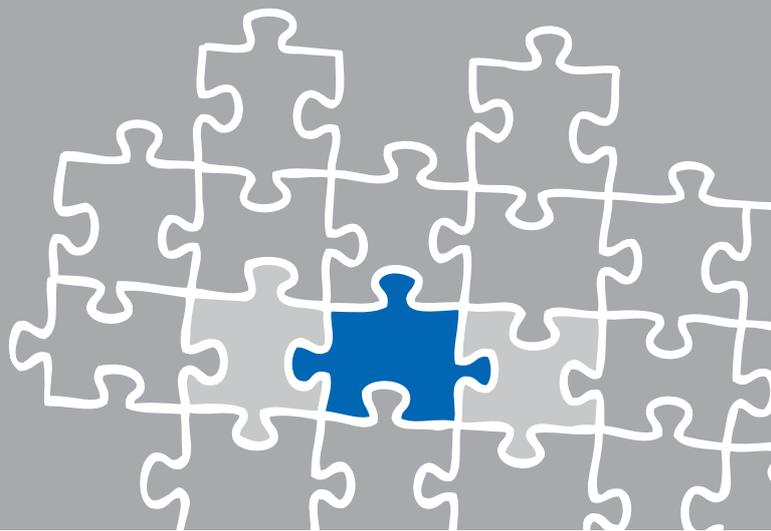


# TechNote

## ShoreTel/ShoreGear 14.2

November 9, 2015





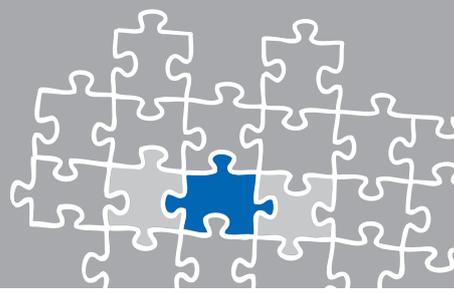
## Introduction

This document is intended to support engineers with the integration of the latest XCAPI version into an existing ShoreTel/ShoreGear environment. Though being based on the version 14.2 (build 19.45.5101.0) of the ShoreTel/ShoreGear and XCAPI version 3.5.59 this document is also applicable to other versions with a few adjustments.

The following pages give essential information to allow optimal interworking of both the ShoreTel/ShoreGear and XCAPI. At this point we suppose that the ShoreTel/ShoreGear environment, the hardware and the operating system where XCAPI and the CAPI 2.0 application is running on, are properly installed and accessible through the IP network.

For detailed ShoreTel configuration procedures, please refer to the respective manufacturer documentations and manuals.

Additional XCAPI information and documents (TechNotes), e.g. Quick Starter Guide, License on demand, Fax Transmission, Virtual Hardware ID and VMware Virtual Machines can be found on our [XCAPI Website](#) within the community download section and on our [YouTube channel](#).

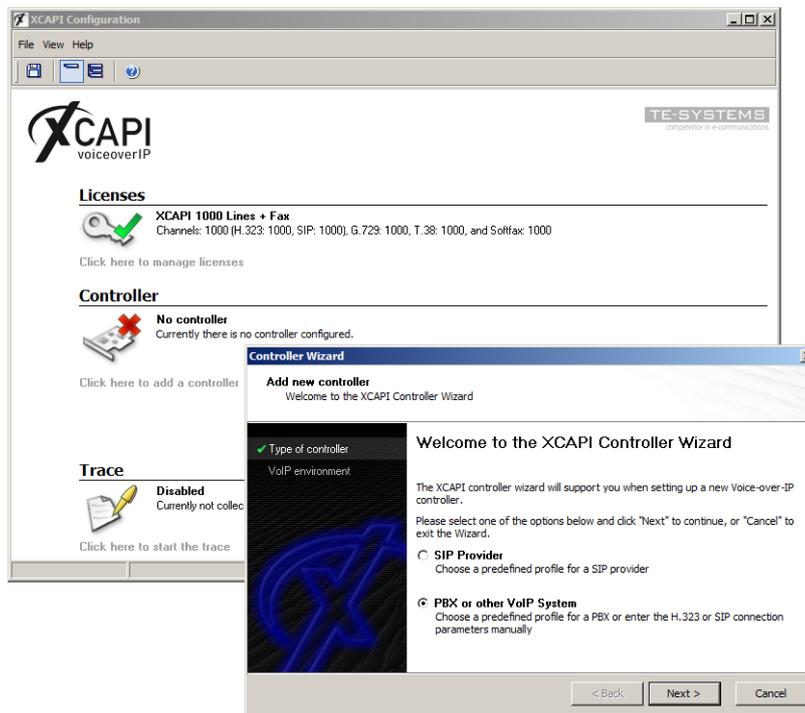


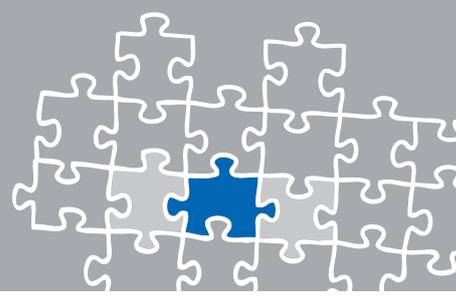
## XCAPI Configuration

Please start up the XCAPI configuration to create a new controller that will be assigned to the ShoreTel/ShoreGear SIP trunk. The ShoreTel/ShoreGear SIP trunk configuration is described from [page 8](#).

If you've just installed XCAPI and start the configuration tool for the first time, the XCAPI controller wizard will pop up automatically. This also happens if no controller is configured. To start up the XCAPI controller wizard on your own, just click the hyperlink labeled **Click here to add a controller** on the main page of the XCAPI configuration tool.

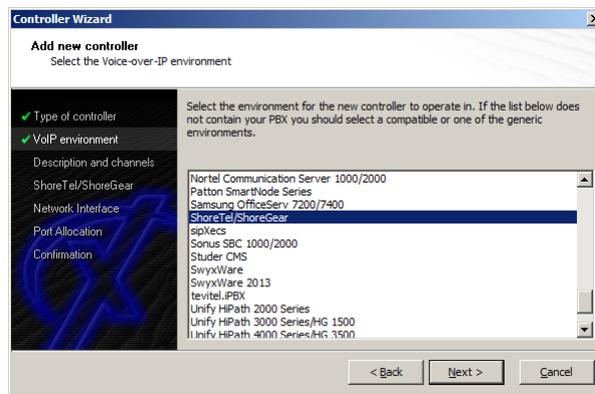
On the first controller wizard dialog, please select the **PBX or other VoIP System** and proceed with the **Next** button.





## 2.1 Voice over IP Environment

The next dialog of the configuration tool shows a list of some common Voice-over-IP environments. Selecting one of those will configure the XCAPI with a selection of near-optimal defaults for the kind of environment you have, saving you a lot of manual configurations.



## 2.2 Description and Channels

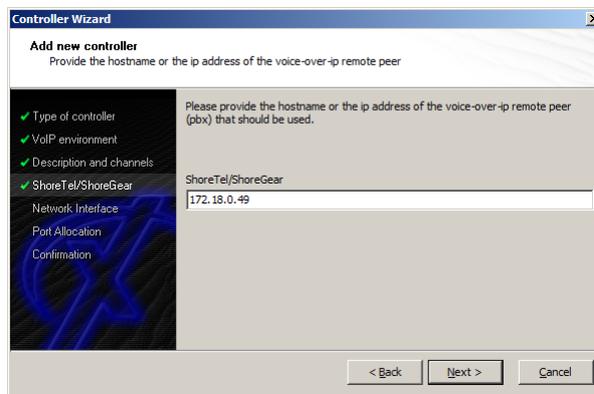
This dialog allows you both to enter an appropriate controller name and set up the number of available and licensed channels. So please enter the amount of simultaneous channels XCAPI should provide when communicating with the ShoreTel and the CAPI 2.0 application.





## 2.3 Gateway Address

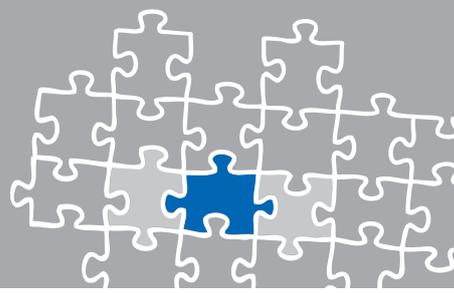
Next, please provide the host name or the IP address of the SIP listening ShoreTel/ShoreGear Ethernet interface. Please note that the XCAPI controller and the ShoreTel/ShoreGear both use by default the UDP port 5060 for SIP signaling.



## 2.4 Network Interface

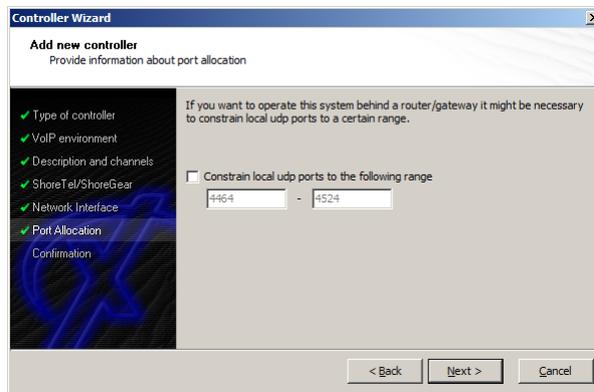
Select the network interface you want to connect to the newly created XCAPI controller.





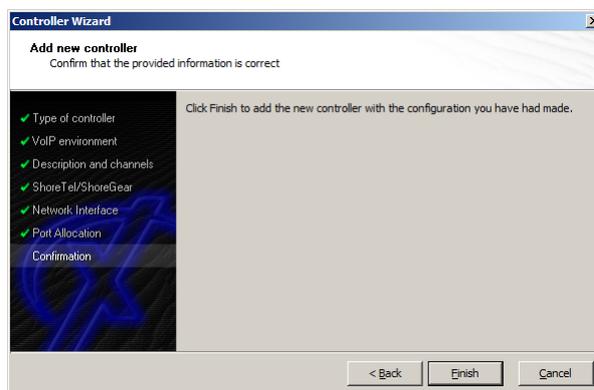
## 2.5 Port Allocation

On demand a UDP (RTP/T.38) port range can be specified. This port range will be used by the XCAPI controller towards the gateway. If the UDP port range has to be enabled for the local VoIP environment and routing behavior, please check with the **System Parameters / Security / Port Configuration** of the ShoreTel/ShoreGear.



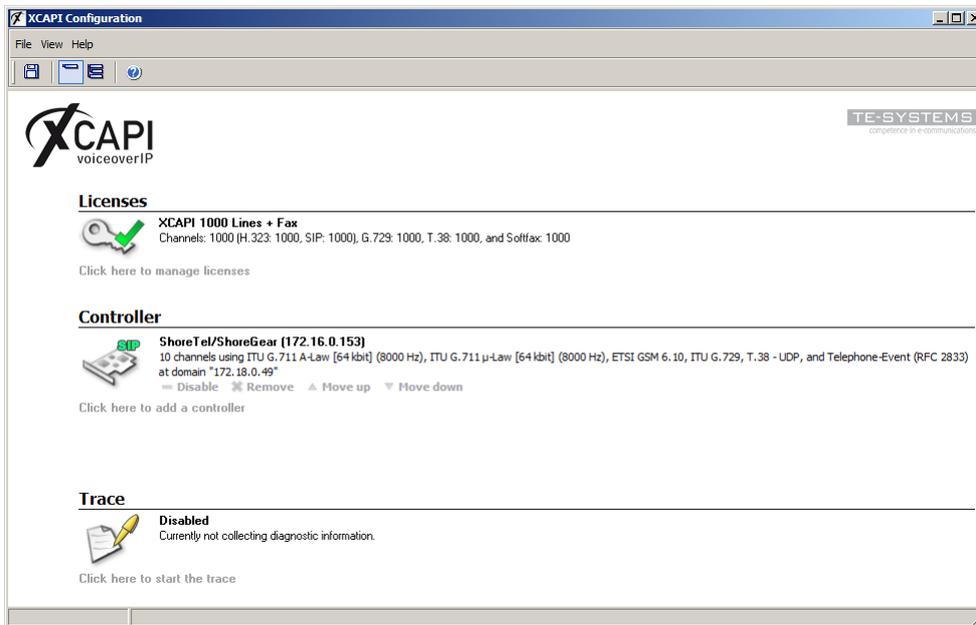
## 2.6 Confirmation

The final dialog of the controller wizard performs some checks on the configuration parameters you've made. When everything is correct, please use the **Finish** button in order to create the new controller.

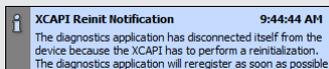




Finally you can save the controller which is also listed on the main view of the XCAPI configuration.



The bound CAPI 2.0 application with its services must always be restarted to take effect on the XCAPI controller changes. Restarting any of the XCAPI services won't help at all.





## ShoreTel Configuration

In order to establish a connection between XCAPI and the ShoreTel/ShoreGear you need to setup XCAPI as SIP trunk with all its appropriate configurations. The next sections show a basic configuration which can't be used one-to-one in the customer environment. The according configuration dialogs have to be adjusted for the PBX environment and the CAPI application. Especially the dialing plan and its related trunk group settings (access codes, DID and DNIS mapping, trunk digit manipulation) must reflect the local circumstances.

Please check with the ShoreTel document **SIP Trunks API For 3rd-Party Developers** chapter 5 about known SIP trunk limitations. Additional services could be achieved with a ShoreTel **SIP Server** configuration and its advanced SIP server profile parameters.

### 3.1 License Requirements

First, please ensure that the **ShoreWare SIP Trunk License** is suitable for SIP trunking. For this, please check the according license requirements/keys dialog.



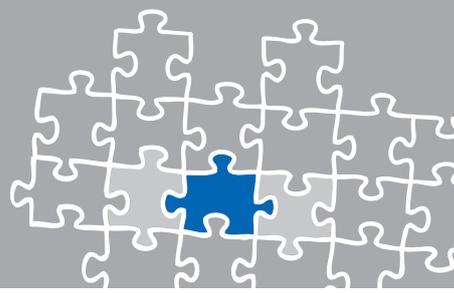
**Director**

Build 19.45.5101.0  
Logoff Administrator

- Administration
  - Users...
  - Trunks...
  - IP Phones...
  - Platform Hardware...
  - Call Control...
  - Voice Mail...
  - Auto-Attendant Menus
  - Workgroups
  - Schedules
  - Communicator...
  - System Directory
  - Application Servers...
  - SIP Servers...
  - Sites
  - System Parameters...
    - Dialing Plan
    - Digit Translation Tables
    - Security...
    - System Extensions
    - SNMP
    - BOOTP Server
    - Other
    - Languages
    - Licenses...
      - Requirements

#### License Requirements

License Requirement List		
Name	Configured	Purchased
<b>Keyed Licenses:</b>		
ShoreTel System License (Enterprise Edition)	1	1
ShoreTel Additional Site License	0	0
ShoreTel Extension License	2	5
ShoreTel Mailbox License	0	3
ShoreTel SoftPhone License	0	3
ShoreTel Additional Language License	0	0
ShoreTel Remote Web Reporting License	0	0
ShoreTel Mobile Access License	0	0
ShoreTel SIP Phone License	0	0
ShoreTel SIP Trunk License	5	5
ShoreTel Standard Resolution Video License	0	3
ShoreTel High Resolution Video License	0	0
ShoreTel Operator Access License	0	0
ShoreTel Professional Access License	2	3
ShoreTel Workgroup Agent Access License	0	0
ShoreTel Workgroup Supervisor Access License	0	0
ShoreTel External Unified Messaging SIP Link	0	0
ShoreTel Audio Conference License	0	0
ShoreTel Web Conference License	0	0
ShoreTel Virtual Switch Phone License	0	0
ShoreTel Virtual Switch SIP Trunk License	0	0



## 3.2 Call Control Options

The call control options are used with their default values and should only be adjusted for interoperability reasons. Ensure that the SIP related parameters are set conform to the ones of the XCAPI controller.

### Call Control Options

Edit

[Edit this record](#) [Refresh this page](#)

**General:**

- Use Distributed Routing Service for call routing.
- Enable Monitor / Record Warning Tone.
- Enable Silent Coach Warning Tone.
- Generate an event when a trunk is in-use for  minutes.
- Park Timeout (1-100000) after  seconds.
- Hang up Make Me Conference after  minutes of silence.

Delay before sending DTMF to Fax Server:  msec

DTMF Payload Type (96 - 127):

**SIP:**

Realm:

- Enable SIP Session Timer.
  - Session Interval (90 - 3600):  sec
  - Refresher:  ▼

**Voice Encoding and Quality of Service:**

Maximum Inter-Site Jitter Buffer (20 - 400):  msec

DiffServ / ToS Byte (0-255):  (DSCP = 0x2e)

Media Encryption:  ▼

Admission control algorithm assumes RTP header compression is being used.

**Call Control Quality of Service:**

DiffServ / ToS Byte (0-255):  (DSCP = 0x1a)

**Video Quality of Service:**

DiffServ / ToS Byte (0-255):  (DSCP = 0x22)

**Trunk-to-Trunk Transfer and Tandem Trunks:**

- Hang up after  minutes of silence.
- Hang up after  minutes.



### 3.3 Build-in Capacity

The **Voice Switch** requires optimal clock source and clock priority configurations. It's necessary that all layers are synchronized, especially for fax interworking. Wrong settings/priorities may lead to packetloss and facsimile abruption.

#### Voice Switches

Edit ShoreGear 30BRI Switch

[Edit this record](#) [Refresh this page](#)

Name:

Description:

Site:

IP Address:

Ethernet Address:

Server to Manage Switch:

Caller's Emergency Service Identification (CESID):  (e.g. +49 69 751903)

Built-in Capacity: IP Phone + SIP Trunk = Total  
 +  = 9 of 10 (20 SIP proxy ports)

Enable Jack Based Music On Hold

Jack Based Music On Hold Gain (-49 to 13):  dB



**Analog Ports:**

Port	Port Type	Description	Jack Number	Location
11	<input type="text" value="Available"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12	<input type="text" value="Available"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**Digital Ports:**

Enable Span 1 as BRI

**Layer 3:**

Protocol Type:

Central Office Type:

Enable Outbound Calling Name:

**Layer 2:**

Signalling:

**Layer 1:**

Clock Source:

Clock Priority:

Channel	Port Type	Trunk Group	Description	Jack Number	Tx Gain (dB)	Rx Gain (dB)
1-1 <a href="#">Edit</a>	<input type="text" value="Trunk"/>	<input type="text" value="BRI"/>	<input type="text" value="BRI-1"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
1-2 <a href="#">Edit</a>	<input type="text" value="Trunk"/>	<input type="text" value="BRI"/>	<input type="text" value="BRI-2"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="0"/>



### 3.4 Codec Lists

Please ensure that the codec settings are set conform to your VoIP environment. The selected codecs must be also available for the XC-API controller. For this test environment two custom codec lists (G.711 Only and Fax Codecs - G.711 Only) were added.

Codec Lists	
Codec Group List	
<input type="button" value="Delete"/>	<input type="button" value="New..."/>
<input type="checkbox"/>	Description
<input type="checkbox"/>	<a href="#">Fax Codecs - G.711 / T.38</a>
<input type="checkbox"/>	<a href="#">Fax Codecs - High Bandwidth</a>
<input type="checkbox"/>	<a href="#">Fax Codecs - High Bandwidth Passthrough</a>
<input type="checkbox"/>	<a href="#">Fax Codecs - Low Bandwidth</a>
<input type="checkbox"/>	<a href="#">Fax Codecs - Low Bandwidth Passthrough</a>
<input type="checkbox"/>	<a href="#">G.711 Only</a>
<input type="checkbox"/>	<a href="#">High Bandwidth Codecs</a>
<input type="checkbox"/>	<a href="#">Low Bandwidth Codecs</a>
<input type="checkbox"/>	<a href="#">Medium Bandwidth Codecs</a>
<input type="checkbox"/>	<a href="#">Very High Bandwidth Codecs</a>
<input type="checkbox"/>	<a href="#">Very Low Bandwidth Codecs</a>

Both codec lists include **PCMA/8000** and **PCMU/8000** only and are assigned to **Intra-, Inter Site Calls** and **FAX and Modem Calls** as shown in the next chapter **Sites** starting on [page 12](#).

Codec Lists	
Edit Codec Lists	
<input type="button" value="Edit this record"/>	<input type="button" value="Refresh this page"/>
Name: <input type="text" value="G.711 Only"/>	
Choose Codecs:	Codec List Members:
L16/8000 DV14/8000 G729/8000 L16/16000 AAC_LC/32000 G722/8000 BV32/16000 BV16/8000 T.38 iLBC/8000	PCMU/8000 PCMA/8000
<input type="button" value="Add &gt;&gt;"/> <input type="button" value="&lt;&lt; Remove"/> <input type="button" value="Move Up ^"/> <input type="button" value="Move Down v"/>	
Name: <input type="text" value="Fax Codecs - G.711 Only"/>	
Choose Codecs:	Codec List Members:
L16/8000 DV14/8000 G729/8000 L16/16000 AAC_LC/32000 G722/8000 BV32/16000 BV16/8000 iLBC/8000	PCMA/8000 PCMU/8000
<input type="button" value="Add &gt;&gt;"/> <input type="button" value="&lt;&lt; Remove"/> <input type="button" value="Move Up ^"/> <input type="button" value="Move Down v"/>	



### 3.5 Sites

Besides the geographical information, ensure that the environment is set to the required bandwidth (see **Admission Control Bandwidth**). As described in the previous **Codec Lists** chapter, this test environment uses the custom codec lists **G.711 Only** and **Fax Codecs - G.711 Only** for **Intra-, Inter Site Calls** and **FAX and Modem Calls**. The other **Headquarter Site** settings are used as shown next.

**Sites**  
Edit Site

---

[Edit this record](#) [Refresh this page](#)

Name:

Service Appliance Conference Backup Site:

Country:

Language:

Parent:

Use Parent As Proxy

Local Area Code:

Additional Local Area Codes:

Caller's Emergency Service Identification (CESID):  (e.g. +49 69 751903)

Time Zone:

Night Bell Extension:

Night Bell Switch:  [Edit Night Bell Call Handling](#)

Paging Extension:

Paging Switch:

Operator Extension:

FAX Redirect Extension:

SMTP Relay:

Network Time Protocol Server:

**Bandwidth:**

Admission Control Bandwidth:  kbps

Intra-Site Calls:

Inter-Site Calls:

FAX and Modem Calls:

SIP Proxy:

Virtual IP Address:

Proxy Switch 1:

Proxy Switch 2:



### 3.6 Dialing Plan

The dialing plan configuration is used as shown in the screenshot below. Digits **0** and **9** are set to **Trunk Access Codes (1 Digit)**.

For this environment, digit **0** is used for accessing the PSTN whilst digit **9** is used for accessing the SIP trunk. Beside of the internal extensions, here allocated to digit **1**, the **Off System Extensions** are reserved to digit **2**. To allow routing PSTN calls towards the SIP trunk, it is necessary to relate the numbering range of the SIP trunk to **Off System Extensions**.

More details about SIP trunking and off system extensions can be found in the chapter **Trunk Groups** starting on [page 14](#).

**System Parameters**  
Edit Dialing Plan

[Edit this record](#) [Refresh this page](#)

Number of Extension Digits: 3 [Increase Extension Length](#)

Dialing Plan:

Digit:	Reservation:
0:	Trunk Access Codes (1 Digit) ▼
1:	Extensions ▼
2:	Extensions ▼
3:	Not Used ▼
4:	Not Used ▼
5:	Not Used ▼
6:	Extensions ▼
7:	Extensions ▼
8:	Not Used ▼
9:	Trunk Access Codes (1 Digit) ▼
#:	Voice Mail Login
*:	Feature Activation



### 3.7 Trunk Groups

The trunk groups with their relations are used as shown next. The related **Individual Trunk Groups** will be described in the next chapter starting on [page 17](#).

Trunk Groups						
Add new trunk group at site: <input type="text" value="Headquarters"/> of type: <input type="text" value="SIP"/> <input type="button" value="Go"/>						
Name	Type	Site	Trunks	DID	Destination	Access Code
<a href="#">E1-PRI</a>	PRI	Headquarters	0	No	700	0
<a href="#">BRI</a>	BRI	Headquarters	2	Yes	700	0
<a href="#">XCAPI</a>	SIP	Headquarters	5	Yes	700	9

The BRI trunk group is used as shown below.

#### Trunk Groups

Edit BRI Trunk Group

[Edit this record](#) [Refresh this page](#)

Name:

Site:

Language:

Profile:

**Inbound:**

Number of Digits from CO:

DNIS

DID

Extension

Translation Table:

Prepend Dial In Prefix:

Use Site Extension Prefix

Tandem Trunking

User Group:

Prepend Dial In Prefix:

Destination:

**Outbound:**

**Network Call Routing:**

Access Code:

Local Area Code:

Additional Local Area Codes:

Nearby Area Codes:

Carrier Code:

Billing Telephone Number:  (e.g. +49 69 751903)

**Trunk Services:**

Local

Long Distance

National Mobile

International

Enable Original Caller Information

Caller ID not blocked by default

Emergency



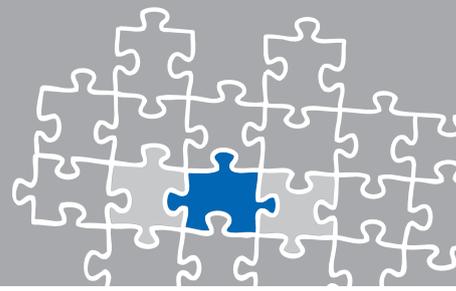
The mentioned number mapping of the dialing plan chapter is realized here via the **DNIS Map** of the BRI trunk group. In detail the number range **900 to 909** is mapped to the according off system extensions from **200 to 209**.

The **XCAPI** related SIP trunk is used here with **Access Code** number **9**. This is the one digit trunk access code as shown in the previous chapter **Dialing Plan** on [page 13](#). The related **SIP Trunk Profile** will be described from [page 17](#).

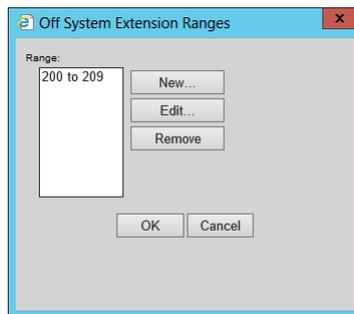
## Trunk Groups

Edit SIP Trunk Group

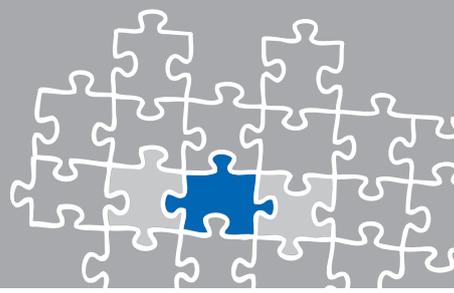
Edit this record	Refresh this page
Name:	XCAPI
Site:	Headquarters
Language:	English(US) ▼
<input type="checkbox"/> Enable SIP Info for G.711 DTMF Signaling	
Profile:	XCAPI SIP Trunk Profile ▼
Digest Authentication:	<None> ▼
Username:	<input type="text"/>
Password:	<input type="text"/>
<b>Inbound:</b>	
Number of Digits from CO:	6
<input checked="" type="checkbox"/> DNIS	<input type="button" value="Edit DNIS Map"/>
<input type="checkbox"/> DID	<input type="button" value="Edit DID Range"/>
<input checked="" type="checkbox"/> Extension	
<input checked="" type="radio"/> Translation Table: <None> ▼	
<input type="radio"/> Prepend Dial In Prefix: <input type="text"/>	
<input type="radio"/> Use Site Extension Prefix	
<input checked="" type="checkbox"/> Tandem Trunking	
User Group:	IP Telephones ▼
Prepend Dial In Prefix:	<input type="text"/>
Destination:	700 : Default <input type="button" value="Search"/>
<input checked="" type="checkbox"/> <b>Outbound:</b>	
<b>Network Call Routing:</b>	
Access Code:	9
Local Area Code:	811
Additional Local Area Codes:	<input type="button" value="Edit"/>
Nearby Area Codes:	<input type="button" value="Edit"/>
Carrier Code:	<input type="text"/>
Billing Telephone Number:	+49 5363819581199 (e.g. +49 69 751903)
<b>Trunk Services:</b>	
<input checked="" type="checkbox"/> Local	
<input checked="" type="checkbox"/> Long Distance	
<input checked="" type="checkbox"/> National Mobile	
<input checked="" type="checkbox"/> International	
<input checked="" type="checkbox"/> Enable Original Caller Information	
<input checked="" type="checkbox"/> Caller ID not blocked by default	
<input type="checkbox"/> Enable Caller ID ( Please confirm with the Carrier(s) or the Service Provider(s) on how the end-to-end caller name is delivered)	
When Site Name is used for the Caller ID, overwrite it with: <input type="text"/>	
<input type="checkbox"/> Emergency	
<b>Trunk Digit Manipulation:</b>	
<input type="checkbox"/> Dial Local Numbers in National Form	
<input type="checkbox"/> Dial in E.164 Format	
Prepend Dial Out Prefix:	<input type="text"/>
Off System Extensions:	<input type="button" value="Edit"/>
Translation Table:	<None> ▼



This examples **Off System Extensions** range **200-209** is set in accordance with the BRI trunks DNIS configuration.



Please ensure that the dialing plan, access code, local area code and other numbering related configurations, match the customer VoIP environment. The numbering/dialing plan shown here is intended as an example.



### 3.8 Individual Trunks

Configure the required individual trunks after you have created the associated SIP trunk group.

Please note that a **ShoreWare SIP Trunk License** is required for appropriate SIP trunking, see chapter **License Requirements** starting on [page 9](#).

Trunks by Group							
Add new trunk at site: <span>Headquarters</span> in trunk group: <span>BRI</span> <span>Go</span>							
Show page: <span>1: BRI-1 - XCAP-SIP-Trunk-1</span> <span>7 Records</span> <span>25</span> per page							
<span>Delete</span>							
<input type="checkbox"/>	Name	Group	Type	Site	Switch	Port/Channel	SIP IP Address
<input type="checkbox"/>	<a href="#">BRI-1</a>	<a href="#">BRI</a>	BRI	Headquarters	BRI	1	
<input type="checkbox"/>	<a href="#">BRI-2</a>	<a href="#">BRI</a>	BRI	Headquarters	BRI	2	
<input type="checkbox"/>	<a href="#">XC-API-SIP-Trunk-2</a>	<a href="#">XC-API</a>	SIP	Headquarters	BRI	0	172.16.0.153
<input type="checkbox"/>	<a href="#">XC-API-SIP-Trunk-3</a>	<a href="#">XC-API</a>	SIP	Headquarters	BRI	0	172.16.0.153
<input type="checkbox"/>	<a href="#">XC-API-SIP-Trunk-4</a>	<a href="#">XC-API</a>	SIP	Headquarters	BRI	0	172.16.0.153
<input type="checkbox"/>	<a href="#">XC-API-SIP-Trunk-5</a>	<a href="#">XC-API</a>	SIP	Headquarters	BRI	0	172.16.0.153
<input type="checkbox"/>	<a href="#">XC-API-SIP-Trunk-1</a>	<a href="#">XC-API</a>	SIP	Headquarters	BRI	0	172.16.0.153

### 3.9 SIP Trunk Profile

The XC-API SIP trunk is assigned to its own SIP trunk profile.

Beside the **User Agent** and **Priority** values it is required to set some specific **Custom Parameters**. The parameter details can be reviewed in the ShoreTel document **SIP Trunks API For 3rd-Party Developers**. Please also check with the **Configuration Notes** starting on [page 18](#) for their relevance.

The parameters are used as shown below for XC-API interworking.

**SIP Profile**  
Edit SIP Trunk Profile

[Edit this record](#) [Refresh this page](#)

Name:

User Agent:

Priority:

Enable

System Parameters:

```
OptionsPing=0
OptionsPeriod=60
StripVideoCodec=0
DontFwdRefer=0
SendMacIn911CallSetup=1
HistoryInfo=0
EnableP-AssertedIdentity=0
AddG729AnnexB_NO=0
Hairpin=0
Register=0
RegisterUser=BTN
RegisterExpiration=3600
CustomRules=0
OverwriteFromUser=0
```

Custom Parameters:

```
HistoryInfo=diversion
EnableP-AssertedIdentity=1
OptionsPing=1
OptionsPeriod=300
DontAdvertiseUpdate=1
RFC2543Hold=0
StripVideoCodec=1
```

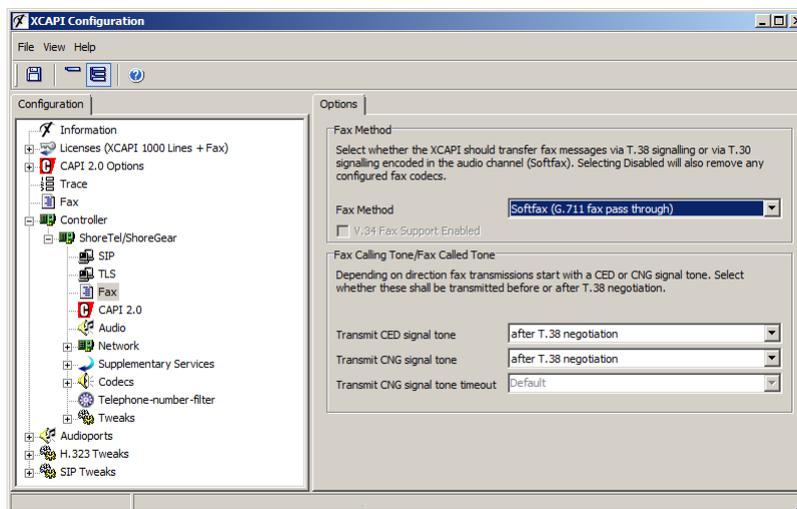


## Configuration Notes

In these chapters you'll find some configuration hints and settings for supplementary services such as Softfax (via G.711), message waiting indication or call transfer. Such services are enabled by default for the XCAPI controller. For interworking those configurations should be checked as well as all the gateway related parameters.

### 4.1 Softfax

With the Softfax mode, the XCAPI simulates an analogue facsimile device by transmitting modulated facsimile-signals modem-like through the established G.711 audio channels. For this please check the XCAPI controller configuration tab labeled **Fax** and ensure that **Softfax (G.711 fax pass through)** is selected as **Fax Method**. The required ShoreTel/ShoreGear codec lists has to be used as described in the previous chapter **Codec Lists** starting on [page 11](#). In the case of multiple ShoreTel/ShoreGear **Sites**, conform codec list configurations are recommended.





## 4.2 T.38

The codec lists have to include the G.711 codecs (at least one of them) and also the T.38 codec for appropriate codec negotiation. Assign the codec lists to **Intra-, Inter Site Calls** and **FAX and Modem Calls** within the ShoreTel **Site** configurations.

Please note that the Voice Switch types **ShoreGear 60/12**, **ShoreGear 120**, **ShoreGear T1**, **ShoreGear E1**, **ShoreGear 120/24** and **ShoreGear 24a** do not support any T.38 at all. Also check with the ShoreTel/ShoreGear documentation for T.38 related limitations and recommendations for fax support.

**Codec Lists**  
Edit Codec Lists

Edit this record Refresh this page

Name: G.711 / T.38

Choose Codecs:

- L16/8000
- DVI4/8000
- G729/8000
- L16/16000
- AAC\_LC/32000
- G722/8000
- BV32/16000
- BV16/8000
- T.38
- iLBC/8000

Add >>  
<< Remove  
Move Up ^  
Move Down v

Codec List Members:

- PCMU/8000
- PCMA/8000
- T.38

---

Name: Fax Codecs - G.711 / T.38

Choose Codecs:

- L16/8000
- DVI4/8000
- G729/8000
- L16/16000
- AAC\_LC/32000
- G722/8000
- BV32/16000
- BV16/8000
- iLBC/8000

Add >>  
<< Remove  
Move Up ^  
Move Down v

Codec List Members:

- PCMA/8000
- PCMU/8000
- T.38

Also the XCAPI controller has to be set to the T.38 Fax Method as shown below.

XCAPI Configuration

File View Help

Configuration

- Information
- Licenses (XCAP 1000 Lines + Fax)
- CAPI 2.0 Options
- Trace
- Fax
- Controller
  - ShoreTel/ShoreGear
    - SIP
    - TLS
    - Fax
      - CAPI 2.0
      - Audio
      - Network
      - Supplementary Services
      - Codecs
      - Telephone-number-filter
      - Tweaks
    - Audioports
    - H.323 Tweaks
    - SIP Tweaks

Options

Fax Method

Select whether the XCAPI should transfer fax messages via T.38 signalling or via T.30 signalling encoded in the audio channel (Softfax). Selecting Disabled will also remove any configured fax codecs.

Fax Method: T.38

V.34 Fax Support Enabled

Fax Calling Tone/Fax Called Tone

Depending on direction fax transmissions start with a CED or CNG signal tone. Select whether these shall be transmitted before or after T.38 negotiation.

Transmit CED signal tone: after T.38 negotiation

Transmit CNG signal tone: after T.38 negotiation

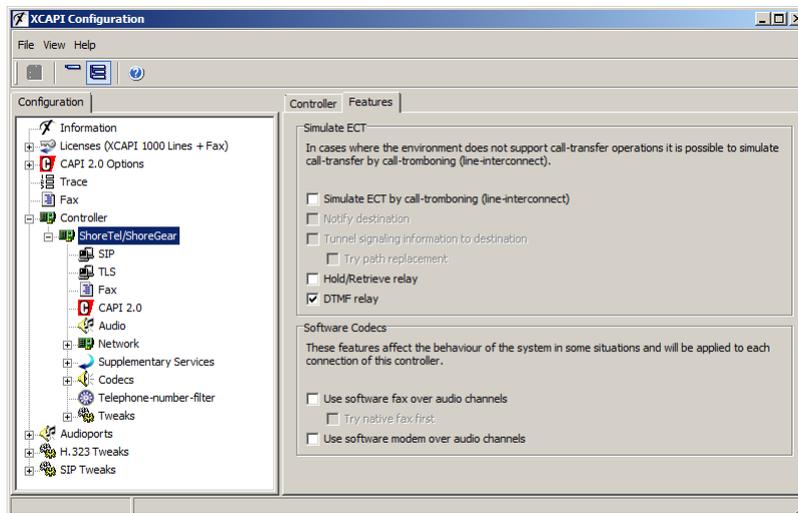
Transmit CNG signal tone timeout: Default



### 4.3 Call Transfer

For enabling call transfer via SIP refer please ensure that the **Simulate ECT by call-tromboning (line-interconnect)** is disabled within the XCAPI controllers **Features** tab.

Ensure that **DontFwdRefer=0** is set to the according SIP trunk profile, as shown in the chapter **SIP Trunk Profile** starting on [page 17](#).



### 4.4 Redirection Number

Several CAPI applications need to be given redirection numbers, in meaning of the gateway generated SIP diversion header, beside of the origins calling number.

For this the **HistoryInfo=diversion** custom parameter must be set to the according SIP profile, as shown in the chapter **SIP Trunk Profile** starting on [page 17](#).

Additionally the SIP trunk group parameter **Enable Original Caller Information** must be set as shown in the chapter **Trunk Groups** starting on [page 14](#).

Please note, XCAPI is also able to support **History-Info** header. On demand this can be evoked with setting up **HistoryInfo=history** for the ShoreTel/ShoreGear **SIP Trunk Profile**.



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