



## SwyxWare configuration guide for BT HSIPT trunk

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## 1 Introduction

### 1.1 General

This guide should be used when configuring the SwyxWare with the following BT SIP Services:

- BT HSIPT

### 1.2 Network considerations

The BT HSIPT is a SIP trunk with registration and digest authorization. Additionally, BT also checks the public IP address, from where SIP packets are sent from. Therefore, a static public IP address from the ISP is necessary.

## 2 Configuration guide

For the BT HSIPT, each customer has to configure some individual customer data, which cannot be preset with the provider profile.

### Individual Configuration data:

Item	Example for this document	comment
SIP Registrar	siptswyx.com	
SIP Proxy	siptswyx.com	
SIP Realm	siptswyx.com	
Pilotnumber	445600653841	Also used for registration
Username	swyxswyxware	
Password	XXXXX	
Number range	+44 5600653842 - 846	

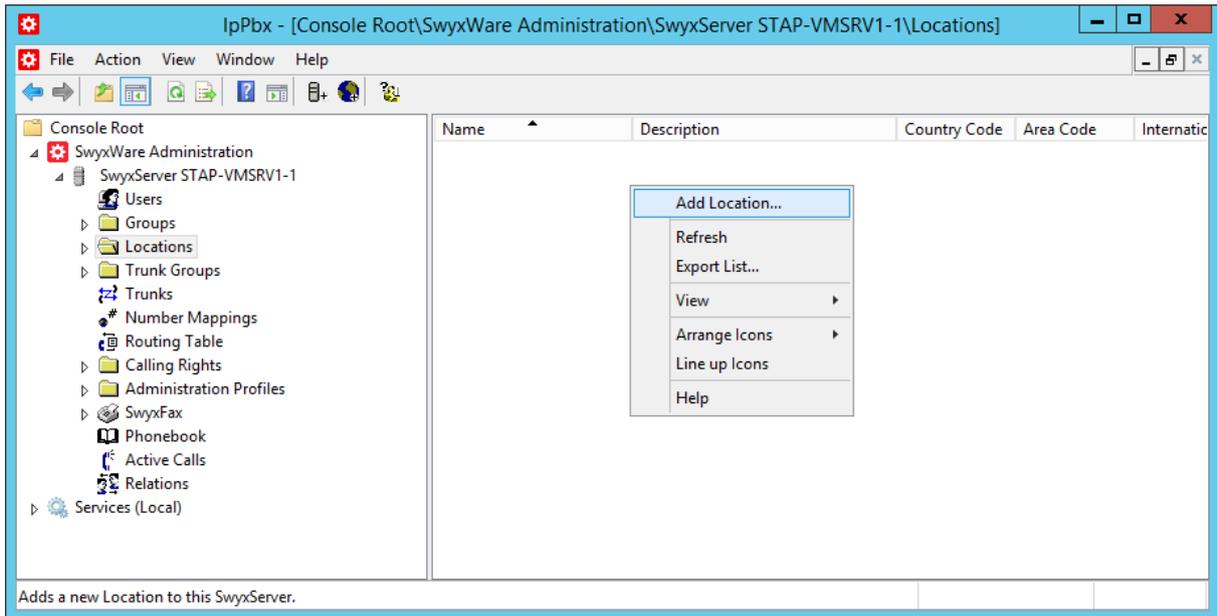
From SwyxWare 11.00 on, the profile for BT HSIPT will be available in the integrated list of provider profile. For earlier versions, it is necessary to import the profile via CustomProviderProfile.config as described in chapter [Provider profile](#).

### The provider profile:

```
<sp:SIPProviderProfile
  id="bt_hsipt"
  name="British Telecom HSIPT (UK) "
  outboundProxy="sipt-dynamic-bslnws09.yourwhc.co.uk"
  registrar="Enter Server"
  Proxy="Enter Server"
  realm="Enter Realm"
  DtmfMode="Rfc2833_Event">
  <sp:NumberFormats
    outbound_called="National"
    outbound_calling="CanonicalWithoutPlus"
    inbound_called="CanonicalWithoutPlus"
    inbound_calling="National"/>
</sp:SIPProviderProfile>
```

### 2.1 Location

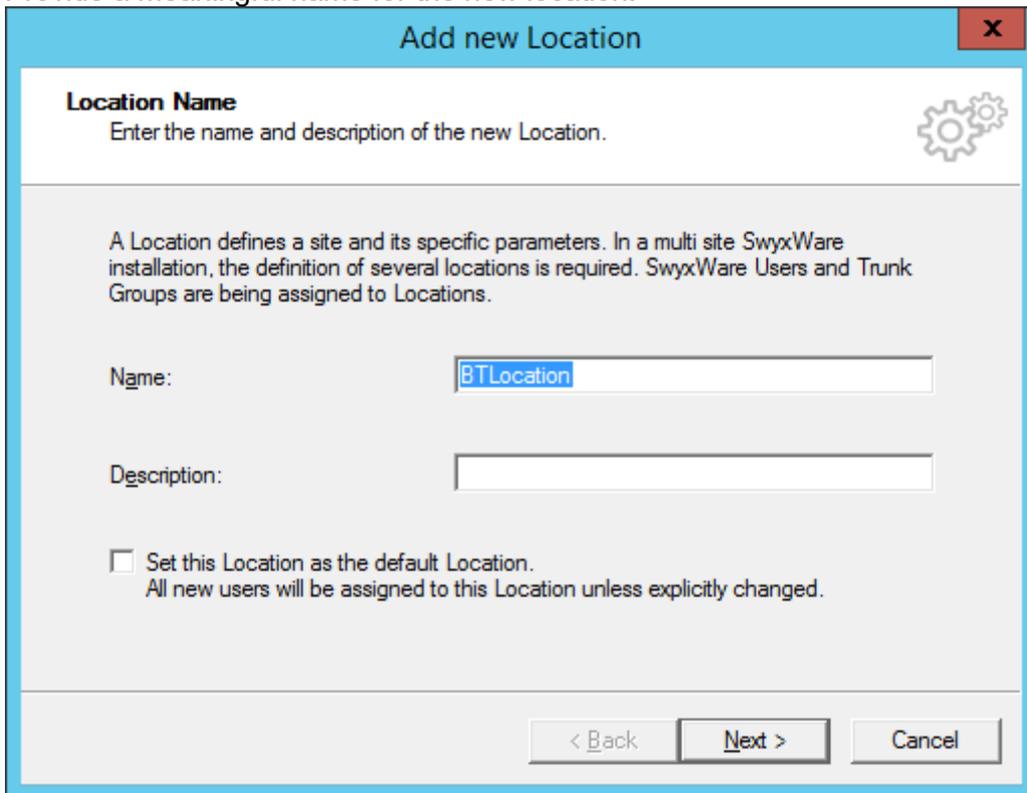
As a first step, a new location has to be created. Open the SwyxWare Admin tool, navigate to the locations folder, start the "Add Location" wizard, by opening the context menu in the right, larger area and selecting "Add Location ...".



**Figure 1: 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 2: Location name**

Configure country code, etc.

**Add new Location** [X]

**Location specific codes and prefixes**  
Specify the codes and prefixes which are related to this Location.

The prompted parameters determine how the destination number of a call, originated by a SwyxWare User or a Trunk, is interpreted by the system. This is in particular needed to identify calls that remain in the same area or county.

A typical German Location in Berlin would have a Country Code set to '49', Area Code to '30', International Prefix to '00' and Long Distance Prefix to '0'.

Own Country Code:

Own Area Code:

Prefix for International Calls:

Prefix for Long Distance Calls:

< Back    Next >    Cancel

Figure 3: Country code, area code etc.

Provide public access number.

**Add new Location** [X]

**Private Branch Exchange related properties**  
Specify the PBX settings which are related to this Location.

The Public Line Access prefix defines which number has to be dialed to obtain access to the public network.

It is possible to define multiple Public Access Prefixes, separated by a semicolon.

The Internal Number for undeliverable calls defines where incoming calls will be transferred when the called public number is not assigned to a SwyxWare User or Group.

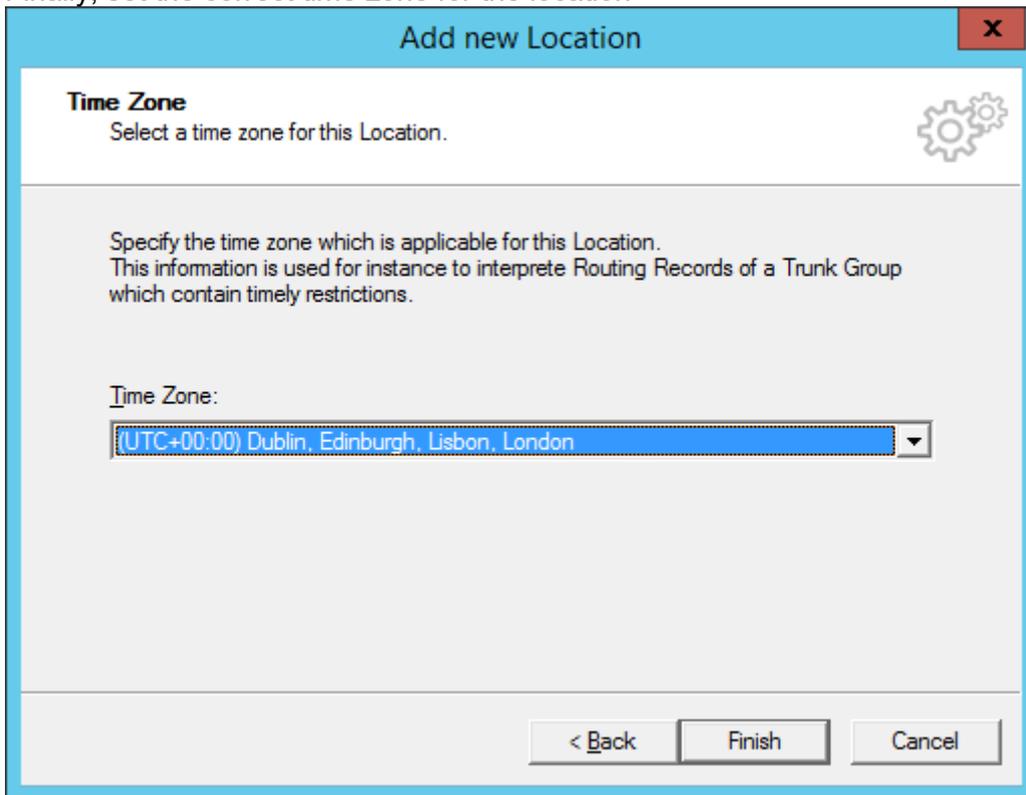
Public Line Access Prefixes:

Route undeliverable calls to Internal Number:  ...

< Back    Next >    Cancel

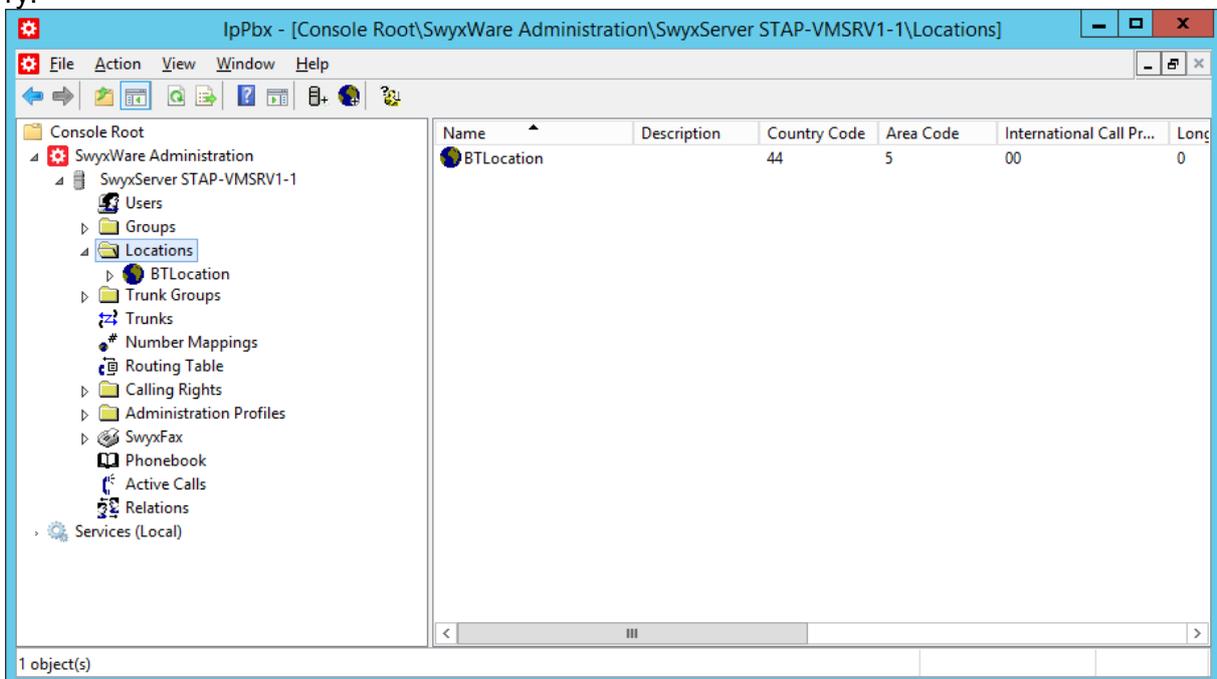
Figure 4: Public access number

Finally, set the correct time zone for the location



**Figure 5: Time zone**

The newly created location is displayed in the administration and can be modified if necessary.

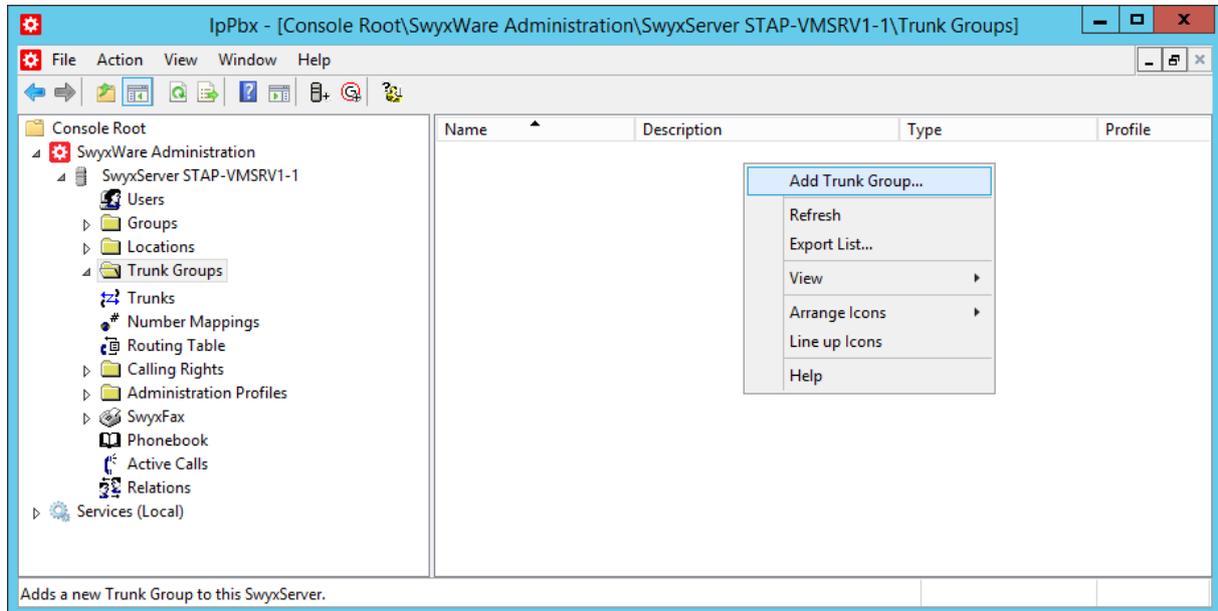


**Figure 6: Overview of all existing locations**

## 2.2 SIP Trunk group

### 2.2.1 Creation

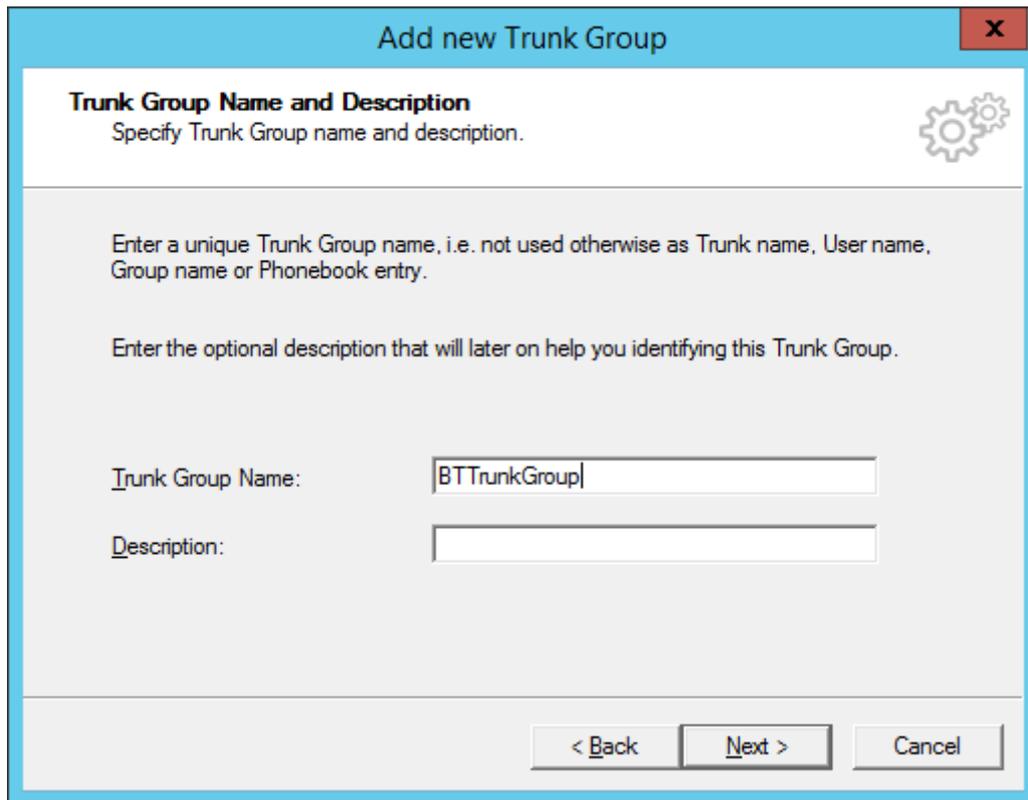
After creating the location, a new SIP trunk group has to be created. In the SwyxWare Admin tool, navigate to the Trunk Groups folder, start the creation wizard by opening the context menu in the right, larger area and selecting “Add Trunk group ...”.



**Figure 7: 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.



**Add new Trunk Group**

**Trunk Group Name and Description**  
Specify Trunk Group name and description.

Enter a unique Trunk Group name, i.e. not used otherwise as Trunk name, User name, Group name or Phonebook entry.

Enter the optional description that will later on help you identifying this Trunk Group.

Trunk Group Name:

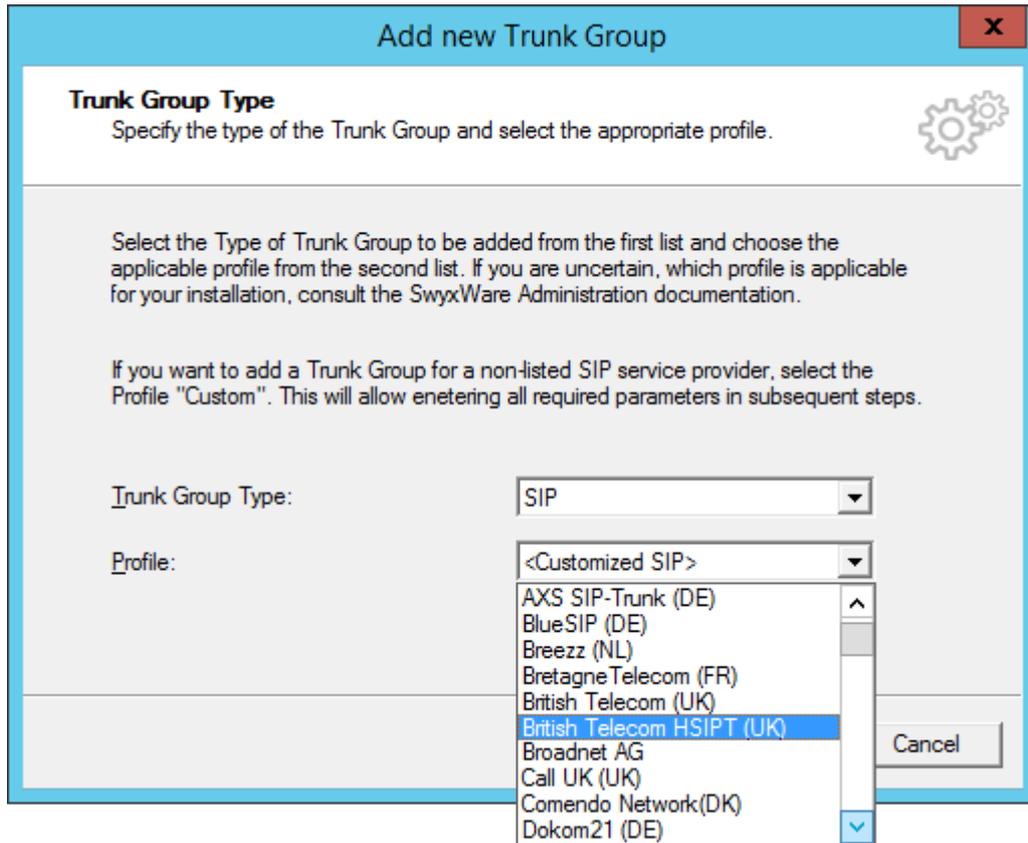
Description:

< Back   Next >   Cancel

**Figure 8: Trunk Group Name**

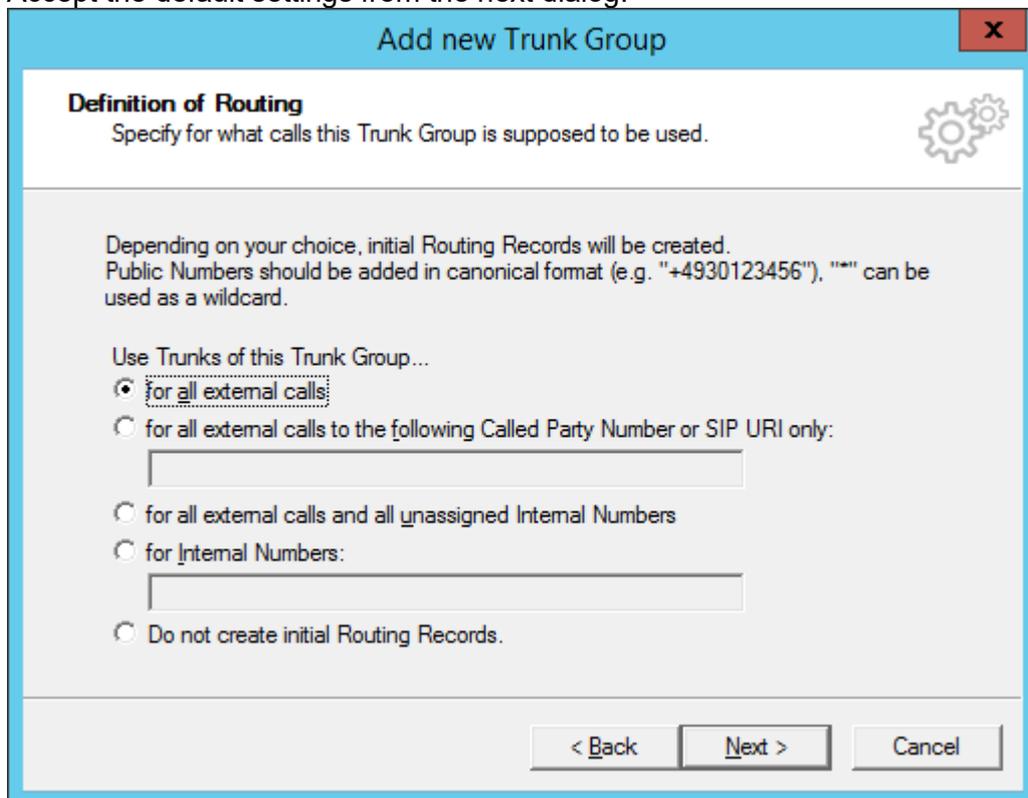
Select „SIP“ as Trunk Group Type and select „British Telecom HSIPT (UK)“ from the dropdown list as Profile.

In case, that a SwyxWare 2015 R40.3.0 or earlier is used, the profile for „British Telecom HSIPT (UK)“ 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.



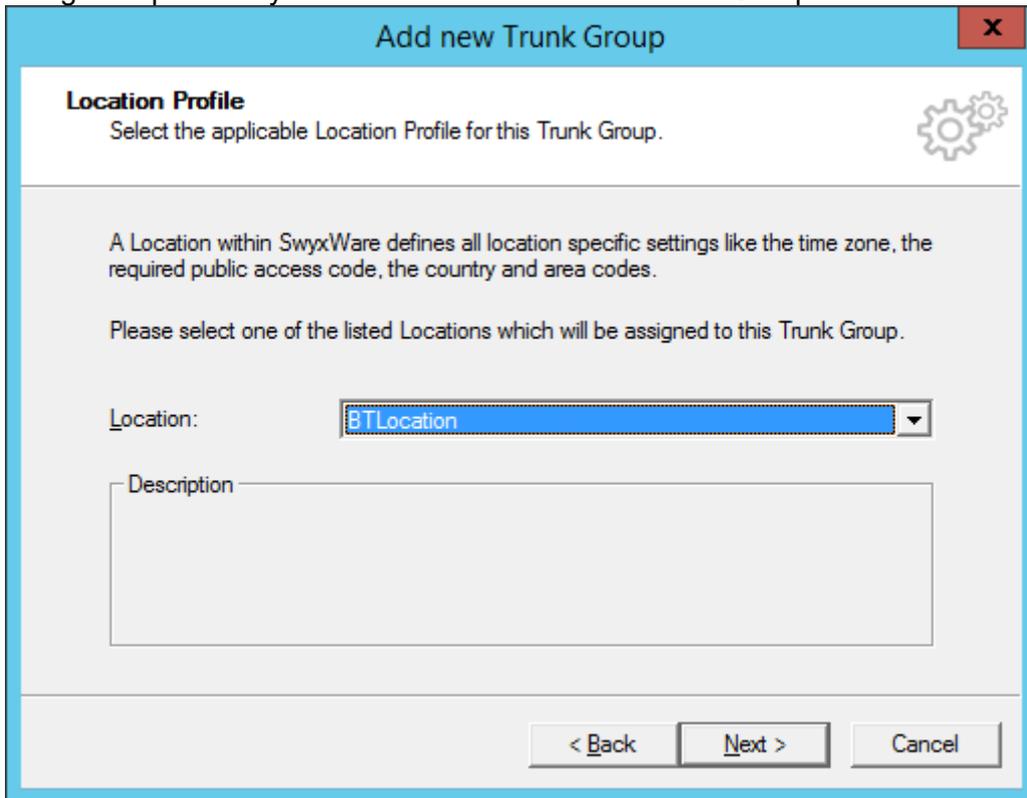
**Figure 9: Choose provider profile**

Accept the default settings from the next dialog.



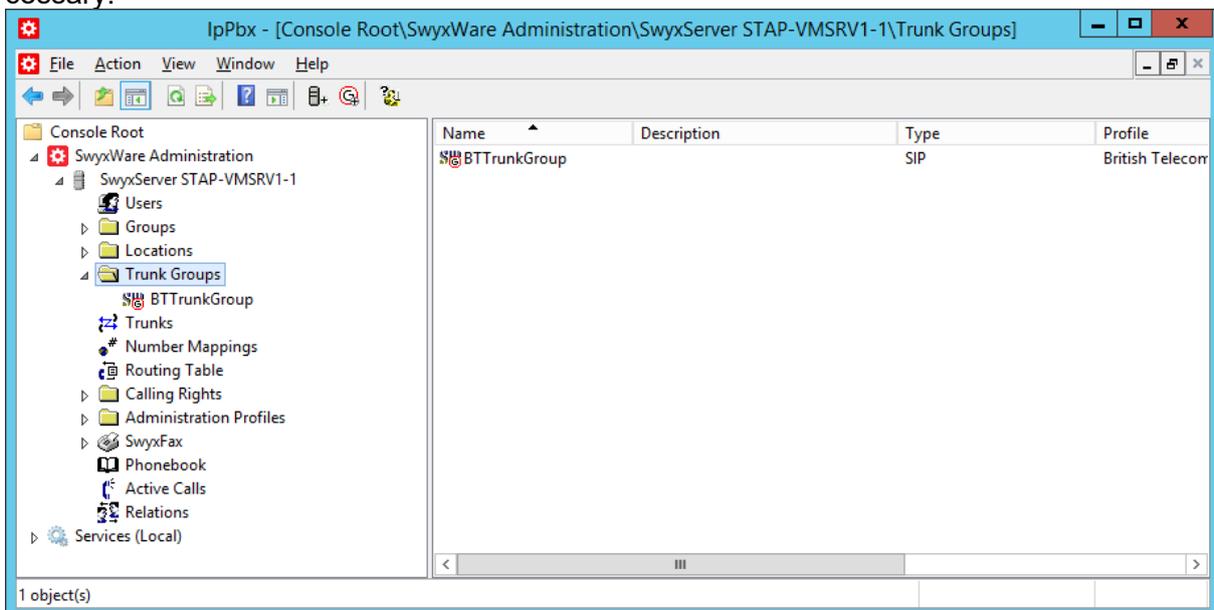
**Figure 10: Initial routing records**

Assign the previously created location to the SIP Trunk Group.



**Figure 11: Assign location**

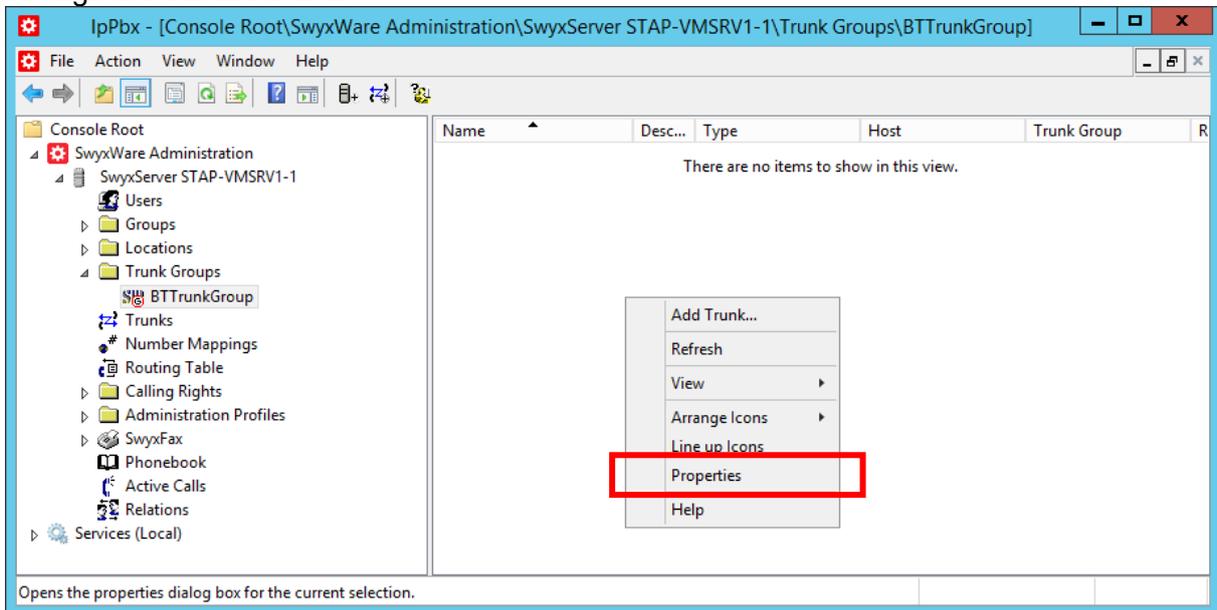
The newly created trunk group is displayed in the administration and can be modified if necessary.



**Figure 12: Overview of all existing trunk groups**

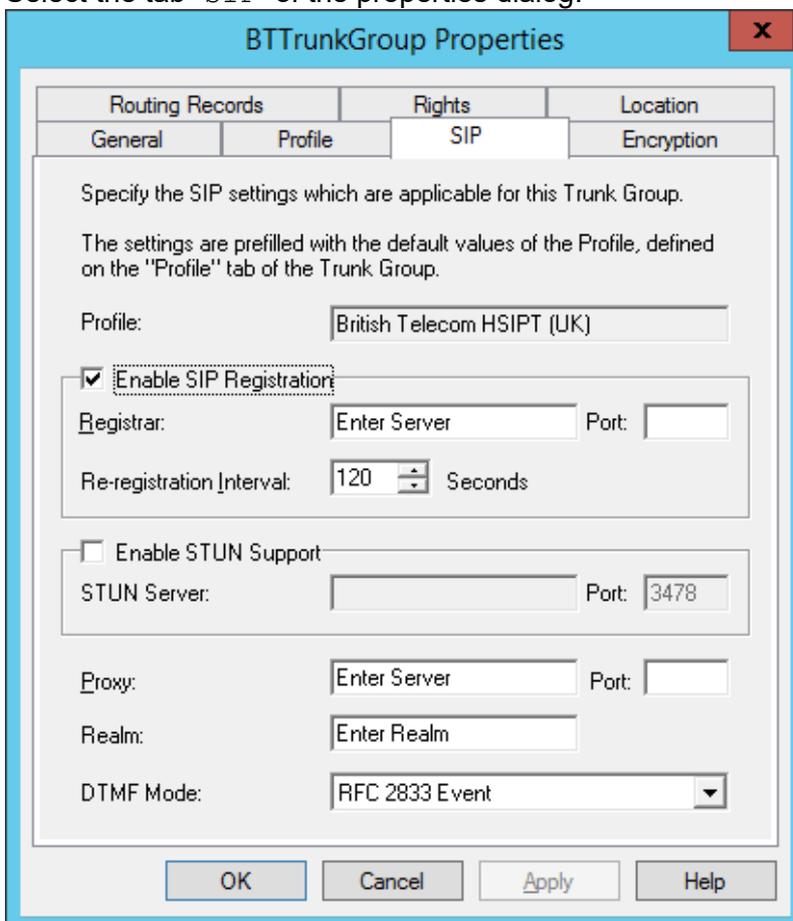
### 2.2.2 Additional configuration

After creating the SIP Trunk Group, a few settings need to be adjusted. Navigate to the Trunk Groups folder, select the created SIP Trunk Group. Open the Trunk Group properties through the context menu.

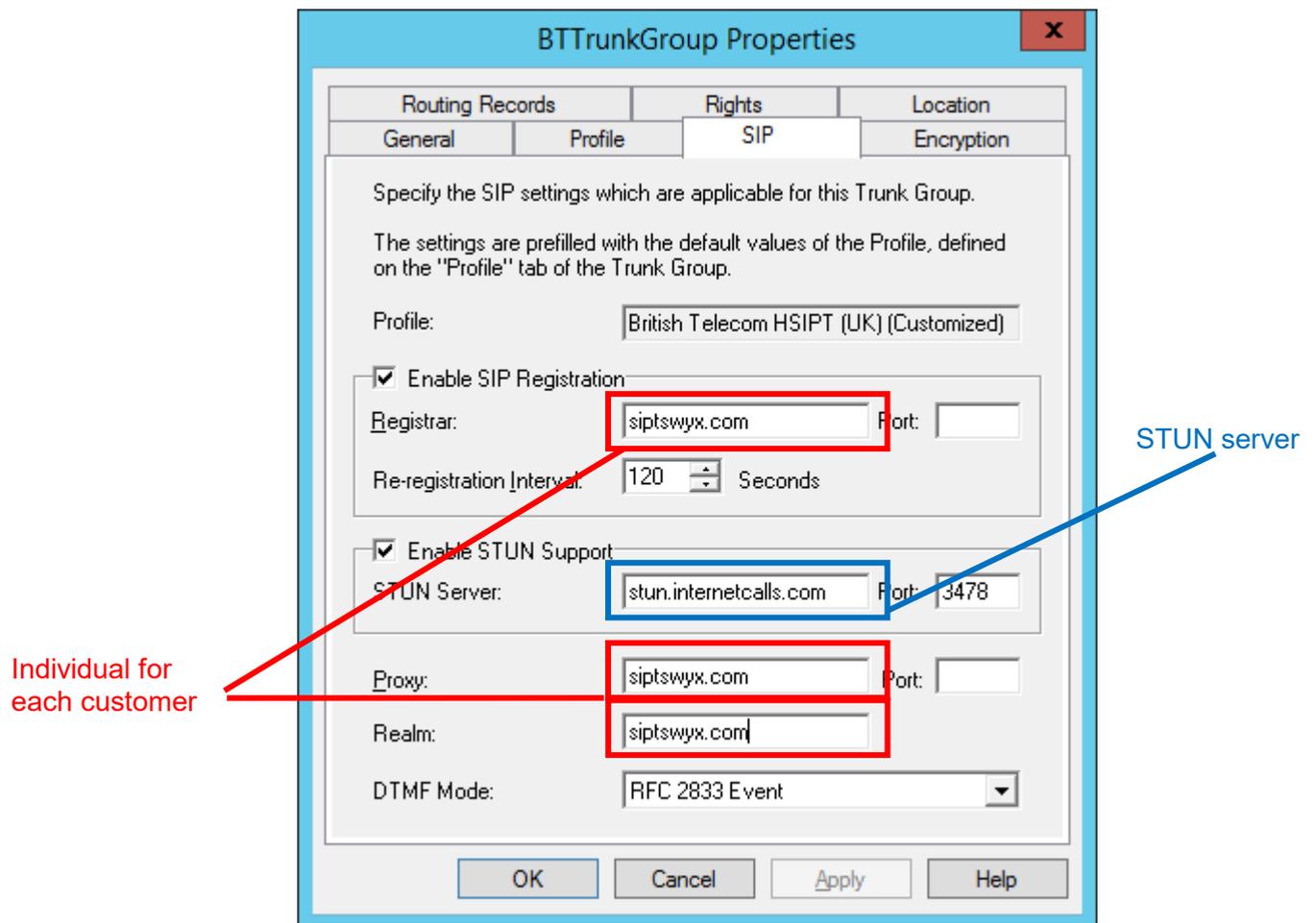


**Figure 13: Properties of the Trunk Group**

Select the tab "SIP" of the properties dialog.



**Figure 14: The original "SIP" Tab**

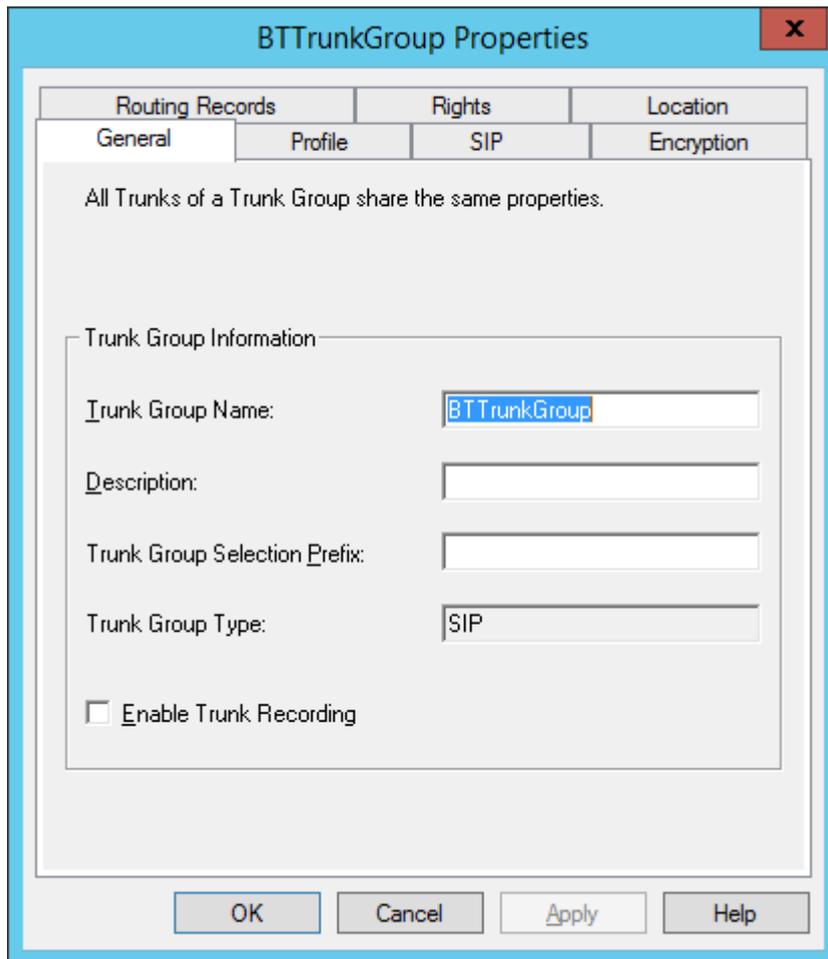


**Figure 15: The configured "SIP" tab**

In the fields "Registrar", "Proxy" and "Realm", the individual settings from BT have to be entered. The "Port" fields have to be left empty.

It is also necessary to configure a STUN server in order to signal public IP address and port in the SIP messages. Mark the "Enable STUN Support" checkbox and enter an IP address or FQDN of a STUN server. A list of available public STUN servers can be found [here](#).

Usually, it is not necessary to configure any additional parameter in the other tabs but are depicted in the following figures. More information about the configuration parameters in these dialogs can be found in the SwyxWare manual.



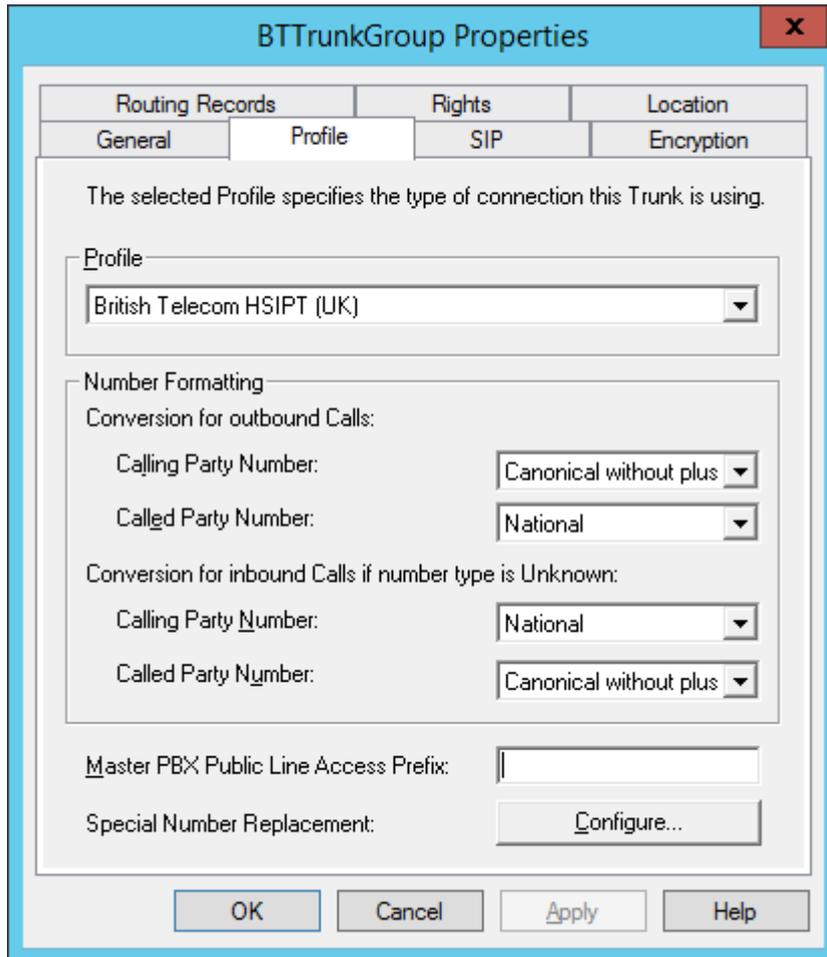
The screenshot shows a dialog box titled "BTTrunkGroup Properties" with a close button (X) in the top right corner. The dialog has four tabs: "General", "Profile", "SIP", and "Encryption". The "General" tab is selected. Below the tabs, there is a message: "All Trunks of a Trunk Group share the same properties." Below this message is a section titled "Trunk Group Information" containing the following fields:

- Trunk Group Name:** A text box containing "BTTrunkGroup".
- Description:** An empty text box.
- Trunk Group Selection Prefix:** An empty text box.
- Trunk Group Type:** A dropdown menu with "SIP" selected.
- Enable Trunk Recording**

At the bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

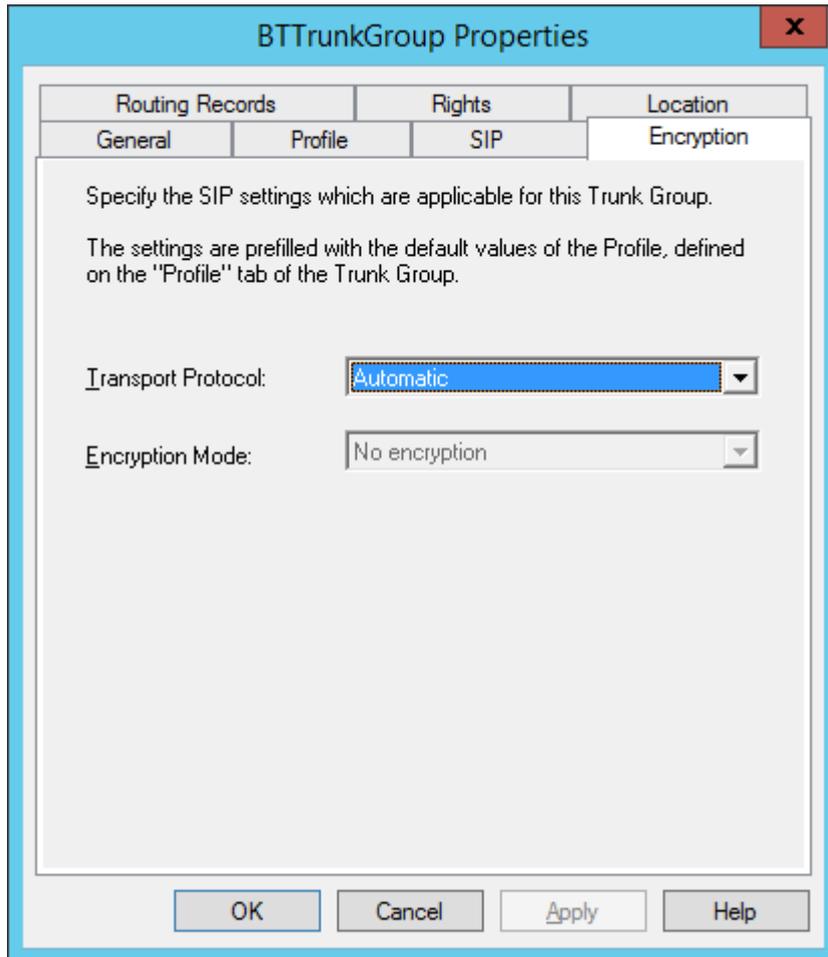
**Figure 16: The "General" tab**

In this tab, the Trunk Group Name can be changed and a description can be provided. It is also possible to define a Trunk Group Selection Prefix if a call has explicitly to be routed through this trunk group. Additionally, trunk recording can be enabled.



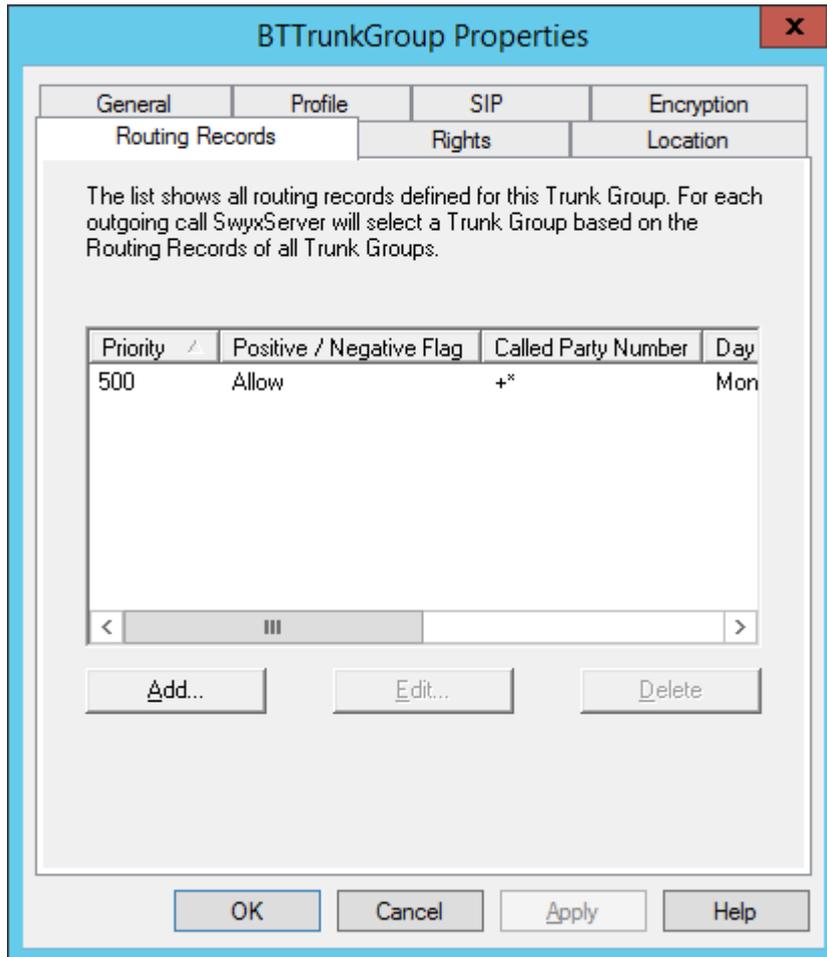
**Figure 17: The "Profile" tab**

In the „Profile“ tab, the provider profile can be set and the number formats for inbound and outbound calls for calling and called party are defined. Currently, for the British Telecom HSIPT trunk, there is no need to configure a special number replacement.



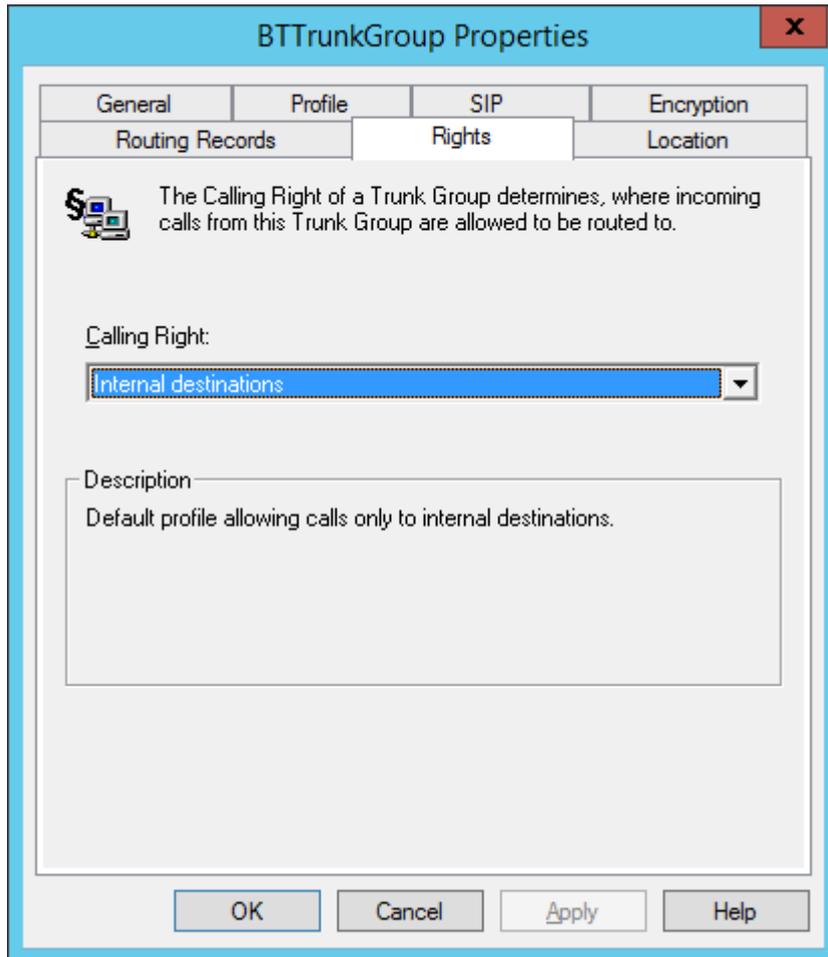
**Figure 18: The "Encryption" tab**

If the `Transport Protocol` is set to „Automatic“, the actual transport protocol and the encryption mode are detected through DNS SRV queries. Currently the transport protocol is set to UDP and encryption is disabled.



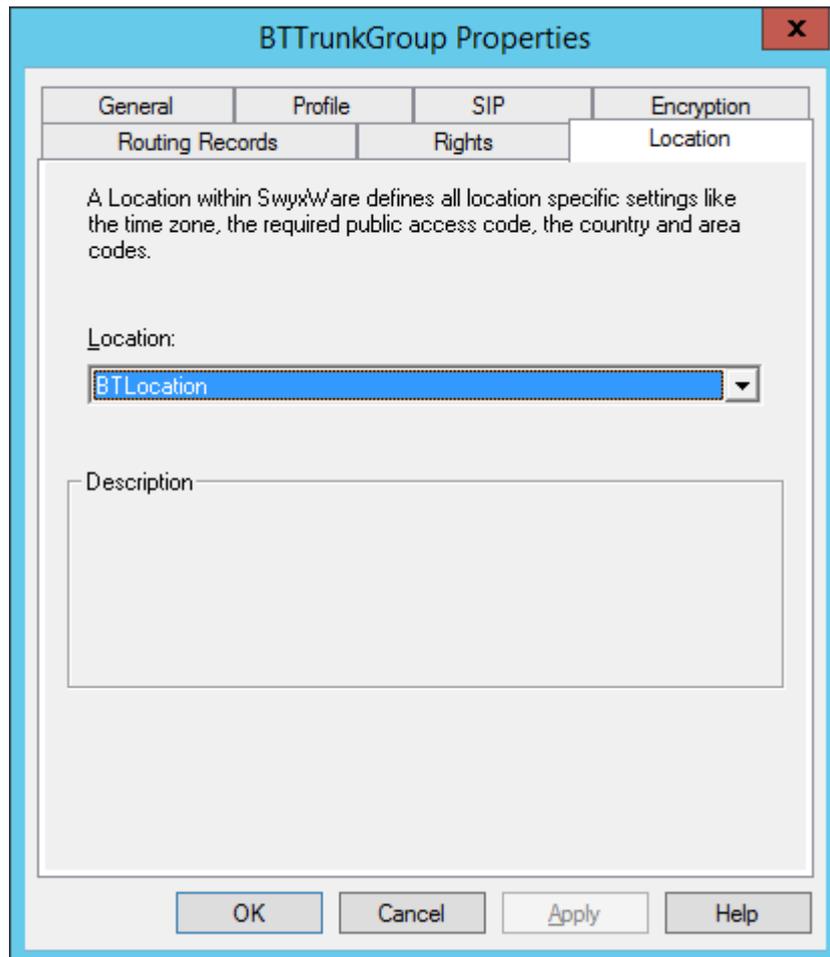
**Figure 19: The "Routing Records" tab**

In this dialog, new routing records can be created. Existing records can be modified or deleted. With the routing records, it is possible to allow or deny usage of this trunk group by different criteria (User, group membership, ...) and to set the routing priority.



**Figure 20: The "Rights" tab**

In this dialog, it is possible to define where inbound calls can be routed to if no internal destination can be found.



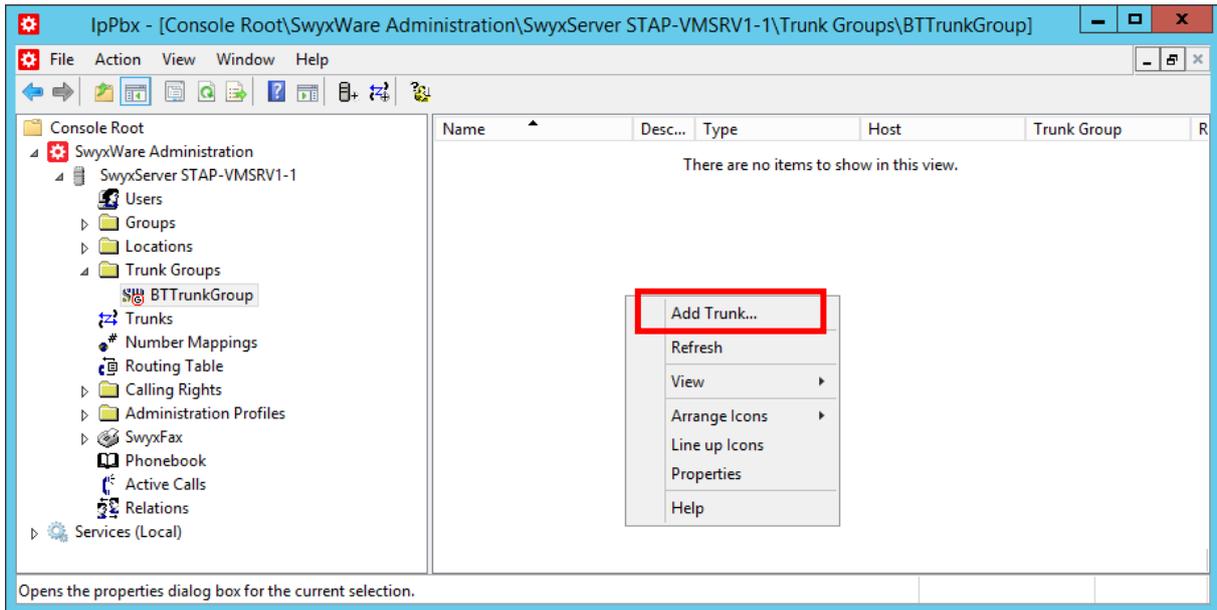
**Figure 21: The "Location" tab**

In this dialog, the location can be selected.

## 2.3 SIP trunk

### 2.3.1 Creation

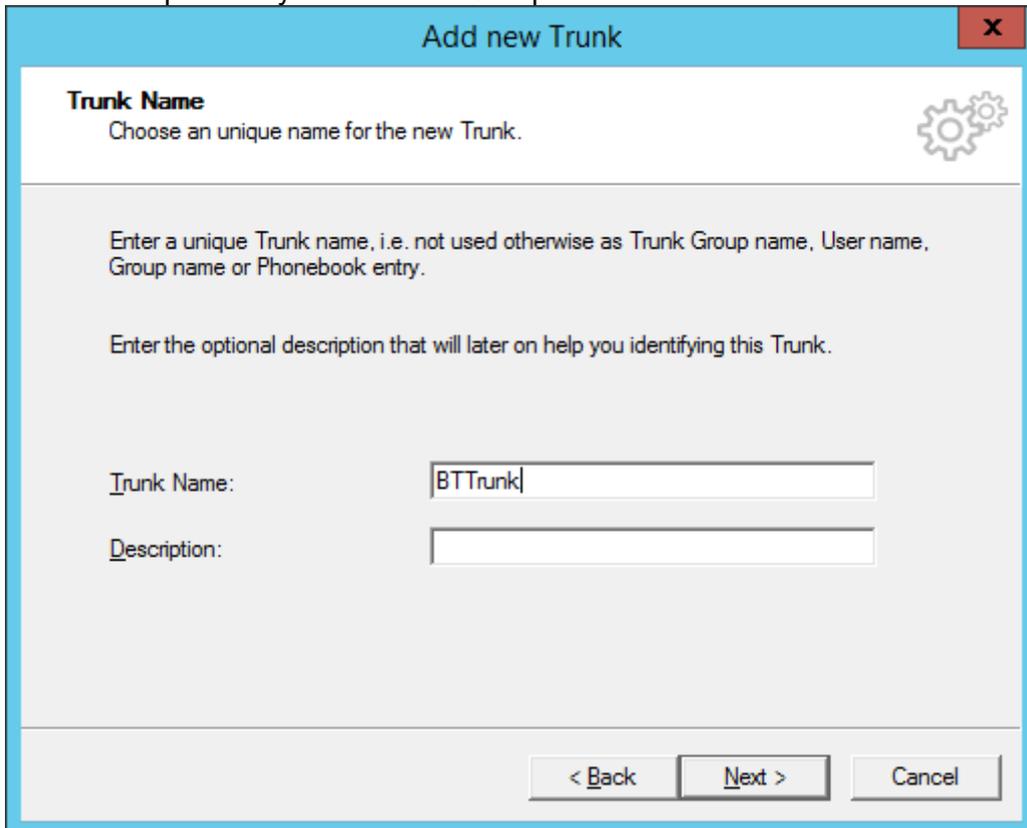
After creating and configuring the SIP Trunk Group, the actual SIP Trunk can be created. Navigate to the Trunk Groups folder, select the created SIP Trunk Group. Open the Trunk Group properties through the context menu and chose "Add Trunk ..." to start the SIP Trunk creation wizard.



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

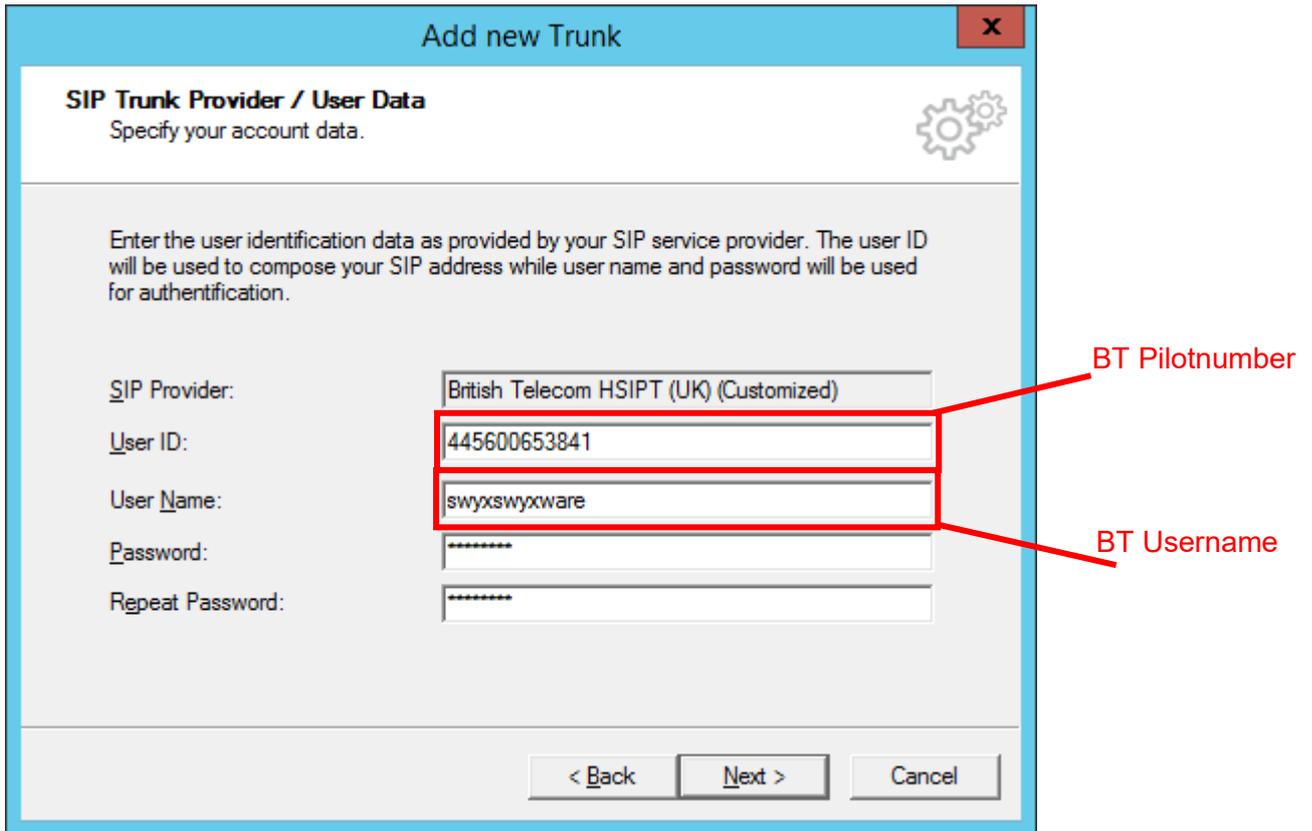
The following screenshots are showing the configuration dialogs from the wizard.

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**

In the following dialog, the SIP user credentials have to be configured.



**Figure 24: User credentials**

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

Add new Trunk
X

**Subscriber Numbers**  
Specify Subscriber Numbers.

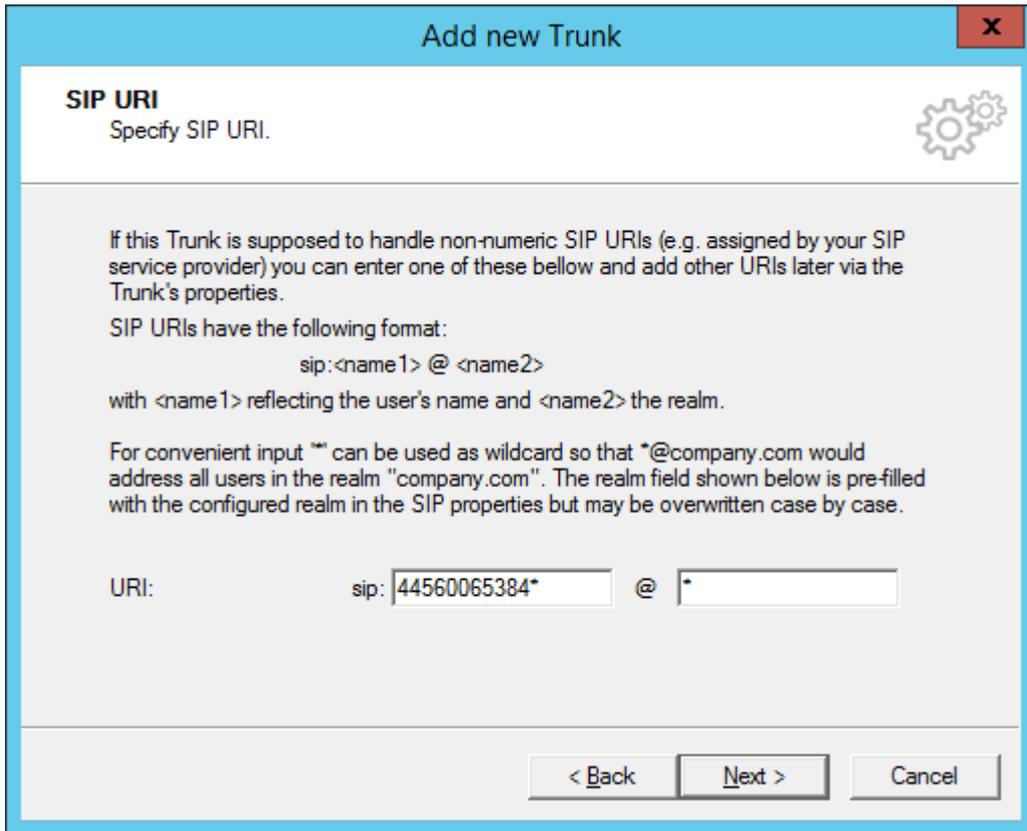
Enter the subscriber number part of the Public Numbers that are terminated by this Trunk.  
 If your set of subscriber numbers is incoherent enter only the first subscriber number and add the other subscriber numbers later via the Trunk's properties.  
 If this Trunk does not add any Public Numbers to the system, leave all fields empty and click 'Next'.

Note: Country Code and Area Code have been pre-determined by the Trunk Group's location.

Country Code	Area Code	First Subscriber Number	Last Subscriber Number
<input style="width: 50px;" type="text" value="44"/>	<input style="width: 50px;" type="text" value="5"/>	<input style="width: 150px;" type="text" value="600653842"/>	<input style="width: 150px;" type="text" value="600653846"/>

**Figure 25: Number range**

To accept incoming calls from BT, it is necessary to configure a SIP URI with wildcarding. The wildcarding in the user part of the SIP URI has to consider the assigned number range.



The screenshot shows a dialog box titled "Add new Trunk" with a close button (X) in the top right corner. The main heading is "SIP URI" with the instruction "Specify SIP URI." and a gear icon. The text explains that non-numeric SIP URIs can be entered and lists the format: sip:<name1> @ <name2>, where <name1> is the user's name and <name2> is the realm. It also notes that "\*" can be used as a wildcard. At the bottom, there are three buttons: "< Back", "Next >", and "Cancel".

**SIP URI**  
Specify SIP URI.

If this Trunk is supposed to handle non-numeric SIP URIs (e.g. assigned by your SIP service provider) you can enter one of these bellow and add other URIs later via the Trunk's properties.

SIP URIs have the following format:

sip:<name1> @ <name2>

with <name1> reflecting the user's name and <name2> the realm.

For convenient input "\*" can be used as wildcard so that \*@company.com would address all users in the realm "company.com". The realm field shown below is pre-filled with the configured realm in the SIP properties but may be overwritten case by case.

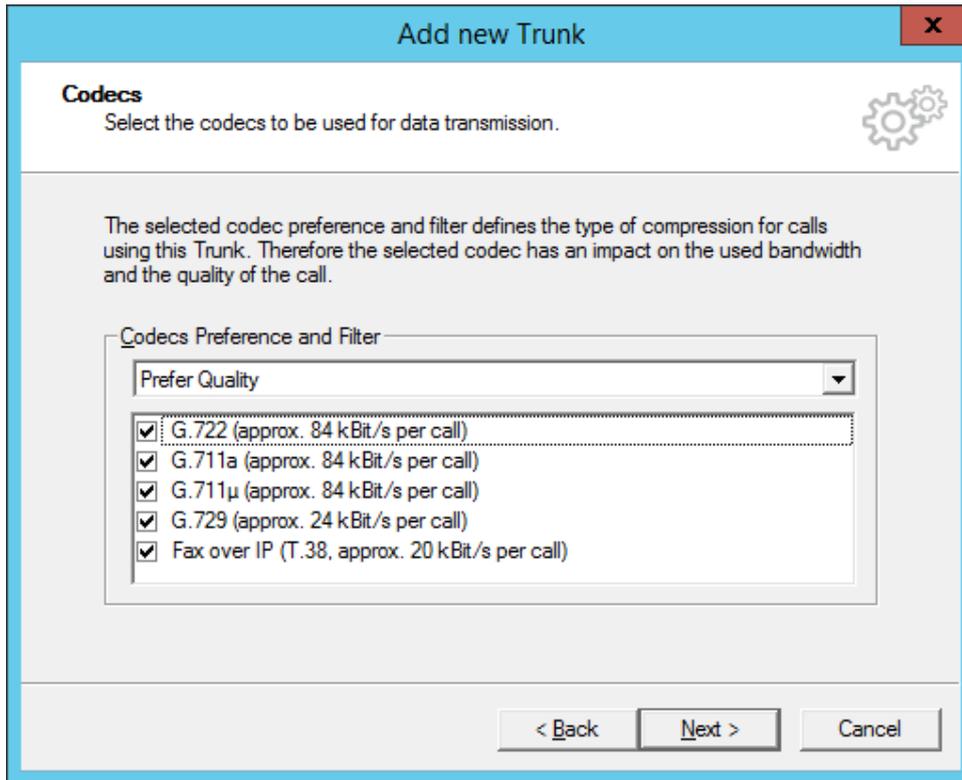
URI:                      sip:  @

**Figure 26: SIP URI**

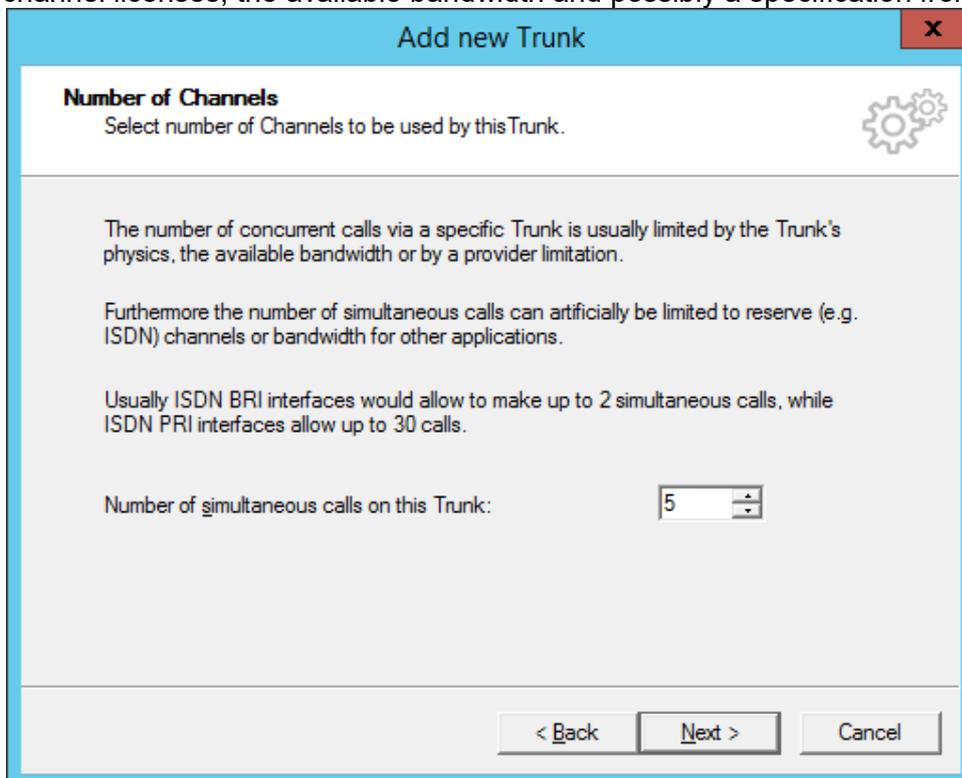
With the settings depicted in figure 19, all incoming calls to +445600653840 until +445600653849 are accepted. It is also possible to configure one single URI with wildcarding. In this case, it is necessary to add each single URI after the trunk was created.

The codecs are configured in the next dialog. The default settings can be accepted.



**Figure 27: Codec settings**

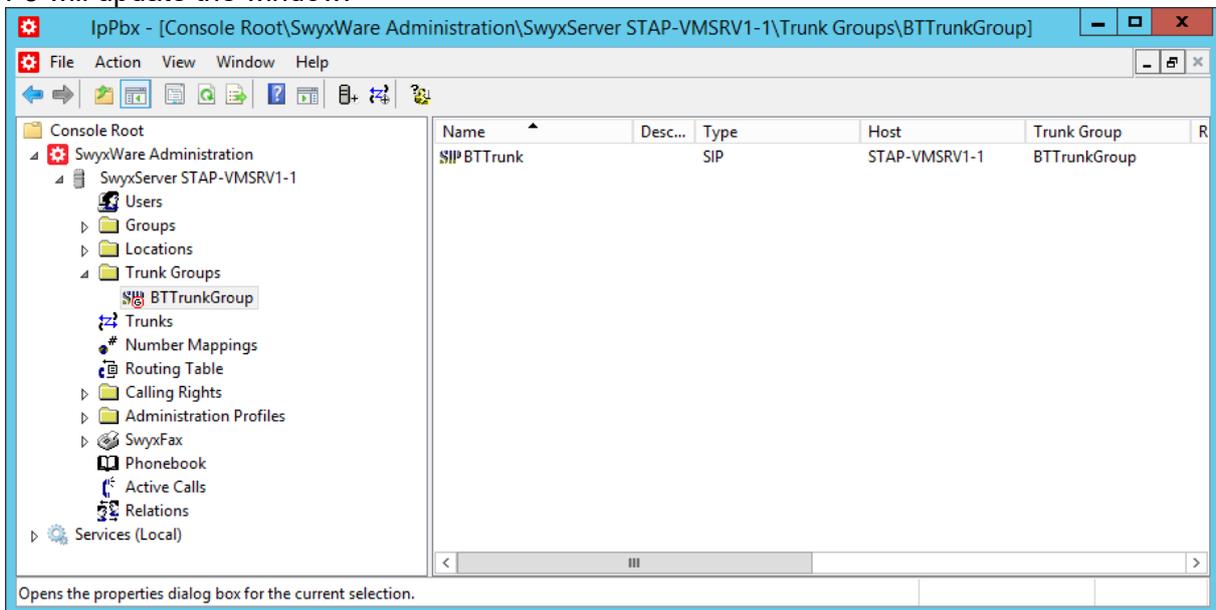
The last parameter is the number of parallel calls. This parameter depends on the installed channel licenses, the available bandwidth and possibly a specification from BT.



**Figure 28: Number of parallel calls**

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

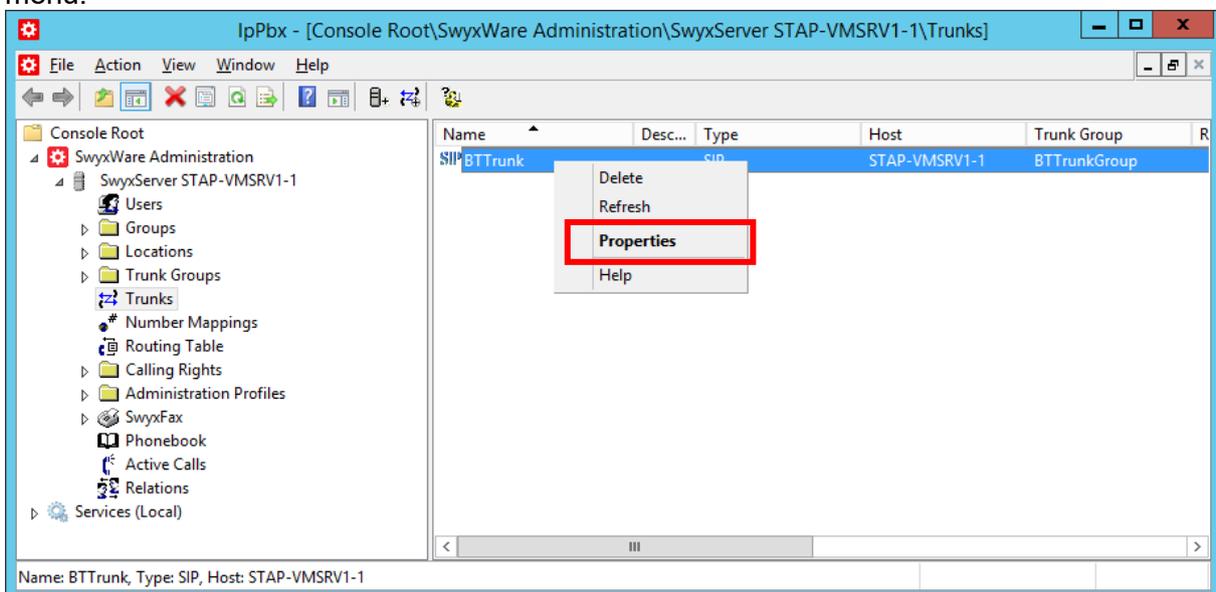
Afterwards, the trunk should be presented as active. This may take some seconds. Pressing F5 will update the window.



**Figure 29: Active SIP trunk**

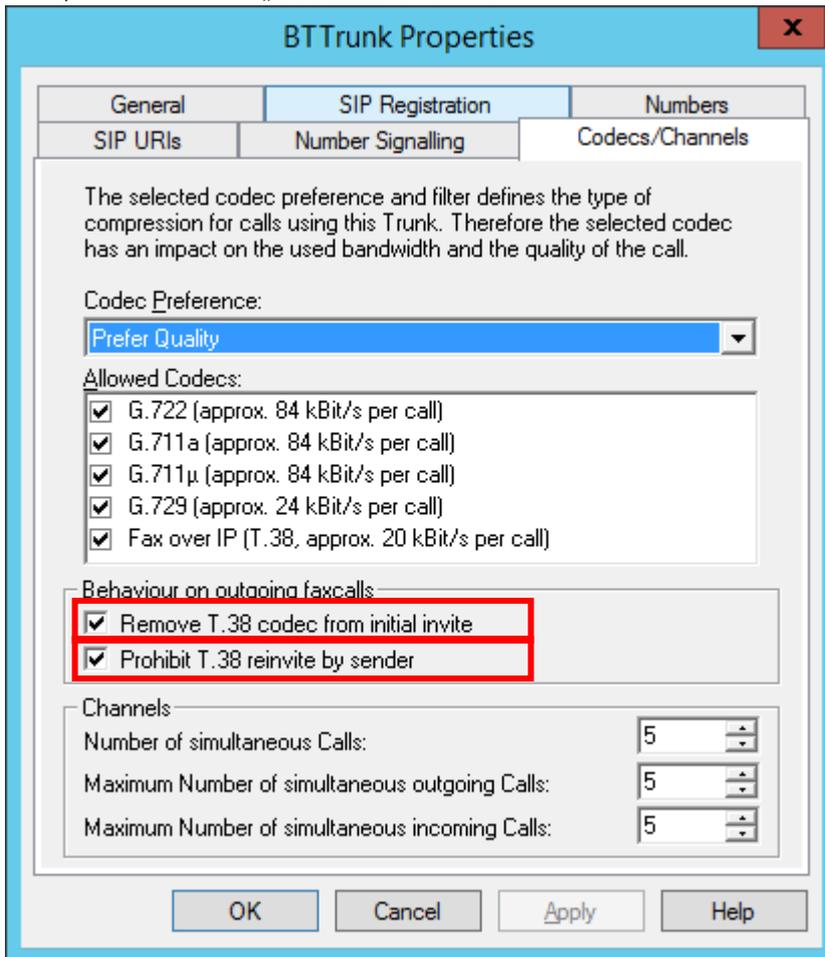
### 2.3.2 Additional configuration

After creating the actual SIP Trunk, some settings need to be adjusted. Navigate to the Trunk folder, select the created BT SIP Trunk. Open the SIP Trunk properties through the context menu.



**Figure 30: Trunk properties**

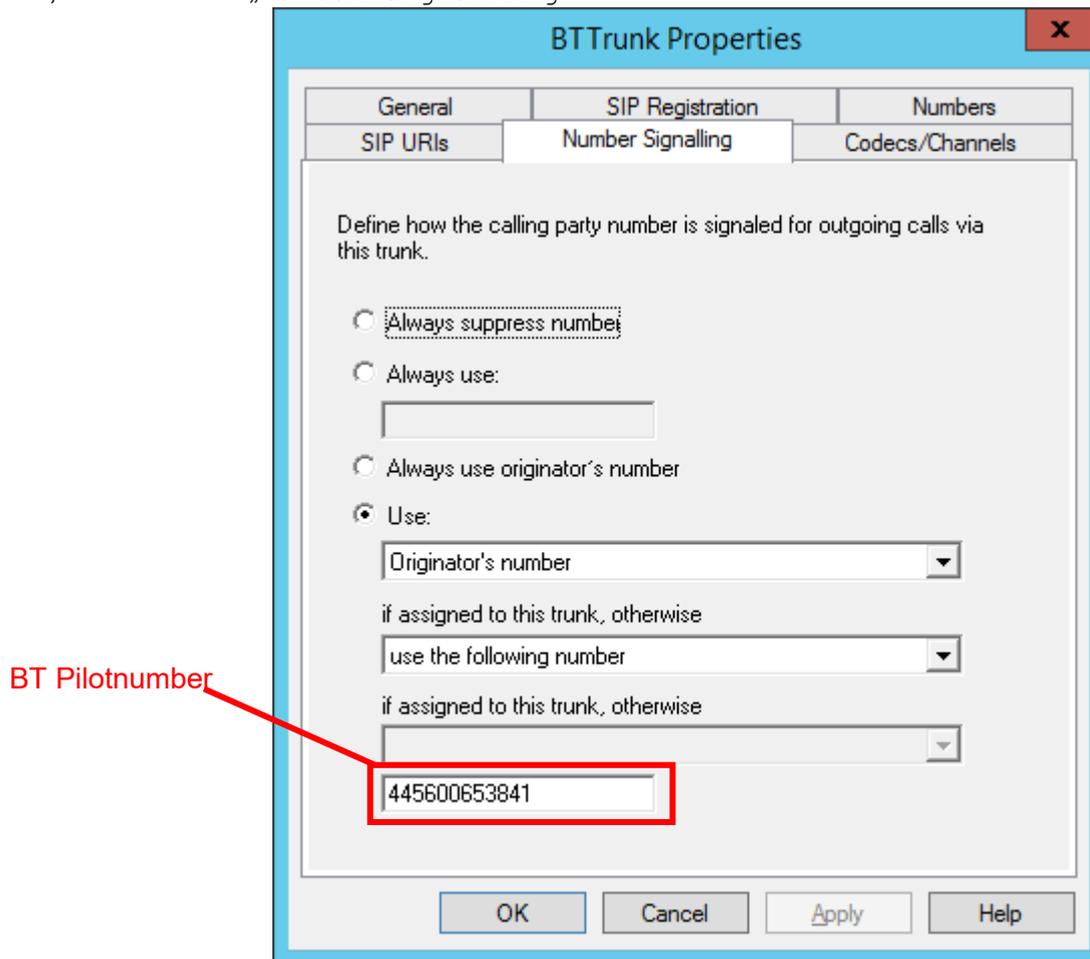
First, select the tab „Codecs/Channel“.



**Figure 31: Additional T.38 configuration**

In the section „Behaviour on outgoing faxcalls“, both checkboxes „Remove T.38 codec from initial invite“ and „Prohibit T.38 reinvite by sender“ have to be selected.

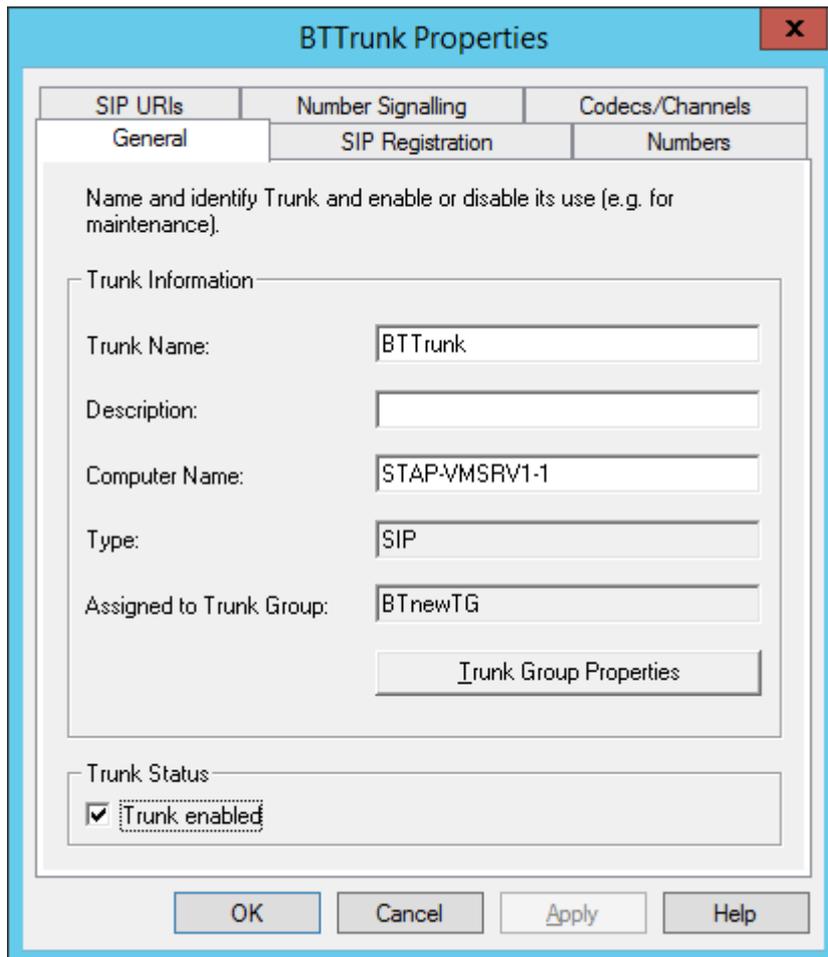
Next, select the tab „Number Signalling“.



**Figure 32: Number signalling configuration**

The configuration for the number signalling is depicted in figure 25. Since CLIP No Screening is not supported, it is mandatory to signal the pilot number in case that an outgoing call is initiated from a user with a number which is not assigned to the SIP trunk and for forwarded calls.

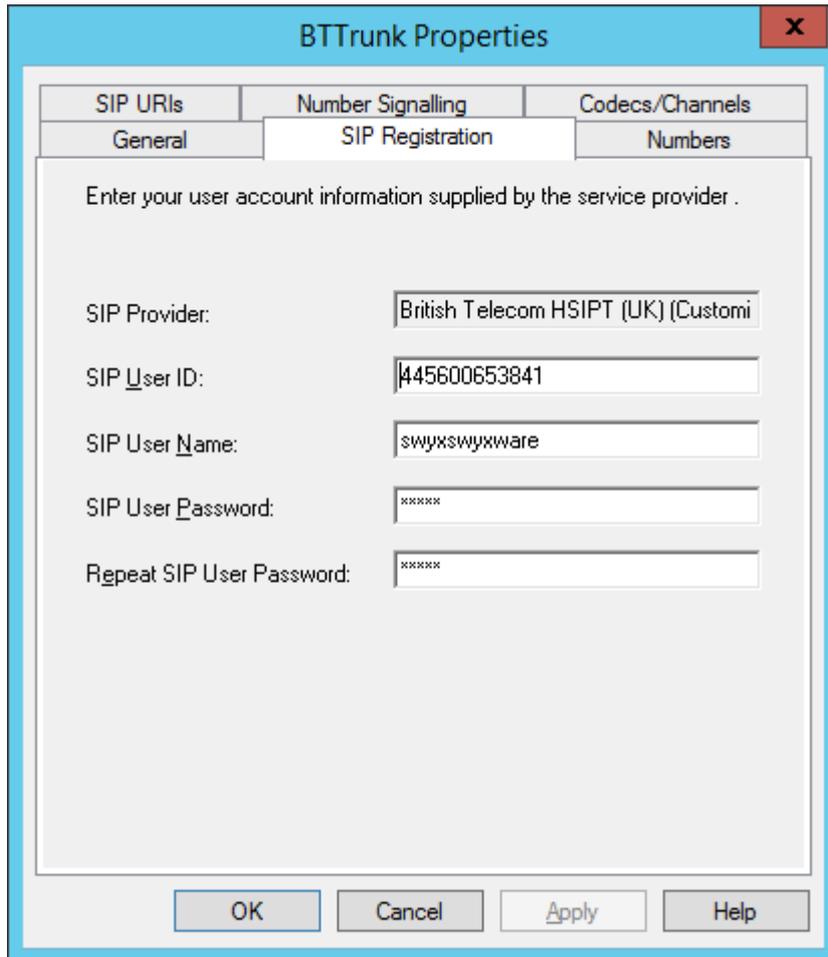
Usually, it is not necessary to configure any additional parameter in the other tabs but are depicted in the following figures. More information about the configuration parameters in these dialogs can be found in the SwyxWare manual.



**Figure 33: The "General" tab**

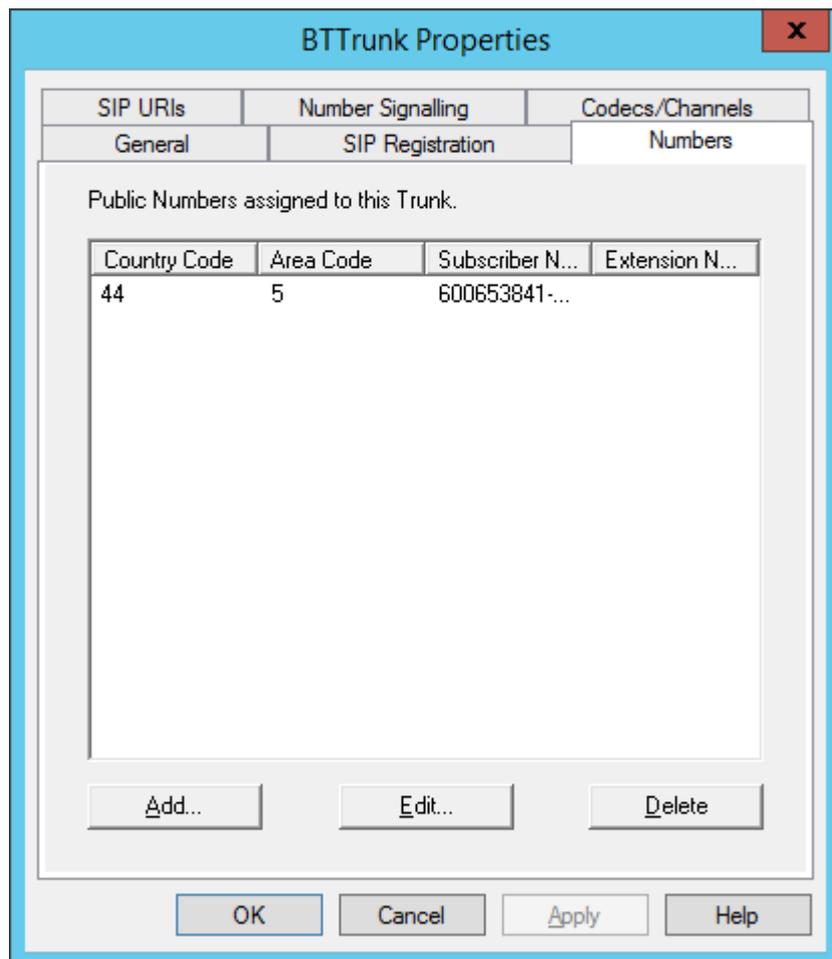
In the „General“ tab, the name of the actual SIP Trunk can be modified. It is also possible to access properties of the trunk group that the SIP trunk is attached to.

Most important is the possibility to activate/deactivate the SIP trunk by the checkbox „Trunk enabled“ in the section „Trunk Status“.



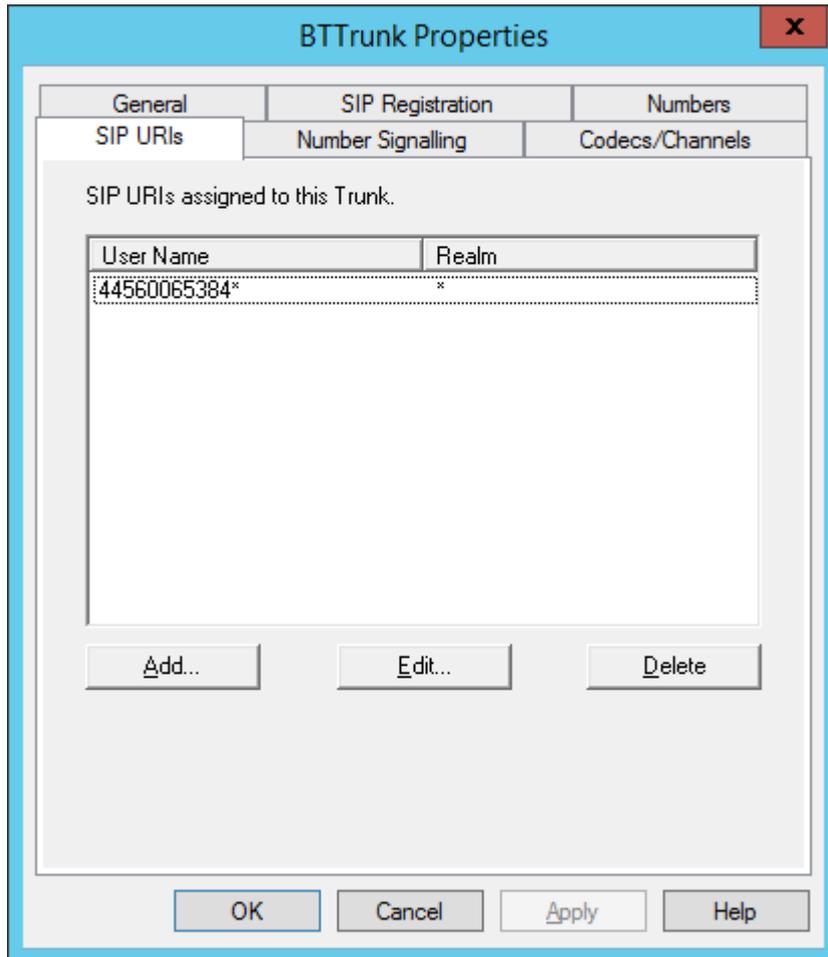
**Figure 34: The "SIP Registration" tab**

In this tab, the registration information can be modified if necessary.



**Figure 35: The "Numbers" tab**

In this dialog, a new number or a new number range can be added. Existing numbers or number ranges can be modified or deleted.



**Figure 36: The "SIP URIs" tab**

In this dialog, new SIP URIs can be added. This is necessary if the SIP URI, that was configured during creation, did not use any wildcards to cover a URI range. Existing SIP URIs can be modified or deleted.

## 2.4 User

Finally, the public numbers from the BT trunk 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 Provider profile

If the SwyxWare installation does not contain the provider profile for British Telecom HSIPT, as with SwyxWare 11.0 or newer, 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>