Quick Guide

Comarch IoT Connect

Preface

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The documents have been prepared to be used by professional and properly trained personnel, and the customer assumes full responsibility when using them. The manufacturer welcomes customer comments as part of the process of continual development and improvement of the documentation in the best way possible from the user's viewpoint. Please submit your comments to the nearest Comarch representative.

Please note that the screenshots in this document are provided for illustrative purposes only and should not be treated as an exact representation of the graphical user interface. It may differ depending on the software version and installed components. Additionally, the user may not have access to some functionalities of modules because of lack of the appropriate privileges.

Because of the product oriented nature of this document, please bear in mind that screens presented here should be treated as purely descriptive and instructive; and they may differ from the version you are working with.

Overview

M2M or IoT SIM card is meant to be used in devices, machines without direct human intervention. Main services used by such a SIM are mobile data and SMSes.

Those SIMs being autonomous, their configuration, behaviour, follow-up is achieved via MyIoT, a selfmanagement tool.

This Quick Guide explains the basics - key information and most frequently used actions.

Glossary

Item	Definition
	Access Point Name. A name of a gateway (a URL) that is used within the GPRS (General
APN	Packet Radio Service) network to route to the correct GGSN (Gateway GPRS Support Node) and to identify the services that should be provided to the user of the APN. It is used between a GSM, GPRS, 3G, 4G, or 5G mobile network and another computer network, frequently the public Internet. An APN consists of two components: a network identifier (mandatory) and an operator identifier (optional).
EID	Electronic ID, a digital ID that can be assigned to a SIM card.
ICCID	Stands for Integrated Circuit Card ID and is a primary unique identifier for a device. The ICCID is typically printed on the SIM card itself. It is similar to a serial number and cannot be changed.
IMEI	Stands for International Mobile Equipment Identity and is a 15- (IMEI) or 17- (IMEISV) digit code that uniquely identifies any mobile device that supports cellular data (mobile phones, smartphones, smartwatches, cellular-enabled tablets, etc.) This means that a device can be located even if a SIM card has been removed or swapped.
IMSI	Stands for International Mobile Subscriber Identity and is unique to every user of a cellular network (i.e. unique to every SIM card.) IMSI consists of three parts: a 3-digit Mobile Country Code (MCC), followed by a Mobile Network Code (MNC: a 2-digit European standard, and a 3-digit North American standard), and the remaining 9 to 10 digits (depending on the length of the MCN) are the Mobile Subscription Identification Number (MSIN).
MCC	Refers to the Mobile Country Code. It consists of three decimal digits. An MCC is used in combination with an MNC (a combination known as an MCC/MNC tuple) to uniquely identify a mobile network operator.

MNC	Refers to the Mobile Network Code. The mobile network code consists of two or three decimal digits. An MCC is used in combination with an MNC (a combination known as an MCC/MNC tuple) to uniquely identify a mobile network operator.
MSISDN	A phone number associated with a device. Over some time, one can use the same phone number for multiple devices (for instance, if the original device is retired for a newer model).
PIN	Personal Identification Number: an access code composed of 4 digits received with the SIM card.
PUK	Personal Unblocking Key: a code consisting of 8 digits received with the SIM card along with the PIN code. It is used to unblock the SIM card when the user has entered the wrong PIN code 3 times.
SIM	A physical card within a device that enables the device to communicate wirelessly via GSM connectivity. Each SIM has a status that describes its readiness for use (e.g. Test, Active, Sleep).

Basics

The **agreement** between the Customer and the Vendor lists the products that can be purchased. It specifies the terms and subscription, presents the services and connection types. The basic product type is the *SIM module* that allows you to order SIM cards. When the order is complete and the SIM cards are ready to be used, you have to activate them to be able to connect to the network.

An **allowance** is a data volume. This volume is allocated to SIM(s) in an individual, shared or pooled way. Allowance may also sometimes contain SMSes.

Example: 100MB pooled BE-EU means 100 MB per SIM on this allowance, combined into a common monthly volume.

3 SIMs using 100MB pooled BE-EU allowance mean a pooled volume of 300 MB, in Belgium and Europe. Adding a 4th SIM to the pooled allowance increases the volume to 400 MB. The volume is valid for one calendar month.

An **agreement** lists agreed elements between Proximus and Customer, and the related prices. This agreement contains:

- One-time costs elements like MyloT onboarding fee, physical SIM orders;
- **Subscription(s)** defining all the available volumes, behaviour, lifecycle and monthly pricing of SIM cards;
- Other possible services.

Activation of a SIM card requires a **subscription**, and a **(Connectivity) Service Plan (CSP)**. A CSP is automatically created and derived from each available subscription ("subscription based"). A CSP can be seen as an extra template applied during activation time of a SIM, refining the subscription. There is always at least one CSP per subscription, or more if extra ones are created by users.

Monitoring profiles are used to monitor services usage, inactivity, locations of SIM cards, or even devices in which the SIM card is installed. Notifications and/or actions are automatically triggered based on thresholds, devices, locations.

SIMs can be in different **states**, according to a flow, also called **SIM lifecycle**. Transitions from one state to another can be triggered by time limit, usage, or rules.

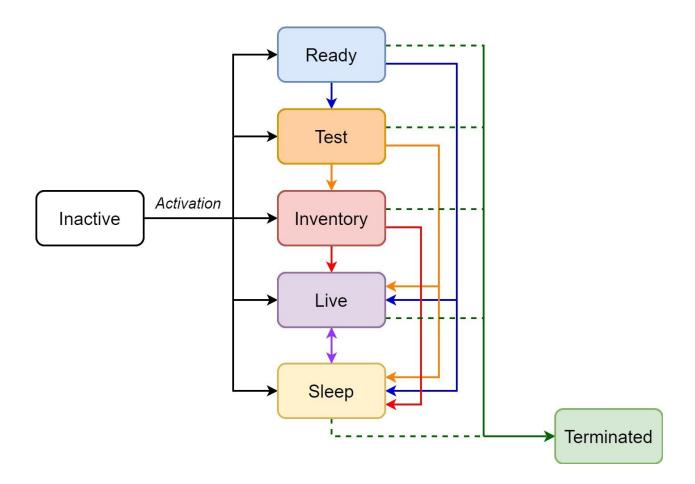


Figure 1. SIM lifecycle diagram.

SIM card lifecycle includes 7 states:

Inactive

All services are blocked and charges do not apply.

Ready

It is an offline state, but provisioned on the network. This state allows Customer to prepare the cards to be used for the validation of their device in combination with the device.

Note that in this state, the card cannot communicate, but as soon as it makes the first network connection and Customer's logistic centre validates the device, it automatically switches to the *Test* state.

Test

This state may be used for factory testing or testing trials for users. In this state, card can use the services in a limited amount. When this limit is exceeded, restrictions and charges may apply if defined in agreement and the card is automatically moved to the *Live* state. For example, if the SIM card in the *Test* state has 10 SMS that have already been used, restrictions will be applied.

Also, there is a default time limit for this state, 30 days, and when it expires, card is automatically moved to the *Inventory* state. SIM card in *Test* state may be moved to *Inventory*, *Live*, *Sleep*, or *Terminated* states by means of the **Finish tests** and **Terminate SIM** actions.

Inventory

In this state, SIM card is not charged, but services remain active with no barrings applied. This state may be used for factory-tested devices, for the time of device shipment to the end user or to the storage of devices in the warehouse before final usage by Customers. The card is automatically moved to *Live* state when the first usage is registered.

Live

During this state, the SIM card is under normal operation. No service limitations are applied. The card is charged in accordance with the provisions of the agreement.

SIM card in *Live* state may be moved to *Sleep* or *Terminated* states by means of the **Send to sleep** and **Terminate SIM** actions.

Sleep

In this state, card is charged in accordance with the provisions of the agreement. SIM card should be put to *Sleep* state for at least one full billing cycle.

SIM card may be moved to *Live* or *Terminated* states by means of the **Finish sleep** and **Terminate SIM** actions.

Terminated

Card services are inactive. No charges apply.

Full List of Questions

- How do I purchase SIM cards?
- How do I activate a SIM card?
- How do I activate multiple SIM cards?
- How do I change the Data allowance?
- How do I find a SIM within all my cards?
- How to group or classify SIMs?
- How can I group SIM cards of the same account? (Cost center)?
- How do I predefine a SIM configuration?
- How do I change the configuration of a SIM card?
- How to create and upload batch file?
- How can I find the data sessions done for my SIM(s)?
- How to monitor single SIM usage?
- How to monitor pooled SIMs usage?
- Customer roles
- How do I add my custom references to a SIM card?

How to start using my account?

To start using your account, go to https://www.proximus.be/myiot/, insert your MyProximus credentials, namely: username and password (see Figure 1).

And click [Log in].

Then you will be redirected to MyloT.

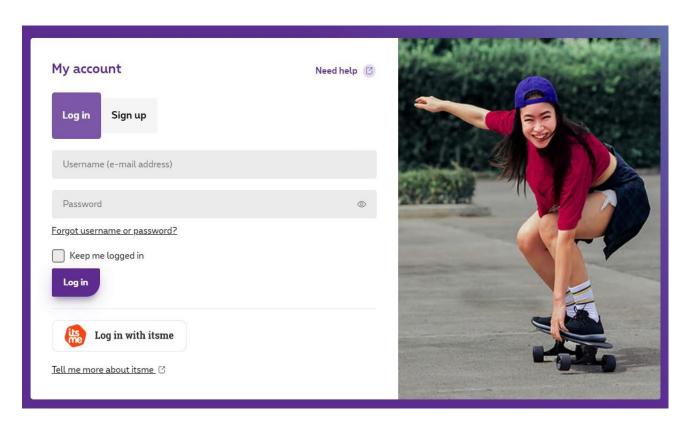


Figure 1. The welcome page that allows logging in the application and language choice.

After that, you will be redirected to a page that allows you to select an application, see Figure 2. There are two My IoT Connect applications that are shown in Figure 1:

- My Service,
- My Admin.

My Service application allows full management of your whole SIM inventory, performing of bulk actions, monitoring SIM cards, and browsing usage and financial data.

My Admin application allows to register and manage users, their passwords and roles as well as define API access credentials.

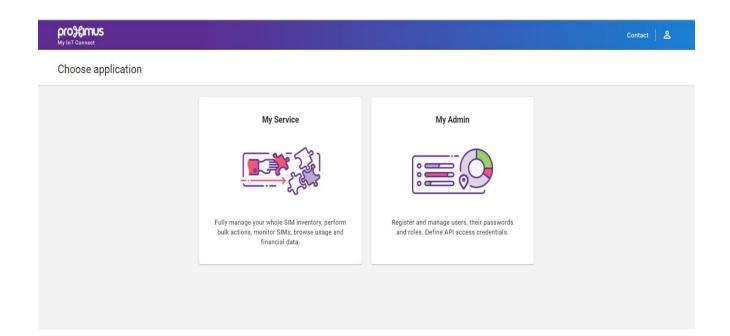


Figure 2. The dashboard used to navigate between My Service and My Admin applications.

To get more detailed information regarding Comarch My IoT Connect applications, please read **My Service** and **My Admin** guides.

How do I purchase SIM cards?

To purchase SIM cards, perform a SIM order. To do this:

1. Go to My Service application, Orders tab and click [Create]. See the button in Figure 1.

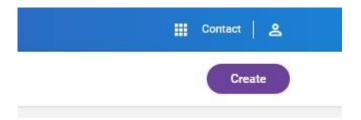


Figure 1. Orders tab, [Create] button, located in the upper-right corner of the page.

2. In the first, *SIM product details* step, shown in Figure 2, select SIM product and provide the size and quantity of the package.

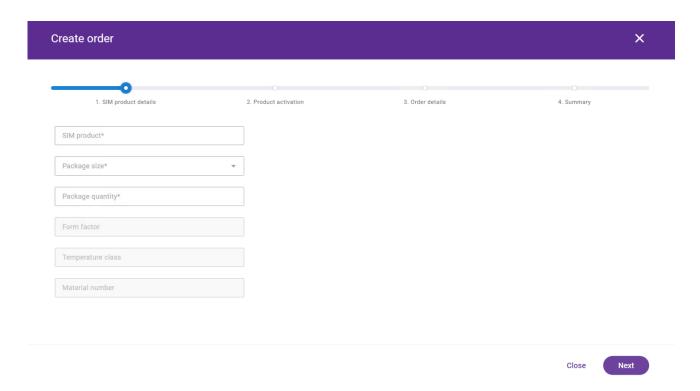


Figure 2. The example of Order creation page, SIM product details step.

3. Select SIM product from the available options that appear in the pop-up window by clicking on *SIM* product bar, shown in Figure 3.

What SIM products are available depends on what products are included in the Customer's Agreement.

Available products can be viewed in *My Service application > My Profile tab > Agreement*.

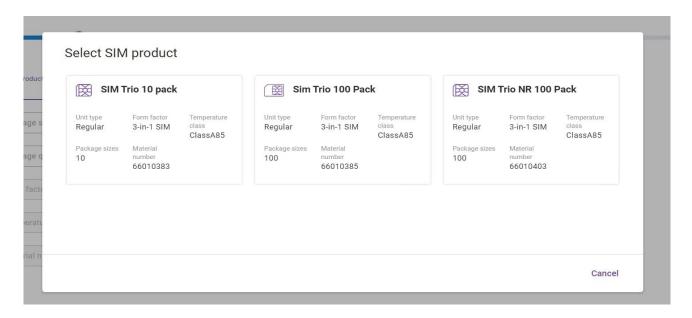


Figure 3. The example of SIM product selection panel during the Order creation process, SIM product details step.

- 4. Once all details of the order are entered, click [Next] to proceed.
- 5. In the second step, *Product activation*, select preferred product activation option. As shown in Figure 4, you can choose one of the following options:
 - Skip automatic activation SIMs will be delivered and loaded on Customer stock, no provisioning actions are performed. SIMs get *Inactive* status.
 - Activate SIMs when loaded to the system After SIMs are loaded, then provisioning process is SIM activation processes triggered. All SIMs from that order are activated. From this moment, customer begins to function.
 - Activate SIMs when delivered SIMs will be delivered and loaded in Customer stock with status Inactive. User confirms on GUI that SIMs are delivered. This confirmation triggers SIM activation processes. All SIMs from that order are activated. From this moment, customer begins to function.

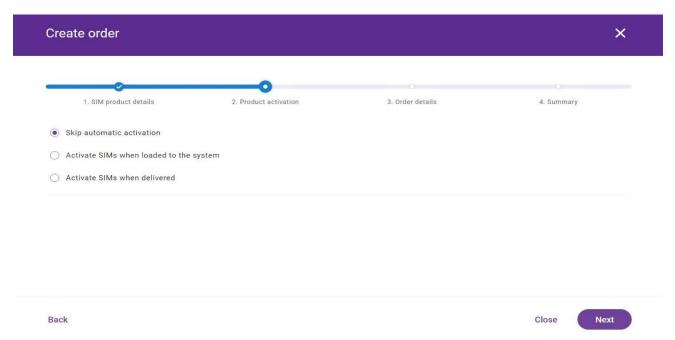


Figure 4. The example of Order creation page, Product activation step.

Both automatic activation options require subscription and state selection.

- Click o subscription to see its configuration panel, shown in Figure 5.
- Select the service plan and choose SIM state. Your default plan has been selected automatically.

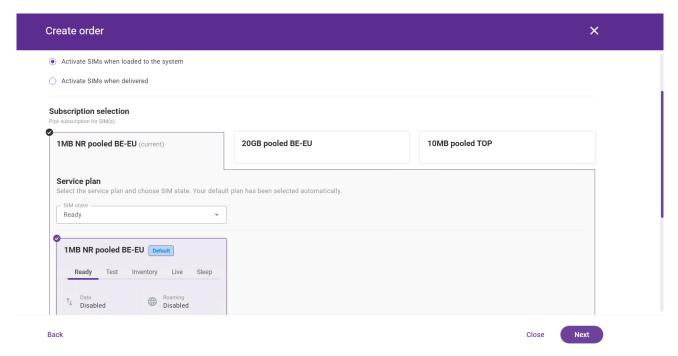


Figure 5. The example view of Order creation form, Product activation step, 1 MB NR pooled BE-EU configuration panel.

6. In the next step, Order details, shown in Figure 6, confirm customer delivery information.

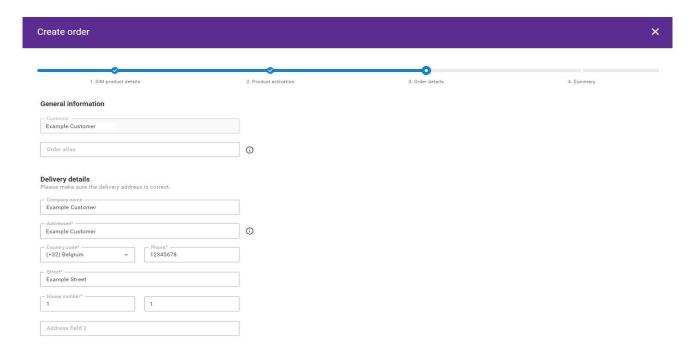


Figure 6. The example of Order creation page, Order details step.

7. In the last step, Summary, shown in Figure 7, review all details of the order before submitting it.

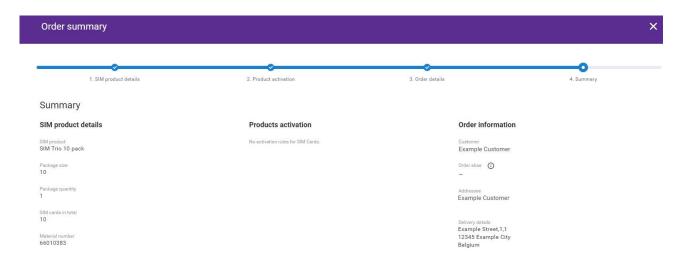


Figure 7. The example of Order creation page, Summary step.

Once submitted, the order is displayed in the table with the list of orders in the Orders tab with *Submitted* status. You can check the progress by clicking on the order.

On the right, as shown in Figure 8, user can check order status, as well as track and trace the parcel.

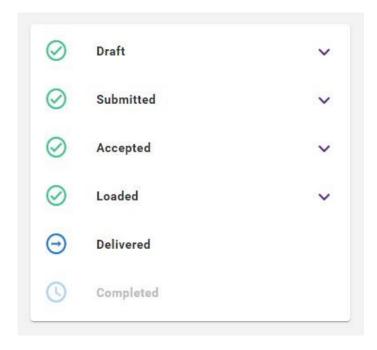


Figure 8. The example of Order status panel, located on the right side of the Order details page.

Once the order has been sent and delivered to the customer, confirm order delivery in **My Service** by clicking [**Delivery confirmation**] button in the upper-right corner of the screen shown in Figure 9. The track and trace history will be updated.

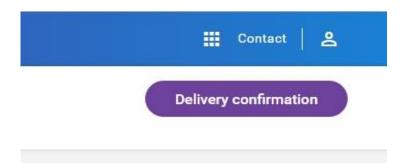


Figure 9. [Delivery confirmation] button, located in the upper-right corner of the Order details page.

How do I activate a SIM card?

SIM activation is obligatory in order for SIM card to function. This action can be performed immediately, by the manual process, or scheduled to a specific time and date.

SIM activation could be performed in two modes: *Quick activation* and *Advanced activation mode*.

SIM activation changes SIM in *Inactive* state, where all services are blocked and charges do not apply, into *Ready, Test, Inventory, Live*, or *Sleep*.

Quick Activation Mode

As shown in Figure 1, in *Quick activation mode*, all data is taken from service plan. User selects only:

- Subscription
- Service plan
- SIM state

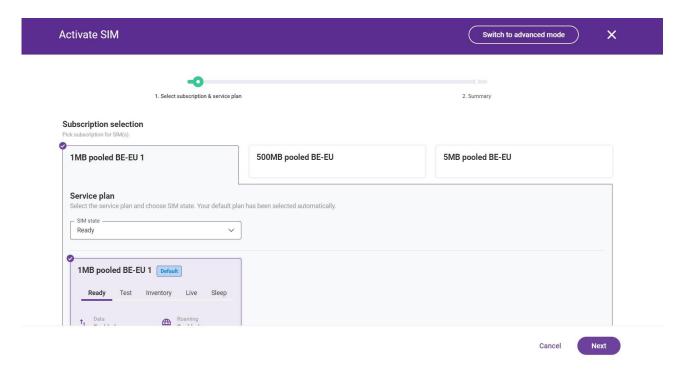


Figure 1. The example view of quick SIM activation process page.

Advanced Activation Mode

Advanced SIM Activation is performed in 4 steps:

- Subscription selection;
- Service plan selection, including SIM State selection (Ready, Test, Inventory, Live, Sleep);
- APNs configuration, i.e. one of defined and assigned to the SIM State APNs;
- Summary.

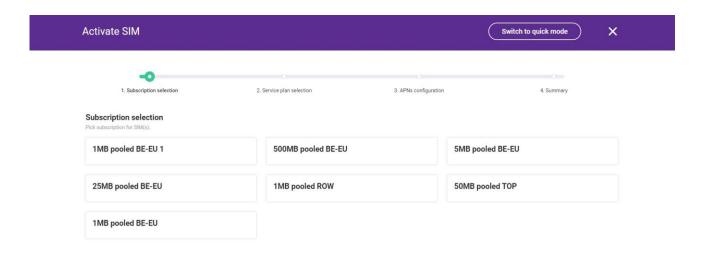


Figure 2. The view of the steps of SIM activation process in advanced mode.

SIM Activation action can be performed immediately, by the manual process, or scheduled to a specific date and time.

To perform SIM activation, the following steps need to be taken:

- 1. Go to the list of SIMs.
- 2. Select SIM from the list.
- 3. Click [Activate] in the upper-right corner.
- 4. Click [Switch to advanced mode].
- 5. Confirm the switch in the pop-up window.
- 6. Select the Subscription. User can choose from the subscriptions assigned to the selected customer context.
- 7. Select Service plan and SIM state (Ready, Test, Inventory, Live, Sleep), see Figure 3.

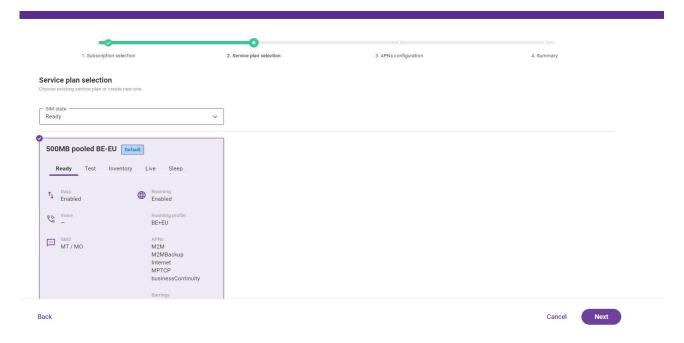


Figure 3. The example view of *Service plan selection* step of advanced mode of SIM activation process.

Click [+Add APN] and choose APN from the possible options, as shown in Figure 4. Then click [Assign]
to assign it.

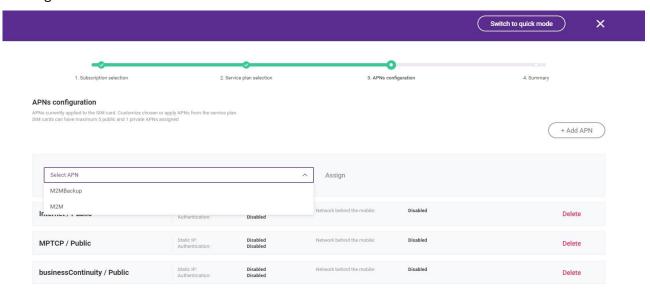


Figure 4. The example view of APNs configuration step of advanced mode of SIM activation process.

2. Click [Next] to proceed.

3. In the *Summary* step, scroll down to the *Schedule* section and select the time activation option: *Perform immediately* or *Run on schedule* (see Figure 5).

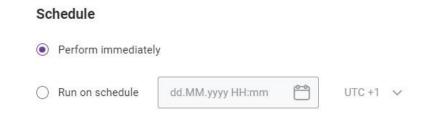


Figure 5. The example view of *Schedule* section in *Summary* step of advanced mode of SIM activation process.

How do I activate multiple SIMs?

To activate multiple SIM cards at once:

- 1. Go to SIM management.
- 2. Choose multiple SIMs from the list, as in Figure 1.

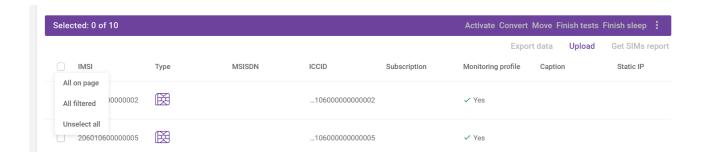


Figure 1. The example view of bulk selection process frame in the context of SIM Profiles subtab.

3. Click [Activate] in the operations bar. See the button in Figure 2.

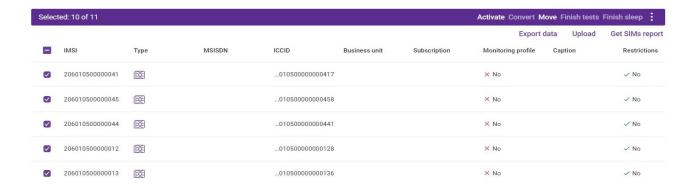


Figure 2. The example view of operations bar for multiple SIMs, where you can see the [Activate] button.

Then you will see the notification in the upper part of the screen, as in Figure 3.

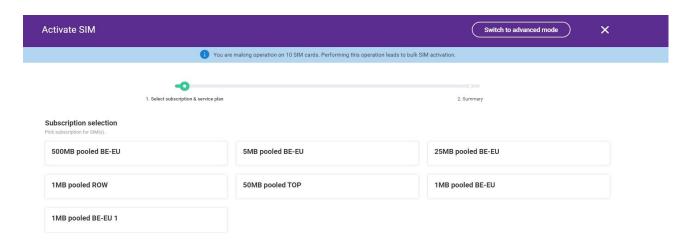


Figure 3. The example view of *You are making operation on 10 SIM cards. Performing this operation leads to bulk SIM activation*. notification.

Then proceed the same way as with the activation of a single SIM card, the process is described here.

How do I change the Data allowance?

To change the Data allowance, perform Convert action.

To convert a SIM:

- 1. Go to the list of SIMs.
- 2. Select SIM.
- 3. Click on overflow menu in the upper-right corner and click [Convert] in the pop-up list.
- 4. In the first step, see Figure 1, select subscription. You can choose from the subscriptions assigned to the selected customer.

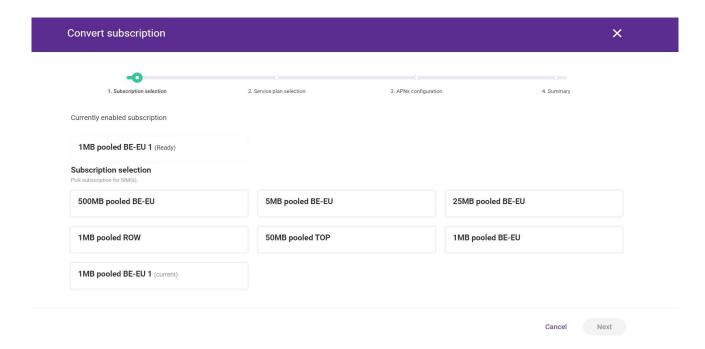


Figure 1. The example view of convert subscription screen, Subscription selection step.

- 5. In the second step, see Figure 2, you can change *service plan* and *SIM state*. Changing service plan will affect SIM configuration, read about it here.
 - Please note that for the Data or SMS allowance change, it is not necessary to select another service plan and SIM state, as the default ones are already selected.

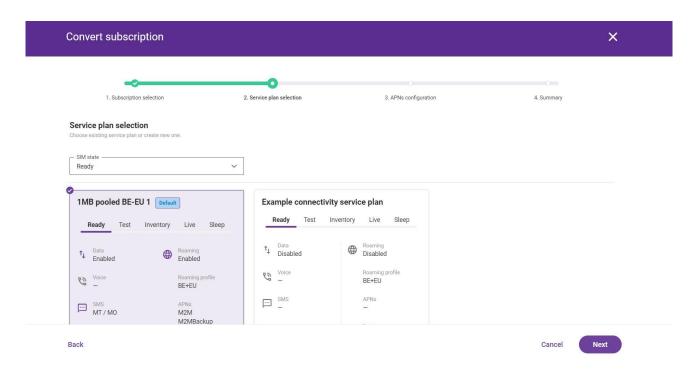


Figure 2. The example view of convert subscription screen, Service plan selection step.

6. In the third step, shown in Figure 3, configure APN.

You can keep the default configuration from connectivity service plan or customize it:

- To keep the default configuration, press [Apply APNs from plan]
- To customize it, press [+ Add APN], select AON from the drop-down list and click [Assign].

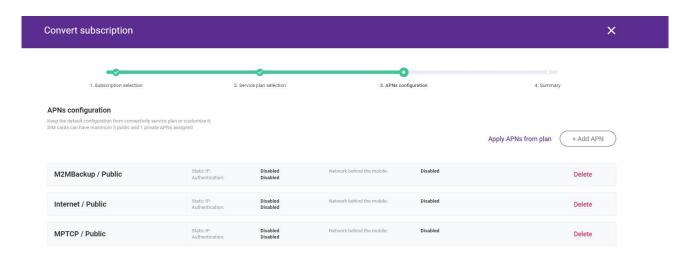


Figure 3. The example view of convert subscription screen, APNs configuration step.

7. In the final step, *Summary*, select the option of the time of executing SIM conversion: *immediately* or *scheduled*.

How do I find a SIM within all my cards?

You can find the necessary SIM card in two ways:

- **Using filters**
- Using the search bar

Filtering

- 1. Go to the SIM management tab, where all SIM cards are listed.
- 2. As shown in Figure 1, filter SIM cards by:
 - Туре,
 - IMSI,
 - MSISDN,
 - State,
 - ICCID,
 - EID,
 - Expected IMEI,
 - Order.

SIM management SIM Profiles IMEI allow list Connectivity service plans Configure view Q Search by ID or unique S... Туре IMSI MSISDN State ICCID EID Expected IMEI Order Static IP Last session IPv4 Clear filter Less filters ^ Last ECID detected

Figure 1. SIM cards filtering options for SIM profiles tab.

Search Bar

- 1. Go to the SIM management tab, where all SIM cards are listed.
- 2. Enter SIM card ID or unique SIM properties into the search bar, see Figure 2.

SIM management



Figure 2. Search bar for SIM profiles tab.

Also, you can use wildcard option. To do this:

• Enter incomplete SIM card ID or unique SIM properties and at the end enter the [*] symbol. An asterisk (*) may be used to specify any number of characters.

Example: Searching for SIM card with IMSI number 12345* would tell the database to look for all possible endings to that root number. Results will include 1234567, 1234578 1234588 or 1234597.

How to group or classify SIMs?

You can group SIMs by:

- *Caption* It is an individual, unique name for SIM card. It can have only one caption. Each new caption added to the SIM card rewrites the old one.
- Label It is a classifying name applied to a SIM. Each SIM can be labeled as many times as needed by the user.
- SIM group This a set of SIM cards. You can use SIM groups to organize and automate actions
 on SIMs.
- Business unit It allows to define the organization structure of a customer. A business unit does
 not represent a physical person or enterprise. Business units allow customers to sign multiple
 agreements (only one agreement can be signed directly by customer or business unit), and
 receive multiple invoices for such agreements.
- **Cost center** It is customer's unit used for organizational purposes. You can assign SIM cards to cost centers, i.e. to organize SIMs of your company's teams etc.
- Custom attribute set You can set up your own list of SIM characteristics with appropriate
 names and values. These characteristics will be independent of each other and can be used for
 filtering the content of the list.

How can I group SIM cards of the same account (Cost center)?

To assign SIM cards to **Cost centers**, perform the following steps:

- Select SIM you want to assign to cost center and go to its details.
 Note that this action cannot be performed on SIM in *Inactive* state.
- 2. Click on the overflow menu in the upper-right corner.
- 3. In the drop-down list, shown in Figure 1, click [Assign to cost center].

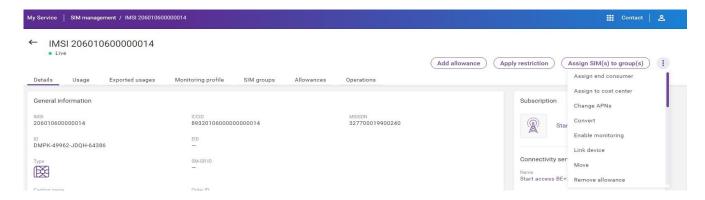


Figure 1. The SIM details screen, where you can see the expanded menu with SIM card operations.

5. On the displayed screen, shown in Figure 2, select cost center from the list. Note that you can select only one cost center.

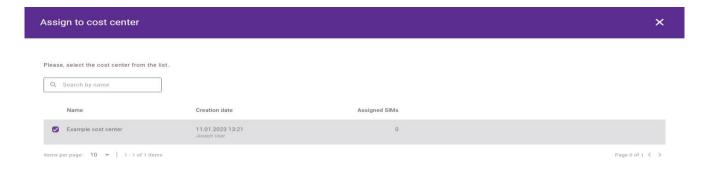


Figure 2. The example of Assign to cost center screen, where you select the cost center.

6. Click [Assign] to finish the operation or [Cancel] to undo it, accordingly.

How do I predefine a SIM configuration?

To predefine a SIM configuration, you can create a **Connectivity service plan**. To do this, perform the following steps:

1. Go to **My Service** application, *SIM Management* tab and switch to the *Connectivity service plans* subtab.

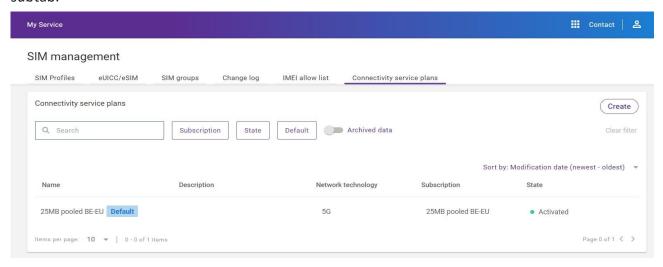


Figure 1. The example of Connectivity service plans subtab view.

- 2. Click [Create].
- 3. As shown in Figure 2, fill out required fields, name and description, and select the subscription from which it will inherit all parameters.

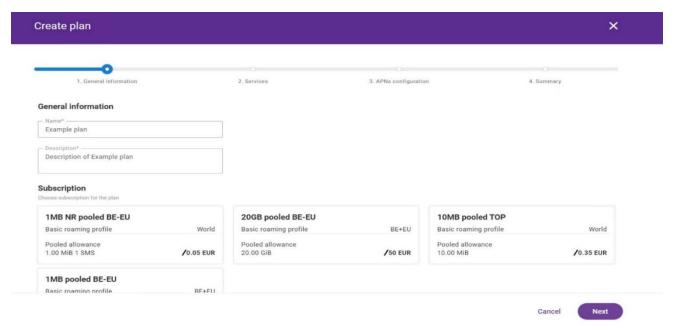


Figure 2. The example of Connectivity service plan creation page, General information step.

4. Optionally, choose template for a new service plan - click [Select template] (Figure 3). All existing Service plans linked to the selected Subscription, can be used as templates.

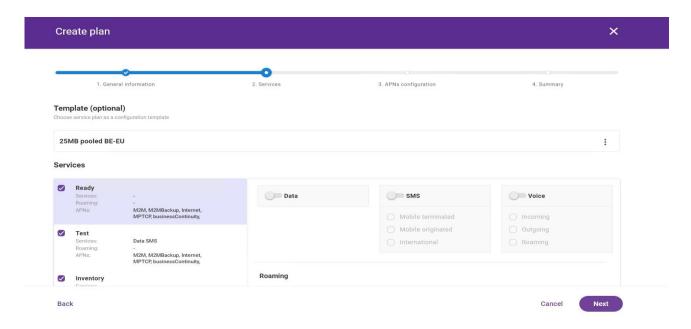


Figure 3. The example of Connectivity service plan creation page, Services step.

5. The next step, APNs configuration, as in Figure 4.

Whole plan APNs configuration is an APN configuration, where you can configure all available APNs.

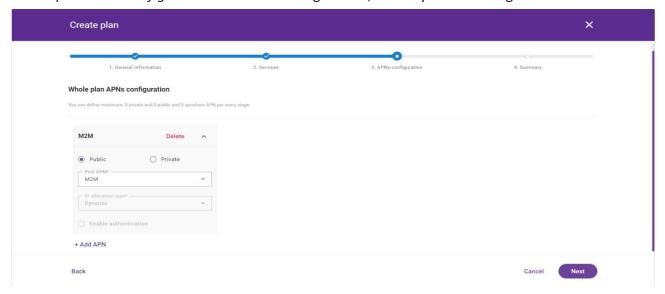


Figure 4. The example of Connectivity service plan creation page, APNs configuration step.

6. Check the summary and click [Create].

You can also **edit** your created service plan. Please note that you can fully edit only service plan in *Draft* state. In *Activated* service plan you can edit only general information - name and description.

To edit service plan:

- 1. Go to **My Service** application, *SIM Management* tab and switch to the *Connectivity service plans* subtab.
- 2. Enter the connectivity plan you want to edit.
- 3. Click [Edit], see Figure 5.

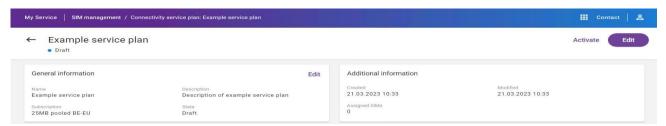


Figure 5. The example of Example service plan details, where you can see [Edit] button.

- 4. Change the desired parameters and click [Next] to pass to the next step.
- 5. Click [Save] on the Summary page.

To activate service plan:

- 1. Go to **My Service** application, *SIM Management* tab and switch to the *Connectivity service plans* subtab.
- 2. Enter the connectivity plan you want to edit.
- 3. Click [Activate], see Figure 5.
- 4. Confirm in pop-up window pressing [Confirm].

Created service plan can be used for SIM activation. User can select one of existing service plans.

How do I change the configuration of a SIM card?

To change the configuration of a SIM card, you can replace its **Connectivity service plan**. To do this, perform **Convert** action.

To convert a SIM:

- 1. Go to the list of SIMs.
- 2. Select SIM.
- 3. Click on overflow menu in the upper-right corner and click [Convert] in the pop-up list.
- 4. In the first step, see Figure 1, select subscription. You can choose from the subscriptions assigned to the selected customer.

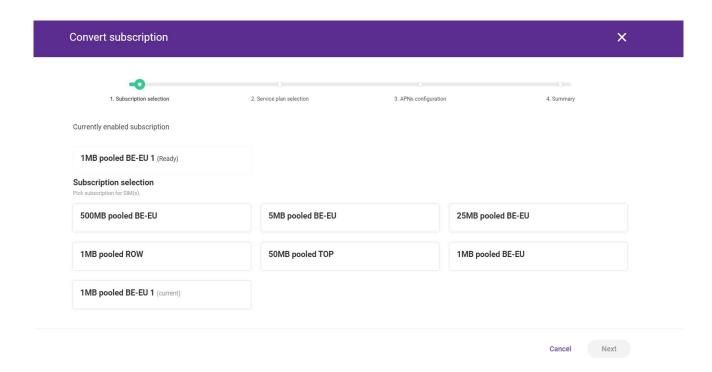


Figure 1. The example view of convert subscription screen, Subscription selection step.

5. In the second step, see Figure 2, the default service plan is already selected, but you can select another service plan linked to the same Subscription.

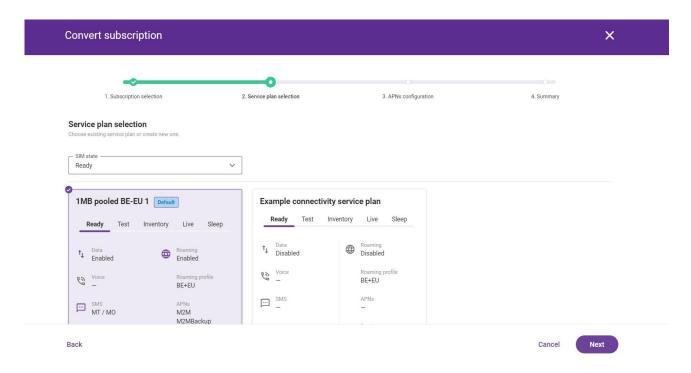


Figure 2. The example view of convert subscription screen, Service plan selection step.

6. In the third step, shown in Figure 3, configure APN.

You can keep the default configuration from connectivity service plan or customize it:

- To keep the default configuration, press [Apply APNs from plan]
- To customize it, press [+ Add APN], select AON from the drop-down list and click [Assign].

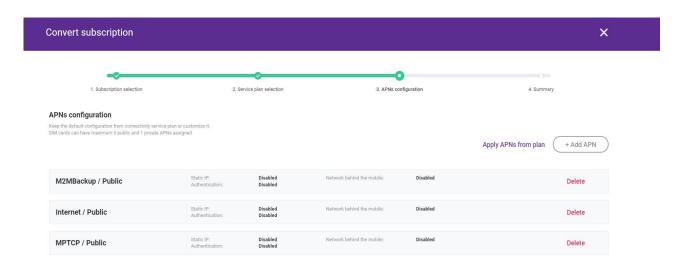


Figure 3. The example view of convert subscription screen, APNs configuration step.

7. In the final step, *Summary*, select the option of the time of executing SIM conversion: *immediately* or *scheduled*.

How to create and upload batch file?

Create Batch File

To perform bulk actions, you may need a **batch file**.

To create a batch file:

- 1. Create a new .csv file;
- 2. Separate columns with semicolon (;).
- 3. Separate elements within column with comma (,).

The example structure of batch file is shown in Table 1. Given example represents general structure for batch file. In order to edit it to your needs, you can either take this example and leave blank the fields that you do not want, or delete unnecessary columns.

Table 1. The example structure of a batch file.

ACTIONS	IMSI	ICCID	STATE	CAPTION	CUSTOMER_ LABEL	IMEI	IMEI_LOCK
SET_STATIC_IP	2,62198E+14	8,977E+18	Live	BatchCustomer	BatchCustomer	1,23456E+13	false

Part 1

APN_LIST	STATIC_IP	AUTH	AUTH_USERNAME	AUTH_PASSWORD
proximus.net:Public,Batch APN:Private	192.168.1.8	false		

Part 2

CONSUMER_ID	CONSUMER_ID	CUSTOMER_ ATTRIBUTE_1	CUSTOMER_ ATTRIBUTE_2
DSsHAwAAAYai2kiDpsZeXaVkAAE	DSsHAwAAAYai2kiDpsZeXaVkAAE	111111	222222

Part 3

In the table below you will find the description of all columns.

Table 2. Labels description for batch file.

Label name	Description
ACTIONS	specifies which columns should be
	taken into account while
	performing bulk operation
	separate actions with comma (,)
	a list of available actions is
	provided in the table below
	(Available actions section)
IMSI	IMSI number
ICCID	ICCID Number
STATE	the following states can be
	provided: INVENTORY, LIVE, SLEEP,
	TERMINATED
	SIM card state will be changed
	within currently assigned
	subscription
CAPTION	A descriptive title given by
	customer (optional), given
	separately for each SIM
CUSTOMER_LABEL	will replace current customer labels
	with a new set of labels
	will remove currently assigned
	customer labels
	separate labels with comma (,)

IMEI_LOCK	 14-, 15- or 16-digits IMEI version can be provided IMEI will be set with option Usage with different device - Enabled Allows assigning SIM use to a
	 specific device or device type only IMEI must be provided in a 14-, 15- or 16-digits IMEI version
ALLOW_LIST	 14-, 15- or 16-digits IMEI version can be provided Allows defining white list (Devices whitelist) for the SIM cards to be used
MONITORING_PROFILE	will assign a specific monitoring profile, from the available in the system
APN_LIST	 will replace current APN with provided APN provide APN name or ID
STATIC_IP	 will replace current STATIC_IP with provided STATIC_IP provide in a form: "<apn_name>: <astatic_ip>"</astatic_ip></apn_name>
AUTH	 will replace current credentials with provided credentials provide in a form: "<apn_name>:</apn_name> <username>: <password>"</password></username>
AUTH_USERNAME	will replace current username with provided

	provide in a form: "<apn_name>:</apn_name><username>"</username>
AUTH_PASSWORD	 will replace current password with provided provide in a form: "<apn_name>:<password>"</password></apn_name>
CONSUMER_ID	D of the end use (user of specific SIM card)
EID	ID of the endpoint
CUSTOMER_ATTRIBUTES_ID	ID of the customer custom attribute sets that will be used
CUSTOMER_ATTRIBUTES_NUMBER	 NUMBER is a number from 1 to 10, for example CUSTOMER_ATTRIBUTE_1 will create customer attributes at the position NUMBER with a new set of attributes

Available actions

A list of actions that can be provided in ACTIONS column. If no actions are provided in ACTIONS column, then all columns will be taken into account.

Actions should be separated with comma (,).

Table 3. Actions description for batch file.

Action name	Description
SET_IMEI	relates to IMEI column
SET_STATE	relates to STATE column
SET_CAPTION	relates to CAPTION column
MODIFY_CUSTOMER_LABELS	relates to CUSTOMER_LABEL, CUSTOMER_LABEL_ADD, CUSTOMER_LABEL_REMOVE columns
SET_APN	relates to APN column
SET_STATIC_IP	relates to STATIC_IP column
SET_AUTH	relates to AUTH column
SET_CONSUMER_ID	relates to CONSUMER_ID column
MODIFY_CUSTOMER_ATTRIBUTES	relates to: CUSTOMER_ATTRIBUTES_ID, CUSTOMER_ATTRIBUTE_NUMBER, CUSTOMER_ATTRIBUTE_ADD_NU MBER, CUSTOMER_ATTRIBUTE_REMOVENUMBER columns where NUMBER is a number from 1 to 10

Upload Batch File

You can perform bulk actions by uploading a batch file. To upload a batch file:

- 1. Go to My Service application, SIM management tab.
- 2. Select multiple SIMs.
- 3. Click [Upload] in the operations bar, see Figure 1.

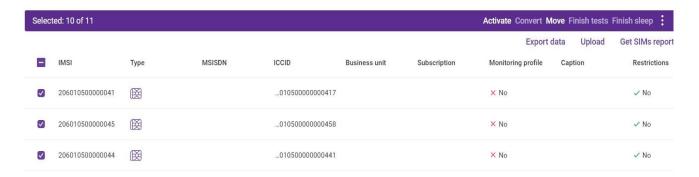


Figure 1. The example view of operations bar for multiple SIMs, where you can see the [**Upload**] button.

4. In the pop-up window, shown in Figure 2, drag and drop the file or click *Browse* and select file.

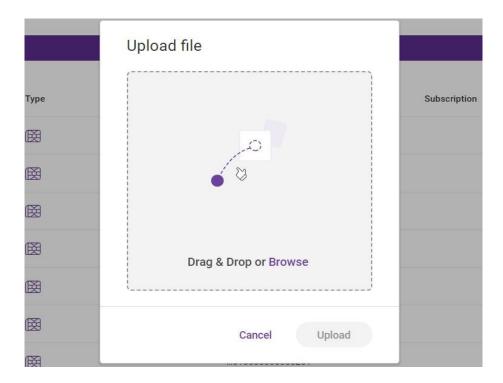


Figure 2. The example view of *Upload file* pop-up window.

- 5. Click [Upload].
- 6. Click [Start process].

How can I find the data sessions done for my SIM(s)?

To find the data sessions for your SIM(s), you can use **SIM management** or **Usage** tabs.

SIM management tab option

- 1. Go to the SIM management tab.
- 2. Select SIM from the list.
- 3. Switch to the *Usage* subtab.
- 4. Click on the entry to see the data record details, as shown in Figure 1

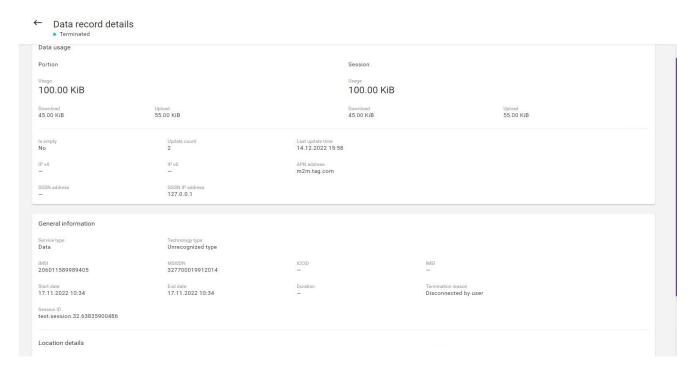


Figure 1. The example view of data record details in the context of one SIM card.

Usage tab option

1. To see the list of all usages, go to the *Usage* tab, shown in Figure 2.

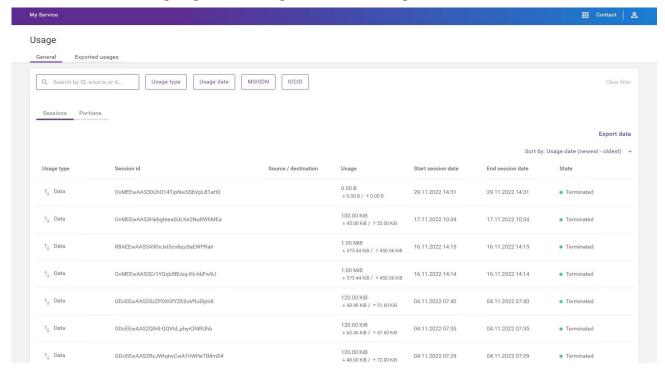


Figure 2. The example view of Usage tab.

2. Also, you can filter the usage entries by MSISDN and see the usage of a concrete SIM.

How to monitor single SIM usage?

To monitor single SIM usage and get notified about it, you have to perform the following steps:

- 1. Create monitoring profile;
- 2. Assign this monitoring profile to the SIM;
- 3. Create notification scheme;
- 4. Create notification template.

Create Monitoring Profile

To create a monitoring profile:

- 1. Go to **My Service** application, **Monitoring profiles** tab and in the upper-right corner of the *Customer profiles* subtab, click [**Create**].
- 2. In the first step, General information, shown in Figure 1, specify the profile name and its description.
- 3. Click [Next] to proceed.

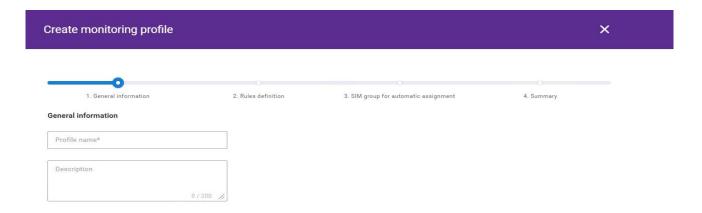


Figure 1. The example view of Monitoring profile creation page, General information step.

- 4. In the second step *Rules definition*, define rule responsible for the profile. There are three possible types of rules for the definition: *Limit rules*, *Device rules*, and *Location rules*.
 - In the **Limit rules** there are 6 available limits to choose from, as shown in Figure 6, but for usage tracking you have to configure *Data limit* rule. Click [**Add data limit**].

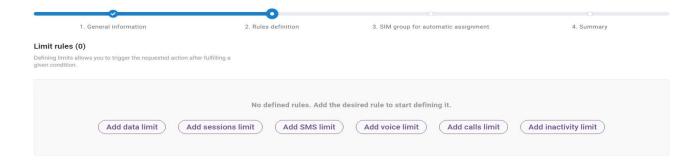


Figure 2. The example view of Monitoring profile creation page, Rules definition step, Limit rules step.

After selecting limit, its configuration wizard opens, which includes the following sections:

- General
- Conditions
- Aggregation period
- Limit & monitoring:
- Max limit
- Monitoring
- Max limit actions
- 5. In the *General* section, set a name and description (optional), see figure 3.

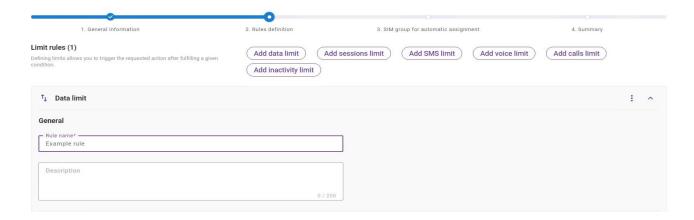


Figure 3. The example of data limit rule configuration, General section view.

The next section, *Conditions*, is optional (see Figure 4). Go to **Customer - My Service documentation** to read about it.

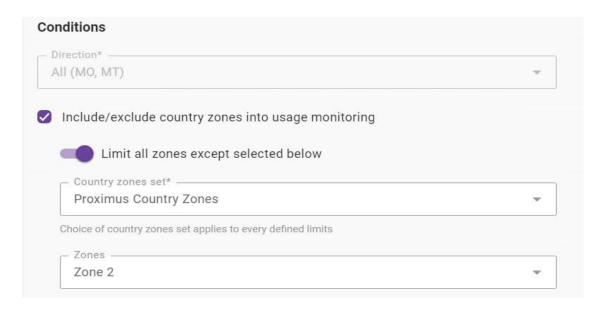


Figure 4. The example of data limit rule configuration, Conditions section, Country zones specification view.

- 6. In the next section, *Aggregation period*, shown in Figure 5, set aggregation period. There are two types of aggregation periods:
 - Defined aggregation In this case, it is necessary to specify the aggregation period (select needed option from the drop-down list: day, week, month, billing cycle period) and provide multiplier (a number by which selected period is multiplied) for the selected period.
 - Indefinite aggregation allows user to avoid time restrictions. Only reaching the consumption limit for the given condition is counted. Example: Prepaid SIM will only be blocked after reaching 500 MiB of the usage.

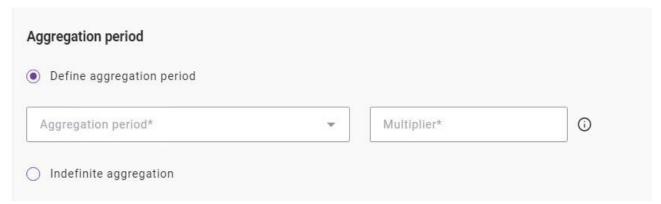


Figure 5. The example of data limit rule configuration, Aggregation period section view.

7. In the Limit & monitoring section, shown in Figure 6, provide a value for the maximum limit to be monitored and its unit.

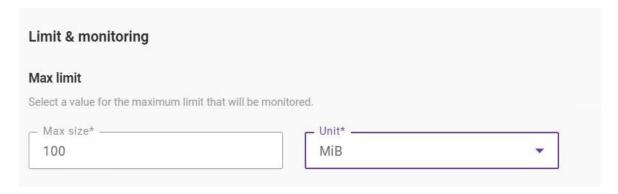


Figure 6. The example of data limit rule configuration, Limit & monitoring section view.

Additionally, you can set the percentage, the reaching of which will generate the appropriate record in the event log with the specified severity. Then, if the selected percentage threshold of the max limit is reached, the relevant event will be generated in the Event log. Additionally, using the notification scheme, you can configure the rule to send the related message over the preferred communication channel.

Max limit actions section is optional. You can configure it and then, if the max limit is reached, the selected actions will be initiated. Go to Customer - My Service documentation to read more information about it.

After Rules definition step, there is SIM group for automatic assignment step that allows you to assign monitoring profile to existing SIM group. In case of single SIM monitoring, this step is unnecessary.

- 8. Click [Next] to proceed.
- 9. Check the summary and click [Create].

Please note that monitoring profile, when created, is automatically in *Draft* state. It means that it requires manual activation.

Activate Monitoring Profile

To activate monitoring profile:

- 1. Go to the Customer profiles subtab.
- 2. In the table, find needed profile in *Draft* state.
- 3. In the right corner of the entry, click on the overflow menu (shown in Figure 7).
- 4. Click [Activate].
- 5. Confirm in a pop-up window.



Figure 7. The example view of actions that can be performed on Monitoring profile in Draft state in the context of Monitoring profiles tab (see the list of actions on the right-hand side).

Alternatively, you can go to monitoring profile details and click [Activate] in the upper-right corner.

After successful performance of the action, the status will change to Activated.

Assign Monitoring Profile to the SIM

- 1. Go to the list of SIMs.
- 2. Select a SIM and go to its details.
- 3. Click on the overflow menu and select [Enable monitoring].
- 4. In the opened wizard, select monitoring profile to assign.
- 5. Click [Next] to proceed.
- 6. In the Summary step, select the schedule option: Perform immediately or Run on schedule.
- 7. Click [Enable] to finish.

Create Notification Scheme

To create new notification scheme:

- 1. Click [Create] in the upper-right corner.
- 2. In the first step, shown in Figure 8, *General & type selection*, provide the scheme description (optionally) and select the *SIM usage* event category type.

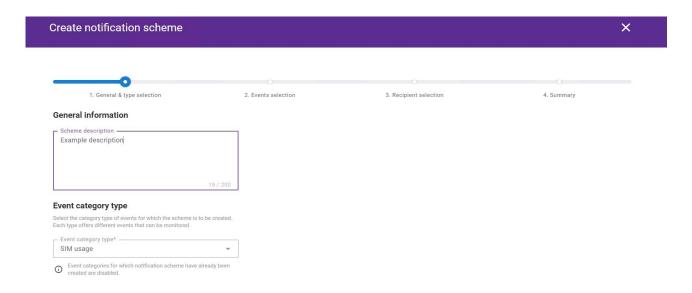


Figure 8. The example view of Notification scheme creation page, General & type selection step.

2. In the next step, Events selection, shown in Figure 9, select the Data usage limit reached event.

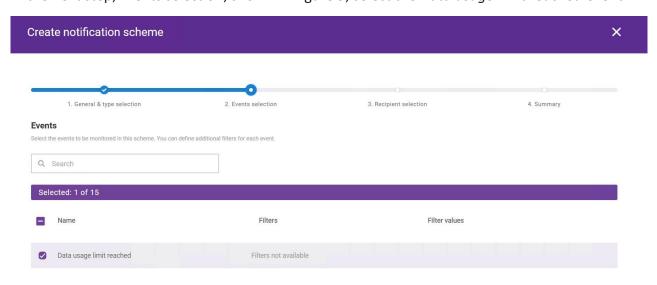


Figure 9. The example view of Notification scheme creation page, Event selection step.

- 3. In the next step, *Recipient selection*, shown Figure 10, in case you want the recipients to be notified by email or phone, select sender's address for these channels.
- 4. Scroll down and in the *General recipients* section, add the recipients pressing [**Add recipient**].

 Recipients will be able to receive notifications when the events selected in the previous step occur.

To add a recipient, provide:

- · recipient type,
- depending on the option selected, the phone number along with the country code or email,
- notification language.

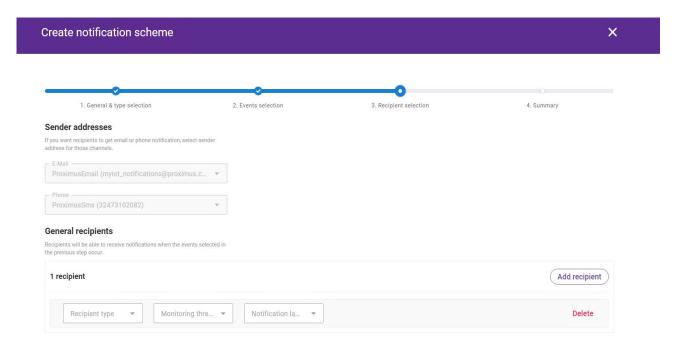


Figure 10. The example view of Notification scheme creation page, Recipient selection step.

The final step in creating the notification scheme, *Summary*, is to review the summary page and then confirm the completion of the process by clicking [**Create**].

The notification scheme when it is creates is already in *Activated* state.

Create Notification Template

To create a notification template:

- 1. In the upper-right corner, click [Create].
- 2. In the first step, *Event selection*, shown in Figure 11, select *SIM usage* category type of event and *Data usage limit reached* event.

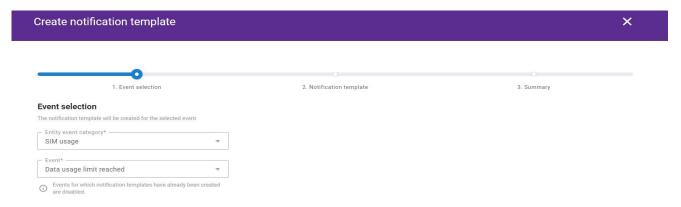


Figure 11. The example view of Notification template creation page, Event selection step.

- 3. In the second step, *Notification Template*, shown in Figure 12, select the type of channel and configure the content of the message.
 - Select the notification channel.

Note: You can create template once for each notification channel (SMS and email).

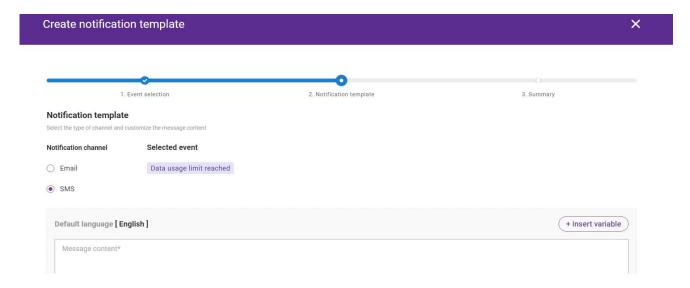


Figure 12. The example view of Notification template creation page, Channel type selection step.

4. Scroll down and click [Add language variant] to add another language for you notifications. You can also specify message content. The available language options are: *Dutch, French, German, English*. (See Figure 13).

Figure 13. The example view of Notification template creation page, language variants panel.

• You can insert variables to your notification message, see Figure 14.

The variables in the message are information that adapts depending on the context of occurrence.

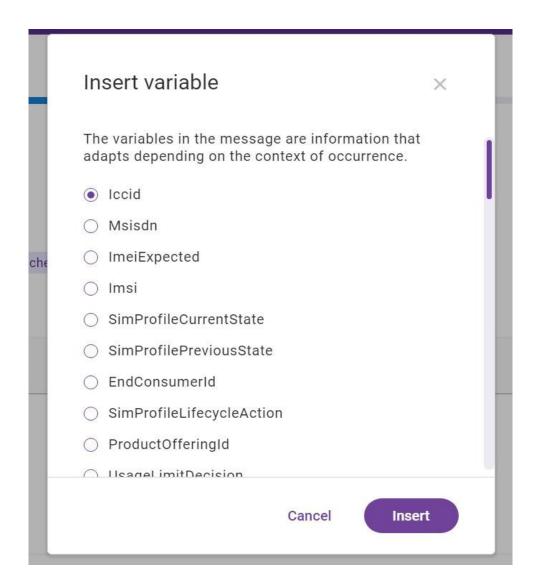


Figure 14. The example view of Notification template creation page, inserting variables option.

5. In *Summary* step, shown in Figure 15, review the summary page and then finish the process with [Create].

If there is a need to correct the data, return to the previous steps using [Back] and correct the necessary information.

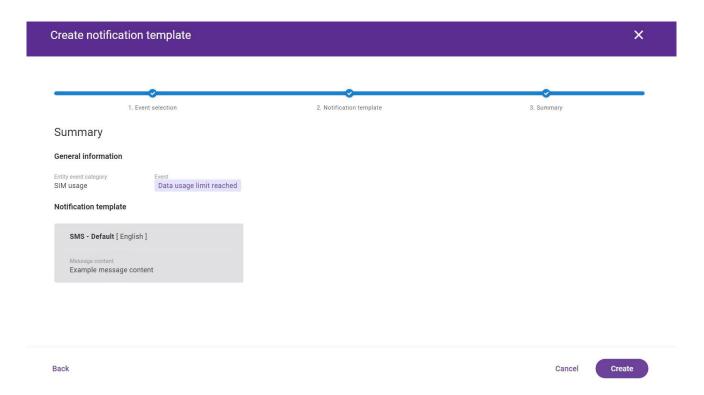


Figure 15. The example view of Notification template creation page, Summary step.

You can cancel the process pressing [Cancel]. Confirm the action with [Yes] in the pop-up window.

After all the steps have been completed successfully, you will get notifications about your singe SIM usage.

How to monitor pooled SIMs usage?

To monitor pooled SIMs usage and get notified about it, you have to perform the following steps:

- 1. Create notification scheme;
- 2. Create notification template.

Create Notification Scheme

To create new notification scheme:

- 1. Click [Create] in the upper-right corner.
- 2. In the first step, shown in Figure 1, *General & type selection*, provide the scheme description (optionally) and select the *Allowance* event category type.

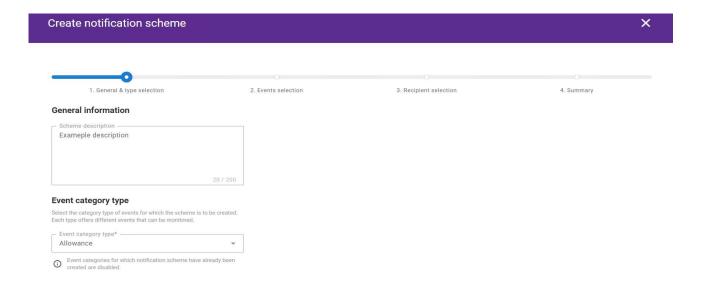


Figure 1. The example view of Notification scheme creation page, General & type selection step.

2. In the next step, *Events selection*, shown in Figure 2, select the *Shared/pooled data allowance* exceeded event.

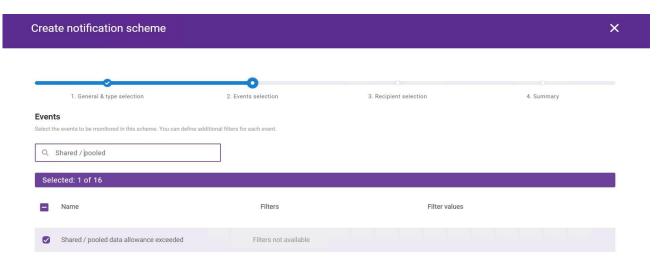


Figure 2. The example view of Notification scheme creation page, Event selection step.

- 3. In the next step, *Recipient selection*, shown Figure 3, in case you want the recipients to be notified by email or phone, select sender's address for these channels.
- 4. Scroll down and in the *General recipients* section, add the recipients pressing [Add recipient].
 Recipients will be able to receive notifications when the events selected in the previous step occur.

To add a recipient, provide:

- recipient type,
- depending on the option selected, the phone number along with the country code or email,
- notification language.

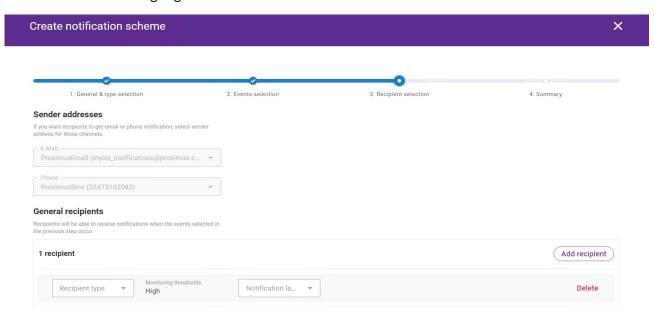


Figure 3. The example view of Notification scheme creation page, Recipient selection step.

The final step in creating the notification scheme, *Summary*, is to review the summary page and then confirm the completion of the process by clicking [**Create**].

The notification scheme when it is creates is already in *Activated* state.

Create Notification Template

To create a notification template:

- 1. In the upper-right corner, click [Create].
- 2. In the first step, *Event selection*, shown in Figure 4, select *Allowance* category type of event and *Shared/pooled data allowance exceeded* event.

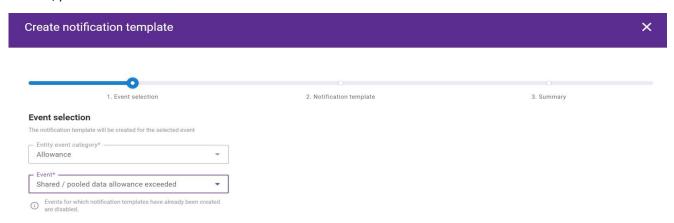


Figure 4. The example view of Notification template creation page, Event selection step.

- 3. In the second step, *Notification Template*, shown in Figure 5, select the type of channel and configure the content of the message.
 - Select the notification channel.

Note: You can create template once for each notification channel (SMS and email).

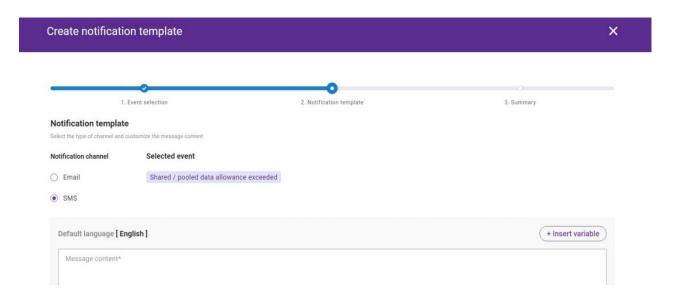


Figure 5. The example view of Notification template creation page, Channel type selection step.

4. Scroll down and click [Add language variant] to add another language for you notifications. You can also specify message content. The available language options are: *Dutch, French, German, English*. (See Figure 6.)

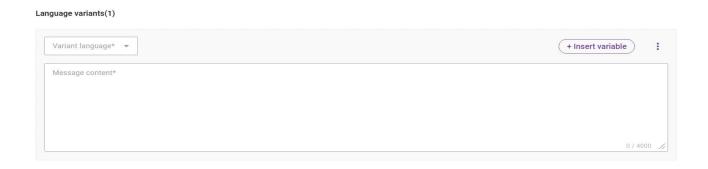


Figure 6. The example view of Notification template creation page, language variants panel.

• You can insert variables to your notification message, see Figure 7.

The variables in the message are information that adapts depending on the context of occurrence.

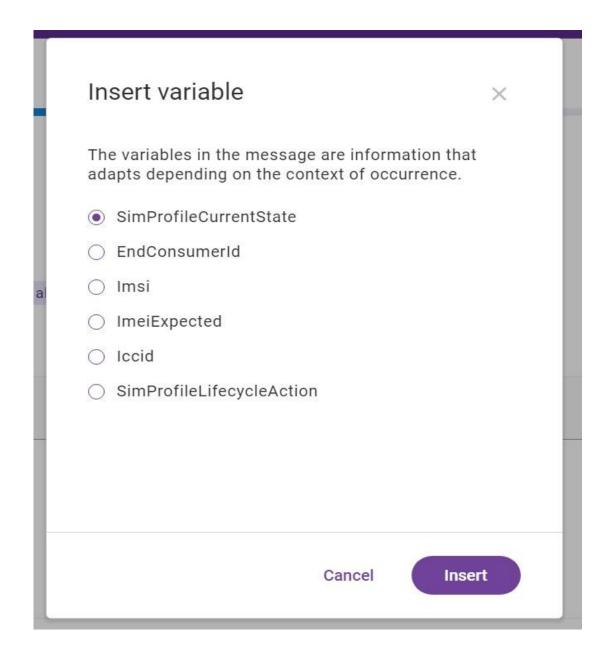


Figure 7. The example view of Notification template creation page, inserting variables option.

4. In *Summary* step, shown in Figure 8, review the summary page and then finish the process with [Create].

If there is a need to correct the data, return to the previous steps using [Back] and correct the necessary information.

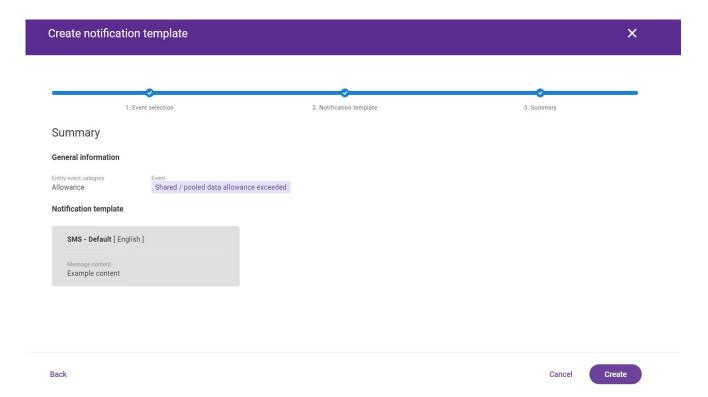


Figure 8. The example view of Notification template creation page, Summary step.

You can cancel the process pressing [Cancel]. Confirm the action with [Yes] in the pop-up window.

After all the steps have been completed successfully, you will get notifications about your pooled SIMs usage.

Customer Roles

Table 1. Customer roles with descriptions.

Role	Description
Read-Only Customer User	 Customer data, limited to customer's own data for customer users; new SIM orders; SIM and resources inventory data; automation rules; events detected by platform; usage data and aggregated usage analytics; SMS AO messages; devices data.
Customer Manager	 customer data, limited to customer's own data for customer users; quotes and agreements in Sales Toolbox application; events detected by platform; usage data and aggregated usage analytics; customer's charging data; devices data. Allows user: to create and edit new SIM orders; to create/modify/delete automation rules; to create and send SMS AO messages; to access SIM and resources inventory data; to modify SIM and resources inventory - acceptance by entitled user is required.

	Allows user:
Customer Admin	 to manage users accounts including assigning roles, managing notifications channels, blocking, changing passwords, closing accounts; to move accounts between Business Units Allows API access for customer external applications with My Admin application; to set custom attribute sets.

Customer Roles [1/2] Full list of questions 61

How do I add my custom attributes to a SIM card?

To add your custom attributes to a SIM, firstly create **Custom attribute set**. To do this:

- In My Admin application, go to Custom attribute sets tab and in the upper-right corner, click [Create].
- 2. In the first step, General & type selection, shown in Figure 1, specify set name and the type of attribute set.

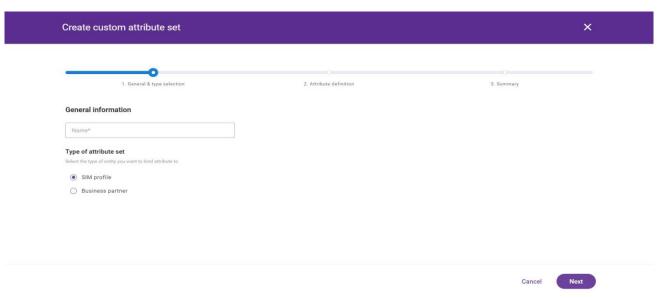


Figure 1. The example of Custom attribute set creation page, General & type selection step.

- 3. As shown in Figure 2, in the second step, *Attribute definition*, specify attributes that should be available in the set.
- After adding a new attribute, provide attribute name and its type (available options are: text, number, date).
- Additionally, you can indicate different language variants, for different platform translations, and specify, if the attribute should allow entering the value manually (and specify max length) or allow only for choosing from the list of predefined attributes. A maximum of 10 attributes can be defined for a custom attribute set. User should also define if the attribute should be marked as required.

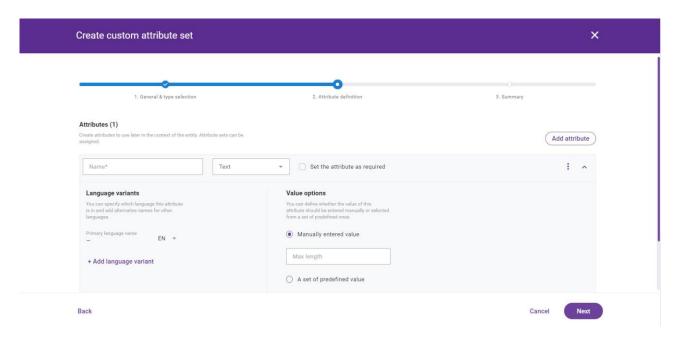


Figure 2. The example of Custom attribute set creation page, Attribute definition step.

- 4. With last step, *Summary*, shown in Figure 3, view the information provided earlier and, if all the data is correct, confirm the completion of the process with [**Create**].
 - If there are some inaccuracies or mistakes, you can correct them with [Back].
 - Alternatively, you can cancel the creation with [Cancel].

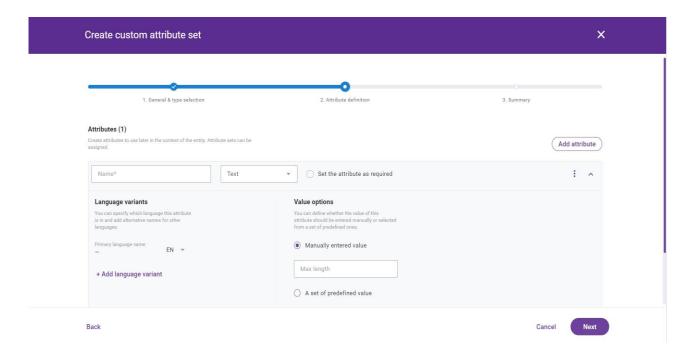


Figure 3. The example of Custom attribute set creation page, Summary step.

Now you can assign your custom attributes to your SIM. For this:

- 1. Go to SIM details.
- 2. In the *Customer attributes* section, click [Assign attribute set].
- 3. Choose custom attribute set, as can be seen in Figure 7.

It is possible to search attributes by ID, filter and sort by creation and modification date.

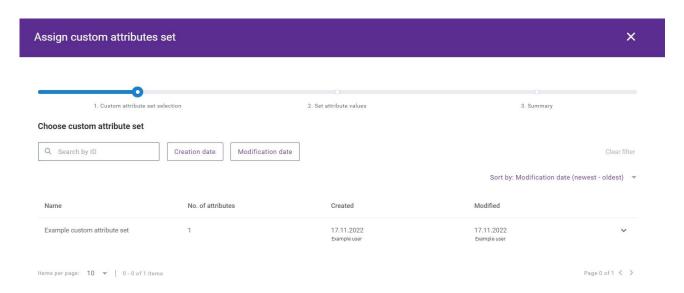


Figure 4. The example page view of Assign custom attributes set action, Custom attribute set selection step.

- 4. Click [Next] to proceed.
- 5. In the next step, set attribute values.
- It can be possible to enter the value manually or select only from the list of predefined attributes. It depends on what was set at creation custom attribute set.
- If user defined that the attribute should be marked as required and leaves a field blank, the validation message will appear.
- 6. Click [Next] to proceed.
- 7. Review summary and click [Assign] to finish.

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