# TechNote

# Avaya IP Office R9.1 April 7, 2016







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## Introduction

This document is intended to support you with the integration of XCAPI into an existing environment of the Avaya IP Office series.

Though being based on the Avaya IP Office R9.1 it should be applicable to higher or lower versions, given a few adjustments.

In the following sections we describe the essential steps of configuration to allow for optimal cooperation of both the XCAPI and the Avaya IP Office. At this point we suppose that the third party environment (including PSTN access and required licenses for appropriate SIP trunking) is in operation and the XCAPI and CAPI applications are properly installed.

For XCAPI basics please refer to the document **XCAPI TechNote (en) - Quick Start Guide.pdf**, which is available for registered users within our **community** download area.

We also recommend to visit our YouTube channel for additional information and hints.







# **XCAPI** Configuration

Please start up the XCAPI configuration to create a new controller that will be assigned to the Avaya IP Office. The XCAPI controller wizard will pop up automatically if you start the configuration tool for the first time, or no controller is present at all. Use the link **Click here to add a controller** for starting up the XCAPI controller wizard manually.

On the first page of the controller wizard please select **PBX or other VolP System** and continue with the **Next** button.



#### 2.1 Voice over IP Environment

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







#### 2.2 Description and Channels

This dialog allows you to set a meaningful description for the controller you're going to create. It also allows setting up the number of channels that the new controller will be able to provide. Please enter how many simultaneous connections the XCAPI should handle when communicating with the Avaya IP Office.

VolP environment	number of available charmers depend of the installed incerise.
Description and channels	
Signalling protocol	Description
Avaya IP Office	Avaya in Onice
Network Interface	Channels 20
Confirmation	1

#### 2.3 Voice-over-IP Signaling Protocol

Next, please select the appropriate signaling protocol used for this VoIP environment.

Turn of controller	Each voice-over-ip network operates with a specific voice-over-ip protocol like H.323
Val Ponuironment	or SIP. The list below contains any voice-over-ip protocol that may be used with the selected environment. Please select the protocol from the list that is used in your
Voir environment	network.
Description and channels	H 323
Signalling protocol	SIP
Avaya IP Office	
Network Interface	
Port Allocation	
Confirmation	





#### 2.4 Gateway Address

Next, the remote address of the Avaya IP Office gateway device has to be set.

Controller Wizard	×
Add new controller Provide the address of	f the Avaya IP Office
<ul> <li>Type of controller</li> <li>VolP environment</li> </ul>	Provide the IP address of the Avaya IP Office in the network. If there is more than one Avaya IP Office present in the network be sure to provide the IP address of the Avaya IP Office that you want to use.
<ul> <li>Description and channels</li> </ul>	Naturek Addrage
<ul> <li>Signalling protocol</li> </ul>	172, 18, 0, 46
Avaya IP Office	
Network Interface	
Port Allocation	
Confirmation	
	< Back Next > Cancel

#### 2.5 Network Interface

On this page of the XCAPI controller wizard you can select the network adapter you want to bind to the XCAPI controller.









#### 2.6 Port Allocation

On demand a UDP port range can be set that will be used for inbound RTP/T.38 data.



#### 2.7 Confirmation

The final wizard dialog performs some checks on the configuration parameters you've made. If any errors are detected here, you can go back to the respective dialogs and correct the necessary input. If everything is correct please use the **Finish** button in order to finally create the new controller.









The controller you've just created now will appear on the main page of the XCAPI configuration. As the controller configuration is now finished with all XCAPI related configuration tasks, please save the changes you've made and exit the configuration tool.



k

Please keep in mind that it is required to save any XCAPI configuration changes followed by a restart of the bound **CAPI** application to take effect. Restarting the XCAPI related services won't help at all. If enabled the XCAPI diagnostic monitor will pop-up with an notification on success.

 XCAPI Reinit Notification
 9:44:44 AM

 The diagnostics application has disconnected itself from the device because the XCAPI has to perform a reinitialization. The diagnostics application will reregister as soon as possible.





# **Configuring the Avaya IP Office**

In order to establish a connection between the XCAPI and the Avaya IP Office you need to setup the XCAPI as SIP trunk with all its appropriate configurations. The next chapters show a basic configuration which can't be assigned one-to-one to the environment.

The according configuration dialogs have to be adapted to the PBX environment and hardware and the according CAPI application. Especially the dialing plan and its related trunk group settings must reflect the local circumstances.

#### 3.1 License

First, please ensure that the Avaya IP Office SIP Trunk Channel license key is available for allowing SIP trunking.

👫 Avaya IP Office Manager 00E0070	71B30 [9.1.300.120] [Administrator(Adr	ninistrator   Manager   Oper	ator)]				
Eile Edit Yiew Tools Help							
IP Offices						- iii	$ X  \leq  V  \leq  V $
BOOTP (1)     Gorador (3)     OcconvortB30     OcconvortB30     Gorador (7)     ConvortB30     ConvortB30     Gorador (7)     ConvortB30     Conv	License         Remote Server           License Mode         License Normal           Licensed Version         9.1           Serial Number (ADI)         13265768           PLDS Host ID         1113265788           PLDS File Status         Present						
Genvice (0)     Active (1)     Active (2)	Feature Essential Edition Avaya IP endpoints Avaya IP endpoints JP500 Universal PR1 (Additional chann <b>SiPTunk Channels</b> Software Luggrade 7 (R-0.0) Small Site Software Luggrade 8 (R9.1)	License Key röm2ötädŞUIYs1hun2E51 bFD xy48x1kDNAFE ago h02V25y0D50_XEu3igg@ xh1g09eAd18U3kmg/yhg01 q8x3qb1d6eg19yh2BIPA Q8x3qV0A6sh@QYh903 Th1hy26EAXVUAEPC(45 DNubFymr5)Yzs1ANJSHn	I         Status           255         Valid           50         Valid           50         Valid           220         Valid           100         Valid           40         Valid           1         Obsolet           1         Valid           40         Valid           1         Obsolet           1         Valid	Ex Never Never Never Never Never Never Never	Source ADI Nodal ADI Nodal ADI Nodal ADI Nodal ADI Nodal ADI Nodal ADI Nodal		Add
	<u> </u>						 

Additional voice networking channel licenses may be necessary, depending on the firmware and hardware.





#### 3.2 System

Next, the **VoIP** tab within the **System** configuration is going to be reviewed. Please ensure that the SIP trunk support is enabled.



This environment doesn't use any STUN. The **Firewall/Nat Type** is here related to the systems **Open Internet** profile.

Yavaya IP Office Manager 00E00 File Edit View Tools Help	7071830 [9.1.300.120] [Administrator(Administrator   Manager   Operator)]
IP Offices	📅 00E007071B30*
	System LANI       LANZ       DNS       Voicemail       Telephony       Directory Services       System Events       SMDR       Twinning       VCM       Codecs       VoIP Security       Contact Center         LAN Settings       Voicemail       Telephony       Directory Services       System Events       SMDR       Twinning       VCM       Codecs       VoIP Security       Contact Center         LAN Settings       Voicewall       Telephony       Directory Services       STUN Port       9478       Image: Codecs       VoIP Security       Contact Center         STUN Server Address       0.0.0.0       STUN Port       9478       Image: Codecs       Policities       Policies       Policities

The **Telephony** settings are used with their default values. The **Inhibit Off-Switch Forward / Transfer** must be disabled for allowing call forwarding or call transfer toward PSTN.

👫 Avaya IP Office Manager 00E007	7071B30 [9.1.300.120] [Administrator(Admi	nistrator [Manager   Operator)]				
File Edit View Tools Help						
IP Offices	12	00E007071B30*			I×   ≤ <	<   >
P ← & BOOTP (1) ← ↔ Operator (5) ← ↔ Operator (5) ← ↔ Operator (5) ← ↔ Operator (5) ← ↔ Operator (1) ← ↔ Operator	System     LAN1     LAN2     DNS     Voicemal       Telephony     Park & Page     Tones & Music     Rin       Analogue Extensions     Default Outside Cal Sequence     Default Noiside Cal Sequence       Default Ring Back Sequence     Restrict Analogue Extension Ringer Volkage       Dial Delay Time (secs)     10       Dial Delay Count     13       Default No Answer Time (secs)     15       Park Timeout (secs)     15       Ring Delay Geus)     5       Call Priority Promotion Time (secs)     Disabled       Default Name Priority     Favor Time       Media Connection Preservation     Disabled       Phone Falback     Manual       Login Code Complexity     1       Enforcement     1	relephory Directory Services System g Tones SM Call Log TUT Normal V Ring Type 1 V Ring Type 2 V r r r r r v r v v v v v v v v v v v v v	Events SMTP SMDR Companding Law Switch C UHaw A-Law DSS Status Auto Hold DSS Status Auto Hold DIG By Name Show Account: Code Inhibit Off-Switch For Rebit Network Inte Induse Jocetons Drop External Conferent Visually Olfferentate E Unsupervised Analogue Auto Directory Overrides B	Twinning VCM Code:	cs VoIP Security Conta	t Center
						14



#### 3.3 ARS

The **ARS** configuration depends on local requirements. In this test environment it's configured as shown next.

Avaya IP Office Manager 00E00 Eile Edit View Tools Help	7071B30 [9.1.300.120] [A	dministrator(Administrator Man	ager [Operator)]		
IP Offices	×.		Main	<b>-</b>	X   ✓   <   >]
<ul> <li>B→K BOOTP (1)</li> <li>B→G Operator (3)</li> <li>B→G 00E007071830</li> <li>B→G 00E007071830</li> <li>B→G 5ystem (1)</li> <li>B+T3 Line (6)</li> <li>B→G Control Linet (3)</li> <li>B→G Extension (12)</li> <li>B</li></ul>	ARS ARS Route ID Route Name Dial Delay Time Description	50 Main System Default (10)	Secondary Dial tone	<b>7</b>	
	In Service Time Profile		Out of Service Route	<none></none>	
Carlos (0) → License (8) → License (8) → Tunnel (0) → License (8) → K RS (1) → K SS	Code	Telephone Number	Feature   Line Group ID	Add Remove Edt	
	Alternate Route Priority L Alternate Route Wait Tim	evel 3 Y	Alternate Route	<none></none>	
					Fi .::





#### 3.4 SIP Line

The XCAPI's related **SIP Line** is here set to line number 8 and used as follows:

- Ensure that the SIP Line is In Service.
- On demand Check OOS can be set for enabling keep alive via SIP Options.
- The **ITSP Domain Name** is set to the IP address **172.16.0.153**, which determines the selected Ethernet interface address of the XCAPI controller which is used by its application server.
- The prefix and numbering related configurations must be set according to the local requirements.
- For the Session Timers part the Refresh Method must be set to Reinivite. Timer (seconds) is here set to the default On Demand.
- Also the Forwarding and Twinning related settings must be set according to the local requirements.
- **REFER Support** has to be enabled for call transfer via SIP refer. For this **Incoming Supervised REFER** must be set to **Always** and **Outgoing Supervised REFER** must be set to **Never**.

👫 Avaya IP Office Manager 00E00	7071B30 [9.1.300.120] [Administ	rator(Administrator Manager Operat	or)]		_ 🗆 ×
Eile Edit Yiew Tools Help					
IP Offices		SIP Line - L	ine 8		🖆 ▾ 💾   🗙   ✔   <   >
BOOTP (1) ⊕ W Operator (3)	SIP Line Transport SIP URI VoIP	T38 Fax SIP Credentials SIP Advanced Eng	pineering		
E 🖘 00E007071B30	Line Number	8 📫	In Service	V	
⊞ - चि System (1) ⊟- 1 (ने Line (6)	ITSP Domain Name	172.16.0.153	Check OOS		
2	URI Type	SIP	Session Timers		
	Location	Cloud	Refresh Method	Reinvite	
7			Timer (seconds)	On Demand	÷
The Control Unit (3)	Prefix		Forwarding and Twinning		
Extension (12)	National Prefix	0	Originator number		
🖶 🎆 Group (1) 🕀 🤧 Short Code (71)	International Prefix	00	Send Caller ID	Diversion Header	<u> </u>
- Service (0)	Country Code		Redirect and Transfer		
	Name Priority	System Default	Incoming Supervised REFER	Always	<u> </u>
WAN Port (0)	Description		Outgoing Supervised REFER	Never	•
- Time Profile (0)			Send 302 Moved Temporarily		
🗉 🝈 Firewall Profile (1)			Outgoing Blind REFER		
IP Route (1) Account Code (0)					
License (8)					
- IIII Tunnel (0)					
User Rights (8) H ARS (1)					
Location (0)					
- 🎇 Authorization Code (0)					
					J



Within the **Transport** tab the IP address **172.16.0.153** is again related to the XCAPI controllers used Ethernet interface. The **Network Configuration** parameters are used as shown on the screenshot below.

Nevertheless, please ensure that those settings are set conform to the ones of the XCAPI controller.

👫 Avaya IP Office Manager 00E00	7071B30 [9.1.300.120] [Administrator(Administrator   Manager   Operator)]	
Eile Edit ⊻iew <u>T</u> ools <u>H</u> elp		
IP Offices	SIP Line - Line 8	📸 - 🔛   🗙   🗸   <   >
A BOOTP (1)     Operator (3)     O	SIP Line       Transport       SIP Unit       VolP       T38 Fax       SIP Credentials       SIP Advanced       Engineering         ITSP Proxy Address       172.16.0.153	
		1 i ii

The **SIP URI** tab is configured as follows. The **Local URI** is used with wildcard \* which determines that the SIP trunk will accept any incoming SIP call. **Contact**, **Display Name** and **PAI** credentials are here used with their defaults (**Use Internal Data**). The **Incoming** and **Outgoing Group** ID is set to **8000**.

IP Offices	SIP Line - Line 8	🖆 - 😬   🗙   -	✓   <
BOOTP (1)     Coperator (3)     OCE00701830     OCE00701830     OCE00701830     OCE00701830     OCE00701830     Coperator (3)     Coperator (3)     Coperator (3)     Coperator (3)     OCE00701018     OCE0010118     OCE0010118     OCE001011     OCE00101     OCE00101     ODEC00101     ODEC0010     ODEC00101     ODEC0010     ODEC001     ODEC0010     ODEC001     ODEC001	SIP Line Transport       SIP URI VolP       T38 Fax       SIP Credentials       SIP Advanced Engineering         Channel Groups       Via Local URI Contact       Display Name       PAI       Or         Edit Channel       Via <hr/> Contact       Or       Cancel         Via <hr/> Contact       Use Internal Data <hr/> Cancel         Display Name       Use Internal Data <hr/> Cancel         Incoming Group       0000 <hr/> Cutagoing Group       0000         Outgoing Group       0000 <hr/> Cancel <hr/> Cancel	·· ·	



The VoIP tab Codec Selection is here used with Custom (G.711 only) settings. Beside of the Re-Invite Supported flag, all others parameters are unchecked.

According to the XCAPI controller configuration **Fax Transport Support** is set to **G.711** and **DTMF Support** is used with **RFC2833** method. Additional information about facsimile can be reviewed in the according chapters starting on page 18.

Mavaya IP Office Manager 00E00 File Edit View Iools Help	7071B30 [9.1.300.120] [Administrator(Administrator   Manager   Operator)]	- <b>-</b> X
IP Offices	SIP Line - Line 8*	▼ 🔄   🗙   ✔   <   >
B→R         BCOTP (1)           B→C         Operator (3)           B→C         Operator (3)           B→C         Operator (3)           B→C         System (1)           C1         1           C1         2           System (1)         1           C1         2           S         5           S         7           B         Extension (12)           B         Extension (12)           B         Group (1)           B         Service (0)           B         For Looning Call Route (4)           B         B           B         Decute (1)           A         ASC (1)           B         B           B         Decute (1)           C         The Profile (0)           C         The Route (1)           A         ASC (1)           B         Service (0)           C         User Rights (8)           B         ASS (1)           A         ASS (1)           B         Cuber Rights (8)           B         ASS (1)	SIP Line       Transport       SIP UR       VolP       T38 Fax       SIP Credentials       SIP Advanced       Engineering       Vol         Codec Selection       Custom       Selected       Image: Code Code Code Code Code Code Code Code	P Silence Suppression invite Supported Codec Lockdown Allow Direct Media Path ☐ Force direct media with phones ACK/100rel Supported 711 Fax ECAN
- 🥁 Authorization Code (0)		

The **SIP Advanced** tab gives various new parameters. Beside of the system given defaults the parameters **Use Phone Context**, **Caller ID from From header** and **Add user=phone** are set for appropriate interworking.

Elle       Edit       Step Line - Line 8*         IP Offices       SiP Line - Line 8*       Media         Image: Step Line ()       SiP Line ()       Media         Image: Step Line ()       Step Line ()       Media         Image: Step Line ()       Media       Media       Media         Image: Step Line	🖌 Avaya IP Office Manager 00E007071B30 [9.1.300.120] [Administrator(Administrator   Manager   Operator)]					
IP Offices       Image: Sippling of the second context of the second contex of the second c	Eile Edit Yiew Tools H	elp				
BODIP (1) SP Line   Transport   SP Lin!   VaP   Ta B Fax, SP Credentals   SP Advanced   ngineering   B Coord (2) Addressing   Call Couting Method Posure IP address   Call Couting Method Posure IP address   Suppres DNS SRV Lookups All   Call Couting Method Posure IP address   Suppres DNS SRV Lookups All   Call Couting Method Posure IP address   B Control UR (3) Suppres DNS SRV Lookups   B Control UR (3) Leefnore rookups   B Concentority (1	IP Offices	<b>1</b>	SIP Line - Line 8*			
	Image: Control of the second of th	SIP Line Transport SIP URI (VI Addressing Association Method Call Routing Method Suppress DNS SRV Lookups Identity Use Phone Context Add user-phone Use + for International Use PAI for Privacy Use Domain for PAI Swap From and PAI Caller ID from From header Send From In Clear Cache Auth Credentials User-Agent and Server Headers	IT38 Fax       SIP Credentials       SIP Advanced       Engineering         By Source IP address       Image: Comparison of the second secon	Media Alow Enpty INVITE Send Empty re-INVITE Allow To Tag Change P-Early-Media Support Send SilenceSupp=Off Force Early Direct Media Media Convection Preservation Call Control Call Initiation Timeout (s) Call Queuing Timeout (m) Service Busy Response on No User Responding Send Action on CAC Location Limit Suppress Q.850 Reason Header Emulate NOTEPY for REFER No Diversion	All V Disabled V 4 4 5 4 406 - Busy Here V 408-Request Timeout V Allow Voicemall V	





#### 3.5 Short Codes

In this chapter we are going to review the most important short codes for appropriate PSTN and SIP line routing.

For matching the PSTN line (here related to Line Group ID 50: Main) the short code 0N is used and set to the Dial Feature.

The **Telephone Number** is set to **ASSN**. In detail code **A** set an outgoing cli, **SS** pass through the calling number and **N** matches any prefix.

Maya IP Office Manager 00E00707	1B30 [9.1.300.120] [Admi	nistrator(Administrator   Manager   Operator)]	
IP Offices	<b>⊒</b> ∕	0N: Dial <sup>≭</sup>	📸 - 🖻   🗙   🗸   <   >
A     A	Short Code Code Feature Telephone Number Line Group ID Locale Force Account Code Force Authorization Code	ON Dial ¥ ASSN 50: Man ¥	
			ii. 🔒

The SIP line using Line Group ID 8000 will match any prefix starting with 8 (Code 8N) and uses the Dial Feature. Also the Telephone Number is here set to 8N.

IP Offices		8N: Dial	📸 - 🔛   🗙   🗸   <
• PX 0N           • PX 6N           • PX 6N <td< th=""><th>Short Code Code Feature Telephone Number Line Group ID Locale Force Account Code Force Authorization Code</th><th>8N Dial ♥ 8N 8000 ♥</th><th></th></td<>	Short Code Code Feature Telephone Number Line Group ID Locale Force Account Code Force Authorization Code	8N Dial ♥ 8N 8000 ♥	



#### 3.6 Incoming Call Route

This example uses two incoming call routes. The first call route is related to the main (PSTN) line.

The **Incoming Number** is set in accordance with this environments used PRI interface **-454XXXX** and its prefix relations. Please replace our example prefix **454XXXX** with the real PSTN provided prefix.

👫 Avaya IP Office Manager 00E0070	71B30 [9.1.300.120] [Administ	rator(Administrator Manager Operator)]	-	
Eile Edit Yiew Tools Help				
IP Offices	xxx III	0 -454XXX	🖆 - 🔤 🗙 🗸 🗸 🗸	>
□         ▲         BOOTP (1)           □         ○         Operator (3)           □         ○         Operator (3)           □         ○         Operator (3)           □         ○         System (1)           □         ↑         ↓           □         ↑         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓           □         ↓         ↓	Standard Voice Recording De Bearer Capability // Line Group ID // Incoming Number // Incoming Sub Address // Incoming CLI // Locale // Priority // Tag // Hold Music Source // Ring Tone Override //	stinations ny Voice stationstations stationstations stations stations stations sta		
				F¥ .::

Within the **Destinations** tab the  $\sharp$  symbol is used for matching all **X** wildcards used in the incoming number field.

👫 Avaya IP Office Manager 00E0070	71B30 [9.1.300.120] [Administrator(Administr	rator [Manager [Operator)]		
Eile Edit ⊻iew <u>T</u> ools <u>H</u> elp				
IP Offices		0 -454XXX		📸 • 🖻   🗙   🗸   <   >
	Standard Voice Recording Destinations	Destination \$	Falback Extension	, V
			ſ	<b>F</b> .::



The second call route is related to the XCAPI's SIP line using ID 8000. Incoming Number and Incoming CLI aren't set at all for this test environment.

le <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp			
IP Offices		8000	💣 • 🖻   🗙   🗸   <
♣ BOOTP (1)           ☞ Operator (3)           ■ ODE07071830           ■ ■ System (1)           ■ ■ Control Unit (3)           ■ ■ System (12)           ■ ■ Control Unit (3)           ■ ■ Sortic (12)           ■ ■ Control Unit (3)           ■ ■ Sortic Code (71)           ■ ■ Sortic Code (71)           ■ ■ Fource (13)           ■ ■ Control Unit (3)           ■ ■ Sortic Code (71)           ■ ■ Assortic Code (71)           ■ ■ Assortin)           ■ ■ Asthoriz	Standard     Voice Recording     Destinations       Bearer Capability     Any Voice       Line Group ID     8000       Incoming Number     Incoming Sub Address       Incoming CLI     Incoming CLI       Locale     Incoming CLI       Priority     1 - Low       Tag     Incoming CLI       Hold Music Source     System Source       Ring Tone Override     None	Y Y Y Y	

For this call route the **Destination** value is set to dot (.) for matching any value of the incoming number field.

IP Offices			8000	🖻	🛯 🗙 🛛 🖌 🗠
BOOTP (1)	Star	ndard Voice Recording Destinations			
Operator (3) 00E007071B30		TimeProfile	Destination	Fallback Extension	
🖘 System (1)	►	Default Value		-	
行了 Line (6)					
Control Unit (3)					
User (13)					
🙀 Group (1)					
9X Short Code (71)					
Service (0)					
💑 RAS (1)					
1100ming currented (1)					
😥 0 -450XXX					
Marrore (0)					
()) Time Profile (0)					
Firewall Profile (1)					
IP Route (1)					
License (8)					
W Tunnel (0)					
🏰 User Rights (8)					
Y ARS (1)					
Location (U)					





### SoftFax

In the SoftFax mode XCAPI simulates an analog Fax device by transmitting modulated facsimile signals modem-like via audio-channels. For this **Softfax (G.711 fax pass through)** must be selected as **Fax Method**.

Ensure that the Fax Transport Support within the SIP line VoIP tab is set to G.711 as shown in the SIP Line chapters screenshot starting on page 12.

🛠 XCAPI Configuration					
File View Help					
Configuration     Costic       Configuration     Costic       Configuration     Fraction       Configuration     Fraction       Controller     Fraction       Control	tions   Fax Method Select whether the XCAPI should tr encoded in the audio channel (Soft Fax Method    YJAF Fax Support Enabled Pax Calling Tone/Fax Called Tone Depending on direction fax transmit shall be transmitted before or after Transmit CED signal tone Transmit CIOS signal tone Transmit CIOS signal tone timeout	ansfer fax messages via T. 38 signaling or via T. 30 signaling fax). Selecting Disabled will also remove any configured fax codecs. Softfax (G.711 fax pass through)			



If using facsimile via G.711 you might have to set the according short code to **Dial 3K1** for appropriate interworking. This dial feature sets the ISDN bearer capabilities to 3.1KHz and improves the compatibility with specific remote devices which only allows facsimile up to such bearer capability.





# **Call Transfer**

Please ensure that the **Simulated ECT by call-tromboning (line-interconnect)** parameter of the XCAPI controller Features dialog is disabled for supporting call transfer via the SIP Refer method.

As already mentioned in the SIP Line chapter starting on page 12, Incoming Supervised REFER must be set to Always. Additionally you might have to disable the Inhibit Off-Switch Forward / Transfer parameter as mentioned in the System chapter starting on page 9.

Depending on the call transfer / forward scenario you might have to set the according parameters for **Restrict Network Interconnect** or **Analog Trunk to Trunk Connection**.

🖉 XCAPI Configuration				
File View Help				
Configuration	Controller Features			
Information     Ucenses (XCAP1 1000 Lines + Fax)     Ucenses (XCAP1 1000 Lines + Fax)     Ucenses (XCAP1 200 Dines + Fax)     Ucense	Simulate ECT In cases where the environment does not support call-transfer operations it is possible to simulate call-transfer by call-tromboning (ine-interconnect). Simulate ECT by call-tromboning (ine-interconnect) Notify destination Tranel signaling information to destination Tranel signaling information			





## **Redirecting Number**

The SIP lines **Send Caller ID** must be set to **Diversion Header** for enabling redirection numbers via SIP diversion header. In addition you might have to set some specific short code characters. More details are mentioned in the **SIP Line** and **Short Codes** chapter starting on page 12 and page 15.

### DTMF

For DTMF interoperability please ensure that **DTMF Support** is set conform to the **XCAPI** controller configuration. Here it is set to **RFC2833** as described in the previous chapter **SIP** Line starting on page 12. By default RFC2833 is set to payload value 101.

File View Help         Image: Stand Sta	🗲 XCAPI Configuration	
Configuration     Options       Information     Payload Type       Options     Payload Type       Options     Payload Type       Options     Payload Type       Image: Strate in the	File View Help	
Configuration       Options         Information       Payload Type         Define the payload-type that should be used to receive telephone-events sent by remote terminals.       Payload-Type (0-127)         Image: Trace       Image: Trace       Payload-Type (0-127)         Image: Trace       Image: Trace       Payload-Type (0-127)         Image: Trace       Image: Trace       Image: Trace         Image: Trace       Image: Trace       Payload-Type (0-127)         Image: Trace       Image: Trace       Image: Trace         Image: Trace       I		
B B Network B B Supplementary Services Codecs Code	Configuration Configuration Configuration CAPI 2.0 Options Fax Controller Fax	Options Payload Type Define the payload-type that should be used to receive telephone-events sent by remote terminals. Payload-Type (0-127) 101 Recommendation





# **Exclusion of Liability**

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