SwyxWare configuration guide for SFR SIP trunk

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History

Nr	Date	Author	Chapter	Content
1	27.10.2016	HT	all	Initial version
1.1	02.11.2016	HT	2.3.1	Configuration of PAI through the registry for NDI signaling
1.2	10.11.2016	HT	2.3.2 2.5	Chapter about number signaling and multiple site installation
1.3	19.12.2016	HT	2 3	Added new chapter 2: Installation guide to install the LinkMgr on a separated server
1.4	23.12.2016	HT		Minor changes. Added description to configure port 5060 for LinkMgr

1 Introduction

1.1 General

This guide gives a detailed description how to configure the SwyxWare in combination with a SIP trunk from SFR (France).

1.2 Network considerations

A customer, who wants to use the SIP trunking service from SFR, also needs his internet access from SFR. Hence, the customer subscribes to a SFR IP/VPN/MPLS service and the customer site and network is directly connected with an IP access SFR to his VRF IP /VPN/MPLS.

Important note

The SwyxWare has a dedicated Windows Service called LinkMgr to handle SIP communication with a SIP provider as SFR. Per default, the LinkMgr uses port 65002 for communication with a SIP provider.
SFR is only able to deal with SIP messages properly, if the SIP default port 5060 is used for communication. It is possible to change the local listener port, but since port 5060 is already being used by the SwyxWare itself, the LinkMgr port cannot be changed to 5060.
To solve this conflict, it is necessary that the LinkMgr service is installed on a separated server. Both the main SwyxWare server and the LinkMgr server have to be member of the same windows domain. Name resolution via NETBIOS must be possible between those two servers. The Swyx services on both machines have to be started with the same Windows Domain account.

Since SFR is offering a static SIP trunk without registration, authentication is based on a static IP address. Therefore, it has to be assured that the SwyxWare server, where the LinkMgr will be installed, will be provided with a fixed IP address. This IP address has to be used by SFR to send SIP requests to.

2 Installation guide

As mentioned, the LinkMgr service has to be installed on a separated windows server.

2.1 Pre-Requisites

- Windows Domain is available
- Both servers are member of that Windows Domain
- NETBIOS name resolution is possible between both servers

2.1.1 Create SwyxWare Service Account

Open Windows Domain Administration console, navigate to Users, add new user.

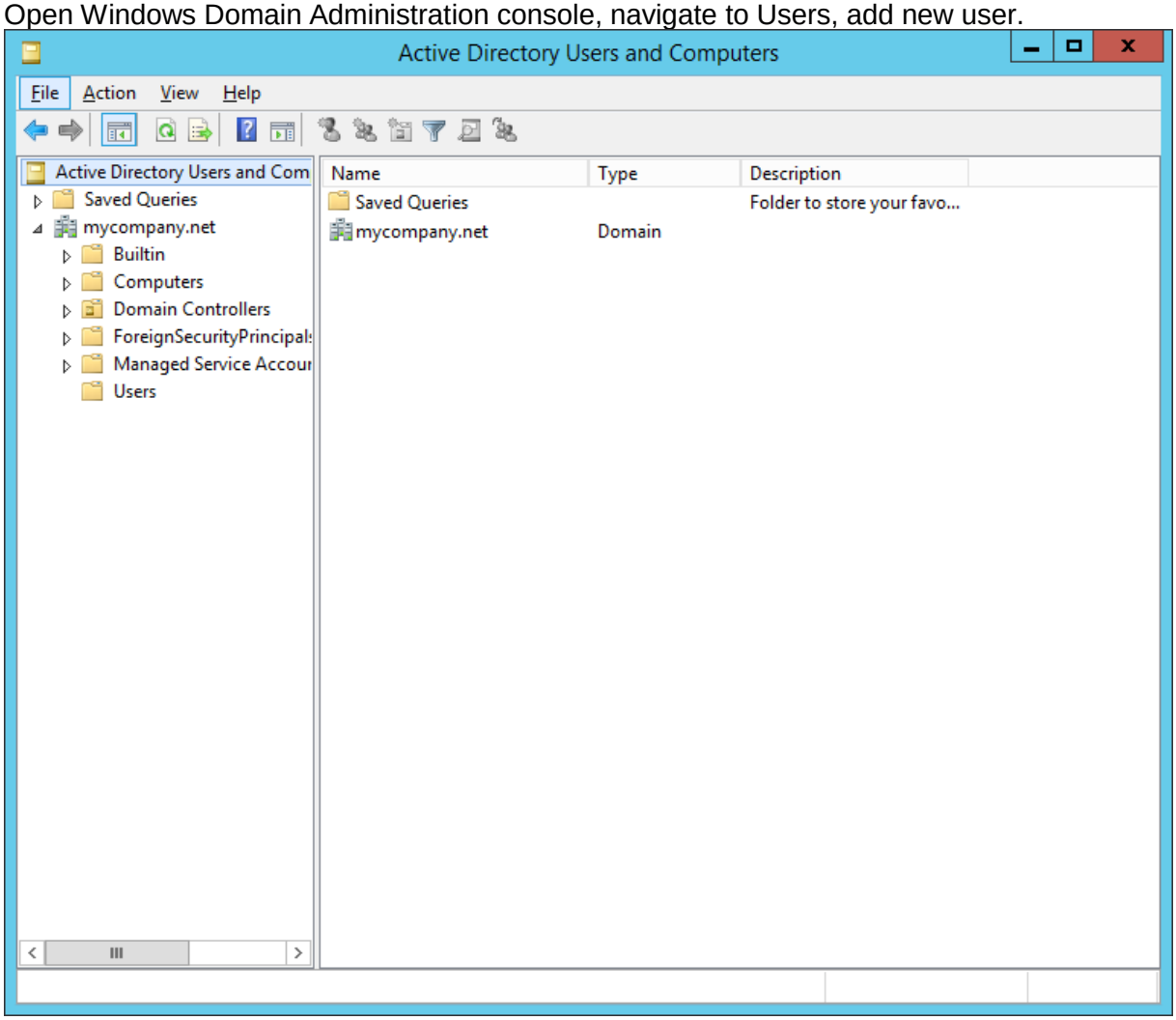

Figure 1: Domain Admin Console

Provide name for new user. The SwyxWare windows services on both servers will be running using this account.

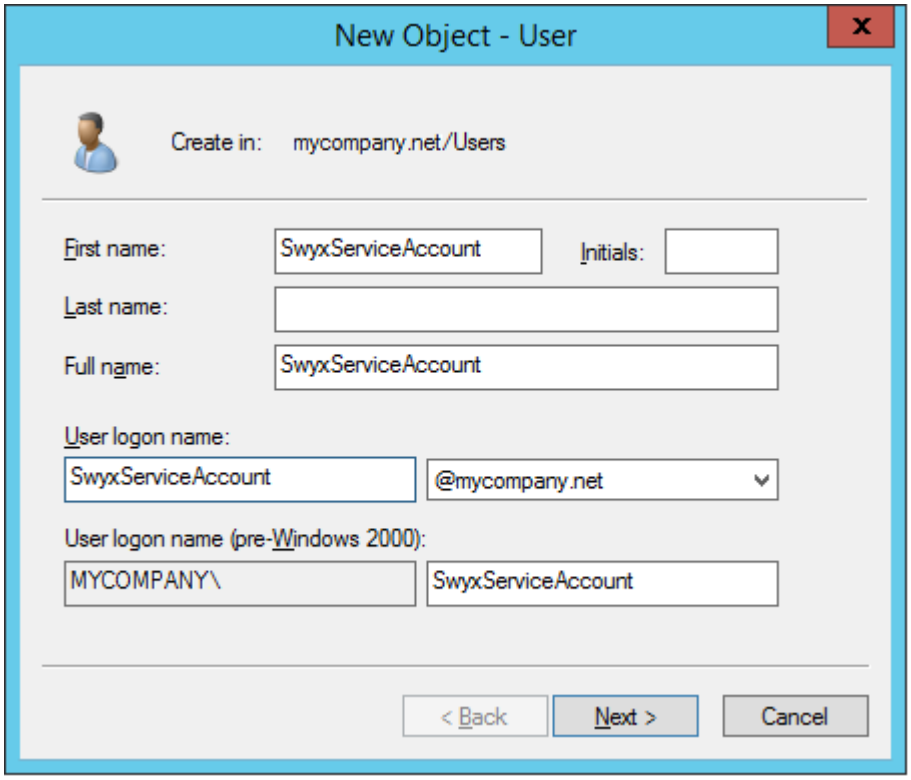

Figure 2: User creation

Provide password, unselect option “User must change password at next logon” and select option “Password never expires”.

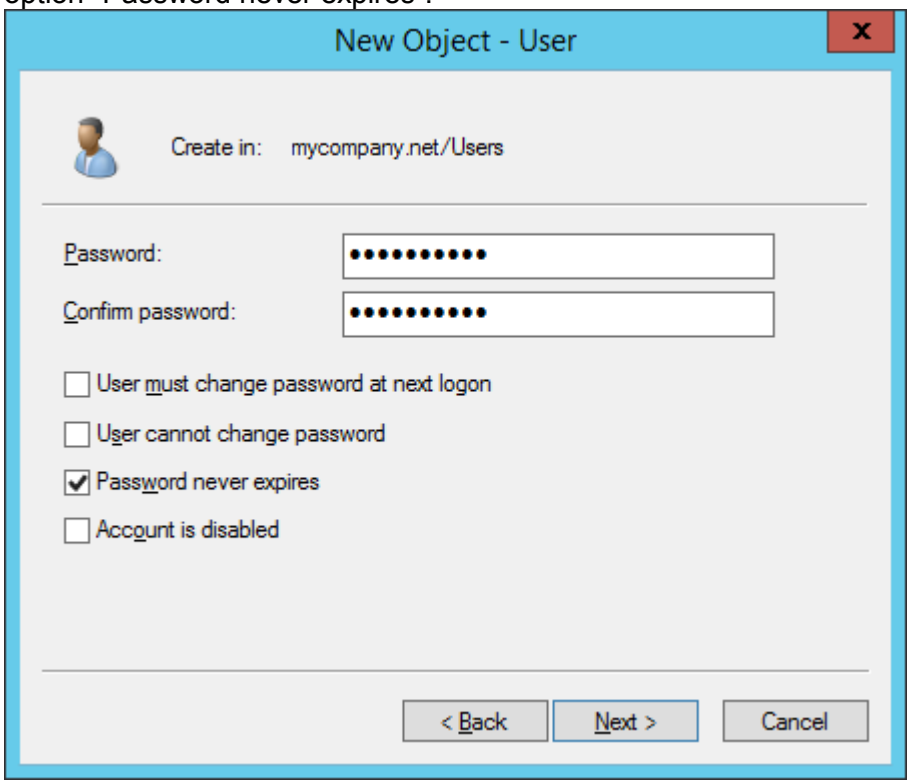

Figure 3: User configuration

2.2 Installation of main SwyxWare server

On the main SwyxWare server, start the installation process. During the setup configuration, in the Dialog “Custom Setup”, it is necessary to deselect the feature SwyxLink Support underneath the “Telephony” folder.

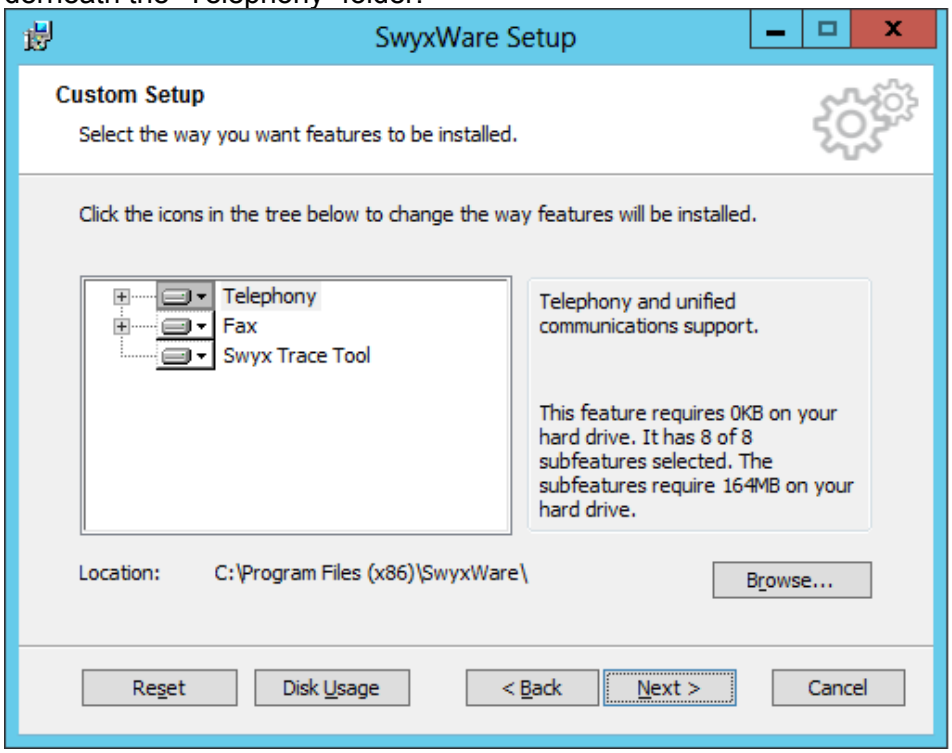

Figure 4: Custom Setup Dialog

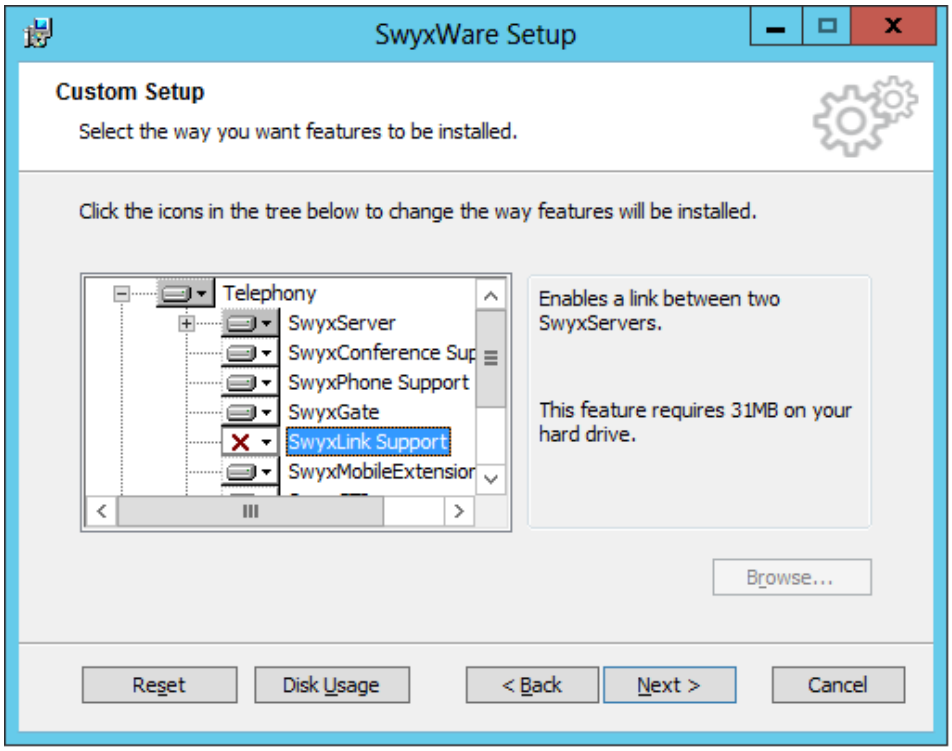

Figure 5: Custom Setup Dialog

After the installation is completed, the ConfigurationWizards starts to perform the initial configuraton. In the “Services Account” dialog, use the Browse Button to browse the Windows Domain for the Swyx Acount that was previously created. Enter the password that is assigned to that account.

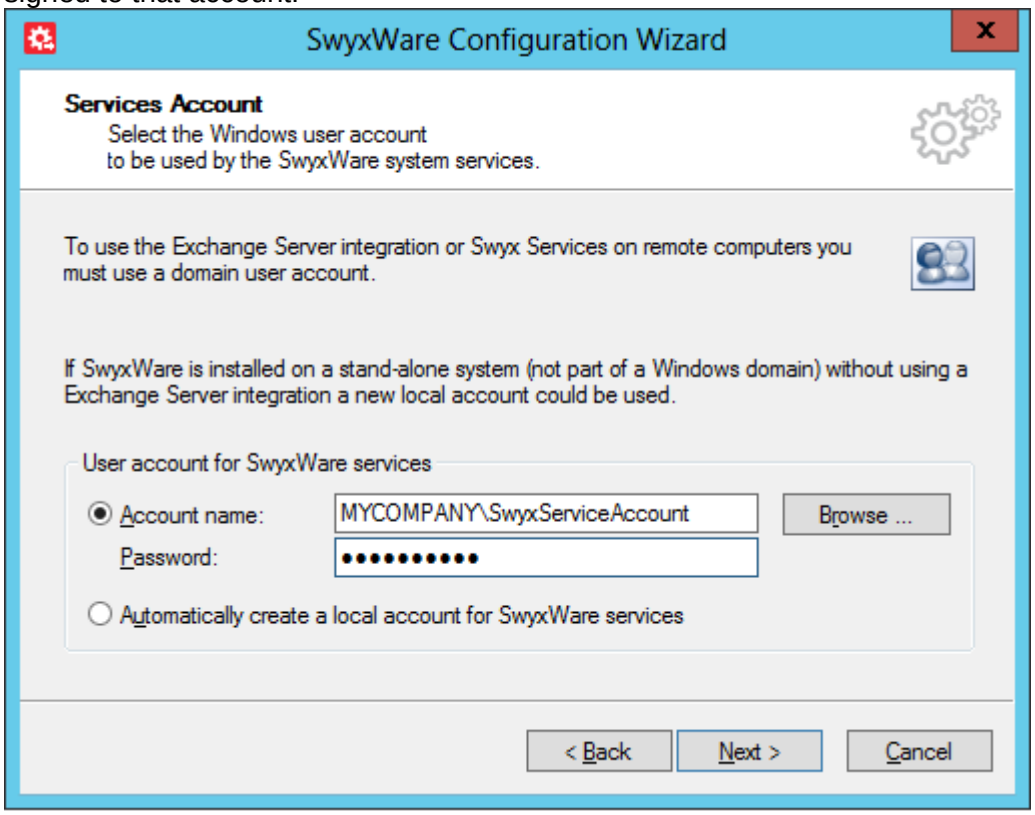

Figure 6: SwyxWare service account

2.3 Installation of LinkMgr SwyxWare server

On the LinkMgr SwyxWare server, start the installation process. During the setup configuration, in the Dialog “Custom Setup”, it is necessary to deselect each feature within the Telephony section except the SwyxLink Support. FAX services have to be deselected, too. The SwyxWareHelper service needs to be selected.

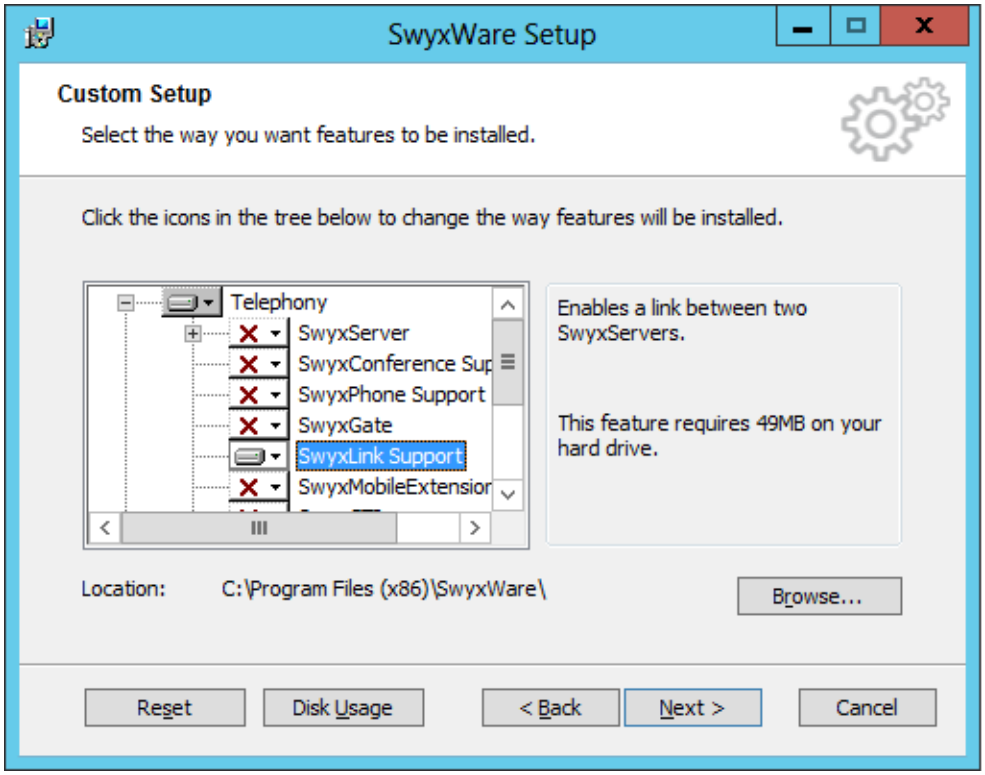

Figure 7: Custom Setup Dialog

After the installation is completed, the ConfigurationWizards starts to perform the initial configuraton. In the “Services Account” dialog, use the Browse Button to browse the Windows Domain for the Swyx Acount that was previously created and already being used by the “main installation”. Enter the password that is assigned to that account.

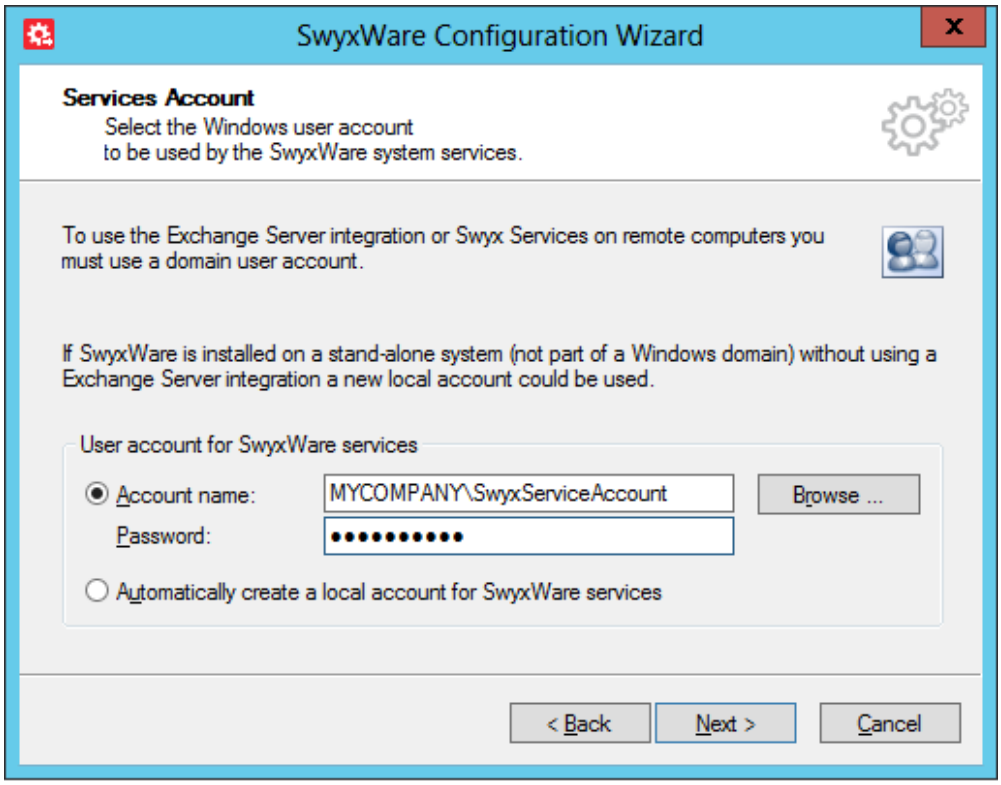

Figure 8: LinkMgr Service Account

Afterwards, the Configuration wizard scan the network for installed SwyxWare instances. It lists the found instances. Select the one that will use this LinkMgr installation.

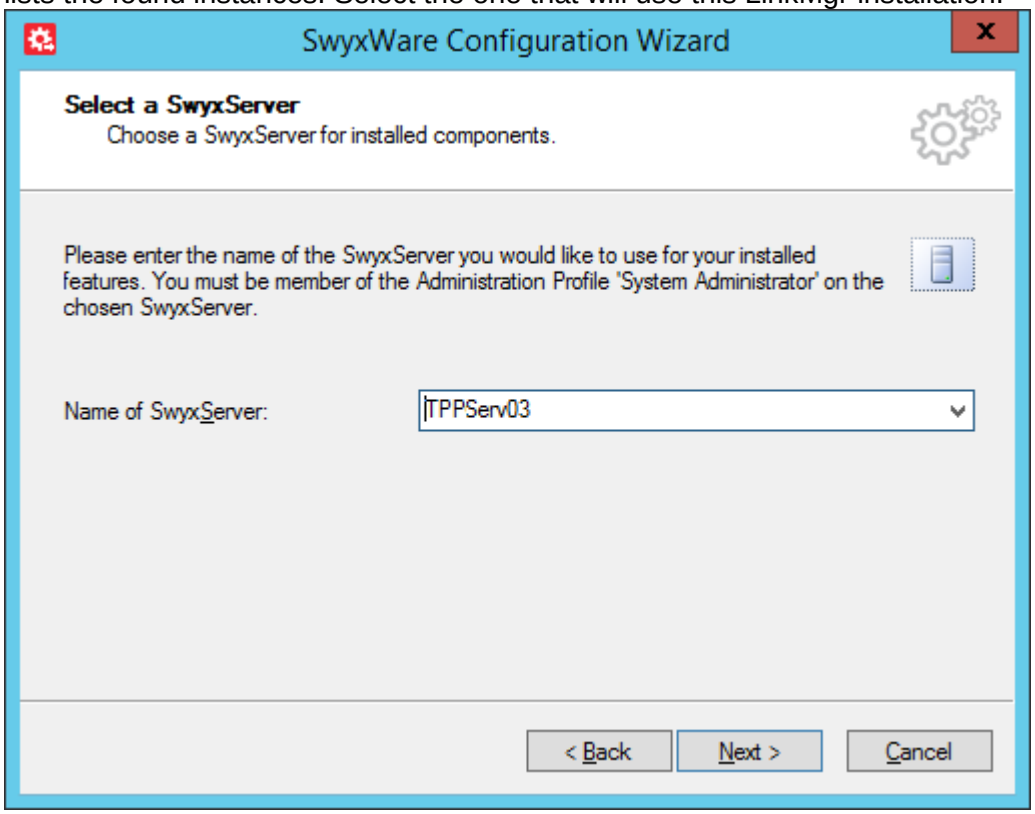

Figure 9: Selection of SwyxWare server

After the LinkMgr was installed, it is mandatory to change the SIP listener port to 5060, this can only be configured through the Windows registry.
On a CMD-shell, start regedit with administrator privileges, navigate to `HKLM\SOFTWARE\Wow6432Node\Swyx\LinkMgr\CurrentVersion\Options`.
Create a new DWORD value named `TcpPortOfRemoteSIPEndpoint` and assign a value of 5060 as decimal (0x13c4 as hex value).
Afterward, restart the LinkMgr service.

3 Configuration guide

Example configuration data:

SIP Proxy: 10.104.129.46
Number range: +33 42 7788120- +33 42 7788129
NDI: 0427788120

3.1 Location

As a first step, a new location has to be created. Open the SwyxWare Admin tool, navigate to the locations folder, start the “Add Location” wizard, by opening the context menu in the right, larger area and selecting “Add Location …”.

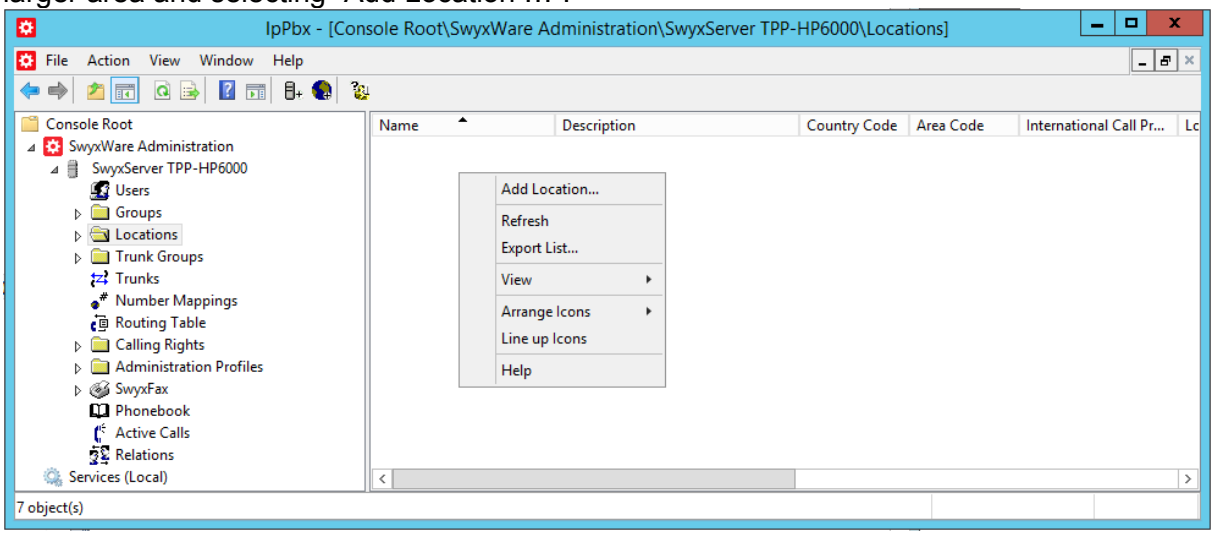

Figure 10: Start the „Add Location“ wizard

The following screenshots are showing the configuration dialogs from the wizard.

Provide a meaningful name for the new location.

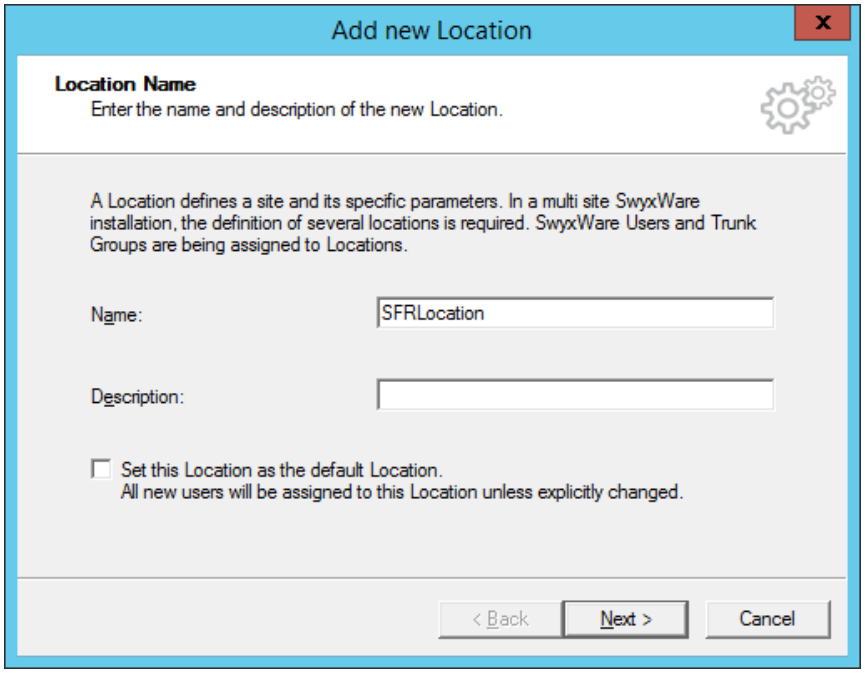

Figure 11: Location name

Configure country code, etc.

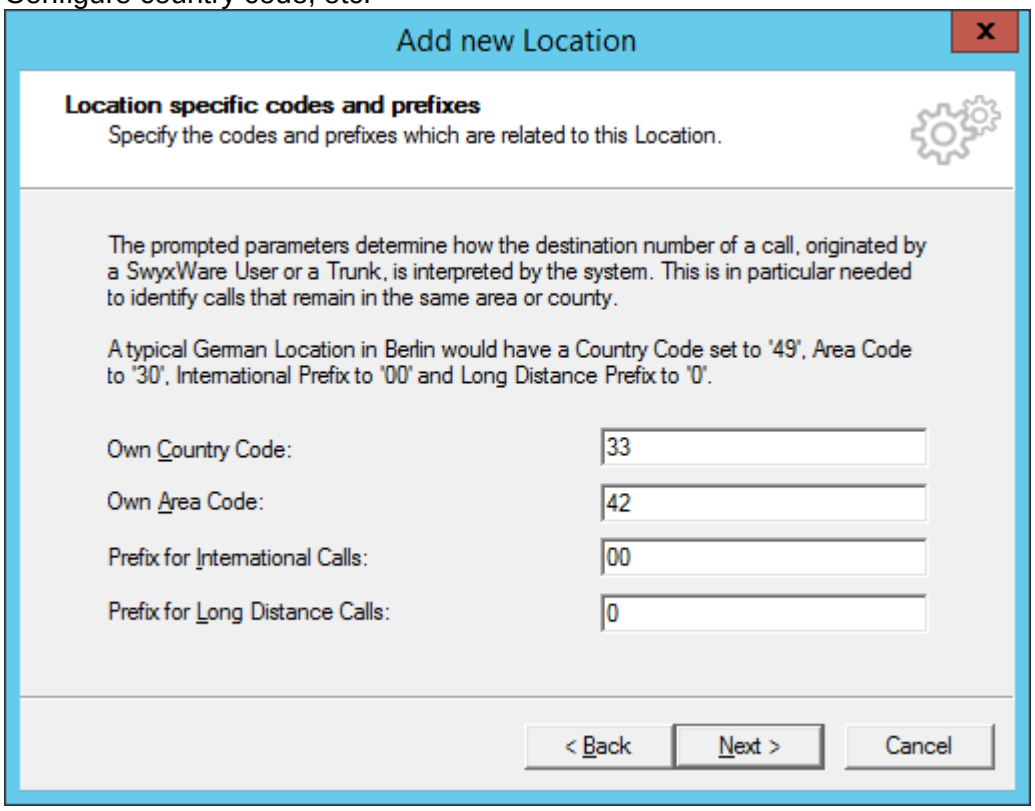

Figure 12: Country code, area code etc.

Provide public access number.

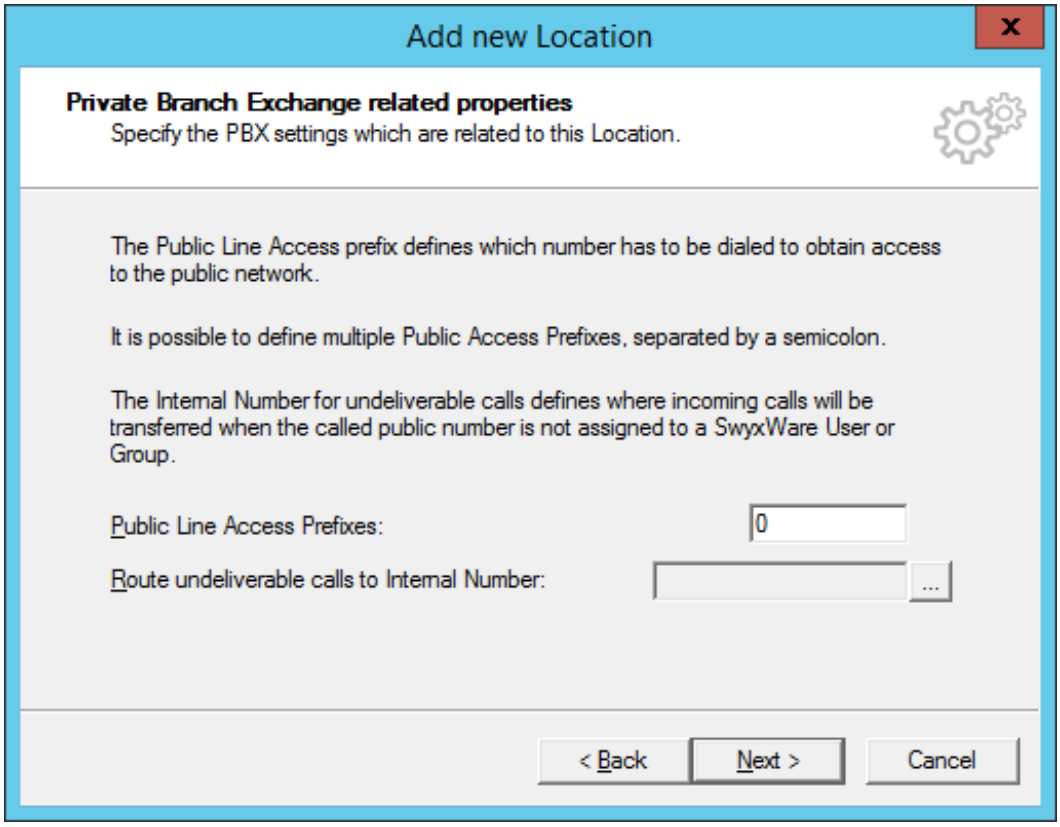

Figure 13: Public access number

Finally, set the correct time zone for the location

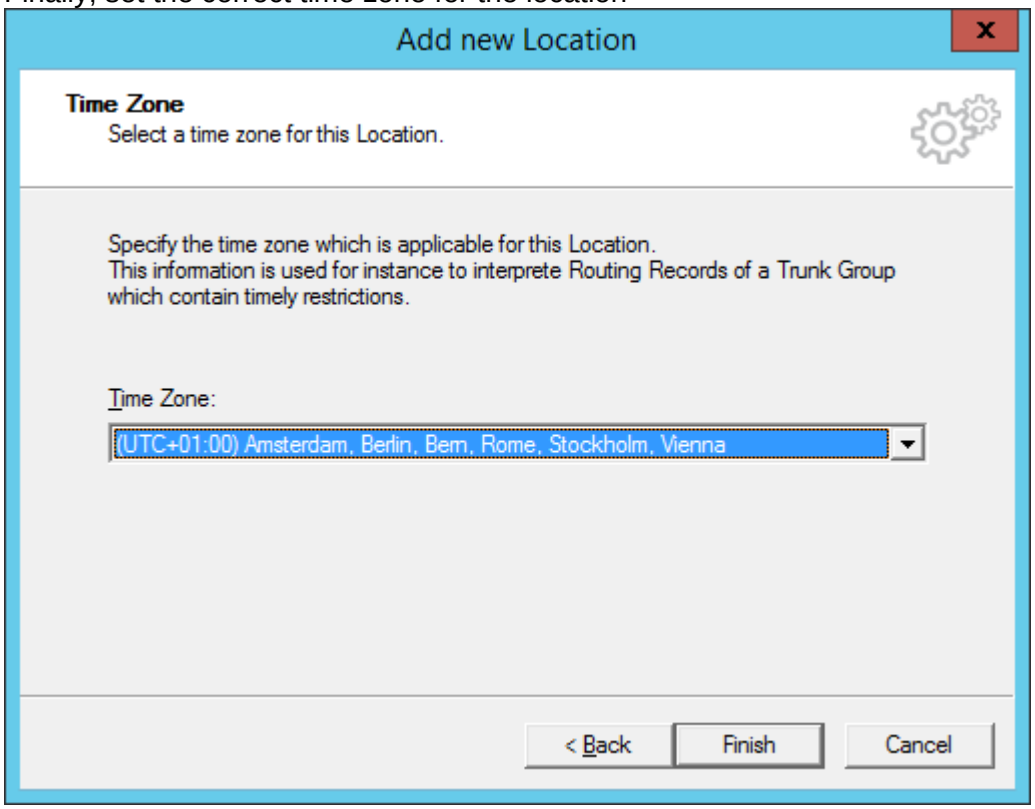

Figure 14: Time zone

3.2 SIP Trunk group

3.2.1 Creation

After creating the location, a new SIP trunk group has to be created. In the SwyxWare Admin tool, navigate to the Trunk Groups folder, start the creation wizard by opening the context menu in the right, larger area and selecting “Add Trunk group …”.

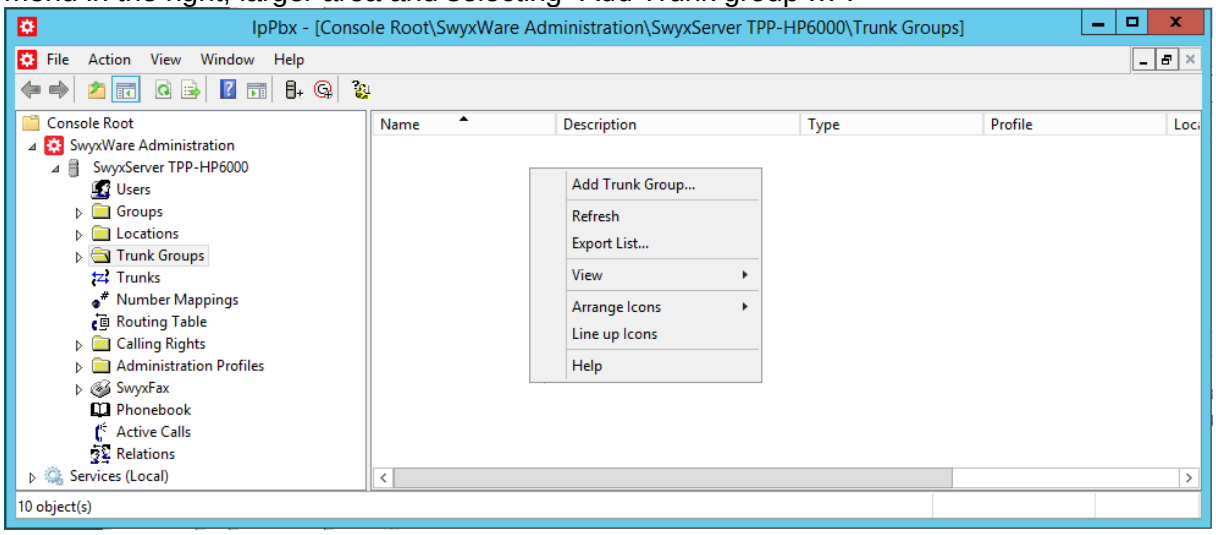

Figure 15: Start the „Add Trunk Group“ wizard

The following screenshots are showing the configuration dialogs from the wizard.
Provide a meaningful name for the new SIP Trunk group.

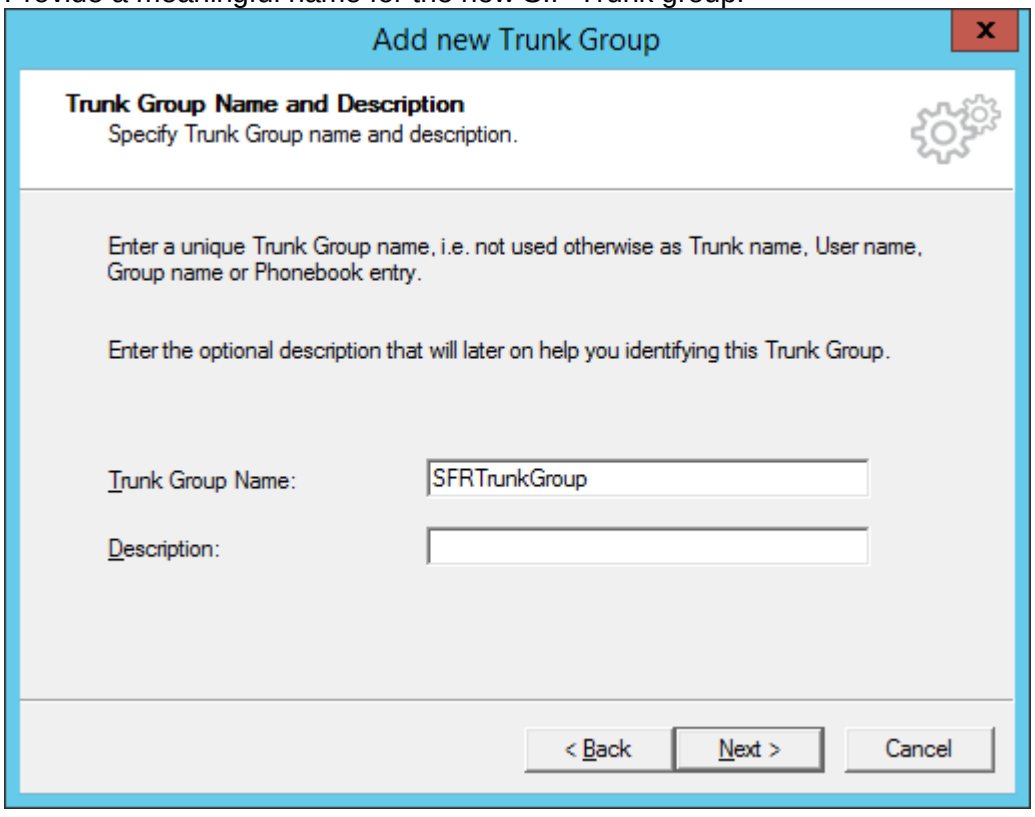

Figure 16: Trunk Group Name

Select „SIP“ as Trunk Group Type and select „SFR (FR)“ from the dropdown list as Profile.

Important note
In case, that a SwyxWare2015R4 or older is used, the profile for “SFR (FR)” first has to be imported using the CustomProviderProfiles.config file. Please read chapter Provider profile for the necessary instructions. Later SwyxWare versions have the profile integrated already.

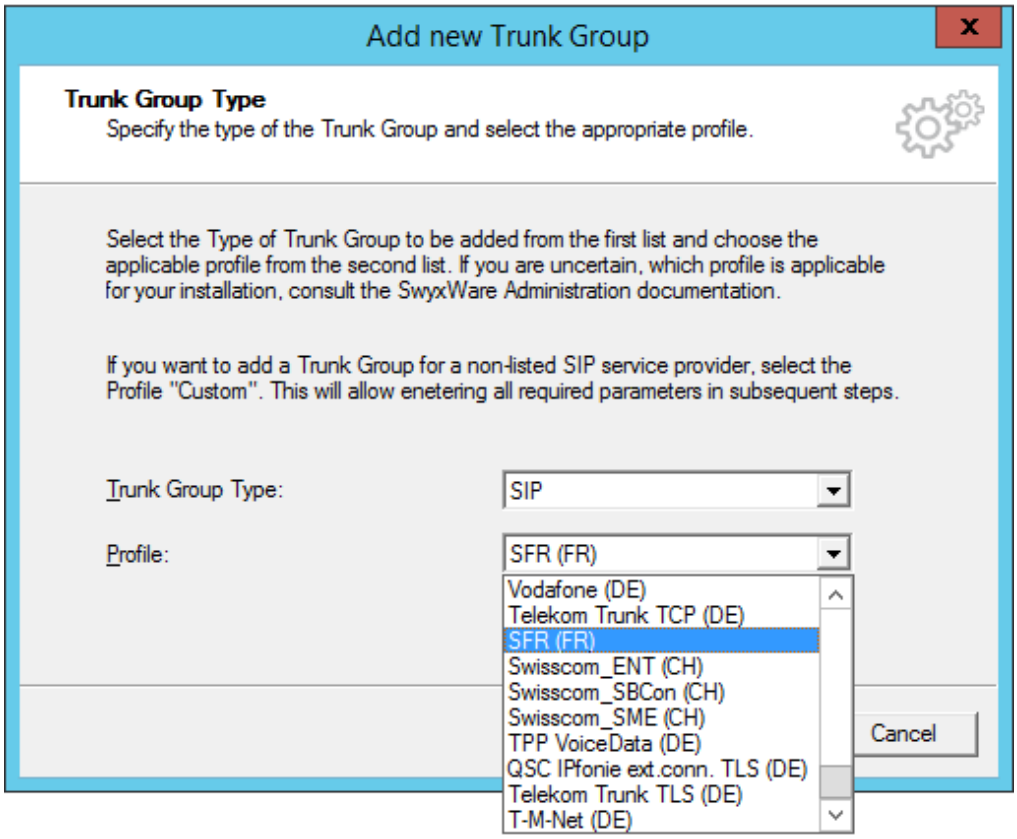

Figure 17: Choose provider profile

Accept the default settings from the next dialog.

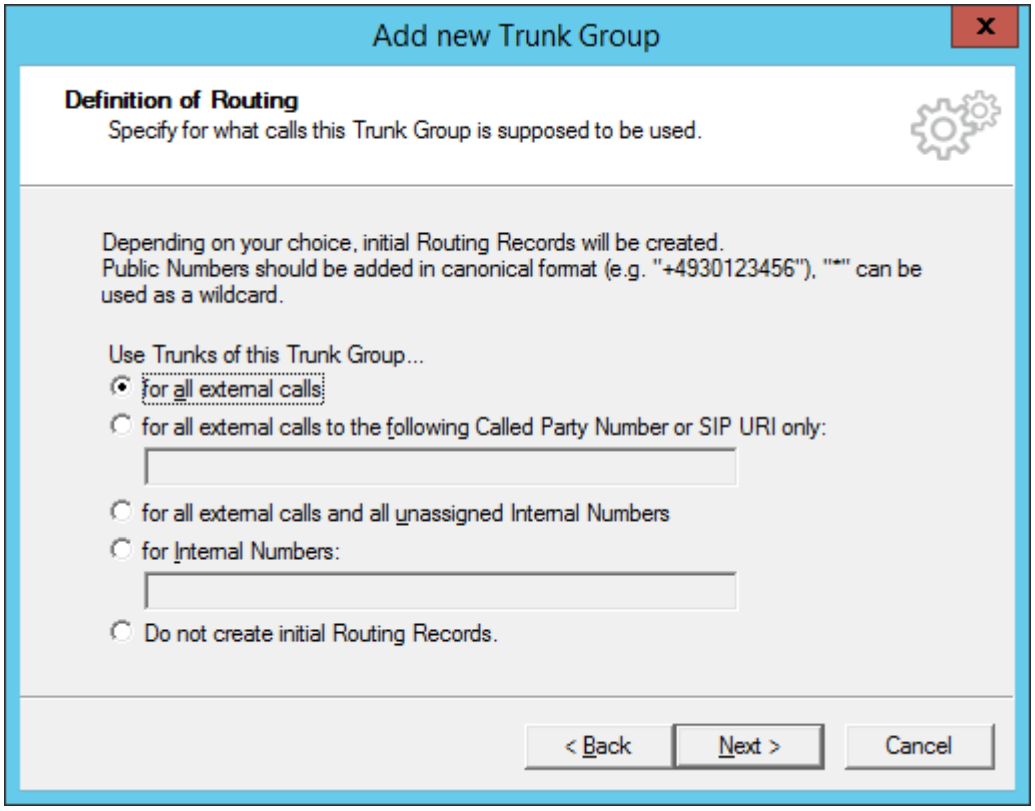

Figure 18: Initial routing records

Assign the previously created location to the SIP Trunk Group.

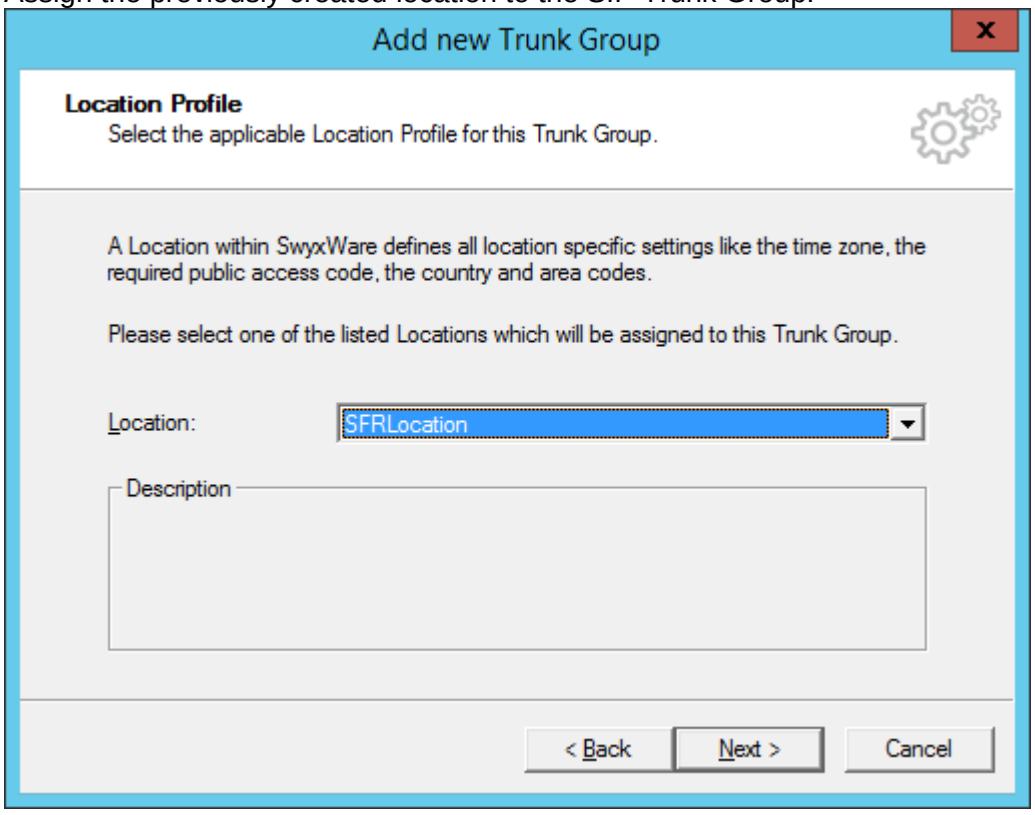

Figure 19: Assign location

3.2.2 Additional configuration

After creating the SIP Trunk Group, the SIP proxy setting needs to be adjusted.
Navigate to the Trunk Groups folder, select the created SIP Trunk Group. Open the Trunk Group properties through the context menu.

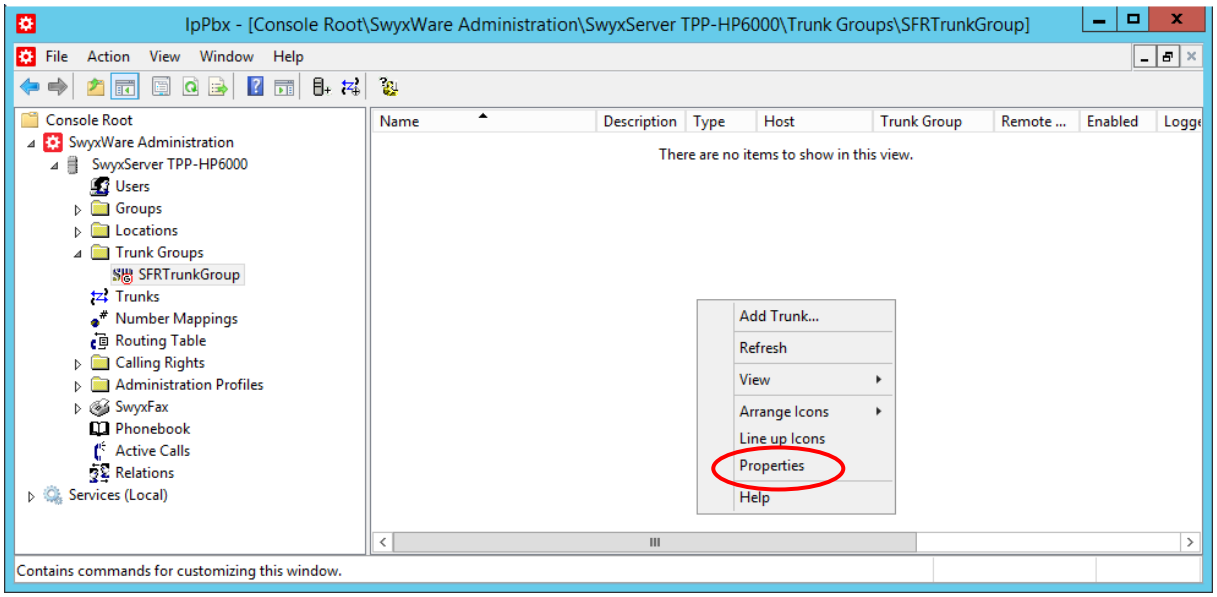

Figure 20: Properties of the Trunk Group

Select the tab “SIP” of the properties dialog.
In the field “Proxy” the IP address or FQDN of the SFR Proxyserver has to be configured, in this example “`10.104.129.46`” with port `5060`.

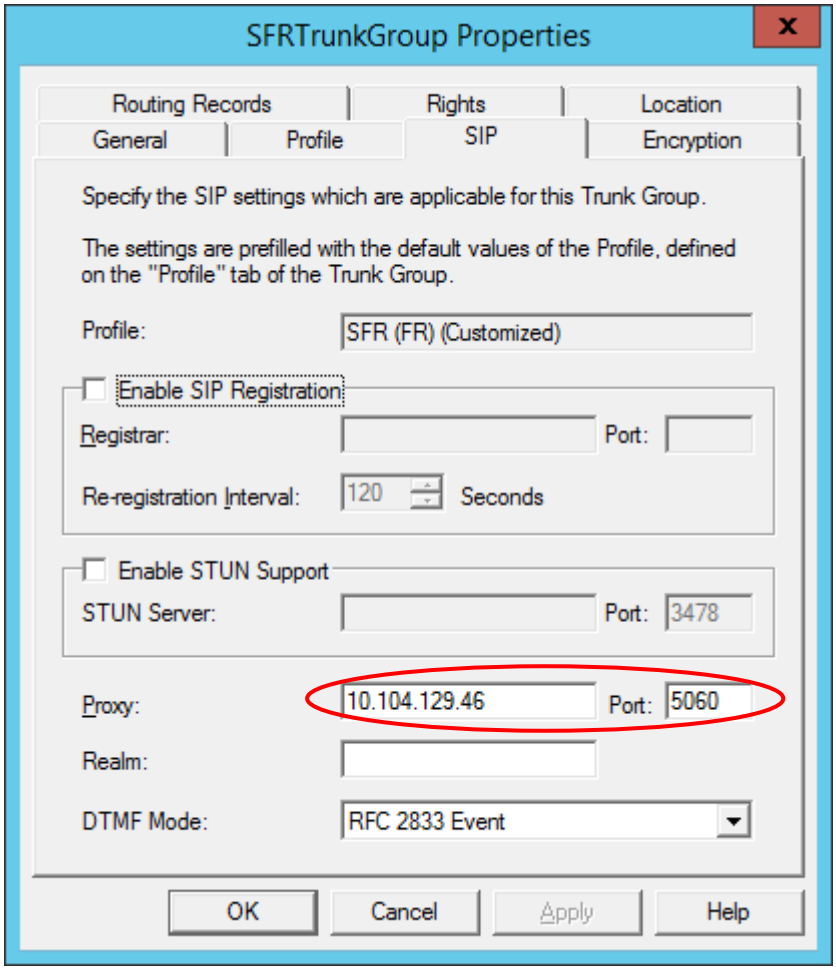

Figure 21: The "SIP" tab of the properties dialog

Usually, it is not necessary to configure any additional parameter in the other tabs.

3.3 SIP trunk

After creating and configuring the SIP Trunk Group, the actual SIP Trunk can be created. Navigate to the Trunk Groups folder, select the created SIP Trunk Group. Open the Trunk Group properties through the context menu and chose "Add Trunk …" to start the SIP Trunk creation wizard.

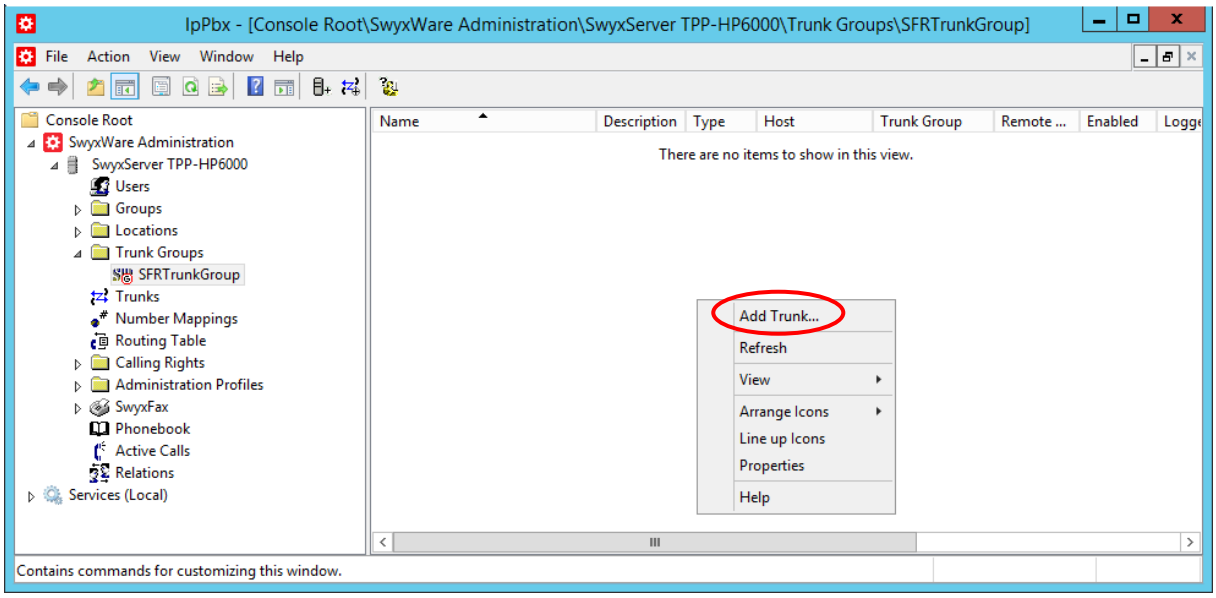

Figure 22: Adding a SIP Trunk to the SIP Trunk Group

The following screenshots are showing the configuration dialogs from the wizard.

Provide a meaningful name for the new SIP Trunk. It is useful to choose a name which reflects the dependency to the Trunk Group.

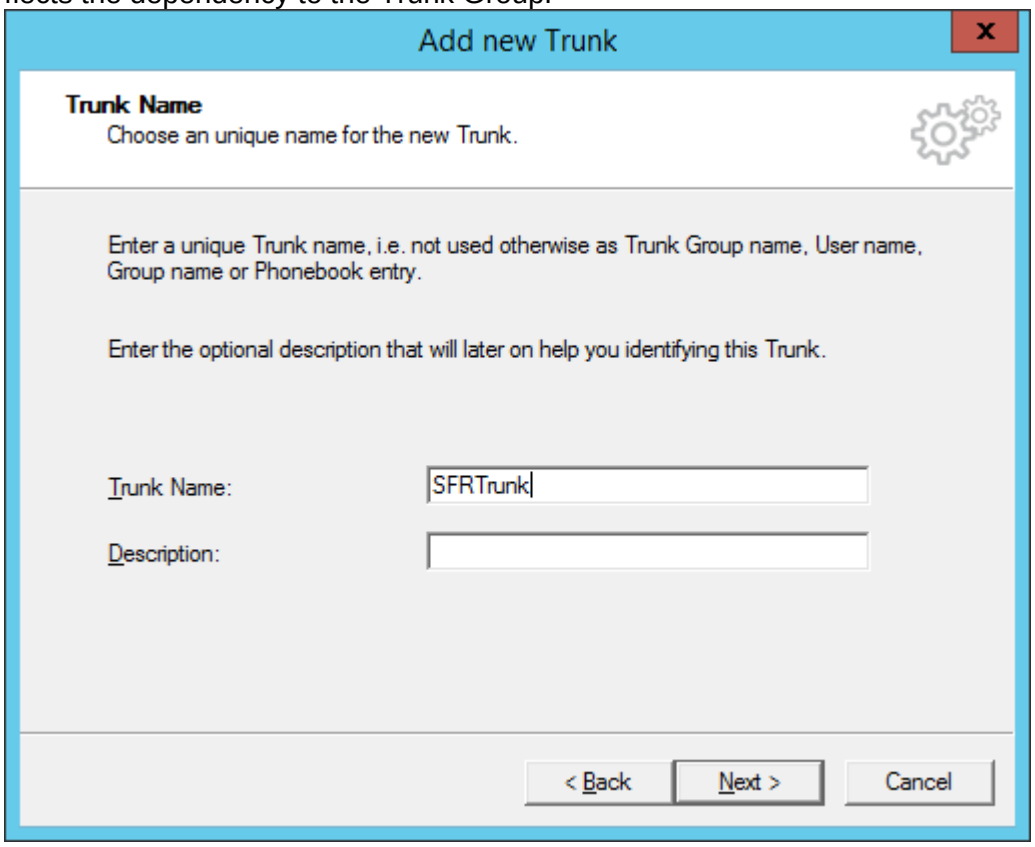

Figure 23: Trunk name

Since SFR is offering a static trunk, no user credentials for registration have to be configured.

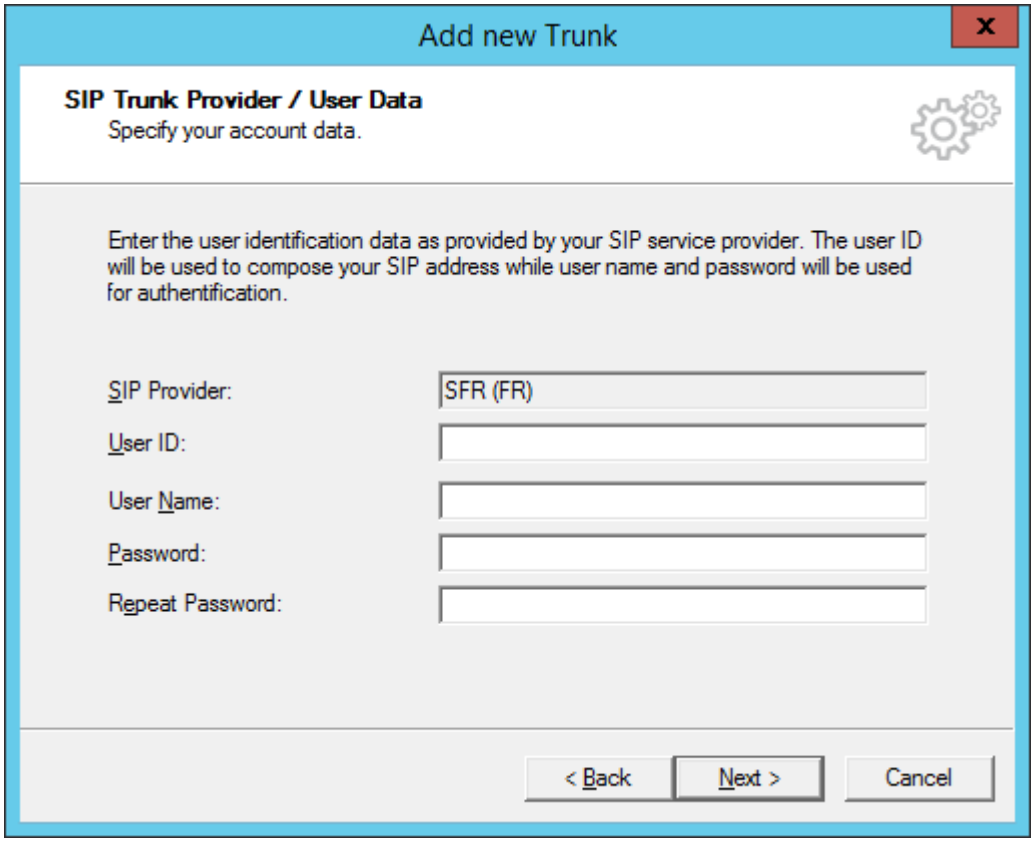

Figure 24: User credentials

In the next dialog, the available number range is specified. Use the number range that SFR has assigned.

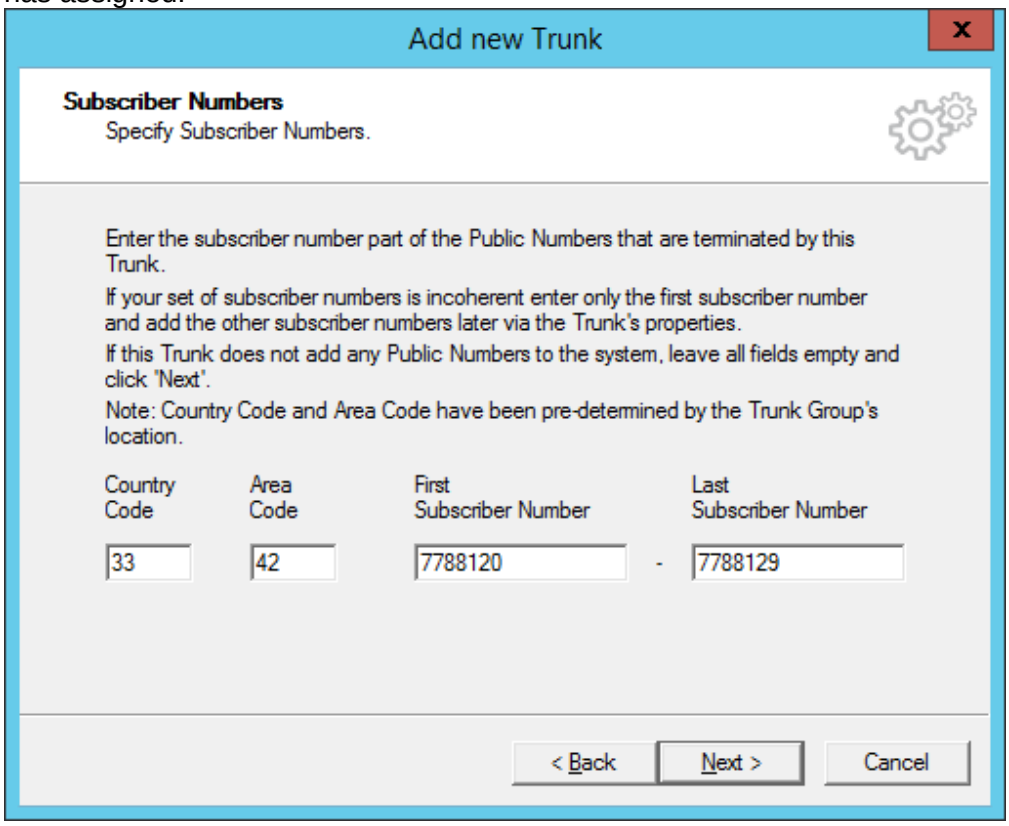

Figure 25: Number range

There is no need to configure a SIP URI in the next dialog.

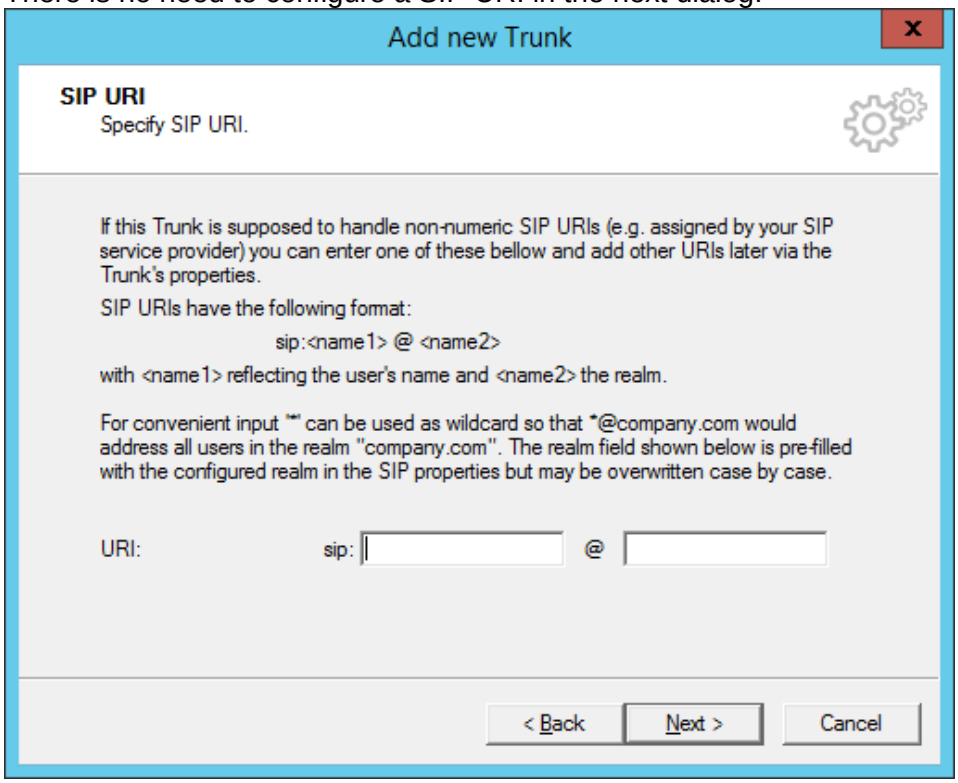

Figure 26: SIP URI

The codecs are configured in the next dialog. Since SFR does not support G.722 and G711µ, these audio codecs can be deselected.

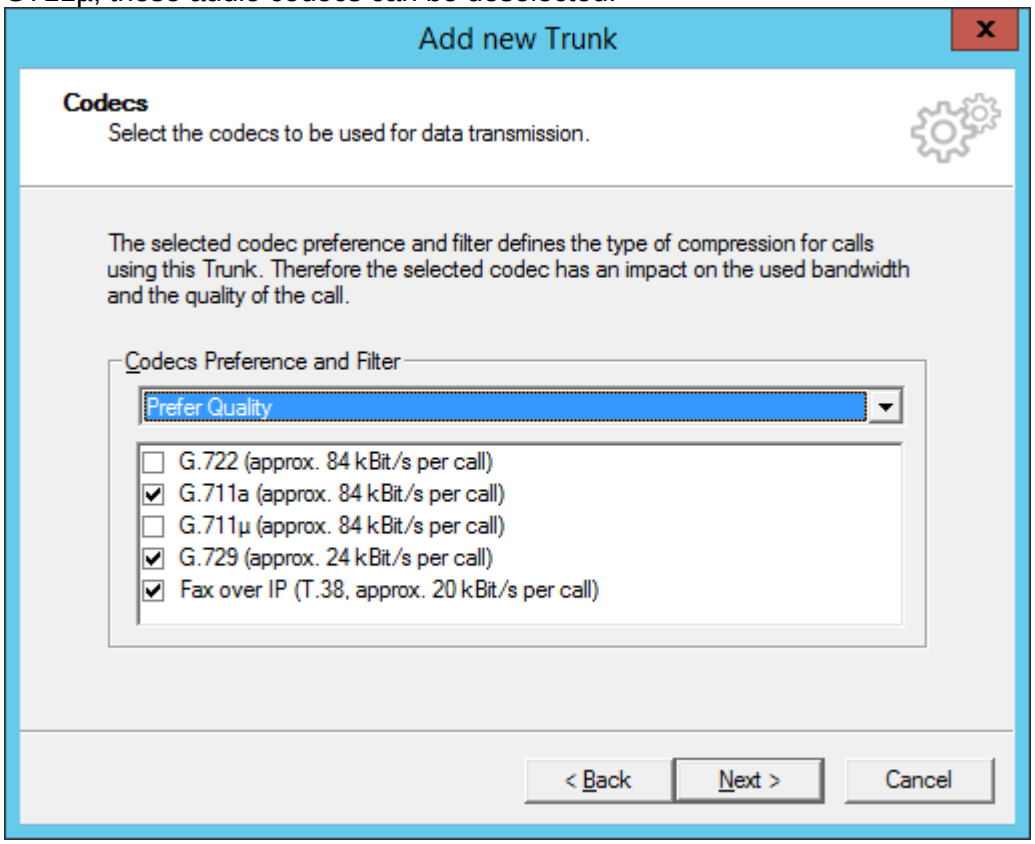

Figure 27: Codec settings

The last parameter is the number of parallel calls. This parameter depends on the installed channel licenses, the available bandwidth and possibly a specification from SFR.

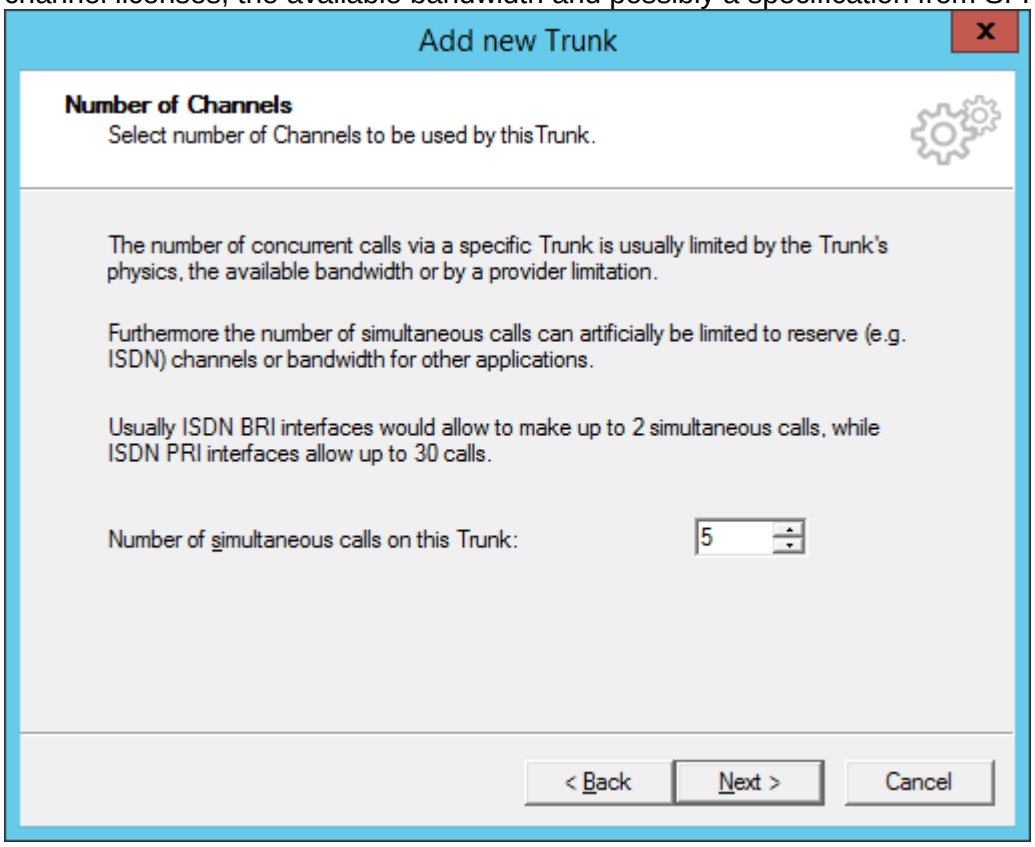

Figure 28: Number of parallel calls

Finish the creation of the SIP trunk with the next dialog.

Afterwards, the trunk will be presented as active. This may take some seconds. The overview window has to be updated by pressing the F5 key.

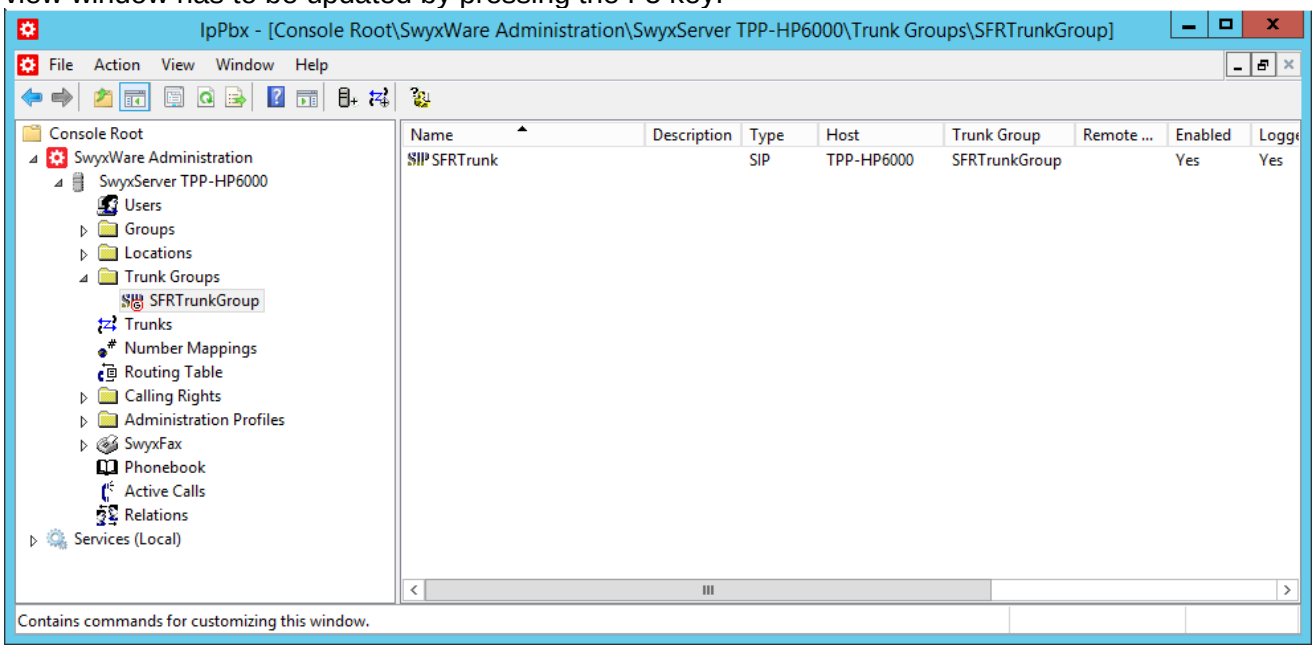

Figure 29: Active SIP trunk

3.3.1 Number signaling

If the trunk is used by a user without a public number, it is reqired that the NDI is signaled as calling party number number. This has to be configured in the properties of the SIP trunk, in the tab “Number Signalling” according to the following screenshot.

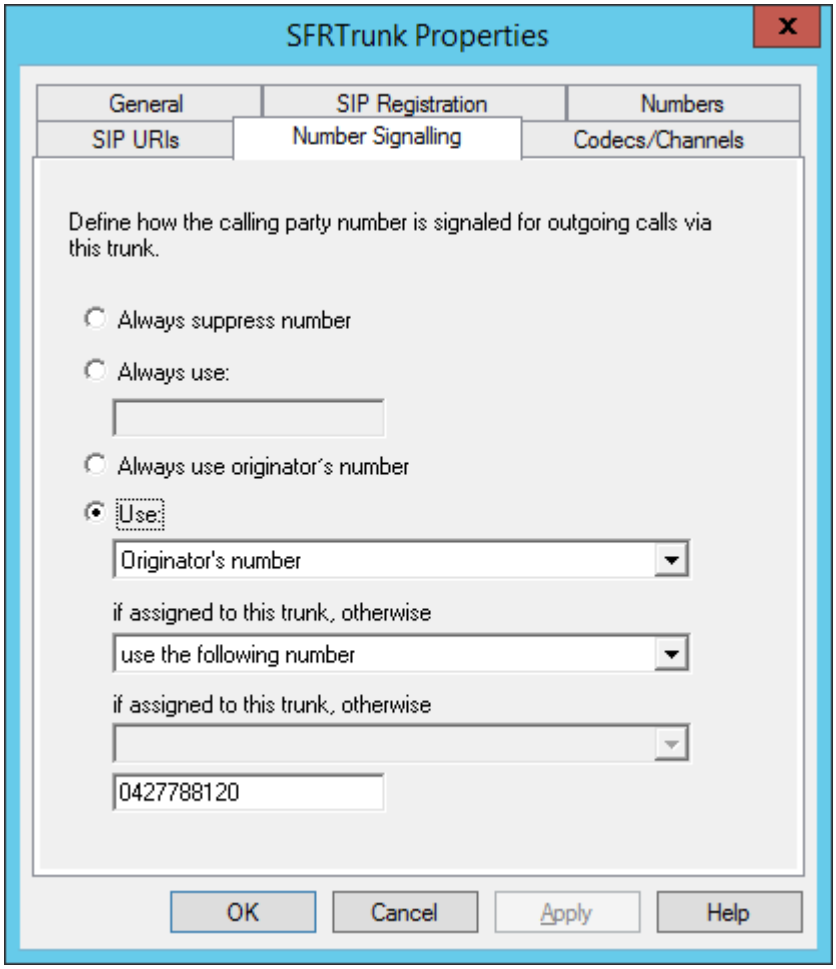

Figure 28: Number signaling

Note: This setting prevents the feature CLIP No Screening. If it is assured that each user has a valid, public number, the feature CLIP No Screening is configured by selection the option “Always use originator’s number”.

3.3.2 T.38 configuration

SFR supports T.38 for FAX transmission. In the initial INVITE of an outgoing FAX call, the T.38 parameter don’t have to be signaled – otherwise the final switching to T.38 after the FAX tone was detected, will fail.
This behavior can to be configured in the properties of the SIP trunk, in the tab “Co-decs/Channle” according to the following screenshot. The option “Remove T.38 codec from initial INVITE” has to be selected.

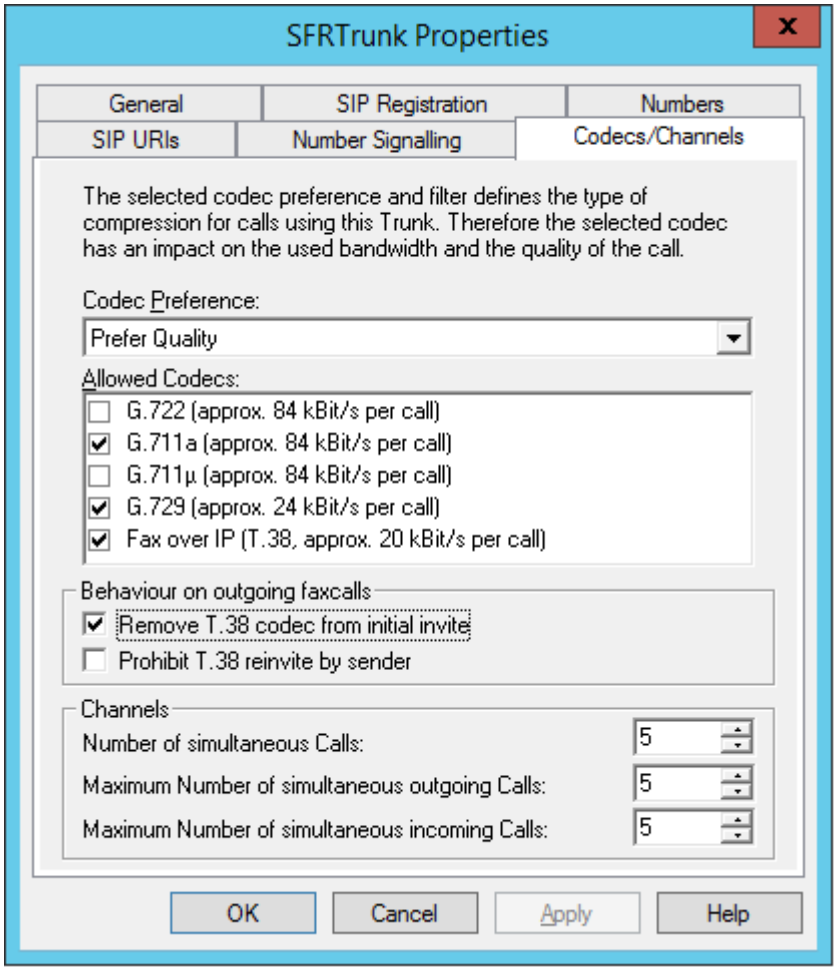

Figure 29: T.38 settings

3.3.3 Additional configuration

Per default, if the user has assigned a public number of the SIP trunk, the SwyxWare will signal this public number in the P-Asserted-Identity header (PAI). For emergency calls, it is required that the PAI of an INVITE from the SwyxWare to SFR contains the NDI in order to determine the location. This required configuration has to be done through the windows registry on the server, on which the LinkMgr is installed:

1. Open the Windows registry editor
2. Navigate to `HKLM\Software\Wow6432Node\Swyx\LinkMgr\CurrentVersion\Options`
3. Create a new **registry key** with the exact name of the SIPTrunk that was created in the SwyxWare, in this case: **`SFRTrunk`**
4. Underneath the newly created registry key, create new registry value of type String, name it `SIPNetworkProvidedNumber`
5. Set the value of `SIPNetworkProvidedNumber` to the value of the NDI, in this case: `0427788120`

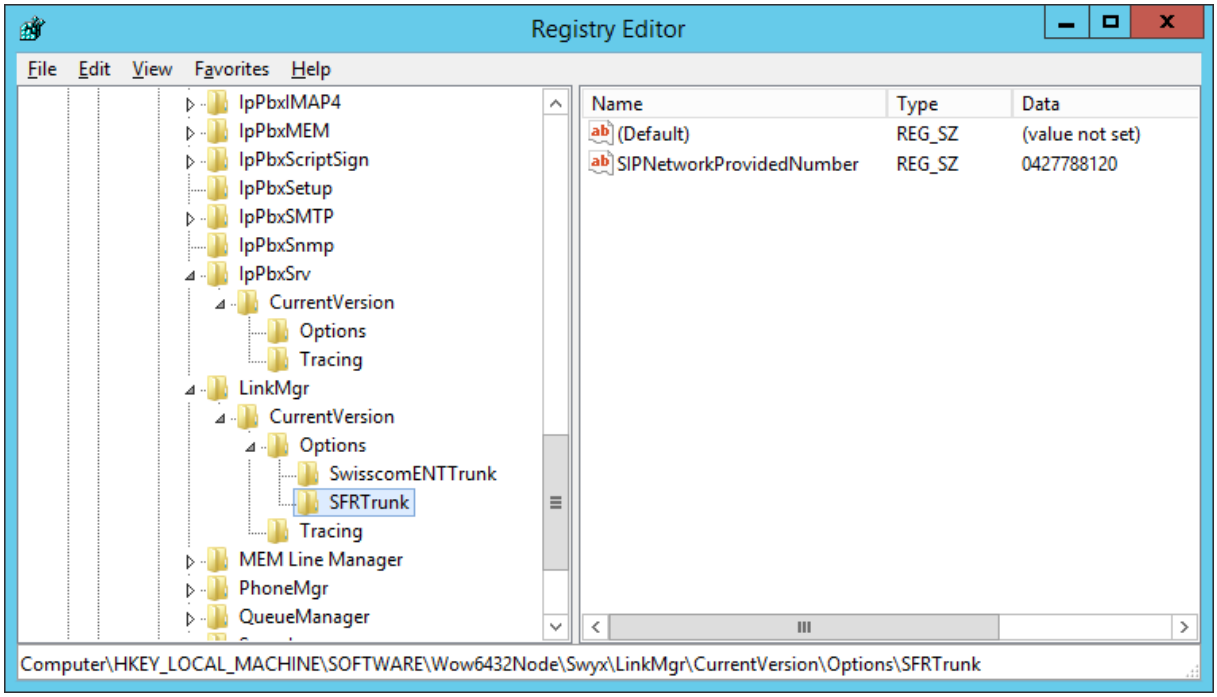

Figure 30: Windows registry

3.4 User

Finally, the public numbers can be assigned to existing or new SwyxWare users, enabling them to make outbound, public calls and receiving public calls.
Please consult the SwyxWare manual for further details if necessary.

3.5 Multiple sites

The SwyxWare does not support several sites/locations to be handled by one single SIP trunk. Each site/location requires its own dedicated SIP trunk and trunk group. This means that the configuration steps from the previous chapters have to be performed for each site/location.
Routing records etc. also have to be considered.

4 Provider profile

If the SwyxWare installation does not contain the provider profile for SFR, as with SwyxWare2015R3 or older, it is necessary to import the profile through the CustomProviderProfile.config.

Please follow these installation steps:

1. Close the SwyxWare Administration (if opened)
2. Copy the file CustomProviderProfiles.config into the SwyxWare installation folder e.g. C:\Program Files\SwyxWare
3. Open the SwyxWare Administration.
4. The newly added SIP Provider profile should appear in the list of available profiles for SIP trunks.

Further information about the CustomProviderProfiles.config file can be taken from the following Knowledgebase article: http://www.swyx.com/support/ssdb.html?kbid=kb3436