ADMIN GUIDE

KeyCom 2025.3

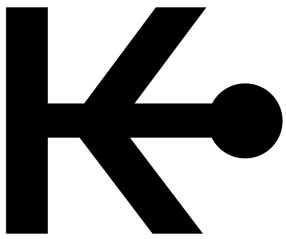


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Introduction

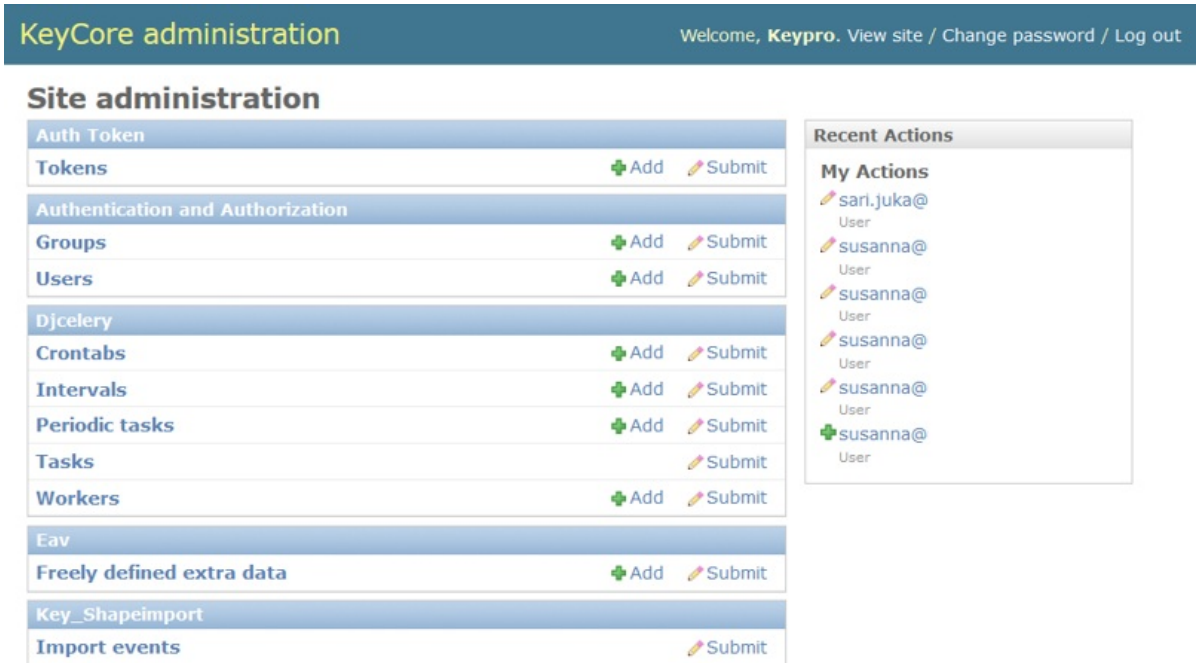
This document describes the KeyCom application settings that can be defined on the Admin site. In addition, the document describes some typical administration tasks related to the KeyCom application.

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Admin user interface

If you have been granted sufficient access rights, you can access the KeyCom admin user interface by clicking **Admin site** in the **Help** menu.





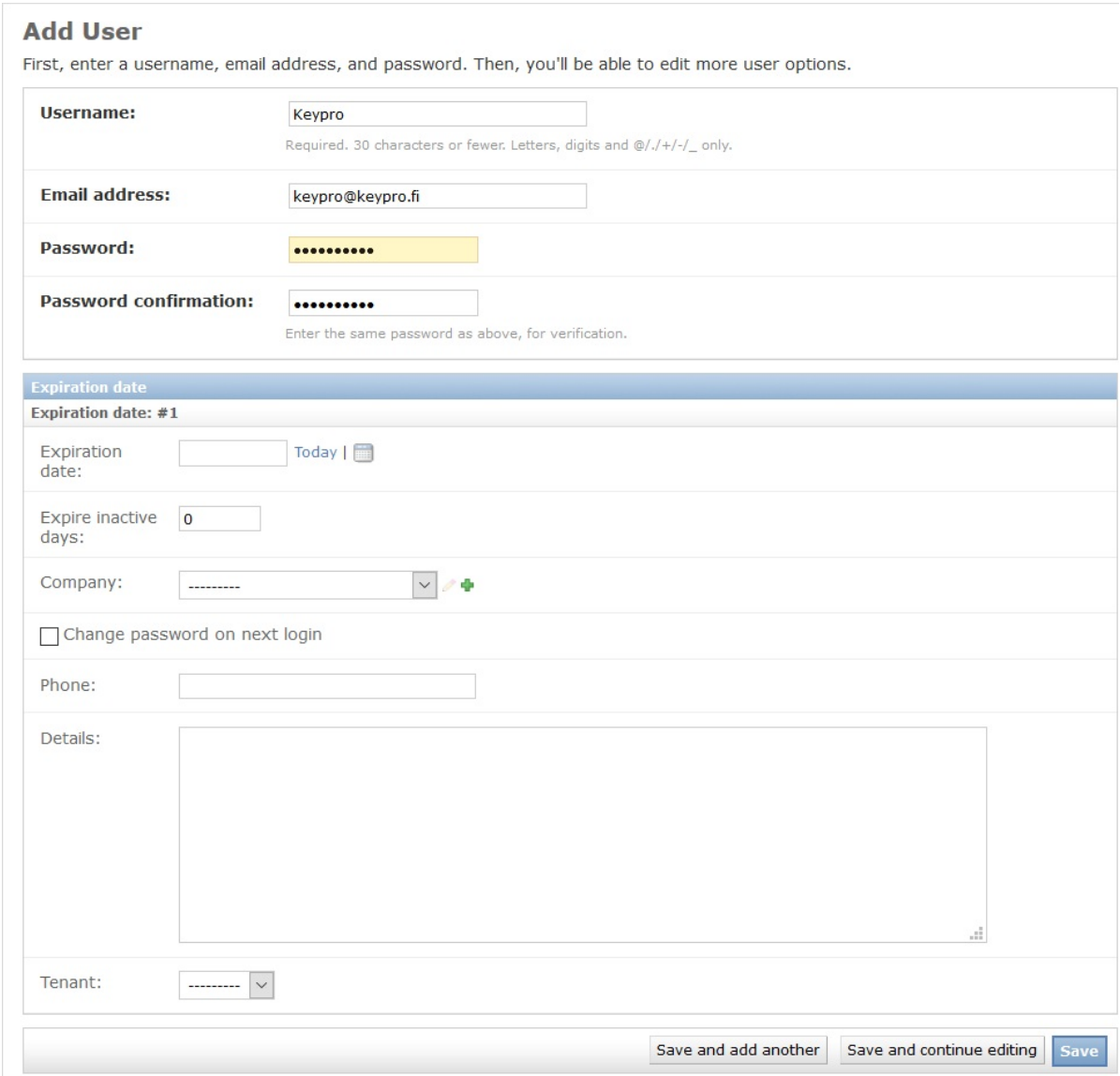
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Managing usernames and user data

Each KeyCom user is identified based on their personal unique username.

Creating new users

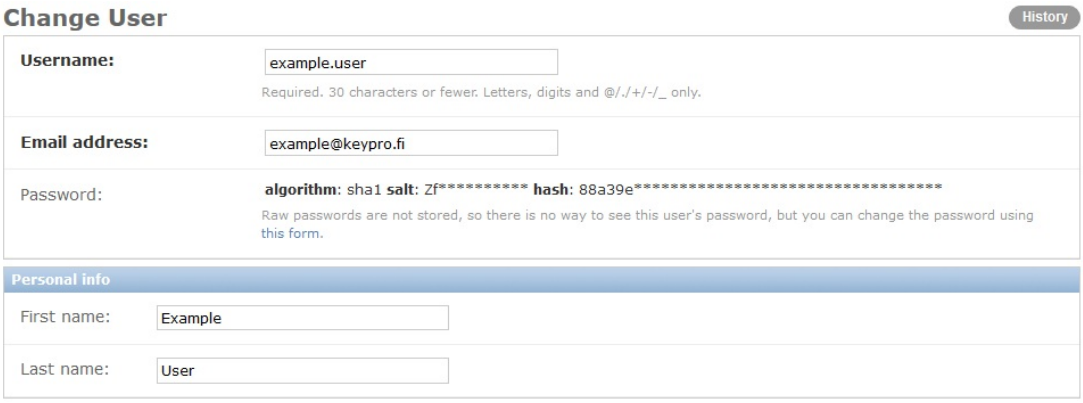
On the Admin site, go to the **Users** row in the **Authentication and authorization** group and click **Add** Add .



1. Complete the **Username** and **Password** fields.
2. Define an **Expiration date** if you want to limit the validity of the username.

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3. Click **Save**.
4. On the displayed form, enter the **first** and **last name** of the user.
5. If the user is authorised to export objects to external file formats such as AutoCAD, enter an **Email address**

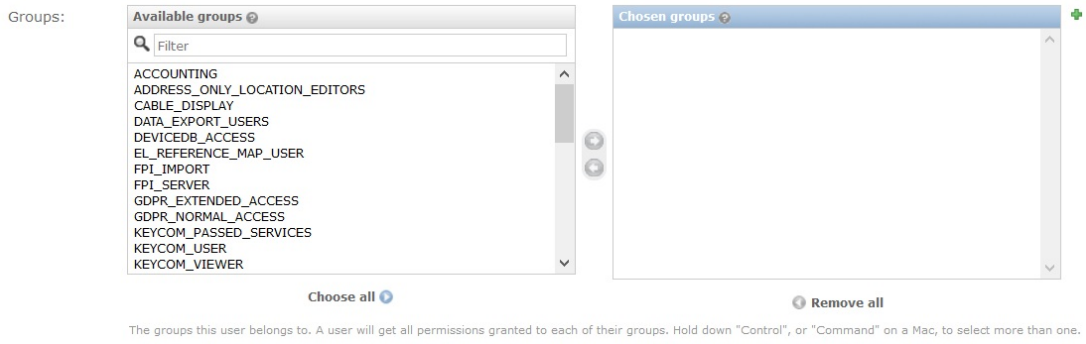


6. Define the access rights for the user as instructed in the Defining and modifying access rights for usernames chapter starting from step 2.

Defining and modifying access rights for usernames

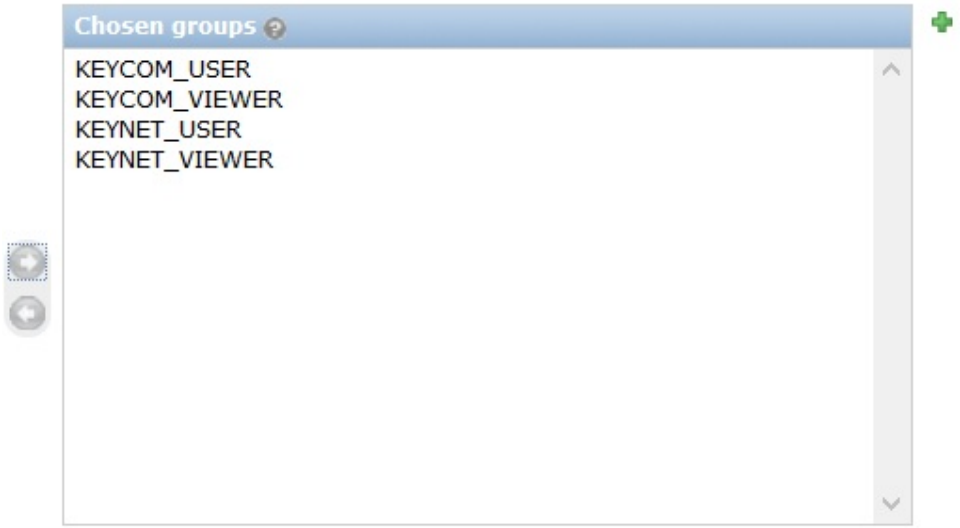
Selecting user groups for the user:

1. Select the username on the **Auth**>**Users** list.
2. On the **Available groups** list, select the user groups to which the user belongs.



3. Click the arrow button displayed between the lists to add groups to the **Chosen groups** list.

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4. You can define user-specific permissions in a similar manner.
5. **Save** changes.

Available user groups in KeyCom

The following user groups have been defined as default groups in KeyCom:

- **KEYCOM_USER** is a user authorized to add, modify and delete network objects.
- **KEYNET_USER** is a user authorized to use the KeyNet functions.
- **KEYCOM_VIEWER** is a user authorized to view network objects.
- **KEYNET_VIEWER** is a user authorized to view KeyNet data.
- **DEVICEDB_ACCESS** is a user authorized to use the device database forms that can be opened from the telecom premises form.
- **CABLE_DISPLAY** is a user authorized to view maps, duct route objects and cable objects.
- **DATA_EXPORT_USERS** is a user authorized to export data to another data format by using the export function.
- **POWER_USERS** is a group that will be removed. Use the KEYCOM_USER and KEYNET_USER groups instead.
- **PREM_ADMIN** is a user authorized to modify restricted telecom premises on Telecom premises form.
- **READONLY_USERS_PLUS_ANNOTATION** is a user with viewing rights and the right to create annotations.
- **READONLY_USERS_PLUS_AREA** is a user with viewing rights and the right to create areas.
- **REFERENCE_MAP_USER** is a user authorized to import files to the map

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by using the spatial upload function.

- **ACCOUNTING** is a user authorized to access the log-in data of users.
- **MASS_DELETE** is a user authorized to delete several objects at once. The mass deletion function of the application must be activated for this.
- **MAIN_ACCESS** is a user authorised to use the main application only. KEYCORE_IGNORE_MAIN_VIEW_ACCESS_GROUPS must not be in an active state in the application.
- **VIEWER_ACCESS** is a user only authorized to use KeyMobile. KEYCORE_IGNORE_MAIN_VIEW_ACCESS_GROUPS must not be in an active state in the application.
- **KPI_REPORT** is a user authorized to run KPI reports. (A customer-specific feature)
- **GDPR_NORMAL_ACCESS** is a user authorized to view customer data.
- **GDPR_EXTENDED_ACCESS** is a user authorized to view customer data and customer data of the "Private–restricted" type (see Customer types).
- **OM_CIRCUIT_ADMIN** allows updating of circuit sections and its related components when the usage state of the circuit section is in O&M (operations and maintenance) state. The KN_USAGE_STATE Numeric value 4 field tells if the circuit section usage state is in O&M state. Value of 1 means that the state is in O&M state. The OM_CIRCUIT_ADMIN group only allows the user to edit/delete circuits in O&M state on Circuit form and allows the user to use the Logical Mass Connection Change functionality. The group has no effect on other forms.
- **DIARY_VIEW** is a user authorized to view Diary feature related functionalities.
- **DIARY_EDIT** is a user authorized to view, create and edit Diary feature related functionalities.
- **DIARY_FULL** is a user authorized to view, create, edit and delete Diary feature related functionalities
- **UV_USER** is a user who has viewing access and limited modifying access to KeyWork forms. This user group always must be active if there's also additional **UV** user groups that need to be active in the environment.
- **UV_CONTRACTOR_DIRECTOR** is a user who has director's rights. They have the rights to control and supervise the work related to the contractor.
- **UV_CONTRACTOR_MECHANIC** is a user who has mechanic's rights.

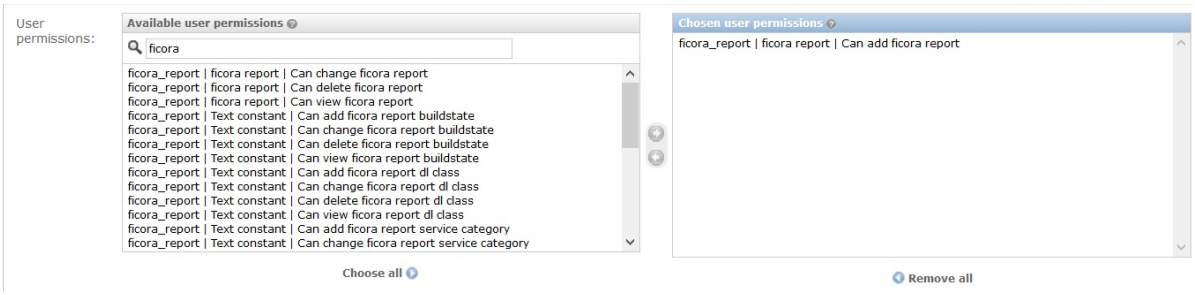
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They have the rights to carry out tasks related to the UV contractor.

- **UV_MAINTENANCE_CONSTRUCTOR** is a user who only has access to KeyWork forms but no editing rights.

Ficora reporting rights

Users with **Can add Ficora report** added to the **Chosen user permissions** field have Ficora reporting rights.



Defining two phased authentication for a user (optional)

If the two-phase authentication has been ordered as an additional service, the view for editing user data includes a section for **User profiles for two phased authentication**.

1. Select the username on the **Auth**>**Users** list.
2. Enter the phone number of the user to which the confirmation code will be sent.
3. Select **Enable two phased authentication**.
4. **Save** changes.



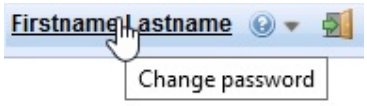
Deleting usernames

To delete an existing username, select the username on the **Auth**>**Users** list and click **Delete** on the displayed form.

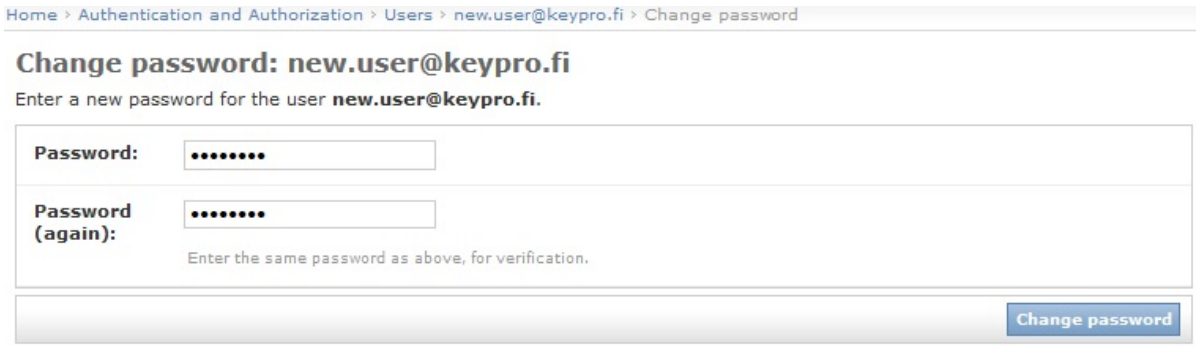
Changing user passwords

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Users can change their own passwords through the link in the applications main view. Admins can change the passwords of a user on the **Change User** form by clicking the “this form” link.



For security reasons, passwords are stored in the system database with strong encryption, and not even admin users can view the passwords of users through the admin interface.



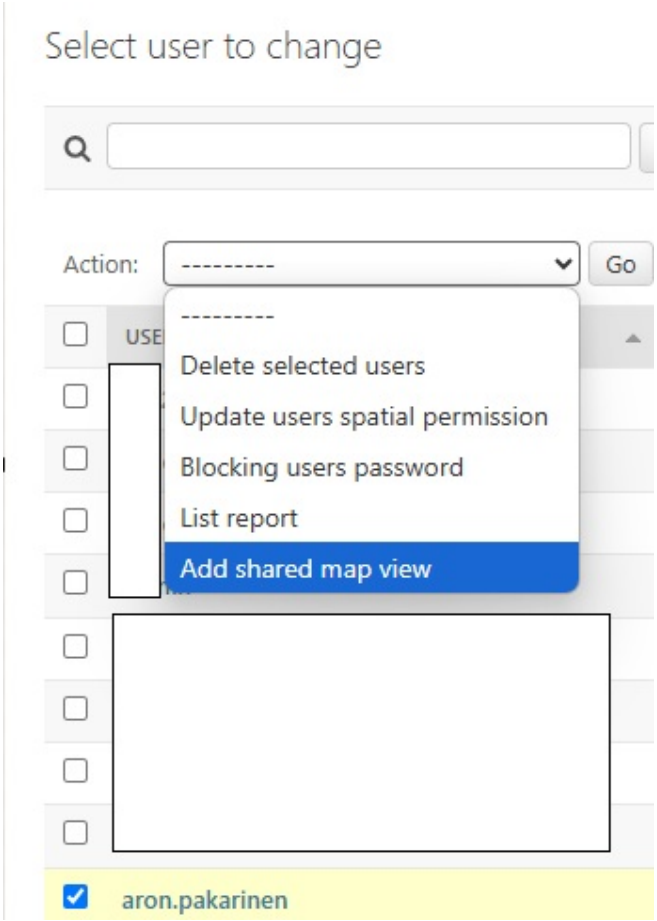
Sharing map views

In KeyCom, you can share a predefined map view with specific users. This map view will be set as their default view from their first login.

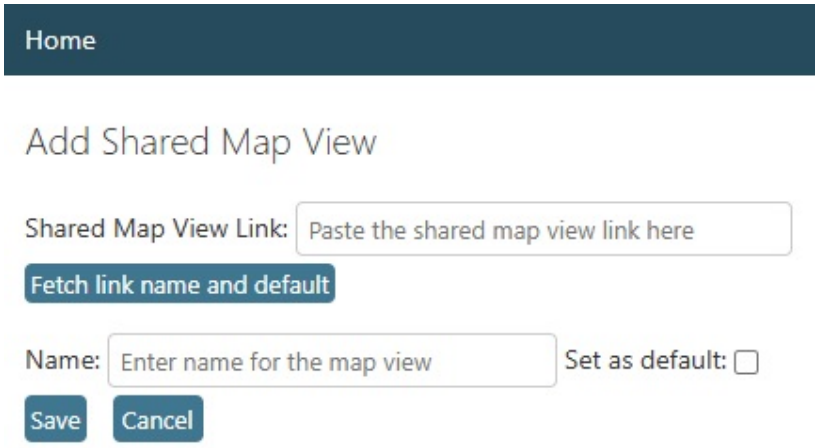
To share a map view for an existing user, do the following:

1. Select a user from the list by enabling the check box next to their username.
2. Select **Add shared map view** from the **Action** menu and select **Go**.

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3. In the page that open, paste the map link link to the **Shared Map View Link** field. (You can obtain the link from the Map views form and by clicking **Copy map link to clipboard**).



4. Click **Fetch link name and default** to automatically fill in the **Name** field and set the map view as the default.

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5. To edit the name, simply edit the text in the **Name** field.



6. Finally, click **Save** to set the map view for the selected users.

Text constants

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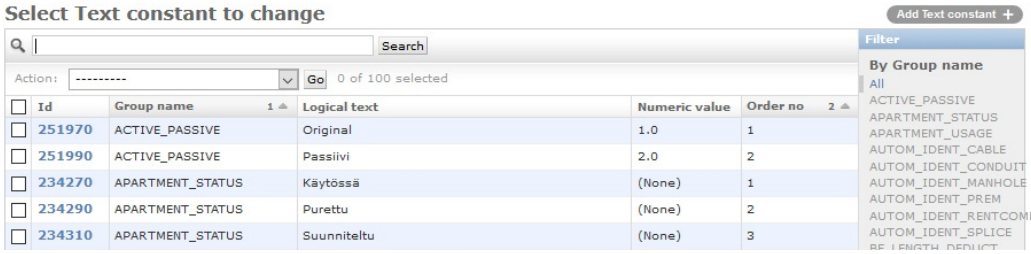
The various selection lists of the application forms are retrieved from the text constants. If the content of the text constants is edited, the selection lists on the forms will be changed accordingly the next time the application is downloaded.

Editing text constants

Click the **Text constants** link in the admin interface.



On the displayed list, click the ID of a text constant to edit it. To limit the list content to a single group, click the group in question on the **Filter** list.



Text constant columns

Text constants include the following information for each setting:

- **Group name:** text constants have been divided into groups, which are used to categorize the settings related to various topics.
- **Logical text:** the text that the application uses internally.
- **Text [fi]...Text [en]:** the translations of the **Text** field that are displayed in the browser in the selected language.
- **Numeric value:** is used, for example, as the numeric value equivalent to the text value, to provide information on whether the feature is in use and to indicate the type of technology. Further information is available in the chapter that discusses each specific group.
- **Abbreviation: the internally used default abbreviation of the text constant.**
- **Abbreviation [fi]...Abbreviation [en]:** the translations of the **Abbreviation** field that are displayed in the browser in the selected language. If the selected language is not supported, the **Abbreviation** field will be displayed.
- **Numeric value 2...Numeric value 4:**
- **Numeric value 3:** Is used for existing *_OWNER groups to point directly to STP Owner ID, which will be then used directly in the STP view (Environment/Customer specific STP Owner ID's to be defined manually per environment when STP activation happens). With this, it is important that these fields remain free until then.

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- **Text value:** varies depending on the group. As a rule, this is not in use.
- **Category:** not in use.
- **Description:**
- **Value...Value 4:** these fields are usually related to the description techniques of old systems. You can ignore these fields if you are using the browser application.
- **Optional data**
- **Order no:** a sequence number for settings. For example, if the values of a group are retrieved for a selection list, the values will be displayed in the order specified by the order number. For some groups, values with negative order numbers are not displayed on the selection lists.
- **Availability start and end:** displayed/can be modified through the group's own admin interface if the field is in use. If data has been entered in these fields, selections with availability start or end dates in conflict with the current date (not available anymore or availability period has not yet started) will be displayed either in grey or not at all depending on the group.

Deleting text constants.

Text constants can be deleted from the list of text constants. Make sure that the text constants you delete are not used anywhere else in the application. To delete text constant, select one or more text constants from the list and choose the "Delete constant(s) with no check" action, then approve the deletion. If any of text constants are used anywhere in the application, the deletion will fail.

Common text constants

Login screen terms

The terms and conditions link available in the login screen is defined in the TERMS_AND_CONDITIONS group under Text constants. To activate the link in the login screen fill in the following fields:

- **Group name:** TERMS_AND_CONDITIONS
- **Logical text (TXT):** private_terms
- **Order number:** 1 (order number)
- **Text value:** Link of for the terms and conditions. For example, "https://www.company.com/terms_and_conditions".
- **Text [fi]:** Yksityiset ehdot (the value that is visible to the user)
- **Text [en]:** Private terms (the value shown to the user on the English login page)
- **Text [sv]:** Private villkor (the value that is displayed to the user on the login page in Swedish)

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Placement scale

The placement scales available in the map tools are defined in the SCALE group under Text constants.

- **Text...Text (en):** a scale value that is appropriate for the user, for example, “1:500”.
- **Numeric value:** the numeric value equivalent to the text for scaling objects.
- **Value:** not available in the browser application. A reference to a Feature table. Contact Keypro’s application support for help.
- **Value 2:** not available in the browser application. A reference to a Feature table. Contact Keypro’s application support for help.
- **Numeric value 2:** defines the default placement scale. The default placement scale when the application is launched is a placement scale with a Numeric value 2 = 1.

Location accuracy and height accuracy

Location accuracies are defined in the LOCATION_ACCURACY group, while the H_ACCURACY group is used to define height accuracies. Both are used on some of the object forms in the relevant selection lists on the **Common settings** tab.

- **Text...Text (en):** text specifying the location accuracy, for example, “+-5 m”
- **Numeric value:** a numeric value equivalent to the text field, for example, 5.0. The value in this field is the radius of a circle in metres, within which the actual location of an object is when measured from the object’s saved location and at the applied level of certainty.

Plan state

The state of a plan is defined in the PLAN_STATE group.

- **Numeric value 2**: if the state of a plan is changed to “ready”, the user will be asked whether the usage states of the related objects should be updated. They will be updated to a usage state with the value 1 (see Usage state).

1	ready

- **Text value**: Locks the objects in the plan if the Maintenance state of

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- **Text value**: Locks the objects in the plan if the Maintenance state of plan objects feature is enabled. See the Maintenance state of plan objects (O&M) chapter.

1	editing of objects with the usage state “In use” is not allowed
<something else>	the objects in the plan can be freely modified

Maintenance state of plan objects - Operations and Maintenance (O&M)

The maintenance state of the plan objects locks the objects in the plan with the state “In use” and prevents the editing of the objects (a notification is displayed to the user). Only the users in the O&M user group (OM_PLAN_ADMIN) have the right to change the state of the plan to something else than the O&M state. The O&M state is defined using the text value of the plan. See the Plan state chapter. **The following objects are supported:**

- Cable
- Conduit
- Duct
- Telecom premises
- Device
- Splice
- Manhole
- Pole
- Points objects
- Connections at the cable and device level
- Circuit sections

Plan type

The plan type is defined in the PLAN_TYPE group.

Numeric value: defines the type of plan in question

4	Deconstruction

If the plan’s type is deconstruction and the plan’s usage state is changed to ready (see the Plan state chapter), the user will be asked whether the objects

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related to the plan should be deleted or scrapped. If the user selects deletion, the objects will be deleted. If the user selects scrapping, the usage state of the objects will be changed to a state (see Usage state) with a numeric value of 3. This feature is activated with the setting PLAN_AUTOMATIC_SCRAPPINGS.

Point object types

- **Name:** name that the application uses internally.
- **Label [fi]...Label [en]:** localised name that is visible to users.
- **Symbol name:** the symbol that is displayed on the map.
- **Point object type category:** the category that the type belongs to. See the Point object type categories chapter.

Point object type categories

The type categories of point objects are defined in the POINT_TYPE_CATEGORY group.

- **Logical text**: the text that the application uses internally:

Kieppi	a point object linked to a cable
<other>	a regular point object

- **Text [fi]...Text [en]**: the translations of the **Text** field that are displayed in the browser in the selected language.
- **Numeric value**: the type of the category:

1	a category used as redline in Keymobile
-1	Types used in KeyRNS. The trigger updates the type_id data field for the object. The type_id field will be removed, but its fields are still used by the placement scale calculation (An obsolete group of point object types).

Point object defaults

To set the defaults, go to a Point object form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Address usage purposes

The usage purposes of addresses are defined in the APARTMENT_USAGE group (the usage purpose of an apartment) and the BUILDING_USAGE group (the usage purpose of a building).

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- **Numeric value...numeric value 4:** these fields specify the addresses that will be excluded in various situations, for example, if you do not want to include addresses with the usage state “Demolished”. If no value has been entered or the value entered into the field is 0, the address will be included. Otherwise the address will not be included. Addresses are displayed in accordance with the table below.

Numeric value	1	Related to external interfaces. **Do not edit!**
Numeric value 2	1	Related to external interfaces. **Do not edit.**
Numeric value 3	1-11	The VRK usage code equivalent to the purpose of use. (Note! Only used in Finland.) This is used when the VRK material is used to update addresses. **Do not edit.**
Numeric value 4	1	Addresses are not updated directly from the VRK file, but the update is included in the list of addresses that will not be updated. (Note! Only used in Finland.)

- **Text value:** The Text value of the BUILDING_USAGE group specifies the color of the address symbol.

r g b	Color of the address symbol. Each value is a number between 0...255, for example, green is presented as “0 255 0”.

Address usage purpose 2

The values for the Address usage purpose 2 field are defined in the KN_ADDR_SPEC group.

- **Numeric value:** Numeric value defines if the address is filtered out in automatic address search and in TTMi-interface’s address search.

1	Address is filtered out in automatic address search and in TTMi-interface’s address search.
Other	Address is not filtered.

- **Text value:** The text value defines the color used to display the address number on the map.

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r g b	The color of the address number. Each value is a number between 0...255, for example, green is presented as “0 255 0”.

Address defaults

To set the defaults, go to an Address form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Address and apartment data

This group will include information of available source systems (3rd party companies/systems) which will add address and apartment data to KeyCom.

To define the Source system and Source system key options that are displayed to users under the Common settings tab on the object forms, go to the SOURCE_SYSTEM groups under Text constants.

- **Abbreviation:** Add the wanted system name to the field.

Coordinate system options

To define the Coordinate system options that are displayed to users, go to the KEYCORE_IMPORT_SRS groups under Text constants.

- **Text value**: the code equivalent to the coordinate system. This code must be included in the code column of the Coordinate systems. See Coordinate systems.

Note! The KEYCORE_IMPORT_SRS group of text constants determines the options that are displayed to the user. The corresponding information must be available in the coordinate system specifications (see the Coordinate systems chapter).

Area types

Area types are defined in the FREEAREA_TYPE group.

- **Numeric value:** defines the area type

1	Access restriction area
2	Province
3	City
4	Zip code

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5	Switching center area (Censal)
6	Country border
7	Population center
8	Autonomous area (Comunidad Autónoma)
9	Building
22	Unsubsidised area
101	(reserved for a modified right of use area)

Area categories

Area categories are defined in the FREEAREA_CATEGORY group. The Links of text constants chapter provides information on linking area types to categories.

Links of text constants

- **Parent id:** Area category (see Area categories).
- **Child id:** Area type (see Area types).

Usage states of areas

The usage states of areas are defined in the FREEAREA_STATE group.

- **Numeric value:**

102	(reserved for a modified right of use area)
103	(reserved for a modified right of use area)
104	(reserved for a modified right of use area)

External map links

The external map links are defined in the EXTERNAL_MAP_LINK group. The link can be opened in the Google maps drop-down menu from **Map tools**.

- **Group name:** EXTERNAL_MAP_LINK
- **Logical text:** the text that the application uses internally

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- **Order no:** define the map link order in the drop-down menu
- **Additional data:** the map link url
- **Text...Text (en):** name of the external map link and the translation of the name

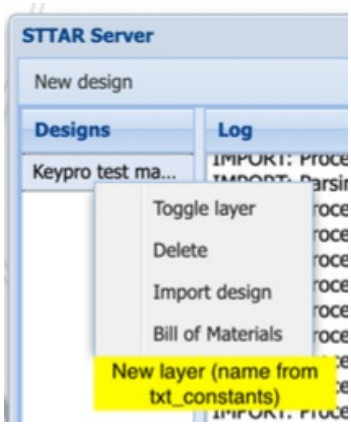
Traficom STP default values

The group TRAFICOM_STP_DEFAULT contains all default values for STP specific views.
NUM_VALUE column contains the default values for linestring objects and NUM_VALUE2 column for point objects.

Groupname	TXT	NUM_VALUE	NUM_VALUE2
TRAFICOM_STP_DEFAULT	LOCATION_ACCURACY_XY	50	50
TRAFICOM_STP_DEFAULT	LOCATION_ACCURACY_Z	5	5
TRAFICOM_STP_DEFAULT	PLANNED_DEPTH	0.7	0.7
TRAFICOM_STP_DEFAULT	MAP_AREA	50	50
TRAFICOM_STP_DEFAULT	MARKING_AREA	10	0
TRAFICOM_STP_DEFAULT	OWNER	NULL	NULL

Setics STTAR values of the customizable preview layer

The CUSTOM_STTAR_PREVIEW group contains all the necessary values for the customizable Setics STTAR preview layer. The text constant defines the name of the abbreviation displayed in the preview level, the text displayed on the STTAR server form and the path displayed in the context menu for activating the level.



When the txt_constants row has been defined system will add a new button in the context menu with the “Toggle layer” option. The button will be labeled as what’s defined in the **Text** and **Abbreviation** fields.

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- **Group name:** CUSTOM_STTAR_PREVIEW
- **TXT:** Custom Setics STTAR preview
- **Numeric value:** 1
- **Order no:** (1). If there is more than one layer, add the following numbers in order.
- **Text:** Add the same text to the **Text** and **Abbreviation** fields.

When making the new design, system will create a new layer which is defined by the txt_constant. The layer will be labeled with the original layer name and suffixed by the abbreviation in the txt_constant row with the design ID in the end (e.g. CW).

Note! The new layer will be available only for new designs that are created after the feature has been enabled in the system.

KeyCom text constants

Installation year

The default installation year for **new network objects** is defined in the DEFAULT_INSTALL_YEAR group. The **Numeric value** determines the behavior.

- **Group name**: DEFAULT_INSTALL_YEAR
- **Numeric value**: the field indicates the installation year, as clarified below.
    - If the **Numeric value** is missing altogether, or **Numeric value** is **NULL**, then installation year is automatically set to the **current year**.
    - If **Numeric value** is, for example, **2024** or any other year, the installation year is automatically set to that year.
    - If **Numeric value** is **0**, then an empty installation year is left empty.

Usage state

Names of groups used to define the usage state of an object end with "_STATE".

- **Numeric value**: the field value is the usage state, as clarified below.

1	In use
2	Planned
3	Discarded

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3	Discarded
4	Decommissioned

The automatic state changing in the system will only apply to the numeric values listed above. Groups using this feature include the following:

CABLE_STATE	Usage state of a cable
CONDUIT_STATE	Usage state of a conduit
DUCT_STATE	Usage state of a duct
MANHOLE_STATE	Usage state of a manhole
POINT_STATE	Usage state of a point object
POLE_STATE	Usage state of a pole
PREM_STATE	Usage state of telecom premises
SERVICE_STATE	Usage state of a service
SPLICE_STATE	Usage state of a splice
TERMINAL_STATE	Usage state of a terminal
THR_CONN_STATE	Usage state of a thread connection

Note: Usage state must have a numeric value so that it can be used on forms to mass update items.

- **Numeric value 2:**

Group	Numeric value	Text
PREM_STATE	1	If the **PREM_STATE** of the telecom premise in question has a value of 1, the devices under it are also updated to that usage state.

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Technology

Technology means the technology of cables and devices (such as fiber, copper and coaxial), which determine whether the objects using a certain technology can be connected to objects using a different technology.

- **Numeric value**: The following groups are used to define the technologies, and the table below presents the values equivalent to each technology:

Group	Numeric value	Text
CABLE_TECHNOLOGY	-1	Cable TV
CABLE_TECHNOLOGY	0	Copper
CABLE_TECHNOLOGY	1	Fiber
CABLE_TECHNOLOGY	(null)	Hybrid
TERMINAL_TECH	1	Fiber
TERMINAL_TECH	(null)	Hybrid
TERMINAL_TECH	1	Cable TV_Fiber
TERMINAL_TECH	-1	Cable TV_Coaxial
TERMINAL_TECH	0	Copper

Devices/cables using hybrid technology can be connected to all other devices/cables using the same technology or some other technology. Other devices/cables can only be connected to devices/cables using the same technology or having the same **Numeric value**.

- **Numeric value 2**: CABLE_TECHNOLOGY group num_value 2 indicates the voltage of the cable.

Numeric value	Meaning
1	Low voltage cable
2	Medium voltage cable
3	High voltage cable

Thread type

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In KeyCom's thread details window, you can select the thread type of each thread through the THREAD_TYPE group under TXT_CONSTANTS.

- **Numeric value**: defines the technology.

1	Fiber
0	Copper
null	Not defined

- **Numeric value 2**: indicates the default attenuation (dB/km).

The uniqueness and NULL value of object identifiers

A rule for an identifier's uniqueness and NULL value can be defined for each usage state of telecom premises, manholes, splices, poles, conduits and cables.

For telecom premises, the rule has been saved in the PREM_ID_RULE group, for manholes in the MANHOLE_ID_RULE group, for splices in the SPLICE_ID_RULE group and for cables in the CABLE_ID_RULE group (see Automatic generation of object identifiers).

- Numeric value: The actual setting has been saved in this field as an integer with three digits in the form of xyz. The functions of the digits are as follows:

x defines the object usage state to which the rule is applied. The available values are:

1 – In use

2 – Planned

3 – Discarded

y defines the uniqueness rule for the objects in the usage state in question

1 – The uniqueness of an object identifier is not checked at all. One identifier can occur in a database table more than once.

2 – One identifier can occur in a database table more than once, but in certain sub-areas only once.

3 – One identifier can occur in a database table only once.

z defines whether or not the identifier of the usage state in question can be null.

1 – The identifier can be null. If the identifier is null, the uniqueness of an object

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identifier will not be checked.

2 – The identifier cannot be null.

For example, a row in the PREM_ID_RULE group with the numeric value of 122 specifies that only one object with the same identifier can be available to telecom premises within one sub-area. Empty identifiers are not permitted for objects with the usage state “In use”.

Automatic generation of object identifiers

Automatic generation of identifiers can be defined for telecom premises, manholes, splices and cables. The automatic generation of identifiers depends on the identifier’s rule for nullability (see the Uniqueness and NULL value of object identifiers).

If the rule defines that the identifier cannot be empty, an identifier will be automatically generated in accordance with the rules for the object that is to be added or updated, unless the user enters an identifier on the form.

The settings can be found in the following groups:

Object	Group
Telecom premises	AUTOM_IDENT_PREM
Manhole	AUTOM_IDENT_MANHOLE
Splice	AUTOM_IDENT_SPLICE
Cable	AUTOM_IDENT_CABLE
Device	AUTOM_IDENT_TERMINAL

The rules are defined as follows:

- **Numeric value**: specifies whether the automatic generation of identifiers has been enabled.

1	Generation enabled
0	Generation disabled

- **Logical text**: this field contains the text that is entered for the identifier. It is entered as strings which will be replaced with the object’s actual data. Strings that will be replaced include the following:

%AREA%	Sub-area

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%AREA%	Sub-area
%TYPE_ABR%,	*The abbreviation of* ***telecom premises, splice, cable, manhole*** or ***device*** *if available*
%TYPE%	Object type
%TECH%	The abbreviation of the applicable ***cable*** or ***device*** technology, or the ***cable*** or ***device*** technology if an abbreviation has not been defined
%ROLE%	The abbreviation of the ***cable*** role, or the ***cable*** role if an abbreviation has not been defined
%SEQ%	A running number that is read from the following sequences: • **Telecom premises**: SQ_AUTOM_IDET_PREM_ID, • **Manholes**: SQ_AUTOM_IDET_MANHOLE_ID, • **Splices**: SQ_AUTOM_IDET_SPLICE_ID • **Cables**: SQ_AUTOM_IDET_CABLE_ID • **Devices**: SQ_AUTOMATED_IDET_TERMINAL

If the string that is to be replaced is followed by n, in which n is a number, the identifier will include as many digits as the number specifies. For example, if the text includes the string %AREA%3, the identifier will include the three first digits of the sub-area.

If a %SEQ% string ends with n, the ending defines the minimum number of digits that will be included in the running number. if the running number has less digits than the specified value, the number will be preceded by the required number of zeros. For example, %SEQ%4 generates a four-digit number such as 0015.

For example, an AUTOM_IDENT_PREM group with the text %AREA%3_%SEQ%4 will generate a telecom premises identifier such as PEH_0001.

Thread connection type

Thread connection type is defined in the THR_CONN_TYPE group.

- **Numeric value:** Field specifies the type of the thread connection in question.

1	Straight
2	Fusion

Duct owners

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Duct owners

The duct owners are defined in the DUCT_OWNER group.

Duct connection type

The type of the duct connection is defined in the DUCT_CONNECTION group.

- **Numeric value**: this field indicates the type of the duct connection to be used for importing FiberPlanIT files:

1	used as the duct connection type when importing FiberPlanIT material. If no type has been specified, the download will fail.

Cable and thread owners

The owners of cables are defined in the CABLE_OWNER group.

- **Numeric value 2**: whether the thread is included in the cable's capacity.

1	(own) thread is included in the cable's capacity
0	thread is not included in the cable's capacity

- **Numeric value 4**: Own cable (KPI report).

1	own cable

Parties having the right to use threads

The parties having the right to use threads are defined in the RIGHT_OF_USE group.

- **Numeric value 2**: whether the thread is included in the cable's capacity.

1	(own) thread is included in the cable's capacity
0	thread is not included in the cable's capacity

Cable roles and default importance

A cable's role from the perspective of network structure is defined in the CABLE_ROLE group.

- **Numeric value**: this field is used for identifying the cable's role when FiberPlanIT files are imported. If a group includes several rows having the same **Numeric value**, the import will be performed by using the row

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with the smallest sequence number (FiberPlanIT is a service subject to a separate order).

- **Numeric value 2**: the field specifies the cable's default importance category if the Importance field is empty.

Role	Importance	Numeric value	Numeric value 2
Drop cable (drop cable)	A drop cable from the customer's location to the first flexibility point	1	1
Distribution cable (distribution cable)	A cable that connects the first and second flexibility points of the network (the first and second points from the customer's location)	4	2
Feeder cable (feeder cable)	A cable that connects the exchange to the first flexibility point (the first one from the exchange)	5	4
Transmission cable (transmission cable)	A cable that connects exchanges	2	5
Transmission + subscriber cable	A cable with both transmission and customer circuits	3	5

- **Numeric value 3**: specifies whether the capacity theme is applied when the cable is displayed

1	the capacity theme is applied when the cable is displayed

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0/null	the capacity theme is not applied when the cable is displayed

Cable importance

The Cable form includes a **Cable importance** field that defines the primary cable importance. The field's value must be between 0 (not important) and 5 (very important).

If this value has not been defined, the default importance related to the cable's role will be used (see the Duct connection type chapter).

Extra lengths of cables

The extra length of a cable models the cable's bends as it traverses across the terrain and inside ducts.

The extra length is defined in the KEYCOM_EXTRA_LENGTH group.

Numeric value: the extra length as a percentage of the total length of the line on the map and the included loops/coils, for example, 0.04 adds 4% to the cable's total length.

Provisioning devices

Device categories (DEVICE group) with **Numeric value 2** = 1 are classified as provisioning devices (see Device type class). Provisioning devices are used, for example, for reserving provisioning ports for circuits and in the tool for circuit mass creation.

Defining cable capacity

Maximum capacity:

- The numeric value 3 for the cable owner = 1
- The numeric value 2 for the thread owner = 1 or the numeric value 2 for the party having the right to use the thread = 1 (see Cable and thread owners and Parties having the right to use threads)

Connected capacity:

- The numeric value 2 for thread construction = 1 (see Circuit and thread construction state)
- The numeric value 2 for the thread owner = 1 or the numeric value 2 for the party having the right to use the thread = 1 (see Cable and thread owners and Parties having the right to use threads)

Used capacity:

- The numeric value 2 for thread construction = 1 (see Circuit and thread

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- The numeric value 2 for thread construction = 1 (see Circuit and thread construction state)
- The numeric value 2 for thread usage state = 1 (see Usage state of threads)
- The numeric value 2 for the thread owner = 1 or the numeric value 2 for the party having the right to use the thread = 1 (see Cable and thread owners and Parties having the right to use threads)

Free capacity:

- The numeric value 2 for thread construction = 1 (see Circuit and thread construction state)
- The numeric value 2 = null for the thread usage state
- The numeric value 2 for the thread owner = 1 or the numeric value 2 for the party having the right to use the thread = 1 (see Cable and thread owners and Parties having the right to use threads)

Usage state of threads

The usage state of threads is defined in the KN_USAGE_STATE group (see Usage state of circuits).

Preventing the editing of threads

The editing of threads that are in use can be prevented through the settings of the KN_THREAD_CHANGE group. The group can only include one row.

- **Numeric value**: the action taken if a user attempts to edit a thread that is in use:

0	editing is not allowed
1	editing is allowed, but a warning is displayed
2	editing is allowed

Circuit usage purpose

The usage purposes of circuits are defined in the USAGE group.

- **Text [fi]...Text [en]**: the usage purpose and the related translation displayed to the user.
- **Numeric value 2**: Determining the circuit name.

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1	The circuit name will consist of the abbreviation of the usage purpose and a running number sequence (the sequence name must be defined in the Description field).

- **Numeric value 3**: Status of the circuit section.

0	POINT-TO-POINT (P2P)
1	POINT-TO-MULTIPOINT (P2MP). The completion of a circuit does not change the usage state or construction state.

- **Numeric value 4**: Status of OTDR monitoring.

0	Monitoring for circuit is off
1	Circuit is being monitored

- **Description**: name of the number sequence used in the circuit's name. For example, TEL12345 is the result of the following definition in the USAGE group:

Text	Abbreviation	Numeric value 2	Description
Telephone	TEL	1	SQ_TEL_SEQ

An obsolete group of point object types

The current editing method for point objects is described in the Point object types chapter.

Note: New functionalities must not be dependent on the type_id field of the point_object table or on the POINT_TYPE group!

Users are no longer using the POINT_TYPE group themselves in the KeyCom application, and the type_id field for point objects is filled in by using a trigger in the database and originally for the purpose of keyrns, but some other functions also continue to be dependent on this field.

- **Numeric value 2**: the field specifies whether the route's installation type is buried or aerial

NULL/0	Buried
Negative	Shallow depth, estimated depth in metres, for example, -0.2
1	Aerial

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- **Value, Value 2, Value 3**: specifies the multiplier for the placement scale. The multiplier is selected based on the numeric value of the usage state by using a trigger.

States of rental contracts

The states of rental contracts are defined in the RENT_STATUS group.

- **Numeric value**:

0	Free
1	Reserved
2	Rented

- **Numeric value 3**:

1	<reserved>
4	<reserved>
2	<reserved>

- **Numeric value 4**:

1	<reserved>
5	<reserved>

Customer types

Customer types can be defined in the KN_CUST_TYPE group. The existing customer types are listed below. The numeric value specifies the customer type:

Group	Numeric value	Description
KN_CUST_TYPE	1	Private person
KN_CUST_TYPE	2	Company
KN_CUST_TYPE	3	Private–restricted
KN_CUST_TYPE	4	Fault notification

Route following direction

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Logical directions used when following a route are defined in KN_CONN_DIR group.

Group	Numeric value	Description
KN_CONN_DIR	1	Ascending direction
KN_CONN_DIR	2	Descending direction

Line type

Line type is determined in text context FREE_LINE_TYPE.

- **Numeroarvo**:

1	Redline. Type which can be created in KeyMobile. It's used in field palnningSitä käytetään kenttäsuunnittelussa.
2	Kadun keskiviiva. Tyyppi, jota käytetään kun viivoja viedään kadun keskiviivoiksi automaattisissa suunnittelutyökaluissa (Setics STTAR ja Comsof FPI)

Type category of the external document

External document type is defined in the group EXT_DOC_CATEGORY.

- **Numeric value 2**:

1	External document which uses this type of category cannot be deleted by the user.

KeyNet text constants

Usage state of circuits

The usage state of circuits is defined in the **KN_USAGE_STATE** group. This group is also used to define the usage states of cable threads.

- **Logical text:** the text that the application uses internally. See the KeyNet's circuit colors chapter for equivalencies.
- **Numeric value:** must be unambiguous and the values 1–6 must be included in the database.
  KPI reports: the value 21 means that the thread in question is reserved.
- **Text [fi]... Text [en]:** presents the value in a localized user-friendly

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format.

- **Numeric value 2:** specifies whether the state in question is deemed to be an “in use” state when calculating the cable capacity.

1	is deemed to be in use for the purposes of cable capacity calculations (the typical values include the following: 2, 3, 4, 7, 8)
0	not included in capacity calculations

- **Numeric value 3:** specifies the usage states of sections that will be included in the Automatic circuit reservation processing. For further information, see chapter Automatic processing of circuit reservations (cron job).
- **Numeric value 4:** locks the objects in the circuit if usage state of circuit section is enabled.

1	editing of objects with the usage state “O&M” is not allowed
<something else>	the objects in the circuit can be freely modified

Circuit and thread construction state

The construction state of circuits is defined in the KN_CONST_STATE group. This group is also used to define the usage states of cable threads.

- **Numeric value:** must be unambiguous and the values 1–7 must be included in the database.
- **Logical text:** the text that the application uses internally.
- **Text (fi)...Text (en):** presents the value in a localised, user-friendly format. See the KeyNet’s circuit colors chapter for equivalencies.
- **Numeric value 2:** specifies whether the state in question is deemed to be “ready” for the purposes of capacity calculations, i.e. ready for circuit reservation.

1	is deemed to be ready for the purposes of cable capacity calculations
0	not ready for the purposes of capacity calculations

- **Numeric value 3:** indicates whether the specified construction state should trigger a warning message in cases involving faulty connectors or fiber reservations. By default, this value is enabled for construction states such as Planned, Faulty, Deleted, and Unbuilt.

1	triggers the warning message for the specified construction state

KeyNet’s circuit colors

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KeyNet's circuit colors

The states of circuits that are presented on KeyNet's logical cross-section forms are defined in the KN_USAGE_STATE and KN_CONST_STATE groups.

The color of a circuit is defined as follows:

1. By the circuit's usage state (KN_USAGE_STATE)
2. By the circuit´s construction state (KN_CONST_STATE)

The colors of the background and text are defined separately in the Description field, with the ";" character as a separator.

For example, r255g255b255;r0g0b0 means black text on a white background, and r0g0b255;r255g255b255 means white text on a blue background.

Text constant group	Numeric value	Description	Text
KN_USAGE_STATE	1	r255g255b255;r0g0b0	Free
KN_USAGE_STATE	2	r152g255b152;r0g0b0	In use
KN_USAGE_STATE	3	r255g255b0;r150g150b150	Soon free
KN_USAGE_STATE	4	r255g246b143;r0g0b0	Soon in use
KN_USAGE_STATE	5	r100g149b237;r0g0b0	Pre-connected
KN_USAGE_STATE	6	r151g255b255;r0g0b0	Partially pre-connected
KN_USAGE_STATE	7	r238g210b238;r0g0b0	Ready to be connected
KN_USAGE_STATE	8	r189g252b201;r150g150b150	Soon closed
KN_USAGE_STATE	9	r189g252b201;r0g0b0	Closed
KN_USAGE_STATE	10	r250g200b150;r0g0b0	Backup
KN_CONST_STATE	1	r240g240b240;r0g0b0	Ready
KN_CONST_STATE	2	r190g190b190;r45g0b0	Planned
KN_CONST_STATE	3	r207g90b48;r0g0b0	Faulty
KN_CONST_STATE	4	r150g150b150;r0g0b25	Under

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			construction
KN_CONST_STATE	5	r150g0b0;r0g0b0	Deleted
KN_CONST_STATE	6	r150g150b0;r0g0b0	Tech. reservation
KN_CONST_STATE	7	r0g150b150;r0g0b0	Unbuilt
KN_CONST_STATE	30	r150g0b0;r255g255b255	Fiber fault detected
KN_CONST_STATE	33	r207g90b48;r0g0b0	Faulty other end
KN_CONST_STATE	40	r255g127b0;r0g0b0l	Fiber repair in progress

KeyNet's circuit fault colors

The states of circuit faults that are presented on KeyNet's circuit fault forms are defined in the CIRCUIT_LOG_STATE group.

The colors of the background and text are defined separately in the Description field, with the ";" character as a separator.

For example, #00FF00;#000000 means black text on a green background.

Group	**Orderno**	Description	**Text**
CIRCUIT_LOG_STATE	1	#00FF00;#000000	Ready
CIRCUIT_LOG_STATE	2	#FF0000;#000000	Informed
CIRCUIT_LOG_STATE	3	#FFFF00;#000000	Under work

Types of circuit installation addresses

The types of circuit installation addresses are defined in the KN_LOCATION_TYPE group. The various types include the following: "Beginning", "Beginning corner address", "End" and "Corner address at end".

- **Logical text**: "Beginning", "Beginning corner address", "End" and "Corner address at end"
- **Numeric value 2**: the Automatic provisioning port reservation function processes the address types for which this field has the value 1. If the value of this field is empty (= null) for all the circuit installation address types, the automatic provisioning port reservation function will process

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all address types.

Circuits' organisations

The organisations for circuits are defined in the KN_ORGANISATION group.

- **Logical text**: name of the organisation for the application's internal use.
- **Text [fi]...Text [en]**: translations of the organisation's name that are displayed in the browser in the selected language.

Generating circuit identifiers

The automatic generation of circuit identifiers is defined in the KN_CIRCUIT_ID group.

- **Logical text**: the format to be used is entered into the field, for example "CIR-%ID%", so that if an identifier is missing, one will be created automatically by using the circuit's internal key (e.g. CIR-121314).

The following values can be used when defining an identifier:

Attribute	Purpose
%ID%	Internal key
%YYYY%	Current year (e.g. 2009)
%YY%	Current year (e.g. 09)
%MM%	Current month (e.g. 09)
%DD%	Current date (e.g. 12)

If the **Numeric value 2** of the circuit's usage state is 1, the identifier generated through that will override this setting. See the Circuit usage purpose chapter.

Generating customer identification numbers

The KN_CUSTOMER_ID group is used to determine the automatic creation of customer numbers.

- **Logical text:** the format to be used is entered into the field, for example "A-%ID%", so that if an identifier is missing, one will be created automatically by using the customer number's internal key (e.g. A-1234).

Generating circuit section identifiers (not included in the default functions of KeyCom)

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default functions of KeyCom)

The automatic generation of circuit section identifiers is defined in the AUTOM_IDENT_SECTION group. A prerequisite for this is that a CIRC_RENT_COMP_AGR_ID_TRIGGER trigger, SQ_CIRC_SECTION_NAME sequence and autom_identification.autom_ident_circ_section function have been created in the database. These are not included in the default functions of the KeyCom application.

- **Logical text**: the format to be used is entered into the field, for example "%SEQ%8", so that if an identifier is missing, one will be created automatically.

Automatic processing of circuit reservations (cron job)

The automatic processing of circuit reservations processes the sections for which the usage state's numeric value 3 = 1 (see the Usage state of circuits chapter), the "connect date real" field is empty and the "connect date planned" field is not empty.

This function is controlled through the KN_USAGE_CHANGE group, which must have three rows.

- **Numeric value**: specifies whether the row settings are applied to sections that are connected or sections that are not connected.

1	Connected
-1	Not connected

- **Numeric value 2**: specifies the phase to which the function belongs.

0	Pre-warning
1	Warning on an expiry date
2	Final function

- **Numeric value 3**: specifies when the warning is sent (the number of days before expiry).
- **Numeric value 4**: defines the actions to be taken.

-1	Will be deleted
0	No actions
1	Marked as completed (a planned functionality that has not yet been implemented)

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- **Text value**: the previous state as a string.
- **Optional data**: email template.

Email templates support the following dynamic fields:

- email header: "Subject: a header"
- {days}
- {section_identifier}
- {circuit_identifier}
- {circuit_identifier2}
- {connect_date_planned}
- {disconnect_date_planned}
- {affected_connections}

Preventing the editing of circuit sections

The editing of circuit sections that are in use can be prevented through the settings of the KN_USAGE_STATE group in text constants. Use the **Numeric value 4** field to identify circuit sections that cannot be edited by normal users.

- **Numeric value 4**

0	0 or empty -> Works as normally.
1	Editing or deleting of circuit section and its related objects is not permitted.

Filtering the connections of a circuit work order

Filtering of the connections of a circuit work order is enabled by defining the settings in the WORKORDER_FILTER group.

- **Numeric value**: Filtering on/off

1	on
[null]	off

Filtering affects how the connections that are to be disconnected are presented on the work order (see the Device type class chapter).

Note! The WORKORDER_FILTER group can only have one row!

Displaying connector type abbreviations on circuit work orders

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In the KN_CONNECTOR_TYPES group, define whether the connector type abbreviation is displayed after the connector identifier on the circuit work order.

- **Logical text**: the text used internally by the application, e.g. “Connector type on work orders” or some other descriptive text.
- **Order no**: 1
- **Numeric value**:

1	In use
[null]	Not in use

If the group has not been defined, the connector type abbreviation will not be included in reports.

Defining the maximum length of routes searched by using automatic route search

The default maximum length (= the number of hops on the route) of routes searched by using the Automatic route search form has been defined to be 20 hops. Longer routes will not be included in the displayed results. This value can be edited in the KEYNET_ROUTE group.

- **Logical text**: ”Max. route length for automatic route search.”
- **Order no:** 1.
- **Numeric value**: the required maximum length used for route following.

Device type class

Device type classes are defined in the DEVICE group.

- **Order no**: 1.
- **Numeric value:** for filtering connections in work orders (see Filtering the connections of a circuit work order) and restricting the use of the Change of circuit reservation functionality.

0 or Null	The device’s internal connections and cross-connections will be printed on the work order as connections to be disconnected.
1	The device’s internal connections will not be printed on the work order as connections to be disconnected if the work order connection filtering has been activated (see Filtering the connections of a circuit work order).
2 or greater	The device’s internal connections and cross connections will not be printed on the work order as connections to be disconnected if the work order connection filtering has been activated (see Filtering the connections of a circuit work order)

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the connections of a circuit work order).

- **Numeric value 2:** If the value is 1, the device is a provisioning device. See the Provisioning devices chapter.
- **Numeric value 3:** If the value is set to 1, the abbreviation for the device types associated with the device class is displayed on the network map while the Splitters layer is enabled. If the value is 2, the abbreviation for the device types associated with the device class is displayed on the network map when the Active devices level is enabled. If the value is 3, the abbreviation for the device types associated with the device class is displayed on the network map when the Customer premises equipment level is enabled.

1	Splitters
2	Active devices
3	Customer premises equipment

- **Numeric value 4:** active/passive device. The ID of the ACTIVE_PASSIVE group. See the Active/passive selection of device type classes chapter.
- **Text value:** Rows with the value 1 are displayed in the **Devices** list of the telecom premises annotations. If none of the affiliates of the DEVICE group has a value of 1 in the text value field, then all types of devices appear in the telecom premises annotations. The **Devices** list in the telecom premises annotations is only available if the setting variable KEYCOM_ENHANCED_PREM_ANNOTATIONS is on.
- **Value:** If the value is 1 when the KEYCOM_ENABLE_RESTRICTED_DEVICE_CLASS is enabled, the devices cannot be edited in KeyCom. A reservation of the device can't be changed and the Change of circuit reservation feature is disabled for Cross-report and Circuit forms.

The Defining the device types chapter discusses the definition of device type classes.

Active/passive selection of device type classes

Device type classes are defined as active and passive devices. In KeyCom, this information is presented, for example, on the list of circuits on the telecom premises in the “Prem. devices” and “Other devices” columns. The active/passive classification is presented as two pieces of information: Whether the device is active or passive on the selected telecom premises, with the same information provided for other telecom premises reserved by the circuit. If the circuit reservations go through even one active device, the status for other telecom premises will be “Active”.

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The active/passive selection is made in the ACTIVE_PASSIVE group as follows:

- **Order no:** 1 or 2
- **Numeric value**: 1 stands for an active device and 2 stands for a passive device

Text	Order no	Numeric value
Active	1	1
Passive	2	2

Other values cannot be used.

Service area categories (used, for example, in the KeyF2H fiber selling application)

The service area categories available, for example, to the KeyF2H fiber selling application are defined in the SERVICE_A_CATEGORY group.

- **Text...Text (en)**: Name of the service area category and the translations of the name.
- **Numeric value**: Area classification using the following values:

Numeric value	Text
1	Fiber available
2	Fiber construction area
3	40%
4	60%
5	80%

- **Numeric value 2**:

Numeric value	Text
1	The service area will be used in automatic network planning export.

- **Numeric value 3**: Used by external interfaces. Do not edit.
- **Numeric value 4**: A category used for the automatic updating of the service area category in certain environments when saving telecom

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premises. Note! Used for no more than one of the rows in the group in question.

1	In use
<other value>	Not in use

Background color of connectors related to a logical mass connection change

Use the KN_MCC_ATTR_COLOR group to define the color of connectors related to a mass connection change to be presented on KeyNet's logical cross-section.

Group	Numeric value	Description
KN_MCC_ATTR_COLOR	1	r255g140b0;r0g0b0

- **Description**: The selected color as RGB values (0..255) in the format "r255g140b0;r0g0b0", in which the part preceding the ";" character is the background color and the latter part is the foreground color.
- **Logical text**: color of the connector related to a mass connection change.
- **Order no**: 1
- **Numeric value**: 1

Default colors for connection states

The default colors of the connection states are defined in the THR_CONN_STATE txt group.

- Ready state to be defined with the RGB values of GREEN (0 255 0) color
- Planned state to be defined with the RGB values of RED (255 0 0) color
- Pending decommission state to be defined with the RGB values of LIGHT GREY color

Defining the terminal and thread connection state coloring in connection diagram

The colors of the terminal and thread connection state in connection diagram can be defined in the THR_CONN_STATE group.

- **Group name:** Name of the group.
- **Description:** The RGB color code of the state
- **Logical text:** Name of the state

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- **Logical text:** Name of the state.
- **Title [fi]...Title [en]:** state title and its translation.

Interval for circuit fault monitoring

Use the TASK_POLL_INTERVAL group to define the update interval of monitoring board related to circuit faults.

Group	Text	Numeric value 2	Description
TASK_POLL_INTERVAL	Circuit fault task	15	Field should contain the interval time in seconds

- **Numeric value2:** Defines in seconds the interval of the monitoring board. Eg. with number 15 the board will update in every 15 seconds.

Connection types

Define the names and abbreviations of the connection types in the KN_CONNECTION_TYPE group. The types can be viewed in the logical side of the **Connections management** form.

- **Group name:** KN_CONNECTION_TYPE
- **Logical text:** connection type's name
- **Text [fi]...Text [en]:** connection type name and translations
- **Abbreviation: [fi]... [en]:** connection type abbreviation and translation

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KeyCom definitions

Defining duct types

Select **Keyrns_core** -> **Duct types**

- **Duct type:** duct type identifier
- **Manufacturer:** define the manufacturer
- **Product code:** include a product code
- **Product code 2:** include an alternative product code
- **Outer diameter:** the duct's outer diameter in numerals
- **Inner diameter:** the duct's inner diameter in numerals
- **Outer X-diameter:** the duct's outer X-diameter in numerals
- **Outer Y-diameter:** the duct's outer Y-diameter in numerals
- **Inner X-diameter:** the duct's inner X-diameter in numerals
- **Inner Y-diameter:** the duct's inner Y-diameter in numerals
- **Sheath color:** duct's color shown in the user interface
- **Duct shape:** the shape of the duct. Define the available options in the DUCT_FORM group. (Editing text constants)
- **Favorite:** define a filter for the duct type in the Duct types admin page
- **Availability starts:** the date from which a duct of the specified type will be available for construction purposes
- **Availability ends:** end date of the availability of a duct of the specified type

Save after filling the desired fields.

Duct defaults

To set the defaults, go to a **Conduit** form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Defining cable types

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Select **Keyrns_core** -> **Cable types**

The **Cable types** admin page is used to manage the CABLE_TYPE group under Text constants, and the group can also be accessed through Text constants (Editing text constants).

- **Numeric value 2:** the field specifies whether the cable's installation type is buried or aerial.

NULL/0	Buried
Negative	Shallow depth, estimated depth in metres, for example, -0.2
1	Aerial

- **Cable type:** cable type identifier.
- **Technology:** cable technology. Define the available options in the CABLE_TECHNOLOGY group. (Editing text constants)
- **Copper capacity:** the number of the cable's copper pairs.
- **Resistance:** not in use.
- **Fiber threads:** the number of the cable's fiber threads.
- **Unit cost:**
- **Default installation:** the default installation method for the cable. Define the available options in the CABLE_TYPE group. (Editing text constants)
- **Color coding:** the old method for defining the color coding of cable fibers. Define the available options in the CABLE_COLORCODING group. (Editing text constants).
- **Color coding:** Color coding of cable fibers (see Color coding of cable fibers).
- **Availability starts:** the date from which a cable of the specified type will be available for construction purposes.
- **Availability ends:** the end date of the availability of a cable of the specified type.

Color coding of cable fibers

Fiber colors

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To add colors, select **Keycom_fibercolor>fibercolor codes**

- **Text [fi]...Text [en]:** name of the color in the user's selected language.
- **Abbreviation [fi]...Abbreviation [en]:** the abbreviation of the color in different languages.
- **Text value:** the rgb code for the color, for example, 0 0 0 for black and 255 255 255 for white

Duct colors

Duct colors are defined in the KEYCOM_DUCT_COLOR group under Text Constants.

- **Text [fi]...Text [en]:** name of the color in the user's selected language.
- **Abbreviation [fi]...Abbreviation [en]:** the abbreviation of the color in different languages.
- **Text value:** the rgb code for the color, for example, 0 0 0 for black and 255 255 255 for white

Defining the color coding

To define color coding, select **Keycom_fibercolor › Fiber color coding configs.** Color coding is defined for a cable type (see the Defining cable types chapter) in order for them to be displayed in the application.

- **Name:** name of the color coding.
- **Color coding type:**

Maximum number of threads:

- **Description:** a user-friendly description of the coding.
- **Thread color coding configs:** a definition of the appearance of each thread.
- **Thread icon:** the appearance of the thread. This will be updated after the data has been saved and the application reloaded again.
- **Thread number:** the number of a single thread, starting from 1, with the largest number being the maximum number of threads.
- **Fiber color:**
- **Inner tube number:**
- **Inner tube color:**

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- **Show inner tube number:**
- **Outer tube number:**
- **Outer tube color:**
- **Show outer tube number:**
- **Inner yarn color:**
- **Outer yarn color:**
- **Stripe color:**
- **Number of stripes:**

Cable defaults

To set the defaults, go to a **Cable** form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Defining the types of telecom premises

Select **Keyrns_Prem** -> **Telecom premises types**

- **Telecom premises type:** type of telecom premises. Define the available options in the PREM_TYPE group (Types of telecom premises types).
- **Manufacturer:** manufacturer of the telecom premises.
- **Product code:** product code of the telecom premises.
- **Cost:** cost of the telecom premises in numerals.

Types of telecom premises types

The telecom premises type (Defining the types of telecom premises) is defined in the PREM_TYPE group.

- **Numeric value:** this field specifies whether the telecom premises in question can be deemed to be large (centre) telecom premises. The information is used in connection with the exporting of FPI Comsof plans:

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10	The telecom premises could be used as a centre
20	Transmission system equipment is located in the telecom premises
30	The telecom premises are the primary cross-connection point of the access network
4	The telecom premises are the secondary cross-connection point of the access network
50	The telecom premises are the initial point of a drop cable
60	The telecom premises are the subscriber point
<other values>	no meaning

Note: Numbers 1-6 are outdated values that are being replaced.

- **Numeric value 2:** The group will grant access to restricted premises on premises form to the user who is part of the group.

1	defines a restricted premises type inaccessible from normal users. Only accessible to members of PREM_ADMIN group or superusers

- **Numeric value 3:** Defines the description used in the circuit diagram

1	all the corners of the telecom premises have been cut (splices)
2	the upper right corner of the telecom premises has been cut (ODF)

- **Numeric value 4:** this field determines whether a type is used by default for the new telecom premises that is created when the cable is cut.

0	not displayed
1	displayed

- **Value, Value 2, Value 3:** Specifies the multiplier for the placement scale. The multiplier is selected based on the numeric value of the usage state.

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- **Availability starts:** the date from which a duct of the specified type will be available for construction purposes.
- **Availability ends:** end date of the availability of a duct of the specified type.

Telecom premises defaults

To set the defaults, go to a **Telecom premises** form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Defining conduit types

Select **Keyrns_core** -> **Conduit types**

The **Conduit types** admin page is used to manage the CONDUIT_TYPE group under Text constants, and the group can also be accessed through Text constants (Editing text constants).

- **Numeric value:** the field specifies whether ducts can be added to the conduit type in question

0	cannot be added (= a ditch-type conduit)
1	can be added (so-called standard conduit type)

- **Numeric value 2:** the field specifies whether the route's installation type is buried or aerial.

NULL/0	Buried
Negative	Shallow depth, estimated depth in meters, for example, -0.2
1	aerial

Conduit defaults

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To set the defaults, go to a **Conduit** form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Defining manhole types

On the **Admin site**, select **Keyrns_core** -> **Manhole types**

The **Manhole types** admin page is used to manage the MANHOLE_TYPE group under Text constants, and the group can also be accessed through Text constants (Editing text constants).

- **Numeric value:** the field specifies the profile's modification point, which is used in splitting the conduit. Conduit splitting uses the point that has the smallest order number and that has the value of 1.

1	The manhole type used for conduit splitting

- **Numeric value 2:** the field specifies the manhole's installation type: buried or aerial (Manholes can in some cases connect Arina-type conduits, which are typically installed overhead).

NULL/0	Buried
Negative	Shallow depth, estimated depth in metres, for example, -0.2
1	Aerial

- **Numeric value 4:** this field determines whether a type is used by default for the new manhole that is created when the cable is cut.

0	not displayed
1	displayed

- **Value, Value 2, Value 3:** specifies the multiplier for the placement scale. The multiplier is selected based on the numeric value of the usage state.

Manhole defaults

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To set the defaults, go to a **Manhole** form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Defining splice types

On the **Admin site**, select **Keyrns_core** -> **Splice types**

The **Splice types** admin page is used to manage the TYPE group under Text constants, and the group can also be accessed through Text constants (Editing text constants).

- **Numeric value 2:** the field specifies whether the splice's installation type is buried or aerial.

NULL/0	Buried
Negative	Shallow depth, estimated depth in metres, for example, -0.2
1	Aerial

- **Numeric value 4:** this field determines whether a type is used by default for the new splice that is created when the cable is cut.

0	not displayed
1	displayed

- **Value, Value 2, Value 3:** specifies the multiplier for the placement scale. The multiplier is selected based on the numeric value of the usage state.

Splice defaults

To set the defaults, go to a **Splice** form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Defining pole types

Select **Keyrns_core** -> **Pole types**

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The Pole types admin page is used to manage the POLE_TYPE group under Text constants, and the group can also be accessed through Text constants (Editing text constants).

- **Text [fi]...Text [en]:** name of the pole type and its translation displayed to the user.
- **Numeric value:**
- **Abbreviation [fi]...Abbreviation [en]:** abbreviation of the pole type name and its translation displayed to the user.
- **Numeric value 2... Numeric value 4:** not in use.
- **Value, Value 2, Value 3:** specifies the multiplier for the placement scale. The multiplier is selected based on the numeric value of the usage state.
- **Text value:** not in use.
- **Category:** not in use.
- **Description:** not in use.
- **Availability starts:** not in use.
- **Availability ends:** not in use.
- **Order number:** the order in which the types are displayed to users on the selection lists.

Pole defaults

To set the defaults, go to a **Pole** form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Defining device types

Select **Keyrns_core** -> **Device types.**

- **Technology:** device technology. Define the available options in the TERMINAL_TECH group under Text constants. (Editing text constants)
- **Class:** device type class. Define the options for a telecommunications network in the DEVICE group and the options for a cable TV network in the CTV_DEVICE group. The device type classes are discussed in the Device type class chapter.
- **Type:** device type identifier displayed to users. Enter a sufficiently

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descriptive text that helps identify the device type.

- **Connectors:** number of connectors on the device.
- **Availability starts:** date from which a device of the specified type will be available for construction purposes.
- **Availability ends:** end date of the availability of the specified type of device.
- **Only as part of a group:** this specifies whether the device can only be added as a part of a device group. A device group enables the saving of connection and connector property data and using that data when new devices are created. If a device that is not part of a device group is added, connectors will be created by using standard settings, with connector numbers as names and without any connections.
- **Device type's documents:** this feature will be removed.

Device defaults

To set the defaults, go to a **Device** form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Defining connector types

Select **Keyrns_Prem** -> **Connector types.**

- **Abbreviation:** abbreviation of the connector type.
- **Description:** a user-friendly description of the connector.
- **Thread count:** number of the connector's threads.
- **Technology id:** only 0 and 1 can be used

0	Copper
1	Fiber

Defining service groups

Select **Keyrns_Prem** -> **Service groups**

- **Name:** service group name.

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- **Remarks:** comments providing additional information on the service group.
- **Priority:** not in use.
- **Primary:** not in use.
- **Services:** services belonging to the service group (see the Defining services chapter).

Defining services

Select **Keyrns_Prem** -> **Services**

- **Cable length:** maximum cable length with which the service still functions.
- **Service usage:** service usages are defined in the USAGE and CCP_SERVICE groups under Text Constants. See the Text Constants chapter.
- **Technology:** the technology that the service uses. available options are defined in the CABLE_TECHNOLOGY group under Text Constants. See the Editing text constants chapter.
- **Service groups:** service groups to which the service belongs. See the Defining service groups chapter.

Defining radio channels

Select **Keyrns_Radiolink** -> **Radio channels**

- **Channel name:** radio channel name.
- **A frequency:** transmit frequency of the radio channel in MHz.
- **B frequency:** receiving frequency of the radio channel in MHz.
- **Radio band:** radio band of the radio channel. Define the available options in the RADIOBAND group under Text Constants. (Editing text constants) or add a new radio band by clicking the + button next to the drop-down menu.

Defining radio permits

Select **Keyrns_Radiolink** -> **Radio permits**

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- **Permit number:** number of the radio permit.
- **Start date:** start date of the radio permit.
- **End date:** end date of the radio permit.
- **Permit info:** type of the radio permit.

Defining product types

Select **Keyrns_Core** -> **Product types** to define the product types to be linked to rental contracts.

- **Product class:** product class. Define the available options in the PRODUCT_CLASS group under Text constants.
- **Type:** product type name that is displayed to users.

Defining products

Select **Keyrns_core** -> **Products**

- **Product type:** Product type (see Defining product types).
- **Name:** product name that is displayed to users.
- **Abbreviation:** product abbreviation.
- **Product code:** product's code.
- **Point value:** product's default point value, which users can modify when they add products to rental contracts.
- **Unit cost:** product's default unit cost. Users can modify the unit cost when adding products to rental contracts.

Bitrates (capacity)

Select **Keyrns_Radiolink** -> **Bitrates**

- **Bitrate:** bitrate (capacity) in numbers.
- **Description:** bitrate (capacity) description that is displayed to users.

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Mass updating objects

With the Mass updating feature multiple objects can be updated simultaneously. There are some things that may need to be considered regarding to the Mass Update feature:

- When mass updating objects, the usage state of the objects which are being updated must be set a numeric value. Learn more: Usage state.

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Object defaults

To set the defaults, go to an object form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Defaults support the following fields, the values of which are entered when the defaults are retrieved to the form.

- ${year} – current year
- ${date} – date in the following format: 2015-10-16
- ${user} – name of user

For example, the following string entered into the **Comments** field and saved as a default:

${year} ${date} ${user}

will result in the following text when defaults are retrieved:

2016 2016-04-11 matti@example.com

These fields can be removed by saving empty fields as defaults. To edit, re-enter text in the fields and save as defaults or edit the defaults of the object in question through the admin site.

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Ignored IP addresses in two phased authentication (optional)

Select **Keycore_auth_sms** -> **Ignored IP addresses in two phased authentication**

- **IP address**s: IP address for which two phased authentication is not required.
- **Netmask**: an alternative way to define the IP network (received requests) for which two phased authentication is not required.
    - For example, two phased authentication is not required for log-ins from the IP addresses 10.121.6.1-10.121.6.255:
        - IP address: 10.121.6.0
        - Netmask: 24

Note: Ignored IP addresses in two phased authentication is available only if the Two phased authentication additional service has been ordered.

Enabling two phased authentication for users is described in the Defining two phased authentication for a user (optional) chapter.

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Reports

To add, delete and edit reports, select **Keygwt_Core-> Keycore reports**

- **Name**: Name of the report. Note! Do not use any spaces when naming a report.
- **Title [fi]...Title [en]**: report title and its translation.

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External document types

To add, delete and edit external document types, select **Keygwt_Core-> External document types**.

- **Type [fi]...Type [en]**: external document type and its translation.
- **Description**: a description of the document type for maintenance purposes.
- **Is default**: if yes, the type is used as a default in KeyMobile.

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Freely defined extra data

Freely defined extra data includes data that can be defined freely for various object types without making changes to the database. The data will be visible to users on the **Extra data** tab on object forms.

Defining freely defined extra data

Select **Eav** -> **Freely defined extra data**

- **Object type:** object type to which the data will be linked. Described in the Extra data selections chapter.
- **Name [fi] ... Name [en]**: the name of the piece of information/field and its translation.
- **Data type**: data type of the added data.
- **Order number**:

Extra data selections

Select **Keycore_Eav** -> **Extra data selections**

- **Extra data model**: object type to which the extra data is linked. Do not edit.
- **Form prefix**: prefix of the object type form. Contact Keypro support if you need any help. Do not edit.
- **Active**: whether the definition is active, i.e. whether the Extra data tab is displayed on the object form.

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Maps and coordinate systems

Maps

Select **Keygwt_Core -> Maps.**

- **Name**: name used internally by the system.
- **Label**: user-friendly name.
- **Options**: map options, for example:

“scales: [6000000,2500000,1000000,500000,250000,100000,50000,20000,10000,5000,2000,1000,500,250,100,50], maxScale: 6000000, minScale: 50, units:'m', maxExtent:new OpenLayers.Bounds(3000000,6500000,3800000,7800000),projection:"EPSG:2393",mapCenter:new OpenLayers.LonLat(3457632.87,6705378.64),zoom:8”

in which...

  - Scales: available scales. Changing these is not allowed, unless Keypro application support has authorised you to do so.
  - maxScale: maximum scale
  - minScale: minimum scale
  - units: unit of measurement
  - maxExtent: available map area (pre-defined). Do not edit. Contact KeyPro support for help as necessary)
  - projection: coordinate system
  - mapCenter: default map center when logging into the system
  - zoom: default placement scale when logging into the system

- **Layers: layers included in the map**

Coordinate systems

Select **Keygwt_Core -> Coordinate systems.**

- **Name**: name of the coordinate system (usually the same as the code).
- **Code**: code used for the coordinate system.

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- SRS details: defined in accordance with the PROJ.4 coordinate system.
- **Note:** The options visible to users are defined in Text Constants. See the Coordinate system options chapter.

Applications

Do not edit!

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Mapping

Mapping defaults

To set the defaults, go to a **Survey file import** form in the application and click **Save as defaults** in the drop-down menu for **Save**. The selection is only visible to admin users.

Mapping configurations

Mapping configurations specify the order of fields in a file and the character used as a separator.

Select **Keygwt_Keyconvert** > **Mapping configs**.

- **Label**: name of the mapping configuration.
- **Separator**: separator used to separate fields in the mapping file.
- **Mapping Options**: fields included in the mapping data.
    - **Mappable**: the content and options for this field have been defined in the Keyconvert mappables chapter.
    - **Column number**: the order of columns in a land survey file. Column numbering must start from zero and there can be no gaps in the numbering. The order in which data is added is not relevant.

Mapping methods

Select **Keygwt_keyconvert** > **Mapping methods**.

The **Mapping methods** admin page is used to manage the MAPPING_METHOD group under Text constants, and the group can also be accessed through Text constants (Editing and deleting text constants). **Note!** The data for the mapping method picklist on the Water and Sewer network forms is determined in the Keyaqua_Core text constant group SOURCE_CODE, whereas the data on KeyDH and KeyGas forms is determined in the MAPPING_METHOD group under common text constants. For more information, see Survey file import.

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- **Text [fi]... Text [en]**: name of the mapping method and its translations.
- **Numeric value**: This must be the same numeric value as the value for the corresponding constant in the SOURCE_CODE group under Keyaqua_Core text constants.
- **Order number**: The order number for the picklists on the KeyDH and KeyGAS forms.

Land survey file as raw text

The application's form is the primary form that should be used for land survey file processing. To view the file as raw text, access it through this page.

- Select **Keygwt_Keyconvert** > **Survey files**.
- Do not edit the survey file's fields or add new ones through the Admin site.

Keyconvert mappables

Keyconvert mappable is a field (column) on the survey file form.

Select **Keygwt_Keyconvert > Keyconvert mappables**.

The admin page for **Keyconvert mappables** includes the text constant group KEYCONVERT_MAPPABLES, which can also be accessed through text constants (Editing and deleting text constants).

- **Text [fi]... Text [en]**: name of the Keyconvert mappable field and its translations.
- This field is for information that has not been defined as being included in other columns: we recommended defining this for one field only. If more than one field is defined, the field with the largest number will collect the information. (Mapping configurations). This data will be saved in the Numeric value 4 field in the text constants.

Results of the survey

The application's form is the primary form that should be used for survey result processing.

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Survey objects

The old way of defining the object types in imported files.

Code set

A code set is a set of kind codes, according to which the file's rows will be interpreted. See chapter Convert codes.

Select **Keygwt_Keyconvert** > **Code sets.**

- **Text**: name of the code set.
- **Text [fi]... Text [en]**: name of the code set and its translations.
- **Order number**: The code set's order number in the form's picklist.

Survey coordinate orders

The old way of defining the order of coordinates in imported files.

Height accuracies

Select **Keygwt_Keyconvert** > **Height accuracies.**

The **Height accuracies** admin page is used to manage the H_ACCURACY group under Text constants, and the group can also be accessed through Text constants (Editing and deleting text constants).

- **Text [fi]... Text [en]**: height accuracy and its translations displayed to the user.
- **Numeric value**: numeric value equivalent to the height accuracy text.
- **Order number**: The order number of height accuracy in the form's picklist.

Convert codes

Select **Keygwt_Keyconvert** > **Convert codes**.

- **Code**: kind code in the survey file.
- **Table name**: database table name equivalent to the code.

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- **Type field name**: name of the object type field in the object's database table that is equivalent to the code.
- **Type field table**: database table name of the object type that is equivalent to the code.
- **Type field id**: primary key of the object type that is equivalent to the code.
- **Id text**: default ID of the object that is equivalent to the code.
- **Object pk field name**: name of the primary key field in the object's database table that is equivalent to the code (usually ID or MSLINK).
- **Description**: a description of the object that is equivalent to the code.
- **Description [fi]... Description [en]**: a description of the object that is equivalent to the code.
- **Code type**: an alternative way of defining the code type (old method).
- **Object type**: an alternative way of defining the object type (old method).
- **Specific type**: an alternative way of defining the object type (old method).
- **Geometry type (mapping geometry)**: object's geometry type (see the Geometry types chapter).
- **Code set**: code set to be used (see the Code set chapter).

Kind codes

The old method of defining the meaning of codes in a file.

Location accuracies

Select **Keygwt_Keyconvert** > **Location accuracies.**

The **Location accuracies** admin page is used to manage the LOCATION_ACCURACY group under Text constants, and the group can also be accessed through Text constants (Editing and deleting text constants).

- **Text [fi]... Text [en]**: location accuracy and its translations.
- **Numeric value**: numeric value equivalent to the location accuracy text.
- **Numeric value 4**: Must be a unique value. (In the old method, it must match the equivalent field in the SURVEY_CONSTANT table).
- **Order number**: order in which accuracies are displayed to users on the picklist.

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Geometry types

Select **Keygwt_Keyconvert** > **Geometry types.**

Geometry types is an admin page that is only used for translation purposes. Edit only the **Text [fi]... Text [en]** fields.

Survey procedures

Select **Keygwt_Keyconvert** > **Survey procedures.**

Survey procedures is an admin page that is only used for translation purposes. Edit only the **Text [fi]... Text [en]** fields.

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Defining point object types

Select **Keycore_Point** -> **Point object types**

- **Name**: type name
- **Label...Label [en]**: label and its translations displayed to the user.
- **Symbol name**: name of the symbol displayed on the map.
- **Point object type category**: define the available options in the POINT_TYPE_CATEGORY group under Text constants. (Editing text constants)

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Thematic layers

Modifying thematic layers requires in-depth system knowledge, so it is smart to leave everything except corrections to translated texts to Keypro's specialists.

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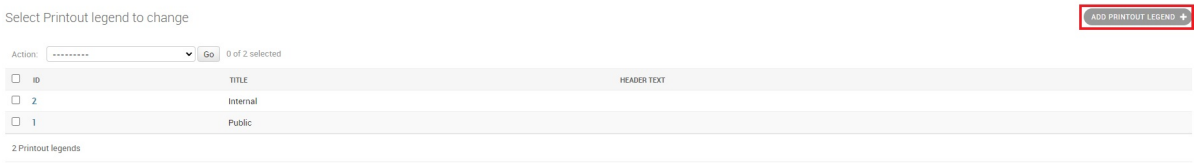
Printing

Defining the printout legend

Printout legends can be added and edited from the KEYGWT_PRINT.



1. Add new printout legends by clicking **Add printout legend.**

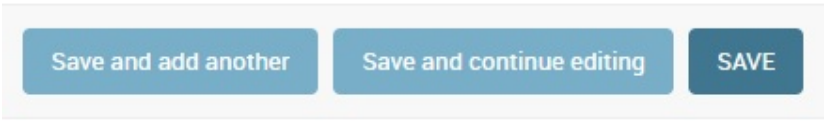


2. Give the values to the desired fields:

- **Title [fi]... Title [en]**: printout legend and its translations displayed to the user.
- **Header text [fi]... Header text [en]**: text to be printed in the printout legend's top section and the related translations.
- **Footer text [fi]... Footer text [en]**: text to be printed in the printout legend's bottom section and the related translations.
- **Copyright [fi]... Copyright [en]**: not in use.
- **Description [fi]... Description [en]**: description to be printed in the printout legend and the related translations.
- **Extra text [fi]... Extra text [en]**: not in use.
- **Image**: logo to be added in the printout legend. The image must be stored in a specific directory on the application server. Please contact Keypro's customer support for help when you want to add or change an image.
- **Scale**: not in use.

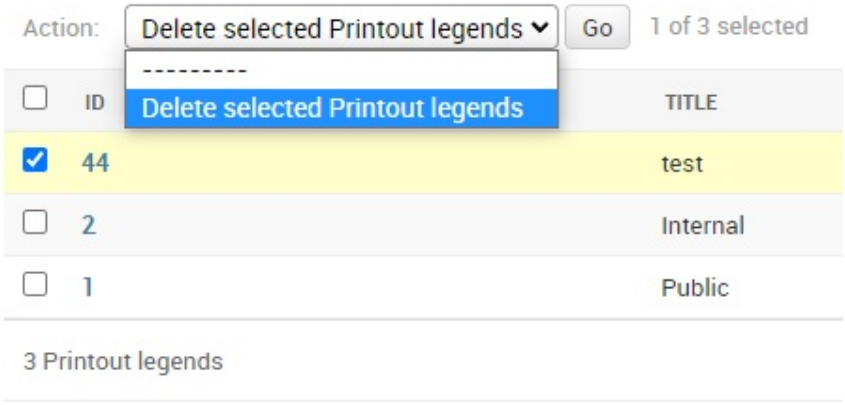
3. Save, add another, or continue editing later.

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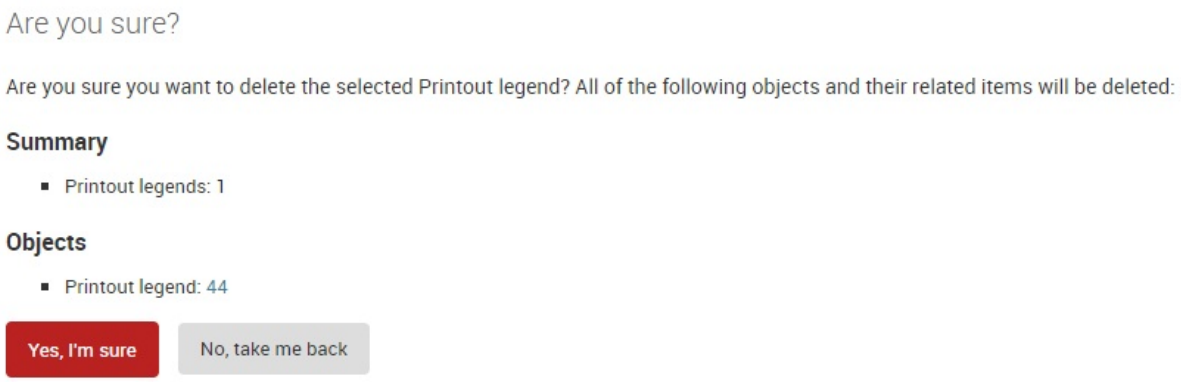


Deleting printout legends

1. Delete printout legends by selecting them from the grid.
2. Then choose **Delete selected Printout legends** from the action menu and press **Go**.



3. The system will make sure if the right printout legends are being deleted. All the items related to the printout legend are deleted as well.



Print frame defaults

Print frame defaults cannot be saved in the application but must be modified through the admin site.

1. Select **Keygwt_Print** -> **Print frame defaults.**
2. Edit the values in the fields as necessary.

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3. Click **Save**.

Note: The names of the fields must match the names used in the application's software code. For this reason, contact Keypro's support when you are adding a new field or if you encounter any problems.

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Layers

Defining layers

Select **Keygwt_Core** -> **Layers.**

- **Type**: layer type

WFS 1.1.1
WMS 1.1.1 and WFS 2.0
TMS
OSM
Google
MapServer
ComboMS

- **Name**: unique internal name of the layer.
- **Label**: internal label of the layer.
- **Label [fi]...Label [en]**: label of the layer and its translations displayed to the user.
- **Url**: The URL from which the layer is downloaded.
- **Parameters**: layer-related parameters that will be sent to the map server.
- **Options**: layer-related options that will be sent to the map server.
- **Order**:
- **System**:
- **Print url**:
- **Data model**:
- **Metaresource**: WFS meta resource (see the WFS Resource chapter).
- **Additional data models**:

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Layer group permissions

Select **Keygwt_Core** -> **Layer group permissions**.

- **Layer**: See the Defining layers chapter.
- **User group**: the user group that has access to the layer (see Available user groups in KeyCom).

Layer locks

Data import locks the layer into which the data is imported for the duration of the operation in order to ensure that the layer cannot be deleted while data is being imported. To remove the lock in problem situations, go to the Admin site (**Keygwt_core** -> **Layer locks**).

Layer legend elements

Select **Keygwt_Core** -> **Layer legend elements**

- **Layer legend**: See the Layer legends chapter.
- **Description [fi]... Description [en]**: a description and translations of the layer legend element, which will be displayed to the user.
- **Fill color**: symbol fill color that will be displayed in the legend, for example, the color used to fill in a circle
- **Stroke color**: symbol stroke color that will be displayed in the legend, for example, the color used to draw a circle.
- **Stroke width**: line width of a symbol that will be displayed in the legend.
- **Type**: symbol and preview image that will be displayed in the legend.
- **Line dash length (px)**: length of a line for drawing a dashed line. In addition, the line space length must be defined.
- **Line space length (px)**: length of a line space for drawing a dashed line. In addition, the line dash length must be defined.
- **Icon url**: URL address that will be displayed instead of a symbol.
- **Order**: order of elements displayed to the user.

Layer legends

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Select **Keygwt_Core** -> **Layer legends.**

The layer legend determines the layer for which the legend will be displayed. The layer legend elements define what is displayed in the legend. Layer legend elements are discussed in the Layer legend elements chapter.

- **Layer**: layer on which the legend is displayed (see the Defining layers chapter.

Layer info

Select **Keygwt_Core** -> **Layer info.**

- **Node**: See the Layer switcher nodes chapter.
- **Header [fi].. Header [en]**: header and its translations that are displayed to users.
- **Description [fi]... Description [en]**: layer description and its translations.
- **Copyright [fi]...Copyright [en]**: copyright information for the layer data and the related translations.
- **Source [fi]... Source [en]**: layer data source.

Freely defined extra data for layer info

Select **Keyqwt_core -> Layer info EAV values.**

- **Entity ct**: not in use.
- **Entity id**: layer info to which the freely defined extra data will be linked.
- **Text**: information as text.
- **Link**: URL link to the data, if available.
- **Extra data**: Information specified for the layer. (See the Defining freely defined extra data chapter.
- **Created**: creation date.

Layer switcher nodes

Select **Keygwt_Core** -> **Layer switcher nodes.**

- **Name**: internal name of the layer switcher node.
- **Node type**: whether this is a layer or a layer group.

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- **Parent**: parent under which the layer switcher node will be created. If nothing is selected, the node will be created at the highest level of the hierarchy.
- **Label**: internal label.
- **Label [fi]...Label [en]**: group label and its translations displayed to users. For individual layers, the layer label is displayed.
- **Order**: position within a group.
- **Layer**: the layer in question (see the Defining layers chapter).
- **Checked**: whether this is defined as a default. Not relevant to groups.
- **Expanded**: whether this is expanded by default (applicable to groups only).Layer legend elements

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WFS interface

KeyCom can use and display external WFS service data through the WFS interface.

WFS Service

- **Url**: address of the WFS service, such as. http://myserver.com/geoserver/service/wfs
- **Version**: WFS protocol version. The current recommendation is WFS v_1.1_.
- **Capabilities xml**: collection of WFS features in XML format. This must be compiled manually by combining the service address and a search string, for example, http://myserver.com/geoserver/service/wfs?SERVICE=WFS&VERSION=1.1.0&REQUEST=GetCapabilities.
- **Options**: Currently, an empty JSON collection: {}.

WFS Resource

- **Name**: a user-friendly name for the WFS meta resource.
- **Form**: A description for the form fields (see the Defining the WFS resource form chapter).
- **Options**: options related to searching and displaying WFS data:
    - id_attr: name of the id field.
    - geometry_attr: name of the geometry attribute field.
    - item_label_format: label format according to Python's format specification.
    - attributes: list of the fields to be retrieved. May include localisation.
- **Service**: The WFS service being used (see the WFS service chapter).
- **Typename**: field name offered by the selected WFS service.
- **Description xml**: a description of WFS features in XML format. This must be compiled manually by combining the service address and a search string, for example,http://myserver.com/geoserver/service/wfs?

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SERVICE=wfs&VERSION=1.1.0&REQUEST=describefeaturetype&TYPENAME=typename
Note that the TYPENAME parameter must be the same as the Typename defined above.

- **ID**:

Defining the WFS resource form

The form must be defined in JSON format.

```
{
  // Form title as visible by user
  "title": {
      "fi": "Kaapelit",
      "en": "Cables"
  },

  // Form fields to which WFS feature data is mapped
  // NOTE: This is optional for WFS resource, all the data can be taken from "attributes" option
  items: [
     {
      // Field type
      "type":"textfield",

      // Data attribute (column) name.
      // Must be one of the columns stored in options
      "name": "id",

      // Field label with localization prefixes
      "label":{
        "fi":"ID",
        "en":"ID"
      }
    },

    // ...
  ],

  "view": {
    "toolbar": {
      // Navigation form toolbar buttons
      "buttons": [
        "search",
        "clear"
      ]
    }
  ]
```

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NetAcl interface

NetAcl interface provides an opportunity to limit network rights, for example, by area or value of an item on another network.

ACL value

Select **Keygwt_Auth -> ACL value**

- **Obj table**: The name of the object's database table.
- **Attr name**: Field name
- **Attr value**: Field value

ACL rules

Select **Keygwt_Auth -> ACL rules**

- **Rule name**: The ID of the rule
- **Negated**: Value / inverse rule
- **Access level**: Right of use layer (MAP always with NetAcl)

Linking the ACL value and rule

Select **Keygwt_Auth -› ACL rule to value links**

- **Acl rule val**: Acl rule
- **Acl rule**: Acl value

Rules of the right of use area

Select **Keygwt_Auth -› Rules of the right of use area**

- **Name**: ID of the rule
- **Access level**: Right of use layer (MAP always with NetAcl)

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Use of right groups

Select **Keygwt_Auth › Use of right groups**

- **Name**: ID of the use of right group

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Template catalogs

The Template catalogs admin page allows users to manage existing templates within the catalog by editing or deleting them.

Delete templates from the catalog

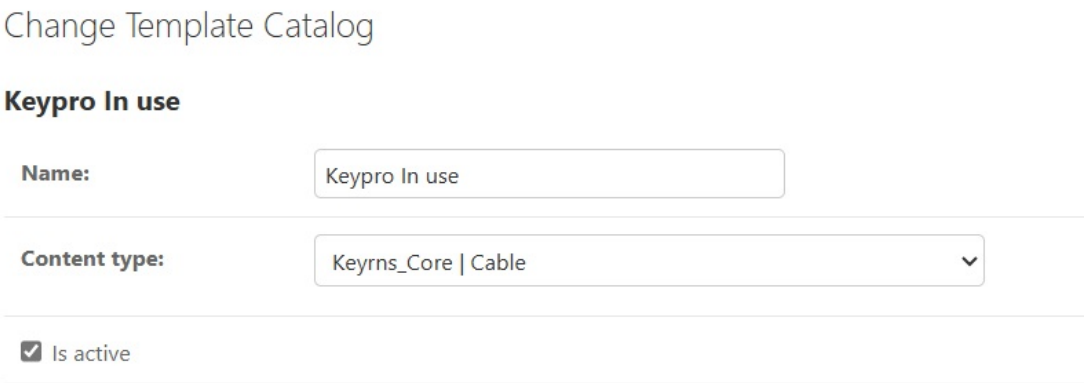
1. Select the desired template from the list by clicking the checkbox next to the template name.
2. From the Action menu, choose "Delete selected Template Catalogs".



3. Click **Go** to delete the selected templates.

Edit templates from the catalog

1. Select desired template from the list by clicking the name of the template.
2. Edit the name, the content type or deactivate it as needed.

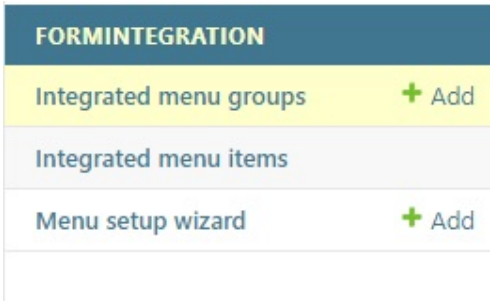


3. Click **Save** to apply your changes.

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Form integration settings

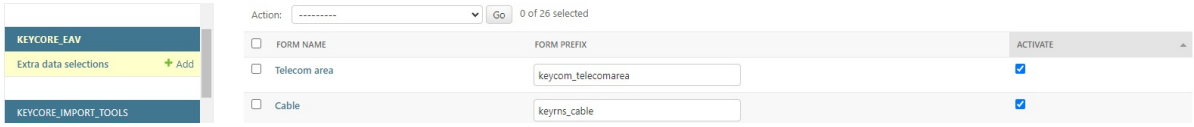
Form integration tools can be found under FORMINTEGRATION.



With form integrations, the admin user is able to configure a custom menu in the top toolbar. For the menu, the user is able to define groups and items that are available in the **Menu setup wizard** functionality.

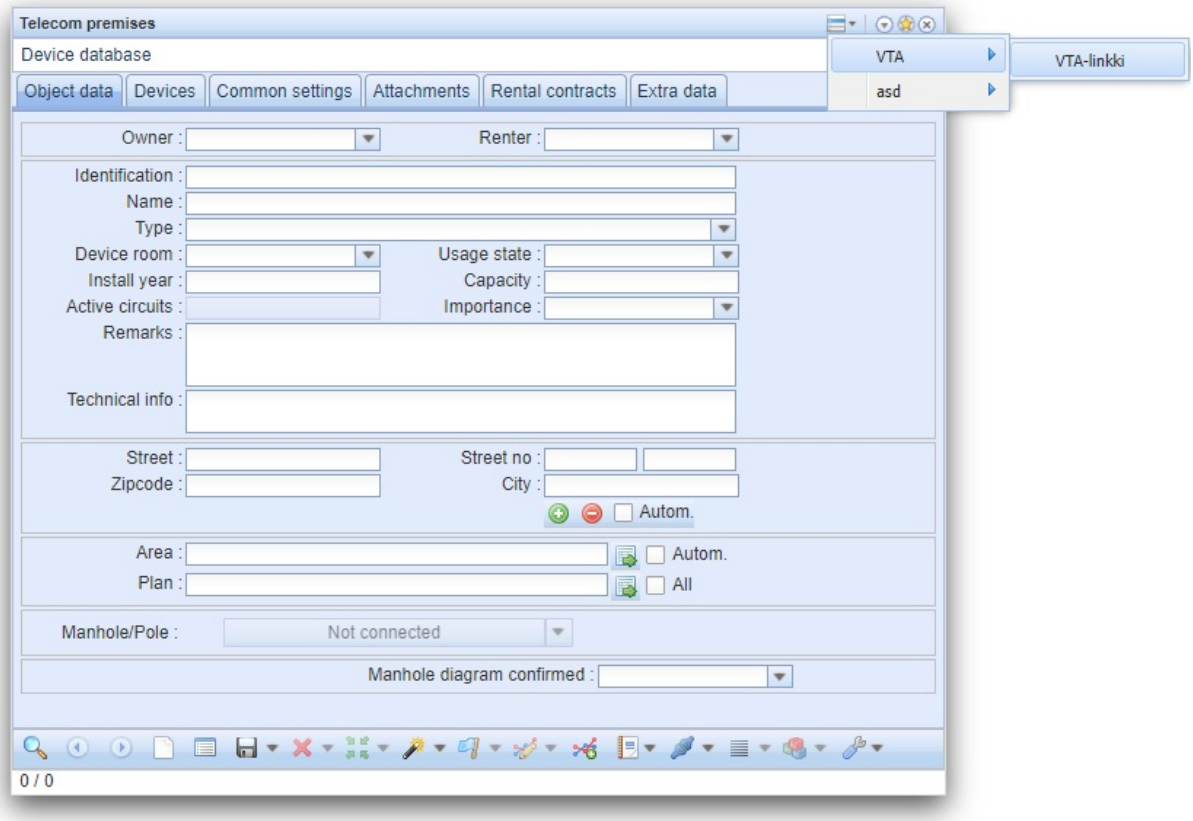
Menu setup wizard

Before using the **Menu setup wizard**, make sure the desired object types have been activated in order to choose them when creating a new menu group. Open Extra data selections and check the **Activate** checkbox next to a form name in order to activate it in the **Menu setup wizard**.



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The **Menu setup wizard** itself is used for creating groups and defining items (actions) for these groups. In the KeyCom user interface, the groups are presented under the **Menu** button in the top toolbar. A menu group is a placeholder for menu items, which are always external links.



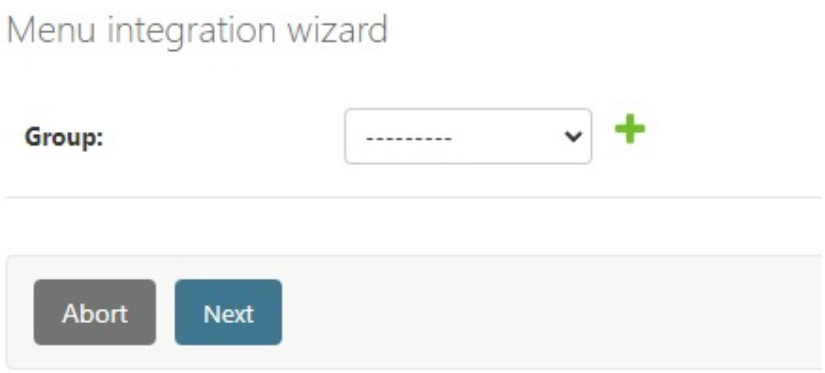
The menu setup process

The **Menu setup wizard** is accessible under subsection **Formintegration**:

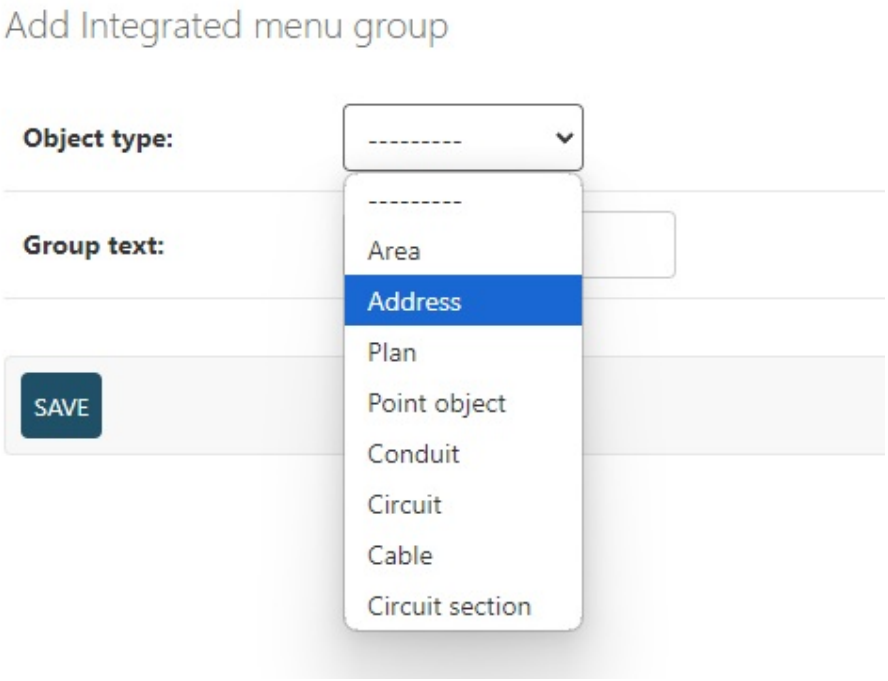


1. At first, you must select a group, which the actual item with a click-action will be added. You can either select an existing group from the drop-down menu, or create a new group with the plus -button, that opens up a new page for creating the group:

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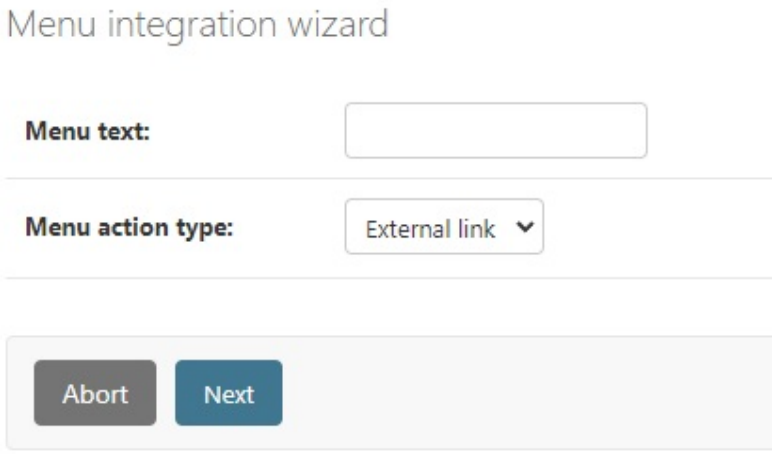


2. If you chose to create a new group, you must choose the object type to which the menu and group will be bound to. Only those object forms can be chosen which have **Extra attribute value's** (EAV) enabled for them. If you chose an existing group from the drop-menu, you can skip to **step 3**:

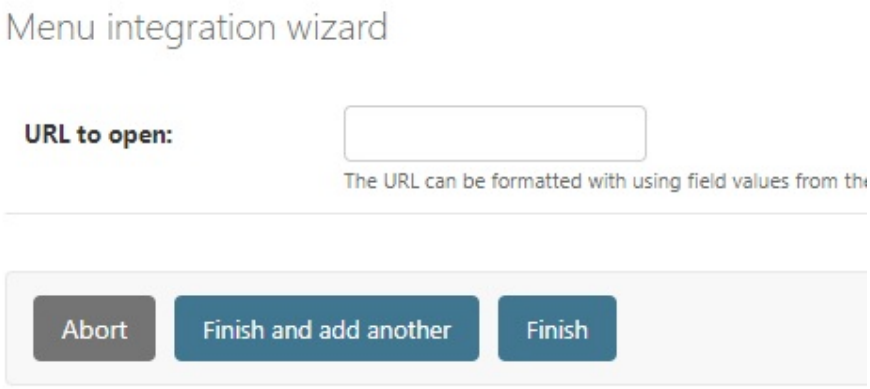


3. When you have chosen the group you wish to use, the **Next** button will take you to the page where you can choose the name and action type for the menu item. A single group can have multiple menu items. Currently, only action type **External link** is available:

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4. You must then enter the URL that you wish to be opened into a new browser tab. The URL field supports both Dojo & Ext field identifiers as placeholders. The placeholders are defined with curly brackets, which should wrap the ID of the form field from which to take the value from:

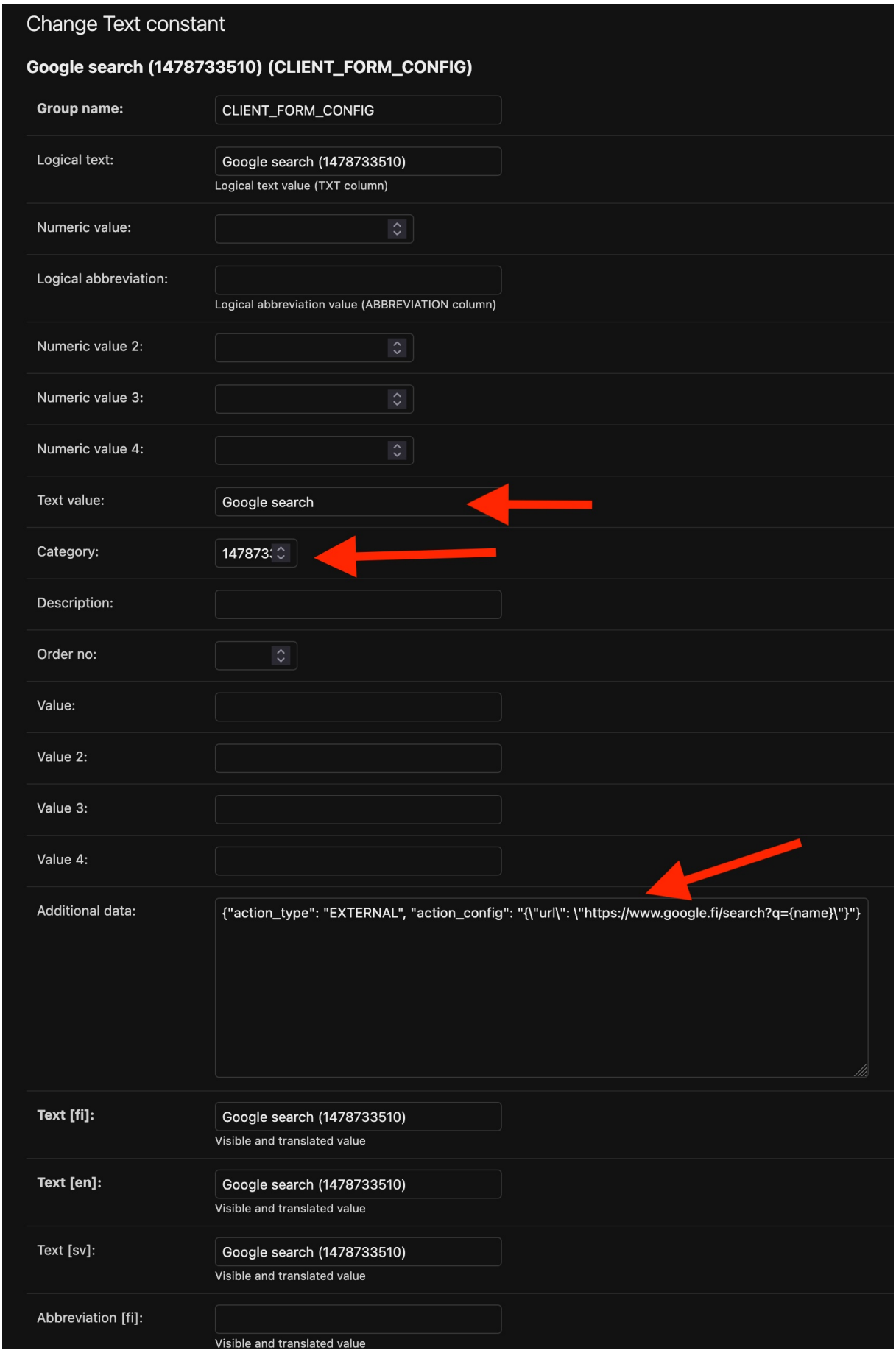


5. Lastly, you can finish the process or use the **Finish and add another** function to save your current progress and run the **Menu setup wizard** again. Abort can be used at any stage of the process and it will take you back to the admin index page.

Editing the menu groups and items

You can later edit and delete the complete menu integrations in the text constants group **CLIENT_FORM_CONFIG** and individual menu groups in the text constants group CLIENT_FORM_GROUP. The item name is saved in **Text value** field, the **Group ID** is saved in category field and the action details are saved in the **Additional data** field which are needed for action to be executed in the system.

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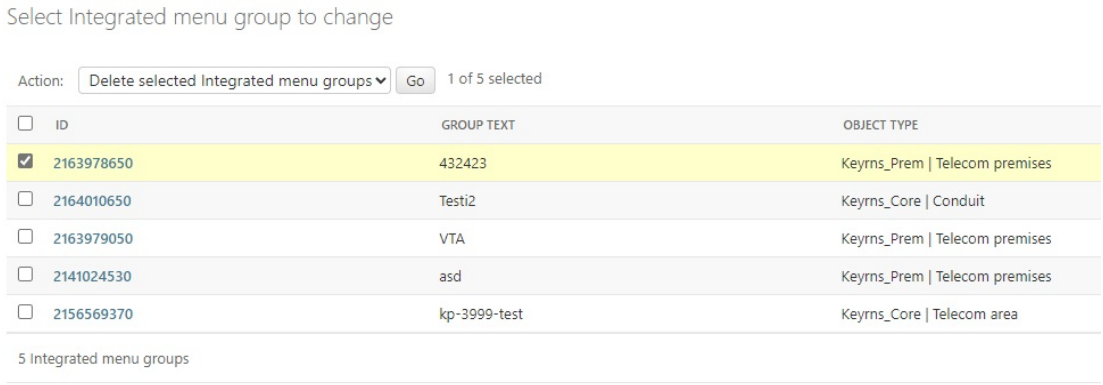
Deleting menu groups and items

You can later view and edit existing groups and items by opening them under the FORMINTEGRATION subsection.

1. Open a list of previously determined menu groups or items.



2. Choose the groups/items that you want to delete.



3. The select **Action: Delete selected Integrated menu groups** and **Go**.

KeyIntegrations

KeyCom supports integrations with external services via a configurable JSON objects. The integration enables automated data exchange using standard web methods (e.g., GET, POST) and supports dynamic parameters and multiple authentication types (Token, JWT, Digest, Basic). The configuration is stored and edited in the **Additional data** field of a text constant with the group name **KEY_INTEGRATION_CFG.** The list of configured integrations can be opened in the **Key-integrated service configurations** menu.



Configuring KeyIntegrations

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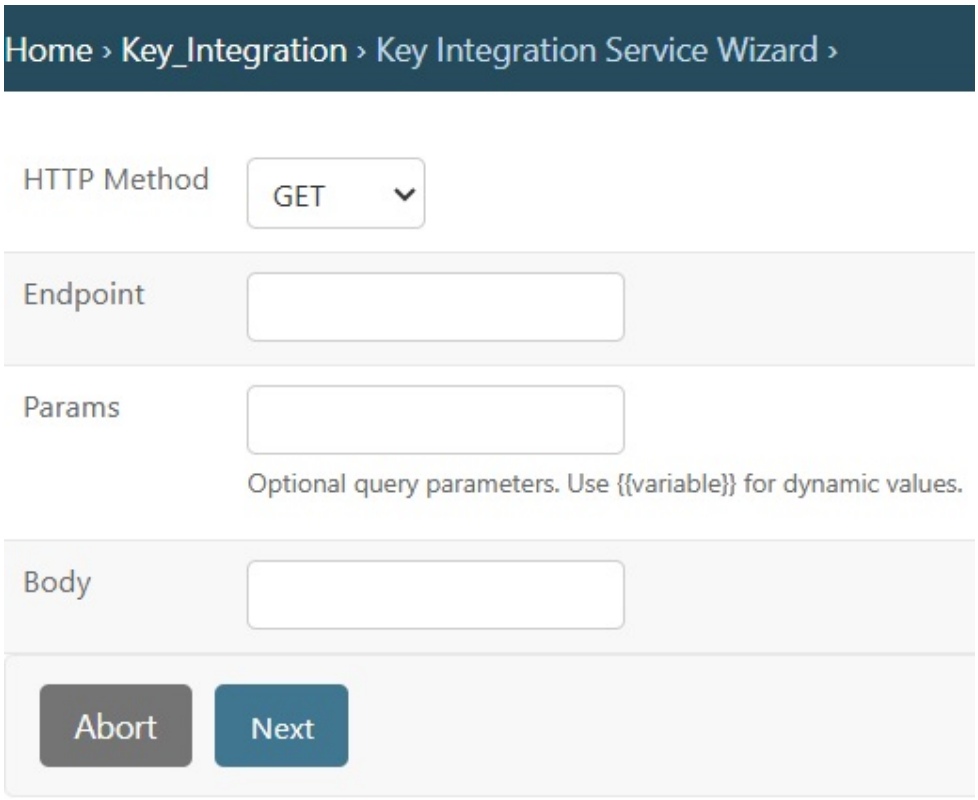
To simplify setup, a **KeyIntegration service wizard** is available in the admin interface. This wizard provides a form for creating service configurations, making it easy to define how external services are called and authenticated. The JSON-configuration produced by the wizard defines the external service URL to be called and the nature by which it will be called (web method, parameters, body and authentication method).



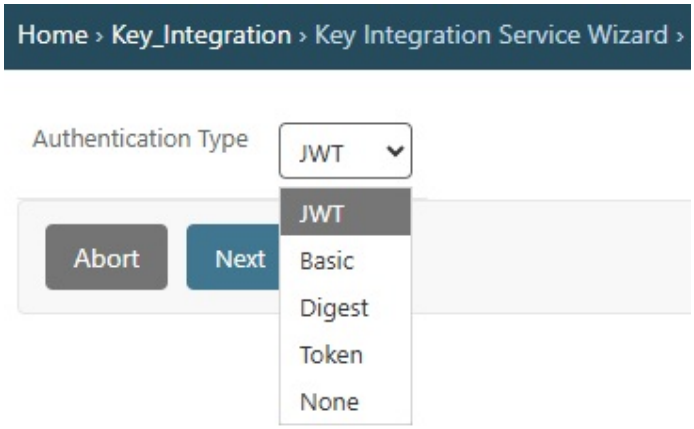
Setting up a new configuration

1. Start by defining a **mandatory** method to be used when calling the external service. Supported methods are: **GET**, **PUT**, **POST**, **PATCH** and **DELETE.**
2. Also fill the second **mandatory** field **Endpoint**, which is the full URL of the external service.
3. You can optionally define:
    a. **Params:** the query string that will be used in the call, without query separator.
    b. **Body:** the content of the request body, which can be either plain string or a dictionary-like object.

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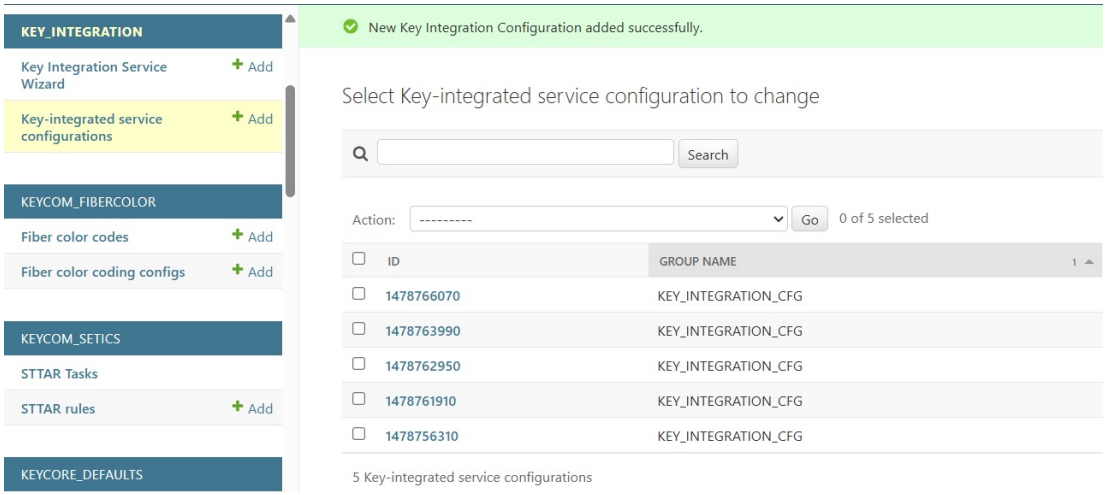
4. Then click **Next** to proceed.
5. In the next window, select the desired authentication method from the **Authentication Type** drop-down menu. Supported types include **Token**, **JWT**, **Digest** and **Basic**. Then click **Next**.



6. After selecting the authentication type, the wizard adjusts the form to show only the relevant fields for that method. For example:
    a. **Token** will prompt for a fixed token value.
    b. **JWT** will guide you through setting up a token retrieval endpoint, pre-authentication method, credentials, and optional body.
    c. **Digest** and **Basic** will request username and password credentials.
7. Finally, click **Finish** to save the configuration. The newly created

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configuration will now appear in the Key-integrated service configurations list, where it can be reviewed or edited as needed.



Dynamic values and parameters

The **Body** and **Params** fields in the JSON configuration can include **dynamic placeholders** that are automatically populated based on user input.

Dynamic values are written using **double curly brackets**, like this:

```
ActionScript
"id={{cable_id}}"
```

In this example, `{{cable_id}}` is a dynamic parameter. When the integration is called, the system looks for a field named `cable_id` in the call query parameters and replaces the placeholder with the actual value provided by the user. This mechanism works the same way in both the **Params** and **Body** fields, allowing flexible and user-driven service calls.

Configuring for form Menu

To enable the use of an external service configuration through a form menu, a new menu entry must be created. This links the form to the configured integration. For detailed steps, refer to the section The menu setup process.

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Import tool settings

Import tool settings require in-depth understanding of the system. The person modifying the settings must know the full names of the Django models and modules used for data import. In addition, setting the default values of objects may require the retrieval of foreign key values from the database.

Shape import objects

Select **Keycore_import_tools** -> **Shape import objects**

On the displayed list, you can see the import status of each object. Imported network objects are not deleted one-by-one on this page, but an entire event will be deleted. See the chapter Deleting a shape import event and the related objects.

Shape import events

1. Select **Keycore_import_tools** -> **Shape import events**
2. On the displayed list, you can see the basic data on import events.
3. Open a single event to view a more detailed event log.

Deleting a shape import event and the related objects

1. Select the import event(s) to be deleted.
2. On the drop-down menu above the list, select **Delete with imported objects**.
3. Click the **Go** button.

Shape import methods

- **Name**: name used on the admin site.
- **Label [fi]... Label [en]**: name and its translations displayed to the user.
- **Module**: module used in the import.
- **Options**: JSON configuration for the import. Mandatory configurations include the following: the plan state (plan_state_id), plan type

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(plan_type_id) and the type of import report (see the following chapters: Plan state and Plan type).

For example:

{
"plan_state_id": 231830,

"import_report_type": 1210,

"plan_type_id": 231990

}

Check the values in the PLAN_STATE and PLAN_TYPE groups under **Text constants**. The type of import report is obtained from the list of External document types (see the External document types) chapter. If these values are missing or incorrect, the import will fail.

Shape import mapping configuration

- **Method**: applicable import method (see the Shape import methods chapter).
- **Source type**: geometry type, such as a line.
- **Destination model**: full name of the Django model, such as: keyrns_core.models.Cable
- **Options**: data in JSON format, with an “attrs” value that includes a set of key/value pairs for defining the network object data to be imported.

In key/value pairs, the *key* (on the left) is equivalent to a single field for a network object (for example, cable type, stroke color, placement scale for telecom premises) and the *value* (on the right) can be either a fixed text or number, or a special variable, the value of which is retrieved from the source data, meaning either a shape file or CSV file. When a variable is used, add the character $ in front of it and enter the field name by using the font size used in the source data.

An example:

{"attrs": {

"CableType_id": 12930,
"State_id": 330,

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"Remarks": "$comments"
}
}

In this example, the *CableType_id*- and *State_id* fields are foreign keys for another table, and a comments field from the data to be imported will be entered in the *Remarks* field.

It is easier to complete these fields on the admin page because the list of fields will be created under the text field when the Destination model field has been completed correctly and the data has been saved.

- Refresher: fields for the object. This will be regenerated when the data has been saved and the Destination has been correctly defined. The field names can be checked on this list when entering the data for the Configuration field.

An example: importing addresses

The configuration depends on the format of the original file.

The address file in this example:

CITY,ZIP,APTS,STREETNO,STREET,X,Y

Kuikkavesi,65530,1,1,Kuikkukatu,3459116.25,6710938.97

Kuikkavesi,65530,1,2,Kuikkukatu,3459079.20,6710953.52

Kuikkavesi,65530,4,3,Kuikkukatu,3459144.03,6710958.82

Required configuration:

- **Method:** address [keycore_import_tools_shcape_import.methods.simple.simple]
- **Source type:** Point
- **Object:** keygwt_address.models.AddressCreatorModel
- **Settings:**{"attrs": {"streetno": "$STREETNO", "streetname_fi": "$STREET", "city_fi": "$CITY", "zipcode": "$ZIP"}, "extra": {"apartments": "$APTS"}}

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Automated planning

Automated planning refers to the tools available at KeyCom that plan networks automatically.

Setics STTAR

KeyCom's support for Setics STTAR covers exporting the plan and associated objects, exporting the data to the Setics STTAR desktop application, creating the network and importing the final network into the Keycom system using the Spatial upload function.

Custom preview layer

It is possible for the user to create a customizable preview layer by creating a new text constant (Read more in Setics STTAR default values).

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GDPR

GDPR is the new General Data Protection Regulation of the European Union. Its purpose is to protect the privacy of users and change the companies' mindset and measures related to data protection.

The related user groups

With the GDPR, two new user groups have been added to the system. The new user groups are GDPR_NORMAL_ACCESS and GDPR_EXTENDED_ACCESS, which are included in the default user groups. See the Available user groups in KeyCom chapter for further information.

Private–restricted customer type

In addition, a new customer type has been added to the system to accommodate the changes required by the GDPR. The name of this new group is "Private–restricted" (see the Customer types chapter for further information). Access to data related to this customer type is restricted to users who belong to the GDPR_EXTENDED_ACCESS user group.

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