

EMFIP

EMFIP Documentation

Administration Guide v4.3



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2. INTRODUCTION

This document describes the Administration part of the Transparency platform (Release 2). The following functionalities are used mainly for configuration of the platform or its detailed monitoring.

Administration Guide is divided into several Chapters according to their purpose or similarity.

2.1 Referenced documents

The Guide refers to following documents

Short name	Document file name	Document description
[01] FSP02 – DataItems DataFlows	EMFIP R2 - FSP - 02DataItems_DataFlows (docx + xlsx)	Part of Functional specification of EMFIP describing structure, special behaviour and features of Data Items in EMFIP. It consists of two parts. Document and excel sheets.
[02] FSP04 – UseCases	EMFIP R2 - FSP - 04UseCases.docx	Part of Functional specification of EMFIP describing screens and generally Use Cases of the system.
[03] WS Integration Guide	EMFIP Web Services Integration guide	Description of web services features and their ways of use.
[04] ECP Integration Guide	EMFIP ECP Integration guide	Description of tool that implements MADES protocol
[05] Introduction Plan	Platform Service Introduction Plan	IP addresses of FTP and other information

3. PART 1: ADMINISTRATION FOR ADMINISTRATORS AND DATA PROVIDERS

This part of the Guide provides a description of system settings that can be used both by Administrators and Data Providers, because Data Providers have access to at least some parts of described functionalities as well.

3.1 Value Detail

Each value in the Table view behaves as a link. When you click this link, a new window will appear in a new layer.

This window shows detailed information for the single value selected in the table view.

There are two versions of the Value Detail window:

- > For the non-registered user
 - Only the date and time of the last update of the value are displayed
 - **Note that the Time is displayed using the UTC time zone**
- > For the privileged user extended version with
 - source values (if applicable)
 - results of aggregations
 - link to Value history (if feasible)

Note that Value detail is not offered for values that are calculated directly on Data View from different values.

Day-ahead Total Load Forecast [6.1.B]

Final value	
Value	Updated (UTC)

Aggregations		
Time aggregation algorithm	Aggregation of SubAreas / SubBorders	Aggregation per Data Provider
Average	None	None

Source values							
Time Interval	Value	Area/Border	Data Provider	Priority	Internal Version	SubArea	Submission Resolution
08:00 - 09:00	N/A	BZN DE-AT-LU	Configuration Link	1	-	-	
08:00 - 09:00		Austria (AT)	Configuration Link		-		-
08:00 - 09:00	N/A	Austria (AT)	Configuration Link		N/A		>
08:00 - 09:00		Germany (DE)	Configuration Link		-		+
08:00 - 09:00		Luxembourg (LU)	Configuration Link		-		+

Figure 1


In the first table in the picture above, types of aggregations are displayed for time, SubDimensions, and data providers. These aggregations (except for the time aggregation) are specified and editable in the configuration matrix for a given data item and business dimension combination.

In the second table, all data providers associated with the area/border are displayed, ordered by priority. Rows can be expanded to subareas/suborders (in case of aggregations). All rows can be then expanded to the submission resolution level.

The hierarchy of areas/borders and their sub-areas/sub-borders is defined in reference data (registers AreaToArea and BorderToBorder). Hierarchy of Areas can be defined also in Area Management

Associated data providers, its areas/subareas/border/sub-border, priorities, and submission resolution are defined in the configuration matrix.

3.1.1 Modify Data

If the current user has the permission to submit data for a data item as its data provider, he or she may click the “pencil icon” () to edit the submission value in Value Detail screen.

When the pencil icon is selected, a new window opens where you can insert/update data.

Add/Modify data

Info

Data Item: **Physical Flows [12.1.G]**
Value from 31.7.2014 2:00:00 to 31.7.2014 3:00:00 UTC
Data provider: **PSE**
Business dimensions: **BZN|PL BZN|SK**

Attributes

Attribute	Value
Net flow	<input type="text"/>

Add/Modify

Figure 2

Please **note that there can be several input boxes required if the updated Data Item requires insertion of several attributes at once**. See the example of Balancing Data Items below.

Add/Modify data

Info

Data Item: **Accepted Aggregated Offers [17.1.D]**
 Value from **31.7.2014 0:00:00 to 31.7.2014 0:30:00 UTC**
 Data provider: **LITGRID**
 Business dimensions: **MBA|LT Automatic Frequency Restoration Reserve (aFRR)**

Attributes

Attribute	Value
Generation Down Accepted Volume	<input type="text"/>
Generation Down Offered Volume	<input type="text"/>
Generation Up Accepted Volume	<input type="text"/>
Generation Up Offered Volume	<input type="text"/>
Load Down Accepted Volume	<input type="text"/>
Load Down Offered Volume	<input type="text"/>
Load Up Accepted Volume	<input type="text"/>
Load Up Offered Volume	<input type="text"/>
Not Specified Down Accepted Volume	<input type="text"/>
Not Specified Down Offered Volume	<input type="text"/>
Not Specified Up Accepted Volume	<input type="text"/>
Not Specified Up Offered Volume	<input type="text"/>

Add/Modify

Figure 3

The result of these modifications is an XML file, which is processed by the EMFIP. Note that the XML always contains a new Identifier generated by application and always has version 1.

Processing of the XML file can be monitored in Data Flow Monitoring as usual.

Data Flow Monitoring


Date: Set Range Data Provider: Data Item:

State	Date and Time	Data Provider	Data Item	File Name	File Format	
Rejected	26.07.2014 08:46 UTC	CEPS		15_v2.xml	GL Market Document	+
Rejected	26.07.2014 08:40 UTC	Elia		253_v1.xml	Publication Market Document	+
Processed	26.07.2014 07:43 UTC	Elia	Explicit Allocations - Use of the T...	46_v1_1.xml	Publication Market Document	-

<p>Time Interval & Nb Values</p> <p>Time Interval: 31.12.2013 23:00 - 30.06.2014 22:00 UTC</p> <p>Nb Values: 34744</p> <p>Nb Errors: 0</p> <p>Nb Warnings: 0</p>	<p>Sender & Document Information</p> <p>Sender ID: 10X1001A1001A094</p> <p>Document ID: 46</p> <p>Message Version: 1</p> <p>Data Flow Log</p>
---	--

Figure 4

3.1.2 Value History

If the logged in user has the permission to view history of value, he or she may click the "history" icon () to view how the value evolved in time.

Month-ahead Total Load Forecast [6.1.D]

Aggregations		
Time aggregation algorithm	Aggregation of SubAreas / SubBorders	Aggregation per Data Provider
Minimum	None	None

Time Interval	Value	Area/Border	Data Provider	Priority	Internal Version	Updated (UTC)	SubArea	Submission Resolution
06.01.2014 - 12.01.2014	510.00	BZN GB	BritNed	1	-	05.06.2014 11:51		-
06.01.2014 - 13.01.2014	510.00	BZN GB	BritNed			1	05.06.2014 11:51	>

Figure 5

When the icon is selected, a new window opens where you can see the current (on the top) and all previous versions of the value. All records have also a link to Data Flow Detail where more information and possibility to download original file from DMS is offered.

Value History

Time interval: 01:00-02:00
Data provider: PSE-Operator S.A.

Value	Internal Version	Upload Date	Data Source
200.00	2	17.06.2014 05:54	Data Flow Detail
100.00	1	17.06.2014 05:48	Data Flow Detail

Versions per page: **10** 25 50 100 1

Figure 6

3.1.3 CACM enhancement

The Value Detail popup on the Data View is complemented by a table including links to all Data Flow Instances which influenced the Data Item instance. ACER status of the instance is shown as well. For relevant ACER statuses, see data item monitoring (see chapter *Data Item Monitoring*, subchapter *ACER Monitoring*)

3.2 Monitoring

Monitoring provides Administrators and Data Providers with an overview of Data Item and Data Flow processing. This is the place where Data Providers can easily check whether uploaded data is correctly processed. Data Flow Log can be very handy for solving issues with incorrect xml files. The overview of Integration Channels can be displayed.

3.2.1 Invalid Data Providers

In case of adjusted validity or deletion of the Data Provider, DIM and GCM data removal from user's point of view are implemented the following way:

> Standard Data Items

- When a Data Provider will be removed from CM for a monitored Data Item, all values that belong to the given Data Provider in DIM and GCM for the given Data Item and combination of business dimensions will be removed during a next job run.
- When a Data Provider validity will be changed in CM, all values with date before the start of Data Provider's validity or after the end of Data Provider's validity will be removed during a next job run from DIM and GCM for the given combination of Data Item and business dimensions.
- After a data removal, a status of aggregated values will be updated.

> Auction Data Items

- When a Data Provider will be removed from the tab Data Items in a Allocation Instance configuration, values for the given Data Item and Allocation Instance will be removed during a next job run from both DIM and GCM.
- When an Allocation Instance will be cancelled, values for a given instance will be removed during the next job run from both DIM and GCM.
- After a data removal, a status of aggregated values will be updated.

The data removal will be started periodically once per day at 00:00 CET in order to decrease impacts on DB performance during a day. The data removal will be done on the background and can possibly take a longer period of time (days even).

Removed data will be completely lost / removed from DB.

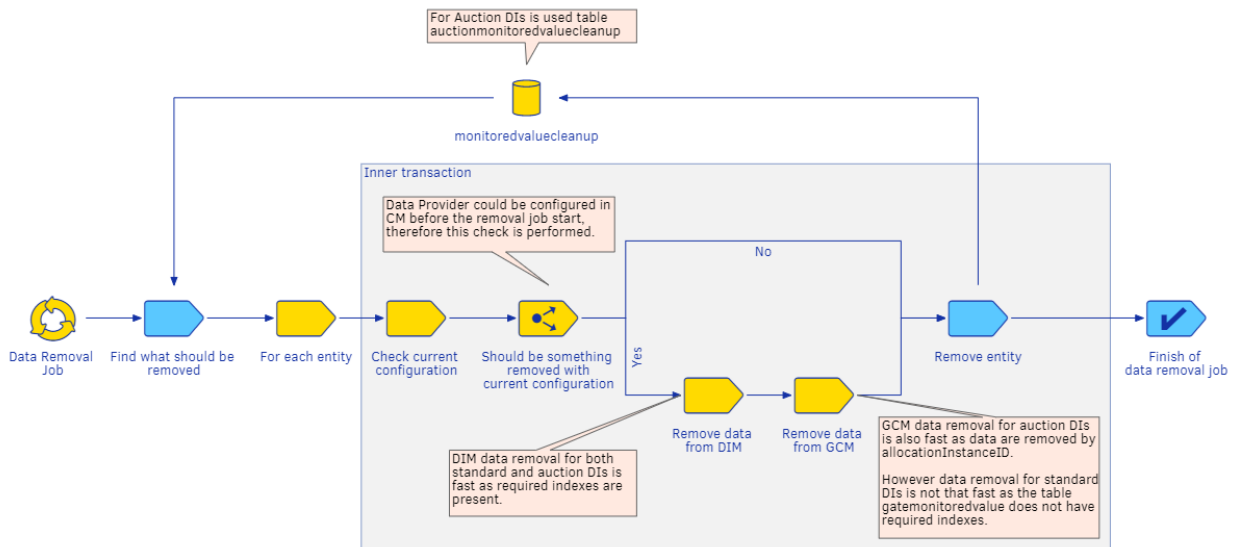


Figure 7 - Data Deletion solution

3.2.2 Data Flow Monitoring

Data Flow Monitoring contains mainly a list of processed files or files that are currently being processed. However, Rejected files or files marked as Error can be also found on this screen. For each file, a set of identifying information and a set of summarized processing information is shown. For each file, a detailed data flow log can be shown.

3.2.2.1 Overview

Go to the Administration menu and choose the Data Flow Monitoring item.

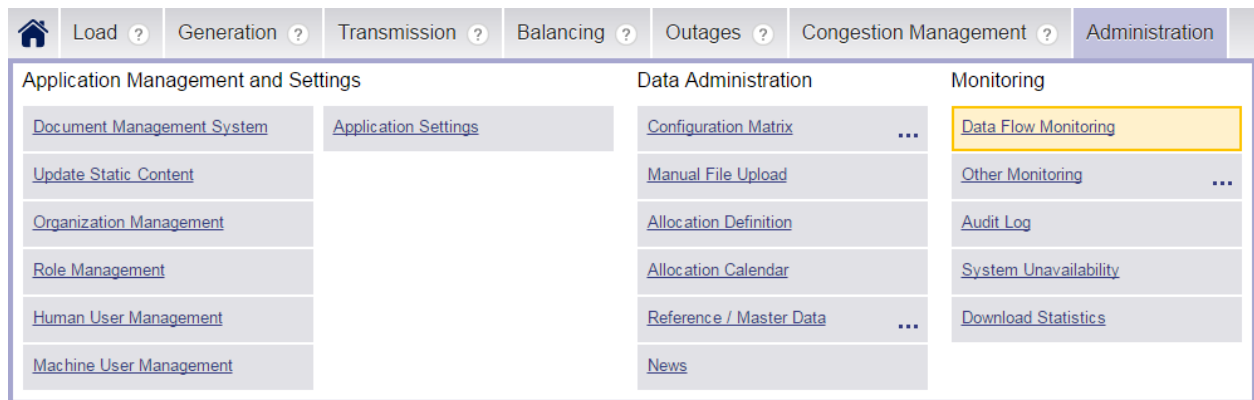


Figure 8

Click the "Detail" (+) button to view details of the XML file. The Data Flow Log link in the detail points to the logs gained from processing of the file within the system.

Data Flow Monitoring

Date: 25.01.2019 Organization: Total Imbalance Volumes [Show Data

State	H	Date and Time	Data Provider	Item	File Name	Channel
Processed		25.01.2019 14:33 UTC	NOSBIH_Machine_User1	Total Imbalance Volumes [17.1.H]	20190125_IMB-VOL_N6M...	Web Service
Time Interval & Nb Values				Sender & Document Information		
Time Interval: 24.01.2019 23:00 - 25.01.2019 14:00 UTC				Organization (Sender ID): NOS BiH (10XBA-JPCCZEKC-K)		
Nb Values: 15				Document ID: 20190125_IMB-VOL_N6MGFB5BMPDKRZGEQE		
Nb Errors: 0				Message Version: 16		
Nb Warnings: 0				Data Flow Log		
Processed	H	25.01.2019 14:30 UTC	Irena Savkovic	Total Imbalance Volumes [17.1.H]	ace_v2_2018-10-28_25...	Manual Upload
Rejected	H	25.01.2019 14:29 UTC	Irena Savkovic	Total Imbalance Volumes [17.1.H]	ace_v2_2018-10-28_25...	Manual Upload
Processed		25.01.2019 14:29 UTC	50Hertz	Total Imbalance Volumes [17.1.H]	RL20190125H_v68.xml	ECP
Processed		25.01.2019 14:29 UTC	HU_ECP_TP_T_EP	Total Imbalance Volumes [17.1.H]	B0754f2286cabbccd627...	ECP
Processed		25.01.2019 14:27 UTC	EirGrid	Total Imbalance Volumes [17.1.H]	IMBVOL_20190125_2019...	Web Service
Processed		25.01.2019 14:25 UTC	APG_Test	Total Imbalance Volumes [17.1.H]	B_TIV_201901251400Z_...	ECP

Figure 9

3.2.2.2 States

As shown in the previous screenshot, there is the State column available in the table. There were two basic states available: Processed or Rejected. However, there are several possible states:

- > Processed – this state means that the uploaded xml file was correctly processed without any errors. Data Flow Log does not contain any Error.
 - Warning –XML files was correctly processed, but the warning was raised. The Warning is visible only in detail Data Flow log and can be triggered when some “warning only” validation fails. An example of this is the file submitted too early (even earlier than values could be obtained in reality).
- > Rejected – the state of the record that informs about the fact that the XML file was processed with error(s) and had to be rejected. The error message is recorded in Data Flow Log. Data Flow Log can be found in the Detail view.
- > Received – a temporary state informing the user that the XML file has been accepted by the platform, but has not been processed yet. Therefore, the values inside the file with such a state are not yet available in Data views. When processing is done, the status is changed to Processed, Rejected, or Error.
- > Error – this should be a very rare state. It informs the user that there has been some internal error in the system. These are errors which cause exceptions not yet handled by the system. Users and Administrators should inform the platform support about this. These are exceptional cases that have to be solved by the Second Level Support of the platform. When the error is fixed, any other issue of the same type is marked with the Rejected status (the exception is already handled). The amount of “Error” states should decrease in time.

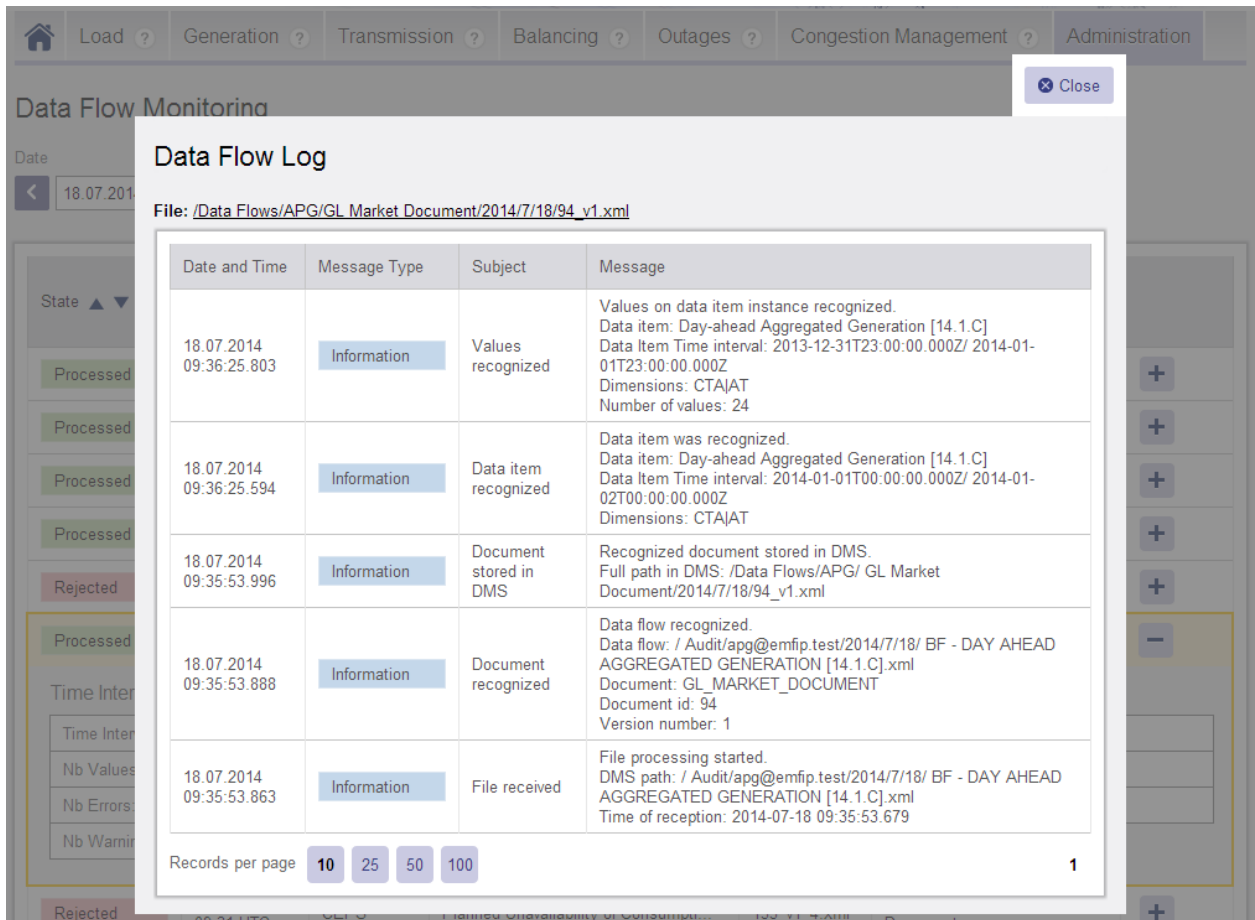


Figure 10

In the picture below, you can see Error in the Message Type column and the problem is described in the Message column: "Data provider is not allowed to insert data." It means that this data provider (e.g. RTE) has no permissions for Data Insertion (The Configuration Matrix should be updated in such a case).

Data Flow Log

File: [/Data Flows/CEPS/Unavailability Market Document/2014/7/18/153_v20.xml](#)

Date and Time	Message Type	Subject	Message
18.07.2014 09:52:12.803	Error	Invalid consumption unit	Consumption unit is not valid on unavailability interval start. Consumption unit code:71A000000000199C Unavailability start:2014-01-20T12:00:00.000Z
18.07.2014 09:52:12.802	Error	Invalid consumption unit	Consumption unit is not valid on unavailability interval start. Consumption unit code:71A000000000199C Unavailability start:2014-01-06T08:00:00.000Z
18.07.2014 09:52:12.419	Information	Data item recognized	Data item was recognized. Data item: Planned Unavailability of Consumption Units [7.1.A] Data Item Time interval: 2014-01-20T13:00:00.000Z/ 2014-01-27T13:00:00.000Z Dimensions: BZN CZ
18.07.2014 09:52:12.418	Information	Data item recognized	Data item was recognized. Data item: Planned Unavailability of Consumption Units [7.1.A] Data Item Time interval: 2014-01-06T09:00:00.000Z/ 2014-01-13T09:00:00.000Z Dimensions: BZN CZ
18.07.2014 09:52:43.523	Information	Document stored in DMS	Recognized document stored in DMS. Full path in DMS: /Data Flows/CEPS/ Unavailability Market Document/2014/7/ 18/153_v20.xml
18.07.2014 09:52:43.291	Information	Document recognized	Data flow recognized. Data flow: / Audit/ceps@emfip.test/2014/7/18/ BF4 - PLANNED UNAVAILABILITY OF CONSUMPTION UNITS [7_8.1.A] - Available.xml Document: UNAVAILABILITY_MARKET_DOCUMENT Document id: 153 Version number: 20

Figure 11

3.2.2.3 Historical Flag

As shown in the screenshot *Figure 8*, there is a H column available in the table. There are two states available: Historical or Non-Historical. This status depends on whether the data was processed by historical queue.

- > Historical – The data is processed by historical queue. The value 'H' is displayed.
- > Non-Historical – The data was processed by default queue. No sign is displayed.

If End of Time Interval in a sent message is older than Current Time - N where N is configurable time parameter (30 by default), then XML file is considered as historical.

3.2.2.4 Filtering

Normally, there are a large number of items in the log; to locate specific items of interest, several filters are available.

- > State filter
 - available in the table header
- > Date filter
- > Date Range filter
 - It works together with other filters, the Administrator may check files for multiple days at once
 - The Set Range checkbox next the Date filter has to be selected

- The range is limited to 10 days so that good performance could be ensured
- > Organization filter
 - The combo box shows all available Organizations.
 - Empty by default.
 - When Organization is selected, Data Flows from all machine users of given Organization are displayed
 - When Organization is selected, list of items in Machine user filter is limited to machine users of selected Organization.
- > Machine user filter
 - The combo box shows all available machine users that can submit data into the system. It is recommended to accompany the name of machine user with name of Data Provider (Organization).
 - Note that multiple machine users can be connected to a single Data Provider
 - Any user with access to this screen can see data of all other machine users
 - users with sufficient user rights have their Machine user filter populated with the first machine user of their Organization, but it is possible for them to select any other machine user or leave it empty to display all machine users at once (same as the Administrator's default)
- > Data Item filter
 - An important filter that can be used to check specific data
 - Note that sometimes a Data Item is not recognized in a file with the Error state and such records then will not appear when the filter is applied. To find unrecognized Data Items, use the State filter.

Data Flow Monitoring

Date: 01.08.2014 Set Range ? Machine User: Data Item:

State ▲ ▼ ▾	Date and Time	Data Provider	Data Item	File Name ?	File Format	
Processed	01.08.2014 15:04 UTC	50hz@emfip.test	Day-ahead Prices [12.1.D]	591_v1.xml	Publication Market Document	+

Figure 12

To refresh the view after selecting or changing filter values, click the "Show Data" button.

3.2.2.5 Relation with DMS

When data is delivered into the system, the file is saved into the DMS. See folders in the DMS, where files are stored according to their status in Data Flow Monitoring.

- > Received – "Audit" folder
- > Processed – "Data Flows" folder
- > Rejected – "Data Flows" folder
- > Error – "Audit" folder

For more details about Document Management System, please see the Chapter– DMS Structure.

3.2.3 Data Item Monitoring

The data is aggregated through the filtered interval into one value per Data Item. Users may go to the detailed level to see particular states for each Business Dimension of Data Item, as well as states per period (in the Data Item's time interval).

Privileged users and Administrators can see which expected data has been delivered and which not.

The screen is available in the Monitoring menu.

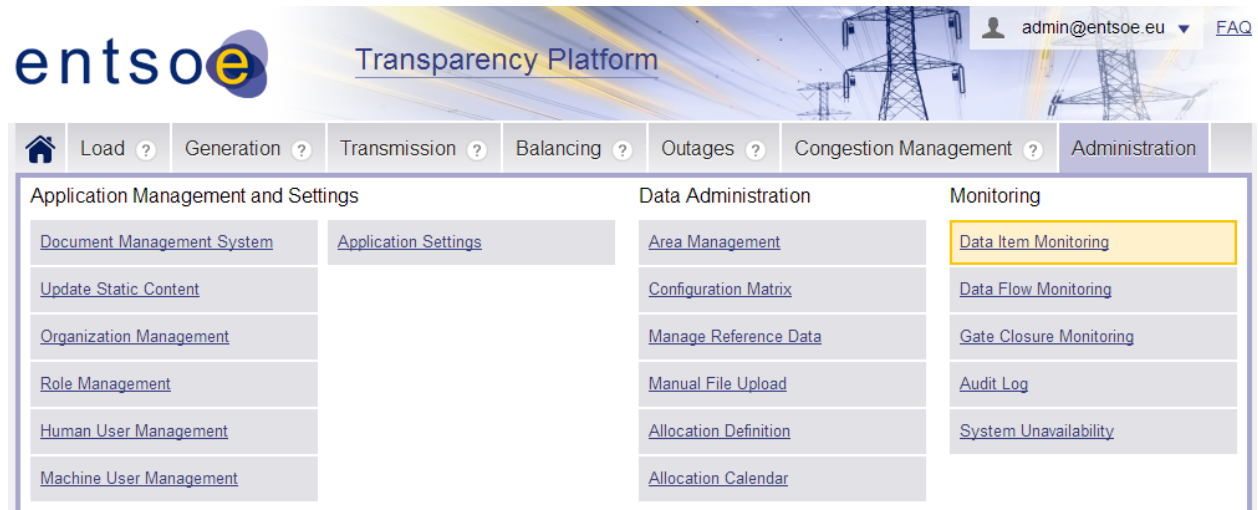


Figure 13

The following screen shows how the summary can look like when almost no data was delivered into the system despite the fact that Submission Gates are already closed.

Data Items Monitoring

Date: 29.07.2014 Time Interval: Day Data Item States: [Dropdown]

Balancing

- Accepted Aggregated Offers [17.1.D]
- Activated Balancing Energy [17.1.E]
- Imbalance Prices [17.1.G]
- Prices of Activated Balancing Energy [17.1.F]
- Total Imbalance Volumes [17.1.H]

Generation

- Actual Generation Output per Generation Unit [16.1.A]
- Aggregated Generation per Type [16.1.B&C]
- Day-ahead Aggregated Generation [14.1.C]
- Day-ahead Generation Forecasts for Wind and Solar [14.1.D]

Load

- Actual Total Load [6.1.A]
- Day-ahead Total Load Forecast [6.1.B]

Transmission

- Day-ahead Prices [12.1.D]
- Physical Flows [12.1.G]
- Scheduled Commercial Exchanges [12.1.F]
- Total Capacity Nominated [12.1.B]

Figure 14

As visible in the screenshot, Data Items are divided into sections according to their related Domains.

Some Data Items are not available here, because these are not expected and therefore cannot be monitored. This is driven by internal rule in Configuration Matrix for each Data Item. Typical examples are Data Items of Outage domain.

3.2.3.1 Filtering

There are several filters within three levels of Data Item Monitoring:

> Time Interval

- The time period used for selection of the overview level. The Administrator may check whether all data has been delivered correctly for a specific day, as well as for a specific Month or Year.
- As a Time Interval, it is possible to choose: Day / Week / Month / Quarter / Year. Other special intervals (like weekend or semester) are available in their parent Time Intervals (like week or a year).

Note that not all combinations are available. See the table below. For example, Daily Data Items are not aggregated into the Year view.

Length of selected Interval	Daily	Weekly	Monthly	Quarterly	Yearly
	Day	X	-	-	-
Week	X	X	-	-	-
Month	X	X	X	-	-
Quarter	-	-	-	X	-
Year	-	X	X	-	X

Table 1

> Date filter

- The Date Filter shows uploaded data in a specific time interval (day, month, week, year.). Use the calendar or the Previous / Next button to choose a specific date.
- N.B.: The screen **does not show the data that should be delivered on the selected date** (the Gate Closure monitoring does this). The selected date concerns the business meaning of the data, not its submission deadline.
- For example, any **data sent today with the business meaning** (Time Interval in the XML file) **for 2050 will not appear on the screen with the Time filter set to today**. Users would find them if they set their filter to 2050.

> Data Item State

- It provides filtering using states like for example “Complete and correct after deadline”
- All available states are briefly described in the legend below the screen with Data Items.

Figure 15

> Data Provider

- This filter is available at the second level of the Data Item Monitoring (Overview). For more information, please see the following chapter Data Item Level - Overview.

3.2.3.2 Aggregation of States

There are states (at the lowest level of Data Item Monitoring) for each period in the data item's time interval. These states are aggregated into intervals (Days, Weeks, Months, Years.)

As source states can differ, a set of rules for their aggregation is defined. The status is used on all levels of data item monitoring. There are monitoring statuses defined per

- > Data Item
- > combination of business dimensions values for given data item
- > combination of business dimensions values and data provider for given data item
- > combination of period and Data provider defined for given combination of business dimensions values and data item.

The status also reflects the Gate Closing and Publication Time. See the table below for the list of available states.





Icon	Short name	Full description	Note
	Complete and correct	Complete and correct data delivered in time	
	Complete and correct after deadline	Complete and correct data delivered after the deadline	
	Missing data	Data Incomplete or missing	Data not delivered or not recognised
	Rejected data	Some data were rejected	Data delivered but rejected

Table 2

3.2.3.3 Data Item Level - Overview

The Data Item Level overview is the second level of Data Item Monitoring. It is displayed when a specific Data Item is selected on the first screen. The selection behaves like a filter and the new screen shows records with states for all expected data of the selected Data Item and Time Interval.

Each basic record (w/o expanded details) consists of a State and a **value of its first Business Dimension** from the Configuration Matrix.

Click the plus icon to select the row with basic information and additional rows will appear. These extra rows show:

- > State
- > Data Provider (responsible for data delivery, configured in the Configuration Matrix)
- > Priority of the Data Provider (taken from the Configuration Matrix)
- > Other business dimensions (areas, periods etc.)

Day-ahead Aggregated Generation [14.1.C] - Overview [Back to Monitoring Overview](#)

Date: 29.07.2014 Time Interval: Day Data Provider: [Dropdown]

State: [Dropdown] Area: [Dropdown]

State	Data Provider	Priority	Area
[Green Exclamation Mark]	APG	1	CTA AT

Items per page: 10 25 50 100 1

Figure 16

The screen above should be read in the following way:

- > The Day-ahead Aggregated Generation [14.1.C] Data Item had been selected on the first screen and we can see that values for two InAreas are expected.
- > Data for both control area of Austria has been delivered, state inform that this data has been delivered too late (after the Gate Closure)
- > When CTA|AT is selected, the user can see that the Data for the the control area were expected to be delivered by APG.

Note the link "Back to Monitoring Overview" that returns the user to the previous level of Data Item Monitoring.

Presented data can be also filtered by Date Range and Time Interval. These filters have the same logic as in first level of Data Item Monitoring. Also, the data can be filtered by Data Provider. Only data associated with the selected Data Provider is presented.

3.2.3.4 Data Item Level - Details

The Data Item - Details (see the picture below) is the third and last level of Data Item Monitoring. It contains information about the State of the data related to the selected Data Provider and Business Dimensions selected at a higher level.

The screen below appears, when you click the row with APG from the previous example.

This final (most detailed) level shows States for data in the submission resolution. In case of a Day delivered in 60 minutes resolution, 24 rows with States appear so that the Data Provider (or Administrator) can easily find that for example data for the hour 02:00 – 03:00 were not delivered.

In the example below, all the data has been delivered correctly (we know it, because the final aggregated State is green).

Day-ahead Aggregated Generation [14.1.C] - Detail [Back to Data Item Overview](#)

Date: Business dimension: Area : CTA\AT Domain: Generation Data Provider: APG Priority: 1

Data provider data item detail

State	Time	
!	00:00 - 01:00	Data Flow Detail
!	01:00 - 02:00	Data Flow Detail
!	02:00 - 03:00	Data Flow Detail
!	03:00 - 04:00	Data Flow Detail
!	04:00 - 05:00	Data Flow Detail
!	05:00 - 06:00	Data Flow Detail
!	06:00 - 07:00	Data Flow Detail
!	07:00 - 08:00	Data Flow Detail
!	08:00 - 09:00	Data Flow Detail
!	09:00 - 10:00	Data Flow Detail

Records per page: 1

Figure 17

Note the link "Back to Data Item Overview" that returns the user to the previous level of Data Item Monitoring.

Each row contains not only a State, but also a link to the Data Flow Detail. This link opens a new window (very similar to the Data Flow log from Data Flow Monitoring) with file processing logs for the file, which contained the value for a given hour. The file can be also downloaded from this screen.

Note, that Data item monitoring always reflects the latest document that affected the publication for the particular interval. (example, When a document with mRID="A" and revisionNumber="1" is submitted on interval 22.09.2020 00:00-12:00(UTC) this document will be linked in via Data Flow Detail link for the particular interval as delivered, upon submission of update document with mRID="A" and revisionNumber="2" on interval 22.09.2020 12:00-22:00(UTC) this document will be linked in via Data Flow Detail link for the particular interval as delivered and also will be linked to the interval 22.09.2020 00:00-12:00(UTC) as Missing Data because this version de-published data from that interval. After another publication of mRID="A" and revision number="3" on interval on interval 22.09.2020 12:00-22:00(UTC), this document will be reflected only on that particular interval, because it does not affect publication on interval 22.09.2020 00:00-12:00(UTC) anymore.)Note that in DIM the interval will usually be reflected on a different interval against the submitted interval in the document, because in the document, the data is submitted in the UTC, but the DIM reflects intervals according to the configured time-zone for the particular Business-dimensions.



3.2.3.5 PDF Monitoring

The status of binary data items is available via both Data Item Monitoring and Gate Closure Monitoring where applicable. The monitoring components provides three levels of data item monitoring: Data Items Overview, Data Item View and Detailed Data Item View. The Detailed Data Item View shows statuses per resolution of given data item. This is not applicable for binary data items. Therefore, Detailed Data Item View are not available for binary data items including reference from Data Item View.

3.2.3.6 ACER Monitoring (CACM data items)

New Data Item Statuses

Secondary status type – ACER Status is used on all levels of Data Item Monitoring in addition to the Data Item status. The Data Item Status is not influenced by the ACER Status.

Icon	Short Name	Full Description	Note
	ACER pending	Some published data have not been sent to ACER	
	ACER dispatched	All published data have been dispatched to ACER	
	ACER acknowledged	All published data have been accepted by ACER	
	ACER rejected	Some published data have been rejected by ACER	This is an Error state

ACER status is assigned to all CACM data subscribed to ACER:

- > On each new publication, the ACER status of the published data is set to *ACER pending* as this newly published version has not yet been dispatched.
- > After each ACER Subscription file is dispatched, ACER status of the corresponding data is set to *ACER dispatched*
- > After ACER response to the dispatched file is retrieved, ACER status of the corresponding data is set to
 - *ACER acknowledged* in case of positive acknowledgement
 - *ACER rejected* in case of rejection

The screenshot displays the 'Data Items Monitoring' interface. At the top, there are filters for Date (31.05.2019), Time Interval (Day), Data Item States, ACER States (highlighted with a red box), and Data Provider. Below these filters, the interface is organized into several categories: Balancing, Generation, Load, and Transmission. The 'CACM' section is highlighted with a red box and contains the following items:

- Curtailment [CACM 1.1]**: Status icon (red circle with white dots) and letter 'A'.
- NTC-based Capacity Allocation and Network Utilization [CACM 2.2&2.3]**: Status icon (green circle with white checkmark) and letter 'A'.
- NTC-based Capacity Allocation and Network Utilization - Result [CACM 2.2&2.3]**: Status icon (green circle with white exclamation mark) and letter 'A'.
- Flow-based Capacity Allocation and Network Utilization [CACM 2.2&2.3]**: Status icon (green circle with white checkmark) and letter 'A'.

Figure 18 - Data Item Monitoring Overview – CACM monitoring

3.2.4 Gate Closure Monitoring

This is very similar to Data Item Monitoring (it also consists of several levels).

The difference is that it displays states of data according to Gate Closure and not to the business time interval as it is in case of Data Item Monitoring.

The Gate Closure Monitoring screen shows states of expected data having submission deadline during the selected day.

There are other differences from Data Item Monitoring:

- > Only Days are available in the Time selection, as each gate ends on a certain day (even for weekly, monthly, and yearly time intervals).
- > **States are no longer updated after the Gate is closed**, even if correct data were sent later. Updated states are available in Data Item Monitoring.
- > The lowest level offers links to Data Item Monitoring, so that the user could check whether the data was delivered later.

Day-ahead Aggregated Generation [14.1.C] - Detail [Back to Gate Item Overview](#)

Date: Business dimension: Area : CTAJAT Domain: Generation Data Provider: APG Priority: 1

Data provider data item detail

State	Time	
✓	01.08.2014 00:00 - 01:00	Data Item detail
✓	01.08.2014 01:00 - 02:00	Data Item detail
✓	01.08.2014 02:00 - 03:00	Data Item detail
✓	01.08.2014 03:00 - 04:00	Data Item detail
✓	01.08.2014 04:00 - 05:00	Data Item detail
✓	01.08.2014 05:00 - 06:00	Data Item detail
✓	01.08.2014 06:00 - 07:00	Data Item detail
✓	01.08.2014 07:00 - 08:00	Data Item detail
✓	01.08.2014 08:00 - 09:00	Data Item detail
✓	01.08.2014 09:00 - 10:00	Data Item detail

Records per page: 1

Figure 19

- > Only two States are available
 - Complete and correct – complete data sent before the gate closure and publication.
 - Missing data – the aggregated status of wrong, missing, and incomplete data after the gate closure and publication.

3.2.4.1 PDF Monitoring

The status of binary data items is available via both Data Item Monitoring and Gate Closure Monitoring where applicable. The monitoring components provides three levels of data item monitoring: Data Items Overview, Data Item View and Detailed Data Item View. The Detailed Data Item View shows statuses per resolution of given data item. This is not applicable for binary data items. Therefore, Detailed Data Item View are not available for binary data items including reference from Data Item View.

Privileged users are able to define Gate Closing time as usual for XML data items.


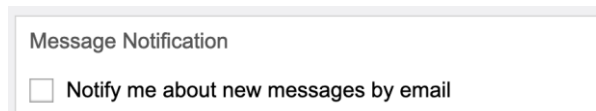
Gate Closing 
End: D + 0 1 hours 0 minutes
Valid: 01.01.1900 to Infinity

Figure 20 - Configuration Matrix - Gate Closing

PDF monitoring sends notifications in case of data unavailability at the time of gate closure. The notification follows current functionality described in EMFIP R2 - FSP - 05MessagesNotificAckNews.docx, chapter 5. Notifications of missing data. Notifications are delivered into message board.

Note: Problem Statement Document is NOT sent via Web Services or ECP within PDF monitoring (functionality of XML monitoring).

Optionally a privileged user may switch on redirecting of notifications from Message board into email. The setting may be changed in My Account Settings section.



Message Notification

Notify me about new messages by email

Figure 21 - My Account Settings - Message Notification

3.2.5 Integration Channels Monitoring

Integration Channels Monitoring contains the overview of monitored Integration Channels (ECP, Web services, FTPS, Web API). The channels are monitored by instance – a specific combination of user, channel type and purpose.

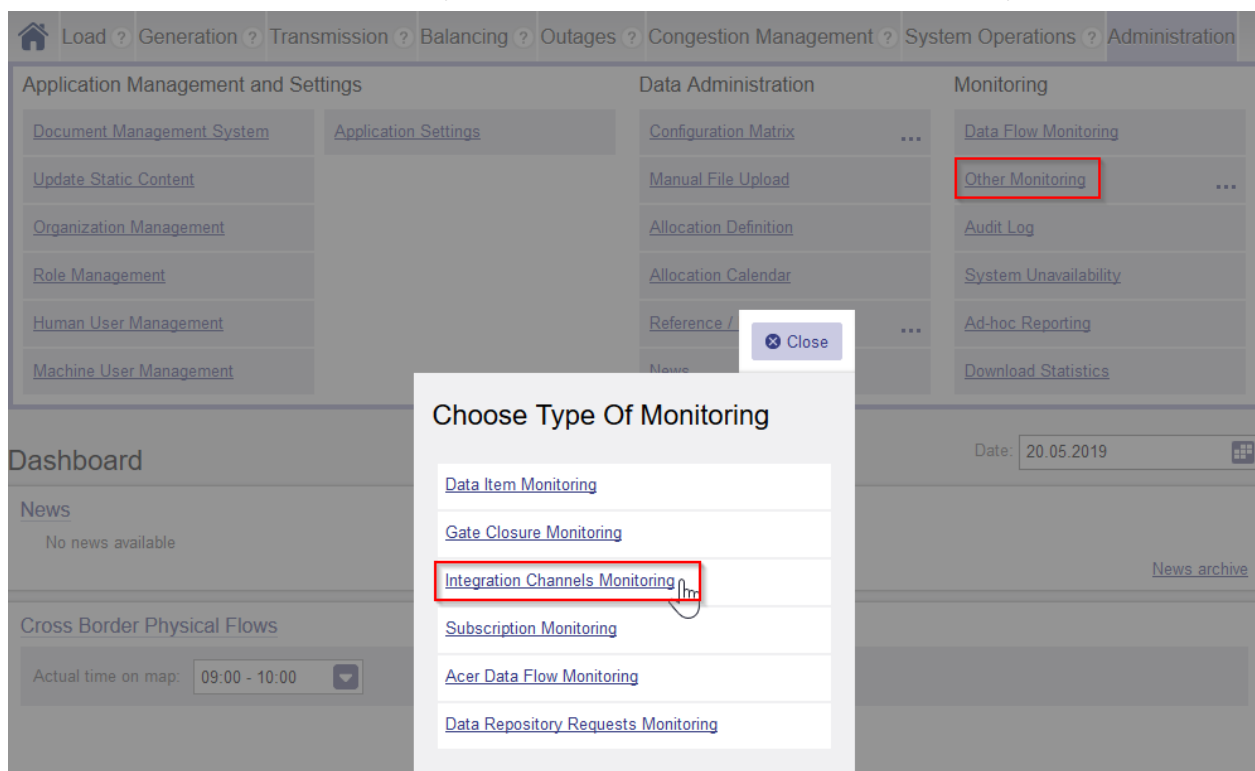


Figure 22 - Integration Channels Monitoring menu

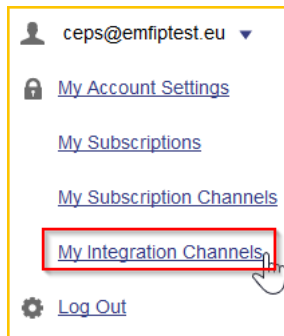


Figure 23 - Integration Channels Monitoring menu

3.2.5.1 Integration Channels Overview

The UC is executed from *Administration* section, *Other Monitoring* subsection. Alternatively, for non-admin users, it is executed from User Panel > *My Integration Channels*.

Integration Channels Monitoring

Organization	User	Purpose	Channel type	Last activity	Data volume [MB]	File Count	Threshold [h]	Monitoring	State	
CEPS	ceps@emfi...	Data Processing	FTPS	2019-04-02 10:38 UTC	0.24	17	20.8	Enabled	Inactive	
CEPS	admin@ent...	Subscription	Web Service	2019-03-27 14:21 UTC	0.02	5	25.7	Enabled	Unknown	
CEPS	admin@ent...	Subscription	ECP	2019-03-27 08:55 UTC	0.02	5	25.8	Enabled	Inactive	
Amprion	amprion@e...	Data Processing	Web Service	2019-03-26 15:28 UTC	0.00	0	24.0	Enabled	Inactive	

Figure 24 - Integration Channels Monitoring screen

3.2.5.2 Integration Channels Monitoring Edit

The UC is executed by clicking on edit icon (pencil icon).

The screenshot shows the 'Edit Monitoring' interface. At the top right is a 'Close without saving' button. The main area contains the following fields:

- 'Weight constant *' with a dropdown menu showing '0,1'.
- 'Threshold *' with a dropdown menu showing '20,8'.
- 'Monitoring enabled' with a checked checkbox.
- A note '* required field' below the checkboxes.
- A 'Save changes' button at the bottom.

Figure 25 - Integration Channels Monitoring Edit screen

An error notification connected to the validation failure can be seen in the printscreen below.

The screenshot shows the 'Edit Monitoring' interface with validation errors. At the top right is a 'Close without saving' button. The main area contains the following fields:

- 'Weight constant *' with a dropdown menu showing an empty field. Below it is a red error message: 'Must be a positive number or 0'.
- 'Threshold *' with a dropdown menu showing an empty field. Below it is a red error message: 'Must be a number higher than 0.1'.
- 'Monitoring enabled' with an unchecked checkbox.
- A note '* required field' below the checkboxes.
- A 'Save changes' button at the bottom.

Figure 26 - Integration Channels Monitoring Edit screen (error)

3.2.5.3 Definition of terms

The following terms are used in Subscription Monitoring:

> *Weight Constant*

- The significance of the last measured period between two subscription uses in Threshold calculation.

> *Threshold*

- The expected maximal period length in hours between two uses of a subscription.

> *Monitoring period*

- The monitoring period is a global settings value, it represents the length of one monitoring cycle in hours.

3.2.5.4 Integration Channels Inactivity notification

> A job is run each monitoring period (which also equals to the minimal threshold value). Each channel with enabled monitoring is checked against its threshold.

- Channels that have not been used for the duration of the threshold period are somewhat suspicious, but not yet eligible for report.
- Channels inactive for longer than two threshold periods are marked as inactive and reported through the Message board to the system administrator (role *Administrators*).

3.2.6 Managing Reference Data

Most of the reference data is administrated via XML. To open the Manage Reference Data overview, go to the Administration menu and choose Reference / Master Data.

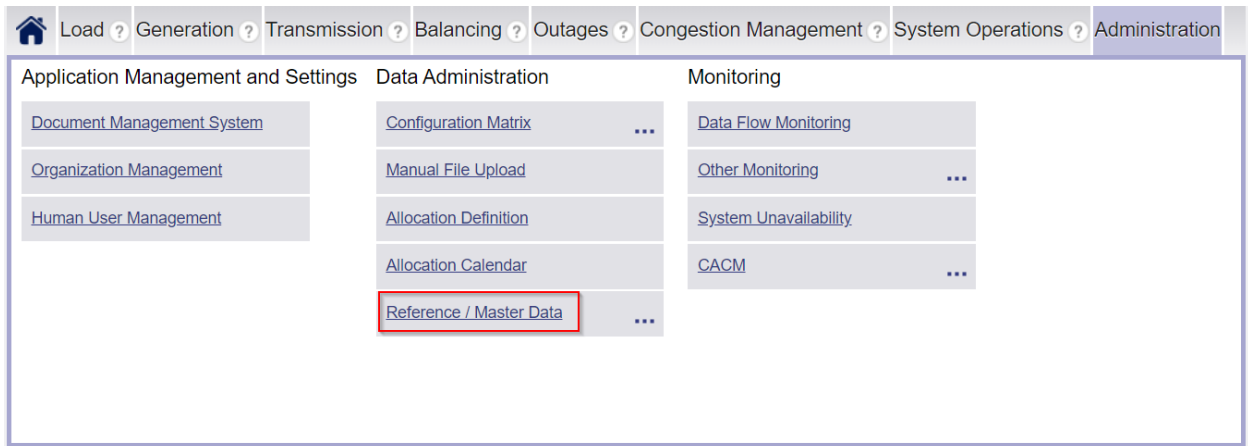


Figure 27 - Administration section: Reference / Master Data

A modal window appears. Select Reference Data and then Manage Applicable Filters option.

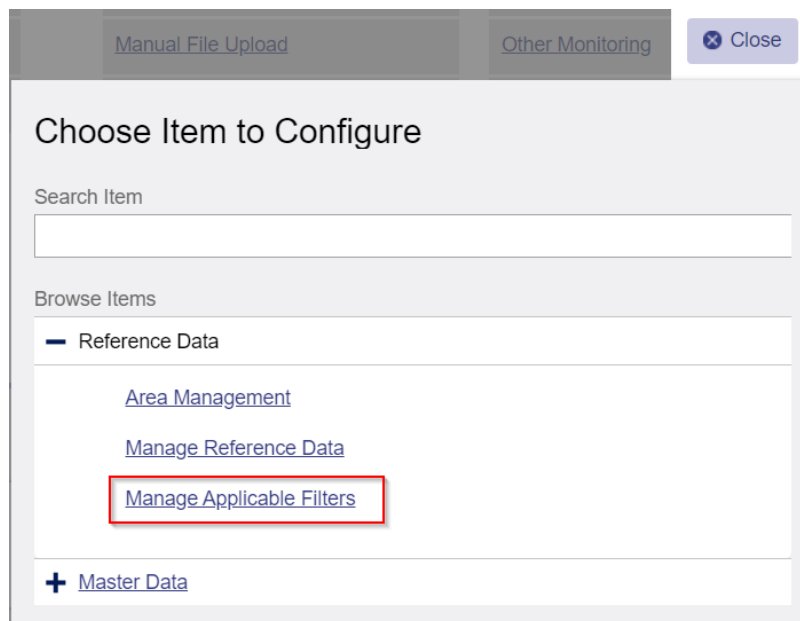


Figure 28 - Manage Applicable Filters

Reference Data can be edited or downloaded.

- > Download reference data
 - To download the data, select the "Download Reference Data" radio button, then select the required reference data, and click the "Download reference data" button.
- > Change reference data
 - If you want change reference data, select the "Change Reference Data" radio button and click the "Browse File" button. Select the file with updated reference data and click the "Upload reference data" button.

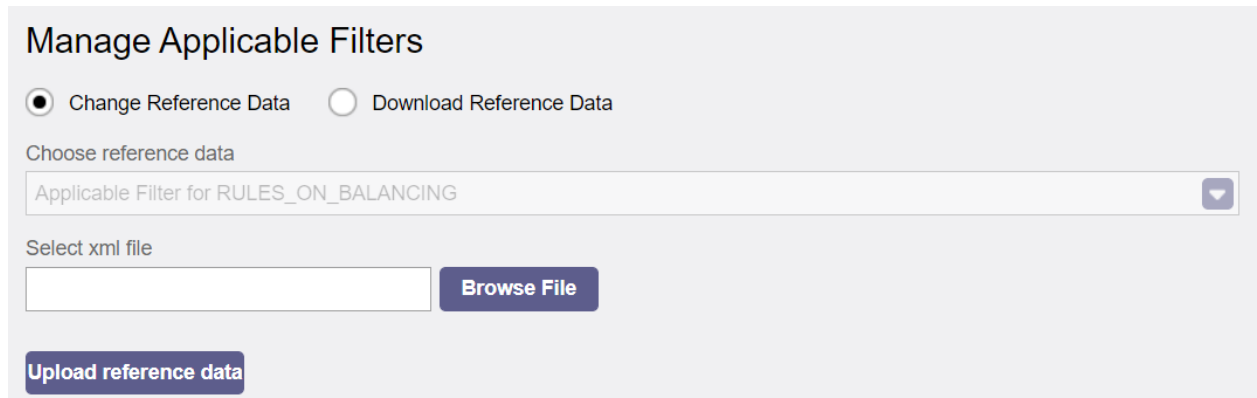


Figure 29 – Manage Applicable Filters UC (Change Reference Data)

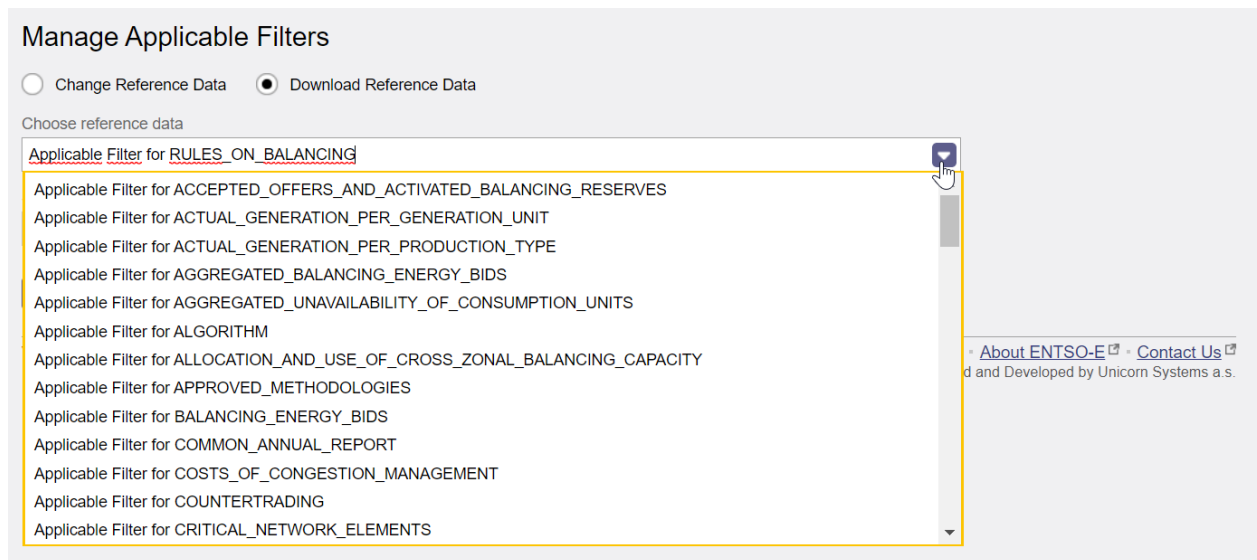


Figure 30 – Manage Applicable Filters UC (Download Reference Data)

The system contains a large number of Registers. Most of them are internal and their unauthorized editing might cause serious troubles. Therefore, only those Registers which are expected to be edited are displayed. Internal Registers are managed by the Second Level Support of the system.

Register
Applicable Filter for ACCEPTED_OFFERS_AND_ACTIVATED_BALANCING_RESERVES
Applicable Filter for ACTUAL_GENERATION_PER_GENERATION_UNIT
Applicable Filter for ACTUAL_GENERATION_PER_GENERATION_TYPE
Applicable Filter for AGGREGATED_BALANCING_ENERGY_BIDS

Applicable Filter for
AGGREGATED_UNAVAILABILITY_OF_CONSUMPTION_UNITS

Applicable Filter for ALGORITHM

Applicable Filter for
ALLOCATION_AND_USE_OF_CROSS_ZONAL_BALANCING_CAPACITY

Applicable Filter for APPROVED_METHODOLOGIES

Applicable Filter for BALANCING_ENERGY_BIDS

Applicable Filter for COMMON_ANNUAL_REPORT

Applicable Filter for
COSTS_OF_CONGESTION_MANAGEMENT

Applicable Filter for COUNTERTRADING

Applicable Filter for
CRITICAL_NETWORK_ELEMENTS

Applicable Filter for CROSS_BORDER_BALANCING

Applicable Filter for CROSS_BORDER_CAPACITY_OF_DC_LINKS_INTRADAY_TRANSFER_LIMITS

Applicable Filter for CROSS_BORDER_CAPACITY_OF_DC_LINKS_RAMPING_RESTRICTIONS

Applicable Filter for CURRENT_BALANCING_STATE

Applicable Filter for CURTAILMENT

Applicable Filter for DAILY_FLOW_BASED_ALLOCATIONS_CONGESTION_INCOME

Applicable Filter for DAILY_IMPLICIT_ALLOCATIONS_CONGESTION_INCOME

Applicable Filter for
DAY_AHEAD_FLOW_BASED_ALLOCATIONS

Applicable Filter for DAY_AHEAD_PRICES

Applicable Filter for DV_CROSS_BORDER_PHYSICAL_FLOW

Applicable Filter for EXCHANGED_RESERVE_CAPACITY

Applicable Filter for EXPANSION_AND_DISMANTLING_PROJECTS

Applicable Filter for EXPANSION_AND_DISMANTLING_PROJECTS_REPORT

Applicable Filter for EXPLICIT_ALLOCATIONS_AAC

Applicable Filter for EXPLICIT_ALLOCATIONS_DAY_AHEAD

Applicable Filter for EXPLICIT_ALLOCATIONS_INTRADAY

Applicable Filter for EXPLICIT_ALLOCATIONS_LONG_TERM_MEDIUM_TERM

Applicable Filter for EXPLICIT_ALLOCATIONS_REVENUE

Applicable Filter for FCR_SHARES_OF_CAPACITY

Applicable Filter for FCR_TOTAL_CAPACITY

Applicable Filter for FINANCIAL_EXPENSES_AND_INCOME

Applicable Filter for FLOW_CAPACITY_ALLOCATION_AND_NETWORK_UTILISATION

Applicable Filter for FORECASTED_TRANSFER_CAPACITIES_DAY_AHEAD

Applicable Filter for FORECASTED_TRANSFER_CAPACITIES_MONTH_AHEAD

Applicable Filter for FORECASTED_TRANSFER_CAPACITIES_WEEK_AHEAD

Applicable Filter for FORECASTED_TRANSFER_CAPACITIES_YEAR_AHEAD

Applicable Filter for FRR_FORECAST

Applicable Filter for GENERATION_FORECAST_DAY_AHEAD

Applicable Filter for GENERATION_FORECASTS_FOR_WIND_AND_SOLAR

Applicable Filter for IMBALANCE

Applicable Filter for IMBALANCE_NETTING

Applicable Filter for IMPLICIT_ALLOCATIONS_DAY_AHEAD

Applicable Filter for IMPLICIT_ALLOCA-
TIONS_INTRADAY

Applicable Filter for IMPLICIT_ALLOCA-
TIONS_NET_POSITIONS

Applicable Filter for INFORMATION_ON_CON-
VERSION_INTO_STANDARD_PRODUCTS

Applicable Filter for INSTALLED_CAPAC-
ITY_PER_PRODUCTION_TYPE

Applicable Filter for INSTALLED_CAPAC-
ITY_PER_PRODUCTION_UNIT

Applicable Filter for INSTALLED_GENERA-
TION_CAPACITY_AGGREGATED

Applicable Filter for INTERCONNECTOR_LOSSES

Applicable Filter for INTRA-
DAY_FLOW_BASED_ALLOCATIONS

Applicable Filter for INTRA-
DAY_FLOW_BASED_ALLOCATIONS_CONGES-
TION_INCOME

Applicable Filter for INTRADAY_IMPLICIT_ALLO-
CATIONS_CONGESTION_INCOME

Applicable Filter for NTC_CAPACITY_ALLOCA-
TION_AND_NETWORK_UTILISATION

Applicable Filter for OPERATIONAL_AGREE-
MENTS_OF_LOAD_FREQUENCY_CON-
TROL_BLOCKS

Applicable Filter for OPERATIONAL_AGREE-
MENTS_OF_SYNCHRONOUS_AREAS

Applicable Filter for PRICE_OF_RESERVED_BAL-
ANCING_RESERVES

Applicable Filter for PRICES_OF_ACTI-
VATED_BALANCING_ENERGY

Applicable Filter for PROCURED_CAPACITY

Applicable Filter for PRODUCTION_AND_GEN-
ERATION_UNITS

Applicable Filter for REDISPATCHING (legacy)

Applicable Filter for REDISPATCH-
ING_CROSS_BORDER

Applicable Filter for REDISPATCHING_INTERNAL

Applicable Filter for RR_FORECAST

Applicable Filter for RULES_ON_BALANCING

Applicable Filter for SHARING_FCR

Applicable Filter for SHARING_OF_RR_AND_FRR

Applicable Filter for SCHEDULED_COMMERCIAL_EXCHANGES

Applicable Filter for TERMS_AND_CONDITIONS

Applicable Filter for TOTAL_LOAD_DAY_AHEAD_ACTUAL

Applicable Filter for TOTAL_LOAD_FORECAST_MONTH_AHEAD

Applicable Filter for TOTAL_LOAD_FORECAST_WEEK_AHEAD

Applicable Filter for TOTAL_LOAD_FORECAST_YEAR_AHEAD

Applicable Filter for TOTAL_NOMINATED_CAPACITY

Applicable Filter for TRANSFER_CAPACITIES_ALLOCATED_WITH_THIRD_COUNTRIES

Applicable Filter for TRANSFER_CAPACITIES_ALLOCATED_WITH_THIRD_COUNTRIES_IMPLICIT

Applicable Filter for UNAVAILABILITY_IN_TRANSMISSION_GRID

Applicable Filter for UNAVAILABILITY_OF_OFFSHORE_GRID

Applicable Filter for UNAVAILABILITY_OF_PRODUCTION_AND_GENERATION_UNITS

Applicable Filter for VALUES_OF_FREQUENCY_QUALITY_EVALUATION

Applicable Filter for VOLUMES_OF_CONTRACTED_BALANCING_RESERVES

Applicable Filter for WATER_RESERVOIRS_AND_HYDRO_STORAGE_PLANTS

Applicable Filter for YEAR_AHEAD_FORECAST_MARGIN

3.2.7 Configuration Matrix Based Applicable Filters

There is a special Business Dimension filter created for Data Item 12.1.D Day-Ahead Prices where a part of the business dimensions is a Submission Resolution. This filter is not configurable via Applicable filter registers, thus the Applicable filter for this dimension filter will be decided based on the Data Provider configuration in the CM.

Once the CM configuration is updated the states of the Resolution filter will be updated as well.

The Area filter is still going to rely on the classic applicable register even for 12.1.D.

3.3 Document Management System

The Document Management System (DMS) is used to access documents that are organized in a directory structure.

File names in its parent folder are required to be unique, which is ensured by an internal mechanism. The DMS supports versioning for static files. Each document version is labelled by its number (the version number is increased with later versions). Note that the document is read only. No modifications of the document are allowed. New version of the document needs to be created in case of update. Each document is provided with the time of saving using the UTC format.

Any DMS document has the following properties:

- > Name
- > Version
- > Tag (one indivisible word)
- > State
- > Timestamp
- > Audit information (user name, organization name, update time etc.)

File and directory names cannot contain the following characters:

- > <
- > >
- > *
- > ?
- > |

3.3.1 DMS Structure

- > Audit
 - This folder contains all incoming documents (even those that are not processed yet). All these documents can be downloaded.
 - The hierarchy of subfolders is: Audit / Machine User Name / Year / Month / Day
 - Subfolders for days contain documents delivered on a given day
- > Data Flows
 - This folder contains all processed documents.
 - **Note that all Data Providers can see data of all other Data Providers.**

- The hierarchy of subfolders is: Data Flows / Name of Data Provider / Name of Data Flow / Year / Month / Day
 - Subfolders for days contain documents delivered on a given day
- > Static Content
- This folder stores the static website content, for example html files like FAQ
- > System
- The folder containing stored maps, xsd files and templates for excel exports

3.3.2 DMS Overview

To open the Document Management System overview screen, go to the Administration menu and choose the Document Management System. The system will display the DMS overview.

The screenshot displays the 'entsoe Transparency Platform' interface. At the top, there is a navigation bar with a home icon and menu items: 'Load', 'Transmission', 'Balancing', 'Outages', and 'Administration'. Below this, the 'Document Management System' section features a search form with fields for 'Document Name', 'Document Tag', 'Date from' (set to 02.10.2013), and 'Date to'. A 'Search document' button is positioned to the right of the search fields. Below the search form, the 'Actual path: Root folder/' is indicated. A table lists document entries with the following columns: Name, Version, Modification, and Author. The table contains six rows of data:

Name	Version	Modification	Author
Audit		29.09.2013 11:56:22	System User
Data Flows		29.09.2013 11:56:22	System User
Static content		29.09.2013 11:56:22	System User
system		29.09.2013 11:56:23	System User
test		29.09.2013 11:57:16	dms test
Reference Data XML		29.09.2013 16:50:11	Admin Adminovič

At the bottom of the table, there are 'Rows per page' options: 10, 25, 50, and 100. The page number '1' is displayed in the bottom right corner. The footer includes links for 'Log out', 'FAQ', 'Sitemap', 'Glossary', 'About ENTSO-E', and 'Contact Us', along with the text 'Designed and Developed by Unicorn Systems a.s.'

Figure 31

3.3.3 Searching

Searching is an important feature of DMS screens. Users can search by document name, tag, and date range. When filters are selected, click the "Search document" button to apply these filters.

Document Management System

Document Name Document Tag Date from Date to

Found 269 documents on set criteria.

Name ▲ ▼	Version ▲ ▼ ▼	Modification ▲	Author ▲ ▼ ▼	Path	
About ENTSO-E.html	1	29.09.2013 11:56:22	System User	/Static content/about ...	
Contact Us.html	1	29.09.2013 11:56:23	System User	/Static content/contac...	
Disclaimer.html	1	29.09.2013 11:56:23	System User	/Static content/discla...	
FAQ.html	1	29.09.2013 11:56:23	System User	/Static content/faq/FA...	
Glossary.html	1	29.09.2013 11:56:23	System User	/Static content/glosa...	
Sitemap.html	1	29.09.2013 11:56:23	System User	/Static content/sitema...	
DAILY_EXPL_AUCTION_OFFER_CAP.xml	1	29.09.2013 11:56:23	System User	/system/Data Flows/ECA...	
DAILY_IMPL_AUCTION_ATC.xml	1	29.09.2013 11:56:23	System User	/system/Data Flows/ECA...	
ECAN_CAPACITY_DOCUMENT.xml	1	29.09.2013 11:56:23	System User	/system/Data Flows/ECA...	
01-capacity-document.xsd	1	29.09.2013 11:56:23	System User	/system/Data Flows/ECA...	

Rows per page > >>

Figure 32

3.3.4 Browsing in DMS

Here is an example of browsing in the DMS. Imagine that you want to find processed files sent by RTE on 29. 09. 2013: ETP – Cross-Border Commercial Schedules. First, choose the Data Flow link in the DMS overview (the file has been already processed).

In the Data Flow file, choose the data provider (RTE). Then, select the ETP - Schedule Message (CrossBorder Commercial Schedules are sent via the Schedule Message type of the XML).

Next, select the year (2013), then the month (9) and day (delivered on 29th).

Finally, you may browse the files. To see more information about the file, click the "Detail" button and the system will display its details. Some of attributes can be empty. For example Description is optional attribute when file is uploaded manually in DMS. XML file delivered by ECP or webservice cannot have such a value present.

Document Management System

Document Name Document Tag Date from Date to

Actual path: [Root folder/Data Flows](#)

Name ▲ ▼	Version ▲ ▼	Modification ▲ ▼	Author ▲ ▼
CEPS		29.09.2013 13:56:47	Dataprovider CEPS
RTE		29.09.2013 14:08:56	Dataprovider RTE
REN		29.09.2013 14:09:26	Dataprovider REN
National Grid		29.09.2013 15:18:01	Dataprovider National Grid
TenneT DE		29.09.2013 15:28:00	Dataprovider TenneT DE
50Hertz		29.09.2013 15:28:11	Dataprovider 50HzT
REE		29.09.2013 15:33:58	Dataprovider REE
Elering		29.09.2013 15:36:59	Dataprovider Elering OÜ
APG		29.09.2013 15:39:09	Dataprovider APG
SEPS		29.09.2013 18:49:13	Dataprovider SEPS

Rows per page 1 2 > >>

Figure 33

Document Management System

Document Name Document Tag Date From Date To

Actual Path: [Root folder/Data Flows/SEPS](#)

Name ▲ ▼	System Version ▲ ▼	Modification ▲ ▼	Author ▲ ▼
Publication Market Document		27.07.2014 07:56:03	SEPS
Configuration Market Document		27.07.2014 09:59:15	SEPS
Transmission Market Document		27.07.2014 10:29:46	SEPS
GL Market Document		27.07.2014 12:22:14	SEPS

Rows per page 1

Figure 34

Document Management System

Document Name Document Tag Date From Date To

Actual Path: [Root folder/Data Flows/SEPS/Transmission Market Document](#)

Name ▲ ▼	System Version ▲ ▼	Modification ▲ ▼	Author ▲ ▼
2014		27.07.2014 10:29:46	SEPS

Rows per page 1

Figure 35

Document Management System

Document Name Document Tag Date From Date To

Actual Path: [Root folder/Data Flows/SEPS/Transmission Market Document/2014](#)

Name ▲ ▼	System Version ▲ ▼	Modification ▲ ▼	Author ▲ ▼	
Z		27.07.2014 10:29:46	SEPS	

Rows per page 1

Figure 36

Document Management System

Document Name Document Tag Date From Date To

Actual Path: [Root folder/Data Flows/SEPS/Transmission Market Document/2014/7](#)

Name ▲ ▼	System Version ▲ ▼	Modification ▲ ▼	Author ▲ ▼	
27		27.07.2014 10:29:46	SEPS	

Rows per page 1

Figure 37

Actual Path: [Root folder/Data Flows/SEPS/Transmission Market Document/2014/7/27](#)

Name ▲ ▼	System Version ▲ ▼	Modification ▲ ▼	Author ▲ ▼	
18_v1.xml	1	27.07.2014 10:29:46	SEPS	<input type="button" value="Download"/> <input type="button" value="Edit"/> <input type="button" value="Add"/>
164_v2.xml	1	27.07.2014 10:40:28	SEPS	<input type="button" value="Download"/> <input type="button" value="Edit"/> <input type="button" value="Add"/>
18_v3.xml	1	27.07.2014 10:40:37	SEPS	<input type="button" value="Download"/> <input type="button" value="Edit"/> <input type="button" value="Add"/>
84_v1.xml	1	27.07.2014 13:31:45	SEPS	<input type="button" value="Download"/> <input type="button" value="Edit"/> <input type="button" value="Add"/>

Rows per page 1

Figure 38

Document Management System

Document Name Document Tag Date From Date To

Actual Path: [Root folder/Data Flows/SEPS/Transmission Market Document/2014/7/27](#)

Name ▲ ▼	System Version ▲ ▼	Modification ▲ ▼	Author ▲ ▼	
18_v1.xml	1	27.07.2014 10:29:46	SEPS	<input type="button" value="Download"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
<p>File Overview</p> <p>Creation: 27.07.2014 10:29:46 Tag: <input type="text"/></p> <p>File size: 5,53 KB</p> <p>File Description</p> <p><input type="text"/></p>				
164_v2.xml	1	27.07.2014 10:40:28	SEPS	<input type="button" value="Download"/> <input type="button" value="Edit"/> <input type="button" value="Add"/>
18_v3.xml	1	27.07.2014 10:40:37	SEPS	<input type="button" value="Download"/> <input type="button" value="Edit"/> <input type="button" value="Add"/>
84_v1.xml	1	27.07.2014 13:31:45	SEPS	<input type="button" value="Download"/> <input type="button" value="Edit"/> <input type="button" value="Add"/>

Rows per page 1

Figure 39

3.3.5 Upload new file

Upload of new files into DMS is available for insertion of new Static content pages. Window for file selection is available when Browse button is selected. Metadata section is prepared for insertion of other types of documents like report templates (Ad-hoc reporting is not part of EMFIP R2 release).

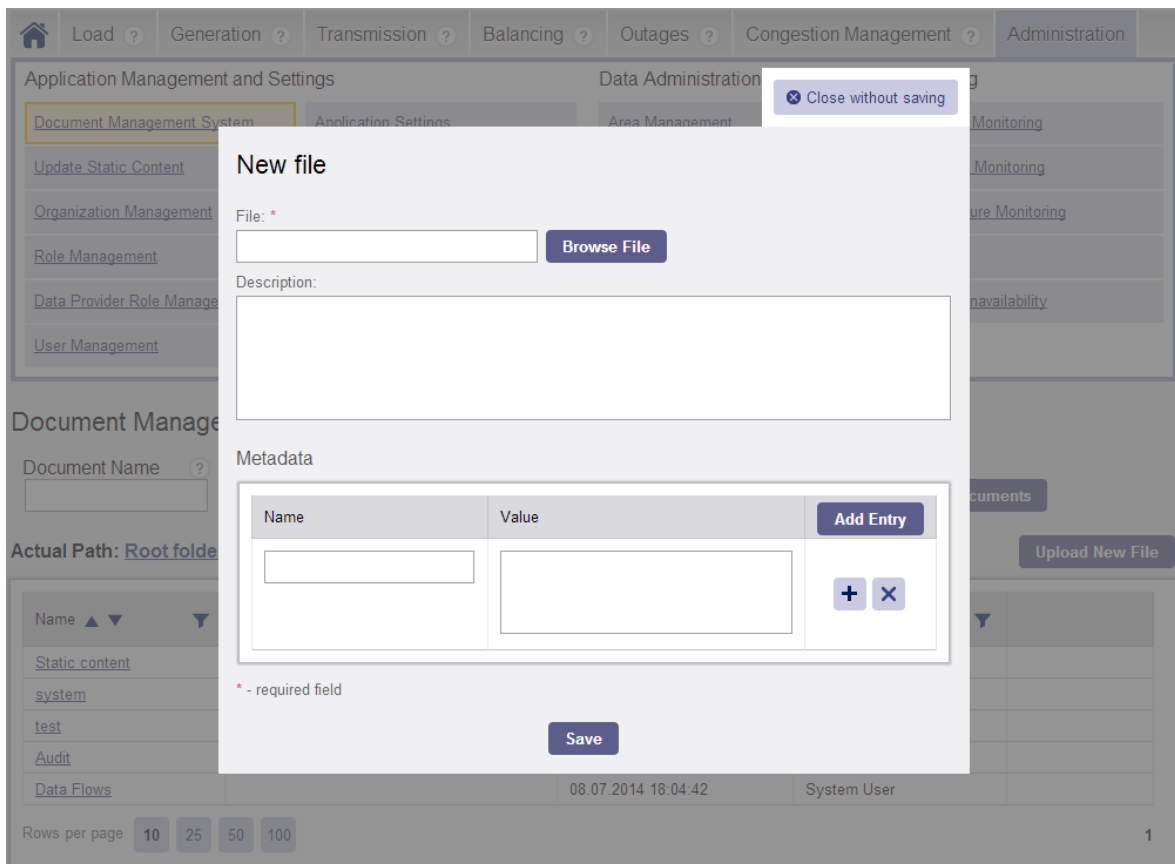


Figure 40

3.4 Allocations

Besides the Configuration Matrix, Managing Allocations (covering also Auctions) is an important part of the system. There are Allocation Definitions and Allocation Instances (forming Allocation Calendar) that are used to handle this area.

> Duplicate validation

This validation is applied only for creation of Allocation Instances and Allocation Definitions via GUI and for submission of Allocation Instance XML document. The validation checks whether there is a same active Allocation Instance or Allocation Definition, i.e. with same combination of Allocation Type, Contract Type, Delivery Period, Capacity Product (InArea, OutArea, Currency, Class. Cat. and Class. Sequence.).

3.4.1 Allocation Definition

Allocation Definition serves as a template. This template defines the Type of Auction, Contract Type (Daily Auction, Monthly Auction, etc.) along with Capacity Products (e.g. border CZ-SK, product Base, round 1 in EUR).

Also, a set of time intervals (Delivery, Allocation, Bidding Periods), corresponding to the first instance of the allocation, are defined here, so that the system could use them as a baseline for automated generation of Allocation instances in the Allocation Calendar.

3.4.1.1 Overview

To open the Allocation Definition overview, go to the Administration menu and choose Allocation Definition.

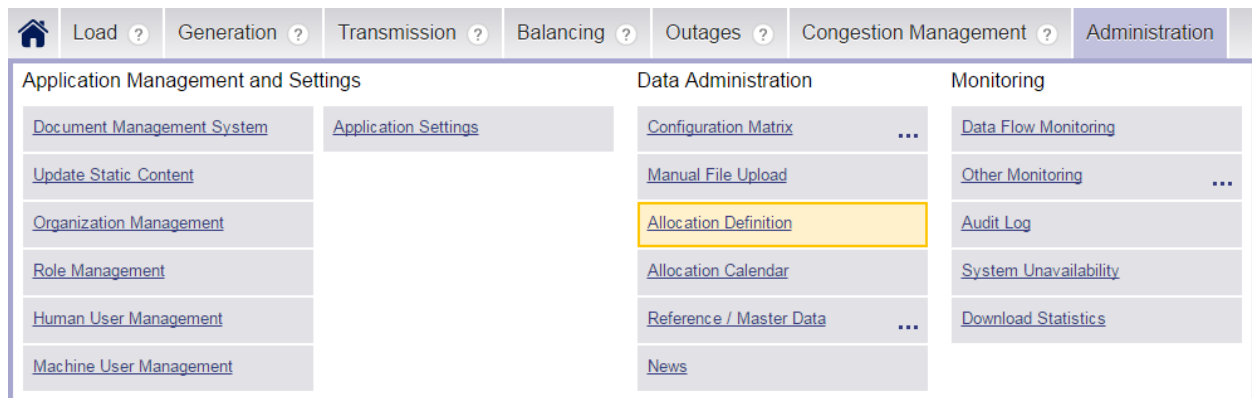


Figure 41

The system shows the Allocation Definition overview (see the screenshot below). Details for each Allocation Definition can be found in Details (click the plus icon).

Allocation Definitions				Create New Allocation Definition
Auction ID ▲ ▼	Allocation Type ▲ ▼	Contract Type ▲ ▼		
A_D_SE4-SE3	Implicit	Daily		▶ ✕ ✎ +
A_D_SE4-PL	Implicit	Daily		▶ ✕ ✎ +
A_D_SE4-DK2	Implicit	Daily		▶ ✕ ✎ +
A_D_SE4-DE(EON)	Implicit	Daily		▶ ✕ ✎ +
A_D_SE3-SE4	Implicit	Daily		▶ ✕ ✎ +
A_D_SE3-SE2	Implicit	Daily		▶ ✕ ✎ +
A_D_SE3-NO1	Implicit	Daily		▶ ✕ ✎ +
A_D_SE3-FI	Implicit	Daily		▶ ✕ ✎ +
A_D_SE3-DK1	Implicit	Daily		▶ ✕ ✎ +
A_D_SE2-SE3	Implicit	Daily		▶ ✕ ✎ +

Definitions per page: 10 25 50 100

1 2 3 4 5 > >>

Figure 42

3.4.1.2 Capacity Product

Before Allocation Definition and Allocation Instance are described, it is necessary to clearly explain the term Capacity Product.

The Capacity Product consists of:

- > InArea
- > OutArea
- > Currency
- > Classification Category (e.g. Base)
 - Not used for implicit auctions

- > Classification Sequence (round of auction, e.g. 1, 2)
 - Not used for implicit auctions

For an example, look at the following Capacity Product:

InArea (CZ), OutArea (SK), Classification Category (Base), Classification Sequence (1).

This capacity product can be easily added for example to Monthly Explicit Auctions or Yearly Explicit Auctions. It is a "component" that can be used in several Allocation definitions of different types.

3.4.1.3 Creating Allocation Definitions

On the Allocation Definition screen, click "Create New Allocation Definition". In the new Allocation definition window, you have to complete all mandatory fields.

Available fields in common part of the screens are:

- > Allocation ID
 - This is the name of the Allocation Definition and must be unique.
- > Description - optional
- > Allocation Type (records in tab Data Items are filtered according to selection)
 - Explicit
 - Implicit
- > Allocation Sub-Type - optional
 - For Explicit auctions
 - Shadow auction (**when set, delivery of data for the Allocation Instance is not mandatory and not monitored**).
 - Not specified
 - For Implicit auctions
 - Market coupling
 - Market splitting
 - Not specified
- > Allocation Mode - optional
 - Auction (2nd criterion first come – first served)
 - Auction (2nd criterion pro rata)
 - First come – first served
 - Pro rata
 - Continuous (**when set, delivery of some data for the Allocation Instance is not expected or monitored**).
- > Contract Type (records in tab Data Items are filtered according to selection)
 - The Contract Type determines the length of the Allocation's delivery period (e.g. Daily, Weekly, Monthly, Yearly), exception being weekend allocations
 - If recurring is used, the Allocation Instance is created according to Contract Type (e.g. Daily, Yearly)

User needs to fill in quite a lot of other settings. To save the space, several tabs with other information are provided :

- > Periods Tab

✕ Close without saving changes

New Allocation Definition

Allocation ID: *

Description:

Allocation Type: *

Allocation Sub-type:

Allocation Mode:

Contract Type: *

Specifications

- Periods
- Recurrence
- Capacity Products
- Data Items

Time Zone: *

Delivery Period Start: *

Delivery Period End: *

Allocation Period Start: *

Allocation Period End: *

Bidding Period Start:

Bidding Period End:

* - required field

Save changes and close

Figure 43

- Time Zone

- User needs to select the Time Zone for which data for Allocation Instance will be delivered (data are submitted using UTC, but for a business time of given time zone)
- The selection also affects list of Intraday periods in case that Intraday Contract type is selected.
- Delivery Period Start / Delivery Period End
 - The Delivery Period is the time interval when the capacity is going to be used. This time interval in the Allocation definition is the very first interval that is going to be used by the automatic scheduler to create new Allocation Instances. The period may shift based on the selected Contract Type.
 - The Delivery Period is an important period which must be present in the XML file when auction Data Items are sent to the system. Together with capacity products it is used for recognition of corresponding Allocation Instance.
 - **Please note that the length of interval does not have to match with the length of selected Contract Type.** It is possible for example use Weekly Contract Type but have a delivery period just for a weekend.
- Intraday Delivery Period
 - Specification of Delivery period in case that selected Contract type is Intraday. User has to select required intraday period from list of available periods (loaded from register "IntradayPeriod"). When required intraday period is not offered, it has to be created in reference data.
 - For hourly intraday periods the user needs to create 25 Allocation Definitions. Each of them will differ only in Intraday Delivery Period. The one extra period (dedicated for Daylight saving time = DST) is used only when applicable.

Figure 44

- Allocation Period Start / Allocation Period End
 - The time period when the attribution of capacities to the participants is realized. The period may shift (in Allocation Instances) based on the selected Contract Type when recurrence is enabled.
 - Deadlines for data delivery (data for Allocation Instances) which are set in Configuration Matrix are related to this period (exception is done for intraday Data Items where the relation is to Delivery Intraday Period). For example If Gate Closing rule in Configuration Matrix is set as "End:

D+0 H+1“, then the deadline for data delivery is one hour after specified Allocation period of given Allocation Instance.

- Bidding Period Start / Bidding Period End - optional
 - o The time period when market participants can submit bids. The period may shift based on the selected Contract Type when recurrence is enabled. A new Allocation Instance using shifted periods is created a given number of days in advance.

> Recurrence tab

The screenshot shows a web interface for configuring Allocation Instance specifications. The 'Recurrence' tab is active. It contains the following fields:

- Valid From: ***: 01.01.2014
- Valid To:**: 31.12.2015
- Recurrence: ***: Enabled
- Recurrence Relative Days Ahead:**: 30

A legend indicates that fields with an asterisk (*) are required. A 'Save changes and close' button is located at the bottom of the form.

Figure 45

- Valid from / Valid to
 - o The time interval that defines the period of validity. When the period is over, no new Allocation instances are created in the Allocation Calendar.
- Recurrence tab
 - o When enabled, new Allocation Instances (in the Allocation Calendar) are automatically generated based on the template (Allocation Definition). For automated generation, "Recurrence Relative Days Ahead" must be specified.
- Relative Days Ahead
 - o Specifies how many days before Delivery period the Allocation Instance should be automatically created.

> Capacity Products tab

Specifications

Periods Recurrence **Capacity Products** Data Items

Selected Capacity Products*

In Area	Out Area	Currency	Class. Cat.	Class. Seq.	
BZN LV	BZN EE	EURO	Peak	1	<input type="checkbox"/>
BZN EE	BZN LV	EURO	Peak	1	<input type="checkbox"/>

Available Capacity Products

In Area	Out Area	Currency	Class. Cat.	Class. Seq.	
BZN LV	BZN EE	EURO	Peak	1	<input checked="" type="checkbox"/>
BZN EE	BZN LV	EURO	Peak	1	<input checked="" type="checkbox"/>
BZN LV	BZN EE	EURO	Off peak	1	<input checked="" type="checkbox"/>
BZN EE	BZN LV	EURO	Off peak	1	<input checked="" type="checkbox"/>
BZN NL	BZN GB	EURO	Base	2	<input checked="" type="checkbox"/>
BZN GB	BZN NL	EURO	Base	2	<input checked="" type="checkbox"/>
BZN GB	BZN FR	EURO	Base	2	<input checked="" type="checkbox"/>
BZN FR	BZN GB	EURO	Base	2	<input checked="" type="checkbox"/>
BZN UA	BZN HU	EURO	Base	1	<input checked="" type="checkbox"/>
BZN SK	BZN PL	EURO	Base	1	<input checked="" type="checkbox"/>

Products per page 10 25 50 1 2 3 4 5

Figure 46

- Products can be selected from a list of available Capacity Products. When you make your selection in the table (using the icon), the selected Capacity Product appears in the “Selected Capacity Products” table. If the required Capacity Product is not available, reference data (register Capacity Product) must be extended.

> Data Items

Data Item Name	Data Provider
Offered Day-ahead Transfer Capacity [11.1]	<input type="text"/> ▼
Explicit Allocations - Use of the Transfer Capacity [12.1.A] (daily)	<input type="text"/> ▼
Explicit Allocations - Auction Revenue [12.1.A] (daily)	<input type="text"/> ▼
Total Capacity Already Allocated [12.1.C] (daily)	<input type="text"/> ▼
Transfer Capacities Allocated with Third Countries [12.1.H] (daily)	<input type="text"/> ▼

* - required field

Save changes and close

Figure 47

- The list of available Data Items (filtered according to Allocation Type and Contract type) is available on “Data Item” tab. Data Providers responsible for delivery data should be associated to these Data Items. At least one Data Item should have a Data Provider associated.
 - Data Provider must be associated to areas of selected Capacity Products
 - There is specific feature for Auction revenue data, see 3.4.4 Submission Type Setting for Auction Revenue for more information.
- > Allocation Definition with the same combination of Allocation Type, Contract Type, Delivery Periods, Capacity Products (InArea, OutArea, Currency, Class. Cat. and Class. Sequence.) cannot be saved. If an Allocation Definition with this combination of these attributes already exists, message “Allocation Definition with the given combination of delivery period, contract type and capacity products already exists in the system (ID: <AllocationDefinitionID>).” is displayed.

3.4.1.4 Editing Allocation Definitions

The Administrator or Data Provider roles may click the “Edit” button (the pencil icon) to update allocation definitions.

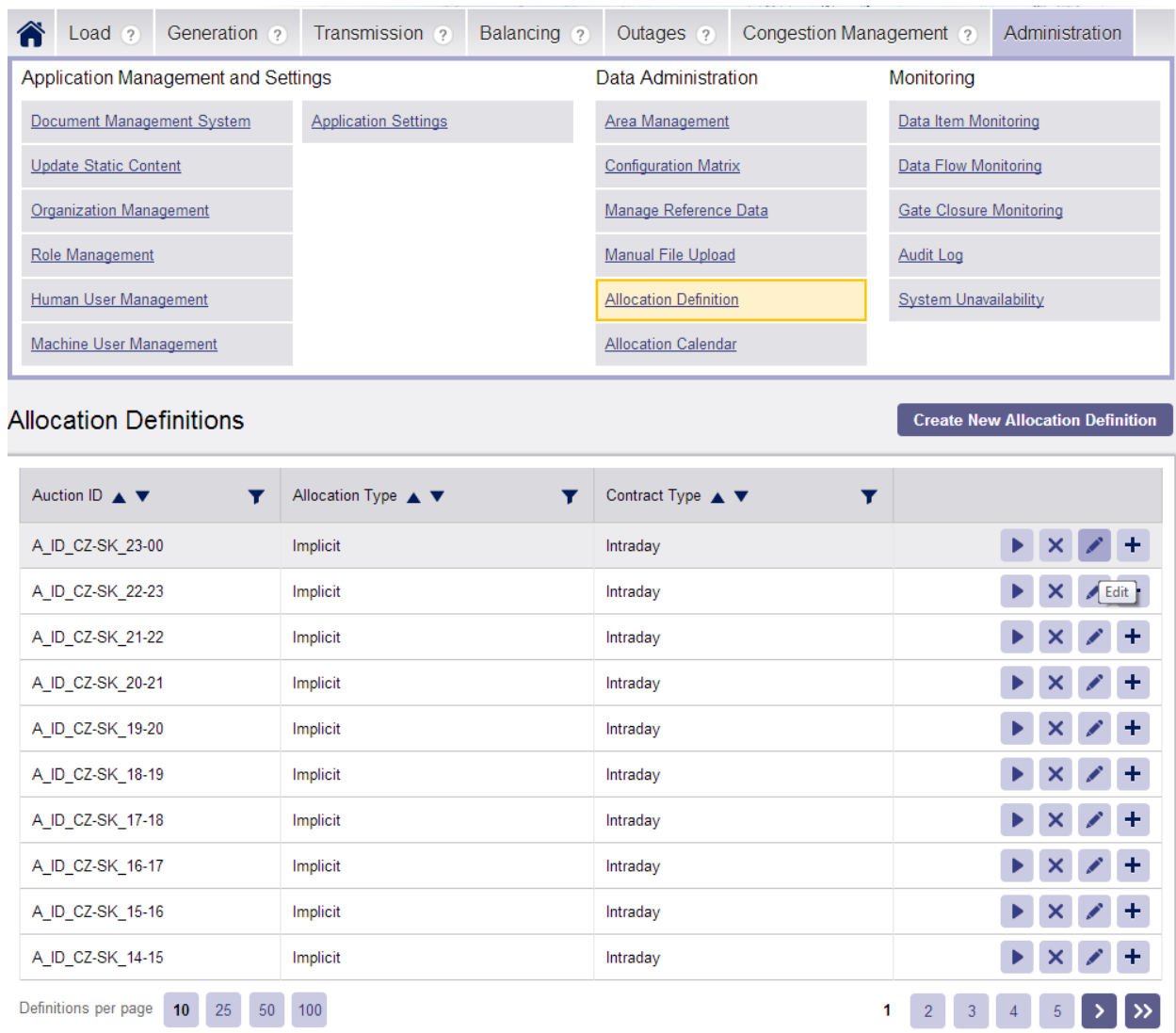


Figure 48

A window appears which is the same as the Create New Allocation Definition window, but populated with already saved values.

Please note that if Recurrence is enabled for an Allocation Definition, updates of the Allocation Definition (Allocation Instance template) will appear only in new Allocation Instances. Any previously created Allocation Instances are not affected.

3.4.1.5 Deleting Allocation Definitions

Allocation Definition can be removed even if Allocation Instances were created based on the definition (there is no link after the creation of Allocation Instance).

When the Allocation Definition is not needed any more, its Time Validity should end or the definition should be removed.

3.4.1.6 Relation to Configuration Matrix

Despite the fact that Data Providers and Time zones are defined directly on each Allocation definition / Instance. There are still rules that needs to be defined in Configuration Matrix.

Configuration matrix rules are defined only on a level of the complete Data Item and therefore the settings affects all Allocation Instances that cover the given Data Item.

Explicit Allocations - Auction Revenue [12.1.A] (daily) [Change](#)

Domain: **Transmission** [Show default values](#)

Actual Rules | Inherited rules | Rules with different time validity

Submission Gates and Publication

Gate Closing	Publication Time
End: D + 0 1 hours 0 minutes	ASAP - received
Valid: 01.01.1900 to Infinity	Valid: 01.01.1900 to Infinity

Figure 49

3.4.2 Allocation Calendar managed in GUI

The Allocation Calendar consists of Allocation Instances (representing a real-world allocations). Please understand that an Allocation Instance is basically configuration specifying what data should be delivered when and by which Data Provider.

Each Allocation Instance is uniquely identified by its combination of the Allocation ID and the Delivery Period time interval.

Please note that if there is no Allocation Instance in the Allocation Calendar (for example for the future), the XML file with data (for example for the Offered Capacity) will be rejected with the “no capacity product instance found” message. A Capacity Product Instance is basically a Capacity Product for a defined Delivery period.

3.4.2.1 Overview

The Allocation Calendar is available from the Administration menu.

Home	Load ?	Generation ?	Transmission ?	Balancing ?	Outages ?	Congestion Management ?	Administration
Application Management and Settings			Data Administration		Monitoring		
Document Management System	Application Settings		Configuration Matrix	...	Data Flow Monitoring		
Update Static Content			Manual File Upload		Other Monitoring		
Organization Management			Allocation Definition		Audit Log		
Role Management			Allocation Calendar		System Unavailability		
Human User Management			Reference / Master Data	...	Download Statistics		
Machine User Management			News				

Figure 50

The Allocation Calendar screen is quite similar to the screen with Allocation Definitions list. There is only one more column for Delivery Period and extra icon for cancelling of allocation. A combination of an Auction ID and a Delivery Period creates a unique record in the Allocation Calendar.

Allocation Calendar

< 27.07.2014 to < 27.07.2014 > Filter Create New Allocation Instance

Auction ID ▲ ▼ ▼	Allocation Type ▲ ▼ ▼	Contract Type ▲ ▼ ▼	Delivery Period	
BE FR	Explicit	Intraday	01.01.2014 17:00 - 01.01.2014 18:00 (CET/CEST)	
A_M_UA-HU	Explicit	Monthly	01.09.2014 - 01.10.2014 (CET/CEST)	
A_M_SK-PL	Explicit	Monthly	01.09.2014 - 01.10.2014 (CET/CEST)	
A_M_SK-HU	Explicit	Monthly	01.09.2014 - 01.10.2014 (CET/CEST)	
A_M_SK-CZ	Explicit	Monthly	01.09.2014 - 01.10.2014 (CET/CEST)	
A_M_SI-IT	Explicit	Monthly	01.09.2014 - 01.10.2014 (CET/CEST)	
A_M_SI-HR	Explicit	Monthly	01.09.2014 - 01.10.2014 (CET/CEST)	
A_M_SI-AT	Explicit	Monthly	01.09.2014 - 01.10.2014 (CET/CEST)	
A_M_RS-HU	Explicit	Monthly	01.09.2014 - 01.10.2014 (CET/CEST)	
A_M_RO-HU	Explicit	Monthly	01.09.2014 - 01.10.2014 (CET/CEST)	

Instances per page 10 25 50 100 1 2 3 4 5 > >>

Figure 51

In case the number of the filtered allocation instances available on the UC exceeds 10 000, the displayed records on the UC will be limited to 10 000 and a notification: “*Number of displayed instances is limited to 10 000. Please use the filters for searching of Allocation Instances.*” will be displayed.

Click the "Detail" button (the plus icon) to see instance details. There are important differences comparing to details of Allocation Definition.

The detail displays all configured Capacity products including derived Capacity products (without sequence, oriented borders or non-oriented borders).

Allocation Calendar

to

Auction ID	Allocation Type	Contract Type	Delivery Period
Guide	Explicit	Monthly	01.07.2014 - 01.08.2014 (CET/CEST)

Allocation Info

Allocation Type: Explicit
Allocation Sub-type: Not specified
Allocation Mode: Unknown
Contract Type: Monthly
Status Code: ACTIVE

Time Intervals

Delivery Period: 1.7.2014 to 1.8.2014
Allocation Period: 9.7.2014 to 9.7.2014
Bidding Period: -

Description

Description:

Capacity Products

In Area	Out Area	Currency	Classification Category	Classification Sequence	
BZNJSK	BZNJHU	EURO	Base	1	+
BZNJHU	BZNJSK	EURO	Base	1	+

Derived Capacity Products

Without Classification Sequence

In Area	Out Area	Currency	Classification Category	
BZNJSK	BZNJHU	EURO	Base	+
BZNJHU	BZNJSK	EURO	Base	+

Oriented Borders

In Area	Out Area	Currency	
BZNJSK	BZNJHU	EURO	+
BZNJHU	BZNJSK	EURO	+

Non-oriented Border

Border	Currency	
BZNJHU - BZNJSK	EURO	+

Figure 52

3.4.2.2 Creating Allocation Instances

There are three ways to create an Allocation Instance.

The first one has been described in the Chapter Allocation Definition.

There is a scheduler that can automatically generate new Allocation Instances till the end of the Allocation Definition validity. This option can be used for all recurring allocations. Once Recurrence is enabled in Allocation Definitions, there is no need for the Data Provider to configure such allocations any more. Only exceptional cases have to be handled in the Allocation Calendar.

The second, “manual” option should be used when the expected allocation is exceptional and shows no signs of recurrence.

- > In the Allocation Calendar window, click "Create New Allocation Instance".
- > Select between “Empty” and “from Allocation Definition (Template)” choice for the creation
 - If “from Allocation Definition (Template)” option is selected, the form is populated with the data defined in the selected template, but the values can be modified. Actually, such modifications are expected, because user should specify required periods and possibly other data (when generating instances manually). Available fields have the very same meaning as in the Allocation Definition. **Note that when an Allocation Instance is changed, the associated template (Allocation Definition) is not updated.** Click the “Save changes and close” button to save your configured Allocation Instance.

The third option is management of Allocation Calendar using XML files. This option is shortly described in next chapter.

Allocation Instances with the same combination of Allocation Type, Contract Type, Delivery Periods, Capacity Products (InArea, OutArea, Currency, Class. Cat. and Class. Sequence.) cannot be saved. If an Allocation Instance with with this combination of these attributes already exists, message “Active Allocation Instance with the given combination of delivery period, contract type and capacity products already exists in the system (ID: <AllocationInstanceID>).” is displayed. This validation is skipped for Allocation Instances created by the recurring job.

3.4.2.3 Editing Allocation Instances

Click the “Edit” button on the Allocation Calendar screen. The editor window appears. Fields and their meanings are the same as explained in Chapters Creating Allocation Instances / Allocation Definition.

3.4.2.4 Cancelling Allocation Instances

Click the “Cancel” button on the row of selected Allocation Instance in Allocation Calendar screen. The Allocation is cancelled immediately and can be activated again if needed (“cancel” button is changed to “reactivate”).

When allocation is cancelled, it remains visible in Allocation calendar, just the status (visible in icon) is changed. If there are already data delivered for the Allocation Instance, the record does not disappear from the Data View.

It is not possible to send data for cancelled Allocation Instance. Such file would be rejected because no valid configuration would be found (since it was cancelled).

3.4.2.5 Deleting Allocation Instances

Allocation Instance cannot be deleted, just cancelled.

3.4.3 Allocation Calendar managed by XMLs

In addition to management of Allocation calendar in GUI, there is also a possibility to manage the calendar using submission of XML files that can create, update or cancel records in Allocation Calendar.

XML files need to follow allocation-configuration.xsd file which was created by system vendor. It is not an ENTSO-E standard.

Management via XML files can do most of actions that can be done in GUI. But there is one main difference:

- > Allocation Instance is always created as “Empty”. Allocation Definition (template) cannot be used.

More details about the structure of XML files is available in separate document called “UNI-1-allocation-configuration-document”.

- > Validation against duplicate allocation:

It is not possible to upload Creation message of Allocation Instance in case of already existing active one with the same combination of Allocation Type, Contract Type, Delivery Periods, Capacity Products (InArea, OutArea, Currency, Class. Cat. and Class. Sequence.).

3.4.4 Submission Type Setting for Auction Revenue

Data for Data Item [12.1.A] EXPLICIT ALLOCATIONS – AUCTION REVENUE can be delivered in two submission modes:

- > Oriented border (derived Capacity product),
- > Standard Capacity product.

The differences between these modes and how data are processed and published is described in the EMFIP R2 - FSP - 02DataItems_DataFlows, chapter Transmission Domain - [12.1.A] EXPLICIT ALLOCATIONS – AUCTION REVENUE.

3.4.4.1 How to set the Submission Mode in Allocation Definition or Allocation Instance:

When added Data Provider for 12.1.A – Auction Revenue in Allocation UC on the tab Data Items, the submission mode has to be set.

Specifications

Periods
Capacity Products
Data Items

Data Item Name	Data Provider
Offered Day-ahead Transfer Capacity [11.1]	<input style="width: 100%;" type="text"/> ▼
Explicit Allocations - Use of the Transfer Capacity [12.1.A] (daily)	<input style="width: 100%;" type="text"/> ▼
Explicit Allocations - Auction Revenue [12.1.A] (daily)	50Hertz ▼
Capacity Product Submission Type:	<input style="width: 100%;" type="text"/> ▼
Total Capacity Already Allocated [12.1.C] (daily)	Oriented Border
Transfer Capacities Allocated with Third Countries [12.1.H] (daily)	Standard

* - required field

Save changes and close

Figure 53

This ensures that Data Item Monitoring will monitor data correctly according to the set mode.

3.4.4.2 Submission Type Recognition during Processing:

When the mode is set for Auction revenue data then submitted data has to correspond to the set mode otherwise is rejected by the system. The way of submission is recognized based on elements in submitted XML file.

Standard (Standard Capacity Product)

In this case XML file has to contain following elements in order to recognize a capacity product:

- Classification Category
- Classification Sequence

Please note, when the user sends XML containing only one option element, then XML is **recognized as Oriented Border** data.

Below you can find example of that file:

```
<TimeSeries>
  <mRID>1</mRID>
  <auction.mRID>A_D_AT-CZ</auction.mRID>
  <auction.type>A02</auction.type>
  <auction.category>A01</auction.category>
  <businessType>B07</businessType>
  <in_Domain.mRID codingScheme="A01">10YAT-APG-----L</in_Domain.mRID>
  <out_Domain.mRID codingScheme="A01">10YCZ-CEPS-----N</out_Domain.mRID>
  <contract_MarketAgreement.type>A01</contract_MarketAgreement.type>
  <currency_Unit.name>EUR</currency_Unit.name>
  <price_Measure_Unit.name>MWh</price_Measure_Unit.name>
  <classificationSequence_AttributeInstanceComponent.position>1</classificationSequence_AttributeInstanceComponent.position>
  <curveType>A03</curveType>
  <Period>
    <timeInterval>
      <start>2013-12-31T23:00Z</start>
      <end>2014-01-01T23:00Z</end>
    </timeInterval>
    <resolution>PT60M</resolution>
    <Point>
      <position>1</position>
      <price.amount>51</price.amount>
    </Point>
    <Point>
      <position>2</position>
      <price.amount>52</price.amount>
    </Point>
  </Period>
</TimeSeries>
```

Figure 54

Oriented Border

If XML file does **not** contain both option elements, then is **recognized as Oriented Border** data because the Capacity product cannot be determine.

3.5 Configuration Matrix

The Configuration Matrix is the most important part of the system from the configuration point of view. There are configurations for all Data Items and for all combinations of Business Dimensions (BDimensions).

The purpose of CONFIGURATION MATRIX is:

- > To provide Default settings for Data Items
- > To enable easy configuration updates
- > To use as few configurations as possible (Inheritance of Configuration)

The link to the Configuration Matrix is available in the Administration Menu

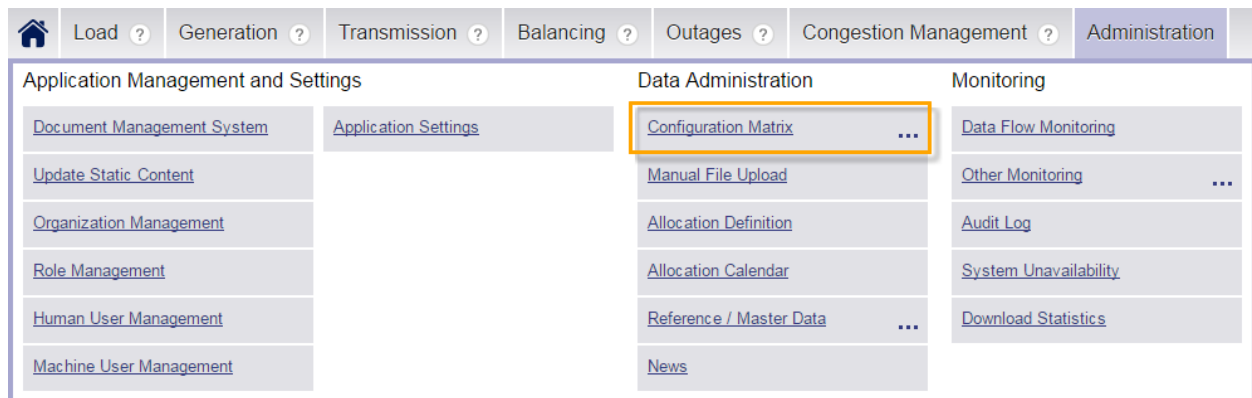


Figure 55

3.5.1 Selecting Data Items

When Configuration Matrix is selected from Administration menu, the Data Item selection screen appears.

The user can filter required data in Configuration Matrix with three options

- > Only configured
 - Configuration Matrix will display only those combinations of Business Dimensions (e.g. borders) where the user's Data Provider is set.
 - This is a default filter for Data Provider role
- > My Areas and Borders
 - With this option the user will be able to work with combinations of Business Dimensions that are relevant to user's Organization. The filtering is based on relation of Organization and Areas in Organization Management.
 - Example: The German TSO „TenneT DE“ has no relation to area of Greece. Therefore the CMatrix will not offer any records related to greek areas or borders.
- > All
 - All records are available in Configuration Matrix
 - Only possible option for Administrator

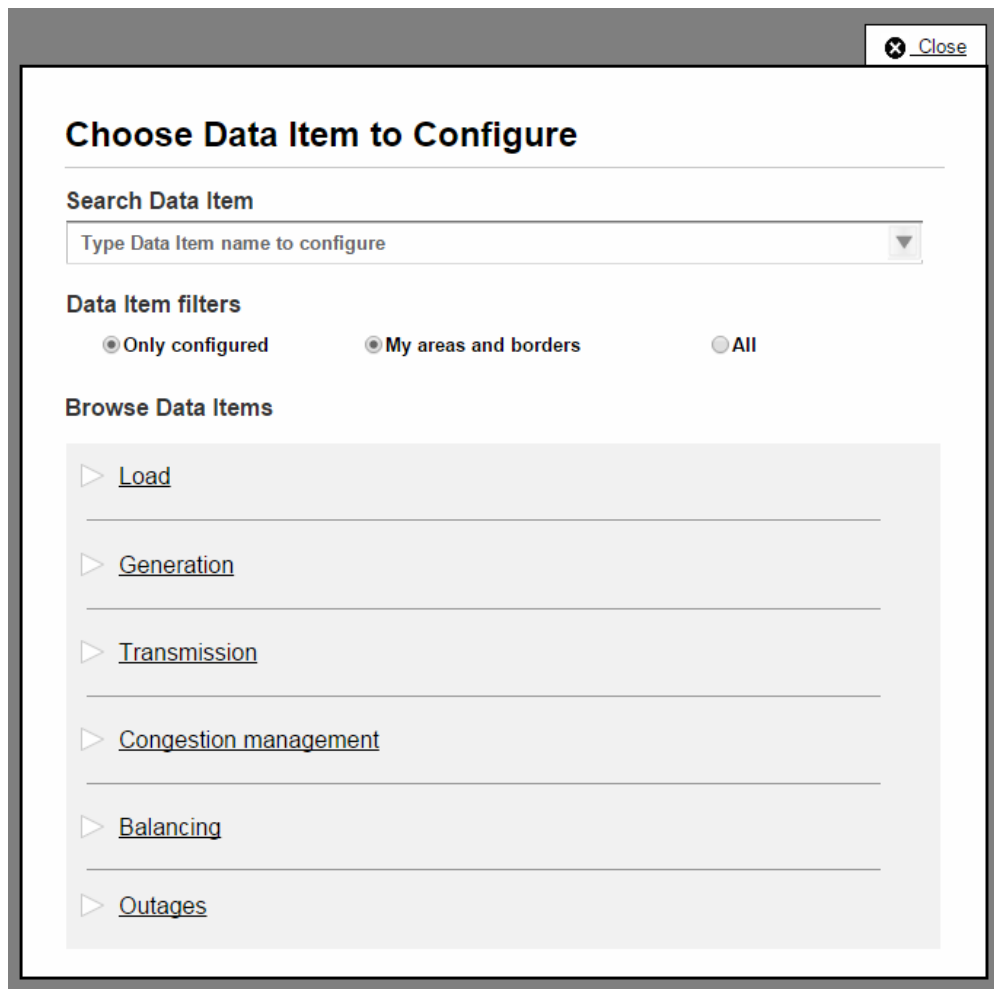


Figure 56

There are two ways to select a Data Item.

- > Selection from the list of related Domains

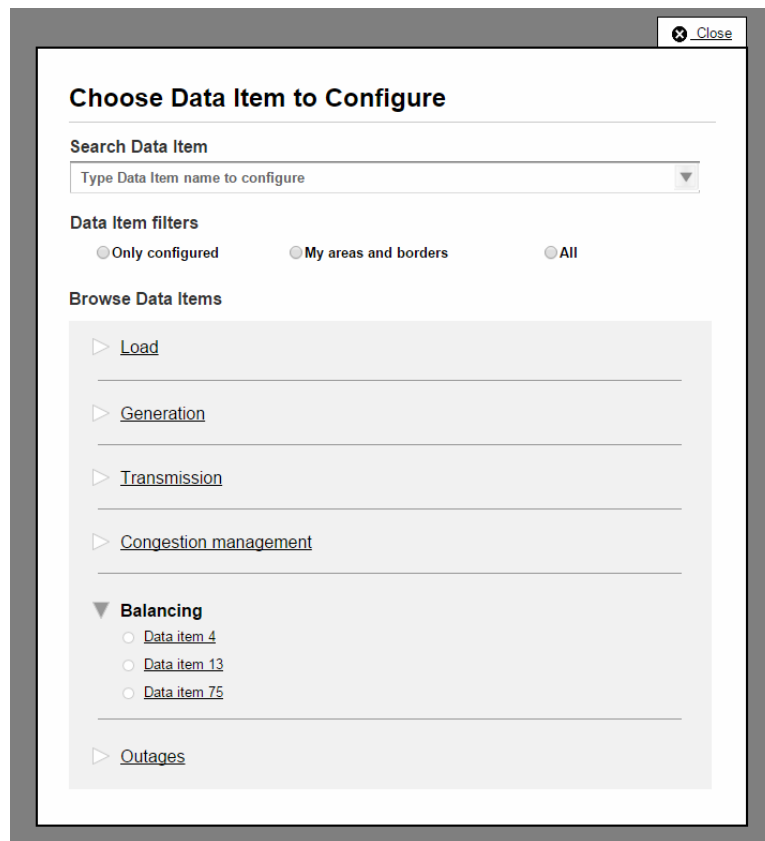


Figure 57

- > Search
 - Note that the characters you specify are searched for in the middle of Data Item names as well.

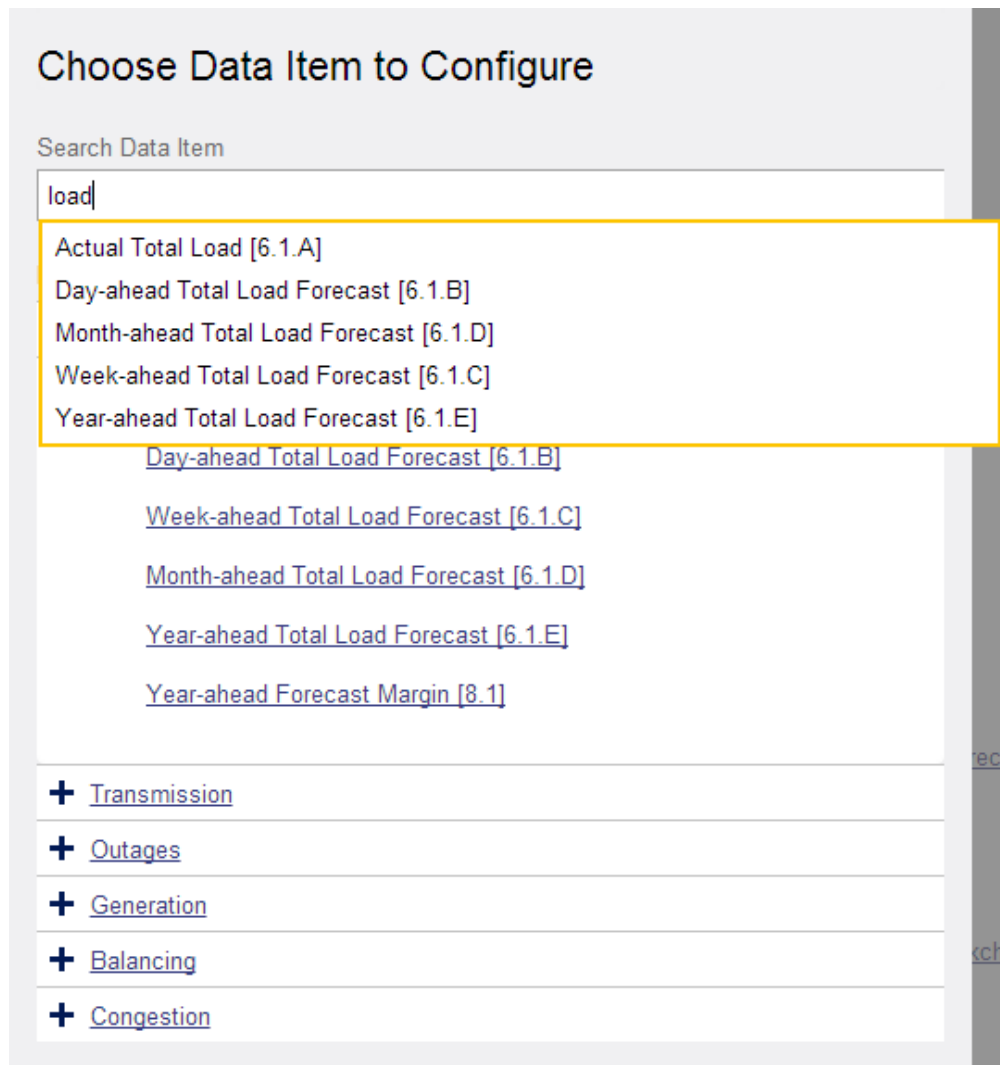


Figure 58

3.5.2 Business Dimensions

The Business Dimension is an important term in the configuration of the EMFIP system. Business Dimensions are sometimes considered the most important attributes of Data Items. Rules can be used to define special behavior for combinations of these attributes. These are usually called "Combinations of Business Dimensions".

The screen in the next Chapter provides a table listing many combinations of BDimensions. There can be a different configuration for each of them. For the Data Item "Physical Flows [12.1.G]", there are two BDimensions: InArea and OutArea (forming a border).

3.5.3 Inheritance of Configuration

The fact that the configuration can be inherited is an important part of the whole idea of the Matrix.

It should be stressed that **there is always a combination of BDimensions with the value ALL. The configuration for this combination of BDimensions affects all sub-configurations.**

In the following example, one Data Provider delivers data for all borders of Country CH (Switzerland). The Data Item has two BDimensions (In and Out Areas). It is possible to configure the Data Provider just once for the combination of BDimensions CH-ALL. All borders will have the same inherited configuration. It is not necessary to configure the same Data Provider for each border.

Physical Flows [12.1.G] [Change](#)

Domain: **Transmission** Show default values

In Area ▲ ▼	Out Area ▲ ▼	
BZNI CZ	ALL	+
BZNI CZ	BZNI DE-AT-LU	+
BZNI CZ	BZNI PL	+
BZNI CZ	BZNI SK	+
BZNI LV	ALL	+
BZNI LV	BZNI EE	+
BZNI LV	BZNI LT	+
BZNI ME	ALL	+
BZNI ME	BZNI RS	+
BZNI ME	BZNI BA	+

Rows per page: 10 25 50 100 1 2 3 4 5 > >>

Figure 59

The very same idea is used for Data Items that have more than two BDimensions. Note that in this case, the row with the value ALL in the second Business Dimension will affect not only all combinations with the second BDimension, but also with all values of the third BDimension.

Amount of Balancing Reserves Under Contract [17.1.B] (hourly) [Change](#)

Domain: **Balancing** Show default values

Market Balance Area ▲ ▼	Reserve Type ▲ ▼	Base Reserve Source ▲ ▼	
MBAJAT	ALL Affects all other combinations	ALL	+
MBAJAT	Automatic Frequency Restoration Reserve (aFRR)	ALL	+
MBAJAT	Automatic Frequency Restoration Reserve (aFRR)	Generation	+
MBAJAT	Automatic Frequency Restoration Reserve (aFRR)	Load	+
MBAJAT	Frequency Containment Reserve (FCR)	ALL	+
MBAJAT	Frequency Containment Reserve (FCR)	Generation	+
MBAJAT	Frequency Containment Reserve (FCR)	Load	+
MBAJAT	Manual Frequency Restoration Reserve (mFRR)	ALL	+
MBAJAT	Manual Frequency Restoration Reserve (mFRR)	Generation	+
MBAJAT	Manual Frequency Restoration Reserve (mFRR)	Load	+

Rows per page: 10 25 50 100 1 2 3 4 5 > >>

Figure 60

The following diagram describes the Inheritance of rules in terms of Time Validity.

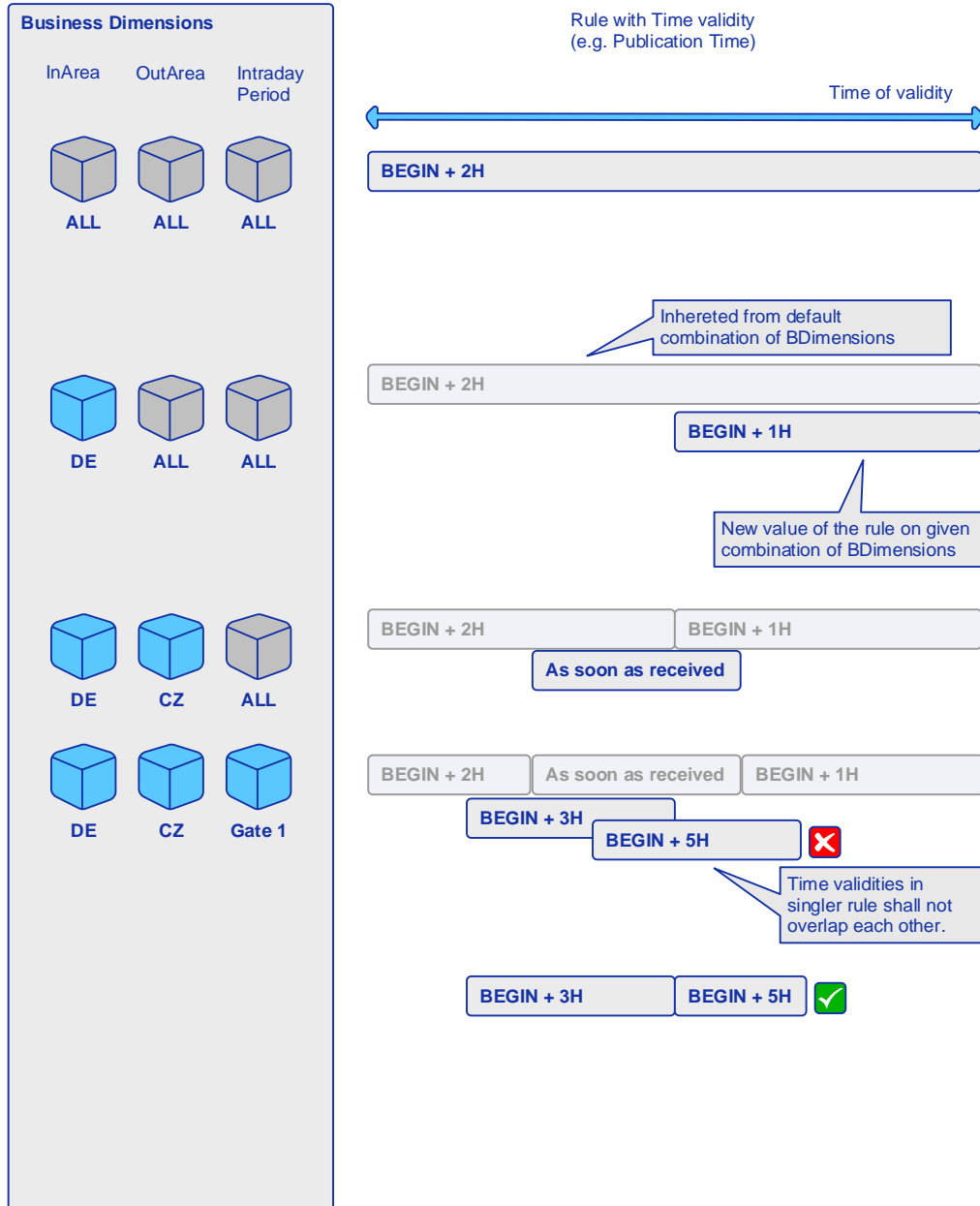


Figure 61

Another diagram for a special Data Provider rule (several other rules are associated with this rule).

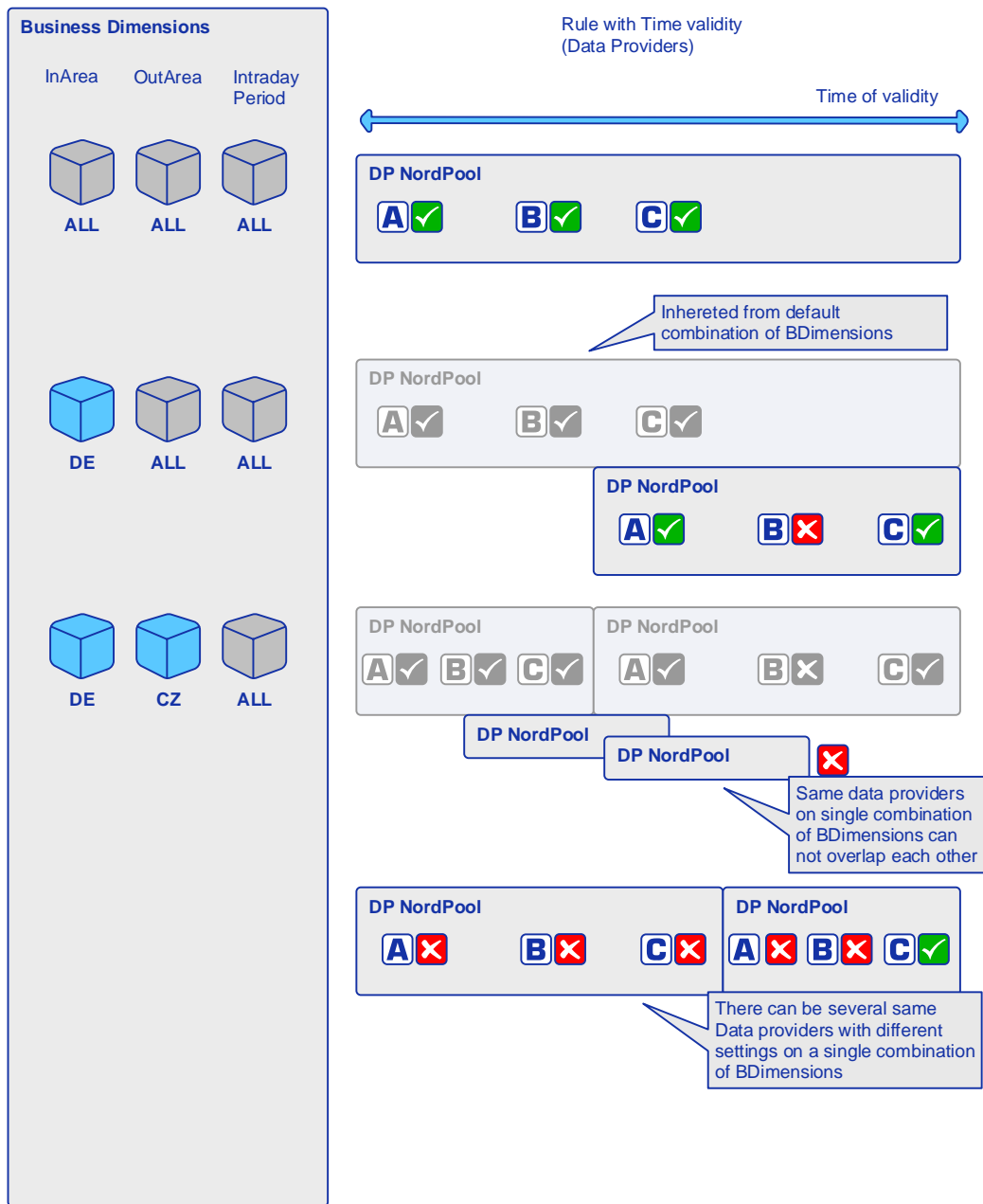


Figure 62

3.5.4 Rule-based Configuration

Configurations can be updated using Rules. A Rule defines behavior of data processing, displaying, monitoring or sending of messages.

For example, the “Gate Closing” rule defines values that are used by Monitoring. It specifies at what time the submission gate should close.

Rules defined on a level of Data Item

- > Values are internal and cannot be changed in GUI

- Time Aggregation – an internal rule that is not available on the screen. It manages aggregation from the Submission Resolution into Publication Resolution (for example submission is in PT30M and data should be published in PT60M). Typically set to SUM or MIN (for NTCs).
 - Be aware that there is no defined algorithm for aggregation of Price. Therefore Data Items that use price have to be submitted in the same resolution as in which they are published.
- Time Disaggregation (where applicable) – Data disaggregation follows the similar logic: if data is sent in for example Submission Resolution PT15M and the Publication Resolution is PT1M, disaggregation is performed based on the defined disaggregation Algorithm (AVERAGE, SAME)
- Monitoring – when set to “Off”, the monitoring of data delivery is not performed for the complete DI. This is used for example for Outages or some balancing Data Items.

Rules available to users are divided into three sections:

> Submission Gates and Publication

- Gate Opening – a rule that allows to set a relative time of the Submission Gate Opening. Data delivered before the gate is opened are accepted with warning. The relative time can be set with respect to the Beginning or End of Data Item Time Interval (MTU, day, month etc.)
- Gate Closing – a rule that allows you to set a relative time of the Submission Gate Closure. The relative time can be set with respect to the Beginning or End of Data Item Time Interval (MTU, day, month etc.).
- Publication Time – a rule that allows to set the Time of Data Publication. Similarly to the Gate Closing rule, the relative time can be set with respect to the Beginning or End of Data Item Time Interval. There is also the ASAP option (used in most of configurations), which indicates that the data should be available in the Data View as soon as the file is processed.
- Publication – Aggregation Completeness – a rule which defines whether values based on incomplete aggregation can be published. Settings “No” means that if value should be calculated as a SUM of four values but just three were delivered, the value is published anyway. It affects both aggregation of SubAreas/Sub-Borders and aggregation of Data Providers. When set to “No”, system will publish data even from single SubArea from single Data Provider.

> General

- Aggregation of SubAreas/SubBorders (SubDimension) Algorithms – a rule created for management of Aggregations. A typical example is the border DE-CZ, which actually consists of two borders: (DE(50HzT)-CZ and DE(TenneT)-CZ. This rule allows you to specify an algorithm to be used for aggregation. In this example, the SUM algorithm should be used, so that the complete border DE-CZ is correctly calculated. This functionality is closely related to Configuration link (also used for aggregations). Aggregation of Sub-Dimensions has to be set (value different from “none”) so that Configuration Link would be available.
- Aggregation of several Data Providers Algorithm – applicable when more than one Data Provider submits data for the same area or border and Time Interval. The Value Minimum is an example for managing the minimum calculation for NTC Data items. Nevertheless this rule is most typically set to “none” which means that priorities of Data Providers are used.
- Data Item Time Interval – The Data Item Time Interval defines the length of period that should be covered by data. It is a Time Dimension of the Data Item. The Time Dimension is important for Data Items of archetype “standard” because it is used for monitoring of data delivery. For example Physical flows [12.1.G] has Data Item Time Intervals set to MTU which means that system expects data for each Market Time Unit. Another case can be Week-ahead Total Load [6.1.C] with value of the rule set to Week which indicates that system monitor delivery of data for each week.

Note that Gates and Publication Time rules are related to this value. They use Beginning and End terms based on the value of Data Item Time Interval. When END + 1 day is set in Publication Time rule, the END means the end of Data Item Time Interval, for example a week.

- Publication resolution – this rule defines the number of rows to be displayed in a Data view. If the Publication resolution is PT15M, the Data View will typically show 96 rows in the Table view. **The submission**

resolution is aggregated into Publication resolution (for example, data can be delivered for every 30 minutes, but the Publication resolution can be P7D).

- Time Zone – The time zone from which the data is sent. For example, data from Belgium is sent in the UTC format, but its business meaning is related to the CET. This rule defines such a Time Zone.
- Price Type – a rule designed for several Data Items in balancing domain. It defines what meaning has the delivered price. The settings can be “Marginal” or “Average”
- Pricing Schema - a rule designed for Data Item 17.1.G. It defines whether values will be delivered with Resolution of Source Type (generation, consumption) or without resolution of Source Type.

> Data Providers

- The Data Provider rule consists of several other rules that are related to the Data Provider.
 - o Data provider name
 - o Priority – Priority 1 is the highest priority. Data from the Data Provider with the highest priority is published.
 - o Time Validity – interval in which the record of Data Provider is valid. The system will accept data only for this time interval from the given Data provider.
 - o Submission Resolution – the permitted resolution(s) in the XML file. If the delivered resolution is different from this settings, the file is rejected. Nevertheless there are some Data Items (with values delivered in curves) that do not use this validation because the Data view displays whatever resolution that is submitted.
 - o Missing Data Notification – When set to “No”, Problem Statement Documents are not sent to Data Provider even if expected data are missing in the platform.
 - o Warning Messages – When set to “No”, warning messages (e.g. too early submission) are not sent to Message board
 - o Netting – a rule designed just for Data Item “Physical flows”. It specifies if Data Provider deliver already netted or not netted values. Used for validations.
 - o Consumption Capacity Type (“How is capacity submitted?”) – rule designed for Data Items 10.1.A and 10.1.B (Outages in Transmission grid) where two options of submissions are possible. The first is available capacity. The other one unavailable capacity. Unavailable capacity is deducted from Installed capacity in the latter case (which creates the available capacity value).
- The Configuration Link also consists of several other rules. The Configuration Link is used only for aggregations
 - o Priority - Priority 1 is the highest priority. Data delivered by subject with higher priority are published. Priorities are not used if rule Aggregation of several Data Providers is set differently from “none”. Note that both Data providers and Configuration links can use priorities.
 - o Assigned SubDimensions are SubAreas or SubBorders in most cases. SubDimensions are offered mainly based on records in AreaToArea register. See the Configuration Link chapter for more details.

Rules can be changed for any combination of BDimensions. When this is done, the configuration defined for a given combination of BDimensions has priority over the inherited one.

See for example values of the Gate Closing rule. Two rules are available for the same time (with overlapping Rule validity), but the one on the second row is the original inherited rule (indicated by the info icon). The value on the first row is defined specifically for this combination of BDimensions and therefore takes precedence.

When the validity of the value on the first row expires (in May 2015 in our example), the inherited rule will start to apply to this Combination of BDimensions once again.

Gate Closing

Time Expression

Begin
Day + h: min
 -

Time Validity

From: To:

Note: Default settings is to infinity

Rule	Rule Validity	
Begin: D - 0 8 hours 0 minutes	31.07.2014 to Infinity	<input type="button" value="edit"/>
Begin: D - 1 6 hours 0 minutes	01.01.1900 to Infinity	<input type="button" value="info"/>

Rows per page 1

Figure 63

Rules can be edited when the pencil icon is available. These rights are assigned only to the Administrator. Rights for Data Providers are very limited in this case. A user from Data Provider can only update records relevant to his own Data Provider.

Physical Flows [12.1.G] [Change](#)

Domain: **Transmission** Show default values

In Area ▲ ▼	Out Area ▲ ▼	
BZN CH	ALL	+
BZN CH	BZN DE-AT-LU	-

Actual Rules Inherited rules Rules with different time validity

Submission Gates and Publication

Gate Opening ✎ Begin: D + 0 1 hours 0 minutes Valid: 01.01.1900 to infinity	Gate Closing ✎ End: D + 0 1 hours 0 minutes Valid: 01.01.1900 to infinity	Publication Time ✎ ASAP - received Valid: 01.01.1900 to infinity
---	---	--

Aggregation Publication Completeness: **Yes** [✎](#)

General

Aggr. per SubAreas/SubBorders: None ✎	Aggr. of several Data Providers : None ✎
Data Item Interval: MTU	MTU/BTU: PT60M
Publication Resolution: PT60M ✎	
Time Zone: CET/CEST ✎	

Data Providers

Data Provider 1: SWISSGRID	Valid: 29.07.2014 to Infinity	✎ ✕
Priority: 1	Submission Resolution: PT30M	

[Add Data Provider](#)

[Add Configuration Link](#)

Figure 64

There is the “Show Default Values” button located in the upper right corner of the Configuration Matrix. When selected, the Configuration Matrix shows the rules defined for this Data Item. These are the rules defined for a basic combination of BDimensions (ALL, ALL for two BDimensions).

3.5.4.1 Configuration Link

Designed only for aggregations and available only for Administrator. The button for creation is available (visible) **only if value of rule “Aggregation of SubDimensions” (SubAreas, SubBorders) is differently from “none”**.

The Configuration Link defines from which combinations of BDimensions (e.g. SubAreas or SubBorders) the value should be calculated. The picture below shows that area Germany (DE) can be constructed from four control areas.

Germany (DE) Close without saving changes

Add Configuration Link

Priority:

Time validity:

From: To:

Note: Default settings is to infinity.

Available borders/areas:

- CTA|DE(50HzT)
- CTA|DE(Amprion)
- CTA|DE(ENBW)
- CTA|DE(TenneT)

Associated borders/areas:

Figure 65

Administrator should select appropriate subDimensions (e.g. borders or areas) **from the list of Available** subDimensions and move them to the right column..

If no values are offered in the left column, there are no SubDimensions from which the value could be constructed. If there should be some, the registers AreaToArea or BorderToBorder should be updated first. Mainly these two registers are used for aggregations.

Note that configuration link cannot be saved empty (without selected SubDimensions).

Total Capacity Nominated

Total Capacity Nominated (12.1.B) is quite a complex when we speak about Configuration Link.

Sub-areas are available only on combinations with Total Contract type. There are two options how Configuration Link can be configured

- > To aggregate value for Total contract type CTA|AT - CTA|CH and then pass this value as input for Configuration link defined on level of Bidding Zone.

Option 1 – forwarding of aggregated data

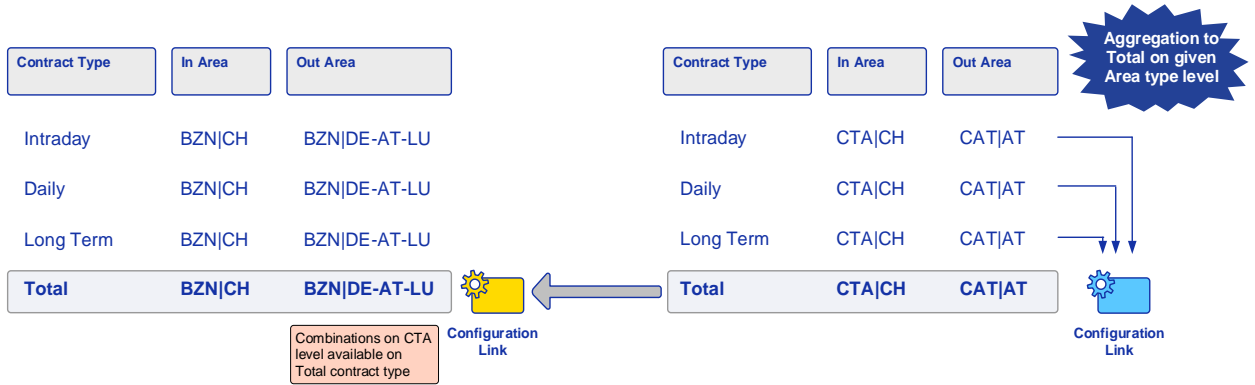


Figure 66

- > Configuration link defined on level of Bidding Zone (total contract type) will take data directly from Intraday, Daily and Long Term contract types on a level of Control Area (no aggregation to Total contract type on a level of CTA)

Option 2 – forwarding of original data

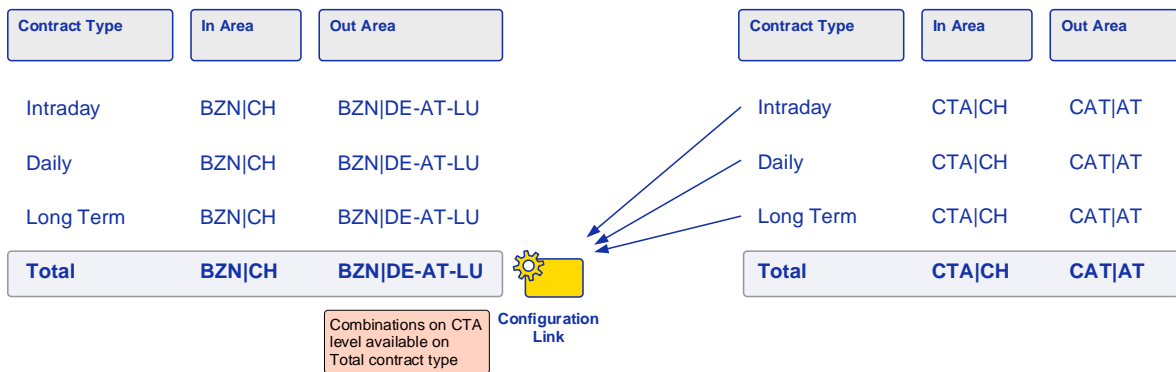


Figure 67

3.6 Manual Upload

All Human users with Data Provider role can access a screen where XML files can be uploaded manually using a browser. This type of upload can be used for example in cases where Data Provider’s integration channel does not work but deadlines for upload of data have to be met.

Application Management and Settings		Data Administration	Monitoring
Document Management System	Application Settings	Area Management	Data Item Monitoring
Update Static Content		Configuration Matrix	Data Flow Monitoring
Organization Management		Manage Reference Data	Gate Closure Monitoring
Role Management		Manual File Upload	Audit Log
Data Provider Role Management		Allocation Definition	System Unavailability
User Management		Allocation Calendar	

Manual File Upload

Manual upload of XML

Select xml file

Figure 68

3.7 Machine User Management

Machine User Management is designed for management of M2M (machine to machine) connections and it is available both for Platform Administrator on Organization Administrator (See also chapter Role Management). While the list of machine users is very similar to management of human users (see chapter Human User Management), the attributes and information needed for creation or update are different.

Machine users can be maintained by two roles:

- > Platform administrator (can manage machine users of all Organizations)
- > Organization admin (can manage machine users only of given Organization)

New Machine User

Name *

Channel Type *

Please select one (or more) of the data-sending channels.

ECP - ECP Endpoint Code:

FTPS ? FTPS Password:

Web service ? Pull Push

Endpoint:

Certificate:

Organization *

Description ?

* - required field

Create User

Figure 69

The name of the machine user is a unique identifier. It is recommended to include name of Data Provider in this field (e.g. APG_machine01). Created folders on FTP server would then be easily associated with Data Provider.

Description of Integration Channels is described in chapter Configuring Submission Channels.

3.8 Subscriptions

The functionality offers automatic download of ordered data. The feature can be used only by users with role “Subscriber” which can be assigned to any user by Administrator of the platform in Human User Management.

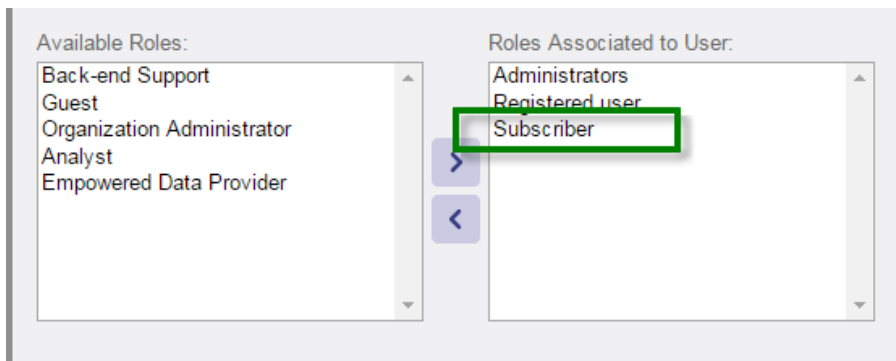


Figure 70

3.8.1 Management of Subscription Channels

The screen is designed for management of needed channels. Two types of channels are currently supported – ECP and WebService.

User can create several channels (instances) for a single type of channel, i.e. several connections using ECP type or several connections based on WebServices. As a result (one of possible use), user can own several WebServices (or ECPs) that will consume different types of data.

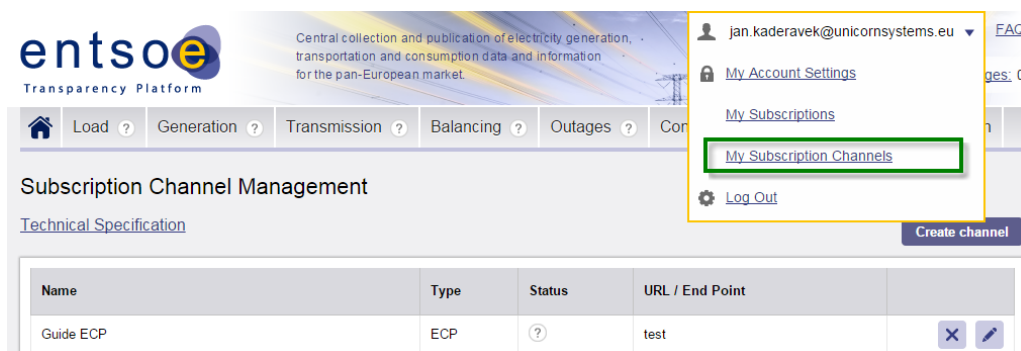


Figure 71

Creation, update and removal are supported. For definition of new channel the user has to fill in the name which will be later offered when subscription from Data View is triggered.

Channels of ECP type require insertion of EndPoint Code while records of WebService type require WebService URL address.

Figure 72

The Edit functionality enables change of any of originally saved attributes.

The table contains also column for a Status. The Status represents a functionality which check validity and correct working of given channel. Following states are available

State	Description
N/A	The Test button has not been used and channel has not been used for subscription yet. No information about status is available.
OK	Channel has been successfully tested or used.
FAILED	Test of channel or last subscription failed. Ten attempts to connect is performed. Then the channel is blocked and user is informed about this action in his Message Board. To unblock the channel and enable next ten attempts, change any attribute of the subscription or only save existing record without any change.

Be aware that Channel can be removed only in situation that it is not used in any subscription. User needs to remove related subscriptions or at least change their subscription channel.

3.8.2 Creation of New Subscription

The user subscribes data from a Data View using a link in the panel for functions. Note that the link is available only for users with needed role. Registered users with default rights cannot use this option.

Time	BZN/CZ	
	Day-ahead Total Load Forecast [MW]	Actual Total Load [MW]
00:00 - 01:00	7745	7660
01:00 - 02:00	7748	7626
02:00 - 03:00	7666	7512
03:00 - 04:00	7553	7399

Figure 73

A screen depicted below appears with following options

- > What Data Item Subscribe
 - All Areas/Borders for selected Area Type – this options enable user to subscribe all combinations of Business Dimensions (i.e. typically all borders or areas) in single Subscription. Currently selected filter is not taken into account. Be aware that we still speak about single Data Item. If the Data View consists of several Data Items, separate subscriptions have to be done to cover the whole content of Data View.
 - Only filtered data on Data view – this option will subscribe only data (of selected Data Item) that user has currently filtered.
- > Data Item to Subscribe
 - If Data View contains several Data Items, one of them needs to be chosen. If Data view consist just from one Data Item, the combo box automatically set the only item.
- > Subscription Reference
 - Description that can be inserted by user. Nevertheless the system offers automatic suggestion consisting from Article number of given Data Item in Regulation, Name of Data Item and selected filter on Data view
- > Valid From and Valid To
 - Defines since when the ordered data should be sent to user and optionally also end of data sending. This time is not related to time of business data. If an update of historical data (before Valid From date) is sent for subscribed Data Item, the data is still delivered to user.
 - Start date cannot be set to past. **Therefore it needs to be highlighted that it is not possible to order delivery of historical data** (the system prepares Subscribed data in time of Data Publication) **unless there are updates of data after the Subscription is set.**
- > When should data be send
 - Two options are offered. Immediately after the system publish them or once a day in 00:00 UTC
- > Select Subscription Channel - many values can be offered based on configured Subscription channels in screen "My Subscription Channels" available from the User area element.

If Subscription channel of ECP type is selected, the application offers option to insert Message Type – free text with limited length and structure (e.g. ActualLoad) that is displayed in ECP application in Message Type column. This allows to user describe each subscription and distinguish delivered data in ECP.

New Data Subscription

What data subscribe:*

All Areas/Borders for selected Area Type.

Only filtered data on Data View.

Data Item to subscribe:*

Actual Total Load [6.1.A]

Subscription Reference:*

6.1.A - Actual Total Load - BZN|HU

Valid from:*

13.04.2015

Valid to:

When should data be send:*

After data are published or updated

Changed data once per day (00:00 UTC)

Select subscription channel:*

Guide ECP

ECP Message Type:

6-1-A

Save subscription

Figure 74

3.8.3 List of Subscription

The List of existing Subscriptions is available after the user with Subscriber role in the User area element on the top of the page.

entsoe
Transparency Platform

Central collection and publication of electricity generation, transportation and consumption data and information for the pan-European market.

jan.kaderavek@unicornsyste.ms.eu

My Account Settings

My Subscriptions

My Subscription Channels

Log Out

Subscription reference ▲ ▼	Valid from ▲ ▼	Valid to ▲ ▼	Type ▲ ▼ ▼	Subscription channel ▲ ▼	
6.1.A - Actual Total Load - BZNICZ	11.12.2014 00:00	Infinity	Per update	TODO - correct channel setting	✕ ✎ +
6.1.B - Day-ahead Total Load Forecast - BZNICZ	12.12.2014 16:55	Infinity	Time: 00:00 UTC	TODO - correct channel setting	✕ ✎ +
6.1.A - Actual Total Load - BZNIHU	13.04.2015 18:59	Infinity	Per update	Guide ECP	✕ ✎ +
6.1.B - Day-ahead Total Load Forecast - BZNIHU	13.04.2015 19:11	Infinity	Per update	Guide ECP	✕ ✎ +

Items per page 10 25 50 100 1

Figure 75

The list of subscribed items enable to see details about what is actually ordered together with possibility to remove or update the subscription.

The Edit functionality is however limited. It is not possible to change Data Item or filters. Only following updates can be done:

- > Subscription Reference (user's label for Subscription]
- > Validity start and end can be changed
- > Time of delivery can change from immediate to once a day or vice versa
- > Channel can be changed (ECP / WS)
- > Message Type (text description of content in case of ECP channel type)

3.8.4 Deactivation of subscription definition

The subscription Definition can be Deactivated via My-Subscriptions UC by selecting the delete button. The subscription can also be deactivated by Setting the end date via using the EDIT UC in the Subscriptions Data View.

Special case of deactivation:

Apart of the common deactivation the definitions are also deactivated when the subscription rights are removed from the user. In the case of the subscriptions That are currently valid, the Subscription definition shall obtain the end date according to the date of the removal of the right. In case that the right is removed, and the user has Subscription definitions that are not active yet, these definitions shall be removed.

Note that by the removal of subscription rights is meant the subscription privilege, not the subscriber role, the privilege can be contained in multiple roles, apart of the subscriber, it also is Administrator role and a Back-end support, which is a child of Administrator.

The basic flow is the following:

When a role that contains subscription, privilege is removed from the user, the system checks, whether there are any other roles left that contain subscription privilege, so in case that a subscriber role is removed, but the user still has for example the Administrator role, no subscriptions should be deactivated. But if there are no such roles left, the deactivation will be performed.

3.9 Message Board

The Message Board is available only to user with specific user Role

> Organization Administrator

- Users in this role (even several users of given Organization can have this role) are informed about missing data (data not delivered after delivery deadline) and warnings (exceptional situations like forced outage announced in advance). To receive these messages, rules “Missing Data Notifications” and “Warning Messages” has to be sent to value “Send” on given Data Item, Combination of business dimensions (e.g. area or border) and Data provider.

> Subscriber

- Users having their own subscriptions using WebService with Push method are informed in case that their channel could not be used for subscription. Number of available attempts is included.
- Users having their own subscriptions using WebService with Push method are informed in case that their channel would be failed due to unavailability of their systems.
- Users having their own subscriptions using WebService with Push method are informed in case that their channel would be disabled/blocked due to unavailability of their systems.

> Reporter

- User who triggers creation of new report is informed by message in Message board when the Report is generated and available for download.
- User who triggers creation of new report is informed by message in Message board when generation of the Report fails.

The screen of Message Board is opened via link “New messages” in the header of the page. The link is accompanied by a number indicating amount of unread messages.

Rows in the list can be expanded and details provide additional information. When report is correctly created, the message also contains a link for direct download.

Central collection and publication of electricity generation, transportation and consumption data and information for the pan-European market.

jan.kaderavek@unicornsyste.ms.eu [FAQ](#)

New messages: 0

Home Load ? Generation ? Transmission ? Balancing ? Outages ? Congestion Management ? Administration

Message Board Refresh All

<input type="checkbox"/>	Source ▲ ▼	Subject ▲ ▼	Creation Date ▲ ▼	Type ▲ ▼	
<input type="checkbox"/>	Reporting	Generation of report "Test Exports" failed	31.03.2015 11:18	ERROR	–
Generation of report "Test Exports" failed with following error: Cannot get result set.					
<input type="checkbox"/>	Reporting	Report "Monthly Report" created	31.03.2015 10:55	INFO	–
Report "Monthly Report" was successfully generated. You can download it from MonthlyReport.xlsx or from DMS folder "Reporting/Report". You can also find the report in section Ad-hoc Reporting in Administration menu.					

Figure 76

User can set in its settings on “My Account Settings” screen if he/she wants to receive e-mails with summary of events in Message Board. When this option is enabled, the user receives e-mail to the address which was used for registration.

Single e-mail is sent every hour, but only in case that there was at least one message in Message Board during last hour. Otherwise no e-mail is sent to user. Already reported messages are not included again, only new messages in given hour are included in the e-mail summary.

The screenshot displays the 'My Account Settings' page for a user named Jan Kadeřávek. The page is divided into several sections:

- Personal Information:** Fields for Title, First Name (Jan), Last Name (Kadeřávek), Mobile Phone Number, and Office Phone Number.
- Login Information:** Fields for Email Address (jan.kaderavek@unicornsistemas.eu) and Current password.
- Competency:** Lists roles: Registered user, Administrators, Report Viewer, Reporter, and Report Template Creator. The organization is Statnett. A 'Show privileges' button is present.
- Message Notification:** A checkbox labeled 'Notify me about new messages by email' is visible.

A dropdown menu is open, showing options: 'My Account Settings', 'My Subscriptions', 'My Subscription Channels', and 'Log Out'.

Figure 77

3.10 Email Message

E-mail message has the similar content as the internal message. Message will contain basic summary about number of events providing link directly to Message Board so that details of Messages could be checked.

The E-mail message consists of:

- > Do-not-reply warning
- > Information that the message was delivered according to the settings in ENTSO-E TP
- > Table with numbers of messages grouped by Message source (table depicted below)

Message source	Number of messages
Missing Data Notifications	<u>15</u>
Subscriptions	<u>3</u>
XML file Validations	<u>32</u>
Acknowledgements	<u>160</u>

Note that precondition of email notification is following:

- > A user has checked the “Message Notification” checkbox in their My Account Settings.

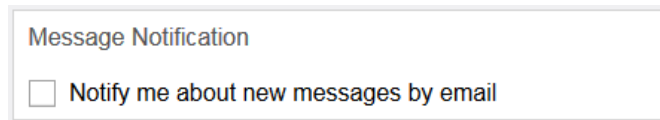


Figure 78 – Message Notification section in My Account Settings

The Email Message notifications are available only to users with specific user Role

- > Subscriber
 - Users having their own subscriptions using WebService with Push method are informed in case that their channel would be has been disabled due to unavailability of their systems.
 - Users having their own subscriptions using WebService with Push method are informed in case that their channel would be has been enabled due to unavailability of their systems.

3.11 Web API

Web API is another interface for downloading of data from Transparency platform. The main reason for its creation was a fact that consumers of data often created robots that accessed web sites and by frequent demanding downloads caused performance issues of Transparency platform web. Offering API to providers should help to solve the issue.

Web API needs to be first enabled before it can be used. This can be done only by administrators of the platform. End users need to request access to web API by sending email to TP helpdesk, indicating the user ID that should be granted access. Both Human and Machine can use the Web API.

Once access to web API has been granted by administrators, system generates a Web API Security Token which has to be used for the communication via API.

Tokens will be displayed for Human users after login in section My Account settings.

For Machine users the Token is visible in detail of Machine users in Machine User Management. Be aware that this screen is available for Organization Administrators only.

My Account Settings

Personal Information

Title

First name * Last name *

Mobile Phone Number + 420 Office Phone Number + 420

Login Information

Email Address *

Password * Repeat your password to confirm *

Additional Account Settings and Information

Country ? Preferred Timezone ?

Position and Responsibilities ?

* - required field

Competency

Roles: Analyst
Data Provider
Organization: CEP5

Web API Security Token

255976e4-4aea-45b7-ab8a-1969d84f226c

Figure 79 - Web API Security Token for Human users in My Account Settings screen

Machine User Management Create new machine user

User ▲▼	Organization ▲▼	Status ▲▼	
weps@emfip.test	WEPS	Active	⊘ × ✎ +
tso-cyprus@emfip.test	Cyprus TSO	Suspended	⊘ × ✎ +
terna@emfip.test	Terna	Suspended	⊘ × ✎ -

General Information		Integration Channels	
Name: <u>terna@emfip.test</u>	Organization: Terna	ECP: TER	FTPS: configured
Web API Security Token		Web service: Pull	
255976e4-4aea-45b7-ab8a-1969d84f226c			
Description			

Name	Organisation name	Status	
Name	Organisation name	Active	⊘ × ✎ +
Name	Organisation name	Suspended	⊘ × ✎ +
Name	Organisation name	Active	⊘ × ✎ +
Name	Organisation name	Suspended	⊘ × ✎ +
Name	Organisation name	Active	⊘ × ✎ +
Name	Organisation name	Suspended	⊘ × ✎ +
Name	Organisation name	Active	⊘ × ✎ +

Rows per page: 10 25 50 100 1 2 3 - 15 Next >>

Figure 80 - Web API Security Token for Machine users in Machine User Management

The **complete documentation** for use of Web API is publicly available as one of links in the Help page of Transparency platform.

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Login ? Help page

Home Load ? Generation ? Transmission ? Balancing ? Outages ? Congestion Management ? Data Pre-5.1.15

Figure 81 - Documentation of Web API available on Help page

3.12 CACM section

The CACM domain is available under Administration > CACM. This is due to CACM section being accessible to *Platform administrator* and *Back/end support (vendor)* and users with a dedicated privilege CACM viewer All or CACM viewer Own. only.

Platform administrator and *Back/end support (vendor)* CACM viewer All:

- Users with these roles will be able to see CACM data on CACM data-views, CACM submission in the DFM, submissions in ADFM, DIM and GCM records.

Data provider with CACM viewer Own:

- These users will be able to see data on CACM data-views published by their own organization, CACM submissions submitted by their own organization in DFM, DIM and GCM.
- These users will not be able to see ADFM submissions as data in ADFM don't have a distinguishable organization that originated the submission.



Figure 82 - CACM section

3.13 Bid Archiving

The bid archiving procedure removes data from live storages after the retention period. Curve data are transformed/exported into XML files that are compressed into ZIP files form and moved to new DMS. The detail procedure is described further in the following chapters.

3.13.1 Archiving Procedure

The standalone tool is repeatedly launched once a day. The following steps describes the procedure:

1. At a beginning of the procedure each bid is stored separately. Delivery period of each bid is used to **identify bids** for archiving:
 - $\text{Delivery_Period_End} + \text{Retention_Period} > \text{Current_Date_And_Time}$ – bid to be archived
 - $\text{Delivery_Period_End} + \text{Retention_Period} \leq \text{Current_Date_And_Time}$ – bid inside retention period
 - Note:
 - the data cannot be submitted/changed after retention period (for archived bids)

- it is recommended to use retention period for archiving 1 day longer than retention period checked by validation that ensures data are not submitted/changed after retention period. This will guarantee correct archiving of data in case of delay in publication.
- 2. The tool identifies group of bids according to their dimensions – see chapter structure of archived data.
- 3. XML and ZIP files are created
 - The selected bids are **exported using standard XML functionality**.
 - Tool **creates and store ZIP archive** in dedicated NFS, archive is properly linked to be downloadable through Balancing energy bids data view.
 - Metadata of ZIP archive are stored
- 4. The tool **cleans up** individual storages. Bid data are removed from databases and filesystem.
- 5. Tool **moves Data flow files** to dedicated NFS. All incoming XML files are stored in Data flow folder for audit purposes. These files are accessible in the platform via DMS use case. Bid XML files are moved to new NFS. To ensure their accessibility, new NFS is mounted to current DMS use case
- 6. The record is removed in case of successful archiving performed.

Details are needed, regarding what audit data will be moved.

3.13.2 Structure of Archived Data

The tool uses standard XML export to create several XML files that are compressed into one archive file.

- > Exported XML files have the same combination of attributes
 - Direction
 - Type of product
 - Complexity (optional attribute – to be omitted if not available)
 - Status
 - Example: *Up_Standard_Exclusive_Available.xml*
- > Bids are grouped by their dimensions
 - Area
 - Reserve type
 - Delivery period
 - Example: *SCA-CZ_aFRR_201810180000-201810201200.zip*

Folder structure of the archived data:

- > `/emfip-archiving/storage/[Year]/[Month]/[Day]/Balancing/BALANCING_ENERGY_BIDS`

The following example depicts the structure of archived data. SCA-CZ_RR_202002120000-202002120600 folder may contain up to 64 (Direction, Type of product, Complexity, Status combinations) XML files:

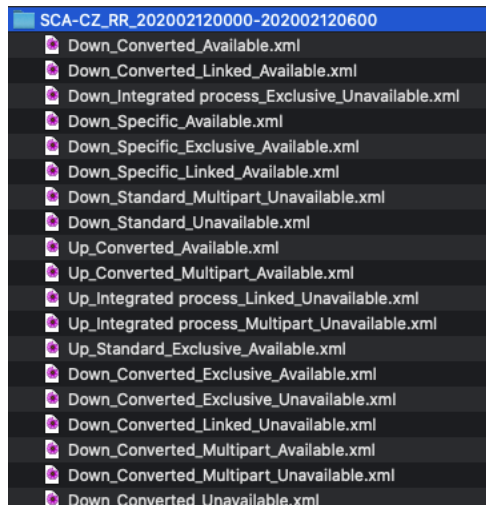


Figure 83: example of the archived data

3.13.3 Displaying in Data View

The available ZIP archives are displayed according to filters:

- > Day and Time Range – selected timestamp has to be in Delivery period of ZIP archive inclusively
- > Area
- > Reserve Type

Balancing energy bids ?

Balancing energy bids [GL EB 12.3.B&C]

Day and Time Range
18.02.2020

Scheduling Area

Area

Czech Republic (CZ)

SCA|CZ

Reserve Type

aFRR ?

mFRR ?

RR ?

Direction

Type of Product

Status

Complexity

Show fullscreen

SCA CZ						
Bid ID	Delivery Period Start-End	Reserve Type	Direction	Type of Product	Complexity	Status
1	18.02.2020 01:00 - 18.02.2020 07:00	RR	Down	Converted		Available
Validity Period						
13.11.2019 00:00 - 13.11.2019 03:00 (CET)						
		From	To	Volume [MW]	Price [EUR / MWH]	
		18.02.2020 01:00 (CET)	18.02.2020 01:15 (CET)			
		18.02.2020 01:15 (CET)	18.02.2020 01:30 (CET)			
		18.02.2020 01:30 (CET)	18.02.2020 01:45 (CET)			
		18.02.2020 01:45 (CET)	18.02.2020 02:00 (CET)			
		18.02.2020 02:00 (CET)	18.02.2020 02:15 (CET)	1	11.00	
		18.02.2020 02:15 (CET)	18.02.2020 02:30 (CET)	434	1666.00	
		18.02.2020 02:30 (CET)	18.02.2020 02:45 (CET)	55	322.00	
		18.02.2020 02:45 (CET)	18.02.2020 03:00 (CET)	70		
		18.02.2020 03:00 (CET)	18.02.2020 03:15 (CET)			
		18.02.2020 03:15 (CET)	18.02.2020 03:30 (CET)			

10 20 50 100
1 2 3 > >>

Export

Balancing energy bids [GL EB 12.3.B&C]

XML
XLS
CSV

Items per page 10 25 50 100
1

Figure 84: Balancing energy bids before archiving

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ceps@emfip-test.eu

Home Load ? Generation ? Transmission ? Balancing ? Outages ? Congestion Management ? System Operations ? Administration

Balancing energy bids ?

Balancing energy bids [GL EB 12.3.B&C]

Scheduling Area Day and Time Range: 11.02.2020

Area: Czech Republic (CZ) SCA|CZ

Reserve Type: aFRR ? mFRR ? RR ?

Direction: +

Type of Product: +

Status: +

Complexity: +

SCA CZ						
Bid ID	Delivery Period Start-End	Reserve Type	Direction	Type of Product	Complexity	Status
No data found for criteria selected						

SCA CZ		
Delivery Period		Archived files
Start	End	
12.02.2020 00:00	12.02.2020 06:00	SCA-CZ_mFRR_202002120000-202002120600.zip
12.02.2020 00:00	12.02.2020 06:00	SCA-CZ_aFRR_202002120000-202002120600.zip

Rows per page: 10 25 50 100 1

Figure 85: Balancing energy bids after archiving

The screenshot shows the 'Balancing energy bids' page on the entsoe Transparency Platform. The page is titled 'Balancing energy bids [GL EB 12.3.B&C]' and includes a 'Scheduling Area' dropdown set to 'Czech Republic (CZ)' and 'SCA|CZ'. The main content area displays a table of bids with columns: Bid ID, Delivery Period (Start-End), Reserve Type, Direction, Type of Product, Complexity, and Status. A single bid is shown with ID 1, a delivery period from 14.02.2020 01:00 to 20.02.2020 07:00, Reserve Type RR, Direction Down, Type of Product Converted, Complexity Exclusive, and Status Available. Below the table, there are options for 'Items per page' (10, 25, 50, 100) and a 'Show fullscreen' button. A second table, titled 'SCA|CZ', shows 'Archived files' with columns for 'Delivery Period' (Start and End) and 'Archived files'. Three rows of archived files are listed, each with a delivery period from 14.02.2020 00:00 to 14.02.2020 06:00 and a corresponding zip file link. The interface also includes a sidebar with filters for Reserve Type (aFRR, mFRR, RR), Direction, Type of Product, Status, and Complexity.

Figure 86: Balancing energy bids - both data in retention period and archived data displayed

3.13.4 Data Repository

The archived data are available via data repository channel. The query for live data is the same as for archived:

- > DocumentType A37
- > ProcessType A51 A47 A46
- > Area_Domain
- > TimeInterval

3.13.5 Operation and Monitoring

The archiving tool is operated by the TP maintenance team. It is automatically launched based on configuration (cron expression). The configurability allows to modify tool usage according to the current needs of a given environment

(number of values, load of system, available time slot for archiving). Duration of retention period is configuration parameter as well. The following default setting is considered:

- > Launch frequency: once a day
- > Launch timing: 02:00
- > Retention period: 31 days

The archiving process is monitored via the standardized Zabbix tool. Specific triggers will be set by M&S in order to be notified via email.

- > Zabbix tool will monitor DataltemArchivingGroup collection in MongoDB once a day (for example 10 AM). A notification is sent if the collection contains at least one metadata document with ArchivingState different from FOR_ARCHIVING state after archiving has been performed. I.e. if the tool is not running and one of ARCHIVE_CREATED, AUDIT_MOVED, DATA_FLOW_MOVED, CURVES_DELETED, DETAILS_DELETED, PUBLICATION_DELETED, RELATIONAL_DELETED states is found. It indicates that archiving has not been completed successfully. Moreover, it determines which step of archiving procedure failed.
- > Zabbix tool will monitor a process of the archiving tool. The check is performed periodically (e.g. each 30 minutes). A notification is sent as soon as inactive process is detected. It indicates that the archiving tool is not running (it is not ready to perform archiving in defined time).

4. PART 2: ADMINISTRATION FOR ADMINISTRATORS ONLY

This part of the Guide describes the administration activities available only to Administrators. Data Providers may not access them.

4.1 Monitoring

Monitoring provides Administrators with an overview of Subscription Monitoring.

4.1.1 Subscription Monitoring

Subscription Monitoring contains the overview of all subscriptions defined in the system.

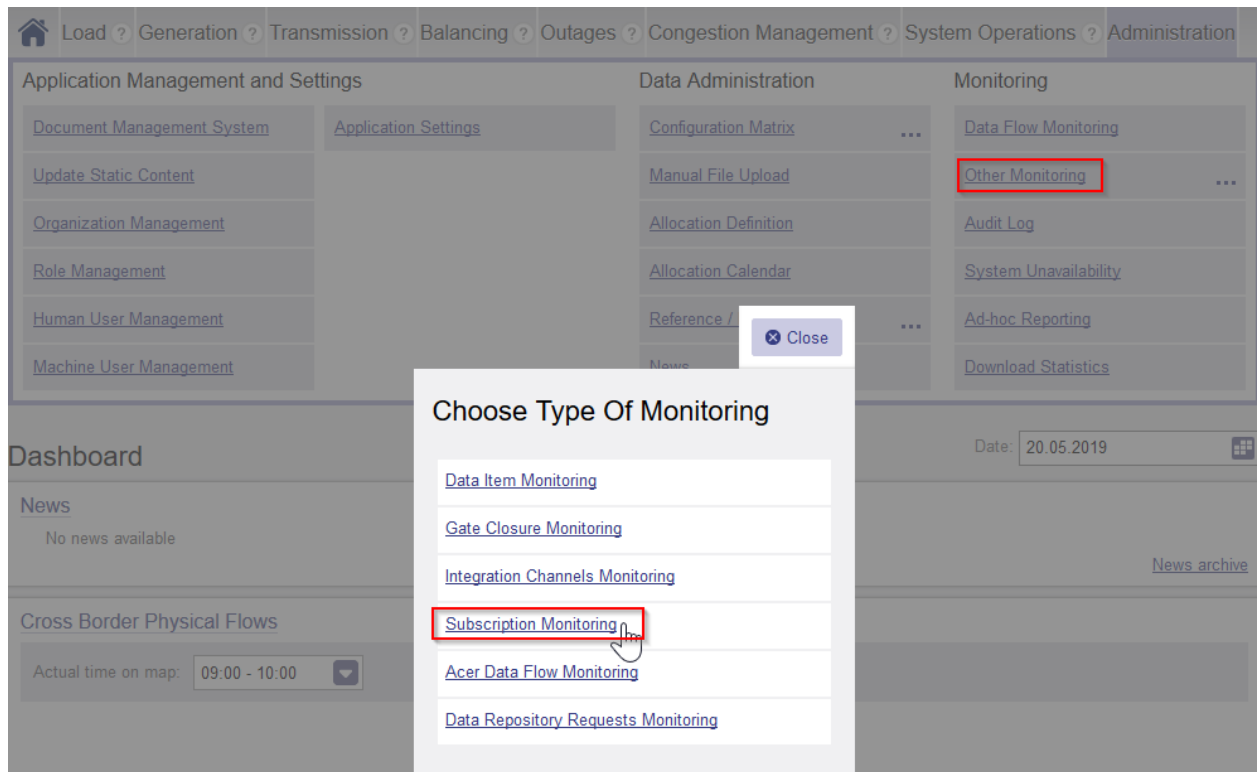


Figure 87 - Subscription Monitoring menu

4.1.1.1 Subscription Monitoring Overview

The UC is executed from *Administration* section, *Other Monitoring* subsection.

Subscription Monitoring

Organization	User	Channel type	Frequency	Domain	Data item	Valid from	Valid to	Last activity	State
N/A	pavel.michalicek@unicornsistemas.cz	Web Service	Per Update	Transmission	Total Commercial Schedules [12.1.F]	2019-09-23 14:38 UTC	2019-11-28 00:00 UTC	N/A	Unknown

Threshold [h]

24.0

Total Data Volume [MB]

0.0

File count

0

Subscription channel

Name

test

Endpoint

<https://tptest.free.beeceptor.com>

Failed attempts on channel

2019-11-27 12:02 UTC
2019-11-27 12:02 UTC
2019-11-27 12:02 UTC
2019-11-27 12:02 UTC

10 25 50 100 1

Retry mechanism test channel history

2019-11-27 14:02 UTC	NOK
2019-11-27 16:02 UTC	NOK
2019-11-27 18:02 UTC	NOK
2019-11-27 20:02 UTC	OK
2019-11-27 22:02 UTC	NOK
2019-11-28 00:02 UTC	NOK
2019-11-28 02:02 UTC	OK
2019-11-28 04:02 UTC	OK
2019-11-28 06:02 UTC	NOK
2019-11-28 08:02 UTC	NOK

10 25 50 100 1 2 > >>

Test channel connection

Figure 88 - Subscriptions Overview I

Organization	User	Channel type	Area	Valid from	Valid to	Last activity	State	
N/A	tamas.borbath@entsoe.eu	Web Service	#ALL#	2019-03-20 12:43 UTC	Infinity	2020-01-31 11:23 UTC	Active	

Threshold [h]	108.6
Total Data Volume [MB]	0.06748485565185547
File count	49

Subscription channel

Name	centOS_test
Endpoint	http://194.78.48.248:8080/axis2/services/ServiceEME?wsdl

Failed attempts on channel

No data

Retry mechanism test channel history

2019-12-23 16:02 UTC	OK
2019-12-23 18:02 UTC	OK

10
25
50
100
1

Test channel connection

Figure 89 - Subscriptions Overview II

4.1.1.2 Subscription Monitoring Edit

The UC is executed by clicking on edit icon (pencil icon).

The screenshot shows a web form titled "Edit Monitoring" with a "Close without saving" button in the top right corner. The form contains the following fields and controls:

- "Weight constant *": A dropdown menu with the value "0,1" selected.
- "Threshold *": A dropdown menu with the value "20,8" selected.
- "Monitoring enabled": A checked checkbox.
- A note: "* required field".
- A "Save changes" button at the bottom.

Figure 90 - Subscription Monitoring Edit

An error notification connected to the validation failure can be seen in the printscreen below.

The screenshot shows the same "Edit Monitoring" form as Figure 90, but with validation errors. The "Close without saving" button is still present. The fields and controls are:

- "Weight constant *": The dropdown menu is empty, and a red error message below it reads "Must be a positive number or 0".
- "Threshold *": The dropdown menu is empty, and a red error message below it reads "Must be a number higher than 0.1".
- "Monitoring enabled": An unchecked checkbox.
- A note: "* required field".
- A "Save changes" button at the bottom.

Figure 91 - Subscription Monitoring Edit (error)

4.1.1.3 Definition of terms

The following terms are used in Subscription Monitoring:

- > *Weight Constant*
 - The significance of the last measured period between two subscription uses in Threshold calculation.
- > *Threshold*
 - The expected maximal period length in hours between two uses of a subscription.
- > *Monitoring period*
 - The monitoring period is a global settings value, it represents the length of one monitoring cycle in hours.

4.1.1.4 Status

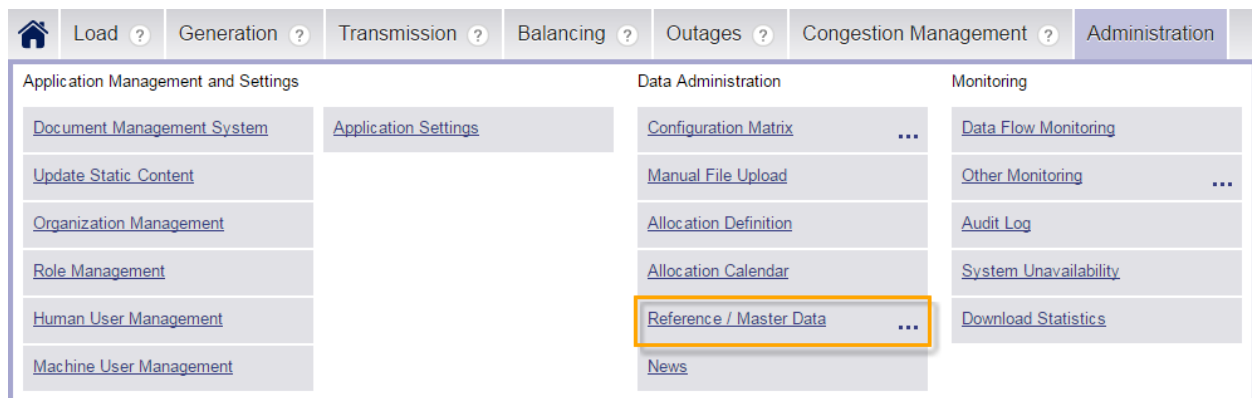
- > Status of subscriptions is highlighted
 - Subscriptions with last activity inside the threshold period are highlighted in green.
 - Subscriptions without activity for longer than one threshold period are highlighted in yellow.
 - Subscriptions without activity for more than twice the threshold period are marked **inactive** and highlighted in red.

- > Subscriptions with disabled channel (due to too many unsuccessful connection attempts) are marked by grey background.

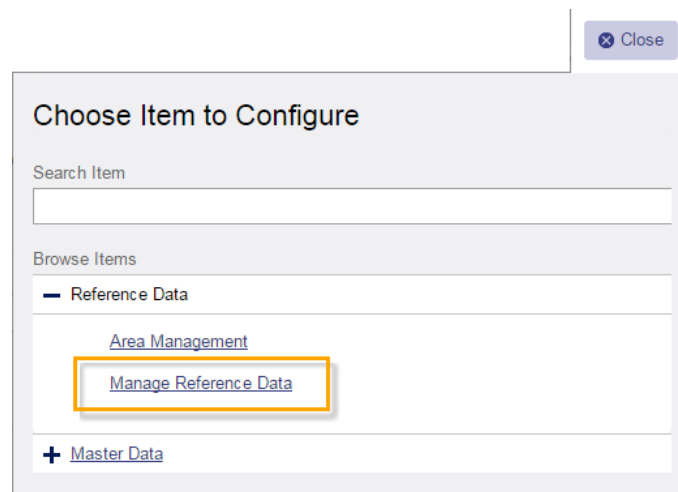
4.2 Managing Reference Data

These are more or less complex lists which are also used as inputs for the system configuration.

Most of the reference data is administrated via XML. To open the Manage Reference Data overview, go to the Administration menu and choose Reference / Master Data.



A modal window appears. Select Reference Data and then Manage Reference Data option.



Reference Data can be edited or downloaded.

- > Download reference data
 - To download the data, select the "Download Reference Data" radio button, then select the required reference data, and click the "Download reference data" button.
- > Change reference data
 - If you want change reference data, select the "Change Reference Data" radio button and click the "Browse File" button. Select the file with updated reference data and click the "Upload reference data" button.

- Typically, the administrator will download the reference data first. This data will be updated (configured) in an XML editor and then the updated XML file will be uploaded using the Change Reference Data option. **The system automatically loads the changed reference data and starts to use it immediately.**

Manage reference data

Change Reference Data Download Reference Data

Choose reference data

Acquiring Connecting Area

Select xml file

Figure 92

Manage reference data

Change Reference Data Download Reference Data

Choose reference data

Acquiring Connecting Area

Acquiring Connecting Area
Area
Area to area
Area to time unit
Border - Bidding Zone
Border - Control Area
Border - Country
Border - Market Balance Area
Border Code
Border To Border
Border to time unit
Capacity product
Currency

[Log out](#) · [FAQ](#) · [Sitemap](#) · [Glossary](#) · [About ENTSO-E](#) · [Contact Us](#)

Designed and Developed by Unicorn Systems a.s.

Figure 93

The system contains a large number of Registers. Most of them are internal and their unauthorized editing might cause serious troubles. Therefore, only those Registers which are expected to be edited by administrators are displayed. Internal Registers are managed by the Second Level Support of the system.

Register	Description
Acquiring – Connecting Area	Register for 17.1.J Data Items, The content creates combination of Business Dimensions
Acquiring – Connecting Area LFB	List of Acquiring – Connecting Areas (LFB type)
Area	List of all available areas of all area types. One of basic registers.
Area MTU & BTU	Market Time Units (or Balancing Time Unit for Market Balance Areas) for each area. Data are used for deadlines. Gate Closing rule in Configuration Matrix use these values in some cases.

Area to Area	Hierarchical relationships among areas. Used for aggregations.
Area type	List of Area types
Border Code	Border codes mapped to codes of bordering areas.
Border MTU	Similar to Area MTU&BTU, just for borders.
Border – Bidding Zone	List of borders between areas of Bidding Zone type
Border – Bidding Zone Aggregation	Bidding Zone Aggregations
Border – Control Area	List of borders between areas of Control Area type
Border – Country	List of borders between areas of Country Area type
Border – Market Balance Area	List of borders between areas of Market Balance Area type
Border To Border	Similar to Area to Area, just for borders.
Capacity Product	List of Capacity products that are available for Allocation Definitions and Instances in Allocation Calendar.
Currency	List of currencies
Currency for country	Combined register that defines which currency is used for which country
Currency for border	Combined register that defines which currency is used for which border
Organization Type	Auction Office, Transmission System Operator, etc.
Time zone	List of Time zones

Table 3

4.3 Managing Master Data

The Release 2.0 enable management of Master data (Transmission Assets, Consumption units, Production & Generation units) only via XML upload. See the corresponding Implementation Guide and XSD.

Note that if Administrator should manage all master data of Data providers, the Administrator’s organization should have assigned all areas. Otherwise XMLs submitted by Administrator would be rejected.

4.4 Area Management

The purpose of Area Management is to allow the administrator to create, update, delete, and view areas in the system.

Each area can include references on other areas. Such references form a hierarchy of areas (e.g. Country of Norway references Bidding Zones NO1, NO2, NO3, NO4, and NO5). **Note that the “AreaToArea” register is updated based on these changes.**

Each area must have its Area Type defined.

4.4.1 Area Management Overview

To select the Area Management overview, go to the Administration menu and choose Area Management. You can create, edit, delete, or view details of Areas on this screen.

Area Management Create New Area

Area Name ▲ ▼	Area EIC ▲ ▼	Area Type ▲ ▼	Validity ▲ ▼	
GB	10YGB-----A	Synchronous Area	Valid	✕ ✎ -

Area Information

Area Display Name: SNA GB
Map Code: SNA_GB
ISO Currency Code: EUR
Effective Start Date: 2019-04-05
Effective End Date:
Time Zone: WET
Out of EU: No

Associated Areas

Bidding Zone Aggregation:
Bidding zone:
Control area: CTA National Grid
Country:
LFC Area:
LFC Block:
Market balance area:
Region:
Synchronous Area:

Area Comment

Continental Europe	10YEU-CONT-SYNC0	Synchronous Area	Valid	✕ ✎ +
Nordic	10Y1001A1001A91G	Synchronous Area	Valid	✕ ✎ +
Ireland SNA	10Y1001A1001A59C	Synchronous Area	Valid	✕ ✎ +
CWE Region	10YDOM-REGION-1V	Region	Valid	✕ ✎ +
Turkey MBA	10YTR-TEIAS----W	Market Balance Area	Valid	✕ ✎ +
SEPS MBA	10YSK-SEPS----K	Market Balance Area	Valid	✕ ✎ +
ELES MBA	10YSI-ELES----O	Market Balance Area	Valid	✕ ✎ +
Sweden MBA	10YSE-1-----K	Market Balance Area	Valid	✕ ✎ +
Transelectrica MBA	10YRO-TEL-----P	Market Balance Area	Valid	✕ ✎ +

Areas per page 10 25 50 100 1 2 3 4 5 > >>

Figure 94

4.4.2 Creating Areas

To create a new Area, click the "Create New Area" button in the Area overview. The create area window appears. This window contains the following fields:

- > Area Name
 - The area name must be unique (e.g. former Czechoslovakia).
- > Display Area Name
 - The name of the area which is displayed in the Business filter on the Data view page (e.g. CS).
- > Area Type
 - Here you can choose the Area Type (a Country in our example).

- > Area EIC
 - This is a unique and mandatory code (let's use 10-CS as an example). This code is used to detect the Area in xml files.
- > Out of EU
 - Information whether the area is in or out of European Union.
- > Time Zone Code
 - The time zone for the area (e.g. CET). Just informative field.
- > ISO Currency Code
 - The currency for the area (e.g. EUR). Just informative field.
- > Effective Start / End Date
 - The time interval describing a validity period (e.g. 09.10.2013). If the Effective End Date is left blank, the validity is unlimited. It is not possible to upload data for time when area is not valid.
- > Area Associations (Super-Areas)
 - Here you can choose the Super-Area associated to the created Area.
 - LFC Area must have exactly one LFC Block assigned as a Super-Area
 - LFC Block must have exactly one Synchronous Area assigned as a Super-Area
- > Area Associations (Sub-Areas)
 - Here you can choose the Sub-Areas associated to the created Area.

Close without saving

Create Area

General Information

Area Name * Displayed Area Name *

Area Type * Bidding Zone Area EIC *

Out of EU* No

Time and Date Information

Time Zone Code* CET ISO Currency Code* CHF

Effective Start Date* 30.05.2019 Effective End Date

Area Associations (Super-Areas)**

CTA REG LFA BZN SNA BZA CTY LFB
MBA

Available areas:

- CTA|AL
- CTA|AT
- CTA|BA
- CTA|BE
- CTA|BG
- CTA|BY
- CTA|CH
- CTA|CY
- CTA|CZ
- CTA|DE(50HzT)

> <

Associated areas:

** - Assign only those super-area which can be constructed from the area (currently being edited).

Area Associations (Sub-Areas)**

CTA REG LFA BZN SNA BZA CTY LFB
MBA

Available areas:

- CTA|AL
- CTA|AT
- CTA|BA
- CTA|BE
- CTA|BG
- CTA|BY
- CTA|CH
- CTA|CY
- CTA|CZ
- CTA|DE(50HzT)

> <

Associated areas:

** - Assign only those sub-area from which the area (currently being edited) can be constructed.

Area description

* - required field

Create new area

Figure 95

> Area Association (Sub-Areas)

- There is a component called "Area Associations" at the bottom of the form, that is used to build the hierarchy of areas. In the example depicted in the screenshot above, you can see some Bidding Zones in the selected bookmark. These areas (of the Bidding Zone type) were created in the very same way as the example of Czechoslovakia (the Country type).
- To create a hierarchy for example between a country and its bidding zones, the administrator needs to create or edit Country and select required Bidding Zones as subAreas (areas situated inside the country from which the country can be constructed).
- In this example, bidding zones of the Czech Republic and Slovakia are moved to the right column (associated areas). This move defines the relation. All Data views that use Bidding Zones start to use this relation immediately.
- The figure below shows that the Business filters include the newly created Czechoslovakia. All borders of both the Czech Republic and Slovakia are available, because we have defined that the bidding zones of the Czech Republic and Slovakia belong to the CS country. **Note that different Data Views can use different area types. We defined this relation only for Bidding Zones.** Area Types for different Data Items can be found in the Configuration Matrix – the Area Type rule.

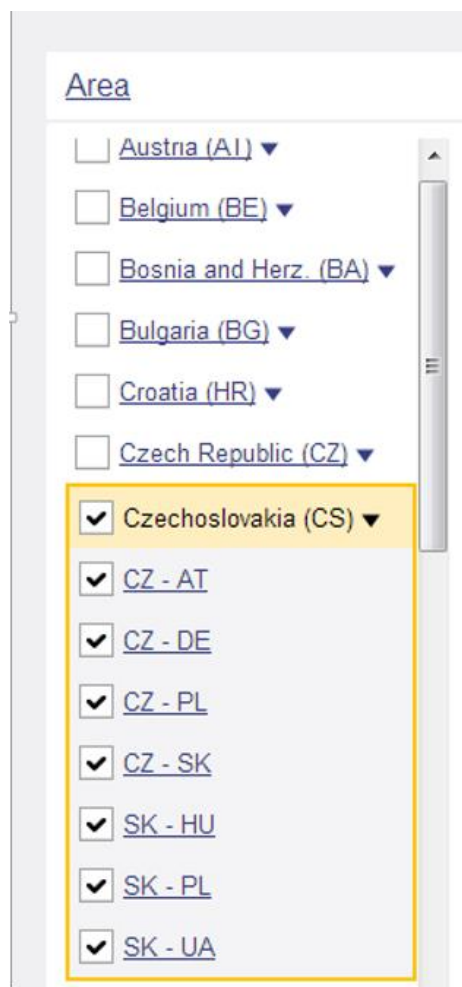


Figure 96

> Area Association (Super-Area)

- If a new Area (LFC Area or LFC Block) is added via XML, its Super-Area needs to be filled in manually or by additional XML containing the relation. Until this is done, the Area will be marked (value *Missing Associations* in the column "Validity") in Area Management. Once the Area is assigned its Super-Area, the value will be updated to *Valid*. Any Areas that do not need to have a Super-Area assigned will have value *Valid*.
 - The expected value is *Valid*.
 - The value *Missing Associations* will be displayed if:
 - LFC Area does not have exactly one LFC Block assigned as a Super-Area
 - LFC Block does not have exactly one Synchronous Area assigned as a Super-Area

4.4.3 Area Deactivation

To deactivate an area, first select the area you want deactivate and then click the Deactivate Area (cross) button. The Deactivation notification appears (see the picture below).



Figure 97

Upon deactivation, the area is not deleted from the system. It is only deactivated and is not available in the Area Management any more. However, using the Manage Reference Data (Download Reference Data) functionality, you can download the associated xml file (e.g. Areas). This document still contains the deactivated area (see the screenshot below). Note that the **record has the "active" tag set to false**. The tag can be changed back to "true". When such updated XML file is uploaded back to the system, the area will be available in the list of areas again.

```

</area>
<area>
  <code>CTY|10-CSK</code>
  <name>Czekoslovakia</name>
  <description></description>
  <active>false</active>
  <startDate>2013-10-09T10:04:00.000Z</startDate>
  <areaCode>10-CSK</areaCode>
  <areaTypeCode>CTY</areaTypeCode>
  <displayName>CSK</displayName>
  <utcTimeZoneCode>CET</utcTimeZoneCode>
  <mapCode></mapCode>
</area>

```

Figure 98

4.4.4 Editing Areas

Area management also supports editing. You can edit an Area, when you click the "Edit" button. The meaning of its fields has been described in the Chapter Creating Areas.

4.4.5 Area to Area association

Area management supports association between Areas and Sub-Areas. Association of areas is managed via Edit Area modal window, section Area Associations. Assign only those sub-areas from which the area (currently being edited) can be constructed. Note that same type of areas cannot be associated. Association between areas is maintained in Area management or in AREA_TO_AREA combined register.

- > For Example: Association of area Albania – CTY with its Sub-Areas – CTA, BZN and MBA.
 - CTY associated with BZN in Area Management in the screen below

Albania - Edit area

General Information

Area Name * Displayed Area Name *

Area Type * ▼ Area EIC *

Out of EU* ▼

Map code: **AL**

Time and Date Information

Time Zone Code* ▼ ISO Currency Code* ▼

Effective Start Date* Effective End Date

Area Associations (Sub-Areas)**

CTA **BZN** BZA MBA CTY

Available areas:

- BZN|CZ+DE+SK
- BZN|BA
- BZN|BE
- BZN|BG
- BZN|BY
- BZN|CH
- BZN|CY
- BZN|CZ
- BZN|DE-AT-LU
- BZN|DK1

Associated areas:

- BZN|AL

** - Assign only those sub-area from which the area (currently being edited) can be constructed.

Area description

* - required field

Figure 99

The same action is represented in the XML file AreaToArea in Manage Reference Data UC. See the record which is automatically created when the settings in Area Management is saved.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<registers>
  <register>
    <registerCode>AREA_TO_AREA</registerCode>
    <items>
      <registerItemCombined>
        <code>BZN|10YAL-KESH-----5_CTY|10YAL-KESH-----5</code>
        <name>BZN|AL</name>
        <active>true</active>
        <registerItemCode>BZN|10YAL-KESH-----5</registerItemCode0>
        <registerItemCode1>CTY|10YAL-KESH-----5</registerItemCode1>
      </registerItemCombined>
    </items>
  </register>
</registers>
```

SubArea first

Figure 100

4.5 How Organization, Roles, and Users Works Together

The following two diagrams should help you understand the relationship between the next few Chapters. The Organization, Role and user are closely connected entities.

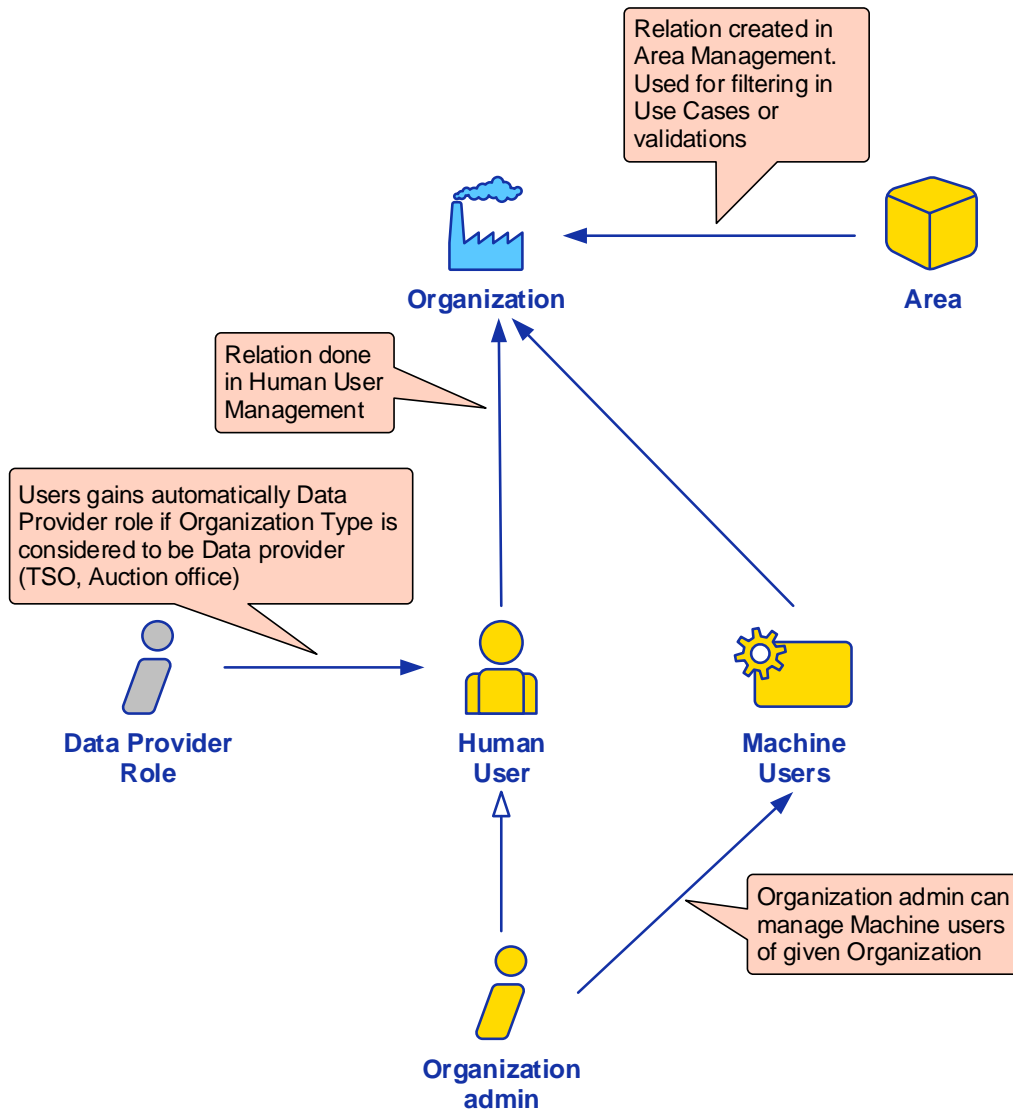


Figure 101

The following order of creation is expected and recommended. The example defines the steps the Administrator should take to configure a new Data Provider on the platform.



Figure 102

Machine users can be managed also by administrator in Organization. The role "Organization admin" has to be assigned by Administrator first.

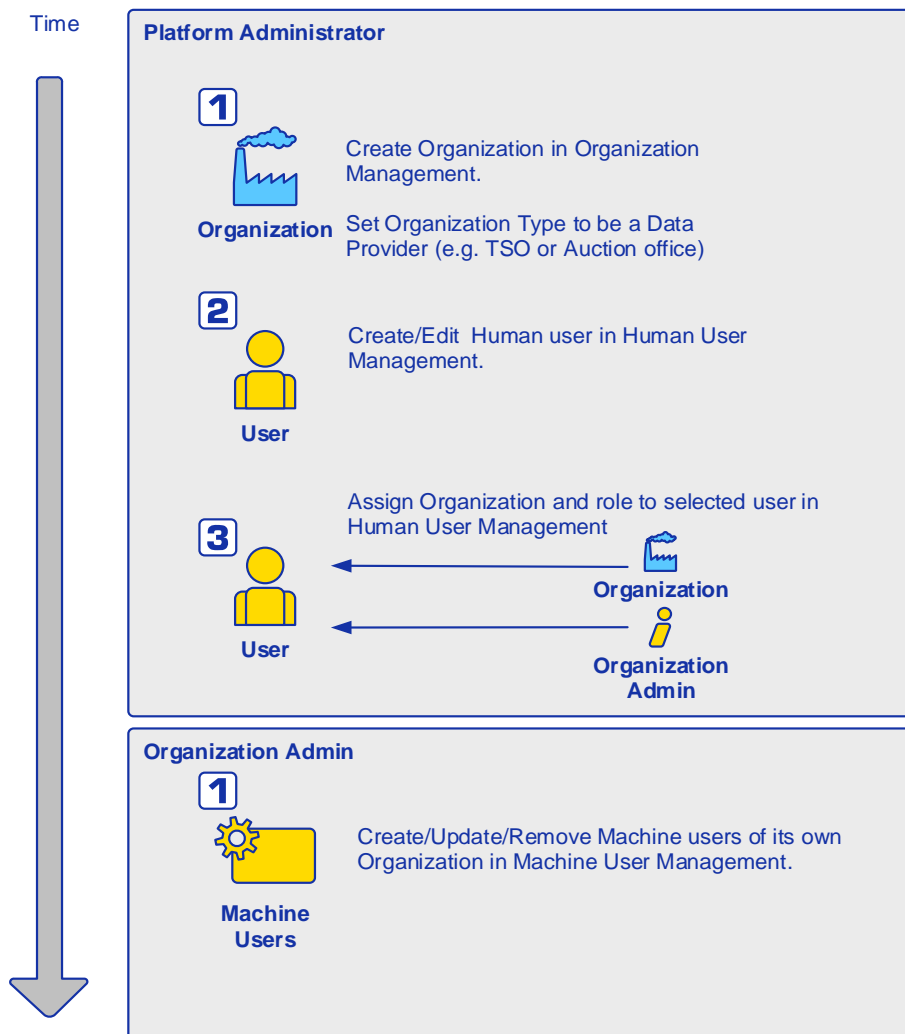


Figure 103

4.6 Role Management

The purpose of Role Management is to allow the administrator to create, update, delete, and view roles in the system. Each role defines a user role in the system, with an assigned set of privileges.

The Administrator can also define a parent role. The same parent role can be used by several roles. However, each role can be assigned to only one parent role. This ensures a proper hierarchy of roles. Lower-level roles inherit their privileges from higher-level roles and the privileges are cumulative (e.g. user U is assigned roles A and B, where role A has the permission and role B has not the permission for resource R. The result is that user U has the permission for resource R. A role can be also defined without any privileges. Each user has a basic role in the system assigned to view contents of the public section of the website.

4.6.1 Role Management Overview

To open the Role Management overview, go to the Administration menu and select Role Management. The system will show the Role Management overview.

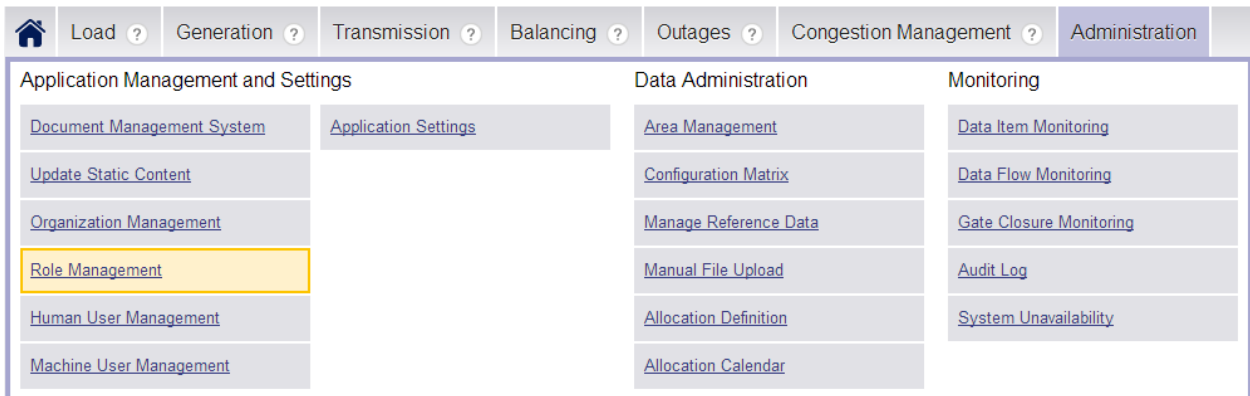


Figure 104

Click the “Detail” button to view details of the selected role.

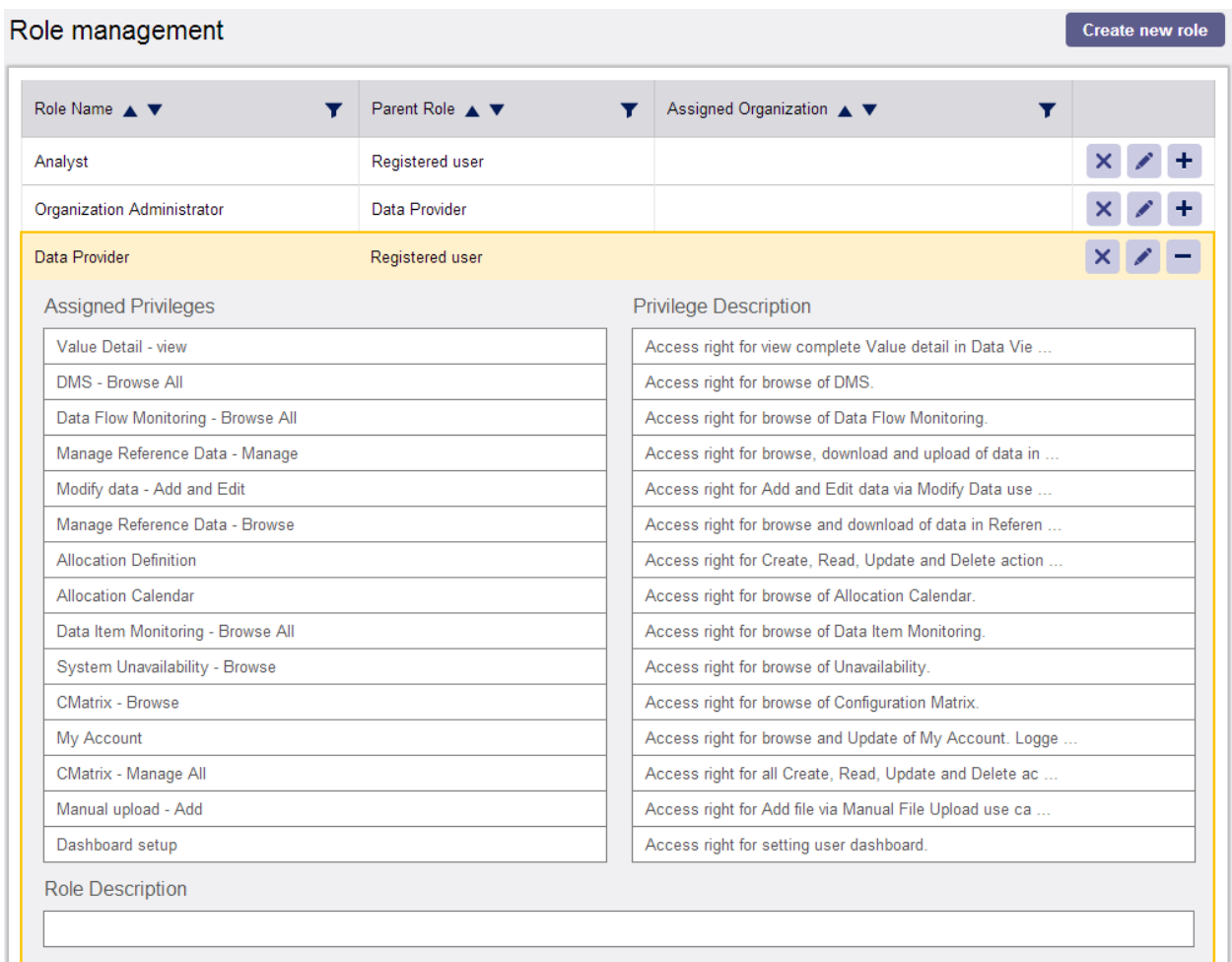


Figure 105

4.6.2 Creating Roles

To create a new Role in the Role Management overview, select "Create new role" in the upper right corner of the screen.

The Create Role window contains the following fields:

- > Role name
 - Mandatory field
 - Must be unique
- > Assigned organization to role
 - Used to assign a specific organization to the role. The field can be left blank. The relationship between roles will be used in EMFIP R2, for example for Messages.
- > Parent role
 - If a parent role is selected, privileges are inherited from the parent. Only one parent role can be selected.
- > Privileges
 - Here you can assign system privileges to the role. Move a desired item to the right column (from Available Privileges to Associated Privileges) to assign the privilege.

The screenshot shows the 'Create role' window with the following elements:

- Tabbed interface with 'Administration' selected.
- Close button: 'Close without saving'.
- Title: 'Create role'.
- Form fields:
 - Role name: * (text input)
 - Assigned organization to role: (dropdown)
 - Parent role: (dropdown)
 - Available privileges: (list box containing Administrator, Allocation Calendar, Allocation Definition, Application Settings - Browse, Application Settings - Manage, Area Mgmt. - Browse, Area Mgmt. - Manage, Audit Log - Browse, CMatrix - Browse)
 - Associated privileges: (empty list box)
 - Role description: (text input)
- Legend: * - required field.
- Button: 'Create new role'.

Figure 106

4.6.3 Editing Roles

To edit a selected role, click the "Edit" button. When the editor window opens, it is populated with all already saved data.

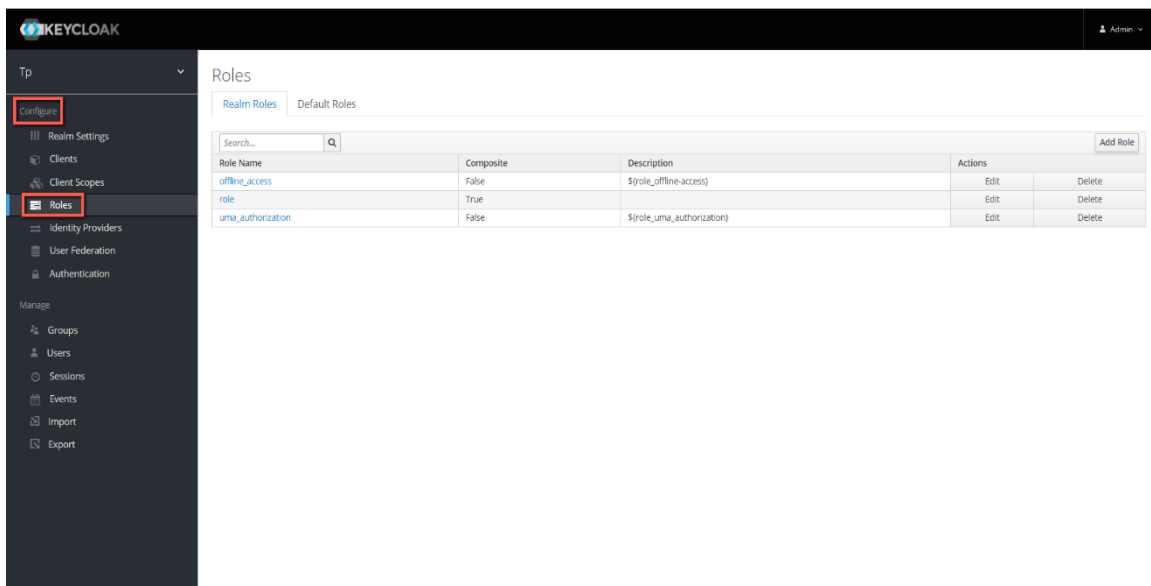
Note that once set, the Parent Role cannot be changed. Changes have consequences that prevent such behavior. If any such changes are necessary, please contact the Second Level Support.

4.6.4 Role Management KeyCloak

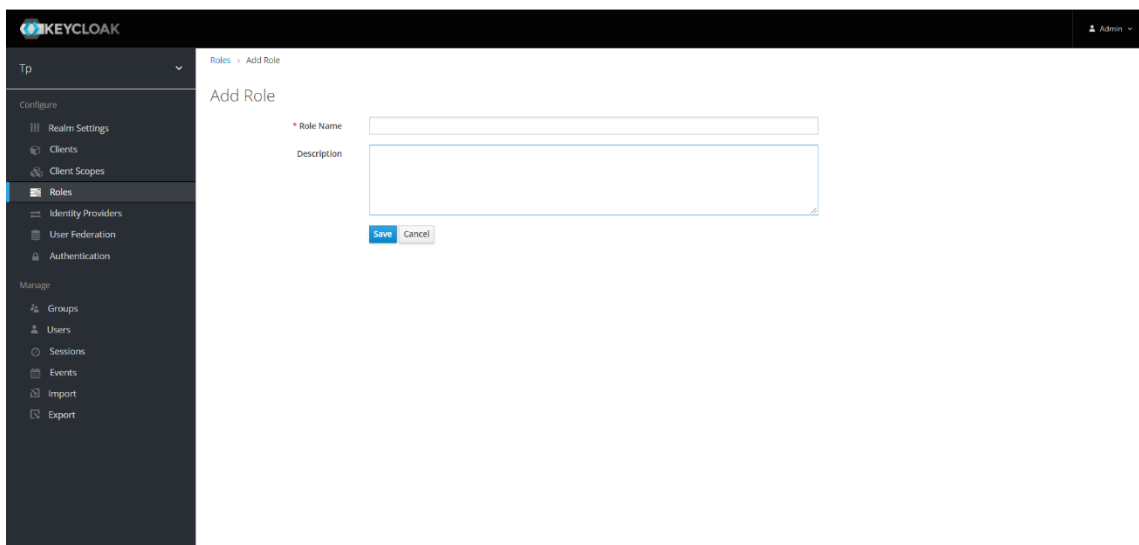
It is possible to manage roles in the KeyCloak as well, however it is recommended to use the TP-based role management over the KC-based role management and mapping in order to avoid inconsistencies. In case that it is necessary to manage and map TP-based roles in KC, the KC-based composite roles should be created for such purpose.

4.6.4.1 KC-based Role Creation

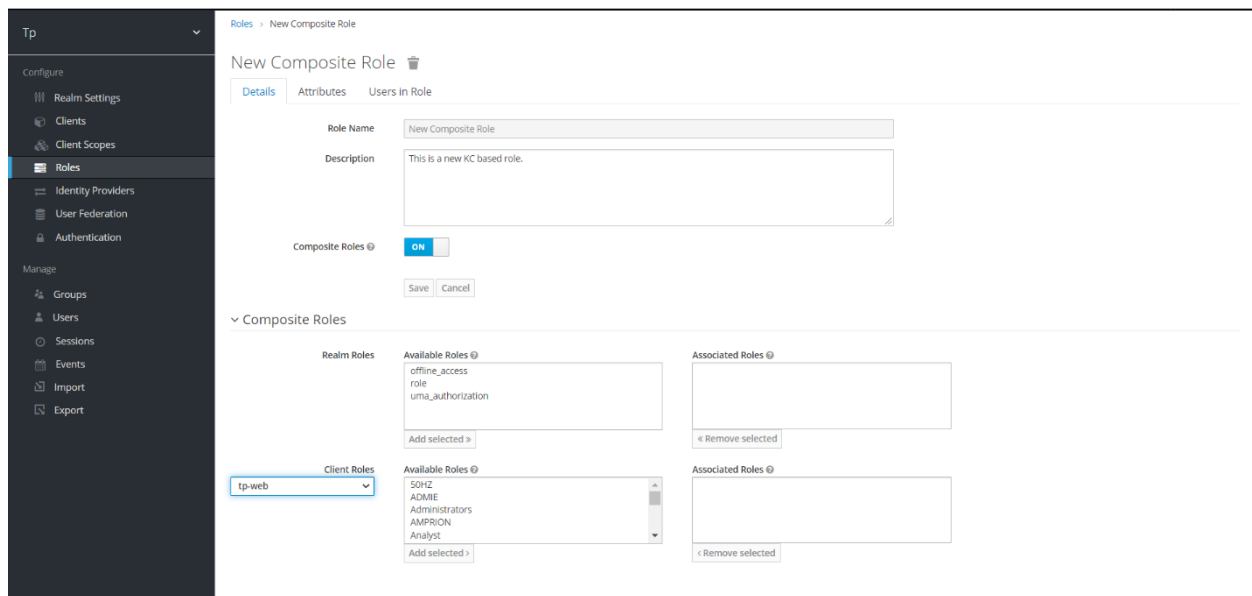
1. Log into the KeyCloak UI as an KC administrator.
 - User is redirected to the Transparency Platform realm.
2. Select the “Roles” in the “Configure” sub-menu.



3. Select “Add Role”.



4. Fill into the form Role Name and optionally some description.
 - After the form is submitted a Composite Role selector appears, that will allow the user to assign multiple Roles to the newly created Role.

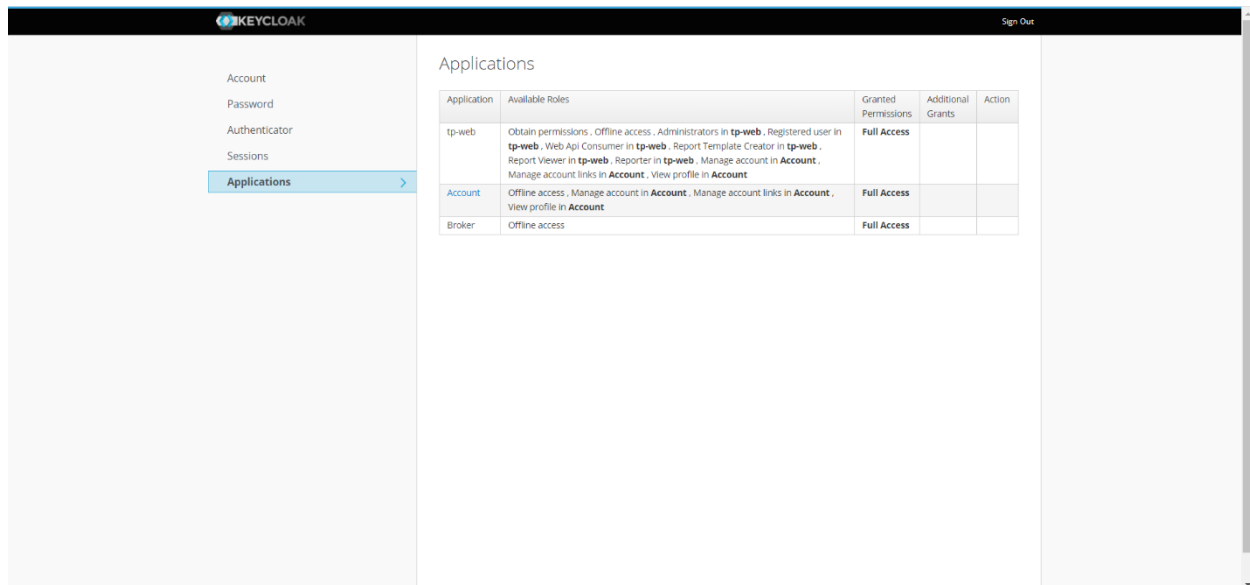


5. In the “Composite Roles” section the user can assign multiple Roles to the newly created Role and if in the “Client Roles” selector is selected “tp-web”, even TP-based Roles can be assigned.
 - Note: This way a KC composite Role can be created from multiple TP based Roles, this is the only permitted way how to assign TP-based Roles to a User in KC UI. If a TP-based Role is assigned to a user via the KC-based composite role, the Role will not be visible in the Role mapping in TP.
 - **Warning: To avoid inconsistencies, the KC-based role should never have an Organizational Role as its composite Role.**

4.6.4.2 KC User to Role Mapping.

In order to display Roles that are assigned to the User or assign some KC-based roles to the user, the KC Role mapping can be used.

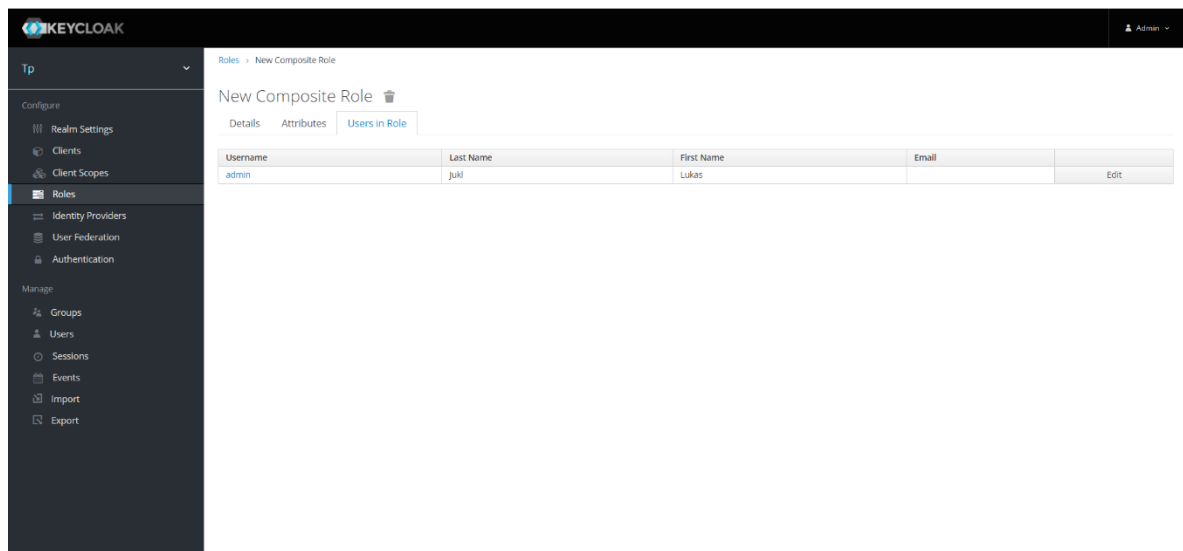
1. Log into the KeyCloak UI as a KC administrator.
 - User is redirected to the Transparency Platform realm.
1. Select the “Users” option in the “Manage” sub-menu.
 - A list of Users appears.
2. Filter for the desired User, or just select “View all users”.
3. Select the “Edit” button.
 - User is redirected to the User’s card.
4. Select the “Role Mappings” option.
5. In order to display assigned TP-based Roles, select the “tp-web” option in the Client Roles combo-box.
 - At this point the assigned roles can be displayed or assigned or assigned.
 - **Note: Only the Realm roles are permitted to be assigned, the client roles section should be used solely as a read-only.**
3. As a second option of displaying mapped roles, the “Impersonate” button can be selected next to the desired User.



4.6.4.3 KC Role to User Mapping

An alternative to the user to role mapping is the role to user mapping, where will be displayed all users that have a specific role assigned.

1. Log into the Keycloak UI as a KC administrator.
 - User is redirected to the Transparency Platform realm.
2. Select the “Roles” option in the “Configure” sub-menu.
 - A list of Roles is displayed.
3. Select the Edit option next to the desired Role.
 - User is redirected to the Role Edit UC.
4. Select the “Users in Role” option.
 - All users that have the Role assigned will be listed.



4.7 Organization Management

Under Organization Management, viewing, creating, editing, and deleting of organizations is supported. Each organization has a type assigned and can be associated with one or more areas of different types.

4.7.1 Organization Management Overview

To open the Organization Management overview, go to the Administration menu and select Organization Management. The system will display the Organization Management screen. Click the “Detail” button to view details of the selected organization.

Organization Management
Create new organization

Displayed name ▲ ▼ ▼	Organization name ▲ ▼ ▼	Contact Person ▲ ▼ ▼	
FAT Organization	FAT Organization	FAT Test user	👤 ✕ ✎ +
TIWAG	TIWAG		👤 ✕ ✎ +
KESH	KESH - Korporata Elektroenergjitive Shqiptare sh.a		👤 ✕ ✎ +
VKW	VKW		👤 ✕ ✎ +
WEPS	WEPS		👤 ✕ ✎ +
CWE	CWE		👤 ✕ ✎ +
Nord Pool Spot	Nord Pool Spot		👤 ✕ ✎ +
CASC	CASC		👤 ✕ ✎ +
ADMIE	ADMIE		👤 ✕ ✎ +
ELEXON	ELEXON		👤 ✕ ✎ +

Organizations per page

10
25
50
100

1
2
3
4
5
>
>>

Figure 107

Organization Management Create new organization

Displayed name ▲ ▼ Organization name ▲ ▼ Contact Person ▲ ▼

MEPSO Macedonian Transmission System Operator AD [User] [X] [Edit] [Close]

Organization Information	Assigned Areas
Full name: Macedonian Transmission System Operator AD	Control Areas:
Displayed name: MEPSO	Bidding Zones:
Abbreviated name: MEPSO	Bidding Zones Aggregation:
Organization type: Transmission system operator	Market Balancing Areas:
EIC: 10XMK-MEPSO....M	Countries:
Legal Entity Identifier:	
European Article Number Code: 0	
Tax Identification Number: 0	
Organization Contact Information	Contact Person Information
Organization Info Email:	First name:
Web Address: http://www.mepso.com.mk	Last name:
Street Address: TODO: ENTSO-E	Notification email address:
Street Address 2: TODO: ENTSO-E	Office telephone:
City: TODO: ENTSO-E	Mobile phone:
Postal Code: TODO: ENTSO-E	
Country: MK	

Figure 108

4.7.2 Creating Organizations

To create a new Organization, click "Create new organization" button. A window appears, containing the following sections and fields:

- > General Information
 - Full Organization Name: The name of the organization must be unique.
 - Displayed Organization Name: The name which is displayed by the system.
 - Abbreviated Organization Name: An abbreviation of the organization name.
- > Type of Organization
 - Auction Office and Transmission System Operator (TSO) are implicitly considered Data Providers. These can also be configured ENTSO-E members.
 - Subsequent Organization types could be for example University. The list can be extended in reference data
 - Mandatory field. Please select item "Other" when any other listed item is not suitable for the organization.
- > Master Data Failed Validation Result
 - Result of the cross-validation of Master Data submitted by the Organization against EIC Library, either WARN or ERROR.
- > Contact information
 - These fields contain the contact information for the organization.
- > Associate Organization to Area
 - Here you can associate the Organization with Areas.

Create new organization

General Information

Full Organization Name * Displayed Organization Name *

Abbreviated Organization Name * Type of Organization *

European Article Number EIC **

Legal Entity Identifier Tax Identification Number

Master Data Failed Validation Result * ENTSO-E Member

Contact Information

Street Address 1 * Street Address 2

City * Postal Code *

Country * Organization Info Email

Web Address *

Associate Organization to Area

SCA **CTA** REG LFA BZN SNA

BZA CTY IBA LFB IPA MBA

Available areas:

- CTA|AL
- CTA|AM
- CTA|AT
- CTA|AZ
- CTA|BA
- CTA|BG
- CTA|BY
- CTA|CH
- CTA|CY
- CTA|CZ

> <

Associated areas:

- CTA|BE

* - required field
** - field is mandatory for Auction office and Transmission system operator

Save changes

Figure 109

4.7.3 Editing Organizations

Click the "Edit" button to start editing the selected organization. Displayed fields have the same meaning as in the creation process.































4.8 Human User Management

Human User Management is a set of screens to be used by administrators to manage user accounts including roles of users.

The EMFIP platform supports several operations (create, read, update, and delete) with human user accounts. It is also possible to suspend (deactivate) user accounts or reactivate any already suspended accounts.

4.8.1 User Management Overview

To open User Management, go to the Administration menu and select Human User Management. The Human User Management screen will appear. Click the "Detail" button to view details of the selected user. Use this screen to create, edit, delete, and/or suspend/reactivate user(s).

E-mail Address ▲ ▼	User ▲ ▼	Last Login ▲ ▼	Organization ▼	Status ▲ ▼ ▼	
zdenek.janda@unicorn.com	Zdenek Janda	23.11.2020 14:56		Active	  
usertpcreated@somenonexistentserver.edu.fake	User TPcreated			Active	  
userkccreated@somenonexistentserver.edu.fake	User KCcreated			Active	  
user@entsoe.e.fake	User Userovič	23.11.2020 13:13		Suspended	  
tso-cyprus@emfiprest.eu.fake	CYPRUS		Cyprus TSO	Active	  
transnetbw@emfiprest.eu.fake	TRANSNETBW		TRANSNET BW	Active	  
transelectrica@emfiprest.eu.fake	TRANSELECTRICA		Transelectrica	Active	  
test@test.test	Lukáš Jukl	24.11.2020 06:46		Active	  
test.user@entsoe.eu.fake	Test_user User_test	23.11.2020 13:15		Active	  
terna@emfiprest.eu.fake	TERNA		Terna	Active	  

Users per page

1 > >>

Figure 110

4.8.2 Creating Users

To create a new user, go to the Human User Management overview and click "Create Human User". There are a few mandatory fields such as First Name, Last Name, Login and Email Address, both Login and Email Address can be used as a Login.

There are now three ways how to register a User. One is from the Users perspective via the login dialog. The other two ways are from the administrator's perspective, the first one via Human User Management in TP and the second one via the User Management in the KC UI.

Figure 111

New User Account

Title

First Name * Last Name *

Mobile Phone Number + Office Phone Number +

Login *

Email Address *

Organization

Available Roles:

- Administrators
- Analyst
- Back-end Support
- CACM Viewer - All
- CACM Viewer - Own
- Data Repository User
- Guest
- Organization Administrator
- Registered user
- Report Template Creator

Roles Associated to User:

User Position and Responsibilities Description ?

* - required field

Create User

Figure 112

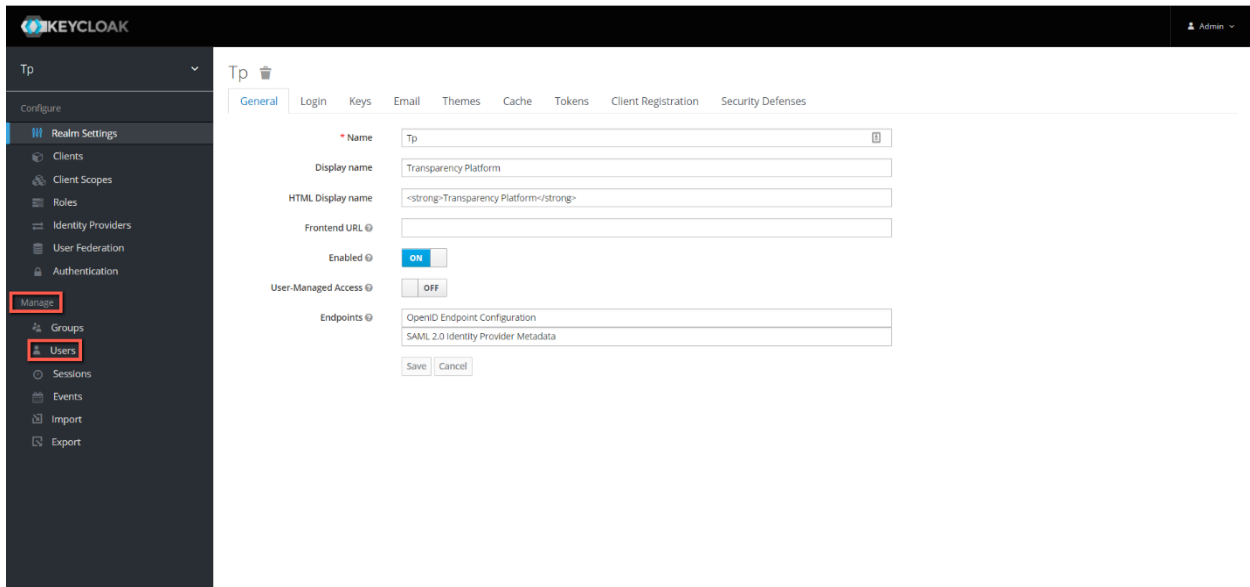
Default roles (e.g. Administrator, Data provider) are available in list of Available roles. Note that if there are special roles created for a specific Organization (role can be created for a specific Organization in Role Management), these roles will not be offered if different Organization is selected for the user.

Note that if user is associated with Organization of Data Provider type (e.g. TSO or Auction office), the user implicitly gains a Data Provider role (the user can manually submit data, see monitoring screens etc.)

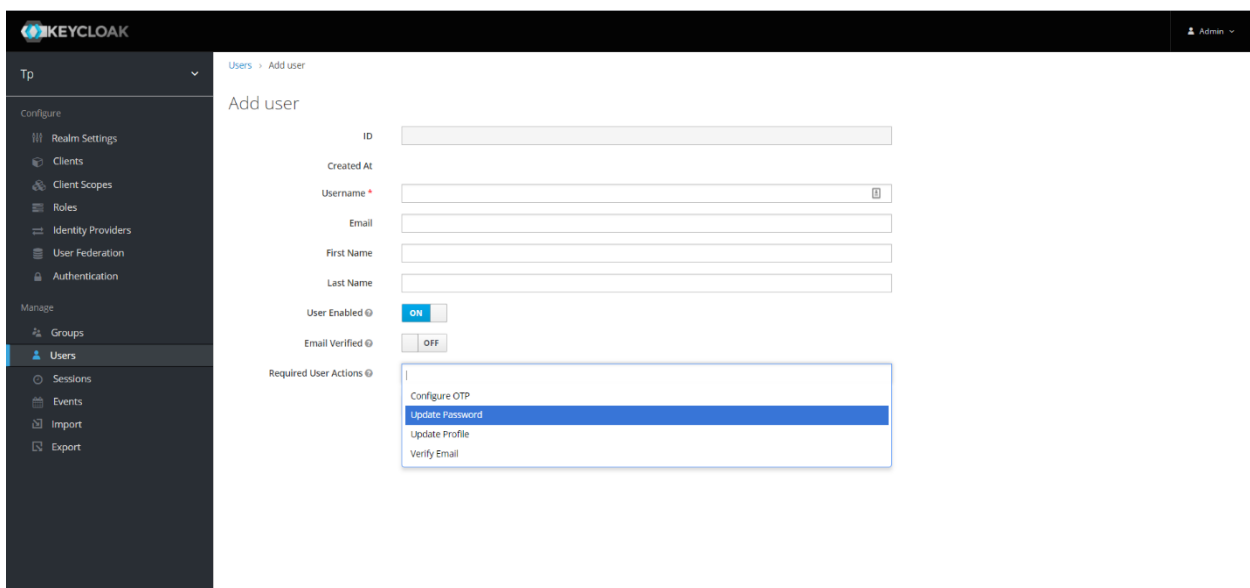
It is recommended to have at least one user with "Organization admin" role for each Organization of Data Provider type. This role grants access to Machine User Management where machine users of given organization can be created and maintained.

4.8.2.1 Creating Users in the KeyCloak

1. Log into the KeyCloak as an administrator.
 - o User is redirected to the Transparency Platform realm.



2. Select the “Users” in the “Manage” sub-menu.
 - o User is redirected to the User Management
3. Select “Add User”.
 - o User is redirected to the Registration form
4. Fill in all mandatory fields
5. Via the Required User Actions field, the administrator can optionally send a password configuration request.



- o After the form is submitted, the user is created.

4.8.2.2 Creation of Password

When a user is created from the Administrators point of view it also is necessary to assign password for that user. This UC can also be used for any other event when a user's password needs to be changed.

1. Log into the KeyCloak as an administrator.
 - User is redirected to the Transparency Platform realm.
2. Select the "Users" in the "Manage" sub-menu.
 - User is redirected to the User Management.
3. Search for the desired user

ID	Username	Email	Last Name	First Name	Actions
bcfd18-b562-46a8-9eec-12bb...	testuser@testuser.testuser	testuser@testuser.testuser	testuser	testuser	Edit Impersonate Delete

4. Select "Edit".
 - User is redirected to the Users card.
5. Select "Credentials".

6. At this UC, in the “Set Password” section, the Administrator can either configure users password as temporary and/or permanent based on the “Temporary” selector as well as an email password reset request can be sent to the user via “Credentials Reset” section.

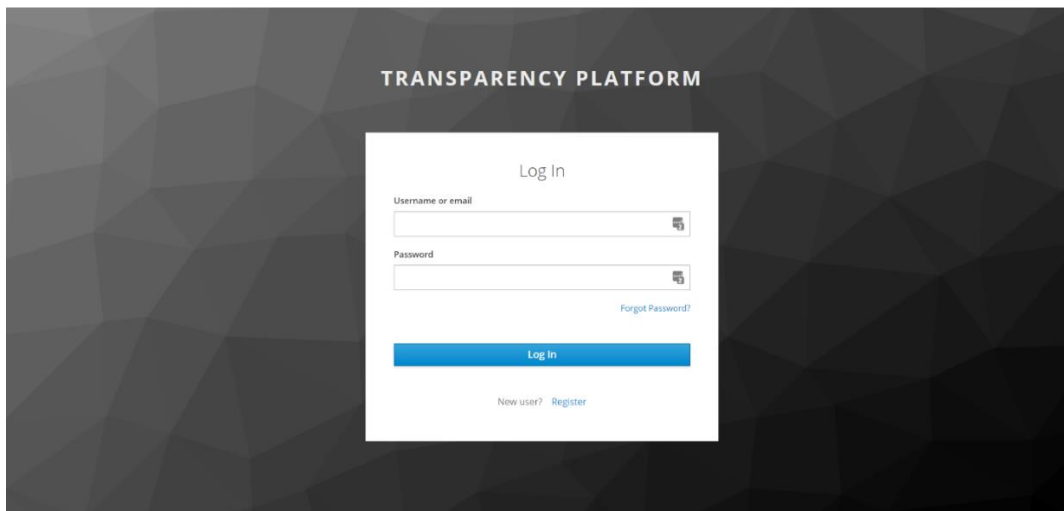
4.8.2.3 Registration from the User Point of View

To create the user from his own point of view, the following steps must be concluded.

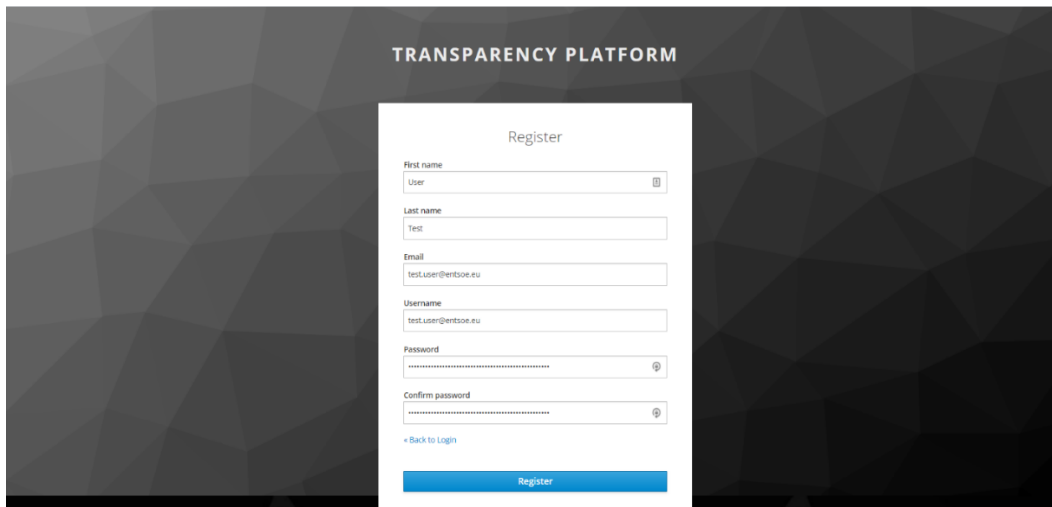
1. Enter the transparency platform and select login.



- o The user is redirected to the KeyCloak landing page.



2. Select the “Register” option.
 - o The user is redirected to the registration form.
3. Fill in all mandatory fields. (minimal requirements for the password are 14 character and at least one special character)



The screenshot shows a web interface for the 'TRANSPARENCY PLATFORM' with a 'Register' form. The form is centered on a dark background with a geometric pattern. The form fields are as follows:

- First name:** Input field containing 'User'.
- Last name:** Input field containing 'Test'.
- Email:** Input field containing 'test.user@entsoe.eu'.
- Username:** Input field containing 'test.user@entsoe.eu'.
- Password:** Input field with a password strength indicator.
- Confirm password:** Input field with a password strength indicator.

Below the form, there is a link '+ Back to Login' and a blue 'Register' button.

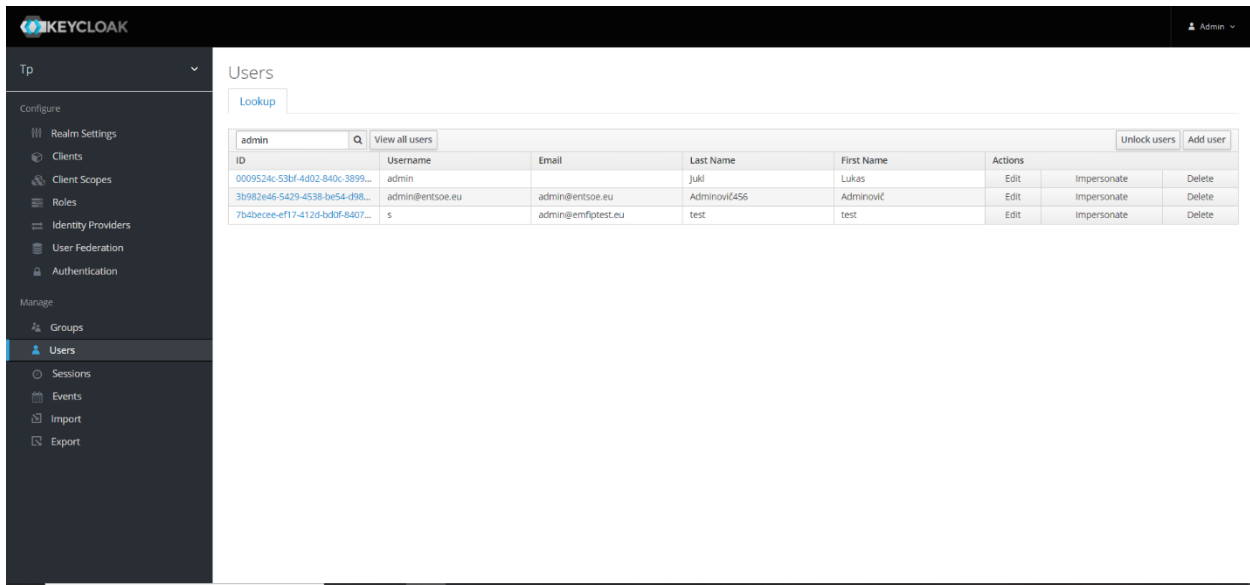
4. After the contents of the form is sent, the user is Redirected into the Transparency Platform and logged in.

4.8.3 Editing Users

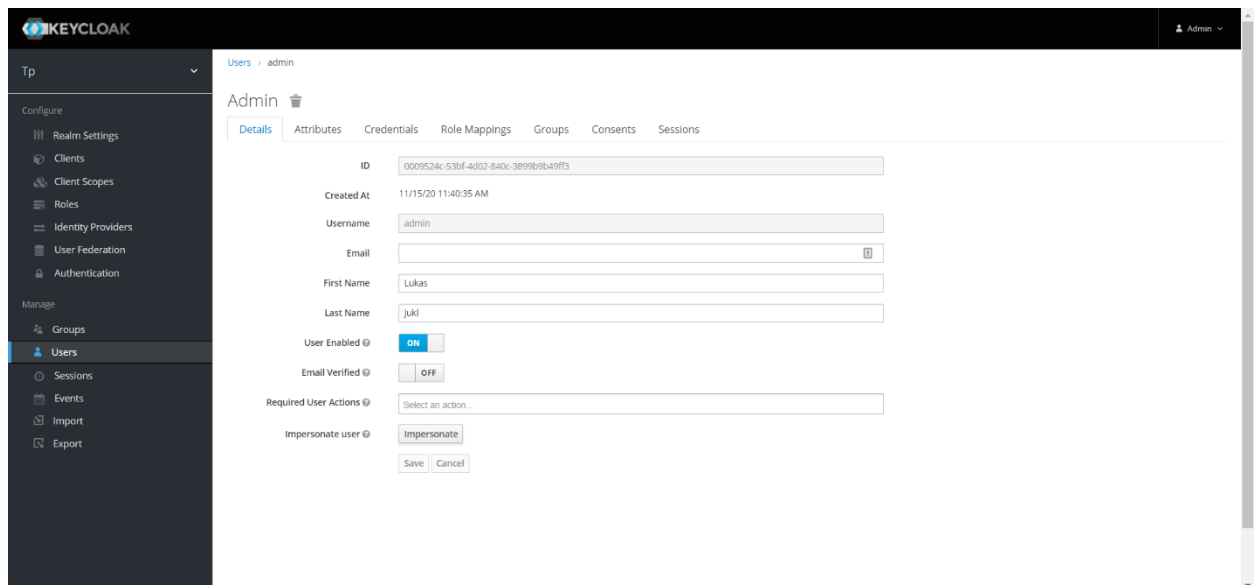
To edit user(s), go to the same screen of Human User Management and click the "Edit" button. A window will appear, populated with already saved data. The meaning of these fields is the same as when creating a user. You can edit all fields except for the Login. Apart from the TP-Based User management, it also is possible to manage the Users via Keycloak.

4.8.3.1 Editing Users via KC

1. Log into the KeyCloak as an administrator.
 - o User is redirected to the Transparency Platform realm.
2. Select the "Users" section in the "Manage" sub-menu
3. Search for the desired user.

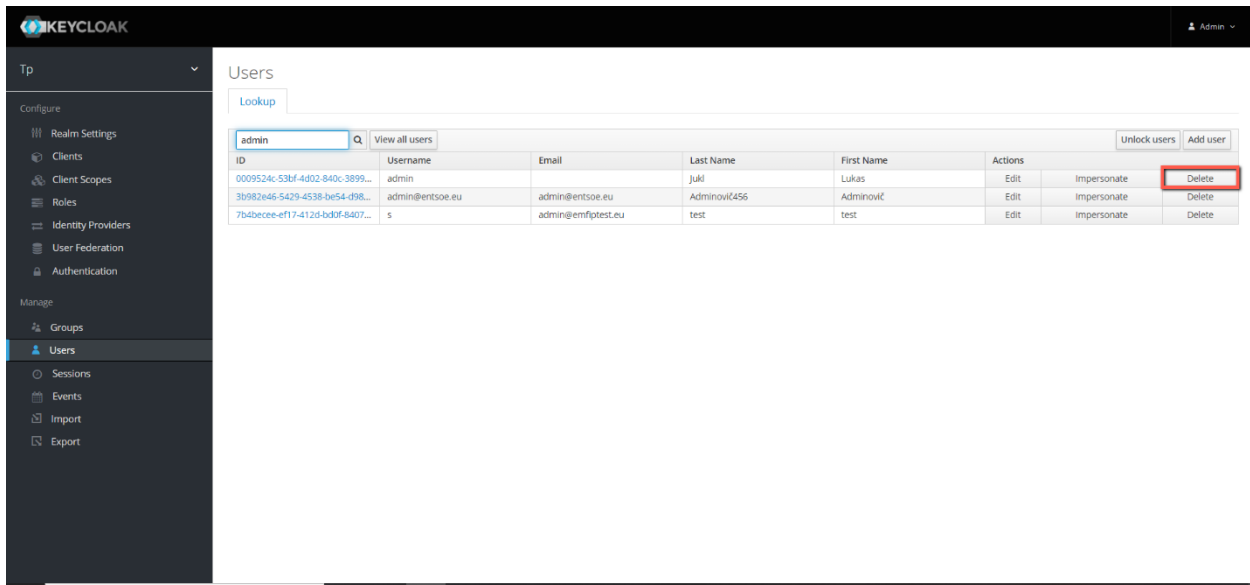


4. Select the “Edit” button next to the user.
 - User is redirected to the User’s card.
5. After the form is successfully submitted, the user’s account will be updated.



Note: In this use case the User can be fully disabled, via the “User Enabled” selector. If the User is disabled through this selector, they will not be permitted to log into any environment integrated to the KC instance with this account.

4. At the “Users” UC it is possible to delete the user account from the KC.
 - This action will remove the user from all environments integrated to the KC instance.



The screenshot shows the Keycloak administration console. On the left is a navigation menu with options like 'Configure', 'Manage', and 'Users'. The main area displays the 'Users' management page. A search bar contains 'admin'. Below it is a table of users with columns for ID, Username, Email, Last Name, First Name, and Actions. The 'Delete' button for the user 'admin' is highlighted with a red box.

ID	Username	Email	Last Name	First Name	Actions
0009524c-53f4-4d02-840c-9899...	admin	admin@entsoe.eu	juhl	Lukas	Edit Impersonate Delete
3b982e46-5429-4538-be54-098...	admin@entsoe.eu	admin@entsoe.eu	Adminovl456	Adminovl456	Edit Impersonate Delete
7b4becee-ef17-4126-bd0f-8407...	s	admin@emfip-test.eu	test	test	Edit Impersonate Delete

4.8.4 Authentication and Authorization

When a user with administrator rights (Roles Administrators and Back-End support) logs into the Transparency Platform the 2-factor authentication is required. The process of the login with 2FA is the following.

Note: For non-Administrator roles, the login process is the same but without the two-factor authentication.

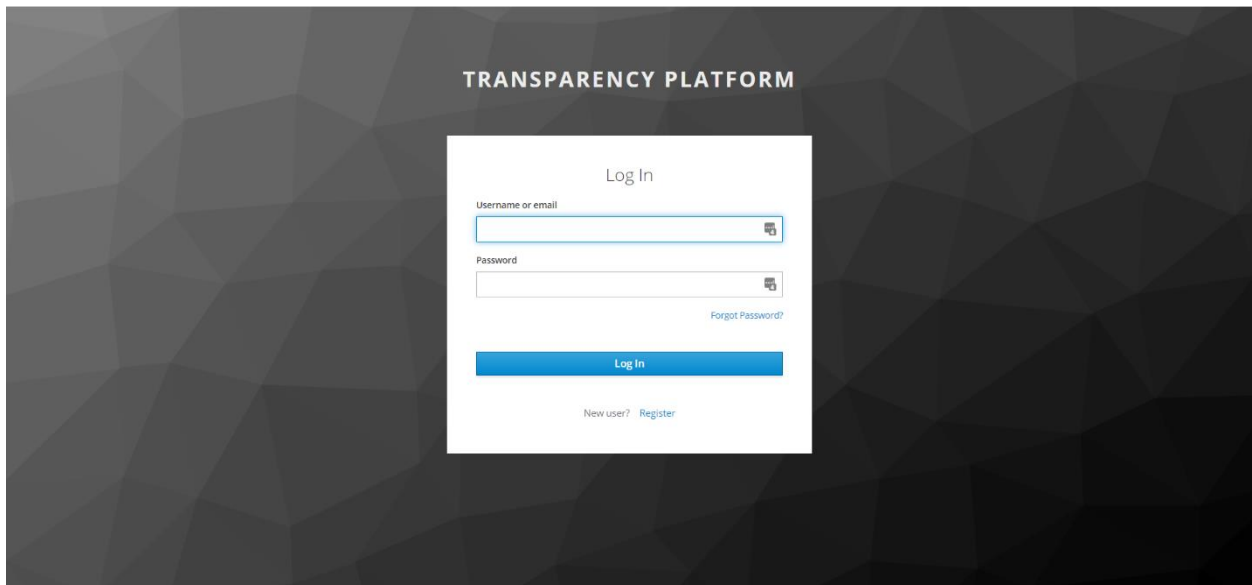
4.8.4.1 First login + 2FA configuration:

1. Go to the Transparency Platform

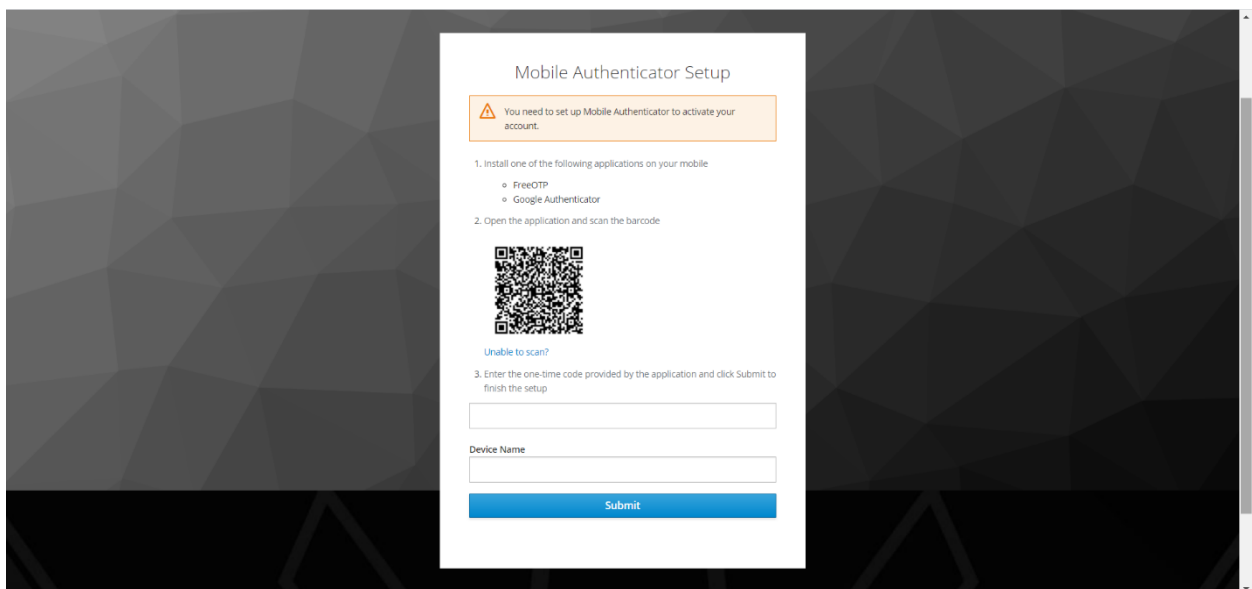


The screenshot shows the entsoe Transparency Platform dashboard. The 'Login' button in the top right corner is highlighted with a red box. The dashboard includes a navigation menu, a 'Dashboard' section with 'News' and 'Cross Border Physical Flows' (showing a loading spinner), and two data visualization panels at the bottom: 'Actual Generation per Production Type - Spain' and 'Total Load - Day Ahead / Actual - Norway'.

2. Select Login
3. Login with account that has Administrator rights.



- User is required to configure 2FA.



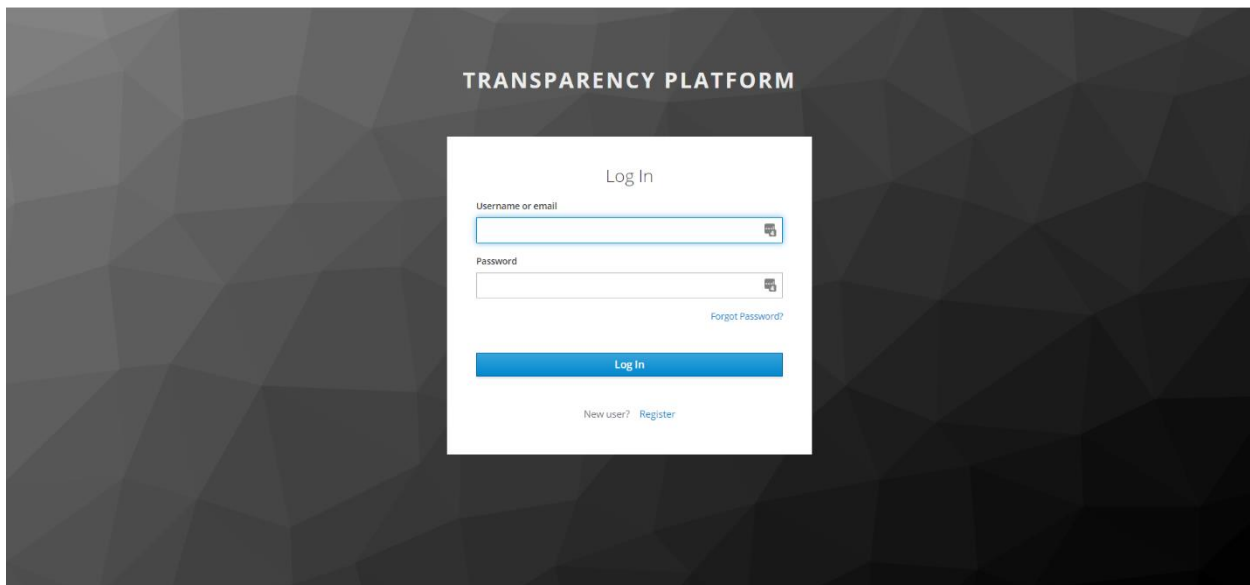
4. Open one of the supported OTP applications in your mobile device.
5. Scan the QR code.
6. Fill the passcode into the first field and submit.
 - User is logged into the Transparency Platform.

4.8.4.2 Login After the 2FA is configured:

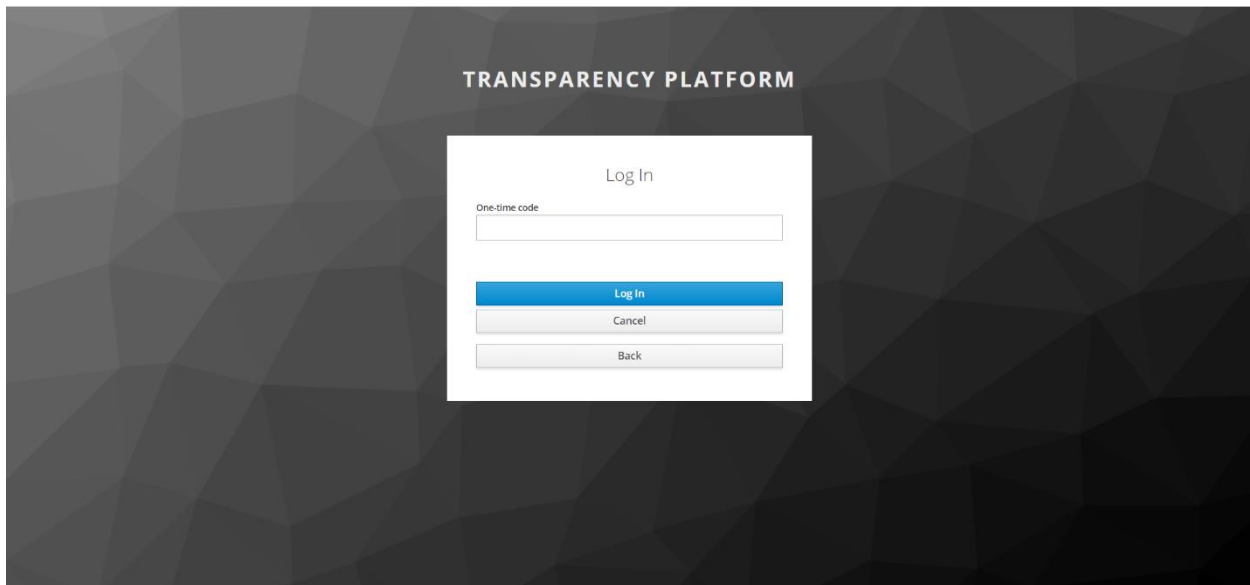
1. Go to the Transparency Platform



2. Select Login
3. Login with account that has Administrator rights.



- The 2FA is required.



4. Open the OTP app in which the 2FA was previously configured.
5. Fill in the passcode.
 - o User is logged in.

4.8.5 Configuring Submission Channels

There are three possible submission channels available.

4.8.5.1 ECP (MADES)

The Energy Communication Platform (ECP) is a channel available for submission of data into the system. ECP tool implements Market Data Exchange Standard (MADES) protocol. The sender is certified and the submission cannot be faked. Detailed information about installation or ECP settings is available in [04] ECP Integration Guide .

4.8.5.2 FTPS

The FTP Secure (FTPS) protocol is another possible channel for data upload. **Please note that standard FTP or SFTP protocols are not supported.**

Folder used on FTP server is created based on the name of the Machine user. **The user record in Machine User Management needs to be filled with a password that will be used for the access to FTP server together with name of the machine user (username).** Find IP addresses of environments are available in [05] Introduction Plan.

4.8.5.3 Web Service

The connection to Transparency platform using the WebService (WS) option is the most complicated option. Please find more technical details in [03] WS Integration Guide.

User needs to select a strategy of the WS. Both Pull and Push strategies require a certificate for security reasons. **The certificate needs to be inserted in a text form into the prepared text field in Machine User Management. When Push strategy is selected, also WS EndPoint (URL address of webservice) needs to be set.**

4.9 Application Settings

Application Settings are used only by system administrators. Use them to set attributes and rules that are common to the whole application. Other settings common to the whole platform may appear here in the future.

To manage Application Settings, go to the Administration menu and select Application Settings.

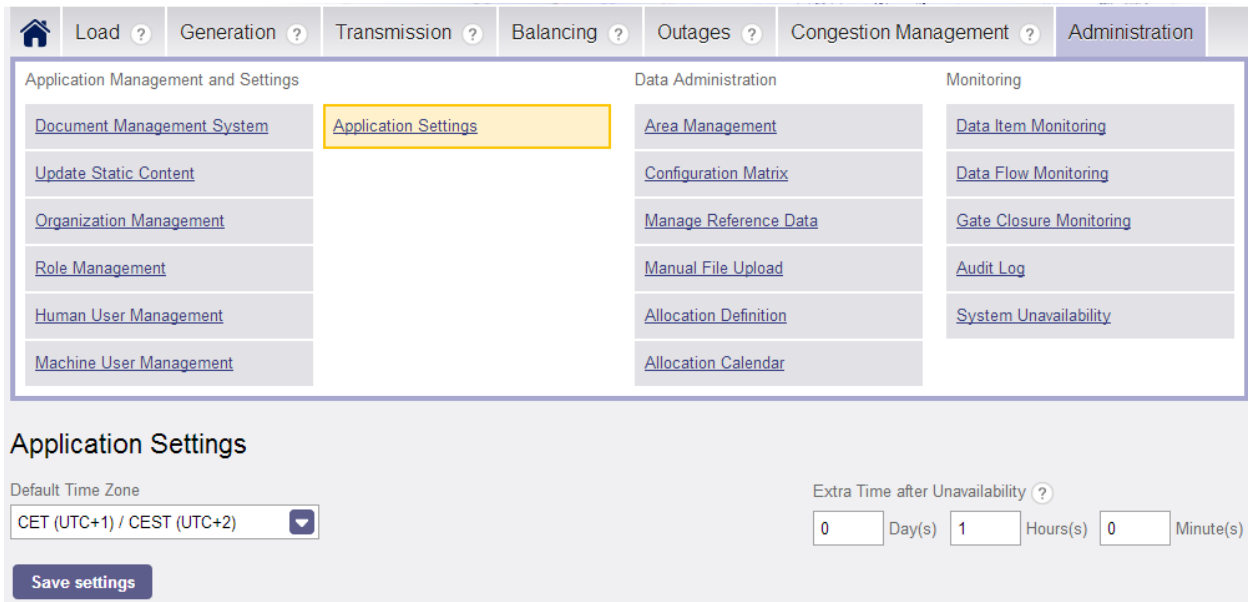


Figure 113

Following settings are available:

- > Default Time Zone
 - This Time Zone is used for not registered users without any cookies. When cookies are enabled, the **cookies have priority over this setting**. Registered users may specify their preferred Time Zone in their Account Settings.
- > Extra Time after Unavailability
 - There are inputs for the number of Days, Hours and Minutes. The time assembled from these inputs (e.g. 0 Days 5 Hours 15 Minutes) will be used as the delay before data monitoring (Data Item Monitoring and Gate Closure Monitoring) will start to check data again, so that Data Providers would have some time e.g. to resend their data.

4.10 Static Content Management

There are few pages with text areas that are available to Transparency platform users. Find the list of these pages below:

- > About ENTSO-E
- > Contact us
- > FAQ
- > SiteMap

If needed, some new pages can be easily added to DMS in future. All the content of these files (html pages) can be maintained in WYSIWYG (what you see is what you get) editor. When required page is selected in combo box, the editor is opened with the content.

Application Management and Settings	Data Administration	Monitoring
Document Management System	Area Management	Data Item Monitoring
Update Static Content	Configuration Matrix	Data Flow Monitoring
Organization Management	Manage Reference Data	Gate Closure Monitoring
Role Management	Manual File Upload	Audit Log
Human User Management	Allocation Definition	System Unavailability
Machine User Management	Allocation Calendar	

Update Static Content

Static content:
FAQ.html

Frequently Asked Questions (FAQ)

Introduction

ENTSO-E is pleased to present its transparency platform. Its objective is very simple: to facilitate access to information by all market participants and stakeholders in promoting the transparency goals of the IEM.

Overview

Currently, there are four main categories of topics:

1. [Navigation](#)
2. [Data](#)
3. [Administration](#)
4. [General information](#)

Figure 114

All changes in content are applied (visible on web for users) immediately after saving.

4.11 Audit Log

The audit log allows the administrator to view audit information, to filter user events, severity, date and time. To open the Audit Log screen, go to the Administration menu and select Audit Log. The system shows the audit log overview. The detailed view can display one of following types of information:

- > Simple message + comparison of original values and updated values in two columns
 - This type is used for all changes in all management screens of application, Configuration matrix and both Allocation definition and calendar managements.
- > Simple message + links to original version and newer version of XML file in reference data
 - Displayed when updates were done using upload of newer version of reference data
- > Simple message only
 - Used in simple cases like information that user changed its own password

Audit Log

Date: Set Range ? User:

Date and Time	User ▲ ▼	Component ▲ ▼	Event ▲ ▼	Severity ▲ ▼	
Mon Apr 13 20:06:47 UTC 2015	Admin Adminovič	Area Management	Update	MEDIUM	—
Message					
Area updated					
Attribute name					
	Old Values		New Values		
Area Name	Ukraine		Ukraine		
Area Display Name	Ukraine (UA)		Ukraine (UA)		
Area Type	CTY		CTY		
Area EIC	CTY UA		CTY UA		
Time Zone Code	EET		EET		
ISO Currency Code	EUR		EUR		
Effective Start Date					
Effective End Date					
SubAreas	BZN UA, BZN UA-WEPS, CTA UA, CTA UA-WEPS, MBA UA		BZN UA, BZN UA-WEPS, CTA UA, CTA UA-WEPS, MBA UA		
Active	true		true		
Out of EU	true		false		

Figure 115

4.11.1 Filtering

The audit log also supports filtering. A specific user can be selected for filtering. It is also possible to filter by date and time or by range of dates (with time specification, if needed). Click the "Show Data" button to view filtered data.

Select User to Filter Audit Log Show all users in audit log

User ▲ ▼	Account Type ▲ ▼	Organization ▲ ▼	Status ▲ ▼	
50HZ	Human User	50Hertz	Active	Select
ADMIE	Human User	ADMIE	Active	Select
AMPRION	Human User	Amprion	Active	Select
APG	Human User	APG	Active	Select
AAT	Human User	Augstsprieguma tīkls	Active	Select
BRITNED	Human User	BritNed	Active	Select
CAO	Human User	CAO	Active	Select
CASC	Human User	CASC	Active	Select
CEPS	Human User	CEPS	Active	Select
CWE	Human User	CWE	Active	Select

Users per page: 10 25 50 100 1 2 3 4 5 > >>

Figure 116

4.12 System Unavailability

The System Unavailability screen shows information related to time periods when the EMFIP platform is temporarily down. The page also contains the reason why EMFIP was inaccessible.

The data on this screen is managed by the Second Line Support, not by the administrator.

To access the System Unavailability screen, go to the Administration menu and select the System Unavailability item.

Home Load ? Transmission ? Balancing ? Outages ? Administration

Application Management and Settings		Data Administration	Monitoring
Document Management System	Application Settings	Area Management	Data Item Monitoring
Organization Management		Configuration Matrix	Data Flow Monitoring
Role Management		Manage Reference Data	Gate Closure Monitoring
Data Provider Role Management		Allocation Definition	Audit Log
User Management		Allocation Calendar	System Unavailability

Transparency Platform Unavailability Overview

Unavailability Date and Time	Reason
2014-04-29 11:15:00.0 - 2014-04-29 11:45:00.0	Release 1.1 deployment
2014-03-03 17:45:00.0 - 2014-03-03 21:45:00.0	DMS maintenance.

Rows per page: 10 25 50 100 1

Figure 117

4.13 Validations

In addition to the validations defined via rule settings in the Configuration Matrix, several validations are implemented in such a way that they can only be modified by second-line support.

4.13.1 EDI Validations

EDI validations are validations developed based on requirements specified in Implementation Guides for various types of Messages. These validations are coded and they are impossible to change or disable via EMFIP configuration settings.

Note that some of them were already disabled for the purpose of migrations of historical ETP data.

ID	Validation	Element / Type	Description
CT01	Version number is higher than version of preceding submission	Document - Version number	
CT02	Unique identification of Time Series	Time Series	Time Series have unique identifiers.
CT04	Series periods within document time interval	Series Period	The time interval of a series period is within the time interval of the document.
CT05	Non-overlapping Series Periods	Series Period	The end date and time of a period is less than or equal to the start date and time of the next period.
CT06	Maximal number of positions (all positions are within time interval of series period)	Series Period, Point	curveType=A01, A02 or A03: $(\text{EndTime} - \text{StartTime}) / \text{Resolution}$ curveType=A04 or A05: $1 + (\text{EndTime} - \text{StartTime}) / \text{Resolution}$
CT07	Completeness for curveType=A01	Series Period, Point	The number of positions is $(\text{EndTime} - \text{StartTime}) / \text{Resolution}$. All positions are present in the time series.
CT08	No gaps for curveType=A01	Time Series, Series Period	The end of the series period time interval must coincide with the start of the time interval of the next series period.
CT09	Completeness for curveType=A03, A04 or A05	Series Period, Point	Points must cover the time interval of the subordinate series period.
CT10	End date and time position for curveType=A04 or A05	Series Period, Point	Position $1 + (\text{EndTime} - \text{StartTime}) / \text{Resolution}$ is included in the series period.
CT11	No overlapping breakpoints for curveType=A05	Series Period, Point	If the end of the series period time interval is equal to the start of the time interval of the next series period, then point values for both the end and the start in question are equal.

Table 4

4.13.2 Specific Data Item Validations

Another kind of validations that are coded directly in the EMFIP platform is validations related to Data Item recognition. Data Items use various Document Types, Process Types, or Business Types, or even lengths of Time Intervals that are specific for a given Data Item.

Values of these attributes cannot be easily changed in EMFIP configuration settings

4.14 Capacity products

Capacity products are associated with Capacity Allocations. New capacity products can be created via submission of XML in Manage reference data UC.

There are Standard and Derived capacity products that need to exist in the register. See the schema below

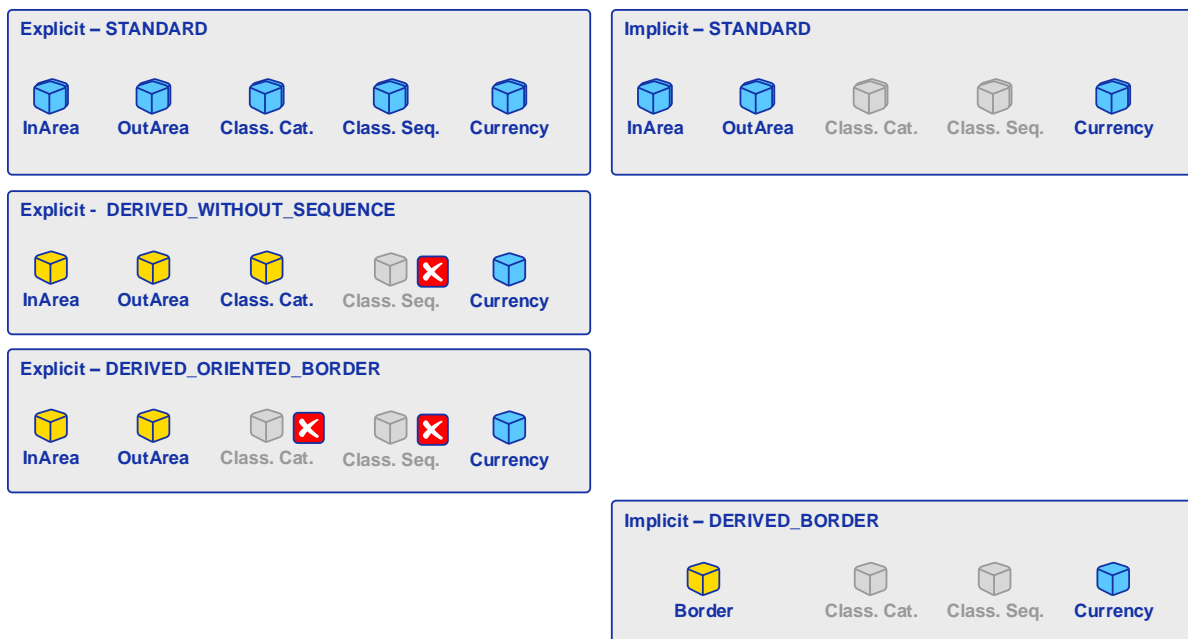


Figure 118

4.14.1 Capacity product structure

Each Capacity product consists of several attributes

- > In Area
 - Area into which electricity flows
 - In case of Derived Capacity product “Non-oriented border” it is considered to be Area 1. EIC code of the Area should be earlier in alphabet (in register Capacity Product) than EIC code of Area 2
- > Out Area
 - Area from which electricity flows
 - In case of Derived Capacity product “Non-oriented border” it is considered to be Area 2.
- > Classification Category

- There are following items available: Base (A01), Peak (A02), Off-Peak (A03), Hourly (A04). Categories are not harmonized through the Europe, but for example Base is usually defined as working days (Monday-Friday) since 08:00 to 20:00. Peak is even shorter, inside the Base. Off-Peak is usually defined as the rest before/after Base. The item Hourly should be used in cases where time intervals are not relevant because the capacity is different each hour (form of diagram).
 - Note that selection of correct category is not crucial in term of configuration. It “just” affects on which Data View will the data be displayed. Nevertheless it is important from a business point of view.
 - Each of items can be used together with any Contract type of allocation (intraday, daily, weekly, monthly etc.). No limits applied
- > Classification Sequence
- Only number 1 should be sufficient in most cases. But there are situations when different sequences is always needed. That is a case when the cross-border capacity is not offered at once, but it is offered several times in smaller amounts, broken to pieces. This is typical for Split auctions (where each TSO of the border offer 50%) and also some commercial projects like undersea links (e.g. BritNed).
- > Currency
- >
- The register Capacity product available in Manage Reference Data UC also contains items:
- > Code
- Just a identifier of the product that needs to be unique within the register
- > Capacity Product Type
- Identifies the type of product (e.g. standard, derived oriented border etc.), see chapters below
 - Notice that for example standard Implicit Capacity product and derived product Oriented border use the very same structure (no class. Category, no class. Sequence). The value of Product Type makes the different and it is important for correct recognition.

4.14.2 Standard Capacity products

Capacity product differs based on allocation type:

- > Capacity products for Implicit allocation contains two Areas with a direction, Currency, Type (STANDARD) and Code.

```
<capacityProduct>
  <code>A_D_SE1-SE2</code>
  <capacityProductType>STANDARD</capacityProductType>
  <ISOCurrencyCode>EUR</ISOCurrencyCode>
  <inAreaCode>BZN|10Y1001A1001A44P</inAreaCode>
  <outAreaCode>BZN|10Y1001A1001A45N</outAreaCode>
</capacityProduct>
```

Figure 119

Following derived capacity products are required in register for each Implicit standard Capacity product:

- Oriented Border (despite it is explicit Capacity product)
- Non-oriented Border

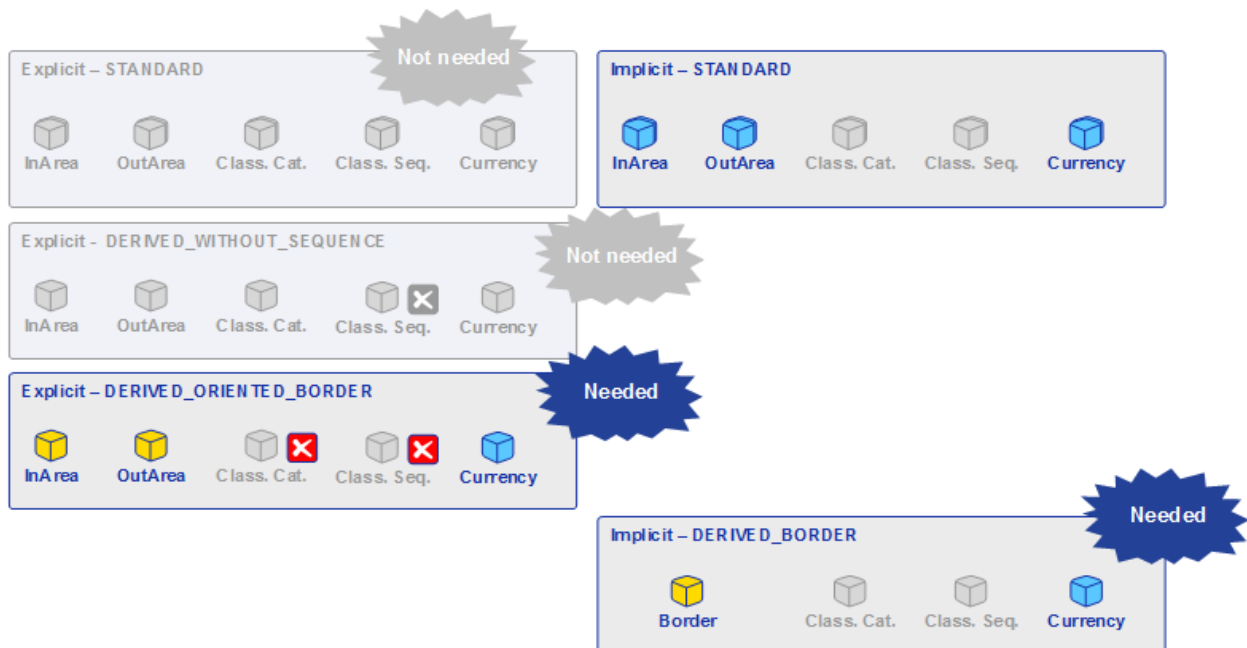


Figure 120

- > Capacity products for explicit allocation contains two Areas with a direction, Currency, Code, Type (STANDARD), Classification category and Classification Sequence.

```
<capacityProduct>
  <code>A_OffPeak1_IT-GR</code>
  <capacityProductType>STANDARD</capacityProductType>
  <classificationCategoryTypeCode>A03</classificationCategoryTypeCode>
  <ISOCurrencyCode>EUR</ISOCurrencyCode>
  <inAreaCode>BZN|26Y1001A1001A08Y</inAreaCode>
  <outAreaCode>BZN|10YGR-HTSO----Y</outAreaCode>
  <classificationCategorySequenceAuctionRoundNumber>1</classificationCategorySequenceAuctionRoundNumber>
</capacityProduct>
```

Figure 121

Following derived capacity products are required in register for each Explicit standard Capacity product:

- Without Classification Sequence
- Oriented Border
- Non-oriented Border (despite it is implicit Capacity product)

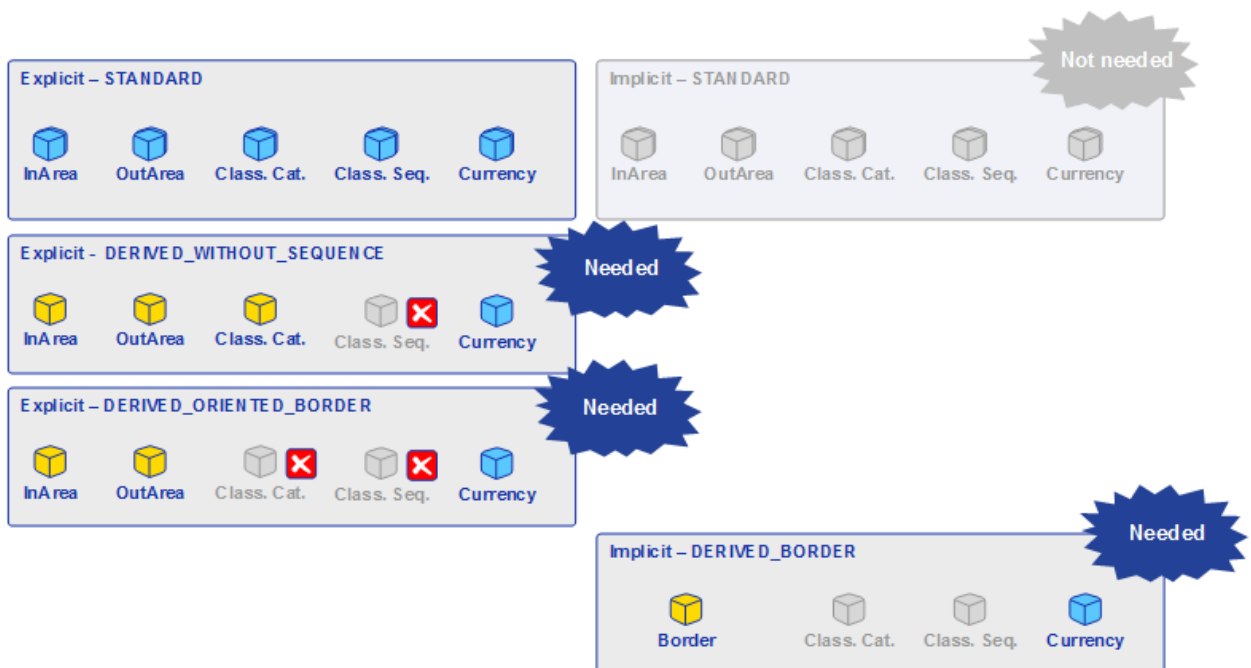


Figure 122

4.14.3 Derived Capacity products

For some Data Items there are Derived Capacity products. These Capacity products contains less data than standard Capacity products.

Note that Derived Capacity products are closely related to STANDARD Capacity Product. When STANDARD Capacity product is created, corresponding derived products have to be created (unless it already exist) as well and vice versa.

4.14.3.1 Without classification sequence

- > Capacity products for explicit allocation without Classification sequence. Contains two Areas with direction, Type (DERIVED_WITHOUT_SEQUENCE), Currency, Code and Classification category.

```
<capacityProduct>
  <code>ADWS_Base_BE-NL</code>
  <capacityProductType>DERIVED_WITHOUT_SEQUENCE</capacityProductType>
  <classificationCategoryTypeCode>A01</classificationCategoryTypeCode>
  <ISOCurrencyCode>EUR</ISOCurrencyCode>
  <inAreaCode>BZN|10YBE-----2</inAreaCode>
  <outAreaCode>BZN|10YNL-----L</outAreaCode>
</capacityProduct>
```

Figure 123

4.14.3.2 Oriented border

- > Capacity products for explicit allocation without Classification sequence and Classification category. Contains two Areas with direction, Currency, Type (DERIVED_ORIENTED_BORDER) and Code.

```

<capacityProduct>
  <code>ADOB_SE3-N01</code>
  <capacityProductType>DERIVED_ORIENTED_BORDER</capacityProductType>
  <ISOCurrencyCode>EUR</ISOCurrencyCode>
  <inAreaCode>BZN|10Y1001A1001A46L</inAreaCode>
  <outAreaCode>BZN|10YN0-1-----2</outAreaCode>
</capacityProduct>

```

Figure 124

4.14.3.3 Non-oriented border

- > Capacity products for implicit allocation with non-oriented Border. Contains two Areas, Currency, Type (DERIVED_BORDER) and Code.

```

<capacityProduct>
  <code>ADB_EE-LV</code>
  <capacityProductType>DERIVED_BORDER</capacityProductType>
  <ISOCurrencyCode>EUR</ISOCurrencyCode>
  <inAreaCode>BZN|10Y1001A1001A39I</inAreaCode>
  <outAreaCode>BZN|10YLV-1001A00074</outAreaCode>
</capacityProduct>

```

Figure 125

- Although this is Derived Capacity product with non-oriented border, it shares the same structure of XML with all others Capacity products. It uses In and Out areas attributes (despite there is no direction needed). Please be aware that values in attributes for areas have to be sorted alphabetically (e.g.: In Area: 10YBE-----2, Out Area: 10YNL-----L).

4.15 Reporting

The reporting functionalities offer an export of data mainly for statistical purposes. It enables manually trigger generation of required report. As the data are coming from Databases (MySQL or Mongo), the user preparing the template for Report has to have a knowledge of database structures.

Both solution is integrated into DMS and use it for storage of both templates and created reports.

4.15.1 Report Template

The presence of Report template in DMS is essential step for creation of a new Report. Templates are stored in directories as depicted below.

Document Management System

Document Name Document Tag Date From Date To

Actual Path: [Root folder](#)

Name ▲ ▼	System Version ▲ ▼	Last Update Date & Time ▲ ▼	User ▲ ▼	Organization
system		07.04.2015 12:17:29	System User	
Subscriptions		27.03.2015 08:51:36	System User	
Reporting		27.03.2015 08:46:57	System User	
Static content		18.03.2015 14:51:31	System User	
Legacy data		10.03.2015 17:23:32	Pavel Michalicek	
Reference Data XML		02.12.2014 17:28:09	Jan Kadeřávek	
Data Flows		02.12.2014 09:27:52	System User	
Audit		02.12.2014 09:27:52	System User	

Rows per page 1

Figure 126

Document Management System

Document Name Document Tag Date From Date To

Actual Path: [Root folder/Reporting](#)

Name ▲ ▼	System Version ▲ ▼	Last Update Date & Time ▲ ▼	User ▲ ▼	Organization
Reports		27.03.2015 08:47:01	System User	
Templates		27.03.2015 08:47:01	System User	

Rows per page 1

Figure 127

The directory for templates is available only to users with one of following roles currently (otherwise the directory is not visible in DMS):

1. Report creator

The Report Template has to be created in one of supported formats out of the system. Then the button "Upload New File" has to be used to open a screen of upload of prepared template and description by metadata.

These metadata related to the file are important because it typically contains also SQL query or defines another source of data that should be published through the reporting engine. See the window of typical Report Template described by metadata.

File: *

C:\fakepath\week report.xlsx

Description:

Weekly report of missing data

Metadata

Name	Value	Add Entry
<input type="text" value="name"/>	<input type="text" value="Week Report"/>	<input type="button" value="+"/> <input type="button" value="X"/>
<input type="text" value="dataSource.0.name"/>	<input type="text" value="standardDaily"/>	<input type="button" value="+"/> <input type="button" value="X"/>
<input type="text" value="dataSource.0.sql"/>	<pre>SELECT DataProviderID, mv.DataItemID, DataItemDescription, roleName, count(1) as missing</pre>	<input type="button" value="+"/> <input type="button" value="X"/>
<input type="text" value="dataSource.1.name"/>	<input type="text" value="allocationDaily"/>	<input type="button" value="+"/> <input type="button" value="X"/>
<input type="text" value="dataSource.1.sql"/>	<pre>SELECT DataProviderID, mv.DataItemID, DataItemDescription, roleName, count(1) as missing</pre>	<input type="button" value="+"/> <input type="button" value="X"/>

* - required field

Figure 128

As you can notice from the window above, there are several items that are always required when you create a Report Template. Some of them can be present several times however.

Metadata name	Description	Values	Mandatory / Optional
engine	Metadata specifying a type of reporting engine to be used. When not provided a default value is used and set for Excel file creation.	EXCEL (default, for XLSX) TEXT (for CSV and XML)	Optional
name	Metadata specifying a name of Report Template that will be displayed to users in GUI when screen for Ad-hoc reporting will be used. The use of lower case is necessary, all metadata are case sensitive.	Any string	Mandatory
dataSource.X.type	Metadata specifying type of engine X representing number, begins with 0.	SQL (default, for MySQL DB) MongoDB (for Mongo DB)	Optional

Metadata name	Description	Values	Mandatory / Optional
dataSource.X.name	Metadata specifying name of initial data source that is going to be used for reporting. This name is used and referenced in files of Report Templates themselves. X representing number, begins with 0.	String without spaces	Mandatory for initial data source "0" / Optional for other data sources
dataSource.X.sql	Metadata intended for definition of data source for report. SQL query is inserted as a value. It is recommended to verify that the query is correct and working directly in database environment before it is used in reporting. X representing number, begins with 0	SQL query	Mandatory for initial data source "0" / Optional for other data sources
dataSource.X.query	Metadata for query into Mongo Database that does not use usual SQL language.		

Table 5

4.15.1.1 XLSX Report Template

The following screenshots depicts the structure of excel template that has to be uploaded into DMS. The layout and formatting is not limited by reporting engine and can be built by template creator according to needs. The important part (or parts in templates containing several data sources) is started by #for and ended with #end marks.

The reference to data source name has to be provided on the initial line. This ensures that the platform correctly loads corresponding sql query. The call of function "reportMetadata.getQueryByName" should not be changed. The alias "d" representing result of data source can be changed, but please be aware that also references to columns must be updated with this alias also.

Results of query are then mapped to required places determined by column names from sql query.

	A	B	C	D
1	Daily and Intraday Data Items			
2				
3	Standard Data Items			
4	Data Item	Data Provider	Missing Values	Expected Values
5	#for d in reportMetadata.getQueryByName('standardDaily') reference to dataSource.0.name			
6	#{d.dataItemDescription}	#{d.roleName}	#{d.missing}	#{d.expected}
7	#end			
8	References to columns inside dataSource.0.sql			
9	Allocation Data Items			
10	Data Item	Data Provider	Missing Values	Expected Values
11	#for d in reportMetadata.getQueryByName('allocationDaily')			
12	#{d.dataItemDescription}	#{d.roleName}	#{d.missing}	#{d.expected}
13	#end			

Figure 129

4.15.1.2 CSV Report Template

The screenshot below depicts the structure of CSV template. The first row is a header of the report that will be displayed as a first. The second line list columns of the report. Notice that items are separated by semicolon.

Part for results is started by “<#list>” and ended by „</#list>” tag. The system is very similar to Excel template. The value of data source is referenced so that correct query could be loaded by the system.

Then columns of the result data source are defined. These columns are also separated by semicolons.

```

Data Providers
Name; EIC
<#list roles as role>
  ${role.roleName}; ${role.roleDescription}
</#list>

```

reference to
dataSource.0.name

references to columns in
dataSource.0.sql

Figure 130

4.15.1.3 XML Report Template

The screenshot below depicts the structure of XML template. There is no special format or XSD dedicated for outputs in form of XML. The creator of template creates its own needed structure of XML.

The reporting part with results is started in the same way as CSV report. It is started on line with “<#list>” and ended by „</#list>” tag. The structure of XML is built between these tags. In this case, columns are represented by special attributes, defined on separate rows.

```

<?xml version="1.0" encoding="UTF-8">
<dataProviders>
  <#list roles as role>
    <dataProvider>
      <name>${role.roleName}</name>
      <eic>${role.roleDescription}</eic>
    </dataProvider>
  </#list>
</dataProviders>

```

reference to
dataSource.0.name

references to columns in
dataSource.0.sql

Figure 131

4.15.2 Report creation

Reports are based on existing Report templates and their creation is triggered on a screen called Ad-hoc reporting which is available in administration menu.

entsoe
Transparency Platform

Central collection and publication of electricity generation, transportation and consumption data and information for the pan-European market.

jan.kaderavek@unicornsyste.ms.eu FAQ

New messages: 0

Home Load ? Generation ? Transmission ? Balancing ? Outages ? Congestion Management ? Administration

Application Management and Settings

- Document Management System
- Update Static Content
- Organization Management
- Role Management
- Human User Management
- Machine User Management

Data Administration

- Configuration Matrix ...
- Manual File Upload
- Allocation Definition
- Allocation Calendar
- Reference / Master Data ...
- News Management

Monitoring

- Data Flow Monitoring
- Other Monitoring ...
- Audit Log
- System Unavailability
- Ad-hoc Reporting**
- Download Statistics

Reporting

Report*
Week Report

Version	Date	Author	File Size [kB]	
2	10.04.2015 10:29	Michal Švondr	18,02	
1	10.04.2015 07:44	Michal Švondr	18,02	

Items per page: 10 25 50 100

Generate new version

Figure 132

Be aware that that creation of report is not a synchronous process. This means that report will not be offered to you immediately as a response of button clicking and you can continue using the application. The reason is that the generation can take some time, depending of complexity of queries inside Report Templates. User is informed by message in Message Board once the Report is finished and available for download.

There are actually three ways how to download generated Report

2. Through a link provided in message of Message Board
3. Through a download button on Ad-hoc reporting screen after selection of corresponding template name
4. Directly in DMS

Similarly to Report Templates, also all Reports are stored in DMS. A directory Reporting\Reports is used for storage. As any other file in DMS, it can be versioned. Therefore a new creation of a report actually does not create a new record in DMS, but it creates a newer version of the existing report. Of course, all previous versions are available for download. Both from Ad-hoc reporting screen and DMS folder.

4.15.3 Roles

Three types of Roles are offered

1. Report Template Creator
 1. This role can access both "Reporting/Reports" and "Reporting/Templates" folder in DMS. Users in this role can upload Report Templates and modify their metadata in DMS.
2. Reporter
 1. This role can access only "Reporting/Reports" folder with generated reports in DMS. Templates are not available for this role.

2. Reporter can access the Ad-hoc reporting screen, download created reports and also trigger new generation based on existing template
3. Report Viewer
 1. Users in this role can access the Ad-hoc reporting screen, however they are not able to trigger creation of new version of the report. They can only download existing versions of Report.

4.16 Web API

Administrator can enable access to Web API both to Human and Machine users.

4.16.1 Web API for Human users

To enable human user's access to web API, Platform Administrator has to assign a special role to human users.

This can be done in Human User management. Select required user and go to edit through the pencil button. Then select role "**Web API Consumer**" in Available roles and move it to field for Roles Associated to User. Changes need to be saved.

Be aware that the "Web API Consumer" role is not inherited from any of other roles and **needs to be always used together with a different role** (e.g. registered user).

Once the Role is assigned and saved, the selected user will see a new section "Web API Security Token" in the My Account Settings screen where the token can be generated. User has to log out and log in again so that correct roles/rights are loaded.

My Account Settings

Personal Information

Title

First name * Last name *

Mobile Phone Number + 420 Office Phone Number + 420

Login Information

Email Address *

Password * Repeat your password to confirm *

Additional Account Settings and Information

Country ? Preferred Timezone ?

Position and Responsibilities ?

* - required field

Competency

Roles: Analyst
Data Provider
Organization: CEPS

Web API Security Token

255976e4-4aea-45b7-ab8a-1969d84f226c

Figure 133 - Role Web API Consumer brings new section in My Account Settings

As Administrator does not have an access to My Account Settings of each user, it will not be possible to find out the Web API Security Token. The Token will be available only for the user himself.

To **remove** the access to Web API, System Administrator or Backend support member needs to remove the role Web API Consumer from the user and save such settings.

To **change** the Web API Security Token, it is needed to remove the role of Web API Consumer, save such settings and then again add the Web API Consumer role.

4.16.2 Web API for Machine users

Before a machine user may access the web API, Platform administrator must enable the access. This is done in List of Machine users, on Edit screen accessible through the Pencil icon on a row of required Machine user. The Edit screen contains (visible only for Platform Administrator and Backend support members) a section called “Web API Access” with a checkbox “Enable Web API Access”. The checkbox is not checked by default.

The screenshot shows the 'Edit Machine User' interface. At the top right, there is a 'Close without saving' button. The main form area is titled 'Edit Machine User' and contains several sections:

- Name ***: A text input field containing 'WEPS'.
- Channel Type ***: A section titled 'Please select one (or more) of the data-sending channels.' with three radio button options:
 - ECP - ECP Endpoint Code: [text input]
 - FTPS ? FTPS Password: [password input]
 - Web service ? Select strategy: Pull Push
- Certificate:** [text input]
- End Point:** [text input]
- Web API Access**: A section highlighted with a green border, containing a checkbox 'Enable Web Api Access'.
- Organization**: A dropdown menu with 'Seps' selected.
- Description ?**: [text input]
- * - required field**: A note at the bottom left.
- Create User**: A button at the bottom center.

Figure 134 - Enabling of Web API Access for Machine users

The same logic is used also when a new Machine user is created.

When checkbox is checked and user saved a new section is available in expanded row of the Machine user in the list of Machine users. This new section is called Web API Security Token and contains the value of the token that needs to be used during communication via Web API.

Machine User Management Create new machine user

User ▲▼ Organization ▲▼ Status ▲▼

weps@emfip.test	WEPS	Active	⊘	✕	✎	+
tso-cyprus@emfip.test	Cyprus TSO	Suspended	↺	✕	✎	+
terna@emfip.test	Terna	Suspended	↺	✕	✎	-

General Information

Name: terna@emfip.test

Organization: Terna

Integration Channels

ECP: TER

FTPS: configured

Web service: Pull

Web API Security Token

255976e4-4aea-45b7-ab8a-1969d84f226c

Description

Name	Organisation name	Active	⊘	✕	✎	+
Name	Organisation name	Suspended	↺	✕	✎	+
Name	Organisation name	Active	⊘	✕	✎	+
Name	Organisation name	Suspended	↺	✕	✎	+
Name	Organisation name	Active	⊘	✕	✎	+
Name	Organisation name	Suspended	↺	✕	✎	+
Name	Organisation name	Active	⊘	✕	✎	+

Rows per page: 10 25 50 100 1 2 3 - 15 Next >>

Figure 135 - Security token of Machine users with enabled Web API Access

The Security token is available only for those Machine users that have enabled Web API Access by Administrator or Backend support.

As opposed to Human users, Token can be seen by Platform Administrators, Organization Administrator.

To **remove** the access to Web API, System Administrator or Backend support member needs to uncheck the checkbox Enable Web API Access in Edit screen of the Machine user and save it.

To **change** the Web API Security Token, it is needed to uncheck the checkbox Enable Web API Access in Edit screen of the Machine user, save the change and again check the same checkbox.

4.16.3 HTML Web API Guide

The documentation of Web API is available in DMS and published as one of links on Help page of Transparency platform. As any other static content, Administrator can update the HTML file in the screen of Update Static Content if needed.

4.17 Data Repository

Administrator can allow usage of Data Repository for both Human and Machine users.

4.17.1 HTML Data Repository Guide

Data Repository Guide is also available in DMS and published as one of links on Help page of Transparency platform. Data Repository Guide references Web API Guide since the XML request format (Status Request document) is the same.

4.17.2 Data Repository for Human users

To enable human users to query the data repository, Platform Administrator must assign them a special role.

This can be done in Human User management. Select required user and go to edit through the pencil button. Then select role "**Data Repository User**" in Available roles and move it to field for Roles Associated to User. Changes need to be saved.

Be aware that the "Data Repository User" role is not inherited from any of other roles and **needs to be always used together with a different role** (e.g. registered user).

Once the Role is assigned and saved, the selected user has access to Submit Request for Data Export use case and to Message Board. User has to log out and log in again so that correct roles/rights are loaded. The UC Submit Request for Data Export is one of menu items available when user clicks on his name in upper right corner.

4.17.3 Data Repository for Machine users

Usage of Data Repository for machine users is not enabled by default and can be allowed by Platform administrator. This is done in List of Machine users, on Edit screen accessible through the Pencil icon on a row of required Machine user. The Edit screen contains (visible only for Platform Administrator and Backend support members) a section called "Data Repository Exports" with a checkbox "Allow Data Repository Exports". The checkbox is not checked by default.

Edit Machine User

Name *
WEPS

Channel Type *
Please select one (or more) of the data-sending channels.

ECP - ECP Endpoint Code:

FTP FTPS Password:

Web service Pull Push

Endpoint:

Certificate:

Web Api Access
 Enable Web Api Access

Data Repository Exports
 Allow Data Repository Exports

Organization *
SEPS

Description

* - required field

Figure 136:Enabling of Data Repository exports for Machine Users

To **remove** the access to Data Repository feature, System Administrator or Backend support member needs to un-check the checkbox Allow Data Repository Exports in Edit screen of the Machine user and save changes.

Be aware of validation covering case when both Data Repository exports and Push method in web service channel are enabled. This combination is not allowed and only Pull method can be used for Data Repository functionality.

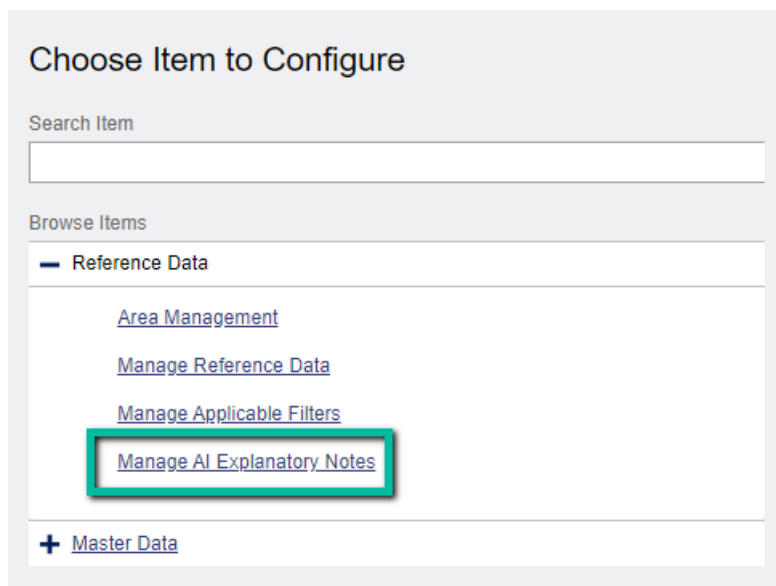
Also please follow a recommendation on use of Data Repository Requests via FTP. As the FTP is not dedicated for Data Repository, but common with the one used for regular data submission according to Regulation 543-2013, Data Providers could have mixed their input messages with Status Requests documents. To avoid this situation, it is recommended to have a dedicated Machine user for requests on Data (that will lead to creation of separate folder on FTP). Similar situation is valid also for Web Services.

4.18 Explanatory Notes for Allocation Data

There is a possibility of adding the explanatory notes even for data items, that are not based on the Configuration Matrix, but on the Allocation Calendar.

Since these Data Items have no Business Dimensions in the Configuration Matrix the Explanatory notes cannot be just configured via CM, but a dedicated register is created for it.

This register can be found in the Administration menu > Reference / Master Data > Reference Data > Manage AI Explanatory Notes.



The screenshot shows the entsoe Transparency Platform interface. At the top, there is a navigation menu with links for Load, Generation, Transmission, Balancing, Outages, Congestion Management, System Operations, and Administration. A 'DEVELOPMENT' banner is visible, along with a user profile for 'admin@entsoe.eu' and a 'New messages: 877' notification. The main content area is titled 'Manage AI Explanatory Notes' and includes radio buttons for 'Change Reference Data' (selected) and 'Download Reference Data'. Below this is a dropdown menu for 'Choose reference data' with the value 'DAILY_FLOW_BASED_ALLOCATIONS_CONGESTION_INCOME'. There is also a 'Select xml file' section with a text input and a 'Browse File' button. An 'Upload reference data' button is located at the bottom of the form. The footer contains version information ('Mobile | PC') and links for 'Terms & Conditions', 'Sitemap', 'About ENTISO-E', and 'Contact Us'.

In order to view the Use Case, the user has to have assigned respective rights.

Note the rights are bound to a role, not directly to a user.

- AI Explanatory notes – Manage: Allows the user to use the write rights for all AI Explanatory Notes registers.
- AI Explanatory notes – Browse: Allows the user only to read(download) all AI Explanatory Notes registers.

In case of a need of assigning the rights to another role or creating a dedicated role for such purposes, the Role Management UC shall be used. See the section: [4.6 Role Management](#).

4.18.1 Publication of the Note

The note will be displayed on the data view under the table as a part of the body of the data view itself.

It will not be a part of the published instance and thus it will be visible even when no data is published on the data view.

Each data view will load notes from both configured directions. It will work the same as it is already implemented for standard DIs.

In case that both directions of a the same border on the same data view have identical Note configured in the register, it will be displayed only once.

The screenshot shows the entsoe Transparency Platform interface. At the top, there is a navigation bar with tabs for Load, Generation, Transmission, Balancing, Outages, Congestion Management, System Operations, and Administration. The main content area is titled 'Explicit Allocations - Intraday' and includes a 'Day Range' selector set to 18.09.2020 to 11.11.2020. Below this, there are tabs for 'Border - Control Area', 'Border - Bidding Zone', and 'Border - Bidding Zone Aggregation'. The 'Area' dropdown is set to 'Belgium (BE)'. A table displays data for the time interval 27.09.2020 00:00 (CET) for the class 'BZN|NL > BZN|BE'. The table has columns for Time interval, Class, Cat., Seq., OC [11.1], RC [12.1.A], AC [12.1.A], Price [12.1.A], OC [11.1], RC [12.1.A], AC [12.1.A], and Price [12.1.A]. The data row shows a value of 1 in the OC [11.1] column. Below the table, there is an 'Explanatory note will be displayed here.' section with a '1' next to it, and a 'Items per page' selector set to 10.

4.18.2 Active Flag Handling

As mentioned in the section above, each note will have assigned an active flag that will describe, whether a note shall be displayed on the data view or not.

When a user creates a new Note with the active Flag set to true, the Note will be deemed as a valid and will be published.

In case that a new note is uploaded, while another note with the same dimensions already exists in the register, the new record will overwrite the old one.

In case that a user will decide to hide already published note from the data view, a new version of XML file will have to be uploaded with the specific note either set to false or completely removed from the XML file. Each of these options will set the active flag to false in the register.

4.18.3 Data View Code

In general, each Data View is identified by a code (it will be filled in the attribute Data View code) in the system. Thus, it will not be possible to configure notes in a separate register item per each data item in case of shared data views such as Explicit Allocations – Intraday. In case of a need to have separate notes per data item on a composed data view, the data item can be specified within the text of the note itself.

In case of evolution data views, these data views have the same data view code as the standard OC intraday data views. Thus, notes for these data views will be submitted in the same XML document. Whether the note will be displayed on the standard OC intraday data view or on the evolution data view, it will be differentiated by the evolution flag in an item register.

4.18.4 Displayed Name

This name will be a free text, that will be stored in the Explanatory Notes Names register, alongside the Data View Code.

The displayed name will be used to list the registers on the filter on the management UC in a more user-friendly way.

In the XML it will be placed in the header of the document where it will be editable. Default value will be the Data view Code.

The following table contains the list of affected Data items.

Covered Data items
Offered Year-ahead Transfer Capacities [11.1]
Offered Month-ahead Transfer Capacities [11.1]
Offered Week-ahead Transfer Capacities [11.1]
Offered Day-ahead Transfer Capacities [11.1] – EXPLICIT
Offered Day-ahead Transfer Capacities [11.1] – IMPLICIT
Offered Intraday Transfer Capacities [11.1] – EXPLICIT
Offered Intraday Transfer Capacities [11.1] – IMPLICIT
Other Offered Transfer Capacities [11.1]
Explicit Allocations - Use of the Transfer Capacity [12.1.a] – Yearly
Explicit Allocations - Use of the Transfer Capacity [12.1.a] - Monthly
Explicit Allocations - Use of the Transfer Capacity [12.1.a] - Weekly
Explicit Allocations - Use of the Transfer Capacity [12.1.a] – Daily
Explicit Allocations - Use of the Transfer Capacity [12.1.a] – Intraday
Explicit Allocations - Use of the Transfer Capacity [12.1.a] - Others
Total Capacity Already Allocated [12.1.c] – Monthly
Total Capacity Already Allocated [12.1.c] – Weekly
Total Capacity Already Allocated [12.1.c] – Daily
Total Capacity Already Allocated [12.1.c] - Intraday
Transfer Capacities Allocated with Third Countries [12.1.h] – Yearly
Transfer Capacities Allocated with Third Countries [12.1.h] - Monthly
Transfer Capacities Allocated with Third Countries [12.1.h] - Weekly
Transfer Capacities Allocated with Third Countries [12.1.h] – Daily
Transfer Capacities Allocated with Third Countries [12.1.h] - Intraday
Transfer Capacities Allocated with Third Countries [12.1.h] – Others
Implicit Allocations - Congestion Income [12.1.e] – Daily
Implicit Allocations - Congestion Income [12.1.e] - Intraday
Explicit Allocations - Auction revenue [12.1.a] – Yearly
Explicit Allocations - Auction revenue [12.1.a] - Monthly
Explicit Allocations - Auction revenue [12.1.a] - Weekly
Explicit Allocations - Auction revenue [12.1.a] – Daily
Explicit Allocations - Auction revenue [12.1.a] – Intraday
Explicit Allocations - Auction revenue [12.1.a] - Others
NTC-based capacity allocation and network utilisation - Day Ahead [CACM 2.2 & 2.3]
NTC-based capacity allocation and network utilisation - Intraday [CACM 2.2 & 2.3]
NTC-based capacity allocation and network utilisation - Result - Day Ahead [CACM 2.2 & 2.3]
NTC-based capacity allocation and network utilisation - Result - Intraday [CACM 2.2 & 2.3]
Flow-based capacity allocation and network utilisation - Day Ahead [CACM 2.2 & 2.3]
Flow-based capacity allocation and network utilisation - Intraday [CACM 2.2 & 2.3]

4.19 Handling of Acknowledgement Receiver Role

The default value of the Receiver Role is set by default to A39 (Data Provider), however the contents of the element may vary with respect to the content and the processing result of the document that is being acknowledged.

In case that the document that is being acknowledged was properly processed, the default value is replaced by the value submitted in the Sender Role element of the original file.

In case that the original file was rejected the content of the Receiver Role element depends on how far the processing reached before it failed.

If the file is rejected because of for example XSD validation or version validation the Receiver Role of the ACK is defaulted to A39.

If the processing is in such an advanced state that the Sender Role of the original file is already known (for example failure during Time Series processing) the default value is replaced by the value submitted in the Sender Role element of the original file.

5. PART 3: MONITORING USING EXTERNAL TOOLS

5.1 Used technologies

5.1.1 Zabbix

Access has been provided to maintenance Zabbix via a VPN tunnel. The rights have been granted to personal accounts of ENTSO-E personnel where requested.

To access the Zabbix application, please follow these steps:

1. Log in to the Global Protect VPN provided by Unicorn
2. Navigate to <http://172.17.193.103/zabbix/>
3. Log in using the credentials provided by Unicorn
4. Select the chosen environment and navigate to the requested UC

For more information please refer to the official Zabbix documentation: <https://www.zabbix.com/documentation/current/>.

5.1.2 ELK

ELK stack has been created, consisting of Filebeat, Logstash, Elasticsearch and Kibana tools:

Tool	Description
Filebeat	Tool collects logs from the servers and sends them to Logstash through SSL layer.
Logstash	Tool receives logs and makes operations for better writes to Elasticsearch.
Elasticsearch	Core database for storage of information from the logs.
Kibana	Frontend application connected to Elasticsearch for browsing the data.

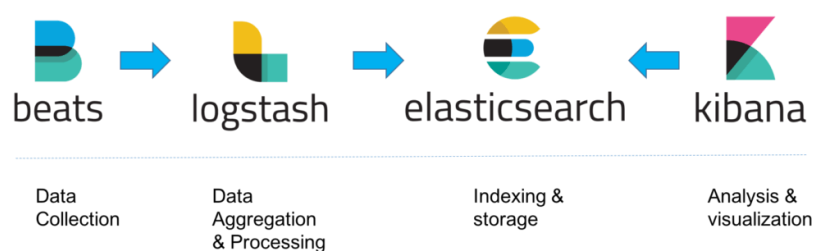


Figure 137: ELK stack

5.1.2.1 Collection of logs

Logs are collected in ELK from virtually all parts of the application infrastructure. The retention period is 90 days, after which the logs are deleted by an automated scheduled process.

Application servers

A unified convention is applied on server instance naming. Below, it is explained and demonstrated on an example.

EMFIPTDGAS01

All server names begin with the code EMFIP for obvious historic reasons (black colour). Then rest of the host name contains the following information:

- > Environment (marked in red)

- PROD: **S**
 - IOP: **T**
 - UAT: **P**
- > Server function (marked in green)
- Listed in the table below
- > Sequence number (marked in blue)

Server function	Description
WPLB	Web Portal load balancer (Apache)
DGLB	Data Gateway load balancer (Apache)
WPAS	Web Portal application server (Tomcat)
DGAS	Data Gateway application server (Jboss)
APAS	Web API application server
MYDB	MySQL database server
MGDB	Mongo DB server
DRCS	Data Receiver - FTP
GOPFE	SPA Front end application server (Tomcat) + Load balancer (Apache)
GOPBE	SPA Back end application (Tomcat)

Installed log sources

Server function	Log sources
WPLB	apache2, auditd, system
DGLB	apache2, auditd, system
WPAS	system, Transparency.webportal
DGAS	auditd, jboss, system, Transparency.datagateway, Transparency.publication, Transparency.subscription
APAS	auditd, system
MYDB	mysql, system
MGDB	mongodb, system
GOPFE	auditd, system
GOPBE	auditd, system

5.1.2.2 Kibana

Access has been provided to Kibana via a VPN tunnel. The rights have been granted to personal accounts of ENTSO-E personnel where requested.

To access the Kibana application, please follow these steps:

5. Log in to the Global Protect VPN provided by Unicorn
6. Navigate to <https://172.17.14.44:1443/> (PROD) or <http://172.17.18.29:5600/app/kibana> (IOP)
7. Navigate to the requested UC. No credentials are required to access Kibana

The following sections describe the main sections of the Kibana tool used. For more information please refer to the official Kibana user guide: <https://www.elastic.co/guide/en/kibana/6.3/index.html>.

Discover

This section of Kibana tool allows user to see and filter gathered log files. It is possible to define fields which should be retrieved from input logs. A dashboard depicts log data receiving during selected time period. The time range can be chosen by user. The complete list of gathered logs is available as well.

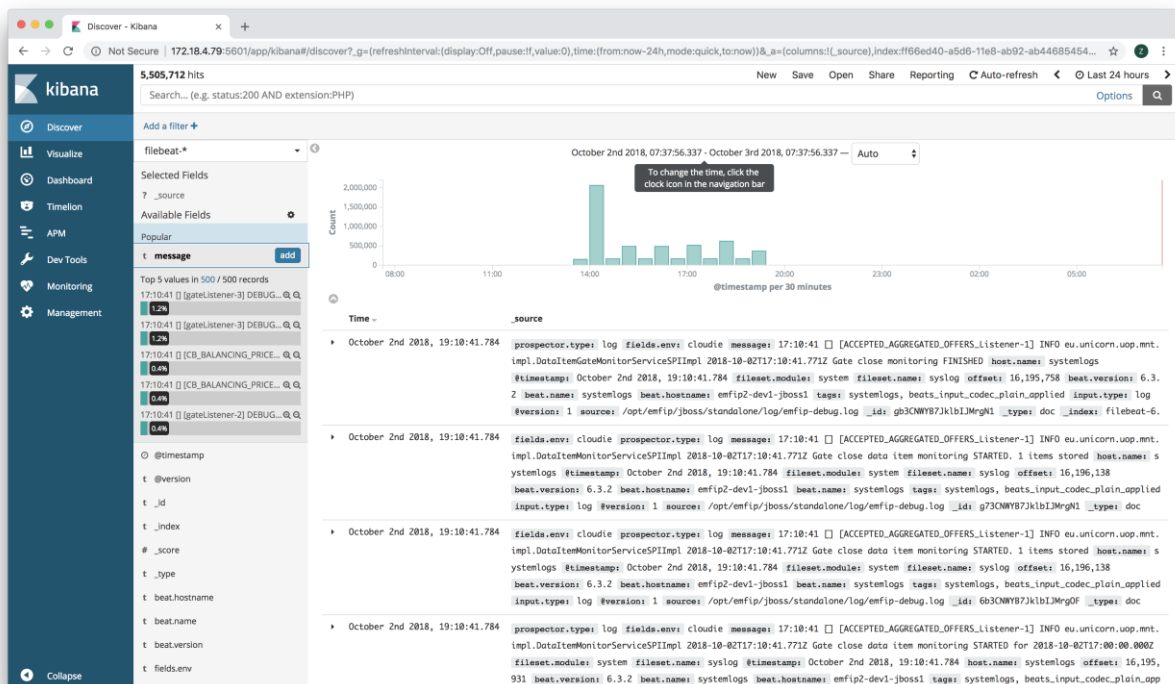


Figure 138: Discover screen

Visualize

The user is able to create a new chart via Visualize screen. The chart is based on fields defined in Discover screen. It is possible to set various chart types (e.g. area, bar, pie), orientation, labels, aggregations and other features. The screen immediately displays result of the created configuration.

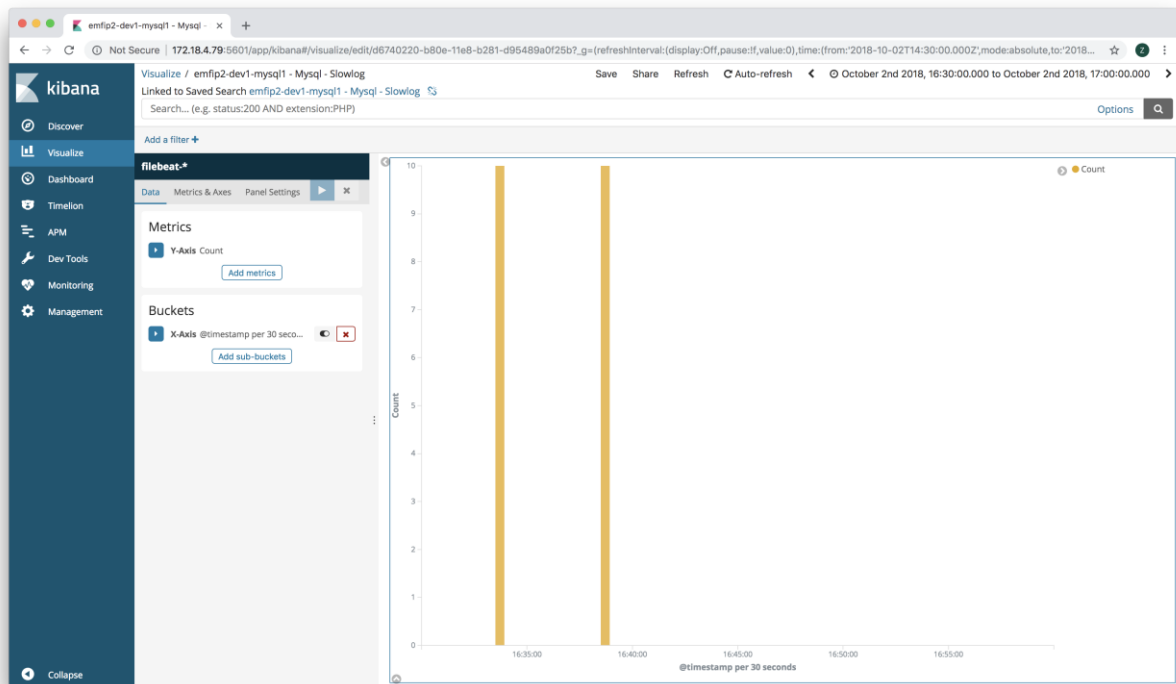


Figure 139: Visualize screen

Dashboard

Dashboard screen is the main output for users. It allows to display several charts and relevant logs defined in previous screens. It is possible to create many independent dashboards. User is able to select displayed time range and refresh interval.

5.1.2.3 Maintenance

Additional infrastructure has been added into IOP and Production environments to accommodate the ELK tools. Provisioning has been incorporated into the standard release procedure.

- > Standalone server for Kibana and Elasticsearch DB
- > Filebeats configured on individual application servers (see description above)

A stable version of the ELK solution is deployed. Any eventual version upgrade will be handled identically to other parts of the technology stack: After a processed request (initiated either by the Customer or recommended by UNI in case of necessity), it will be performed by the Maintenance team.

Filebeat outage

In case of Filebeat outage, the Maintenance team will be notified by infrastructure monitoring. In order to ensure the capture all logs, 5 latest log files (100 MB of logs each) are being kept at all times. This allows long enough retention of logs so that all are available for processing by Filebeat if the outage is handled inside SLA reaction times.

Dashboard creation/update

Users are able to create custom dashboards themselves (see description above). Any maintenance intervention must be requested by standard CR procedure:

- > Design and implementation of new dashboards
- > Updates of existing dashboards
- > Restoration of dashboards corrupted by user changes

5.2 Monitored features

5.2.1 Via Zabbix

5.2.1.1 Hardware monitoring

Hardware is monitored by maintenance team via Zabbix with appropriate notifications.

From the menu, the following hardware performance indicators are available:

- > CPU
- > Memory
 - Used up memory
 - Available memory
 - Ready to use memory
- > File system
- > Network interfaces
- > Server running
 - Boot time
 - Running time
 - Number of processes

5.2.1.2 Data gateway monitoring

The Zabbix tool visualizes Data Flow and Data Item processing tasks waiting in queues and measures their delays. The maintenance team is automatically notified in case some task exceeded defined threshold.

- > ActiveMQ Task data
 - Queue count
 - Queue size

The user can access the Queue monitoring through menu and inspect graph:

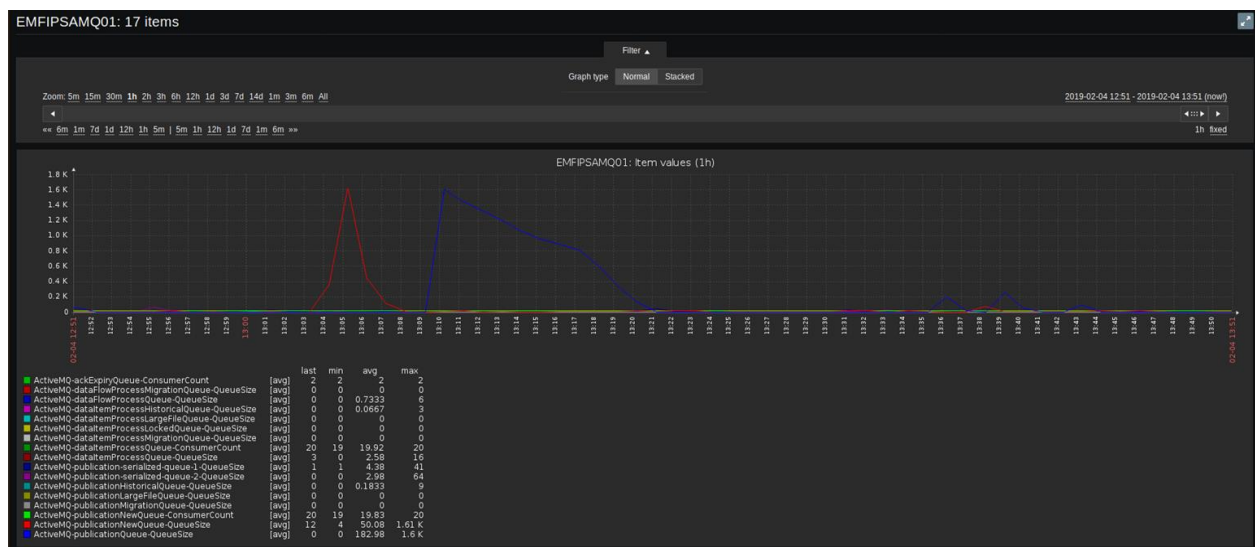


Figure 140: Data Gateway and Publication queues graph

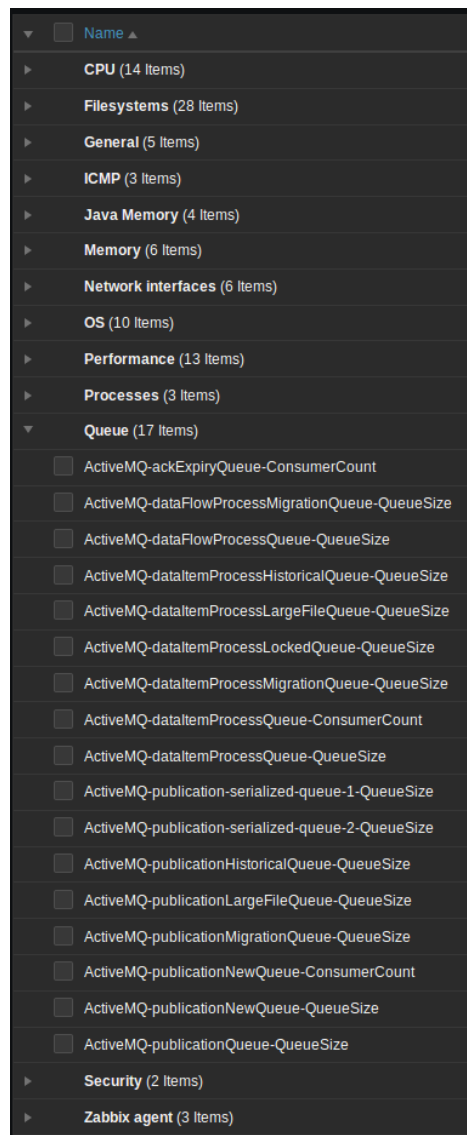


Figure 141: Data Gateway and Publication queue monitoring

5.2.1.3 Publication monitoring

The current instance of Zabbix tool visualizes publication tasks waiting in queues and measures their delays. The maintenance team is automatically notified in case some task exceeded defined threshold.

- > ActiveMQ Task data
 - Queue count
 - Queue size

The user can access the Queue monitoring through menu as shown in *Figure 4*.and *Figure 5*

5.2.1.4 Web portal monitoring

The relevant monitored values describing the Web portal operations are as follows:

- > Availability of the 8080 TCP port for Tomcat application
- > Java memory usage
- > Actual version of Tomcat

The user can access them through menu:

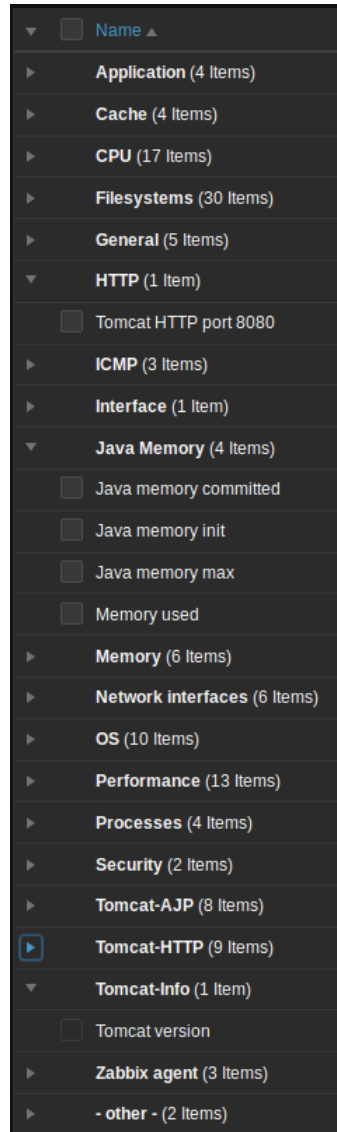


Figure 142: Web portal monitoring options

5.2.1.5 Communication monitoring

Communication monitoring is being performed proactively. Zabbix monitoring checks expiration of SSL certificates. There are several triggers to announce SSL certificate is about to expire with levels of severity assigned to them. Actual connection attempts can be tracked via the *Apache Load Balancer log* monitoring in **ELK**.

Host	Name	Last check	Last value
EMFIPWPAS01	SSL certificate (1 item)		
EMFIPECPAS01	SSL certificate (1 item)		
EMFIPSWPLB01	SSL certificate (1 item)		
	{SSN} SSL certificate validity	2019-04-03 06:56:10	348 days
EMFIPTWPLB01	SSL certificate (1 item)		
	{SSN} SSL certificate validity	2019-04-03 06:56:13	348 days
EMFIPWPPLB01	SSL certificate (1 item)		
	{SSN} SSL certificate validity	2019-04-03 06:56:16	348 days
EMFIPECPWPLB	SSL certificate (1 item)		
	{SSN} SSL certificate validity	2019-04-03 06:56:19	348 days

Figure 143: Certificate expiration check table

Severity	Name	Expression	Status
Disaster	Template SSL Cert Check External oid:SSL certificate on (HOSTNAME) expired	{EMFIPSWPAS01:zext_ssl_cert.sh[-d,(HOST.CONN)],{SSN}}.last{0}<0	Enabled
Disaster	Template SSL Cert Check External oid:SSL certificate on (HOSTNAME) expires in less than 7 days ((ITEM.VALUE) days remaining)	{EMFIPSWPAS01:zext_ssl_cert.sh[-d,(HOST.CONN)],{SSN}}.last{0}<7	Enabled
High	Template SSL Cert Check External oid:SSL certificate on (HOSTNAME) expires in less than 15 days ((ITEM.VALUE) days remaining)	{EMFIPSWPAS01:zext_ssl_cert.sh[-d,(HOST.CONN)],{SSN}}.last{0}<15	Enabled
Average	Template SSL Cert Check External oid:SSL certificate on (HOSTNAME) expires in less than 30 days ((ITEM.VALUE) days remaining)	{EMFIPSWPAS01:zext_ssl_cert.sh[-d,(HOST.CONN)],{SSN}}.last{0}<30	Enabled
Warning	Template SSL Cert Check External oid:SSL certificate on (HOSTNAME) expires in less than 60 days ((ITEM.VALUE) days remaining)	{EMFIPSWPAS01:zext_ssl_cert.sh[-d,(HOST.CONN)],{SSN}}.last{0}<60	Enabled
Not classified	Template SSL Cert Check External oid:SSL certificate on (HOSTNAME) expires in less than 90 days ((ITEM.VALUE) days remaining)	{EMFIPSWPAS01:zext_ssl_cert.sh[-d,(HOST.CONN)],{SSN}}.last{0}<90	Enabled

Figure 144: Certificate expiration severity levels

5.2.1.6 Database monitoring

Mongo

In the section *Monitoring > Graphs* the user can discover data for monitoring Mongo database. Of most interest should be the graph *Mongo connections*:

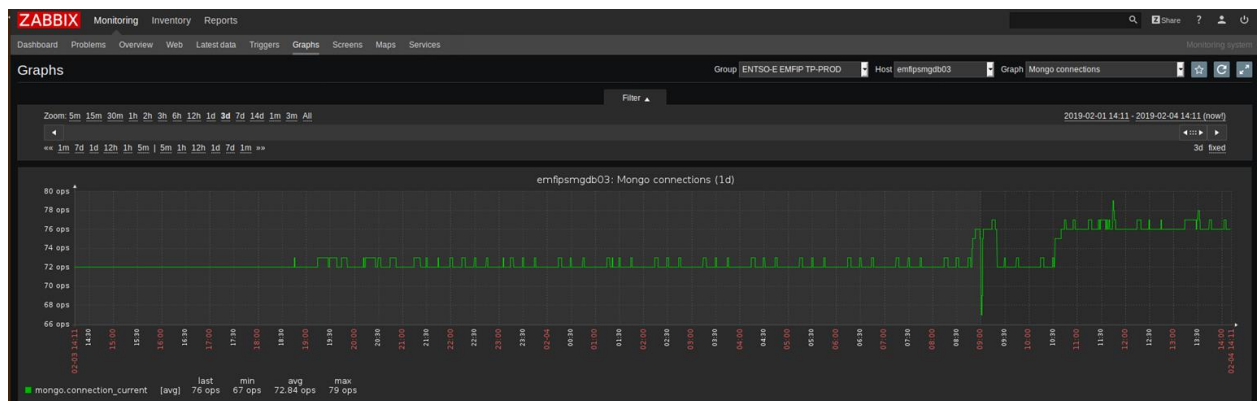


Figure 145: Mongo connections graph

Usage of disk space can be found in the graph *Disk space usage*. When observing the trend of the graph, the user can usually also extrapolate/predict future evolution to some degree:

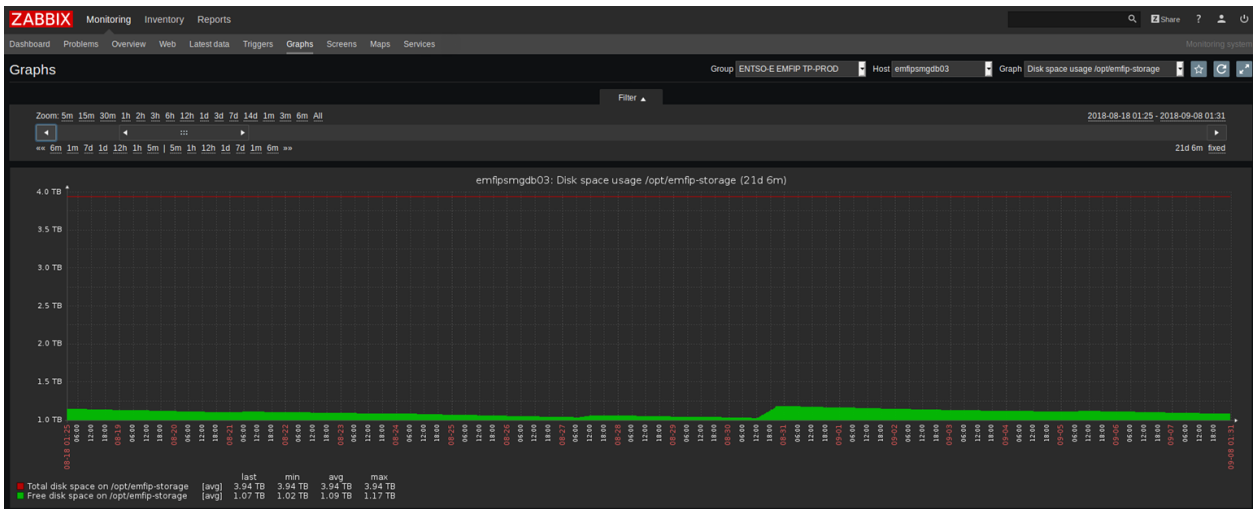


Figure 146: Mongo DB disc space usage graph

MySQL

In the section *Monitoring > Graphs* the user can also discover data for monitoring MySQL database. Of most interest should be the graph *MySQL operations*:

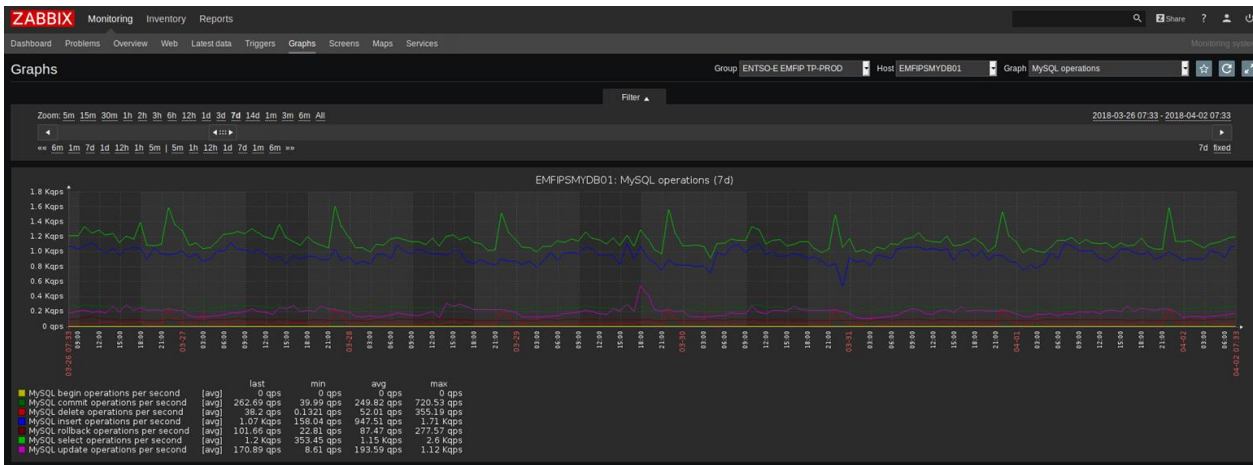


Figure 147: MySQL operations graph

The *MySQL bandwidth* graph is important as well:



Figure 148: MySQL bandwith graph

5.2.2 Via ELK

5.2.2.1 Detail logs

Tomcat

ELK is collecting Web portal Tomcat Catalina logs. These are reachable on the dashboard *Transparency – Tomcat*. The top graph shows number of logs differentiated by host-name on a time-line. The table below contains the details of the individual logs. The user can easily filter the records.

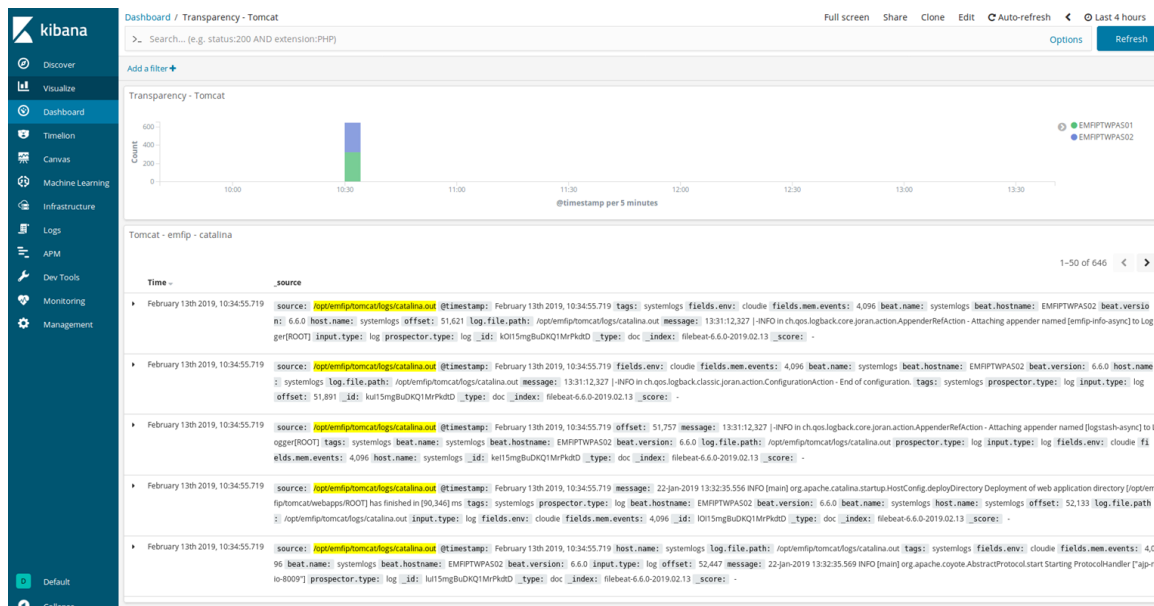


Figure 149: Tomcat Catalina logs dashboard

JBoss

ELK is collecting logs from Data Gateway, Web API and Web services JBoss servers. These are reachable on the dashboard *Transparency – JBoss*. The top graph shows number of logs differentiated by host-name and severity on a time-line. The table below contains the details of the individual logs. The user can easily filter the records.

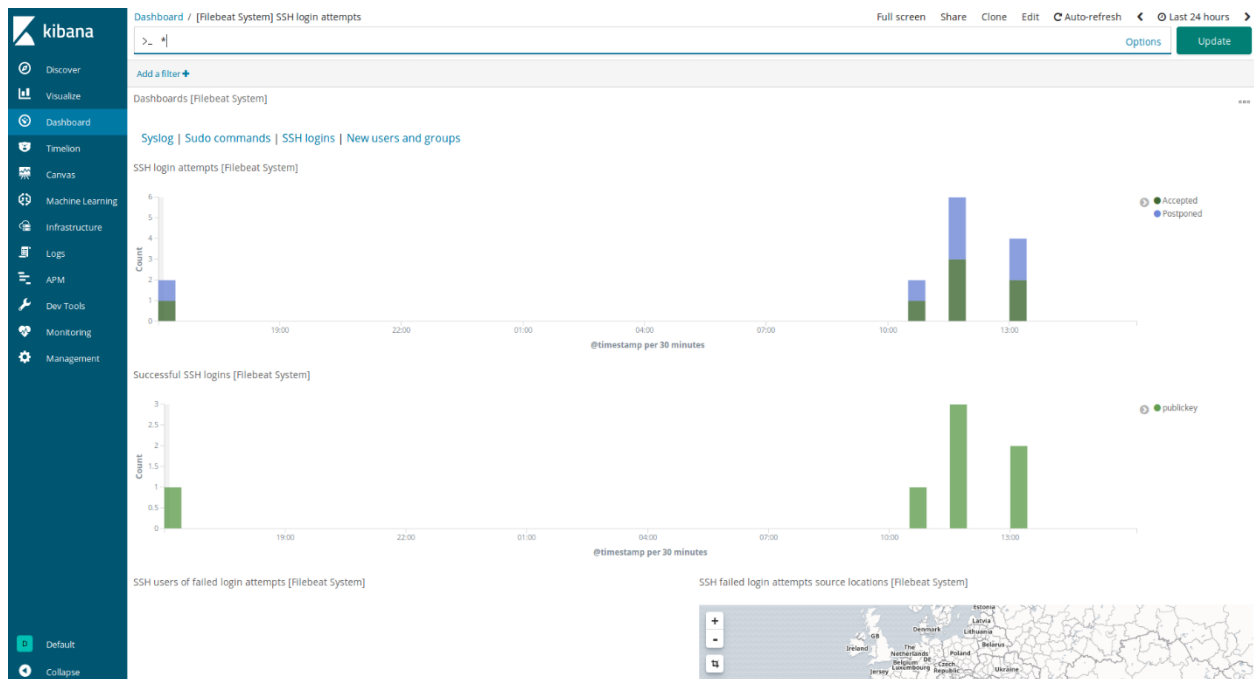


Figure 152: SSH login attempts dashboard

The dashboard *Syslog sudo commands* visualizes sudo commands executed by server OS users (please do not mistake for TP users) on the servers.

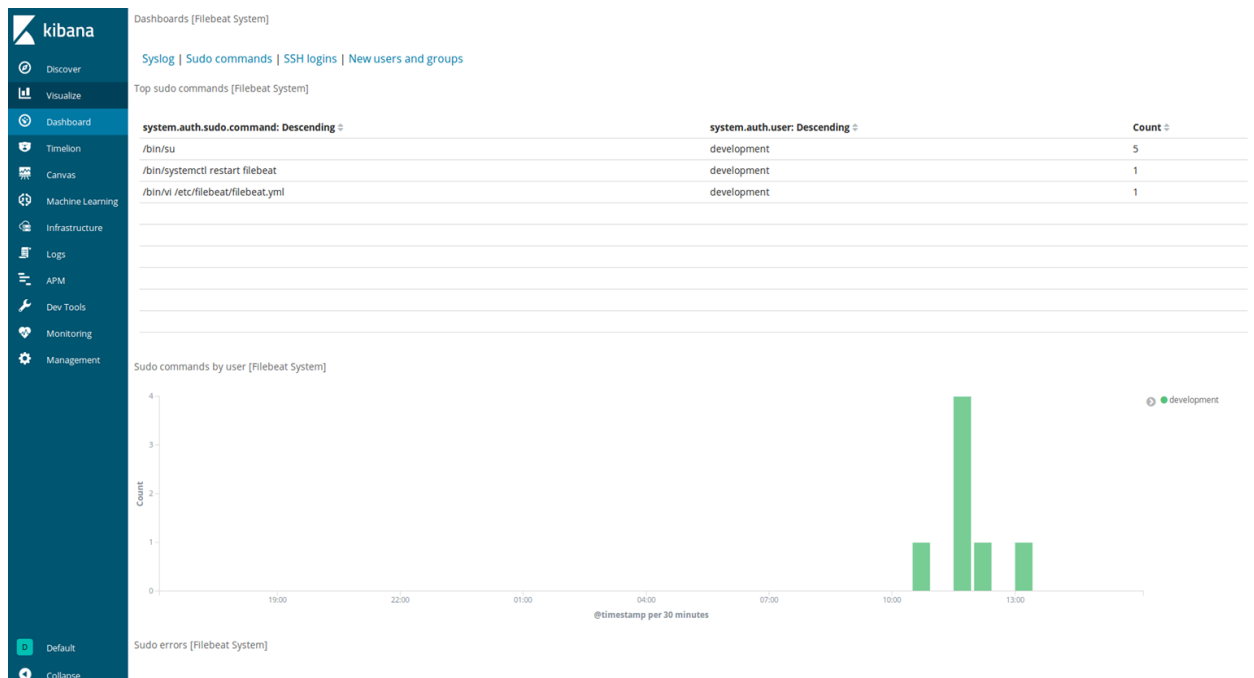


Figure 153: Syslog sudo dashboard

Audit log

The dashboard *Audit Events* visualizes much information about system commands:

- > Overview of the commands used

- > Users executing the commands
- > Most frequent commands
- > Event results
- > Location from where the commands were triggered
- > Time of execution

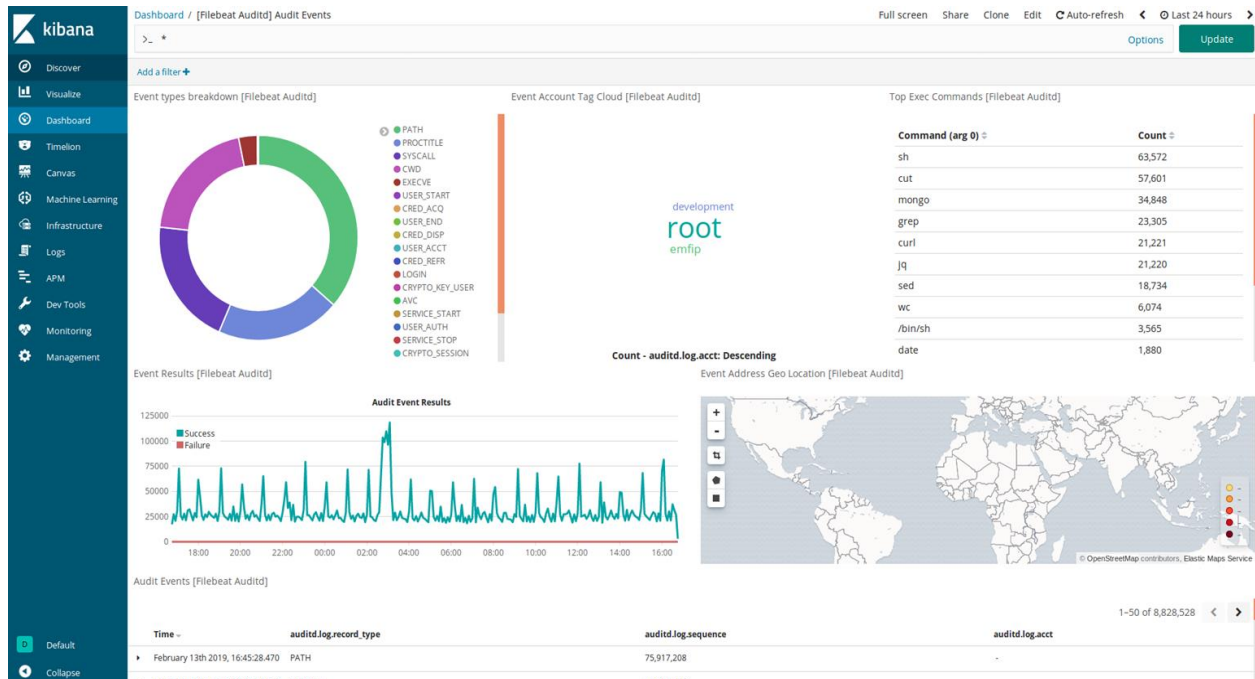


Figure 154: Audit Events dashboard

Apache Load balancer log

The dashboard *Access and error logs* visualizes the internet traffic coming to the platform:

- > Map with locations of unique IP addresses
- > Number of requests by HTTP response codes in time
- > Top most successful URLs in the means of response code
- > Overview percentage by Operating system and browser
- > Table showing detailed log information

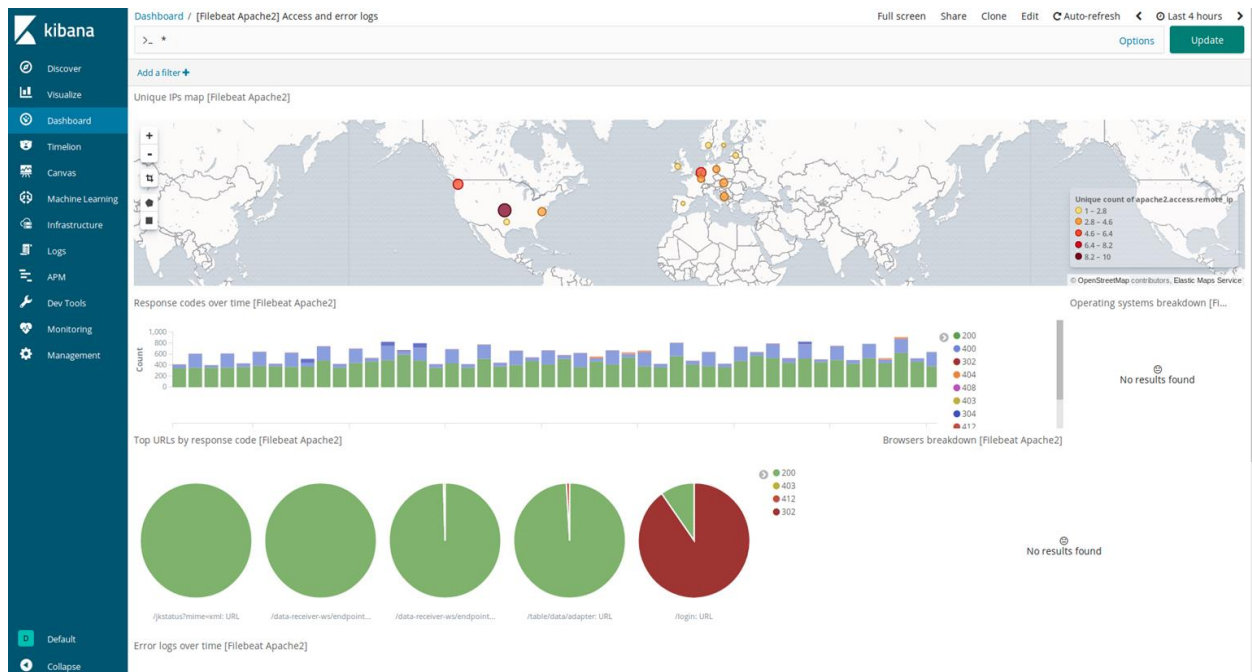


Figure 155: Access and error logs dashboard

5.2.2.2 Database monitoring

MySQL

The dashboard *MySQL Overview* visualizes queries and errors occurring in the MySQL DB:

- > Graph of slow query (a query taking excessive time to process) occurrences over time
- > Overview of slow queries
- > List of the slowest queries including user and duration
- > Error logs over time
- > Error log counts by level
- > List of the error logs including timestamp, level and message

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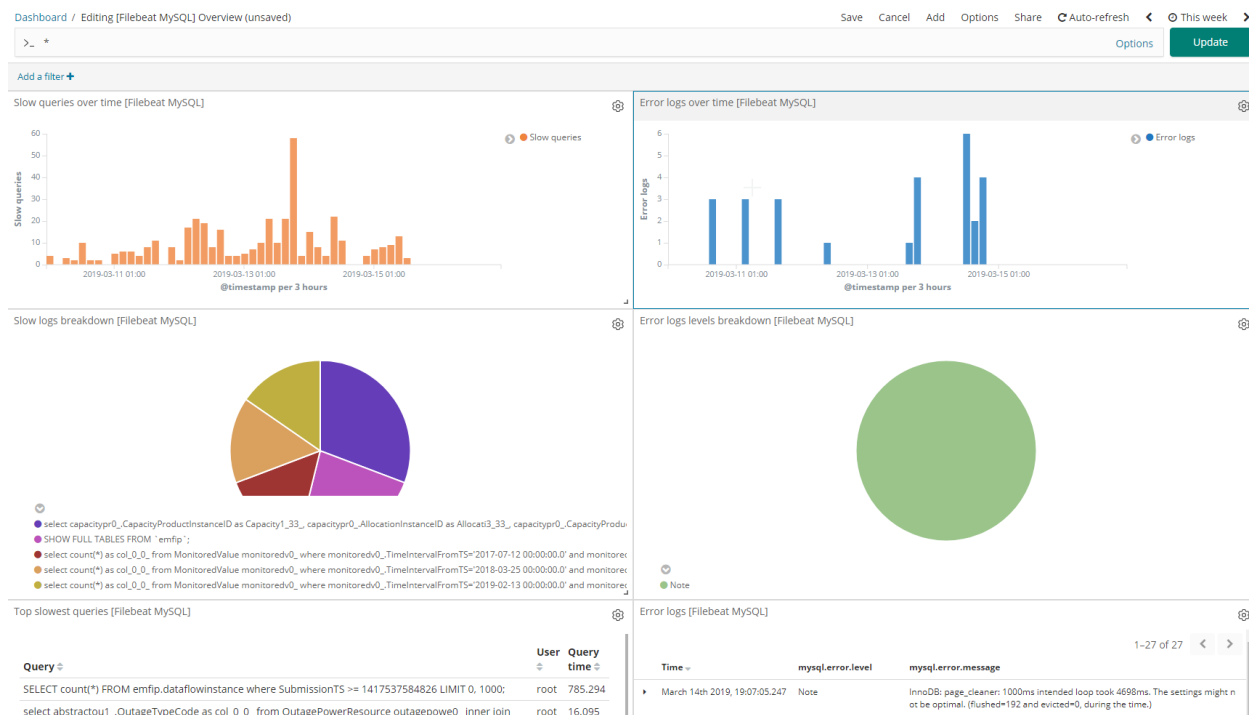


Figure 156: MySQL Overview dashboard

Mongo

The dashboard *MongoDB Overview* visualizes events occurring in the Mongo DB:

- > Graph showing percentage of logs by severity
- > Table of error logs including component, context and the error message
- > Table of all available logs including component, context and the error message

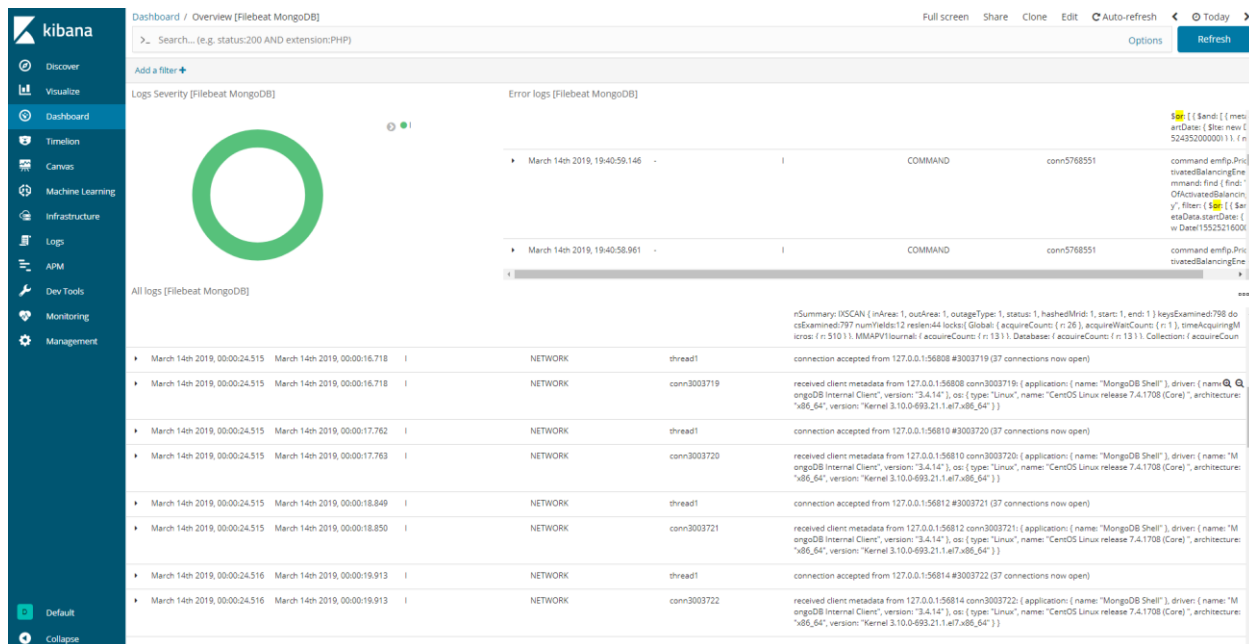


Figure 157: MongoDB Overview dashboard

5.2.2.3 Data gateway monitoring

The dashboard *Transparency Datagateway* visualizes the procedures and phases of Data Flow and Data Item processing:

- > Timeline with numbers of Data Flow instances (i.e. files) in processing
- > Table showing the length of the full processing in milliseconds
- > Graph of procedures and their phases which have been performed
- > Maximal duration of Data Flow processing at a given time
- > Detailed overview of all the procedure phases including time elapsed since the procedure's initiation

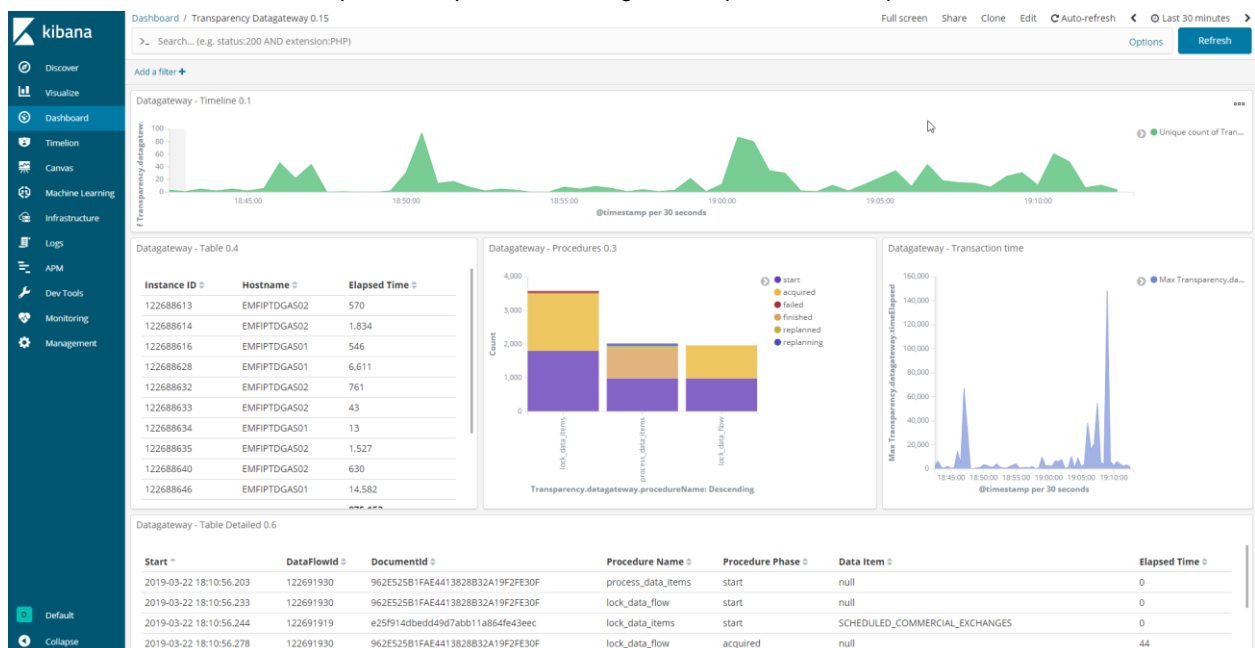


Figure 158: Transparency Datagateway dashboard

5.2.2.4 Publication monitoring

The dashboard *Transparency Publication* visualizes the procedures and phases of the publication process:

- > Timeline with numbers of Data Flow instances (i.e. files) in processing
- > Table showing the length of the full processing in milliseconds
- > Graph of procedures and their phases which have been performed
- > Maximal duration of Data Flow processing at a given time
- > Detailed overview of all the procedure phases including time elapsed since the procedure's initiation

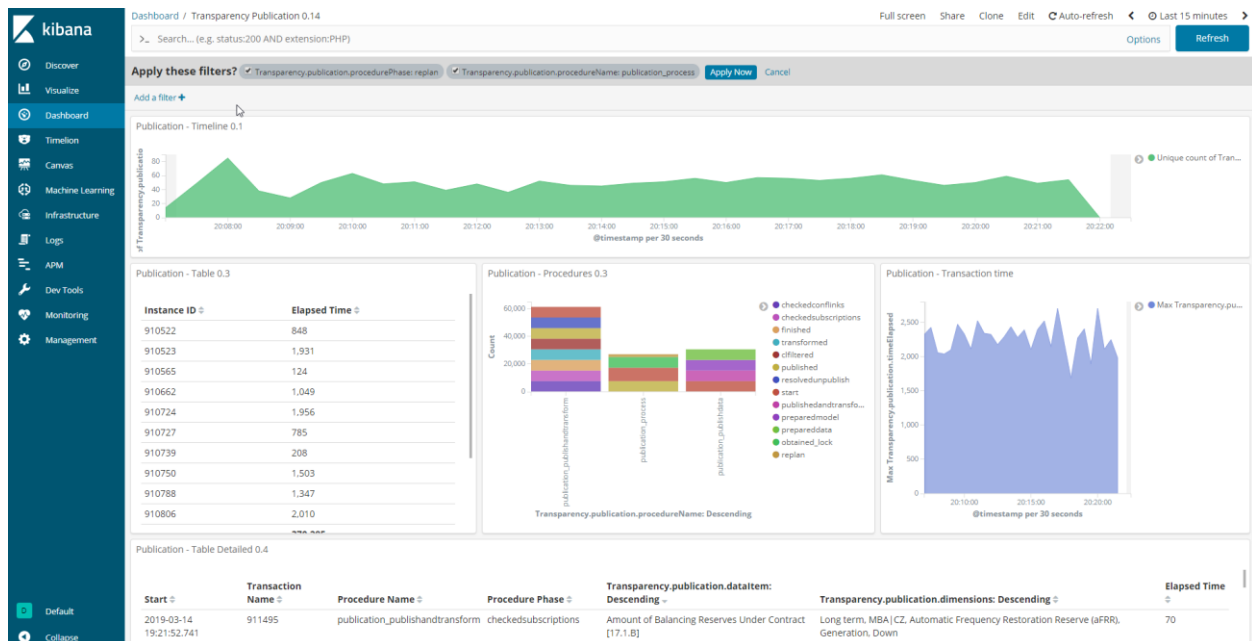


Figure 159: Transparency Publication dashboard

5.2.2.5 Application Error and Warning logs

The dashboard *Transparency Error* visualizes the warnings and errors occurring during data processing and publication, including subscriptions:

- > Graph showing *Error* and *Warning* counts in time
- > Detailed overview of the errors including timestamp, component, trigger event and message
- > Table containing all *Error* and *Warning* logs

Detailed overview of all the procedure phases including time elapsed since the procedure's initiation

It is possible to inspect Subscription dispatching errors and warnings on this screen. Specifically, the user should filter for the component "eu.unicorn.emfip.messaging.channels.ws.WSPushChannel" and the approximate time span the subscription should have been sent in.

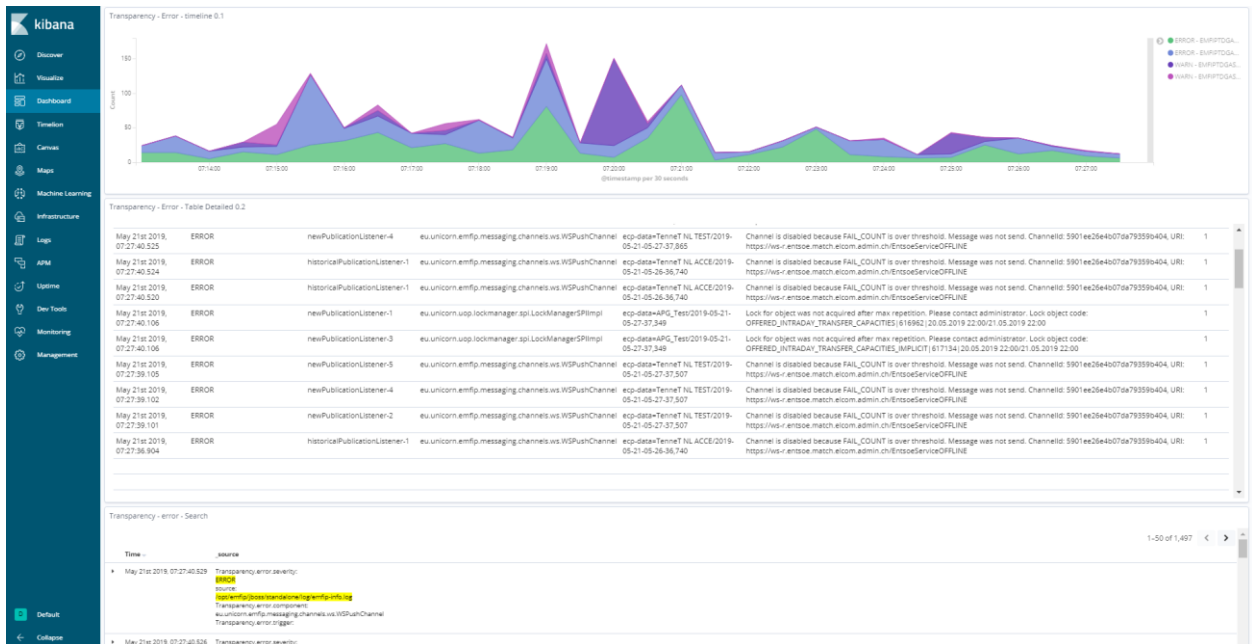


Figure 160: Transparency Error dashboard

5.2.2.6 Web portal monitoring

The dashboard *Transparency Webportal* visualizes statistics of Web Portal usage:

- > Sum of request response times per Data Item including
- > Sum of request response times per Data Item and user
- > Table containing all Web Portal logs
- > Number of requests per Data Item and user

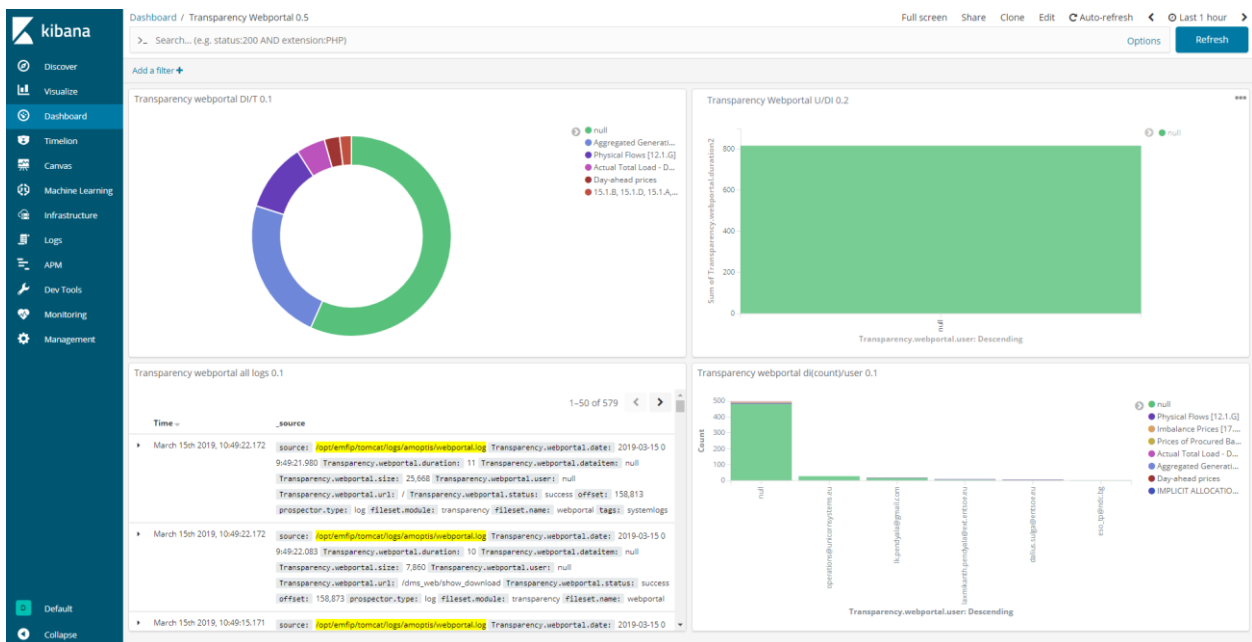


Figure 161: Transparency Webportal dashboard

5.2.2.7 Custom dashboards

With the information present in ELK, the user can create custom dashboards to their liking as described in the ELK process.

