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Inextor market regulation configuration documentation index

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Introduction [🔗](#)

Document INEX-INDX-00006: Inextor Market Regulation Configuration Documentation Index, lists all the required configuration documentation required for the correct setup of Inextor per regulatory requirements based on the market of implementation.

Purpose [🔗](#)

The purpose of INEX-INDX-00006 is to provide a central point for internal and external stakeholders to access the required regulatory knowledge and configuration setup of Inextor to support market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the use of the documentation listed in the table below.

Regulation operational guide index table [🔗](#)

Market/ Country/ ID Issuer	Official Regulation Documents Confluence Location	Inextor Regulation Operational Guide
 Angola	Angola Regulation Documents (PROSEFA)	INEX-OG-000x (TBA)
 Armenia	Armenia Regulation Documents (CRPT)	INEX-OG-00006

 Azerbaijan	Azerbaijan Regulation Documents (AZ)	INEX-OG-00004
 Burkina Faso	--	INEX-OG-00010
 China	China Regulation Documents (CH)	INEX-OG-00005
 Congo	Congo Regulation Documents (CG)	INEX-OG-00007
 DLR	--	INEX-OG-00008
 Ecuador	Ecuador Regulations Documents (EC)	INEX-OG-00009
 Jordan	--	INEX-OG-00011
 Mexico	Mexico Regulations (MEX)	INEX-OG-000012

 Russia (CRPT)	Russia Regulation Documents (RU)	INEX-OG-00006
 Serbia	Serbia Regulation Documents (SRB)	INEX-OG-00013
 EU (TPD)	--	INEX-OG-00015
 UK (Brexit)	United Kingdom (UK)	INEX-OG-00016
 Tanzania and Zambia	Tanzania and Zambia (UWAZI)	INEX-OG-00043

Reference documents [↗](#)

Document ID	Document Title	Revision
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****END OF DOCUMENT****

Inextor Azerbaijan (AZ) regulated market operational guide

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Introduction [🔗](#)

Document INEX-OG-00004: Inextor Azerbaijan Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the Azerbaijan (AZ) regulated market requirements. Document INEX-OG-00004 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the AZ Regulated Market, system overview and background.
- **Configuration** - Requirements that must be completed prior to a production run, requirements that can be used for subsequent multiple production runs.
- **Operations** - Requirements to be performed for each production run

Purpose [🔗](#)

The purpose of INEX-OG-00004 is to provide the required knowledge necessary to successfully set up Inextor correctly to support AZ market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the AZ regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)



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Reference documents [🔗](#)

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INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Introduction (AZ)

- [Background \(AZ\)](#)
- [Prerequisites \(AZ\)](#)
- [System Overview \(AZ\)](#)

Background (AZ)

For an explanation of the Azerbaijan code regulation, see page [Azerbaijan Codes](#).

Prerequisites (AZ)

Requirements [🔗](#)

Before using this guide to configure and operate the INEXTOR software, the following requirements must be fulfilled.

Installation of INEXTOR [🔗](#)

INEXTOR is the main software used for the serialization of manufactured products.

This documentation is compatible with version **10.1.0.5253** (and above) of the software.

Installation of the software is provided by:

Requirements	Provided by	Reason
Installation instructions and checklists	3rd-level Inexto support	To provide information to the 2nd-level support
Installation and configuration	2nd-level Inexto support	To install and configure the INEXTOR software for production

System Overview (AZ)

For an overview of the implementation of the Azerbaijan market regulation in the Inextor software, see [Azerbaijan Codes in INEXTOR](#).

The specificities of producing for the Azerbaijan regulation (compared to other regulations in Inextor) can be summarized as follows:

1. External code chunks are tied to a specific production order. If a new production order is created, it will NOT be able to utilize existing codes from the chunks of another production order, even if all other relevant parameters match.
2. Bundles are external too, like packs. So pack-to-bundle rework requires external codes too (for the bundles).
3. Code expiration is 20 days after the order is placed. So if the ID Issuer plugin is configured to order codes 3 days in advance, the codes will expire 20 days after they have been downloaded, even if the Production Order is planned to start in 3 days. This is done so that the planning is not restrictive, and the PO can start early if desired.
4. Pack and bundle codes for production are handled in a single forecast on the Gate and a single UID order request on the Vault. This is as opposed to one per unit type, which is normal for the forecast/FCTC mechanisms.
5. Product registrations on the ID Issuer are downloaded to the Vault and to the Gate, and a Manufactured Product needs to be associated to one of them at the Gate level before it can be used to create a production order (this will be automated in the foreseeable future). Alternatively, external IDs may be declared on the ID Issuer webportal for the various entities (products, package types, factories, machines) and these may then be used on the Gate to reference the ID Issuer entities.
6. Excise code orders on the ID Issuer are also downloaded to the Vault and to the Gate. Production orders need to specify an excise order from which the Vault will draw codes for the production order (this will also be automated eventually).

Configuration (AZ)

- › TNT System
- › Vault
- › Gate
- › Liz

TNT System

This section describes the information that needs to be configured on the TNT system in preparation for using INEXTOR to produce for the Azerbaijan market. Most of this information needs to be provided in the TNT website, with an appropriate account and credentials.

Department

A department needs to be registered on the TNT website for the factory where production is to take place.

Manufacturing must be selected as the **Activity** of the department.

Department identifiers are needed for ordering codes and for performing aggregation/disaggregation, and must be registered on the Vault and Gate.

There are 2 ways to identify departments:

- Via internal, numeric ID, assigned automatically by the TNT system. This ID is not visible on the website, but can be obtained by 3rd level support
- Via external ID, which can be an arbitrary string, declared explicitly on the TNT website.

Production Lines

A production line needs to be registered on the TNT system for each production line, under the department that represents the factory.

Production line identifiers are not needed for ordering codes, but they are needed to do aggregation/disaggregation.

If INEXPRESS is used, it is necessary for the production line identifiers to be registered on the Gate, so that INEXPRESS can form aggregation/disaggregation messages.

There are 2 ways to identify production lines

- Via internal, numeric ID, assigned automatically by the TNT system. This ID is not visible on the website, but can be obtained by 3rd level support.
- Via external ID, which can be an arbitrary string, declared explicitly on the TNT website.

Products

All products must be registered on the TNT website before codes can be ordered for them from INEXTOR.

The following principles apply:

- Products must be registered under the correct product group, in the Tobacco product category, for purposes of regulatory compliance.
- A special package hierarchy for the product must always be defined for each product. Follow these guidelines:
 - The following 3 levels are mandatory: Packs, Bundles, Cases, with embedded levels 0, 1 and 2 respectively
 - Each package type must contain the correct GTIN for that level. Code generation must be deactivated for cases, as INEXTOR generates it's own case codes, and does not support downloading TNT codes for cases.
 - Pallets may also optionally be registered
- Try to enter a meaningful internal code that can be used to identify the product in the Vendor Code field

The product and package types can be identifier in the following ways:

- Via internal IDs, assigned automatically on the TNT website during product registration. These IDs are obtained from the TNT system on the Vault, and sent to the Gate.
- Via external IDs. See the TNT driver section on the Gate for options available when using external identifiers.



IMPORTANT

Once package types have been created for packs, bundles and cases, for a product, and the information has been synchronized to the INEXTOR Vault, the package types must NOT be deleted.

If it is necessary to correct some information, the existing package types can be edited on the TNT website.

If the package types are instead deleted and recreated, they will be assigned new Identifiers by the TNT system, and aggregation events of existing production may fail, and the product may become unusable.

Vault

TNT ID Issuer

Set up ID Issuer

The TNT system needs to be registered as an ID Issuer for the Azerbaijan market on the Vault. This will allow ordering of codes and downloading of master data from TNT.

On the Vault Administration client, go to the TPD / UK / WLN / TNT tab, and click on Id Issuers.

If the TNT ID Issuer already exists, check that the information below is correct.

If you need to register TNT, click New and enter the following information:

Main form

Field	Value	Notes
ID Issuer Code	TNT	
Name	TNT Id Issuer	
Plugin	Select TNT Id Issuer	
Serial Number Length	14	
Product Code Length	0	
Min order quantity	1	
Max order quantity	1,000,000	If there is a request for more codes than the value in this field from the factory, the request will be split into multiple orders. 100'000 is the recommended value.
Quantity must be multiple of	1	
Mode	MMIC	
Requires Economic Operator OnBoarding	Leave unchecked	
SLA period	1d0H0M0s0ms	Codes will be ordered 1 day before the start date of the production order, as declared on the Gate. This can be increased to order codes earlier.
Immediate Delivery SLA Period	0d0H0M0s0ms	
SLA only on working days	Leave unchecked	
Remove TP_ID and TP_PN for UK market	Leave unchecked	

Plugin Parameters tab

Field	Value	Notes
Id Issuer Service Url	For production, enter: https://tnt-api.e-taxes.gov.az For test environment, enter: https://demo-tnt-api.e-taxes.gov.az/	
Username	The username of the account to be used for API Access to TNT	
Password	The password of the account to be used for API Access to TNT	
Has certificate?	Check if connecting to the production environment, otherwise uncheck In the former case, you need to Import the certificate that is needed for signing on the production environment.	
Batch validity (days)	20	This is the number of days after which codes from an code batch will expire.

Field	Value	Notes
		The code batch will be closed on the TNT system after a further number of days equal to the "Reporting Margin (days)" setting, to transfer the remaining credit balance to the excise order.
Production document validity (days)	365	This is the number of days after which codes from an production document will expire. The production document will be closed on the TNT system after a further number of days equal to the "Reporting Margin (days)" setting.
Reporting margin (days)	7	The numbed of days an event can be reported after it has occurred.
Earliest excise order creation for synching (days)	365	When downloading data excise orders from the TNT system, only orders that were created up to the specified number of days in the past will be considered.
Max batches to close	50	How many batches and production documents to close on every run of the closing Job (applies to each).
Max orders to poll	10	How many batches or production documents to poll for code download readiness (applies to both).
Validate order with synched TNT product	checked	If checked, the Vault will validate code order information using the synchronized TNT product on the Vault database. This requires that the synchronization job must be active, and the TNT product must already be on the Vault database. If unchecked, this validation does not take place, and the presence of the product is not necessary. This is useful when using external IDs to link INEXTOR products to TNT products.

Markets tab

Field	Value	Notes
Country	AZ	
Start date	10th December 2023	
End date	leave empty	

Create User Account

You need to follow the instructions in this section only if you need to create an additional user account in order to register an additional economic operator.

On the Vault Administration client, go to the TPD / UK / WLN / TNT tab, and click on Id Issuers.

Expand the TNT ID Issuer row to see a list of accounts.

You can create a new account which can then be selected while registering an Economic Operator, or you can edit an existing one

Field	Value	Notes
Name	enter a name for the account to be able to distinguish it from the default account.	
Id Issuer Service Url	For production, enter: https://tnt-api.e-taxes.gov.az For test environment, enter: https://demo-tnt-api.e-taxes.gov.az/	
Username	The username of the account to be used for API Access to TNT	
Password	The password of the account to be used for API Access to TNT	

Field	Value	Notes
Has certificate?	Check if connecting to the production environment, otherwise uncheck In the former case, you need to import the certificate that is needed for signing on the production environment.	
Batch validity (days)	20	This is the number of days after which codes from an code batch will expire. The code batch will be closed on the TNT system after a further number of days equal to the "Reporting Margin (days)" setting, to transfer the remaining credit balance to the excise order.
Production document validity (days)	365	This is the number of days after which codes from an production document will expire. The production document will be closed on the TNT system after a further number of days equal to the "Reporting Margin (days)" setting.
Reporting margin (days)	7	The numbed of days an event can be reported after it has occurred.
Earliest excise order creation for synching (days)	365	When downloading data excise orders from the TNT system, only orders that were created up to the specified number of days in the past will be considered.
Max batches to close	50	How many batches and production documents to close on every run of the closing Job (applies to each).
Max orders to poll	10	How many batches or production documents to poll for code download readiness (applies to both).
Validate order with synched TNT product	checked	If checked, the Vault will validate code order information using the synchronized TNT product on the Vault database. This requires that the synchronization job must be active, and the TNT product must already be on the Vault database. If unchecked, this validation does not take place, and the presence of the product is not necessary. This is useful when using external IDs to link INEXTOR products to TNT products.

Economic Operators

An economic operator needs to be created for each distributor who will create excise orders for codes to be consumed by INEXTOR.

On the Vault Administration client, go to the TPD / UK / WLN / TNT tab, and click on Economic Operators.

Click First EO Registration to create a new economic operator, or Edit Registration to edit an existing economic operator and review or modify their information.

Field	Value	Notes
ID Issuer Code	TNT	
ID Issuer account	Default TNT account	If you need a second economic operator for the Azerbaijan market, see the section on TNT ID Issuer for how to create it, and select it here when creating the economic operator.
Name	Enter a name for the economic operator by which you can identify it when needed.	informational field
EOID	The TIN of the fiscal entity.	You can find the value in the profile of your user account on the TNT website.
EO Code	leave blank	not relevant to this regulation
Country of Registration	Azerbaijan (AZ)	
Alternate name Address	not necessary for TNT, leave blank	informational fields
Email	Enter an email address for the economic operator.	
VAT Tax number Excise number Third party integration	Enter a Tax number but the value is not important. Leave the other fields blank.	not relevant to this regulation
Mailing List (To) Mailing List (Cc)	Enter email addresses to which notifications for this economic operator need to be sent.	

Facilities

A facility registration needs to be created for each factory that will be producing for Azerbaijan.

On the Vault Administration client, go to the TPD / UK / WLN / TNT tab, and click on Facilities.

Select the Gate you want to create a facility for and click Add Registration.

To edit an existing facility registration for Azerbaijan, select it on the grid and click Edit Registration.

Field	Value	Notes
EOID	select the Economic Operator you have created for this factory	
FID	enter the TNT identifier for the department, which will be used for code ordering.	If using internal TNT identifiers, just enter the numeric identifier in this field. If using external TNT identifiers, enter the external identifier prefixed with "ext:". For example, if using the factory GLN as external identifier for departments on the TNT website, for a factory with GLN 7350053850019 you would enter "ext:7350053850019".
Default	leave unchecked	not relevant to this regulation
Address	The address or location of the factory	informational field
Facility Country	Select the country where the factory resides.	
Tax WarehouseStatus Excise number Third party registration	leave unchecked	not relevant to this regulation
Type of facility	Manufacturing Site with Warehouse	

Machines

A machine registration needs to be created for each production line that will be producing for Azerbaijan.

A facility registration for the factory must already have been registered on the Vault.

On the Vault Administration client, go to the TPD / UK / WLN / TNT tab, and click on Machines.

Select the machine you want to create a machine registration for and click Add Registration.

To edit an existing machine registration for Azerbaijan, select it on the grid and click Edit Registration.

Field	Value	Notes
FID	select the facility registration you have created for this factory, for the Azerbaijan regulation	
TPD MID	enter the TNT identifier for this production line	This is for reference purposes only. This is not used when ordering codes for Azerbaijan.

Link Up Configuration

Click the Edit Link Up Setup Attributes and enter the following information

Field	Value	Notes
Producer	the producer of the machine	informational field
Model	the model	informational field
Serial number	the serial number	informational field
Max Capacity	the maximum daily production capacity of the machine	This will allow INEXTOR to know the maximum amount of codes the machine will need in a day of production

Jobs

There are 2 background jobs running on the Vault, that are related to the Azerbaijan regulation.

- **TntMasterDataSynchronizer:** This job regularly downloads master data (products and excise orders) from the TNT system and stores them on the Vault and on the Gate. This job may be disabled if using automatic excise order selection fro code ordering, as well as using external IDs to identify products and package types on the ID Issuer.
- **TntOrderClosing:** This job regularly checks for batches or production documents on the Vault that have passed their validity period, and will close them on the TNT system.

These will run regularly in the background with a given schedule.

By going on the Vault Administration client, in the Configuration tab, and clicking Jobs, it is possible to find these jobs and alter their schedules if necessary, or execute them directly.

Application Settings

You can find a description of all Vault application settings here: [Vault Service](#)

There are 2 in particular than affect how (and if) code orders are automatically approved on the Vault, which will affect the code ordering process for the Azerbaijan regulation.

- TpdWaitTimeBeforeAutomaticOrderRelease
- TpdMaxAutomaticApprovedQuantity

TpdMaxAutomaticApprovedQuantity can also be configured per factory, see [Vault FCTC Regulations: Facilities](#).

Gate

Layout-and-Contents

A layout is necessary to specify what kind of information needs to be available to produce for a certain product.

One layout is necessary for each unit type (packs, bundles, cases).

The information inside layouts is represented by contents.

Contents

The following contents are available for the Azerbaijan regulation:

Content code	Description	Example value
Packs_TNT_MR	The machine readable code for Packs	25012345678901234
Packs_TNT_HR	The human readable code for Packs	(250)123456788901234
Packs_TNT_AI250	The AI250 part of the code for Packs	12345678901234
PGTIN	Pack GTIN	04033100063022
Bundles_TNT_MR	The machine readable code for Bundles	243123456789012340104023500715224 21457f8f5d2ece9addW111
Bundles_TNT_HR	The human readable code for Bundles, as a single code	(243)00000000000002(01)04023500715224(21)457f8f5d2ece9addW111
Bundles_TNT_HR_Line1	The 1st line of the HR for Bundles	(243)00000000000002
Bundles_TNT_HR_Line2	The 2nd line of the HR for Bundles	(01)04023500715224
Bundles_TNT_HR_Line3	The 3rd line of the HR for Bundles	(21)457f8f5d2ece9addW111
Bundles_TNT_AI243	The AI243 part of the code for Bundles	00000000000002
Bundles_TNT_AI21	The AI21 part of the code for Bundles	457f8f5d2ece9addW111
BGTIN	Bundle GTIN	04023500715224
Cases_TNT_MR	The machine readable code for Cases	010403310006304621457f8f5d2ece9addW111
Cases_TNT_HR	The human readable code for Cases, as a single code	(01)04033100063046(21)457f8f5d2ece9addW111
Cases_TNT_HR_Line1	The 1st line of the HR for Cases	(01)04033100063046
Cases_TNT_HR_Line2	The 2nd line of the HR for Cases	(21)457f8f5d2ece9addW111
Cases_TNT_AI21	The AI21 part of the code for Cases	2122
SCGTIN	Case GTIN	04033100063046

External IDs

If using external product IDs to identify products on the TNT system, the following contents need to be modified, and have their **ProductReferencePropertyName** value changed from **TNT_ProductId** to **TNT_ProductId_External**

- Bundles_TNT_AI21
- Bundles_TNT_AI243
- Packs_TNT_AI250

Layouts

On the Gate Administration client, go to the Printing tab, and click on Layouts.

Here you can define layouts for the 3 unit types (packs, bundles and cases).

Each layout will reference the contents that are needed to produce the specified unit type.

Below are examples for layouts for the 3 unit types.

For each content, there is a "Commissioned As" field. It is necessary to signify which content represents the full HR (human-readable) and MR (machine-readable) versions of the code.

Packs layout (Packs_TNT)

Code	Packs_TNT			
Name	Packs_TNT			
Description	Packs_TNT			
Unit Type	Packs			
Deleted	☐			
Layout Contents	Required	Commissioned As	Content	Delete
	☐	HR code	Packs_TNT_HR	Delete
	☒	MR code	Packs_TNT_MR	Delete
	Add...			
Validation results: ✔ Successful				
OK Cancel				

Bundles layout (Bundles_TNT)

Code	Bundles_TNT			
Name	Bundles_TNT			
Description	Bundles_TNT			
Unit Type	Bundles			
Deleted	☐			
Layout Contents	Required	Commissioned As	Content	Delete
	☐	HR code	Bundles_TNT_HR	Delete
	☐	-	Bundles_TNT_HR_Line1	Delete
	☐	-	Bundles_TNT_HR_Line2	Delete
	☐	-	Bundles_TNT_HR_Line3	Delete
	☒	MR code	Bundles_TNT_MR	Delete
Add...				
Validation results: ✔ Successful				
OK Cancel				

Cases layout (Cases_TNT)

Code	Cases_TNT			
Name	Cases_TNT			
Description	Cases_TNT			
Unit Type	Cases			
Deleted	☐			
Layout Contents	Required	Commissioned As	Content	Delete
	☐	-	Cases_TNT_AI21	Delete
	☐	HR code	Cases_TNT_HR	Delete
	☐	-	Cases_TNT_HR_Line1	Delete
	☐	-	Cases_TNT_HR_Line2	Delete
	☒	MR code	Cases_TNT_MR	Delete
Add...				
Validation results: ✔ Successful				
OK Cancel				

Templates

Templates

In order to imprint the information specified in the layout onto a product, it is necessary to provide a template for the specific printer we are using, for each unit type.

The definition of a printer template, and the contents of the template, depend on the specific printer used.

In order to link the printer-specific template to the information in the layout, we define a layout implementation, which provides the mapping between the two.

An example of a printer template (for packs) can be seen below.

The Injection Points are placeholders that are defined inside the template. We use the layout implementation (below) to specify what goes into these placeholders.

Template Edit

Fields

Template Code: VPL.Packs.AZ Template Name: VPL.Packs.AZ Deleted: ☐

Device Family: TelnetFamily Template Description: VPL.Packs.AZ

Injection Points

Name	Comments
MRCODE	
HRCODE	

Template Data

```
1 DH,MRCODE*,10,10,2,1,7,6,0,{MRCODE}
2 T,HRCODE,10,60,Arial,10,{HRCODE}
```

Extract Injection Points Load File

Validation results: Successful

Save Cancel

Layout Implementation

This entity describes how a specific layout, such as the Packs_TNT layout for printing Azerbaijan packs, is applied (implemented) on a specific template designed for a specific printer type.

The Injection Points of the template are mapped to the Contents of the layout.

Edit Layout Implementation

Device Configuration: Telnet.Packs

Layout: Packs_TNT

Template: VPL.Packs.AZ

Content Mappings

Injection Point	Content	Type	Variable
HRCODE	Packs_TNT_HR	Variable	
MRCODE	Packs_TNT_MR	Variable	

Validation results: Successful

OK Cancel

Serializers

Each production line needs to be configured with data that is necessary for producing for the Azerbaijan regulation.

On the Gate Administration client, go to the Serializers tab, and click on LinkUp Setups.

Edit each serializer that will be used for Azerbaijan production.

Fill the following information:

Field	Value	Notes
Attributes - TNT_ProductionLineId_External	The external Id that was used when registering the production line on the TNT system. If an external Id was not specified, enter the value 0	This field is only necessary if you are using INEXPRESS
Attributes - TNT_ProductionLineId	The TNT internal Id of the production line. If an external Id was specified and entered in the attribute above, you can enter 0 here.	This field is only necessary if you are using INEXPRESS
RejectionRates - RejectionRate_Packs	Expected rejection rate for packs for this production line, expressed in percentage points (not using the % sign). Enter a whole number, for example a value of 5 means the line is expected to have a roughly 5% rejection rate.	Because the ordering of Packs and Bundles are linked and cannot be done separately in the TNT system, this figure will affect both Pack and Bundle codes ordered for production. For example, if a production order for 1,000 codes is made, and the rejection rate is 5%, the Vault will order 1,050 codes to account for the rejection rate. The TNT system will automatically also provide a number of bundle codes equal to 10% of the pack codes (in this case 105), so there is no opportunity to apply a different rejection rate for bundles in this case.
RejectionRates - RejectionRate_Bundles	Expected rejection rate for bundles for this production line, expressed in percentage points (not using the % sign). Enter a whole number, for example a value of 5 means the line is expected to have a roughly 5% rejection rate.	The rejection rate for bundles will only take effect in code ordering when a production order is configured as a pack-to-bundle rework.

Forecast Operation Driver

The forecast operation driver is the component that sends the factory requirements in codes to the Vault, which will in turn place the necessary code orders to the TNT ID Issuer.

On the Gate Administration client, go to the Configuration tab, and click on Op. Drivers.

Find the Forecast driver and click Manage, enable all components of the driver and click OK (see [Gate Op. Driver: Forecast Driver](#)).

You may then click Configure to access the configuration page of the driver.

On this page, you may control 2 things:

- **The execution schedule of the driver**, when the forecasts are collected from the Gate and sent to the Vault. You can either configure the driver to run each day at a specific time, or execute at a specific interval.
- **The slicing strategy**. Make sure this is set to MaxCapacityPerSlice. This ensures that if you want to order the codes for a given Production Order incrementally, one day at a time, the Vault will order each day a number of codes that matches the maximum capacity of the production line. However, it will never exceed the expected product quantity specified in the Production Order. This setting will be ignored if you select the option to order all codes at once, at the Production Order. This is detailed in the Operation section on creating a Production Order.

INEXPRESS Operation Driver

The INEXPRESS operation driver needs to be enabled for the Azerbaijan regulation.

The following modules need to be enabled

- INEXPRESS Internal Component (required)
- INEXPRESS version 2 Synchronization

Ensure that both Production Order form and Manufactured Product form are enabled in the driver's configuration.

For more details, see: [Gate Op. Driver: INEXPRESS Driver](#)

Gate Settings

The following attributes need to be declared on the Gate Settings:

Field	Value	Notes
Attributes - TNT_DepartmentId_External	The external Id that was used when registering the department (factory) on the TNT system. If an external Id was not specified, enter the value 0	This field is only necessary if you are using INEXPRESS
Attributes - TNT_DepartmentId	The TNT internal Id of the department (factory). If an external Id was specified and entered in the attribute above, you can enter 0 here.	This field is only necessary if you are using INEXPRESS

TNT Operation Driver

See [Gate Op. Driver: TNT operation driver](#)

Azerbaijan Manufacturing Market

A manufacturing market for Azerbaijan needs to be created and configured on the Gate.

On the Gate Administration client, go to the Products tab, and Manufacturing Markets.

Create a manufacturing market with the following information:

Field	Value	Notes
Code	AZ or AZE or AZB or Azerbaijan	
Name	Azerbaijan	
Description	Azerbaijan	

Azerbaijan Products

Before production can be started, the product needs to be specified on the Gate.

In order for the Azerbaijan regulation to work, the product on the Gate also needs to be linked to the product as it was specified on the TNT system.

It is necessary to have both these definitions ready, and to link them in the Gate, as they contain different but necessary information for production and regulatory compliance.

On the Gate Administration client, go to the Products tab, and click Manufactured Products (see [Manufactured Products](#)).

There are 3 ways to create products on the Gate:

- By importing them from an excel file, using the "Import from Excel" button
- By using product integration and the associated web service
- By creating them on the client using the Create and Edit buttons

The association between the Gate product and the TNT product can happen in 3 ways:

- Manually, by editing the manufactured product on the product form of the Gate UI. There is a TNT tab that contains a drop-down from which you can select the respective TNT product. If the list is empty, you can use the "Sync Master Data" button on the configuration page of the TNT operation driver on the Gate.
- Automatically, by selecting one of the options on the TNT driver configuration screen, This can work when importing via excel file or web service, or when creating the product manually using the UI. Available options are described in the TNT operation driver section.

Other information needed to create a manufactured product:

- The manufacturing market of the product (Azerbaijan)
- The layouts for each unit type (packs, bundles and cases)

Note: if you are using external IDs to identify products, and you are using the Vault for code ordering, the product needs to have the following attribute, so that the Vault can send all the information necessary for the code order to the ID Issuer:

- TNT_ProductCategoryId with value 2 (tobacco)

INEXPRESS tab

In this tab, you need to configure the unit type GTINs and contents for the product (see [INEXPRESS Driver](#)).

The INEXPRESS driver must have been configured correctly according to the requirements for the factory.

For Azerbaijan, the active levels will typically be Level 1 (Packs), Level 3 (Bundles) and Level 5 (Cases), and only these will be visible.

Depending on the INEXPRESS driver configuration, the GTIN and sublevel quantity may be pre-filled.

GTIN generation

**Note**

Starting with the INEXTOR release on the 17th November, 2023, it is necessary to register GTINs for packs, bundles and cases on the TNT website.

If you are using the mechanism described below, you need to manually ensure that the GTINs on the Gate match the GTINs on the TNT website. This needs to be done manually.

There is a mechanism implemented on the Gate that can assist in the case where GTINs exist only for packs for any given product.

If this feature is enabled (currently possible only with the help of 2nd level support), whenever a product is imported from Excel, or created from the UI, the following process takes place:

- If EANs are provided for packs, bundles and cases, they are converted to GTINs by applying a leading 0.
- If EANs are not provided for either bundles or cases, but are provided for packs, the GTIN for bundles and cases is generated by:
 - adding the leading digit 3 (for bundles) or 5 (for cases)
 - recalculating the GTIN check digit
- If EANs are not provided for packs, an error is thrown, as it is not possible to obtain GTINs in any way, and the product remains invalid.

This method of generating bundle and case GTIN is only valid for products where each bundle contains 10 packs, and each case contains 50 bundles.

Liz

INEXPRESS Operation Driver for Azerbaijan

The INEXPRESS operation driver needs to be enabled for the Azerbaijan regulation.

The following modules need to be enabled

- INEXPRESS
- InexpressConnectionPoll
- InexpressMessageProcessor
- ValidateOrder

For more details, see: [INEXPRESS Driver \(Liz UI\)](#).

Operation (AZ)

- [TNT Codes Manual Import](#)
- [Production Orders](#)
- [Forecasts and External Code Reference](#)
- [Code Ordering for Azerbaijan](#)
- [External Code Reference](#)
- [Az Codes Materialization](#)

TNT Codes Manual Import

This page describes the process to import TNT codes thanks to the Manual Import functionality in the Gate.

Prerequisite

When using manual import of TNT codes, the **Enable Forecasts** option should be **disabled** in the [TNT Operation Driver](#).

To import codes in the Gate a Production Order with the corresponding master data must exist in the system.

Codes import

Follow these steps to manually import TNT codes on the Gate:

1. Navigate to Gate → Products → External Codes view.
2. Click the *Import...* button.
3. Select *TNT External Codes Importer*.
4. Use the Browse... button to choose the codes archive to import. Once this is done validation on the archive sanity will be done.
5. Select a Production Order number.

 The list of available Production Orders is filtered to show only Orders where TNT regulation is applied. The imported codes files might contain a Production Order number. If a Production Order with the same number already exists in the Gate, it will be automatically selected.

The Gate Importer for TNT codes only support *.zip archive files.

They can contain either packs and bundles codes files for a standard production or only bundles codes files for a rework production.

The system will go through several validation steps to ensure that the imported codes' nature matches the master data of the selected production order.

Production Orders

In order to produce on a line at the factory, it is necessary to create a production order.

The production order keeps important information, including when and on which line production will run, which product will be produced, and the expected quantity.

This information is necessary for 2 main reasons:

- To determine requirements in terms of codes: how many codes and of which type we will need, and when we will need them.
- To start production on a Liz, when the codes have arrived.

Productions are managed on the Gate Administration client.

Go to the Production tab, and click on Production Orders. Here you can see and edit existing production orders, or create a new one.

The main information you need to enter is the following:

Main form

Field	Notes
Order Number	A unique Order Number for the production order
Manufactured Product	The manufactured product you will produce
LinkUp Setup	The production line (LinkUp) where production will take place
Requested Quantity	The requested quantity in packs, i.e. the number of packs that you expect to produce
Order Expected Start Date	The expected start date of the production order, so that the Vault can determine when the codes will have to be ordered
Order Full Quantity	Whether all codes should be ordered at once, overriding the slicing strategy selected when configuring the forecast driver.
Total Quantity	After saving the production order, this read-only field will contain the number of packs with the rejection rate configured on the LinkUp. So if you have a requested quantity of 10'000 and have configured a rejection rate of 1% for packs, you would see 10,100 in this field. This number reflects the number of packs codes that will be ordered.

TNT tab

You need to select an excise order from which the codes will be drawn for this production order. The excise order needs to have a sufficient number of codes to cover the requested quantity + rejection rate, otherwise the code order will fail.

Another possibility is to select the "Automatic Excise Order" checkbox: the Vault will then take the oldest compatible TNT excise order with available codes to download the codes. If this excise order does not have enough codes, the order will be split in two on the Vault. If the total of available codes on all TNT excise orders is not enough to cover the requested quantity, the Vault will give an error.

INEXPRESS tab

If the manufactured product has been properly registered, there should not be any need to alter information in this tab, with the exception of Rework, described below.

Rework

To configure a production order for rework, you need to modify the following fields in the INEXPRESS tab:

- Change Order Type to "Mono-Product Rework", or other type of rework as advised by support
- Select the Reworked Item Object Type (Packs or Bundles), which represents the unit level that will be re-fed to the line, and already have codes printed:
 - In the case of pack-to-bundle rework, you would select Packs, in which case, bundle codes will be ordered by INEXTOR from TNT.
 - In the case of bundle-to-case rework, you would select Bundles, in which case, no codes need to be ordered.

In the case of rework, the Requested Quantity field in the main form still corresponds to packs. So if you need to rework 10'000 packs, you would enter the number 10'000, and the Gate would calculate that 1'000 bundle codes are needed for this production order.

Modifying a Production Order

It is possible to modify most information on a production order.

Some modifications, however, may render codes already downloaded for this production order unusable, and will cause the Gate to request more codes via forecasts. See section [External Code Reference](#) for more details on this.

Modifying the Requested Quantity of a production order is a valid operation. If the requested quantity is increased, this may result in a new code order placed to cover the difference. If the requested quantity is decreased, no change will take place.

Forecasts and External Code Reference

Forecasts are the means by which code requirements on the Gate are communicated to the Vault (for a detailed description, see [Forecast](#)).

After one or more Production Orders have been created on the Gate, forecasts for code requirements must be sent from the Gate to the Vault, to initiate code ordering.

The forecast driver will automatically send forecasts depending on the execution schedule configured (as shown in the [Configuration](#) section).

It is also possible to use the Generate Forecasts button to expedite the sending of forecasts.

This can be found in the Gate Administration client. Go to tab Configuration, click Op. Drivers, locate the Forecast driver, click Configure and then click Generate Forecasts (see [Gate Op. Driver: Forecast Driver](#)).

The button is also available in the Production Orders grid form, also on the Gate Administration client (see [Production Orders](#)).

Code Ordering for Azerbaijan

After the forecasts have been sent to the Vault, the Vault will create order requests to request codes from TNT and download them to INEXTOR.

A forecast issued for a specific production order will result in the creation of one or more order requests on the Vault. If the quantity required for the production order does not exceed the Maximum Order Quantity specified for the TNT ID Issuer (see [TNT ID Issuer](#)), then a single order request will be created. Otherwise, the quantity will be split into multiple order requests, each having no more than the specified maximum.

You can view order requests on both the Vault Administration client, or the Gate Administration client. In both cases you need to go to TPD / UK / WLN / TNT tab, and click Orders.

There are 2 types of order requests that may be created for Azerbaijan:

- Order requests for **production**, that will request both packs and bundles. For this type of order request, the Requested column will show the number of pack codes that have been requested for the production order. The Downloaded field will contain the total number of downloaded codes, packs and bundles.
- Order requests for **pack-to-bundle rework**, which will request only bundles. For this type of order request, the Requested column will show the number of bundle codes that have been requested for the production order, and the Downloaded field will contain the total number of downloaded bundle codes.

Other types of rework (bundle-to-case) do not require codes from TNT, and so will not generate forecasts or order requests.

You can use the buttons at the bottom of the grid to manipulate orders. The most important are:

- Approve: an order request needs to be approved before it will be sent to TNT, unless automatic approval is enabled. See [Application Settings](#) for more details on automatic approval.
- Block: to block an order, such as in the case where a production order was created on the Vault with incorrect quantities or other attributes.
- History: to show a log of the steps that the Vault has so far taken in order to complete the order request.
- Cancel: when cancelling an order request for the Azerbaijan market, for which no codes have been downloaded, the TNT plugin will also close the underlying batch or production document immediately (see [Azerbaijan Codes \(INEXTOR\)](#)) instead of after it has expired (see [Jobs](#)).

For more information on the Orders form, see [Orders](#).

The following are currently not supported for the Azerbaijan regulation:

- Manual order requests - Manual order button.

External Code Reference

When ordering and consuming codes, it is necessary to provide some means to match a Production Order to chunks of code that are compatible with that order, and can be printed as part of that order.

The External Code Reference (ECR for short) is a code generated for each unit type of a Production Order, for which codes need to be ordered: Packs and Bundles in the case of production, or just Bundles in the case of pack-to-bundle rework (for a detailed explanation, see [ECRs](#)).

It contains all information that is needed to map a production order to the appropriate chunks of TNT codes.

The forecasts and the code orders that are generated for a specific production order, as well as the chunks of codes that are finally downloaded to the Gate to be used for production, all bear the ECRs that were originally generated for the production order.

For chunks of codes to be usable by a specific Production Order, the ECR of the order and the ECR of the chunks must match.

You can view the ECRs of a production order by going to the Attributes tab of the Production Order form on the Gate Administration client (see [Attributes](#)), and locating the attributes named: **TntExternalCodeReference_Packs** and **TntExternalCodeReference_Bundles**.

The contents of the ECRs for the Azerbaijan regulation are as follows:

- DestinationMarket: AZ
- OrderType: P for production, R for pack-to-bundle rework.
- OrderNumber
- ProductCategory: for tobacco, this is always "2"
- EmissionType (R/I): R (Retail) for domestic factories, I (Import) for factories outside Azerbaijan
- Product ID: the ID of the TNT product, If you are using external IDs for product identification, this part of the ECR will be prefixed with "ext:"
- MID: the machine ID
- UnitType: Packs or Bundles
- GTIN: The GTIN14 of the specified unit type

About the "ext:"

A factory must decide whether they operate with internal or external product ID. All the productions in the factory must use the same mode.

In order to mark the difference, "ext:" is prefixed to the product ID in the ECR.

Today, manual code ordering only supports external product ID.

Az Codes Materialization

Overview [🔗](#)

Az Codes can be materialized and decomposed.

Configuration [🔗](#)

The Az codes can be materialized in:

Gate:

- the database, in a table named `externalcodes.TNTPacks` and `externalcodes.TNTBundles`.
- an external SQL server database, in a table with customizable name, but still in the `externalcodes` schema.

Vault:

- the database, in a table named `externalcodes.TNTPacks` and `externalcodes.TNTBundles`.
- an external SQL server database, in a table with customizable name, but still in the `externalcodes` schema.
- the Azure Table.

The materialization options can be specified per unit type scheme.

To configure the materialization, you need to:

Gate:

- Create a `configunit` file in the `GateService` directory with the content below.
- Optionally, only when external SQL database is used, add a connection string to the `GateService.exe.config` file.

Vault:

- Create a `configunit` file in the `VaultService` directory with the content below.
- Optionally, only when external SQL database is used, add a connection string to the `VaultService.exe.config` file.
- Or when Azure Table will be used. Create a `configunit` file in the `VaultService` directory with the content below.

AzMaterialization.configunit [🔗](#)

The structure of the `configunit` file can be customized according to your needs. The specific configuration starts from the child of the `Implementation` element.

- **TntGateCodesHandlerConfig** or **TntVaultCodesHandlerConfig** - the root element of the Az-specific configuration
- **ExternalCodeStorageConfigurations** - a collection with Az scheme-specific configurations.
- **ExternalCodeStorageConfigurationByUnitType** - Az scheme-specific materialization configuration. You can specify one or many elements.
 - **StorageStrategy** - `StoredProcedure`, `ExternalDatabase` or `AzureTable`
 - **StoredProcedure** will materialize the codes in the Gate database, in table `externalcodes.TNTPacks` and `externalcodes.TNTBundles`.
 - **ExternalDatabase** will materialize the codes in an external database. The following element, **DatabaseConfiguration** is required in this case.

- **AzureTable** will materialize the codes in an Azure Table. The following element, **AzureTableConfiguration** is required in this case.
- **DatabaseConfiguration** - optional, used only when StorageStrategy=ExternalDatabase
 - **ConnectionStringName** - the name of a connection string to the external SQL server database where to materialize Az codes. The connection string must be declared in GateService.exe.config or VaultService.exe.config
 - **TableName** - optional, the name of the table where to materialize Az codes. The name must be TNT + Unit Type.

Example:

```

1  <?xml version="1.0" encoding="utf-8" ?>
2  <ConfigUnit FormatVersion="1.0" xmlns="http://el4net.sf.net/configunit">
3      <FriendlyName>ExternalStorage</FriendlyName>
4      <Version>1.0</Version>
5      <Description>External storage configuration</Description>
6      <Category/>
7      <Mandatory>true</Mandatory>
8      <Partial>false</Partial>
9      <EnvironmentInformation/>
10     <CUDependencies>
11         <UseOrOverride>ComponentManager,ConfigUnitVersion=1.0</UseOrOverride>
12         <UseOrOverride>SingletonComponentsAndInterception,ConfigUnitVersion=1.0</UseOrOverride>
13     </CUDependencies>
14     <ConfigFragment>
15         <ComponentRepository>
16             <ComponentDefinition Name="Inexto.S3r.ExternalCodesHandler.TNT">
17                 <SingletonComponent>
18                     <Implementation>
19                         <TntVaultCodesHandlerConfig>
20                             <DefaultConfiguration OnMiss="Add" OnExist="Fail">
21                                 <StorageStrategy>StoredProcedure</StorageStrategy>
22                                 <MainDatabaseConfiguration>
23                                     <UseCompression>false</UseCompression>
24                                 </MainDatabaseConfiguration>
25                             </DefaultConfiguration>
26
27                             <ExternalCodeStorageConfigurations OnMiss="Add" OnExist="Replace">
28                                 <!-- Azure Table -->
29                                 <ExternalCodeStorageConfigurationByUnitType UnitType="Packs">
30                                     <StorageStrategy>AzureTable</StorageStrategy>
31                                     <AzureTableConfiguration>
32
33                                         <ConnectionString>DefaultEndpointsProtocol=https;AccountName=duplicatestest;AccountKey=Crn
34                                         NosffQV8v9d4/aqMfJa0o7K9QWjoAtrURG8ChzYSVLNZqTe0stdEzkrvBDtrQscmoQCG40DFN+ASTlh5dkg==;EndpointSuffix=core.wind
35                                         ows.net</ConnectionString>
36
37                                         <TableName>TNTPacks</TableName>
38                                     </AzureTableConfiguration>
39                                 </ExternalCodeStorageConfigurationByUnitType>
40                                 <ExternalCodeStorageConfigurationByUnitType UnitType="Bundles">
41                                     <StorageStrategy>AzureTable</StorageStrategy>
42                                     <AzureTableConfiguration>
43
44                                         <ConnectionString>DefaultEndpointsProtocol=https;AccountName=duplicatestest;AccountKey=Crn
45                                         NosffQV8v9d4/aqMfJa0o7K9QWjoAtrURG8ChzYSVLNZqTe0stdEzkrvBDtrQscmoQCG40DFN+ASTlh5dkg==;EndpointSuffix=core.wind
46                                         ows.net</ConnectionString>
47
48                                         <TableName>TNTBundles</TableName>
49                                     </AzureTableConfiguration>
50                                 </ExternalCodeStorageConfigurationByUnitType>
51                             </ExternalCodeStorageConfigurations>
52                         </TntVaultCodesHandlerConfig>
53                     </Implementation>
54                 </SingletonComponent>
55             </ComponentDefinition>
56         </ComponentRepository>
57     </ConfigFragment>
58 </ConfigUnit>

```

```

44         <!-- External Database -->
45         <ExternalCodeStorageConfigurationByUnitType UnitType="Packs">
46             <StorageStrategy>ExternalDatabase</StorageStrategy>
47             <DatabaseConfiguration>
48                 <ConnectionStringName>DBConnectionString</ConnectionStringName>
49                 <TableName>TNTPacks</TableName>
50             </DatabaseConfiguration>
51         </ExternalCodeStorageConfigurationByUnitType>
52         <ExternalCodeStorageConfigurationByUnitType UnitType="Bundles">
53             <StorageStrategy>ExternalDatabase</StorageStrategy>
54             <DatabaseConfiguration>
55                 <ConnectionStringName>DBConnectionString</ConnectionStringName>
56                 <TableName>TNTBundles</TableName>
57             </DatabaseConfiguration>
58         </ExternalCodeStorageConfigurationByUnitType>
59     </ExternalCodeStorageConfigurations>
60
61     </TntVaultCodesHandlerConfig>
62 </Implementation>
63 </SingletonComponent>
64 </ComponentDefinition>
65 </ComponentRepository>
66 </ConfigFragment>
67 </ConfigUnit>

```

For External Database, apply this on the appsetting.config (change Server and Database name):

```

1 <?xml version="1.0" encoding="utf-8"?>
2 <configuration>
3     ...
4     <connectionStrings>
5         <add name="DBConnectionString"
6             providerName="Microsoft.Data.SqlClient"
7             connectionString="Data Source=CdfySqlInstance;Initial Catalog=ExternalDatabase;Integrated
Security=True;Application Name=GateService;MultipleActiveResultSets=True;" />
8     </connectionStrings>
9     ...
10 </configuration>

```

Inextor China (CN) regulated market operational guide

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Introduction [🔗](#)

Document INEX-OG-00005: Inextor China Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the China (CN) regulated market requirements. Document INEX-OG-00005 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the CN Regulated Market, system overview and background.
- **Configuration** - Requirements for configuring the Vault and Gate components for the China regulation
- **Operations** - Requirements for generating and exporting Chinese unique identifiers and manual code importing from external.

Purpose [🔗](#)

The purpose of INEX-OG-00005 is to provide the required knowledge necessary to successfully set up Inextor correctly to support CN market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the CN regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation, configuration and operation is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)



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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Introduction (CN)

- [Background \(CN\)](#)
- [Prerequisites \(CN\)](#)
- [System overview \(CN\)](#)

Background (CN)

The document provides the technical requirements for Inextor software to comply with Chinese regulations for tracking and tracing tobacco products. The main goal is to prevent illicit trade by ensuring every product is uniquely identifiable. The process involves several steps from onboarding import agents and production centers to integrating operational data with the IRS* via an API for code ordering and production reporting.

IRS: Industry Regulation System - The Track & Trace regulatory system from which to order code and report track & trace events.

Introduction

Foreign tobacco manufacturers, that want to sell products on the Chinese market, must follow the Chinese regulation. It requires to print unique QR codes on the packaging levels: **pack**, **bundle** and **case**. Currently, the products regulated are **cigarettes** and **cigars**. **Taxed** and **duty-free** products must both follow the regulation.

During manufacturing and logistic, events must be sent to the Chinese authorities.

Organizations

The QR code are provided by the State Tobacco Monopoly Administration (STMA). The technical implementation is done by Tencent.

Since it's imported production, the tobacco manufacturer must work with an importer registered in China. It is the importer who will be the legal representative. Therefore, the importer must create an account in the STMA system and register the products. STMA will provide identifier for the different entities, importer, manufacturer, products. STMA will also provide credentials to access their system.

Coding

The unique identifiers (UID) must be printed as QR code. The regulation doesn't require printing a human-readable version.

The UID is a web URL. It starts by "https://". It is composed of various parts referencing master data. For instance, it contains the importer code, the brand code, the product type, etc ...

Pack and bundle

The UIDs for pack and bundles are received exactly as they should be printed.

The UID is made of 59 alphanumeric+symbols characters.

Sample

- <https://y2wm.cn/99.1000.1/AC1006498001VI6WHW2T6O2US73TPANTK>

Case

The case UID must be created during production. STMA will only provide the serial number. The rest of the UID is composed of various master data (see figure 1).

	Identification Prefix (26)				Shipping Case Identification Code (70)													
					Cigarette Main Data Encoding				Business Serial Number (61)									
					Object Encoding		Basic Information Encoding		Associated Attribute Code									
	Network Service Address	Forward Slash	Identification resolution prefix	Forward Slash	Cigarette Classification	Package Type	Business Type	SKU Code	Organization Code	Product Barcode	Production Type	Production Time	Production Line	Printer	Production Shift	Self Defined Info	Unique Serial Number	
Start-End	1-15	16	17-25	26	27-28	29	30	31-35	36-43	44-56	57	58-71	72-73	74-75	76	77-78	79-96	
Length	15	1	9	1	2	1	1	5	8	13	1	14	2	2	1	2	18	
Example	HTTPS://Y2WM.CN	/	99.1000.1	/	AC	3	2	12345	88888888	6901028123456	9	20230906112220	01	01	A	XX		

Example : [HTTPS://Y2WM.CN/99.1000.1/AC+1+2+12345+88888888+6901028123456+6+20230906112220+01+01+A+XX+QR Code Serial Number](https://Y2WM.CN/99.1000.1/AC+1+2+12345+88888888+6901028123456+6+20230906112220+01+01+A+XX+QR Code Serial Number)

Remark:

Character 1-15 **No modification:** Network Service Address in 15 Characters
Character 16 **No modification:** Forward Slash
Character 17-25 **No modification:** Identification resolution prefix in 9 Characters
Character 26 **No modification:** Forward Slash
Character 27-28 **No modification:** Cigarette Classification in 2 Characters
Character 29 **No modification:** Package Type (2-Shipping Case)
Character 30 **No modification:** Business Type
Character 31-35 SKU code generated according to product specification files by China Tobacco in 5 Characters
Character 36-43 Organization code assigned by China Tobacco in 8 Characters
Character 44-56 Product Barcode in 13 Characters
Character 57 **No modification:** Production Type (6-Foreign Brands Produced Oversea)
Character 58-71 Production Time (Year/Month/Day/Hour/Mins/Second-20230906132030) in 14 Characters
Character 72-73 Production Line in 2 Characters
Character 74-75 Printer Equipment Number self-defined by manufacturer in 2 Characters
Character 76 Production Shift self-defined by manufacturer
Character 77-78 Information self-defined by manufacturer in 2 Characters
Character 79-96 QR Code Serial Number in 18 Characters

The serial number is made of 18 alphanumeric+symbols characters.

The complete UID is made of 96 alphanumeric+symbols characters.

Sample

- [HTTPS://Y2WM.CN/99.1000.1/AC3212345ABCD123485258229799736202408200801000101A0116WZSW7BRRYIU4O57T](https://Y2WM.CN/99.1000.1/AC3212345ABCD123485258229799736202408200801000101A0116WZSW7BRRYIU4O57T)

Prerequisites (CN)

Requirements [↗](#)

Before using this guide to configure and operate the Inextor software, the following requirements must be fulfilled.

Installation of Inextor [↗](#)

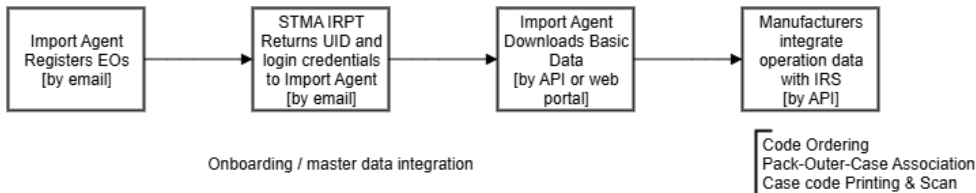
Inextor is the main software used for the serialization of manufactured products.

This documentation is compatible with version **10.1.0.5530** (and above) of the software.

Installation of the software is provided by:

Requirements	Provided by	Reason
Installation instructions and checklists	3rd-level Inexto support	To provide information to the 2nd-level support
Installation and configuration	2nd-level Inexto support	To install and

System overview (CN)



The provided image and accompanying text outline the onboarding and integration process for complying with Chinese regulations using the Inextor system.

The process involves four key steps:

1. Register EOs:

- **Description:** Tobacco import agents must register their organizational information and access information for their application systems with IRPT: Industry Regulation Project Team (The Team in charge of the [IRS](#) system in China) via email.

2. Return UID and Login Credentials:

- **Description:** IRPT processes the submitted information and returns unique identifiers and login credentials to the import agent and its production enterprises via email.

3. Download Basic Data:

- **Description:** Import agents download organizational and brand specifications data from the IRS, which they then distribute to their subordinate production enterprises.

4. Integrate Operation Data:

- **Description:** Tobacco import agents and production enterprises integrate operational data with the IRS for code ordering and event reporting.

Concepts [🔗](#)

Abbreviation	Name	Definition
IRPT	Industry Regulation Project Team	The Team in charge of the IRS system in China.
IRS	Industry Regulation System	The Track & Trace regulatory system from which to order code and report track & trace events.
STMA	State Tobacco Monopoly Administration 国家烟草专卖局	Government agency responsible for national tobacco monopoly regulation. It is the same institution as China Tobacco.
CT	China Tobacco 中国烟草	State owned tobacco manufacturer. It is the same institution as the STMA.
	Import agent	The company importing tobacco products in China. The import agent is the one responsible for ordering UIDs.

	Access system	The client system that request QR code segment to the IRS.
	QR code segment	Describe an order for UIDs. Name used in the STMA documentation.
	Print-shop	A printing company providing the sheets of cardboard that are then folded into the packs and bundles.

Workflow [🔗](#)

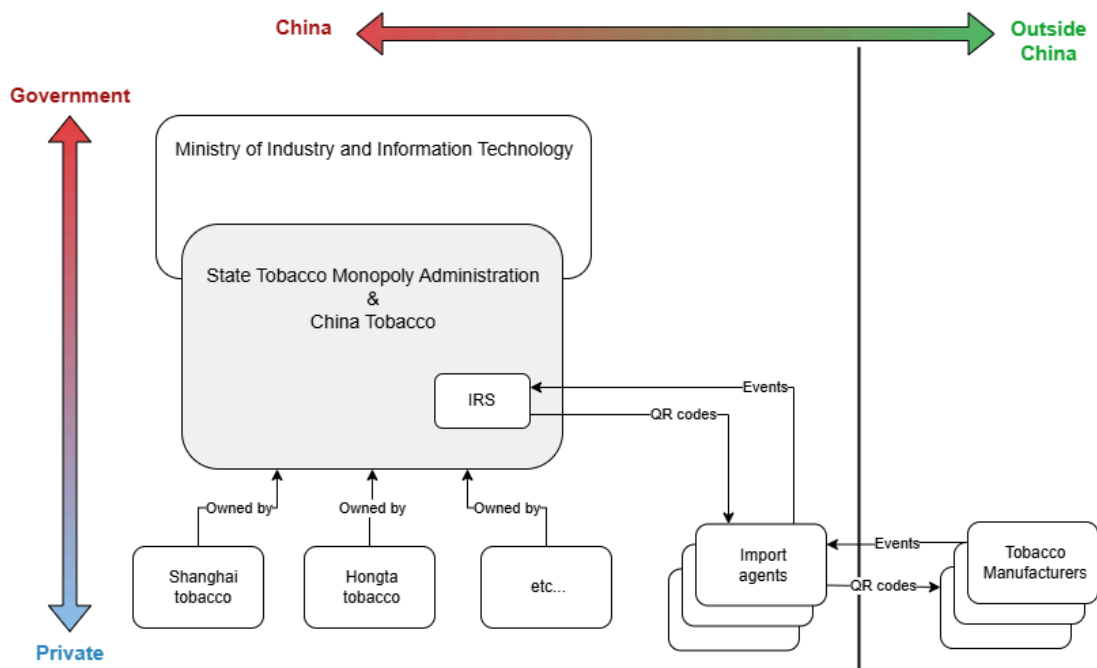


Figure 1: The structure of the Chinese tobacco market. Domestic manufacturers are all owned by the state.

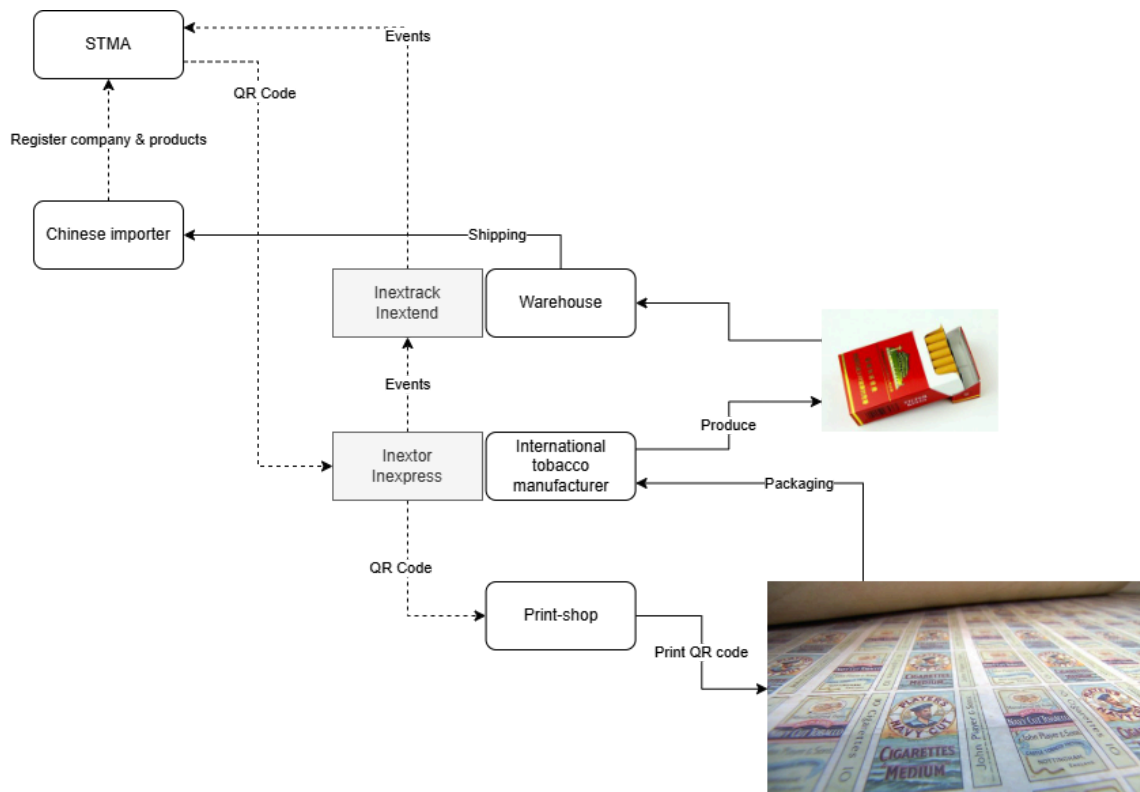


Figure 2: Simplified workflow of the data. One specificity is that some manufacturer sends the QR code for packs and bundles to the print-shop. The Chinese code is pre-printed before the production starts at the factory.

Configuration (CN)

- › [China Vault Configuration](#)
- › [China Gate Configuration](#)

China Vault Configuration

STMA Id Issuer

To order UIDs from the Chinese authorities, you must use the STMA Id Issuer.

1. Go to FCTC Regulations → Id Issuer.
2. Create a new Id Issuer.
3. Fill the form with the help of the table below.

Name	Production	Quality Assurance
Id Issuer Code	STMA	
Name	China State Tobacco Monopoly Administration	
Plugin	STMA Id Issuer	
upUI_i SN Length	59	
upUI_s SN Length	59	
Accept different upUI_s SNs from upUI_i SNs	NO	
Product Code Length	0	
Request delay	2 days	
Min order quantity	1	
Max order quantity	100'000	
Quantity must be a multiple of	1	
Process Order Immediately	N/A	
SLA Period	0ms	
Immediate Delivery SLA period	0ms	
SLA only on working days	NO	
Remove TP_ID and TP_PN for UK market	NO	
Plugin parameters		
Id Issuer Service URL	https://jkyys.y2wm.cn NOTE: The older versions of Vault required this URL to end with /ImpTobaccoPlan. The path should be removed in version 5594 and above.	https://jkyys-test.y2wm.cn NOTE: The older versions of Vault required this URL to end with /ImpTobaccoPlan. The path should be removed in version 5594 and above.

Importer code	Code of the importer (ORG_CODE) NOTE: To have more than one importer use different Id Issuer accounts. The Id Issuer account name must be the same as the Importer Code.
Edge ID	Access token of the importer.
Pack UID length	59
Bundle UID length	59
Case UID length	18
Signing key	Key used to sign the messages sent to STMA (Key1)
Private key ZIP	Import the private key, used to decrypt the ZIP file password (Key2)

The code format for this regulation is the following:

HR	HR-Tracking	MR	MR Datamatrix	MR DotCode
{SerialNumber}	{SerialNumber}	{SerialNumber}	{SerialNumber}	{SerialNumber}

The other tabs are standard for all regulations. You can find more details here : [Id Issuers](#)

▼ Debug mode

 Do not use in production !

A debug mode allows to emulate the STMA server. When this mode is enabled, the plugin will not contact the ID Issuer. The codes are generated by the plugin. They are fake. Use this mode only for testing purposes.

To display the debug setting → Right-click on the label “Edge ID”.

China Gate Configuration

FCTC driver China tab

In the Gate, the China regulation is enabled as a component of the FCTC driver.

1. Navigate to Configuration→ Op.Drivers→ FCTC driver.
2. Press Manage, then enable the China component.
3. Press Configure, then go to the China tab. Adapt the settings to your needs.

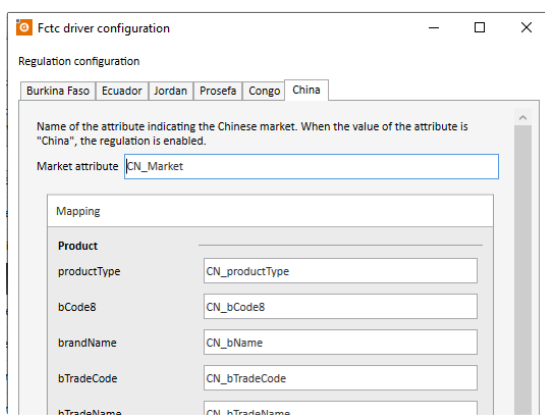


Figure 1: Configuration for Chinese regulation. Most of are for mapping attributes provided by the manufacturer.

Below, we list the attributes that must be transmitted to the Gate.

They are needed for:

- UID ordering
- Case QR code printing
- Transmission to other systems of the supply chain, Inexpress→ Inextrack, Inextend, who will send the events.

In the STMA documentation, the same data can have several names. We present all the names in the first column.

China documentation	Inexto mapping	Description	UID ordering	Case QR code	Events
orgCode prodOrgCode factCode	CN_impOrgCode*	Import agent code	X		X
orgId prodOrgId	CN_impOrgId*	Import agent ID			X
orgName prodOrgName factName	CN_impOrgName*	Import agent name			X
planType	CN_planType*	30: Import ; 60: Duty free import	X		

productType typeCode	CN_productType*	AC: Cigarettes ; AD: Cigars	X	X	X
bCode8 specCode	CN_bCode8*	Brand code. productType + 6 alphanumeric	X		X
bName specName	CN_bName*	Brand name			X
mppYear	CN_mppYear*	Year of production	X		
mppMonth	CN_mppMonth*	Semester of production. 01: first half ; 07: second half	X		
applyType	CN_applyType*	Optional. Always 1.	X		
applyReason	CN_applyReason*	Optional.	X		
applyQty	PO requested quantity	Quantity of UIDs to order.	X		
packagingCode		Computed by Inextor. 1:Pack, 2:Bundle, 3:Case	X		
edgeID		Master data manually provided in the Vault.	X		X
	CN_OrderPack*	Define if the PO or Stock must order pack UID.	X		
	CN_OrderBundle*	Define if the PO or Stock must order bundle UID.	X		
	CN_OrderCase*	Define if the PO or Stock must order case UID.	X		
	CN_IdPrefix*	Identification resolution prefix. (e.g. 99.1000.1)		X	
	CN_BusinessType*	Business type (e.g. 2: foreign import)		X	
	CN_SKU*	Product SKU at China Tobacco. 5 characters		X	
	CN_ProductionType*	Always 6: Foreign brands produced oversea.		X	
	CN_ProductionLine*	Production line.		X	
	CN_Printer*	Printer		X	
	CN_ProductionShift*	Shift		X	
	CN_SelfDefinedInfo*	?		X	
cigBrandCode13 bCode13	EAN13	EAN13. (This is already provided today for all packaging levels.)*		X	X
flowNodeCode	CN_flowNodeCode*	Link code. AC_R_001: Cigarette, AD_R_001: Cigar			X
prodSiteId	CN_prodSiteId*	Production enterprise Id			X

prodSiteCode	CN_prodSiteCode*	Production enterprise Code			X
prodSiteName	CN_prodSiteName*	Production enterprise Name			X
bTradeCode brandCode	CN_bTradeCode*	Brand code			X
bTradeName brandName	CN_bTradeName*	Brand name			X

*Attribute name can be mapped in the configuration of the Inextor Gate. The presented name, is the default one.

Gate global China attribute

The identification prefix composing the Case QR code must be set globally in the Gate.

1. Go to Configuration→ Gate settings.
2. Add a new attribute "CN_IdentificationPrefix" enter the value provided by STMA. Usual format is 2 digits + dot + 4 digits + dot + 1 digit (99.1000.1).
3. Press enter to go to a new line.
4. Press save.

Linkup China attributes

The line and printer identifier composing the Case QR code must be set for each production line.

1. Go to Serializers→ LinkUp setup→ Edit your linkup.
2. Add attribute **CN_Printer** with the value provided by authorities.
3. Add attribute **CN_ProductionLine** with the value provided by authorities.
4. Press enter to go to a new line.
5. Press save.

Contents Configuration Guide

Overview [🔗](#)

For products manufactured in or exported to China, specific code formats and data elements must be printed on the packaging.

This guide explains how to configure layouts and contents for Chinese regulatory compliance in INEXTOR.

For a generic overview of Contents, refer to this page: [Gate Contents](#).

Contents [🔗](#)

List of contents available for the Chinese market on the Gate

Content Identifier	Unit Type	Code Type	Description
Bundles_CN	Bundles	MR Code	QR code for bundles
Cases_CN_QrCode	Cases	MR Code	QR code for cases
CN_CaseEAN	Cases	HR Code	EAN 13 code
CN_CaseSerialNumber	Cases	HR Code	Case serial number
CN_Date	All	HR Code	Timestamp (second precision)
CN_DateHR	All	HR Code	Date timestamp in Chinese timezone
CN_IdentificationPrefix	All	HR Code	Case identification prefix
CN_impOrgCode	All	HR Code	Import agent identifier
CN_Printer	All	HR Code	Printer identifier
CN_ProductionLine	All	HR Code	Production line ID
CN_ProductionShift	All	HR Code	Shift identifier
CN_ProductType	All	HR Code	Product Type
CN_SelfDefinedInfo	All	HR Code	Custom defined attribute
CN_SKU	Packs	HR Code	China Tobacco SKU

Step-by-Step Configuration [🔗](#)

The following section provides the steps involved in creating a content configuration.

1. Create Layout [🔗](#)

1. Navigate to "Printing" → "Layout" and click on "New Layout"
2. Enter details:
 - Code: e.g., "CN_Packs"

- Name: "Chinese Packs Layout"
- Description: "Layout for Chinese market packs"
- Unit Type: Select the appropriate unit type for which the content is intended, e.g., Packs

Note that additional content may be necessary if your product is subject to further regulations.

2. Add Contents to Layout [🔗](#)

Code	TestChinese		
Name	TestChinese		
Description	TestChinese		
Unit Type	Packs		
Deleted	☐		
Layout Contents	Required	Commissioned As	Content
	☒	HR code	CN_Date
			Delete
	Add...		

Figure 1: Adding Content to Layouts

1. To add contents to the layout you created, first select the Layout and click "Add." as seen in Figure 1.
2. For each content:
 - Select content from list
 - Set "Required" flag if mandatory
 - Set "Code Level"
 - Configure "Commissioned As" based on content type:

3. Create Template [🔗](#)

1. Go to "Templates" → "New Template"
2. Configure:
 - Template Code: e.g., "CN_PackTemplate"
 - Device Family: Select printer type
 - Load template file or use editor
 - Extract injection points

4. Map Layout to Template [🔗](#)

1. Go to "Layout Implementations"
2. Create new implementation:
 - Select Chinese layout
 - Select template
 - Map contents to injection points:
 - Machine-readable codes (QR)
 - Human-readable elements
 - Identifiers

Operations (CN)

- [Generating and Exporting Chinese Unique Identifiers \(UIDs\)](#)
- [Manually Importing Chinese Codes from External Sources](#)

Generating and Exporting Chinese Unique Identifiers (UIDs)

In some Chinese markets, print shops are responsible for labeling codes onto packages that do not yet contain the product. These pre-labeled packages are then sent to factories for the actual packaging process. Due to technical limitations at the print shops, they need to receive the codes in advance as they lack the necessary software and machinery to print the codes themselves.

This guide provides step-by-step instructions for generating and exporting Chinese Unique Identifiers (UIDs) using the INEXTOR. It covers the process from enabling the necessary drivers to creating stock orders, approving them, and finally exporting the generated codes.

To get started, refer to the following step-by-step instructions:

1. Enable External Code Provider Driver

- 1.1. Navigate to Operation Drivers on the Gate.
- 1.2. Enable the "[External Code Provider](#)" driver.
- 1.3. Enable the "ExternalCodeProviderUidTransfer" component to allow Chinese code generation.
- 1.4 Go to Gate > Security. At the line UidTransfer, enable the appropriate access rights.

2. Create a Stock Order

- 2.1. Go to the **Gate > Products > Stocks** window.
- 2.2. Click "**New**" to create a new stock order.
- 2.3. Fill in the required fields:
 - Select the appropriate Manufactured Product for China.
 - Set the Requested Quantity.
 - Set the Order Expected Start Date (current or future date).
 - Set the Order Expected End Date (future date, must be after Start Date).
 - For more reference about this window, see [Gate > Production Orders](#)
- 2.4. In the CN tab on the right side:
 - Fill in the fields. Use the following document for reference [Production Order China Tab](#)

3. Approve the Stock Order

- 3.1. Go to Vault > Orders screen.
- 3.2. Locate the newly created stock order in the grid.
- 3.3. Highlight the stock order row.
- 3.4. Click on "Approve Orders" to approve the stock.

4. Verify External Codes

- 4.1. Navigate to Gate > Products > External Codes.

4.2. Verify the requested codes are available on the Gate. Use the stock order details to verify.

5. Export Codes [🔗](#)

5.1. Return to Gate > Products > Stocks.

5.2. Select the stock order you wish to export.

5.3. Click "Transfer" to open the UID Transfer Edit window.

5.4. Adjust the Requested Quantity if needed (e.g., to export a portion of the total stock).

5.5. Click "Export" to generate the ZIP file containing the codes.

6. Access Exported Codes [🔗](#)

6.1. Locate and open the exported ZIP file.

6.2. Inside, you'll find a CSV file with the following structure:

- First line: Column headers
- Second line: Export metadata
- Subsequent lines: Individual codes totaling the requested quantity.

7. Review UID Transfers [🔗](#)

7.1. To view a list of completed transfers (exports), go to Gate > Products > UID Transfers.

Manually Importing Chinese Codes from External Sources

This guide outlines the process for manually importing Chinese codes obtained from external sources (such as email or government websites) into the INEXTOR Vault system.

This feature is particularly useful when direct connection with the government ID issuer is not possible, providing an alternative method to make codes available for end users.

Operational Guide [🔗](#)

1. Disable Debug Mode in Vault [🔗](#)

- 1.1. Navigate to **Vault > FCTC Regulations > ID Issuers**.
- 1.2. Select the Chinese ID issuer (STMA) and edit the default STMA account.
- 1.3. Ensure the "**Debug Mode**" checkbox is unchecked.

Debug mode simulates the government server for testing purposes. If enabled, it prevents orders from being sent to the actual Vault.

2. Create a Production Order [🔗](#)

- 2.1. Go to **Gate > Production > Production Order**.
- 2.2. Create a new production order with the necessary details. For detailed information on filling out the production order form, refer to [Gate > Production Orders](#).

3. Verify Order in Vault [🔗](#)

- 3.1. Open **Vault > FCTC Regulations** window.
- 3.2. Locate the production order you created in the Gate. If the order is not visible, double-check that debug mode is disabled as per step 1.

4. Import Codes [🔗](#)

- 4.1. In the **Vault > FCTC Regulations** window, highlight the relevant production order.
- 4.2. Click the "**Import codes**" button.
- 4.3. In the new window that appears: - Click "**Browse**" to select the ZIP file containing the codes from your computer. - If the ZIP file is password-protected, be prepared to enter the password.
- 4.4. Click "**OK**" to begin the import process.

5. Verify Code Availability [🔗](#)

- 5.1. After import, go to **Gate > Production > Stocks**.
- 5.2. Verify that the imported codes are now available for export.

Inextor CRPT regulated market operational guide

Document Information Table	
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Introduction [🔗](#)

Document INEX-OG-00006: Inextor Center for Research in Perspective Technologies (CRPT) Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the CRPT regulated market requirements. Document INEX-OG-00006 is structured into four sections:

- **Introduction** - Inexto SA pre-requisites for the CPRT Regulated Market, system overview and background.
- **Configuration** - Requirements for configuring the Vault and Gate components for the CPRT regulation
- **Operations** - Code formats, PO management, code ordering, usage and aggregation reports etc..

- **Special Scenarios** - Imported code use, Code order approval, Fortuna code use.

Purpose [🔗](#)

The purpose of INEX-OG-00006 is to provide the required knowledge necessary to successfully set up Inextor correctly to support CRPT market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the CRPT regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)

- › [Introduction \(CRPT\)](#)
- › [Configuration \(CRPT\)](#)
- › [Operation \(CRPT\)](#)
- › [Special Scenarios \(CRPT\)](#)
- › [Appendix \(CRPT\)](#)

Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Introduction (CRPT)

- › Prerequisites (CRPT)
- Background (CRPT)
- System overview (CRPT)

Prerequisites (CRPT)

This page provides a list of prerequisites that must be fulfilled to use Inextor.

Installation of Inextor

The Inextor installation manual can be found in the [IT Setup Guide](#) section.

For any further questions on this topic, please contact:

- **INEXTO third-level support:** for all questions and support related to installation.
- **INEXTO second-level support:** for all questions and support related to installation and configuration.

CRPT Operational Guide - Prerequisites Checklist

- [CRPT Registration](#)
- [Communication with OMS](#)
- [Ordering of CRPT codes](#)
- [Summary](#)

CRPT Registration

In order to sell a CRPT-regulated product you need to have a registration in the country CRPT branch. The registration allows you to use the OMS API to order codes and send usage and aggregation reports.

- Manufacturers who are located in the country, or distribute their production by themselves, use their own registration with CRPT.
- Manufacturers who use a local distributor in the country, use the distributor's CRPT registration.

Communication with OMS

CRPT codes are ordered using the API of a service called OMS (Order Management Station, CV3 - Станция Управления Заказами, COS - Code Ordering Station, etc.). The API uses authentication tokens to secure the communication with the client software.

- Static tokens are used by the OMS services in Armenia, Kazakhstan, Kyrgyzstan, and Uzbekistan.
- Dynamic tokens are used by the OMS services in Russia.

i The Inexto suite cannot obtain tokens by itself, it uses 3rd party services to request tokens:

- OMS authenticator
- Sputnik
- other.

Contact Inexto support for more information.

Ordering of CRPT codes

The CRPT-regulated products must use both pack and bundle codes purchased from the regulator. To order codes the following information is required:

- GTIN for packs
- GTIN for bundles
- MRP (only for Russian tobacco production)

i The GTINs must be registered in the country's National Catalog in order to be used for production.

Summary

This is the information that is needed to start CRPT-regulated production for Armenia, Kazakhstan, Kyrgyzstan, Russia, Uzbekistan, etc.

	Where to get this value from?	Applicable for	Notes
Participant ID	From the CRPT registration (OMS website)	AM, KG, KZ, RU, UZ	Usually this is the tax number of the manufacturer or distributor.
OMS ID	From the CRPT registration (OMS website)	AM, KG, KZ, RU, UZ	The identifier of the OMS account
Factory Address	Factory	AM, KG, KZ, RU, UZ	The factory physical address
Factory GLN	Factory	AM, KG, KZ, RU, UZ	The unique location number of the factory
GTINs	From the National Catalog registration	AM, KG, KZ, RU, UZ	GTINs for packs and bundles with correct registration in the country National Catalog.
MRP	From the National Catalog registration	RU	Only for Russian tobacco products.

	Where to get this value from?	Applicable for	Notes
Static Token	From the CRPT registration (OMS website)	AM, KG, KZ, UZ	Not for Russia.
OMS Connection ID	From the CRPT registration (OMS website)	RU	This is used to obtain dynamic tokens for communication with the Russian cloud OMS.
Qualified Electronic Signature (Certificate+Keys)	Manufacturer or local distributor	RU	This is a special electronic signature that is used to make the CRPT registration. It is also used to obtain dynamic tokens for communication with the Russian cloud OMS.  This certificate is implemented with the Russian proprietary crypto standards. To use it, you need to install CryptoPro, software that implements the Russian crypto standards. CryptoPro is a paid software and requires a license.
Gate ID	Inexto Support	AM, KG, KZ, RU, UZ	Each Gate instance must have a unique value for Gate ID. Using the default value 0 is reserved only for Inexto testing purposes.

Background (CRPT)

A description of the CRPT regulation is outlined below:

Introduction to tobacco regulation in Russia [↗](#)

In December 2017, the Russian Government introduced a law requiring that all tobacco products produced and sold in Russia must carry a unique serialization code.

These unique codes allow the Russian Government control over any goods sold on the Russian market by monitoring their movement in the supply chain.

Timeline [↗](#)

The diagram below illustrates the timeline from the legislation to the adoption of the regulation.



With the introduction of this new law, all manufacturers producing tobacco products for Russia were now required to change their workflow as follows:

1. The manufacturer must generate a unique product code for serialization
2. The generated codes must be uploaded to the Russian ID Issuer for validation
 - The ID Issuer validates codes by adding an extra 4-characters known as check digits
3. The manufacturer downloads the validated codes for application on their product

The ID Issuer authorized to validate the manufacturer's code is referred to as The Center for Research in Perspective Technologies (CRPT).

About CRPT [↗](#)

Introduction and Purposes [↗](#)

CRPT is a private-public joint program of several shareholders approved by the Russian government to create a unified national track & trace digital system.

The CRPT, which is similar to its EU counterpart EMVO, is also the operator of the Chestny ZNAK (fair label) the national digital track and trace system.

Currently, almost a dozen product categories are already covered by the system, including drugs, medicine, fur coats, milk, tobacco products, clothes, footwear, perfumes, bicycles, wheelchairs, digital cameras, and tires (see [complete catalog](#)).

By 2024, the system is expected to be applied for all commodities.

For the CRPT-regulated market (Russia, Kazakhstan, etc. - probably the whole Commonwealth of Independent States (CIS) in the future), codes must be generated at the factory and then sent to the OMS (Order Management System), which is an intermediary (middleware) between the manufacturer and the ID Issuer (CRPT, i.e., Center for Research in Perspective Technologies). The OMS signs the codes (by adding some information to them) and returns them to the manufacturer's repository. They can then be used.

CRPT codes lose their validity after 20 days: They cannot be printed on products manufactured after that time (if they are, the product will be considered illegal).

The official Russian Track and Trace directive can be found [on the site of Chestny Znak](#). The CRPT organization and aim can be found on [the CRPT site](#).

Codes for packs [↗](#)

The following structure present the content of the Machine-Readable code for the Packs

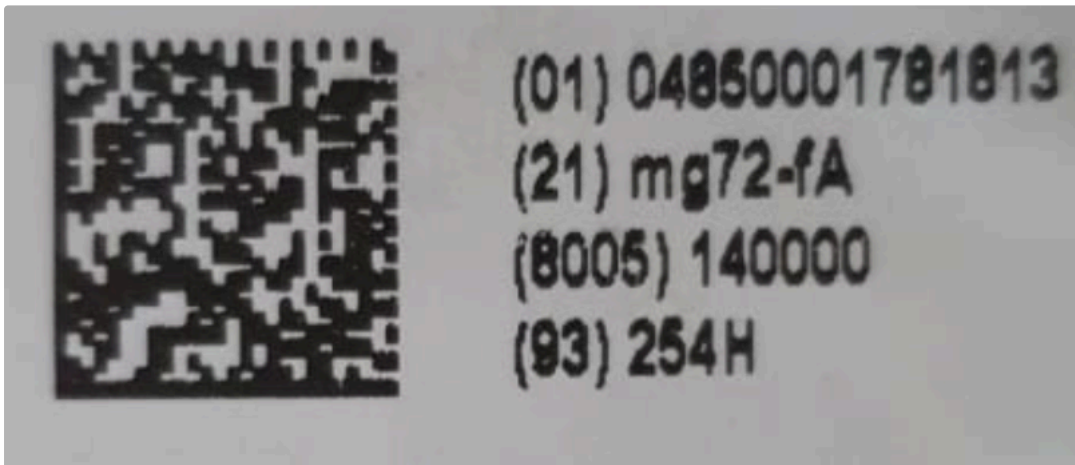
GTIN14 14 Digits Ex: 01234567891234	SERIAL 7 Characters ABCDEFGF	MRP 4 Characters ABCD	Signature 4 Characters ABCD
---	------------------------------------	-----------------------------	-----------------------------------



Codes for bundles [↗](#)

For the bundles, here is the structure, used by some tobacco manufacturers (JTI-PMI-BAT)

GTIN14 14 Digits Ex: 01234567891234	21	SERIAL 7 Characters ABCDEFGF		8005	MRP 6 Digits (Bundle price in kopecks) 125000		93	Signature 4 Characters ABCD		240	PRODUCTCODE 11 characters FAXXXXXX-XX
---	----	------------------------------------	---	------	--	---	----	-----------------------------------	---	-----	---



Any element after AI 93 is considered as optional for the bundles and can be added by the tobacco manufacturers

The elements in Orange are master data that must be provided by tobacco manufacturers as part of the attributes of production order or manufactured products.

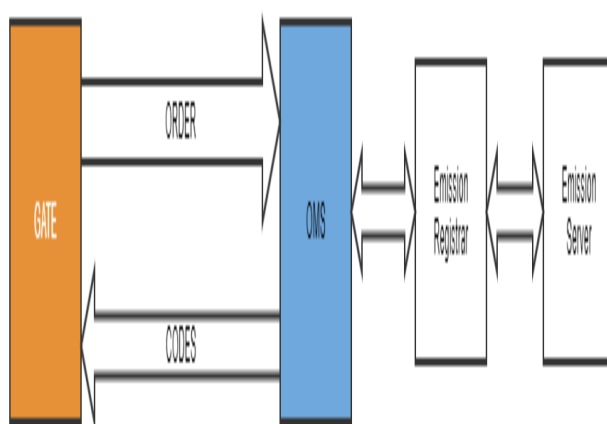
The elements in Gray are the serial number generated by the software.

The elements in Red are generated by the authorities.

So the software has to generate an internal code and send it to the OMS. The OMS then sends it back with an added signature. The MRP (Maximum Retail Price) must be added in between. There are 2 scenarios, depending on the OMS version used:

Information Flow

The flow of the information is as described in the following diagram.



OMS version 1:

The MRP must be added after receiving the signed code, between the internal code and the signature.

Example:

- Internal code sent to the OMS: 00000000001234Ym74k2D
- With the OMS signature: 00000000001234Ym74k2D5462
- The MRP is 125
- Final version, with the MRP added: 00000000001234Ym74k2D1255462

OMS version 2:

The MRP can be added to the internal code, and the concatenation sent to the OMS, which will add the signature before sending it back.

Example:

- Internal code with MRP (=125), sent to the OMS: 00000000001234Ym74k2D125
- With the OMS signature, final version: 00000000001234Ym74k2D1255462

System overview (CRPT)

See the information below for the general overview of the CRPT regulation implementation in Inextor.

This page contains an introduction to the system overview and the code ordering process in CRPT-regulated markets.

System Overview [🔗](#)

The following diagram shows a basic overview of the manufacturing systems used from requesting codes to reporting code usage data.

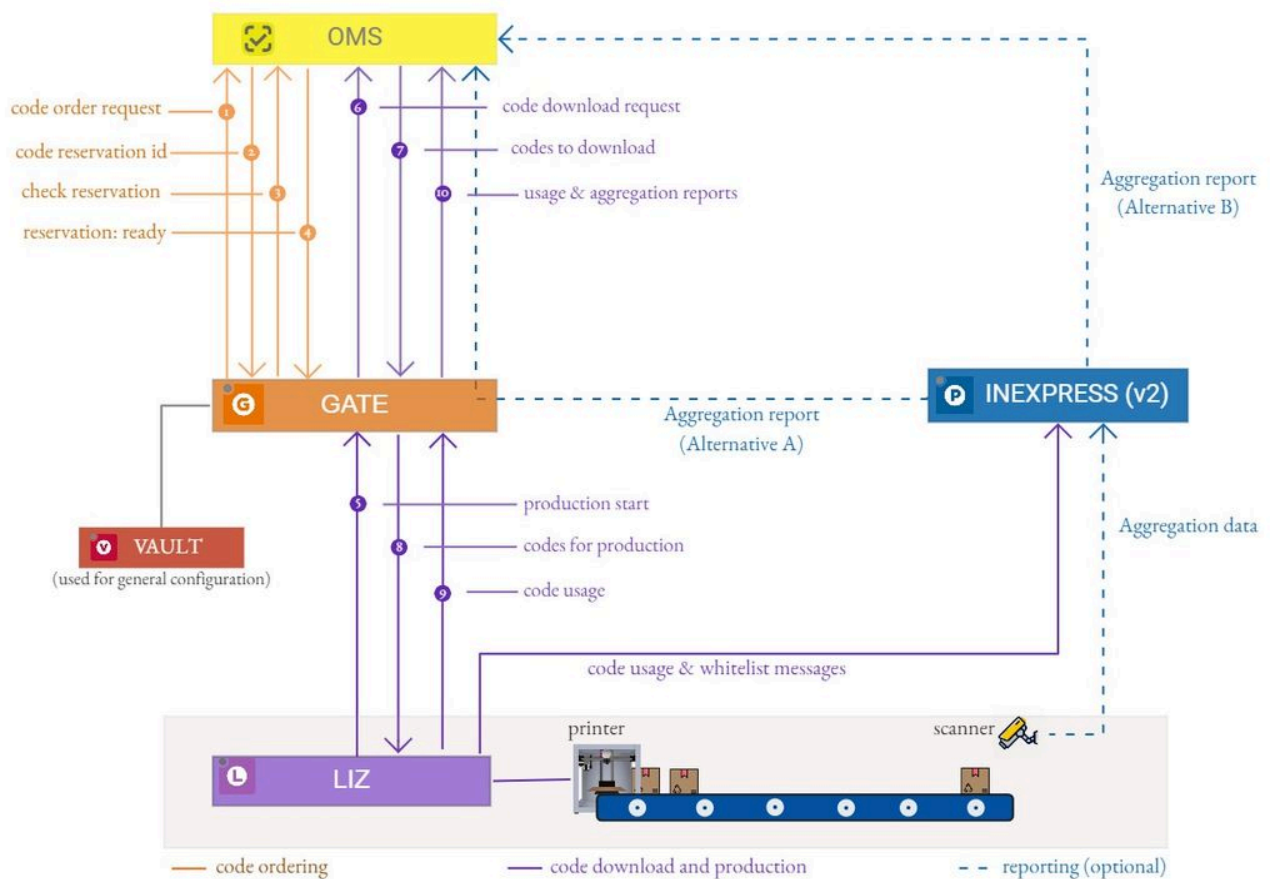


Figure 1: System overview of software systems used in production

Description of data flow in Figure 1 (without Inexpress v2)

1. A code order request is sent from the factory to OMS (CRPT) using the Gate.
 - a. In this scenario, the Gate will upload codes to be signed by CRPT
2. The code order request is saved by the OMS, and a response (with Reservation Id) is returned.
3. Using the Reservation Id, the Gate will continue to request the status of the code order.
4. If the code order is accepted by the OMS, the Reservation Id will return a status of Ready

- a. A status of Ready indicates the OMS has accepted (signed) the codes
- b. At this stage, the manufacturer can start production
5. Production is started on the Liz
6. A request to the OMS is sent from the Gate to download the signed codes
7. Codes are downloaded from the OMS to the Gate
8. The Gate will forwards chunks of codes to the Liz for production
 - a. At this stage, the Liz will forward the codes to printers and store the usage status (e.g., printed)
9. Code usage status is sent to the Gate by the Liz
10. The Gate sends a report to the OMS about the code usage and aggregation information.

Reporting and Alternatives

The reporting mechanism of the Inextor Suit can vary depending on the requirements of the manufacturer.

For the reporting section, the following alternatives exist:

1. Scanner → Inextor (Gate) → OMS
2. Scanner → Inexpress → Inextor (Gate) → OMS
3. Scanner → Inexpress (v2) → OMS
4. Scanner → Third-party → OMS

In the following diagram, the lines represent the alternative ways a code consumption report is sent from an Acquisition System (scanner) to the OMS.

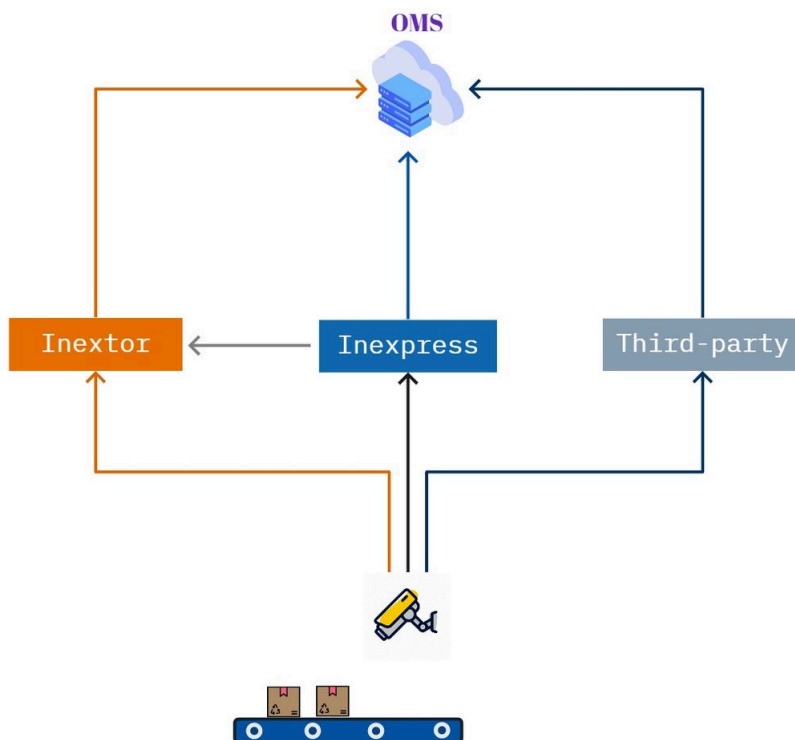


Figure 2: variations of the reporting system

CRPT Codes

The CRPT codes are hybrid codes: They are internal codes generated by INEXTOR and then sent to the government repository (OMS), which signs them by adding a signature string at the end of the code (meant to prevent tampering). CRPT codes are thus generated, sent to the OMS, signed by the OMS and finally imported into the Gate (which sends them on to the Liz) on the fly during production. There is no buffering. For a precise description of CRPT codes, see [Codes and code ordering flow: CRPT codes \(OMS\)](#).

More precisely, there is first a reservation for the codes sent to the OMS by the Gate, then the OMS confirms the codes are ready. When production starts (from the Liz), the Liz fetches the codes on the OMS through the Gate. Report on usage and aggregation is mandatory, and therefore the use of INEXPRESS is required.

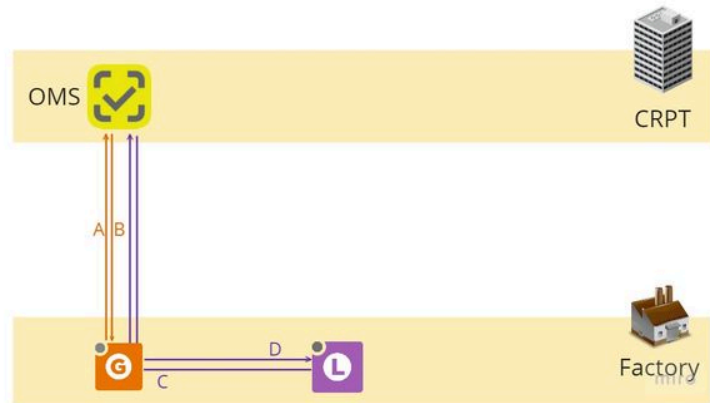
The workflow is the following:

1. Ordering codes

- (A) The Gate generates codes and sends them to CRPT to be signed (validation)
- (B) CRPT accepts order and returns signed codes

2. Downloading codes

- (C) Code download request is sent from Liz to Gate, and from Gate to OMS
- (D) CRPT accepts download request and returns signed codes



❌ CRPT codes lose their validity after 20 days.

The comprehensive description of the CRPT code implementation can be found on the [CRPT-Codes-OMS](#) page. The complete operational guide can be found in the [CRPT Regulated Markets Operational Guide](#).

CRPT Orders

Normally, CRPT Orders follow the same rules as other orders, i.e., "Orders based on PO" (see [Codes: External Codes](#)).

However, some customers are not ordering the complete amount of CRPT codes for a production before starting it. Instead, the Gate places orders on the fly, while the production is running. This mode is called "Orders based on Batch".

When the "Orders based on Batch" is used, the production is started without codes. The creation of the Batch will trigger a first set of OMS orders, usually one of 90'000 pack codes and one of 30'000 bundle codes. Once the number of codes Reserved, Downloaded and in Memory goes under the prefetch quantity, a new OMS order is generated. By default, the Liz has a prefetch duration of 20 minutes and a TI max of 1000 codes/min, thus, the prefetch quantity is 20'000 codes.

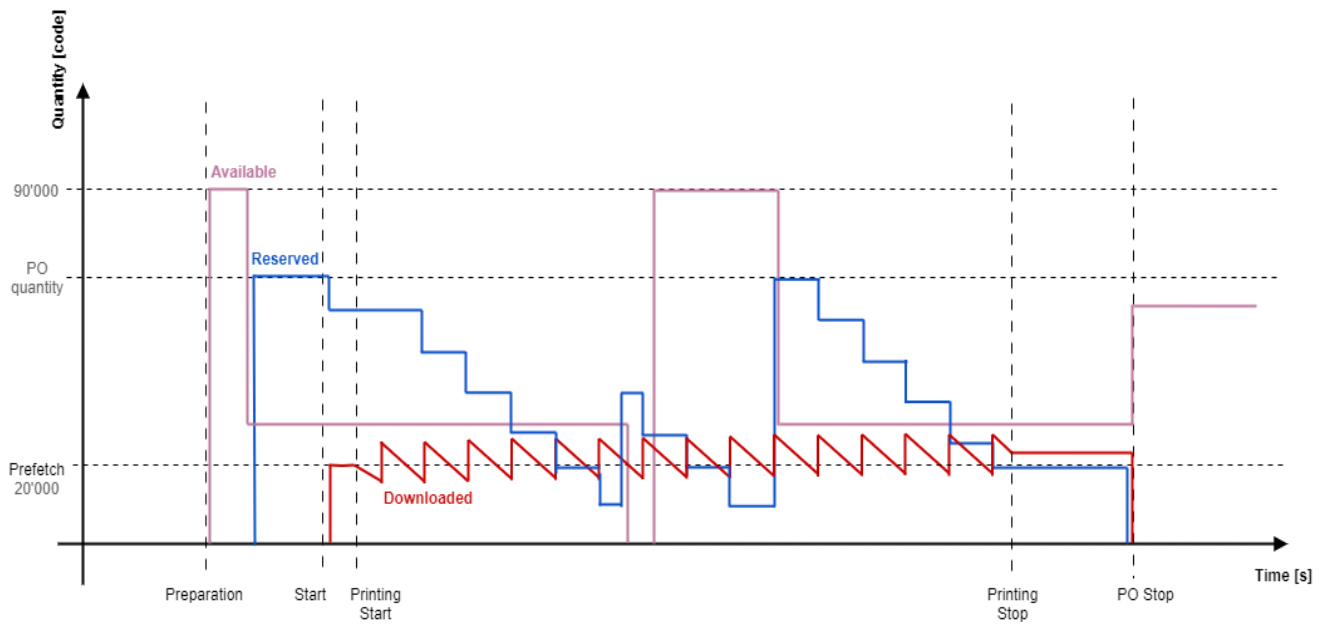
External Code Reference (ECR)

The External Code Reference for CRPT packs and bundles is composed of the following properties:

ECR Name	Structure	ECR Sample
RussiaExternalCodeReference_Packs	{GTIN}_{MRP}_{OMS_SCHEME}	00000046223715_012500_DefaultV2.0_Packs
RussiaExternalCodeReference_Bundles	{GTIN}_{MRP}_{OMS_SCHEME}	04600439938842_125000_DefaultV2.0_Bundles

Note: Markets that do not require the MRP code (e.g., Kazakhstan) use the **{GTIN}_{OMS_SCHEME}** ECR structure for packs and bundles (without the MRP code)

Code Quantity Presentation



Configuration (CRPT)

- [CRPT Operational Guide - Configuration Checklist](#)
- [CRPT Application Settings](#)
- [CRPT special attributes](#)
- [CRPT Driver Configuration](#)
- › [CRPT Master data](#)

CRPT Operational Guide - Configuration Checklist

- [Attributes](#)
- [Products](#)
 - [Product Attributes](#)
 - [Packs and Bundles GTINs \(All countries\)](#)
 - [MRP \(only for RUSSIA tobacco\)](#)
 - [Contents and Layouts](#)
 - [CRPT Contents](#)
 - [CRPT Layouts](#)
 - [Templates and Layout Implementations](#)
- [CRPT Operation Driver](#)
 - [General Settings](#)
 - [Gate ID](#)
 - [OMS Scheme](#)
 - [OMS Reports](#)
- [Market](#)
 - [Market Attributes](#)
 - [OMS_SCHEME](#)

Attributes

The CRPT driver needs the following attribute values to be present in the Production Order when it is created, or when the production starts:

- OMS Scheme Name (OMS_SCHEME attribute)
- Packs GTIN
- Bundles GTIN
- MRP (only for Russian tobacco production)

Usually the OMS_SCHEME attribute (name is important to be the same) is specified in Manufacturing Market, but could be on Manufactured Product or Production Order.

Usually the values with the GTINs are specified on Manufactured Product, but they can be provided with the Production Order too.

Products

Product Attributes

Packs and Bundles GTINs (All countries)

The GTINs for packs and bundles must be present as attributes in the manufactured product, or in the production order. Inextor can use shorter EANs too: 8 or 13 digits.

By default Inextor is configured to use attributes with names PGTIN14 and BGTIN14 for packs and bundles GTINs correspondingly.

 Make a note of the attribute names, we will need them when configuring the OMS scheme (below)

MRP (only for RUSSIA tobacco)

MRP (Maximum Retail Price, also MPLU) is a required property for tobacco products sold in Russia. It represents the maximum price of a pack or a bundle in Kopeks (Russian cent) and must be provided in all code order requests. The MRP is also part of the Russian tobacco codes.

By default Inextor is configured to look for this value in an attribute named PPRICE.

Contents and Layouts

CRPT Contents

By default a set of preconfigured contents for CRPT-regulated production is provided in Gate out of the box. The contents start with CRPT_. The formatted contents can be customized according the manufacturer needs. The dynamic contents should not need modifications.

For more detailed information about the CRPT contents and for special cases, visit [Contents](#).

CRPT Layouts

By default a set of preconfigured layouts for CRPT-regulated production is provided in Gate out of the box. The layouts start with CRPT_. They should not need modifications, but if needed, they can be customized according the manufacturer needs.

For more detailed information about the CRPT layout, visit [Layouts](#).

Templates and Layout Implementations

Templates are printer-specific and are not provided with Gate, as well as Layout Implementations.

For more detailed information about the CRPT templates, visit [Templates](#).

CRPT Operation Driver

General Settings

Gate ID

Gate ID is used to ensure the serial numbers generated by the Gate instance are unique.

⚠ Never use Gate ID = 0! Always configure a new Gate ID for QAS, and even during the test production phase on PROD. Contact Inexto support to provide you with a new Gate ID.

OMS Scheme

A new OMS scheme must be created for each new market (Armenia, Kazakhstan, Kyrgyzstan, Russia, Uzbekistan, etc.) and product type (Tobacco, NCP, etc.).

OMS scheme must be configured as explained in [Driver Configuration](#)

OMS Reports

OMS usage and aggregation reports are mandatory for CRPT-regulated production. Gate is able to send OMS reports, as well as Inexpress and some 3rd party systems.

OMS reports are configured as explained in [OMS Reports](#)

Market

Market Attributes

OMS_SCHEME

Add OMS_SCHEME attribute to the markets for CRPT-regulated production. The value must be the same as the corresponding OMS scheme for the market.

When one market is used for different production types (e.g. Russia market can produce Tobacco, NCP and OTP), configure the most frequently used OMS scheme name in the market. The other production types can be configured upon creation of production order. Contact Inexto 3rd level support for help in such cases.

For more detailed information about the CRPT markets, visit [Manufacturing Market](#).

CRPT Application Settings

Application Settings are key-value settings used to alter and modify certain operations of Inextor.

The list of all CRPT-specific Application Settings is documented on this page.

Application Settings

Category	Setting	Default value	Description
OmsConnectivityMonitor	OmsConnectivityMonitorEnabled	false	A value to specify whether the Gate will periodically check the connectivity with the OMS server. In case of interruption, users will receive a notification by email regarding the issue. <i>Note: This setting has been replaced, in version 4100, with the configuration of the underlying job.</i>
	OmsConnectivityInterval	5M	Specifies the time interval between two connectivity checks. Note: this option is taken into account only when OmsConnectivityMonitorEnabled = true <i>Note: This setting has been replaced, in version 4100, with the configuration of the underlying job.</i>
	OmsConnectivityAlertInterval	30	Specifies the time to wait before sending a notification to users, when the OMS connection was interrupted. Note: this option is taken into account only when OmsConnectivityMonitorEnabled = true
	OmsConnectivityReminderInterval	1H	Specifies how often to send a notification to users (excluding the first notification), when the OMS connection was interrupted. Note: this option is taken into account only when OmsConnectivityMonitorEnabled = true
	OmsConnectivityReminderCount	2	Specifies how many notifications to send to the users within the interval specified in OmsConnectivityReminderInterval (excluding the first notification), when the OMS connection was interrupted. Note: this option is taken into account only when OmsConnectivityMonitorEnabled = true
ReportAuditManager	OmsReportAuditPath	{RootApplicationData}\OmsReports	Specifies the root directory where to save the OMS report audit data. Since the amount of collected data could be large, it is recommended to choose a path that has plenty of free space.
	ArchiveOmsReportsOlderThan	7d	Specifies the maximum age of the audit records before they are archived. By default, this is 7d (one week).

OmsMessaging	OmsUsageMaximumAmongReportedCodes	1000	The maximum number of codes to be reported in one usage report.
	OmsMissingWindowPeriod	360d	Period to monitor for missing usage reports.
	OmsUsageMissingPackQueryPart	AVG(Printed) + AVG(Activated) + AVG(Aggregated)	Query to calculate for missing used packs
	OmsUsageMissingBdleQueryPart	AVG(SentToPrinter) + AVG(Printed) + AVG(Activated) + AVG(Aggregated)	Query to calculate for missing used bundles
	OmsUsageSanitizeCodes	false	Specifies if the system should sanitize the codes in the usage reports.
	OmsUsagePackFormat	^[0-9]{14}.{7}.{8}\$	Specifies a regular expression to validate pack codes in OMS usage reports
	OmsUsageBundleFormat	*01[0-9]{14}21.+93.{4}\$	Specifies a regular expression to validate bundle codes in OMS usage reports
	OmsDropoutMaximumAmountReportedCode	60000	The maximum number of codes to be reported in one dropout report.
OmsChunkManager	OmsDropoutReportOnExpire	false	Specifies if the codes in the expired chunks should be reported in the dropout report.
	DropoutReportOnExpire	false	If enabled, a dropout report for expired codes will be sent from the Gate to the OMS
OmsReportCleaner	Cleanup_CrptReport_RetentionTime	180d	To specify how long the Gate must keep reports sent to the OMS The reports are stored in the ReportEntries and Reports tables.
	Cleanup_CrptReports_MaxToDelete	2000	To specify the maximum number of CRPT reports to delete from the Gate database By default, the Delete CRPT reports background job is configured to: - run every hour - delete 2000 codes each time the background runs This means the background job deletes 48,000 each day automatically.
ProdPrepDriver	LogsOmsScheme	DefaultV1.0	[deprecated] Specifies the OMS Scheme used to send log files.
	OmsCheckDuplicate	false	Specifies if usage report duplicates are checked over several threads (affects performance)
	OmsRegisterAggregationStatuses	false	Specifies if the OMS reports aggregated status on the processing of the aggregation status
	CrptOrderValidationIsBlocking	false	Specifies if the validation warnings for production orders for CRPT-regulated markets should prevent the PO from being created. Currently, the validated PO properties are Link-Up and Quantity.
	OmsOrderFromPO	true	[deprecated] Specifies whether the creation of a PO on the Gate will send OMS code orders (see OMS Code Ordering).
	CrptDontOrderCodesForRework	false	If a PO is configured as rework via Inexpress attributes, and this setting is set to true, codes will not be ordered for unit types that will not be printed.
	EnableOmsAggregationReporting	true	A global switch to enable or disable the ability of the CRPT operation driver to send aggregation reports to

			OMS. This setting affects all OMS schemes.
	EnableOmsDropoutReporting	true	A global switch to enable or disable the ability of the CRPT operation driver to send dropout reports to OMS. This setting affects all OMS schemes.
	EnableOmsUsageReporting	true	A global switch to enable or disable the ability of the CRPT operation driver to send usage reports to OMS. This setting affects all OMS schemes.

[Gate](#) > [Configuration](#) > [Gate Configuration: Applications Settings](#)

CRPT special attributes

Name	Type	Default Value if attribute is missing	Description
OMS_ReportingActivated	Boolean	True	When this attribute is present on Production Order with value False the CRPT driver will not send usage or aggregation reports to the OMS. NOTE: In order this flag to work correctly, you need to disable the "OMS Reports: Missing Usage Generator" component of the CRPT codes driver.
OMS_SCHEME	String		When this attribute is present on Production Order and its value matches one of the configured OMS schemes, the CRPT codes driver will run all CRPT workflows - code ordering, usage and aggregation reporting, according to the configuration.

CRPT Driver Configuration

- [Operation Driver](#)
 - [General Settings](#)
- [OMS Scheme](#)
 - [Factory Information](#)
 - [Production Type](#)
 - [Authentication](#)
 - [Orders](#)
 - [Reports](#)
 - [OMS Servers](#)
 - [Production URLs](#)
 - [Test URLs](#)
- [Reported Units](#)
 - [Packs](#)
 - [Bundles](#)

Operation Driver [↗](#)

General Settings [↗](#)

- Gate ID - use the provided by Inexto support value. NEVER use the default 0!

 We recommend leaving the rest of the CRPT Codes driver settings with their default values.

OMS Scheme [↗](#)

Factory Information [↗](#)

- GLN - The factory Global Location Number
- Factory Name - The factory name
- Contact Person - Optional, you can leave this empty.
- Country - The code of the country where the factory is located.
- Participant ID - INN of the manufacturer or the distributor in the destination market country
- Address - The factory address

Production Type [↗](#)

This field specifies which OMS API to use when ordering codes and sending usage and aggregation reports

- Use Tobacco for cigarette production (All countries)
- Use NCP for nicotine containing production (Russia only)
- Use OTP for other tobacco products (Russia only)
- Beer for beer production (Russia and Uzbekistan only)
- Water for water production (Russia and Uzbekistan only)

i RRP products usually use Tobacco codes. Exception is Russia, which has two different categories NCP and OTP.

- Armenian RRP products use Tobacco codes (confirmed on 27.01.2025)

Authentication [🔗](#)

These settings specify the authentication values used to communicate with the OMS API. Not all countries support all options.

Option	Armenia	Kazakhstan	Kyrgyzstan	Uzbekistan	Russia V2	Russia V3
OMS ID	The OMS ID of the OMS account of the manufacturer or the distributor in the destination market country.					
Use Dynamic Tokens	no	no	no	no	yes	
Dynamic Token Provider	-	-	-	-	OMS Authenticator	
Dynamic Token Provider URL	-	-	-	-	URL of OMS Authenticator	
OMS Connection	-	-	-	-	OMS Connection is obtained from the OMS web site, in the Devices section.	
Sputnik API Key	-	-	-	-	Contact Inexto 3rd level support for more information	
Static Token	A Static Token is obtained from the OMS web site.				-	

Orders [🔗](#)

Option	Armenia	Kazakhstan	Kyrgyzstan	Uzbekistan	Russia V2	Russia V3
Sign Orders	no				- Tobacco, NCP - no - OTP, water, beer - yes	yes
Release Method	- PRODUCTION when the factory is in the Russian Federation - IMPORT when the factory is outside of the Russian Federation					
Create Method	Create Method contains the value of the createMethodType property in the code orders. We recommend contacting the country regulator for more information about what value to choose.					- TOBACCO, NCP - <empty> - OTP - SELF MADE
Expiration Scheme	Fixed				End of Month (PMI) or Fixed (everyone else)	

Expiration Period	5000d				19d
Expiration TimeZone	-				Moscow, St.Petersburg

 For more information about how to configure the Expiration settings read [CRPT Codes Expiration](#)

Reports

Option	Armenia	Kazakhstan	Kyrgyzstan	Uzbekistan	Russia V2 / V3
Machine Prefix	Factory GLN				
Aggregation Reports	yes				
Aggregated Items Count	yes				
Approve on Error	2H				
FIAS ID	<empty>				<empty>
KPP	<empty>				required
Send Aggregation Report productionDate	no	yes	yes	yes	yes

OMS Servers

Option	Armenia	Kazakhstan	Kyrgyzstan	Uzbekistan	Russia V2	Russia V3
Country	Armenia	Kazakhstan	Kyrgyzstan	Uzbekistan	Russian Federation	
API Version	V2				V2	V3

Production URLs

Option	Armenia	Kazakhstan	Kyrgyzstan	Uzbekistan	Russia
URL	https://icom.emark.am/	https://omscloud.ismet.kz	https://icom-legacy-api.teksher.kg	https://omscloud.asllikbelgisi.uz/	https://suzgrid.crpt.ru
Priority	1 (0 means disabled)				

Test URLs

Option	Armenia	Kazakhstan	Kyrgyzstan	Uzbekistan	Russia
URL	n/a	https://suzcloud.sta.ge.ismet.kz	n/a	https://omscloud.stage.aslbelgisi.uz	https://suz.sandbox.crptech.ru
Priority	1 (0 means disabled)				

Reported Units

Packs

- Name - Packs
- Unit - Packs
- Generation Mode
 - Tobacco, NCP - TOBACCO_STR
 - OTP - OTP_STR
 - Beer - BEER_UNIT_RU or BEER_UNIT_UZ
 - Water - WATER_UNIT_RU or WATER_UNIT_UZ
- Ordering Quantity - 90'000, Fixed
- Code State - [how to configure reports](#)
- GTIN - The name of the attribute that contains the 14 digit GTIN for units/packs, enclosed in { }
- Has MRP
 - Russia, Tobacco - yes
 - Otherwise - no
- MRP
 - Russia - The name of the attribute that contains the MRP for packs, enclosed in { }
 - All other countries - <leave empty>
- Cis Type - UNIT

Bundles

- Name - Bundles
- Unit - Bundles
- Generation Mode
 - Tobacco, NCP - GS1_SHORT_STR
 - OTP - GS1_OTP_STR
 - Beer - BEER_GROUP_RU or BEER_GROUP_UZ
 - Water - WATER_GROUP_RU or WATER_GROUP_UZ
- Ordering Quantity - 30'000, Fixed
- Code State - [how to configure reports](#)
- GTIN - The name of the attribute that contains the 14 digit GTIN for bundles/groups, enclosed in { }
- Has MRP
 - Russia, Tobacco - yes
 - Otherwise - no
- MRP

- Russia - The name of the attribute that contains the MRP for bundles, enclosed in { }
 - All other countries - <leave empty>
- Cis Type - GROUP or SET, depending on the registration of the product in the product catalog. The manufacturer should know this.

CRPT Master data

Double Regulation Overview

- [Double Regulation Overview](#)
- [Regulation Requirement By Market](#)
- [How to Configure for Double Regulation](#)
- [Which Codes Are Scanned During Double Regulation](#)

Double Regulation Overview

Double Regulation is the procedure in which a manufactured product falls under the regulatory requirements of multiple regulations (markets).

This occurs, for example when a product is made in a TPD market and sold in a CRPT market, requiring both TPD and CRPT codes to be visibly displayed on the product.

To comply with the regulation, a manufacturer must obtain and apply both TPD and the CRPT on each manufactured product.

Regulation Requirement By Market

The table below details all regulatory requirements in the context of the CRPT market.

Product Produced In	Product Sold In	Required Product Code	Additional Notes
CRPT Market (e.g., Russia)	CRPT Market (e.g., Russia)	CRPT	Standard CRPT code is mandatory.
CRPT Market (e.g., Russia)	Another CRPT Market (e.g., Uzbekistan)	CRPT (destination country)	Only the destination country's CRPT code is required.
CRPT Market	Non-regulated Market	None	No track and trace codes are required.
Non-regulated Market	CRPT Market	CRPT	Must bear CRPT-authorized track and trace codes.
TPD (EU)	CRPT Market	CRPT + TPD	Both CRPT and TPD codes are required.
CRPT Market	TPD (EU)	CRPT + TPD	Both CRPT and TPD codes are required.

How to Configure for Double Regulation

Information about double regulation is defined on the Gate via the user interface [Layout Implementation](#).

A Layout Implementation describes the relationship between Device Configuration, Layouts, and Templates, ensuring that the appropriate data is populated in the layout when generating a label.

The following configuration examples show the Layout Implementation for different markets:

From CRPT to CRPT Market

Example of a layout implementation for a product that is both manufactured and sold within a single CRPT market, specifically Russia in this case.

Device Configuration	MetronicLaser.Packs
Layout	P_2x0_RUSSIANPILOT
Template	P_2x0_RUSSIANPILOT
Content Mappings	• GTIN • PACK_PRICE • RUSSIA_PACK • RUSSIA_PACK_SERIAL

From CRPT to CRPT Market (different countries)

Example of a layout implementation for a product manufactured in one CRPT-regulated market and sold in another, e.g., Russia to Kyrgyzstan.

Device Configuration	MetronicLaser.Packs
Layout	B_KG1_DGUT
Template	B_KG1_DGUT
Content Mappings	• UPC_PACK • KG_PACK • KG_PACK_SERIAL

From CRPT to Unregulated Market

Example of a layout Implementation for a product manufactured in a CRPT-regulated market and sold in an unregulated market.

Here products do not require any track and trace codes. Generally, the only information that needs to be displayed is the production date.

Device Configuration	MetronicLaser.Packs
Layout	P_1x0_999_Date
Template	P_1x0_999_Date
Content Mappings	• ProductionDate

From Unregulated Market to CRPT Market

Example of a Layout Implementation for a product made in a non-regulated country and sold in CRPT Market.

Device Configuration	MetronicLaser.Packs
Layout	P_2x0_RUSSIANPILOT
Template	P_2x0_RUSSIANPILOT
Content Mappings	• GTIN • PACK_PRICE • RUSSIA_PACK • RUSIA_PACK_SERIAL

From TPD to CRPT Market

Example of a Layout Implementation for a product manufactured in a regulated market but sold in a CRPT-regulated market.

Device Configuration	MetronicLaser.Packs
Layout	P_AM1_DUP_BU
Template	P_AM1_DUP_BU
Content Mappings	• Packs_TPD_HR • PACK_PRICE • Packs_TPD_UPUI_Dotcode • AM_PACK

From CRPT to TPD Market

Documentation is not available. This is currently an uncommon scenario.

Which Codes Are Scanned During Double Regulation

In cases of double regulation, both sets of codes (origin market, destination market) are scanned.

For example, if a product is produced in Greece (TPD) and sold in Armenia (CRPT), both TPD and CRPT codes must be displayed and scanned.

In this scenario, the TPD code is categorized as "code-level 0" (main code), while the Armenian code is labeled as "code-level 3" (alternate code).

For more information about code levels, see [/wiki/spaces/CMPINT/pages/398244868](https://wiki.spaces/CMPINT/pages/398244868)

During the reporting process, INEXPRESS uses the INEXTRACK channel and the OMS channels to send code-level information to ensure compliance with the respective regulatory bodies.

Options for double coding

Manufacturers may need to manufacture products for CRPT markets in EU.

In that scenario, double-coding **TPD + CRPT** would be mandatory.

possible configurations:

- 2 codes printed by 1 printers
- 2 codes printed by 2 printers

option 1: synchronized printers with Domino Vision Control System (VCS), Liz transmitting 1 code white list pairing the 2 codes.

option 2: non-synchronized printers, Liz transmitting 2 independant code white lists.

option 1: 1 camera scanning 2 codes

option 2: 2 camera scanning 2 codes successively

threat (Inexpress): incorrect code association by scanners

OPTION 1:

The camera configuration is adapted to scan both codes.

The Hermos Activation System is adapted to transmit both codes (paired) to Inexpress.

Inexpress performs the **full verification** of code pairing against the Liz code white list, and transmits the events for CRPT and TPD.

OPTION 2:

The camera configuration is unchanged, or it is adapted to scan both codes. If it scans the second code, the advantage is that it can at least verify that the second code is readable, but it will drop the information and not transmit it.

The Hermos Activation System is unchanged.

Inexpress validates only the first code, and uses the code pairing information obtained from the Liz code white list, in order to transmit the events for CRPT and TPD.

	Risk	Impact	Detectability
Print Risk (CRPT code printing is not verified)	Medium	High	Low
Pairing Risk (Association between TPD code and CRPT code is not verified)	Low	High	Low

OPTION 3:

TO BE DEFINED.

The scope should be enlarged to cover the future scenario with double-coding for any regulation.

A specification should give the details of validation and possible limitations.

Documentation should explain the impact in terms of configuration and operations:

- Printing master data (INEXTOR)
- Printers (speed reduction ?)
- Scanners (re-configuration and training)
- INEXPRESS
- INEXTRACK (when applicable. For CRPT codes, INEXTRACK is out of the loop).

Manufacturing Market (CRPT)

A **Manufacturing Market** defines the market origin of the product.

To create a Manufacturing Market, open the **Gate** → **Products** → **Manufacturing Markets** window. See [Manufacturing Markets](#) for details.

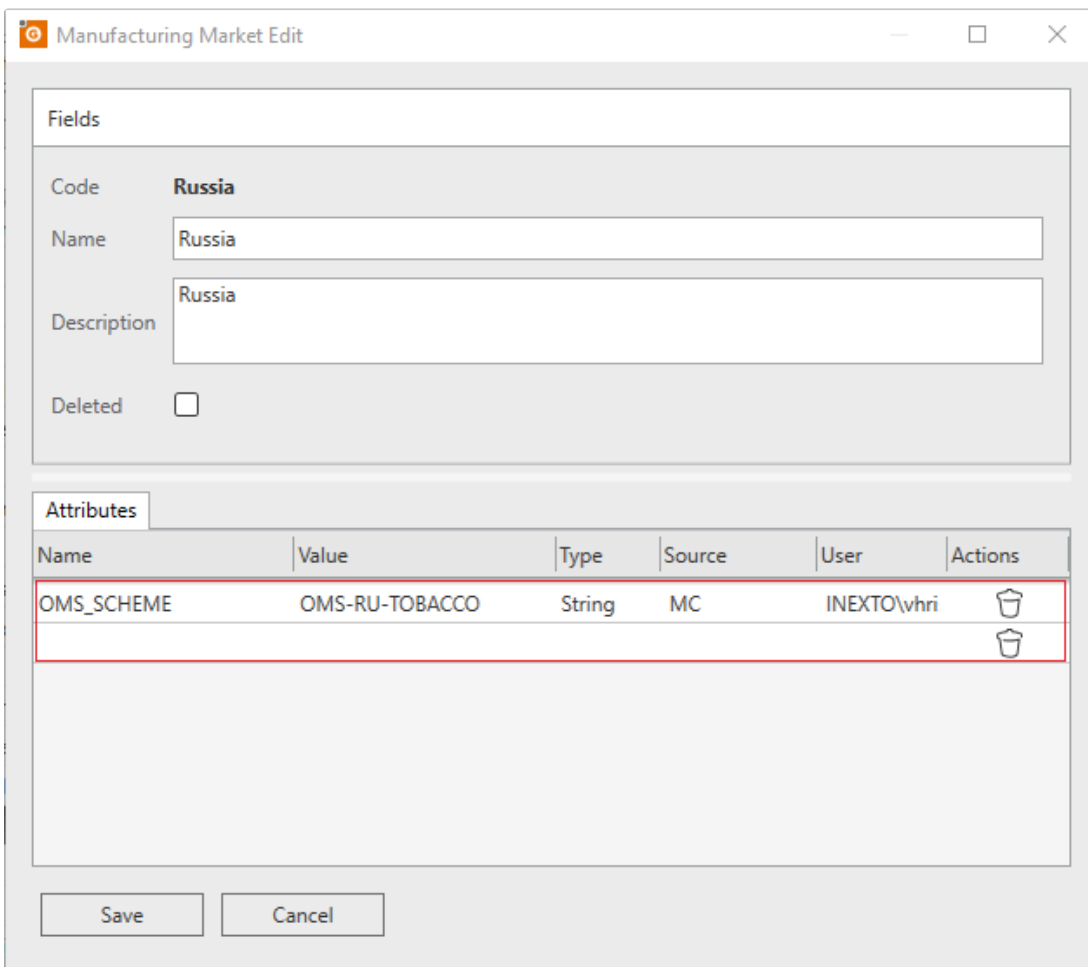
OMS_SCHEME

The **OMS_SCHEME** is a property that must be specified in the **Attributes** field of the **Manufacturing Markets** window.

This property is used to store the instance of an OMS Server associated with the market.

The Gate uses the OMS_SCHEME property to identify the CRPT production orders (Russia, Kazakhstan, Kyrgyzstan, Uzbekistan, etc.).

When the property is present in a production order, the CRPT operation driver will be activated and will order codes, send OMS reports, etc., depending on its configuration.



The screenshot shows the 'Manufacturing Market Edit' window. It has two main sections: 'Fields' and 'Attributes'.

Fields Section:

- Code:** Russia
- Name:** Russia
- Description:** Russia
- Deleted:** ☐

Attributes Section:

Name	Value	Type	Source	User	Actions
OMS_SCHEME	OMS-RU-TOBACCO	String	MC	INEXTO\vhri	

At the bottom of the window are 'Save' and 'Cancel' buttons.

Figure 1: Manufacturing Market window

The Attributes field in Figure 1 highlights the OMS configuration for the Russian market.

The required columns are:

- **Name:** defines an attribute name to use. Attribute **OMS_SCHEME** is required for CRPT markets.
- **Value:** must equal to one of the configured OMS schemes for the market.

For the OMS scheme configuration guide, see page [OMS v2](#).

For market and product-specific OMS values, see page [CRPT Driver Configuration](#).

CRPT Master Data - Contents

- [Overview](#)
 - [Dynamic Contents](#)
 - [Formatted Contents](#)
 - [Special Contents](#)
 - [Static Scripted Contents](#)
- [Default Contents](#)

Overview [🔗](#)

A [Content](#) represents a piece of human-readable or machine-readable information printed on the surface of products or product packages, e.g., product code, expiry date, price, etc.

Dynamic Contents [🔗](#)

Dynamic contents are used to print elements that are different in every label. Usually these are the CRPT codes themselves or parts of them, such as GTIN, serial number, signature, etc.

The following attributes from the **Code issuer arguments** table are **required** on each dynamic content that is used for CRPT-regulated production:

Attribute	Pack content	Bundle content
ExternalCodeReferencePropertyName	RussiaExternalCodeReference_Packs	RussiaExternalCodeReference_Bundles
SerializationLevelReference	Packs	Bundles
SOURCE	RUSSIA	RUSSIA



- Incorrect configuration will prevent Gate from ordering codes on demand. For more information about code ordering modes see [this article](#).
- Liz will prevent production orders that do not reference CRPT contents from starting production.

The following dynamic contents are available in each Gate instance:

- [CRPT_Packs_MR](#)
- [CRPT_Bundles_AI01](#)
- [CRPT_Bundles_AI21](#)
- [CRPT_Bundles_AI93](#)
- [CRPT_Bundles_AI8005](#)

Formatted Contents [🔗](#)

Depending on the printer, it might be needed to replace the default FNC1 characters with something else, or to append some text to the code (usually manufacturers append AI240 to bundle codes). There are several formatted contents that are provided with each Gate instance that combine several dynamic contents and can be configured according the manufacturer needs:

- [CRPT_Bundles_MR_KG](#)
- [CRPT_Bundles_MR_KZ](#)
- [CRPT_Bundles_MR_RU](#)
- [CRPT_Bundles_MR_UZ](#)

i The format of the codes may be different in the CRPT-regulated countries, hence we recommend using the formatted content for the corresponding country. If a content is missing, you can copy an existing one and modify it according the requirements.

Special Contents [🔗](#)

Sometimes the label must contain parts of the pack codes: GTIN, serial, MRP, etc. Contents that split pack codes are not provided by default, but can easily be created:

- [CRPT_Packs_GTIN](#)
- [CRPT_Packs_SERIAL](#)

Static Scripted Contents [🔗](#)

For Russian tobacco production the CRPT codes driver uses two static scripted contents to obtain and format pack and bundle MRP from production order or batch attributes. Each Gate instance contains these two contents by default:

- [CRPT_Packs_MRP](#)
- [CRPT_Bundles_MRP](#)

i The two default MRP contents will read the value of an attribute named PPRICE. If you want to use another attribute you should change the scripts accordingly.

Default Contents [🔗](#)

Following are the contents created by default in Gate for use in CRPT-regulated markets.

- [CRPT_Packs_MR](#)
- [CRPT_Packs_MRP](#)
- [CRPT_Bundles_MRP](#)
- [CRPT_Bundles_AI01](#)
- [CRPT_Bundles_AI21](#)
- [CRPT_Bundles_AI93](#)
- [CRPT_Bundles_AI8005](#)
- [CRPT_Bundles_MR_KG](#)
- [CRPT_Bundles_MR_KZ](#)
- [CRPT_Bundles_MR_RU](#)
- [CRPT_Bundles_MR_UZ](#)
- [Special CRPT Contents](#)

CRPT_Packs_MR

The **CRPT_Packs_MR** content is used to print machine-readable codes on packs.

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Packs_MR
Description	Machine-readable content for packs - universal for all countries, and both NCP and Tobacco productions.
Content type	Dynamic
Startup Mode Value	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Length	Min: 29 Max: 29
Code issuer	External
Code mask	(Not Set)
Code issuer arguments	
ExternalCodeReferencePropertyName	RussiaExternalCodeReference_Packs
SerializationLevelReference	Packs
SOURCE	RUSSIA

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

CRPT_Packs_MRP

The **CRPT_Packs_MRP** scripted content parses and formats the **Maximum Retail Price (MRP)** for packs, it is not used for printing. The MRP is required for Russian tobacco production.

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Packs_MRP
Description	Scripted content to extract MRP from attribute with name PPRICE
Content type	Static
Startup Mode Value	XXXXXX
Length	Min: 6 Max: 6
Property Name	CRPT_Packs_MRP
Code formatter	ScriptedProperties

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

Script

Edit Arguments > Script (tab)

```
1
2 public const string PRICE_PROPERTY = "PPRICE";
3 public static Regex priceExtractor = new Regex(@"^(?<PRICE>\d+(?:\.\d+)?)$", RegexOptions.Compiled);
4
5 public string Generate() {
6     if (!Attributes.ContainsKey(PRICE_PROPERTY)) {
7         Log(MessageLevel.Error, $"Property {PRICE_PROPERTY} is not defined");
8         return null;
9     }
10
11     var priceProperty = Attributes[PRICE_PROPERTY];
12     if (String.IsNullOrEmpty(priceProperty))
13     {
14         Log(MessageLevel.Error, $"Property {PRICE_PROPERTY} is empty");
15         return null;
16     }
17
18     if (!priceExtractor.IsMatch(priceProperty))
19     {
20         Log(MessageLevel.Error, $"Property {PRICE_PROPERTY} is not in the correct format {priceProperty}");
21         return null;
22     }
23
24     var m = priceExtractor.Match(priceProperty).Groups["PRICE"].Value;
25
26     float priceValue;
27     if (!FloatExtensions.TryParse(m, out priceValue)) {
28         Log(MessageLevel.Error, $"Property {PRICE_PROPERTY} is not in the correct format {priceProperty}");
29         return null;
30     }
31
32     uint truncatedKopecs = (uint)Math.Round(priceValue * 100);
33     return truncatedKopecs.ToString("D6");
34 }
```

① The difference between the bundle and pack scripts is on line 31, where we multiply the price. For bundles we multiply by 1000, for packs - by 100.

CRPT_Bundles_MRP

The **CRPT_Bundles_MRP** scripted content parses and formats the **Maximum Retail Price (MRP)** for bundles, it is not used for printing. The MRP is required for Russian tobacco production.

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Bundles_MRP
Description	Scripted content to extract MRP from attribute with name PPRICE
Content type	Static
Startup Mode Value	XXXXXX
Length	Min: 6 Max: 6
Property Name	CRPT_Bundles_MRP
Code formatter	ScriptedProperties

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

Script

Edit Arguments > Script (tab)

```
1
2 public const string PRICE_PROPERTY = "PPRICE";
3 public static Regex priceExtractor = new Regex(@"^(?<PRICE>\d+(?:\.\d+)?)$", RegexOptions.Compiled);
4
5 public string Generate() {
6     if (!Attributes.ContainsKey(PRICE_PROPERTY)) {
7         Log(MessageLevel.Error, $"Property {PRICE_PROPERTY} is not defined");
8         return null;
9     }
10
11     var priceProperty = Attributes[PRICE_PROPERTY];
12     if (String.IsNullOrEmpty(priceProperty))
13     {
14         Log(MessageLevel.Error, $"Property {PRICE_PROPERTY} is empty");
15         return null;
16     }
17
18     if (!priceExtractor.IsMatch(priceProperty))
19     {
20         Log(MessageLevel.Error, $"Property {PRICE_PROPERTY} is not in the correct format {priceProperty}");
21         return null;
22     }
23
24     var m = priceExtractor.Match(priceProperty).Groups["PRICE"].Value;
25
26     float priceValue;
27     if (!FloatExtensions.TryParse(m, out priceValue)) {
28         Log(MessageLevel.Error, $"Property {PRICE_PROPERTY} is not in the correct format {priceProperty}");
29         return null;
30     }
31
32     uint truncatedKopecs = (uint)Math.Round(priceValue * 1000);
33     return truncatedKopecs.ToString("D6");
34 }
```

① The difference between the bundle and pack scripts is on line 31, where we multiply the price. For bundles we multiply by 1000, for packs - by 100.



CRPT_Bundles_AI01

The **CRPT_Bundles_AI01** content is used to print the value of GTIN14 of a product on bundles.

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Bundles_AI01
Description	Content to extract GTIN from a bundle code
Content type	Dynamic
Startup Mode Value	XXXXXXXXXXXXXX
Length	Min: 14 Max: 14
Code issuer	External
Code mask	(Not Set)
Code issuer arguments	
ExternalCodeReferencePropertyName	RussiaExternalCodeReference_Bundles
SerializationLevelReference	Bundles
SOURCE	RUSSIA
Format	AI(01)

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

CRPT_Bundles_AI21

The **CRPT_Bundles_AI21** content is used to print a serial number of the product on bundles.

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Bundles_AI21
Description	Content to extract a serial number from a bundle code.
Content type	Dynamic
Startup Mode Value	XXXXXXX
Length	Min: 7 Max: 7
Code issuer	External
Code mask	(Not Set)
Code issuer arguments	
ExternalCodeReferencePropertyName	RussiaExternalCodeReference_Bundles
SerializationLevelReference	Bundles
SOURCE	RUSSIA
Format	AI(21)

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

CRPT_Bundles_AI93

The **CRPT_Bundles_AI93** content is used to print a CRPT crypto code (check digits)

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Bundles_AI93
Description	Content to extract signature from a bundle code.
Content type	Dynamic
Startup Mode Value	XXXX
Length	Min: 4 Max: 4
Code issuer	External
Code mask	(Not Set)
Code issuer arguments	
ExternalCodeReferencePropertyName	RussiaExternalCodeReference_Bundles
SerializationLevelReference	Bundles
SOURCE	RUSSIA
Format	AI(93)

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

CRPT_Bundles_AI8005

The **CRPT_Bundles_AI8005** content is used to print the price of a bundle

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Bundles_AI8005
Description	Content to extract MRP from a bundle code. Use for Russian tobacco and NCP production.
Content type	Dynamic
Startup Mode Value	XXXXXX
Length	Min: 6 Max: 6
Code issuer	External
Code mask	(Not Set)
Code issuer arguments	
ExternalCodeReferencePropertyName	RussiaExternalCodeReference_Bundles
SerializationLevelReference	Bundles
SOURCE	RUSSIA
Format	AI(8005)

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

CRPT_Bundles_MR_KG

The **CRPT_Bundles_MR_KG** content is used to print machine-readable codes on Kazakhstan bundles.

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Bundles_MR_KG
Description	Machine Readable content for Bundles for Kyrgyzstan tobacco production. This is formatted content that combines CRPT_Bundles_AI01, CRPT_Bundles_AI21, CRPT_Bundles_AI93 and adds GS characters. Can be customized if needed.
Content type	Formatted
Format	[FNC1]01{CRPT_Bundles_AI01}21{CRPT_Bundles_AI21}[FNC1]93{CRPT_Bundles_AI93}
Code mask	(Not Set)

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

CRPT_Bundles_MR_KZ

The **CRPT_Bundles_MR_KZ** content is used to print machine-readable codes on a bundle of beer products

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Bundles_MR_KZ
Description	Machine Readable content for Bundles for Kazakhstan tobacco production. This is a formatted content that combines CRPT_Bundles_AI01, CRPT_Bundles_AI21, CRPT_Bundles_AI93 and adds GS characters. Can be customized if needed.
Content type	Formatted
Format	[FNC1]01{CRPT_Bundles_AI01}21{CRPT_Bundles_AI21}[FNC1]93{CRPT_Bundles_AI93}
Code mask	(Not Set)

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

CRPT_Bundles_MR_RU

The **CRPT_Bundles_MR_RU** content is used to print machine-readable codes on Russian bundles.

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Bundles_MR_RU
Description	Machine Readable content for Bundles for Russian tobacco and NCP production. This is formatted content that combines CRPT_Bundles_AI01, CRPT_Bundles_AI21, CRPT_Bundles_AI8005, CRPT_Bundles_AI93 and adds GS characters. Can be customized if needed.
Content type	Formatted
Format	[FNC1]01{CRPT_Bundles_AI01}21{CRPT_Bundles_AI21}[FNC1]8005{CRPT_Bundles_AI8005} [FNC1]93{CRPT_Bundles_AI93}
Code mask	(Not Set)

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

CRPT_Bundles_MR_UZ

The **CRPT_Bundles_MR_UZ** content is used to print machine-readable codes on Uzbekistan bundles.

The default configuration of the content is displayed below:

Property	Value
Code	CRPT_Bundles_MR_UZ
Description	Machine Readable content for Bundles for Uzbekistan tobacco production. This is a formatted content that combines CRPT_Bundles_AI01, CRPT_Bundles_AI21, CRPT_Bundles_AI93 and adds GS characters. Can be customized if needed.
Content type	Formatted
Format	[FNC1]01{CRPT_Bundles_AI01}21{CRPT_Bundles_AI21}[FNC1]93{CRPT_Bundles_AI93}
Code mask	(Not Set)

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

Special CRPT Contents

- [Overview](#)
- [CRPT_Packs_GTIN](#)
- [CRPT_Packs_SERIAL](#)

Overview

Sometimes the pack labels must contain other information, in addition to the datamatrix, such as GTIN, serial number, etc. The tobacco, NCP and OTP pack codes are not GS1 and that's why the standard GS1 format strings that we use for bundle contents do not work for packs - AI(01), AI(21), etc. The pack codes must use the string cut-off formats: [0,14], [14,7], etc. When a content uses this format string, it will skip characters from the code with count equal to the first number and return characters with count equal to the second number.

For example:

- Format [0,14] applied on serial 00000046233820EPIH?qiNUTac+ZG will return 00000046233820
- Format [14,7] applied on serial 00000046233820EPIH?qiNUTac+ZG will return EPIH?qi



Some factories try to use CRPT_Bundles_AI01 to obtain the GTIN from pack codes get the error below when they start production. To fix the problem, create CRPT_Packs_GTIN (below) and use it instead.

System.InvalidOperationException: [CommonMessageId:3124]Could not find application identifier for AI(1) for code XXXXX

CRPT_Packs_GTIN

The following settings will configure a content that returns the GTIN part of a CRPT pack code for tobacco, NCP or OTP:

Property	Value
Code	CRPT_Packs_GTIN
Description	Machine-readable content for packs that returns only the GTIN part of the code - universal for all countries, tobacco, NCP and OTP.
Content type	Dynamic
Startup Mode Value	XXXXXXXXXXXXXX
Length	Min: 14 Max: 14
Code issuer	External
Code mask	(Not Set)
Code issuer arguments	
ExternalCodeReferencePropertyName	RussiaExternalCodeReference_Packs
SerializationLevelReference	Packs
SOURCE	RUSSIA
Format	[0,14]

Screen: Gate → Layouts → Contents **Reference Guide:** [Contents](#)



Since the CRPT pack codes are not following the GS1 standard, we use Format = [0,14] to take the first 14 characters of the code.

CRPT_Packs_SERIAL

The following settings will configure a content that returns the serial number part of a CRPT pack code for tobacco, NCP or OTP:

Property	Value
Code	CRPT_Packs_SERIAL
Description	Machine-readable content for packs that returns only the serial number

	part of the code - universal for all countries, tobacco, NCP and OTP.
Content type	Dynamic
Startup Mode Value	XXXXXXX
Length	Min: 7 Max: 7
Code issuer	External
Code mask	(Not Set)
Code issuer arguments	
ExternalCodeReferencePropertyName	RussiaExternalCodeReference_Packs
SerializationLevelReference	Packs
SOURCE	RUSSIA
Format	[14,7]

Screen: Gate → Layouts → Contents Reference Guide: [Contents](#)

i Since the CRPT pack codes are not following the GS1 standard, we use Format = [14,7] to take 7 characters, starting at position 14 (zero-based).

Layouts (CRPT)

Overview [↗](#)

A layout defines an area on a package of a product on which some information must be printed. A layout is associated to a unit type to define on which packaging level the information has to be applied for printing. In other words, the layout defines the serialization requirements for a given unit type of a product (what needs to be printed). Additional documentation can be found in [Layouts](#).

i Due to the different code formats, the products for different countries and/or production types may/should use different contents. Please, ensure that the layouts reference the correct contents in themselves and in their implementations.

Integration [↗](#)

Vault [↗](#)

To send commissioning events through the Vault the layouts must specify a content containing machine-readable code that is commissioned as **MR code**.

INEXPRESS [↗](#)

In order Liz to be able to send code white lists to INEXPRESS, the layouts must specify a content containing machine-readable code that is commissioned as **MR code**.

Examples [↗](#)

The following screenshots demonstrate the default Packs and Bundles layout configurations for Russia, that are available on Gate.

- Layout CRPT_Packs references content CRPT_Packs_MR and specifies it is commissioned as MR code. In addition, the content is marked as required to be added all implementations of this layout.
- Layout CRPT_Bundles references content CRPT_Bundles_MR_RU and specifies it is commissioned as MR code. In addition, the content is marked as required to be added all implementations of this layout.

Packs	Bundles

Edit Layout

Code: CRPT_Packs

Name: CRPT packs layout

Description: Packs layout for Russian products

Unit Type: Packs

Deleted: ☐

Required	Commissioned As	Content	Delete
☒	MR code	CRPT_Packs_MR	Delete

Validation results: ✔ Successful

OK Cancel

The default Packs layout specifies that the value of the default pack machine readable content should be commissioned as MR code.

Edit Layout

Code: CRPT_Bundles_RU

Name: CRPT bundles layout for RU

Description: Packs layout for Russian products

Unit Type: Bundles

Deleted: ☐

Required	Commissioned As	Content	Delete
☒	MR code	CRPT_Bundles_MR_RU	Delete

Validation results: ✔ Successful

OK Cancel

The default Bundles layout specifies that the value of the default bundle machine readable content should be commissioned as MR code.

- The layouts and the contents on the screenshots above are reference data that is available on all Gate instances with version newer or equal to **v10.1.0.3486**
- The factories historically used contents and layouts with no common naming convention and the configuration could be different in the different factories

Templates (CRPT)

Overview [🔗](#)

A template specifies, for a given equipment, how to print several pieces of information in various formats (text, data matrix, dotcode, barcode,...) on an area of a product.

A template is usually created using a visual designer of the equipment provider for a given device. This designer tool provides operators with the ability to place, arrange and format template variables on a layout representing an area of the target product package. The output of such a designer is a template file that can be of various formats depending on the equipment provider (plain text, xml). Once created with the visual tool, the template has to be imported on the Gate.

To import your template, use the Gate → Templates → Templates window. The relevant documentation can be found in [Templates](#).

Label requirements [🔗](#)

Machine Readable [🔗](#)

The codes must be printed in a DataMatrix that complies with the following requirements:

- ✓ 40. The barcode format means of identification meet the following requirements:
 - (a) For consumer and group packaging, a module of at least 0.254 millimeter shall be used for consumer and group packaging;
 - (b) The probability of guessing the means of identification shall be negligibly small and in any case less than one in 10,000;
 - (c) the recognition and error correction function shall be equivalent to or greater than the DataMatrix ECC200;

Human Readable [🔗](#)

The human readable part of the CRPT labels usually contains one or more of the following elements:

- Manufacturing date
- Serial number
- MRP (for Russian tobacco production)
- GTIN

Compatible Printers [🔗](#)

The [Compatible Printers](#) page provides you a list of printers supported by INEXTOR.

Operation (CRPT)

Production operations can be performed using only the Inexto Suite Software or through third-party software.

Select the method that suits your production method from the list below:

- [CRPT Code Formats](#)
- [CRPT Production Order Management](#)
- [CRPT Code Ordering](#)
- [Reimbursement+Reports](#)
- [OMS Usage And Aggregation Reports](#)
- [CRPT codes materialization](#)
- [CRPT Codes Expiration](#)
- [CRPT Data Retention and Cleanup](#)
- [CRPT Scripting](#)

CRPT Code Formats

- [Overview](#)
- [Official Reference](#)
- [Tobacco Formats](#)
 - [Packs](#)
 - [Bundles](#)
- [Beverage Formats](#)
 - [Units](#)
 - [Groups](#)

Overview

The different supported countries and industries often have different code formats. The common elements GTIN, Serial Number and Signature (Crypto Tail), are always present, but their format could be different.

Gate uses self-generated serial numbers and thus for each unit type for each country and/or industry the generation mode has to be specified. The generation mode also controls certain parameters of the OMS code order for additional validation. Serial numbers that are OMS-generated are not supported by Gate.

The following generation modes are supported:

- TOBACCO_STR - generates tobacco and NCP pack codes
- GS1_SHORT_STR - generates tobacco and NCP bundle codes
- OTP_STR - generates OTP pack codes
- GS1_OTP_STR - generates OTP bundle codes
- BEER_RU_UNIT - generates beer unit codes for Russia
- BEER_RU_UNIT_SHORT - generates optimized beer unit codes for Russia that can fit in DM 20x20. This mode has less unique combinations than BEER_RU_UNIT and should be used only if DM 20x20 is required.
- WATER_RU_UNIT - generates water unit codes for Russia. Gate generates 12 characters, OMS adds country code in front of the serial.
- WATER_RU_GROUP - generates water group codes for Uzbekistan. Gate generates 12 characters, OMS adds country code in front of the serial.
- BEER_UZ_UNIT - generates beer unit codes for Uzbekistan. Gate generates 6 characters, OMS adds country code in front of the serial.
- BEER_UZ_GROUP - generates beer group codes for Uzbekistan. Gate generates 12 characters, OMS adds country code in front of the serial.
- WATER_UZ_UNIT - generates water unit codes for Uzbekistan. Gate generates 6 characters, OMS adds country code in front of the serial.

❗ Each of the generation modes has a variant that uses reduced charset (62 characters, instead of 82). The names of these generation modes end with _ALPHA. They have much less unique combinations than the full-charset modes and should not be used unless the machines don't support the full character set.

Official Reference

The following links lead to the country regulator web sites:

- AM <https://e-mark.am/ru/kb>
- KG <https://main.teksher.kg/about.html>
- KZ <https://qazmarka.kz/law/>
- UZ <https://help.crpt-turon.uz/hc/en-us/categories/4416610961809-Getting-started-at-ASL-BELGISI>

Tobacco Formats

Packs

The packs format for Tobacco, NCP and OTP is plain text format (i.e. non-GS1). The code elements are:

- GTIN14 - 14-character GTIN number
- Serial7 - 7-character serial number, using the GS82 charset.
- MRP4 - 4-character MRP (market retail price), only for Russia. Russian NCP and OTP codes use AAAA in place of the MRP.
- Signature4 or Signature8- 4 or 8-character signature generated by the OMS.

	Generation Mode	Format	Length	Sample
Armenia Tobacco	TOBACCO_STR	<GTIN14><Serial7><Signature8>	29	
Kazakhstan Tobacco	TOBACCO_STR	<GTIN14><Serial7><Signature8>		00000046082251RxT9keRVDIkKytO
Kyrgyzstan Tobacco	TOBACCO_STR	<GTIN14><Serial7><Signature8>		
Russia NCP	TOBACCO_STR	<GTIN14><Serial7><MRP4><Signature4>		04016001412441RxT9keRAAAAdGVz
Russia OTP	OTP_STR	<GTIN14><Serial7><MRP4><Signature4>		04006381484534RxT9keRAAAAdGVz

Russia Tobacco	TOBACCO_STR	<GTIN14><Serial7><MRP4><Signature4>	040160014124348URFCZuAB.AdGVz
Uzbekistan Tobacco	TOBACCO_STR	<GTIN14><Serial7><Signature8>	05367567230024RxT9keROXJpQzRo

Bundles

The bundles' format for Tobacco, NCP and OTP is GS1, standard format. The code elements are:

- GTIN14 - 14-character GTIN number
- Serial7 - 7-character serial number, using the GS82 charset
- MRP6 - 6-character MRP (market retail price), only for Russian tobacco. Russian NCP codes use 000000 in place of the MRP. The other countries generate longer signature in order to maintain the same code size.
- Signature4 or Signature8 - 4 or 8-character signature generated by the OMS

Optionally the following elements can be appended:

- BrandCode - manufacturer-specific brand code, as GS1 application identifier 240

	Generation Mode	Format	Length	Sample
Armenia Tobacco	GS1_SHORT_STR	01<GTIN14>21<Serial7><FNC>93<Signature8>	31-41	
Kazakhstan Tobacco	GS1_SHORT_STR	01<GTIN14>21<Serial7><FNC>93<Signature8>		011536756723002121RxT9keR93bzNsNXJW
Kyrgyzstan Tobacco	GS1_SHORT_STR	01<GTIN14>21<Serial7><FNC>93<Signature8>		011536756723002121RxT9keR93bzNsNXJW
Russia NCP	GS1_SHORT_STR	01<GTIN14>21<Serial7><FNC>8005000000<FNC>93<Signature4>		010401600141245821RxT9keR800500000093dGVz
Russia OTP	GS1_OTP_STR	01<GTIN14>21<Serial7><FNC>93<Signature4>		010401600141245821RxT9keR93dGVz
Russia Tobacco	GS1_SHORT_STR	01<GTIN14>21<Serial7><FNC>8005<MRP6><FNC>93<Signature4>		010401600141245821RxT9keR800512000093dGVz
Uzbekistan Tobacco	GS1_SHORT_STR	01<GTIN14>21<Serial7><FNC>93<Signature8>		

Beverage Formats

Units

The units' format for Beverages is GS1, standard format. The code elements are:

- GTIN14 - 14-character GTIN number
- Serial7 or Serial13 - 7- or 13-character serial number, using the GS82 charset
- Signature4 - 4-character signature generated by the OMS

	Generation Mode	Format	Length	Sample
Russia Beer	BEER_RU_UNIT	01<GTIN14>21<Serial7><FNC>93<Signature4>	>32	010463633245535321575W\$#q93dGVz
Russia Water	WATER_RU_UNIT	01<GTIN14>21<Serial13><FNC>93<Signature4>		010463633245537721575WmPqJgLf2x93dGVz
Uzbekistan Beer	BEER_UZ_UNIT	01<GTIN14>21<Serial7><FNC>93<Signature4>		010750106419397221RxT9keR93aFRm
Uzbekistan Water	WATER_UZ_UNIT	01<GTIN14>21<Serial13><FNC>93<Signature4>		010762390040598521I75WmPqJgLf2x93RzJr

Groups

The groups' format for Beverages is GS1, standard format. The code elements are:

- GTIN14 - 14-character GTIN number
- Serial13 - 13-character serial number, using the GS82 charset
- Signature4 - 4-character signature generated by the OMS

	Generation Mode	Format	Length	Sample
Russia Beer	n/a	n/a	>32	n/a
Russia Water	WATER_RU_GROUP	01<GTIN14>21<Serial13><FNC>93<Signature4>		010463633245538421575WmPqJgLf2x93dGVz
Uzbekistan Beer	BEER_UZ_GROUP	01<GTIN14>21<Serial7><FNC>93<Signature4>		01075010641939722158dEo_=&yqeAA93aFRm
Uzbekistan Water	WATER_UZ_GROUP	01<GTIN14>21<Serial13><FNC>93<Signature4>		010762390040598521I75WmPqJgLf2x93RzJr

CRPT Production Order Management

The Production Order must contain the following attributes:

- OMS_SCHEME - value must be equal to the name of one of the configured OMS schemes
- Packs GTIN (name is configurable) with a valid GTIN14 or EAN8 or EAN13
- Bundles GTIN (name is configurable) with a valid GTIN14 or EAN8 or EAN13
- For Russia only - Pack price (name is configurable)

In specific cases, the OMS_SCHEME must be added to certain products: see [CRPT Scripting External Service Driver](#).

CRPT Code Ordering

- [Overview](#)
- [Production Order Configuration](#)
- [Ordering Modes](#)
 - [Preorder \(Before Production\)](#)
 - [On Demand \(During Production\)](#)
- [Choosing Ordering Mode](#)
 - [Scenario: Factory has local OMS server](#)
 - [Scenario: Factory is located in rural area with bad Internet connection \(some production stops and overordering is tolerable\)](#)
 - [Scenario: Factory prints codes that are paid in advance](#)
 - [Scenario: Production stop is absolutely unacceptable](#)

Overview

The CRPT codes driver orders codes from Gate (other regulations, such as TPD order codes from Vault). The CRPT codes driver supports the following ordering modes:

Ordering Mode	Description
Disabled	The CRPT driver will never order codes.
Preorder	The CRPT driver will order codes when a Production Order is created .
On Demand	The CRPT driver will order codes during production if there are not enough available on Gate to satisfy the configured Liz Autonomy Target. This mode will always order more codes than the produced quantity (overordering).
Preorder & On Demand	The CRPT driver will order codes when a Production Order is created. The CRPT driver will order codes during production if there are not enough available on Gate to satisfy the configured Liz Autonomy Target. This mode will always order more codes than the produced quantity (overordering).

Production Order Configuration

To start the code ordering process in any of the Ordering Modes, the Production Order must contain certain attributes. See [CRPT Production Order Management](#) for the list.

Ordering Modes

Preorder (Before Production)

The CRPT driver will order codes when a Production Order is created when:

- The OMS scheme specified in the OMS_SCHEME attribute is configured with **Ordering Mode = Preorder** or **Preorder and On Demand**.
- The Production Order was created using the Gate GUI or API (Basic Http Driver or External Service Driver)

In this mode the CRPT driver will order the exact amount of codes specified in the Production Order Requested Quantity:

Ordered Codes = Requested Quantity

 Since Inextor Gate v10.1.0.5000 it is possible to configure the CRPT driver to preorder codes for Production Orders created using the Liz GUI or API (Liz File Interface or PMI-MES).

- In Gate Administration, navigate to Configuration / Application Settings and make sure **CrptEnablePreorderingOnLiz** is configured with **true**.

On Demand (During Production)

The CRPT driver will order codes during production, when:

- Gate does not have enough codes to satisfy the configured Liz Autonomy Target
- The OMS scheme specified in the OMS_SCHEME attribute is configured with **Ordering Mode = On Demand** or **Preorder & On Demand**

In this mode the CRPT driver will always order more codes than the needed for the production batch:

Ordered Codes = Used Codes + Liz Autonomy Period + 0..(Ordering Quantity)

[Ordering Quantity](#) is a setting in the OMS Scheme.

 For this scenario a reliable Internet connection to the OMS is required.
To limit the production stops when using On Demand we recommend increasing the **Liz Autonomy Target** to 1H or more.

Choosing Ordering Mode

	When to use	When not to use
Disabled	▪ The factory has codes that must be used and no new codes must be ordered	▪ The factory needs to order codes for production
On Demand	▪ The factory has a stable Internet connection or a local OMS server ▪ The codes are paid only when included in usage report	▪ The factory has poor Internet connection ▪ The cloud OMS has frequent or unexpected maintenance periods ▪ The factory wants limit the overordering
Preorder	▪ The factory wants to limit the overordering ▪ The factory wants to avoid production stops ▪ The codes are paid upon ordering	▪ The factory cannot foresee how many codes will be printed in the production batch
Preorder & On Demand	▪ The factory uses Preorder but in rare cases it needs to order more codes to compensate for the waste	• The factory has poor Internet connection • The cloud OMS has frequent or unexpected maintenance periods • The factory wants limit the overordering

Scenario: Factory has local OMS server

Use any Ordering Mode except None.

Scenario: Factory is located in rural area with bad Internet connection (some production stops and overordering is tolerable)

Use **Preorder** or **On Demand** with increased Liz Autonomy Period (1 hour or more).

Scenario: Factory prints codes that are paid in advance

Use **Preorder**.

If some codes need to be ordered from time to time, use **Preorder & On Demand** with small Liz Autonomy Period (10-20 min).

Scenario: Production stop is absolutely unacceptable

Use **Preorder**.

CRPT Rework

Overview

[Rework Production Orders](#) reaggregate packaged units on different levels. The CRPT driver can automatically detect such production orders and can avoid ordering of codes for the units that are reused.

The application setting `CrptDontOrderCodesForRework` controls this behavior:

- When it is set to **true**, the CRPT driver will not order codes for reused units.
- When it is set to **false**, the CRPT driver will order codes for all units. The default value is **false** for historical reasons.

 We strongly recommend setting `CrptDontOrderCodesForRework` to **true** to avoid ordering of codes that will not be used.

Manual Preordering

- [Overview](#)
- [Configure Gate to preorder codes](#)
- [Create production order for preorder](#)
- [Obtain expected attribute names from the Gate configuration](#)
 - [Bundles GTIN](#)
 - [Packs GTIN](#)
 - [Pack price \(MRP\)](#)

Overview

Factories usually use the Gate or Liz API to create production orders. During periods of OMS maintenance it might be convenient to manually preorder the codes for the upcoming productions.

To preorder codes you need to:

- Configure Gate to preorder codes
- Create a production order with all attributes required for ordering: pack and bundle GTINs and pack price (only for Russian tobacco production)

Configure Gate to preorder codes

In Gate Administration go to CONFIGURATION / Application Settings, and make sure **OmsOrderFromPO** is **true**. If it is not, set it to true and restart Gate service.

 Gate newer than 10.1.0.3676 uses different properties to configure preordering. See [CRPT Code Ordering](#) for details.

Create production order for preorder

 Before you start, you need:

- Brand code
- If the Manufactured Product on Gate does not contain GTIN and price attributes
 - [Attribute name](#) for pack GTIN
 - GTIN for packs
 - [Attribute name](#) for bundle GTIN
 - GTIN for bundles
 - [Attribute name](#) for pack price (only for Russian tobacco production)
 - Price for packs

On Gate Administration go to PRODUCTION / Production Orders and click the New button:

1. Enter Order Number. We recommend using the number of the production order that you will be producing, with suffix "preorder". For example, if the production order you want to preorder codes for will be named "1000", you can use "1000preorder" for the preorder number.
2. Enter description. The value is irrelevant, you can use the Order Number here.
3. Choose Manufactured Product (SKU)
4. Choose Link-up Setup
5. Enter Requested Quantity
6. If the Manufactured Product does not contain attributes for pack and bundle GTIN and pack price, you need to add them to the PO. To do so switch to the Attributes tab:
 - a. Add new attribute for **bundle GTIN**. The name and value should be the same as they are usually provided by your MES. On the screenshot below we use attribute with name BGTIN14 with value 04016001412458.
 - b. Add new attribute for **pack GTIN**. The name and value should be the same as they are usually provided by your MES. On the screenshot below we use attribute with name PGTIN14 with value 04016001412434.
 - c. If the SKU is for Russian tobacco product, add new attribute for **pack price**. The name and value should be the same as they are usually provided by your MES. On the screenshot below we use attribute with name PPRICE with value 120.00.
7. Press Save, then Close.

Production Order

Order Number

1000preorder

Description

1000preorder

Manufactured Product

tobacco

Fine cut

Brand Code: [000123] (Na

Finer Cut

Brand Code: [000128] (Na

CRPT

Brand Code: [KG-TOBACCO

Brand Code: [KZ-TOBACCO

Brand Code: [RU-TOBACCO

Brand Code: [UZ-TOBACCO

LinkUp Setup

03 - VPL

Requested Quantity

100000

Total Quantity

0

Deleted

☐

Order Expected Start Date

Order Expected End Date

Order Full Quantity

☒

Attributes

ExtendedFields

TPD

Name	Value	Type	Source	User	Actions
ACTIVITY	Domestic	String	MP-EP	INEXT0\whris	
BGTIN14	04016001412458	String	MP	INEXT0\whris	
BRANDESC	Flotskie Blue	String	MP-EP	INEXT0\whris	
BrandFamily	CRPT	String	MP	INEXT0\whris	
BundleQty	200	String	MP	INEXT0\whris	
CaseQty	10000	String	MP	INEXT0\whris	
DESTINATIONMARKET	Russia	String	MP-EP	INEXT0\whris	
FactoryOuterMcCode	C5	String	Gate		
FactoryPackCode	NA	String	Gate		
Gs1CompanyPrefix	12345	String	Gate		
Gs1LocationReference	66666	String	Gate		
Leavinglot	3	String	MP	INEXT0\whris	
MACHINE_GLN	0000001.00092.1	String	PO-LinkUp		
MCID	DCTA	String	LinkUp	INEXT0\ddel	
MID	03	String	LinkUp	INEXT0\ddel	
M_Capacity	720000	Integer	PO-LinkUp		
OMS_SCHEME	OMS-RU-TOBACCO	String	MC	INEXT0\whris	
PackQty	20	String	MP	INEXT0\whris	
PGTIN14	04016001412434	String	MP	INEXT0\whris	
PPRICE	120.00	String	MP	INEXT0\whris	
ProductCategory	Packs	String	MP	INEXT0\whris	
PRODUCTCODE	RU-TOBACCO-001	String	MP-EP	INEXT0\whris	
RejectionRate_Bundles	0	Double	PO-LinkUp		
RejectionRate_Cases	0	Double	PO-LinkUp		
RejectionRate_Packs	0	Double	PO-LinkUp		
SCGTIN14	14016001412455	String	MP	INEXT0\whris	
UnitOfMeasure	cig	String	MP	INEXT0\whris	

Validation results: Successful

Save

Cancel

Close

Obtain expected attribute names from the Gate configuration

The CRPT codes driver requires 3 attributes containing the following values in order to initiate OMS code ordering:

- Packs GTIN
- Bundles GTIN
- Price (only for Russian tobacco, other countries or production types don't need this value)

To see the names of the attributes, in Gate Administration go to CONFIGURATION / Op.Drivers, configure the CRPT codes driver, switch to the OMS tab, edit the OMS scheme to use when preordering and switch to the Reported Units tab:

Edit OMS scheme

Scheme

Name: **OMS-RU-TOBACCO**

The production orders that use this scheme must contain an attribute with name OMS_SCHEME and value the scheme name. Usually this attribute is placed on the manufacturing market.

General | Reported Units

Name	Unit Type	Generation Mode	Event State	Mrp
Bundl	Bundles	GS1_SHORT_STR_ALPHA	SentToPrinter	☒
Packs	Packs	TOBACCO_STR_ALPHA	Printed	☒

Reported Unit

Name: **Bundles**

The Name should match the value of the SerializationLevelReference attribute in all contents for products that use this OMS

Unit: **Bundles**

Generation Mode: **GS1_SHORT_STR_ALPHA**

Identification: **GLUED**

Marking: **PRODUCTPACKAGE**

Ordering Quantity: **10000**

Code State: **SentToPrinter**

The Gate will send usage reports to OMS for codes that enter in this state. Choose None to disable the usage reports.

Gtin: **000{BGTIN14}** **\d{14}\$**

Has MRP: ☒ Controls whether Gate should send MRP in code orders. Check this for Russian OMS, uncheck for KZ and KG.

Mrp: **{CRPT_Bundles_MRP}**

New Delete OK Cancel

Bundles GTIN

Select Bundles from the list on the left and see the value in the **Gtin** text box on the right. The name of the bundles GTIN is in the "curly braces". For example with the configuration below:

Gtin: **000{BGTIN14}** **\d{14}\$**

the name of the attribute is **BGTIN14**.

Packs GTIN

Select Packs from the list on the left and see the value in the **Gtin** text box on the right. The name of the packs GTIN is in the "curly braces". For example with the configuration below:

Gtin: **{PGTIN14}** **\d{14}\$**

the name of the attribute is **PGTIN14**.

Pack price (MRP)

i MRP is required only for Russian tobacco production. OMS schemes for NCP and OTP do not require MRP. Ignore this step if you are preordering NCP or OTP codes.

Most factories are configured to put the pack price in an attribute with name **PPRICE**, but the name might vary. Also, there could be different attributes for pack and bundle price.

To see what is the configured attribute for your factory, select Packs or Bundles from the list on the left and see the value in the **Mrp** text box on the right. Usually this is the name of a scripted content that provides the MRP:

Mrp: **{CRPT_Bundles_MRP}**

the name of the scripted content above is **CRPT_Bundles_MRP**, it might be different in your factory. Then go to LAYOUTS / Contents and edit the content with the same name.

Click Edit Arguments, a dialog will open, switch to the Script tab. On the screenshot below the pack price is expected to be in attribute with name **PPRICE**.

Content

CRPT_Bundles_MRP

Scripted content to extract MRP from attribute with name PPRICE

Static

XXXXXX

Length

Min 6 Max 6

CRPT_Bundles_MRP

ScriptedProperties

Edit 2 items

Arguments

Name	Value	Type	Source	User	Actions
CalculatedPropertyFormula	a	String			

Calculated Property Formula

Scripted

public const string PRICE_PROPERTY = "PPRICE";

public static Regex priceExtractor = new Regex(@"^(?<PRICE>\d+(?:\.\d+)?)\$", RegexOptions.Compiled);

public string Generate() {

if (!Attributes.ContainsKey(PRICE_PROPERTY)) {

Log(MessageLevel.Error, \$"Property {PRICE_PROPERTY} is not defined");

return null;

}

var priceProperty = Attributes[PRICE_PROPERTY];

if (String.IsNullOrEmpty(priceProperty))

{

Log(MessageLevel.Error, \$"Property {PRICE_PROPERTY} is empty");

return null;

}

if (!priceExtractor.IsMatch(priceProperty))

{

Log(MessageLevel.Error, \$"Property {PRICE_PROPERTY} is not in the correct format for

Reimbursement+Reports

- [Overview](#)
- [Report Types](#)
- [Prerequisites](#)

Overview

Some countries under the CRPT regulation require paying the excise for the production when the OMS code orders are placed. Sometimes the country regulator allows reimbursing the excise for wasted and unused codes. To get a reimbursement credit, the manufacturers usually need to provide a file with a list with all codes that were not used in production, i.e. a reimbursement report.

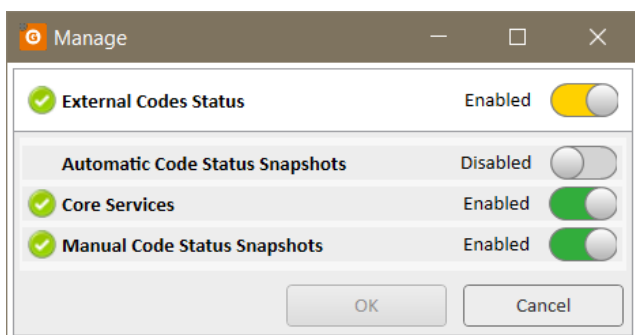
Report Types

Gate can generate various types of reimbursement reports, but all use the same principle - Gate generates snapshot of the code statuses selected for the report and then exports the data.

- **Automatic Report (whitelist)** - creates code status snapshots in the background, this report type is used to automatically insert the code whitelists in a table, where it can be exported in external database for further processing.
- **Manual Report for Production Order** - creates code status snapshots upon user request. The user selects a production order and Gate will snapshot all code statuses generated for this order. Then the commissioned and not-commissioned codes are exported into files.
- **Manual Report for Time Period** - creates code status snapshots upon user request. The user selects a time period and Gate will snapshot all code statuses generated in it. Then the commissioned and not-commissioned codes are exported into files.

Prerequisites

- Enable the **External Code Status** operation driver
- Enable the **Core Services** component
- Depending on the report type:
 - **Automatic Report (whitelist)** - enable **Automatic Code Status Snapshots** component
 - **Manual Report for Production Order or Period** - enable **Manual Code Status Snapshots** component



⚠ Only one of Automatic or Manual Code Status Snapshots could be enabled.

Automatic code status snapshots (whitelist)

- [Overview](#)
- [Configuration](#)
 - [Production selection](#)

Overview

In normal use, code status snapshots are not needed for CRPT production. However, sometimes, for reporting purposes, you might want to have the code whitelists in a database table.

Configuration

To enable automatic generation of code status snapshots you need to:

- Enable the External Codes Status operation driver and the following components:
 - Automatic Code Status Snapshots
 - Core Services
- Configure the operation driver
 - Configure the Automatic Generation options for production selection

 The generation of code status snapshots works best when the materialization of the codes is enabled.

 **IMPORTANT:** Once enabled, the Automatic Code Status Snapshots component will start generating snapshots from the first code status in the database. With default configuration, that would be 6 months old data.

To start generating snapshots for code statuses created from now on, use the following SQL script AFTER you start the Gate Service:

```
UPDATE Jobs
SET DataSnapshot = '{    "$type": "Inexto.S3r.ExternalCodeStorage.Business.CodeStatusMonitorJobState, Inexto."
(SELECT CONVERT(VARCHAR(MAX), CAST(@@DBTS AS BIGINT)))
+ ' }'
WHERE InternalId = 107
```

Production selection

The External Code Status operation driver can generate snapshots selectively, based on attributes in the production order. By default, whitelists will be generated for production orders that print codes with code type RUSSIA and contain attribute with name OMS_SCHEME and any value.

Production can be selected by one or more criteria:

- Presence of an attribute in production order
- Value of an attribute in production order
- Code type code

The **Filter by code type** is always enabled.

To match all production orders, regardless of the attributes inside, leave the **Filter Attribute Name** empty.

To match only production orders which contain a specific attribute, enter its name in the **Filter Attribute Name** text box.

To match only production orders which contain an attribute with a specific value, enter the value in the **Filter Attribute Value Regex** text box.

 The value of Filter Attribute Value Regex is a .NET regular expression. Characters in the attribute value that are recognized by the regex syntax must be escaped.

Examples

Match all production orders:

- **Filter Attribute Name** should be empty

Match all CRPT production orders:

- **Filter Attribute Name** should contain the text OMS_SCHEME
- **Filter Attribute Value Regex** should contain .*

Match all CRPT production orders that use specific OMS_SCHEME

- **Filter Attribute Name** should contain the text OMS_SCHEME
- **Filter Attribute Value Regex** should contain the name of the OMS scheme, for example RUv2

Match all CRPT production orders that use one of several OMS_SCHEMES

- **Filter Attribute Name** should contain the text OMS_SCHEME
- **Filter Attribute Value Regex** should contain the names of the OMS schemes, separated by pipe - |, for example RUv2|KZv2|KGv2

CRPT Manual Reimbursement Reports

Overview

The codes in the manual reimbursement reports are exported into a single-column Tab-separated CSV files containing the full CRPT codes (including the signature). Optionally a second column can be added that contains the status of each code: Commissioned, Uncommissioned, Expired or Banned.

Configuration

The main configuration options of the External Code Status operation driver are:

- **Report Mode** - specifies whether the user can create Production Order reports, or Period reports. This setting affects the UI of the New Reimbursement Report dialog. When Production Order is chosen, and the user starts creating a report, he will see the list with production orders. When Period is chosen, the user will see the list with OMS schemes and the time pickers.

⚠ When a report of one type exists (Production Order or Period), you will not be able to create a report of the other type, even if you change the value of this dropdown.

- **Min Commissioned State** - specifies the minimum code state that is considered commissioned. All codes in states below this state are considered not-commissioned (see notes below). Banned, Expired, Wasted and Cleared code states are always considered not-commissioned. The available codes are never included in reimbursement reports. They must be banned in order to enter a reimbursement report.
- **Exported Reports Path** - the codes that match the report criteria are written in files in the specified directory.

Examples

- Min Commissioned State = **Aggregated**. Commissioned states are: *Aggregated*. Not-commissioned states are: *Banned, Expired, Generated, Sent To Printer, Wasted, Cleared, Printed and Activated*.
- Min Commissioned State = **Activated**. Commissioned states are: *Activated, Aggregated*. Not-commissioned states are: *Banned, Expired, Generated, Sent To Printer, Wasted, Cleared and Printed*.
- Min Commissioned State = **Printed**. Commissioned states are: *Printed, Activated and Aggregated*. Not-commissioned states are: *Banned, Expired, Generated, Sent To Printer, Wasted, Cleared*.
- Min Commissioned State = **Sent To Printer**. Commissioned states are: *Sent To Printer, Printed, Activated and Aggregated*. Not-commissioned states are: *Banned, Expired, Generated, Wasted, Cleared*.
- Min Commissioned State = **Generated**. Commissioned states are: *Generated, Sent To Printer, Printed, Activated and Aggregated*. Not-commissioned states are: *Banned, Expired, Wasted, Cleared*.

Advanced Options

- **Max Exported Reports** - can affect the speed of the report generation and should not be changed.
- **Export Code Status Text** - specifies whether to add a second column in the output CSV file with the code status text. This option will greatly affect the speed of the report generation and should be enabled only when the status is required.
 - When this checkbox is checked, four other checkboxes appear, that allow specifying the text in the CSV file for each status.
- **Export Commissioned Codes** - specifies whether to export codes with Commissioned status (see Min Commissioned State). This option will greatly affect the speed of the report generation and should be enabled only when the commissioned codes must be exported. When this option is disabled the *Commissioned.CSV file will be created, but will be empty.
- **Max Code States** and **Max Chunks To Process** - these options will greatly affect the speed of the report generation and should not be changed.

Period Reimbursement Reports (monthly)

- [Overview](#)
- [How to Generate Report](#)

Overview

The Period Reimbursement Reports contain:

- all external codes ordered using the selected OMS scheme that were used for production during the chosen period
- all banned and expired codes ordered using the selected OMS scheme that were imported during the chosen period

The available codes, even when they were imported during the chosen period and OMS scheme, will never be included in the report. To include available codes you need ban them before generating the report.

 The Period reimbursement reports are available in Inextor Gate 10.1.0.4591 and later.

How to Generate Report

 See the [prerequisites](#) and the [configuration](#) for the generation of Period Reports

To generate a reimbursement report:

1. In Gate Administration navigate to CRPT codes / Reimbursements. The screen displays all reimbursement reports generated in the past.
2. Press the New Reimbursement Report button at the bottom of the screen. A popup dialog appears ([detailed description of the GUI elements](#))
3. Select the OMS scheme for which to generate the reimbursement report.
4. Select the start and end date of the period for which to generate the reimbursement report.
 - The report will contain codes used or imported from the beginning of the day on the start date (00:00:00), until the end of the day on the end date (23:59:59). For example, to generate a report for a given month, select the first and last date of that month.
5. Click the Generate Reimbursement Report button.
6. The dialog is closed.
7. A new entry appears in the data grid
 - The reimbursement report is initially with status Created. After some time the status changes to Exported and two files appear in the configured Export Path directory - one with commissioned codes and another with not commissioned codes.

Production Order Reimbursement Reports

- [Overview](#)
- [How to Generate Report for Production Order](#)

Overview

The Production Order reimbursement reports contain:

- all external codes that were used during the production of the chosen Production Order
- all banned and expired codes compatible with the Production Order at the moment of creation of the report

The available codes, even when they are compatible with the chosen Production Order, will never be included in the report. To include available codes you need ban them before generating the report.

How to Generate Report for Production Order

See the [prerequisites](#) and the [configuration](#) for the generation of Period Reports

To generate a report:

1. In Gate Administration navigate to CRPT CODES / Reimbursements. The screen displays all generated reimbursement reports in the past.
2. Press the New Reimbursement Report button at the bottom of the screen. A popup dialog appears ([detailed description of the GUI elements](#)).
3. Select the production order for which to generate the reimbursement report.
 - Only **closed** production orders appear in the list. If you don't see the desired production order, make sure it is closed and refresh the list.
 - Selecting the production order will reveal the counts of commissioned, uncommissioned, banned, expired and available codes for the corresponding unit.
4. Click the Generate Reimbursement Report button.
5. The dialog is closed.
6. A new entry appears in the data grid (you need to press Refresh)
 - The reimbursement report is initially with status Created. After some time the status changes to Exported and two files appear in the configured Export Path directory - one with commissioned codes and another with not commissioned codes.

The export of the codes is a CPU and memory intensive process and can take significant time for large production orders.

OMS Usage And Aggregation Reports

- Overview
 - Gate sends OMS reports
 - Overview
 - Usage reports
 - Aggregation Reports
 - Inexpress sends OMS reports
- Typical Scenarios
 - Gate and Inexpress V1
 - Gate and Inexpress V2
 - Gate sends all reports
 - Inexpress V2 sends all reports
 - Gate and both Inexpress V1 and V2
 - Gate and 3rd party aggregation system
 - Gate sends usage reports, Aggregation system sends aggregation reports
 - Aggregation system sends all reports

Overview

All manufactured codes for Russia, Kyrgyzstan, Kazakhstan and Uzbekistan must be sent in usage (other names: utilization, application) and aggregation reports to OMS. When a code has been reported as used, the country regulator will issue an invoice for that code. The aggregation reports are used to identify packs and bundles in shipping cases and are also required.

Gate sends OMS reports

Overview

Gate will send OMS reports that contain only valid codes, i.e. it must have processed all related production data (code pairing and code status messages) before sending the report. Sending of the reports will be delayed if the production data was not processed yet.

Usage reports

During production, Gate will keep track on the status of each used code. When a code enters the [configured code status](#), the CRPT driver will send a message to the OMS stating that the code was commissioned.

i Gate can be configured to automatically put the codes in status Aggregated upon decomposition request. This method is used by Inexpress V1 or some 3rd party aggregation systems to trigger sending of usage reports.

Aggregation Reports

The aggregation reports are sent upon receiving an aggregation message from Inexpress. Inexpress V1 and some 3rd party aggregation systems use a file-based interface to communicate with Gate. Inexpress V2 uses the built-in messaging system in Gate.

Gate will automatically postpone the sending of the aggregation reports if the codes inside are not sent in usage reports.

Inexpress sends OMS reports

Inexpress V2 can send usage and aggregation reports on its own. Please, refer to the Inexpress documentation for the configuration options.

Typical Scenarios

Gate and Inexpress V1

In factories with Gate and Inexpress V1, Gate sends both usage and aggregation reports.

- Usage reports are usually sent on code status Printed (or Sent to Printer if the equipment does not support Printed).
- The Inexpress operation driver on Gate must be enabled and configured in order to read the files from Inexpress V1.

Gate and Inexpress V2

There are two sub-scenarios:

- Gate sends usage reports and aggregation reports
- Inexpress sends usage reports and aggregation reports

Gate sends all reports

This is similar to Inexpress V1, except the aggregation reports are triggered by the built-in messaging, rather than files:

- Usage reports are usually sent on code status Printed (or Sent to Printer if the equipment does not support Printed).
- The Inexpress operation driver on Gate must be enabled.

Inexpress V2 sends all reports

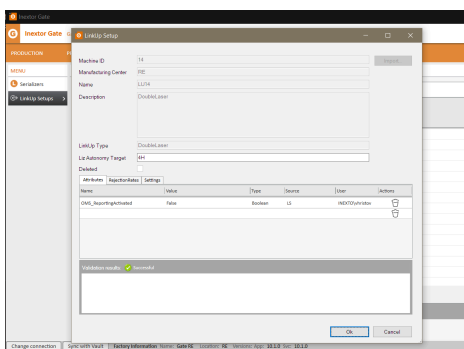
Refer to the Inexpress documentation about how to configure Inexpress to send usage and aggregation reports.

Gate should be configured to disable all reporting.

Gate and both Inexpress V1 and V2

During the upgrade period of Inexpress, it is possible both versions to exist and to be used at the same time. In this scenario Gate will send OMS reports for the lines that use Inexpress V1 and Inexpress V2 will send OMS reports for the lines that use it. This means that Gate should be configured to not send OMS reports for the production made by certain Link-ups.

To configure Gate to not send reports for the Inexpress V2 Link-ups, add an attribute **OMS_ReportingActivated** with **Boolean** value **false** on the corresponding Link-up attributes:



Gate and 3rd party aggregation system

Gate sends usage reports, Aggregation system sends aggregation reports

In this scenario Gate receives information about the aggregated codes using either:

- The decomposition API (i.e. the aggregation system decomposes aggregated codes using the Gate API)
- [/wiki/spaces/BAT/pages/399712243](https://wiki.spaces.bat/pages/399712243). When the FSS activation driver is enabled, it will automatically read aggregation data from the FSS database and will activate all valid codes. This will trigger sending of OMS usage reports.

Changing the status of the codes in this case is triggered by decomposition requests to the Gate API

i For the decomposition API to change the state of the valid codes to Aggregated you need to configure the following Gate Application Setting:

CodeDecompositionSendCodeStatusMessages = true

Aggregation system sends all reports

Gate should be [configured to disable all reporting](#).

CRPT - Disabling Reports

Overview [🔗](#)

Some factories use another system to send OMS usage and/or aggregation reports (Inexpress V2.3.0+ or 3rd party software) and in order to avoid sending duplicate reports, Gate should be configured not to send some types of reports.

Summary [🔗](#)

To completely disable sending OMS reports from Gate set the following application settings:

- To disable sending of aggregation reports set **EnableOmsAggregationReporting** = false
- To disable sending of dropout reports set **EnableOmsDropoutReporting** = false
- To disable sending of usage reports set **EnableOmsUsageReporting** = false

It is also possible to disable reporting of codes for 1 specific link-up (line). This configuration is particularly useful in case of a migration from INEXPRESS V1 and reporting from Gate to INEXPRESS V2 and reporting from INEXPRESS.

To disable/enable, please add the following setting in the Link-up setup attributes: **OMS_ReportingActivated**. The default is true, if the setting is not set, the system will behave as if the usage have to be reported unless **EnableOmsUsageReporting** is set to false.

 The settings were introduced in Inextor Gate version **10.1.0.3035**

Pre-Installation Script [🔗](#)

When upgrading from Gate earlier than 10.1.0.3035, we recommend executing the following script **before** the installation of the new Gate:

```
1  -- Disable aggregation reports
2  DECLARE @EnableOmsAggregationReporting NVARCHAR(50) = N'EnableOmsAggregationReporting';
3  IF NOT EXISTS(SELECT 1 FROM [dbo].[Settings] WHERE [Key] = @EnableOmsAggregationReporting)
4      INSERT [dbo].[Settings] ([Key], [Value], [ModifiedBy], [ModifiedOn]) VALUES
      (@EnableOmsAggregationReporting, N'false', ORIGINAL_LOGIN(), GETUTCDATE())
5  ELSE
6      UPDATE [dbo].[Settings] SET [Value] = N'false', [ModifiedBy] = ORIGINAL_LOGIN() , [ModifiedOn] =
      GETUTCDATE() WHERE [Key] = @EnableOmsAggregationReporting
7  GO
8
9  -- Disable dropout reports
10 DECLARE @EnableOmsDropoutReporting NVARCHAR(50) = N'EnableOmsDropoutReporting';
11 IF NOT EXISTS(SELECT 1 FROM [dbo].[Settings] WHERE [Key] = @EnableOmsDropoutReporting)
12     INSERT [dbo].[Settings] ([Key], [Value], [ModifiedBy], [ModifiedOn]) VALUES (@EnableOmsDropoutReporting,
      N'false', ORIGINAL_LOGIN(), GETUTCDATE())
13 ELSE
14     UPDATE [dbo].[Settings] SET [Value] = N'false', [ModifiedBy] = ORIGINAL_LOGIN() , [ModifiedOn] =
      GETUTCDATE() WHERE [Key] = @EnableOmsDropoutReporting
15 GO
16
17 -- Disable usage reports
```

```
18 DECLARE @EnableOmsUsageReporting NVARCHAR(50) = N'EnableOmsUsageReporting';
19 IF NOT EXISTS(SELECT 1 FROM [dbo].[Settings] WHERE [Key] = @EnableOmsUsageReporting)
20     INSERT [dbo].[Settings] ([Key], [Value], [ModifiedBy], [ModifiedOn]) VALUES (@EnableOmsUsageReporting,
N'false', ORIGINAL_LOGIN(), GETUTCDATE())
21 ELSE
22     UPDATE [dbo].[Settings] SET [Value] = N'false', [ModifiedBy] = ORIGINAL_LOGIN() , [ModifiedOn] =
GETUTCDATE() WHERE [Key] = @EnableOmsUsageReporting
23 GO
24
25
```

✖ The script will disable all reports on Gate. Modify it according to your needs.

CRPT - Configuring Usage Reports

Overview [↗](#)

The CRPT operation driver monitors the status of the codes in Gate and when they reach the configured status, it will send OMS usage report.

The codes change status in the following order:

1. Generated
2. Sent to Printer
3. Printed
4. Activated
5. Aggregated

i The Printed, Activated and Aggregated statuses depend on whether the production line systems reports the status back to Liz. See the Scenarios section below for more details.

Configuration [↗](#)

To choose the code state that will trigger sending of usage reports for a certain OMS scheme and unit (packs or bundles) you need to set the [Code State dropdown](#):

- On Gate Administration, navigate to Configuration / Op.Drivers
- Configure the CRPT codes driver
- Edit the desired OMS scheme and switch to the Reported Units tab
- Choose a value on the Code State dropdown for Packs and Bundles

i To completely disable sending of usage reports on your Gate, set [EnableOmsUsageReporting to false](#). This setting is available since Inextor 10.1.0.3035.

Scenarios [↗](#)

Scenario	Code State	Notes
Usage reports are disabled.	None	Choose None when you have another system that sends usage reports, for example Inexpress 2.3.0.0 and newer or another. i A better option is to completely disable sending of usage reports .
Usage reports are sent when Liz sends the codes to the printers.	SentToPrinter	This is the least optimal mode for reporting used codes, because it will report wasted and cleared codes, as well as codes printed on packaging that did not enter a shipping case.

Usage reports are sent when printers confirm printing of codes to Liz.	Printed	This mode will be slightly more precise than SentToPrinter, because the CRPT Codes driver will report only codes that were actually printed. However, it depends on the ability of the printers to send feedback to Liz.
Usage reports are sent when packs and bundles are packaged into a shipping case.	Aggregated	This mode is the optimal way to report used codes, because only codes that enter a shipping case will be reported as used. However, this only works if the line system is able to call the Gate API to verify the aggregated codes and thus turn them into Aggregated state. Inexpress V1 and FSS can do that (through the FSS Activation operation driver). i For this setting to work you also need to set CodeDecompositionSendCodeStatusMessages to true in the Gate Application Settings screen.

Code Statuses [🔗](#)

Chunk Usage Reporting

⚠ This configuration is used to report all codes of a chunk to OMS as used. It should not be used together with INEXPRESS V2 reporting as it is not possible to report usage of code twice.

It is possible to configure chunk reporting on per OMS configuration (Usage Report Mode).

Reports

Machine Prefix

test

Aggregation Reports

☒ Controls whether Gate should wait for related usage reports to be approved before sending aggregation reports.

Aggregated Items Count

☒ When checked, the aggregatedItemsCount field in the OMS aggregation reports will contain the actual number of items, when unchecked the field will always contain 10 and 50 for bundles and cases correspondingly.

Approve on Error

2H

After this period, the Gate will mark the OMS reports as approved if the OMS returns an error when asked for status.

Usage Report Mode

ChunkUsage

Specify how the usage reports are sent to the OMS.

The possible values are:

- CodeUsage (default), the usage report (unless deactivated) will be reported based on the usage of the codes returned by the LIZ.
- ChunkUsage, the usage report will be reported whenever a chunk is downloaded on the LIZ
- ChunkDownload, the usage report will be reported as soon as the codes are downloaded from the OMS.

It is also possible to configure if chunks reported by ChunkUsage or ChunkDownload can be reused for a different production order or not. The Gate application setting CrptReuseReportedChunksForOtherProduction, configure this behavior. By default, it is authorized. If disabled, the chunks can be used only for the same production and if a chunk is partially used, it will be banned once returned by the LIZ to avoid being reused for another production.

When reporting is configured for ChunkUsage or ChunkDownloaded, the Oms Reports display the usage in that way:

Report Id	Type	Status	Number Of Codes	Data	Reprocessed	Date (UTC)
	Usage				☐	
b54df818-ff40-4af0-ae1e-9f11bde1f452	Usage	Approved	Full Chunk	Chunk:[3]	☐	26/11/2021
8ba3ebc9-1480-4465-8e8e-2e07c08a8d94	Usage	Approved	Full Chunk	Chunk:[4]	☐	26/11/2021
64c73909-c8ed-4ca7-b16f-efe2162b5ee2	Usage	Approved	Full Chunk	Chunk:[5]	☐	26/11/2021
99514741-2908-4897-896f-d01d6ce2e901	Usage	Approved	Full Chunk	Chunk:[6]	☐	26/11/2021
40b8e80f-40ff-4bda-bacc-b28fe9205307	Usage	Approved	Full Chunk	Chunk:[7]	☐	26/11/2021
ce57207b-0d4c-40f2-bb35-8cd3224c5f06	Usage	Approved	Full Chunk	Chunk:[8]	☐	26/11/2021

CRPT codes materialization

- [Overview](#)
- [Configuration](#)
 - [CrptMaterialization.configunit](#)
 - [GateService.exe.config](#)
- [Cleanup](#)

Overview

For normal use the CRPT codes do not need to be materialized. However, sometimes, for reporting purposes you might want to have them in plain text in a database table.

Configuration

The CRPT codes can be materialized in:

- the Gate database, in a table named externalcodes.CRPT.
- an external SQL server database, in a table with customizable name, but still in the externalcodes schema.

The materialization options can be specified per OMS scheme. By default, no codes are materialized.

To configure the materialization, you need to:

- Create a configunit file in the GateService directory with the content below.
- Optionally, only when external SQL database is used, add a connection string to the GateService.exe.config file.

CrptMaterialization.configunit

The structure of the configunit file can be customized according to your needs. The specific configuration starts from the child of the Implementation element.

- **RussianCodesHandlerConfig** - the root element of the CRPT-specific configuration
- **MaterializationConfigurations** - a collection with OMS scheme-specific configurations.
- **CrptMaterializationConfiguration** - OMS scheme-specific materialization configuration. You can specify one or many elements.
 - **OmsSchemeName** - the name of an OMS scheme, as specified in the CRPT codes driver settings
 - **StorageStrategy** - StoredProcedure or ExternalDatabase
 - **StoredProcedure** will materialize the codes in the Gate database, in table externalcodes.CRPT.
 - **ExternalDatabase** will materialize the codes in an external database. The following element, **DatabaseConfiguration** is required in this case.
 - **DatabaseConfiguration** - optional, used only when StorageStrategy=ExternalDatabase
 - **ConnectionStringName** - the name of a connection string to the external SQL server database where to materialize CRPT codes. The connection string must be declared in GateService.exe.config
 - **TableName** - optional, the name of the table where to materialize CRPT codes. The name must not include schema. The default TableName is CRPT.

CrptMaterialization.configunit

```
<?xml version="1.0" encoding="utf-8" ?>
<ConfigUnit FormatVersion="1.0" xmlns="http://el4net.sf.net/configunit">
  <FriendlyName>ExternalStorage</FriendlyName>
  <Version>1.0</Version>
  <Description>External storage configuration</Description>
  <Category></Category>
  <Mandatory>true</Mandatory>
  <Partial>false</Partial>
  <EnvironmentInformation></EnvironmentInformation>
  <CUDependencies>
    <UseOrOverride>ComponentManager,ConfigUnitVersion=1.0</UseOrOverride>
    <UseOrOverride>SingletonComponentsAndInterception,ConfigUnitVersion=1.0</UseOrOverride>
  </CUDependencies>
  <ConfigFragment>
    <ComponentRepository>
      <ComponentDefinition Name="Inexto.S3r.ExternalCodesHandler.RUSSIA">
        <SingletonComponent>
          <Implementation>
            <RussianCodesHandlerConfig>
              <MaterializationConfigurations OnMiss="Add" OnExist="Fail">
                <CrptMaterializationConfiguration OnMiss="Add" OnExist="Fail">
                  <OmsSchemeName>OMS-RU-TOBACCO</OmsSchemeName>
```

```

        <StorageStrategy>StoredProcedure</StorageStrategy>
    </CrptMaterializationConfiguration>
    <CrptMaterializationConfiguration OnMiss="Add" OnExist="Fail">
        <OmsSchemeName>OMS-RU-NCP</OmsSchemeName>
        <StorageStrategy>ExternalDatabase</StorageStrategy>
        <DatabaseConfiguration>
            <ConnectionStringName>CrptMaterializationConnectionString</ConnectionStringName>
            <TableName>CRPT</TableName>
        </DatabaseConfiguration>
    </CrptMaterializationConfiguration>
</MaterializationConfigurations>
</RussianCodesHandlerConfig>
</Implementation>
</SingletonComponent>
</ComponentDefinition>
</ComponentRepository>
</ConfigFragment>
</ConfigUnit>

```

 The OMS scheme names above are from the Inexto test environment. Replace the values with the configuration on your Gate instance.

GateService.exe.config

The GateService.exe.config is located in the root directory of the GateService, next to GateService.exe.

Open it with notepad and locate the connectionStrings element. If it does not exist, add it as a child of the root element configuration (see example below).

 XML is case sensitive, make sure you configure the elements exactly as they are described below.

Add an add element with the following attributes:

- **name** - is the name of the connection string. You need to use the same value in **CrptMaterialization.configunit** CrptMaterializationConfiguration / DatabaseConfiguration / ConnectionStringName
- **providerName** - this must be System.Data.SqlClient
- **connectionString** - ADO.NET connection string to the external database.

GateService.exe.config

```

<?xml version="1.0" encoding="utf-8"?>
<configuration>
    ...
    <connectionStrings>
        <add name="CrptMaterializationConnectionString"
            providerName="Microsoft.Data.SqlClient"
            connectionString="Data Source=CdfySqlInstance;Initial Catalog=CrptMaterialization;Integrated Security=True;A
        </connectionStrings>
    ...
</configuration>

```

 The database server (Data Source element) and the database name (Initial Catalog element) are from the Inexto test environment. Make sure you use the corresponding names from your environment.

Cleanup

The materialized CRPT codes are cleaned in the same way as any other external codes. For more information see [Cleanup Configuration](#).

CRPT Codes Expiration

- [Overview](#)
- [Configuration](#)
- [Expiration Schemes](#)
 - [Fixed Period \(default\)](#)
 - [End of the Month](#)
 - [No Ordering Window](#)

Overview

The CRPT codes have different expiration depending on many factors:

Excise	Armenia	Kazakhstan	Kyrgyzstan	Russia	Uzbekistan
Paid after production	No expiration	?	?	21 days	?
Paid before production (usually import)	No expiration	No expiration	No expiration	n/a	No expiration

By default the CRPT codes are configured to expire 19 days after they have been ordered. When needed, this period could be extended globally for the Gate instance, or per OMS scheme.

When the codes should not expire, we recommend setting [Expiration Period](#) = 365d (i.e. 1 year) or more.

- i** Gate will automatically mark the codes as expired one day before their Expiration Period. This behavior is the same for all regulations and is controlled by the [GateAdvanceExpirationPeriod](#) application setting.

Liz will automatically not print codes one day before their Expiration Period. This behavior can be configured for all regulations or per-regulation, and is controlled by the [LizAdvanceExpirationPeriod](#) family of application settings.

Configuration

Expiration Period can be configured on Gate level, or per OMS scheme (i.e. per market):

- The CRPT Codes driver setting: [Default Code Expiration](#) will affect all codes that were downloaded on this Gate instance, unless their OMS scheme was configured differently.
- The OMS scheme setting [Expiration Period](#) will affect only the codes that were downloading using that OMS scheme.

Expiration Schemes

Gate supports flexible expiration configuration per OMS scheme by setting the [Expiration Scheme](#) dropdown.

Fixed Period (default)

The default behavior is to expire CRPT chunks after a fixed period, configured in the [Default Code Expiration](#) setting in the CRPT Codes driver configuration dialog.

End of the Month

This behavior will expire the chunks at the end of the last day of each calendar month, or when the default **Expiration Period** ends, whichever comes first.

The OMS works in local time zone and the expiration should happen in the same time zone. When the factory is in a different time zone, it is recommended to use the [Expiration Time Zone](#) setting and select the OMS time zone (i.e. Moscow for Russian OMS, etc.).

- i** Examples:

 - Codes ordered on October 1st will expire on October 19th (assuming **Expiration Time** is the default value - 19 days)
 - Codes ordered on October 30th will expire on October 31th.

No Ordering Window

Chunks ordered close before the end of the month could expire before they are printed. This setting configures a period in the end of the month when no codes will be ordered.

When using monthly expiration it is strongly recommended to set [LizAdvanceExpirationPeriod](#) and [AdvanceTimeForChunkExpiry](#) with the same or smaller value than **No Ordering Window**.

- i** The CRPT operation driver will display a warning in its validation messages when [LizAdvanceExpirationPeriod](#) or [AdvanceTimeForChunkExpiry](#) is longer than **No Ordering Window**.

CRPT Data Retention and Cleanup

CRPT Reports Cleanup

- [Overview](#)
- [Configuration](#)
- [Background Job](#)

Overview [↗](#)

When the Gate sends usage and aggregation reports to the OMS, these reports are also recorded and saved in the Gate's [ReportEntries](#) and [Reports](#) tables.

Storing many historical records can negatively impact the performance of the Gate, Liz, and production.

The following section explains how to manage the cleanup of CRPT reports:

Configuration [↗](#)

Category	Key	Default Value
OmsReportCleaner	Cleanup_CrptReport_RetentionTime	180d

[Application Setting](#) to define how long CRPT reports must be kept in the Gate database

Category	Key	Default Value
OmsReportCleaner	Cleanup_CrptReports_MaxToDelete	2000

[Application Setting](#) to define the total number of reports to delete when the CRPT background job (see *Background Job*) runs.

Background Job [↗](#)

The *CRPT Delete reports* background job is used to clean up CRPT reports

By default, the job is configured to:

- run every 1 hour
- delete 2000 codes each time the background runs (see Configuration to change)

This means the background job deletes 48,000 each day automatically.

INEXTORGATE

Production

Products

Printing

Vaults

Serializers

Configuration

Application Settings

UI Configurations

Jobs

Unit Types

Reset Criteria

Search

The history of jobs with a periodicity below 5 minutes is not available

Component

Job Name

Schedule

Next Execution

Last Execution

Last Run Time

CRPT

CRPT codes driver	Delete CRPT code signatures	every 30 minutes	Suspended	None	
CRPT codes driver	Delete CRPT reports	every 1 hour	in 1 hour	None	
CRPT codes driver (10.1.0.4584)	BackgroundModule-OMS Code Orders (Required)	N/A	Running for 19 minutes	None	
CRPT codes driver (10.1.0.4584)	BackgroundModule-OMS Reports: Aggregation	every 10 seconds	in 3 seconds	about 6 seconds ago	0 seconds
CRPT codes driver (10.1.0.4584)	BackgroundModule-OMS Reports: Status Monitor	every 1 minute	in 32 seconds	about 27 seconds ago	0 seconds
CRPT codes driver (10.1.0.4584)	BackgroundModule-OMS Reports: Missing Usage Generator	every 10 minutes	in 32 seconds	about 9 minutes ago	0 seconds

<

<<

1 of 1 (6/6)

>>

>

Validation results: Successful

Edit Schedule

Start

Suspend

History

Change connection

Sync with Vault

Factory Information

Name: Gate DCTA

Location: DCTA

Versions: App: 10.1.0.4584-rc.80/7d155723 Svc: 10.1.0.4584-rc.80/7d155723

figure 1: view of the "Delete CRPT reports" job

Removing CRPT signatures

A [background job](#) is available in Gate to delete the signatures of CRPT codes after they were printed and sent in usage reports to OMS:



The job is suspended by default, in order to be usable it has to be resumed first. By default it will run every 30 minutes and will delete the contents of depleted CRPT external code chunks that match the following conditions:

- when [OMS usage reports are enabled](#), all codes in the chunk must be present in one or many approved OMS usage reports
- when [OMS usage reports are disabled](#) globally or in OMS scheme, the chunk contents are deleted as soon as the chunk is marked as depleted

⚠ After the contents of a CRPT chunk have been deleted, Gate will not be able to:

- create usage reports for the codes in the chunk
- decompose (validate) the codes in the chunk
- print the codes in the chunk
- recover the content

Do not enable the background job if any of the above is required by the factory process.

The existing functionality to cleanup old chunks is available and will delete depleted chunks after they reach the configured age (6 months by default).

Related pages:

1. [How to configure jobs](#)
2. [OMS Usage And Aggregation Reports](#)
3. [Configure OMS Usage Reports](#)

CRPT Scripting

- [Overview](#)
 - [Common Tips & Tricks](#)
 - [Write a message in the operation driver logs](#)

Overview [🔗](#)

This section contains examples of commonly used scripts in factories.

✖ When you are adding new scripts, use the same document structure:

- Service
 - Operation Driver
 - Script Title
 - Script Description
 - Script Usings
 - Script Code

Common Tips & Tricks [🔗](#)

Write a message in the operation driver logs [🔗](#)

The log messages can help you troubleshoot a problem in the script. They are written in both the service logs and in the operation driver mini log.

```
1 // Log the value of a variable
2 Log(MessageLevel.Info, $"Variable is: {variable}");
3 // Log the contents of a PropertySet
4 Log(MessageLevel.Info, attributes.Serialize());
```

CRPT Scripting: PMI MES driver

- [Add OMS_SCHEME Attribute Depending on the Value of Another Attribute in PO](#)
 - [Using Tab](#)
 - [Convert Tab](#)
- [Remove Attributes Depending on Another Attribute in PO](#)
 - [Using Tab](#)
 - [Convert Tab](#)

Add OMS_SCHEME Attribute Depending on the Value of Another Attribute in PO [🔗](#)

This script will add a attribute OMS_SCHEME to the incoming Production Order with a value that depends on the value of an existing attribute.

Extension points:

- Change attribute name - line 4
- Change attribute value - line 6
- Use different OMS scheme - line 13

Using Tab [🔗](#)

```
1 using Inexto.S3r.MC.OperationDrivers.PmiMesDriver;
```

Convert Tab [🔗](#)

```
1 public void Convert(Inexto.S3r.MC.OperationDrivers.PmiMesDriver.CodingInformation toConvert)
2 {
3     // Add the following code before the default PMI MES driver script
4     var marketAttributeName = "C1";
5     var marketCode = toConvert.ProcessOrder.Properties.FirstOrDefault(x => x.Name == marketAttributeName);
6     if ((string)marketCode?.Value == "RU04")
7     {
8         toConvert.ProcessOrder.Properties.Add(
9             new CodingInformationProcessOrderProperty
10            {
11                Name = "OMS_SCHEME",
12                Type = "string",
13                Value = "RU_OMSCLOUD" // The name of the OMS scheme for the RU04 market
14            });
15     }
16     // The PMI MES driver script should go after this line
17
18 }
```

✖ IMPORTANT: The PMI MES Driver is usually configured with a large script. The code above does not contain the default script.

Remove Attributes Depending on Another Attribute in PO [🔗](#)

This script will remove predefined attributes from if another attribute has specified value.

Extension points:

- Use different attribute - line 4
- Use different attribute value - line 6
- Remove different attributes - line 10-11

Using Tab [🔗](#)

```
1 using Inexto.S3r.MC.OperationDrivers.PmiMesDriver;
```

Convert Tab [🔗](#)

```
1 public void Convert(Inexto.S3r.MC.OperationDrivers.PmiMesDriver.CodingInformation toConvert)
2 {
3     // Add the following code before the default PMI MES driver script
4     var flagAttributeName = "ATTRIBUTE-NAME";
5     var flag = toConvert.ProcessOrder.Properties.FirstOrDefault(x => x.Name == flagAttributeName);
6     if (flag?.Value == "VALUE-TO-TEST")
7     {
8         var propertiesToRemove = new HashSet<string>(StringComparer.OrdinalIgnoreCase)
9         {
10             "Property1",
11             "Property2",
12         };
13         toConvert.ProcessOrder.Properties.RemoveAll(property => propertiesToRemove.Contains(property.Name));
14     }
15     // The PMI MES driver script should go after this line
16 }
```

❌ **IMPORTANT:** The PMI MES Driver is usually configured with a large script. The code above does not contain the default script.

CRPT Scripting: Liz File Interface

- [Add OMS_SCHEME Depending on a Property in PO](#)
 - [Convert Tab](#)

Add OMS_SCHEME Depending on a Property in PO [🔗](#)

This script will add a property OMS_SCHEME to the incoming Production Order with a value that depends on the value of an existing property.

The extension points are:

- Use other attribute (line 5, line 12 - error message)
- Use other attribute value (line 6)
- Use other OMS scheme name (line 8)

Convert Tab [🔗](#)

```
1 public void Convert(Inexto.S3r.Liz.OperationDriver.FileOperation.OrderFileContent toConvert) {
2
3     var attributes = toConvert.Content.GetOrCreatePropertySet("Attributes");
4
5     var marketCode = attributes.GetPropertyValueOrDefault("C1", "not found");
6     if (marketCode == "RU04")
7     {
8         var omsScheme = "RU_OMSCLOUD"; // The name of the OMS scheme for the RU04 market
9
10        attributes.AddProperty("OMS_SCHEME", omsScheme);
11
12        Log(MessageLevel.Info, $"File Operation Driver script: Changed OMS_SCHEME to {omsScheme} because C1=
13        {marketCode}");
14    }
```

CRPT Scripting: External Service Driver

- [Products Interface](#)
 - [Add OMS_SCHEME to some products](#)

Products Interface [↗](#)

Add OMS_SCHEME to some products [↗](#)

When configuring a Gate instance, the general rule is to configure OMS scheme on each CRPT-regulated market. Some countries support different production types (Tobacco, NCP, OTP, etc.) and the way to use different production type with the same OMS instance is to create separate OMS scheme. In this case the value of the OMS scheme in manufactured products will be inherited from the market and the different kinds of products must specify OMS_SCHEME attribute. A simple way to add OMS_SCHEME attributes to products based on the value of other attributes is with script.

The script below adds OMS_SCHEME attribute depending on the value of an attribute named MATERIALGROUP and also the value of the MarketCode property of the product. The customization points are:

- use different attribute than MATERIALGROUP (28)
- use different value of the MATERIALGROUP attribute (line 32)
- use different market (line 33)
- use different OMS scheme name (line 35)

```
1 public MasterData.Contract.ExternalDataWithValidation<GateMasterData.Contract.Products.ProductEct>[]
   ImportProducts (GateMasterData.Contract.Products.ProductEct[] products, System.Boolean overwrite) {
2     foreach (var product in products)
3     {
4         ConfigureThpProduct(product);
5     }
6     return Holder.ImportProducts(products, overwrite);
7 }
8
9 public MasterData.Contract.ExternalDataWithValidation<GateMasterData.Contract.Products.ProductEct> GetProduct
   (System.String productCode, System.Nullable<System.Int16> productVariant) {
10     return Holder.GetProduct(productCode, productVariant);
11 }
12
13 public Inexto.S3r.Foundation.Validation.ValidationMessages CreateProduct
   (GateMasterData.Contract.Products.ProductEct product) {
14     ConfigureThpProduct(product);
15     return Holder.CreateProduct(product);
16 }
17
18 public Inexto.S3r.Foundation.Validation.ValidationMessages DeleteProduct (System.String productCode,
   System.Nullable<System.Int16> productVariant) {
19     return Holder.DeleteProduct(productCode, productVariant);
20 }
21
22 public Inexto.S3r.Foundation.Validation.ValidationMessages UpdateProduct
   (GateMasterData.Contract.Products.ProductEct product) {
```

```

23     return Holder.UpdateProduct(product);
24 }
25
26 private void ConfigureThpProduct(GateMasterData.Contract.Products.ProductEct product)
27 {
28     var materialGroupProperty = product.PropertyCollection.Properties.FirstOrDefault(p =>
29         "MATERIALGROUP".Equals(p.Key, StringComparison.OrdinalIgnoreCase));
30
31     Log(MessageLevel.Info, $"Properties value: {product.MarketCode} {materialGroupProperty.Value}");
32
33     if ("ZF6510000".Equals(materialGroupProperty.Value, StringComparison.OrdinalIgnoreCase) &&
34         "RUS".Equals(product.MarketCode, StringComparison.OrdinalIgnoreCase))
35     {
36         product.Add("OMS_SCHEME", "OMS CLOUD THP");
37     }
38 }

```

Special Scenarios (CRPT)

- [CRPT: Using Imported Codes](#)
- [CRPT Code Orders Approval](#)
- [CRPT Printing Only Pack Codes](#)
- [CRPT Using Fortuna Codes](#)

CRPT: Using Imported Codes

- [Overview](#)
- [Configuration](#)
 - [Prerequisites](#)
 - [System Configuration](#)
 - [Manufactured Products & Layouts](#)
 - [Contents](#)
 - [Production Orders](#)
 - [Scripts](#)
 - [Setup Gate Database](#)
 - [Setup Vault Database](#)
 - [Undo Gate Database](#)

Overview [🔗](#)

The imported CRPT codes are not treated as CRPT codes, they become generic and they have the following differences:

	CRPT codes	Imported codes
Ordering	• CRPT driver orders codes automatically	• Manually imported in Gate
OMS reports	• CRPT driver sends OMS reports or • INEXPRESS sends OMS reports	• INEXPRESS sends OMS reports
Decomposition	• Can be validated in Gate / CRPT codes, Liz and Vault	• Can be checked on Liz and Vault
Other	• The CRPT codes do not require materialization and therefore they occupy less space in the database • The crypto part (signature) is not present on Vault	• Imported codes are stored in plain text in the database • The crypto part (signature) is present on Vault (i.e. it is not deleted)

Configuration [🔗](#)

Prerequisites [🔗](#)

- INEXTOR 10.1.0.4678 or newer
- INEXPRESS for sending usage and aggregation reports

System Configuration [🔗](#)

In order to tell INEXPRESS which configuration to use when sending OMS reports, the Production Order in Gate has to contain OMS_SCHEME attribute. However, the presence of OMS_SCHEME will activate the CRPT driver on Gate. To avoid that configure the following settings:

- In Gate, CRPT codes driver
 - [Create OMS scheme](#) for each country for which you will import codes (KZ, KG, etc.)
 - Set Ordering Mode = Disabled
 - [Disable the CRPT codes driver usage and aggregation](#) reporting modules
- In Gate, Manufacturing Markets
 - Make sure the markets which are using imported codes have OMS_SCHEME attribute with value equal to the OMS scheme you created in the previous step.

Manufactured Products & Layouts

The scripts below will create the following layouts that should be used in the Manufactured Products:

- CRPT_IMP_PACK_GEN
- CRPT_IMP_BUNDLE_GEN
- CRPT_IMP_BUNDLE_TOB
- CRPT_IMP_BUNDLE_NCP
- CRPT_IMP_BUNDLE_OTP

The layouts above can be customized if needed.

Contents

The scripts below will create the following contents:

- CRPT_IMP_PACK_GEN_MR - dynamic content for imported packs that contains the full pack code. This can be used for any country and production type.
- CRPT_IMP_BUNDLE_GEN_AI01 - dynamic content for imported bundles that contains AI01. This should be used only for codes that are not from Russia.
- CRPT_IMP_BUNDLE_GEN_AI21 - dynamic content for imported bundles that contains AI21. This should be used only for codes that are not from Russia.
- CRPT_IMP_BUNDLE_GEN_AI93 - dynamic content for imported bundles that contains AI93. This should be used only for codes that are not from Russia.
- CRPT_IMP_BUNDLE_GEN_MR - formatted content for imported bundles that contains the full bundle code. This should be used only for codes that are not from Russia.
- CRPT_IMP_BUNDLE_TOB_AI01 - dynamic content for imported bundles that contains AI01. This should be used only for Russian Tobacco codes.
- CRPT_IMP_BUNDLE_TOB_AI21 - dynamic content for imported bundles that contains AI21. This should be used only for Russian Tobacco codes.
- CRPT_IMP_BUNDLE_TOB_AI8005 - dynamic content for imported bundles that contains AI8005. This should be used only for Russian Tobacco codes.
- CRPT_IMP_BUNDLE_TOB_AI93 - dynamic content for imported bundles that contains AI93. This should be used only for Russian Tobacco codes.
- CRPT_IMP_BUNDLE_TOB_MR - formatted content for imported bundles that contains the full bundle code. This should be used only for Russian Tobacco codes.
- CRPT_IMP_BUNDLE_NCP_AI01 - dynamic content for imported bundles that contains AI01. This should be used only for Russian NCP codes.
- CRPT_IMP_BUNDLE_NCP_AI21 - dynamic content for imported bundles that contains AI21. This should be used only for Russian NCP codes.
- CRPT_IMP_BUNDLE_NCP_AI8005 - dynamic content for imported bundles that contains AI8005. This should be used only for Russian NCP codes.

- CRPT_IMP_BUNDLE_NCP_AI93 - dynamic content for imported bundles that contains AI93. This should be used only for Russian NCP codes.
- CRPT_IMP_BUNDLE_NCP_MR - formatted content for imported bundles that contains the full bundle code. This should be used only for Russian NCP codes.
- CRPT_IMP_BUNDLE_OTP_AI01 - dynamic content for imported bundles that contains AI01. This should be used only for Russian OTP codes.
- CRPT_IMP_BUNDLE_OTP_AI21 - dynamic content for imported bundles that contains AI21. This should be used only for Russian OTP codes.
- CRPT_IMP_BUNDLE_OTP_AI93 - dynamic content for imported bundles that contains AI93. This should be used only for Russian OTP codes.
- CRPT_IMP_BUNDLE_OTP_MR - formatted content for imported bundles that contains the full bundle code. This should be used only for Russian OTP codes.

Production Orders [🔗](#)

The production orders that use imported codes configured with the scripts below must contain the following attributes:

- PGTIN14 = EAN or GTIN for packs. The attribute name can be configured in the script below.
- BGTIN14 = EAN or GTIN for bundles. The attribute name can be configured in the script below.
- PPRICE = When printing Russian Tobacco codes, this must contain the price for a single pack. Otherwise it must be "0". The attribute name can be configured in the script below.
- Enable_CRPT_IMP_PACK_GEN = true.
- Enable_CRPT_IMP_BUNDLE_GEN = true. Add only when printing codes for a country that is not Russia.
- Enable_CRPT_IMP_BUNDLE_NCP = true. Add only when printing codes Russian NCP codes.
- Enable_CRPT_IMP_BUNDLE_OTP = true. Add only when printing codes Russian OTP codes.
- Enable_CRPT_IMP_BUNDLE_TOB = true. Add only when printing codes Russian Tobacco codes.

Examples:

- Scenario: printing imported Russian Tobacco codes
 - PGTIN14 = 0000000001113
 - BGTIN14 = 0000000002226
 - PPRICE = 130
 - Enable_CRPT_IMP_PACK_GEN = true
 - Enable_CRPT_IMP_BUNDLE_TOB = true
- Scenario: printing imported Russian OTP codes
 - PGTIN14 = 0000000001113
 - BGTIN14 = 0000000002226
 - PPRICE = 0
 - Enable_CRPT_IMP_PACK_GEN = true
 - Enable_CRPT_IMP_BUNDLE_OTP = true
- Scenario: printing imported KZ Tobacco codes
 - PGTIN14 = 0000000001113
 - BGTIN14 = 0000000002226
 - PPRICE = 0
 - Enable_CRPT_IMP_PACK_GEN = true
 - Enable_CRPT_IMP_BUNDLE_GEN = true

Scripts [↗](#)

Setup Gate Database [↗](#)

Configures external code types, contents and layouts for imported CRPT codes

README FIRST!

The External Code Reference of the codes imported for the configured code types consists of GTIN and Price.

The script below will configure Gate to look for GTIN and price in the following attributes:

- Packs: PGTIN14, PPRICE
- Bundles: BGTIN14, PPRICE

Replace all the names of the attributes above in the script below with the names of the attributes that the manufacturer uses.

▼ CRPT manual import setup.sql

```
1 EXECUTE [dbo].[ConfigureNewExternalCodeType]
2     'CRPT_IMP_PACK_GEN'
3     , 'CRPT imported GEN packs'
4     , 'CRPT imported GEN packs'
5     , 200
6     , 29
7     , '^d{14}[A-Za-z0-9!&'\'*\+-\._/:;<=>\?%()]{7}[A-Za-z0-9!&'\'*\+-\._/:;<=>\?%()]{8}'
8     , 'PGTIN14,PPRICE'
9     , 'RussiaExternalCodeReference_Imported_Packs'
10    , 'Enable_CRPT_IMP_PACK_GEN'
11    , '999d'
12    , 'Pack'
13    , NULL
14    , 0
15
16 INSERT INTO [dbo].[Contents] (
17     [Code], [Guid], [Description], [ContentType], [MinLength], [MaxLength], [RegularExpression],
18     [RegularExpressionDescription], [StartupModeValue],
19     [PropertyName], [IssuerCode], [IssuerArgumentsXml], [Format], [CodeMaskCode], [ValidatorComponentName],
20     [PropertiesXml], [Version], [ModifiedOn],
21     [ModifiedBy], [ExternalCodeSource], [ExternalCodeVaultRole], [Deleted])
22 VALUES(
23     'CRPT_IMP_PACK_GEN_MR',
24     '7f25e9b0-3cbf-44aa-bb7c-d9b26f97edb7',
25     'Full imported CRPT code for packs',
26     2, --codetype=External
27     29, --min length
28     29, --max length
29     NULL, --regex
30     NULL, --regex description
31     'XXXXXXXXXXXXXXXXXXXXXXXXXXXX', --startup mode value
32     NULL, --property type
33     'External', --issuer code
34     '<Set ns=""><P n="CodeTypeId" t="x" v="200" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Packs" /><P n="Format" t="x" v="" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Pack" /><P n="SOURCE" t="x"
v="CRPT_IMP_PACK_GEN" /></Set>',
35     NULL, --format
36     NULL, --code mask code,
```

```

35     NULL, --validator
36     '<Set ns="" />',
37     1, --version
38     GETDATE(),
39     'INEXT0/support',
40     'CRPT_IMP_PACK_GEN',
41     'Secondary', --vault role
42     0) --deleted
43
44 INSERT [dbo].[Layouts] ([Code], [Name], [Guid], [Description], [UnitTypeCode], [ModifiedOn], [ModifiedBy],
[Version], [Deleted])
45 VALUES (N'CRPT_IMP_PACK_GEN', N'CRPT_IMP_PACK_GEN', N'7d7e2b09-8863-49ac-8df7-cc3e7ab568b3',
CAST(CAST('{{\rtf1\ansi\ansicpg1252\uc1\htmautsp\def2{{\fonttbl{{\f0\charset0 Times New Roman;}}
{{\f2\charset0 Segoe UI;}}
{{\colortbl\red0\green0\blue0;\red255\green255\blue255;}}\loch\hich\dbch\pard\plain\ltrpar\itap0{{\lang103
3\fs18\fs2\cf0 \cf0\ql{{\f2 {{\ltrch CRPT_IMP_PACK_GEN}}\li0\ri0\sa0\sb0\fi0\ql\par}}
46 }}
47 }}' AS VARBINARY(MAX)) AS IMAGE), N'Packs', GETDATE(), 'INEXT0/support', 1, 0)
48
49 INSERT [dbo].[LayoutContents] ([LayoutCode], [ContentCode], [Required], [CodeLevel])
50 VALUES (N'CRPT_IMP_PACK_GEN', N'CRPT_IMP_PACK_GEN_MR', 1, 0)
51
52 EXECUTE [dbo].[ConfigureNewExternalCodeType]
53     'CRPT_IMP_BUNDLE_GEN'
54     , 'CRPT imported GEN bundles'
55     , 'CRPT imported GEN bundles'
56     , 201
57     , 36
58     , '^01\d{14}21[A-Za-z0-9!&'\*\+-.\/_.,;=<>?%( )]{7}(:?(:\x1D)?(:?93[A-Za-z0-9!&'\*\+-.\/_.,;=<>?%( )){8}))?'
59     , 'BGTIN14'
60     , 'RussiaExternalCodeReference_Imported_Bundles'
61     , 'Enable_CRPT_IMP_BUNDLE_GEN'
62     , '999d'
63     , 'Bundle'
64     , NULL
65     , 0
66
67 INSERT INTO [dbo].[Contents] (
68     [Code], [Guid], [Description], [ContentType], [MinLength], [MaxLength], [RegularExpression],
[RegularExpressionDescription],
69     [StartupModeValue], [PropertyName], [IssuerCode], [IssuerArgumentsXml], [Format], [CodeMaskCode],
[ValidatorComponentName],
70     [PropertiesXml], [Version], [ModifiedOn], [ModifiedBy], [ExternalCodeSource], [ExternalCodeVaultRole],
[Deleted])
71 VALUES(
72     'CRPT_IMP_BUNDLE_GEN_AI01',
73     '96bee2c0-c250-4a8c-bf82-bb6a6910f037',
74     'AI01 part of imported CRPT bundles code',
75     2, --codetype=External
76     14, --min length
77     14, --max length
78     NULL, --regex
79     NULL, --regex description
80     'XXXXXXXXXXXX', --startup mode value
81     NULL, --property type
82     'External', --issuer code

```

```

83      '<Set ns=""><P n="CodeTypeId" t="x" v="201" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[2,14]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_GEN" /></Set>',
84      NULL, --format
85      NULL, --code mask code,
86      NULL, --validator
87      '<Set ns="" />',
88      1, --version
89      GETDATE(),
90      'INEXT0/support',
91      'CRPT_IMP_BUNDLE_GEN',
92      'Secondary', --vault role
93      0) --deleted
94 INSERT INTO [dbo].[Contents] (
95     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
96     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
97     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
98 VALUES(
99     'CRPT_IMP_BUNDLE_GEN_AI21',
100     'e8311763-9fd7-461c-b6f4-638a5b88c94d',
101     'AI21 part of imported CRPT bundles code',
102     2, --codetype=External
103     7, --min length
104     7, --max length
105     NULL, --regex
106     NULL, --regex description
107     'XXXXXXX', --startup mode value
108     NULL, --property type
109     'External', --issuer code
110     '<Set ns=""><P n="CodeTypeId" t="x" v="201" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[18,7]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_GEN" /></Set>',
111     NULL, --format
112     NULL, --code mask code,
113     NULL, --validator
114     '<Set ns="" />',
115     1, --version
116     GETDATE(),
117     'INEXT0/support',
118     'CRPT_IMP_BUNDLE_GEN',
119     'Secondary', --vault role
120     0) --deleted
121 INSERT INTO [dbo].[Contents] (
122     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
123     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
124     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
125 VALUES(
126     'CRPT_IMP_BUNDLE_GEN_AI93',

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127     '04d94336-9a31-41c0-a6ea-ba3afd3fa839',
128     'AI93 part of imported CRPT bundles code',
129     2, --codetype=External
130     8, --min length
131     8, --max length
132     NULL, --regex
133     NULL, --regex description
134     'XXXXXXX', --startup mode value
135     NULL, --property type
136     'External', --issuer code
137     '<Set ns=""><P n="CodeTypeId" t="x" v="201" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[28,8]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_GEN" /></Set>',
138     NULL, --format
139     NULL, --code mask code,
140     NULL, --validator
141     '<Set ns="" />',
142     1, --version
143     GETDATE(),
144     'INEXT0/support',
145     'CRPT_IMP_BUNDLE_GEN',
146     'Secondary', --vault role
147     0) --deleted
148 INSERT INTO [dbo].[Contents] (
149     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
150     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
151     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
152 VALUES(
153     'CRPT_IMP_BUNDLE_GEN_MR',
154     '222d87c7-a6c6-4d63-84f4-15be35a088d2',
155     '[FNC1]01{CRPT_IMP_BUNDLE_GEN_AI01}21{CRPT_IMP_BUNDLE_GEN_AI21}[FNC1]93{CRPT_IMP_BUNDLE_GEN_AI93}', --
description
156     3, --content type 3=formatted
157     1, --min length
158     60, --max length
159     NULL, --regex
160     NULL, --regex description
161     NULL, --startup value
162     NULL, --property name
163     NULL, --issuer code
164     NULL, --issuer arguments
165     '[FNC1]01{CRPT_IMP_BUNDLE_GEN_AI01}21{CRPT_IMP_BUNDLE_GEN_AI21}[FNC1]93{CRPT_IMP_BUNDLE_GEN_AI93}', --
format
166     NULL, --code mask code
167     NULL, --validator component name
168     '<Set ns="" />', --properties xml,
169     1, --version
170     GETDATE(),
171     'INEXT0/support',
172     NULL, --ExternalCodeSource,
173     NULL, --ExternalCodeVaultRole,
174     0) --deleted
175

```

```

176 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_GEN_MR',
'CRPT_IMP_BUNDLE_GEN_AI01')
177 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_GEN_MR',
'CRPT_IMP_BUNDLE_GEN_AI21')
178 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_GEN_MR',
'CRPT_IMP_BUNDLE_GEN_AI93')
179
180
181 INSERT [dbo].[Layouts] ([Code], [Name], [Guid], [Description], [UnitTypeCode], [ModifiedOn], [ModifiedBy],
[Version], [Deleted])
182 VALUES (N'CRPT_IMP_BUNDLE_GEN', N'CRPT_IMP_BUNDLE_GEN', N'60365988-c045-442c-9efa-24cd35cb17cb',
CAST(CAST('{"rtf1\ansi\ansicpg1252\uc1\htmautsp\def2{"fonttbl{"f0\charset0 Times New Roman;}"
{"f2\charset0 Segoe UI;}"
{"colortbl\red0\green0\blue0;\red255\green255\blue255;}"\loch\hich\dbch\pard\plain\ltrpar\itap0{"lang103
3\fs18\p2\cf0 \cf0\ql{"f2 {"ltrch CRPT_IMP_BUNDLE_GEN"}\li0\ri0\sa0\sb0\fi0\ql\par}'}
183 }}
184 }}' AS VARBINARY(MAX)) AS IMAGE), N'Bundles', GETDATE(), 'INEXT0\support', 1, 0)
185
186 INSERT [dbo].[LayoutContents] ([LayoutCode], [ContentCode], [Required], [CodeLevel])
187 VALUES (N'CRPT_IMP_BUNDLE_GEN', N'CRPT_IMP_BUNDLE_GEN_MR', 1, 0)
188
189 EXECUTE [dbo].[ConfigureNewExternalCodeType]
190     'CRPT_IMP_BUNDLE_TOB'
191     , 'CRPT imported TOB bundles'
192     , 'CRPT imported TOB bundles'
193     , 202
194     , 43
195     , '^01\d{14}21[A-Za-z0-9! "&'\'*\+-.\/_,:;<>?%( )]{7}(?:$|(?:\x1D8005[0-9]{6}\x1D93[A-Za-z0-9! "&'\'*\+-.
\./_,:;<>?%( )]{4})$)'
196     , 'BGTIN14,PPRICE'
197     , 'RussiaExternalCodeReference_Imported_Bundles'
198     , 'Enable_CRPT_IMP_BUNDLE_TOB'
199     , '999d'
200     , 'Bundle'
201     , NULL
202     , 0
203
204 INSERT INTO [dbo].[Contents] (
205     [Code], [Guid], [Description], [ContentType], [MinLength], [MaxLength], [RegularExpression],
[RegularExpressionDescription],
206     [StartupModeValue], [PropertyName], [IssuerCode], [IssuerArgumentsXml], [Format], [CodeMaskCode],
[ValidatorComponentName],
207     [PropertiesXml], [Version], [ModifiedOn], [ModifiedBy], [ExternalCodeSource], [ExternalCodeVaultRole],
[Deleted])
208 VALUES(
209     'CRPT_IMP_BUNDLE_TOB_AI01',
210     '3a300577-68b9-46cf-8448-e40832f27505',
211     'AI01 part of imported CRPT bundles code',
212     2, --codetype=External
213     14, --min length
214     14, --max length
215     NULL, --regex
216     NULL, --regex description
217     'XXXXXXXXXXXX', --startup mode value
218     NULL, --property type
219     'External', --issuer code
220     '<Set ns=" "><P n="CodeTypeId" t="x" v="202" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[2,14]" /><P

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```

n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_TOB" /></Set>',
221     NULL, --format
222     NULL, --code mask code,
223     NULL, --validator
224     '<Set ns="" />',
225     1, --version
226     GETDATE(),
227     'INEXT0/support',
228     'CRPT_IMP_BUNDLE_TOB',
229     'Secondary', --vault role
230     0) --deleted
231 INSERT INTO [dbo].[Contents] (
232     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
233     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
234     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
235 VALUES(
236     'CRPT_IMP_BUNDLE_TOB_AI21',
237     'e6d2b410-679c-4c85-8536-6e1543442ea9',
238     'AI21 part of imported CRPT bundles code',
239     2, --codetype=External
240     7, --min length
241     7, --max length
242     NULL, --regex
243     NULL, --regex description
244     'XXXXXXX', --startup mode value
245     NULL, --property type
246     'External', --issuer code
247     '<Set ns=""><P n="CodeTypeId" t="x" v="202" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[18,7]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_TOB" /></Set>',
248     NULL, --format
249     NULL, --code mask code,
250     NULL, --validator
251     '<Set ns="" />',
252     1, --version
253     GETDATE(),
254     'INEXT0/support',
255     'CRPT_IMP_BUNDLE_TOB',
256     'Secondary', --vault role
257     0) --deleted
258 INSERT INTO [dbo].[Contents] (
259     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
260     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
261     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
262 VALUES(
263     'CRPT_IMP_BUNDLE_TOB_AI8005',
264     '6e02f42a-f85e-4928-9e1f-82473f4e3896',
265     'AI8005 part of imported CRPT bundles code',

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266     2, --codetype=External
267     6, --min length
268     6, --max length
269     NULL, --regex
270     NULL, --regex description
271     'XXXXXX', --startup mode value
272     NULL, --property type
273     'External', --issuer code
274     '<Set ns=""><P n="CodeTypeId" t="x" v="202" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[30,6]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_TOB" /></Set>',
275     NULL, --format
276     NULL, --code mask code,
277     NULL, --validator
278     '<Set ns="" />',
279     1, --version
280     GETDATE(),
281     'INEXT0/support',
282     'CRPT_IMP_BUNDLE_TOB',
283     'Secondary', --vault role
284     0) --deleted
285 INSERT INTO [dbo].[Contents] (
286     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
287     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
288     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
289 VALUES(
290     'CRPT_IMP_BUNDLE_TOB_AI93',
291     '661fa154-4c68-4c5f-97ca-5eeae3635d3e',
292     'AI93 part of imported CRPT bundles code',
293     2, --codetype=External
294     4, --min length
295     4, --max length
296     NULL, --regex
297     NULL, --regex description
298     'XXXX', --startup mode value
299     NULL, --property type
300     'External', --issuer code
301     '<Set ns=""><P n="CodeTypeId" t="x" v="202" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[39,4]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_TOB" /></Set>',
302     NULL, --format
303     NULL, --code mask code,
304     NULL, --validator
305     '<Set ns="" />',
306     1, --version
307     GETDATE(),
308     'INEXT0/support',
309     'CRPT_IMP_BUNDLE_TOB',
310     'Secondary', --vault role
311     0) --deleted
312 INSERT INTO [dbo].[Contents] (

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```

313     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
314     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
315     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
316 VALUES(
317     'CRPT_IMP_BUNDLE_TOB_MR',
318     'd6f56681-4c92-4470-bdcd-707577787d3b',
319     '[FNC1]01{CRPT_IMP_BUNDLE_TOB_AI01}21{CRPT_IMP_BUNDLE_TOB_AI21}[FNC1]8005{CRPT_IMP_BUNDLE_TOB_AI8005}
[FNC1]93{CRPT_IMP_BUNDLE_TOB_AI93}', --description
320     3, --content type 3=formatted
321     1, --min length
322     60, --max length
323     NULL, --regex
324     NULL, --regex description
325     NULL, --startup value
326     NULL, --property name
327     NULL, --issuer code
328     NULL, --issuer arguments
329     '[FNC1]01{CRPT_IMP_BUNDLE_TOB_AI01}21{CRPT_IMP_BUNDLE_TOB_AI21}[FNC1]8005{CRPT_IMP_BUNDLE_TOB_AI8005}
[FNC1]93{CRPT_IMP_BUNDLE_TOB_AI93}', --format
330     NULL, --code mask code
331     NULL, --validator component name
332     '<Set ns="" />', --properties xml,
333     1, --version
334     GETDATE(),
335     'INEXT0/support',
336     NULL, --ExternalCodeSource,
337     NULL, --ExternalCodeVaultRole,
338     0) --deleted
339
340 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_TOB_MR',
'CRPT_IMP_BUNDLE_TOB_AI01')
341 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_TOB_MR',
'CRPT_IMP_BUNDLE_TOB_AI21')
342 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_TOB_MR',
'CRPT_IMP_BUNDLE_TOB_AI8005')
343 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_TOB_MR',
'CRPT_IMP_BUNDLE_TOB_AI93')
344
345
346 INSERT [dbo].[Layouts] ([Code], [Name], [Guid], [Description], [UnitTypeCode], [ModifiedOn], [ModifiedBy],
[Version], [Deleted])
347 VALUES (N'CRPT_IMP_BUNDLE_TOB', N'CRPT_IMP_BUNDLE_TOB', N'1f2f1df4-edaf-4f7f-8d79-c603d5b1cc64',
CAST(CAST('{\rtf1\ansi\ansicpg1252\uc1\htmautsp\def2{\fonttbl{\f0\fcharset0 Times New Roman;}
{\f2\fcharset0 Segoe UI;}
{\colortbl\red0\green0\blue0;\red255\green255\blue255;}}\loch\hich\dbch\pard\plain\ltrpar\itap0{\lang103
3\fs18\f2\cf0 \cf0\ql{\f2 {\ltrch CRPT_IMP_BUNDLE_TOB}}\li0\ri0\sa0\sb0\fi0\ql\par}
348 }}'
349 AS VARBINARY(MAX)) AS IMAGE), N'Bundles', GETDATE(), 'INEXT0/support', 1, 0)
350
351 INSERT [dbo].[LayoutContents] ([LayoutCode], [ContentCode], [Required], [CodeLevel])
352 VALUES (N'CRPT_IMP_BUNDLE_TOB', N'CRPT_IMP_BUNDLE_TOB_MR', 1, 0)
353
354 EXECUTE [dbo].[ConfigureNewExternalCodeType]
355     'CRPT_IMP_BUNDLE_NCP'
356     , 'CRPT imported NCP bundles'

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357     , 'CRPT imported NCP bundles'
358     , 204
359     , 43
360     , '^01\d{14}21[A-Za-z0-9!'&''\*\+-\._,;=<>\?%()]{7}(\?:$|(\?:\x1D8005[0]{6}\x1D93[A-Za-z0-9!'&''\*\+-\._,;=<>\?%()]{4}))$)'
361     , 'BGTIN14'
362     , 'RussiaExternalCodeReference_Imported_Bundles'
363     , 'Enable_CRPT_IMP_BUNDLE_NCP'
364     , '999d'
365     , 'Bundle'
366     , NULL
367     , 0
368
369     INSERT INTO [dbo].[Contents] (
370         [Code], [Guid], [Description], [ContentType], [MinLength], [MaxLength], [RegularExpression],
371         [RegularExpressionDescription],
372         [StartupModeValue], [PropertyName], [IssuerCode], [IssuerArgumentsXml], [Format], [CodeMaskCode],
373         [ValidatorComponentName],
374         [PropertiesXml], [Version], [ModifiedOn], [ModifiedBy], [ExternalCodeSource], [ExternalCodeVaultRole],
375         [Deleted])
376     VALUES(
377         'CRPT_IMP_BUNDLE_NCP_AI01',
378         '3e2d0dac-bdf5-4a80-9b68-e84a3f2d5a6e',
379         'AI01 part of imported CRPT bundles code',
380         2, --codetype=External
381         14, --min length
382         14, --max length
383         NULL, --regex
384         NULL, --regex description
385         'XXXXXXXXXXXX', --startup mode value
386         NULL, --property type
387         'External', --issuer code
388         '<Set ns=""><P n="CodeTypeId" t="x" v="204" /><P n="ExternalCodeReferencePropertyName" t="x"
389         v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[2,14]" /><P
390         n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
391         t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
392         v="CRPT_IMP_BUNDLE_NCP" /></Set>',
393         NULL, --format
394         NULL, --code mask code,
395         NULL, --validator
396         '<Set ns="" />',
397         1, --version
398         GETDATE(),
399         'INEXT0/support',
400         'CRPT_IMP_BUNDLE_NCP',
401         'Secondary', --vault role
402         0) --deleted
403
404     INSERT INTO [dbo].[Contents] (
405         [Code], [Guid], [Description], [ContentType], [MinLength], [MaxLength], [RegularExpression],
406         [RegularExpressionDescription],
407         [StartupModeValue], [PropertyName], [IssuerCode], [IssuerArgumentsXml], [Format], [CodeMaskCode],
408         [ValidatorComponentName],
409         [PropertiesXml], [Version], [ModifiedOn], [ModifiedBy], [ExternalCodeSource], [ExternalCodeVaultRole],
410         [Deleted])
411     VALUES(
412         'CRPT_IMP_BUNDLE_NCP_AI21',
413         '6ed70d28-49e1-4b2b-925a-50368a9233a5',
414         'AI21 part of imported CRPT bundles code',

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```

404     2, --codetype=External
405     7, --min length
406     7, --max length
407     NULL, --regex
408     NULL, --regex description
409     'XXXXXX', --startup mode value
410     NULL, --property type
411     'External', --issuer code
412     '<Set ns=""><P n="CodeTypeId" t="x" v="204" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[18,7]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_NCP" /></Set>',
413     NULL, --format
414     NULL, --code mask code,
415     NULL, --validator
416     '<Set ns="" />',
417     1, --version
418     GETDATE(),
419     'INEXT0/support',
420     'CRPT_IMP_BUNDLE_NCP',
421     'Secondary', --vault role
422     0) --deleted
423 INSERT INTO [dbo].[Contents] (
424     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
425     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
426     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
427 VALUES(
428     'CRPT_IMP_BUNDLE_NCP_AI93',
429     '05c3986f-4a8f-49d8-b6a6-cf4c3d2e0e83',
430     'AI93 part of imported CRPT bundles code',
431     2, --codetype=External
432     4, --min length
433     4, --max length
434     NULL, --regex
435     NULL, --regex description
436     'XXXX', --startup mode value
437     NULL, --property type
438     'External', --issuer code
439     '<Set ns=""><P n="CodeTypeId" t="x" v="204" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[39,4]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_NCP" /></Set>',
440     NULL, --format
441     NULL, --code mask code,
442     NULL, --validator
443     '<Set ns="" />',
444     1, --version
445     GETDATE(),
446     'INEXT0/support',
447     'CRPT_IMP_BUNDLE_NCP',
448     'Secondary', --vault role
449     0) --deleted
450 INSERT INTO [dbo].[Contents] (

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451     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
452     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
453     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
454 VALUES(
455     'CRPT_IMP_BUNDLE_NCP_MR',
456     '828a4ffd-395a-4568-8592-66c4870fa6fe',
457     '[FNC1]01{CRPT_IMP_BUNDLE_NCP_AI01}21{CRPT_IMP_BUNDLE_NCP_AI21}[FNC1]93{CRPT_IMP_BUNDLE_NCP_AI93}', --
description
458     3, --content type 3=formatted
459     1, --min length
460     60, --max length
461     NULL, --regex
462     NULL, --regex description
463     NULL, --startup value
464     NULL, --property name
465     NULL, --issuer code
466     NULL, --issuer arguments
467     '[FNC1]01{CRPT_IMP_BUNDLE_NCP_AI01}21{CRPT_IMP_BUNDLE_NCP_AI21}[FNC1]93{CRPT_IMP_BUNDLE_NCP_AI93}', --
format
468     NULL, --code mask code
469     NULL, --validator component name
470     '<Set ns="" />', --properties xml,
471     1, --version
472     GETDATE(),
473     'INEXT0/support',
474     NULL, --ExternalCodeSource,
475     NULL, --ExternalCodeVaultRole,
476     0) --deleted
477
478 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_NCP_MR',
'CRPT_IMP_BUNDLE_NCP_AI01')
479 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_NCP_MR',
'CRPT_IMP_BUNDLE_NCP_AI21')
480 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_NCP_MR',
'CRPT_IMP_BUNDLE_NCP_AI93')
481
482
483 INSERT [dbo].[Layouts] ([Code], [Name], [Guid], [Description], [UnitTypeCode], [ModifiedOn], [ModifiedBy],
[Version], [Deleted])
484 VALUES (N'CRPT_IMP_BUNDLE_NCP', N'CRPT_IMP_BUNDLE_NCP', N'990d17c6-7e4c-4f6c-9b5d-02b155e16ab1',
CAST(CAST('{\rtf1\ansi\ansicpg1252\uc1\htmautsp\def2{\fonttbl{\f0\fcharset0 Times New Roman;}}
{\f2\fcharset0 Segoe UI;}
{\color0\red0\green0\blue0;\red255\green255\blue255;}}\loch\hich\dbch\pard\plain\ltrpar\itap0{\lang103
3\fs18\p2\cf0 \cf0\ql1{\f2 {\ltrch CRPT_IMP_BUNDLE_NCP}}\li0\ri0\sa0\sb0\fi0\ql\par}}
485 }}
486 }}' AS VARBINARY(MAX)) AS IMAGE), N'Bundles', GETDATE(), 'INEXT0/support', 1, 0)
487
488 INSERT [dbo].[LayoutContents] ([LayoutCode], [ContentCode], [Required], [CodeLevel])
489 VALUES (N'CRPT_IMP_BUNDLE_NCP', N'CRPT_IMP_BUNDLE_NCP_MR', 1, 0)
490
491 EXECUTE [dbo].[ConfigureNewExternalCodeType]
492     'CRPT_IMP_BUNDLE_OTP'
493     , 'CRPT imported OTP bundles'
494     , 'CRPT imported OTP bundles'
495     , 203

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```

496 ,32
497 ,'^01\d{14}21[A-Za-z0-9!'&' '\*\+-\._,:;=<>?%()]{7}{?:$|(?:\x1D93[A-Za-z0-9!'&' '\*\+-\._,:;=<>?%()]{4})$)'
498 , 'BGTIN14'
499 , 'RussiaExternalCodeReference_Imported_Bundles'
500 , 'Enable_CRPT_IMP_BUNDLE_OTP'
501 , '999d'
502 , 'Bundle'
503 , NULL
504 , 0
505
506 INSERT INTO [dbo].[Contents] (
507     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
508     [RegularExpressionDescription],
509     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
510     [ValidatorComponentName],
511     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
512     [Deleted])
513 VALUES(
514     'CRPT_IMP_BUNDLE_OTP_AI01',
515     '50117ce3-2b78-43cb-b44a-bbb6cce945a6',
516     'AI01 part of imported CRPT bundles code',
517     2, --codetype=External
518     14, --min length
519     14, --max length
520     NULL, --regex
521     NULL, --regex description
522     'XXXXXXXXXXXX', --startup mode value
523     NULL, --property type
524     'External', --issuer code
525     '<Set ns=""><P n="CodeTypeId" t="x" v="203" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[2,14]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_OTP" /></Set>',
526     NULL, --format
527     NULL, --code mask code,
528     NULL, --validator
529     '<Set ns="" />',
530     1, --version
531     GETDATE(),
532     'INEXT0/support',
533     'CRPT_IMP_BUNDLE_OTP',
534     'Secondary', --vault role
535     0) --deleted
536
537 INSERT INTO [dbo].[Contents] (
538     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
539     [RegularExpressionDescription],
540     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
541     [ValidatorComponentName],
542     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
543     [Deleted])
544 VALUES(
545     'CRPT_IMP_BUNDLE_OTP_AI21',
546     'cd974dde-0472-4e0d-9e7d-1a59c7d7daae',
547     'AI21 part of imported CRPT bundles code',
548     2, --codetype=External
549     7, --min length

```

```

543     7, --max length
544     NULL, --regex
545     NULL, --regex description
546     'XXXXXX', --startup mode value
547     NULL, --property type
548     'External', --issuer code
549     '<Set ns=""><P n="CodeTypeId" t="x" v="203" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[18,7]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_OTP" /></Set>',
550     NULL, --format
551     NULL, --code mask code,
552     NULL, --validator
553     '<Set ns="" />',
554     1, --version
555     GETDATE(),
556     'INEXT0/support',
557     'CRPT_IMP_BUNDLE_OTP',
558     'Secondary', --vault role
559     0) --deleted
560 INSERT INTO [dbo].[Contents] (
561     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],
562     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
563     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
564 VALUES(
565     'CRPT_IMP_BUNDLE_OTP_AI93',
566     '3948a139-dd5a-4b9b-8811-46577d6f0958',
567     'AI93 part of imported CRPT bundles code',
568     2, --codetype=External
569     4, --min length
570     4, --max length
571     NULL, --regex
572     NULL, --regex description
573     'XXXX', --startup mode value
574     NULL, --property type
575     'External', --issuer code
576     '<Set ns=""><P n="CodeTypeId" t="x" v="203" /><P n="ExternalCodeReferencePropertyName" t="x"
v="RussiaExternalCodeReference_Imported_Bundles" /><P n="Format" t="x" v="[28,4]" /><P
n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P n="ROLE"
t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Bundle" /><P n="SOURCE" t="x"
v="CRPT_IMP_BUNDLE_OTP" /></Set>',
577     NULL, --format
578     NULL, --code mask code,
579     NULL, --validator
580     '<Set ns="" />',
581     1, --version
582     GETDATE(),
583     'INEXT0/support',
584     'CRPT_IMP_BUNDLE_OTP',
585     'Secondary', --vault role
586     0) --deleted
587 INSERT INTO [dbo].[Contents] (
588     [Code],[Guid],[Description],[ContentType],[MinLength],[MaxLength],[RegularExpression],
[RegularExpressionDescription],

```

```

589     [StartupModeValue],[PropertyName],[IssuerCode],[IssuerArgumentsXml],[Format],[CodeMaskCode],
[ValidatorComponentName],
590     [PropertiesXml],[Version],[ModifiedOn],[ModifiedBy],[ExternalCodeSource],[ExternalCodeVaultRole],
[Deleted])
591 VALUES(
592     'CRPT_IMP_BUNDLE_OTP_MR',
593     'caa78e64-1bdd-4427-bbbf-e3f9881f32e0',
594     '[FNC1]01{CRPT_IMP_BUNDLE_OTP_AI01}21{CRPT_IMP_BUNDLE_OTP_AI21}[FNC1]93{CRPT_IMP_BUNDLE_OTP_AI93}', --
description
595     3, --content type 3=formatted
596     1, --min length
597     60, --max length
598     NULL, --regex
599     NULL, --regex description
600     NULL, --startup value
601     NULL, --property name
602     NULL, --issuer code
603     NULL, --issuer arguments
604     '[FNC1]01{CRPT_IMP_BUNDLE_OTP_AI01}21{CRPT_IMP_BUNDLE_OTP_AI21}[FNC1]93{CRPT_IMP_BUNDLE_OTP_AI93}', --
format
605     NULL, --code mask code
606     NULL, --validator component name
607     '<Set ns="" />', --properties xml,
608     1, --version
609     GETDATE(),
610     'INEXT0/support',
611     NULL, --ExternalCodeSource,
612     NULL, --ExternalCodeVaultRole,
613     0) --deleted
614
615 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_OTP_MR',
'CRPT_IMP_BUNDLE_OTP_AI01')
616 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_OTP_MR',
'CRPT_IMP_BUNDLE_OTP_AI21')
617 INSERT ContentsContents ([ParentContentCode], [ChildContentCode]) VALUES ('CRPT_IMP_BUNDLE_OTP_MR',
'CRPT_IMP_BUNDLE_OTP_AI93')
618
619
620 INSERT [dbo].[Layouts] ([Code], [Name], [Guid], [Description], [UnitTypeCode], [ModifiedOn], [ModifiedBy],
[Version], [Deleted])
621 VALUES (N'CRPT_IMP_BUNDLE_OTP', N'CRPT_IMP_BUNDLE_OTP', N'a8436dad-1dab-4309-b0e7-345eef0fb6a3',
CAST(CAST('{{\rtf1\ansi\ansicpg1252\uc1\htmautsp\def2{{\fonttbl{{\f0\fcharset0 Times New Roman;}}
{{\f2\fcharset0 Segoe UI;}}
{{\colortbl\red0\green0\blue0;\red255\green255\blue255;}}\loch\hich\dbch\pard\plain\ltrpar\itap0{{\lang103
3\fs18\f2\cf0 \cf0\ql{{\f2 {{\ltrch CRPT_IMP_BUNDLE_OTP}}\li0\ri0\sa0\sb0\fi0\ql\par}}
622 }}
623 }}' AS VARBINARY(MAX)) AS IMAGE), N'Bundles', GETDATE(), 'INEXT0\support', 1, 0)
624
625 INSERT [dbo].[LayoutContents] ([LayoutCode], [ContentCode], [Required], [CodeLevel])
626 VALUES (N'CRPT_IMP_BUNDLE_OTP', N'CRPT_IMP_BUNDLE_OTP_MR', 1, 0)
627

```

Setup Vault Database [🔗](#)

Configure the external code types on Vault

▼ CRPT manual import vault setup.sql

```
1 EXECUTE [dbo].[ConfigureNewExternalCodeType]
```

```

2      'CRPT_IMP_PACK_GEN'
3      , 'CRPT imported GEN packs'
4      , 'CRPT imported GEN packs'
5      , 200
6      , 29
7      , '^d{14}[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{7}[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{8}'
8
9  EXECUTE [dbo].[ConfigureNewExternalCodeType]
10     'CRPT_IMP_BUNDLE_GEN'
11     , 'CRPT imported GEN bundles'
12     , 'CRPT imported GEN bundles'
13     , 201
14     , 36
15     , '^01\d{14}21[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{7}(:?(:\x1D)?(:93[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{8})?)?'
16
17  EXECUTE [dbo].[ConfigureNewExternalCodeType]
18     'CRPT_IMP_BUNDLE_TOB'
19     , 'CRPT imported TOB bundles'
20     , 'CRPT imported TOB bundles'
21     , 202
22     , 43
23     , '^01\d{14}21[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{7}(:?:$|(::\x1D8005[0-9]{6}\x1D93[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{4})$)'
24
25  EXECUTE [dbo].[ConfigureNewExternalCodeType]
26     'CRPT_IMP_BUNDLE_NCP'
27     , 'CRPT imported NCP bundles'
28     , 'CRPT imported NCP bundles'
29     , 204
30     , 43
31     , '^01\d{14}21[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{7}(:?:$|(::\x1D8005[0]{6}\x1D93[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{4})$)'
32
33  EXECUTE [dbo].[ConfigureNewExternalCodeType]
34     'CRPT_IMP_BUNDLE_OTP'
35     , 'CRPT imported OTP bundles'
36     , 'CRPT imported OTP bundles'
37     , 203
38     , 32
39     , '^01\d{14}21[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{7}(:?:$|(::\x1D93[A-Za-z0-9!&'\'*\+-\._,;=<>\?%()]{4})$)'
40

```

Undo Gate Database [🔗](#)

Execute the following script in case Setup Gate Database must be undone

▼ CRPT manual import teardown.sql

```

1
2  DELETE FROM dbo.ConfiguredCodeTypeDefinitions
3  WHERE CodeTypeCode='CRPT_IMP_PACK_GEN'
4
5  DELETE FROM dbo.CodeMaskCaptures

```

```

6 WHERE CodeMaskCode='CRPT_IMP_PACK_GEN'
7
8 DELETE FROM dbo.CodeMasks
9 WHERE Code='CRPT_IMP_PACK_GEN'
10
11 DELETE FROM dbo.ExternalCodeTypes
12 WHERE Code='CRPT_IMP_PACK_GEN'
13
14 DELETE FROM dbo.IssuedCodes
15 WHERE Code='CRPT_IMP_PACK_GEN'
16
17 DELETE FROM Contents WHERE Code = 'CRPT_IMP_PACK_GEN_MR'
18
19 UPDATE [dbo].ManufacturedProductUnits
20 SET LayoutCode = NULL
21 WHERE LayoutCode = N'CRPT_IMP_PACK_GEN'
22
23 DELETE FROM [dbo].LayoutImplementationsContents
24 WHERE LayoutCode = N'CRPT_IMP_PACK_GEN'
25
26 DELETE FROM [dbo].LayoutImplementations
27 WHERE LayoutCode = N'CRPT_IMP_PACK_GEN'
28
29 DELETE FROM [dbo].[LayoutContents]
30 WHERE LayoutCode = N'CRPT_IMP_PACK_GEN'
31
32 DELETE FROM [dbo].[Layouts]
33 WHERE Code = N'CRPT_IMP_PACK_GEN'
34
35 DELETE FROM dbo.ConfiguredCodeTypeDefinitions
36 WHERE CodeTypeCode='CRPT_IMP_BUNDLE_GEN'
37
38 DELETE FROM dbo.CodeMaskCaptures
39 WHERE CodeMaskCode='CRPT_IMP_BUNDLE_GEN'
40
41 DELETE FROM dbo.CodeMasks
42 WHERE Code='CRPT_IMP_BUNDLE_GEN'
43
44 DELETE FROM dbo.ExternalCodeTypes
45 WHERE Code='CRPT_IMP_BUNDLE_GEN'
46
47 DELETE FROM dbo.IssuedCodes
48 WHERE Code='CRPT_IMP_BUNDLE_GEN'
49
50 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_GEN_AI01'
51 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_GEN_AI21'
52 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_GEN_AI93'
53
54 DELETE FROM ContentsContents WHERE ParentContentCode = 'CRPT_IMP_BUNDLE_GEN_MR'
55
56 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_GEN_MR'
57
58 UPDATE [dbo].ManufacturedProductUnits
59 SET LayoutCode = NULL
60 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_GEN'
61
62 DELETE FROM [dbo].LayoutImplementationsContents
63 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_GEN'

```



```

64
65 DELETE FROM [dbo].[LayoutImplementations]
66 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_GEN'
67
68 DELETE FROM [dbo].[LayoutContents]
69 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_GEN'
70
71 DELETE FROM [dbo].[Layouts]
72 WHERE Code = N'CRPT_IMP_BUNDLE_GEN'
73
74 DELETE FROM dbo.ConfiguredCodeTypeDefinitions
75 WHERE CodeTypeCode='CRPT_IMP_BUNDLE_TOB'
76
77 DELETE FROM dbo.CodeMaskCaptures
78 WHERE CodeMaskCode='CRPT_IMP_BUNDLE_TOB'
79
80 DELETE FROM dbo.CodeMasks
81 WHERE Code='CRPT_IMP_BUNDLE_TOB'
82
83 DELETE FROM dbo.ExternalCodeTypes
84 WHERE Code='CRPT_IMP_BUNDLE_TOB'
85
86 DELETE FROM dbo.IssuedCodes
87 WHERE Code='CRPT_IMP_BUNDLE_TOB'
88
89 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_TOB_AI01'
90 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_TOB_AI21'
91 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_TOB_AI8005'
92 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_TOB_AI93'
93
94 DELETE FROM ContentsContents WHERE ParentContentCode = 'CRPT_IMP_BUNDLE_TOB_MR'
95
96 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_TOB_MR'
97
98 UPDATE [dbo].[ManufacturedProductUnits]
99 SET LayoutCode = NULL
100 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_TOB'
101
102 DELETE FROM [dbo].[LayoutImplementationsContents]
103 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_TOB'
104
105 DELETE FROM [dbo].[LayoutImplementations]
106 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_TOB'
107
108 DELETE FROM [dbo].[LayoutContents]
109 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_TOB'
110
111 DELETE FROM [dbo].[Layouts]
112 WHERE Code = N'CRPT_IMP_BUNDLE_TOB'
113
114 DELETE FROM dbo.ConfiguredCodeTypeDefinitions
115 WHERE CodeTypeCode='CRPT_IMP_BUNDLE_NCP'
116
117 DELETE FROM dbo.CodeMaskCaptures
118 WHERE CodeMaskCode='CRPT_IMP_BUNDLE_NCP'
119
120 DELETE FROM dbo.CodeMasks
121 WHERE Code='CRPT_IMP_BUNDLE_NCP'

```

```

122
123 DELETE FROM dbo.ExternalCodeTypes
124 WHERE Code='CRPT_IMP_BUNDLE_NCP'
125
126 DELETE FROM dbo.IssuedCodes
127 WHERE Code='CRPT_IMP_BUNDLE_NCP'
128
129 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_NCP_AI01'
130 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_NCP_AI21'
131 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_NCP_AI93'
132
133 DELETE FROM ContentsContents WHERE ParentContentCode = 'CRPT_IMP_BUNDLE_NCP_MR'
134
135 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_NCP_MR'
136
137 UPDATE [dbo].ManufacturedProductUnits
138 SET LayoutCode = NULL
139 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_NCP'
140
141 DELETE FROM [dbo].LayoutImplementationsContents
142 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_NCP'
143
144 DELETE FROM [dbo].LayoutImplementations
145 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_NCP'
146
147 DELETE FROM [dbo].[LayoutContents]
148 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_NCP'
149
150 DELETE FROM [dbo].[Layouts]
151 WHERE Code = N'CRPT_IMP_BUNDLE_NCP'
152
153 DELETE FROM dbo.ConfiguredCodeTypeDefinitions
154 WHERE CodeTypeCode='CRPT_IMP_BUNDLE_OTP'
155
156 DELETE FROM dbo.CodeMaskCaptures
157 WHERE CodeMaskCode='CRPT_IMP_BUNDLE_OTP'
158
159 DELETE FROM dbo.CodeMasks
160 WHERE Code='CRPT_IMP_BUNDLE_OTP'
161
162 DELETE FROM dbo.ExternalCodeTypes
163 WHERE Code='CRPT_IMP_BUNDLE_OTP'
164
165 DELETE FROM dbo.IssuedCodes
166 WHERE Code='CRPT_IMP_BUNDLE_OTP'
167
168 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_OTP_AI01'
169 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_OTP_AI21'
170 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_OTP_AI93'
171
172 DELETE FROM ContentsContents WHERE ParentContentCode = 'CRPT_IMP_BUNDLE_OTP_MR'
173
174 DELETE FROM Contents WHERE Code = 'CRPT_IMP_BUNDLE_OTP_MR'
175
176 UPDATE [dbo].ManufacturedProductUnits
177 SET LayoutCode = NULL
178 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_OTP'
179

```

```
180 DELETE FROM [dbo].LayoutImplementationsContents
181 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_OTP'
182
183 DELETE FROM [dbo].LayoutImplementations
184 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_OTP'
185
186 DELETE FROM [dbo].[LayoutContents]
187 WHERE LayoutCode = N'CRPT_IMP_BUNDLE_OTP'
188
189 DELETE FROM [dbo].[Layouts]
190 WHERE Code = N'CRPT_IMP_BUNDLE_OTP'
191
```

CRPT Code Orders Approval

- [Overview](#)
- [Configuration](#)

Overview

The Russian cloud OMS requires a X-Signature header in all HTTP requests for code orders for the OTP production type (e.g. cigars). Gate will send this header when it is using OMS Authenticator and Sign Orders is checked in the OMS scheme configuration.

When the manufacturer cannot use OMS Authenticator to sign the OTP code orders, or it wants to implement manual approval process, Sign Orders must be unchecked in the OMS scheme configuration. OTP code orders created without X-Signature will wait until operator logs in the OMS web site and signs the order.

ⓘ This feature works only for OTP code orders. Tobacco and NCP do not require X-Signature and therefore cannot be configured for approval. In addition, only the Russian cloud OMS supports the X-Signature header. All other countries cannot be configured for approval.

Configuration

In Gate Administration, navigate to CONFIGURATION / Op.Drivers and click the Configure button on the CRPT codes driver. Edit the OTP OMS scheme and:

- Uncheck the Sign Orders checkbox
- Ordering Mode should be Preorder
- In the Reported Units tab for each unit configuration set Ordering Quantity = 150000.

ⓘ The maximum allowed value for Ordering Quantity is 150'000. In this case we use the maximum to limit the number of code orders that will be created for large Production Orders.

CRPT Printing Only Pack Codes

- [Overview](#)
- [CRPT Codes Driver](#)
- [Manufactured Product](#)
- [Reports](#)

Overview

The cigar bundles (OTP) can be a non-sellable unit and therefore the manufacturers can choose to print their own codes instead of CRPT codes.

CRPT Codes Driver

1. Create a [OMS scheme for OTP](#)
2. Delete the Reported Unit configuration for Bundles
3. Click OK until all dialogs are closed

Manufactured Product

1. Change the bundles layout to SUPI (or whatever layout is needed)
2. Add OMS_SCHEME attribute and set its value to be equal to the name the OTP OMS scheme you created above
3. Click OK

Reports

Usage reports will work without additional configuration.



Gate does not support sending of aggregation reports to OMS with non-CRPT bundle codes. INEXPRESS or a 3rd party system must be used to send aggregation reports to OMS.

CRPT Using Fortuna Codes

Monitoring Fortuna

On Gate administration GUI (if the Fortuna driver is enabled and user has the rights on Orders), a tab shows all Fortuna orders (see [Fortuna Orders - INEXTOR Reference Guide](#)).

Fortuna Background Jobs

This page contains a list of background jobs associated with the Fortuna market.

For global background jobs, see [Background Tasks in the Vault](#)

- [BackgroundModule-Fortuna Background Job](#)

BackgroundModule-Fortuna Background Job

Manages Fortuna orders, see [Gate Op. Driver: Fortuna Driver](#)

Application	Component	Job Name	Schedule	Is Editable	Is Cancellable	Is Suspendable
Gate	Fortuna driver	BackgroundModule-Fortuna Background Job	every 30 seconds	n/a	n/a	n/a

When a job is linked to an operation driver component, the name starts with "BackgroundModule-"

Content (Fortuna)

In Layouts / Contents, create or edit a content that is linked to Fortuna codes:

Content

Code: Fortuna_Packs_HR

Description: Packs received from Fortuna, in HR format

Content type: Dynamic

Startup Mode Value: x

Length: Min 1 Max 25

Code issuer: External

Code mask: (Not Set)

Code issuer arguments:

Name	Value	Type	Source	User	Actions
CodeTypeId	130	Int16			
ExternalCodeReferencePropertyName	FortunaExternalCodeReference	String			
Format	HR	String			
MachineReferencePropertyName		String			
ProductReferencePropertyName		String			
ROLE	Secondary	String			
SerializationLevelReference	Pack	String			
SOURCE	FORTUNA	String			

Validation results: Successful

OK Cancel

Make sure that the following values are set:

- The content type must be 'Dynamic',
- The Code issuer must be 'External'
- In the code issuer arguments, the following properties must be defined:
 - The ExternalCodeReferencePropertyName (which describes the property name for the External code reference in the production order) must be 'FortunaExternalCodeReference',
 - The SOURCE must be set to 'FORTUNA'.
 - The SerializationLevelReference must be set to 'Pack'

Additionally, the Format property in the code issuer arguments can be set to:

- HR (for human-readable): the code is printed without the signature
- MR (for machine-readable): the code is printed with the signature, as received from Fortuna server.
If Fortuna sent 'raw' codes (i.e. without any application identifier), the RAW format is used. If Fortuna sent GS1-formatted codes, the GS1 format is used.
- GTIN: the GTIN is extracted from the code and printed
- SERIAL: the serial code (without the special | character that Fortuna sends, instead of FNC1) is extracted from the code and printed
- SIGNATURE: the 4-character signature is extracted from the code and printed.

- PRICE: the 4-character price is extracted from the code and printed (if the code was received in GS1 format, it has no price and nothing is printed)
- RAW: the GTIN, serial code, price and signature are sent without any application identifier (nor FNC1 character)
- GS1: the codes are printed with application identifiers and FNC1 characters (at the beginning and after the serial code).

Creating a template, layout and layout implementation is 100% identical to any other regulation. Make sure to define the code levels 0 and 1 in the layout for INEXPRESS and aggregation.

Overview (Fortuna)

This section gives the procedure to follow in order to be able to run productions using Fortuna external codes (for CRPT regulated markets). For a general description of the steps to follow in order to be able to produce, see [System Overview](#), [General Steps \(Configuration\)](#) and [General Steps \(Operations\)](#). Here we point out the additional steps and modifications that must take place in order to incorporate the Fortuna codes on top of a normal production.

Some customers use another Gate driver to get CRPT codes. This driver is simply called the 'CRPT codes driver', it communicates with the OMS server. Do NOT use both Fortuna and CRPT drivers at the same time (for the same production order).

Prerequisites (Fortuna)

Enable the Fortuna operation driver and configure it (see [Fortuna Driver](#)).

Production peculiarities (Fortuna)

The following elements are specific to a production using Fortuna codes.

 They must be followed to the letter in order to ensure business continuity.

- Aggregation must be performed on packs. It is necessary for the Gate to receive this aggregation information, in order to report not only the aggregation itself, but also the use of codes to Fortuna.
- A production order must be closed **ONLY** when the customer is done with this order and all aggregation information has been received on Gate. As codes are linked to a production order, the remaining codes are no longer usable. On closing, the Gate sends the list of unused codes to Fortuna

Production Order (Fortuna)

Go to Production / Production orders and create or edit a production order and check that the Fortuna attribute is present.

Production Order

Order Number: **f10**

Description: **test 1**

Manufactured Product:

- Brand Code: [Be400123] (Name)
- Brand Code: [IT500123] (Name)
- Brand Code: [PL000123] (Name)
- Brand Code: [SP300123] (Name)
- Brand Code: [TPD BE and UA]
- Brand Code: [ff]
- Brand Code: [Fortuna 1] (Name)

LinkUp Setup: **03 - VPL**

Requested Quantity: **50000**

Total Quantity: **50,000**

Deleted: ☐

Order Expected Start Date: **jeudi, 8 octobre 2020 00**

Order Expected End Date:

Order Full Quantity: ☒

Validation results: **Successful** 21 Messages

The defined Static Attribute: TPD_Process_Type is not referenced in any layout

The defined Static Attribute: TPD_M_Producer is not referenced in any layout

The defined Static Attribute: TPD_M_Number is not referenced in any layout

The defined Static Attribute: TPD_M_Model is not referenced in any layout

The defined Static Attribute: RejectionRate_Packs is not referenced in any layout

The defined Static Attribute: RejectionRate_Cases is not referenced in any layout

The defined Static Attribute: RejectionRate_Bundles is not referenced in any layout

Name	Value	Type	Source	User	Actions
ACTIVITY	ff	String	MP-EP	INEXTC	
BRANDESC	ff	String	MP-EP	INEXTC	
DESTINATIONMARKET	United Arab Emirates	String	MP-EP	INEXTC	
DirExternalCodeReference	United Arab Emirates-00012345600012-0000001.00092.1	String	PO	INEXTC	
Fortuna	V1	String	PO	INEXTC	
FortunaExternalCodeReference	f10-00012345600012	String	PO		
MACHINE_GLN	0000001.00092.1	String	PO-LinkU		
MCID	DCTA	String	LinkUp	INEXTC	
MID	03	String	LinkUp	INEXTC	
M_Capacity	720000	Integer	PO-LinkU		
ORDERNUMBER	f10	String	PO-EP	INEXTC	
Price	12	String	PO	INEXTC	
PRODUCTCODE	fortuna 1	String	MP-EP	INEXTC	
ProductGTIN	00012345600012	String	PO	INEXTC	
RejectionRate_Bundles	0	Double	PO-LinkU		
RejectionRate_Cases	0	Double	PO-LinkU		

After a PO is created, the Fortuna server will be informed of the order.

! The description field must be the 'Sales order number' from the client.

As there is a business process for ordering codes (process which occurs outside of Inextor), an update of a PO implies changing the description (i.e. the sales order number), otherwise a new order will be rejected by Fortuna.

Codes will be ordered n days before the production start.

Steps (Fortuna)

The process is the following:

- create the Content for Fortuna codes.
- create a layout, template and layout implementation.
- create a manufactured product.
- create a Production Order.

Appendix (CRPT)

CRPT OMS Authenticator

- [Overview](#)
- [Deployment](#)
 - [Hardware Requirements](#)
 - [Prerequisites](#)
 - [Installation and Configuration](#)
 - [Upgrade](#)
 - [Replace Expired Certificate](#)
 - [Add New Token Provider](#)
 - [Default Configuration](#)
 - [Sample configuration](#)
- [Testing and Troubleshooting](#)
- [Logs](#)
- [Frequently Asked Questions](#)
 - [How to secure the web service?](#)
- [Configuring OMS Scheme](#)

Overview [🔗](#)

The Russian cloud OMS requires the use of dynamic tokens for authentication. The dynamic tokens are obtained using:

- a personal electronic signature
- paid software, called CryptoPro

OMS Authenticator is a simple web service, that allows INEXTOR and INEXPRESS to obtain dynamic tokens without directly using the manufacturer's or importer's personal signature. It also simplifies the deployment, because it is the central point from which all INEXTO applications obtain dynamic tokens.

The following dynamic token sources are supported:

- CRPT TRUE API (adapter **gis-v3**)
- Fortuna (adapter **fortuna-v0**)
- Dtabac (adapter **dtabac-v0**)

i Fortuna and Dtabac are Russian tobacco importers and distributors who expose APIs to obtain tokens without sharing their certificates. OMS Authenticator works as a proxy to their APIs.

Deployment [🔗](#)

Hardware Requirements [🔗](#)

The service has low hardware requirements and it can be installed on the same machine as Gate or Inexpress. All INEXTO applications have local cache for tokens and rarely make requests to OMS Authenticator.

- 1 CPUs

- 8 GB RAM
- 500MB disk space
- Windows 10 or 11

Prerequisites [↗](#)

The following software must be installed in order to use OMS Authenticator.

- [.NET Framework 4.8](#) or newer
IMPORTANT: Older versions of Windows may not support .NET 4.8.1. Use .NET 4.8 instead!
- [.NET 9 Hosting Bundle](#) (old versions of OMS Authenticator uses [.NET 6 - download the Hosting Bundle](#))

For CRPT production and sandbox environments (not needed for Fortuna and Dtabac)

- [CryptoPro CSP](#)
- [CryptoPro .NET](#)
- Certificate and keys for signing the token requests - you will need the certificate serial number later

Installation and Configuration [↗](#)

1. Make sure all prerequisites are installed
2. Get the latest archive from \\inextochnas0001.inexto.network\Sources\Inextor\OmsAuthenticator (access only from the INEXTO network)
3. Copy the archive in C:\OmsAuthenticator (this is optional, but will be very convenient if you want to downgrade for some reason)
4. Extract into a directory of your choice, we recommend C:\OmsAuthenticator\bin
5. Edit appsettings.json
 - Configure the items in the TokenProviders section, for more details scroll to the Default Configuration table below
 - Supported adapter values are
 - gis-v3 for standard CRPT dynamic token protocol (using the True API endpoints)
 - dtabac-v0 for DTABAC (a Russian tobacco importer)
 - fortuna-v0 for Fortuna tokens (a Russian tobacco importer)
 - If needed, add more entries with unique keys
 - Configure [Kestrel, the ASP.NET Core web server](#)
 - [Endpoint configuration](#)
 - [Host filtering](#)
6. Run Install.bat as Administrator
7. Configure the OMS Authenticator service in Windows Control Panel - Services
 - a. Choose a user, make sure it has access to the certificate
 - b. Ensure the service start mode is Automatic
 - c. Start the service
8. Obtain a token by requesting the [OMS Authenticator endpoint](#)

Upgrade [↗](#)

1. Stop the OMS Authenticator service
2. Make a backup of C:\OmsAuthenticator\bin\appsettings.json (IMPORTANT!)
3. Delete the contents of C:\OmsAuthenticator\bin
4. Extract the new OMS Authenticator in C:\OmsAuthenticator\bin
5. Copy the backed up appsettings.json to C:\OmsAuthenticator\bin

6. Start the OMS Authenticator service
7. Obtain a token by requesting the [OMS Authenticator endpoint](#)

Replace Expired Certificate [↗](#)

1. Install the new certificate, find its serial number in CryptoPro
2. Locate the TokenProvider element in appsettings.json that has expired token
3. Enter the new serial number in the Certificate property
4. Restart OMS Authenticator service in Control Panel

Add New Token Provider [↗](#)

When a new token provider or account should be added to an existing instance of OMS Authenticator:

1. Copy one of the elements in TokenProviders section (do not forget the comma)
2. Replace the <key> with an unique string (i.e. in the examples above the key is "crptp", "crpts", "fortunap", etc.)
3. Replace the configured values with the values for the new token provider (Url, Certificate, UserName, Password, etc.)
4. Restart OMS Authenticator service in Control Panel.
5. In INEXTOR and/or INEXPRESS configure the OMS scheme with the token provider URL with path

Default Configuration [↗](#)

	CRPT Production	CRPT Sandbox	Fortuna Production	Fortuna Sandbox	Dtabac Production
<key>	crptp	crpts	fortunap	fortunas	dtabacp
_description	CRPT production	CRPT sandbox	Fortuna production	Fortuna sandbox	Dtabac production
Adapter	gis-v3	gis-v3	fortuna-v0	fortuna-v0	dtabac-v0
Certificate	<serial number of your certificate>	<serial number of your certificate>	<not used>	<not used>	<not used>
Inn	<optional, the INN of the organization>				
Expiration	10:00:00				
Url	https://markirovka.crpt.ru	https://markirovka.sandbox.crptech.ru	<address provided by Fortuna>	<address provided by Fortuna>	The address provided by Dtabac
OmsApiUrl	https://suzgrid.crpt.ru/api/v2/tobacco/ping	https://suz.sandbox.crptech.ru/api/v2/tobacco/ping	https://suzgrid.crpt.ru/api/v2/tobacco/ping	https://suz.sandbox.crptech.ru/api/v2/tobacco/ping	https://suzgrid.crpt.ru/api/v2/tobacco/ping
UserName	<not used>	<not used>	<user name provided by Fortuna>	<user name provided by Fortuna>	<not used>
Password	<not used>	<not used>	<password provided by Fortuna>	<password provided by Fortuna>	<not used>

- The <key> can be anything, but we recommend using lower case letters and numbers, because it is part of the OMS authenticator API URLs. The values in the table above were chosen for clarity.
- When Inn is configured, OMS Authenticator will send the value in the HTTP requests to obtain OMS or TRUE API token. This is required when using machine-readable certificates.

Sample configuration [↗](#)

```

1 {
2     "Authenticator": {
3         "SignDataPath": ".\\SignData\\SignData.exe",
4
5         "_description": "Only the first token provider is registered on '/oms/token'. You can define as many
        token providers as needed.",
6
7         "TokenProviders": {
8
9             "crpts": {
10                 "_description": "CRPT sandbox",
11                 "Adapter": "gis-v3",
12                 "Certificate": "51ab9f002caf13a47754097e6a148694",
13                 "Expiration": "10:00:00",
14                 "Url": "https://markirovka.sandbox.crptech.ru",
15                 "OmsApiUrl": "https://suz.sandbox.crptech.ru/api/v2/tobacco/ping",
16                 "_info": "Available at '/api/v2/crpts/true/token/', '/api/v2/crpts/oms/token/',
        '/api/v1/crpts/oms/token/' and '/oms/token'"
17             },
18
19             "crptp": {
20                 "_description": "CRPT production",
21                 "Adapter": "gis-v3",
22                 "Certificate": "98dc9f002caf13a409123a97e6a148f44",
23                 "Expiration": "10:00:00",
24                 "Url": "https://markirovka.crpt.ru",
25                 "OmsApiUrl": "https://suzgrid.crpt.ru/api/v2/tobacco/ping",
26                 "_info": "Available at '/api/v2/crptp/true/token/', '/api/v2/crptp/oms/token/' and
        '/api/v1/crptp/oms/token'"
27             },
28
29             "fortunap": {
30                 "_description": "Fortuna sandbox",
31                 "Adapter": "fortuna-v0",
32                 "Expiration": "10:00:00",
33                 "Url": "https://xxxx.ru/yyy/",
34                 "OmsApiUrl": "https://suz.sandbox.crptech.ru/api/v2/tobacco/ping",
35                 "UserName": "USER1",
36                 "Password": "PASS1",
37                 "_info": "Available at '/api/v2/fortunap/oms/token/', '/api/v1/fortunap/oms/token/'"
38             },
39
40             "fortunap": {
41                 "_description": "Fortuna production",
42                 "Adapter": "fortuna-v0",
43                 "Expiration": "10:00:00",
44                 "Url": "https://xxxx.ru/yyy/",
45                 "OmsApiUrl": "https://suzgrid.crpt.ru/api/v2/tobacco/ping",
46                 "UserName": "USER2",

```

```

47         "Password": "PASS2",
48         "_info": "Available at '/api/v2/fortunap/oms/token/', '/api/v1/fortunap/oms/token/'"
49     },
50
51     "dtabacp": {
52         "_description": "Dtabac production",
53         "Adapter": "dtabac-v0",
54         "Expiration": "10:00:00",
55         "Url": "https://xxxx.ru/yyy/",
56         "OmsApiUrl": "https://suzgrid.crpt.ru/api/v2/tobacco/ping",
57         "_info": "Available at '/api/v2/dtabacp/oms/token/', '/api/v1/dtabacp/oms/token/'"
58     }
59 }
60 },
61
62 "AllowedHosts": "*",
63 "Kestrel": {
64     "Endpoints": {
65         "Https": {
66             "Url": "http://*:5000"
67         }
68     }
69 }
70 }

```

Testing and Troubleshooting [🔗](#)

Assuming you are using the default configuration with port 5000, open the following URL in a web browser:

`http://<ip address>:5000/api/v2/<key>/oms/token?omsId=<oms id>&connectionid=<oms connection>`

Where:

- **ip address** is the IP address of the machine where OMS Authenticator is installed. If the service will be accessible from the Internet, this should be the public IP. If the service will be accessible only within the manufacturer network, this should be the network IP.
- **key** is the key of the configuration you want to test
- **oms id** is the OMS ID of the account you are getting the tokens for
- **oms connection** is a device identifier obtained from the OMS web site

The response will return a token, or an error.

Common errors:

- The service does not start
 - Open the Windows Event Viewer and check the errors from OMS Authenticator. Common problems are:
 - The user cannot login as a service
 - There is an error in appsettings.json. Put the content in a json validator to rule out syntax errors
 - SignData.exe cannot be found (if you used the recommended install location, it is expected to be in `C:\OmsAuthenticator\bin\SignData\`)
 - See the OMS Authenticator logs for more information (if you used the recommended install location, they will be in `C:\OmsAuthenticator\bin\Logs\`)
- Cannot find certificate with serial number 'xxx'
 - The certificate is not installed

- The serial number has a typo
- The user that the OMS Authenticator service is using does not have access to the certificate
- fortuna-v0 does not support signing. Fortuna code orders must be signed manually
 - The OMS scheme for OTP on Gate must have Sign Code orders unchecked
- [GET http://oms.ru/api/v2/tobacco/ping?omsId=xxx] Response was 400 with content 'yyy'
 - The token is not for the configured OMS instance - make sure OmsApiUrl is configured with the URL that corresponds to the OMS environment.
 - OMS Authenticator could not obtain a token - make sure you are using the correct certificate
 - If you cannot figure out what the OMS response means, contact the CRPT support
- [GET https://markirovka.crpt.ru/api/v3/true-api/auth/key] Response was 400 with content 'xxx'
 - The OMS Authenticator configuration is wrong. Make sure the Url configuration parameter is configured correctly.
 - The CRPT production environment is down for maintenance. Try again later or contact CRPT support
- [POST https://markirovka.crpt.ru/api/v3/true-api/auth/simpleSignIn/xxx] Response was 400 with content 'yyy'
 - The OMS Authenticator configuration is wrong. Make sure the Url configuration parameter is configured correctly.
 - The **oms connection** is for a different environment or it has a typo.
 - The configured certificate is not for this environment. Make sure the Certificate property in appsettings.json is correct.
 - The CRPT production environment is down for maintenance. Try again later or contact CRPT support.
- GIS-MT returned status OK, but no token. Error Code: '', Error Message: '', Error Description: ''
 - The oms connection is wrong, or for a device that is configured for static tokens. In the OMS web interface create a new device for dynamic tokens and use its connection id.

Logs

The service logs are located in a sub-directory named Logs, directly under the installation directory. The recent versions of OMS Authenticator log all details of the outbound HTTP requests and their responses and this information could be valuable when troubleshooting.

Frequently Asked Questions

How to secure the web service?

We recommend limiting the access to the OMS Authenticator endpoint by IP address. Open the firewall only to machines that will make requests to the service (INEXTOR Gate and/or INEXPRESS).

Configuring OMS Scheme

In the [OMS scheme configuration](#):

- OMS ID - use the OMS ID of the account you are getting tokens for. Make sure you are using the ID for the correct environment.
- Use Dynamic Tokens - checked
- Dynamic Token Provider - OMS Authenticator
- Dynamic Token Provider Url - http://<ip address>:5000/<path>
 - **ip address** is the IP address of the machine where OMS Authenticator is installed
 - **path** specifies the configuration you want to use. For example, when using the sample configurations above, you can use the following paths:
 - **<empty>** for the first configured adapter
 - **api/v1/crpts** for the CRPT sandbox environment (note that crpts is the <key> of the configuration)

- [api/v1/crptp](#) for the CRPT production environment
- [api/v1/fortunas](#) for the Fortuna sandbox environment
- ...
- OMS Connection - obtain a OMS connection from the OMS web site, or ask the importer to provide one for you
- Sign Code Orders - when using Fortuna and Dtabac, this should be unchecked.

CRPT OMS Authenticator API Reference

Overview

OMS Token API

Get Existing Token

Requests

Responses

Get New Token

Requests

Responses

Signature API

Sign Data

Requests

Responses

TRUE API Token API

Get Token

Requests

Responses

Overview [↗](#)

OMS Authenticator provides API for obtaining OMS tokens, TRUE API tokens and for signing data.

- OMS Token API is for obtaining dynamic tokens for communication with the Russian OMS API V2 and V3. Other countries' OMS APIs work with static tokens.
- TRUE API Token API is for obtaining dynamic tokens for communication with the Russian TRUE API.
- Signature API is for obtaining the value of the X-Signature header that is required by some endpoints in the OMS V2 and V3 APIs.

OMS Token API [↗](#)

There are two OMS Authenticator APIs - V1 and V2. V1 is used by Gate and Inexpress, V2 is not used, but it is convenient for manual testing because it relies only on Get requests. The tokens are shared between V1 and V2, i.e. regardless of the API version you use, you will get the same tokens.

Get Existing Token [↗](#)

Returns a token with the given key that already exists in the OMS Authenticator cache. If such token does not exist, returns 404 Not Found.

Requests [↗](#)

There are several endpoints that expose this API:

- `GET <base-url>/oms/token?omsId=<omsid>®istrationKey=<registrationKey>`
- `GET <base-url>/api/v1/<key>/oms/token?omsId=<omsid>®istrationKey=<registrationKey>`

Where:

- `<key>` is a [token provider configuration key](#).
- `<omsId>` is the ID of the OMS account that will be associated with the token
- `<registrationKey>` is a OMS Connection ID from the same OMS account

Responses [↗](#)

- 200 OK

```
1 {
2   "token": "a263be55-a90e-449d-ab2f-ef3496beb4cf",
3   "expires": "2021-11-18T18:38:36.7359206+00:00",
4   "requestId": "defe9ea9-14bc-43a4-9ba4-46bdaa7970e6"
5 }
```

- 400 Bad Request - when one or more required parameters are missing
- 404 Not Found - when a token with the provided key does not exist in the OMS Authenticator cache
- 422 Unprocessable Entity - when the external API returns an error

```
1 {
2   "errors": [ "error 1", "error 2" ]
3 }
```

Get New Token [↗](#)

Returns a token with the given key that already exists in the OMS Authenticator cache. If such token does not exist, a new token is requested.

Requests [↗](#)

- POST `<base-url>/oms/token`
POST `<base-url>/api/v1/<key>/oms/token`

```
1 {
2   "omsId": "<omsId>",
3   "registrationKey": "<registrationKey>",
4   "omsConnection": "<omsConnection>",
5   "requestId": "<requestId>"
6 }
```

- GET `<base-url>/api/v2/<key>/oms/token?omsId=<omsid>&omsConnection=<omsConnection>&requestId=<requestId>`

Where:

- `<key>` is a [token provider configuration key](#).
- `<omsId>` is the ID of the OMS account that will be associated with the token
- `<registrationKey>` and `<omsConnection>` is a OMS Connection ID from the same OMS account (both parameters should have the same value)
- `<requestId>` is a GUID. If the value matches an existing token in the cache, it will be returned. To force the generation of a new token, use a new GUID.

Responses [↗](#)

- 200 OK

```
1 {
2   "token": "a263be55-a90e-449d-ab2f-ef3496beb4cf",
3   "expires": "2021-11-18T18:38:36.7359206+00:00",
4   "requestId": "defe9ea9-14bc-43a4-9ba4-46bdaa7970e6"
```

```
5 }
```

Where `token` is the token, `expires` is the token expiration date and time in UTC.

- 400 Bad Request - when one or more required parameters are missing
- 422 Unprocessable Entity - when the external API returns an error

```
1 {
2   "errors": [ "error 1", "error 2" ]
3 }
```

 Get New Token never returns 404 Not Found. When a token does not exist in cache, a new one will be requested.

Signature API [↗](#)

Sign Data [↗](#)

Returns a detached CMS signature of the provided value.

How to send X-Signature to OMS:

1. Take the HTTP request body that you want to send to OMS (i.e. a JSON string)
2. Encode it in BASE64 (OMS is using UTF-8 as encoding, so Base64 is applied on the binary representation of the UTF-8 string)
3. Send the encoded value to the Signature API (`payloadBase64` property)
4. Use the value of the `signature` property from the response as value of the X-Signature header for the OMS HTTP request.

Requests [↗](#)

- POST `<base-url>/api/v1/signature`
- POST `<base-url>/api/v2/<key>/signature`

```
1 {
2   "payloadBase64": "<data>"
3 }
```

Where

- `<key>` is a [token provider configuration key](#).
- `<data>` is the value to sign.

Responses [↗](#)

- 200 OK

```
1 {
2   "signature": "<signature>"
3 }
```

Where `<signature>` is the Base64 encoded detached CMS signature of the provided in the request value.

- 400 Bad Request - when the request payload does not contain `payloadBase64`
- 422 Unprocessable Entity - when an error occurs during signing

```
1 {
2   "errors": [ "error 1", "error 2" ]
3 }
```

TRUE API Token API [↗](#)

Get Token [↗](#)

Returns a token with the given key that already exists in the OMS Authenticator cache. If such token does not exist, a new token is requested.

Requests [↗](#)

- GET `<base-url>/api/v2/<key>/true/token?requestId=<requestId>`

Where:

- `<key>` is a [token provider configuration key](#).
- `<requestId>` [optional] is a GUID. If the value is omitted, an existing token will be returned, or if there is no token in cache, a new one will be requested. To force the requesting of a new token, use a new GUID.

Responses [↗](#)

- 200 OK

```
1 {  
2   "token": "a263be55-a90e-449d-ab2f-ef3496beb4cf",  
3   "expires": "2021-11-18T18:38:36.7359206+00:00",  
4   "requestId": "defe9ea9-14bc-43a4-9ba4-46bdaa7970e6"  
5 }
```

Where `token` is the token, `expires` is the token expiration date and time in UTC.

- 400 Bad Request - when one or more required parameters are missing
- 422 Unprocessable Entity - when the external API returns an error

```
1 {  
2   "errors": [ "error 1", "error 2" ]  
3 }
```

 Get Token never returns 404 Not Found. When a token does not exist in cache, a new one will be requested.

CRPT Background Jobs

This page contains a list of background jobs available for CPRT productions.

For global background jobs, see [Background Tasks](#)

- [Delete CRPT code signatures](#)
- [BackgroundModule-OMS Code Orders \(Required\)](#)
- [BackgroundModule-OMS Reports: Aggregation](#)
- [BackgroundModule-OMS Reports: Status Monitor](#)
- [BackgroundModule-OMS Reports: Missing Usage Generator](#)
- [ConnectivityCheck](#)
- [CrptOrderingHighFailureCheck](#)
- [OmsReportAuditWrite](#)
- [OmsReportArchive](#)
- [BackgroundModule-Report Exporter](#)
- [BackgroundModule-FSS Database Monitor](#)
- [BackgroundModule-Hierarchy file reader](#)
- [Delete CRPT reports](#)

Delete CRPT code signatures

Deletes CRPT signatures after they are printed. See [Remove CRPT code signatures](#)

Application	Component	Job Name	Schedule
Gate	CRPT codes driver	Delete CRPT code signatures	every 30 minutes

BackgroundModule-OMS Code Orders (Required)

Core component required for the other components to work

Application	Component	Job Name	Schedule
Gate	CRPT codes driver	BackgroundModule-OMS Code Orders (Required)	N/A

* When a job is linked to an operation driver component, the name starts with "BackgroundModule-"

BackgroundModule-OMS Reports: Aggregation

Synchronizes Inexpress aggregation messages with the OMS

Application	Component	Job Name	Schedule
Gate	CRPT codes driver	BackgroundModule-OMS Reports: Aggregation	every 10 seconds

BackgroundModule-OMS Reports: Status Monitor

Monitors (polls) the OMS for the status of send code usage reports

Application	Component	Job Name	Schedule
Gate	CRPT codes driver	BackgroundModule-OMS Reports: Status Monitor	every 1 minute

BackgroundModule-OMS Reports: Missing Usage Generator

Sends OMS usage reports for codes that have not been reported as used for some reason.

Application	Component	Job Name	Schedule
Gate	CRPT codes driver	BackgroundModule-OMS Reports: Missing Usage Generator	every 10 minutes

ConnectivityCheck

Monitors connectivity with the OMS

Application	Component	Job Name	Schedule
Gate	OmsMonitor	ConnectivityCheck	every 5 minutes

CrptOrderingHighFailureCheck

Checks the table [Reservations](#) (see column: RejectedQuantities) to calculate the rejection rates for an order.

Application	Component	Job Name	Schedule
Gate	OmsMonitor	CrptOrderingHighFailureCheck	every 30 minutes

OmsReportAuditWrite

Logs communications with OMS asynchronously into files

Application	Component	Job Name	Schedule
Gate	ReportAuditManager	OmsReportAuditWrite	every 30 seconds

OmsReportArchive

Archives files containing communication logs with OMS in zip files.

Application	Component	Job Name	Schedule
Gate	ReportAuditManager	OmsReportArchive	every 1 day

BackgroundModule-Report Exporter

Scans and exports code status reports with the state "Created" for reimbursement purposes.

Application	Component	Job Name	Schedule
Gate	External Codes Status	BackgroundModule-Report Exporter	every 1 minute

BackgroundModule-FSS Database Monitor

To import file hierarchy from a database

Application	Component	Job Name	Schedule
Gate	FSS Activation	BackgroundModule-FSS Database Monitor	every 2 minutes

BackgroundModule-Hierarchy file reader

To import file hierarchy from a file

Application	Component	Job Name	Schedule
Gate	FSS Activation	BackgroundModule-Hierarchy file reader	every 2 minutes

Delete CRPT reports

Cleans CRPT reports. This job frequency is set by default to one hour.

The configuration of this cleanup is done through two [CRPT Application Settings](#):

- **OmsReportCleaner→Cleanup_CrptReports_MaxToDelete**: specify the number of reports to delete at each job run
- **OmsReportCleaner→Cleanup_CrptReport_RetentionTime**: specify the period (after creation) of the reports to keep in the database

Application	Component	Job Name	Schedule
Gate	CRPT codes driver	Delete CRPT reports	every 1 hour

CRPT Resources and Materials

Overview

This page provides training materials for CRPT-regulated markets.

Images	
	Pack label HR Contents: Serial + MRP + Date
	
	Bundle labels HR Contents: GTIN14 + Serial + MRP + Signature
Training & Presentations	
Russian training	• PowerPoint presentation - 2020 • Video guide - 2020

CRPT Upgrading to OMS V3

Steps [↗](#)

The following steps are needed to upgrade a Gate instance that uses OMS V2 to V3:

1. Deploy version of Gate that supports OMS V3
2. Deploy the latest version of OMS Authenticator (ask Inexto support)
3. Create new OMS scheme for API V3
4. Change the value of the OMS_SCHEME attribute in the Russia market to be the same of the new OMS scheme

NOTE: The existing production orders will continue to use the old OMS scheme. To switch to the new one you need to modify the production orders manually in the Gate UI (e.g. change description).

Inextor Congo (CG) regulated market operational guide

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Introduction [🔗](#)

Document INEX-OG-00007: Inextor Congo (CG) Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the CG regulated market requirements. Document INEX-OG-00007 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the CG Regulated Market, system overview and background.
- **Configuration** - Requirements for configuring the Vault and Gate components for the CG regulation
- **Operations** - Production order, Forecast and code orders

Purpose [🔗](#)

The purpose of INEX-OG-00007 is to provide the required knowledge necessary to successfully set up Inextor correctly to support CG market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the CG regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)



For Advanced Content Navigator for Confluence to display, you need to allow the app to access Atlassian products on your behalf.

Allow access

Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
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Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Introduction (CG)

- [Prerequisites \(CG\)](#)
- [Background \(CG\)](#)
- [System overview \(CG\)](#)

Prerequisites (CG)

This page provides a list of prerequisites that must be fulfilled to use Inextor.

Installation of Inextor

The Inextor installation manual can be found in the [IT Setup Guide](#) section.

For any further questions on this topic, please contact:

- **INEXTO third-level support:** for all questions and support related to installation.
- **INEXTO second-level support:** for all questions and support related to installation and configuration.

Background (CG)

For an explanation of the Congo code regulation, see below for details

Introduction

To sell tobacco product on the territory of the Republic of the Congo, unique identifiers (UID) must be printed on the packaging. The smallest packaging level must have a UID provided by the government. The other aggregation packaging must have a UID, but it doesn't need to be one provided by the government.

The technical provider of the solution is Dentsu, thus you will see similarities with the European Tobacco Product Directive (EU TPD). Dentsu has put in place an Id Issuer, where the entities can be registered and UIDs can be ordered. The Id Issuer has both a website and a web API.

- QA: <https://idissuer.cg-pre.dentsutracking.com/>
- Production: <https://idissuer.cg.dentsutracking.com/>

Coding

Smallest packaging level

The smallest packaging level is the one that doesn't contain another packaging inside. It's usually: packs, pouch, tin, etc...

The UID provided by the government can have up to 4 parts:

- **Id Issuer identifier:** A code that identify the Id Issuer
- **Serial number:** The unique identifier of the package. Two packages of the same product must have different serial number.
- **Product code:** The unique identifier of the product. All the packages produced during a production, usually, have the same product code.
- **Timestamp:** The date-time at which the UID has been printed. Precision is to the hour.

When receiving the UIDs from the Id Issuer, it is composed of the Id Issuer identifier, serial number and product code.

During production, the governmental UIDs must be printed in a human-readable (HR) format and a machine-readable (MR) format.

- **HR:** {IDIssuerCode}{SerialNumber}
- **MR datamatrix:** 5R{IDIssuerCode}::{SerialNumber}{ProductCode}{Date:yyMMddHH}
- **MR dotecode:** [FNC1]5R{IDIssuerCode}::{SerialNumber}{ProductCode}{Date:yyMMddHH}

The IU code comes in three different versions:

- upUI(s): The format supplied to manufacturers and importers.
- upUI(L): The format of the code encoded by the manufacturer and importer in the data carrier.
- Human-readable: The format printed next to the data carrier in plain text, where applicable.



Figure 1 - upUI(s) format

upUI(s): UpUI short identifier, format issued to the manufacturer or importer.

Sample: QCCGA1qW3e4RtyUOHGj5

Length: 20 characters

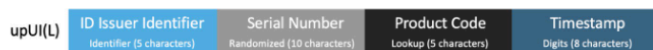


Figure 2 - upUI(L) format

upUI(L): long upUI identifier, this is the upUI(s) plus the time stamp in YYMMDDhh format (Y - year, M - month, D - day, h - hour).

Échantillon: QCCGA1qW3e4RtyUOHGj522010101

Length: 28 characters

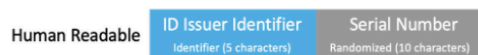


Figure 3 - Human-readable format

Human readable: The human-readable version to be printed. The human-readable code must enable an electronic link with the corresponding UI code in the system.

Sample: QCCGA1qW3e4RtyU

Length: 15 characters

Various formats of the QCCGA UID.

i UIDs are valid for 6 months after they have been generated by the Id Issuer.

Aggregation packaging [↗](#)

For the aggregation packaging, the Inextor SUPI code can be printed.

System overview (CG)

See below for the general overview of the CG regulation implementation in Inextor.

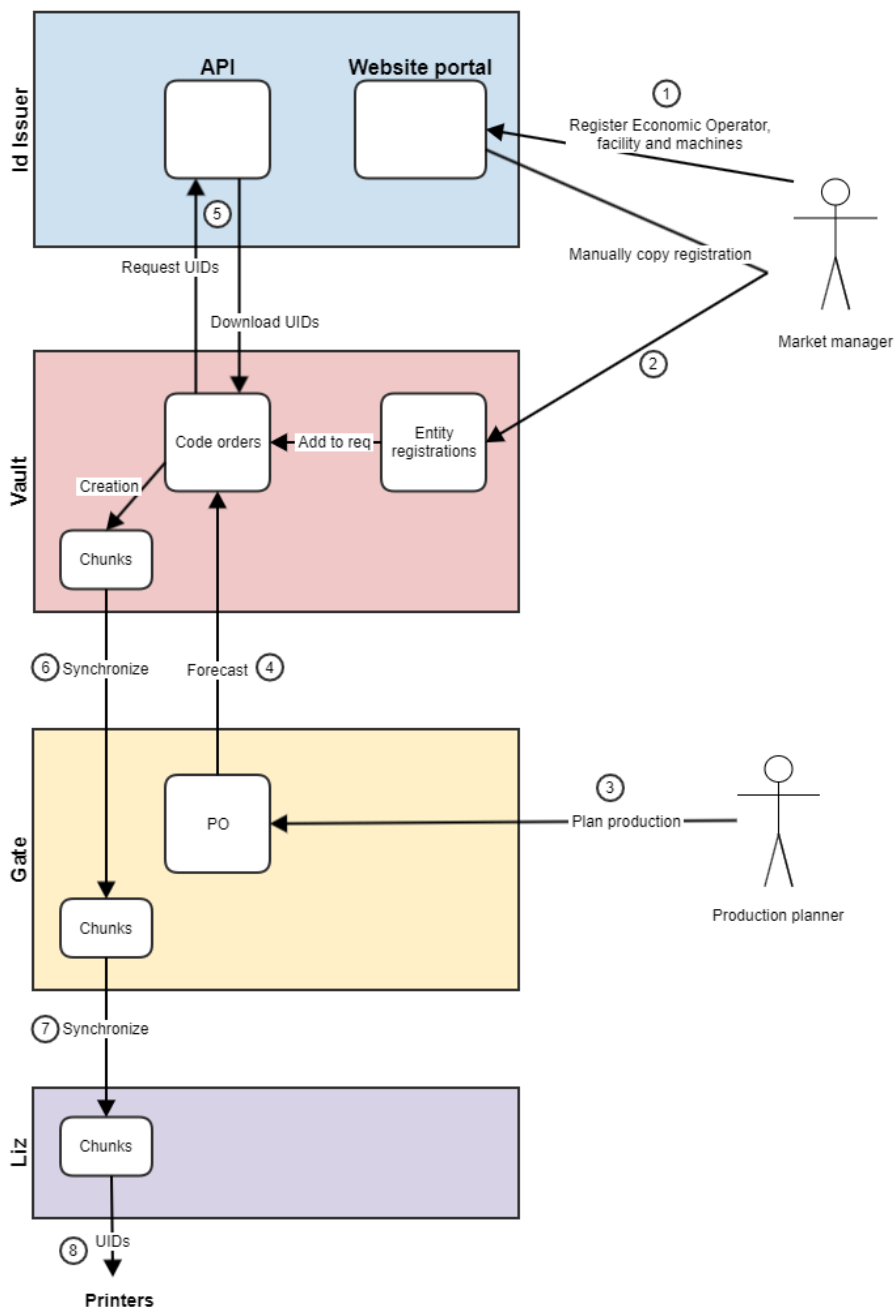
Concepts [↗](#)

Id Issuer	The entity mandated by the government to emit the UIDs. For Congo, it's the AGENCE CONGOLAISE DE NORMALISATION ET DE LA QUALITE (ACONOQ). The technical provider of the Id Issuer solution is Dentsu International. The Id Issuer offers a website and an API. The Vault use the API to order UIDs.
Code order	A request for UIDs. It is created on the Vault and sends a request to the Id Issuer API. The code order is completed when the UIDs are downloaded by the Vault. The Congo code orders are found on the Vault with the other FCTC code orders (TPD, UK, WLN, etc...)
Production Order (PO)	Describes a production. The PO is created in the Gate. A custom Congo tab exists to easily see and edit the Congo attributes. If the Gate detects that the stock of compatible UIDs is not enough for the production, it will send a forecast message to the Vault to request more UIDs.
Forecast	A message from the Gate to the Vault requesting UIDs. Congo has its own type of forecast.
Chunk	A package containing a group of UIDs. The chunks containing Congo UIDs indicates that the external code type is CONGO.

Workflow [↗](#)

1	The economic operator, facilities and machines must be registered on the website of the Id Issuer. This operation is manual, but must only be done once per entities.
2	Once an entity has been registered, the registration must be manually copied in the Vault. The most important data to copy are the EOID, EO Code, FID and MID generated by the Id Issuer. See: Vault FCTC Regulations: Economic Operators Vault FCTC Regulations: Facilities Vault FCTC Regulations: Machines
3	When a production is planned, the user must create a production order on the Gate. This can be done from the UI or from the API. The start date, the requested quantity, the linkup and the Congo specific attributes must be specified. Gate PO Tab: Congo The PO must be created in advance to leave enough time for the system to order UIDs. It takes 2 days for the Id Issuer to provide the UIDs. In a hurry, the setting immediate delivery can be used. The Id Issuer will deliver the UIDs as soon as possible, but the code order cannot be canceled. The setting can be set in the Congo tab or with the attribute "CG_ImmediateDelivery" = "True".

4	Gate will analyze the POs and the available Congo UUIDs. If it detects that more UUIDs are needed, it will send a forecast message to the Vault.
5	The Vault will convert the forecast into one or more code orders. The code orders will automatically request UUIDs to the Id Issuer's API.
6	Once the UUIDs are downloaded from the Id Issuer, they are stored into one or more chunks. The chunks are then automatically synchronized to the Gate.
7	When the production is started, the Gate sends a number of chunks to the Liz.
8	The Liz extract the UUIDs from the chunks and push to the printers the data.



Configuration (CG)

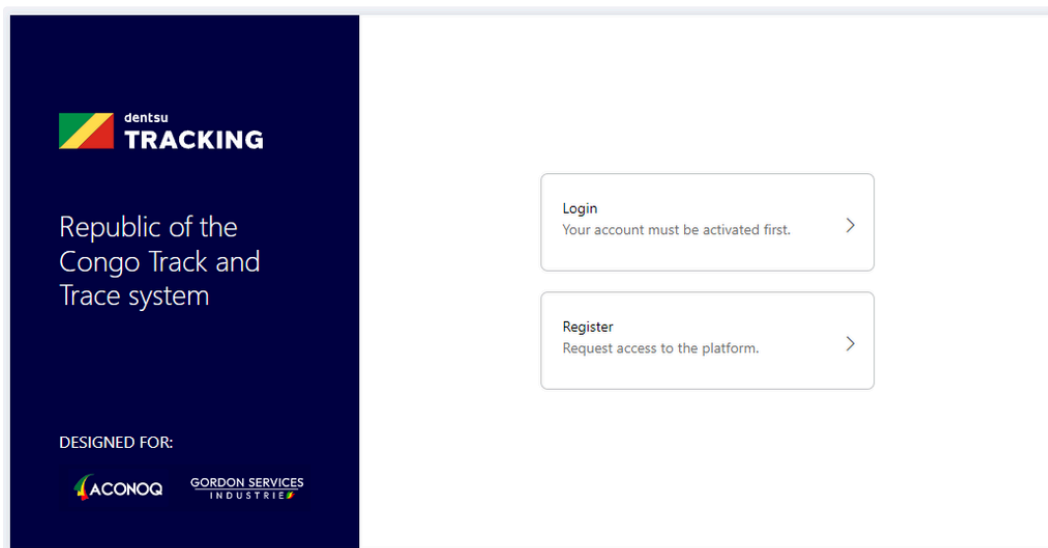
- [Id Issuer portal \(Congo\)](#)
- [Vault configuration \(CG\): Id Issuer plugin \(Congo\)](#)
- › [Gate configuration \(CG\)](#)

Id Issuer portal (Congo)

In order to sell tobacco product on the Republic of Congo market, you need to register at their Id Issuer portal.

Account creation [🔗](#)

1. Browse : <https://idissuer.cg.dentsuttracking.com/> (QA : <https://idissuer.cg-pre.dentsuttracking.com/>)
2. Select Register.
3. Select Manufacturer.
4. Fill the forms and submit.



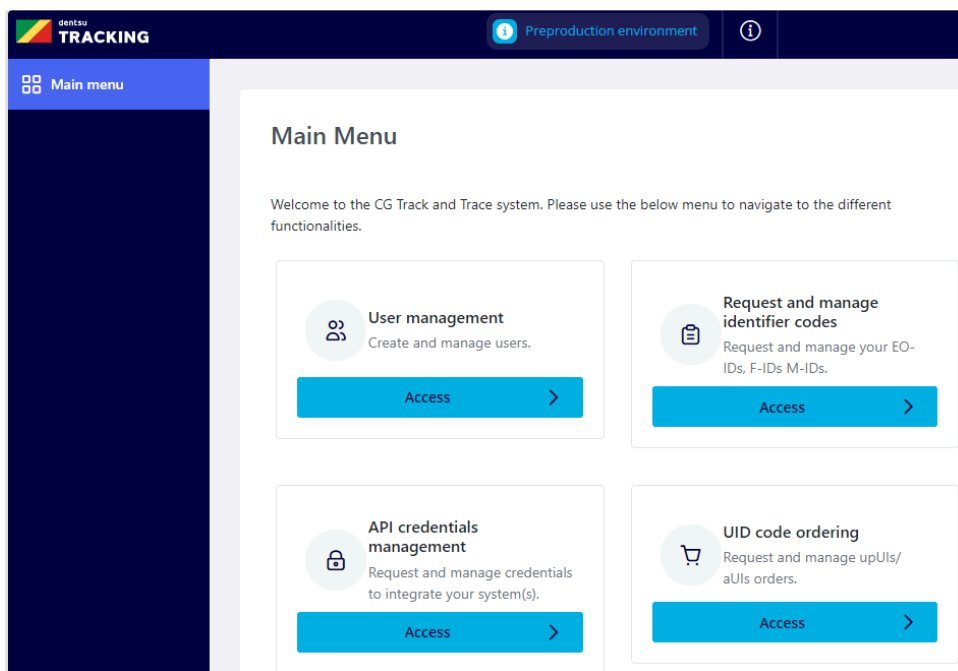
Entry page of the Id Issuer portal.

Once you have an account, you can log in the portal.

API access [🔗](#)

Credentials needs to be created for the API. Those credentials will be used in the Id Issuer configuration in the Vault. They allow the Vault to order UIDs.

1. Select API credentials management.
2. Select New API Access.
3. Enter a name and description. Agree to the terms. Finally, press Create Access.
4. The Client ID and Key will be needed in the Vault. Save them somewhere safe.



Main page

Entity registration [🔗](#)

Economic operator [🔗](#)

The first entity that must be registered is your Economic Operator. It is possible that the account creation already provides you an economic operator. If that is the case, you can skip this part.

1. From the main page, select Request and Manage identifier codes.
2. Go to Registry → Economic Operators.
3. Select New Economic Operator.
4. Fill the form's information.
5. Select Create EO.
6. Once the economic operator is registered, it will receive an ID called EOID. It starts with the Id Issuer code (QCCGA)

New Economic Operator

ECONOMIC OPERATOR DETAILS

Name*

Alternative name

☐ Use organization address

Building name

Street name & number*

Block/ Floor/ etc.

Postal code

City*

Country*

Select a country ▼

E-mail*

Create EO

Facility [🔗](#)

Your factories producing for Congo market must be registered. They must be registered under one of your economic operator.

1. From the main page, select Request and Manage identifier codes.
2. Go to Registry → Facilities.
3. Select New Facility.
4. Fill the form's information.
5. Select Create facility.
6. Once the facility is registered, it will receive an ID called FID. It starts with the Id Issuer code (QCCGA)

New facility

FACILITY DETAILS

EO-ID*

Select an economic oper

▼

Type*

Select a type

▼

☐ Use the Economic Operator address

Other facility type*

Facility name

Building name ?

Street name & number*

Block/ Floor/ etc.

Postal code

City*

Country*

Select a country

▼

Create facility

Machine [🔗](#)

Your automated lines producing for Congo market must be registered. They must be registered under the factory it is located in and that has been registered in the previous step.

1. From the main page, select Request and Manage identifier codes.
2. Go to Registry → Machines.
3. Select New Machine.
4. Fill the form's information.
5. Select Create machine.
6. Once the machine is registered, it will receive an ID called MID. It starts with the Id Issuer code (QCCGA)

New machine

MACHINE DETAILS

Machine name

Producer*

Model*

Serial number* 

Capacity (24h cycle)* 

F-ID*

Select a facility

▼

Create machine

Vault configuration (CG): Id Issuer plugin (Congo)

In order for the Vault to automatically order and download UIDs, we need to configure the ID Issuer plugin.

1. Start the Vault Administration.
2. Navigate to FCTC regulations→ Id Issuers.
3. Press the New button.
4. Enter the data as specified below.

 The data presented in this page are updated according to the latest documentation available to Inexto. We advise the users to double-check with the documentation they have received from the Id Issuer.

Name	Production	Quality Assurance
Id Issuer Code	QCCGA	QCCGA
Name	Dentsu Congo	Dentsu Congo
Plugin	Congo Id Issuer	Congo Id Issuer
upUI_i SN Length	10	10
upUI_s SN Length	10	10
Accept different upUI_s SNs from upUI_i SNs	NO	NO
Product Code Length	5	5
Request delay	2 days	2 days
Min order quantity	1	1
Max order quantity	1'000'000 <i>(In the past, Dentsu recommended 100'000)</i>	1'000'000 <i>(In the past, Dentsu recommended 100'000)</i>
Quantity must be a multiple of	1	1
Process Order Immediately	Based on Production Order	Based on Production Order
SLA Period	0ms	0ms
Immediate Delivery SLA period	0ms	0ms
SLA only on working days	NO	NO
Remove TP_ID and TP_PN for UK market	NO	NO
Plugin parameters		

Id Issuer Service URL	https://api.idissuer.cg.dentsutrack.com/api/v1	https://api.idissuer.cg-pre.dentsutrack.com/api/v1
Access token URL	https://auth.cg.dentsutrack.com/oauth2/token	https://auth.cg-pre.dentsutrack.com/oauth2/token
Client ID	Go to : https://idissuer.cg.dentsutrack.com/configuration/api-access	Go to : https://idissuer.cg-pre.dentsutrack.com/configuration/api-access
Secret	Create a new API access management user.	Create a new API access management user.
Property Name for Internal Reference Number *	InternalReferenceNumber	InternalReferenceNumber
Default Value for Internal Reference Number *	N/A	N/A

*Those settings are required by the Id Issuer, but not used, for now.

The code format for this regulation is the following:

Code	HR	HR-Tracking	MR	MR Datamatrix	MR DotCode
QC UK T	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}

The other tabs are standard for all regulations. You can find more details here : [Vault FCTC Regulations: Id Issuers](#)

Gate configuration (CG)

FCTC driver Congo tab

In the Gate, the Congo regulation is enabled as a component of the FCTC driver.

1. Navigate to Configuration→ Op.Drivers→ FCTC driver.
2. Press Manage, then enable the Congo component.
3. Press Configure, then go to the Congo tab. Adapt the settings to your needs.

Name	Default	Description
Ecr Formats	CG-{0}-{1}-{2}-{3}-{4}-{5}-{6}-{7}-{8}-{9}	Format of the Congo ECR. Can only be edited from the database. Please contact Inexto support if you need to modify the ECR format.
Enable Blocking Errors	Disabled	Enable this setting to have blocking errors. It will block production starts if a critical validation fails.
Po Requested Quantity Threshold	Disabled	Enable this setting to block code ordering if the requested quantity is too big. This can happen with human error. With this setting, the end date becomes mandatory in the PO. The code ordering is blocked if the quantity requested cannot be consumed by the line in the time defined between the start and the stop.
Lock Production Order Ecr Conditions	None	Enable this setting to block modification of the ECR after the PO has started producing.

Printing configuration (Congo)

Contents [↗](#)

A number of contents are deployed by default. They allow printing the Congo codes in various formats.

Code	Description
Packs_CONGO_UPUI	Congo code as in the chunks.
Packs_CONGO_UPUI_DataMatrix	Data matrix format. Defined in the Id Issuer plugin's official code format: MR_DataMatrix.
Packs_CONGO_UPUI_DotCode	Dot code format. Defined in the Id Issuer plugin's official code format: MR_DotCode.
Packs_CONGO_UPUI_HR	Human-readable format. Defined in the Id Issuer plugin's official code format: HR.
Packs_CONGO_UPUI_HR_Tracking	Human-readable format. Defined in the Id Issuer plugin's official code format: HR_Tracking.
Packs_CONGO_UPUI_MR	Use the content Packs_CONGO_UPUI and add the timestamp at the end.

Layout [↗](#)

Packs [↗](#)

We advise adding 2 contents to the Congo Packs layout.

Required	Commissioned as	Content
Yes	MR	Data-matrix or dot-code content.
No	HR	Human-readable content.

Edit Layout

Code: Packs_Congo

Name: Packs layout Congo

Description: Packs layout Congo

Unit Type: Packs

Deleted: ☐

Required	Commissioned As	Content	Delete
☒	MR code	Packs_CONGO_UPUI_DotCode	Delete
☐	HR code	Packs_CONGO_UPUI_HR	Delete

Validation results: Successful

OK Cancel

Example of packs for Congo

Bundles and Cases [🔗](#)

Bundles and cases do not use a Congo code. They use an Inexto SUPI code.

The layout should follow the same design as for the other packaging level using SUPI codes.

Edit Layout

Code: Bundles.SGTIN

Name: Bundles.SGTIN

Description: Bundles.SGTIN

Unit Type: Bundles

Deleted: ☐

Required	Commissioned As	Content	Delete
☒	MR code	BUNDLE_SGTIN_MR	Delete
☐	-	BUNDLES_SUPUI	Delete

Validation results: Successful

OK Cancel

Example of bundle layout using a SUPI code.

Manufactured product (Congo)

When the Congo component of the FCTC driver is enabled, the manufactured product contains a Congo tab. This tab is the same as the one present in the PO: 

We advise using it to fill the attributes that will not be modified at the PO level.

Linkup setup (Congo)

For the lines that will produce for Congo, an attribute needs to be added in the Linkup setup.

1. In the Gate Administration, navigate to Serializers→ Linkup Setups.
2. Edit the linkup that will produce for Congo.
3. In the Attributes, add “CG_Process_Type“. Type must be Boolean. The value must be True if the line is automated. It must be false if the process is manual.

Attributes					
RejectionRates					
Name	Value	Type	Source	User	Actions
CG_Process_Type	True	Boolean			

Mandatory attribute to define if the line is automated or manual.

Operation (CG)

- Production Order (CG)
- Forecast (CG)
- Code order (CG)

Production Order (CG)

To prepare a production, you must create in the Gate a Production Order (PO). It contains all the information required by the system to start printing. In this page, we will focus on the information required for a Congo production.

The PO will trigger the code ordering request. Once the codes are downloaded, they can be printed by the PO. The compatibility between the codes and the PO is defined by the External Code Reference (see related section).

Graphical user interface [↗](#)

You can create a production order for Congo from the user interface.

Here are the common fields that are mandatory for Congo.

- Order number
- Product
- Linkup setup
- Requested quantity (unless it's a rework order)
- Start date

CONGO tab [↗](#)

A tab is available to help managed the attributes specific to Congo. For more details, see the section Attributes.

CRPT	TNT	Worldline	Inexpress
Attributes	ExtendedFields	CONGO	TPD
Regulation			
Regulation Enabled ☒			
Market			
Import... ☐			
Intended Market Congo (CG)			
Intended Route ☐ Unassigned			
Product			
Brand CongoProduct001			
Product Type Cigarette			
Product Weight 16			
Other ID			
Machine			
Process Type ☒			
Optional			
Immediate Delivery ☒			
Id Issuer Code QCCGA			
Economic OperatorId QCCGAR7OLN1WA			
Facility Id QCCGA3LA9175I			
Machine ID: QCCGATO9OQ8G4			

Congo tab. It displays together the attributes for Congo and simplify their editing.

Web service [↗](#)

The production order can also be created from the web-service. See [Gate Op. Driver: External Service Driver](#)

The attributes specific to Congo must be added in the “Properties” part of the payload. For the list of attributes to use, see section Attributes.

Attributes [↗](#)

Attribute	UI name	Description	Mandatory/Optional
CgExternalCodeReference	-	Auto generated. Concatenation of other attributes. Define the compatibility of the codes.	Mandatory
CG_EcrFormat	-	The format of the CgExternalCodeReference. We advise to use the default format.	Mandatory
CG_EO_ID	Economic Operator ID	ID of the economic operator paying the codes.	Optional
CG_F_ID	Facility ID	ID of the factory producing.	Optional
CG_M_ID	Machine ID	ID of the production line.	Optional
CG_IdIssuerCode	Id Issuer Code	Code of the Id Issuer.	Optional
CG_ImmediateDelivery	Immediate delivery	If false, the codes are not delivered until 48 hours, leaving time for cancellation. If true, codes are delivered as soon as possible.	Optional
CG_Import	Import		Optional
CG_IntendedMarket	Intended market	Market where the products will be sold.	Mandatory
CG_Intended_Route1	Intended route (checkbox)	If true, CG_Intended_Route2 must be specified.	Optional
CG_Intended_Route2	Intended route (drop-down list)	Country where the products transit.	Optional
CG_Process_Type	Process type	True if the process is automated. False if the process is manual.	Mandatory
CG_P_Brand	Brand	Brand of the product.	Optional
CG_P_Type	Product type	Type of product. • 1: Cigarette • 2: Cigar • 3: Cigarillo • 4: Roll your own tobacco • 5: Pipe tobacco • 6: Water pipe tobacco	Mandatory

		• 7: Oral tobacco • 8: Nasal tobacco • 9: Chewing tobacco • 10: New tobacco product • 11: Other	
CG_P_weight	Product weight	Weight of the product.	Optional

External Code Reference [🔗](#)

The external code reference (ECR) is an Inextor concept. It helps to identify the compatibility between a production and external codes. Congo has its own ECR named `CgExternalCodeReference`. The ECR is a concatenation of certain attributes. Those attributes are announced to the Id Issuer when ordering the codes. The codes downloaded must respect the announced attributes. The ECR is created in the PO, then when the codes are downloaded, the ECR is added to the chunks, finally a PO can only use chunks with the same ECR.

For instance, a PO planned for the line L304 orders 10'000 codes. The codes are downloaded and the chunks have an ECR with the mention of "L304". After that, the PO is modified to run on line L197. The ECR in the PO is updated to mention "L197". Therefore, the modified PO can't use the previously downloaded codes. It must re-order 10'000 codes with the new attributes.

The ECR is composed of:

CG-{Machine}-{Unit type}-{Import}-{Intended market}-{Process type}-{Id Issuer Code}-{Other ID}-{EOID}-{FID}-{MID}

EOID, FID, MID, Id Issuer code [🔗](#)

The attributes for EOID, FID, MID and Id Issuer code are optional. If they are present in the PO, they are added to the ECR, otherwise their spot is left empty.

When all 4 attributes are specified in the PO, the Vault will use them to order codes.

When the attributes are not specified in the PO, the Vault will use its routing mechanism to determine the EOID, FID, MID and Id Issuer Code to use.

Modify the default format [🔗](#)

The default format of the ECR can be modified. For instance, one of the attributes can be removed.

The format can only be modified with an SQL query, however we do not advise changing it. If it must be changed, please contact Inexto support.

Forecast (CG)

Forecast is an Inextor concept. It describes the message the Gate sends to the Vault to request Unique Identifiers (UID). The Vault process the forecast message and convert it into one or more UID orders.

The Congo has its own version of the forecast message. It's called **CongoCodeOrderForecastMessage**.

The Congo forecasts have a similar behavior as for the other regulation. The main difference is the validation of the data. For more details on the forecast, see [Forecast](#) .

Gate [↗](#)

In the Gate, the forecast messages can be found in the outbox queue for the Vault. (Configuration→Messaging→OutBox)

After editing, a Production Order (PO), the forecast is generated by a background job called “Code Order Forecast Job” (Configuration→Jobs). If you don't want to wait on the background job, you can use a button to forcefully generate the forecast. This button is called “Generate Forecasts” and is found in Productions→ Production Orders.

Vault [↗](#)

In the Vault, the forecast messages can be found in Configuration→ Messaging→ TPD→ CongoCodeOrderForecastMessage.

Once the forecast message has successfully been processed and the Vault has detected that more codes are required, you should find code orders under FCTC→ Orders. The main way to differentiate the order for Congo is through the External Code Reference which always starts with “CONGO-“.

Code order (CG)

You can manage Congo code orders from the Vault FCTC - Orders page. [Vault FCTC Regulations: Orders](#)

This page contains code orders for various regulations. You can find the Congo orders by filtering the External Code Reference with "CONGO-".

Inextor DLR regulated market operational guide

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Introduction [🔗](#)

Document INEX-OG-00008: Inextor De La Rue (DLR) Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the DLR regulated market requirements. Document INEX-OG-00008 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the DLR Regulated Market, system overview and background.
- **Configuration** - Requirements for general component configuration for the DLR regulation
- **Operations** - Production order, Monitoring, external code importing.

Purpose [🔗](#)

The purpose of INEX-OG-00008 is to provide the required knowledge necessary to successfully set up Inextor correctly to support DLR market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the DLR regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)



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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Introduction (DLR)

- [Background \(DLR\)](#)
- [Prerequisites \(DLR\)](#)
- [System Overview \(DLR\)](#)

Background (DLR)

For an explanation of DLR markets regulation, see the information below

For some markets, codes are mandatorily emitted by De La Rue (DLR).

The list of these markets is the following:

- United Arab Emirates
- Kingdom of Saudi Arabia
- Kingdom of Bahrain
- Sultanate of Oman
- State of Qatar

The tobacco goods must comply with 2 obligations:

- Bear a DLR physical tax stamp
- Be printed with a DLR electronic code.

As a first step, the manufacturer must order the appropriate category of physical paper stamps, that he will stick on the tobacco packs. This stamp order grants to the manufacturer an **Entitlement** for electronic codes.

As a second step, the manufacturer will scan a datamatrix located on the boxes of paper stamps. To do that, they use a dedicated PC located in the factory, which is equipped with a scanner. The scanning will allow ordering the same quantity of electronic codes against these paper stamps. The user will fill a form on the dedicated PC and select the GTIN14 in a combobox that lists the registered products. The codes are downloaded as a file, and imported into the manufacturing system.

Because of this manual process related to physical stamps, the electronic code ordering and downloading to the factory is not automatable.

The code-stamp correspondence is not one-on-one: To a batch of codes corresponds a batch of stamps, and any one of these stamps can be attached to a package bearing any one of these codes. However, these stamps cannot be used with another batch.

DLR codes lose their validity after 12 months: They cannot be printed on products manufactured after that time (if they are, the product will be considered illegal).

The relevant documents are attached to this page:

- United Arab Emirates Cabinet Decision No. (42) of 2018 'On Marking Tobacco and Tobacco Products'
- United Arab Emirates Federal Tax Authority Decision No. (3) of 2018 'On Implementing the Marking Tobacco and Tobacco Products Scheme'
- De La Rue 'DTS Interface for Manufacturers and Supply Chain Agents UAE' documentation

Code structure

Tobacco

Based on document [Manufacturers Interface v1.1.pdf](#) , the code will have the following format:

CC AAAAAAAAAA PPPP (YYMMDDHH): 17 characters (25 with date)

Where:

- **CC** = 2 digit ISO country code of installation, e.g. AE for UAE.
- **AAAAAAAAAA** = 11 character alphanumeric serial number with security element. 1Bn (1,000,000M) unique values, likelihood of guessing > 1 in 32k. Security algorithm can be switched out.
- **PPPP** = 4 character identifier for Site, Product, Machine, Intended Retail market (country), and Intended Shipment Route (for EU only) – Generated by DTS System. Approximately 1M unique values.
- (YYMMDDHH) = Date Time ADDED BY MANUFACTURER (not generated by DTS System).

Beverage

In a foreseeable future, and only for the state of Oman, a new legislation for beverages will take effect.

The code will have the following format:

CC BBBB BBBB SSS PP (YYMMDDHH): 15 characters (23 with date)

Where:

- **CC** = 2 digit ISO country code of installation, e.g. OM for Oman.
- **BBBBBBB** = 8 character alphanumeric serial number
- **SSS** = 3 character security code
- **PP** = 2 character product type
- (YYMMDDHH) = Date Time ADDED BY MANUFACTURER (not generated by DTS System).

File	Modified
›  Cabinet-Decision-No-42-of-2018-on-Marking-Tobacco-and-Tobacco-products EN.PDF	Jul 15, 2020 by Former user
›  FTA-Decision-No-(3)-of-2018-on-Implementing-the-Marking-Tobacco-and-Tobacco-Products-Scheme EN.PDF	Jul 15, 2020 by Former user
›  Manufacturers Interface v1.1.pdf	Jul 15, 2020 by Former user
›  DLR - UAE- Manufacturers Interface v1.1.pdf	Oct 06, 2023 by Yannick Gauthier

↓ [Download All](#)

Prerequisites (DLR)

It is required to have the following Gate permissions for being able to import DLR codes:

ExternalCodes: Read - Edit - Manage - Advance

Vault: Read.

System Overview (DLR)

This guide gives the procedure to follow in order to be able to run productions using DLR external codes (see [DLR Codes](#) for the list of supported markets). For a general description of the steps to follow in order to be able to produce, see [General steps \(serialization configuration\)](#) and [General Steps](#). Here we point out the additional steps and modifications that must take place in order to incorporate the DLR codes on top of a normal production.

The initial phase of supporting DLR external codes (generated by De La Rue) involves a manual import of codes obtained from De La Rue DTS system.

This imported file references a market, a product and a machine, which must match the production order defined in INEXTOR.

For an overview of the implementation of the DLR markets regulation in the INEXTOR software, see below.

The DLR codes must be imported manually: the user in charge goes to the DLR website, orders the codes, gets a file and imports it into the Gate (which then sends them automatically to the Vault).

 The difficulty to automate is that the products registered in the DLR system are usually not matching the products registered in the Manufacturer ERP.

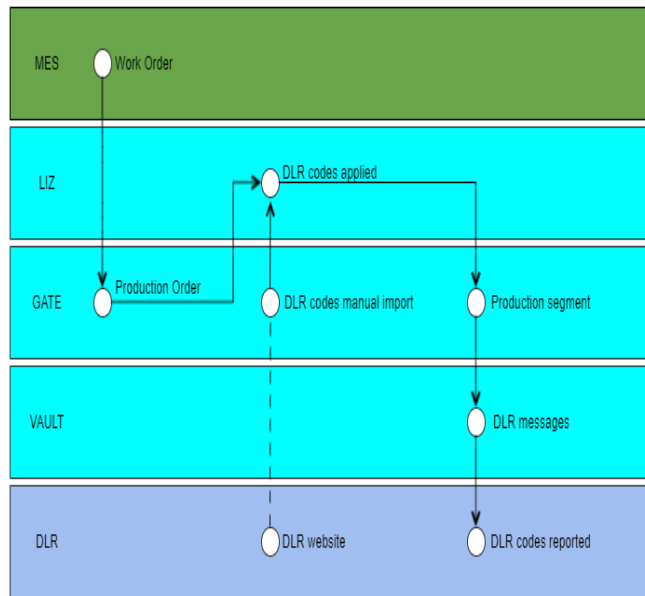
Consequently, an informed person from the Market Entity needs to pick the right product on the DLR web site combobox.

It is not unusual that the code file generated by the DLR web site will not match the products defined on the Gate, so the file header must be edited manually before import.

 DLR codes lose their validity after 12 months.

In the DLR regulated markets, the ECR (see definition in [Forecasts](#)) comprises the country, the product reference and the production line machine reference, so any PO which matches that information can use the codes.

The workflow is the following (where MES is the manufacturer's Management Execution System):



The comprehensive description of the DLR code implementation can be found in the [DLR Regulated Markets Operational Guide](#).

DLR codes are often used for code pairing (see page [Concepts and Workflow Printing: Multiple Regulation Production](#)).

Configuration (DLR)

- [Steps](#)
- [Content](#)
- [Template](#)
- [Layout](#)
- [Manufacturing Market](#)
- [Manufactured Product](#)
- [Supported Markets](#)
- [Configuring Materialization for DLR](#)
- [DLR Layout Implementation](#)

Steps

Prerequisites:

- Enable the DLR Communication Driver on Vault, and configure various settings: See page [Vault Op. Drivers: DLR Communication Driver](#).
- Enable the DLR Codes operation driver on Gate, and configure various settings: See page [Gate Op. Driver: DLR Codes Driver](#).

The process is the following:

- create the Content for DLR codes (Note: a default installation has such a content, named Packs_DLR).
- create a layout, template and layout implementation.
- import the DLR external codes.
- create a manufactured product.
- create a PO.

Content

In Layouts / Contents, create or edit a content that is linked to DLR codes:

Content

Code: Packs_DLR

Description: Packs_DLR

Content type: Dynamic

Startup Mode Value: #####

Length: Min 1, Max 30

Code issuer: External (Edit Arguments)

Code mask: (Not Set)

Code issuer arguments:

Name	Value	Type	Source	User	Actions
CodeTypeId	110	Int16			Delete
ExternalCodeReference	DlrExternalCodeReferer	String			Delete
MachineReferenceProp		String			Delete
ProductReferencePrope		String			Delete
ROLE	Secondary	String			Delete
SerializationLevelRefere		String			Delete
SOURCE	DLR	String			Delete

Validation results: Successful

OK Cancel

Make sure that the following values are set:

- The content type must be 'Dynamic',
- The code issuer must be 'External'
- In the code issuer arguments, the following properties must be defined:
 - ExternalCodeReferencePropertyName describes the property name for the External code reference in the production order (DlrExternalCodeReference in the screenshot),
 - The SOURCE must be set to DLR.

Note: this example shows a simple content, directly linked to an external code. It is suited for printing what is called a human-readable code. When commissioning or code pairing is involved, it is usually necessary to have what is called a machine-readable code, which is the code (with possible data qualifiers) and a production timestamp.

Template

The template is specific to the installed printer and defines injection points, i.e. places where a dynamic value (called a content) must be inserted during product creation. In the Gate administration interface, go to Templates / Templates and create or edit a template:

Template

Template Code: VPL.Packs.UAE

Template Name: VPL Packs UAE

Device Family: TelnetFamily ☐ Deleted

Template Description: VPL Packs UAE

Injection Points

Name	Comments
HRCODE	

Template Data

```
1 DC,MRCODE*,10,10,2,1,96,7,0,{HRCODE}
2 T,HRCODE,10,60,Arial,10,{HRCODE}
```

Extract Injection Points Load file...

Validation results: Successful

Save Cancel

This example is based on a telnet template sample, which has an injection point called HRCODE (human-readable code). It is assumed here that the device configuration has already been configured.

Layout

In Layouts / Layouts, create or edit a layout for the pack unit type.

In order to be able to send commissioning events to the official DLR Repository (either through INEXPRESS or the Vault, depending on customer implementation), it is necessary to specify the code usage as being the machine-readable version of the printed code.

In order to be able to send code pairing events through the Vault, it is necessary to add a content with usage "Paired DLR HR", which references the machine-readable version of the DLR code (code pairing is done only in EU factories).

CodePaacks_DLR

NamePaacks DLR

DescriptionPaacks DLR

Unit TypePaacks

Deleted☐

Layout Contents

Required	Commissioned As	Content	Delete
☐	HR code	Paacks_DLR	Delete
☐	MR code	Paacks_DLR_MR	Delete

Validation results: Successful

OKCancel

Layout for non-EU factory using DLR codes. It must have at least the DLR "Commissioned As" MR code.

CodePaacks_TPD_DLR

NamePaacks TPD with DLR

DescriptionPaacks_TPD_DLR

Unit TypePaacks

Deleted☐

Layout Contents

Required	Commissioned As	Content	Delete
☐	Paired DLR HR	Paacks_DLR	Delete
☐	HR code	Paacks_UK_UPUI_HR_Tracking	Delete
☐	MR code	Paacks_TPD_MR	Delete

Validation results: Successful

OKCancel

Layout for EU factory. It must have at least the TPD machine-readable and the paired DLR human-readable.

For TPD layouts, use Paacks_TPD_HR_Tracking for human readable code (available from version 10.1.0.3101 of the Gate).

If the code usages are not correctly set, the Commissioning and Code Pairing messages will not be sent to De La Rue !

In the DLR operation driver, if the market is set with the **commissioning** event or if the INEXPRESS driver is enabled, then the absence of a **MR code** content is an error.

In the DLR operation driver, if the market is set with the **code-pairing** event or if the INEXPRESS driver is enabled and the factory is located in the European Union (as set in the configuration of the TPD operation driver), it is required to have both a **MR code** and a **Paired DLR HR** content.

Obsolete after version 10.1.0.3163

CodePaacks_DLR

NamePaacks DLR

DescriptionPaacks DLR

Unit TypePaacks

Layout Contents

Required

☐

Code Level

0

Paacks_DLR_MR

Remove

Add...

Validation results: Successful

OKCancel

Left: Layout for non-EU factory. It must have at least the DLR machine-readable code at level 0.

CodePaacks_TPD_DLR

NamePaacks TPD with DLR

DescriptionPaacks_TPD_DLR

Unit TypePaacks

Deleted☐

Layout Contents

Required	☐	Code Level	2	Paacks_DLR	Delete
Required	☐	Code Level	1	Paacks_TPD_HR_Tracking	Delete
Required	☐	Code Level	0	Paacks_TPD_MR	Delete

Add...

Validation results: Successful

OKCancel

Right: Layout for EU factory. It must have at least the TPD machine-readable code at level 0 and the DLR human-readable code at level 2.

- The meaning of the code levels value is as follows:
- level 0: Machine-readable code printed (with data qualifiers)
 - level 1: Human-readable version of the printed code. Note: for a TPD layout, use Paacks_TPD_HR_Tracking (available from version 10.1.0.3101 of the Gate).
 - level 2: DLR human-readable code (when level 0 is not the DLR code)

Manufacturing Market

If needed, create a manufacturing market, whose name is one of the supported markets (see [Codes and Code Ordering Flow: DLR Codes](#) for the list of supported markets).

Manufacturing Market

Code

KSA

Name

Saudi Arabia

Description

Kingdom of Saudi Arabia

Deleted

Attributes

Name	Value	Type	Source	User	Actions

Validation results:  Successful

OK

Cancel

Manufactured Product

If needed, create a manufactured product that uses a layout above. To do this, go to Products / Manufactured Products. Create or edit a manufactured product; in the 'Unit configurations and layouts', choose the appropriate layout for unit types.

Manufactured Product

General Information

Unit Configurations and Layouts

Associated SKUs

Layouts

Unit Type	Unit Configuration	Layout	End Of Lot Layout
Bundles	(Not Set)	(Not Set)	(Not Set)
Cases	(Not Set)	(Not Set)	(Not Set)
Cigarettes	(Not Set)	(Not Set)	(Not Set)
MultiBundles	(Not Set)	(Not Set)	(Not Set)
Packs	standardPacks	Packs_UAE	(Not Set)
Pallets	(Not Set)	(Not Set)	(Not Set)

Attributes

ExtendedFields

Name	Value	Type	Source	User	Actions
ACTIVITY	UAE Activity	String	MP-EP	INEXTO	Delete
BRANDESC	UAE Brand name	String	MP-EP	INEXTO	Delete
DESTINATIONMAR	UAE	String	MP-EP	INEXTO	Delete
PRODUCTCODE	UAE Brand code	String	MP-EP	INEXTO	Delete

Validation results: ✓ Successful

OK

Cancel

Make sure that the associated market is one of the supported markets.

Supported Markets

The list of markets currently under the DLR regulation can be found on page [Codes and Code Ordering Flow: DLR Codes](#).

Adding a market can be done on the Vault, as explained in page [Vault Op. Drivers: DLR Communication Driver](#), and on the Gate, as explained on page [Gate Op. Driver: DLR Codes Driver](#).

Configuring Materialization for DLR

See [Configuring Materialization](#).

DLR Layout Implementation

A layout implementation maps a printer device, a layout and a template.

In Templates / Layout implementations, create or edit a layout implementation, linking the right printer device, the layout described in [Layout](#) and the template described in [Template](#). For the variable in the template, select the content described in [Content](#).

Device Configuration	
Device Configuration	Telnet.Packs

Layout	
Layout	Packs_DLR

Template	
Template	VPL.Packs.DLR

Content Mappings		
Injection Point	Content	Format
HRCODE	Packs_DLR	

Validation results: ✔ Successful

OK Cancel

✖ Manufacturing for a DLR market within the EU [🔗](#)

The Content referenced in the **Layout Implementation** is the TPD content, not the DLR content.

The DLR Content is referenced only in the **Layout**, as shown in [Layout](#).

Edit Layout Implementation

Device Configuration: Telnet.Packs

Layout: Packs_TPD_UAE

Template: VPL.Packs.TPD.KIT

Injection Point	Content
HRCODE	Content: Packs_TPD_HR Format:
MRCODE	Content: Packs_TPD_MR Format:

Validation results: Successful

OK Cancel

Remark: When printing data qualifiers, the mapping of the MRCode injection point is different: use Packs_TPD_MR (without data qualifiers) or Packs_TPD_UPUI_DataMatrix (with data qualifiers) or Packs_TPD_UPUI_DotCode (with data qualifiers)

When a production order has a destination market regulated by DLR (as seen in the Manufacturing Market of the Manufactured Product of the production order), it is necessary to reference an external content using DLR codes either in the layout implementation or the contents in the layout itself.

Operations (DLR)

- [Production Order](#)
- › [Monitoring](#)
- [External Code Import Guide for DLR Regulated Markets](#)
- [Automatic DLR Code Ordering for Beverages](#)

Production Order

Go to Production / Production orders and create or edit a production order and check the **DESTINATIONMARKET**, **ProductGTIN** and **MACHINE_GLN** attributes.

⚠ The values of the **DESTINATIONMARKET**, **ProductGTIN** and **MACHINE_GLN** properties (or other property names as configured in the [Gate Op. Driver: DLR Codes Driver](#)) must match the *Market*, *Product Reference* and *Machine Reference* fields of the imported files, as seen in the "external codes" screen in [External Codes Import](#). The associated manufactured product must reference the DLR layout.

Production Order

Order Number

UAE 01

Description

UAE

Manufactured Product

UAE Brand code

▲ Fine cut UAE

Brand Code: UAE Brand code (Name: UAE Brand name)

LinkUp Setup

03 - VPL

Requested Quantity

50000

Total Quantity

50

Deleted

☐

Order Expected Start Date

Order Expected End Date

Order Full Quantity

☒

Attributes

ExtendedFields

TPD

Name	Value	Type	Source	User	Actions
ACTIVITY	UAE Activity	String	MP-EP	INEXT0j	Delete
BRANDDESC	UAE Brand name	String	MP-EP	INEXT0j	Delete
DESTINATIONMARKET	United Arab Emirate	String	MP-EP	INEXT0j	Delete
DlrExternalCodeRef	United Arab Emirate	String	PO		Delete
MACHINE_GLN	0000001.00092.1	String	PO	ELCANET	Delete
MCID	DCTA	String	LinkUp	INEXT0c	Delete
MID	03	String	LinkUp	INEXT0c	Delete
M_Capacity	720000	Integer	PO-LinkUp		Delete
ORDERNUMBER	UAE 01	String	PO-EP	INEXT0j	Delete
PRODUCTCODE	UAE Brand code	String	MP-EP	INEXT0j	Delete
ProductGTIN	00012345600012	String	PO	ELCANET	Delete
RejectionRate_Bundl	0	Double	PO-LinkUp		Delete
RejectionRate_Cases	0	Double	PO-LinkUp		Delete
RejectionRate_Packs	0	Double	PO-LinkUp		Delete

Validation results: ✓ Successful 18 Messages

Save

Cancel

Close

Maximize

The link-up setup must match the involved production line.

It is now possible to start this production order in the Liz administration interface.

Monitoring

Introduction

Gulf countries require that several production and logistic events be reported to DeLaRue. The Vault has the capability to report:

- Code commissioning
- Code pairing

Options

The Vault can send those messages, but not all users resort to use this functionality. Some users use other systems to send those messages. This is managed in the [DLR \(KSA, UAE, etc.\) Communication Driver](#). It can be set per market.

Vault sends both types of messages

Add markets with all the correct information and configure them to send Commissioning and Code Pairing.

Vault sends nothing

In the market, don't select commissioning, nor code-pairing events. If no market sends any event, the driver can even be disabled.

Commissioning message can easily be created by the scanners or aggregation system without the help of INEXTOR.

Code Pairing must somehow be transmitted from INEXTOR to the external system. Since the paired code is not physically present on the product, INEXTOR provides them through a channel. If the external system is INEXPRESS, the Liz performs the pairing, then transmits this info to INEXPRESS. Some aggregation systems can request DLR codes to the Gate and perform the pairing themselves (see [External Code Provider Driver](#)).

Vault sends only pairing

Configure the market to send only Code Pairing.

In this mode, another system must send the Commissioning messages.

Vault sends only commissioning

Configure the market to send only commissioning.

 This only work for factories outside Europe. If a facility inside EU must produce for this market, you must select the code-pairing as well.

Process

On Vault administration GUI (if the DLR communication driver is enabled + user has the rights on DlrMessages), a tab shows all DLR messages under De La Rue / messages.

Vault Administration ([https://localhost/S3r_tpd-scenario2_PRIV10_VaultWS/VaultAdministrationGuiService.svc/\\$spi](https://localhost/S3r_tpd-scenario2_PRIV10_VaultWS/VaultAdministrationGuiService.svc/$spi))

Order number	Gate Code	Creation date	Send date	DLR ECR	Type	Status	Response	Retry
		☒	☒					
UAE 01	Gate_DCTA	07.01.2020 18:05:40	07.01.2020 18:11:45	United Arab Emirates-00012345600012-00000X	Commissioning	Sent	OK	2
UAE 01	Gate_DCTA	07.01.2020 18:05:40	07.01.2020 18:11:45	United Arab Emirates-00012345600012-00000X	Commissioning	To be resent	OK	2
UAE 01	Gate_DCTA	07.01.2020 18:05:39	08.01.2020 17:12:39	United Arab Emirates-00012345600012-00000X	Commissioning	To be resent	OK	5

« < | of 1 (3/3) | > » |

The 'Resend' button can be used to force a resend of a message in the 'Communication error', 'Validation error' or 'Sent' states. If a message is in the 'Sent' state, a confirmation is first asked.

The 'History' button shows the history of attempts to send a message to a DLR server:


Message History

Message ID: 1, Order: UAE 01, ECR: United Arab Emirates-00012345600012-0000001.00092.1

☐ Show payload

	Logged On	Server URL	Status	Response Message	Error Message
	1/7/2020 6:07:07 PM	https://dtstest.tax.gov.ae:8443/api/acquire/rabbitmq/epcis	OK		
	1/7/2020 6:11:45 PM	https://dtstest.tax.gov.ae:8443/api/acquire/rabbitmq/epcis	OK		
	1/8/2020 1:51:05 PM	https://dtstest.tax.gov.ae:8443/api/acquire/rabbitmq/epcis	OK		
	1/8/2020 5:08:38 PM	https://dtstest.tax.gov.ae:8443/api/acquire/rabbitmq/epcis	OK		
	1/8/2020 5:12:39 PM	https://dtstest.tax.gov.ae:8443/api/acquire/rabbitmq/epcis	OK		
	1/8/2020 5:13:39 PM	https://dtstest.tax.gov.ae:8443/api/acquire/rabbitmq/epcis	OK		

Refresh

Close

A message in the status 'Communication error' will be retried up to 3 times. The other error statuses are not retried because they are not transient issues. The Vault waits each time more before retrying. The wait time can be configured with setting **DirRetryExpBase**. (By default: 3min, 9min, 27min).

Status diagram

Monitoring

The DLR messages must be sent rapidly after the event occurred. In order to rapidly detect an issue with the DLR messages, the user can activate the email notification (see [User Notifications](#) "DLR event message failed").

Appendix event reporting time

For some markets, the events must be sent in a particular order. For instance, the **Commissioning** must arrive before the **Aggregation**.

It can take some time between the printing and the events being received by DeLaRue. This is because the information needs to travel through several applications: Liz → Gate → Vault → DeLaRue.

We measured the time it takes in a production environment.

- 1'305'308 samples
- Filtered out 5% of the longest times. This removes the events stuck in error. They can stay a very long time in this state and make the graph unreadable.
- Majority of events are sent in **1 to 4 minutes**.

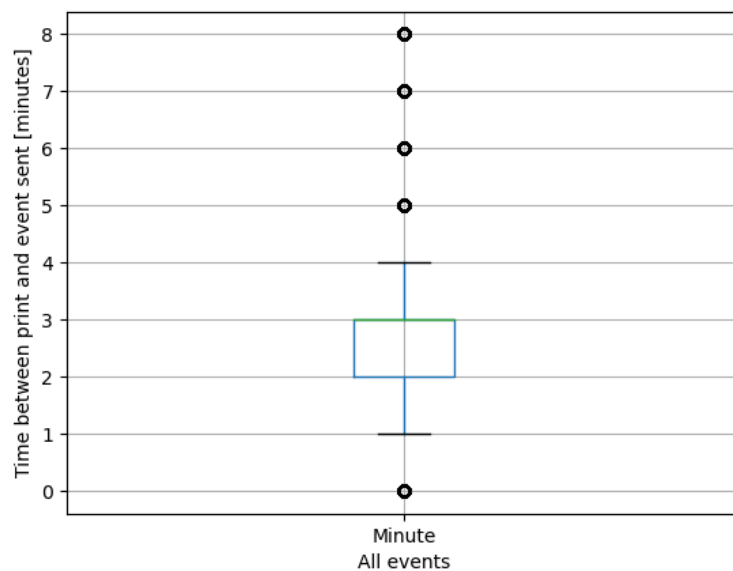


Figure 1: Boxplot of the time in minutes between code printing and event received by DeLaRue.

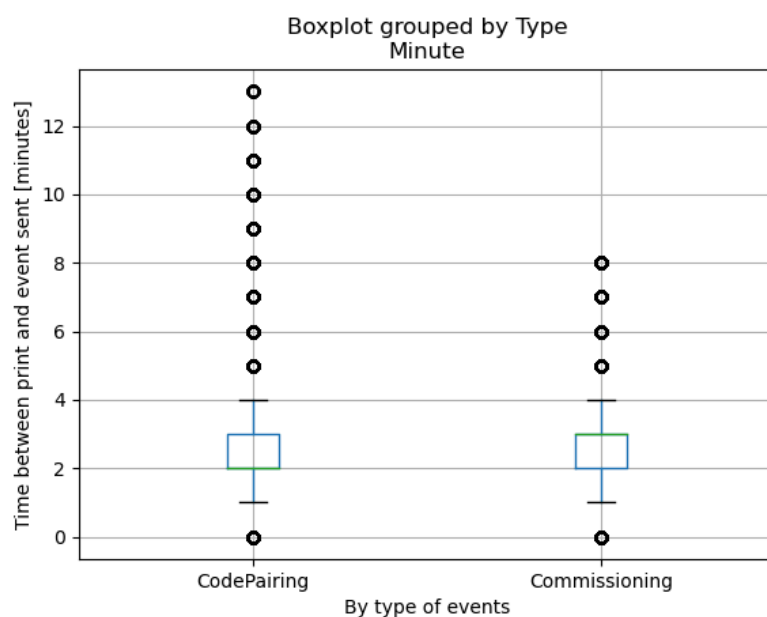


Figure 2: Boxplot of times, by type of events.

External Code Import Guide for DLR Regulated Markets

[Overview](#)

[Prerequisites](#)

[DLR Code Overview](#)

[Manual Code Import](#)

[Automated Import Using Background Jobs](#)

[Additional Information](#)

Overview [🔗](#)

This guide provides instructions on importing files containing De La Rue (DLR) codes into INEXTOR.

DLR codes are regulatory-compliant unique identifiers that DLR issues for product marking in different countries.

Prerequisites [🔗](#)

- INEXTOR Gate (version 4005 if production is for the Sultanate of Oman)
- CSV file containing valid DLR code.

DLR Code Overview [🔗](#)

A DLR code (see Figure 1) consists of the following units:

1. A header row containing product and batch information, such as:
 - Version number
 - Quantity of codes
 - Product name
 - Country
 - Manufacturer name
 - Aggregation type
 - Applicability
 - Product reference
 - GTIN
 - Additional identifier
2. Multiple code rows, each containing a unique identifier, such as:
 - a. CC: 2-digit ISO country code (e.g., 'AE' for UAE, 'OM' for Oman)
 - b. AAAAAAAAAA: 11-character alphanumeric serial number with security element
 - c. PPPP: 4-character identifier containing product identifier

DLR-SA0001_00002_2019_6_21.csv	
1	2,10000,Regression Product A1,Saudi Arabia,Regression Manufacturer 1 PLA,AGGREGATION,Not Applicable,5.06001E+12,00305608128249,654321459
2	SA000000359C20001,,,,,,,,,
3	SA00000036K310001,,,,,,,,,
4	SA000000378030001,,,,,,,,,

Figure 1: DLR Code Samples for the Saudi Arabian Market

Manual Code Import [🔗](#)

Important Code Validation Rules [🔗](#)

Before importing, ensure your code files meet these requirements:

- The product identifier (9th element in the header) must be a valid GTIN
- Individual codes are validated to ascertain, that each code must:
 - Be exactly 17 characters long
 - Start with the correct market prefix (2 letters), for example, “SA” for “Saudi Arabia”
 - Must not contain visually ambiguous letters I, O, Q, or Z

NOTE: These validations can be disabled via application settings if required for special cases.

To disable or change these validations, go to “Gate” → “Configuration” → “Application Settings” and find the relevant settings under the category “DlrCodesImport”.

Manual Code Import Process [🔗](#)

1. Navigate to “Products” → “External Codes”
2. Click the 'Import...' button
3. In the import dialog:
 - Select "DLR external codes" from the Importer dropdown
 - Click 'Browse' to select your code file(s)
 - Choose the target Vault (if multiple are configured)
 - Click 'Import' to begin the process

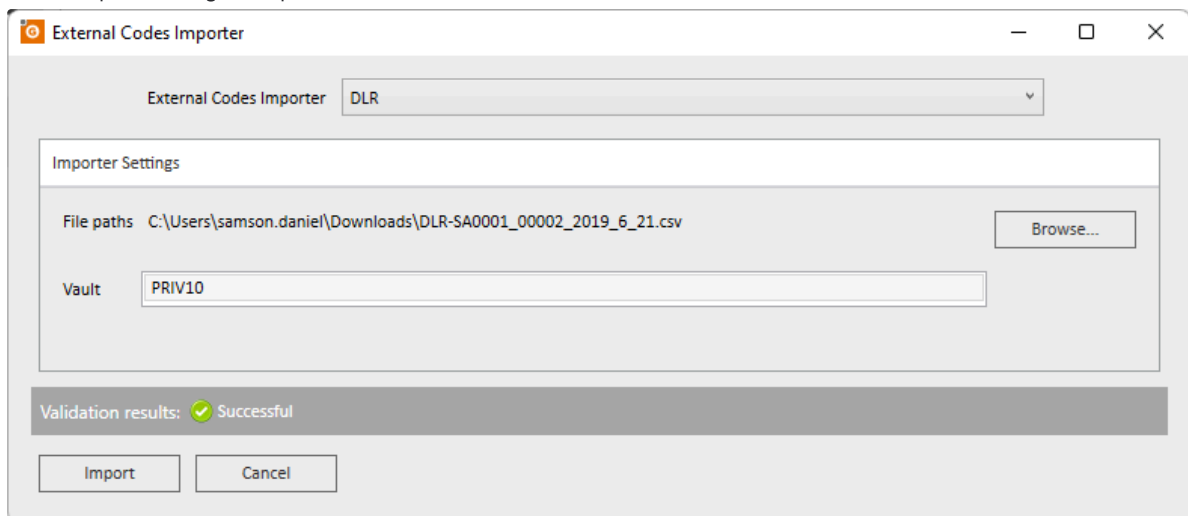


Figure 2: External Codes import screen showing code import window

GTIN Handling [🔗](#)

De La Rue occasionally uses GTIN14 or GTIN13 in the product reference field of the file header.

To address this, Gate has a mechanism that removes a leading zero from the product reference field containing 14 characters. For more details, refer to the `DlrImportForce6tin13` configuration setting on Gate.

Verifying Imported Codes [↗](#)

After import, codes appear in the External Codes view where you can verify:

- Total imported quantity
- Code status
- Associated product information
- Market assignment

The screenshot shows a web interface for viewing external codes. At the top, there are buttons for 'Reset' and 'Search', followed by input fields for 'Property Name' and 'Property Value'. Below these are several columns: 'Reserved Liz', 'Reserved For Batch', 'External C', 'Product Reference', 'Machine Ref', 'External Code Refere', 'Serialization Level Reference', and 'Source Uniqu'. Each column has a dropdown menu. Below the columns, there are values: '(Not reserved)', '(Not reserved)', 'DLR', 'Saudi Arabia-003056', and '2-Saudi Arab'.

Figure 3: External Codes view showing successfully imported codes

Automated Import Using Background Jobs [↗](#)

The Gate provides a background job system for high-volume operations or automated workflows for code imports.

To use automatic import of DLR code files, follow these steps:

1. Enable the File Import Background Job module in the [DLR Codes Driver](#) configuration (click “Manage” on the driver section)
2. Place the file containing the codes inside the folder mapped to the **Folder to monitor** (see diagram below)

The screenshot shows a configuration screen titled 'Automatic import of DLR Codes File'. It contains a paragraph of instructions: 'If the file import background job is enabled, the below folder is monitored and files are automatically imported as DLR codes (zip files are supported). Files with errors are moved to the error folder below. After a successful import, a file can be either deleted or moved to a different folder. Please take care with the 'Browse' button if this administration program is being run on a different machine than the Gate server: the paths entered below are for the Gate server.' Below this are several fields: 'Wait time after monitoring the folder' with a value of '0d0H10M0s0ms', 'Folder to monitor' with a 'Browse...' button, 'Move files with error to' with a 'Browse...' button, 'Action after processing' with radio buttons for 'Delete files' (selected) and 'Move files to' (with a 'Browse...' button), and 'Vault' with a dropdown menu showing 'PRIV10'.

Figure 4: Background job configuration screen for code import

3. Please wait for the background job to complete the file import process.
4. Alternatively, you can configure or manually initiate the background [job using this link](#).

Place valid DLR code files in the configured monitoring folder. The background job processes files according to the same validation rules as manual import.

Additional Information [↗](#)

Starting with Gate version 4850, imported files are subject to thorough validation:

- The 9th element in the file header is required to be a valid GTIN. You can disable this requirement by adjusting the application setting `DisableGtinCheckWhenImportingCodes`.
- Each code must comprise 17 characters, start with the specified 2-letter market prefix, and must not contain the letters I (capital i), O (capital o), Q, or Z. This restriction can be relaxed by changing the application setting `DisableStrictCodeChecks`.

Automatic DLR Code Ordering for Beverages

Overview [🔗](#)

The Automatic DLR Code Ordering feature allows beverage manufacturers to order DLR codes automatically through the INEXTOR system without manual intervention. This feature streamlines production planning and minimizes the risk of code expiration, reducing administrative overhead and potential costs.

Unlike the tobacco industry where physical stamps need to be activated at the factory before using codes (which requires manual code ordering), beverage production doesn't have this requirement, making automatic code ordering possible.

Benefits [🔗](#)

- **Time-saving:** Eliminates the need for manual code ordering and file imports
- **Automated process:** Codes are automatically ordered based on production plans
- **Optimized code usage:** The system intelligently selects entitlements based on expiry dates
- **Reduced risk:** Minimizes human error in the code ordering process

Prerequisites [🔗](#)

Before using the automatic DLR code ordering feature, ensure:

1. Your Gate application setting for "Industry" is set to "Beverage"
2. You have valid DLR credentials (username and password)
3. You have registered your Economic Operators, Facilities, and Machines with the DLR system

Enabling Automatic Code Ordering [🔗](#)

On the Gate [🔗](#)

1. Navigate to **Configuration > DLR operation driver**
2. In the Markets grid, locate the DLR market you want to configure (e.g., Oman)
3. Edit the market or create a new one
4. Check the **Automatic code ordering** checkbox
5. Save your changes

The feature is disabled by default and must be enabled for each DLR market individually.

On the Vault [🔗](#)

The Vault administrator must configure the DLR ID Issuer plugin:

1. Create a new ID Issuer with code "DLR"
2. Configure the following settings:
 - **Service URL:** The DLR API service URL
 - **Username:** Your DLR service username
 - **Password:** Your DLR service password

Creating Production Orders [↗](#)

When creating a Production Order (PO) for a market with automatic code ordering enabled:

1. Create a Production Order as usual for a DLR market
2. Ensure the following information is correctly provided:
 - **Product EAN/GTIN** (in GTIN14 format)
 - **Machine GLN**
 - **Market country code** (2-character ISO code, e.g., "OM" for Oman)
 - **Manufacturer organization GLN** (optional if there's only one economic operator)

The system will automatically validate the regulation attributes and populate the DLR-specific attributes.

How It Works [↗](#)

1. **Forecast Generation:** When a Production Order is created with automatic code ordering enabled, the Gate generates forecasts and sends them to the Vault.
2. **Entitlement Selection:** The Vault automatically fetches compatible entitlements from the DLR system and selects them in ascending order of expiry date, optimizing code usage.
3. **Code Order Execution:** The Vault executes code orders through the DLR API, materializes the codes, and generates chunks on the Vault.
4. **Code Download:** Codes are automatically downloaded to the Gate and made available for production.
5. **Production:** During production, codes are formatted and printed normally on your products.

External Code Reference (ECR) Format [↗](#)

The External Code Reference format for DLR codes follows this pattern:

```
Country-MachineGLN-ProductGTIN[-ManufacturerGLN]
```

Examples:

- Without EOID: `Oman-00012345600012-4032900.00000.8552`
- With EOID: `Oman-00012345600012-4032900.00000.8552-0847976000005`

Troubleshooting [↗](#)

If you encounter issues with automatic code ordering:

1. **Codes not being ordered:** Verify that automatic code ordering is enabled for the specific market
2. **Authentication failures:** Check the username and password configured in the Vault
3. **No entitlements available:** Contact DLR to ensure you have valid entitlements for your product
4. **Regulation attribute validation errors:** Ensure all required attributes are correctly specified in your Production Order

For additional assistance, contact your INEXTOR system administrator or Inexto support.

Limitations [↗](#)

- The DLR API has no way to cancel an order request after it is made
- There is no "Immediate Order" equivalent for DLR orders
- The DLR ID Issuer works in MMIC mode only (Manually Managed) - no synchronization of entities takes place with the ID Issuer

Appendix (DLR)

- [Background Jobs \(DLR\)](#)

Background Jobs (DLR)

This page contains a list of background jobs associated with DLR production.

For global background jobs, see [Background Tasks - Jobs](#)

- [Production](#)
- [Cleanup](#)
- [Monitoring](#)
- [Activation Module](#)

Production [↗](#)

BackgroundModule-Message Sending Job

Sends event messages to De La Rue

Application	Component	Job Name	Schedule
Vault	DLR (KSA, UAE, etc.) Communication driver	BackgroundModule-Message Sending Job	every 1 minute

Cleanup [↗](#)

BackgroundModule-Message Cleaner Job

Cleans old event messages sent to De La Rue

Application	Component	Job Name	Schedule
Vault	DLR (KSA, UAE, etc.) Communication driver	BackgroundModule-Message Cleaner Job	every 1 day

Monitoring [↗](#)

BackgroundModule-Message Monitoring Job

Monitors if event messages have errors.

If true, users subscribed to the *DLR event message failed* from the [User Notifications Driver](#) will receive email alerts regarding the error.

Application	Component	Job Name	Schedule
Vault	DLR (KSA, UAE, etc.) Communication driver	BackgroundModule-Message Monitoring Job	every 2 hours

Activation Module [↗](#)

BackgroundModule-Compute ECR

This job exists only for technical reasons. Users should enable/disable from the Operation Driver (i.e. [DLR Codes Driver](#)) page and not from the Jobs page.

End-users and support should not interact with this job.

Application	Component	Job Name	Schedule
Gate	DLR codes driver	BackgroundModule-Compute ECR	N/A

* When a job is linked to an operation driver component, the name starts with "BackgroundModule-".

BackgroundModule-File Import Background Job

Periodically checks in a folder if there are new DLR code files and imports them.

See *File Import Background Job* in [DLR Codes Driver](#)

Application	Component	Job Name	Schedule
Gate	DLR codes driver	BackgroundModule-File Import Background Job	every 10 minutes

Aujan Coca-Cola Dubai

- Basic Introduction
- Daily production operations workflow
- Creating production orders
- Starting production on LIZ
- Activating product codes

Basic Introduction

Overview [🔗](#)

The INEXTOR system at Aujan Coca-Cola manages code generation and tracking for beverage production destined for Uzbekistan and Oman markets.

This system handles two types of codes:

- DLR codes for the Oman market (manually uploaded via CSV)
- CRPT codes for the Uzbekistan market (automatically ordered through the CRPT's OMS system)

This guide focuses on the system's day-to-day operations, helping operators efficiently manage production orders and code printing processes.

This guide assumes system installation and configuration are complete. For system setup, please refer to Inextor and Inexline Installation Guide

Operators should be familiar with basic beverage production processes and quality control procedures

About This Guide [🔗](#)

This operational guide provides step-by-step instructions for:

- Creating and managing production orders for Oman (DLR) and Uzbekistan (CRPT) markets
- Management (Start, stop, pause, etc..) of production orders on the Inextor Liz.
- The process of scanning and activating production by the Activation Point System.
- Basic troubleshooting and error recovery

The guide assumes a basic understanding of the Inextor and Inexline systems.

System Components Overview [🔗](#)

INEXTO provides (for Aujan Coca-Cola) three main components that work together to manage code generation, printing, and verification:

- **INEXTOR - Gate:** The Gate serves as your central control point for:
 - Creating and managing production orders (e.g, Oman and Uzbekistan markets)
 - Downloading and storing codes for different markets
 - Managing product information and printing templates (how the code physically appears on products)
 - Communicating with other system components
- **INEXTOR - Liz:** The LIZ (serializer) manages the actual production line operations:
 - Retrieves code from Gate when needed
 - Manages the printing of codes on products by transmitting print instructions directly to the printers.
 - Reports production status back to Gate
- **INEXLINE - Activation Point System:** The Activation Point System validates scanned codes against expected formats and:
 - Displays available production orders from Gate

- Allows operators to start/stop production and scan codes for activation
- Shows real-time production status
- Monitors code quality through cameras
- Reports any issues requiring operator attention
- Sends activation information to Inexpress

System Process Overview [🔗](#)

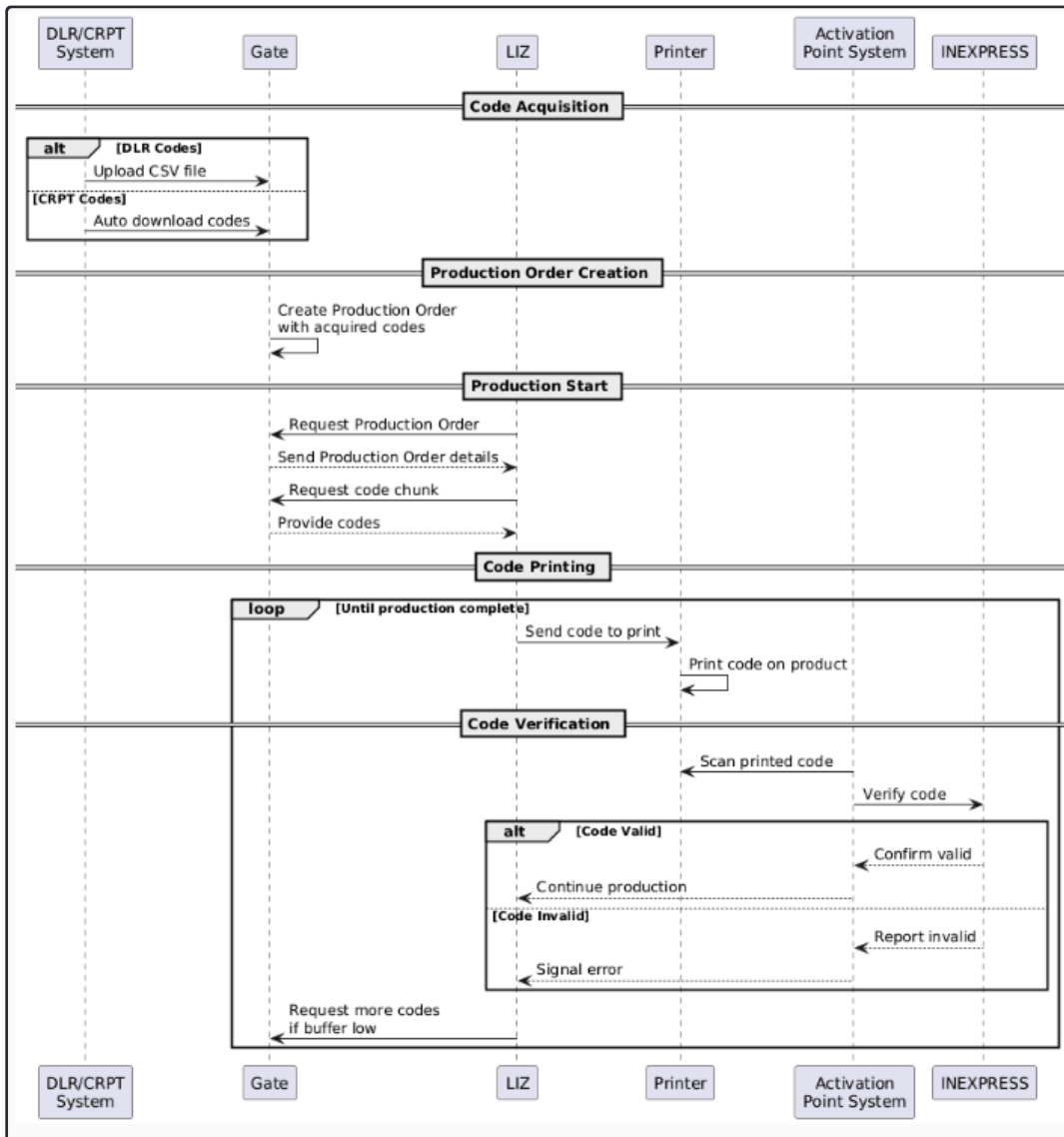


Figure 1: System Process Overview Diagram

The diagram in Figure 1, illustrates the complete workflow of the INEXTOR system at Aujan Coca-Cola, from code acquisition through production and verification.

The process follows these key stages:

Code Acquisition Phase

- The system supports two code sources:
 - DLR codes for Oman market (uploaded via CSV file)
 - CRPT codes for Uzbekistan market (automatically downloaded)

- All codes are stored and managed in the Gate

Production Process

- LIZ initiates production by requesting a Production Order from Gate
- LIZ manages code printing by requesting codes in chunks as needed
- Codes are sent to the printer for application on products
- This process continues throughout the production run

Verification Flow

- The Activation Point System continuously scans printed codes
- Each code is verified against the INEXPRESS database
- Valid codes allow production to continue
- Invalid codes trigger error signals for operator attention

This workflow ensures proper code management, accurate printing, and validation for regulatory compliance in both Oman and Uzbekistan markets.

Pre-Operation Checklist [🔗](#)

Operators should use the following checklists to verify the application's readiness before performing operations.

System Configuration Verification

System Configuration Verification ensures that all fundamental software settings are correctly configured for beverage production.

These settings should remain constant unless technical support specifically directs changes to them, and any deviation from these settings could affect production quality and regulatory compliance.

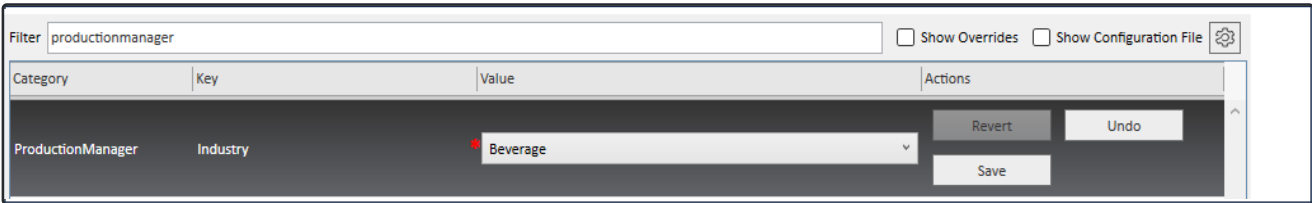
Configuration Item	Location	Expected Setting	Verification Steps
Application Settings	Gate → Configuration → Application Settings	Select "beverage" for category "ProductionManager"	1. Navigate to settings 2. Verify dropdown shows "beverage"
 Figure 2: Application Settings Configuration			
Unit Configuration	Gate → Configuration → Unit Configuration	"bottle" for unit type	1. Check unit type setting

Figure 3: Setting Up Unit Configuration for Bottles

DLR Driver	Gate → Configuration → Op. Drivers	Enabled	1. Locate DLR driver 2. Verify status is "Enabled"
CRPT Driver	Gate → Configuration → Op. Drivers	Enabled	1. Locate CRPT driver 2. Verify status is "Enabled"

Figure 4: CRPT Configuration for Beverages

INEXPRESS Driver	Gate → Configuration → Op. Drivers	Enabled with Level 1="glass" (value: 11)	1. Check driver status 2. Verify Level 1 settings
------------------	------------------------------------	--	--

Figure 5: INEXPRESS Driver Configuration for Bottle Production

External Service Driver	Gate → Configuration → Op. Drivers	Enabled	1. Locate External Service Driver 2. Verify status is "Enabled"
-------------------------	------------------------------------	---------	--

Daily Operational Checks

Daily Operational Checks are essential verifications that operators must perform at the start of each production shift or before beginning a new production order.

These checks focus on the operational readiness of equipment and consumables to prevent production delays and quality issues.

Item	Expected Status	Action if Not OK
Code Availability	Sufficient codes available for planned production: • DLR codes for Oman	• For DLR: Upload new codes • For CRPT: Initiate code ordering

	• CRPT codes for Uzbekistan	
Printer Status	• Online • No error messages • Print head clean	1. Clear any printer errors 2. Clean print head if needed
Camera System	• Cameras aligned • Test readings successful • No error messages	1. Check camera alignment 2. Clean camera lenses 3. Verify lighting conditions
Label Stock	• Sufficient quantity for production run • Correct label type loaded	Replenish label stock before starting production
System Communication	All components showing "Connected": • Gate ↔ LIZ • LIZ ↔ Printers • INEXLINE ↔ Cameras	Check network connections and restart services if needed

Daily production operations workflow

Market-Specific Production Workflows [🔗](#)

Oman Market Production (DLR) [🔗](#)

In Oman market production, operators manually manage DLR codes through a CSV upload process. The sequence is:

1. Operator uploads DLR codes via CSV to Gate
2. Operator creates production order in Gate
3. aOperator starts production in LIZ
4. LIZ handles code printing
5. Activation Point System verifies printed codes

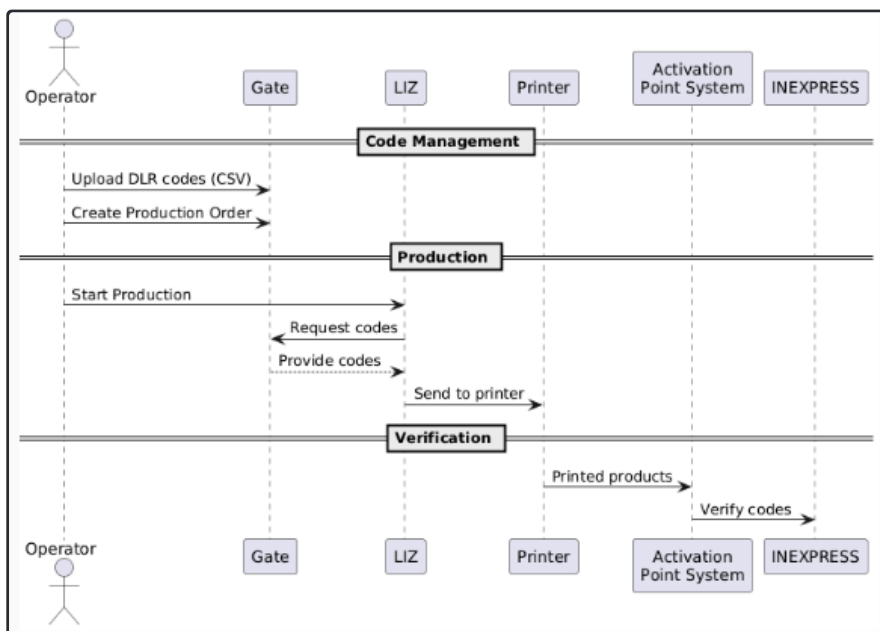


Figure 1: Oman Market Production Workflow

Uzbekistan Market Production (CRPT) [🔗](#)

For Uzbekistan market, CRPT codes are handled automatically. The sequence is:

1. Operator creates production order in Gate
2. The Gate system automatically orders CRPT codes from the OMS
3. Operator starts production in LIZ
4. LIZ handles code printing
5. Activation Point System verifies printed codes

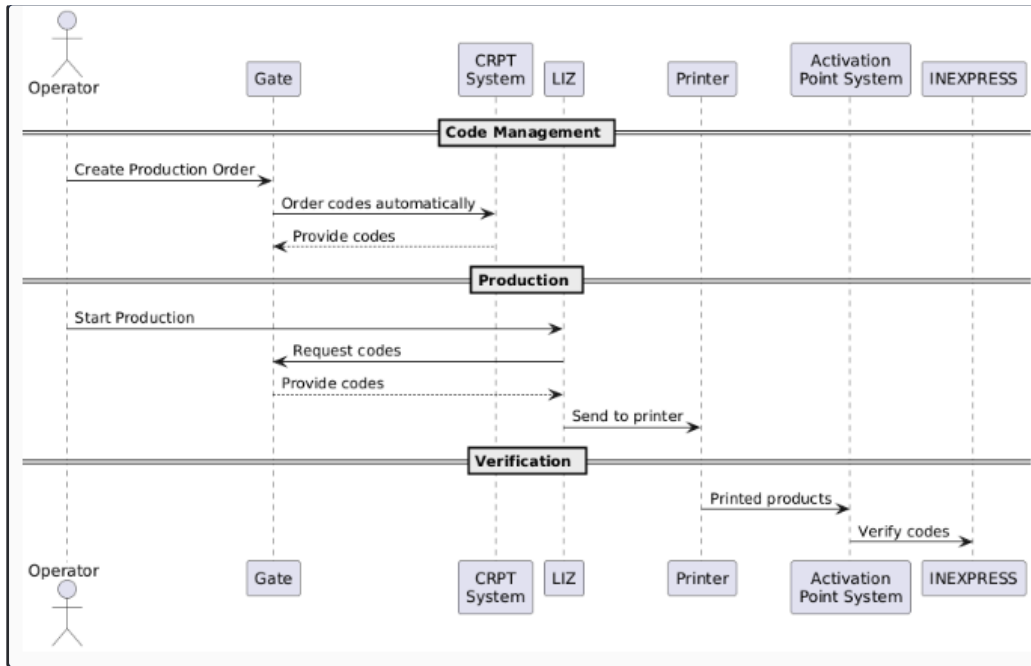


Figure 2: Uzbekistan Market Production Workflow

Creating production orders

Oman Market Production [↗](#)

Creating DLR Production Order [↗](#)

1. Access Gate interface
2. Upload DLR Codes:
 - Go to "External Codes" section
 - Click "Import" button
 - Select CSV file containing DLR codes. and import. For reference, take a look a this reference file: [Aujan_Dubai_MasterData.xlsx](#)
 - Verify upload success
3. Navigate to "Production" tab from the left sidebar
4. Navigate to "Production Orders" tab
5. Click "New" to create a production order.
 - The following window allows the user to create a production order

Production Order

Order Number

Description

Manufactured Product

LinkUp Setup

Requested Quantity

Total Quantity

Deleted

Order Expected Start Date

Order Expected End Date

Order Full Quantity

Validation results: Successful

Save Cancel Close

Figure 1: Production Order Creation Window

1. **Order Number**
 - Unique identifier for the production order
 - Required field
2. **Description**
 - Free text field for order description
 - Optional field
3. **Manufactured Product**
 - Product type to be produced
 - For Oman: Auto-populated from DLR file
 - Selection via dropdown menu
4. **LinkUp Setup**
 - Machine configuration selection
 - Dropdown menu showing "(unassigned)" by default
5. **Requested Quantity**
 - Number of codes to order/produce
 - Numeric field
6. **Order Expected Start Date**
 - Production start date and time
 - Calendar selection
7. **Order Expected End Date**
 - Expected production completion
 - Calendar selectio

After completing all the fields, Confirm all parameters and click Save to create the order.

Uzbekistan Market Production [🔗](#)

Creating CRPT Production Order [🔗](#)

1. Access Gate interface through web browser
2. Navigate to "Production" tab
3. Click "Production Orders"
4. Select "Create New Production Order"
 - a. The following window allows the user to create a production order

CRPT	TJ	TNT	Worldline	Inexpress	
Attributes	ExtendedFields	CN	CG	TPD	
Name	Value	Type	Source	User	Action
ACTIVITY	Domestic	String	MP-EP	INEXTO\	
BGTIN14	15367567230021	String	MP	INEXTO\	
BRANDESC	Bahchisarai Gold	String	MP-EP	INEXTO\	
BrandFamily	CRPT	String	MP	INEXTO\	
BundleQty	200	String	MP	INEXTO\	
CaseQty	10000	String	MP	INEXTO\	
CATEGORY	CRPT	String	MP-EP	INEXTO\	
CG_EO_ID	QCCGAR70LN1WA	String	Gate		
CG_F_ID	QCCGA3LA9175I	String	Gate		
CG_IdIssuerCode	QCCGA	String	Gate		
CG_M_ID	QCCGATO9OQ8G4	String	Gate		
CG_Process_Type	True	Boolean	PO-LinkUp		
CN_IdentificationP	99.1000.1	String	Gate		
CN_Printer	01	String	LS	INEXTO\	
CN_ProductionLine	01	String	LS	INEXTO\	

Figure 2: Production Order Creation Window Using Uzbekistan Data

1. **Order Number**
 - Unique identifier for the production order
 - Required field
2. **Description**
 - Free text field for order description
 - Optional field
3. **Manufactured Product**
 - Product type to be produced
 - For Uzbekistan: Auto-populated from Uzbekistan code
 - Selection via dropdown menu
4. **LinkUp Setup**
 - Machine configuration selection
 - Dropdown menu showing "(unassigned)" by default
5. **Requested Quantity**
 - Number of codes to order/produce
 - Numeric field
6. **Order Expected Start Date**
 - Production start date and time
 - Calendar selection
7. **Order Expected End Date**
 - Expected production completion
 - Calendar selectio

After completing all the fields, Confirm all parameters and click Save to create the order.

Order Verification [🔗](#)

Code Availability Check (Oman Market) [🔗](#)

Once you have created the production order for Oman market, you can refer to the following guide to check the status and determine whether you can begin production.

1. Navigate to External Codes Window:
 - Click "Products" in left menu

- Select "External Codes" (see Figure 3)

2. Review Code Chunks:

- Each row represents a chunk of codes (typically 20,000 codes)
- Check columns for important information:
 - Product Reference
 - External Code Reference
 - Chunk Index
 - Total Codes
 - Importation Date
 - Expiration Date

3. Verify Code Status:

- Look for "Status" column
- Ensure codes show "Available" status
- If status is not "Available", production cannot start
- Other statuses may indicate issues requiring investigation

4. Ready for Production:

- Production can start only when sufficient codes show "Available" status
- Total available codes should match or exceed production order quantity

Figure 3: Overview of External Codes on the Gate

Code Availability Check (Uzbekistan Market)

Once you have created the production order for Oman market, you can refer to the following guide to check the status and determine whether you can begin production.

1. Navigate to CRPT Orders Window:

- Click "CRPT Codes" in left menu
- Select "Ordering Overview"

2. Review Order Information:

- Each row represents a production order with CRPT codes
- Check key columns for order details:
 - Order Number
 - Market (should show "Uzbekistan")
 - Machine ID
 - Status
 - Requested Quantity
 - Remaining To Order Quantity

3. Verify Order Status:

- Look for "Status" column
- Ensure status shows "None" for new orders
- Monitor status changes during code ordering process
- Production can only start when codes are available

4. Ready for Production:

Figure 4: Overview of CRPT-regulated Market Code Ordering on the Gate

- Check Requested Quantity matches production needs
- Verify Remaining To Order Quantity shows expected value
- Ensure no error indicators are present
- Production can start only when codes are successfully ordered

Starting production on LIZ

Production Execution Overview [🔗](#)

After creating a production order and verifying code availability ([Creating Production Orders](#)), the actual production is executed through the LIZ interface.

This section guides operators through the production startup process.

Starting Production Process [🔗](#)

Accessing LIZ [🔗](#)

1. Launch LIZ application
2. Navigate to "LIZ Operation" tab
3. Verify "Global Status" shows ready (green indicator)
4. Click "Prepare" to start production preparation

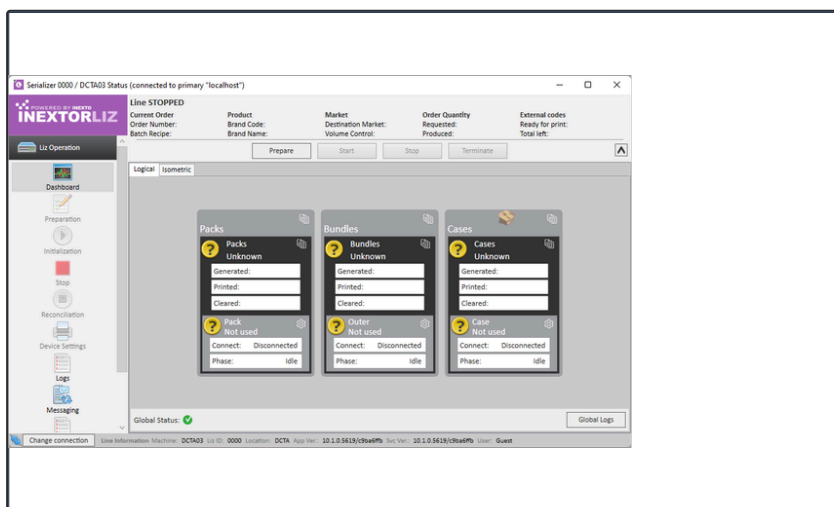


Figure 1: Liz Dashboard Showing Idle Liz Before Production Preparation

Production Setup Steps [🔗](#)

Production setup follows a wizard-style process with these steps:

1. Select PO

- Use the "Select" dropdown to choose from existing production orders
- From the dropdown list:
 - Find your Production Order ID (example: 74000123)
 - Only orders with available codes will be shown
- Verify displayed information:
 - Order Number
 - Market selection (Oman/Uzbekistan)
 - Brand code
- Click "Next" to proceed

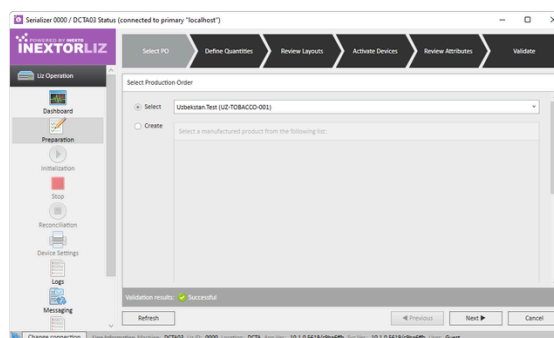


Figure 2: Liz Preparation - Select PO

2. Define Quantities

- Review unit configurations in top panel:
 - Packs, Bundles, Cases ratios
 - Standard configurations for each level
- Check requested quantities:
 - Order Requested Quantity matches Gate order
 - Batch Requested Quantity shows production run size
 - Values auto-calculate based on pack:bundle:case ratio
- Verify production targets:
 - Rejection rates are set correctly (typically 0.00%)
 - Order Reference Quantity shows total expected output
 - Target quantities align with production plan
- Click "Next" when quantities are confirmed

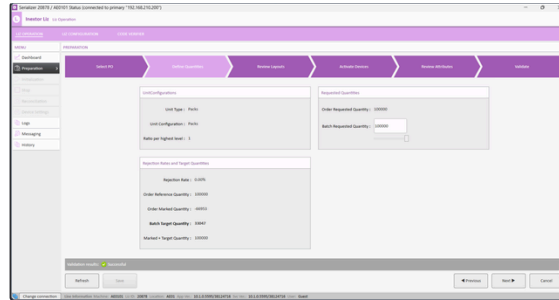


Figure 3: Liz Preparation - Define Quantities Tab

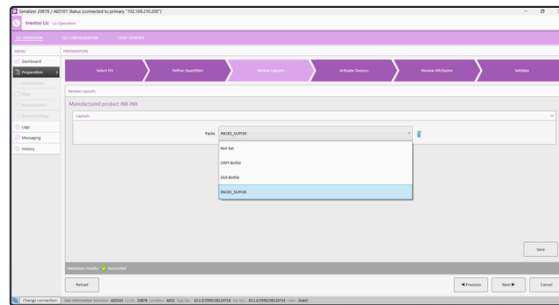


Figure 4: Liz Preparation - Review Layouts Tab

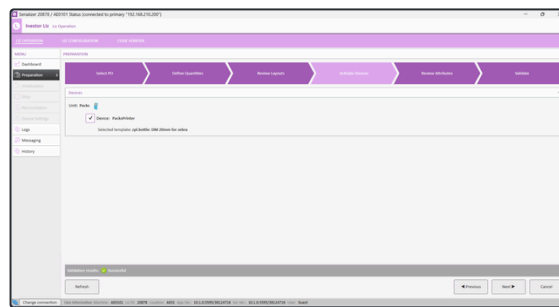


Figure 5: Liz Preparation - Activate Devices Tab

3. Review Layouts

- View layout configuration under selected product name
- Verify correct template selection:
 - Packs: Select standard pack layout (e.g., "Packs STD")
 - Bundles: Confirm bundle layout (e.g., "Bundles STD")
 - Cases: Check case layout (e.g., "Cases STD")
- Each layout determines:
 - Code placement
 - Print format
 - Label positioning
- Click "Next" after confirming all layouts

Note: note this is a generic example. Do not copy or rely on these configurations shown in the screenshot for Oman or Uzbekistan scenarios.

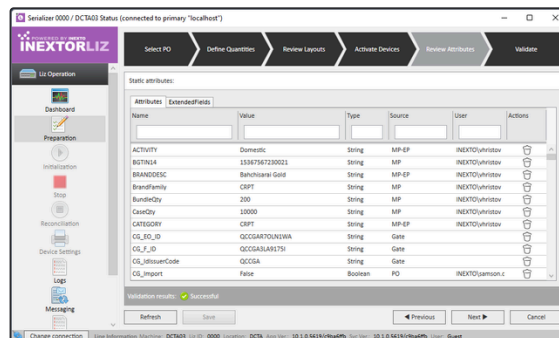


Figure 6: Liz Preparation - Review Attributes Tab

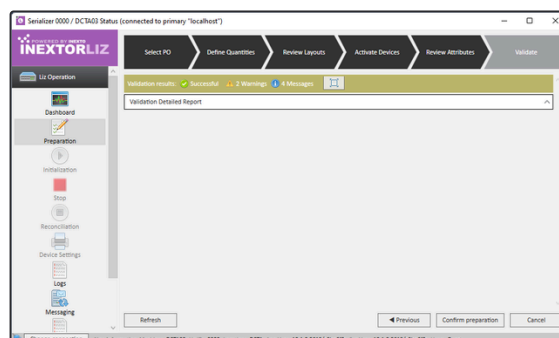


Figure 7: Liz Preparation - Validate Tab

4. Activate Devices

- Review each packaging level:
 - Packs: Check Dot Code template
 - Bundles: Verify Data Matrix template
 - Cases: Confirm Data Matrix template
- Ensure device status for each level:
 - Device checkbox is selected
 - Template name displays correctly
 - Shows "Connected" status
- If devices show "Disconnected":
 - Wait for automatic reconnection
 - Check physical printer connections
- Click "Next" when all devices show ready state

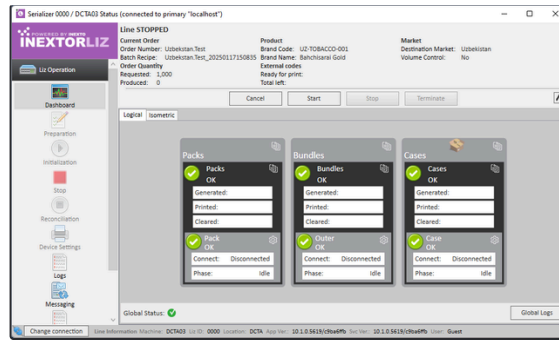


Figure 8: Liz Preparation - Start Production

5. Review Attributes

- Check static attributes displayed in grid:
- Verify key production values:
 - Brand description
 - Market information
 - Product codes
- System-generated values shown for:
 - Factory IDs
 - Production line details
 - Issuer codes
- Click "Next" when attributes are confirmed

6. Validate

- System runs automatic validation checks:
 - Order parameters
 - Quantity configurations
 - Layout selections
 - Device settings
- Review validation results at bottom of screen
- Click "Confirm Preparation" when all checks pass

7. Start Production

- Before clicking "Start," verify:
 - Printer connections show "Connected"
 - Codes are available in Gate
 - System status shows "Ready"
- Click "Start" to begin production
- Monitor initial prints to ensure quality
- Production begins when all systems are ready

Production Monitoring [🔗](#)

Once started, monitor production through the Dashboard view:

- Track code generation counts
- Monitor printer status
- Check for any system alerts

It is essential to investigate any indicators of errors, such as yellow or red icons.

Activating product codes

This guide provides instructions for operators on managing the operation of the Activation Point System. This document does *not* cover the installation or configuration of the software.

Prerequisites [↗](#)

Before proceeding, ensure you have completed steps 1 through 4 of the [overall operation guide](#). Specifically, make sure that the [relevant production order has been started in the Liz system](#). Only after that has been done should you begin using the activation point system.

System Overview [↗](#)

i For a comprehensive understanding of all screens and user elements within the Activation Point Module, please refer to the documentation titled [User Interface - Activation Point System](#).

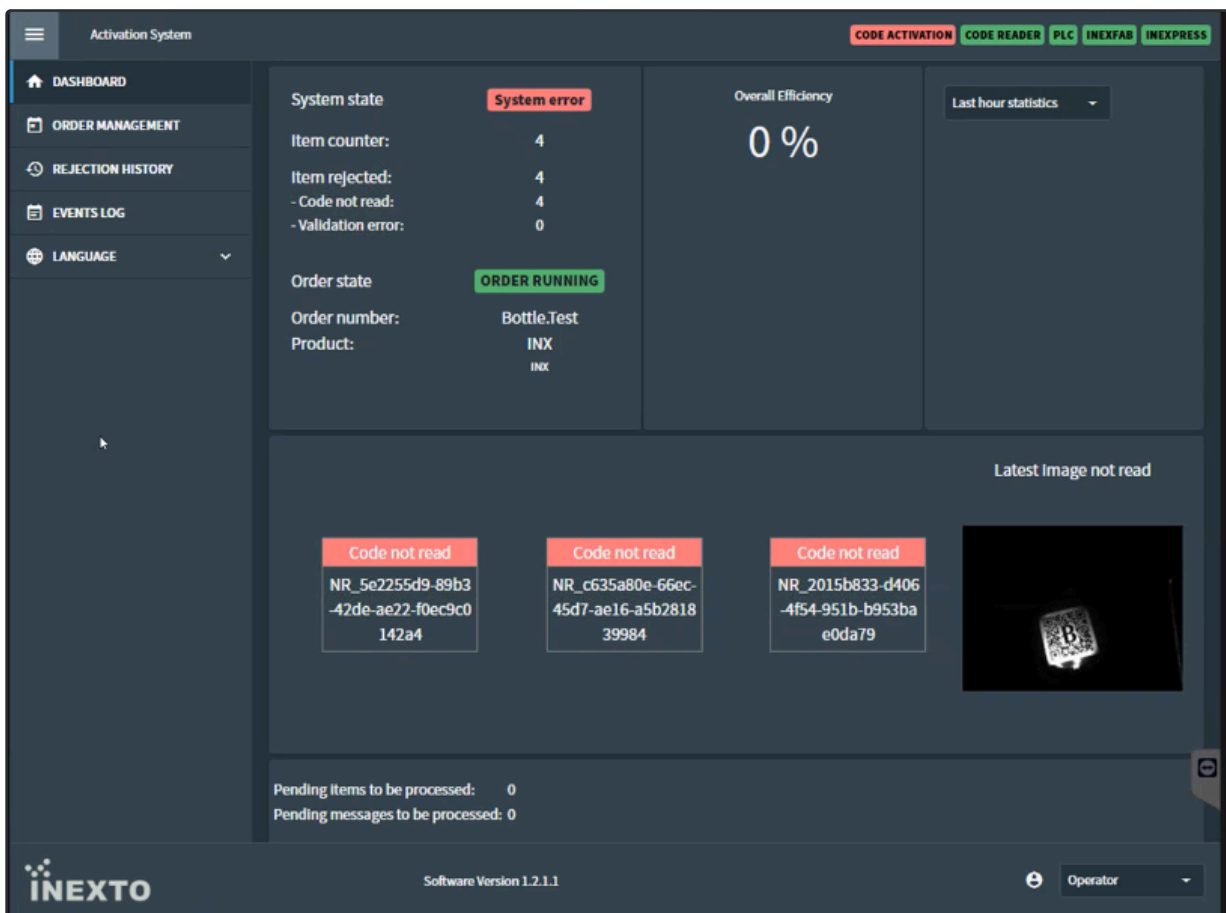


Figure 1: Activation point System Dashboard

The Activation Point System is designed to validate unique product codes. These codes are associated with products labeled within the Liz system. The system scans these codes and sends a validation request to Inexpress.

The response from Inexpress determines the status of the scanned code and is displayed in the system interface.

Operating the Activation Point System [🔗](#)

1. Verify System Status:

- Upon launching the software, check the indicators in the top-right corner of the screen. Ensure that no errors are being displayed.



Figure 1: Activation Point System - Service Status

2. Access the Order Management Window:

- Navigate to the "Order Management" window. Here, you will see a list of active Production Orders.

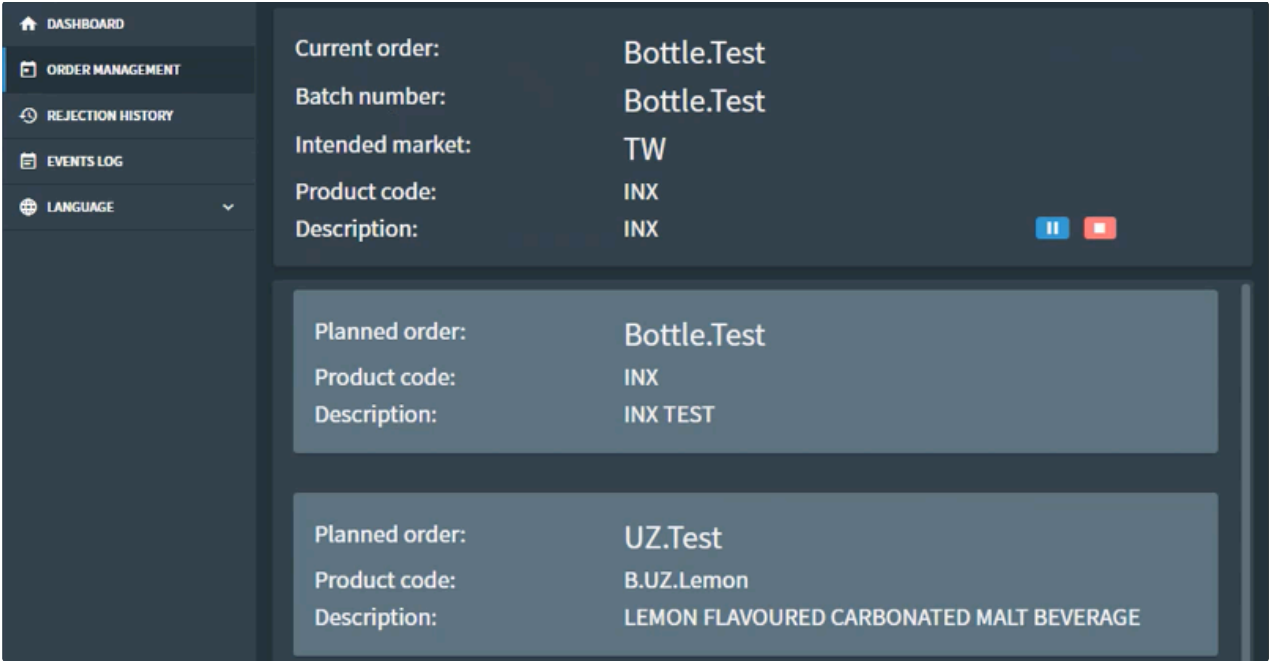


Figure 2: Activation Point System Showing Gate Production Orders

Note: Production Orders are retrieved from the "Gate". If your desired Production Order is not listed, confirm it has been correctly created within the designated "Gate" system.

3. Select and Manage a Production Order:

- Choose the specific production order that you intend to begin scanning against.
- Click the "Start" button to activate the system for that order.
- The "Pause" button may also be used to temporarily stop the production order.

4. Code Scanning and Validation:

- Once a production order has been started the system will automatically begin listening for codes being scanned.
- The system automatically scans the code and validates it against Inexpress.
- Valid codes will have their corresponding record in the display highlighted in green with green text.
- Invalid codes will be highlighted in red with red text.

5. Error Handling and Debugging

- If you encounter any unexpected issues while operating the software, consult the "Events Log" section (see Figure 2) and to help locate the potential issue.

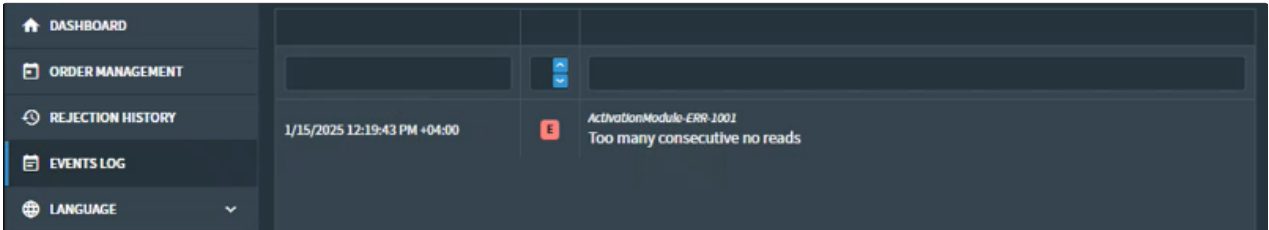


Figure 3: Activation Point System - Logging Section

Important Considerations

- The Activation Point System is directly linked to the Inexpress system. Ensure the connection is established and operational as seen in Figure 1 (see Inexpress label)
- Always confirm production orders are correctly created before attempting to use the Activation Point System to avoid issues with scanning.
- Pay close attention to the color-coded validation messages displayed on screen. Red indicates invalid or potentially problematic codes.
- For more advanced debugging or trouble-shooting, consult the main system documentation or contact your designated support team.

This guide is intended to provide a clear understanding of the steps required to operate the Activation Point System. Following these steps carefully will help ensure smooth and successful code validation.

Inextor Ecuador (EC) regulated market operational guide

Document Information Table	
Document Type	Operational Guide
Classification	Company Confidential
Document ID	INEX-OG-00009
Version Number	v1.0
Owner	@Michael Houlding Lead Technical Writer - Engineering
Reviewer / Approver	@Samson Daniel Technical Writer - Engineering
Reviewer / Approver	@Stephane Huck VP Software Engineering - Software Engineering

State: Review

Approvals	Reviewer	Status	Date	Comment
Approval		PENDING		
	Michael Houlding	APPROVED	May 13th 2025 at 12:43:17 PM (UTC)	No comment recorded
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	Stephane Huck	PENDING		

Introduction [🔗](#)

Document INEX-OG-00009: Inextor Ecuador (EC) Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the EC regulated market requirements. Document INEX-OG-00009 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the EC Regulated Market, system overview and background.
- **Configuration** - Requirements for general properties, production properties and layouts.
- **Operations** - Production order and external code importing.

Purpose [🔗](#)

The purpose of INEX-OG-00009 is to provide the required knowledge necessary to successfully set up Inextor correctly to support EC market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the EC regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)

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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Introduction (EC)

- [Background \(EC\)](#)
- [Prerequisites \(EC\)](#)
- [System Overview \(EC\)](#)

Background (EC)

For an explanation of the Ecuador code regulation, see below:

For the Ecuador market, a special regulation applies to the manufacturers of alcoholic beverages, industrial beer and cigarettes.

The manufacturers must pay the *Impuesto a los Consumos Especiales* (ICE), i.e. Special Consumption Tax, to the *Servicio de Rentas Internas* (State Internal Revenue Service). They must apply CFS (codes called *Componentes Físicos de Seguridad*, Physical Security Components) to the manufactured goods in order to provide traceability and to prove payment. They can choose the ID Issuer as they wish, with the constraint that this ID issuer must not be a related party to the manufacturer. The higher levels of containers (e.g. cigarette bundles) must also be marked and aggregation must be performed. No product subject to control will continue to the next marketing chain without having the CFS marked and activated, as well as having been reported to the Tax Administration.

The ID issuer must provide identification, marking, tracking and tax traceability services to manufacturers and importers of goods taxed with ICE, and must generate information on goods, either domestically produced or imported. They must also guarantee a certain level of security in the components that make up the solution. They must transmit the relevant information to the Tax Administration in compliance with a given format and in a timely manner.

The interconnection mechanisms used between the supplier, the taxpayers and the Tax Administration must guarantee that the information complies with certain parameters of confidentiality, security, integrity and availability. CFS must be unique, traceable, and if not activated, must be reported as such to the Tax Administration.

A mobile application for reading and providing information on codes must be provided.

When planning to commercialize a new type of product, manufacturers must request an ICE-SKU code from the Tax Administration. The CFS delivered by the supplier is associated with the corresponding ICE-SKU product code. Goods that do not have the ICE-SKU product code generated will not be marked.

ICE-SKU codes consist of the following fields, separated by a hyphen between fields (total of 40 characters with codes and hyphens):

Description	Length	Type	Remark
Tax code	4 char.	Numeric	Codification of product according to product type, given by the State.
Category	3 char.	Numeric	Category of product, given by the manufacturer.
Brand	6 char.	Numeric	Given by the manufacturer
Presentation	3 char.	Numeric	Code corresponding to the type of packaging (e.g. 'Pack of 20 cigarettes').
Capacity	6 char.	Numeric	Product quantity (e.g. '1'). 000000 for cigarettes.
Unit of measure	2 char.	Numeric	
Country	3 char.	Numeric	
Alcohol content	6 char.	Numeric	000000 for cigarettes.

All elements must be completed with zeros to the left if they do not reach the specified length. All codes refer to a specific catalog table of correspondence provided by the manufacturer (see chapter 13 of the attached document).

When generating CFS, during code activation, additional information must be generated and transmitted to the Tax Administration (see chapter 8 of the attached document for more details). Equipment used by the supplier must allow to read and activate the CFS (automatic activation). The information of the activated CFS is then transmitted to the supplier's database. This activation consists in reading the unique CFS code and registering it with *activated* status in the supplier's system. In automatic production lines, the CFS is activated directly during the manufacturing process in the production plants.

File	Modified
>  Ficha técnica de proveedores de identificación marcación y trazabilidad fiscal.pdf	Oct 10, 2022 by Nathalie Chiva (Deactivated)
>  Ficha técnica de proveedores de identificación marcación y trazabilidad fiscal en-US.pdf	Oct 10, 2022 by Nathalie Chiva (Deactivated)
>  image2022-11-9_15-21-8.png	Nov 09, 2022 by Yannick Gauthier

 [Download All](#)

Today, the manufacturer prints the following information:

1. In the Datamatrix code (MR) we are printing the full code <ID-Issuer ID><Serialization part><Product description><Date&Time>
2. In the human readable part (as per Law) we are printing only <ID-Issuer ID><Serialization part> as short code



Prerequisites (EC)

TBD

System Overview (EC)

For an overview of the implementation of the Ecuador market regulation in the INEXTOR software, see below for details:

Two cases arise:

1. Cigarettes: The Gate orders codes from the ID Issuer (in this particular case, the Worldline company). The code structure is described in the document below.
2. Industrial beer and alcoholic beverages: INEXTOR acts as ID issuer and generates SUP12 codes (see [Internal codes generated by Inextor](#))

The Gate is also responsible for validating the necessary Ecuadorian production data supplied by the customer and putting it into the production order properties, in order to pass them to INEXPRESS for further processing.

File	Modified
>  Worldline Technical Proposal-T&T EC.pdf	Oct 10, 2022 by Nathalie Chiva (Deactivated)

Configuration (EC)

- [General Properties List](#)
- [Production Properties](#)
- [Layouts \(Ecuador\)](#)

General Properties List

#	Property name	Mandatory	Characteristics	Description
Information about the supplier (producer / importer)				
1	EcuProducerRucNumber	Y	Min: 13 chars. Max: 13 chars.	RUC del productor / importador "The producer's or importer's identification number. It is the RUC number. This should be a valid number, of 13 characters, and the last three digits have to be 001."
	EcuProducerLegalEntityName	Y		
Information about the software provider				
2	N/A on INEXTOR (probably INEXTRACK)	Y	Min: 1 char. Max: 1 char.	Tipo de identificación del proveedor "Provider's identification type. It will be the letter "R" if the provider is enrolled in the RUC, or "E" for foreign people with no domicile in the country"
3	N/A on INEXTOR (probably INEXTRACK)	Y	Min: 3 chars.	Identificación del proveedor "Identification number of the service provider. In the case of providers from Ecuador or taxpayers with permanent establishments, enter the RUC number; for foreign providers, enter the identification number."
4	N/A on INEXTOR (probably INEXTRACK)	Y	Min: 3 chars. Max: 500	Razón Social del proveedor "Service provider's registered or corporate name. Both letters and numbers can be entered in this field, but no special characters"
5	N/A on INEXTOR (probably INEXTRACK)	Y	Min: 3 chars. Max: 3 chars.	País proveedor Country where the provider has his permanent establishment. For Ecuadorian providers, the code is 593.
7	N/A on INEXTOR (probably INEXTRACK)	Y	Format: dd/mm/aaaa	Fecha activación Date in which the physical security components are activated. This shall be prior to the distribution and commercialization in Ecuadorian grounds
Information about the product				
8	EcuIceSku	Y	Min: 39 chars. Max: 40.	Código producto ICE - Sku ICE-SKU. Format should be validated. : Number generated in the Tax Administration requested by each producer or importer
9	EcuProductOriginCode	Y	Min: 1. Max: 1.	Origen del producto It identifies whether the product is of national origin –code 1–; or imported –code 2–; no other codes are allowed
Information about marking and activation				
10	EcuRucEstablishmentCode	Y	Min: 3 chars. Max: 5.	Planta de producción - Código establecimiento en el RUC Code of the establishment registered in the RUC where the production plant is located in the case of producers. For imported goods, the field will be completed with 000 if the marking is done in the product's place of origin or in the custom's warehouse. If the marking is done in the deposit of the taxpayer, the RUC of the establishment shall be entered.
11	EcuMarkingType	Y	Min: 1 char. Max: 1.	Tipo de marcación If the marking is direct, enter –code 1–; if it is indirect, enter –code 2–.
12	N/A: number of codes activated not provided as property by INEXTOR	Y		Número de unidades activadas - CFS The number of units marked as CFS and activated in the establishment for each product code shall be indicated. The field allows users to enter 1-7 digits, for example, up to 9,999,999 activated units can be informed
13	N/A: number of codes wasted (not activated) not provided as property by INEXTOR	N		Número de unidades baja - sin activar Number of units that were lost, destroyed, damaged or disposed of, among other options, that were marked but not activated. The field allows users to enter 1-7 digits, for example, up to 9,999,999 activated units can be informed. It is an optional field, it will be completed if information is generated.
14	N/A: number of codes wasted (marked or activated) not provided	N		Número de unidades baja - activadas

	as property by INEXTOR			Number of units that were lost, destroyed, damaged or disposed of, among other options, that were marked and activated. The field allows users to enter 1-7 digits, for example, up to 9,999,999 activated units can be informed. It is an optional field, it will be completed if information is generated
Information about codes (CFS)				
15	N/A on INEXTOR	Y	Min: 1	Código CFS Activados (de 1 a n) Generated code for every unit of marked products, which will be listed. All codes with the same activation date, ICE product code and establishment will be reported. Only those activated CFS codes that were not disposed of shall be reported. All codes that are not added shall be reported. The field allows users to enter 1-50 digits that can be letters, numbers or a combination of the two. It is a mandatory field.
16	N/A on INEXTOR	N	Min: 1	Código CFS Agregado en empaque nivel 1 (de 1 a n) Code generated for every package that contains several units of marked products, which shall be listed. The codes reported in this section will not be duplicated with the codes in the field "Activated CFS Codes". All codes with the same activation date, ICE product code and establishment will be reported. Only those activated CFS codes that were not disposed of shall be reported. The field allows users to enter 1-50 digits that can be letters, numbers or a combination of the two. It is an optional field, it will only be completed if information is generated.
17	N/A on INEXTOR	N	Min: 1	Código CFS Agregado en empaque nivel 2 (de 1 a n) Same general description as for codes of level 1
18	N/A on INEXTOR	N	Min: 1	Código CFS Agregado en empaque nivel 3 (de 1 a n) Same general description as for codes of level 1
19	N/A on INEXTOR	N	Min: 1	Código CFS Activados y dados de baja (de 1 a n) Code generated for every unit of product that was marked, activated and disposed of (by loss, destruction, damage and others), which shall be listed. All codes with the same activation date, ICE product code and establishment will be reported. Only those activated CFS codes that were disposed of shall be reported. The field allows users to enter 1-50 digits that can be letters, numbers or a combination of the two. It is an optional field, it will only be completed if information is generated

Production Properties

Before starting a production, INEXTOR must provide the following properties (see also INEXPRESS [/wiki/spaces/INEXPRESS/pages/396233020](#)):

- EcuProducerRucNumber
- EcuRucEstablishmentCode
- EcuIceSku
- EcuProductOriginCode
- EcuMarkingType
- EcuProducerLegalEntityName
- EcuAlcoholByVolume (only for alcoholic beverage industry)



Order Validation

If using INEXPRESS, configuring the INEXPRESS Operation Driver to validate the order is necessary. Details on the configuration of this validation can be found in page [Liz INEXPRESS Driver](#)

In Gate, you can also enable an Operation Driver module, "Ecuador" ([Gate Op. Driver: FCTC Driver](#)), which will provide validation for these properties in the Gate backend.

In practice, these properties can be configured as follows:

Area	Properties	Remarks
Gate Settings or Market	• EcuProducerRucNumber • EcuRucEstablishmentCode • EcuProducerLegalEntityName	Gate settings should contain properties global to the factory (information about the supplier and the provider). If they are not global, they should be at the SKU or Manufactured Product level
SKU on Vault or Manufactured Product on Gate	• EcuIceSku • EcuProductOriginCode • EcuAlcoholByVolume (beverage industry)	SKUs on Vault can be configured by INEXTO support. Properties can be added/edited via the Vault Web Service (VaultWS). Another possibility is to set these properties on the Gate in the Manufactured Product.
Manufactured Product on Gate	• EcuMarkingType	
Production Order on Gate	-	It remains possible to override properties in the Production Order

A Dynamic Form for Manufactured Product and one for Production Order are provided. They will allow overriding the following properties:

- EcuIceSku
- EcuProductOriginCode
- EcuMarkingType
- EcuAlcoholByVolume (only for alcoholic beverage industry)

As stated above, an Operation Driver module, "Ecuador", was added to the Gate to validate these properties: [Gate Op. Driver: FCTC Driver](#).

Layouts (Ecuador)

The layouts must be configured in the same manner as the TPD layouts (see page [TPD Gate Contents and Layouts](#)).

When using INEXPRESS, a layout with the following contents must exist:

- HR : Packs_Worldline_HR
- MR : Packs_Worldline_MR

In the layout implementation, Packs_Worldline_HR and Packs_Worldline_MR must be used in order to print human-readable and machine-readable codes.

Operation (EC)

- [Production Order \(Ecuador\)](#)
- [External Code Import \(Ecuador\)](#)

Production Order (Ecuador)

This page contains instructions to order codes from Worldline.

- [Create a Production Order from the Gate UI](#)
- [Create a Production Order from a third-party API](#)

Create a Production Order from the Gate UI [↗](#)

To create a production order for Ecuador from the Gate UI, follow the steps below:

1. To order Worldline codes, enable the [Worldline codes driver](#) from **Gate** → **Configuration** → **OP. Drivers**
2. Go to the **Gate** and click the **Production** → **Production Order** → **New** to create a new order
3. Fill in the required fields:
 - a. **Order Number**: Identifier of the production order
 - b. **Description**: Description of the production order
 - c. **Manufactured Product**: Choose among the products available and created for **Ecuador**
 - d. **LinkUp Setup**: Choose the LinkUp setup configuration
 - e. **Requested Quantity**: Specify the quantity required
 - f. **Order Expected Start Date**: Specify the order expected start date
4. Click on the **Worldline** tab on the right side of the window and fill in the required fields:
 - a. **Id Issuer Code**: Identifier code of the ID Issuer
 - b. **Economic Operator Id**: The Economic Operator Identifier (EO_ID)
 - c. **Facility Id**: The facility Id (F_ID)
 - d. **Machine Id**: The Machine (LinkUp) Id (M_ID)
5. Click on **Save** to create the production order.

Figure 1: New Production Order window

Create a Production Order from a third-party API [🔗](#)

1. To order Worldline codes, enable the [Worldline codes driver](#) from **Gate** → **Configuration** → **OP. Drivers**
2. Send the following properties as attributes to the Gate

Property	Type	Value
WLN_Process_Type	boolean	True if the production involves machinery, False if it is manual.
WLN_IdIssuerCode	string	ID Issuer code
WLN_EO_ID	string	Economic Operator Code
WLN_F_ID	string	Facility Code
WLN_M_ID	string	Machine Code

See [Product Integration](#) to manage products and production using APIs.

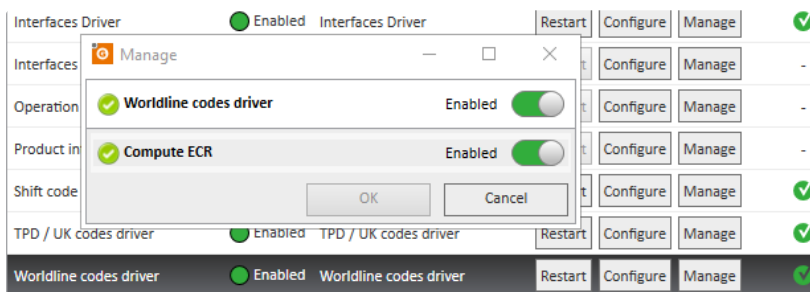
External Code Import (Ecuador)

This page contains a step-by-step guide on the process of importing Ecuadorian codes for production.

1 - Enable and Configure Worldline codes driver [🔗](#)

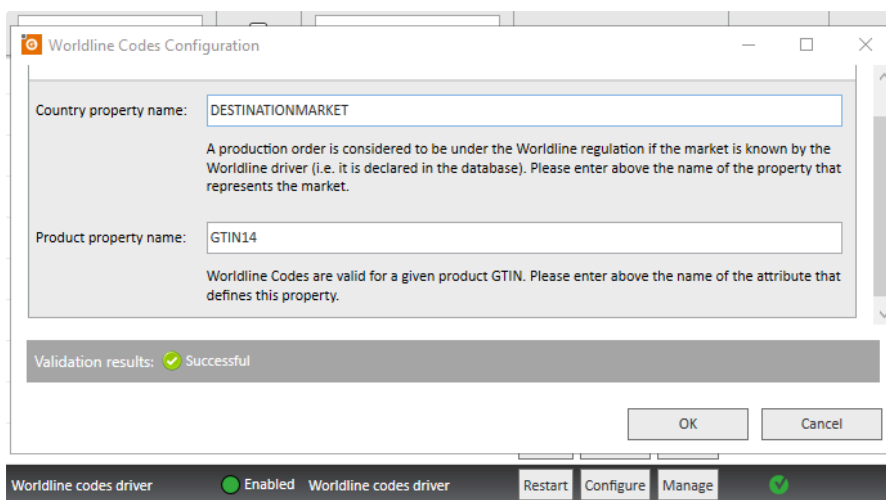
Go to the Operation Drivers on the Gate and click on **Manage** to enable the [Worldline codes driver](#).

Make sure the components shown below are activated.



Once the driver is enabled, click on **Configure** to provide values used to compute the ECR by the Gate

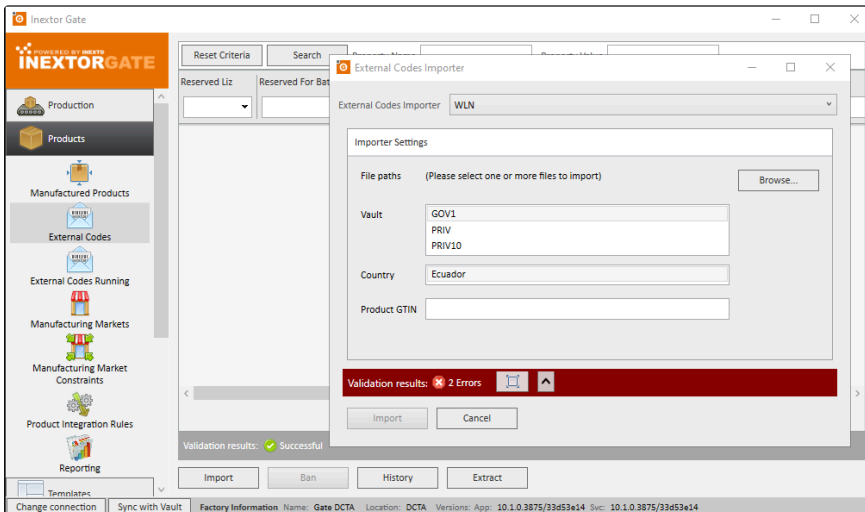
Use the default values as shown below:



2 - Import Ecuador Codes Into the Gate [🔗](#)

From the [External Codes](#) window on the Gate, click on **Import** and select the code type **WLN** to import codes.

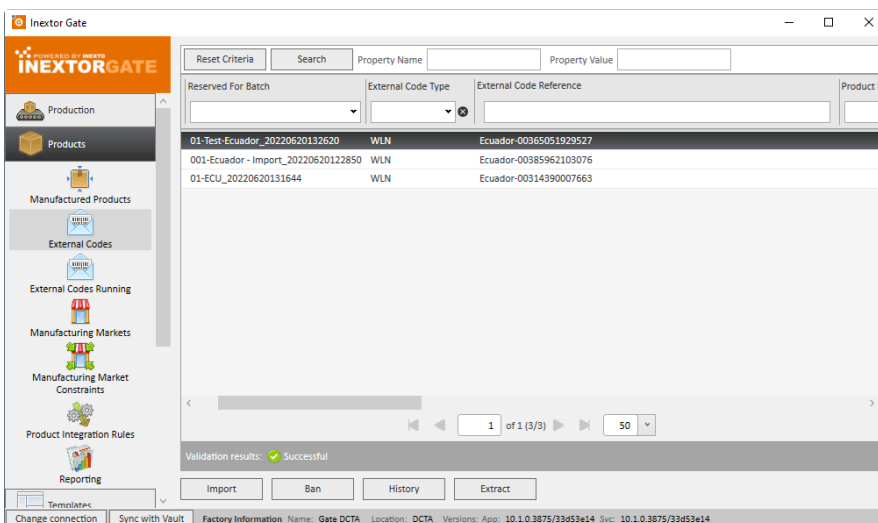
See the documentation [External Codes → Import](#) for the description of the fields.



The contents of the file must match the following pattern: `LEWL3AAAA1000AAAA`

- 5-character prefix (LEWLx, where x is assumed to be 3)
- 8-character serial number
- 4-character product code

After importing the codes, verify the codes are available on the Gate → [External Codes](#) window.



3 - Create a Production Order [🔗](#)

Create a Production Order on the Gate.

Choose the Manufactured Product **Ecu-Ecu1** and enter a GTIN14 of the product.

Note: The value of the **GTIN14** must match **Product GTIN** provided during code import (see step 2)

Production Order

Order Number

01-Test-Ecuador

Description

01-Test-Ecuador

Manufactured Product

Fine cut

Brand Code: [000123] (Name: Tobacco

Finer Cut

Brand Code: [000128] (Name: Tobacco

Fine cut BHR

Brand Code: [BHR-Brand-code] (Name

Switzerland

Brand Code: [CH-CH-BAT-000123] (Nar

Ecuador

Brand Code: [Ecu-Ecu1] (Name: Ecu-Ec

TPD

LinkUp Setup

03 - VPL

Requested Quantity

0

Total Quantity

0

Deleted

☐

Order Expected Start Date

Order Expected End Date

Order Full Quantity

☒

Validation results: Successful

Save

Cancel

Close

Attributes

ExtendedFields

TPD

Name	Value	Type	Source	User	Actions
ACTIVITY	Domestic	String	MP-EP	INEXTO\	
BRANDDESC	EcuMP1	String	MP	INEXTO\	
DESTINATIONMAR	Ecuador	String	MP-EP	INEXTO\	
KET					
FactoryOuterMcCo	c5	String	Gate		
de					
FactoryPackCode	NA	String	Gate		
Gs1CompanyPrefix	12345	String	Gate		
Gs1LocationRefere	66666	String	Gate		
nce					
GTIN14	00365051929527	String	MP	INEXTO\	
MACHINE_GLN	0000001.00092.1	String	PO-LinkUp		
MCID	DCTA	String	LinkUp	INEXTO\	
MID	03	String	LinkUp	INEXTO\	
M_Capacity	720000	Integer	PO-LinkUp		
PRODUCTCODE	Ecu-Ecu1	String	MP-EP	INEXTO\	
RejectionRate_Bun	0	Double	PO-LinkUp		
dies					
RejectionRate_Cas	0	Double	PO-LinkUp		
es					
RejectionRate_Pac	0	Double	PO-LinkUp		
ks					

4 - Start Production

Select and start the production order from the Liz

Serializer 0000 / DCTA03 Status (connected to primary "localhost")

INEXTORLIZ

Select PO

Define Quantities

Review Layouts

Activate Devices

Review Attributes

Validate

Liz Operation

Dashboard

Preparation

Initialization

Stop

Reconciliation

Device Settings

Logs

Messaging

Select Production Order

Select

01-Test-Ecuador (Ecu-Ecu1)

Create

Select a manufactured product from the following list:

Validation results: Successful

Refresh

Previous

Next

Cancel

Change connection

Line Information Machine: DCTA03 Liz ID: 0000 Location: DCTA App Ver: 10.1.0.3875/33d53e14 Svc Ver: 10.1.0.3875/33d53e14 User: Guest

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Appendix (EC)

- [Background Jobs \(Ecuador\)](#)

Background Jobs (Ecuador)

This page contains a list of background jobs available for the [Worldline codes driver](#)

For global background jobs, see [Background Tasks - Jobs](#).

ProcessApprovedOrders [🔗](#)

Approves code orders automatically and sends the orders to Worldline. See [Worldline codes driver](#) for more information.

Application	Component	Job Name	Schedule
Vault	WLNCodeOrderForecastHandler	ProcessApprovedOrders	every 5 minutes

BackgroundModule-Compute ECR [🔗](#)

Computes the External Code References of Worldline codes. See [Worldline codes driver](#) for more information.

Application	Component	Job Name	Schedule
Gate	Worldline codes driver	BackgroundModule-Compute ECR	N/A

* When a job is linked to an operation driver component, the name starts with "BackgroundModule-".

Inextor governmental Vault operational guides

Document Information Table	
Document Type	Operational Guide
Classification	Company Confidential
Document ID	INEX-OG-00010
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Owner	@Michael Houlding Lead Technical Writer - Engineering
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Reviewer / Approver	@Stephane Huck VP Software Engineering - Software Engineering

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Approval		APPROVED		
	Michael Houlding	APPROVED	May 5th 2025 at 2:56:58 PM (UTC)	No comment recorded
	Samson Daniel	APPROVED	May 6th 2025 at 7:21:54 AM (UTC)	No comment recorded
	Stephane Huck	APPROVED	May 12th 2025 at 10:04:16 AM (UTC)	Approved by default after migration of existing used documentation

Introduction [🔗](#)

Document INEX-OG-00010: Inextor governmental vault Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the governmental Vault regulated market requirements. Document INEX-OG-00010 is structured into two sections:

- **Introduction** -Background to governmental Vaults .
- **Configuration** - Requirements for general component configuration.

Purpose [🔗](#)

The purpose of INEX-OG-00010 is to provide the required knowledge necessary to successfully set up Inextor correctly to support governmental vault market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the governmental vault regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

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- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)



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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Introduction (Gov. Countries)

Government Vaults [↗](#)

Before the TPD regulation there were several government Checkers and Vaults. Since May 2019, only a few Checkers/Vaults are still being used for the tobacco industry.

The Vaults are hosted by external companies:

- CH Vault hosted by INEXTO
- BF Checker hosted by SNEDAI
- Jordan Vault hosted by INEXTO

The contacts for accessing these Vaults can be found in page [Governmental Vault Contact List](#).

Swiss Vault [↗](#)

It is possible to access it using the following url: <https://che.inextor.biz/>

Burkina Faso Checker [↗](#)

It is still using the Codentify Checker software because there are still some factories running Codentify which is not fully compatible with INEXTOR.

It is possible to access it using the following url <https://checkerbf.com/CheckerWeb> The user and password are available in LastPass for the Support team.

Jordan Vault [↗](#)

See page </wiki/spaces/JOR/pages/399574044>.

Normally, when the Gates are producing for one of the targeted markets (BF, CH, or JO), they will be connected to two Checker/Vaults, the GOV Vault and the PRIV Vault.

For example, the following factory from Modern Tobacco (Universal) is connected to two Vaults:

- BF which belongs to the Government
- MDT which is their private Vault

GATE ADMINISTRATION				
 Production Products Templates Layouts Vaults Vaults SKUs	Vault			
	Vault Code	MSK Type	Type	Certificate serial
	BF	BF	ForeignMarket	66A8B8D42AF3B8354E23B8C5
	MDT	MDT	Manufacturer	6A919E64820BFDE455F7C1FA
	Vault Connection			
	Vault Code	Gate Code	URL Fragment	Certificate Serial
	BF	Gate-UT	checkerbf.com/factory	35B79B47C36EAP9D2CBF1
	MDT	2000	ut-gate-api.inextor.biz	70B7EBD1F36A6E211178C1

Configuration (GOV. countries)

- [How to Configure SSO Authorization \(DTVCH\)](#)
- › [How to configure the Gate to produce for GOV Vaults](#)
- [Registering a Liz with a GOV Vault](#)
- [How to Configure INEXTOR for Ecuador Heineken Beer Project](#)

How to Configure SSO Authorization (DTVCH)

The configuration of the SSO authorization for DTVCH should be done on the Vault service and on the website configuration:

- In the file *VaultService.exe.config* add the following *Unit*: **<Unit>SSOAuthorizationModule</Unit>**
- In the file *Web.config* add the following *Unit*: **<Unit>SSOCredentialProvider</Unit>**

How to configure the Gate to produce for GOV Vaults

Once you have the factory connected to the Governmental Vault, you will need also to register a MSK for that Vault in the Liz.

It is **critical** to configure correctly the Manufacturing Market Constraints so that the correct MSKs are used to generate the SUPIs and the manufactured products are linked to one SKU of each vault.

Basically, you will print INEXTOR codes in packs, bundles and cases. The INEXTOR codes are generated on the fly by the INEXTOR algorithm (there is not need to order them in advance like the TPD codes):

- The SUPI codes printed on packs will use the MSK from the GOV Vault.
- The SUPI codes printed on bundles and cases will use the MSK from the customer VAULT (PMI, ITG, BAT, etc.)

- [How Does the PACKS_CSUPI Content Know Which MSK to Use?](#)
- [How to Setup the Product Integration Rules ?](#)
- [Contents and Layouts](#)
- [How to Setup the Manufacturing Market Constraints \(MMCs\)](#)

How Does the PACKS_CSUPI Content Know Which MSK to Use?

If you check the details of the contents used to print SUPIs you will see that there is an argument called ROLE that is used to determine the MSK that will be used by the algorithm to generate the SUPI:

Content

Code

PACKS_CSUPI

Description

Codentify Compact Code

Content type

Dynamic

Startup Mode Value

ABC123DEF456

Length

Min 12

Max 12

Code issuer

Codentify

Code mask

SUPI12

Code issuer arguments

Name	Value	Type	Source	User	Actions
CodeTypeid	1	Int16			
FORMAT	CSUPI	String			
ROLE	Primary	String			

Validation results: Successful

OK Cancel

Content

Code

BUNDLES_CSUPI

Description

Codentify Compact Code

Content type

Dynamic

Startup Mode Value

ABC123DEF456

Length

Min 12

Max 12

Code issuer

Codentify

Code mask

SUPI12

Code issuer arguments

Name	Value	Type	Source	User	Actions
CodeTypeid	1	Int16			
FORMAT	CSUPI	String			
ROLE	Secondary	String			

Validation results: Successful

OK Cancel

The role is defined in the Manufacturing Market constraint.

In the example below, BF will be Primary and KNE Secondary:

Manufacturing Market Constraint

Code

BurkinaFaso

Name

BurkinaFaso

Description

BurkinaFaso

Deleted

☐

Vault Constraints:

Add...

Remove

Vault	GateCode	Requires Authorized SKU	Manufacturer	Owner	Local	Market	Primary	Secondary
BF	Gate-KDF	☐	☐	☐	☐	☒	☒	☐
KNE	KDF	☐	☒	☐	☐	☐	☐	☒

Attributes

Settings

Name	Value	Type	Source	User
------	-------	------	--------	------

Validation results: Successful

OK Cancel

With the settings above:

- The BF Vault will be used by the contents (PACKS_CSUPI, etc.) with the ROLE Primary,
- The KNE Vault will be used by the contents (BUNDLES_CSUPI, CASES_CSUPI, etc.) with the ROLE Secondary.

How to Setup the Product Integration Rules ?

You will need a rule for the GOV products, and another rule for the rest of the products. Every rule will use one of the MMCs:

Inextor Gate								
INEXTOR GATE Production Products Manufacturing Markets Manufacturing Market Constraints Product Integration Rules Reset Criteria Search								
Code	Description	Market Code Filter	BrandOwnerCode Filter	ProductCode Filter	MinVariant Filter	MaxVariant Filter	Priority	Manufacturing
1	Default				(All)	(All)	1000	Default
2	BurkinaFaso	Burkina Faso			(All)	(All)	500	BurkinaFaso

In the rule for the GOV Vault, the Manufactured Product is linked to 2 SKUs, one from the Customer Vault (KNE), and one from the GOV Vault (BF):

Edit Rule 2

General

RuleId

2

Description

BurkinaFaso

Validity

Start

Wednesday, March 18, 2020 11:45:31 AM

End

Thursday, June 10, 2021 11:38:19 AM

Priority

500

Deleted

☐

Selection filters for entries in the product catalog

Market Code Filter

Burkina Faso

Brand Owner Code Filter

Product Code Filter

Product Variant

Min

Max

Custom Criteria Format

Custom Filter

Manufactured Products will be created using the following attributes

Manufactured Product Code Format: {ProductCode}

Manufacturing Market Constraint: BurkinaFaso

Countable Unit Type: ☒ Select ☐ Format ☐ Pack Units

Allow Override Of: ☐ Extended Fields ☒ Static Attributes

SKUs will be created for the following Vaults

BF

Add Rule

General

RuleId: 1

Description: BurkinaFaso

Delete

Sub-selection filters

Product Code Filter:

Product Variant: Min: Max:

Custom Criteria Format:

Custom Filter:

SKUs will be created using the following attributes

Sku Code Format: {ProductCode}

Actor: ☒ Select ☐ Format ☐ KNE

Product Group: ☒ Select ☐ Format ☐ (Select an item...)

☒ Extended Fields ☐ Activity

KNE

Add Rule

General

RuleId: 1

Description: Kaane

Delete

Sub-selection filters

Product Code Filter:

Product Variant: Min: Max:

Custom Criteria Format:

Custom Filter:

SKUs will be created using the following attributes

Sku Code Format: {ProductCode}

Actor: ☒ Select ☐ Format ☐ KDF

Product Group: ☒ Select ☐ Format ☐ (Select an item...)

☒ Extended Fields ☐ Activity

Validation results: ✔ Successful

OK Cancel

In the rule for the rest of the products (Default), the Manufactured Product is linked to 1 SKU from the Customer Vault (KNE):

Edit Rule 1

General

RuleId1

DescriptionDefault

Validity

StartWednesday, March 18, 2020 11:44:18 AM

EndThursday, June 10, 2021 11:43:06 AM

Priority

1000

Deleted

Selection filters for entries in the product catalog

Market Code Filter

Brand Owner Code Filter

Product Code Filter

Product Variant

Custom Criteria Format

Custom Filter

Manufactured Products will be created using the following attributes

Manufactured Product Code Format (ProductCode)

Manufacturing Market Constraint Default

Countable Unit Type

Select

Pack Units

Format

Allow Override Of

Extended Fields

Static Attributes

SKUs will be created for the following Vaults

KNE

Add Rule

General

RuleId1

DescriptionDefault

Delete

Sub-selection filters

Product Code Filter

Product Variant

MinMax

Custom Criteria Format

Custom Filter

SKUs will be created using the following attributes

Sku Code Format (ProductCode)

Actor

Select

KDF

Format

Product Group

Select

(Select an item...)

Format

Extended Fields

Activity

Validation results: Successful

OK

Cancel

341

Contents and Layouts

Use this section if your version is 10.1.0.4639 or lower

> Versions 10.1.0.4639 and lower

The content to be used in the Packs DM for GOV Vaults (Jordan and Burkina Faso) has the following format:

Content

CodePACKS_SGTIN_MR

DescriptionPACKS SGTIN Machine Readable

Content typeFormatted

Format[FNC1]01{PackGtin}21{PACKS_CSUPI}

Code mask(Not Set)

The PackGtin content is a content with 14 digit size. Usually it is static content that makes a PADL of a PackEan variable which usually have a 8 or 13 digit size. The PADL just adds zeros to the left until completing the 14 digits.

Content

CodePackGtin

DescriptionPackGtin

Content typeStatic

Startup Mode Value

LengthMin 14Max 14

Property NamePackGtin

Regular Expression

Regular Expression Description

Validator Component Name

Code formatterScriptedPropertiesEdit Arguments

Arguments

Name	Value	Type	Source	User	Actions
CalculatedPropertyFormula	PADL(PackEan,14,0)	String			
	public string Generate				

Validation results: Successful

OKCancel

Layout for Packs:

Edit Layout

CodePacksBF

NamePacksBF

DescriptionPacksBF

Unit TypePacks

Deleted☐

Layout Contents

Required	Commissioned As	Content	Delete
☒	MR code	PACKS_SGTIN_MR	Delete
☒	HR code	PACKS_SUP1	Delete

Contents

The content to be used in the Packs Datamatrix for GOV Vaults (Jordan and Burkina Faso) is **PACKS_GS1_01_21_DM**. It has the following format:

```
[FNC1]01{PGTIN14}21{PACKS_CSUPI}
```

This Content uses the **PGTIN14** one that itself requires the PGTIN14 attribute in the Production Order by default.

Alternatively, you can modify the PGTIN14 Content to use another attribute that is already present in the Production Order/Manufactured Product. This could be an option when the master data already contains another property holding the GTIN or the EAN.

Example:

Here is an example using the PackEan attribute. Assuming this attribute, contains 8 or 13 digits, you can use the PADL function to transform it into a 14 character value. The PADL just adds zeros to the left until completing the 14 digits.

Original Content

Content

Code

PGTIN14

Description

Pack GTIN 14

Content type

Static

Startup Mode Value

00000000000000

Length

Min 14 Max 14

Property Name

PGTIN14

Regular Expression

Regular Expression Description

Validator Component Name

Code formatter

(Not Set)

Modified Content

Content

Code

PGTIN14

Description

Pack GTIN 14

Content type

Static

Startup Mode Value

00000000000000

Length

Min 14 Max 14

Property Name

PGTIN14

Regular Expression

Regular Expression Description

Validator Component Name

Code formatter

ScriptedProperties

Arguments

Name	Value	Type	Source	User	Actions
CalculatedPropertyFormula	PackEan,14,0)	String			
CodeGenerationScript	public string Generate() { return null; }	String			

In this example, the Content will automatically compute a PGTIN14 attribute at production preparation, based on PackEan attribute.

Layout for packs

Create Layout

Code

Packs (Add Target Market)

Name

Packs (Add Target Market)

Description

Packs (Add Target Market)

Unit Type

Packs

Layout Contents

Required	Commissioned As	Content	Delete
☒	MR code	PACKS_GS1_01_21_DM	Delete
☒	HR code	PACKS_SUP1	Delete

Validation results:

Successful

OK

Cancel

How to Setup the Manufacturing Market Constraints (MMCs)

If the factory is producing for either Switzerland, Burkina Faso or Jordan, you will need a dedicated Manufacturing Market Constraint and the Default MMC.

The Default MMC, as we only have one Vault, will have both roles, Primary and Secondary

The screenshot shows the 'Manufacturing Market Constraint' dialog box. The 'Code' field is set to 'Default', 'Name' is 'Default', and 'Description' is 'Default'. The 'Vault Constraints' section contains a table with one row for 'KNE' (Vault), 'KDF' (GateCode), and 'Requires Authorized SKU' (checkbox). The 'Manufacturer' column has a dropdown arrow, 'Owner' is a checkbox, 'Local' is a checkbox, 'Market' is a checkbox, 'Primary' is checked, and 'Secondary' is checked. The 'Attributes' tab is selected, showing a table with columns: Name, Value, Type, Source, User. The 'Validation results' section shows 'Successful'. The 'OK' and 'Cancel' buttons are at the bottom.

Vault	GateCode	Requires Authorized SKU	Manufacturer	Owner	Local	Market	Primary	Secondary
KNE	KDF	☐		☐	☐	☐	☒	☒

Name	Value	Type	Source	User
------	-------	------	--------	------

Validation results: ✔ Successful

The Burkina Faso MMC will have the role Primary for BF, and Secondary for the Customer Vault (KNE in this example):

The screenshot shows the 'Manufacturing Market Constraint' dialog box for 'BurkinaFaso'. The 'Code' field is 'BurkinaFaso', 'Name' is 'BurkinaFaso', and 'Description' is 'BurkinaFaso'. The 'Vault Constraints' section contains a table with two rows: 'BF' (Vault), 'GateKDF' (GateCode), and 'Requires Authorized SKU' (checkbox); and 'KNE' (Vault), 'KDF' (GateCode), and 'Requires Authorized SKU' (checkbox). The 'Manufacturer' column has a dropdown arrow, 'Owner' is a checkbox, 'Local' is a checkbox, 'Market' is a checkbox, 'Primary' is checked for BF and unchecked for KNE, and 'Secondary' is unchecked for BF and checked for KNE. The 'Attributes' tab is selected, showing a table with columns: Name, Value, Type, Source, User. The 'Validation results' section shows 'Successful'. The 'OK' and 'Cancel' buttons are at the bottom.

Vault	GateCode	Requires Authorized SKU	Manufacturer	Owner	Local	Market	Primary	Secondary
BF	GateKDF	☐		☐	☐	☒	☒	☐
KNE	KDF	☐		☐	☐	☐	☐	☒

Name	Value	Type	Source	User
------	-------	------	--------	------

Validation results: ✔ Successful

Registering a Liz with a GOV Vault

In case of a governmental project, the Liz must be registered with the governmental Vault (as well as with the manufacturer's Vault if the latter one exists). The steps are described in page [LIZ Registration on the VAULT](#).

How to Configure INEXTOR for Ecuador Heineken Beer Project

Vault

Enable Code storage driver

Gate

Add Ecuadorian properties global to the factory in Gate Settings:

EcuProducerRucNumber	RUC del productor / importador "The producer's or importer's identification number. It is the RUC number. This should be a valid number, of 13 characters, and the last three digits have to be 001."
EcuRucEstablishmentCode	Planta de producción - Código establecimiento en el RUC Code of the establishment registered in the RUC where the production plant is located in the case of producers. For imported goods, the field will be completed with 000 if the marking is done in the product's place of origin or in the custom's warehouse. If the marking is done in the deposit of the taxpayer, the RUC of the establishment shall be entered.

 These property names are a proposal

Reference: [#154486](#) - Vault+Gate: add Ecuador as new regulation

Inextor Mexico (MEX) regulated market operational guide

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Introduction [🔗](#)

Document INEX-OG-00012: Inextor Mexico (MEX) Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the MEX regulated market requirements. Document INEX-OG-00012 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the MEX Regulated Market, system overview and background.
- **Configuration** - Requirements for general properties, production properties and layouts.
- **Operations** - Code ordering, Code reporting, code importing etc..

Purpose [🔗](#)

The purpose of INEX-OG-00012 is to provide the required knowledge necessary to successfully set up Inextor correctly to support MEX market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the MEX regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)



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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Introduction (MEX)

- [Prerequisites \(MEX\)](#)
- [Background \(MEX\)](#)
- [System overview \(MEX\)](#)

Prerequisites (MEX)

The connection to the Mexican authorities (SAT) must go through a site-to-site VPN. This VPN tunnel must first be put in place between the Vault's Azure server and a Mexican provider.

For customers already having a VPN tunnel connecting their network and Mexico, they can re-use it. To do so, they need to either keep using the Codentify Checker or install the SAT Proxy that will act as a bridge between the customer's network and the Vault.

Background (MEX)

For an explanation of the Mexican code regulation, see below for details:

For the Mexico market, the manufacturer must order codes from the *Servicio de Administración Tributaria* (SAT), use them and then report use to the SAT service (which is an official Mexican state service). This regulation impacts production very little, since codes can be ordered without specifying for which product and on which line of production they will be used.

The SAT provides a web-service that allows to download codes and send back reports.

The SAT codes can be downloaded by specifying the Company and Factory. Since there is no other info, this means that the code can be printed on any product. It's only after printing that the information of the Product and Line must be reported back to the SAT service. Without this report, the printed codes will be invalid (which means that the manufactured products they are printed on will be considered illegal).

The code is a 12 characters alphanumeric combination.

SAT codes lose their validity after 120 days: They cannot be printed on products manufactured after that time (if they are, the product will be considered illegal).

The relevant documents (the SAT's 'Fiscal Miscellaneous Resolution for 2015' and the 'Anexo 26-BIS de la Resolución Miscelánea Fiscal para 2015') are attached to this page. Information about the tobacco products regulation can be found on page 412 of the Fiscal Miscellaneous Resolution.

The validity period is referred in the screenshot "SatExpiration120Days.png". Translation:

Deadline for using security codes

5.2.33. For the purposes of article 19, section XXII of the IEPS Law, the security codes provided by the SAT, which have not been used within one hundred and twenty calendar days, from the date on which they were authorized, will be without effect.

Once the period referred to in the previous paragraph has ended, the SAT will invalidate the security codes and they cannot be used. LIEPS 19, FMR 2023 5.2.2

File	Modified
>  RMF2015_compila2aresolucion.pdf	Jul 29, 2020 by Former user
>  Anexo 26 BIS.docx	Sep 24, 2020 by Former user
>  SatExpiration120Days.png	Jun 02, 2023 by Ken Larpin

 [Download All](#)

System overview (MEX)

For an overview of the implementation of the Mexican market regulation in the INEXTOR software, see below for details:

Data flow [🔗](#)

The SAT codes are ordered by the Vault. The only information given out at order time is the manufacturer's identity, the factory (Gate) and the quantity of codes. This means that codes can be ordered without considering which product will be produced, only total factory production quantity is necessary.

Once codes are received by the Vault, they are sent to the Gate. The Gate uses them for production and then sends them back, together with the production's precise information (product, quantity, factory line/Liz), to the Vault.

The Vault then builds a report with all the relevant info and sends it to the SAT. The codes are then considered as legal.

The comprehensive description of the SAT code implementation can be found in the [Mexican Regulated Market Operational Guide](#).

❌ SAT codes lose their validity after 120 days.

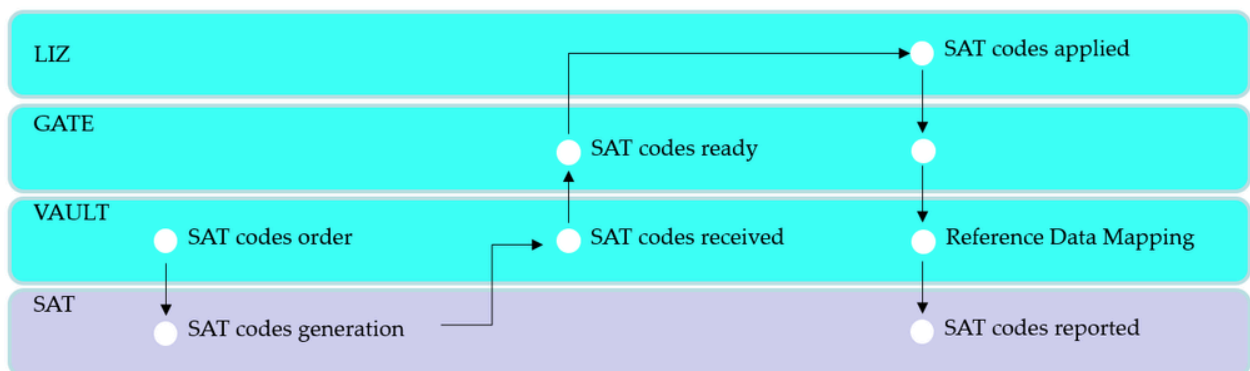


Figure 1: Workflow

Connection to SAT [🔗](#)

Direct VPN [🔗](#)

The recommended connection infrastructure is to have a VPN between Inexto's Azure cloud and Alestra's network.

For a brand-new setup, SAT require an Expressroute VPN. For existing setup, site-to-site policy-based VPN can be used.

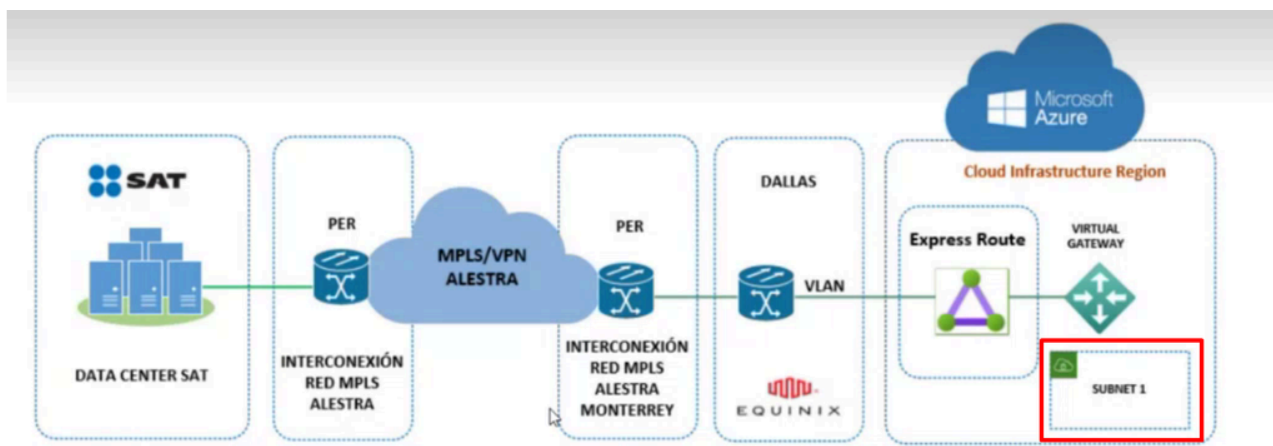


Figure 2: The latest connection requirement provided by SAT.

SAT Proxy [🔗](#)

If the customer has already a VPN configured between their network and Alestra, we can use the existing infrastructure. To do this, we need to deploy in the customer's infrastructure the SAT Proxy. It will act as a bridge between the Vault and the customer's network.

For more details, see [Installing the SAT Proxy](#)

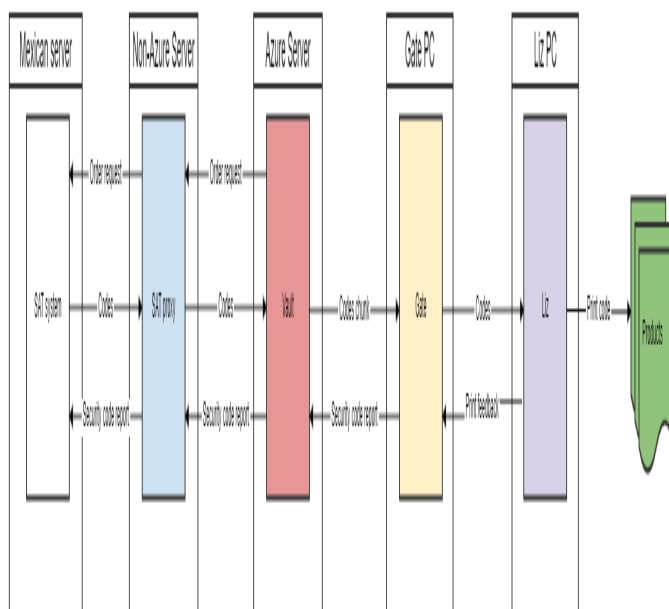


Figure 3: Simplified view of the data flow with the SAT Proxy.

Annex [🔗](#)

WSDL provided by SAT: <https://apagaf.siat.sat.gob.mx/ws/tabacos-PacContribuyente/PacContribuyente?WSDL>

Configuration (MEX)

- [Layouts \(MEX\)](#)
- › [Installation \(MEX\)](#)
- [Configuring SAT Reference Data](#)
- [Contents \(MEX\)](#)
- [Template \(MEX\)](#)
- [Layout Implementation \(Mexico\)](#)

Layouts (MEX)

Overview [↗](#)

A layout defines an area on a package of a product on which some information must be printed. A layout is associated to a unit type to define on which packaging level the information has to be applied for printing. In other words, the layout defines the serialization requirements for a given unit type of a product (what needs to be printed). Additional documentation can be found in [Layouts](#).

Examples [↗](#)

Regular [↗](#)

For Mexico, you need to print the SAT code as machine readable (MR).

The screenshot shows the 'Edit Layout' dialog box. The 'Code' is 'Pack_SAT'. The 'Name' and 'Description' fields both contain 'Mexican code'. The 'Unit Type' is set to 'Packs'. The 'Deleted' checkbox is unchecked. The 'Layout Contents' table has one row with a checked 'Required' checkbox, 'MR code' in the 'Commissioned As' column, 'Pack_GS1-SAT' in the 'Content' column, and a 'Delete' button. An 'Add...' button is to the right of the table. The 'Validation results' at the bottom show a green checkmark and the text 'Successful'. 'OK' and 'Cancel' buttons are at the bottom right.

Required	Commissioned As	Content	Delete
☒	MR code	Pack_GS1-SAT	Delete

European factory [↗](#)

If the factory is in a European country, both Mexican and TPD codes needs to be printed as machine readable. The SAT code is marked as "Doubled code". This information is used by Inexpress.

Edit Layout

Code

Name

Description

Unit Type

Packs

Deleted

☐

Layout Contents

Required	Commissioned As	Content	Delete
☐	HR code	Packs_TPD_HR	Delete
☐	-	Packs_TPD_ID	Delete
☐	-	Packs_TPD_ProdCode	Delete
☐	-	Packs_TPD_SERIAL	Delete
☐	MR code	Packs_TPD_UPUI_Datamatrix	Delete
☐	Doubled code	SAT	Delete

Add...

Validation results:

Successful

OK

Cancel

Installation (MEX)

There are 5 steps required for installation:

- [Registering at SAT](#)
- [Enabling SAT Features](#)
- [Installing the SAT Proxy](#)
- [Configuring the Vault](#)
- [Configuring the Gate](#)

Registering at SAT

The first step for a manufacturer is to register at the Mexican authority. The important part for INEXTOR is to receive:

- FIEL certificate for each company registered
- Certificate for the web-service. With the password to open it.
- Target IDs for each registered entities
- URL of the API

Enabling SAT Features

Vault website

On the website under *Administration – Users*, grant to the selected user access to the pages: **SecurityCodeOrder**, **SatReferenceData**, **SatCodeReport**.

Configuring the Vault

Install the certificates

1. Save the SAT web-service certificate in the VaultService in the Security folder. If there is more than one server used (load-balancing), save it on all servers.
2. Use the Certificate Manager tool to install the FIELD certificates in the Vault's database. Options: Is Key = false, Is Trusted = true, Type = Other. See chapter **Import certificates into Vault database** in page [Certificate Manager](#). If you need to convert the certificate to a .PFX, you can use [CertRequest.exe](#)

Configure the Vault

1. In the Vault Service folder open the VaultService.exe.config or from the settings page in the UI.
2. In the appSettings zone set the following key:
 - a. **SatServiceUrl**. Url you set as the baseAddress of the proxy.
 - b. **SatClientCertificateFile**. The path of the SAT web-service certificate you have saved in the VaultService folder. (e.g. *Security\tabacos UAT mutual auth.p12*)
 - c. **SatClientCertificatePassword**. The password of the SAT web-service certificate.
3. Restart the Vault service to take into account the previous changes.
4. In the Vault website under Administration → Users, give to the appropriate users the rights to the **SecurityCodeOrder**, **SatReferenceData**, **SatCodeReport**. This will make the corresponding pages visible. (You must reload the browser to make the changes effective.)
5. Create the various entities needed in the SAT Reference Data page. (See [Configuring SAT Reference Data](#))

WebSatService	SatServiceUrl	https://ServerName.Company.com:58910/SatProxyCommunicationService	<button>Revert</button>	<button>Undo</button>	<button>Save</button>
WebSatService	SatClientCertificateFile	Security\SatClientCertificate.pfx	<button>Revert</button>	<button>Undo</button>	<button>Save</button>
WebSatService	SatClientCertificatePassword	password12345	<button>Revert</button>	<button>Undo</button>	<button>Save</button>

Code Mask

Verify in the Vault database that the Mexican CodeMasks and CodeMaskCaptures are present. Vaults deployed a long time ago could be missing them. If they are missing, the SAT code mask needs to be manually added in the Vault database. It is used to detect that a code is SAT during code decomposition. Use the file **MexicoCodeMask.sql**.

File	Modified
CheckerCertificates.sql	Dec 10, 2020 by Nathalie Chiva
CertificateManagerCodentify.zip	Dec 10, 2020 by Nathalie Chiva
CertificateManager.zip	Dec 10, 2020 by Nathalie Chiva
MexicoCodeMask.sql	Sep 06, 2023 by Ken Larpin

[Download All](#)

Configuring the Gate

Application settings

1. In the Gate → Configuration → Application settings, set the following settings. (Some customers might have those settings set directly in the GateService.exe.config file.)
 - a. **Vaults4WithMessaging** with the VaultCode that is connected to the SAT system. (This can be the Checker code if the Gate is connected to a Checker.)
 - b. **ProductionCodePropertyName**. Modify the default value for the production code that corresponds to your environment.
 - i. PMI10 (PMI)
 - ii. SHIFTCODE (JTI)
 - iii. LOTE (BAT)
2. Restart the Gate service to take into account the previous changes.
3. Create a Market and Market constraint for Mexico. Set the constraint toward the Vault (or Checker if using one.)

Code Mask

Verify in the Gate database that the Mexican CodeMasks and CodeMaskCaptures are present. Gates deployed a long time ago could be missing them. If they are missing, the SAT code mask needs to be manually added in the Gate database. It is used to detect that a code is SAT during code decomposition. Use the file **MexicoCodeMaskGate.sql**.



For more details about production configuration, see [System Overview](#), [General Steps \(Configuration\)](#) and [General Steps \(Operations\)](#).

Installing the SAT Proxy

The SAT proxy service can be installed on a non-Azure server to serve as a bridge between the Vault and SAT. Its purpose is to re-use an existing VPN connection that the customer have created between their Checker server and Mexican Authorities.

Today, we recommend not to use the SAT proxy, but instead have a direct VPN connection from the Vault Azure server to Mexican authorities.

Prerequisite [🔗](#)

.NET Framework 4.8 or above must be present on the server.

Install the service [🔗](#)

1. Retrieve the binaries from the build and copy-paste the folder on the server.
2. Open the CMD in administrator mode and navigate to `%WINDIR%\Microsoft.NET\Framework64\<framework_version>`. It's where the Installutil.exe is located.
3. Execute: `installutil "<SatProxyExePath>\SatProxyService.exe"`
4. Open the services viewer from the Windows Administrative Tools. Verify that the SAT proxy is installed and that the startup type is Automatic.
5. If the service is not running, start it to verify that there are no issues.

Install the certificates [🔗](#)

There are 4 certificates.

- Proxy's server certificate. Installed in the windows store of the machine running the proxy.
 - a. Install the server certificate on the SAT proxy server, in local machine store. (NOT the FIEL certificate)
 - b. With MMC retrieve the thumbprint of the certificate.
 - c. Open the CMD in administrator mode and execute: `netsh http add sslcert ipport=0.0.0.0:<Port where the Vault will connect to the server> certhash=<cert thumbprint>appid={a06193a2-5ea3-4bdd-9287-01326ce48584}`
- Client certificate. Present in the "Security" folder of the Vault service. It's used by the Vault to connect to the proxy.
 - a. Save the client certificate in the Vault service folder, in a sub-folder named Security.
 - b. Install it on Local Machine Trusted Root Certificate Store if you wish to load the certificate on the sat proxy with ThumbPrint Config (check the *"Configure the service"* section for more information)
- SAT certificate. Provided by SAT and present in the folder "Security" of the SAT Proxy service.
 - a. Save the SAT certificate in the SatProxy folder, in a sub-folder named Security.
- FIEL certificate. Provided by SAT and present in the Vault database. Used to sign the requests.
 - a. (Optional) Export the FIEL certificate from the Checker database using the Certificate Manager tool.
 - b. Import the FIEL certificate in the Vault database using the Certificate Manager tool.

Configure the service [🔗](#)

1. Go to where the service executable is installed and open the **SatProxyService.exe.config** file.
2. In the **appSettings** section specify:
 - a. The SAT url in **SatEndpointUrl**
 - b. The SAT API certificate **SatClientCertificateThumbPrint** if you wish to load the certificate from the Local Machine Trusted Root Certificate Store.

- c. The path to the SAT API certificate in **SatClientCertificateFilePath** (only configure this if you do not have set the **ThumbPrint**)
- d. The password of the SAT API certificate in **SatClientCertificatePassword** (only configure this if you do not have set the **ThumbPrint**)
- e. The base directory where the logs files should be created. Logs will by default be in a sub-directory named Logs, in a file named log-date.log.
Note that you can also modify the Logging.Serilog.json file and set the full logs path directly there (see the "path" tag).
3. In the **baseAddresses** zone set the **baseAddress** to one that the Vault can access. This is where the Vault will connect to the proxy.
4. Open the CMD in administrator mode and execute: **netsh http add urlacl url=<Url you added in baseAddress> user=Everyone**
5. Restart the SAT proxy service to take into account the previous changes.

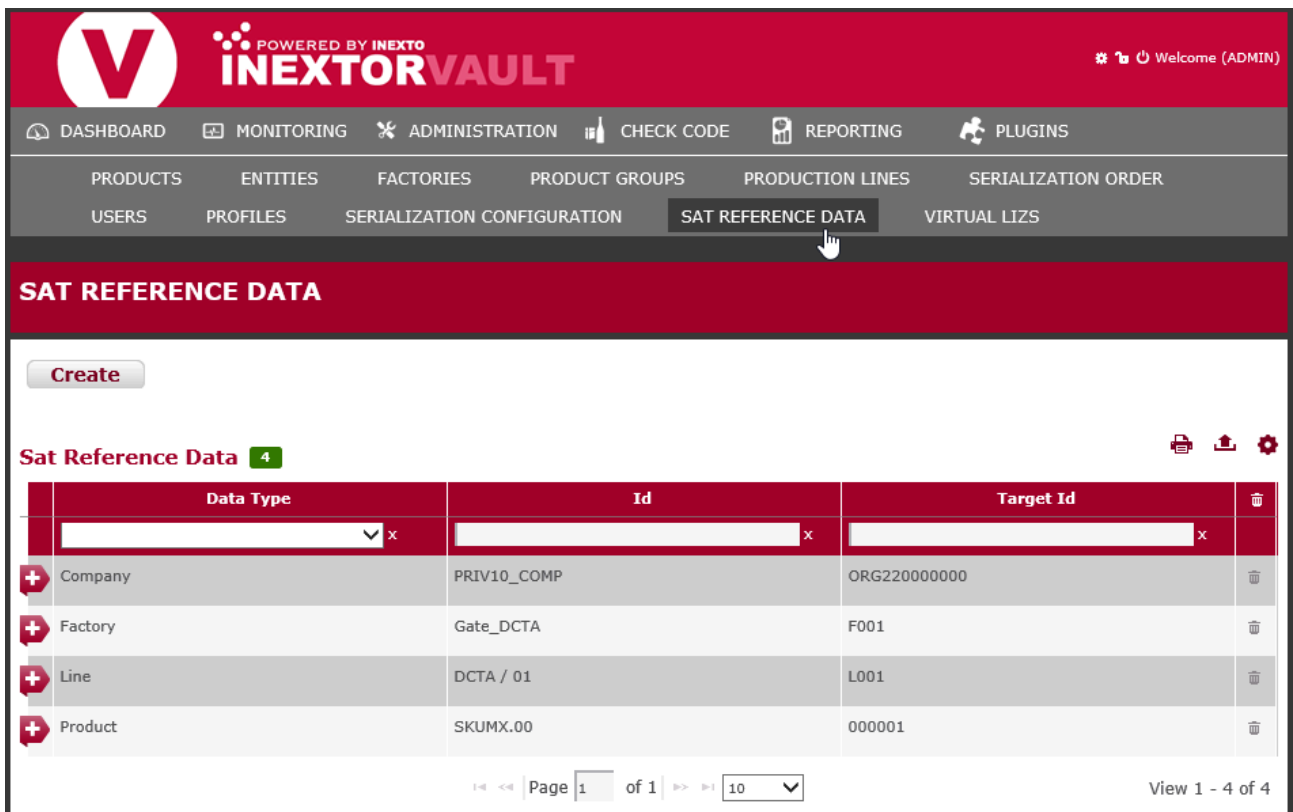
File	Modified
>  SatProxyService_10_1_0_1492.zip	Dec 10, 2020 by Nathalie Chiva
>  SatProxyService_10_1_0_2700.zip	Jan 20, 2021 by Ken Larpin (Deactivated)
>  SatProxy_10_1_0_3163.zip	Aug 09, 2021 by Ken Larpin (Deactivated)
>  SatProxyServer.pfx	Aug 10, 2021 by Ken Larpin (Deactivated)
>  SatProxyServer.txt	Aug 10, 2021 by Ken Larpin (Deactivated)
>  SatProxy20220314.zip	Mar 14, 2022 by Ken Larpin (Deactivated)
>  SatProxy20220729.zip	Jul 29, 2022 by Ken Larpin (Deactivated)
>  SatProxyService_10_1_0_5530.zip	Oct 17, 2024 by Ken Larpin (Deactivated)
>  SatProxyService_10_1_0_5657.zip	Mar 27, 2025 by Valéry Esteves

 [Download All](#)

Configuring SAT Reference Data

A number of entities must be registered by SAT. They will receive a Target ID to identify them. Once this is done the data can be saved on the Vault website and used to order codes.

The registration is not managed by Inextor, you will need to contact SAT to do it. Inextor only stores those data.



The screenshot shows the INEXTORVAULT interface for configuring SAT Reference Data. The top navigation bar includes links for DASHBOARD, MONITORING, ADMINISTRATION, CHECK CODE, REPORTING, and PLUGINS. Below this, a secondary navigation bar lists various entities and configurations, with 'SAT REFERENCE DATA' highlighted. The main content area is titled 'SAT REFERENCE DATA' and features a 'Create' button. A table displays the current data, with columns for Data Type, Id, and Target Id. The table contains four entries: Company (PRIV10_COMP, ORG220000000), Factory (Gate_DCTA, F001), Line (DCTA / 01, L001), and Product (SKUMX.00, 000001). The page also includes a pagination control showing 'Page 1 of 1' and a 'View 1 - 4 of 4' indicator.

Vault website → Administration → SAT reference data. You can see a **Company**, **Factory**, **Line** and **Product** data.

Company [🔗](#)

Name	Description	Validation rules
Id	The Legal Entity name as defined in the Vault under Administration → Entities. !!!!!!!!!!!!!!! IT MUST HAVE THE SAME NAME !!!!!!!!!!!!!!!	
Target Id	The legal entity name as given by SAT. It can be found in the FIEL certificate provided by SAT, in the field IssuedTo, you will see the value: example:OID.2.5.4.45=ORG2200000000 (it will be different for every customer)	Regex: ('[A-ZÑ&]{3,4}[0-9]{2}[0-1][0-9][0-3][0-9][A-Z0-9][A-Z0-9][0-9A-Z]')

Certificate Serial Number	The serial number of the FIEL certificate provided by SAT for signing the messages. It must have been imported in the Vault database prior to defining the company. (See <i>Installation</i> below)	Must be 20 numbers long.
---------------------------	---	--------------------------

Factory [🔗](#)

Name	Description	Validation rules
Id	The factory code as defined in the Vault under <i>Administration</i> → <i>Factories</i> !!!!!!!!!!!!!!! IT MUST HAVE THE SAME NAME !!!!!!!!!!!!!!!	
Target Id	The factory ID as given by SAT	Max length 255
Country	The country of the factory	

Line [🔗](#)

Name	Description	Validation rules
Id	The production line identifier in the form "MCID / MID" where MCID is the manufacturing center identifier and MID is the machine identifier. They are defined under <i>Administration</i> → <i>Production Lines</i>	
Target Id	The production line ID as given by SAT	Max length 50
Line Code	The line code	1 to 3 digit

Product [🔗](#)

Name	Description	Validation rules
Id	The product code as defined in the Vault under <i>Administration</i> → <i>Products</i> .	
Target Id	The product ID as given by SAT	Regex: ('[0-4][0-9]{5}')
Cigarettes Per Packs	The number of cigarettes per packs for this product	1 to 4 digits

Starting from version 10.1.0.5589 of Inextor, it is possible to receive the target Id and the number of cigarettes per pack from extended fields found in a SKU.

The name of the properties can be defined through the `DimmPropertyName` and `SatItemsPerPackPropertyName` application settings (for target id and number of cigarettes per pack). A new or updated SKU is automatically used to create or update this data if its intended market matches the `SatReferenceDataMarketFilter` application setting.

Typically, the views defined on a Gate for product integration can be changed to include these attributes in the extended fields of a product. If a product integration rule allows for extended field updates, the data from the product will be copied to the SKU, which will land on the Vault.

Contents (MEX)

Overview [↗](#)

A [Content](#) represents a piece of human-readable or machine-readable information printed on the surface of products or product packages, e.g., product code, expiry date, price, etc.

Dynamic Contents [↗](#)

Dynamic contents are used to print elements that are different in every label. Usually it's the SAT codes itself. Below you will find the default SAT content.

The screenshot shows a 'Content' configuration window. The 'Code' field is 'SAT' and the 'Description' is 'SAT'. The 'Content type' is set to 'Dynamic'. The 'Startup Mode Value' is 'XXXXXXXXXXXX'. The 'Length' is set with a minimum of 1 and a maximum of 12. The 'Code issuer' is 'External'. The 'Code mask' is '(Not Set)'. The 'Code issuer arguments' section contains a table with the following data:

Name	Value	Type	Source	User	Actions
CodeTypeId	3	Int16			
ContentFlushDelay	Forbidden	String			
ExternalCodeReferencePropertyName		String			
MachineReferencePropertyName		String			
ProductReferencePropertyName		String			
ROLE	Primary	String			
SerializationLevelReference		String			
SOURCE	MEXICO	String			

At the bottom, the 'Validation results' are 'Successful'. The window has 'OK' and 'Cancel' buttons.

Note the "ContentFlushDelay" = "Forbidden". This blocks the printers from flushing Mexican codes from their buffer. The SAT external codes are expensive and should not be wasted.

Formatted Contents [↗](#)

Formatted content allows concatenating several contents together. Below, you will find the default content to print SAT codes as DotCode.

The fix code in front defines the country of processing. It's a creation from Inexto and not an official format.

- 424: GS1 Country of Processing identifier

- 484: ISO 3 digit country code for Mexico
- 21: GS1 Serial number identifier

 Content

Code

Pack_GS1-SAT

Description

Pack_GS1-SAT

Content type

Formatted

Format

42448421{SAT}

Code mask

MEXICO_SAT

Template (MEX)

The template is specific to the installed printer and defines injection points, i.e. places where a dynamic value (called a content) must be inserted during product creation.

In the Gate administration interface, go to Templates / Templates and create or edit a template:

Template Edit

Fields

Template Code: Template Name: Deleted ☐

Device Family: Template Description:

Injection Points

Name	Comments
MRCODE	
HRCODE	
TEXTCODE1	
TEXTCODE2	

Template Data

```
1 DC,MRCODE*,10,10,2,1,96,7,0,{MRCODE}
2 T,HRCODE,10,50,Lucida Console,10,{HRCODE}
3 T,BATCHCODE,10,80,Lucida Console,10,{TEXTCODE1}
4 T,ORDERNUMBER,10,110,Arial,10,{TEXTCODE2}
```

Extract Injection Points Load File

Validation results: Successful

Save Cancel

This example is based on a telnet template sample, which has an injection point for Human Readable code, Machine Readable code and 2 extra fields.

It is assumed here that the device configuration has already been configured.

Layout Implementation (Mexico)

Overview [↗](#)

A Layout Implementation associates a [Layout](#) with [Device Configuration](#) and a [Template](#). The Implementation also consists of the mapping between the Injection Points inside a Template and the Contents in the Layout.

For more information on how to set up a Layout Implementation, see the [Layout Implementations](#) guide.

Examples [↗](#)

Regular [↗](#)

SAT code printed as a DotCode and a human readable code.

Injection Point	Content	Type	Element	Data Carrier	ReadableText	Format
0-SHIFTCODE	SHIFTCODE	Data Carrier	ReadableText			
1-readable	SAT	Data Carrier	ReadableText			
2-PRICE	(Not Set)	Data Carrier	ReadableText			
3-text	PACKS_GS1_SAT	Data Carrier	DotCode			
4-empty	(Not Set)	Data Carrier	ReadableText			

Validation results: ✔ Successful

OK Cancel

European factory [↗](#)

SAT code printed as a DotCode and a human readable code (HR). TPD codes is also printed as DataMatrix and human readable (HR).

 Edit Layout Implementation

Device Configuration

MetronicLaser.Packs

Layout

Template

Content Mappings

Injection Point	Content
0-readable	Content Packs_TPD_HR
Type Element	
Data Carrier ReadableText	Format
1-SATMR	Content Pack_GS1-SAT
Type Element	
Data Carrier DotCode	Format
2-SHIFTCODE	Content SHIFTCODE
Type Element	
Data Carrier ReadableText	Format
3-text	Content Packs_TPD_UPUI_scripted_for_DM
Type Element	
Data Carrier DataMatrix	Format
4-SATHR	Content SAT
Type Element	
Data Carrier ReadableText	Format

Validation results:  Successful

OK

Cancel

Operations (MEX)

- SAT Code Ordering
- › SAT Code Reporting
- SAT Codes Lifecycle
- SAT Manual Import
- SAT Code Verification

SAT Code Ordering

Once the reference data have been created, you can order codes under Vault website -- Monitoring -- Security Code Order.

Security Code Order

Create

Order	Gate Code	Folio Number	Status	Sat Status	Generation State	Requested Quantity	Request Date
Test	Gate_DCTA	0000000021	Authorized	Updated	Generated	10,000	09/02/2022 10:16

Order: Test
 Folio Number: 0000000021
 Acknowledgment: Ack
 Transaction Stamp: Stamp
 Last Update Date: 09/02/2022 10:16
 Total Payment: 20000
 Total References: 2

Payment Reference

Payment Reference	Amount Paid	Date of Payment
204903920	10000.00	07/02/2022 23:00:00
1203620462	10000.00	08/02/2022 23:00:00

Code Files

Archive Name	Number of Codes	Downloaded
0000000021-1.zip	10000	false

On this example, we have one order. The codes have been downloaded as seen in the Code Files section. We can also see the payment list of the order.

Security Code Order

Create

Order	Gate Code	Folio Number	Status	Sat Status	Generation State	Requested Quantity	Request Date

No records to view

Edit security Code Order

Order: Test
 Actor Code: PRIMO_COMPLI
 Gate Code: Gate_DCTA
 Requested Quantity: 10000
 Status: Authorized

Payment Reference

Payment Reference	Amount Paid	Date of Payment	Add Payment
204903920	10000	09/02/2022 00:00	Delete
1303620462	10000	09/02/2022 00:00	Delete

Validate or Cancel

On this example, we have the creation of the order. Payments must appear on the order.

By pressing on the Create button, you can make a new order by filling the following info:

Order	Give a name to your order.
Actor code	Select one of the company created in the SAT reference data. This defines the owner of the codes: this actor will sign the request that is posted to the remote generation system.
Gate code	Select the factory created in the SAT reference data. This defines where the codes will be delivered.
Requested quantity	The quantity of codes to request from the authorities.
Status	Pending : Waiting for someone to authorize or reject this order. Nothing will be transmitted to the SAT service. Authorized : The order will be sent to the SAT service. Rejected : Order is blocked and nothing will be transmitted to the SAT service.
Total Payment	Sum of all payments
Total References	Number of payments done

Payments	Payments is collection of:	
	Payment Reference	Identifier of the reference of the payment
	Amount Paid	Amount value of the payment
	Date of Payment	Date payment has been made

On each order you can press the Sync button to force the update. Otherwise the updates will be done automatically by a synchroniser after some time.

For more synchronization options, see SAT [Background Jobs](#)

The *Comm Traces* button display any communication errors if there are any.

Order expiration

Orders are automatically expired if they are too old. Their status is changed to Rejected. This is to avoid unnecessary processing and to avoid accidental download of expired codes.

An order is automatically set to the Rejected status in the following conditions.

- Order has been created more than 6 months ago. (Configurable with setting `OrderExpirationTime`.)
- The code file's name have been received, but they have not been downloaded for more than 120 days. This means the government has generated the codes, but the Vault didn't download them and let them expire. (Code validity is defined by setting `SatExpirationTime`.)

SAT Code Reporting

Overview

This page allows to see production reports generated by the Gate and forwarded to the Vault. By default, the Gate will generate these reports every five minutes.

The report is then sent to the SAT service by the Vault. For a report to be considered as complete, it must contain all SAT Reference Data (see [Configuring SAT Reference Data](#))

If the **Product** or **Line** are not used in the SAT reference data, they will be created automatically. But they must be registered with SAT and fill the missing target ID.

Security Code Report Groups

Actor	Factory	Production line	Product	ProductionDate	Reports synchronization
PRIV10_COMP	Gate_DCTA	DCTA / 01	SKUMX.00	02/07/2019	5 / 5

SAT Company code: ORG220000000
Certificate number: 00E6F93BBE9A2A18A30F44BEF
SAT Factory code: F001
Country: CHE
SAT Line code: L001
Line identifier: 0
SAT Product code: 000001
Number of cigarettes: 20

Sync all

Security Code Report

Liz Id	Production Date	Ranges	Production Code	Status
0	02/07/2019 15:34	[51900,52199]	DCTA019183	Complete
0	02/07/2019 15:31	[51000,51299]	DCTA019183	Complete
0	02/07/2019 15:35	[52200,52499]	DCTA019183	Complete
0	02/07/2019 15:33	[51600,51899]	DCTA019183	Complete
0	02/07/2019 15:32	[51300,51599]	DCTA019183	Complete

Figure 1: Example of reports sent successfully to the SAT service

Use the following link <http://siat.sat.gob.mx> for manual reporting.

Synchronizing Reports

Each report displayed on this page allows to forcibly synchronize Security Code Reports using the **Sync** button. If not done manually, the system will automatically synchronize the data after some time.

To synchronize all reports at once, use the **Sync all** button.

Grafana Reports

Once the SAT codes have been printed, the manufacturer must report the production to the SAT ID Issuer within 78 hours. Failing to report within the given deadline will make the manufacturer subject to monetary fines.

One possible cause of delay when reporting is, if Inextor fails to send reports to SAT due to connection issues between the Vault and the SAT ID Issuer.

Therefore, a monitoring dashboard has been added to Grafana to allow manufacturers to see the status of a report and possibly, in case of issues, ask the ID Issuer for an extension.

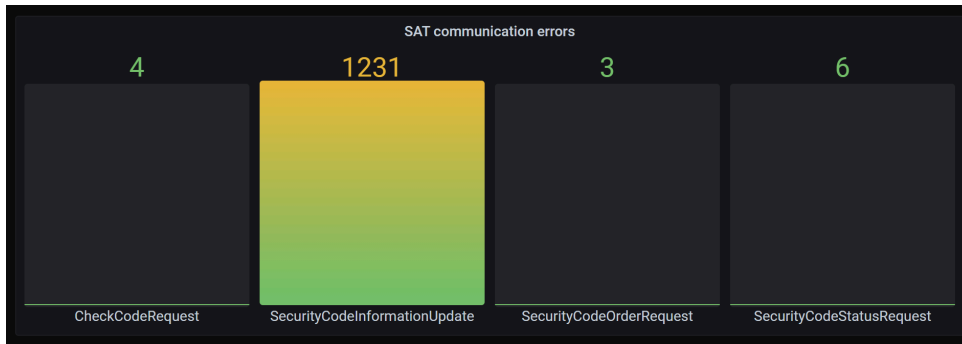


Figure 2: SAT production errors displayed using Grafana

In figure 2, the diagram shows the number of errors found for each of the following types of errors:

- **CheckCodeRequest**: errors related to SAT codes checked in the Vault Website
- **SecurityCodeInformationUpdate**: errors related to production report
- **SecurityCodeOrderRequest**: errors related to SAT order request
- **SecurityCodeStatusRequest**: errors related to polling SAT for order request status

Vault Reports - SAT Unused Expired Codes

Overview [🔗](#)

This page describes the process of creating and downloading reports about expired SAT codes

To understand more about reporting and schedules in general, click here: [Vault Website Power BI Paginated Reports](#).

Background [🔗](#)

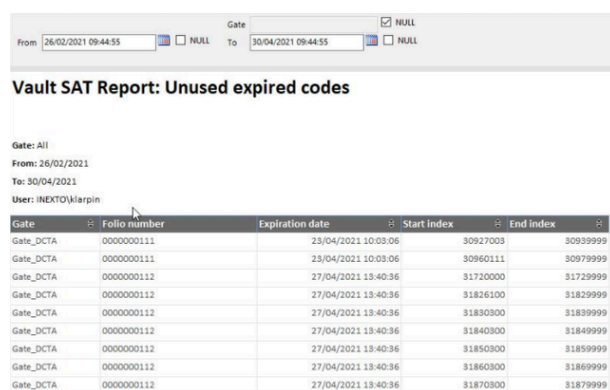
SAT codes are free (or very affordable) to download, and manufacturers are only required to pay for the codes used in production.

This means, a manufacturer could potentially print more codes and report less than the actual amount.

Therefore, in order to avoid having unreported codes from being used in production the Mexican Government now requires all codes (used and expired) to be reported

The **SAT Unused expired codes** report allows you to generate and download expired codes in Excel files.

Once downloaded, the files can be uploaded manually to the SAT website to report unused codes.



Gate	Folio number	Expiration date	Start index	End index
Gate_DCTA	0000000111	23/04/2021 10:03:06	30927003	30999999
Gate_DCTA	0000000111	23/04/2021 10:03:06	30960111	30979999
Gate_DCTA	0000000112	27/04/2021 13:40:36	31720000	31729999
Gate_DCTA	0000000112	27/04/2021 13:40:36	31826100	31829999
Gate_DCTA	0000000112	27/04/2021 13:40:36	31830300	31839999
Gate_DCTA	0000000112	27/04/2021 13:40:36	31840300	31849999
Gate_DCTA	0000000112	27/04/2021 13:40:36	31850300	31859999
Gate_DCTA	0000000112	27/04/2021 13:40:36	31860300	31869999
Gate_DCTA	0000000112	27/04/2021 13:40:36	31870300	31879999

figure 1: Power BI representation of expired SAT codes

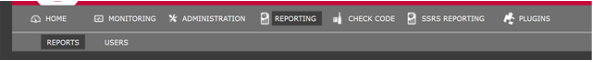
Power BI Report [🔗](#)

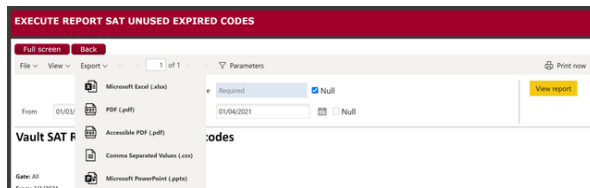
Power BI Reports can be downloaded manually or sent to recipients via scheduled reporting system in the Vault.

To export or schedule reports, see the steps below:

Manual Export [🔗](#)

Follow the steps below to manually export expired SAT codes:

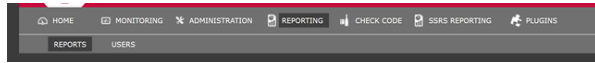
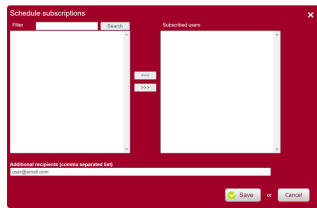
Step	Description
1	Open Vault Website and go to Reporting → Reports 
2	Select the SAT Unused expired codes report and click on Execute 
3	Once the report is generated, click on Export and select the file type to export



Note: It's possible to change the date of export and select the Gate associated with the production

Scheduled Export [🔗](#)

Follow the steps below to schedule and export SAT codes:

Step	Description
1	Open Vault Website and go to Reporting → Reports 
2	Select (expand) the SAT Unused expired codes report and click on Button + 
3	Add the email of the report's recipient and click on Save to close the dialogue. 
4	From the reports page (see step 2) click on Create new schedule and use the new dialogue to enter the report details (e.g., periodicity, file type, etc.) Click on Save to create the schedule 

SAT - Code Download and Usage Reconciliation

Overview:

Now that the Mexican codes must be paid upfront, The SAT Reconciliation report helps to reconcile the quantity of codes downloaded and used. The report has the following data grouped by FOLIO number:

Fields

Folio Number	Id of the related Security Code Order
Importation Date	Download of the codes date
Expiration Date	Date the codes will expire
Download	Quantity downloaded for this FOLIO order.
Initial	Initial quantity at Start Date or since forever if the Start Date is not defined. Empty when the codes have been imported after the start.
Final	Final quantity at End Date or until forever if the End Date is not defined
Consumption	Consumed Codes with or without a defined date ranges

Filter Parameters

Folios	Collection of all active folio numbers associated to a Security Code Order
Start Date	Start date of the amount analysis
End Date	End date of the amount analysis
Start Time	Shift times of the day 06:30 14:30 22:30
End Time	Shift times of the day 06:30 14:30 22:30

Folios: 0014, 0015, 0016, 0017 Start Date: 02/03/2023 NULL Start Time: 22:30
End Date: 09/03/2023 NULL End Time: 06:30

SAT - Download and Usage Reconciliation

Folios: All

Start Date: 02/03/2023 22:30:00

End Date: 09/03/2023 06:30:00

Report displays the Folios that were downloaded, consumed and/or expired between the start and end date.

Folio Number	Date		Amounts			
	Importation Date (Download)	Expiration Date	Download	Initial	Final	Consumed Codes
			Downloaded: 2,840,000	Total: 2,537,764	Total: 2,815,525	Total: 22,239
0014	02/03/2023 14:50:30	01/05/2023 14:50:30	2,300,000	2,297,764	2,297,764	0
0015	02/03/2023 15:18:28	01/05/2023 15:18:28	40,000	40,000	17,761	22,239
0016	02/03/2023 15:23:36	01/05/2023 15:23:36	200,000	200,000	200,000	0
0017	03/03/2023 07:25:01	02/05/2023 07:25:00	300,000		300,000	0

SAT - Download and Usage Reconciliation

Report Generated: 03/03/2023 11:37:10

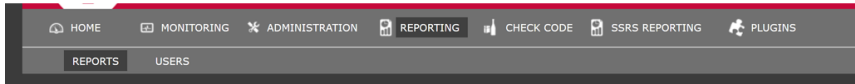
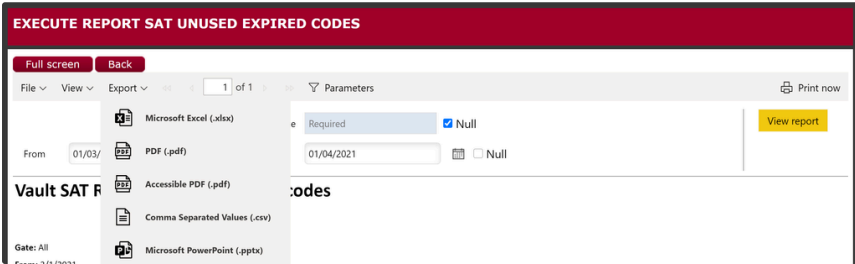
Page: 1 / 1

Power BI Report

Power BI Reports can be downloaded manually or sent to recipients via scheduled reporting system in the Vault. To export or schedule reports, see the steps below:

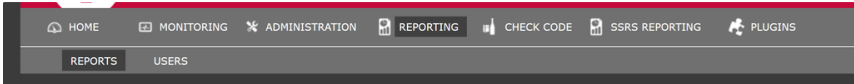
Manual Export

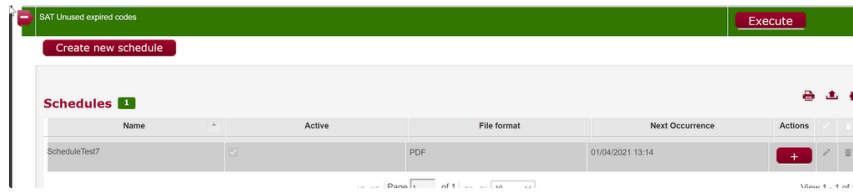
Follow the steps below to manually export the report:

Step	Description
1	Open Vault Website and go to Reporting → Reports 
2	Select the SAT Download and Usage Reconciliation report and click on Execute 
3	Once the report is generated, click on Export and select the file type to export  Note: It's possible to change the date of export and select the Gate associated with the production

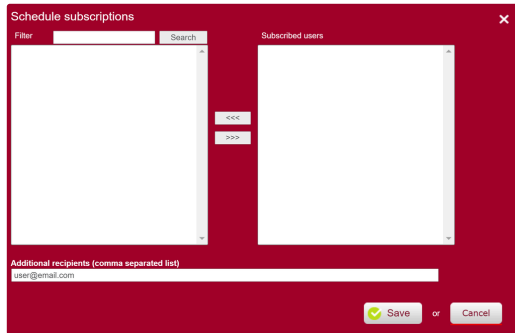
Scheduled Export

Follow the steps below to schedule and export the report:

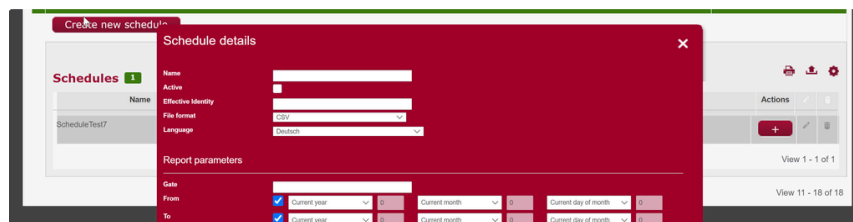
Step	Description
1	Open Vault Website and go to Reporting → Reports 
2	Select (expand) the SAT Download and Usage Reconciliation report and click on Button +



- 3 Add the email of the report's recipient and click on **Save** to close the dialogue.



- 4 From the reports page (see step 2) click on **Create new schedule** and use the new dialogue to enter the report details (e.g., periodicity, file type, etc.)
Click on **Save** to create the schedule



SAT - Production Manual Reporting

If there is no connection to the SAT service and production needs to be reported, it can be done manually.

- 1. Vault Website → Reporting. Run the report SAT_ProductionManualReporting.rdl. (Power BI need to be deployed)
- 2. Export the report as an Excel file.
- 3. Upload the production range on the SAT website. You will most probably need to manually upload the ranges or heavily adapt the Excel, because we do not know what format SAT is expecting.
- 4. After successful reporting the ranges, they need to be marked as completed on the Vault. Go to Monitoring→ Security Code Reports→ Import ranges. Select the Excel file.

Vault SAT Report: Production manual reporting

Company	First index	Last index	Product	Factory	Machine	Order number	Factory country	Production day	Quantity
RFC	Inicio	Final	Marca	Planta	Maquina	Lote	Origen	Fecha Importation	Cantidad
SAT970701NN3	8103010	8108516	123456	SCP970811NE6	2	SAT.74000128	CHE	03/08/2023 00:00:00	5507
SAT970701NN3	8110000	8110244	123456	SCP970811NE6	2	SAT.74000128	CHE	03/08/2023 00:00:00	245

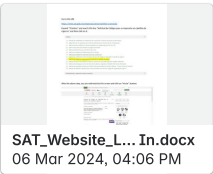
03/08/2023 09:04:46

Figure 1: Example of report. There is a header in English and Spanish to help on the Spanish SAT website. The ranges are the First and Last index. They are grouped together as much as possible to minimize the rows.

Range Id
90f5a7b9-35db-4a5e-bdc7-1be10fe53ea2
1179bf52-d0cf-4ff3-b237-1f42efe5ac3b
0ea08174-6709-412d-a839-261b69ba2543
4c0caa17-7e10-4af1-9fb1-3768d0ce7264
8676d056-e28b-4f35-9467-394507067a4f
aead8e3d-ae53-4d14-a7e3-3987151eea3f
4128cb06-660e-4df2-acac-3bd088baa0b1
3cc605d1-0183-40e6-b5ad-50edbf5805cd
9b22c44a-8556-4569-be7f-51d50c94c7c6

Figure 2: Page 2 of the report. Contains the range ID used by the Vault when using the Import Ranges button.

SAT website URL: <https://www.sat.gob.mx/empresas/otros-tramites-y-servicios>



✓ SQL query

This query can be used in case the Import Ranges button is not working.

Set in the Vault database, the reported ranges as synchronized. Fill the Query 1 with the Range IDs from the SAT_ProductionManualReporting.rdl

MarkSatRangeAsSynchronized [🔗](#)

```
1 UPDATE [dbo].[SatSecurityCodeRanges]
2 SET SynchronizationStatus = 2 -- 2= Synchronized
3     ,SynchronizationDate = GETUTCDATE()
4     ,Acknowledgment = NEWID()
5     ,SatStatus = 'ManualUpload'
6 WHERE SynchronizationStatus <> 2
7 AND Id IN (
8     'F2792107-3F57-4FEE-A183-0C45DDE8DBA9'
9     , '041BA3C5-AF93-434D-A469-14B4D3EDF783'
10 )
```

Query 1: Fill, the IDs with what you manually reported on the SAT website, then run it on the Vault database.

Vault Reports - JTI - Expired Mexican Codes

Overview

Certain clients producing Mexican codes would like to periodically receive email notifications about expiration dates of SAT codes.

This feature has been implemented using Power BI reporting tool, which is created from the Vault Website.

This page describes the steps required to schedule the code expiry reports notification.

To understand more about reporting and schedules in general, click here: [Vault Website Power BI Paginated Reports](#)

How to Create Email Notifications Schedules

Follow the steps below to create a schedule.

Step	Description
1	From the Vault Website, go to Reporting → Reports
2	Select (expand) the report type, i.e Available Mexican Codes and Expiration Date and click on Plus button (

Step	Description						
3	This field allows you to enter the email of the recipient(s). Once entered, click on Save to close the dialog. This will take you back to the page displayed above in step 2. Schedule subscriptions Filter Search <<< >>> Subscribed users Additional recipients (comma separated list) your-email@domain.com Save or						
4	Click on Create new schedule to define the details of the schedule. JTI - ExpiredMexicanCodes Create new schedule Schedules 1 <table><tr><th>Name</th><th>Active</th><th>File format</th></tr><tr><td>KenTest</td><td>☒</td><td>PDF</td></tr></table> <<< >>> Page 1 of 110	Name	Active	File format	KenTest	☒	PDF
Name	Active	File format					
KenTest	☒	PDF					
5	Use the newly-opened dialog to enter the report details (e.g., periodicity, file type, etc.) and click Save to close the dialog.						

Step	Description						
	Schedule details Name Active ☐ Effective Identity File format CSV Language Deutsch Report parameters StartDate ☒ Current year 0 Current month 0 Current day of EndDate ☒ Current year 0 Current month 0 Current day of Schedule Definition Start Date 12/04/2021 End Date Schedule ☐ Hour ☒ Day ☐ Week ☐ Month ☐ Once Daily Schedule ☐ On the following days: ☒ Mon☒ Tue☒ Wed☒ Thu☒ Fri☒ Sat☒ Sun ☐ Every weekday ☒ Repeat after this number of days: 1 Start time (24h): 02 : 00 ☒ Save						
6	Click on Execute to complete the process JTI - ExpiredMexicanCodes Create new schedule Schedules 1 <table><thead><tr><th>Name</th><th>Active</th><th>File format</th></tr></thead><tbody><tr><td>KenTest</td><td>☒</td><td>PDF</td></tr></tbody></table> Page 1 of 1 10	Name	Active	File format	KenTest	☒	PDF
Name	Active	File format					
KenTest	☒	PDF					
7	The schedule has been created, the dashboard below shows the list of SAT codes with their expiration dates						

Step	Description
	From 26/02/2021 09:44:55 ☐ NULL Gate ☒ NULL To 30/04/2021 09:44:55 ☐ NULL

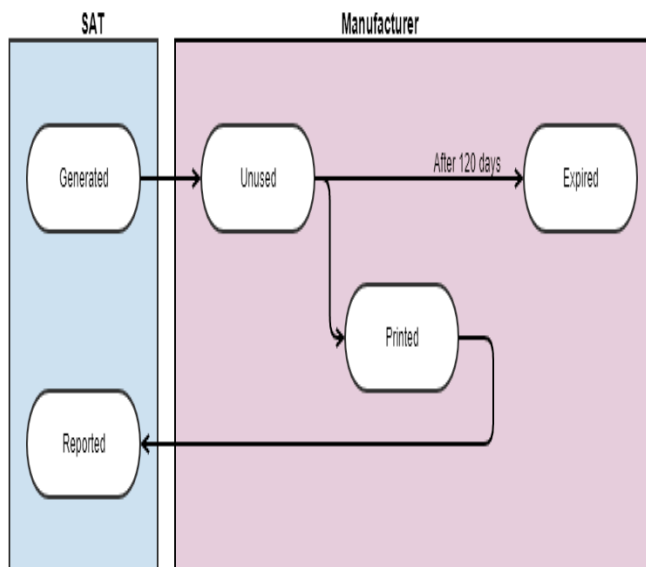
SAT Codes Lifecycle

The Mexican government (SAT) wants to know what happens to the codes they provide to the manufacturers.

The Vault report automatically the printed codes.

SAT wants to receive info about "Unused" and "Expired" codes. This doesn't need to be reported with as often and as precisely as the "Printed". A simple report run manually should be enough. (SAT doesn't provide a web-service to report the codes Unused or Expired.)

From SAT point of view, the codes banned in Inextor are unused if expiration date is not reached. Otherwise they are expired.



Normally we should have:

- Reported = Printed
- Generated = Reported + Unused + Expired.

SAT Manual Import

If the connection between the Vault and SAT is not working, it is possible to manually download the codes from SAT and import them in the Gate.

To do it, go to Products / External Codes. Click on the 'Import...' button. A new window opens.

External Codes Importer

The products.xml file and all the related external codes files have to be selected at the same time

Importer

MEXICO

Importer Settings:

File paths

C:\MEXICO\SOLIC_1496_ARCHIVO_1_DE_250.zip
C:\MEXICO\SOLIC_1496_ARCHIVO_2_DE_250.zip

Browse...

Vault

PRIV10

Expiration Date

Wednesday, March 2, 2022

Validation results: Successful

Import

Cancel

There, select MEXICO external codes in the Importer drop-down. Add one or more files generated by SAT through the 'Browse' button. If several vaults are connected to the Gate, select the relevant one. The expiration date is calculated adding 60 days to the date in which the codes were delivered by SAT. For example, if the SAT codes were delivered January 1st, the expiration date will be the 2nd of March. Click 'Import' when done.

The files are now available within INEXTOR, as seen in the following figure:

[illegible]

SAT Code Verification

The Mexican codes can be verified on the Vault website and the Liz UI. Further details are available in [Code Decomposition](#).

Vault

As SAT codes can be materialized on internal or external storage (see [Configuring Materialization](#)), the verification is done as for most of the external codes (e.g. TPD, DLR).

Note that after printing it can take several minutes for the production data to move from Liz→Gate→Vault.

Website page manual : [Vault \(Website\): Check Codes](#)

Liz

On the Liz Operation UI, a code can be verified as soon as it has been printed. Production details will be displayed. This verification does not requires any call to Mexican government.

This option is only available if the setting "MaterializeSatCodesOnGate" is set to true on the Vault before downloading codes. With this the chunk of codes will be un-zipped (materialized) when they arrive on the Gate.

UI page manual : [Code Verifier](#).

Appendix (MEX)

- [Background Jobs](#)

Background Jobs

This page contains a list of background jobs associated with Mexican production.

For global background jobs, see [Background Tasks - Jobs](#)

- [Production](#)
- [Reporting](#)
- [Monitoring](#)

Production

SynchronizeSatObjects

To prepare the request sent to the SAT Government. This includes order, and report information from the database.

Application	Component	Job Name	Schedule
Vault	SatManager	SynchronizeSatObjects	every 2 minutes

SatCommunicationScheduler

To synchronize master data between the Vault and the SAT Government.

Application	Component	Job Name	Schedule
Vault	SatManager	SatCommunicationScheduler	once

Reporting

ReportCompleteScheduler

To prepare and process reports that must be sent to the SAT Government.

Application	Component	Job Name	Schedule
Vault	SatManager	ReportCompleteScheduler	once

Monitoring

MonitoringOrdersIssue

To receive email notifications about failed or slow SAT orders.

Application	Component	Job Name	Schedule
Vault	SatOrderMonitoring	MonitoringOrdersIssue	every 30 minutes

Inextor Jordan (JOR) regulated market operational guide

This Guide is in the dedicated Jordan Project space, in [Inextor Jordan operational guide](#).

Inextor PROSEFA Regulated Market Operational Guide

- › [Introduction \(Prosefa\)](#)
- › [Configuration \(Prosefa\)](#)
- [Operation \(Prosefa\)](#)

Prerequisites (Prosefa)

Background (Prosefa)

For an explanation of the Prosefa code regulation, see below for details:

The Prosefa Platform consists of an integrated system to support both physical stamping and Direct Product Marking of products in Angola that must hold a secure fiscal stamp, such as tobacco and its substitutes, wines and spirits, beers and sugary drinks to be consumed in the domestic market, whether produced in Angola or imported.

The sealing of these products consists of the affixing of physical seals or direct marking on the packages, which include an exclusive and Unique Identifier (UID) for each individual product package, which allows the individual tracking of each product unit placed on the market.

Each stamp with a Unique Identifier is declared on the Prosefa Platform as associated with a specific product by the economic operator who affixes it. The agencies responsible for inspecting seals, economic agents and any citizen can trace the origin of a product to which they have access, validating its legitimacy by reading the Unique Identifier attached to it, by consulting the Identification and Tracking System of the Prosefa Platform.

Many of the products covered by Prosefa may be sealed in their production lines using the Direct Marking of the packages, after being filled. Direct Marking to Product is accomplished by engraving a Unique Traceability Identifier (UID), Direct To Print (DTP) on bottles, cans or other legally acceptable containers. With this option, no physical tax seal label will be applied to the product. This option is suitable for high-speed production lines where the placement of physical seals may be inappropriate.

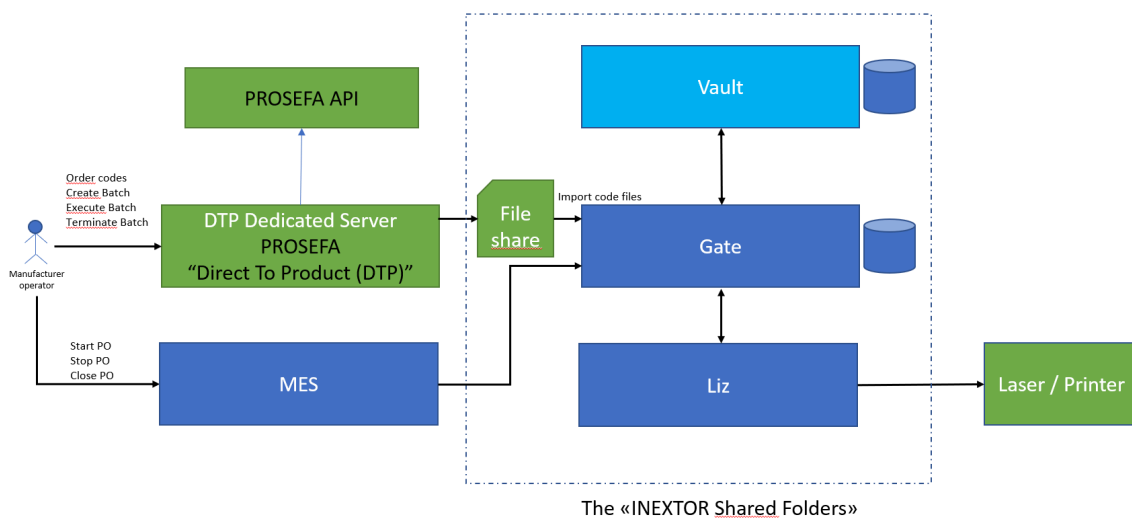
All Prosefa documentation can be found in [AN - Documentation](#).

System Overview (Prosefa)

For an overview of the implementation of the Prosefa regulation in the INEXTOR software, see below for details:

The INEXTOR Gate imports automatically the files of codes exported from PROSEFA.

PROSEFA batches and Production Orders transmitted to the Gate are mapped one-to-one, using the same identifier (order number). This allows INEXTOR to match the imported codes with the production order that can use them.



Configure Prosefa External Codes Import and Printing

✖ This page describes for now the process to test Prosefa codes by using the Generic import feature.

Developments are planned for Prosefa regulation, using the [FCTC driver](#). Once these developments are integrated in INEXTOR, this page will have to be updated.

✖ **The final format of the codes received by the id issuer is still not clear.**

Based on the last production codes that were delivered, nothing separates the two parts of the code. This KB assumes that the code are 9 characters long and without any separator.

If the separator is present in your original files please contact Inextor's dev team to adapt the configuration accordingly.

This page describes how to configure the INEXTOR system in order to be able to manually import and use external codes for Angola (PROSEFA platform made by OpSec). It applies for pack codes.

Refer to the general guide describing the feature: [Generic Import and Usage of External Codes - INEXTOR Operational Guide](#).

Configuration [🔗](#)

Follow the steps described here below as an installation guide.

These steps describe a way to configure the code types for PROSEFA (Angola) in the system. Note that it can be further customized, especially in terms of the required property names or the import validation regex.

Step 1: Upgrade INEXTOR to a compatible version [🔗](#)

Download and install a version recent enough to contain the Configurable external codes Import feature (10.1.0.4678 or greater). Upgrade Vault, Gate and Liz.

If the Liz is not updated, the external codes will be wasted at production start.

Step 2: check the stored procedure [dbo].[ConfigureNewExternalCodeType] on Gate and Vault [🔗](#)

The Gate and Vault should already have a stored procedure [dbo].[ConfigureNewExternalCodeType].

If this stored procedure is not present in the database, or if it does not take as input the CodeTypeId, please take the stored procedures documented in [Generic Import and Usage of External Codes - INEXTOR Operational Guide](#) page.

Step 3: Populate the Vault database [🔗](#)

Execute the stored procedure [dbo].[ConfigureNewExternalCodeType] on Vault with following parameter:

Parameter	Value
ExternalCodeTypeCode	PROSEFA
ExternalCodeTypeName	Prosefa external codes
ExternalCodeTypeDescription	Prosefa external codes

CodeTypeId	160
MaxCodeLength	9
CodeRegularExpression	^[0-9a-zA-Z]{7}[0-9a-zA-Z]{2}\$

```

1 DECLARE @return_value int
2 EXEC     @return_value = [dbo].[ConfigureNewExternalCodeType]
3         @ExternalCodeTypeCode = N'PROSEFA',
4         @ExternalCodeTypeName = N'Prosefa external codes',
5         @ExternalCodeTypeDescription = N'Prosefa external codes',
6         @CodeTypeId = 160,
7         @MaxCodeLength = 9,
8         @CodeRegularExpression = N'^[0-9a-zA-Z]{7}[0-9a-zA-Z]{2}$'
9 SELECT  'Return Value' = @return_value

```

Make sure that the CodeTypeId is an input parameter.

Step 4: Populate the Gate database [🔗](#)

Execute the stored procedure [dbo].[ConfigureNewExternalCodeType] on Gate with following parameter:

Parameter	Value
ExternalCodeTypeCode	Same as Vault
ExternalCodeTypeName	Same as Vault
ExternalCodeTypeDescription	Same as Vault
CodeTypeId	Same as Vault
MaxCodeLength	Same as Vault
CodeRegularExpression	Same as Vault
EcrProperties	ORDERNUMBER
EcrPropertyName	ProsefaExternalCodeReference
EnablePropertyName	ProsefaRegulation For the Prosefa regulation to apply, this property should have a non-empty value (for example "1") in the Market, or in the MP or PO
CodesValidity	180d
UnitType	Pack
ContentCode	NULL
AddUnitTypeToEcr	0

```

1 DECLARE @return_value int
2 EXEC @return_value = [dbo].[ConfigureNewExternalCodeType]
3     @ExternalCodeTypeCode = N'PROSEFA',
4     @ExternalCodeTypeName = N'Prosefa external codes',
5     @ExternalCodeTypeDescription = N'Prosefa external codes',
6     @CodeTypeId = 160,
7     @MaxCodeLength = 9, ----For JTI is 10
8     @CodeRegularExpression = N'^[0-9a-zA-Z]{7}[0-9a-zA-Z]{2}$', ---- For JTI N'^[0-9a-zA-Z]{7};[0-9a-zA-Z]
{2}$'
9     @EcrProperties = N'ORDERNUMBER',
10    @EcrPropertyName = N'ProsefaExternalCodeReference',
11    @EnablePropertyName = N'ProsefaRegulation',
12    @CodesValidity = N'180d',
13    @UnitType = N'Pack',
14    @ContentCode = NULL,
15    @AddUnitTypeToEcr = 1
16 SELECT 'Return Value' = @return_value

```

Make sure that the CodeTypeId is an input parameter.

Use following script to insert contents for Prosefa on Gate:

```

1 -- Insert Prosefa contents
2 INSERT [dbo].[Contents] ([Code], [Guid], [Description], [ContentType], [MinLength], [MaxLength],
[RegularExpression], [RegularExpressionDescription], [StartupModeValue], [PropertyName], [IssuerCode],
[IssuerArgumentsXml], [Format], [CodeMaskCode], [ValidatorComponentName], [PropertiesXml], [Version],
[ModifiedOn], [ModifiedBy], [ExternalCodeSource], [ExternalCodeVaultRole], [Deleted])
3     VALUES (N'Prosefa_Packs', N'270ac705-f0bf-48e0-b29e-d2b3ebc5fd89', N'Prosefa Packs', 3, 10, 10, N'', N'',
N'', N'', NULL, NULL, N'{Prosefa_Packs_UID} {Prosefa_Packs_VC}', NULL, NULL, N'<Set ns="" />', 1, CAST(N'2023-
04-21T11:47:51.380' AS DateTime), N'INEXT0\fjacquet', NULL, NULL, 0)
4 INSERT [dbo].[Contents] ([Code], [Guid], [Description], [ContentType], [MinLength], [MaxLength],
[RegularExpression], [RegularExpressionDescription], [StartupModeValue], [PropertyName], [IssuerCode],
[IssuerArgumentsXml], [Format], [CodeMaskCode], [ValidatorComponentName], [PropertiesXml], [Version],
[ModifiedOn], [ModifiedBy], [ExternalCodeSource], [ExternalCodeVaultRole], [Deleted])
5     VALUES (N'Prosefa_Packs_UID', N'1d50d6cf-bd29-4a93-a0d5-e38b2bdc366c', N'Prosefa Packs UID', 2, 7, 7, N'',
N'', N'000000', N'', N'External', N'<Set ns=""><P n="CodeTypeId" t="s" v="160" /><P
n="ExternalCodeReferencePropertyName" t="x" v="ProsefaExternalCodeReference" /><P n="Format" t="x" v="[0,7]"
/><P n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P
n="ROLE" t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Pack" /><P n="SOURCE" t="x"
v="PROSEFA" /></Set>', NULL, NULL, NULL, N'<Set ns="" />', 4, CAST(N'2023-04-21T11:46:57.250' AS DateTime),
N'INEXT0\fjacquet', N'PROSEFA', N'Secondary', 0)
6 INSERT [dbo].[Contents] ([Code], [Guid], [Description], [ContentType], [MinLength], [MaxLength],
[RegularExpression], [RegularExpressionDescription], [StartupModeValue], [PropertyName], [IssuerCode],
[IssuerArgumentsXml], [Format], [CodeMaskCode], [ValidatorComponentName], [PropertiesXml], [Version],
[ModifiedOn], [ModifiedBy], [ExternalCodeSource], [ExternalCodeVaultRole], [Deleted])
7     VALUES (N'Prosefa_Packs_VC', N'abf06831-ccd8-4fe2-9061-d690a799bfd9', N'Prosefa Packs VC', 2, 2, 2, N'',
N'', N'00', N'', N'External', N'<Set ns=""><P n="CodeTypeId" t="s" v="160" /><P
n="ExternalCodeReferencePropertyName" t="x" v="ProsefaExternalCodeReference" /><P n="Format" t="x" v="[7,2]"
/><P n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P
n="ROLE" t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Pack" /><P n="SOURCE" t="x"
v="PROSEFA" /></Set>', NULL, NULL, NULL, N'<Set ns="" />', 1, CAST(N'2023-04-21T11:46:38.460' AS DateTime),
N'INEXT0\fjacquet', N'PROSEFA', N'Secondary', 0) --excluding JTI
8     VALUES (N'Prosefa_Packs_VC', N'abf06831-ccd8-4fe2-9061-d690a799bfd9', N'Prosefa Packs VC', 2, 2, 2, N'',
N'', N'00', N'', N'External', N'<Set ns=""><P n="CodeTypeId" t="s" v="160" /><P
n="ExternalCodeReferencePropertyName" t="x" v="ProsefaExternalCodeReference" /><P n="Format" t="x" v="[8,2]"
/><P n="MachineReferencePropertyName" t="x" v="" /><P n="ProductReferencePropertyName" t="x" v="" /><P
n="ROLE" t="x" v="Secondary" /><P n="SerializationLevelReference" t="x" v="Pack" /><P n="SOURCE" t="x"
v="PROSEFA" /></Set>', NULL, NULL, NULL, N'<Set ns="" />', 1, CAST(N'2023-04-21T11:46:38.460' AS DateTime),
N'INEXT0\fjacquet', N'PROSEFA', N'Secondary', 0) ---FOR JTI

```



```
9
10     INSERT [dbo].[ContentsContents] ([ParentContentCode], [ChildContentCode]) VALUES (N'Prosefa_Packs',
11     N'Prosefa_Packs_UID')
11 INSERT [dbo].[ContentsContents] ([ParentContentCode], [ChildContentCode]) VALUES (N'Prosefa_Packs',
    N'Prosefa_Packs_VC')
```

Step 5: Restart INEXTOR services [🔗](#)

Vault and Gate services must be restarted in order to complete the Prosefa external codes configuration process.

Operation (Prosefa)

To test the import and usage of Prosefa codes, see page [Testing Prosefa regulation](#).

Inextor Serbia (RS) regulated market operational guide

Document Information Table	
Document Type	Operational Guide
Classification	Company Confidential
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Introduction [🔗](#)

Document INEX-OG-00013: Inextor Serbia (RS) Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the EC regulated market requirements. Document INEX-OG-00013 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the RS Regulated Market, system overview and background.
- **Configuration** - Operation driver, contents and layouts.
- **Operations** - Production order and code importing.

Purpose [🔗](#)

The purpose of INEX-OG-00013 is to provide the required knowledge necessary to successfully set up Inextor correctly to support RS market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the RS regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)



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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Background

The Serbian tobacco regulation requires unique serialization codes on tobacco products sold in Serbia.

These codes must be ordered from the Serbian authorities and applied to products to ensure local track and trace requirements compliance.

 Previously, Serbian codes could only be ordered manually through the Gate. A new implementation adds support for automatic code ordering through forecasts, consistent with the approach used for other regulations like TPD.

System Overview

The Serbian regulation system consists of several components working together:

1. **ID Issuer:** The Serbian authority (using the code RSGOVEAKCIZE) that provides unique codes for tobacco products.
2. **FCTC Forecast Mechanism:** The same forecast-based ordering system used for TPD codes, now adapted for Serbian regulation.
3. **Gate Configuration:** The operation driver settings that control how Serbian code ordering works, including company type and forecast enablement.
4. **Vault Plugin:** The connector that communicates with the Serbian ID Issuer API to order codes automatically.
5. **Custom Attribute Tabs:** Fields added to Production Orders and Manufactured Products to capture Serbian-specific attributes such as product type, marking nomenclature, product code, pack weight, and pack units.

The system supports standalone Serbian code production as well as paired code scenarios (where Serbian codes are paired with TPD codes). Unlike some other regulations, Serbian codes do not expire, which is a change from the previous implementation where a 6-month expiration was enforced.

Serbia operation driver

See [Gate Op. Driver: FCTC Driver](#)

Serbian Contents and Layouts

Overview [🔗](#)

Serbian Pack codes are printed using a set of pre-configured Contents. Contents for other unit types, and all layouts, need to be created manually.

Contents [🔗](#)

The following pre-configured Serbian contents are available:

- Packs_RS_HR: Contains the human readable pack code
- Packs_RS_MR_DataMatrix: Contains the machine readable pack code, for printing in a data matrix (without leading FNC1)
- Packs_RS_MR_DotCode: Contains the machine readable pack code, for printing in a dotcode (with leading FNC1)
- Packs_RS_ProductCode: Contains only the product code
- Packs_RS_SerialNumber: Contains only the serial number

Format [🔗](#)

When defining Dynamic (External) contents for Serbian codes, the following formats can be specified, to represent different parts of a Serbian pack code:

- IDIssuerCode - the content will contain the code of the Serbian ID Issuer (MF).
- SerialNumber- the content will contain the serial number of the Serbian pack code.
- ProductCode- the content will contain the product code of the Serbian pack code.

Layouts [🔗](#)

The Serbian pack layout must reference content containing the machine-readable version of the code (such as Packs_RS_MR_DataMatrix or Packs_RS_MR_DotCode).

Serbian Codes Manual Import

This document outlines the process for importing Serbian codes on the Gate.

Importing codes involves the user uploading a file (in Microsoft Excel xlsx format) that includes codes authorized for use on a product.

As the file itself carries no master data, a production order needs to be defined on the Gate in advance, and selected during the import process. The external code chunks that will be generated during the import process will adopt the master data of the selected production order. See [Serbia Production Orders](#) for the list of attributes necessary.

 Importing Serbian codes on the Vault possible, this capability is only available on the Gate.

Importing Codes

 Before getting started, ensure the [Gate Op. Driver: FCTC Driver](#) and its Serbian module are enabled and configured properly.

Follow these steps to import Serbian codes on the Gate manually:

1. Navigate to Gate → Products → External Codes
2. Click the **Import...** button.
3. From the **External Codes Importer** dropdown select *RS*.
4. Select the production order for which these codes are needed.
5. Use the **Browse** button to choose the xlsx code file to import.
6. Click **Import**. A status message will be displayed based on the outcome of the operation.

 **NOTE:** As the Serbian code file does not contain any metadata, it is the responsibility of the operator to make sure that the codes are compatible with the selected production order. The Gate is unable to check this.

Serbia Production Orders

Production orders for Serbia are handled through the Gate Administration client.

For a Production Order to be considered for the Serbian regulation it needs to contain an attribute `DESTINATIONMARKET` with an appropriate value (both are configurable in the [Operation Driver](#) settings).

Creating Production Orders

To create a production order follow these steps:

1. Navigate to **Production** → **Production Orders** and then select the **New** button.
2. A new window will appear, prompting you to input the necessary details to initiate a production order.
3. Refer to the table below for guidance on completing the required fields and click on **Save**.

Field	Usage and Description
Order Number	A unique Order Number for the production order
Manufactured Product	Select the product you will manufacture.
Link-Up Setup	The production line (LinkUp) where production will take place
Requested Quantity	The requested quantity in packs, i.e. the number of packs that you expect to produce
Order Expected Start Date	The expected start date of the production order. NOTE: This field is not used at the moment, but in the future, it will help Vault determine when the codes will have to be ordered
Order Full Quantity	Whether all codes should be ordered simultaneously, overriding the slicing strategy selected when configuring the forecast driver. NOTE: This field is not used at the moment but in the future Vault will use it to distribute the ordered quantities in one or more code orders.
Total Quantity	After saving the production order, this read-only field will contain the number of packs with the rejection rate configured on the Link-Up. So if you have a requested quantity of 10'000 and have configured a rejection rate of 1% for packs, you would see 10,100 in this field. This number reflects the number of packs codes that will be ordered.
Attributes	The following attributes need to be available in the Production Order, as they are required by the Serbian regulation. They can be defined in the PO itself or at the Manufactured Product level: • RS_CompanyType: Company type (1 for Producer, 2 for Importer) • RS_ProductType: Product type (1 for Cigarettes, 2 for Smoke Free Product) • RS_KnCode: KN commodity code • RS_ProductCode: the unique 1-4 character product code assigned by the ID Issuer • RS_PackWeight: the average weight of the pack in grams, rounded to the nearest 0.1 gram

- | | |
|--|---|
| | <ul style="list-style-type: none">• RS_PackUnits: how many cigarettes in a pack |
|--|---|

Automatic Code Ordering - User Guide

Overview [🔗](#)

This guide walks you through configuring and using the automatic code ordering system for Serbian tobacco regulation.

The automatic code ordering feature uses INEXTOR's forecast mechanism to order codes from the Serbian ID Issuer based on your production needs.

Configuration Steps [🔗](#)

1. Configure the ID Issuer on the Vault [🔗](#)

1. Log in to the Vault application
2. Navigate to "Configuration" > "ID Issuers"
3. Click "Add New ID Issuer"
4. Enter the following information:
 - Name: Serbian ID Issuer
 - Code: RSGOVEAKCIZE
 - Type: Select "Serbian ID Issuer" from the dropdown
5. Click "Save"
6. Click on the newly created ID Issuer
7. Configure the plugin parameters:
 - Service URL: Enter the eExcise API service URL provided by Serbian authorities
 - API Key: Enter the authentication key obtained from the ID Issuer
8. Click "Test Connection" to verify the configuration
9. Click "Save" when the connection test is successful

2. Configure the FCTC Operation Driver on the Gate [🔗](#)

1. Log in to the Gate application
2. Navigate to "Operation Drivers" > "FCTC Driver"
3. Click "Configure"
4. In the configuration panel, locate the Serbian regulation section and set:
 - Company Type: Select appropriate value (1 for Producer, 2 for Importer, 5 for Special trade procedure)
 - Enable forecasts: Check this box to activate automatic code ordering
 - Enable tab in Production Orders form: Check to display Serbian attributes in PO screen
 - Enable tab in Manufactured Products form: Check to display Serbian attributes in MP screen
5. Click "Save"
6. Click "Restart" to apply the changes

3. Set Up Manufacturing Market Constraint [🔗](#)

1. Navigate to "Configuration" > "Manufacturing Market Constraints"
2. Click "Add New" or edit an existing constraint for the Serbian market
3. In the Market field, select "Serbia (RS)"

4. Configure the Vault roles appropriately (typically set your Vault as "Primary")
5. Click "Save"

4. Create a Production Order for Serbian Market [🔗](#)

1. Navigate to "Production" > "Production Orders"
2. Click "New Production Order"
3. Fill in the standard fields:
 - Order Number: Enter a unique identifier
 - Brand Code: Select the appropriate product
 - Description: Enter a description
 - Requested Quantity: Enter the number of codes needed
 - Link Up Setup: Select the appropriate machine and manufacturing center
 - Start Date: Set the planned production date
4. Navigate to the "Serbian" tab (visible if you enabled it in step 2)
5. Complete the Serbian-specific fields:
 - Product Type: Select appropriate type (1: Cigarettes, 2: Smoke-free product)
 - Marking nomenclature: Enter the RS_KnCode value
 - Product code: Enter the 1-4 digit code (no leading zeros)
 - Pack weight: Enter the weight with exactly one decimal place (e.g., 10.0)
 - Pack units: Enter the number of units per pack (integer value)
6. Click "Save"

5. Verify Forecast Generation [🔗](#)

1. After saving the Production Order, the system automatically generates forecasts
2. To confirm forecast generation, navigate to "Reports" > "Forecasts"
3. Filter the list to show forecasts for Serbian codes
4. Verify that a forecast exists for your Production Order with the correct quantity

6. Monitor Code Ordering Process [🔗](#)

1. Navigate to "Reports" > "Code Orders"
2. Filter by "ID Issuer" and select the Serbian ID Issuer
3. Locate the order associated with your Production Order
4. Check the status:
 - "Pending" indicates the order is waiting to be sent
 - "Sent" indicates the order has been submitted to the ID Issuer
 - "Processing" indicates the ID Issuer is generating codes
 - "Completed" indicates codes have been received
5. Once the status is "Completed," the codes are automatically materialized and available for use

7. Verify Code Availability for Production [🔗](#)

1. Return to "Production" > "Production Orders"
2. Locate your Serbian market Production Order
3. Check the "Code Availability" column
4. A green indicator confirms that codes are available for production
5. You can also click on the Production Order and select the "Codes" tab to see detailed code availability

Additional Information [🔗](#)

- **Code Expiration:** Unlike other regulations, Serbian codes do not expire once ordered
- **Paired Production:** If producing for both TPD and Serbian regulations, both code types will be ordered automatically if forecasts are enabled for both
- **Manual Override:** If needed, you can still manually import Serbian codes using the Import form accessible via "Tools" > "Import" > "Serbian Codes"

By following these steps, you have successfully configured and used automatic code ordering for Serbian tobacco regulation, streamlining your compliance process.

Inextor Tajikistan (TJ) regulated market operational guide

Document Information Table	
Document Type	Operational Guide
Classification	Company Confidential
Document ID	INEX-OG-00014
Version Number	v1.0
Owner	Michael Houlding Lead Technical Writer - Engineering
Reviewer / Approver	Samson Daniel Technical Writer - Engineering
Reviewer / Approver	Christos Stogiannopoulos Development Manager - Factory Systems



Document Approval - Document does not have a workflow applied.

Introduction [🔗](#)

Document INEX-OG-00014: Inextor Tajikistan (TJ) Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the TJ regulated market requirements. Document INEX-OG-00014 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the TJ Regulated Market, system overview and background.
- **Configuration** - Operation driver, contents and layouts.
- **Operations** - Production order and code importing.

Purpose [🔗](#)

The purpose of INEX-OG-00014 is to provide the required knowledge necessary to successfully set up Inextor correctly to support TJ market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the TJ regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)

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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.1	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Tajikistan Operation Driver

See [Gate Op. Driver: Tajikistan Codes Driver](#)

Tajikistan Contents and Layouts

Overview [🔗](#)

The Tajikistan codes are printed using a set of Contents that come out of the box. Layouts need to be created manually.

Contents [🔗](#)

The Tajikistan contents that are available out of the box are the following:

- Packs_TJ_MR - dynamic content that represents a full Tajikistan pack code.
- Bundles_TJ_MR - formatted content that represents a full Tajikistan bundle code. This content references the bundle contents below.
- Bundles_TJ_AI01 - dynamic content that represents the AI01 (GTIN) of a Tajikistan bundle code
- Bundles_TJ_AI21 - dynamic content that represents the AI21 (Serial) of a Tajikistan bundle code
- Bundles_TJ_AI93 - dynamic content that represents the AI93 (Crypto) of a Tajikistan bundle code

Format [🔗](#)

The Tajikistan codes can be split using different Format values. Splitting is often needed when the codes must be modified before printing. For example:

- Sometimes pack labels must contain GTIN or Serial as human readable text
- Usually the bundle codes must contain GS or FNC1 in order to be GS1 standard compliant

Supported case-sensitive values for Format of pack codes:

- FULL - the content will contain the full Tajikistan code
- GTIN - the content will contain the GTIN part of the Tajikistan pack code
- SERIAL - the content will contain the SERIAL part of the Tajikistan pack code

Supported case-sensitive values for Format of bundle codes:

- AI(01) - the content will contain the GTIN part of the Tajikistan bundle code
- AI(21) - the content will contain the Serial part of the Tajikistan bundle code
- AI(93) - the content will contain the Crypto part of the Tajikistan bundle code

i To create pack contents that contain parts of the Tajikistan pack codes copy all settings from Packs_TJ_MR into a new content (e.g. Packs_TJ_GTIN, or Packs_TJ_Serial) and change the Format parameter to the desired value.

Layouts [🔗](#)

The Tajikistan layouts must reference the full machine readable contents (ending with _MR above).

Tajikistan Codes Manual Import

The document outlines the process for importing Tajikistan codes into the Gate.

Importing codes involves the user uploading a file (in zip format) that includes codes authorized for use on a product.

Once the code is imported, the user can create a production order through an ERP/SAP software or via the Gate Administration user interface.

 Importing Tajikistan codes via the Vault Application is currently not achievable. Only the Gate allows for this process.

Importing Codes

 Before getting started, ensure the [Tajikistan Codes Driver](#) is enabled and configured properly.

Follow these steps to import Tajikistan codes on the Gate manually:

1. Navigate to Gate → Products → External Codes
2. Click the **Import...** button.
3. From the **External Codes Importer** dropdown select *TJ*.
4. Use the **Browse** button to choose the zipped codes to import.
5. Click **Import**. A status message will be displayed based on the outcome of the operation.

Technical Details:

- The Tajikistan codes are not linked to a production line or a factory, therefore once imported they can be used with any production order, as long as the GTINs of the worked units match.
- The Tajikistan operation driver will automatically detect the GTIN and the unit type of the codes.
- The Gate Importer for Tajikistan codes supports: *.ZIP and *.CSV files. One ZIP file may contain multiple CSVs for multiple unit types.

 After successfully importing the codes, to create a production order through the Gate Administration (see [Tajikistan Production Orders](#))

Tajikistan Production Orders

Production orders for Tajikistan are handled through the Gate Administration client.

For a Production Order to be considered for the Tajikistan regulation it needs to contain an attribute `DESTINATIONMARKET` (configurable in the [Operation Driver](#) settings) with a value equal to TJ or TJK (the Tajikistan ISO country codes; also configurable in the Operation Driver settings).

Creating Production Orders [🔗](#)

To create a production order follow these steps:

1. Navigate to **Production** → **Production Orders** and then select the **New** button.
2. A new window will appear, prompting you to input the necessary details to initiate a production order.
3. Refer to the table below for guidance on completing the required fields and click on **Save**.

i When creating a production order, a new tab labeled "TJ" will appear, featuring a single read-only checkbox. This checkbox aids in identifying whether the Production Order should adhere to Tajikistan regulations. By checking the box, the Tajikistan regulation will be activated for the specific Production Order.

Field	Usage and Description
Order Number	A unique Order Number for the production order
Manufactured Product	Select the product you will manufacture, named <code>TJ-001</code> , located within the Tajikistan section.
Link-Up Setup	The production line (LinkUp) where production will take place
Requested Quantity	The requested quantity in packs, i.e. the number of packs that you expect to produce
Order Expected Start Date	The expected start date of the production order. NOTE: This field is not used at the moment, but in the future, it will help Vault determine when the codes will have to be ordered
Order Full Quantity	Whether all codes should be ordered simultaneously, overriding the slicing strategy selected when configuring the forecast driver. NOTE: This field is not used at the moment but in the future Vault will use it to distribute the ordered quantities in one or more code orders.
Total Quantity	After saving the production order, this read-only field will contain the number of packs with the rejection rate configured on the Link-Up. So if you have a requested quantity of 10'000 and have configured a rejection rate of 1% for packs, you would see 10,100 in this field. This number reflects the number of packs codes that will be ordered.

Tajikistan Code Materialization

Overview [↗](#)

TJ Codes can be materialized and decomposed.

Configuration [↗](#)

The TJ codes can be materialized in:

Gate:

- the database, in a table named `externalcodes.TJPacks` and `externalcodes.TJBundles`.
- an external SQL server database, in a table with customizable name, but still in the `externalcodes` schema.

Vault:

- the database, in a table named `externalcodes.TJPacks` and `externalcodes.TJBundles`.
- an external SQL server database, in a table with customizable name, but still in the `externalcodes` schema.
- the Azure Table.

The materialization options can be specified per unit type scheme.

To configure the materialization, you need to:

Gate:

- Create a `configunit` file in the `GateService` directory with the content below.
- Optionally, only when external SQL database is used, add a connection string to the `GateService.exe.config` file.

Vault:

- Create a `configunit` file in the `VaultService` directory with the content below.
- Optionally, only when external SQL database is used, add a connection string to the `VaultService.exe.config` file.
- Or when Azure Table will be used. Create a `configunit` file in the `VaultService` directory with the content below.

TjMaterialization.configunit [↗](#)

The structure of the `configunit` file can be customized according to your needs. The specific configuration starts from the child of the `Implementation` element.

- **TJCodesHandlerConfig** - the root element of the TJ-specific configuration
- **ExternalCodeStorageConfigurations** - a collection with TJ scheme-specific configurations.
- **ExternalCodeStorageConfigurationByUnitType** - TJ scheme-specific materialization configuration. You can specify one or many elements.
 - **StorageStrategy** - `StoredProcedure`, `ExternalDatabase` or `AzureTable`
 - **StoredProcedure** will materialize the codes in the Gate database, in table `externalcodes.TJPacks` and `externalcodes.TJBundles`.
 - **ExternalDatabase** will materialize the codes in an external database. The following element, **DatabaseConfiguration** is required in this case.

- **AzureTable** will materialize the codes in an Azure Table. The following element, **AzureTableConfiguration** is required in this case.
- **DatabaseConfiguration** - optional, used only when StorageStrategy=ExternalDatabase
 - **ConnectionStringName** - the name of a connection string to the external SQL server database where to materialize Az codes. The connection string must be declared in GateService.exe.config or VaultService.exe.config
 - **TableName** - optional, the name of the table where to materialize Tj codes. The name must be TJ + Unit Type.

Example:

```

1  <?xml version="1.0" encoding="utf-8" ?>
2  <ConfigUnit FormatVersion="1.0" xmlns="http://el4net.sf.net/configunit">
3      <FriendlyName>ExternalStorage</FriendlyName>
4      <Version>1.0</Version>
5      <Description>External storage configuration</Description>
6      <Category/>
7      <Mandatory>true</Mandatory>
8      <Partial>false</Partial>
9      <EnvironmentInformation/>
10     <CUDependencies>
11         <UseOrOverride>ComponentManager,ConfigUnitVersion=1.0</UseOrOverride>
12         <UseOrOverride>SingletonComponentsAndInterception,ConfigUnitVersion=1.0</UseOrOverride>
13     </CUDependencies>
14     <ConfigFragment>
15         <ComponentRepository>
16             <ComponentDefinition Name="Inexto.S3r.ExternalCodesHandler.TJ">
17                 <SingletonComponent>
18                     <Implementation>
19                         <TJCodesHandlerConfig>
20                             <DefaultConfiguration OnMiss="Add" OnExist="Fail">
21                                 <StorageStrategy>StoredProcedure</StorageStrategy>
22                                 <MainDatabaseConfiguration>
23                                     <UseCompression>false</UseCompression>
24                                 </MainDatabaseConfiguration>
25                             </DefaultConfiguration>
26
27                             <ExternalCodeStorageConfigurations OnMiss="Add" OnExist="Replace">
28                                 <!-- Azure Table -->
29                                 <ExternalCodeStorageConfigurationByUnitType UnitType="Packs">
30                                     <StorageStrategy>AzureTable</StorageStrategy>
31                                     <AzureTableConfiguration>
32
33                                         <ConnectionString>DefaultEndpointsProtocol=https;AccountName=duplicatestest;AccountKey=Crn
34                                         NosffQV8v9d4/aqMfJa0o7K9QWjoAtrURG8ChzYSVLNZqTe0stdEzkrvBDtrQscmoQCG40DFN+ASTlh5dkg==;EndpointSuffix=core.wind
35                                         ows.net</ConnectionString>
36
37                                         <TableName>TJPacks</TableName>
38                                     </AzureTableConfiguration>
39                                 </ExternalCodeStorageConfigurationByUnitType>
40                                 <ExternalCodeStorageConfigurationByUnitType UnitType="Bundles">
41                                     <StorageStrategy>AzureTable</StorageStrategy>
42                                     <AzureTableConfiguration>
43
44                                         <ConnectionString>DefaultEndpointsProtocol=https;AccountName=duplicatestest;AccountKey=Crn
45                                         NosffQV8v9d4/aqMfJa0o7K9QWjoAtrURG8ChzYSVLNZqTe0stdEzkrvBDtrQscmoQCG40DFN+ASTlh5dkg==;EndpointSuffix=core.wind
46                                         ows.net</ConnectionString>
47
48                                         <TableName>TJBundles</TableName>
49                                     </AzureTableConfiguration>
50                                 </ExternalCodeStorageConfigurationByUnitType>
51                             </ExternalCodeStorageConfigurations>
52                         </TJCodesHandlerConfig>
53                     </Implementation>
54                 </SingletonComponent>
55             </ComponentDefinition>
56         </ComponentRepository>
57     </ConfigFragment>
58 </ConfigUnit>

```

```

44         <!-- External Database -->
45         <ExternalCodeStorageConfigurationByUnitType UnitType="Packs">
46             <StorageStrategy>ExternalDatabase</StorageStrategy>
47             <DatabaseConfiguration>
48                 <ConnectionStringName>DBConnectionString</ConnectionStringName>
49                 <TableName>TJPacks</TableName>
50             </DatabaseConfiguration>
51         </ExternalCodeStorageConfigurationByUnitType>
52         <ExternalCodeStorageConfigurationByUnitType UnitType="Bundles">
53             <StorageStrategy>ExternalDatabase</StorageStrategy>
54             <DatabaseConfiguration>
55                 <ConnectionStringName>DBConnectionString</ConnectionStringName>
56                 <TableName>TJBundles</TableName>
57             </DatabaseConfiguration>
58         </ExternalCodeStorageConfigurationByUnitType>
59     </ExternalCodeStorageConfigurations>
60
61     </TJCodesHandlerConfig>
62 </Implementation>
63 </SingletonComponent>
64 </ComponentDefinition>
65 </ComponentRepository>
66 </ConfigFragment>
67 </ConfigUnit>

```

For External Database, apply this on the appsetting.config (change Server and Database name):

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <configuration>
3      ...
4      <connectionStrings>
5          <add name="DBConnectionString"
6              providerName="Microsoft.Data.SqlClient"
7              connectionString="Data Source=CdfySqlInstance;Initial Catalog=ExternalDatabase;Integrated
Security=True;Application Name=GateService;MultipleActiveResultSets=True;" />
8      </connectionStrings>
9      ...
10 </configuration>

```

Inextor TPD regulated market operational guide

Document Information Table	
Document Type	Operational Guide
Classification	Company Confidential
Document ID	INEX-OG-00015
Version Number	v1.0
Owner	@Michael Houlding Lead Technical Writer - Engineering
Reviewer / Approver	@Samson Daniel Technical Writer - Engineering
Reviewer / Approver	@Stephane Huck VP Software Engineering - Software Engineering

State: Review

Approvals	Reviewer	Status	Date	Comment
Approval		APPROVED		
	Michael Houlding	APPROVED	May 13th 2025 at 12:46:37 PM (UTC)	No comment recorded
	Samson Daniel	APPROVED	May 13th 2025 at 8:51:12 PM (UTC)	No comment recorded
	Stephane Huck	APPROVED	May 13th 2025 at 3:06:59 PM (UTC)	No comment recorded

Introduction [🔗](#)

Document INEX-OG-00015: Inextor Tobacco Product Directive (TPD) Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the TPD regulated market requirements. Document INEX-OG-00015 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the TPD Regulated Market, system overview and background.
- **Configuration** - ID issuers, component setup, code checking, product, contents and layouts etc..
- **Operations** - Production order, code ordering, code checking and disabling TPD regulations for specific productions.

Purpose [🔗](#)

The purpose of INEX-OG-00015 is to provide the required knowledge necessary to successfully set up Inextor correctly to support TPD market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the TPD regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)

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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

System overview (TPD)

See the below information for the general overview of the EU TPD regulation implementation in Inextor.

Definition: ID Issuer [🔗](#)

Inside European Union, an ID issuer is the issuer for all codes destined to the country and/or produced in the country.

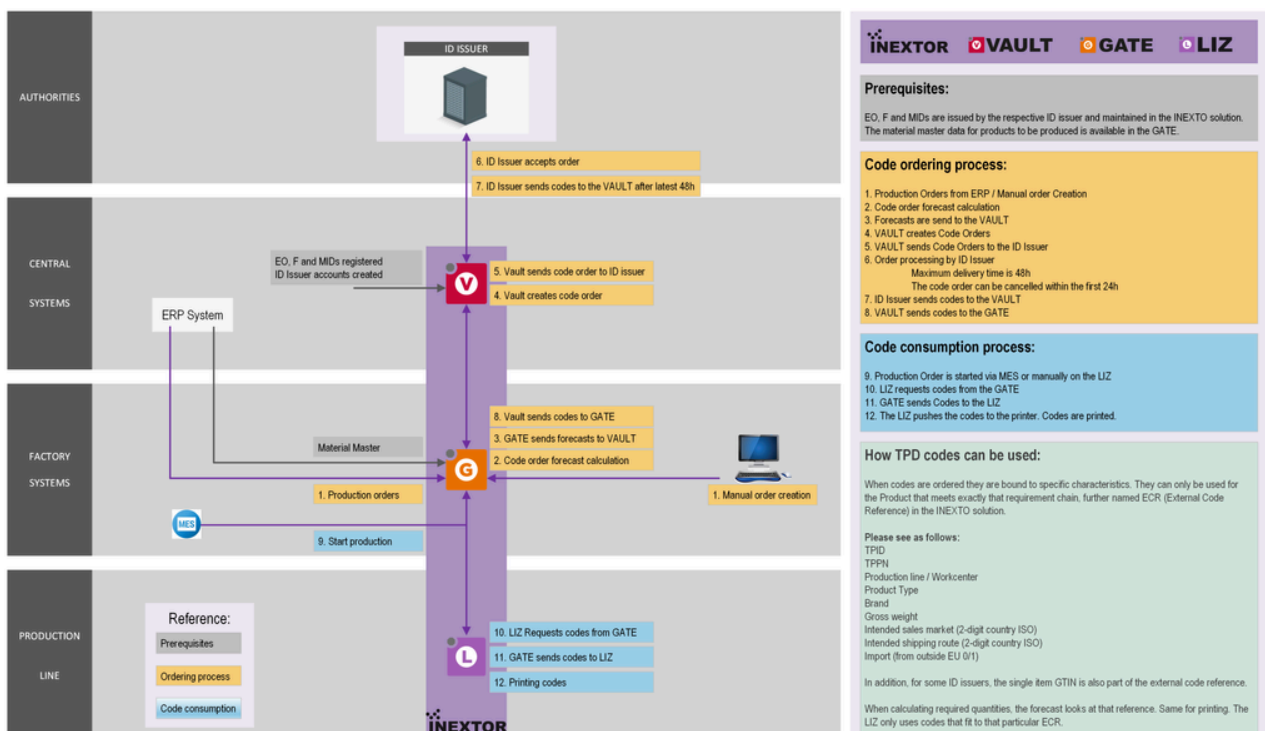
Each country of the EU chooses one (and only one) ID issuer. Each ID issuer is provided by a supplier. Each manufacturer also chooses a Primary, which is a third-party repository, and a single Secondary repository exists for all of the EU. There is no interaction of the INEXTOR software with the Secondary.

An ID issuer can, by law, take up to two working days to generate codes after being queried, which means that manufacturers must plan ahead.

❌ TPD codes lose their validity after 6 months.



UID ordering and consumption in EU-TPD



In order to plan production, the manufacturer creates a Production Order in the Gate. The Gate then checks if it has chunks of codes available to cover the production order, totally or partially: Inside the Gate is a component called a Forecast Driver which

tries to match the available codes to the Production Order by looking at the ECR (sublist of the Production Order's attributes, see [ECRs](#)). The Forecast Driver then sends forecasts to the Vault for the Production Order if there are not enough available codes matching that Production Order. For a more complete explanation, see [Forecasts](#).

For the TPD regulated Production Orders, the ECR comprises approximately 15 elements.

The Vault receives the forecasts and tries to order the codes as late as possible, given the production start date (which is defined in the forecast) and a customer-defined parameter which indicates the number of days to schedule in advance for the ID issuer involved. The number of codes the Vault specifies in the order is defined by the forecast, by the maximum number of codes the ID issuer accepts in a single order (defined per ID issuer), by the minimum number of codes the ID issuer accepts in a single order (defined per ID issuer) and by the number of which it must be a multiple of (defined per ID issuer). This means that sometimes the Vault has to order too many codes (if the minimum number is not reached or if the number is not the required multiple) or to split the order into several (if the maximum number is exceeded).

Example [🔗](#)

For ID issuer XZY, the maximum number is 100'000, the minimum number is 20'000 and the number must be a multiple of 5000.

- If the number of codes specified in the forecast is 155'000, the Vault will issue 2 orders: One for 100'000 and one for 55'000 (total: 155'000).
- If the number of codes specified in the forecast is 15'000, the Vault will issue 1 order for 20'000 (total: 20'000).
- If the number of codes specified in the forecast is 133'000, the Vault will issue 2 orders: One for 100'000 and one for 35'000 (total: 135'000).
- If the number of codes specified in the forecast is 103'000, the Vault will issue 2 orders: One for 100'000 and one for 20'000 (total: 120'000).

Each ID issuer has its own interface for ordering codes, so the Vault has one plugin per supplier in order to be able to issue the orders.

The Vault regularly polls the ID issuer for availability of ordered codes and sends them to the Gate when they arrive. If the primary code checks takes place (i.e., if that functionality is enabled for the ID Issuer), the codes won't be released to the Gate until they have been whitelisted (i.e., checked and found valid).

All the codes which are ordered from an ID issuer are sent by the latter to the Primary. If, at control time, the codes are not in the Primary, they will not be recognized as legal, and so the Vault checks for the existence of the codes on the Primary before sending them to the Gate.

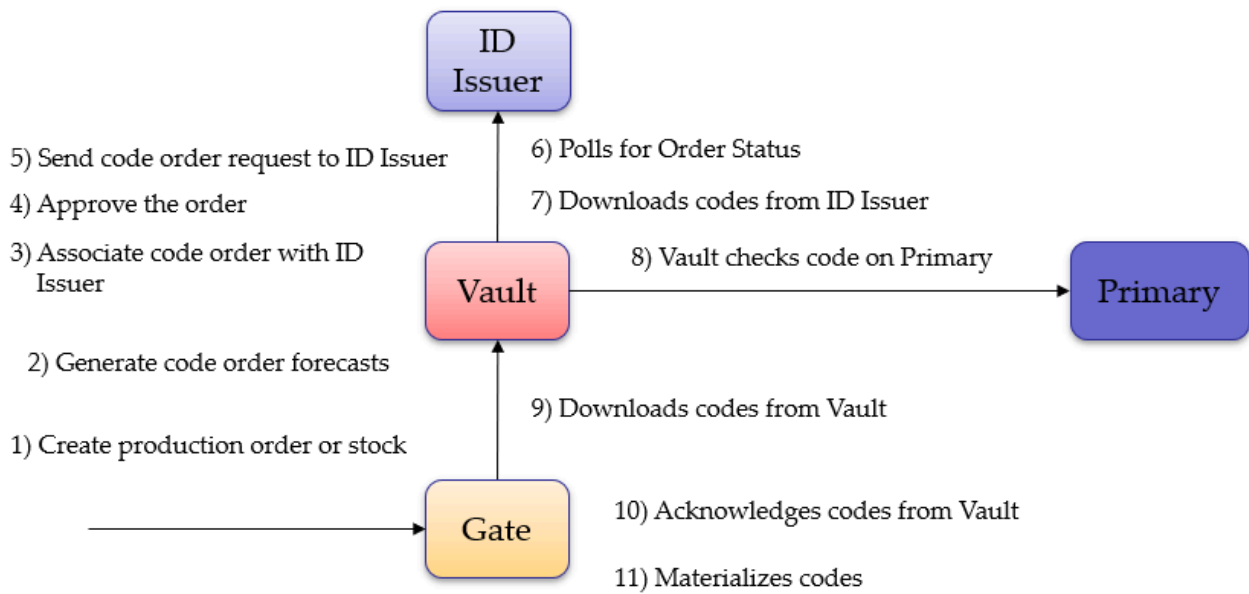
For each ID issuer, a code check strategy is defined: check nothing, check all codes, check every Nth code, or check 1st and last codes of received order.

If code checks fail, codes are put aside and checked regularly after that. When the forecast's start date is reached and the codes still do not check out, the codes are blacklisted. The not yet accepted codes are then regularly checked and emails are sent to the manufacturer regularly to remind them of the existence of the blacklisted codes or to inform them that they are not blacklisted anymore.

If only part of the forecast's codes checks out and another part does not, there is what is called a salvage operation which ensures the 'good' codes can still be used.

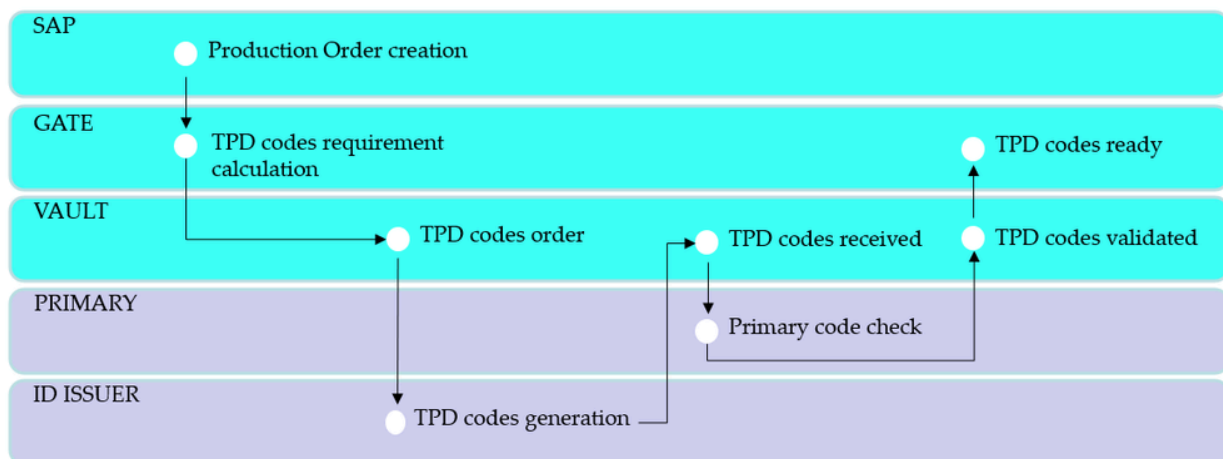
For more details, see page [Codes Check on Primary](#).

The process of code ordering is the following:



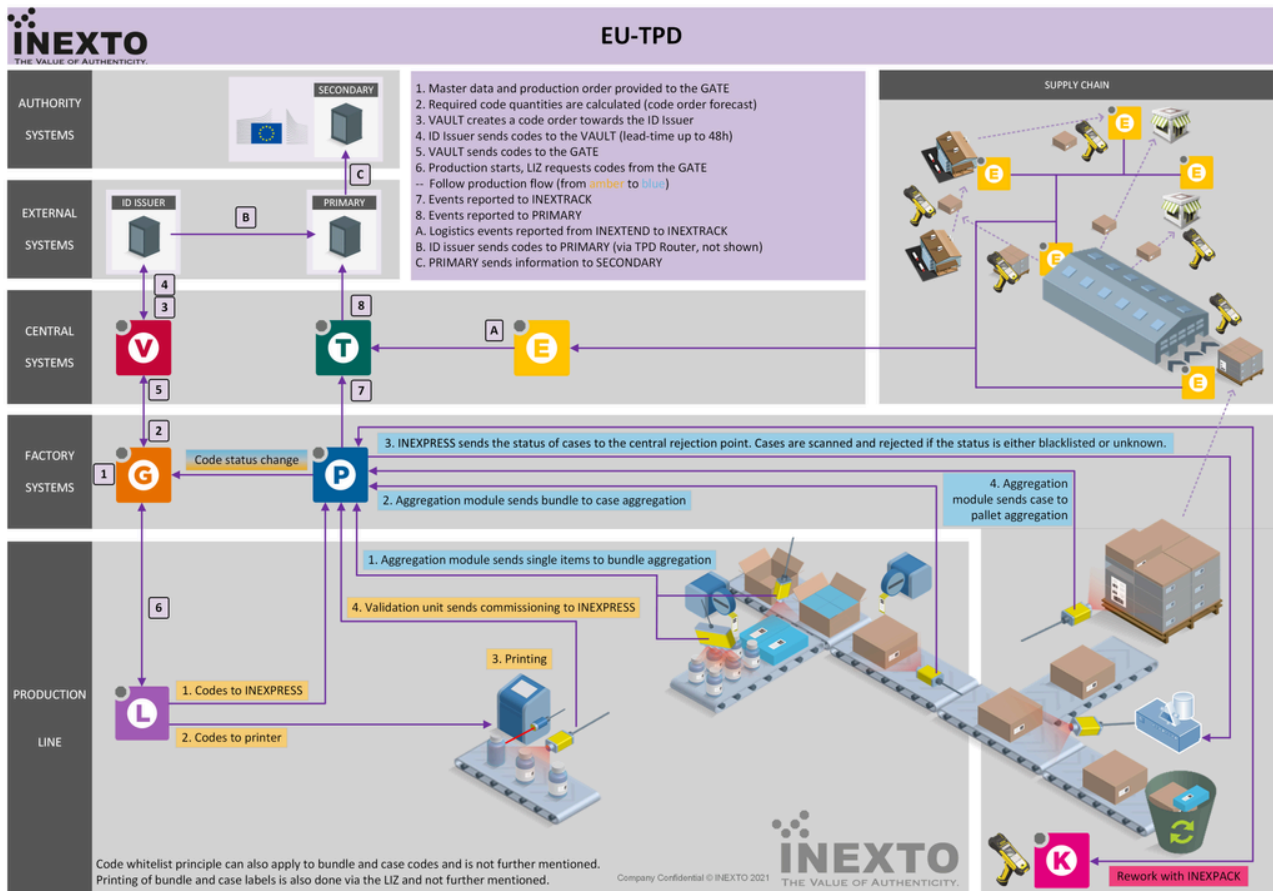
1. User or Web service creates or modify production orders & stocks.
2. Gate sends order forecasts to Vault based on production orders, stocks & its available codes.
3. Vault associates order with the appropriate ID Issuer depending on order forecast information.
4. If enabled on Vault, a manual approval can be necessary before the order is sent to the ID Issuer (disabled by default).
5. When reaching time limit, Vault automatically sends order to ID Issuer.
6. Vault regularly requests ID Issuer for order status (approved, rejected).
7. Once approved, Vault downloads codes from ID Issuer, order is completed
8. If enabled, codes are checked against the Primary
9. Gate downloads codes from Vault, the order is ready to be executed.
10. Gate acknowledges the reception of codes.
11. Gate materializes the codes (in order to speed up codes check).

The workflow is the following one (where SAP can be replaced by any manufacturer's Management Information System):



Most ID issuer support automated code ordering, but in some cases, the manufacturer must manually download a file containing the codes on the ID issuer's site. The codes must then be imported into the INEXTOR software.

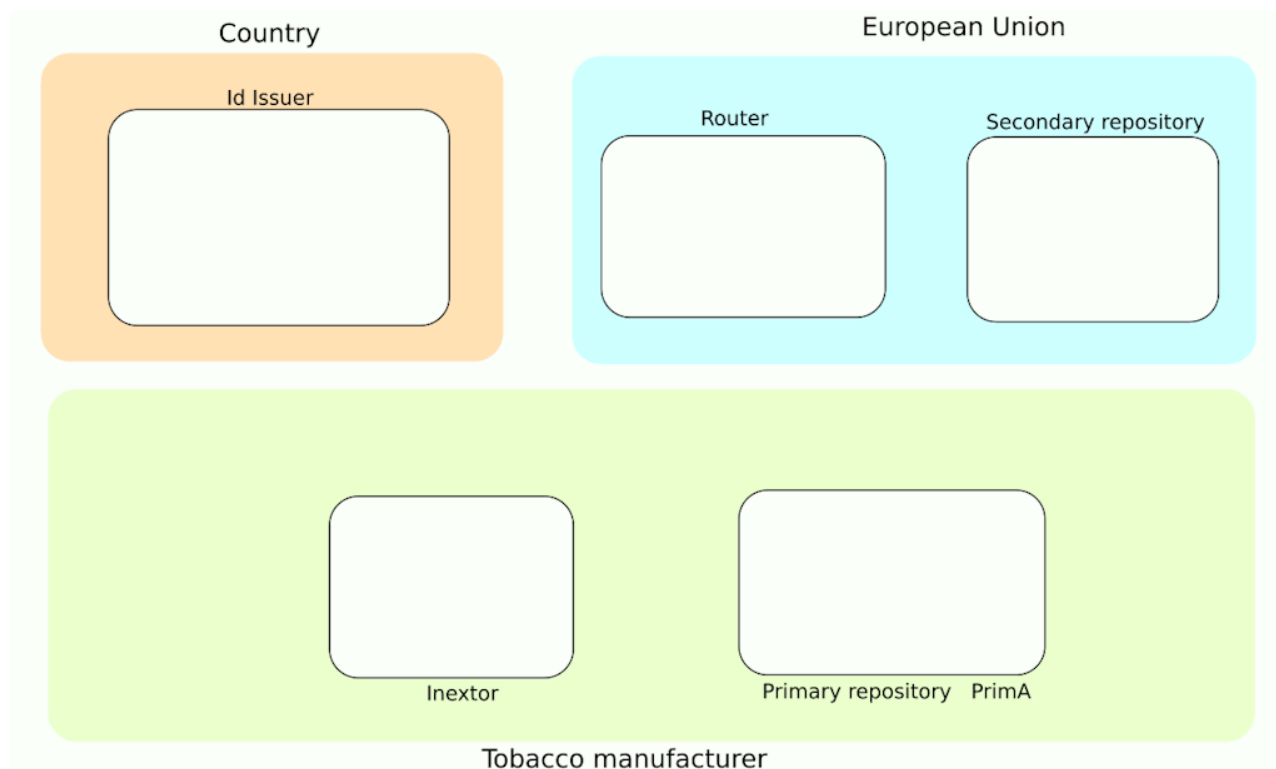
The end-to-end process is the following:



The comprehensive description of the TPD code implementation can be found on the [Code Ordering Process](#) page.

Routing [🔗](#)

The relationship between the TPD router, primary and secondary repository, is not directly impacting INEXTOR, but it's interesting to understand how it works.



The above animation shows a simplified view of the process to download codes, with an emphasis on the role of the router and two repositories.

1. Registration

- Manufacturer register its company, factories and machines to the Id Issuer.
- Id Issuer generates corresponding EOID, FID, MID.
- Id Issuer sends the new IDs to EU Router and secondary.

2. Copy of IDs

- Manufacturer manually adds the new IDs in the Vault.
- Manufacturer adds the new IDs in the Primary repository.
- Primary repository tells the EU Router that data with EOID/FID must be routed to this Primary.

3. Unique Identifiers (UIs) ordering

- Vault sends a UIs request with the EOID/FID/MID.
- Id Issuer generates the UIs and sends a copy to the EU Router.
- Vault download the UIs.
- Router sends a copy of the UIs to the Secondary and manufacturer's Primary. It's using the info provided in 2.c to know which Primary should receive the UIs.

4. Primary check

- Vault ask the Primary if it has also received the UIs. If yes, it will push the codes to the factory (Gate).

Background (TPD)

For a description of the Tobacco Product Directive (TPD), see below for details.

The Tobacco Products Directive (TPD) gives a set of rules mandatory for all tobacco products manufactured or sold in the EU.

Codes must be bought and printed on tobacco items. These codes are used for all TPD regulated markets. The composition of these codes depends on each ID issuer. For a detailed description of these codes per ID Issuer, see [ID Issuers Integration](#). For codes formats, see [INEXPRESS Tobacco Tpd Code Formats](#).

There are two main entities involved: The manufacturer and the State Authority.

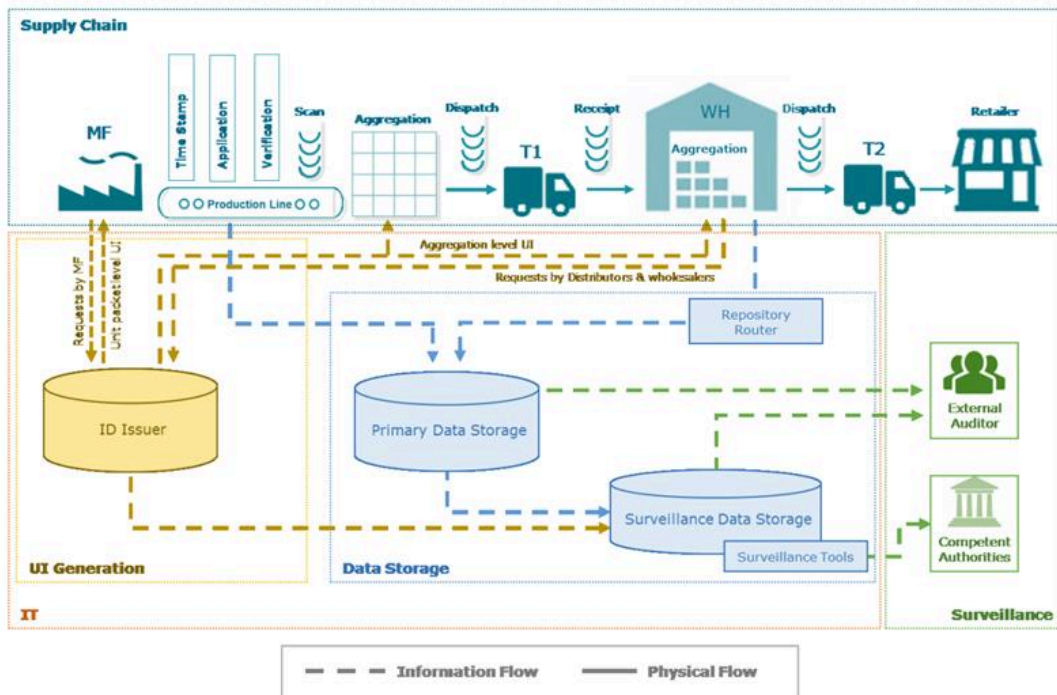
The state requires the manufacturer to mark its production with a certain type of codes which must be ordered from specific code issuers named ID issuers. The choice of the ID issuer is determined by specific rules (market for which the production is intended, manufacturing country, etc.).

There are three types of repositories for codes and code information:

1. The manufacturer's private repository.
2. The Primary, which is a third-party repository, chosen by the manufacturer from a list of state-approved Primaries, used to deposit codes as a stage between the manufacturer's repository and the Secondary. Some validation checks on the codes are performed in the Primary.
3. The Secondary, which is a sole repository, owned by the EU, for all codes from all manufacturers in the EU. Some validation checks on the codes are performed in the Secondary, outside the scope of this documentation.

Manufacturers order codes from an ID Issuer, via a production order sent to the manufacturer's repository from the factory. This ID Issuer then sends codes to both the manufacturer's repository which ordered them and to the Primary. The Primary sends these codes to the Secondary. When manufactured products enter the geographical area of one of the EU countries, customs request checks from the Secondary and will not let the merchandise enter the area if these checks return invalid results.

The following diagram illustrates the process (diagram taken from the site [Public Health | \(europa.eu\)](#), file https://ec.europa.eu/health/sites/health/files/tobacco/docs/2018_technicalspecifications_analysis_en.pdf).



TPD codes lose their validity after 6 months: They cannot be printed on products manufactured after that time (if they are, the product will be considered illegal).

The official TPD directive can be found [on the site of the European Commission](#). Dentsu's Secondary repository specifications can be found [on Dentsu's site](#).

ID Issuers

An Id Issuer is for INEXTOR an entity that emits UIDs (codes).

Generally they are associated with a regulation: a country enforces a law requiring producers and importers to order and use codes with a predefined Id Issuer. The code requestor provides information in the order, and the ID Issuer, if the order is approved, sends back UIDs to be printed or consumed.

Currently the main Id Issuers supported by INEXTOR are the TPD (European Union) Id Issuers, UK Id Issuer, SAT (Mexican codes), and DLR (Saudi Arabian, and United Arab Emirates) Id Issuers.

Some Id Issuers provide a Web Service, while other require to generates the codes in a file and manually import them in INEXTOR.

TPD ID Issuers

ID Issuers Tab

The ID issuers view is used to perform the following action:

- Create / Edit / Delete Id Issuer connection
- Create / Edit / Delete additional accounts for ID Issuer

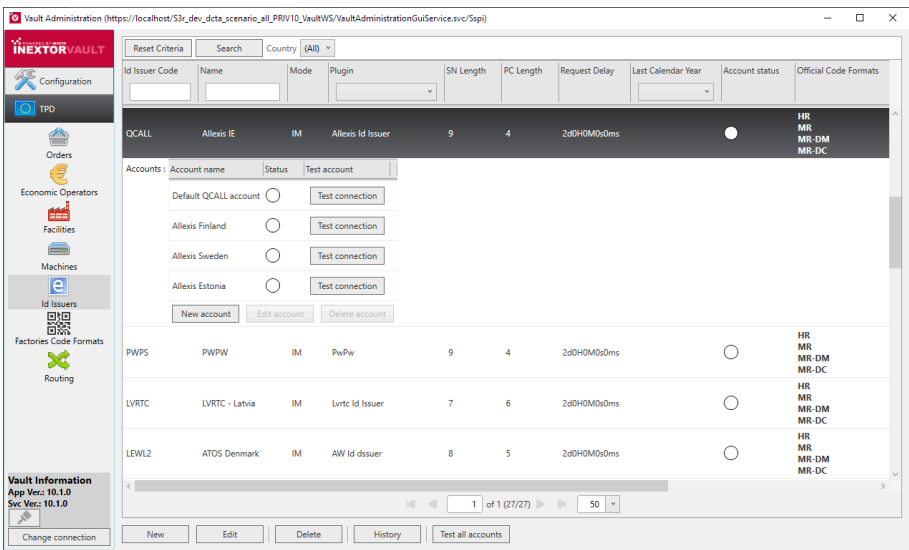


fig.1 Id Issuers view in the Vault UI.

When an ID issuer is selected in the grid, it shows the list of the configured accounts. The Default ID issuer account can be configured either by selecting it in the account list and clicking Edit account or Editing the ID issuer itself. Other accounts can be created, edited and deleted.

Test Connection

It is possible to test the credential of an account by clicking the "Test connection" button (it is possible to test all accounts by clicking on "Test all accounts").

The indicator has the following meaning:

	No connection testing was performed
Unknown Attachment	The ID issuer plugin does not support connection testing
	The connection is working correctly
	The connection is not working correctly

It is possible to get some information about the error by putting the mouse over the indicator:

TST	TST	IM	Demo Identifier Kit (Param)	9	4	2d0H
Accounts : Account name Status Test account Default TST account Test connection						
tion for ID issuer 'TST' (Dcta.Eu.IdIssuers.IdIssuerKit.Business.IdIssuerKitPlugin) : 'Error HTTP Unauthorized: '						

fig.2 Connection test feedback.

Create/Edit ID Issuer

General Configuration

The creation or edition of an ID issuer opens a form (described in detail in page [ID Issuer Details / New Registration](#)) for general configuration of the ID issuer plugin. The properties and the recommended values are explained in the corresponding ID Issuer page.

⚠ Some actions could be required **beforehand** for some specific implementations. Please check the desired Id Issuer page before proceeding with the creation on the Vault.

SLA Properties

Just below the common ID Issuer properties there is a section that specifies the SLA of the ID issuer:

Process Order Immediately	Based on Production Order
SLA Period	0d0H0M0s0ms
Immediate Delivery SLA Period	0d0H0M0s0ms
SLA only on working days	☐

fig.4 SLA properties on the Vault UI.

Name	Description
Process Order Immediately	If ID Issuer allows it, specifies options for "Immediate Delivery" (urgent flag): Always: always sends with "Immediate Delivery" flag. Based on Production Order: the order is sent with the "Immediate Delivery" flag value that was in the Production Order: this is the default behavior. Immediate with explicit confirmation: if a Production Order has the Immediate Delivery flag set, the Vault operator has to explicitly confirm it (select the order and click on "Approve"), otherwise the Immediately Delivery flag is automatically removed. This option is mostly useful for Id Issuers where urgent orders are very costly. Never: never send urgent orders, even when the Immediate Delivery flag is set.
SLA Period	If different from 0 ("0d0H0M0s0ms" is 0), this value specifies the SLA period of an order, which is the interval of time the ID Issuer has to approve or reject a received order request. In practice, in the order view of the Vault, the "Expected on" date will be the date of the order request, added with the SLA period.
Immediate Delivery SLA period	If different from 0 ("0d0H0M0s0ms" is 0), this value specifies the SLA period of an immediate delivery order, which is the interval of time the ID Issuer has to approve or reject a received request flagged with immediate delivery. It can be set only if the ID Issuer supports immediate delivery. In practice, in the order view of the Vault, the "Expected on" date will be the date of the order request, added with this Immediate Delivery SLA period in case of immediate delivery orders.
SLA only on working days	Specifies if the SLA periods cover only working days, or all days.

Brexit considerations

The Vault removes the TP_ID and TP_PN fields when ordering codes if the intended market is GB. This is because GB is considered as an export market (because of Brexit).

It is possible to opt out of this feature by unchecking the check box "Remove TP_ID and TP_PN for UK market" if the given ID Issuer still wants these parameters (at least temporarily).

For detailed information about this setting, see [this page about routing](#).

Plugin Parameters

Additional parameters are dependent on the ID issuer plugin selected and can be found in the documentation of the plugin itself. Those parameters will be used as the Default ID issuer account.

Additional accounts allow to override the default ID issuer parameters with different set of credential and/or options. An account can then be linked to an Economic Operator Registration.

Markets

Specifies which markets are operated by this ID Issuer.

For each market, the Start Date should be specified with optionally the End Date if market will be operated in the future by another Id Issuer.

Official Code Formats

Specifies the official code formats for the ID Issuer.

Calendar of Business Holidays

Configuration for business holidays.

Horizons

Special factory configuration for ordering codes in advance.

- Factory - the name of the factory. This field is not editable. All factories that are connected to this Vault will be automatically listed.
- Horizon When - specifies how many days before the start date to order codes for each PO.
- Horizon Max Days Coverage - specifies for how many calendar days of production to cover in one order (depending on the machine parameters)

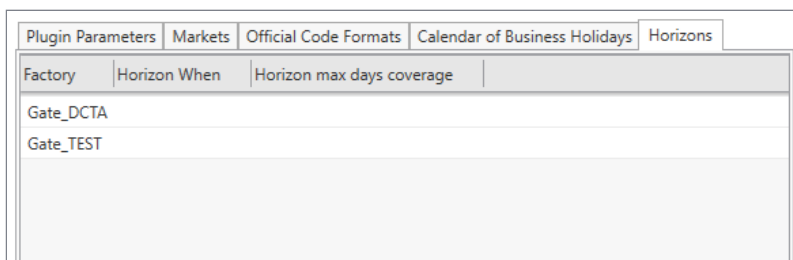


fig.5 Id Issuers view in the Vault UI.

Add new account

Once the ID Issuer is created on the Vault, the related account is created by default.

You can create more accounts for one single ID Issuer, by selecting it and clicking on the *New account* button.

This can be necessary if one codes provider is the official Issuer of multiple countries.

Add certificates

The following Id Issuers require authentication certificates to be imported through the Vault UI:

- France (ING)
- Germany (BDR)
- Hungary (NDN)
- Italy (AAMS)
- Slovakia (Datacentrum)

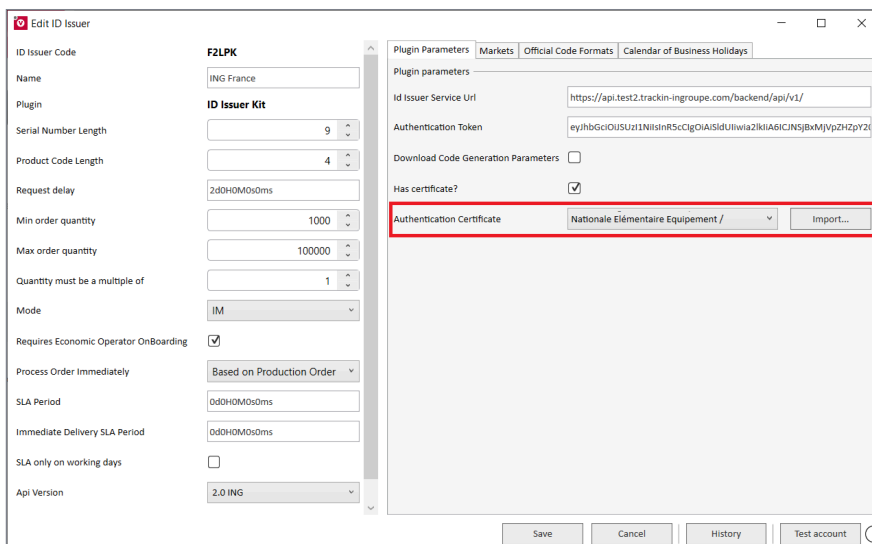


fig.6 Id Issuer with imported authentication certificate.

❗ Important

The Importing tool allows the user to import also *Root* and *Intermediate* certificates, however to correctly communicate with the Id Issuers the *Client* certificate will have to be the selected one among the options.

After selecting the right certificate, the UI will ask for the certificates passwords and upon correct insertion the Vault will store the certificate in the Database.

It is possible to import other certificates to connect to other external services, such as a Proxy.

External services requiring a certificate by Id Issuer:

-QtspSigningProxy for Italy (AAMS)

Edit ID Issuer

ID Issuer Code

Name: **LEITA**
AAMS Italy

Plugin: **AAMS id issuer**

Serial Number Length: 10

Product Code Length: 8

Request delay: 2d5H0M0d0ms

Min order quantity: 30000

Max order quantity: 10000000

Quantity must be a multiple of: 500

Mode: IM

Requires Economic Operator Onboarding: ☒

Process Order Immediately: Based on Production Order

SLA Period: 2d5H0M0d0ms

Immediate Delivery SLA Period: 2d5H0M0d0ms

SLA only on working days: ☐

Remove TP_ID and TP_PN for UK market: ☒

Plugin Parameters

Orders and Registrations Url: https://interopfed.adm.gov.it/TTS13baccoManufacturerWeb/services/TTS13baccoManufacturer

Status polling Url: https://interoptest.adm.gov.it/interopServiceWeb/services/interopService

Download Url: https://interoptest.adm.gov.it/interopServiceWeb/services/interopService

Authentication Certificate: 0754341003-431 / CA Agenzia delle Dogane e dei Monopoli Test / 15/02/2024

Applicant Code: 07558787003

Enable Automatic Code Ordering: ☒

Signing Proxy Url: https://signing-proxy.inventor.biz/api/v1/QtspProxy

Proxy Authentication Certificate: C:\localhost / C:\localhost / 31/03/2032

Buttons: Save, Cancel, History, Test account

fig.7 Example of a market requiring two certificates (one for the Id Issuer, the other for the Signing Proxy).

ID Issuers Code Formats

Co de	Plugin	HR	HR- Tracking	MR	MR Datamatrix	MR DotCode
1E	Fnmt.Business.FnmtPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber} {ProductCode}	235{IDIssuerCode} {SerialNumber} [FNC1]01{ProductCode}8008{Date:yyMMddHH}	[FNC1]235{IDIssuerCode}{SerialNumber} [FNC1]01{ProductCode}8008{Date:yyMMddHH}	235{IDIssuerCode} {SerialNumber} [FNC1]01{ProductCode}8008{Date:yyMMddHH}
3P	IncM.Business.IncmPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber} {ProductCode}	235{IDIssuerCode} {SerialNumber} [FNC1]01{ProductCode}8008{Date:yyMMddHH}	[FNC1]235{IDIssuerCode}{SerialNumber} [FNC1]01{ProductCode}8008{Date:yyMMddHH}	235{IDIssuerCode} {SerialNumber} [FNC1]01{ProductCode}8008{Date:yyMMddHH}
KLT T	Aw.Business.AwPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
KP L1	Pwpw.Business.PwpwPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
KP L2F	IdIssuerKit.Business.IdIssuerKitPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LE AK D	Akd.Business.AkdPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LE AT1	Mvg.Business.MvgPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	25S{IDIssuerCode} {SerialNumber} {ProductCode} {Date:yyMMddHH}	25S{IDIssuerCode} {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]25S{IDIssuerCode} {SerialNumber}{ProductCode} {Date:yyMMddHH}
LE BG R	Bnb.Business.BnbPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}

LE CN I	Cnin.Business.Cni nPlugin	{IDIssuer Code} {SerialNu mber}	{IDIssue rCode} {SerialN umber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LE DT C	IdIssuerKit.Busin ess.IdIssuerKitPl ugin	{IDIssuer Code} {SerialNu mber}	{IDIssue rCode} {SerialN umber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LE GR1	Aw.Business.AwPl ugin	{IDIssuer Code} {SerialNu mber}	{IDIssue rCode} {SerialN umber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LE HU 1	IdIssuerKit.Busin ess.IdIssuerKitPl ugin	{IDIssuer Code} {SerialNu mber}	{IDIssue rCode} {SerialN umber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LEI TA	Aams.Business.A amsPlugin	{IDIssuer Code} {SerialNu mber}	{IDIssue rCode} {SerialN umber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LER TC	Lvrtc.Business.Lvr tcPlugin	{IDIssuer Code} {SerialNu mber} {Product Code}	{IDIssue rCode} {SerialN umber} {Product Code}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LES TC	Stc.Business.StcP lugin	{IDIssuer Code} {SerialNu mber}	{IDIssue rCode} {SerialN umber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LE WL 1	Aw.Business.AwPl ugin	{IDIssuer Code} {SerialNu mber}	{IDIssue rCode} {SerialN umber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
LE WL 2	Aw.Business.AwPl ugin	{IDIssuer Code} {SerialNu mber}	{IDIssue rCode} {SerialN umber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
QC AL L	Allexis.Business.A llexisPlugin	{IDIssuer Code} {SerialNu mber} {Product Code}	{IDIssue rCode} {SerialN umber} {Product Code}	5R{IDIssuerCode}U: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}U: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}U: {SerialNumber}{ProductCode} {Date:yyMMddHH}
QC BD	Bdr.Business.BdrP lugin	{IDIssuer Code}	{IDIssue rCode}	5R{IDIssuerCode}U: {SerialNumber}	5R{IDIssuerCode}U: {SerialNumber}	[FNC1]5R{IDIssuerCode}U: {SerialNumber}{ProductCode}

R		{SerialNumber}	{SerialNumber}	{ProductCode} {Date:yyMMddHH}	{ProductCode} {Date:yyMMddHH}	{Date:yyMMddHH}
QC GD LR	Aw.Business.AwPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
QC LU XX	Incert.Business.IncertPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
QC SG SE	Akd.Business.AkdPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
QC UK T	Dentsu.Business.DentsuPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber} {ProductCode}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}
WA A0	Opsec.Business.OpsecPlugin	{IDIssuerCode} {SerialNumber}	{IDIssuerCode} {SerialNumber}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	5R{IDIssuerCode}: {SerialNumber} {ProductCode} {Date:yyMMddHH}	[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}

ID Issuers Registration Configuration

The following table summarizes, for each ID Issuer, which entity (Economic Operator, Facility, Machine) can be automatically registered from the Vault through their API (system to system registration). If a given registration is listed as not possible, it's because the ID Issuer does not support it.

ID Issuer	Markets	Automated Registration		
		Economic Operator	Facility	Machine
AAMS	Italy	No	Yes	Yes
AKD	Croatia	No	Yes	Yes
AKD (Smart Net)	Slovenia	No	Yes	Yes
Allexis	Estonia, Finland, Ireland, Sweden	No	Yes	Yes
ATOS Worldline	Denmark, Netherlands	No	Yes	Yes
BDR	Germany	No	Yes	Yes
BNB	Bulgaria	No	Yes	Yes
CNIN	Romania	Yes	Yes	Yes
DATACENTRUM	Slovakia	Yes	Yes	Yes
Dentsu	United Kingdom	Yes	Yes	Yes
FNMT	Spain	No	No	No
GSIS (Worldline)	Greece, Cyprus	No	Yes	Yes
INCERT	Belgium, Luxembourg	No	Yes	Yes
INCM	Portugal	Yes	Yes	Yes
ING	France	No	Yes	Yes
LVRTC	Latvia	No	Yes	Yes
MVG	Austria	No	No	No
NDN	Hungary	No	Yes	Yes
OPSEC	Malta	No	No	No
PWPW	Poland	Yes	Yes	Yes
STC	Czech Republic	No	Yes	Yes
STI (Worldline)	Lithuania	No	Yes	Yes

TPD Routing

Goal

Here we explain how a TPD order is routed in Inextor. From the creation of the Production Order (PO) to the messages sent to an ID Issuer, we detail the various rules that defines the ID Issuer, the Economic Operator, facility, machine set in the order.

The routing is responsible of selecting the 5 following data:

- **ID Issuer Code** (which defines the ID Issuer)
- **EOID** (Economic Operator ID)
- **FID** (Facility ID)
- **MID** (Machine ID)
- **Account** (An ID Issuer can have more than one account. This will usually change the credentials used by the Vault to connect.)

In case No EOID, FID and MID is found, an error is raised by the Vault and notified to the external system.

In case the Process_Type associated to the LinkupSetup on the Gate is false, MID is empty because it's a hand made production.

Routing levels

There are several levels that decide of the routing. The below graph describes in which order they are evaluated.

IDs specified in the PO

If the ID Issuer code, EOID, FID, MID are **all** 4 specified in the PO, then they are used as is. The account will be the one linked with the Economic Operator.

- ① An exception exists for the ID Issuer QCLUXX, as it manages orders for two distinct markets (Belgium and Luxembourg).
To differentiate between orders related to these markets, a specific routing rule configuration is necessary. For more detailed information, please refer to the dedicated configuration details for each economic operator.

Default local routing

The order is routed to the ID Issuer local to the country of the facility and machine.

This is the routing used in the following cases:

- The intended market is the same EU country as where the facility and machine are located.
- The intended market is in another EU country as the facility and machine, but does not apply the derogation 4.1 (rare case).
- The intended market is outside EU, but the facility and machines are inside EU.

In this case, all the IDs are those of the local ID Issuer and the account will be the one linked with the Economic Operator. If several registrations are found, the set linked to the facility marked as "default" is selected.

Owner	Factory	FID	Facilit	EO Name	EOID	Country	ID Issuer code	Registration Status	Registration Date	Default	Tax Warehouse Status
PRIV10_COMP	Gate_DCTA	20A_56062210625	FR	INCM_INEXTO	20A_560622106245	PT	20	Registered	23/04/2019 11:29:53	☐	☐
PRIV10_COMP	Gate_DCTA	DAN_FACILIB3002	FR	GSIS_Inexto	DANQ1H44IB3002C	CY	DANLEGR1	Registered	20/05/2019 11:14:18	☐	☐
PRIV10_COMP	Gate_DCTA	F2LPK7QxOo	FR	Inexto FR	F2LPKIsx46	FR	F2LPK	Registered	23/04/2019 11:29:53	☒	☐

If one facility is registered at more than one ID Issuer, you will need to select which one is the default option you want.

Derogation routing

When an intended market country apply the derogation 4.1, the codes need to be ordered from the ID Issuer of the intended market and not the one from the facility/machine location. This can be specified in the ID Issuer configuration window. Each country associated has a checkbox to specify the derogation.

A second checkbox, "Accept external IDs", define which IDs should be used. For more detail, see below.

Derogation TPD Art 4.1	☒
Accept external IDs	☒
Market EOID	PWPS000000f

Foreign IDs

If the ID Issuer **accepts foreign IDs**, the Vault will use the EOID, FID, MID of the ID Issuer where the facility/machine are located. This means the code issuer will receive foreign IDs.

Market IDs

If the ID Issuer **does not accept foreign IDs**, that means you need to register your economic operator (Market EOID), facility and machine there. This means your entities will be registered more than one time. If you don't have those market registrations then the Vault will not be able to create the order and an error will be raised. In this case, the Market EOID must be filled in with the registered Economic Operator's ID.

Custom routing rules

On the Vault under Routing, you can set custom routing rules. Those rules override the specified fields of an order. They are applied if an order matches the matching selector. For more details, see page [Vault FCTC Regulations: FCTC Routing](#).

ID Issuers Plugin Setups

AAMS plugin setup

Prerequisites

In order for the AAMS plugin to work with automatic code ordering, it is necessary to have a **qualified electronic signature** to digitally sign the TDP order requests rooted to Italian Id Issuer service. Our implementation requires to use the service provider (QTSP) called **Intesi Group**.

The Vault is then implemented to communicate to this signature service through a proxy called Signing Proxy.

Therefore it is needed to install this component. See [Vault Integration Development: Installing the QTSP Signing Proxy](#) for the installation guidelines.

Information coming from ADM portal

To complete the installation the customer needs to provide us with some pieces of information coming from the Italian governmental agency ADM (Agenzia delle Dogane e dei Monopoli):

- Applicant code (called "Id Richiedente" by SOGEI, usually starts with "ADMEST...")

For each EO needing Italian codes that have been registered at ADM:

- Client authentication certificate generated for PROD environment (.pd12 of .pfx file, name should start with EO VAT number)
 - Password for the certificate (required for installation)

Note that if a QA environment, the PROD client authentication certificate cannot be used, a specific TEST certificate is needed.

Registrations

EO, factory and machine(s) information to be registered in the Vault have to be aligned with the information communicated to ADM.

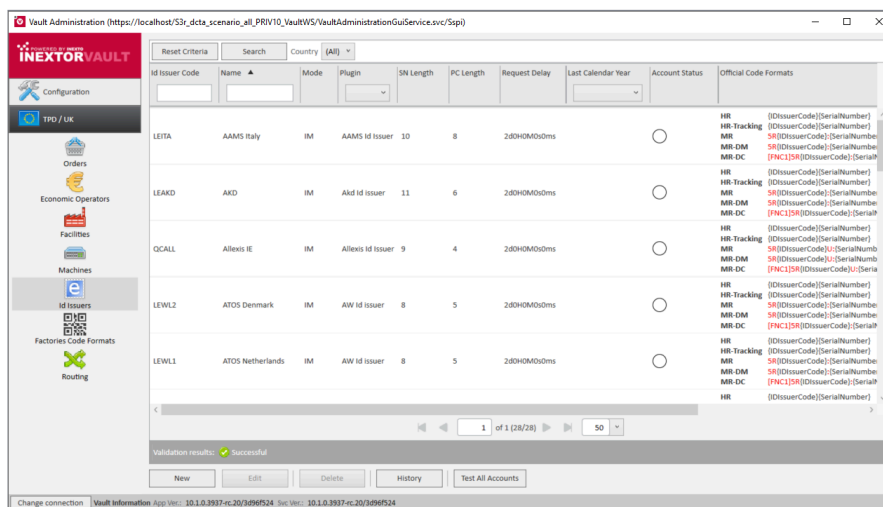
Important

In order for the authentication to work, the **VAT Number** field in the EO registration must be populated and aligned with the client certificate provided by ADM.

Installation

This page contains instructions on how to configure the plugin to connect and order codes from AAMS ID Issuer. Page [AAMS - Italy](#) contains all ID Issuer technical details.

To get started, open the ID Issuer plugin window from **Vault** → **Id Issuers** and click on **New** to create your configuration



Configuration

Important

One Id Issuer account must be created for each EOID. Each EOID has one VAT number based on which a client authentication certificate is generated by ADM.

Id Issuer configuration window

Edit ID Issuer

ID Issuer Code

LEITA

Name

AAMS Italy

Plugin

AAMS Id Issuer

upUI_i SN Length

10

upUI_s SN Length

10

Accept different upUI_s SNs from upUI_i SNs

☐

Product Code Length

8

Request delay

2d0H0M0s0ms

Min order quantity

30000

Max order quantity

10000000

Quantity must be a multiple of

500

Mode

IM

Requires Economic Operator OnBoarding

☒

Process Order Immediately

Based on Production Or

SLA Period

0d0H0M0s0ms

Immediate Delivery SLA Period

0d0H0M0s0ms

Plugin Parameters

Markets

Official Code Formats

Calendar of Business Holidays

Plugin parameters

Orders and Registrations Url

https://interoptest.adm.gov.it/TTSTobaccoManufacturerWeb/services/TTSToba

Status polling Url

https://interoptest.adm.gov.it/InteropRServiceWeb/services/InteropRService

Download Uri

https://interoptest.adm.gov.it/InteropServiceWEB/services/InteropService

Authentication Certificate

07554341003-EST / CA Agenzia delle Dogane e dei N

Import...

Applicant Code

07554341003

TPPN Regular Expression

Enable Automatic Code Ordering

☒

Signing Proxy Parameters

☒ Enable Integrated Signing Proxy

PkBox Url

https://pkbox.intesigroup.com/sandbox

User name

inexto

Password

.....

Alias

AUTO_IDCFR-1509GVA00395

Pin

.....

Save

Cancel

History

Test account

The following section contains a description of each input field displayed on the ID Issuer configuration window.

Manual ordering scenario
In case of manual ordering, the *Plugin Parameters* are not used/needed. Please **disable** "Enable Automatic Code Ordering".

New ID Issuer		
Field Name	Default Value	Usage and Description
ID Issuer Code	LEITA	The ID Issuer code, use LEITA as shown in the screenshot.
Name	AAMS Id Issuer	Name of the ID Issuer
Plugin	AAMS Id Issuer	Select the plugin associated with the ID Issuer
upUI_i SN Length	10	Length of the serial number in the upUI_i code
upUI_s SN Length	10	Length of the serial number in the upUI_s code
Accept different upUI_s SNs from upUI_i SNs	Yes	Keep like this except if the manufacturer is unable to report HR codes
Product Code Length	8	Length of the product code
Request delay	1	The amount of time taken by the ID Issuer to deliver ordered codes
Min order quantity	1'000	The minimum quantity of codes allowed to order
Max order quantity	200'000	The maximum quantity of codes allowed to order
Quantity must be multiple of	1	The minimum unit of quantity used for ordering codes.
Mode	MMIC	The operation mode of the ID Issuer registration: MMIC - Manual Mode. Indicates the Vault will only store Economic Operator, Facilities, and Machines registrations. The ID Issuer API will not be used.
Requires Economic Operator OnBoarding	No	If set to true, the Id Issuer requires the Economic Operators to be registered on its website but allows registrations of facilities and machines through the Vault.
Process Order Immediately	<optional>	A flag indicating orders from this ID Issuer is required to be downloaded immediately.
SLA Period	<optional>	The Service Level Agreement, SLA period of the Id Issuer
Immediate Delivery SLA Period	<optional>	Immediate delivery period of SLA
SLA only on working days	<optional>	Indicates if the SLA period covers only working days or all days.
Api version	- (default)	This allows to select the targeted API version. Select v2 to be compatible with TPD2.0 regulation.
Remove TP ID and TP PN for UK market	<optional>	The TPD specification states that the TPD_PN and TPD_ID properties should be empty in a code order when the intended market is outside the European Union. When the Brexit rules are in effect, these properties are indeed empty when the intended market is the UK. If an ID issuer still wants them for the UK market, this check box should be deactivated.
Plugin Parameters		
Orders and Registrations Url	Code order and manufacturer registration web address	

	Production environment https://interop.adm.gov.it/TTSTobaccoManufacturerWeb/services/TTSTobaccoManufacturer Test environment https://interop.test.adm.gov.it/TTSTobaccoManufacturerWeb/services/TTSTobaccoManufacturer										
Status polling Url	Web address provided for polling registration and code order status Production environment https://interop.adm.gov.it/InteropRServiceWeb/services/InteropRService Test environment https://interop.test.adm.gov.it/InteropRServiceWeb/services/InteropRService										
Download Url	Web address provided for downloading codes Production environment https://interop.adm.gov.it/InteropServiceWEB/services/InteropService Test environment https://interop.test.adm.gov.it/InteropServiceWEB/services/InteropService										
Authentication Certificate	Provide the client authentication certificate issued by ADM. Usually it is linked to one EO registration, the CN should then match with the EO VAT number.										
Applicant Code	Specify the manufacturer importer/applicant code that is registered by AMD (usually starts by ADMEST..., unless it is an Italian person's account)										
TPPN Regular Expression	(Optional) Use this field to define a special TPPN format										
Enable Automatic Code Ordering	If enabled, for easier operation Inextor will be able to order and download codes from AAMS automatically										
Enable Integrated Signing Proxy	This setting, when enabled, allows for the integration of a signing proxy within the system for security and operation purposes. It is part of streamlining the system's process for handling digital signatures. After enabling the checkbox, the following additional fields will be shown: <table border="1"> <tr> <td>PkboxUrl</td><td>Url of the Intesi Server</td></tr> <tr> <td>UserName</td><td>User name to access intesi service</td></tr> <tr> <td>Password</td><td>Obfuscated Password to access intesi service</td></tr> <tr> <td>Alias</td><td>Alias to access intesi service</td></tr> <tr> <td>PIN</td><td>Obfuscated PIN to access intesi service</td></tr> </table>	PkboxUrl	Url of the Intesi Server	UserName	User name to access intesi service	Password	Obfuscated Password to access intesi service	Alias	Alias to access intesi service	PIN	Obfuscated PIN to access intesi service
PkboxUrl	Url of the Intesi Server										
UserName	User name to access intesi service										
Password	Obfuscated Password to access intesi service										
Alias	Alias to access intesi service										
PIN	Obfuscated PIN to access intesi service										
Market											
Country	Italy										
Start Date	a date										
End Date	a date (optional)										
Mode	N/A										
Derogation TPD Art 4.1	True										
Accept External IDs	True										
Market EOID	N/A										

The remaining tabs next to **Markets** are not specific to the AAMS ID Issuer. See the documentation for each tab usage below:

- Official Code Formats: see [Gate TPD UI: Code Formats](#)
- Calendar of Business Holidays: Allows the user to set a Calendar of Business Holidays per year
- Horizons: see Id Issuer Horizons in [Gate TPD UI: Id Issuers Gate](#)

Alexis Plugin Setup

Ireland
Ireland stops using the Alexis plugin on the 28th of May 2025. See [AKD plugin setup](#)

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the Alexis ID issuer software:

- Before creating the ID Issuer on the Vault, create an account and register the Economic Operator to be used on Alexis' web site.

	Ireland	Finland	Sweden	Estonia (temporary)
Test environment	https://tapp.idissuer.ie/economic-operator/public/registration Web site: https://tapp.idissuer.ie	https://tapp.idissuer.fi/economic-operator/public/registration Web site: https://tapp.idissuer.fi	https://tapp.idissuer.se/economic-operator/public/registration Web site: https://tapp.idissuer.se	https://tapp.idissuer.ee/economic-operator/public/registration Web site: https://tapp.idissuer.ee
Production environment	https://app.idissuer.ie	https://app.idissuer.fi	https://app.idissuer.se	https://app.idissuer.ee

This will allow to obtain an Economic Operator ID and Code.

Remark: you need to contact the Id Issuer support to make sure the Economic Operators can order codes via the APIs.

- Once the Economic Operator has been created, you can login on Alexis web site and obtain the EOID and EO Code.

- Click on "Details", to get more information about the Economic Operator.

At the end of the page, the button "Integration Configuration" needs to be clicked to obtain at the end of the page the Salt, Client Id, and Client Secret, information requires by the Vault. Do not forget to save the data.

Client ID of economic operator generated by ID
Isseur's OAuth2 authorization server

4116803488bf450196803488bf8501fa5FFAF99A64F820A32E80999FD

Correct De-registration Integration configuration Back

4. Click on "Confirm":

Confirmation of client secret generated by economic operator's OAuth2 authorization server

X-OriginalHash salt*

24d0a6e4739fe7aabd1dd94951c

Client ID of economic operator generated by ID Issuer's OAuth2 authorization server

4116803488bf450196803488bf8

Client secret of economic operator generated by ID Issuer's OAuth2 authorization server

Y2piMxkEeQeoghFZXtkzEAFTFW

Confirm configuration settings

Back

5. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Ireland	Finland	Sweden	Estonia
Id Issuer Code	QCALL			
Name	eg. Alexis Ireland	eg. Alexis Finland	eg. Alexis Sweden	eg. Alexis Estonia
Plugin	Alexis Id Issuer			
upUI_i SN Length	9			
upUI_s SN Length	9			
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)			
Product Code Length	4			
Max order quantity	1'000'000			
Min order quantity	1			
Quantity must be a multiple of	1			
Mode	Choose MMIC if you already registered your facilities and machines with the ID issuer, or IM is you want to use Inextor to register facilities and machines			
Requires On-Boarding	Checked			
Api Version	v2			
Plugin Parameters				
Id Issuer URL	Test environment: https://tapp.idissuer.ie/api/ii2eo Production environment: https://app.idissuer.ie/api/ii2eo	Test environment: https://tapp.idissuer.fi/api/ii2eo Production environment: https://app.idissuer.fi/api/ii2eo	Test environment: https://tapp.idissuer.se/api/ii2eo Production environment: https://app.idissuer.se/api/ii2eo	Test environment: https://tapp.idissuer.ee/api/ii2eo Production environment: https://app.idissuer.ee/api/ii2eo
API Access Token URL	Test environment: https://tapp.idissuer.ie/api/token Production environment: https://app.idissuer.ie/api/token	Test environment: https://tapp.idissuer.fi/api/token Production environment: https://app.idissuer.fi/api/token	Test environment: https://tapp.idissuer.se/api/token Production environment: https://app.idissuer.se/api/token	Test environment: https://tapp.idissuer.ee/api/token Production environment: https://app.idissuer.ee/api/token
Client Id	Client ID that you got from the ID issuer web site			
Client Secret	Client ID secret (password) you got from the ID issuer web site			
Salt	Salt that you got from the ID issuer web site			
Markets				
Country	Ireland (IE)	Sweden (SE)	Finland (FI)	Estonia (EE)
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.			
End Date	Support officially ends 28th of May 2025	The date at which code should stop to be ordered from this Id Issuer for this country.		

Derogation TPD Art 4.1	Checked
External Accept IDs	Checked
Marked EOID	N/A
Official Code Formats	
See Inexpress Tobacco Tpd Code Formats	

Pages [Allexis - Estonia](#), [Allexis - Finland](#), [Allexis - Ireland](#) and [Allexis - Sweden](#) contain all ID Issuer technical details.

AW plugin setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the ATOS Worldline ID issuer software:

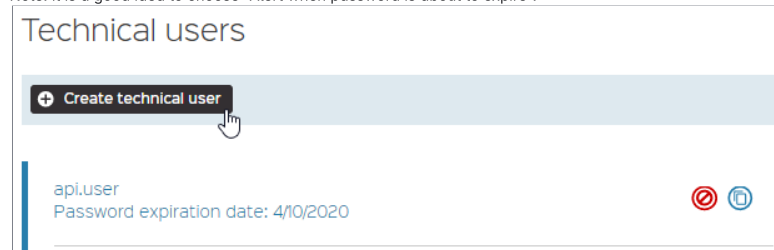
- Go to the corresponding ID issuer web site and create a new account. This will create a new Economic Operator (EO) registration. Since those ID issuers require EO to be registered through their web sites, you cannot create EO registration from Inextor. You will receive an email when your registration is approved. Once you have an account, you could register new EO from there without approval from the ID issuer.

Note: the confirmation email contains **EO ID** and **EO confirmation code**. Store these values because they will be needed later.

	Netherlands (ATOS)	Denmark (ATOS)	Lithuania (STI)	Greece & Cyprus (ATOS) from December 2022
Production Environment	https://tpd.nl.atos.net	https://tpd.dk.worldline.com	https://uid.vmi.lt	https://idissuer2.gsis.gr
Test Environment	https://stg-nl-uidissuing.worldline-solutions.com/	https://stg-dk-uidissuing.worldline-solutions.com/	https://stg-lt-uidissuing.worldline-solutions.com/	https://idissuertest2.gsis.gr/

- Create a technical user on the ID issuer web site for your EO. This option is located at the bottom of the EO page.

Note: it is a good idea to choose "Alert when password is about to expire".



- Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Netherlands	Denmark	Lithuania	Greece & Cyprus
Id Issuer Code	LEWL1	LEWL2	KLTT	LEGR1
Name	eg. ATOS Netherlands	eg. ATOS Denmark	eg. STI Lithuania	GSIS
Plugin	AW Id Issuer			
upUI_i SN Length	8	8	9	10
upUI_s SN Length	8	8	9	10
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)			
Product Code Length	5	5 (Behind the scene, the length will automatically been increased to 19 if the GTIN14 is detected in the codes.)	5	6
Request Delay	2d0H0M0s0ms			
Min Order Quantity	100			
Max Order Quantity	150'000 (130'000 for LEGR1) (10'000 on QAS)			
Quantity must be a multiple of	100			
Mode	IM or MMIC			
Requires EO Onboarding	checked			
Process Order Immediately	user preference (checking this will make all orders immediate)			
SLA period	See this TPD ID Issuers to know how you want to configure your Service-Level Agreement.			
Immediate delivery SLA period				
SLA only on working days				
API version	V3 (before TPD 2.0) V4 (after TPD 2.0)	V3 (before TPD 2.0) V4 (after TPD 2.0)	V3 (before TPD 2.0) V4 (after TPD 2.0)	V3 OAuth (before TPD 2.0) V4 OAuth (after TPD 2.0)
Plugin Parameters				

Id Issuer Service Url	Test Environment: https://stg-nl-uidissuing.worldline-solutions.com/api Production Environment: https://tpd.nl.atos.net/api	Test Environment: https://stg-dk-uidissuing.worldline-solutions.com/api Production Environment: https://tpd.dk.worldline.com/api	Test Environment: https://stg-it-uidissuing.worldline-solutions.com/api Production Environment: https://uid.vmi.it/api	Test Environment: https://idissuertest2.gsis.gr/api Production Environment: https://idissuer2.gsis.gr/api
Authentication Url				Test Environment: https://idissuertest2.gsis.gr/api/auth/connect/token Production Environment: https://idissuer2.gsis.gr/api/auth/connect/token
Username	fill the technical user name you created in Step 2			
Password	fill the password of the technical user you created in Step 2			
EO ID	Identifier of the Economic operator that contains credential information above.			
Purchaser number property name	empty	empty	empty	empty
Send POtherId and get GTIN in code.	checked	We advise: Unchecked . Avoid sending the P_Other_Id when ordering codes. Otherwise, if it's a GTIN14, it will be added to the codes. Check only when you are sure other systems support this new code format.	checked	checked (to be confirmed)
Markets				
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.			
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.			
Derogation TPD Art 4.1	checked	checked	checked	checked
Accept External IDs	checked	checked	checked	checked
Market EOID	fill the ID of the EO you registered in step 1			
Official Code Formats				
See Inexpress Tobacco Tpd Code Formats				

NOTE: Check with your Id Issuer contact if some of the parameters were changed and update them accordingly.

- Add business holidays if needed.
- Press the **Save** button.

Economic Operator Registration

The registration/update of an Economic Operator requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Api version
AddressName	no	v3 + v3 OAuth
StreetOne	yes	v3 + v3 OAuth
StreetTwo	no	v3 + v3 OAuth
City	yes	v3 + v3 OAuth
PostCode	no	v3 + v3 OAuth

Facility Registration

The registration/update of a Facility requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Api version
AddressName	no	v3 + v3 OAuth
StreetOne	yes	v3 + v3 OAuth
StreetTwo	no	v3 + v3 OAuth
City	yes	v3 + v3 OAuth
PostCode	no	v3 + v3 OAuth

Creating Production Orders

IMPORTANT: Make sure you first choose the Manufactured Product and LinkUp Setup. Otherwise the Attributes table will not be visible or will be reset to its default values if you change the Manufactured Product or LinkUp Setup.

Click in the empty cell and type the property name, the value and choose the corresponding type:

- Purchaser_Reference_Number - String

Production Order

Order Number

Description

Manufactured Product

File out

File out TPD

Brand Code: 111111_TpdNoAttr (Name: 111111)
Brand Code: 0A500123 (Name: Tobacco out EU)
Brand Code: Be400123 (Name: Belgium400123)
Brand Code: IT500123 (Name: Italy500123)
Brand Code: PL500123 (Name: Tobacco PL)
Brand Code: SP300123 (Name: Spain300123)
Brand Code: TPD BE and UAE Product (Name: TF)

LinkUp Setup

03 - VPL

Requested Quantity

0

Total Quantity

0

Deleted

Order Expected Start Date

Order Expected End Date

Order Full Quantity

☒

Attributes

ExtendedFields

TPD

Name	Value	Type	Source	User	Actions
ACTIVITY	Domestic	String	MP-EP	ELCANET	Delete
BRANDDESC	111111_Tpd No Attrs	String	MP-EP	ELCANET	Delete
DESTINATIONMARKET	Switzerland Domestic	String	MP-EP	ELCANET	Delete
MACHINE_GLN		String	PO-LinkUp		Delete
MCID	DCTA	String	LinkUp	INEXT04	Delete
MID	03	String	LinkUp	INEXT04	Delete
M_Capacity	720000	Integer	PO-LinkUp		Delete
PRODUCTCODE	111111_TpdNoAttr	String	MP-EP	ELCANET	Delete
RejectionRate_Bundles	0	Double	PO-LinkUp		Delete
RejectionRate_Cases	0	Double	PO-LinkUp		Delete
RejectionRate_Packs	0	Double	PO-LinkUp		Delete
Purchaser_Reference_Number		String			Delete

Validation results: 3 Errors

The 'Requested Quantity' field must have a value between 1 and 2147483647.

The 'Description' field is required.

The 'Order Number' field is required.

Save

Cancel

Close

Registration Details

⚠ The ATOS-based ID issuers require all foreign EOs, facilities and machines to be registered in their system. If they are not you will get Error 403 - Forbidden when placing order requests. When the registration is done make sure to create corresponding technical users for each EO and use them to authenticate the order requests.

Pages [ATOS - Denmark](#) and [ATOS - Netherland](#) contain all ID Issuer technical details.

BDR plugin setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the BDR ID issuer software:

1. Contact BDR to request a certificate to install on the Vault machine and an account for their website (on-boarding production: <https://onboarding.de.id-issuer.eu/>) . You will need to provide to BDR information about your company, like address, email, VAT, etc... (Install the certificate on your PC as well if you want to access the website from there.)
2. Install the certificate on the Vault machine:
 - Install certificate for account LocalMachine or for the user account used by the Vault Service
 - On Import option, check the checkbox "Mark this key as exportable".

Once you have installed the certificate and received your account password, access the website (web site for production: <https://self-management.de.id-issuer.eu/login>, for tests it is <https://self-management.test.de.id-issuer.eu/>) and go under **Account settings** → **API Key**. Create a username, password and secret and save them somewhere safe. Press **New Key**.


BUNDESDRUCKEREI

[Facilities](#)
[Orders](#)
[Managed retailers](#)
[Account settings](#)
[Log out](#)

General settings

API key

Change password

Deactivate account

Please save this data. After you close this view, all information will be lost.

Username

Password

Secret

New key

This website will also allow you to manage the entities and orders.

3. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow (the **Certificate Serial Number** was transmitted with the certificate in step 1 or ask somebody of the IT to retrieve it for you. The **Username**, **Password**, **Secret** are the data you have saved in step 2):

Field	Value
ID Issuer Code	Test environment: qcbdr Production environment: QCBDR
Name	eg. BDR Germany
Plugin	BDR id issuer
upUI_i SN Length	10
upUI_s SN Length	10
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	20
Min order quantity	1
Max order quantity	1'000'000
Quantity must be a multiple of	1
Mode	IM
Requires Economic Operator Onboarding	YES
Plugin Parameters	
Id Issuer Service Url	Test environment: https://api.test.de.id-issuer.eu/v2 (updated end of October 2023) Production environment: https://api.de.id-issuer.eu/v1

	Please note that the Production environment URL will be updated to https://api.de.id-issuer.eu/v2 effective from December 21, 2023.
API Access Token Url	Test environment: https://iam.test.de.id-issuer.eu/auth/realms/idissuer/protocol/openid-connect/token Production environment: https://iam.de.id-issuer.eu/auth/realms/idissuer/protocol/openid-connect/token
Code Download Url	Test environment: https://api.test.de.id-issuer.eu/v2 Production environment: https://api.de.id-issuer.eu/v1 Please note that the Production environment URL will be updated to https://api.de.id-issuer.eu/v2 effective from December 21, 2023.
Client Id	self-management-gui
Markets	
Country	DE
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	Yes
Accept External IDs	Yes
Market EOID	N/A (not useful unless the customer has only one EOID)

Economic Operator and Facility Registration

The registration/update of an Economic Operator and Facility registration requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Description
Street	yes	Street address
StreetNumber	yes	Street number
City	yes	City
ZipCode	yes	Zip code
Gln	no	Gln (used for 3rd party EO registration or facility registration). Not updated afterwards

Note 3: On the Gate, when creating a Production Order destined for BDR, the **Other ID** field is used to pass the product's GTIN. It's a 14 digit ID.

Weight	23
Other ID	12345678901234
Machine	

To have more than one accounts with BDR

The first thing to do is to register again on BDR on-boarding Web site. Once the account is setup on BDR with the EOID, EO Code, and certificate, you can open the Vault Administration and add an account to BDR Id issuer:



Code	Id Issuer	IM	Id Issuer	EO	EO Code	EO Certificate
PWPS	PWPW	IM	PwPw	9	4	2d0H0M0s0ms
QCALL	Allexis IE	IM	Allexis Id Issuer	9	4	2d0H0M0s0ms
QCBDR	BDR	IM	BDR Id issuer	10	20	2d0H0M0s0ms

Accounts:

Account name
Default QCBDR account
BDR INEXT0 TEST2

The new account window allows to setup a new account for BDR and to provide the credentials for this account.

Then, on the "Economic Operators" tab, you can register the Economic Operator of the account.

Remarks:

- By default, the orders are sent to the **"Default QCBDR account"**. To change this behavior, either specify the Id Issuer Code, EOID, FID, MID in the Production Order, or use a routing rule on the Vault.
- When you setup a new account, you need to install the new BDR certificate on the Vault, as it was done for the default account.

Page [BDR - Germany](#) contains all ID Issuer technical details.

BNB plugin setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the Polish ID issuer software BNB:

1. Go on the website ([Test environment](#) or [Production environment](#)) and register as a new user.
2. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Value
Id Issuer Code	Test environment: LEBGN Production environment: LEBGR
Name	eg. BNB Bulgaria
Plugin	BNB Id Issuer
upUI_i SN Length	9
upUI_s SN Length	9
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	7
Min order quantity	1
Max order quantity	1'000'000
Quantity must be a multiple of	1
Mode	IM
Requires Economic Operator OnBoarding	YES
Api Version	v1.3 (from the the 30th of March)
Plugin Parameters	
Id Issuer Service Url	Test environment: https://testing.tobacco-id.com Production environment: https://bgtpd.com
API Access Token Url	Test environment: https://052eb377-1e0b-403c-969e-599df5632071@testing.tobacco-id.com/oauth/token Production environment: https://052eb377-1e0b-403c-969e-599df5632071@bgtpd.com/oauth/token
Client Id	052eb377-1e0b-403c-969e-599df5632071
Secret	Empty for testing and prod.
Markets	
Country	Bulgaria
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	Yes
Accept External IDs	Yes
Market EOID	Fill with the EOID coming from the id issuer.
Official Code Formats	
See Inexpress Tobacco Tpd Code Formats	

Economic Operator Registration

The registration/update of an Economic Operator requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Api version
Address_Region	no	v2
Address_Municipality	no	v2
Address_Street	yes	v2
Address_AdditionalInfo	no	v2
Address_PostCode	yes	v2
Address_City	yes	v2

Facility Registration

The registration/update of a Facility requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Api version
Address_Region	no	v2
Address_Municipality	no	v2
Address_Street	yes	v2
Address_AdditionalInfo	no	v2
Address_PostCode	yes	v2
Address_City	yes	v2

Page [BNB - Bulgaria](#) contains all ID Issuer technical details.

CNIN plugin setup

 For TPD 2.0, the plugin version must be updated to 'v2'.

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the CNIN ID issuer software:

1. Go on the id issuer website www.ridis.ro to register a new account and follow the steps (for test environment: <https://staging.emitentid.cnin.ro/backoffice>).
2. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Value
ID Issuer Code	LECNI
Name	eg. CNIN Romania
Plugin	CNIN Id issuer
upUI_i SN Length	9
upUI_s SN Length	9
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	6
Min order quantity	1'000
Max order quantity	1'000'000
Quantity must be a multiple of	1'000
Mode	IM
Requires EO OnBoarding	no
Process Order Immediately	supported
Api Version	v2 (Mandatory for TPD 2.0)
Plugin Parameters	
ID Issuer Service Url	Test Environment: https://staging.emitentid.cnin.ro/eaapi Production Environment: https://emitentid.ridis.ro/eaapi
Authentication Url	Test Environment: https://staging.emitentid.cnin.ro/auth/realms/ddcm/protocol/openid-connect/token Production Environment: https://emitentid.ridis.ro/auth/realms/ddcm/protocol/openid-connect/token
Client ID	ddcm-authz-client
Username	provided by the id issuer
Password	provided by the id issuer
Markets	
Country	Romania
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	yes
Accept External IDs	yes
Market EOID	fill the ID of the EO you registered in step 1

Economic Operator Registration

The registration/update of an Economic Operator requires the following specific data in the IdIssuerProperties tab:

Entity type	Property name	Mandatory	Description	Api version
Economic Operator	EO_Telephone	yes	Phone number of the Economic Operator	v1 + v2
	Name	no	Name of the address	v2
	StreetOne	yes	Street and number of the main address	v2
	StreetTwo	no	Street and number of a secondary address	v2
	City	yes	City	v2
	PostCode	no	Postal code	v2

Facility Registration

The registration/update of an Facility requires the following specific data in the IdIssuerProperties tab:

Entity type	Property name	Mandatory	Description	Api version
Facility	EO_Telephone	yes	Phone number of the Economic Operator	v1 + v2
	Name	no	Name of the address	v2
	StreetOne	yes	Street and number of the main address	v2
	StreetTwo	no	Street and number of a secondary address	v2
	City	yes	City	v2
	PostCode	no	Postal code	v2

Production Order



Production Order weight

The P_Weight value should be a multiple of 0.02

Page [CNIN - Romania](#) contains all ID Issuer technical details.

FATIDIK Plugin Setup

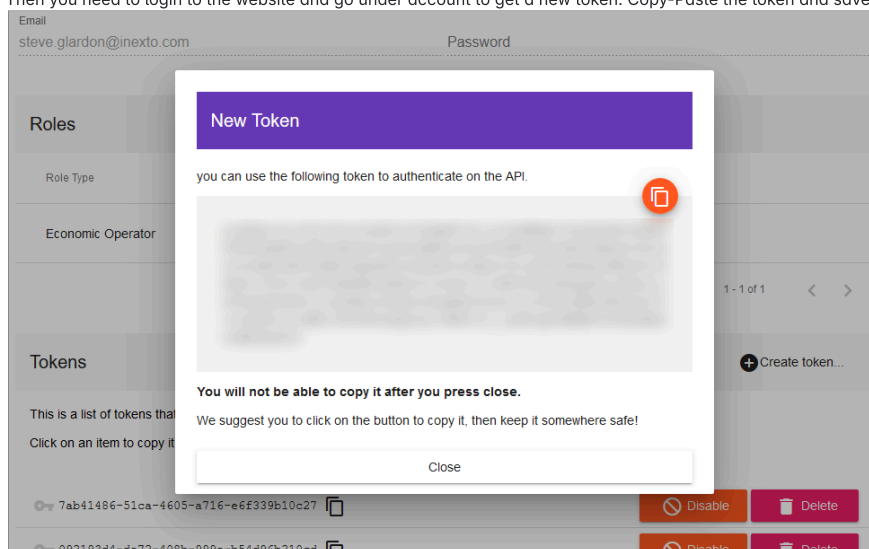
Here are the steps needed to configure Inextor when ordering codes from ID issuers using the FAT ID Issuer Kit software:

1. Contact the corresponding ID issuer and create a registration. Since those ID issuers require EO to be registered through their web sites, you cannot create EO registration from Inextor:

	France (ING)	Slovakia (DataCentrum)	Hungary (NDN)	Inexto QA
Contact email	contact_TPD@ingroupe.com	aureusplus@aureusplus.com	dakirsupport@4ig.hu	-
Test Environment Url	V1 https://test.trackin-ingroupe.com V2 https://portal.test2.trackin-ingroupe.com/	https://idt.ttsk.sk	https://m2mtest1.dakir.suaviter.hu	https://idissuer-inx.inextor.biz
Production Environment Url	V1 https://www.trackin-ingroupe.com V2 https://portal.trackin-ingroupe.com/	https://id.ttsk.sk	https://m2mprod1.dakir.suaviter.hu	-

⚠ For **Slovakia**, please proceed with the additional steps described here: [Datacentrum login info](#)

2. Then you need to login to the website and go under account to get a new token. Copy-Paste the token and save it somewhere safe.



You can use this website to manage the entities registered and the codes ordered.

3. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	France	Slovakia	Hungary	Inexto QA
Id Issuer Code	Test Environment: F2LPK Production Environment: KPL2F	Test Environment: TSTSK Production Environment: LEDTC	Test Environment: TSTHU Production Environment: LEHU1	TEST (for the QA environment you could set this to something else if you wish)
Name	eg. IN Groupe France	eg. Datacentrum Slovakia	eg. NDN Hungary	Inexto QA ID Issuer
Plugin	ID Issuer Kit			
upUI_i SN Length	9	9	9	9
upUI_s SN Length	9	9	9	9
Accept different	Yes (except if the manufacturer is unable to report HR codes)			

upUI_s SNs from upUI_i SNs				
Product Code Length	4	6	4	4
Request Delay	2d0H0M0s0ms			
Min Order Quantity	1000	1	1	1
Max Order Quantity	100'000 (before TPD2.0) 10'000 (after TPD2.0)	100'000 (before TPD2.0) 10'000 (after TPD2.0)	100'000	100'000
Quantity must be a multiple of	1			
Mode	IM			
Requires EO Onboarding	checked	checked	checked	not checked
Process Order Immediately	Open to user preference. See Vault FCTC Regulations: Id Issuers for more details.			ignored - the ID issuer Kit does supports only immediately delivery of orders
Api Version	2.0 ING TPD 2.0 ING (after TPD2.0)	1.3.5 TPD 2.0 Aureus (after TPD2.0)	1.3.5 NDN TPD 2.0 NDN (after TPD2.0)	1.3.5
Plugin Parameters				
Id Issuer Service Url	Test Environment: Before 2022: https://test.trackin-ingroupe.com/api/v1/ After 2022: https://api.test2.trackin-ingroupe.com/backend/api/v1/ Production Environment: Before 2022: https://www.trackin-ingroupe.com/api/v1/ After 2022: https://api.trackin-ingroupe.com/backend/api/v1/	Test Environment: https://idt.ttsk.sk/api/v1/ Production Environment: https://id.ttsk.sk:4433/api/v1/	Test Environment: https://m2mtest1.dakir.suaviter.hu/api/v1/ Production Environment : https://m2mprod1.dakir.suaviter.hu/api/v1/	Test Environment: https://idissuer-inx.inextor.biz/api/v1/ Production Environment: n/a
Authentication Token	Authentication token you created in Step 1			
Download Code Generation Parameters	not checked			
Has certificate ?	Before 2022: not checked After 2022: checked	checked	checked	not checked
Markets				
Country	France	Slovakia	Hungary	-
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.			
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.			
Derogation TPD Art 4.1	Checked			
Accept External IDs	Checked Only if you have beforehand registered your foreign EOID on the Datacentrum portal. Register in the details of your EO under International EOIDs . (Not <i>Other EO</i> !)			
Market EOID	The ID of the EO you registered in Step 1			
Official Code Formats				
See Inexpress Tobacco Tpd Code Formats				

NOTE: Check with your Id Issuer contact if some of the parameters were changed and update them accordingly.

① ING France will reject order requests for all intended markets except: France, Estonia, Lithuania, Italy and all [DROM-COM](#) countries.

Page [DATACENTRUM - Slovakia](#), [NDN - Hungary](#) and [ING - France](#) contain all ID Issuer technical details.

Certificate creation with OpenSSL

Introduction [↗](#)

Some Id Issuers requires a certificate in order to authenticate. In this page, we explain step by step how to generate it with OpenSSL.

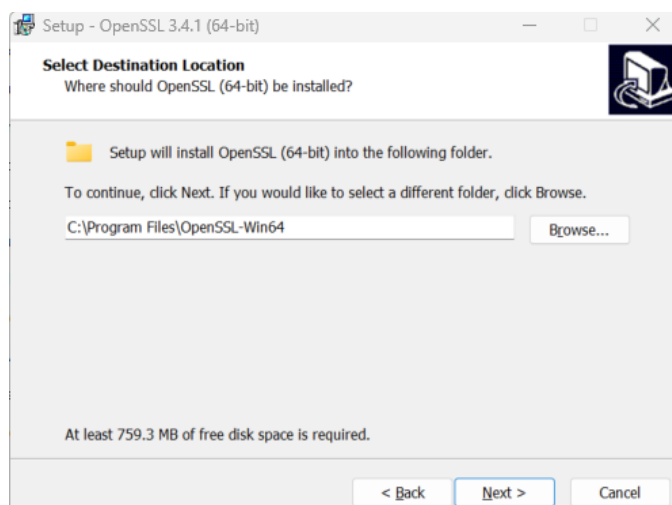
Note that OpenSSL is not the only available option on the market to perform this task.

Installation [↗](#)

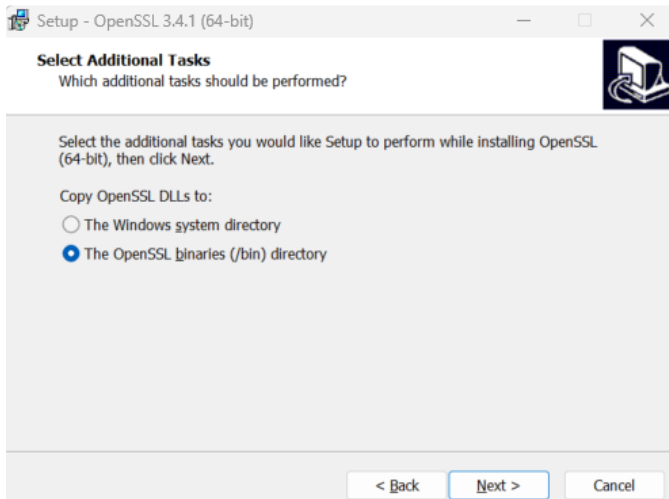
Compiled version [↗](#)

Since I'm lazy, I don't compile the source code of OpenSSL. Instead, I grab a built version from below link. I usually take "Win64 OpenSSL v3.4.1", but read the description to know which one fit best for you.

<https://siproweb.com/products/Win32OpenSSL.html>



During installation, I choose the option to have the binaries in the "bin" folder. I find it easier to work like this:



If needed, you can find other compiled version here:

<https://wiki.openssl.org/index.php/Binaries>

Source code [🔗](#)

If you want to build yourself OpenSSL, you can get the latest source code from here:

<https://www.openssl.org/>

On the wiki, you can find help on how to compile:

https://wiki.openssl.org/index.php/Compilation_and_Installation

Process [🔗](#)

1 Gather data for certificate [🔗](#)

There are a number of information you need to enter when creating your certificate. It's better to have them ready before starting.

Some Id Issuer might have specific requests as to how the data must be filled.

- **File name.** Name must make it easy to identify the function of the certificate.
- **Common Name.** This can be the same or similar to the file name.
- **Certificate password.** The password used to protect your certificate. You will need it when installing the certificate.
- **PEM Pass Phrase.** Password that need to be kept. It will be used during final certificate generation.
- **Country** (optional). Two letters ISO code.
- **City name** (optional)
- **Organization name** (optional)
- **Organization department** (optional)
- **Email address** (optional)
- **Optional company name** (optional)

2 Generate certificate request and key [🔗](#)

Run CMD command prompt as Administrator. Then move to the folder C:\Program Files\OpenSSL-Win64\bin and execute the command openssl.exe

```
Administrator: C:\WINDOWS\system32\cmd.exe - openssl.exe
Microsoft Windows [Version 10.0.19044.1586]
(c) Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>cd C:\Program Files\OpenSSL-Win64\bin

C:\Program Files\OpenSSL-Win64\bin>openssl.exe
OpenSSL> req -newkey rsa:2048 -keyout PrdHBTfrIdIssuer.key -out PrdHBTfrIdIssuer.csr
Generating a RSA private key
.....+++++
.....+++++
writing new private key to 'PrdHBTfrIdIssuer.key'
Enter PEM pass phrase:
```

Run the following command. Change the file name of the .key and the .csr. If requested by the Id Issuer, change the encryption algorithm "rsa:2048" to what they want.

```
1 req -newkey rsa:2048 -keyout QasAcmeFrenchIdIssuer.key -out QasAcmeFrenchIdIssuer.csr
```

OpenSSL will ask you several data. Fill them with what you collected in step 1. If it's an optional field and you don't want to fill it, just press "Enter".

 When entering a password there is **no visual feedback** in OpenSSL. There are no *** being displayed, but OpenSSL is registering what you are typing.
I usually don't copy-past the password. Instead, I manually type it, then press "Enter". OpenSSL will then ask you to enter the password again for confirmation.

The key and csr will be generated in the folder of the OpenSSL executable.

- **KEY**. It's the private key. You will need it later to finalize the certificate. Do NOT send it. Keep it somewhere safe.
- **CSR**. It's the certificate request. You need to send it to the Id Issuer for processing.

3 Merge certificate and private key [🔗](#)

3.1 Generat PFX [🔗](#)

The Id Issuer will send back the certificate as a CER or CRT file. You will also receive a P7B or PEM file containing the Root and Intermediate certificates.

We now need to link this certificate with its private key that you generated in the previous step. This will generate the final PFX file.

CER + KEY = PFX

```
1 pkcs12 -export -in QasAcmeFrenchIdIssuer.cer -inkey QasAcmeFrenchIdIssuer.key -out QasAcmeFrenchIdIssuer.pfx
```

or CRT + KEY = PFX

```
1 pkcs12 -export -in QasAcmeFrenchIdIssuer.crt -inkey QasAcmeFrenchIdIssuer.key -out QasAcmeFrenchIdIssuer.pfx
```

You would need to open a CMD as admin and then run the on of the previous commands with "Openssl" at the beginning of the command (openssl pkcs12 -export -in...):

- Copy the certificate files to the C:\Program Files\OpenSSL-Win64\bin path
- Use in the previous command the full path of the files (openssl pkcs12 -export -in C:\Users\"user"\Downloads\CertFRENCH_ID_ISSUER_RONA_PROD_TRTC.crt -inkey

```
C:\Users\"user"\Downloads\Certprivate_FR_ISSUER.key -out  
C:\\"user"\jblanco\Downloads\CertRONA_FRENCH_ID_ISSUER_PROD.pfx)
```

You would need to generate a password and verify it again.

Reference ticket: [\[#72548\] FR id issuer setup in Vault : INEXTO \(freshdesk.com\)](#)

You will be asked to enter the **PEM Pass Phrase** first, then the **Certificate Password**.

! When entering a password there is **no visual feedback** in OpenSSL. There are no *** being displayed, but OpenSSL is registering what you are typing.
I usually don't copy-past the password. Instead, I manually type it, then press "Enter". OpenSSL will then ask you to enter the password again for confirmation.

3.2 Convert PEM to P7B [🔗](#)

If the Id Issuer did send a PEM file, you can convert it to P7B with OpenSSL. Run the following command to create the P7B file.

```
1  openssl crl2pkcs7 -nocrl -certfile QasAcmeFrenchIdIssuer.pem -out QasAcmeFrenchIdIssuer.p7b -certfile  
   QasAcmeFrenchIdIssuer.cer
```

4 Install certificate [🔗](#)

Install the **PFX** file on the Vault server under "Local Computer". You will need to enter the Certificate Password. Check the box "Mark this key as exportable".

Install the **Intermediate** and **Root** certificates in "Intermediate Certification Authorities" and "Trusted Root Certification Authorities" respectively. To install:

1. Copy P7B file on the Vault server.
2. Open P7B file.
3. Double-click a certificate. Check the "Certification Path" to know which one it is.
4. Press "Install Certificate...". Select "Local Computer", then manually choose the folder between "Intermediate Certification Authorities" and "Trusted Root Certification Authorities".
5. Do step 3 and 4 for the Intermediate and Root certificate.

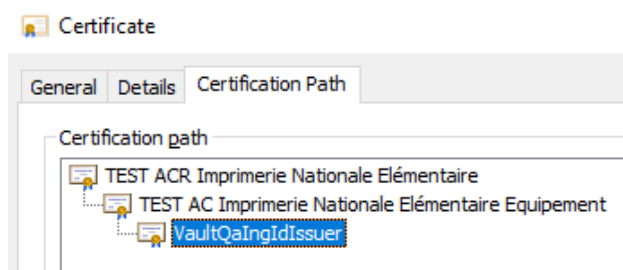


Figure 1: Chain of certificate. Bottom, the PFX you created. Middle, intermediate. Top, Root.

If there are several Vault services, the certificate needs to be installed on all the servers.

Known issue [↗](#)

Older Windows [↗](#)

At least with Windows Server 2016, the PFX should not be encrypted with AES256-SHA256. This algorithm is too recent and incompatible with some old Windows.

If you get an error like incorrect password when trying to install the PFX in Windows, you should re-encrypt it in SHA1.

1. On a modern Windows, like your PC, install the PFX.
2. Go to MMC.exe and find your certificate.
3. Right-click and select export.
4. Choose "Yes, export the private key."
5. Select password for security and "**TripleDES-SHA1**" for the encryption.
6. The new PFX should be compatible with old Windows.

Datacentrum Plugin Setup

We describe here the steps needed to create an account at Datacentrum, the Slovakian Id Issuer. We cover only the part that is different from the other Id Issuers using the Id Issuer Kit plugin. For the global page go here : [FATIDIK Plugin Setup](#)

1. Go on the [TTTSK](#) web site and register as a Manufacturer.

What am I supposed to do when I am:

☒ RETAILER

☐ DISTRIBUTOR

☒ MANUFACTURER OR IMPORTER

Introduction

In accordance with Article 15 of the **Tobacco Products Directive** 2014/40/EU and Commission Implementing Regulation (EU) 2018/574 from 15th of December 2017 on technical standards for the establishment and operation of a traceability system for tobacco products, DataCentrum shall be responsible for issuing unique IDs for tracking and tracing of tobacco products to Economic subjects. Unique IDs are mandatory in EU-wide systems of traceability and security features for tobacco products to address the issue of illicit trade.

Registration formular UPLOAD FILE

Subject name *

Subject short name (if exists)

Street name * Street number *

City *

ZIP (postal code) * Country of registration * Slovakia

Firstname * Lastname *

Email *

2. You now need to generate a certificate. Follow the steps described in this document : [Param_gener_CSR_en.docx](#) using this file : [config.cnf](#)
3. You should receive from step 1 and 2:
 - Certificate
 - Certificate password
 - Authentication token
 - Login name
 - Login password
 - EOID
 - EO_CODE
4. Install the certificate on the Vault server machine.
 - Install certificate for account LocalMachine
 - During installation, on Import option, check the checkbox "Mark this key as exportable"
 - Retrieve the certificate serial number from the MMC (Microsoft Management Console)
5. During the configuration of the plugin you will need to add the certificate serial number in the corresponding text box.

FNMT Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the FNMT ID issuer software:

1. Go to the FNMT web portal <https://tpd.fnmt.es/TPD/> and register an account.

2. Once you have your account, login. Go under "**Registro/Registry**" and select your Economic Operator (EO). You will need the info on the page for later.

3. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Value
Id Issuer code	1E
Name	eg. FNMT Spain
Plugin	FNMT Id Issuer
upUI_i SN Length	13
upUI_s SN Length	13
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	14
Min order quantity	1'000
Max order quantity	10'000'000 (QA → 150'000)
Quantity must be a multiple of	1
Mode	MMIC
Plugin Parameters	
Id Issuer Service URL	https://tpd.fnmt.es (Production)

	https://tpd-qa.apps.fnmt.es/ (QA)
Client ID (email)	Email and password used when the account was registered.
Client Secret (password)	
Serial Number Imported Code Length	14
Product Number Imported Code Length	14
Markets	
Country	Spain
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	Checked
Accept External IDs	Checked
Marked EOID	Fill the EOID received in step 1
Official Code Formats	
See Inexpress Tobacco Tpd Code Formats	

 When adding an EO registration, all the fields should be filled as in the web portal. See step 2.

Page [FNMT - Spain](#) contains all ID Issuer technical details.

GSIS Plugin Setup



Obsolete id issuer plugin

This id issuer plugin became obsolete in December 2022. See [AW plugin setup](#) for the new plugin.

Check this [KB137 - Greek Id Issuer transition from supplier Authentix to Worldline](#)

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the GSIS ID issuer software for Greece and Cyprus:

1. Go on the website to register a new account: <https://idissuer.gsis.gr/#/login>
2. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field name	Greece		Cyprus
Id Issuer Code	LEGR1		
Name	eg. GSIS Greece		eg. GSIS Cyprus
Plugin	GSIS - Authentix Id Issuer		
upUI_i SN Length	9		
upUI_s SN Length	9		
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)		
Product Code Length	5		
Request Delay	2d0H0M0s0ms		
Min Order Quantity	1		
Max Order Quantity	1'000'000		
Quantity must be a multiple of	1		
Mode	IM		
Requires EO Onboarding	checked		
Process Order Immediately	manufacturer choice		
Api Version	v1.0.6 (from the 30th of March)		
Plugin Parameters			
Id Issuer Url	Test Environment: https://idissuertest.gsis.gr/api Production Environment: https://idissuer.gsis.gr/api		
Authentication Url	Test Environment: https://idissuertest.gsis.gr/api/auth/connect/token Production Environment : https://idissuer.gsis.gr/api/auth/connect/token		
Client ID	fill with credentials given from Id issuer		
Client Secret	fill with credentials given from Id issuer		
Markets			
Country	Greece		Cyprus
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.		
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.		
Derogation TPD Art 4.1	checked		
Accept External IDs	checked		

Market EOID	fill the ID provided form the Id issuer
--------------------	---

3. Add business holidays if needed.
4. Press the **Save** button.

Economic Operator Registration

The registration/update of an Economic Operator requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Api version
eO_TYPE	yes	v1 + v2
Address_Name	no	v2
Address_City	yes	v2
Address_StreetOne	yes	v2
Address_StreetTwo	no	v2
Address_PostCode	no	v2

Facility Registration

The registration/update of a Facility requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Api version
Address_Name	no	v2
Address_City	yes	v2
Address_StreetOne	yes	v2
Address_StreetTwo	no	v2
Address_PostCode	no	v2

Pages [GSIS \(Worldline\) - Greece and Cyprus](#) (from July 2022 on) and [GSIS - Greece and Cyprus](#) (before July 2022) contain all ID Issuer technical details.

INCERT Plugin Setup

INCERT is covering both Luxembourg and Belgium with the same ID issuer code. This means that you should have one ID issuer registration with two accounts. In the instructions below assume that ID issuer with the Luxembourg data is created first and then adding a Belgium account. It could be done in the opposite order too. Refer to [TPD ID Issuers](#) for setup generalities.

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the INCERT ID issuer software for Luxembourg and Belgium:

1. Before creating the ID Issuer on the Vault, go to the desired environment and register a new economic operator. When the registration is approved, you will receive a confirmation email with the password to access the site.

	Luxembourg	Belgium
Test environment	https://test.luxembourg.ttid.incirt-id.eu/havana	https://test.belgium.ttid.incirt-id.eu/havana
Production environment	https://ttid.incirt-id.eu/havana	https://belgium.ttid.incirt-id.eu/havana

2. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Luxembourg	Belgium
Id Issuer Code	QCLUXX	
Name	eg. INCERT Luxembourg	eg. INCERT Belgium
Plugin	INCERT Id Issuer	
upUI_i SN Length	12	
upUI_s SN Length	12	
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)	
Product Code Length	7	
Request Delay	2d0H0M0s0ms	
Min Order Quantity	1	
Max Order Quantity	1000000	
Quantity must be a multiple of	1	
Mode	IM	
Requires EO Onboarding	Checked	
Process Order Immediately	-manufacturer choice-	
Plugin Parameters		
Registration Url	Test Environment: https://test.luxembourg.ttid.incert-id.eu/havana/RegistrationService Production Environment: https://ttid.incert-id.eu/havana/RegistrationService	Test Environment: https://test.belgium.ttid.incert-id.eu/havana/RegistrationService Production Environment: https://belgium.ttid.incert-id.eu/havana/RegistrationService
UI code Url	Test Environment: https://test.luxembourg.ttid.incert-id.eu/havana/UIDService Production Environment : https://ttid.incert-id.eu/havana/UIDService	Test Environment: https://test.belgium.ttid.incert-id.eu/havana/UIDService Production Environment : https://belgium.ttid.incert-id.eu/havana/UIDService
Username	User name you created in Step 1	
Password	Password you received in Step 1	
Behaviour	Luxembourg	Belgium

Packaging amount property name (1)	Leave empty (used for Belgium)	Packaging_Amount
Price property name (2)	Leave empty (used for Luxembourg)	Price
Enable TPD Amendments	Checked. <i>ⓘ</i> Unchecking this will disable the sending of TPD 2.0 values to the ID issuer. The INCERT API is permissive and allows sending of undocumented/unnecessary values. This checkbox is here only as precaution in case code orders start to fail after the API is changed. NOTE: The checkbox will be removed shortly after the switch to TPD 2.0.	
Markets		
Country	Luxembourg	Belgium
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.	
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.	
Derogation TPD Art 4.1	checked	
Accept External IDs	checked	
Market EOID	fill the ID provided form the Id issuer	

(1) Indicates the name of the Attribute in the production order that represents the packaging amount (a number). This is required when Behaviour is Belgium. See **Creating Production Orders** below for more details.

(2) Indicates the name of the Attribute in the production order that represents the price (a number). This is required when Behaviour is Belgium. See **Creating Production Orders** below for more details.



Routing Rule

Once the both accounts are created, you should add the following routing rule:

Field	Value	Description
Intended Market	Belgium (BE)	-
Account EOID	INCERT Belgium	IMPORTANT: This is the Name of the account (INCERT Belgium). If you used a different name change this value accordingly.

Facility Registrations

IMPORTANT: Do not register facilities that are not located in Luxembourg or Belgium, correspondingly. Those registrations will not be accepted by INCERT and the registration will fail.

When registering facilities, you need to enter the parts of the facility address in the **IdIssuerProperties** tab (of attributes grid):

Name	Value	Type	Source	User
Street		String	<empty>	<empty>
StreetNumber		String	<empty>	<empty>
City		String	<empty>	<empty>
ZipCode		String	<empty>	<empty>

Creating Production Orders

Belgium requires additional data when creating production orders. Add the following to the attributes grid of the PO:

Name	Value	Type
Complementary_Code	(will be automatically calculated)	String
Packaging_Amount	(text)	Double
Price	(a number)	Double

Page [INCERT - Luxembourg and Belgium](#) contains all ID Issuer technical details.

INCM Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the INCM ID issuer software:

1. Go on the Website of INCM, <https://rastreadabilidadetabaco.incm.pt>, and register as a manufacturer.



[Who we are](#)
[News](#)
[Frequently asked questions](#)

[Login/Register](#)

2. Once you are registered you should receive:

- Authentication Token
- EOID
- EO_CODE

3. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Value
ID Issuer Code	Test Environment: 20 (old → 5v) Production Environment: 3P
Name	eg. INCM Portugal
Plugin	INCM Id issuer
upUI_i SN Length	13
upUI_s SN Length	13
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	14
Min order quantity	50
Max order quantity	1'000'000
Quantity must be a multiple of	1
Mode	IM
Requires EO Onboarding	YES
SLA Period	See this documentation to know how you want to configure your Service-Level Agreement.
Immediate delivery SLA Period	
SLA only on working day	
API Version	v2 (starting 01 March 2020)
Plugin Parameters	
ID Issuer Service Url	Test Environment: https://sandbox-rastreabilidadetabaco.incm.pt/id-issuer/services/ QA Environment: https://pre-prod.rastreabilidadetabaco.incm.pt/id-issuer/services/ Production Environment: https://rastreadabilidadetabaco.incm.pt/id-issuer/services/
Serial Number Imported Code Length	14
Product Number Imported Code Length	14
Markets	
Country	Portugal
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	checked

Accept External IDs	checked
Marked EOID	Fill the EOID received from INCM.
Official Code Formats	
See Inexpress Tobacco Tpd Code Formats	

Economic Operator registration

The registration/update of an Economic Operator requires the following specific data in the IdIssuerProperties tab:

Property name	Action	Value	Type	Mandatory	Comments
Profile	Registration Update	1 (Manufacturers) 2 (Importers) 3 (Wholesalers) 4 (Retailers)	string	yes	One or more values separated by ","
Address	Registration	(eo address)	string	yes	-
City	Registration	(eo city)	string	yes	-
Street number	Registration	(eo street number)	string	no	-
Street fraction	Registration	(eo street fraction)	string	no	-
Postal Code	Registration	(eo postal code)	string	no	-
EoOtherId	Registration	Up to 50 characters	string	no	-

Facility registration

The registration/update of a Facility requires the following specific data in the IdIssuerProperties tab:

Property name	Action	Value	Type	Mandatory
Address	Registration	(facility address)	string	yes
City	Registration	(facility city)	string	yes
Street number	Registration	(facility number)	string	no
Street fraction	Registration	(facility street fraction)	string	no
Postal Code	Registration	(facility postal code)	String	no
Gln	Registration	Up to 13 digits	integer	no

Machine registration

The registration/update of a Machine requires the following specific data in the IdIssuerProperties tab:

Property name	Action	Value	Type	Mandatory	Comments
Gcp	Registration	Up to 11 digits	integer	no	GS1 Compagny prefix
InternalId	Registration	Up to 30 alphanumerics	string	no	-

Production Order

When creating a Production Order in the Gate, the following fields have requirements to order upUI. This is in addition to the standard requirements of TPD.

Name	Comment
Brand	It must be the name of an existing product. INCM somehow check the validity of this field.
Weight	This must be the weight of an existing product. INCM somehow check the validity of this field.
OtherId	14 digit GTIN of an existing product. INCM somehow check the validity of this field.

Page [INCM - Portugal](#) contains all ID Issuer technical details.

LVRTC Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the LVRTC ID issuer software:

1. All registrations require to be made through their web site ([Test environment](#) or [Production environment](#)) (or [email](#)) and you cannot create EO registration from Inextor. You will receive an email when your registration is approved.
2. To register an Economic Operator (EO) send an email to edgars.savcenko@zzdats.lv with the following information

Code	Put information here	Description	Data Type	Cardinality	Priority
EO_Name1		Economic operator's registered name	Text	Single value	Mandatory
EO_Name2		Economic operator's alternative or abridged name	Text	Single value	Optional
EO_Address		Economic operator's address – street name, house number, postal code, city	Text	Single value	Mandatory
EO_CountryReg		Economic operator's country of registration	Country	Single value	Mandatory
EO_Email		Economic operator's email address used to inform about registration process, including subsequent changes and other required correspondence	Text	Single value	Mandatory
VAT_R		Indication of the VAT registration status. 0 – No VAT registration; 1 – VAT number exists	Boolean	Single value	Mandatory
VAT_N		Economic operator's VAT number	Text	Single value	Mandatory, if VAT_R = 1
TAX_N		Economic operator's tax registration number	Text	Single value	Mandatory, if VAT_R = 0
EO_ExciseNumber1		Indication if the economic operator has an excise number issued by the competent authority for the purpose of identification of persons/premises. 0 – No SEED number; 1 – SEED number exists	Boolean	Single value	Mandatory
EO_ExciseNumber2		Economic operator's excise number issued by the competent authority for the purpose of identification of persons/premises	SEED	Single value	Mandatory, if EO_ExciseNumber1 = 1
OtherEOID_R		Indication if the economic operator has been allocated an identifier by another ID Issuer. 0 – No; 1 – Yes	Boolean	Single value	Mandatory
OtherEOID_N		Economic operator identifier codes allocated by other ID Issuers	EOID	Multiple value	Mandatory, if OtherEOID_R = 1

3. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Name
Id Issuer Code	Test Environment: LVRTC Production Environment: LERTC
Name	eg. LVRTC Latvia
Plugin	Lvrtc Id Issuer
upUI_i SN Length	7
upUI_s SN Length	7
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	6
Request Delay	2d0H0M0s0ms

Min Order Quantity	1
Max Order Quantity	Test Environment: 10'000 (200'000 before TPD 2.0) Production Environment: 10'000 (200'000 before TPD 2.0)
Quantity must be a multiple of	1
Mode	IM
Requires EO Onboarding	checked
Process Order Immediately	N/A
API Version	V1.7.1 (starting 27 April 2020)
Plugin Parameters	
Id Issuer Service Url	Test Environment: https://tabaka-api-act.lvrta.lv/v1.0/ Production Environment: https://tabaka-api.lvrta.lv/v1.0/
Username	fill user name you created in Step 1
Password	fill the password of the user you created in Step 1
Markets	
Country	Latvia
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	checked
Accept External IDs	checked
Market EOID	fill the ID of the EO you registered in step 1
Official Code Formats	
See Inexpress Tobacco Tpd Code Formats	

NOTE: Check with your Id Issuer contact if some of the parameters were changed and update them accordingly.

4. Add business holidays if needed.
5. Press the **Save** button.

Facility registration

The registration/update of a Facility requires the following specific data in the IdIssuerProperties tab:

Property name	Type	Mandatory
Address_Name	string	no
Address_City	string	yes
Address_StreetOne	string	yes
Address_StreetTwo	string	no
Address_PostCode	string	no

Page [LVRTC - Latvia](#) contains all ID Issuer technical details.

MVG Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the MVG ID issuer software:

- Go on the id issuer website www.usp.gv.at to register a new account and follow the steps described in the documentation [AT-ISSUER-REGISTERING-FOR-PRODUCTION-SYSTEM_1.6.pdf](#) (related documentation can be found [here](#)).
- You will need to get an API-Key. The easiest way is to use [Insomnia](#) with the requests collection [Insomnia_Test-Collection_v2](#) (explanation of how to use it [AT-ISSUER-API-TESTING-WITH-TEST-TOOL-INSOMNIA_2.0.pdf](#)).
Send a *GET* request to `api/v2/authorization/token/{EO_ID}`.
When you call this function, a new api-key is generated and replaces the old one. The registered economic operator will receive a confirmation by e-mail that his api-key has been changed. Note that the old api-key is no longer valid immediately after using this message.
If you experience an error 403 or 401 remove the cookies and send again the request without any authentication, then try again with the basic authentication.
- Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Value
ID Issuer Code	Test Environment: leat1 Production Environment: LEAT1
Name	eg. MVG Austria
Plugin	MVG Id issuer
upUI_i SN Length	8 (before 01.01.2024) 10 (after 01.01.2024)
upUI_s SN Length	8 (before 01.01.2024) 10 (after 01.01.2024)
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	6
Min order quantity	1
Max order quantity	10'000'000 ((before 01.01.2024)) 2'500'000 (after 01.01.2024)
Quantity must be a multiple of	1
Mode	MMIC
Requires EO Onboarding	unchecked
Process Order Immediately	supported
Plugin Parameters	
ID Issuer Service Url	Test Environment: https://txm.portal.at/track-and-trace-tobacco-issuer-t/api/public/orders (before TPD 2.0) https://txm.portal.at/track-and-trace-tobacco-issuer-t/api/v2/public/orders (after TPD 2.0) Production Environment: https://txm.portal.at/track-and-trace-tobacco-issuer/api/public/orders (before TPD 2.0) https://txm.portal.at/track-and-trace-tobacco-issuer/api/v2/public/orders/ (before TPD 2.0)
Username	provided by the id issuer
Password	provided by the id issuer
Authentication Key	provided by the id issuer
Markets	
Country	Austria
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.

End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	checked
Accept External IDs	checked
Market EOID	fill the ID of the EO you registered
Official Code Formats	
See Inexpress Tobacco Tpd Code Formats	

Economic Operator registration

Not supported, no manufacturer in Austria, EOID provided by ID issuer for production ordering

Facility registration

Not supported, no manufacturer in Austria, FID provided by ID issuer for production ordering

Machine registration

Not supported, no manufacturer in Austria, MID provided by ID issuer for production ordering

Product Order

Configure manually EOID, FID and MID provided by the Austrian ID issuer for production order

Page [MVG - Austria](#) contains all ID Issuer technical details.

OPSEC Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the OPSEC ID issuer software:

1. Before creating OPSEC ID Issuer on the Vault, first send an email to mgil@opsecsecurity.com and request a new account. They will create a new **EO ID** and will give you **user name**, **password** and **subscription key**. These pieces of information need to be put in the plugin configuration (see below). The EO ID is needed when the Country is added in the Market list.
2. Account can be managed on the id issuer website ([Test environment](#) or [Production environment](#))
3. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Value
Id Issuer Code	WAA0
Name	eg. OPSEC Malta
Plugin	OPSEC Id issuer
upUI_i SN Length	11
upUI_s SN Length	11
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	7
Request Delay	2d0H0M0s0ms
Min Order Quantity	1
Max Order Quantity	10000
Quantity must be a multiple of	1
Mode	MMIC
Requires EO Onboarding	Checked
Process Order Immediately	Manufacturer preference
Plugin Parameters	
Id Issuer Service Url	Test Environment: https://insightapi.opsecsecurity.com/tpdqa Production Environment: https://insightapi.opsecsecurity.com/tpd
Username	User name you created in Step 1
Password	Password you received in Step 1
Subscription Key	Subscription key you received in Step 1
Markets	
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	Checked
Accept External IDs	Checked
Marked EOID	Fill the EOID you registered by OPSEC.
Official Code Formats	
See Inexpress Tobacco Tpd Code Formats	

NOTE: Check with your Id Issuer contact if some of the parameters were changed and update them accordingly.

4. Page [OPSEC - Malta](#) contains all ID Issuer technical details.

PWPW Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the Polish ID issuer software PWPW:

1. Go on the website QAS (<https://idissuer.pulab.pl>) PRD (<https://www.idissuer.pl/>) and register as a new user.

Be careful, the website email is case sensitive. You can use this website to manage the entities registered and the codes ordered. The website was not 100% translated in English at the time of writing.

2. Once registered, PWPW need to authorize the account to order codes. You can check if you have the rights by going in your user settings. If you don't have the rights, contact PWPW. Without the authorization, code ordering will return the **Error HTTP Forbidden**.
3. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Value
Id Issuer Code	Test environment: PWPS Production environment: KPL1
Name	eg. PWPW Poland
Plugin	Pwpw Id issuer
upUI_i SN Length	9
upUI_s SN Length	9
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	4
Min order quantity	1
Max order quantity	1'000'000
Quantity must be a multiple of	1
Mode	IM
Requires Economic Operator Onboarding	Not checked
Api Version	"15 May 2024" (Old : TPD 2.0)
Plugin Parameters	
URL	Test environment: https://idissuer.pulab.pl/api/v3 (Old: https://idi-api.pulab.pl/v2) Production environment: https://idissuer.pl/api/v3 (Old: https://api.idissuer.pl/v2)

Username	Username used when the account was registered.
Password	Password used when the account was registered.
Markets	
Country	Poland
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	YES
Accept External IDs	Only if you have beforehand registered your foreign EOID and FID on the PWPW portal. IDs added in the details of your entities.
Marked EOID	Fill the EOID of your default Economic Operator.
Official Code Formats	
See Inexpress Tobacco Tpd Code Formats	

Economic Operator and Facility Registration

The registration/update of an Economic Operator and Facility requires the following specific data in the IdIssuerProperties tab:

Entity type	Property name	Mandatory	Api version
Economic Operator and Facility	Street	yes	v2
	Number	no	v2
	City	yes	v2
	PostalCode	yes	v2

Code ordering

PWPW allows to re-download already downloaded codes, both from the API and website (in Inextor you will receive an error message if the codes are already in the database).

Page [PWPW - Poland](#) contains all ID Issuer technical details.

STC Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the STC ID issuer software:

1. Go on their web portal, <https://znacenitabaku.cz/tpd/login>, and register as an Economic Operator.

Welcome in system TPD ID Issuer

The ID_Issuer system serves to support the production and distribution of tobacco products under EU Commission Regulation No. 2018/574.
The use of the system is restricted to entities that provide this activity within the Czech Republic or other EU countries and requires an authorized registration in the system.
The registration in the system is carried out together with the representative of the registered entity as well as the registration entity, which is already registered in the system as an economic entity, or an IDIssuer for the Czech Republic, which is the State Printing Works of Securities, a state enterprise.

Next information [here](#).

Login

Welcome to the TPD IDIssuer registration page

The ID_Issuer system is used to support the registration of production and distribution of tobacco products under EU Commission Regulation No. 2018/574.
The use of the system is limited to entities operating this activity within the Czech Republic or other EU countries and requires an approved registration in the system.
To begin the registration process, fill in the basic identification data of the Economic Operator (EO) and confirm the simple check of your contact email. The IDIssuer employee validates the request and informs the registered EO about the registration result on the contact email. IDIssuer (publisher of codes) for the Czech Republic is the State Printing Works of Securities, a state enterprise.

Next information [here](#).

Registration of a new operator

The right link allows to register. The left one is used once your account is created.

Registration of a new operator

Enter your identification data of the managed Economic operator (EO), after processing your request you will receive an e-mail with the assigned username and activation link that will allow you to access full functionality.

Information about Economic operator (EO)

Name of EO *		Alternative name of EO *	
Address of EO *			
E-mail of EO *		Telephone of EO *	Example: +420 123 456 789
Country of registration *	CZ-Czechia		
Company ID *		** Tax number	
** VAT Number		Sevice Number	
** Legal address registration overview			
ID's of other IDIssuers			
Order			
No data			

Information about the applicant

E-mail for the registration *		Phone number *	
common.validator.email@opnwp		Example: +420 123 456 789	
Password *		Password (repeat) *	
Password strength			

TPD operating conditions

☐ I have read the registration and operating system conditions and I agree with them.

☐ I'm not a robot

[Registration](#) [Cancel](#)

Form to fill with your company info.

2. Wait until you receive an email with the confirmation link. Follow the instruction to activate your account.
3. Once your account is created, you will be able to access their [web portal](#). There you can manage the economic operator, facilities, machines and users. Check that you have your Economic Operator with an EOID and EO.CODE.
4. Send an email to info@znacenitabaku.cz explaining you need credential for their web API. Specify in the email your EOID (see [STC documentation](#) for more details).
5. Once you receive the **Client ID** and **Client Secret**, save them somewhere safe. They are required when creating the Id Issuer on the Vault.
6. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Value
ID Issuer Code	LESTC
Name	eg. STC Czech
Plugin	STC Id Issuer
upUI_i SN Length	9
upUI_s SN Length	9
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	7
Min order quantity	1
Max order quantity	150'000
Quantity must be a multiple of	1
Mode	IM
Requires Economic Operator Onboarding	Checked
Process order immediately	Manufacturer preference
Plugin Parameters	
Id Issuer Service Url	Test environment: https://test-portal.znacenitabaku.cz/DevPublicApi/tpd/v2.0
	Production environment: https://api.znacenitabaku.cz/PublicApi/tpd/v2.0

Authentication Url	Test environment: https://test-portal.znacenitabaku.cz/stagingidp/connect/token Production environment: https://znacenitabaku.cz/idp/connect/token
Client ID	Received from STC (see Step 5)
Client Secret	Received from STC (see Step 5)
Markets	
Country	Czechia
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	Checked
Accept External IDs	Only if you have beforehand registered your foreign EOID on the STC portal. Register in the details of your Czech EO.
Marked EOID	Fill the EOID received from STC.
Official Code Formats	
See Inexpress Tobacco Tpd Code Formats	

NOTE : Check with your STC contact that the **Id Issuer Code**, **Serial Number Length**, **Product Code Length** and **Id Issuer Urls** haven't changed.

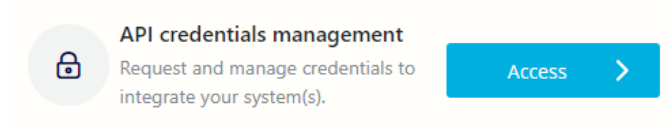
① STC allows to re-download codes from the API or from their website (in INEXTOR you will receive an error message if the codes are already in the database).

Page [STC - Czech Republic](#) contains all ID Issuer technical details.

Dentsu Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the Dentsu ID issuer software:

- If you already have an account with UK DelaRue Id Issuer QCGDLR, please contact Dentsu to get the process on how to access your migrated data
- To register a new account for UK Dentsu Id Issuer, go to the Web site:
 - QA: <https://idissuer.qa-uk-trackandtrace-dentsutracking.com/>
 - Production: <https://idissuer.uk-trackandtrace-dentsutracking.com>
- Once you have your account, you need to create an API access key on the Web Site:



- This website will also allow you to manage the entities and orders.

Once you have setup an account with Dentsu, you can configure the Id Issuer on the Vault.

Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow (the **Client** and **Secret** correspond to the API key you requested):

Field	Value	
ID Issuer Code	QCUKT	
Name	eg. UK Dentsu Id Issuer	
Plugin	Dentsu Id Issuer	
Request Delay	Normally the same as QCGDLR (by default "2d0H0M0s0ms")	
upUI_i SN Length	10	
upUI_s SN Length	10	
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)	
Product Code Length	5	
Min order quantity	1	
Max order quantity	1'000'000	
Quantity must be a multiple of	1	
Mode	IM if you want to create/update/deregister entities with the Vault or MMIC if you prefer to manage entities on Dentsu Id Issuer Web Portal <i>i</i> During transition from QCGDLR to QCUKT, it is safer to use MMIC in order to not accidentally deregister IDs on QCUKT.	
Requires Economic Operator Onboarding	NO	
Remove TP_ID and TP_PN for UK Market	NO	
Primary Code Checks Strategy	No Validation (UK codes cannot be validated)	
Plugin Parameters		
Id Issuer Service Url	Test environment: https://api.idissuer.qa-uk-trackandtrace-dentsutracking.com/api/v1 Production environment: https://api.idissuer.uk-trackandtrace-dentsutracking.com/api/v1	

Field	Value		
API Access Token Url	Test environment: https://auth.qa-uk-trackandtrace-dentsuttracking.com/oauth2/token Production environment: https://auth.uk-trackandtrace-dentsuttracking.com/oauth2/token		
Client Id	From API Key		
Secret	From API Key		
Property Name for Internal Reference Number	During code order, Dentsu requires to pass an Internal Reference Number. This field sets the name of a Production Order property that the Vault will use, if found, for the Internal Reference Number		
Default Value for Internal Reference Number	If no property is found for the Internal Reference Number, this field sets the default value that the Vault uses for the field Internal Reference Number during code ordering		
Code Formats	Code formats:		
	Name	Value	
	HR	{IDIssuerCode}{SerialNumber}	
	HR-Tracking	{IDIssuerCode}{SerialNumber}	
	MR	5R{IDIssuerCode}:{SerialNumber}{ProductCode}{Date:yyMMddHH}	
	MR DataMatrix	5R{IDIssuerCode}:{SerialNumber}{ProductCode}{Date:yyMMddHH}	
	MR DotCode	[FNC1]5R{IDIssuerCode}:{SerialNumber}{ProductCode}{Date:yyMMddHH}	
Markets			
Country	GB	XI	
Start Date	July 1, 2022	July 1, 2022	
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.	The date at which code should stop to be ordered from this Id Issuer for this country.	
Derogation TPD Art 4.1	Yes	Yes	
Accept External IDs	Yes	Yes	
Market EOID	Normally N/A	Normally N/A	

Economic Operator Registration

The registration/update of an Economic Operator registration requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Description
AddressCity	yes	City
AddressName	no	Address name
AddressPostCode	no	Postal number
AddressStreetOne	yes	Address street, line 1
AddressStreetTwo	no	Address street, line 2

Facility Registration

The registration/update of a Facility registration requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Description
AddressCity	yes	City
AddressName	no	Address name
AddressPostCode	no	Postal number
AddressStreetOne	yes	Address street, line 1
AddressStreetTwo	no	Address street, line 2

Property name	Mandatory	Description
FacilityName	no	Facility Name

Machine Registration

The registration/update of a Machine registration requires the following specific data in the IdIssuerProperties tab:

Property name	Mandatory	Description
MachineName	yes	Machine Name

Page [Dentsu - United Kingdom](#) contains all ID Issuer technical details.

WLN Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the Worldline ID issuer software:

1. Register to the Id Issuer and get an account for the portal website. Login.
 - a. Test portal website: <https://cm-ui.qtf-pmi-private.tpd.worldline-solutions.com/>
 - b. PRD portal website: <https://cm-ui.prd-pmi-private.tpd.worldline-solutions.com/>
2. On the portal, navigate to your Economic Operator. Go to the section "Technical Users". Add a tech user. Save the login and password somewhere safe.
3. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Value
Id Issuer Code	LEWL3
Name	eg. Worldline Ecuador
Plugin	WLN Id issuer
upUI_i SN Length	8
upUI_s SN Length	8
Accept different upUI_s SNs from upUI_i SNs	Yes (except if the manufacturer is unable to report HR codes)
Product Code Length	4
Min order quantity	1
Max order quantity	200'000
Quantity must be a multiple of	1
Mode	MMIC
Requires Economic Operator Onboarding	Checked
Plugin Parameters	
URL	Test environment: https://cm-ui.qtf-pmi-private.tpd.worldline-solutions.com/api Production environment: https://cm-ui.prd-pmi-private.tpd.worldline-solutions.com/api
Client ID	Client ID received when creating the technical user
Client Secret	Password received when creating the technical user
Markets	
Country	Ecuador
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	YES
Accept External IDs	YES
Marked EOID	
Official Code Formats	
HR	{IDIssuerCode}{SerialNumber}
HR_Tracking	{IDIssuerCode}{SerialNumber}
MR	To be confirmed: {IDIssuerCode}{SerialNumber}{ProductCode}{Date:yyMMddHH}
MR DataMatrix	To be confirmed: {IDIssuerCode}{SerialNumber}{ProductCode}{Date:yyMMddHH}
MR DotCode	To be confirmed: [FNC1]{IDIssuerCode}{SerialNumber}{ProductCode}{Date:yyMMddHH}

TNT Plugin Setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the TNT ID issuer:

Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follows:

Field	Value
Id Issuer Code	TNT
Name	TNT Id Issuer
Plugin	TNT Id Issuer
upUI_i SN Length	14
upUI_s SN Length	14
Accept different upUI_s SNs from upUI_i SNs	Yes (not relevant for TNT)
Product Code Length	0
Min order quantity	1
Max order quantity	500'000
Quantity must be a multiple of	1
Mode	MMIC
Requires Economic Operator Onboarding	Unchecked
Plugin Parameters	
URL	Test environment: https://demo-tnt-api.e-taxes.gov.az Production environment: https://tnt-api.e-taxes.gov.az
Username	The username of the account to be used for API Access to TNT
Password	The password of the account to be used for API Access to TNT
Has certificate?	Check if connecting to the production environment, otherwise uncheck In the former case, you need to Import the certificate that is needed for signing on the production environment.
Batch validity (days)	20
Production document validity (days)	365
Reporting margin (days)	7
Max batches to close	50
Max orders to poll	10
Validate order with synched TNT product	checked
Markets	
Country	Azerbaijan
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.
Derogation TPD Art 4.1	NO
Accept External IDs	NO
Marked EOID	

AKD plugin setup

Here are the steps needed to configure Inextor when ordering codes from ID issuers using the AKD (Croatia), SmartNet (Slovenia) ID issuer or Smurfit (Ireland) ID issuer software:

1. Go to the Id Issuer website, [Croatia web portal](#), [Slovenia web portal](#) or [Ireland QA web portal](#), and register as an Economic Operator (EO). Since AKD only offer on boarding EO registration, you can't create new EO registration from Inextor. You will receive an email + an SMS containing all the login info.(for QA: [Croatia QA web portal](#), [Slovenia QA Web portal](#) and [Ireland QA web portal](#),)
2. Connect to the web portal and go under Administration → API and save the data on the page somewhere safe.
3. Create a new id issuer in the Vault as described on [TPD ID Issuers](#) and configure it as follow:

Field	Croatia	Slovenia	Ireland
ID Issuer Code	LEAKD	QCSGSE	QCSWSC
Name	eg. AKD Croatia	eg. Smartnet Slovenia	e.g. Smurfit Ireland
Plugin	AKD ID Issuer		
upUI_i SN Length	11	11	9
upUI_s SN Length	11	11	9
Accept different upUI_s SN from upUI_i SN	Yes (accept if the manufacturer is unable to report HR codes)	Yes (accept if the manufacturer is unable to report HR codes)	Yes (accept if the manufacturer is unable to report HR codes)
Product code length	6	5	4
Min order quantity	1'000 (Before TPD2.0) 10'000 (After TPD2.0)	1'000 (Before TPD2.0) 10'000 (After TPD2.0)	1'000 (Before TPD2.0) 10'000 (After TPD2.0)
Max order quantity	1'000'000 (Before TPD2.0) 150'000 (After TPD2.0)	1'000'000 (Before TPD2.0) 150'000 (After TPD2.0)	1'000'000 (Before TPD2.0) 150'000 (After TPD2.0)
Quantity must be a multiple of	1	1	1
Mode	IM	IM	IM
Requires Economic Operator OnBoarding	Yes	Yes	Yes
Api Version	TPD 2.0		
Plugins and parameters			
ID Issuer Service URL	Test environment: https://idissuertest-api.akd.hr Production environment:	Test environment: https://api.sandbox.tpd.agency	Test environment: https://tpdtest-api.irelandidissuer.ie/

	https://idissuer-gpi.akd.hr Production environment for outside Croatia: https://idissuer-euapi.akd.hr	Production environment: https://api.idissuer.si	Production environment: https://tpd-gpi.irelandidissuer.ie/	
SFTP Url	Test environment: idissuertest-sftp.akd.hr Production environment: idissuer-sftp.akd.hr Production environment for outside Croatia: idissuer-eusftp.akd.hr	Test environment: sftp.sandbox.tpd.agency Production environment: sftp.idissuer.si	Test environment: tpdtest-sftp.irelandidissuer.ie Production environment: tpd-sftp.irelandidissuer.ie	
Markets				
Country	Croatia	Slovenia	Ireland	
Start Date	The date at which code should start to be ordered from this Id Issuer for this country.		Officially starts on 28th of May 2025	
End Date	The date at which code should stop to be ordered from this Id Issuer for this country.			
Accept External IDs	Yes only if you use an account for foreign manufacturer.			
Marked EOID	Fill the EOID received from AKD.			
Official Code Formats				
HR			{IDIssuerCode} {SerialNumber}	
HR-Tracking			{IDIssuerCode} {SerialNumber}	
MR			5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}	
MR Data Matrix			5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}	
MR Dotcode			[FNC1]5R{IDIssuerCode}: {SerialNumber}{ProductCode} {Date:yyMMddHH}	
For information on INEXPRESS configuration see Inexpress Tobacco Tpd Code Formats				

Note: Check with your Id Issuer contact if some of the parameters were changed and update them accordingly.

- Add business holidays if needed.
- Press the **Save** button.

Economic operator and facility registration [↗](#)

The registration/update of an Economic Operator and Facility requires the following specific data in the IdIssuerProperties tab:

Entity type	Property name	Description	Mandatory	Api version
Economic Operator	EO_Phone	Phone number of the Economic Operator	yes	v1 + v2
	EO_Type	1 – Manufacturer / Importer 2 – External Manufacturer / Importer 3 – Distributor 4 - Retailer	yes	v1 + v2
Economic Operator and Facility	Name	Name of the address	yes	v2
	StreetOne	Street and number of the main address	yes	v2
	StreetTwo	Street and number of a secondary address	yes	v2
	City	City	yes	v2
	PostCode	Postal code	yes	v2

Note:

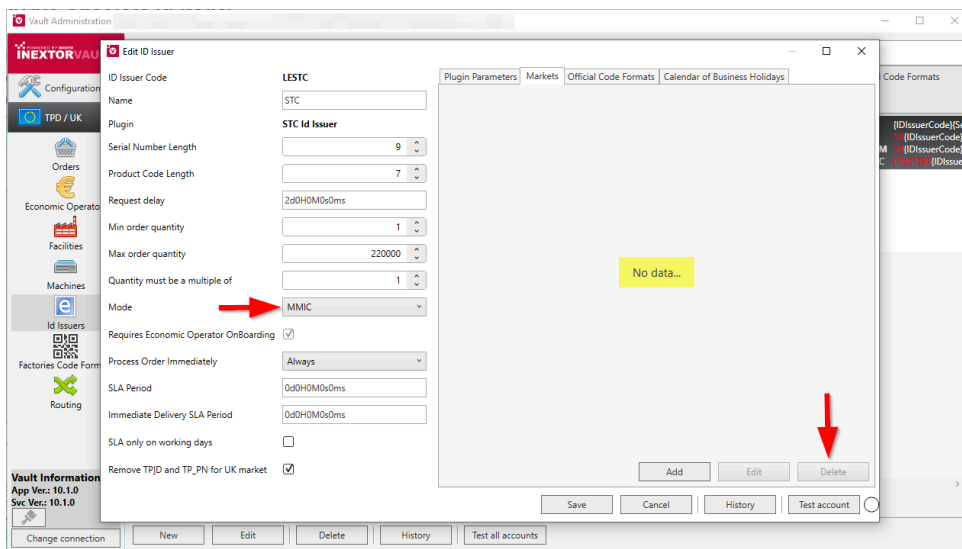
- Factory must be of type **Manufacturing site with warehouse** to have a machine associated.
- Product's CN, Brand and Machine Link-up model must be at least 3 characters long.

Pages [AKD - Croatia](#) , [Smart Net- Slovenia](#), [Smurfit - Ireland](#) contain all ID Issuer technical details.

Deactivate Obsolete Id Issuer

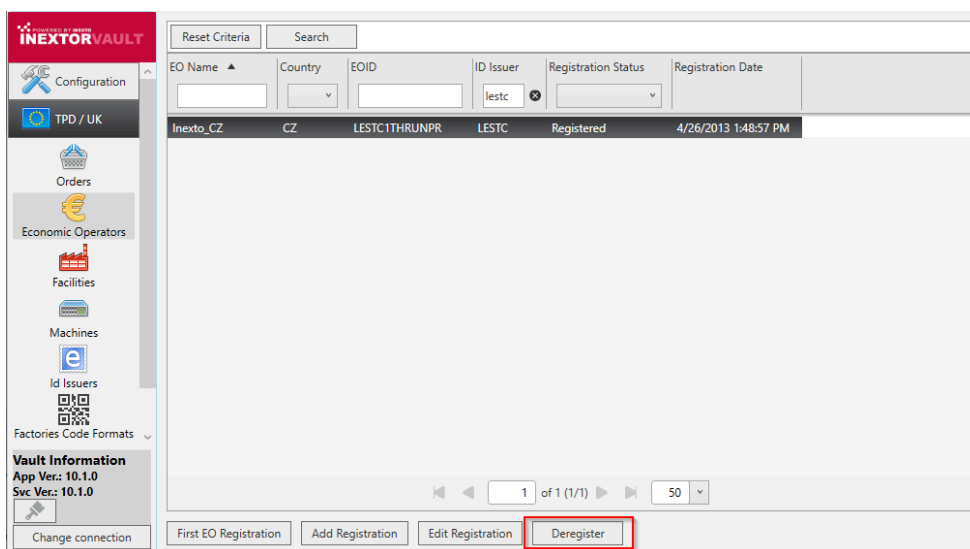
If the Id Issuer code has changed, you will need to recreate a new Id Issuer in the Vault, but before you do this you will need to deactivate the obsolete entities.

- 1 Open the Vault administration interface and go under TPD → Id Issuers
- 2 Edit the obsolete Id Issuer. Set it in **MMIC** mode and **Delete all countries** associated. Press save.



In this example, we deactivate the STC Id Issuer with the code LESTC.

- 3 Under Economic Operators, Facilities and Machines, select the entities associated with the obsolete Id Issuer and press deregister. (You can find the entities by using the search criteria "ID Issuer" and entering the Id Issuer Code.)



In this example, we only have one Economic Operators associated with our obsolete Id Issuer, LESTC.

Once the deactivation is completed, follow the instructions associated to the Id Issuer to create a new one and re-register your entities.

If you want to make sure to not use code ordered with the previous Id Issuer Code and there are remaining codes, please contact Inexto support to make sure to deactivate them.

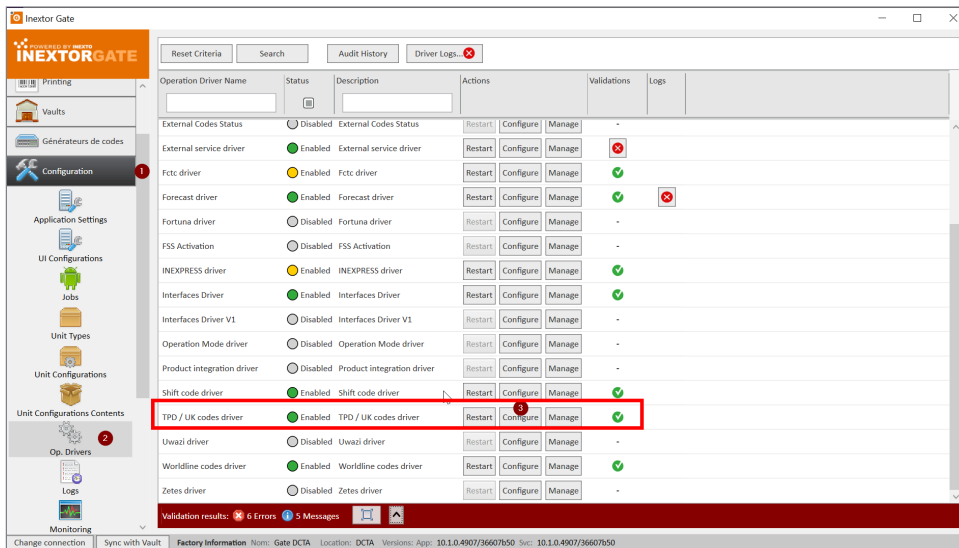
Gate Setup for TPD

i The minimum recommended version of the Gate in order to activate and use TPD is 10.1.0.4635.

Activate TPD features

TPD / UK codes Driver

In the Gate UI go to the Configuration menu and then click on Op. Drivers. The Operation Driver page will be displayed on the right part. Locate the TPD /UK codes driver and click on Configure.



If the current Gate is in EU, make sure to select *Europe* as Factory location.

For a detailed description of all parameters, please check page [Gate Op. Driver: TPD / UK Codes Driver](#)

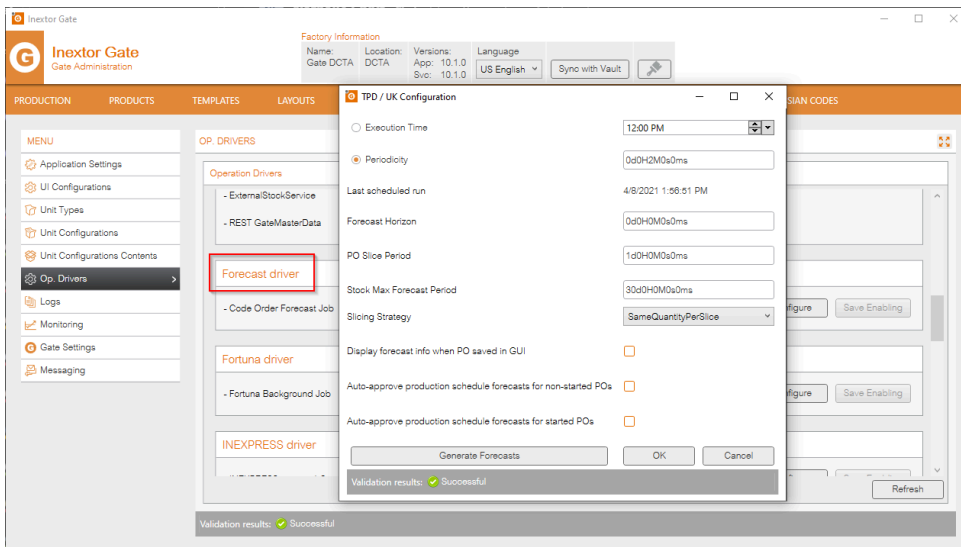
You can also check the "ECR changes are forbidden after production start" box to avoid bad editing manipulations on PO.

Save the configuration.

Forecast driver

On the same Op. Drivers tab, locate the Forecast driver and click on Configure.

Refer to [Gate Op. Driver: Forecast Driver](#) to configure this driver accordingly to your needs.



Once configured, make sure that the driver is correctly enabled.

Linkup Setup Configuration

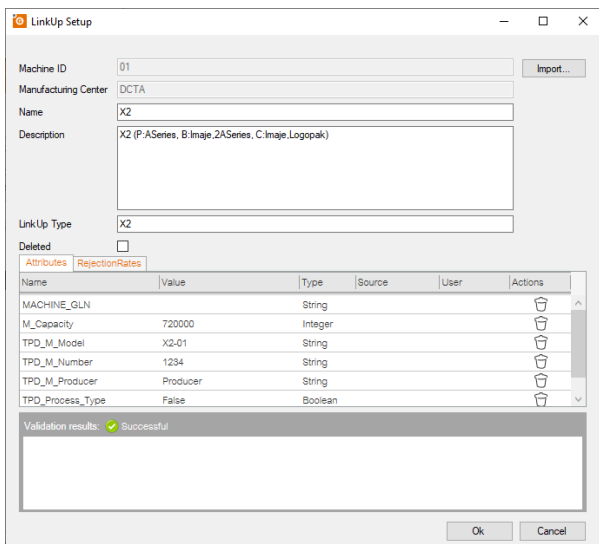
TPD attributes need to be added to the Linkup Setups.

On Gate Administration application, navigate to Serializers > Linkup Setups.

Edit the Linkup Setups and set the following TPD attributes in the Attributes tab:

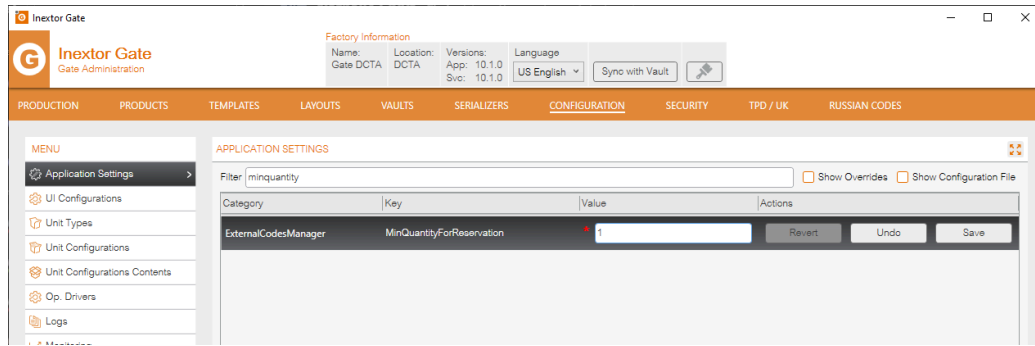
- M_Capacity: Capacity of the machine (number).
- TPD_M_Model: Model.
- TPD_M_Number: Serial number of machine.
- TPD_M_Producer: Producer.
- TPD_M_ATD: Serial number of the anti-tampering device.
- TPD_Process_Type: True if the production involves machinery, False if it is manual.

Define attributes in the RejectionRates tab as described in [Gate Serializers UI: LinkUp Setups](#).



Gate Service configuration

1. By default, only external code chunks **of which codes have been materialized (indexed)** can be consumed in production. This ensures that codes can be decomposed on the Gate (checked) immediately after printing. It is possible to change this behavior by changing the `ReserveOnlyMaterializedChunks` application setting in the [Settings tab](#). Manufacturers who do not need the code decomposition feature on the Gate can set it to false.
2. By default, production can be started even if there are no available codes, to support scenarios like rework or incomplete production. To prevent production from starting if there are not enough codes, set the **MinQuantityForReservation** property in Gate → Configuration → Application Settings:



A value of 1, as in the screenshot above, will require at least one code on the Gate (materialized or not, depending on **ReserveOnlyMaterializedChunks**) to start a production.

Materialization and Code Checking

MCG_PC	PL	Poland	2042443747	KPL1	PWPW Poland	PL	Completed	18/05/2019	317 367	18/05/2019	0	317 367	1361
MCG_PC	PL	Poland	101983484	KPL1	PWPW Poland	PL	Completed	20/05/2019	325 887	20/05/2019	0	325 887	2581
MCG_PC	PL	Poland	101983127	KPL1	PWPW Poland	PL	Completed	17/05/2019	325 887	17/05/2019	0	325 887	131
MCG_HA	HU	Hungary	101982431	LEHU1	NDN Hungary	HU	Completed	18/05/2019	15 975	18/05/2019	0	15 975	383b9781-c385-4846-9e9b-9349b17be2d6
MCG_HA	HU	Hungary	101982436	LEHU1	NDN Hungary	HU	Completed	18/05/2019	13 845	18/05/2019	0	13 845	d886bfb7-a384-4185-af39-c333a3d8812f

GREYLISTED

Factory	Country Code	Country Name	Production Order	ID Issuer Code	ID Issuer Name	Destination Market	Status	Ordered Date	Ordered Quantity	Receiving Date	Valid QTY	Invalid Qty	Request ID
MCG_PC	PL	Poland	101983484	KPL1	PWPW Poland	PL	Completed	18/05/2019	436 646	18/05/2019	0	0	1323
MCG_PC	PL	Poland	2042443747	KPL1	PWPW Poland	PL	Completed	18/05/2019	317 367	18/05/2019	0	0	1361

Regards,

Primary codes check driver on Vault Server

Part of the e-mail can be customized. See the configuration section at the end of the page.

New screen for Primary Check

A screen [on the Gate and the Vault](#) (similar to the TPD Order screen) displays specific information about TPD orders that are being validated on the Primary.

The screen is only visible if the operation driver is enabled. Note that right after the driver is enabled, it takes a couple of minutes AND a restart of the Gate administration program to have the screen visible.

On the Gate, only orders issued from the Gate can be seen and operated. Orders from other factories are not available.

The screen displays the progression of the checks with the following information in a table:

- OrderNumber
- Factory
- Machine
- Sku
- Intended Market
- Id Issuer Code
- Planned Date
- Status
 - Whitelisted : All codes in the order are valid
 - Greylisted : The validation is in progress. Code verification will be retried periodically (PrimaryCheckPeriodicity or ExtendedPrimaryCheckPeriodicity)
 - Blacklisted : At least one of the code is invalid and time is past the PO StartDate.
- Requested quantity
- Amount of codes valid
- Amount of codes invalid
- Requested On
- Completed On
- Next Check Retry Date

The table can be filtered by the following fields :

- OrderNumber
- Factory
- Machine
- Sku
- Intended Market
- Id issuer Code
- Planned Date
- Status (show whitelisted, greylisted or blacklisted)

By default the following filters and sorting are applied on this screen:

- Greylisted and Blacklisted checkboxes are ticked while Whitelisted checkbox is unticked
- Sorting is done by column status : Blacklisted (first) , Greylisted (second), Whitelisted (third) and a secondary sorting on the start date is applied as well

Actions can be done on orders that are in validation against the primary as described in the next table.

Action	Description
Reorder codes	A new order is created, for a number equal to the number of codes that could not be validated. The order is then considered complete if the extended code check on primary is not activated (ExtendedPrimaryCheckPeriodicity = 0). Otherwise codes verification against the primary is extended till the code expiration.
Retry verification	It will trigger a validation of the codes for the selected order in the next background job run. This operation can be performed for greylisted or blacklisted orders.
Stop primary check	The extended code check against the primary can be stopped manually. Order is then considered as blacklisted

The Retry verification action can be executed on a single row at a time. Reorder codes and Stop primary check can be executed on multiple row at once.

All chunks that have been validated against the primary are marked as available and sent to the Gate. The chunks that could not be validated are banned.

Only blacklisted orders that do not have expired chunks and that succeeded the verification are validated and sent to the Gate.

Access rights for this new operation driver are managed under the "Orders" operation as the TPD order screen:

- *Read* privilege provides access to this screen.
- *Manage* privilege provides access to the actions "Retry verification", "Reorder codes" and "Stop primary check".

It is then possible to restrict access to this screen to a specific user Profile/Role only on both the Gate or the Vault.

Vault Administration (https://localhost/S3r_dctaScenAllTest_PRIV10_VaultWS/VaultAdministrationGuiService.svc/\$spi)													
Configuration TPD / UK Orders Checks on Primary Economic Operators Facilities Machines Id Issuers Vault Information App Ver.: 10.1.0 Svc Ver.: 10.1.0 US English Change connection													
Reset Criteria Search ☒ Show whitelisted orders? ☒ Show greylisted orders? ☒ Show blacklisted orders?													
Order number	Factory	MID	SKU	Planned On	Status	Requested	Valid Quantity	Invalid Quantity	Intended Market	Id Issuer Code	Requested On	Completed On	Next Retry Date
KFB_test09	Gate_DCTA	03	FR-BE-400123	1/15/2022 1:36:34 PM	Blacklisted	130,000		40,000	BE	KFB	1/12/2022 1:36:32 PM	1/12/2022 1:36:33 PM	
KFB_test01	Gate_DCTA	03	FR-BE-400123	1/13/2022 3:14:14 PM	Blacklisted	300,000		40,000	BE	KFB	1/10/2022 3:13:12 PM	1/10/2022 3:14:12 PM	
KFB_test08	Gate_DCTA	03	FR-BE-400123	1/15/2022 1:35:04 PM	Greylisted	130,000		40,000	BE	KFB	1/12/2022 1:34:58 PM	1/12/2022 1:35:03 PM	1/12/2022 1:39:39 PM
KFB_test08	Gate_DCTA	03	FR-BE-400123	1/15/2022 1:35:39 PM	Greylisted	130,000		40,000	BE	KFB	1/12/2022 1:35:36 PM	1/12/2022 1:35:37 PM	1/12/2022 1:39:39 PM
KFB_test07	Gate_DCTA	03	FR-BE-400123	1/15/2022 1:33:18 PM	Whitelisted	150,000	150,000	0	BE	KFB	1/12/2022 1:33:08 PM	1/12/2022 1:33:15 PM	1/12/2022 1:33:28 PM
KFB_test06	Gate_DCTA	03	FR-BE-400123	1/15/2022 1:33:19 PM	Whitelisted	300,000	300,000	0	BE	KFB	1/12/2022 1:33:05 PM	1/12/2022 1:33:15 PM	1/12/2022 1:33:19 PM
KFB_test06	Gate_DCTA	03	FR-BE-400123	1/15/2022 9:48:35 AM	Whitelisted	300,000	300,000	0	BE	KFB	1/12/2022 9:48:22 AM	1/12/2022 9:48:30 AM	1/12/2022 10:19:21 AM
KFB_test05	Gate_DCTA	03	FR-BE-400123	1/14/2022 4:45:04 PM	Whitelisted	300,000	300,000	0	BE	KFB	1/11/2022 4:44:56 PM	1/11/2022 4:45:02 PM	1/11/2022 4:46:24 PM
KFB_test04	Gate_DCTA	03	FR-BE-400123	1/14/2022 4:21:03 PM	Whitelisted	300,000	300,000	0	BE	KFB	1/11/2022 4:20:56 PM	1/11/2022 4:21:01 PM	1/11/2022 4:32:50 PM
KFB_test01	Gate_DCTA	03	FR-BE-400123	1/14/2022 4:17:48 PM	Whitelisted	300,000	300,000	0	BE	KFB	1/11/2022 4:16:45 PM	1/11/2022 4:17:45 PM	1/11/2022 4:33:39 PM
KFB_test02	Gate_DCTA	03	FR-BE-400123	1/14/2022 3:22:42 PM	Whitelisted	300,000	300,000	0	BE	KFB	1/11/2022 3:22:35 PM	1/11/2022 3:22:39 PM	1/11/2022 4:33:39 PM
KFB_test03	Gate_DCTA	03	FR-BE-400123	1/14/2022 3:14:50 PM	Whitelisted	300,000		40,000	BE	KFB	1/11/2022 3:13:46 PM	1/11/2022 3:14:46 PM	1/11/2022 3:33:43 PM
KFB_test02	Gate_DCTA	03	FR-BE-400123	1/13/2022 3:18:16 PM	Whitelisted	300,000	300,000	0	BE	KFB	1/10/2022 3:18:12 PM	1/10/2022 3:18:13 PM	1/11/2022 3:25:49 PM
< of 1 (13/13) >													
Reorder codes Retry Verification Stop primary check													

Checking old orders

Using the 'change status' feature in the TPD orders screen, it is possible to force the checking of old orders (or re-perform the checks on previously-checked orders). This is only possible for orders in the 'Completed' state. The new status is 'Restart Codes Check'.

An order in this new state is automatically checked on the next run of the background job. This job handles the order as if the codes had just been downloaded (including postponing the planned date of the order if necessary) and sets the order state to 'Pending codes check again'. The order stays in this state as long as all codes have not been accepted by the Primary. Like for normal checks, the order goes to blacklisted state if the planned date is reached.

Code reordering is not possible for these orders (as the codes have already been sent to the Gate, it would make no sense).

Note that the ID issuer strategy is followed for these checks. This implies that nothing will be done if the check strategy is 'No validation'.

Configuration

The following elements can be configured regarding the working of the codes check driver:

Key	Default	Description
PrimaryCheckPeriodicity	24H	Indicates the time between two code checks on the Primary during the standard code check (order status = Pending on Primary). Greylisted orders will be retried until all codes are successfully verified, the PO StartDate is due or codes are reordered.
ExtendedPrimaryCheckPeriodicity	168H	Indicates the time between two code checks on the Primary during the extended code check (order status = Extended code check on Primary). Greylisted orders will be retried until all codes are successfully verified, codes are expired or extended check is manually stopped
EnableCodeReorderBeforePlannedDate	48H	How long before the PO planned date codes can be reordered. If no value is set the reorder codes functionality is disabled
DelayBeforeFirstPrimaryCheck	1H	Delay before first codes checks on Primary after codes downloading. If no value is set the functionality is disabled and the first check is done immediately after the codes downloading
PrimaryCheckBackgroundThreadPeriodicity	10M	Delay between each run of the background thread for the codes check on Primary
PrimaryCheckEmailIntroduction	To whom it may concern,	The beginning of the e-mail about results of primary codes check
PrimaryCheckEmailBlacklistIntroduction	Blacklisted	If there are blacklisted orders, this is the text before the actual list
PrimaryCheckEmailEmptyBlacklist	There is currently no blacklisted order.	If there is no blacklisted orders, this is the text added to the e-mail
PrimaryCheckEmailPendingIntroduction	Greylisted	If there are orders pending validation, this is the text before the actual list
PrimaryCheckEmailEmptyPending	There is currently no order pending validation on the Primary.	If there is no order pending validation, this is the added to the e-mail
PrimaryCheckEmailWhitelistIntroduction	Whitelisted	If there are orders pending validation, this is the text before the actual list
PrimaryCheckEmailEmptyWhitelist	There is currently no whitelisted order.	If there is no order pending validation, this is the added to the e-mail
PrimaryCheckEmailEnd	Regards, Primary codes check driver on Vault Server	The end of the e-mail about results of primary codes check
PrimaryCheckEmailSubject	Information about TPD codes check on Primary	Subject of the notification email sent after codes check on Primary

Configuring Materialization (TPD)

See [Configuring Materialization](#).

Products, Contents and Layouts

TPD UPI Scripted Contents

⚠ The use of Scripted Contents is supported but discouraged (because of complexity); especially for what is described in this page. A better, simpler, more manageable solution is to use the so-called "smart" contents described in the [previous page](#).

Base contents

Before starting with the scripted content for TPD data qualifier, you need to add some basic contents to expose the different parts of the TPD code.

The script below will create or update the following contents :

Content	Description
Packs_TPD_ID	TPD ID issuer code
Packs_TPD_SERIAL	TPD Serialnumber
Packs_TPD_ProdCode	TPD product code

File	Modified
------	----------

This script must be run on the Gate SQL Server database.

Input Contents

The Contents that will serve as input for the script must be added to the Layout, as follows:

Layouts

Layouts

Contents

Templates

Vaults

Serializers

Results

Layouts

Layout Code	Name	Unit Type	Deleted
A_999_DU	A_999_DU	Packs	☒
A_999_DUP	A_999_DUP	Packs	☐
A_999_MU	A_999_MU	Packs	☐

Layout Contents

Code	Description
Packs_TPD_ID	Packs_TPD_ID
Packs_TPD_ProdCode	Packs_TPD_ProdCode
Packs_TPD_SERIAL	Packs_TPD_SERIAL

⚠ It is mandatory to add the content shown above to every layout that will use the scripted content.

⚠ If the Layout is being used with INEXPRESS, the Input Contents above must have a Code Level. It is shown in the user interface as 'Commissioned as'.

Script

Create or edit the content

Content

Code

Packs_TPD_UPUI_scripted

Description

Packs_TPD_UPUI_scripted

Content type

Dynamic

Startup Mode Value

x

Length

Min 1

Max 50

Code issuer

Scripted

Edit Arguments

Code mask

(Not Set)

Code issuer arguments

Arguments

Name	Value	Type	Source	User	Actions
	<pre> public string Generate(string idIssuerCode = string serialNumber = string productCode = string date = Property </pre>				
	25s Remove 25s A				
	5P Remove 5P red				

Validation results: Successful

OK

Cancel

Click Edit Arguments and paste the content below depending on your use case.

You need to empty the Declarations and the Preparation tab and put the content below on the Generation tab.

Packs_TPD_UPUI_Datamatrix_script

[Expand source](#)

Packs_TPD_UPUI_Dotcode_script

[Expand source](#)

You can edit the script to replace the format where needed or remove the Data Qualifier by removing the two lines related to an ID issuer.

Alternately, you can execute the following SQL script to create two Contents containing the script above :

File	Modified
 TpdScriptedContents.sql 	Dec 15, 2020 by Nathalie Chiva

Code Issuers and Code Formatters (TPD)

A general description is given in page [Code Issuers and Code Formatters \(General OG\)](#) . This page concerns only the TPD.

The TPD external source supports the following formats:

- HR: Human-readable format, typically the ID issuer code followed by the serial code given by the ID issuer.
- HR-Tracking: Human-readable format, identical to the HR format, except for Spain and Portugal where the Product Code is added at the end. This is useful to send to Inexpress as HR in the layout content.
- Full: ID issuer code, followed by the serial code and product code (i.e. the machine-readable format without the timestamp)
- MR: Machine-readable format: typically the ID issuer code, followed by the serial code given by the ID issuer, followed by the product code and the timestamp. This will contain the FNC1 symbol before the 01 application identifier for GS1 codes (Spain & Portugal)
- MR_DataMatrix: Same as MR, but may also include a leading FNC1 symbol depending on GS1 requirements for DataMatrix
- MR_DotCode: Same as MR, but may also include a leading FNC1 symbol depending on GS1 requirements for DotCode
- IDIssuerCode: the ID issuer code
- SerialNumber: the serial number given by the ID issuer
- ProductCode: the product code

The format can be further customized by using placeholders. A placeholder is a name between curly brackets. The following placeholders are supported:

- {IDIssuerCode}: returns the ID issuer code
- {SerialNumber}: returns the serial code given by the ID issuer
- {ProductCode}: returns the product code
- {Date}: returns the UTC date. This placeholder supports the same formatting as the .Net DateTime class, by adding a colon and the format string. For example: {Date:yyMMddHH}

It is possible to only use a part of a placeholder value by using the following syntax:

{placeholder/SUBSTR/start/length} or {placeholder/SUBSTR/start}

The first syntax takes *length* characters starting from character at *start* index (starting with 0). The second syntax takes all characters after the character at index *start*.

Example: {SerialNumber/SUBSTR/0/10} represents the first 10 characters of the serial number, while {SerialNumber/SUBSTR/10} represent all characters of the serial number except the first 10.

Internally, the HR format is defined as: {IDIssuerCode}{SerialNumber}, Full is defined as {IDIssuerCode}{SerialNumber}{ProductCode}, MR is defined as {IDIssuerCode}{SerialNumber}{ProductCode}{Date:yyMMddHH}. The exact format can combine these placeholders with common characters.

The MR, MR_DataMatrix and MR_DotCode formats are special in the sense that their contents automatically include the data qualifiers specified by the ID issuer (there is no magic: this information comes from the Vault). As an example, the machine-readable format for codes issued by BDR is: 5R{IDIssuerCode}U:{SerialNumber}{ProductCode}.

Furthermore, some special sequences are reserved to support GS1 in the MR format. The table below lists and describes these sequences.

Sequence	Description
----------	-------------

[FNC1]	The FNC1 control character
[GS]	Group Separator
[LF]	Line Feed
[CR]	Carriage Return
[WS]	White Space
[U+XXXX]	Any Unicode character where XXXX is the hexadecimal value (i.e. [U+003D])

If there is the necessity to print one of these sequences in the code itself the first bracket should be doubled. Then, the encoding won't take place. For example, writing [[LF] will result with having the [LF] sequence readable in the bar code.

Only for the MR formats, the IDIssuerCode, SerialNumber and ProductCode placeholders are escaped (i.e. an opening square bracket is doubled), so that they are not confused with the special sequences.

For the HR and Full formats, the handling of the special sequences is disabled.

If the format is a custom combination of common characters and placeholders, the handling of special sequences is disabled. To enable it, start the attribute value with "ESC+".

The following examples show the various possibilities, assuming the ID Issuer is BDR, the serial number is abc[def, the product code is 1234. Further assume that the date is February 1st, 2019 at 10:15 AM.

Format	Assumption	Printed result	Remark
SerialNumber	-	abc[def	Simple format known to the formatter
{SerialNumber}	-	abc[def	Simple placeholder
HR	no override by official code format from Vault	BDRabc[def	Known format
HR	override by official code format from Vault: 5R{IDIssuerCode}[FNC1] {SerialNumber}	5RBDR[FNC1]abc [def	Special sequence handling is inactive for HR case.
Full	-	BDRabc[def1234	
MR	no override by official code format from Vault	BDRabc[def1234 2019020110	Default date format is year, followed by month, day and hours.
MR	override by official code format from Vault: 5R{IDIssuerCode}[FNC1] {SerialNumber}P: {ProductCode}	5RBDR**abc[def P:1234	** represents the printer-specific code for [FNC1] special sequence.
issuer:{IDIssuer} [FNC1]Serial: {SerialNumber}	-	issuer:BDR[FNC1] Serial:abc[def	Special sequence handling is inactive for custom format.
ESC+issuer:{IDIssuer} [FNC1]Serial:	-	issuer:BDR**Seri al:abc[def	Special sequence handling is enabled as the custom format starts with "ESC+".

{SerialNumber}			
----------------	--	--	--

Gate Contents and Layouts

TPD contents [↗](#)

For the TPD, the following contents exist on the Gate (available on tab "Layout", page "Contents"):

Content	Description
Packs_TPD_HR	The human-readable form of the code (without the product code part)
Packs_TPD_HR_Tracking	The human-readable form of the code, including the product code part for markets that require it.
Packs_TPD_UPUI_MR	The machine-readable form of the code. It omits non-visible symbols which depend on the carrier.
Packs_TPD_UPUI_DotCode	The machine-readable form of the code when the carrier is DotCode.
Packs_TPD_UPUI_DataMatrix	The machine-readable form of the code when the carrier is DataMatrix.

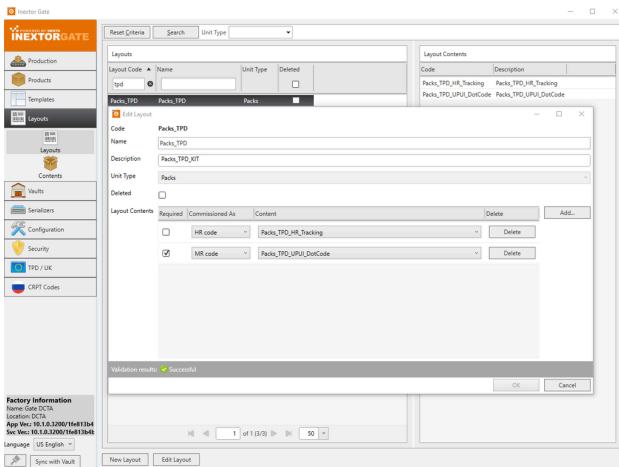
They are available on the Gate and don't need to be created or edited.

Use of scripted contents [↗](#)

If you are producing for the TPD regulation and you are using different contents than the ones mentioned above, you might be using incorrect Code Formats.

Layout [↗](#)

To print TPD codes on packs, create a new layout:



Go to tab "Layout", page "Layouts".

Create a new layout for packs and provide a code, such as "Packs_TPD".

You can copy this to the Name and Description field, or provide more descriptive values to those fields.

You then need to add the necessary contents.

If you are using INEXPRESS, you also need to set up the Code Level fields for both the human- and machine-readable contents. Please refer to [Configuration for INEXPRESS V2](#) for more information.

For TPD, you should add the following contents:

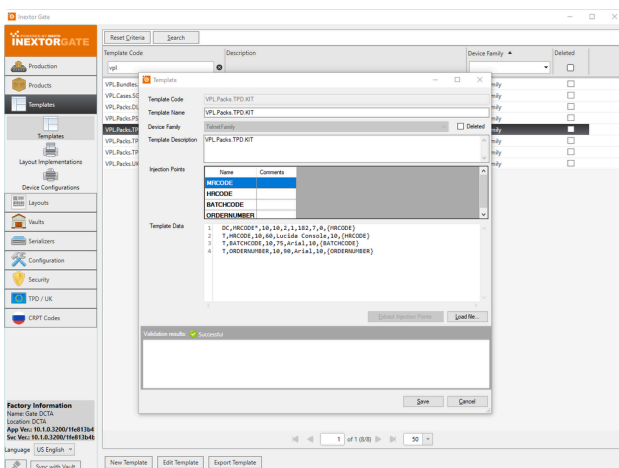
- A content that contains the human-readable form of the code. Whether the human-readable form must be printed or not depends on market-specific regulation. If not, the Required flag must be cleared.
- A content that contains the machine-readable form of the code.

Other contents may also be required if more regulations apply to your product (please refer to the appropriate documentation), or other information needs to be printed on the pack.

Template

In tab "Templates", page "Templates", make sure that there is a template available that will allow printing the human-readable and machine-readable parts of the TPD code.

Example:



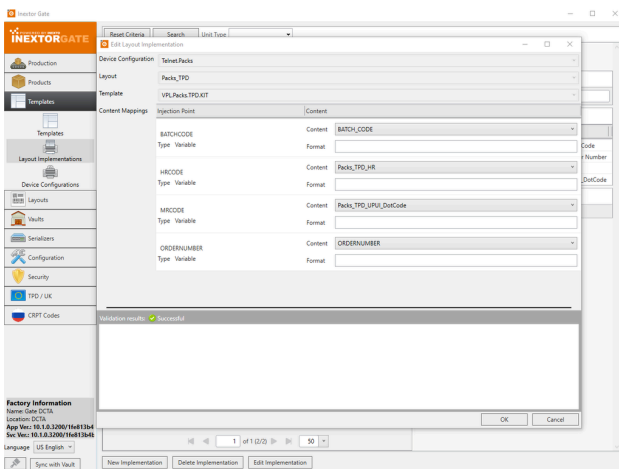
In this example of template, we have four injection points, MRCODE for the machine-readable form of the code and HRCODE for the human-readable form. (BATCHCODE AND ORDERNUMBER are required by the VPL emulator)

Layout Implementation [🔗](#)

It is now necessary to define a layout implementation, which does two things:

- associates a Layout (which specifies the information to print) and a Template (which specifies how to print) with a Device Configuration (which is assigned to the Liz). This tells INEXTOR which layout and template to use for printing codes in Liz components that have the specified device configuration.
- provides a mapping between the injection points of the template and the contents that will actually be injected when printing is carried out.

Example:



Go to "Templates", "Layout Implementations" tab, and create a new layout implementation.

Select the device configuration, the TPD layout, and the printer template.

Then map the injection points with the TPD contents Packs_TPD_HR and Packs_TPD_UPUI_Dotcode (in our example the two TPD injection points are HRCODE and MRCCODE).

Manufactured Product (TPD)

When creating a Manufactured Product, the form will expose a TPD specific interface allowing to enter TPD related properties easily.

This interface will show up only if the TPD driver is enabled.

Manufactured Product management with the Gate Administration application [↗](#)

To create a new Manufactured Product (or edit an existing one), click on section "Products" → "Manufactured Products". Then click on "New/Edit Product".

The following fields are used for the TPD:

- Manufacturing Market, it can contain TPD related properties

The following table describes the attributes fill through the TPD tab. All of them are **optional** at the MP level (exception : see *Other Product Type*).

Name	Description
Import	Indicates if the product is imported into the EU. If a value is provided it will override the Manufactured Market one (if defined).
Intended Market	Intended country of retail sale. If a value is provided it will override the Manufactured Market one (if defined).

Intended Route	Indicates if the product is intended to be moved across country borders with terrestrial/water/air transport. If yes, specify the first country of terrestrial/water/air transport after the product leaves the Member State of manufacturing or the Member State of importation established on the basis of a checkpoint on the land border, next seaport or next airport respectively. If a value is provided it will override the Manufactured Market one (if defined).
Product ID	Tobacco product identifier used in the EU-CEG system. If a value is provided it should match the format NNNNN-NN-NNNN (N for Numeric).
PN	Product Number: tobacco product number used in the EU-CEG system
Brand	Product brand
Product Type	TPD product type. 1. Cigarette 2. Cigar 3. Cigarillo 4. Roll Your Own Tobacco 5. Pipe Tobacco 6. Waterpipe Tobacco 7. Oral Tobacco 8. Nasal Tobacco 9. Chewing Tobacco 10. - 11. Novel Tobacco 12. Other
Other Product Type	This field is mandatory if the <i>Product Type</i> is set to the "Other" value.
CN	Combined Nomenclature code
Weight	Product weight. If a value is provided it should be a numeric value bigger than 0.1. The entry is limited to 5 decimal digits.
Other ID	Product GTIN for the lower unit level.
Product SubType	Product subtype: optional. This field was added for TPD 2.0 Amendments
Product Units	Number of product units. This field was added for TPD 2.0 Amendments. It is mandatory if the Product Type is "Cigarette", "Cigar", or "Cigarillo".
Optional parameters	• Id Issuer Code: to which Id Issuer Code should this order be sent on the Vault? • Economic Operator Id: which EOID to be used for the order • Facility Id: which Facility Id • Machine Id: which Machine Id

Configuring Notification to External Systems

Some clients want to get notice of some or all TPD events.

This is possible with the [Vault Op. Drivers: TPD Notification Driver](#). The events which must be reported can be chosen from the list below. The most important event type, and the most used, is UIOrder.

- Economic Operator: Status of registration request at the ID Issuer's. Possible action types:
 - Approved: Approval of request by ID Issuer.
 - Rejected: Request rejected by ID Issuer.
 - RequestFailed: Request failed to reach ID Issuer or unknown error.
- Facility: Status of registration request at the ID Issuer's. Possible action types:
 - Approved: Approval of request by ID Issuer.
 - Rejected: Request rejected by ID Issuer.
 - RequestFailed: Request failed to reach ID Issuer or unknown error.
- Machine: Status of registration request at the ID Issuer's. Possible action types:
 - Approved: Approval of request by ID Issuer.
 - Rejected: Request rejected by ID Issuer.
 - RequestFailed: Request failed to reach ID Issuer or unknown error.
- UIOrder: Information about code order. Possible action types:
 - Approved: Approval of order by ID Issuer.
 - Rejected: Request rejected by ID Issuer (potentially after several tries - this is configured at ID Issuer level).
 - RequestFailed: Request failed to reach ID Issuer or unknown error.
 - Sent: Order has been sent.
 - UisDownloaded: All ordered codes have been downloaded.
 - Error: Forecast cannot be processed, no order created nor sent.
 - UisChunkDownloaded: Notice that a chunk has been created, and chunk transmission.
 - PollingFailed: Failure to retrieve order status while polling the order, after notice that order has been accepted.

The method (service) type used for sending notifications can be chosen from three possible options, depending on the external system notifications must be sent to:

- SOAP-DEFAULT (uses the default SOAP)
- SOAP-ORCHESTRATOR (used for the BAT scenario)
- REST (uses the REST (HTTP) protocol for sending messages)

For more details, see [Vault Op. Drivers: TPD Notification Driver](#).

Special Configurations

Configuration for INEXPRESS V2

For DB installation and INEXPRESS Application setup, please refer to below link:
[/wiki/spaces/INEXPRESS/pages/394989583](#)

Remark: The names of contents, layouts and other entities in the examples below are indicative and may vary from Gate to Gate.

Contents and Layouts

See also InexpressV2 installation page: [/wiki/spaces/INEXPRESS/pages/394990020](#).

Contents

The following contents need to be added on the Gate for INEXPRESSv2 (BUNDLES_SGTIN_MR_TRACKING and CASES_SGTIN_MR_TRACKING are also examples that depend on the customer implementation).

See [Gate Contents and Layouts](#) for more details on configuring the layout for TPD packs.

Content name	Type	Value
BUNDLES_SGTIN_MR	Formatted	01{BUNDLES_GTIN14}21{BUNDLES_CSUPI}}240{PRODUCTCODE}
CASES_SGTIN_MR	Formatted	01{CASES_GTIN14}21{CASES_CSUPI}}240{PRODUCTCODE}

Layouts

The packs layout for INEXPRESS TPD should be as follows:

Edit Layout

Code

Packs_TPD

Name

Packs_TPD

Description

Packs_TPD_KIT

Unit Type

Packs

Deleted

☐

Layout Contents

Required	Commissioned As	Content	Delete
☐	HR code	Packs_UK_UPUI_HR_Tracking	Delete
☒	MR code	Packs_TPD_UPUI_DotCode	Delete

Add...

Validation results:

Successful

OK

Cancel

See [Gate Contents and Layouts](#) for more details on configuring the layout for TPD packs.

For bundles:

Edit Layout

Code

Bundles.SGTIN

Name

Bundles.SGTIN

Description

Bundles.SGTIN

Unit Type

Bundles

Deleted

☐

Layout Contents

Required	Commissioned As	Content	Delete
☒	MR code	BUNDLE_SGTIN_MR	Delete

Add...

Validation results:

Successful

OK

Cancel

For cases:

Edit Layout

Code

Cases.SGTIN

Name

Cases.SGTIN

Description

Cases.SGTIN

Unit Type

Cases

Deleted

☐

Layout Contents

Required	Commissioned As	Content	Delete
☒	MR code	CASE_SGTIN_MR	Delete

Add...

Validation results:

Successful

OK

Cancel

Operation Drivers

Gate

The INEXPRESS Operation Driver needs to be enabled. This is documented at page: [Gate Op. Driver: INEXPRESS Driver](#).

The Interfaces Driver also needs to be activated in order for the QA check functionality to work.

It is highly recommended to check the 'Display Inexpress driver and validation status' checkbox in the Serializers screen (see [Gate - Serializers](#)).

Liz

The INEXPRESS Operation Driver needs to be enabled. This is documented at page: [/wiki/spaces/INEXTOR/pages/395813408](#)

Manufactured Products and Production Orders

Manufactured Products used with INEXPRESS must use the layouts configured for INEXPRESS.

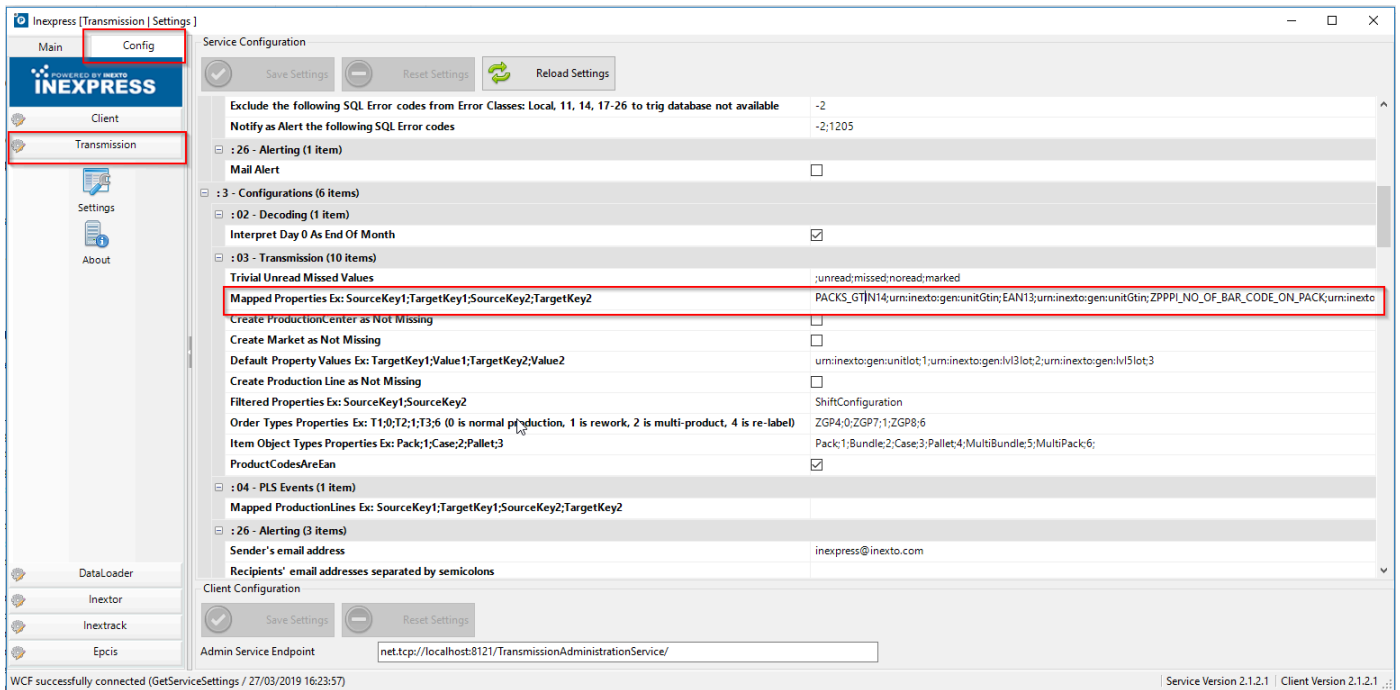
Also Production Orders or Manufactured Products should have attributes that will be mapped in INEXPRESS to INEXPRESS properties.

The properties of INEXPRESS are documented on the page: [/wiki/spaces/INEXPRESS/pages/394991274](#)

It means that for example, if PACKS_GTIN14 is the Inextor equivalent of INEXPRESS urn:inexto:gen:unitGtin, the Manufactured Product or PO should contain the property PACKS_GTIN14.

INEXPRESS Configuration of Mapped Properties

The Transmission Service of INEXPRESS needs to be configured to map these Inextor properties to INEXPRESS Transmission Service Mapped Properties.



Example:

PACKS_GTIN14;urn:inexto:gen:unitGtin;
 EAN13;urn:inexto:gen:unitGtin;
 BUNDLES_GTIN14;urn:inexto:gen:lv3Gtin;
 EAN_B;urn:inexto:gen:lv3Gtin;
 GTIN14;urn:inexto:gen:lv3Gtin;
 CASES_GTIN14;urn:inexto:gen:lv5Gtin;
 PACKS_ITEMS;urn:inexto:gen:unitEachQty;
 BUNDLES_ITEMS;urn:inexto:gen:lv3EachQty;
 CASES_ITEMS;urn:inexto:gen:lv5EachQty;

TPD_EO_ID;urn:inexto:tobacco:be:eueoid;
 TPD_F_ID;urn:inexto:tobacco:be:eufid;
 TPD_TP_ID;urn:inexto:tobacco:be:tpid;
 TPD_TP_PN;urn:inexto:tobacco:be:tppn;
 ORDER_TYPE;urn:inexto:gen:orderType;
 DeactivateOrphanPacks;urn:inexto:gen:deactivateOnOrderClosing;
 BATCH;urn:inexto:gen:lot

Ideally, on a new installation, the InexpressV2 variables should be used (urn:inexto:gen:unitGtin instead of PACKS_GTIN14, urn:inexto:gen:lv3Gtin instead of BUNDLES_GTIN14, etc).

Integration with Zetes Primary

The integration between INEXTOR Gate and Zetes Primary allows commissioning and aggregation data to be sent from INEXTOR to the Zetes Primary Repository.

The commissioning and aggregation information is generated from:

- **Commissioning:** This is generated within INEXTOR, using CodeStatus messages received from Liz.
- **Aggregation:** This comes from an external system as files stored in a specific directory.

Only data related relevant to an ID issuer is processed; any other data is ignored.

Detailed Process Flow

The diagram below, along with the summary, explains how commissioning and aggregation data is transmitted from INEXTOR to the Zetes Primary Repository.

1) Request of UIs from the ID Issuer

- Exclusive Tobacco s.r.l requests the unique product identifiers (upUIs) for individual packs from the Romanian ID Issuer for example. This request is made through the ID Issuer's web portal, using the credentials provided to the Exclusive Tobacco.

2) Upload of Requested UIs to the Private Repository and INEXTOR Vault

- Exclusive Tobacco uploads the requested upUIs to the ZetesOlympus web portal.
- Simultaneously, the upUIs are also uploaded to the INEXTOR Vault through the VaultAdministration GUI, ensuring they are securely stored and accessible for future processes.

3) Request of UIs for Production/Marking

- The INEXTOR Gate Server at the given factory automatically downloads the upUIs from the INEXTOR Vault. This step prepares the factory for production by ensuring all necessary codes are available for marking.

4) UI Updates

- INEXTOR Gate reports the produced UIs, both at the unit level and aggregated level, to the Private Repository using the ZetesOlympus API (API4).
- Any deactivated or disaggregated aUIs are also reported back to the Private Repository via the same API, maintaining an accurate and up-to-date record of all identifiers.

5) Arrival of Products at Exclusive Tobacco Warehouse in Romania

- Upon arrival at the warehouse, the Exclusive Tobacco receives the products using the ZetesMedea Solution.

6) Exclusive Tobacco Logistics Operations (Order, Dispatch, Invoice, and Payment)

- Exclusive Tobacco executes all logistics operations, including order consolidation, dispatch, invoicing, and payment, using the ZetesMedea Solution.

Configuration

To configure the Zetes operation driver in the Gate administration program, follow the instructions provided in the [Gate Op. Driver: Zetes Driver](#).

Additionally, you can configure the following elements using the Application Settings of the Gate:

Parameter name	Default value	Description
ZetesOAuthScope	trac hub.api	OAuth 2 scope in authentication request (refer to Zetes documentation)
SendMessageToZetesPeriodicity	5M	Frequency of sending codes to Zetes

Rework Production

Overview [🔗](#)

These are orders for which no codes are generated for packs.

This implies that some data might be missing (EOID/FID).

In order to address this issue a retrieval mechanism making use of the TpdFacilityRegistrations has been put in place.

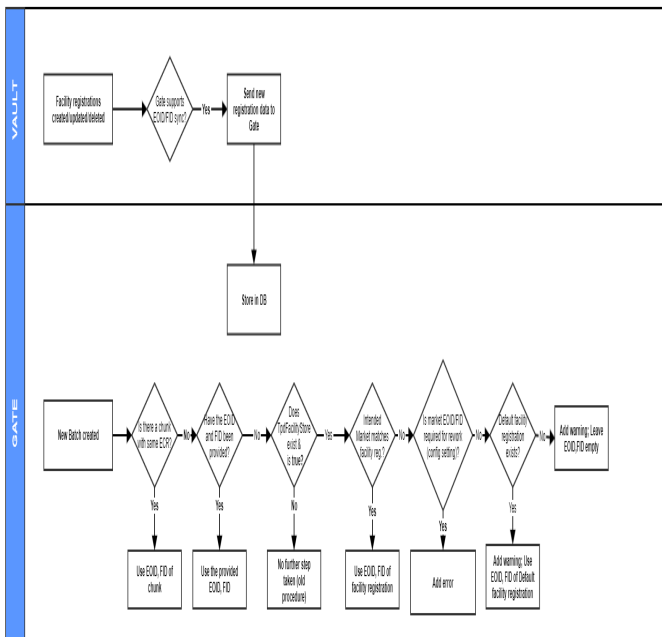
Two Application settings have been introduced:

- *TpdFacilityStore* (bool) defines whether the EOID/FID retrieval mechanism is enabled;

- *IsMarketEoidFidRequiredForRework* (bool) if true, then a rework production order for TPD created on that Gate will fail if no market-specific EOID/FID is found.

Logical flow [🔗](#)

The following graph depicts the steps taken when a new batch is created (for the *rework* case):



Process to select EOID, FID for new Production Order [🔗](#)

For productions and reworks from clients who want to keep the new feature disabled, the old mechanism is maintained (priority given to Chunk's EOID/FID where available).

Exclusively for reworks from clients who enabled the new feature the process is the following:

1. Get chunk that matches the PO ECR. Use EOID, FID from chunk if a chunk is found.
2. If there is no ECR match and If EOID/FID are provided on the PO, use them.
3. If **TpdFacilityStore** is true then continue with this and the following steps. Get facility registration whose country matches the PO Intended Market. Use EOID, FID from registration.

4. If there is no Market match:
 - a. if the Gate is configured to require an EOID/FID for the market, return an error specifying why (missing EOID/FID or ambiguity among available options) and how to fix the problem (ex. provide EOID/FID manually)
 - b. otherwise, continue below
5. If there is a Default facility registration, use EOID, FID from Default facility registration.
6. Otherwise, leave EOID, FID blank.

TpdFacilityRegistrations on the Gate

The TpdFacilityRegistrations table has been added to the Gate DB.

The content is obtained from the homonymous Vault's table, and is updated every time:

- A *Facility Registration* for that Gate has been altered via the Vault UI;
- *AppSettings* have been received (via *HealthReports*) for that Gate. (This will allow the first synchronization to take place, since it will not be triggered by a change in the Vault UI);
- The Gate is restarted.

Code Ordering Process

This page describes the Code Ordering Process in a TPD scenario.

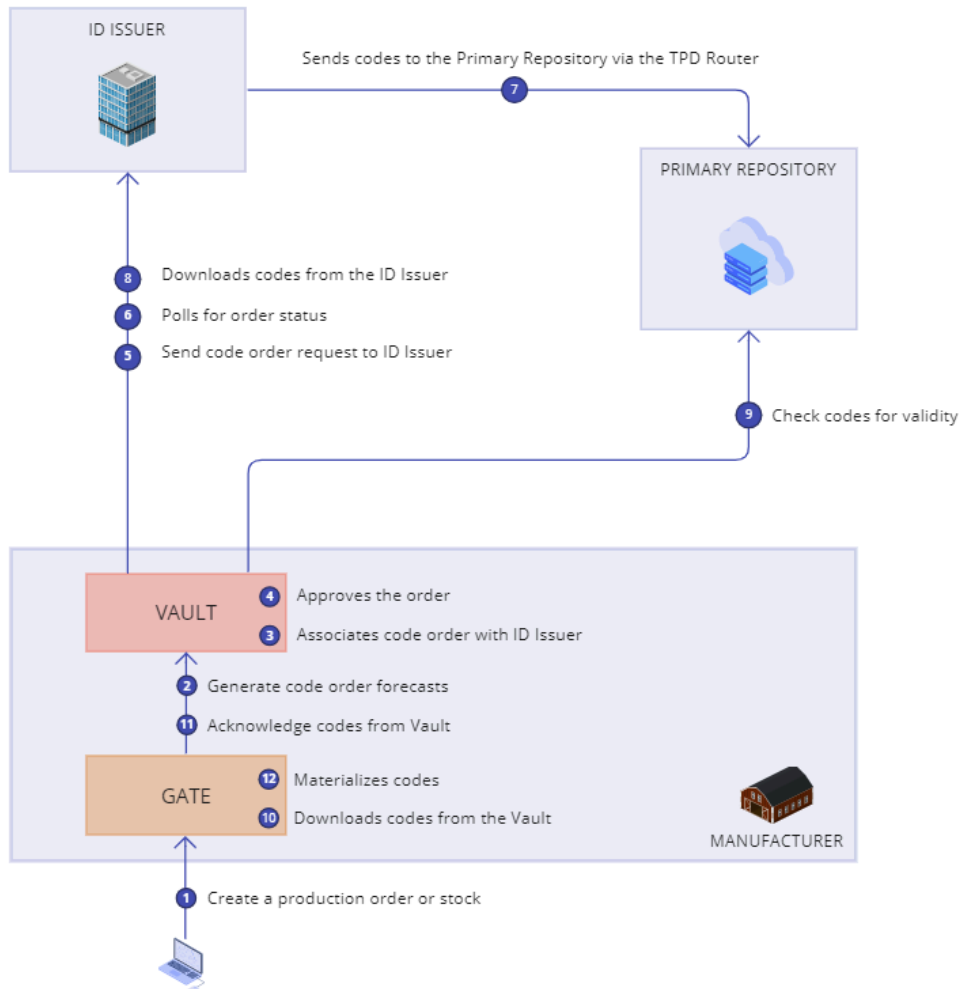


figure 1: code ordering process

Code Ordering Process

The following Table of Contents provides extensive information about the Code Ordering Process.

- [1. Create a PO on Gate](#)
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)
- [2. Forecast driver on Gate sends forecast message to Vault](#)
 - [Forecast Generation](#)
 - [External Code Reference](#)
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)
- [3. On Vault, forecast is transformed in order for a given ID Issuer](#)
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)
- [4. Order is approved on Vault](#)

- [Input data](#)
- [Output data](#)
- [Troubleshooting](#)
- 5. Order is sent to ID Issuer
 - [Input data](#)
 - [Troubleshooting](#)
- 6. Vault polls ID Issuer to know when order is ready
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)
- 7. ID Issuer sends codes directly to the primary repository via the TPD router
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)
- 8. Vault downloads codes from ID Issuer
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)
- 9. Optional: Vault checks codes on Primary
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)
- 10. Vault sends codes to Gate
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)
- 11. Gate acknowledges codes to Vault
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)
- 12. Gate materializes codes
 - [Input data](#)
 - [Output data](#)
 - [Troubleshooting](#)

1. Create a PO on Gate

This step can be performed by a user in the Gate administration interface (Production / Production orders tab) or by a machine through a Web Service.

Input data

Either a human user created / modified a PO from the Gate admin UI or a Web service was called to create or update a PO.

Output data

- The `dbo.ProductionOrders` table has a row for this PO (new or modified)
- The `dbo.PoExternalCodeReferences` table has a row for this PO

Troubleshooting

- Make sure that the TPD operation driver is enabled and that the factory is configured to be in European Union or the intended market is in the European Union. Otherwise, the External Code Reference (ECR) property is not set in the PO and no entry in table `PoExternalCodeReferences` is created.
- The requested quantity may not be what one expects. If there is an attribute `Forecast_GenerationMethod` in the PO, see [/wiki/spaces/S3RRG/pages/402338969](#) to see how the quantity is computed.

2. Forecast driver on Gate sends forecast message to Vault

Forecast Generation

The Forecast Driver allows computing the quantity of UUIs that must be automatically ordered from ID Issuers.

The computation is based on production orders and the available quantity of codes remaining in the factory.

The UUIs are ordered and generated against a set of attributes (product, machine, ...), which constrains the usage of these codes: they cannot be applied on any product, anywhere.

This set of attributes is called the External Code Reference.

The ordering process is divided in 2 steps:

- The Gate computes the UUIs consumption forecasts for each External Code Reference. The UUIs Forecasts are sent to the Vault.
- Based on these forecasts, the Vault computes the missing quantities, and cover the need by issuing new orders to the ID Issuers.

Periodically, a background job (called Code Order Forecast) takes all POs that have been modified since it last ran. From the requested quantity, it first subtracts the produced quantity, then the available codes for the same ECR. If codes are still required, a `CodeOrderForecastMessage` is created in the outbox of the Vault.

External Code Reference

When ordering UUIs to an ID Issuer, the following properties must be provided (non limitative list):

- TPD_Process_Type
- TPD_P_Type
- TPD_P_OtherType
- TPD_P_weight
- TPD_TP_ID
- TPD_TP_PN
- TPD_P_Brand
- TPD_P_CN
- TPD_IntendedMarket
- TPD_Intended_Route1
- TPD_Intended_Route2
- TPD_Import
- TPD_M_ID
- TPD_P_SubType_Exist
- TPD_P_SubType_Name
- TPD_P_units

These properties define the machine, the product, the destination market and the intended route through which the goods will be shipped.

We must ensure that the UUIs used for production have been ordered using the correct set of properties.

For instance, 2 productions that correspond to the same product and same machine but differ by the TPD_Intended_Route2 cannot use the same pool of UUIs.

Input data

Entries in the dbo.ProductionOrders table where the *ModifiedOn* column is more recent than the last run of the forecast driver.

Output data

- Creation of new forecast message(s) in the Vault Outbox queue (in dbo.Messages table).

Troubleshooting

- Make sure that the Forecast driver is enabled. Check its configuration: if it is configured to run once per day, the forecast messages will only be created once per day.
- Make sure that the TPD driver is enabled. Check its configuration: the factory location must be correctly set. If the location is EU, all POs are handled by the driver (i.e. an ExternalCodeReference is computed). If it is not activated, only POs whose intended market is in the EU will be handled.
- Check that the regulation is enabled in the PO.
- If the PO has no end date and 'Order Full Quantity' is not activated, an error will occur during forecast generation.
- Not an error: if the PO has an end date and 'Order Full Quantity' is not activated, one forecast per day will be generated, with each time a different starting date. This will create several orders to an ID issuer.
The ordered quantity for each day depends on the slicing strategy of the TPD driver:
 - Same quantity per slice: each order has the same quantity. But at most the maximum capacity of the associated link-up.
 - Max quantity per slice: each order has the maximum capacity of the associated link-up.
There may be orders starting beyond the end date of the PO if the maximum link-up capacity is too low (in other words, if the requested quantity is too high for the capacity).
There may not be orders for all days in the interval, if the requested quantity is low compared to the link-up capacity.
- If the driver does not generate a forecast for a new or modified PO, check the available quantity of codes in chunks with the same ECR. It is displayed in the Production/ Production orders tab in the Gate administration program.
- If the driver does not generate a forecast for a modified PO, check the produced quantity. If 2 POs share the same ECR, the first one could over-produce (i.e. use more codes than the requested quantity). In this case, increasing the requested quantity of the first one to an amount less than the produced quantity will not create a forecast.
- In both cases above, manually checking the forecasts is a big help: in the 'Code order forecast' driver configuration, click on 'Generate forecasts' and you will see how the forecast driver handles the PO modifications.
- If the connectivity between Gate and Vault is bad, a forecast message may be generated but never seen by the Vault. Check in the messaging tab that the forecast message is in status Completed.

3. On Vault, forecast is transformed in order for a given ID Issuer

After being received on Vault, the forecast messages are handled by generating TPD orders.

Once the forecast arrive on the Vault, it will create orders that will be sent to the Id Issuer. One forecast can generate more than one order, if the requested quantity is bigger than the limit of the Id Issuer.

In order to compute the missing quantities, the Vault takes into account the existing orders that have been created in the past and not yet completed.

Once the Id Issuer has approved an order, the Vault download the UUIs and save them in External Code Chunks. Again one order can generate more than one chunk if the quantity is bigger than 20'000, which is the limit of a chunk.

During this download process, the Vault performs checks to ensure that we received the correct codes. The checks are the following:

- The received quantity must match the ordered quantity.
- The UUIs start with the Id Issuer code
- The length match what is defined in the Id Issuer config. Length of Id Issuer Code + Serial Number + Product Number
- The Product number is the same on all the UUIs.

- For each chunk, it checks that there is not already one with the same first code. If it's the case, that means that the codes have already been downloaded and the chunk is not saved.

Below is a diagram illustrating the last sections. Some Production Orders are created on the Gate. It generates forecasts and sends them to the Vault. The Vault requests and downloads UIIs from the Id Issuers and sends the chunk back to the Gate. In the end a production is started on the Liz based on a PO. Since there were two PO with the same ECR, the production is able to use chunks originating from both of them. But it cannot use chunks originating from the Production Order with ECR B.

Input data

The queue TPD / CodeOrderForecastMessage.

Output data

- Creation of new TPD orders in the dbo.TpdOrderRequests table in the Vault database. The status of the order(s) is 'New'.
- If there were existing orders with the same order number (and Gate code), they may be updated. The status of updated orders is kept as is, except if the status was 'Approved' and the quantity is changed; in this case, the status is changed to 'New' (the rationale is that a quantity change is assumed to require approval).

Troubleshooting

- Make sure that the CodeOrderForecast message has been handled. If it is in failed state with an exception, resolve the issue and retry the message.
- If an order is not sent to the right ID issuer, check the routing rules and the countries associated with an ID issuer. Also check if the originating PO has attributes forcing the id issuer / EO ID / FID / MID, as it takes precedence.
- Remember that once an order has been sent to an ID issuer, it cannot be changed. This may create unexpected new orders. E.g. a PO requesting 40 codes causes an order to be sent to an ID issuer (for 40 codes). If the PO is changed afterwards to need 100 codes, a second order will be created for the same ID issuer (for 60 codes),
- If a forecast is received but no new order is generated, check the logs (at seq.inexto.biz or on the file system of the Vault). Check the following:
 - There will be a log entry for each forecast message that states "Forecasts have MaxChunkId=xxx and nnn unsynchronized codes". If the number of unsynchronized codes is not zero, check the AckChunkId column in dbo.ExternalCodeChunks for the given ECR. If there are records with null AckChunkId or AckChunkId larger than the value in the forecast message, the sum of their TotalCodesCount column account for the number of unsynchronized codes. This number is subtracted from the requested quantity in the forecast messages. For example, if there are 1'000 unsynchronized codes and a forecast for 1'000 codes is received, no new order will be issued. There are more details here: [The forecast message on Vault indicates that forecasts have been built on unacknowledged external codes](#)
 - For each forecast message, the Vault also computes the 'pending quantity', i.e. the amount of codes already ordered and waiting to be received. This quantity is also subtracted from the requested quantity. Orders in the following states are taken into account for the 'pending quantity': Pending, Processing, ProcessingError, Downloading, DownloadingError, Error, Canceling, PendingCodesCheck, Blacklisted.
Note 1: orders in error states are taken into account, otherwise getting again a forecast for the same ECR would cause a new order to be issued (as the Gate does not know about this error, it will not update the requested quantity on its own).
Note 2: the pending quantity is not logged. But the sum of unsynchronized codes and the pending quantity is logged in the message as nnn: "Forecasts for ECR: xxx with numbers ooo have available codes = nnn"

4. Order is approved on Vault

Some customers want a manual approval of orders, in order to avoid issues when data in POs is not reliable. Some customers do not need this approval. It is thus configurable. See [Order Management](#) for the configuration parameters.

Input data

TPD orders in the dbo.TpdOrderRequests table in the Vault database, in the status 'New'.

Output data

- The status of input records is changed to 'Approved'.

Troubleshooting

- If an order was unexpectedly approved, check if the wait time before automatic approval has elapsed.
- If an order does not get automatically approved after the expected time, check that the quantity of the order is not above the *TpdMaxAutomaticApprovedQuantity* setting.
- If an order is blocked by an operator, it will never be automatically approved.

5. Order is sent to ID Issuer

An approved order is automatically sent to the involved ID issuer. This is performed by a background job (see [TPD Background Jobs – ProcessApprovedOrders](#))

Input data

TPD orders in the dbo.TpdOrderRequests table in the Vault database, in the status 'Approved'.

Output data

- The status of the input records is changed to 'Processing'.
- If an error is received, the order is retried in the following case: access token or service unavailable issue and automatic retry of code ordering is activated. Otherwise the status is set to Failed

Troubleshooting

- Note: orders have an additional, temporary state (between Approved and Processing), called Pending. An approved order causes an internal message of type `UuidOrderMessage` and the status is set to Pending. The component associated with the involved ID issuer (plugin) handles this message by sending a request to the ID Issuer and setting the status to Processing.
- If no request is sent to an ID issuer, check the Messaging tab in the Vault admin for the presence (and handling) of the above message.

6. Vault polls ID Issuer to know when order is ready

One background job per ID issuer asks about the status of each order in the Processing state (see [TPD Background Jobs](#) → [IdIssuerSynchronizer](#))

Input data

TPD orders in the dbo.TpdOrderRequests in the Vault database, in the status 'Processing'.

Output data

- When an order is ready, an internal message (of type `UuidDownloadMessage`) is generated.
- If an error is reported by the ID issuer, the order goes to 'ProcessingError' status.

Troubleshooting

- Lots of things can go wrong on the ID issuer side. Check the error field of an order to get more information about it.
- If an error occurs, the order can be retried and the polling will resume.

7. ID Issuer sends codes directly to the primary repository via the TPD router

Note: This process is not covered in the documentation, as it occurs between the ID Issuer and the primary repository (outside the scope of INEXTOR.)

Input data

N/A

Output data

N/A

Troubleshooting

N/A

8. Vault downloads codes from ID Issuer

As an order is ready on the ID issuer side, the Vault performs the actual codes download.

Input data

An internal message in the `UuidDownloadMessage` queue.

Output data

- While the download is in progress, the status is set to 'Downloading'.
- When the download is finished, the status is set to 'Completed', except if the involved ID issuer is configured to require codes check in Primary.
- If checks on Primary are required:
 - The status is set to 'Pending codes check in Primary'.
 - Entries are created in the dbo.TpdPrimaryChecks table, with state 'New' (9). Each entry has a foreign key (OrderId) to reference the order itself. The configuration of the 'Primary Code Check' driver defines how many codes can be sent at one time for verification. This usually results in quite a few entries in dbo.TpdPrimaryChecks table.
 - The application setting `DelayBeforeFirstPrimaryCheck` is used to define the datetime when the first check for this order will be done. If no value was configured the Vault attempts to immediately check the order on Primary; this creates entries in dbo.TpdPrimaryCheckHistories table (see following step for more details).
If other checks on Primary are already being performed (on the current Vault or on another Vault instance), the checks are not done at this time.
- If an error is reported by the ID issuer, the order goes to 'DownloadingError' status.
- For each chunk of 20'000 codes in the list of downloaded codes, a record is created in dbo.ExternalCodeChunks and dbo.ExternalCodeChunkContents tables, in Vault database.

If the order status is 'Completed', the AllocationStatus column of these chunks is set to 'Available' (1); if checks on Primary are required, the allocation status is set to Pending (5).

Troubleshooting

- Lots of things can go wrong on the ID issuer side. Check the error field of an order to get more information about it.
- Note: orders for ID issuers using the 'ID issuer kit' plugin are downloaded by chunks of 20'000 codes in parallel. For other plugins, a single download is performed (and the resulting list of codes is split in chunks of 20'000 codes).
- If an error occurs, the order can be retried and the download will start from scratch. Already-created chunks are not stored as duplicates.

9. Optional: Vault checks codes on Primary

A background job is responsible for contacting the Primary (i.e., [TPD Background Jobs → BackgroundModule-PrimaryChecksBackgroundJob](#)) and asking it to validate the codes. Verified chunks are directly sent to the Gate. Once all checks of a given order are successful, the order is complete. This job performs the checks and takes all concerned orders with a NextCheckRetryDate in the past, then waits a configurable amount of time (see PrimaryCheckBackgroundThreadPeriodicity setting for the delay between each run) and starts again. The NextCheckRetryDate value is set with the settings DelayBeforeFirstPrimaryCheck, PrimaryCheckPeriodicity or ExtendedPrimaryCheckPeriodicity.

Input data

Entries in dbo.TpdPrimaryChecks with state 'New' (9).

Output data

- If all codes in an entry of dbo.TpdPrimaryChecks are accepted by the Primary, the entry is set to Completed state (2).
- If some codes in an entry of dbo.TpdPrimaryChecks are not accepted (either the Primary returns an HTTP error code or a non-empty payload), the status remains at 'New' (9).
- For each check performed, an entry in dbo.TpdPrimaryCheckHistories is created. This entry has a foreign key (TpdPrimaryCheckId) to reference the involved check.
- The Atos Primary is very sensitive to the number of concurrent checks that are performed. If it detects too many checks performed at the same time, it returns the error code 503. The limit is in the configuration of the 'Primary code check' driver (currently 4). In order to avoid too many parallel requests, a Vault instance reserves the right to perform checks by writing in the dbo.ResourceLocks table. This prevents other instances from checking codes at the same time.
- If the start date of an order is reached and the extended code check is disabled (ExtendedPrimaryCheckPeriodicity=0) when the job starts to check an order, the order is set to 'Blacklisted' state. If the extended code check is enabled, the order is set to ExtendedCheckOnPrimary and code check is extended till the expiration of codes.

Troubleshooting

- When an order is not whitelisted, check the Vault database, by joining the dbo.TpdPrimaryChecks and dbo.TpdPrimaryCheckHistories, when knowing the order identifier (it is shown in the user interface of the 'Check on Primary' tab of Vault admin, when hovering over the Order Number cell).
 - If no recent entry is found in dbo.TpdPrimaryCheckHistories is found, this looks like an error. Contact the dev team to discuss this.
 - If recent entries are found in dbo.TpdPrimaryCheckHistories, with a response payload showing invalid codes, the only known fact is that the Vault is not to blame. The ID issuer is supposed to send the codes to the Router. In turn, the Router is supposed to send them to the Primary. This makes looking for the issue very difficult. It is recommended to start by contacting the ID issuer.
- It is always possible to ask the Vault to re-check orders immediately, using the 'Retry verification' button on the 'Checks on Primary' tab in Vault admin. If no other check is in progress, they will be asynchronously re-checked. Refresh the page after a little while to see the results.

10. Vault sends codes to Gate

When an external code chunk is ready, the Vault creates a message of type ExternalCodeChunkMessage in the Outbox of the requesting Gate (i.e. the Gate that sent the forecast message which resulted in the order and the downloaded codes).

Note: this step is not triggered by a background job or the reception of a message, like most other steps. It is automatically invoked after downloading the chunks of an order or after successfully checking a chunk of an order on the Primary.

Input data

Entries in dbo.ExternalCodeChunks with allocation status of 'Available' (1).

Output data

- A message of type ExternalCodeChunkMessage sent to the Gate.

Troubleshooting

- When a Gate does not receive chunks, check the actual name of the message queue where the messages are stored. A Gate can have a field called GateInstanceVersion which has an influence on the queue name. If this field is mishandled by the Vault, the message is sent to the wrong queue. An easy way to see this is to look at the queue names in the Outbox, if there are 2 queues for a given Gate, the error is likely.

11. Gate acknowledges codes to Vault

Upon handling a message of type ExternalCodeChunkMessage, the Gate answers by sending a message of type ExternalCodeChunkAckMessage in the Outbox of the Vault.

Input data

A message in the Code / Chunk / EntityCodeChunk queue.

Output data

- The Gate stores the received chunks in `dbo.ExternalCodeChunks` and `dbo.ExternalCodeChunksContents` (like the Vault). The `MaterializationDate` column in `dbo.ExternalCodeChunks` is set to null.
- A message of type `ExternalCodeChunkAckMessage` is sent to the Vault. This message contains the identifier of the chunk in the Gate database. When processing this acknowledgment message, the Vault stores this identifier in the `AckChunkId` column in the `dbo.ExternalCodeChunks` table. See the troubleshooting section on the step 3.

Troubleshooting

- (There are instances of lost `ExternalCodeChunkMessage` or `ExternalCodeChunkAckMessage`; the root cause is unknown)

12. Gate materializes codes

Codes are stored in `dbo.ExternalCodeChunkContents` table, one record per 20'000 codes in zip format. This makes it efficient to transmit them to the Liz for printing, but very inefficient when a user requests to check the validity of a code. For this reason, codes are also stored individually in a table called the materialization table. This is performed by a background job. There is one materialization table per ID issuer.

Note: writing to a table is the default behaviour. There are other possibilities: see [Configuring Materialization](#)

Input data

An entry in `dbo.ExternalCodeChunks` with a null value in the `Materialization` column.

Output data

- The `MaterializationDate` column in the input records is set to the current date.

Troubleshooting

- Materialization can cause a lot of pressure on a database. See the link above to configure throttling if needed.
- Materialization tables can be quite large. See the link above to store data in another, dedicated database. If this is configured, already-materialized chunks must be re-materialized by setting the `MaterializationDate` column to null.

Stocks

 **Unmaintained:** At the present time, no client uses this feature. Given this fact, INEXTOR tests do not include this feature and the documentation stays as is and will be updated if and when this feature is again used

The purpose of defining stocks on the Gate is to provide the ability for Manufacturers to have a certain quantity of codes always available in the Gate to start a production for a given Manufactured Product, a given LinkUp Setup during a certain period.

The system ensures that the defined quantity is always available during this period in case there is a change of plan at the last minute (e.g. machine breakdown).

To manage stocks, see page [Gate Production: Stocks](#).

Code Ordering Status Flow

The graph below shows the current state machine states of a TPD code order

Several ID issuers offer the possibility to order unique identifiers (UIDs) with an *Immediate Delivery* flag.

The purpose of this flag is to send urgent orders and bypass the original period of 48 hours an ID issuer has to approve an order.

An urgent order is processed immediately so that the codes can be delivered as soon as possible to the factory.

There are two ways to enable *Immediate Delivery*:

- Globally for all orders sent to an ID issuer: By enabling the feature in the ID issuer configuration on the Vault.
- For a specific Production Order on the Gate.

The configuration of the ID issuer has priority over the information in the PO. See [TPD ID Issuers](#) for all the possibilities.

On the Gate, there is the possibility to set a PO as urgent. This is done through the PO edition form, in the **TPD tab**. By checking *Immediate Delivery*, the feature will be turned on (if the ID issuer configuration allows it).

Then on the *TPD - Orders*, the urgent orders will be displayed in blue.

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Marking all orders for an ID issuer as urgent orders on the Vault

On the Vault, the administrator sets the *Process Order Immediately* option for an ID issuer.

This option can be set in the ID issuer form, by choosing 'Always' in the drop-down for *Process Order Immediately*. If the drop-down is not there, it means that the ID issuer does not support the feature.

 Edit ID Issuer

ID Issuer Code	KFB	Plu
Name	KFB Belgium	Plu
Plugin	ID Issuer Kit	Id
Serial Number Length	9	Au
Product Code Length	4	Do
Request delay	2d0H0M0s0ms	Ha
Min order quantity	1	
Max order quantity	0	
Quantity must be a multiple of	1	
Mode	MMIC	
Requires Economic Operator OnBoarding	☐	
Process Order Immediately	Always Based on Production Order Immediate with explicit confirmation Never	
SLA Period		
Immediate Delivery SLA Period		
SLA only on working days		
Api Version	1.3.5	

Forecast quantity redistribution

Introduction

A feature is available on the Vault to alter the quantities pre-calculated in the forecasts generated on the Gate.

Since the Gate doesn't have all the data, it can happen that the quantities of codes are not distributed in an intuitive way among the Production Orders (PO) that share the same External Code Reference (ECR). When this feature is active, the Vault will use its data to adjust the quantities in the forecasts before processing them. The total quantity requested by the Gate is untouched. It's only the distribution among the PO that is altered.

Activation

Vault

In the Vault Administration, navigate to Configuration → Application Settings.

Set the setting : **TpdForecastReDistributeQuantity** to "true".

Gate

There is nothing to activate on Gate side, but you will need a Gate with version 10.1.0.3*** or higher for the feature to work. The new Gate sends more data in the forecast messages.

If your Gate is older, the Vault will just process the forecasts message with the default mechanism.

Behavior

In most case, this feature will not change anything. Below, we illustrate some scenario where the feature has a beneficial impact.

Over-production

In this example, we have two POs sharing the same ECR, so they can share their codes. They have each generated a TPD order on the Vault and got their planned quantities.

PO	Start date	Planned quantity	Ordered quantity	Produced quantity
1	Today	1'000	1'000	1'500
2	Tomorrow	20'000	20'000	0

PO 1 start producing, but it over-produce of 500 codes. It used the codes from PO 2. Now PO 2 don't have enough for it's planned production. The operator, change the hour of production on PO 2 to force a new forecasts message.

With the default mechanism, it's PO 2 that needs to order the extra 500 codes. This is because PO 1 start first and thus receive any available codes. In the reports, the situation looks strange. PO 2 has downloaded 20'500 codes, but planned and produced only 20'000 codes.

With the redistribution active, the Vault sees that PO 1 has over-produced, thus it creates a TPD order of 500 codes attributed to PO 1. Now it's easier to track why 500 extra codes are ordered. PO 1 had planned 1'000 codes, but downloaded and used 1'500 codes.

Expiration

If a PO is not closed or deleted, it can re-order codes after expiration. The TPD orders created like this, often don't have the Order Number of the PO that has expired, thus making it difficult to track the issue.

PO	Start date	Planned quantity	Ordered quantity	Produced quantity
1	6 months ago	10'000	10'000	9'000
2	Tomorrow	20'000	20'000	0

PO 1 had produced 6 months ago, but user forgot to close it. There are still 1'000 codes that remains, because they produced less than planned. When those codes expire, the Gate send a forecast to re-order 1'000 codes, since now the available quantity is not enough to cover both POs.

With the default mechanism, it's PO 2 that will generate the TPD order. This is because PO 1 start first and thus receive any available codes. The factory manager now wonder why the PO 2 has suddenly ordered 1'000 extra codes. He might not see that an old PO is un-closed and the issue might happen again in six months.

With the redistribution active, the Vault sees that PO 1 has let its codes expire. It will assign the TPD order of 1'000 codes to PO 1. The factory manager now see that the extra codes were ordered by an old PO. He close it to avoid futur issues.

Logs

When the redistribution is applied to a forecasts message, you will find some logs in the Vault Service.

LogsExample	
1	"NOTICE";"OrderForecastHandler";"[ECR:12345678-03-Pack-False-False-BE-1-12345-05-12345--SmokeV-10-KFB7atr1-KFF
2	"NOTICE";"OrderForecastHandler";"[ECR:12345678-03-Pack-False-False-BE-1-12345-05-12345--SmokeV-10-KFB7atr1-KFF
3	"NOTICE";"OrderForecastHandler";"PO: OrderF001 has a deficit of order of 1000, a difference between requested
4	"NOTICE";"OrderForecastHandler";"PO: OrderF002 has a deficit of order of 2000, a difference between requested
5	"NOTICE";"OrderForecastHandler";"PO: OrderF003 has a deficit of order of -200, a difference between requested
6	"NOTICE";"OrderForecastHandler";"Forecasts for ECR:12345678-03-Pack-False-False-BE-1-12345-05-12345--SmokeV-10
7	"NOTICE";"OrderForecastHandler";"[OrderF001\Quantity:800\Start:28/06/2021] Generated an order for an existing
8	"NOTICE";"OrderForecastHandler";"[OrderF002\Quantity:2000\Start:29/06/2021] Generated an order for an existing

"Quantity redistribution activated." : Indicate that the feature will redistribute the quantities.

"deficit of order" : Quantity the PO still need to order. If it's negative, it means that the PO has already ordered more codes than it needs. This can happen if the PO's quantity is reduced after a first round of ordering.

"difference between requested and produced" : Quantity the PO still need to produce. If it's negative, it means the PO has already produced more than planned.

Errors

If this error is in the logs, it means the redistribution encountered an issue. The Vault will revert to process the forecasts with the default mechanism.

It's a fail-safe to guaranty that the total quantity requested by the Gate is the same after the redistribution.

ErrorLog
"ERROR";"OrderForecastHandler";"Quantities are not distributed properly. 10'000 codes must be ordered, but 9'000 co

Order Management

Introduction [🔗](#)

As per the TPD setup, the Vault receives forecasts indicating the need for external codes based on production orders defined on the Gate. These forecasts trigger the creation of order requests for ID issuers.

The number of order requests generated from a forecast depends on the configuration of the ID issuer:

- If available codes cover the forecast, no order request is made.
- Typically, one order request is created.
- In cases where the ID issuer accepts orders up to a maximum amount and the forecast exceeds this limit, multiple order requests are generated.

By default, orders are automatically forwarded to ID issuers. Once the ID issuers accept the order, codes are retrieved from the Vault and become accessible on the Gate for a production order. The duration of this process varies from minutes to days, contingent on the ID issuer's response time.

Administrators have the authority to stipulate that orders must receive approval before being dispatched to an ID issuer or to be entirely obstructed. In cases where no action is taken on an order request within a specified timeframe (in days/hours/minutes), the order is automatically sanctioned.

The default duration for this process is set to 0 seconds, eliminating the need for manual intervention. However, assigning a different duration, such as 1 day, allows the administrator time to either approve or block the order request. Notably, if the order possesses the attribute `Forecast_GenerationMethod` set to `ProductionSchedule` and the production order is underway, it will not be released automatically. Further details on this configuration can be found in the section below.

User interface [🔗](#)

For a detailed description of this feature, see page [Gate: TPD Orders](#)

Manual Order Import [🔗](#)

If an ID issuer does not offer online code ordering (or if there is no network connection between the vault and the ID issuer), manual code import becomes essential. This process can be carried out under the following circumstances:

- The ID issuer provides support for manual import.
- The vault is configured to support manual import for the particular ID issuer.
- The order status is categorized as New, Approved, Manual import needed, or Error Status.

Typically, the manual import process consists of two primary steps:

1. Users can opt for an alternative method to request codes, either through a website or via email. To provide the necessary details to the ID issuer, users can select the preferred order and click on the 'Manual Order' button. This information mirrors what would have been submitted during online ordering. While the user interface of Inextor can display this data, it is currently limited in functionality. For further guidance on ordering codes from the ID issuer's perspective, please consult the relevant documentation.

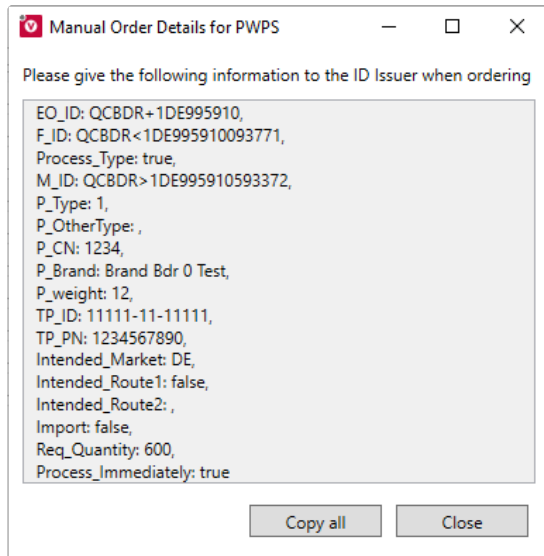
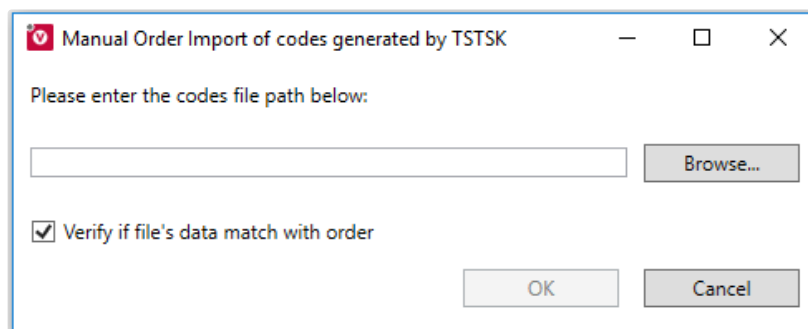


Figure 1: Upon clicking the 'Manual order' button, a screen will appear displaying a list of elements that may vary depending on the ID issuer.

2. Upon receiving a file containing codes, you can import it by selecting the order and clicking on the 'Import codes' button. You will be prompted to provide a file path for the import process. It is essential to note that the codes within the file must start with the ID issuer code.

The system first checks the existence of the initial code in the file within the database. If the code is already present, it is inferred that the user has previously uploaded the same file, and the import process is consequently rejected. Multiple files can be imported for a specific order. The order is marked as complete once the required quantity of codes has been reached.

Certain files include metadata that serves to validate the codes for the correct order. In case a plugin incorporates this functionality and detects a mismatch in the data, an error message will be displayed, and the codes will not be imported. Should you prefer to bypass this verification, you have the option to deselect the "Verify if file's data match with order" checkbox. In this scenario, you will receive a warning, but the codes will still be imported.



Upon clicking the 'Import codes' button, users are directed to a screen displaying various options. They can either input a path in the designated edit box or utilize the 'Browse...' button to select a file. Once the user confirms by clicking 'OK', the chosen file is imported. Subsequently, a message box will indicate whether the import was successful or unsuccessful, accompanied by an error message if applicable.

In scenarios where there are two files to upload (for example, upUI_i and upUI_s), users are required to manually merge the files side by side, using a semi-colon as a separator.

Order Details [🔗](#)

By double-clicking on an order or when selecting an order and clicking the button "Order details", a window opens showing all TPD properties of that order.

All values displayed in the window can be selected for copy-paste.

The 'Order Details' window displays the following information:

ID: 12, QCLUXX TPDJNCERT_BE 400123_KFB-03-Pack-FR-False-BE-1-00000-44-00125-CN400123-BE400123-20-01234567890123			
Order Number	TPD_INCERT_BE	Requested	300000
Planned On	8/9/2019 8:00:00 AM	Immediate Delivery	False
Status	Blocked		
Identification		Product	
Id Issuer Code	QCLUXX	ID	00000-44-00125
Eoid	KFB7atr1 i	PN	400123_KFB
FID	KFBP7tch i	Brand	BE400123
MID	KFBd582o i	Product Type	1
Market		CN	CN400123
Import	False	Weight	20.0
Intended Market	BE	Other ID	01234567890123
Intended Route	FR		
Other (QCLUXX specific properties)		Machine	
BRANDESC Belgium400123		Process Type	Yes
M_Capacity 720000			

Close

ID Issuers not supporting Other ID [🔗](#)

Some ID Issuers don't support the TPD property "Other ID" (where we usually store the GTIN).

In such a case, the property appears greyed out with a tooltip:

The 'Other ID' field displays the value 01234567890123. A tooltip is shown below the field with the text: "This property is not sent to the ID Issuer according to its configuration".

ID Issuer Registration Info [🔗](#)

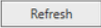
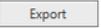
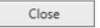
By hovering over the information icon next to the EOID, FID or MID, it is possible to see additional information about registration with the ID Issuer:

The MID field displays the value KFBd582o. A tooltip is shown next to the field with the text: "Machine 03", "Factory Gate_DCTA", and "Producer VPL-03".

Order History

When selecting an order, the button "History" becomes available. This button allows to see the history of an order (approval, order sent to ID Issuer, etc).

The history can be exported to a file, or each line can be copied in the Windows clipboard.

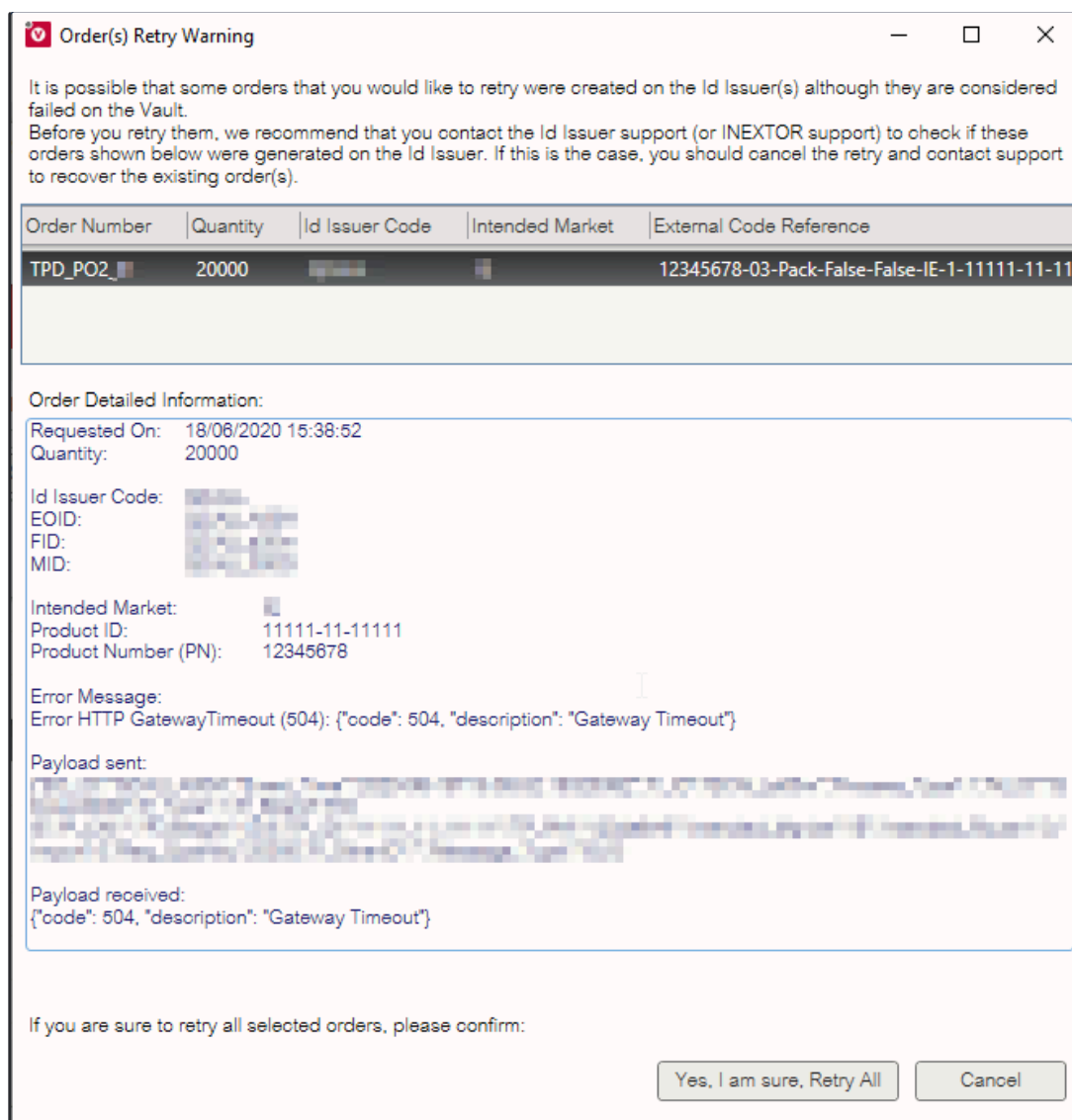
Order History			
ID: 7, F2LPK TPD_PO4_Default pnBA600123-03-Pack-False-False-BA-1-60123-11-60123-cnBa0-BrandBa600123-12.3			
	Logged On	Log	Details
	7/2/2019 2:01:20 PM	Created order for PO TPD_PO4_Default, ECR pnBA600123-03-Pack-False-False-BA-1-60123-11-60123-cnBa0-BrandBa600123-12.3, with quantity=50000, Id Issuer F2LPK, AccountEoid=F2LPKIsx46, EOID=F2LPKIsx46	
	7/2/2019 2:03:16 PM	Order approved	
	7/2/2019 2:03:41 PM	Update order status to Pending	
	7/2/2019 2:03:41 PM	Sending order to Id Issuer F2LPK	
	7/2/2019 2:03:49 PM	Order 7 for order number TPD_PO4_Default and quantity 50 000 has been sent to ID Issuer F2LPK (new state is Processing)	
	7/2/2019 2:04:43 PM	Polling: rejected: Order Status is 'RouterReject'. Additional information: 'Router Rejected'	
	7/2/2019 2:04:43 PM	Setting order 7 for order number TPD_PO4_Default and ID issuer F2LPK to ProcessingError state - Order Status is 'RouterReject'. Additional information: 'Router Rejected'	
	7/2/2019 3:03:58 PM	Retry order, new routing: F2LPK, account eoid: F2LPKIsx46, eoid: F2LPKIsx46	
	7/2/2019 3:04:39 PM	Polling: rejected: Order Status is 'RouterReject'. Additional information: 'Router Rejected'	
	7/2/2019 3:04:40 PM	Setting order 7 for order number TPD_PO4_Default and ID issuer F2LPK to ProcessingError state - Order Status is 'RouterReject'. Additional information: 'Router Rejected'	
			  

The payloads of the order request are available by clicking on the button in the "Details" column.

Order Retry

When a TPD order fails during the order request to the ID Issuer, there can be a risk that the order is marked as failed on Vault, but succeeded on the ID Issuer. In this case, if the order is retried without contacting the ID issuer, the risk is to order the double quantity, and even to lose money on the first order if it is never recovered. There are two cases where we decided to allow the automatic retry: access token issue and service unavailable. This could be activated through the application setting `OrderRequestAutomaticRetry` and configured using the following application settings: `OrderRequestMaxRetries` and `OrderRequestRetryInterval` (see [Application Settings](#))

That is why, if the Vault considers that there is a risk for such a scenario, it will show a specific warning window:



This window shows clearly the order error and let the operator decide if it is better to contact the ID Issuer before retrying the selected order(s).

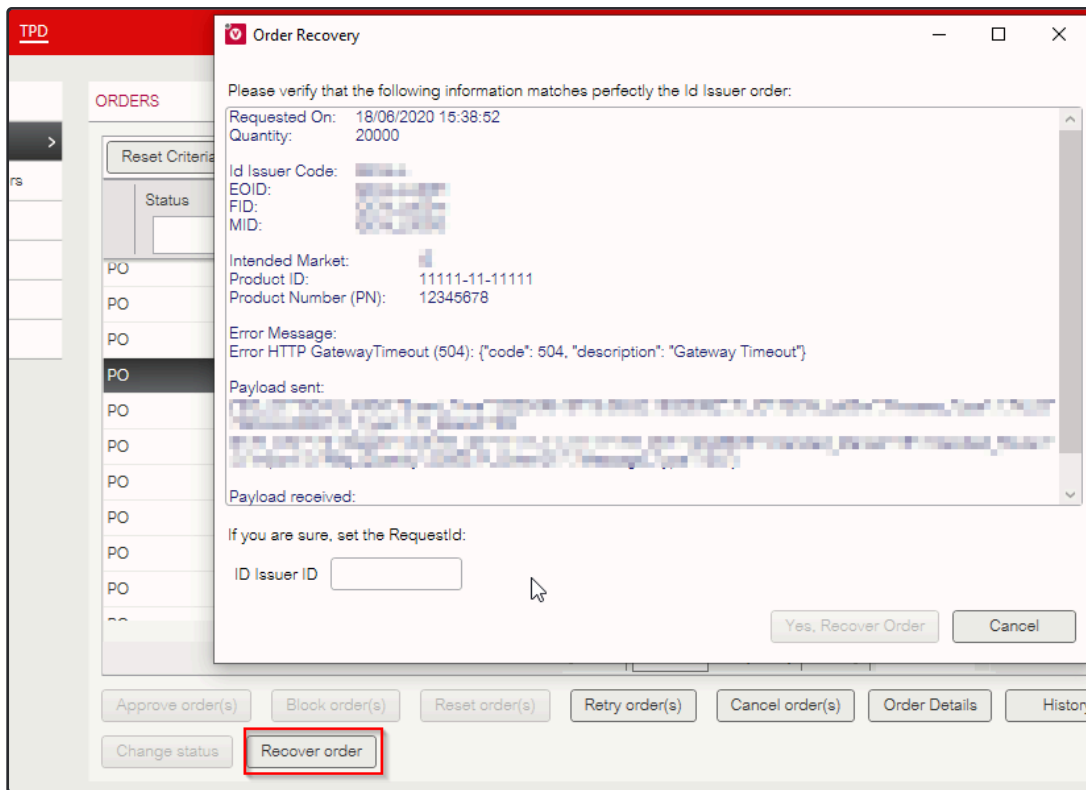
Order Recovery (advanced) [🔗](#)

For operators who have "Validate" and "Manage" access rights, a button, [Recover Orders](#), was added to support the case described in the section above where an order failed on the Vault while succeeding on the ID Issuer.

In this case, the steps are as follows:

1. INEXTOR support or the operator contacts the ID Issuer Technical Support to see if a failed order could have been ordered on their side
2. If yes, after verifying the whole order information (EOID, FID, MID, request date, TPD ID, Brand, TP PN, etc) and verifying that the order was not downloaded by the Vault, INEXTOR support or operator gets the ID Issuer Request ID
3. On the Vault, find the corresponding failed or deleted order (ideally, when there was a doubt about the order, support should have written down the Vault order ID). Use the EOID, TPD MID, the requested date, and other information if available, to find the order
4. Select the order, click on [Recover Orders](#)
5. Verify carefully all the order information. Compare it with the one from the ID Issuer

6. If everything matches, set the ID Issuer Request ID in the dedicated field and click on the "Yes, Recover Order" button
7. In Vault Administration, monitor the recovered order: it should be first in the state "Processing", then after a few seconds/minutes, the codes should be downloaded automatically.



Order Routing Recalculation (advanced) [🔗](#)

For operators who have "Validate" and "Manage" access rights, a button, "Recalculate routing", was added to support the case where an order set in the future (status New, Approved, or Blocked) was wrongly routed by the Vault. In such cases, the button, "Recalculate routing" allows to update the routing directly on the order.

A window shows the changes that would be applied to the orders (changes shown in blue). The operator can decide to apply all the changes shown or to cancel. Orders that would have no changes are shown in grey.

Recalculate routing

Please verify that the following routing information is correct before applying changes:

Factory	Order ID	Order Number	Country	Id Issuer Code	Account EOID	EOID	FID
Gate_DCTA	25	TPD.TEST_0	MA	LEWL1	Test account		
Gate_DCTA	9	TPD.EU[NL]-ROW[MA]	MA	LEWL1	Test account (LEWL1E		
Gate_DCTA	10	TPD.EU[NLm]-ROW[MA]	MA	LEWL1	Test account (LEWL1E		

Validation results:
Successful
1 Warnings

Order TPD.TEST_0 (Id 25): the routing has not changed. It does not need to be recalculated.

Are you sure you want to apply these routing changes?

Apply Changes
Cancel

The routing recalculation only applies when possible. If the routing changes the Id Issuer Code and the order is not compatible with the new ID Issuer (for example the quantity is greater than the maximum quantity supported by the ID Issuer), the routing recalculation windows will show an error for this order. Such orders need to be retriggered from the Gate.

Please also note that this functionality only recalculates the routing.
 If the TPD or UK data of an order has to be changed (for example Import flag), the Production Order needs to be retriggered on Gate and the new order should be controlled on the Vault.

Configuration [🔗](#)

The following settings allow an administrator to fine-tune the behavior of the ordering management. They are described, along with another setting at [Vault Service](#)

- TpdForecastHandlerProcessingInterval
- TpdMaxAutomaticApprovedQuantity
- TpdReleasedOrdersProcessingInterval
- TpdWaitTimeBeforeAutomaticOrderRelease
- TpdForecastForceManualOrders

Production Orders (TPD)

Production Order Management with the Gate Administration Application [🔗](#)

To learn about using the Production Order functionality, see page [Gate-Production-Orders](#).

The following fields are used for the TPD:

- LinkUp Setup: Liz LinkUp Setup (will be mapped to a TPD Machine)
- Order Expected Start Date: start date of the PO: mandatory for TPD orders
- Order Full Quantity (true/false): determines if a PO is filled in only one order on the Vault, or if it is sliced on multiple smaller orders. This field is ignored for a production order with a production schedule. In this case, code requests are created per scheduled production day.
- On TPD tab:

Name	Description
Import	indicates if the product is imported into the EU
Intended Market	intended country of retail sale
Intended Route	indicates if the product is intended to be moved across country borders with terrestrial/water/air transport. If yes, specify the first country of terrestrial/water/air transport after the product leaves the Member State of manufacturing or the Member State of importation established on the basis of a checkpoint on the land border, next seaport or next airport respectively
Product ID	it must be of format NNNNN-NN-NNNN: tobacco product identifier used in the EU-CEG system
PN	Product Number: tobacco product number used in the EU-CEG system
Brand	product brand
Product Type	TPD product type ("Cigarette", "Cigar", "Cigarillo", etc)
Other Product Type	Other product type. This field is only available if Product Type is "Other"
CN	Combined Nomenclature code: optional
Weight	product weight
Other ID	GTIN
Product SubType	Product subtype: optional. This field was added for TPD 2.0 Amendments
Product Units	Number of items in the unit packaging level (e.g. number of cigarettes in a pack). This field was added for TPD 2.0

	Amendments. It is mandatory if the Product Type is "Cigarette", "Cigar", or "Cigarillo".
Immediate delivery	if possible, should the order be filled as fast as possible? Note that this comes with an extra cost depending on the Id Issuer.
Optional parameters	if not set, the Vault determines these parameters automatically upon receiving an order: • Id Issuer Code: to which Id Issuer Code should this order be sent on the Vault? • Economic Operator Id: which EOID to be used for the order • Facility Id: which Facility Id • Machine Id: which Machine Id

Common TPD properties [🔗](#)

It is likely that Production Orders who have the same Manufactured Product share also the same TPD properties. In this case, it makes sense to add TPD properties at the Manufactured Product (MP) level. These properties are then inherited by the POs.

To set properties in Manufactured Product, go to tab "Products", "Manufactured Products", create or update a MP, and in "Attributes", add the TPD properties:

- TPD_P_Brand
- TPD_P_weight
- TPD_TP_ID
- TPD_TP_PN

These TPD attributes are inherited by POs but they can be overridden with other values in the POs (they are not read-only).

Monitor TPD orders from the Gate [🔗](#)

A tab "TPD" has been added to the Gate Application. It allows monitoring the state of the orders on the Vault, and allows approving/blocking/retrying/canceling them on the Vault if possible.

For more details, please read page [Order Management](#).

Production Order Management via the External Web Service [🔗](#)

To configure the Gate External Web Service, go to "Configuration" tab, "Operation Drivers", Inexto.S3r.Gate.ExternalServiceDriver.

The External Web Service contains two main interfaces:

- REST (JSON): available by default on port 8080.
- WCF (SOAP), available by default on port 7455, contains three endpoints:
 - Gate/StockInterface: management (creation/update/delete/import) of stocks
 - Gate/ProductionOrderInterface: management of production orders
 - Gate/ProductInterface: management of products

The following properties need to be passed in the production order for TPD production (these properties were described above) to the Web Service:

Property	Description
----------	-------------

TPD_P_Type	Identifies the product's category with a corresponding number from 1 to 12: 1. Cigarette 2. Cigar 3. Cigarillo 4. Roll your own tobacco 5. Pipe tobacco 6. Waterpipe tobacco 7. Oral tobacco 8. Nasal tobacco 9. Chewing tobacco 10. <i>obsolete</i> 11. NovelTobacco 12. Other
TPD_P_OtherType	Specification required when TPD_P_Type is 12 to detail the type of product.
TPD_P_CN	The Combined Nomenclature code.
TPD_P_Brand	The commercial brand name of the product.
TPD_P_weight	The net weight of the product.
TPD_TP_ID	The unique identifier for the product, formatted according to EU-CEG system standards.
TPD_TP_PN	The specific product number assigned within the EU-CEG system.
TPD_Intended_Market	The market for which the product is intended.
TPD_Intended_Route1	Intended route of the product. <i>True</i> if the product is intended for cross-border movement via terrestrial, water, or air transport.
TPD_Intended_Route2	The country of the first intended route if <i>TPD_Intended_Route1</i> is true. This field is optional if <i>TPD_Intended_Route1</i> is false.
TPD_Import	A boolean value indicating whether the product is imported, which is computed automatically if the "Automatic computation of import TPD property" feature is enabled in the TPD/UK codes driver.
TPD_P_OtherID	The Global Trade Item Number (GTIN) associated with the product.
TPD_P_SubType_Exist	A boolean indicating the presence of a product subtype, added as part of the TPD 2.0 Amendments.
TPD_P_SubType_Name	The name of the product subtype, a field added with the TPD 2.0 Amendments.
TPD_P_units	The number of individual items within the product's packaging, introduced with the TPD 2.0 Amendments.

Rework orders

In a production order that represents rework, no new codes need to be ordered. Because of this, the TPD attributes listed above are not mandatory, and can be omitted,

A rework can be identified when the Inexpress operation driver is enabled on the Gate, based on the Order Type specified in the attributes of the order (see [INEXPRESS Driver](#))

REST Web Service [🔗](#)

For information related to management of products and production order via REST or SOAP APIs, refer to the [Web Services List](#) section.

Scrap Calculation

To determine the amounts of codes that need to be ordered for a production order, the Gate will take the product quantity expected for that production order and add the scrap.

See [Specifying Code Order Quantity](#) for a list of the ways in which to declare the product quantity for the production order.

The method used for a Production Order to specify product quantity also affects the calculation of scrap. The process to calculate scrap for each method is detailed below.

In all cases, there are 3 values that affect scrap calculation, which are defined in the link up with which the order is associated: rejection rate, minimum rejection quantity and maximum rejection quantity. (see [LinkUp Setups](#))

By Total Requested Quantity

When creating or updating a production order, the Total Quantity (which contains the total amount of codes needed for the order) is calculated in this way:

- 1) The amount of scrap is calculated based on the Requested Quantity and the rejection rate specified in the link up setup:

$$\text{Scrap Quantity} = \text{Requested Quantity} * (\text{Link up rejection rate} / 100)$$

- 2) If minimum or maximum rejection quantities are defined for the link up setup, the scrap is adjusted so as not to go beyond these limits.

- 3) The code quantity is calculated by adding the scrap to the requested quantity.

$$\text{Total Quantity} = \text{Requested Quantity} + \text{Scrap Quantity}$$

By Remaining Product Quantity

When a production order is created or updated

- 1) The amount of scrap is calculated based on the Remaining Product Quantity (in attribute Forecast_RemainingProductQuantity) and the rejection rate specified in the link up setup:

$$\text{Scrap Quantity} = \text{Remaining Product Quantity} * (\text{Link up rejection rate} / 100)$$

- 2) If minimum or maximum rejection quantities are defined for the link up setup, the scrap is adjusted so as not to go beyond these limits.

- 3) The code quantity is calculated by adding the scrap and the amount of codes that were consumed by the order at the time of the order's modification (stored in attribute Forecast_ConsumedCodesOnRemainingProductRequest) to the Remaining Product Quantity.

$$\text{Total Quantity} = \text{Remaining Product Quantity} + \text{Scrap Quantity} + \text{Codes Consumed On Request}$$

By Production Schedule

When a production order is created or updated via web service and the production order has not started production yet, a order-level scrap rate is calculated for the production order as shown below.

This scrap rate is then applied to each day in the production schedule, and the final code quantity is stored in the database for each day.

A user can also change the order-level scrap rate via the Gate Admin UI at any time (see [Gate PO Tab: Production Schedules](#)).

After a production order has started production, the order-level scrap rate is no longer calculated when the production order is updated, and can only be modified by a user via the UI.

PO scrap rate calculation

- 1) The total remaining product quantity is calculated:

$$\text{Total Remaining Product Quantity} = \text{SUM of (production days' Remaining Product Quantity)}$$

- 2) The amount of scrap is calculated based on the Total Remaining Product Quantity and the rejection rate specified in the link up setup:

$$\text{Scrap Quantity} = \text{Total Remaining Product Quantity} * (\text{Link up rejection rate} / 100)$$

- 3) If minimum or maximum rejection quantities are defined for the link up setup, the scrap is adjusted so as not to go beyond these limits.

- 4) The order-level scrap rate is calculated and stored in an attribute named Forecast_OrderScrapRate on the production order.

$$\text{Order Scrap Rate} = \text{Scrap Quantity} / \text{Total Remaining Product Quantity}$$

Specifying Code Order Quantity

There are three ways to specify how many codes are needed for a Production Order.

A Production Order can use only one of the following ways. This is determined by the value of attribute `Forecast_GenerationMethod` inside the Production Order attribute set. It is generally not advisable to switch from one method to another for a single production order.

If this attribute is missing, the method used is By Total Requested Quantity.

The method selected also has implications on scrap calculation (see [Scrap Calculation](#)), forecast generation and code ordering.

Summary of methods [↗](#)

Method used to specify codes required	How to activate (<code>Forecast_GenerationMethod</code> value)	How to specify codes required
By Total Requested Quantity	"Default" or attribute is missing from the attribute set	Set the production order field Requested Quantity to the full expected product quantity for the whole production order.
By Remaining Product Quantity	"RemainingProduct"	Provide the remaining product quantity expected for this order in the <code>Forecast_RemainingProductQuantity</code> attribute.
By Production Schedule	"ProductionSchedule"	Provide a snapshot of production days scheduled for this order, with the product quantity expected for each day.

By Total Requested Quantity [↗](#)

This is the default method for specifying the codes required for a production order.

Activate: [↗](#)

Set the **Forecast_GenerationMethod** attribute to "**Default**", or omit the attribute from the attribute set.

Specify codes required: [↗](#)

Set the expected production output for the whole production order in the Requested Quantity field of the Production Order.

Details [↗](#)

In this method, a Production Order needs to have the **Requested Quantity** field set to the amount of packs (or other base unit) that are expected to be produced for this order.

This value is then increased by the expected scrap (by default defined in the LinkUp Setup in the RejectionRates tab), and the final quantity is shown in the **Total Quantity** read-only field in the Production Order form on the Gate UI.

The Requested Quantity can also be set via web service call ([RequestedQuantity field in the web service](#)).

By Remaining Product Quantity [🔗](#)

Activate: [🔗](#)

Set the **Forecast_GenerationMethod** attribute to "**RemainingProduct**"

Specify codes required: [🔗](#)

When creating or updating the production order, a numeric attribute **Forecast_RemainingProductQuantity** must be added to the order attribute set.

The value of this attribute is the amount of packs expected to be produced at the moment when the creation or update is made via web service or the Gate Admin UI.

Details [🔗](#)

There are two ways to specify these two attributes:

- On the Production Order form on the **Gate UI**, in the Attributes tab.
- Via **web service**, by supplying two additional properties with Key and Value as shown above.

When creating or updating a production order that uses this method, the Gate will generate a new, read-only attribute **Forecast_ConsumedCodesOnRemainingProductRequest**.

This attribute will contain the number of codes consumed by that Production Order at the time the Create or Update operation is being executed.

This is done so that the Gate can calculate how many codes have been consumed since the last time **Forecast_RemainingProductQuantity** was updated, and therefore be able to provide an accurate forecast in-between updates of the quantity.

When this method of forecast generation is chosen, the **Requested Quantity** field is not used for code ordering.

Every time a production order is updated on the Gate, the Requested Quantity field is updated as follows: Requested Quantity = **Forecast_RemainingProductQuantity** with scrap + consumed codes (see Numeric representation below)

Property Name	Description	time t1	time t2
Forecast_RemainingProductQuantity	Fit-for-sale target quantity	50000	40000
Forecast_ConsumedCodesOnRemainingProductRequest	Consumed code quantity	0	15000
RequestedQuantity	RequestedQuantity	50000	55000

It is possible to revert to the default method of generating forecasts by providing the **Forecast_GenerationMethod** attribute with value **Default**.

Important Note [🔗](#)

If a Production Order is updated without the **Forecast_GenerationMethod** and **Forecast_RemainingProductQuantity** attributes, the old values for these attributes will persist in the Production Order.

It is thus possible to update other fields in the Production Order without changing the last estimation of product quantity remaining.

However, care needs to be taken when editing an order in the Gate UI, as the Gate UI will not omit the 2 attributes, but will instead resubmit them. The Gate will then assume that the remaining quantity provided is a new estimation, even though production may have taken place in the meantime.

By Production Schedule [🔗](#)

Activate: [🔗](#)

Set the **Forecast_GenerationMethod** attribute to **"ProductionSchedule"**

Specify codes required: [🔗](#)

When submitting the production order via web service, an additional data structure is required (the **production schedule**), specifying the days on which production is scheduled for this order, and the product output expected for that day:

Production schedule fields:

Field name	Description
ProductionDate	The date during which production is expected to run for this order
RemainingProductQuantity	The product quantity that is still expected to be produced on that day.
TotalCodeQuantity	The RemainingProductQuantity with scrap applied. This is a calculated field that is stored in the Gate database but cannot be submitted.

Days for which the expected production has been reached (i.e. have RemainingProductQuantity = 0) should not be included.

See ProductionOrderDayPlans node in the sample request below on how to specify a production schedule.

SOAP Production Order schedule example [🔗](#)

```
1  <soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
   xmlns:prod="http://inextor.com/Common/2018/03/ProductionOrderInterface"
   xmlns:ns="http://inextor.com/Common/2018/03">
2    <soapenv:Header/>
3    <soapenv:Body>
4      <prod:CreateProductionOrder>
5        <prod:productionOrder>
6          <ns:Properties>
7            .
8            .
9            <ns:Property>
10             <ns:Key>Forecast_GenerationMethod</ns:Key>
11             <ns:Value>ProductionSchedule</ns:Value>
12           </ns:Property>
13         </ns:Properties>
14         <ns:BrandCode>Be400123</ns:BrandCode>
15         <ns:Description>TPD_P05_KFB</ns:Description>
16         <ns:LinkUpSetup>
17           <ns:MachineId>03</ns:MachineId>
18           <ns:ManufacturingCenterId>DCTA</ns:ManufacturingCenterId>
19         </ns:LinkUpSetup>
20         <ns:OrderNumber>TPD_P05_KFB</ns:OrderNumber>
21         <ns:RequestedQuantity>42000</ns:RequestedQuantity>
22         <ns:OrderFullQuantity>true</ns:OrderFullQuantity>
```

```

23      <ns:StartDate>2020-09-23T12:25:14.550</ns:StartDate>
24      <ns:ProductionOrderDayPlans>
25          <ns:ProductionOrderDayPlan>
26              <ns:ProductionDate>2020-09-21T12:25:14.550</ns:ProductionDate>
27              <ns:RemainingProductQuantity>10000</ns:RemainingProductQuantity>
28          </ns:ProductionOrderDayPlan>
29          <ns:ProductionOrderDayPlan>
30              <ns:ProductionDate>2020-09-22T12:25:14.550</ns:ProductionDate>
31              <ns:RemainingProductQuantity>11000</ns:RemainingProductQuantity>
32          </ns:ProductionOrderDayPlan>
33          <ns:ProductionOrderDayPlan>
34              <ns:ProductionDate>2020-09-23T12:25:14.550</ns:ProductionDate>
35              <ns:RemainingProductQuantity>12000</ns:RemainingProductQuantity>
36          </ns:ProductionOrderDayPlans>
37      </prod:productionOrder>
38  </prod:CreateProductionOrder>
39 </soapenv:Body>
40 </soapenv:Envelope>
41 </soapenv:Envelope>

```

Details [🔗](#)

A Production Order can use this method only if it is initialized via the web service with the correct value for the Forecast_GenerationMethod and the production schedule.

The Gate Amin UI allows modifying the production schedule of such an order (See [Production Schedules](#)).

When creating or updating a Production Order with this method using the web service, the previous production schedule is removed and replaced by the newly submitted one.

When creating or updating a production order that uses this method via the web-service, the Gate will generate a new, read-only attribute **Forecast_ConsumedCodesOnRemainingProductRequest**.

This attribute will contain the number of codes consumed by that Production Order at the time the Create or Update operation is being executed.

This is done so that the Gate can calculate how many codes have been consumed since the last time Forecast_RemainingProductQuantity was updated, and therefore be able to provide an accurate forecast in-between updates of the quantity.

The final amount of codes to be ordered for each day in the production order is calculated by applying an order-level scrap rate (see [Scrap Calculation](#)) to the Remaining Product Quantity, like this:

$$\text{ProductionDay.TotalCodeQuantity} = \text{ProductionDay.RemainingProductQuantity} * (1 + \text{OrderScrapRate})$$

This calculation is done every time the OrderScrapRate or the RemainingProductQuantity of one or more production days changes after a modification of the production order via either the UI or the web service.

Requested Quantity and Reference (Total) Quantity [🔗](#)

The Requested Quantity and Total Quantity fields are not used for forecast generation when using this method.

The values of these fields are still updated whenever the production order is modified, so that they are available for reporting.

$$\text{RequestedQuantity} = \text{Forecast_ConsumedCodesOnRemainingProductRequest} + \text{SUM(RemainingProductQuantity for all days in production schedule)}$$

$$\text{TotalQuantity} = \text{Forecast_ConsumedCodesOnRemainingProductRequest} + \text{SUM(TotalCodeQuantity for all days in production schedule)}$$

Preparing and Running a Production

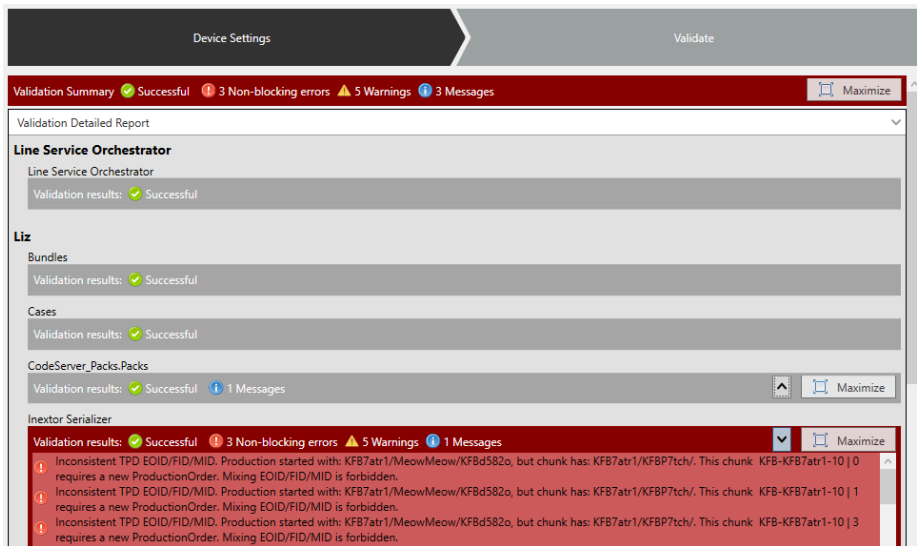
Preparing and running a production on Liz

On Liz, launch the preparation of a TPD Production Order.

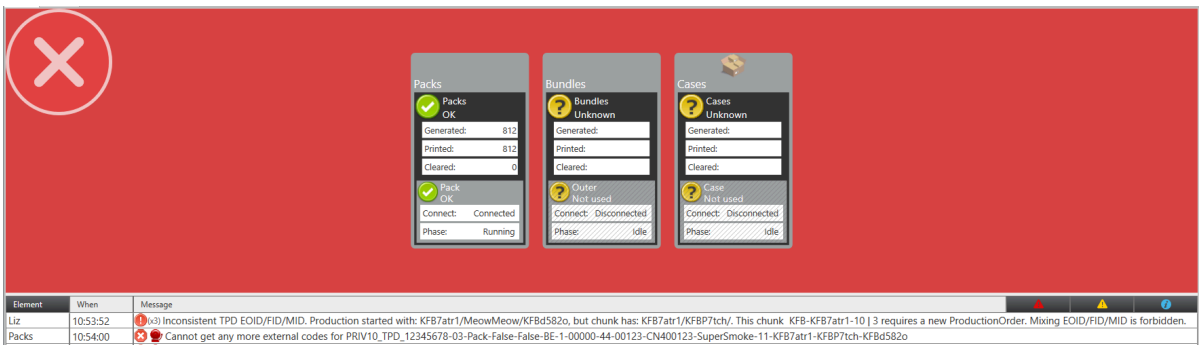
Special security. Mixed EOID, FID, MID, and Id Issuer Code

At an Id Issuer you can make a new registration for your Economic Operator, Facility or Machine. You will then receive new IDs. When ordering codes, you can use those new IDs with the same External Code Reference (ECR) as before. This means that during a production you could end up with a mix of EOID, FID, MID. This is an issue for the systems that are further down the chain.

In order to avoid this issue, a special protection is implemented. It will block the use of chunks that have different IDs than the ones used at start of production. This security can be disabled with the Gate setting **CheckTpdIdConsistency**. By default it's enabled.



At start, if chunks with inconsistent IDs are downloaded on the Liz you will see this non-blocking error: "Inconsistent TPD EOID/FID/MID. Production started with <PO first EOID>/<PO first FID>/<PO first MID>, but chunk has: <chunk EOID>/<chunk FID>/<chunk MID>. This chunk <chunk unique ID> requires a new ProductionOrder. Mixing EOID/FID/MID is forbidden.". Those chunks will be reset to available.



During production, it might stop because there is not enough codes because some are incompatible. You will see in the Global Logs the error message explaining why.

What to do if your production runs out of codes because of this issue ?

1. You must first terminate your production.
2. On the Gate UI, create a new Production Order (PO).
3. Re-start producing but with the new PO.

The same functionality was implemented for UK codes (**CheckUkIdConsistency** application setting) to avoid mixing chunks with a different Id Issuer Code and/or EOID, FID and MID for UK codes.

⚠ If at step 2 you decide to clone your PO. You will need to delete 3 attributes before starting your production. Delete: **CHUNK_TPD_EO_ID** , **CHUNK_TPD_F_ID** and **CHUNK_TPD_M_ID**.
This issue will be fixed in the release of March 2021

Disabling the TPD regulation for specific productions

Important

The information on this page is valid from version 10.1.0.2650.

Some products are not subject to TPD regulations, even for a factory located in the EU or when the intended market is in Europe.

In this case, one can disable all activities mandated by the TPD regulation, i.e. codes ordering, as well as the checks made on TPD attributes, as well as the use of TPD contents.

This disabling is in effect when the attribute `TPD_NonRegulatedProduct` (with value "True") is found on the production order.

As attributes are inherited, it can also be added either in the manufactured product or in the manufacturing market constraints.

Code Checking on Vault Website

Code checking

To check a TPD code, go on the vault website, in the **Check Code** tab.

CHECK A CODE

Check the validity, origin and target market of a pack.

Enter a code

Location

Type of check

Employee

☐ Burn this code

☐ Mark as wasted

Check

The process of checking a code is identical to any other code type, except that the result has some specific fields.

The specific TPD information are described below. The standard code checking operations and information are described [here](#).

TPD specific information

When checking a TPD code some TPD data related to the TPD code are displayed on the vault website

TSTSKqdV751Tsq - ALREADY CHECKED

SKU_Belgium

SKU_Belgium_Market

Product Code: SKU_Belgium

Variant: 0

Brand: 6e400123

Activity: SKU_Belgium_Activity

Product Group code: TAX_1

DCTA-03

Production Details

Code details

Production Date: 07/08/2019 13:46

Production Date (local): 07/08/2019 15:46

Liz ID: 0

Code Scheme: CSLD

Aggregation Id: 190108000000713046

Packaging Level: Packs

State: Sent to printer

Alternate Codes:

• 0_TPD_DATE: 19080713

External code information

• External code reference: 400123-03-Pack-FR-False-BE-1-00000-44-00123-CN400123-BE400123-20-TSTSKkvzgW4-TSTSKNchxAO-TSTSKfbdT5e

• TPD ID Issuer: TSTSK

• TPD Vault Order Id: 9

• TPD ID Issuer's Order Id: d9a38922-0705-4def-bcef-bd9d795b8e34

WHERE HAS THE CODE BEEN CHECKED?

Data	Description
External code reference	Inexta's external code reference.
TPD ID Issuer code	The code of the corresponding ID Issuer
TPD Vault order ID	This is the technical ID of the order on the vault. It uniquely references the order on the Vault.
TPD ID Issuer order ID	This is the ID of the order on the ID Issuer's side.

TPD Background Jobs

This page contains a list of background jobs available for CPRT productions.

For global background jobs, see [Background Tasks in the Vault](#)

- [IdIssuerSynchronizer](#)
- [ProcessApprovedOrders](#)
- [BackgroundModule-Primary Checks Background Job](#)
- [BackgroundModule-Email notification Background Job](#)
- [BackgroundModule-Activation module](#)

IdIssuerSynchronizer

To synchronize TPD order data with TPD ID Issuers.

Application	Component	Job Name	Schedule	Is Editable	Is Cancellable	Is Suspendable
Vault	IdIssuerSynchronizer	Dcta.Eu.IdIssuers.*Business.*Plugin	every 1 minute	n/a	n/a	n/a

The token (*) replaces the ID Issuer's code, e.g., *Dcta.Eu.IdIssuers.Dentsu.Business.DentsuPlugin*

ProcessApprovedOrders

Approves TPD orders by sending automatically approved orders to ID Issuers.

Application	Component	Job Name	Schedule	Is Editable	Is Cancellable	Is Suspendable
Vault	TPDCodeOrderForecastHandler	ProcessApprovedOrders	every 5 minutes	n/a	n/a	n/a

BackgroundModule-Primary Checks Background Job

Checks against the Primary Repository if the code is valid for production.

See [Primary Code Check Driver](#) for more information.

Application	Component	Job Name	Schedule	Is Editable	Is Cancellable	Is Suspendable
Vault	Time Primary Code Check driver (TPD only)	BackgroundModule-Primary Checks Background Job	every 10 minutes	n/a	n/a	n/a

* When a job is linked to an operation driver component, the name starts with "BackgroundModule-"

BackgroundModule-Email notification Background Job

Sending email notification to manufacturers if there are codes rejected by the Primary Repository.

See [Primary Code Check Driver](#) for more information.

Application	Component	Job Name	Schedule	Is Editable	Is Cancellable	Is Suspendable
Vault	Time Primary Code Check driver (TPD only)	BackgroundModule-Email notification Background Job	at 08:00	n/a	n/a	n/a

* When a job is linked to an operation driver component, the name starts with "BackgroundModule-"

BackgroundModule-Activation module

This job exists only for technical reasons. It only enables or disables the operation driver. Users should enable/disable from the Operation Driver page and not from the Jobs page.

End-users and support should not have to touch this job.

Application	Component	Job Name	Schedule	Is Editable	Is Cancellable	Is Suspendable
Gate	TPD / UK codes driver	BackgroundModule-Activation module	N/A	n/a	n/a	n/a

* When a job is linked to an operation driver component, the name starts with "BackgroundModule-"

Inextor UK regulated market (post-Brexit) operational guide

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Introduction [🔗](#)

Document INEX-OG-00016: Inextor United Kingdom (UK) Regulated Market (post-Brexit) Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of Inextor a product of the Inexto SA Suite range of serialization, authentication and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the UK regulated market (post-Brexit) requirements. Document INEX-OG-00016 is structured into three sections:

- **Introduction** - Inexto SA pre-requisites for the UK Regulated Market (post-Brexit), system overview and background.
- **Configuration** - Routing rules, code checks, layouts and content configuration
- **Operations** - Code pairing (UK) and Code ordering (UK)

Purpose [🔗](#)

The purpose of INEX-OG-00016 is to provide the required knowledge necessary to successfully set up Inextor correctly to support UK market regulatory (post-Brexit) requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the UK regulated market (post-Brexit) requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)



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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Prerequisites (UK)

Requirements [🔗](#)

Before using this guide to configure and operate the INEXTOR software, the following requirements must be fulfilled.

Installation of INEXTOR [🔗](#)

INEXTOR is the main software used for the serialization of manufactured products.

This documentation is compatible with version **10.1.0.2506** and above, of the software.

Installation of the software is provided by:

Requirements	Provided by	Reason
Installation instructions and checklists	3rd-level Inexto support	To provide information to the 2nd-level support
Installation and configuration	2nd-level Inexto support	To install and configure the INEXTOR software for production

Background (UK)

The impact of this new regulation on INEXTOR is described in [UK Codes - INEXTOR](#).

DLR (De La Rue) was the UK ID Issuer from January 1, 2021 to June 30, 2022. The UK ID Issuer since July 1, 2022 is Dentsu.

The present document describes the operation procedure and impact of the UK regulation on the INEXTOR product mainly on code ordering and serialization.

A description of the UK regulation is outlined below:

Until end of 2020, United Kingdom was under the EU regulation defined by the Tobacco Product Directive (TPD).

Following the Brexit, United Kingdom put in place its own regulation for Tobacco products in 2 phases:

- Phase 1: starting from January 1st 2021, a transitory regulation went live. This first version was based on the existing TPD regulation to minimize the impact of the change for the manufacturers.
- Phase 2: the final UK regulation was effective after June 30, 2022. It does not rely on the existing TPD regulation anymore.

What remains from TPD regulation [🔗](#)

During Phase 1, De La Rue was the ID Issuer for the UK regulation.

The code ordering API exposed by this ID Issuer was exactly the same under the UK regulation as the TPD regulation (same properties, same validation rules).

De La Rue kept in its master data all registrations of EOIDs, FIDs and MIDs performed until end of 2020.

These registrations could still be used by factories located in EU, UK or Rest Of the World (ROW) to order codes from the UK ID Issuer.

In Phase 2, Dentsu Tracking is the ID Issuer for the UK regulation, and offers a new code ordering API. All registered EOIDs, FIDs and MIDs are kept, and new registrations must be done with Dentsu.

Northern Ireland is a special case: Northern Ireland is considered part of UK and EU in the same instance, so in this scenario UK codes for Northern Ireland are considered as EU codes and no pairing is needed. In order to be able to manage this exception, Northern Ireland was given an ISO code of XI.

All other UK territories are treated like UK mainland.

The complete UK regulation can be found on page <https://www.gov.uk/guidance/put-unique-identifiers-uids-on-your-tobacco-products>.

System overview (UK)

See the information below for the general overview of the UK Post-Brexit regulation implementation in Inextor.

The code ordering process as well as production configuration (which content to use) are impacted by the UK regulation.

The differences depends on the scenario of production which relies on 2 main parameters:

- The market of production
- The market of destination of the product

The values of these 2 parameters determine which regulation applies between UK and EU and how code ordering and serialization are impacted.

The main impact is when both regulation UK and EU apply:

- Codes must be ordered both from an EU ID Issuer and the UK ID Issuer (except for Northern Ireland, which requires only codes from the UK ID Issuer).
- EU codes are printed on Packs
- UK codes are paired with EU codes and the pairing information needs to be reported to UK authorities (Dentsu Gateway system).
INEXTOR does not report the code pairing directly to UK authorities but, depending on the code pairing solution chosen by each manufacturer, INEXTOR can be involved in building this information.

When only UK regulation applies:

- Codes must be ordered from the UK ID Issuer only.
- UK codes are printed on Packs.

The following table summarizes the different scenarios.

Production Market	Destination Market	UK codes	EU codes
UK	UK (without Northern Ireland)	✓	✗
UK	EU	✓	✓
UK	Northern Ireland	✓	✗
UK	Rest of World	✓	✗
EU	UK (without Northern Ireland)	✓	✓
EU	Northern Ireland	✗	✓
EU	Rest of World	✗	✓
Rest of World	UK	✓	✗

Routing rules (UK)

Routing Process

After production orders have been created on Gate, code order forecasts are sent to Vault which is creating TPD/UK orders and route them to the ID Issuer (see [Dentsu Plugin Setup](#)).

The TPD order routing process has been adapted for UK. It is described below.

To route an order to the appropriate ID Issuer, the Vault takes into account the 3 following items:

1. IdIssuerCode, EOID, FID and MID provided as part of the original production order.
Some manufacturers are using the option to specify these properties in the PO.
 - a. If these properties have been defined in the PO then the order is routed to the corresponding ID Issuer with these IDs.
Item 2 below is used to determine the account to use to connect to the ID Issuer.
Item 3 below is skipped.
 - b. For a UK forecast, The target ID Issuer is forced to QCUKT and EOID, FID and MID defined in the PO are used as is.
2. TPD/UK routing rules defined in Vault if they match the order.
 - a. If a routing rule matches the properties defined in the order, the order is routed according to the items defined in the rule.
In this case, the item 3 below is ignored.
 - b. For a UK forecast, only routing rules with QCUKT as output are taken into account.
3. Registrations of Economic Operators, Facilities and Machines on Vault.
When the 2 preceding items do not apply, Vault routes the order according to these registrations based on:
 - a. Order's Intended Market,
 - b. ID issuer's configuration for that Intended Market,
 - c. Default facility registration with this ID Issuer.
 - d. For a TPD forecast having a UK forecast counterpart, the order is routed to the facility's local ID Issuer.

Examples

The following examples apply if code ordering relies on routing rules for intended market GB or factories located in GB.

If using default routing only (no routing rules) or ID Issuer Code, EOID, FID and MID are provided as part of the production orders' properties.

Scenario EU ⇒ UK

Example 1

2 rules must be defined, as illustrated below.

It is important that the rule that routes the order to the local EU ID Issuer is placed before the rule that routes the order to the UK ID Issuer as in the example so that:

- The EU TPD order is sent routed to LEWL1 (the local ID Issuer) by the first rule.
- The UK order will ignore any rule that doesn't have QCUKT in the ID Issuer output property and will then be routed to QCUKT by the second rule.

Results										
Intended Market	Gate	Machine	TP	TP_P	P_OtherId	Inp	Vall	Vall	Country	ID issuer
United Kingdom (GB)	Gate_NL									LEWL1
United Kingdom (GB)	Gate_NL									QCUKT

Example 2

In this example, a rule already is defined to route each market targeted by factory NL (Slovakia, Spain or United Kingdom) to its corresponding ID Issuer. Any markets not in this list are routed to the local ID Issuer (LEWL1). The rule for United Kingdom must be placed after the rule for the local ID Issuer to ensure proper routing.

Results										
Intended Market	Gate	Machine	TP	TP_P	P_OtherId	Inp	Vall	Vall	Country	ID issuer
Slovakia (SK)	Gate_NL									LEW1C
Spain (ES)	Gate_NL									1E
	Gate_NL									LEWL1
United Kingdom (GB)	Gate_NL									QCUKT

Scenario UK ⇒ EU

For this scenario, codes are ordered to the EU destination market and default routing ensures codes are ordered from QCUKT for UK.

Scenario UK ⇒ UK or UK ⇒ ROW, Scenario ROW ⇒ UK

For these scenarios, the only involved ID Issuer before and after Brexit is QCUKT. Any existing rule targeting this ID Issuer will be used to route the orders.

Presence of TP_ID and TP_PN properties [↗](#)

An order from EU to UK is considered as export outside EU. According to TPD, properties TP_ID and TP_PN are optional for export.

Some ID Issuers expect no value at all in these properties when an order is for export and might return an error if the properties are filled in.

Some ID Issuers could reject an order when those properties are not provided.

In order to allow maximum flexibility, a parameter in the ID Issuer configuration indicates if those 2 properties should be removed or not from an order intended to GB market as depicted in the screenshot below. By default, the properties are removed for such order (the parameter is ticked), but it is possible to change this behavior per ID Issuer.

Edit ID Issuer

ID Issuer Code

LEWL1

Name

ATOS Netherlands

Plugin

AW Id issuer

Serial Number Length

8

Product Code Length

5

Request delay

2d0H0M0s0ms

Min order quantity

1

Max order quantity

250000

Quantity must be a multiple of

1

Mode

MMIC

Requires Economic Operator OnBoarding

☒

Process Order Immediately

Based on Production Order

SLA Period

0d0H0M0s0ms

Immediate Delivery SLA Period

0d0H0M0s0ms

SLA only on working days

☐

Api Version

v3

Remove TPID and TP_PN for UK market

☒

Plugin

Plugin

Id Issu

Usema

Passw

EO ID

Purcha

Send f

Codes Check on Primary (UK)

For configuration information, see [Codes Check on Primary](#).

Automatic disabling [↗](#)

Code Checks on Primary are automatically disabled if the intended market of the production is GB. The configuration is honored for other markets (typically North Ireland).

Layout and Contents Configuration (UK)

Introduction [🔗](#)

The configuration of pack layouts determines what information will be printed on Packs and which codes will be consumed (printed or paired) during the production.

This configuration depends on 2 important factors:

- which regulation applies (UK or UK+EU TPD),
- which strategy has been selected for code pairing in case both regulations apply.

Only UK regulation applies (UK ⇒ UK, UK ⇒ ROW, ROW ⇒ UK) [🔗](#)

In this scenario, either the factory is located in UK and produces for UK or ROW, either it is located in ROW and produces for UK.

UK codes need to be printed on packs.

The Pack layout needs to be configured in the following way as depicted in the screenshot below:

1. It must reference 2 contents:
 - a. 1 content for the UK Human Readable code: **Packs_UK_UPUI_HR_Tracking** commissioned as HR code (previously known as Code Level 1).
 - b. 1 content for the UK Machine Readable code: either **Packs_UK_UPUI_DotCode** or **Packs_UK_UPUI_DataMatrix** commissioned as MR code (previously known as Code Level 0).
The Data Carrier used for the code defines which of the 2 contents must be used (Dotcode or Datamatrix).
2. The **MR Code** must be marked as "Required" (this indicates that it has to be printed and thus referenced in the printer template)
3. Unit Type should be Packs.

Edit Layout

Code: Packs_UK

Name: Packs UK

Description: Packs_UK

Unit Type: Packs

Deleted: ☐

Required	Commissioned As	Content	Delete
☐	HR code	Packs_UK_UPUI_HR_Tracking	Delete
☒	MR code	Packs_UK_UPUI_DataMatrix	Delete

Add...

Validation results: Successful

OK Cancel

Both UK and EU TPD regulation applies (EU ⇒ UK, UK ⇒ EU) - INEXTOR is responsible for the pairing [🔗](#)

In this scenario, either the factory is located in EU and produces for UK, either it is located in UK and produces for EU.

EU TPD codes need to be printed on packs and UK codes need to be paired with them.

INEXTOR maintain the association between UK and TPD pack codes and can communicate it to an other system for reporting code pairing (message 3.0) to UK authorities.

The Pack layout needs to be configured in the following way as depicted in the screenshot below:

1. It must reference 3 contents:
 - a. 1 content for the EU TPD Human Readable code: Packs_TPD_HR-Tracking commissioned as HR code (previously known as Code Level 1).
 - b. 1 content for the EU TPD Machine Readable code: either Packs_TPD_UPUI_DotCode or Packs_TPD_UPUI_DataMatrix commissioned as MR code (previously known as Code Level 0).
The Data Carrier used for the code defines which of the 2 contents must be used (Dotcode or Datamatrix).
 - c. 1 content for the UK Machine Readable code: Packs_UK_UPUI commissioned as Paired code (previously known as Code Level 2).

As this code will not be printed, there is no DataCarrier associated to it and it should not be marked as Required.
2. The 2 first contents (the TPD ones) must be marked as Required (this indicates that they have to be printed and thus referenced in the printer template).
3. Unit Type should be Packs.

Edit Layout

Code: **Packs_TPD_UK**

Name: Packs TPD paired with UK upUI

Description: Packs_TPD_UK

Unit Type: Packs

Deleted: ☐

Required	Commissioned As	Content	Delete
☒	HR code	Packs_TPD_HR_Tracking	Delete
☒	MR code	Packs_TPD_UPUI_DotCode	Delete
☐	Paired code	Packs_UK_UPUI	Delete

Validation results: Successful

OK Cancel

Both UK and EU TPD regulation applies (EU ⇒ UK, UK ⇒ EU) - INEXTOR is NOT responsible for the pairing [🔗](#)

In this scenario, either the factory is located in EU and produces for UK, either it is located in UK and produces for EU.

EU TPD codes need to be printed on packs and UK codes need to be paired with them.

INEXTOR DOES NOT maintain the pairing between UK and TPD pack codes. This is performed by another system.

In this scenario, INEXTOR orders UK codes but doesn't consume itself these codes and thus the layout to be used doesn't reference a content for the UK code but only contents for EU TPD.

The same layout as for EU TPD can be used.

The Pack layout needs to be configured in the following way as depicted in the screenshot below:

1. It must reference 2 contents:
 - a. 1 content for the EU TPD Human Readable code: Packs_TPD_HR-Tracking commissioned as HR code (previously known as Code Level 1).
 - b. 1 content for the EU TPD Machine Readable code: either Packs_TPD_UPUI_DotCode or Packs_TPD_UPUI_DataMatrix commissioned as MR Code (previously known as Code Level 0).
The Data Carrier used for the code defines which of the 2 contents must be used (Dotcode or Datamatrix).
2. Both contents must be marked as Required (this indicates that they have to be printed and thus referenced in the printer template).
3. Unit Type should be Packs.

Edit Layout

Code: **Packs_TPD**

Name: Packs_TPD

Description: Packs_TPD_KIT

Unit Type: Packs

Deleted: ☐

Required	Commissioned As	Content	Delete
☒	HR code	Packs_TPD_HR_Tracking	Delete
☒	MR code	Packs_TPD_UPUI_DotCode	Delete

Validation results: Successful

OK Cancel

Use of Scripted Contents [🔗](#)

Some manufacturers are referencing a Scripted Content for TPD codes.

This content can still be used and referenced in the layouts, but only for TPD codes, not for UK codes.

Code Pairing (UK)

Compared to TPD regulation, code pairing is an additional step in the UK regulation.

In case both regulations apply, Pack codes need to be ordered for both regulations. The TPD code is printed on Packs and the UK code is paired with the TPD one, and not printed.

Reporting code pairing consists in providing the list of pairs (TPD Code, UK Code) which have been consumed during a production.

According to UK regulation, code pairing must be reported to the UK ID Issuer before commissioning.

There are two solutions available in order to do this code pairing.

Pairing during printing

The UK codes are virtually paired with the TPD ones during printing. After this virtual printing, INEXTOR will report the pairs to another system which will send the Code Pairing messages to the UK ID Issuer.

See [ATTP Communication Driver](#) to configure this reporting.

Pairing during aggregation

The UK codes are virtually paired with the TPD ones during aggregation. With this configuration, we do not need to consume UK codes on products that could end up in the waste.

The aggregation system can request chunks of UK codes from the Gate. It will then use them to create the pairing and send the messages to the UK ID Issuer.

In this configuration, the INEXTOR system does not know the virtual pairing. If you check a TPD code, you will not get the UK counterpart.

Setup

1. On the Gate, in the TPD / UK Operation driver, activate the checkbox for late code pairing. Without this option, INEXTOR will not let you produce if you do not pair UK codes.
2. On the Gate, activate the External Code Provider operation driver. This is the interface which the aggregation system will use to get UK codes (see [External Code Provider Driver](#)).
3. On the Gate, in the layouts, do not use UK code contents (we do not want to do the pairing at the INEXTOR level).

Process

Here is a typical process during code pairing:

1. Aggregation system requests a list of chunks for a specific order and code type (UK). The Gate sends a list of compatible chunks, with some details like quantities, status, expiration, etc.
2. Aggregation system selects one or more chunks it wants to use.
3. It requests the chunks. The Gate sends all the codes in raw format and again the details of the chunks. The Gate marks the chunk as "InMemory".
4. The aggregation system will pair the UK codes with the TPD ones and send the pairing messages to the UK ID Issuer.

5. Used quantity is reported to the Gate.
6. When the aggregation system reports that it has used all the codes of a chunk, the Gate marks it as "Depleted". The aggregation system can start again from step 1 or 2.
7. When production is terminated, the aggregation system reports the final code usage and frees the chunks. The Gate will set the chunks which still have codes back to "Available".

Methods of the External Code Provider [↗](#)

GetChunkIds [↗](#)

Provide a Production Order number and get a list of compatible chunks with some relevant details.

ReserveChunk [↗](#)

Provide a chunk ID and get all the codes in it. The chunk will also be marked as *in use* on the Gate.

UpdateChunk [↗](#)

Update the count of the used code of a chunk. Can also set it back to *available* after use.

To retrieve and reserve the Chunks of a production both the *OrderNumber* and the *ExternalCodeType* need to be specified.

The *ExternalCodeType* can be "UK", "DLR" or "VIRTUALLY_PAIRED": by using the last one the system will retrieve and use the correct *ExternalCodeType*.

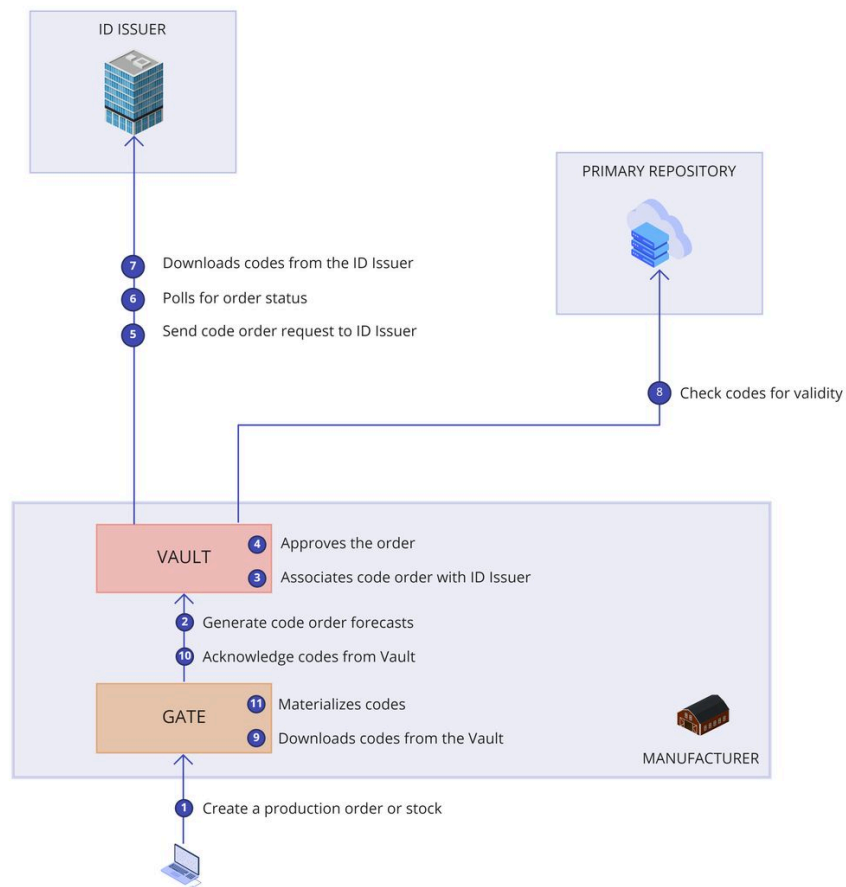
Additional information [↗](#)

For more theoretical information on Code Pairing please refer to page [Code Pairing Introduction](#).

Code Ordering (UK)

Code ordering for UK regulation is following the same process as for TPD. A code order includes information about various entities like economic operator, facility and machine. A factory based outside UK will register this information at its local ID Issuer. The website of the UK ID Issuer (Dentsu) must be used to register this information explicitly (as external entity).

For this reason, most of the TPD implementation has been kept for UK regulation.



This section describes the different items involved in the code ordering process and how they are used for UK regulation.

1 - Production Order creation

When creating a PO on Gate for UK market, TPD fields are required.

When TPD_IntendedMarket is UK, the PO will be associated a new ECR field for UK (UkExternalCodeReference).

This new ECR field is also generated when the factory is located in UK.

This UK ECR is composed of the same fields as of TPD ECR but prefixed with with the CodeType (UkExternalCodeReference = UK-{TpdExternalCodeReference}).

2 - Forecast generation

On Gate, when generating forecasts, if a PO has a UK ECR, an additional forecast is generated for QCUKT ID Issuer and UK market.

This means that if the PO involves both EU and UK market (producing in EU and targeting UK), 2 forecasts will be generated:

- 1 forecast to order UK codes from QCUKT,
- 1 forecast to order codes from the EU local market's ID Issuer

A special case is implemented for Import flag:

- For a factory in EU and Intended Market in UK:
-

- TPD order: Import value comes from Import property in Production Order
- UK order: Import is true
- For a factory in UK producing for EU market:
 - - TPD order: Import value comes from Import property in Production Order
 - UK order: Import is false
- Other cases: Import values comes from Import property in Production Order (normal case)

3 - Associate code order with ID Issuer Routing rules [🔗](#)

Orders targeting UK market are routed to UK ID Issuer, TPD routing rules are then skipped for UK orders. Only rules having QCUKT as the output property ID Issuer are considered.

UK orders are created in the same way as TPD orders and the same TPD order screen is used to follow UK orders.

It is possible to distinguish UK orders from TPD orders by the ECR (prefixed with UK-).

All functions available for TPD orders are also available for UK orders (Approve/Block/Reset, Retry Order, Cancel Order, Order details, History, Change status, Recover order, Manual order, Import codes).

When a production order involves both TPD and UK regulations, orders for both regulations are created (orders for the local ID Issuer and orders for the intended market's ID Issuer).

4 - Approve the order [🔗](#)

UK regulation has no impact, approval/blockage feature is the same as for TPD.

See related [background job: ProcessApprovedOrders](#)

5 - Sending UK order to Dentsu [🔗](#)

See [Dentsu Plugin Setup](#).

6 - Poll for order status [🔗](#)

Use Dentsu API (see [Dentsu Plugin Setup](#)).

7+8 - Downloading UK pack codes from Dentsu [🔗](#)

Use Dentsu API (see [Dentsu Plugin Setup](#)). When downloading UK pack codes:

1. Primary code checks must be disabled for UK ID Issuer QCUKT with no option to enable it as there is no primary repository for UK.
2. When creating chunks of UK pack codes downloaded from QCUKT, the chunk has a code type 'UK' instead of 'TPD'.
All other information remains the same as for TPD code chunks.

9+10 - Downloading UK pack codes from Vault to Gate [🔗](#)

UK regulation has no impact, the Gate downloads from the Vault UK pack codes in the same way it downloads TPD codes.

The mechanism to acknowledge downloaded chunks from Gate to Vault remains also the same.

11 - Materialize UK codes [🔗](#)

This step is necessary to ensure code decomposition of UK codes. UK codes have to be materialized like TPD ones.

This is a generic mechanism for all external codes, there are no changes required to provide this ability.

Enabling UK Regulation

Introduction

UK regulation was effective as January 1st 2021, but it was possible to enable the UK regulation already from 9th of December 2020, according to UK authorities agenda. In INEXTOR, enabling UK regulation is done at Gate level so Brexit can be applied factory by factory.

Procedure

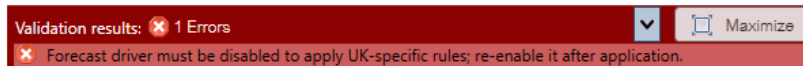
Enabling UK regulation on Gate is an operation that can be done in the configuration of the TPD / UK Operation driver.

1. Preparation

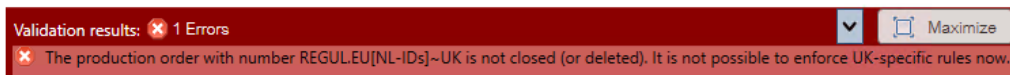
Prior to enable it the following actions need to be performed:

- a. Forecast operation driver needs to be disabled.

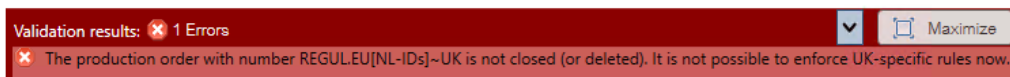
This is necessary to avoid forecasts to be sent while the production orders and chunks are being updated by the operation (see introduction above). If not disabled, the Gate will refuse to enable the UK regulation and display the following error message:



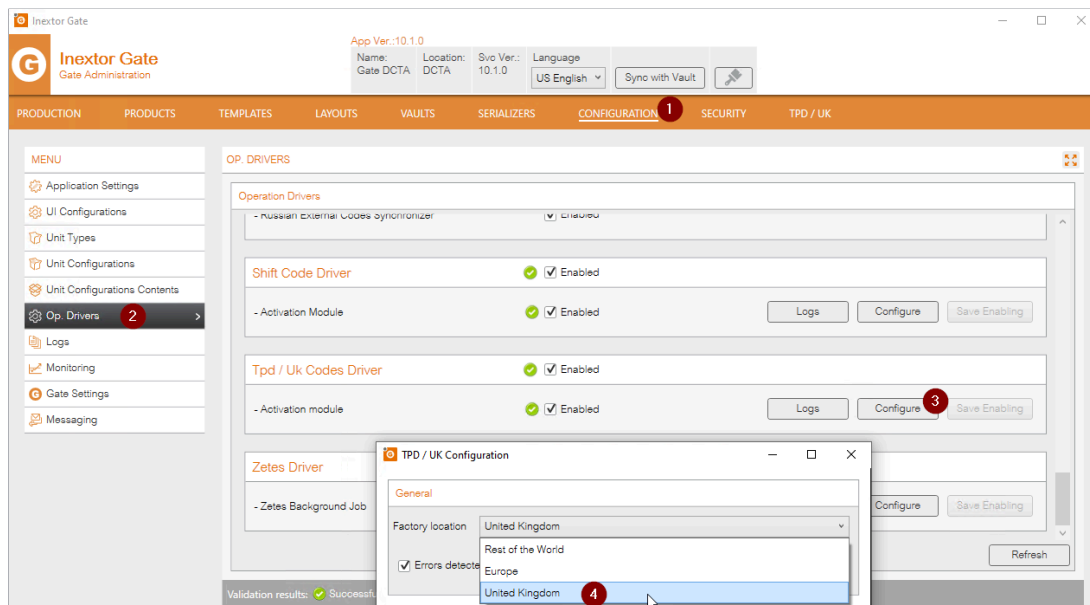
- b. All open Production Orders that have already produced for Intended Market GB needs to be completed and marked as Closed or Deleted.



- c. For a factory located in UK, all production orders that have started producing needs to be completed and marked as Closed or Deleted.



- d. For a factory located in UK, it is necessary to select the factory location in the TPD / UK operation driver:



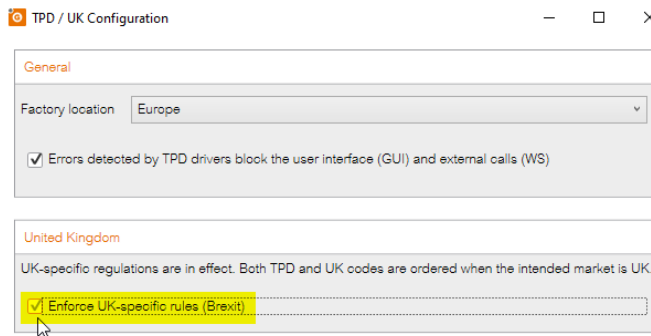
Note

Factory location replaces the old setting *Factory is located in EU*. For factories located in EU or in other parts of the World, the factory location is automatically migrated based on the value of the old setting. This migration takes place automatically after installing the Gate version that includes this UK regulation feature.

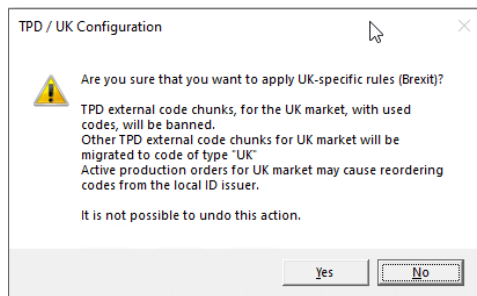
2. Enabling UK regulation

Starting from Inextor version 10.1.0.4660, this configuration is no longer present. UK codes are now treated independently the EU market.

- a. Enable UK regulation by ticking the option "Enforce UK-specific rules (Brexit)" in the United Kingdom section:



- b. When validating the change by clicking the OK button, the Gate informs about the impact of the operation and requires a confirmation from the user:



The section *Outcome* below provides more details about what happens when applying UK regulation.

Beware that this operation cannot be undone!

- c. Confirming the operation will trigger the operation and enable the UK regulation.
A message box informs the user that the UK regulation is now active.



2. Checking results

- Open production orders that target the UK market have now a new attribute `UkExternalCodeReference` (same as TPD ECR prefixed with "UK-").
- For a factory located in UK, all open production orders have now a new attribute `UkExternalCodeReference`.
- Chunks of codes ordered from DLR have been
 - either banned (if they have some codes already consumed),
 - or updated with `CodeType UK` and External Code Reference prefixed with 'UK-'.

- Finally, re-enable the forecast driver to ensure that TPD and UK codes are placed to their corresponding ID Issuer.

Outcome

Enabling the regulation has the following impact in INEXTOR:

- Existing TPD partly consumed code chunks that have been downloaded from DLR ID Issuer are banned. This means that those codes will not be usable in any production and will be lost.
- Existing TPD unconsumed code chunks that have been downloaded from DLR ID Issuer are automatically converted to UK code chunks. Their External Code Reference (ECR) is modified and prefixed with "UK-" and their code type is changed from "TPD" to "UK" so they can be reused for UK regulation as they have been provided by the same ID Issuer.

EXTERNAL CODES

Reset Criteria

Search

Property Name

Property Value

Source Unique Id	External Code Type	External Code Reference	Total Codes	Available Codes	Status
QCGDLR					
QCGDLR-LEWL1EbgETw8-11	TPD	12345678-03-Pack-False-False-GB-1-11111-11-11111--Po5 GB	10000	9905	Available
QCGDLR-LEWL1EbgETw8-11	TPD	12345678-03-Pack-False-False-GB-1-11111-11-11111--Po5 GB	20000	20000	Available

Before enabling UK regulation

EXTERNAL CODES

Reset Criteria

Search

Property Name

Property Value

Source Unique Id	External Code Type	External Code Reference	Total Codes	Available Codes	Status
QCGDLR					
QCGDLR-LEWL1EbgETw8-11	TPD	12345678-03-Pack-False-False-GB-1-11111-11-11111--Po5 GB	10000	9905	Banned
QCGDLR-LEWL1EbgETw8-11	UK	UK-12345678-03-Pack-False-False-GB-1-11111-11-11111--Po5	20000	20000	Available

After enabling UK regulation

- Open production orders for the UK destination market or from a UK factory and that have not produced yet are modified to include a new ECR for UK. This ensures that a code order will be issued to the UK ID Issuer with the UK code type if the production order is not yet covered with the codes that have been converted (previous point).
- For open production orders that have been converted and fall in both EU and UK regulation, new TPD code orders are sent to the local ID Issuers because the codes that were available to cover the requested quantity have been converted to UK codes.

Examples

Scenario EU ⇒ UK or UK ⇒ EU

Both regulation applies, 2 ECRs in the production order, 2 set of codes will be ordered from EU and UK ID Issuers.

Production Order

Order Number

Description

Manufactured Product

LinkUp Setup

Requested Quantity

Total Quantity

Deleted

Order Expected Start Date

Order Expected End Date

Order Full Quantity

REGUL EU[NL-IDs]-UK-2

Factory location must be EU

Fine out

Brand Code: [000123] (Name: Tob

Fine out TPD

Brand Code: [111111_TpdNoAttr

Brand Code: [BA600123] (Name: T

Brand Code: [Be400123] (Name: B

Brand Code: [IT500123] (Name: Ita

Brand Code: [PL000123] (Name: T

Brand Code: [SP300123] (Name: S

Brand Code: [TPD BE and UAE Pro

Fine out KSA

Fine out UAE

Brand Code: [UAE Brand code] (N

Attributes

ExtendedFields

TPD

Name	Value	Type	Source	User	Actions
ACTIVITY	Domestic	String	MP-EP	ELCANE	
BRANDESC	111111_Tpd No Attributes	String	MP-EP	ELCANE	
DESTINATIONMARKET	Switzerland Domestic Market	String	MP-EP	ELCANE	
ExternalCodeReference	12345678-03-Pack-False-False-GB-1-11111-11-11111--Po5 GB Dummy test routing-24.3-LEWL1EbgETw8-LEWL1FF5[N-W-LEWL1MatGIZk-0000000009999	String	PO		
MACHINE_GLN	0000001.00092.1	String	PO-LinkUp		
MCID	DCTA	String	LinkUp	INEXTOI	
MID	03	String	LinkUp	INEXTOI	
M_Capacity	720000	Integer	PO-LinkUp		
ORDERNUMBER	REGUL EU[NL-IDs]-UK-2	String	PO-EP	INEXTOI	
PRODUCTCODE	111111_TpdNoAttr	String	MP-EP	ELCANE	
ProductionSchedules_SerializedData		String	PO	INEXTOI	
ProductReference	12345678	String	PO		
RejectionRate_Bundles	0	Double	PO-LinkUp		
RejectionRate_Cases	0	Double	PO-LinkUp		
RejectionRate_Packages	0	Double	PO-LinkUp		
UkExternalCodeReference	UK-12345678-03-Pack-False-False-GB-1-11111-11-11111--Po5 GB Dummy test routing-24.3-LEWL1EbgETw8-LEWL1FF5[N-W-LEWL1MatGIZk-0000000009999	String	PO		

Scenario ROW ⇒ UK or UK ⇒ UK or UK ⇒ ROW
Only UK regulation applies, only UK ECR is present in the production order, 1 set of codes will be ordered from UK ID Issuer.

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Production Order

Order Number

Description

Manufactured Product

LinkUp Setup

Requested Quantity

Total Quantity

Deleted

Order Expected Start Date

Order Expected End Date

Order Full Quantity

REGUL.ROW~UK

Factory location must be ROW

Fine out

Brand Code: [000123] (Name

Fine out TPD

Brand Code: [111111_TpdNo

Brand Code: [BA600123] (Na

Brand Code: [Be400123] (Na

Brand Code: [IT500123] (Na

Brand Code: [PL000123] (Na

Brand Code: [SP300123] (Na

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AttributesExtendedFieldsTPD

Name	Value	Type	Source	User	Actions
ACTIVITY	Domestic be	String	MP-EP	ELCANI	
BRANDESC	Belgium400123	String	MP-EP	ELCANI	
DESTINATIONMARKET	BelgiumMarket	String	MP-EP	ELCANI	
MACHINE_GLN	0000001.00092.1	String	PO-LinkU		
MCID	DCTA	String	LinkUp	INEXTO	
MID	03	String	LinkUp	INEXTO	
M_Capacity	720000	Integer	PO-LinkU		
ORDERNUMBER	REGUL.ROW~UK	String	PO-EP	INEXTO	
PRODUCTCODE	Be400123	String	MP-EP	ELCANI	
ProductionSchedules_SerializedData		String	PO	INEXTO	
ProductReference	400123_KFB	String	PO		
RejectionRate_Bundles	0	Double	PO-LinkU		
RejectionRate_Cases	0	Double	PO-LinkU		
RejectionRate_Packs	0	Double	PO-LinkU		
UkExternalCodeReference	UK-400123_KFB-03-Pack-FR-False-GB-1-00000-44-00123-CN400123-BE400123-22	String	PO		

Note: ROW means Rest of World, or any other market except UK and EU.

Background Jobs (UK)

This page contains a list of background jobs associated with the UK market.

For global background jobs, see [Background Tasks in the Vault](#)

- [Production order](#)
- [Activation Module](#)

Production order [↗](#)

ProcessApprovedOrders

Approve UK orders automatically and send approved orders to ID Issuer

Applicati on	Component	Job Name	Schedule	Is Editabl e	Is Cancella ble	Is Suspendab le
Vault	UKCodeOrderForecastHandl er	ProcessApprovedOrders	every 5 minutes	n/a	n/a	n/a

Activation Module [↗](#)

BackgroundModule-Activation module

This job exists only for technical reasons. It only enables or disables the operation driver. Users should enable/disable from the Operation Driver page and not from the Jobs page. In short, end-users and support should not have to touch this job.

Applicati on	Component	Job Name	Schedule	Is Editabl e	Is Cancella ble	Is Suspendab le
Gate	TPD / UK codes driver	BackgroundModule- Activation module	N/A	n/a	n/a	n/a

Inextor UWAZI regulated market operational guide

Document Information Table	
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Reviewer / Approver	@Stephane Huck VP Software Engineering - Software Engineering

 Document Approval - Document does not have a workflow applied.

Introduction [🔗](#)

Document INEX-OG-00043: Inextor UWAZI Regulated Market Operational Guide, outlines the required steps and knowledge to be performed during factory site setup of of Inextor a product of the Inexto SA Suite range of serialization, validation and track and trace solutions. Information provided will guide the audience in the correct setup and configuration of Inextor based on the UWAZI regulated market requirements. Document INEX-OG-00043 is structured into three sections:

- **Introduction** - UWAZI Regulated Market overview and system architecture.
- **Configuration** - Key components, Workflows and configuration requirements.
- **Operations** - Day-to-day operational information

Purpose [🔗](#)

The purpose of INEX-OG-00043 is to provide the required knowledge necessary to successfully set up Inextor correctly to support UWAZI market regulatory requirements.

Scope [🔗](#)

The scope of this document is limited to the the bespoke configurable parameters of Inextor based on the UWAZI regulated market requirements.

Target audience [🔗](#)

The intended target audience of this document to complete the Inextor installation and configuration is as follows:

The contents of this document are intended for use by:

- Hands-on IS operators and administrators
- Developers and Testers
- Solution Architects and Integration Experts

This document is not intended for:

- Business Managers
- Sales and Marketing
- Quality Management and Certificate Issuers

Document content [🔗](#)

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Reference documents [🔗](#)

Document ID	Document Title	Revision
SOP 8.6	Technical Documentation Writing	v1.0
INEX-TMP-00006	Regulated Market Document Template	v1.0

Revision history [🔗](#)

Version Number	Section	Description of change	Justification of change
v1.0	All	Original Document	New Document

Uwazi overview

What is Uwazi? [🔗](#)

Uwazi, meaning "openness" in Swahili, is a blockchain-based initiative by AB Inbev aimed at monitoring production volumes across various manufacturers.

Think of it as a digital note that keeps track of how many products manufacturers are producing.

The Uwazi system links manufacturers, service providers like Inexto, and governments through a blockchain framework to ensure data integrity and verify product information throughout the supply chain.

The system enables:

1. Creation of contracts among service providers, governments, and producers
2. Publication of master data (factories, products) on the blockchain
3. Retrieval of authorised batches for production
4. Tracking of production volumes with tamper-proof verification

Currently targeting Tanzania and Zambia as initial implementation countries, Uwazi connects to IBM's APIs over blockchain and aims to attract manufacturers in the tobacco and beverage industries.

The implementation uses Inexto's existing INEXTOR solution components (Gate, Vault) as well as Inexpress and Inextrack with additional Uwazi-specific operation drivers to handle the integration.

What makes Uwazi different is that it connects to IBM's blockchain-based system through their APIs. The IBM Uwazi system handles the blockchain integration, ensuring that once information is recorded, it can't be changed or tampered with. Inexto's service acts as an interface between manufacturers' production systems and IBM's blockchain solution.

System Architecture

[System Components](#)

[Business Benefits](#)

[Integration Overview](#)

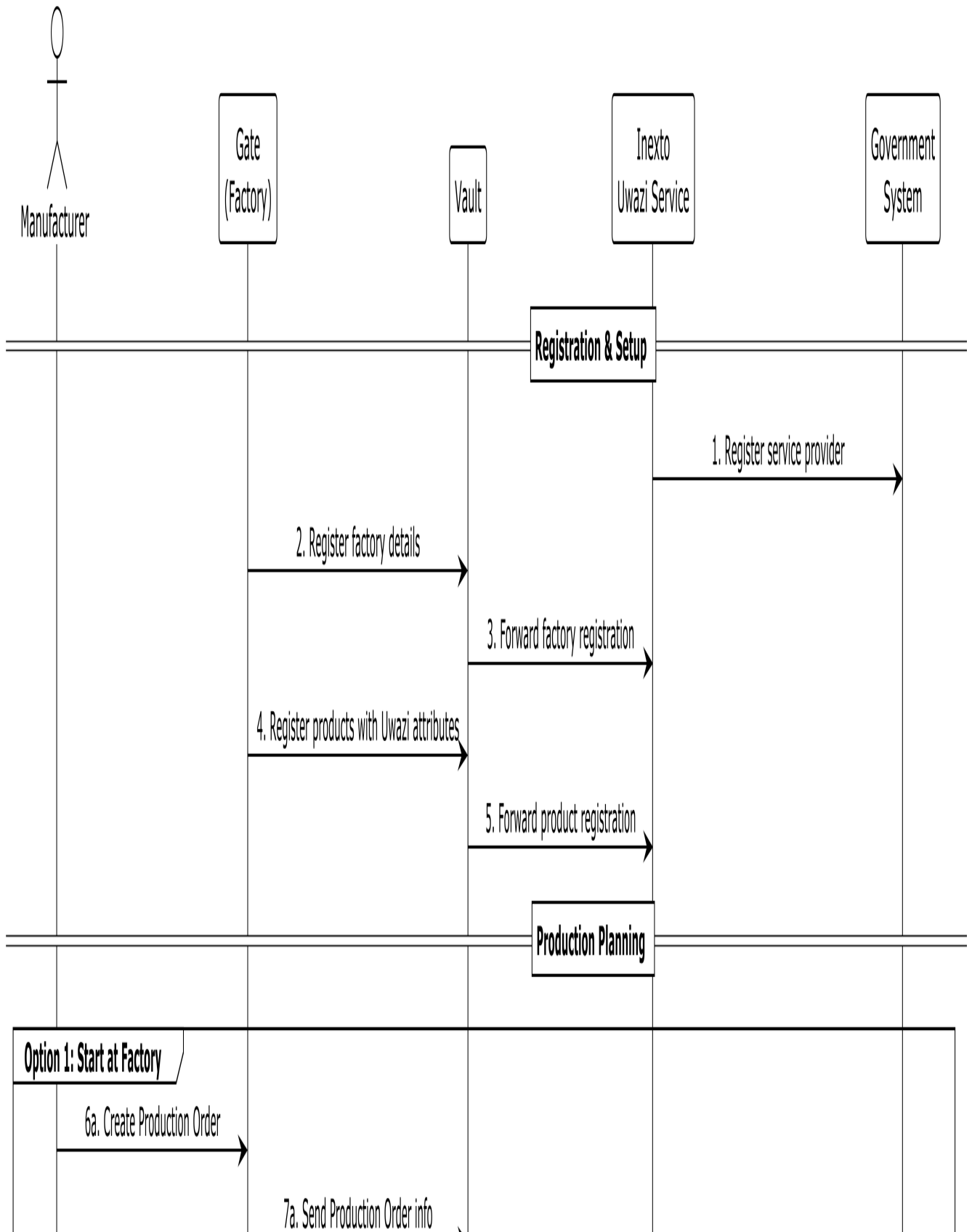
[End-to-End Workflow](#)

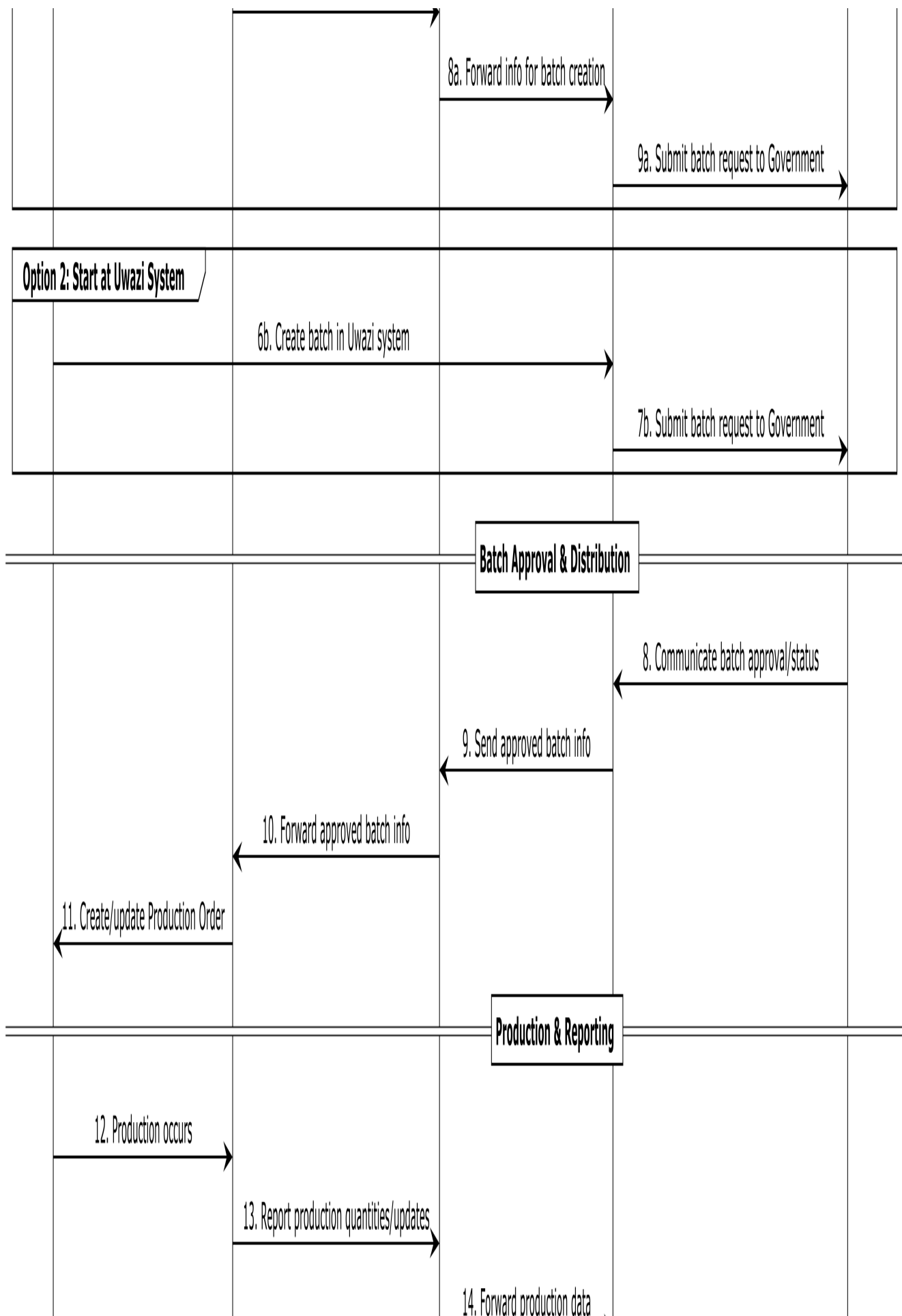
System Components [🔗](#)

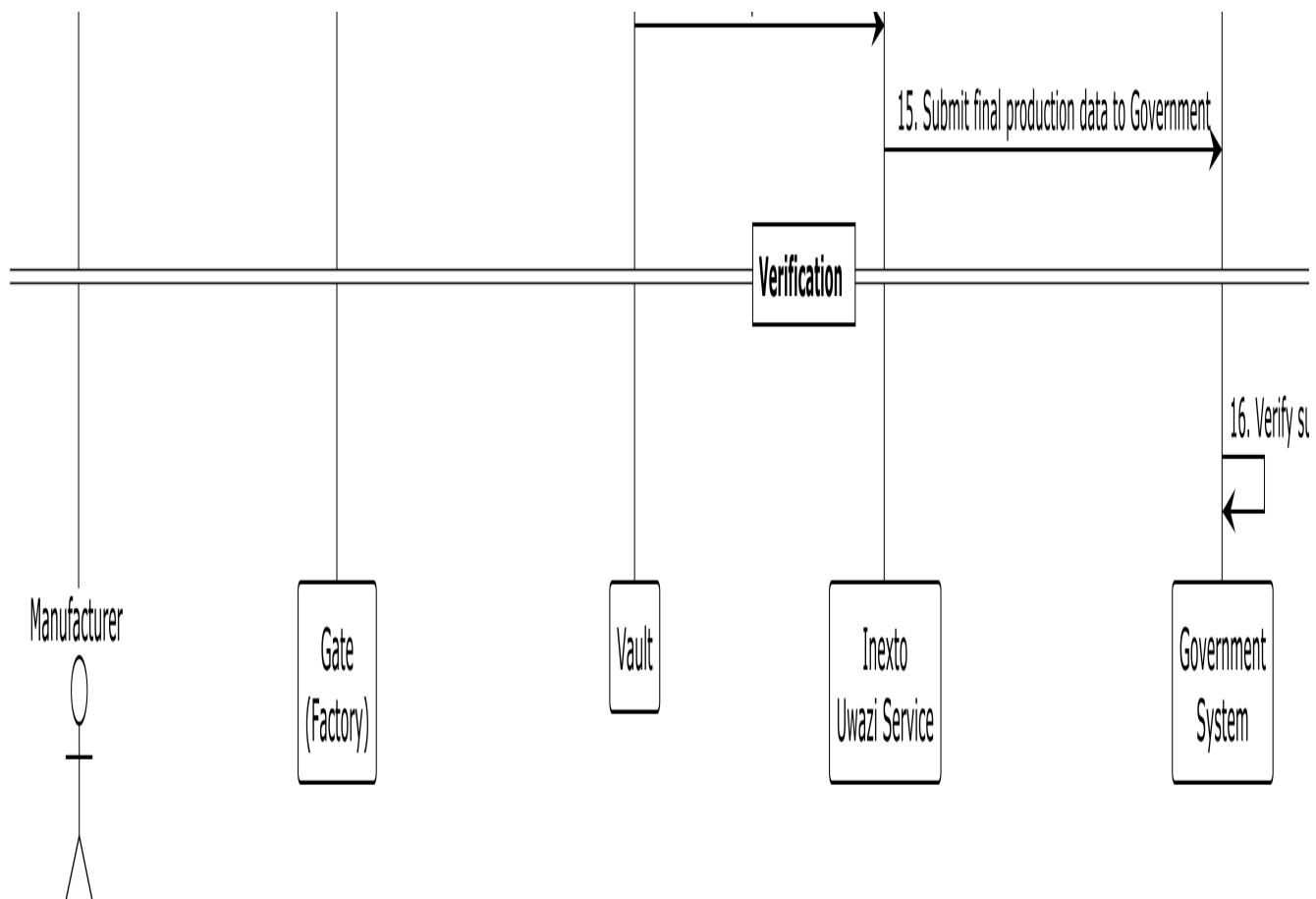
Uwazi is a blockchain-based transparency system for production volume control. It connects manufacturers, service providers (like Inexto), and governments through a shared architecture that ensures data integrity for product tracking and regulatory compliance.

The diagram below illustrates the basic workflow of the Uwazi system. It shows the four main phases of the process: Registration & Setup, Production Planning, Batch Approval & Distribution, and Production & Reporting.

Simplified Uwazi System Flow







The flow demonstrates how information moves between the key stakeholders (Manufacturer, Factory Gate, Vault, Inexto Uwazi Service, and Government System) sequentially.

Business Benefits [↗](#)

To understand the benefits and use cases, imagine a government that wants to make sure companies are truthfully reporting how much they produce (for tax purposes, regulation, etc.).

Uwazi solves this by creating a system where production volumes are tracked in a way that everyone can trust via blockchain.

Integration Overview [↗](#)

The Uwazi scenario involves three main players:

1. **Manufacturers** (like ABInBev) - They make products and need to report their volumes
2. **Service Providers** (like Inexto) - They provide the technology ensuring the data exchange between manufacturers and governments via Uwazi (e.g, Inextor)
3. **Governments** - They monitor and approve production

The system uses specifically the following software applications:

- **Inextor Vault:** The central hub that connects to the Uwazi blockchain service
- **Inextor Gate:** Installed at each factory and tracks what's happening there in terms of produced goods
- **Uwazi Service:** This is the platform that ties everything together using IBM's blockchain APIs (rather than direct blockchain development)

End-to-End Workflow [↗](#)

- **Getting Started:**

- **At Government Level:** The service provider (Inexto) registers with the government to obtain credentials
- **At Factory Level:** Factory administrators register their facility using the [Gate's Uwazi Operation Driver](#)
- **At Product Level:** Products are created in the Gate interface with special Uwazi attributes in the dedicated [Uwazi tab](#)
- **Planning Production:**
 - **Option 1 - Start at Factory:** Manufacturers create a Production Order in the Gate, which automatically triggers batch creation in the Uwazi blockchain system
 - **Option 2 - Start at Uwazi System:** Manufacturers create a batch in the external Uwazi system, which gets fetched by the Uwazi service and sent to the Gate via the Vault, automatically creating a Production Order
 - Either way, the Gate and Uwazi systems stay synchronized
- **Making Products:**
 - **In the Factory:** As production happens, the Gate tracks quantities and dates of produced products
 - **In the Gate:** Any updates to Production Orders (quantity changes, date changes) are automatically sent to the Uwazi system
 - **In the Blockchain:** All production data is recorded immutably in the blockchain system through IBM's blockchain APIs
- **Reporting:**
 - **Automatic Flow:** The Gate sends production data to the Vault, which forwards it to the Uwazi blockchain service
 - **Government Access:** Government authorities can verify approved vs. actual production through their Uwazi interface
 - **Data Security:** The blockchain ensures all parties see the same verified information that cannot be altered

The advantages of this system are that it creates trust through technology. The government knows production volumes are accurate, manufacturers have an efficient way to report, and the blockchain ensures everything is tamper-proof.

Key Components & Workflows

[Key Stakeholders & Responsibilities](#)
[Batch Management Fundamentals](#)
[Contract Management](#)
[Production Order Lifecycle](#)
[Master Data Management](#)
[Data Synchronization Principles](#)
[Blockchain Architecture](#)
[Regulatory Compliance Framework](#)
[Reporting & Verification Processes](#)

Key Stakeholders & Responsibilities [🔗](#)

The Uwazi system operates through the interaction of three key participants, each with distinct responsibilities and roles in ensuring transparent production control.

- **Service Providers** (like Inexto): The technical solution that makes everything work is provided. The software that connects manufacturers with government authorities is built and maintained. Registration directly with each government is required to obtain access credentials.
- **Producers** (manufacturers like us): The products are made and accurate reporting of production volumes is necessary. Service Providers are engaged to ensure all production data is properly recorded in the blockchain system.
- **Government**: The monitoring and approval of production activities is conducted. The blockchain provides real-time oversight of manufacturing activities.

Batch Management Fundamentals [🔗](#)

In Uwazi, batches are important - they're different from the regular production batches you might be familiar with in Inextor. Here is how they work:

- When planning to produce something, a batch is created in the Uwazi system.
- A Production Order can also be created in the Gate system, which will automatically create a batch in Uwazi system
- The Inexto Uwazi service regularly fetches these batches and sends them to the factory's Gate via the Vault.
- Each batch is linked directly to the blockchain, which means all production data is permanently recorded and can be verified.
- If the quantity or start date is changed in the Gate, it automatically updates in the Uwazi system too.

One important thing to remember: If production starts before getting a batch identifier from Uwazi, no report will be generated in the Uwazi system for that production. That's why it is essential to ensure that the identifier is obtained first.

Contract Management [🔗](#)

Contracts in Uwazi are digital agreements recorded in the blockchain that connect Service Providers, Producers, and Governments. They're created by the Service Provider (i.e. Inexto).

These contracts:

- Establish who's working with whom
- Define what can be produced and how much

- Set up who can see what data
- Create a framework for accountability

You can think of contracts as pre-declarations of how much product we plan to make.

Production Order Lifecycle [↗](#)

If you start a Production Order before getting a batch identifier from Uwazi, no report will be generated in the Uwazi system for this production. This is a critical constraint that must be followed to ensure regulatory compliance.

When creating a Production Order in the Gate system, remember that:

- The product referenced in the batches we receive must already exist in the Gate
- If we start a Production Order before getting a batch identifier from Uwazi, the system will warn us that no report will be generated

Master Data Management [↗](#)

For Uwazi to work properly, you need to maintain several types of information:

Factory Information:

- The name of your factory
- Global Location Number (GLN) of the factory
- Physical address and coordinates of the factory
- Details about production lines
- For which industry the factory is producing.

Product Information:

- Product identifiers
- Details about packaging levels
- Material specifications
- Quantity measurements

Data Synchronization Principles [↗](#)

Data in Uwazi is constantly being synchronized to keep everything consistent:

- The Inexto-Uwazi service regularly checks for batches and delivers them to our factory Gate through our Vault
- Production data flows back through the system in real-time
- When you make changes in the Gate, it triggers updates in the Uwazi blockchain

Blockchain Architecture [↗](#)

The blockchain technology that underlies Uwazi gives it some special capabilities:

- All production data is recorded permanently and can't be changed
- Historical production records remain accessible
- Compliance with regulations can be verified independently

The Uwazi system does not develop directly on the blockchain but instead leverages IBM's APIs built over the blockchain. This approach provides the benefits of blockchain technology without requiring direct blockchain development.

Regulatory Compliance Framework [↗](#)

Uwazi helps you stay compliant with regulations through:

- Requiring government approval of production batches
- Real-time monitoring of production
- A blockchain architecture that prevents unauthorized changes to records

Different countries may have different requirements, but Uwazi is flexible enough to accommodate them. The pilot implementations in Tanzania and Zambia show how adaptable the system is.

Reporting & Verification Processes [🔗](#)

The reporting system in Uwazi gives everyone visibility into manufacturing activities:

- As manufacturers, we can monitor our production and verify we're complying with approved batches
- Government authorities can access real-time production data
- Service Providers can monitor the system and ensure data is flowing properly

All reporting is backed by blockchain verification, which ensures the data is authentic and can't be changed.

Configuration Guide

[Prerequisites](#)

[Vault Configuration](#)

[Gate Factory Setup](#)

[Product Configuration](#)

[System Testing & Validation](#)

[Setup Troubleshooting](#)

Prerequisites [🔗](#)

Before diving in, make sure you have:

- Government-issued credentials (URL and token)
- Access to your Vault and Gate systems
- Your factory and product details ready

Vault Configuration [🔗](#)

The Vault is the central communication hub between the factory and the government system. The following points outline the required steps to be performed to configure the Vault to the Uwazi regulation:

1. Find the "[Uwazi Operation Driver](#)" in your Vault's Operation Drivers section
2. Enter two important pieces of information:
 - The URL where messages will be sent (this is provided by the government)
 - The authentication token you received during registration
3. Once finished, restart the driver

The purpose of configuring the Vault is to create a secure environment for communication between the factory site and local governmental entities.

Gate Factory Setup [🔗](#)

Telling the Uwazi system about your factory

1. Activate the [Uwazi Operation Driver](#) in the Gate
2. Fill in your factory details, such as:
 - Name
 - GLN code
 - Complete address and GPS coordinates
3. Map your production lines - this is important! Each actual production line (linkup) needs to be matched with its corresponding name in the Uwazi system
4. Specify what kind of products you make (Beer, Wine, Spirits, etc.)

Product Configuration [🔗](#)

For each product that will be tracked in the Uwazi system:

1. Look for the new "[Uwazi tab](#)" that appears in your product definition screen

2. Check the "Apply Uwazi Attributes" box to enable Uwazi for this product
3. Use the "Add packaging level" button to define each type of packaging (bottles, cases, pallets, etc.)
4. Fill in details about materials, quantities, and measurements for each level

System Testing & Validation [🔗](#)

Before going into full production:

1. Create a test Production Order in your Gate
2. Check that information flows correctly through the system
3. Verify that the Uwazi service receives your production data
4. Make sure batch information comes back from the Uwazi system to your Gate

Setup Troubleshooting [🔗](#)

If things aren't working:

- Check your network connections between systems
- Verify your authentication token is still valid
- Make sure your production line mapping is correct
- Confirm all required product details are filled in
- Never start production without a batch identifier from the Uwazi system, as this will result in production not being reported to the regulatory system

Day-to-day operations

The below table documents the required step-by-step process required to enable on site unit production to be fully compliant with the Uwazi regulation

Main Step	Sub-step	Action to Take	Screenshot
1. Vault Configuration	1.1. Access Vault Administration	Log into your Vault Administration interface	-
	1.2. Locate Operation Driver	Navigate to "Op. Drivers" and then find "Uwazi Operation Driver"	-
	1.3. Configure Connection	Click "Configure" and enter: - URL: Uwazi service endpoint - Token: Registration token	-
	1.4. Activate Driver	Click "Manage" and ensure "Uwazi Driver" module is enabled	-
2. Gate Configuration	2.1. Access Gate Administration	Log into your Gate Administration interface	-
	2.2. Locate Operation Driver	Navigate to "Op. Drivers" in the menu and then find "Uwazi Gate Operation Driver"	-
	2.3. Configure Factory Information	Click "Configure" and fill in: - Is Active: "On" - Factory Name - GLN code - Street address - City - Country - Factory coordinates - Factory Lines mapping (linkups to Uwazi lines) - Vault Code - Industry type	-
	2.4. Activate Driver	Click "Manage" and ensure "Uwazi Driver" module is enabled	-
3. Product Configuration	3.1. Access Product Management	Navigate to "Manufactured Products" in Gate Administration	-
	3.2. Configure Uwazi Attributes	In the product form, find and select the "Uwazi" tab	-
	3.3. Enable Uwazi Properties	Check "Apply Uwazi Attributes" box	-
	3.4. Fill Product Information	Complete all required fields: - IsProductActive - SkuId - SkuName - Gtin - ProductName - AlcoholContent (if applicable) - Optional InfoText fields	-
	3.5. Configure Packaging Levels	Click "Add packaging level" for each required level and fill in: - Order - Material	-

		- Quantity - Unit of Measure	
	3.6. Save Product	Save the product configuration	-
4. Production Planning	4.1. Create Production Order	Navigate to "Production Orders" in Gate Administration and click "Create New"	-
	4.2. Configure Production Details	Fill in: - Product: Select Uwazi-configured product - Production Line: Select Uwazi-configured linkup - Quantity: Planned production amount - Start Date/Time - Other required attributes	-
	4.3. Save Production Order	Save the Production Order	-
5. Batch Synchronization	5.1. Automatic Batch Fetching	Wait for the Inexto Uwazi service to fetch batches	-
	5.2. Batch Verification	Verify that Production Orders are created for each received batch	-
6. Production Execution	6.1. Access Production Line	Access the Liz interface on the production line	-
	6.2. Select Production Order	Select the Uwazi Production Order to produce	-
	6.3. Start Production	Initiate the production process	-
	6.4. Monitor Production	Observe the production process and data transmission	-
7. Production Completion	7.1. Verify Reporting	Check that final quantities are reported to the Uwazi system	-
	7.2. Close Production	Complete the production process in the system	-
8. Troubleshooting	8.1. Check Batch Identifier	Ensure a batch identifier was received before starting production	-
	8.2. Verify Product References	Confirm that products in received batches exist in the Gate	-
	8.3. Monitor Data Synchronization	Verify updates to quantities or dates are reflected in both systems	-

Notes:

- When modifying existing products, any changes to Uwazi-related attributes will trigger an update in the Uwazi system. Ensure that all modifications comply with regulatory requirements before saving changes.
- If you attempt to start production before receiving a batch identifier from the Uwazi system, no report will be generated in the Uwazi system for this production. This means your production data will not be recorded in the blockchain, potentially causing compliance issues. Always wait for a valid batch identifier before starting production.
- During production, you can modify quantities and start dates in your Production Order. These changes automatically trigger corresponding updates in the Uwazi system. Keep in mind that:
 - All changes are tracked in the blockchain
 - Updates must comply with regulatory requirements
 - System synchronization occurs automatically
- If you encounter issues during production:
 - Check system connectivity:
 - Verify Gate-Vault communication
 - Confirm Uwazi service access
 - Validate blockchain connectivity
- Verify data consistency:
 - Compare the Gate and Uwazi batch information

- Check production line mapping
- Validate product registration details
- Review system messages:
- Check the Gate operation logs
 - Monitor Vault communication status
 - Verify Uwazi service responses

****END OF OF DOUMENT****