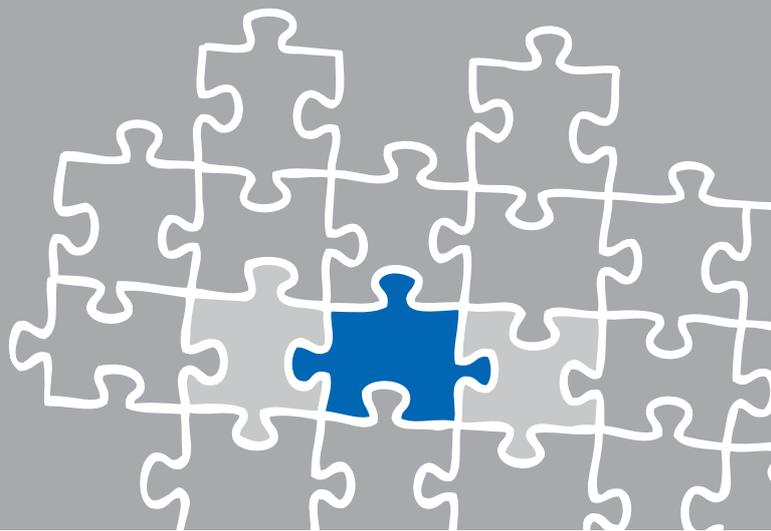


TechNote

Mitel MiVoice MX-ONE V6

April 1, 2015





Introduction

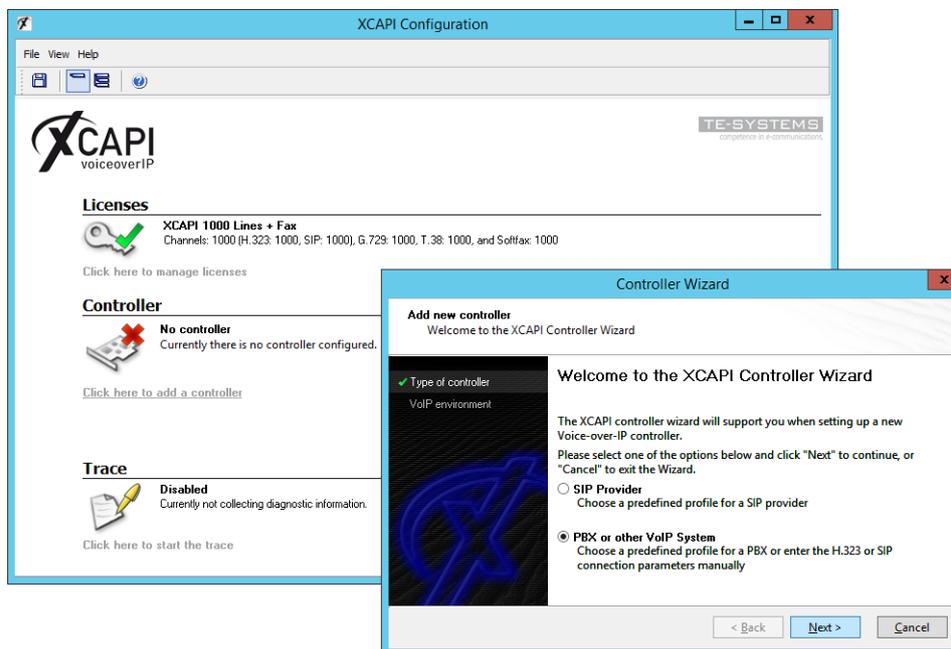
This document is intended to support you with the integration of the XCAPI into an existing environment of the Mitel MiVoice MX-ONE series (formerly Aastra MX-ONE).

Though being based on the Mitel MiVoice MX-ONE V6 series, 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 Mitel MiVoice MX-ONE. 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 around XCAPI.

XCAPI Configuration

Please start up the XCAPI configuration to create a new controller assigned to the Mitel MiVoice MX-ONE. If you've just installed the XCAPI and start the configuration tool for the first time, the XCAPI controller wizard will pop up automatically. This will also happen if there's no controller configured at all. 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. On the first page of the controller wizard please select **PBX or other VoIP System** and continue with the **Next** button.

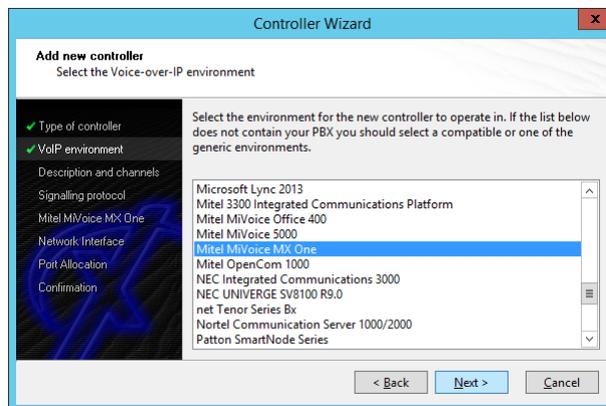




2.1 Voice-over-IP Environment

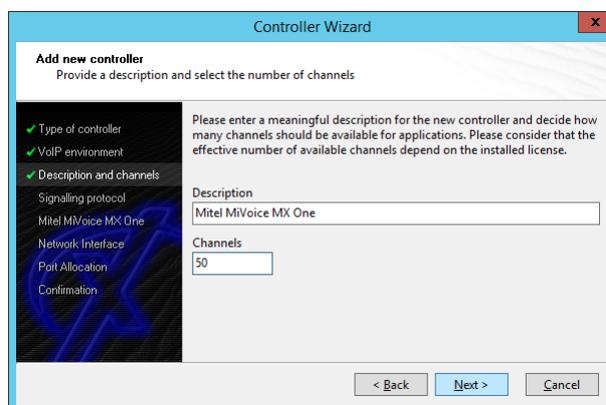
The next dialog of the configuration tool shows a list of some common Voice-over-IP environments. Selecting one of those will configure the XCAPI with a selection of near-optimal presets for the kind of environment you have, sparing you quite a lot of manual configuration.

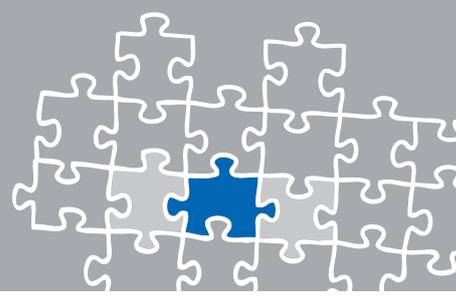
Please note that **Mitel MiVoice MX-ONE** is selectable from XCAPI version 3.5.43.



2.2 Description and Channels

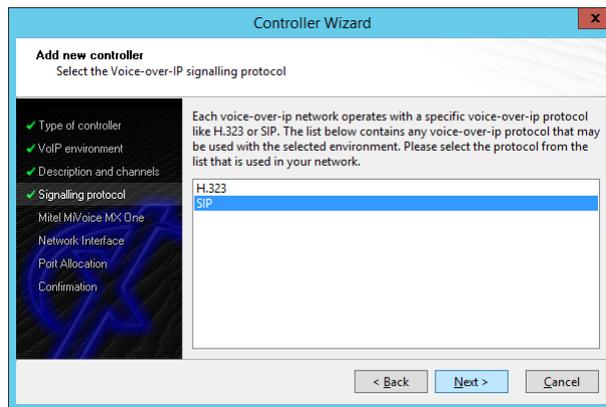
The next-to-final dialog of the controller wizard allows you to configure a meaningful description for the newly created controller. Additionally this dialog allows to specify the number of available channels that the controller can provide towards the VoIP trunk and CAPI application.





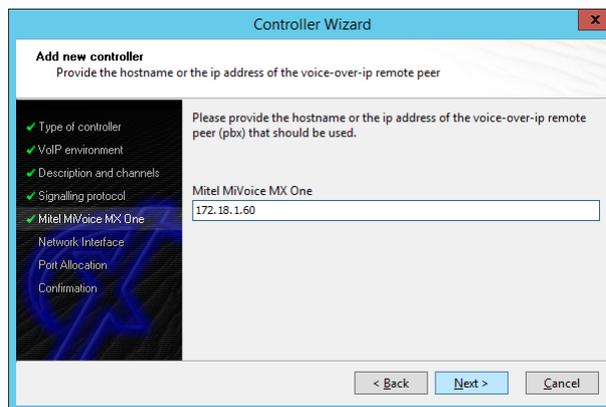
2.3 VoIP Protocol

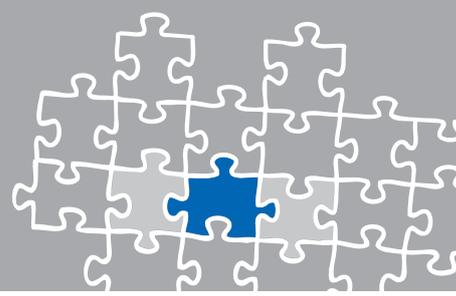
Next, please select the appropriate signaling protocol used for this VoIP environment.



2.4 IP Address of the Mitel MiVoice MX-ONE

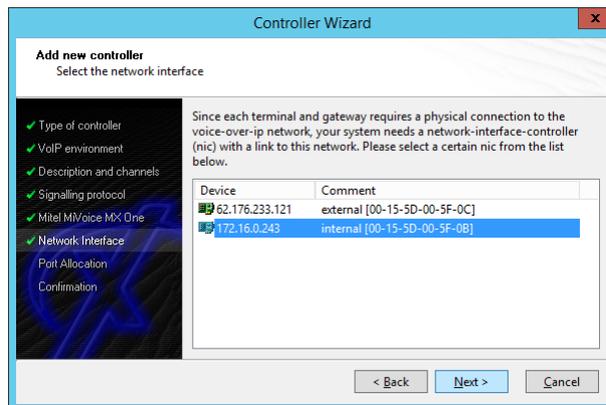
In the dialog **Network Address** please provide the IP address of the MX-ONE gateway.





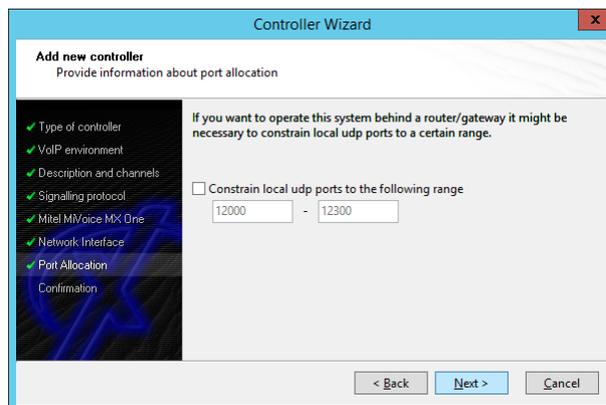
2.5 Network Interface

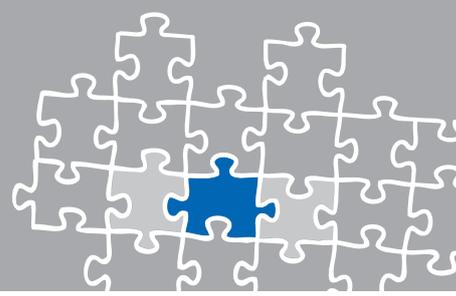
For this XCAPI Controller Wizard dialog the related network interface must be selected.



2.6 Port Allocation

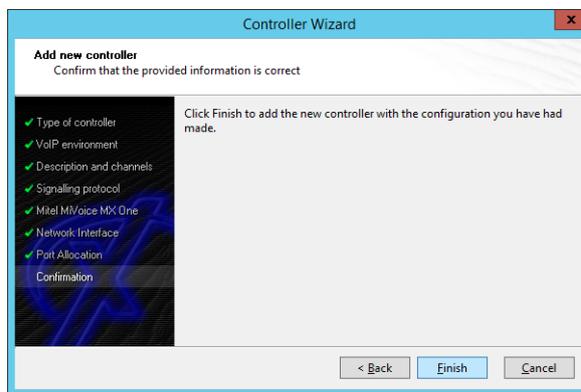
On demand a port range can be set for UDP (RTP/T.38) packets towards the gateway.



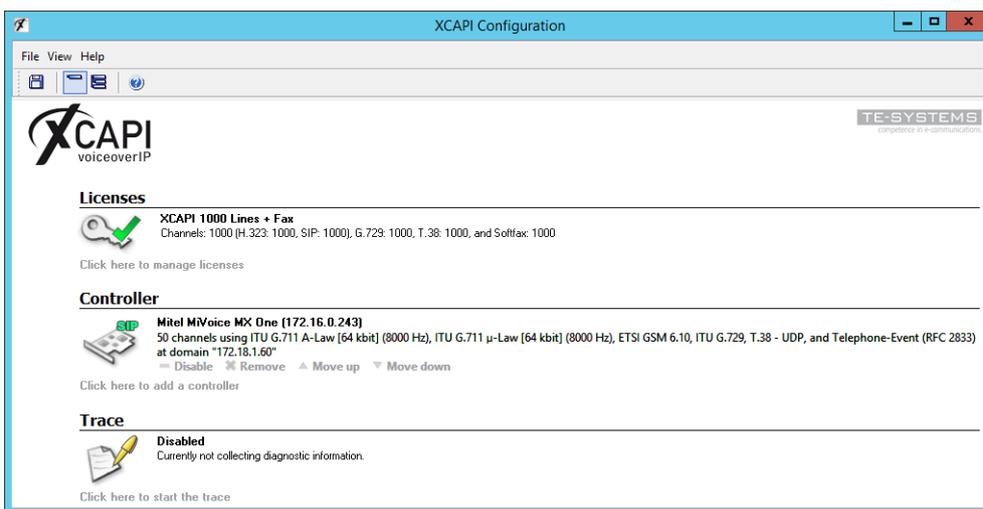


2.7 Confirmation

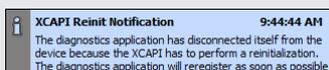
The final controller wizard dialog performs some checks on the configuration parameters you've made. If any errors are detected here, you can go back to the respective dialogs and correct the necessary input. Use the **Finish** button in order to finally create the new controller.



The created controller is now listed on the main page of the XCAPI configuration. Finally, please save the new controller and exit the configuration tool.



You always need to restart the bound CAPI application services to take effect on any changes. Restarting any XCAPI services won't help at all.





Mitel MiVoice MX-ONE Configuration

This chapter gives an overview about the PBX related configurations.

3.1 Telephony System Version

The shown Mitel MiVoice MX-ONE configurations are based on the following build version and RPM packages.

```
MDSH> ts_about;
=====  MX-ONE Telephony System  =====
Version: 6.0.0.1.11

RPM Packages
=====
Telephony Server 16.0.0.1.11 :
  eri_sn_opt-16.0.0.1.11-201412161137
  eri_sn_dbg-16.0.0.1.11-201412161137

Media Server 2.0.53 :
  mgw-2.0.53-1

Media Gateway Classic :
  -

Manager TS 6.0.0.1.9.361 :
  eri_om-6.0.0.1.9.361-201412151640

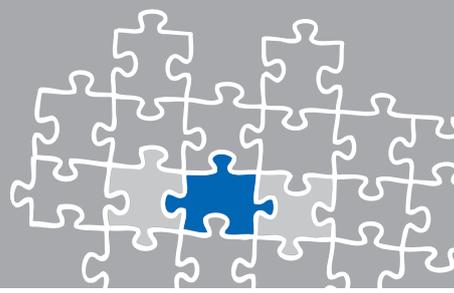
Manager Provisioning :
  -
```

3.2 License Status

Review the license status and the availability of the SIP trunk services and channels.

```
MDSH> license_status;

Port licenses:
=====
Tag          Trial time  Allowed  Used
-----
TRUNK-SIP-CHANNEL          0        120    0
TRUNK-SIP-PRIVATE-SERVICES 0         2      0
```



3.3 Number Initialization

This example use the external destination prefix 9 for accessing the XCAPI related SIP trunk. It is initiated and reviewed as follows.

```
MDSH> number_initiate -numbertype ed -number 9;
EXECUTED

MDSH> number_print -numbertype ed;
TYPE OF SERIES          NUMBER SERIES
EXTERNAL DESTINATION CODE
                        8 -          9
                                0
```

3.4 Route Category (ROCAI)

The SIP trunks route category is set as shown next.

```
MDSH> ROCAI:ROU=19,SEL=7110000000000010,SIG=0111111000A0,TRAF=03151515,
      TRM=4,SERV=3100000007,BCAP=111111;

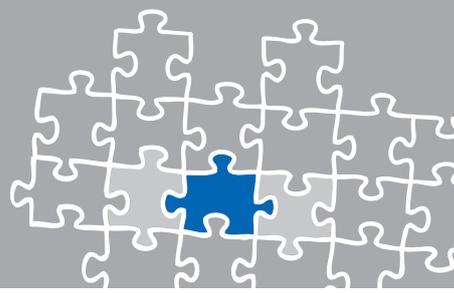
MDSH> rocap:rou=19;
ROUTE CATEGORY DATA
ROU  CUST  SEL          TRM  SERV          NODG  DIST  DISL  TRAF    SIG          BCAP
19   711000000000000010  4    3110000000    0    30    128  03151515  0111111000A0  111111
END
```

3.5 Route Data (RODAI)

The according SIP trunk route data is used as follows.

```
MDSH> RODAI:ROU=19,TYPE=TL66,VARI=00000000,VARO=00000110,VARC=00000010;

MDSH> rodap:rou=19;
ROUTE DATA
ROU  TYPE  VARC          VARI          VARO          FILTER
19   TL66  H'00000010  H'00000000  H'00000110  NO
END
```



3.6 SIP Route

The SIP trunks interface data is here used with the SIP **Default** profile. IP address **172.16.0.243** is the one used by the XC-API Ethernet interface whilst IP address **172.18.1.60** is the one used by the Mitel MiVoice MX-ONE Ethernet interface. Additional **sip_route** parameters might be set for local requirements.

```
MDSH> sip_route -set -route 19 -uristring0 "sip:?@172.16.0.243" -fromuri0 "sip:?@172.18.1.60"
                    -accept REMOTE_IP -match 172.16.0.243 -trusted NO_TRUSTED
                    -protocol udp -service PRIVATE_SERVICES

MDSH> sip_route -print -route 19 -short
Route data for SIP destination

route : 19
  protocol      = udp
  profile       = Default
  service       = PRIVATE_SERVICES
  uristring0    = sip:?@172.16.0.243
  fromuri0      = sip:?@172.18.1.60
  accept        = REMOTE_IP
  match         = 172.16.0.243
  register      = NO_REG
```

3.7 Route Equipment (ROEQI)

Next, the SIP trunk route equipment will be created.

```
MDSH> ROEQI:ROU=19,TRU=1-30,INDDAT=000000000000;

MDSH> roedp:rou=19,tru=all;
ROUTE EQUIPMENT DATA
ROU  TRU    EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-1   EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-2   EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-3   EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-4   EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-5   EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-6   EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-7   EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-8   EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-9   EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-10  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-11  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-12  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-13  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-14  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-15  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-16  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-17  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-18  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-19  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-20  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-21  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-22  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-23  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-24  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-25  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-26  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-27  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-28  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-29  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
19   001-30  EQU          IP ADDRESS          SQU          INDDAT          CNTRL
```



3.8 Route External Destination Data (RODDI)

Finally this examples SIP trunk will be accessed by using the route access code 9 which is related to route 19.

```
MDSH> roddi:dest=9,rou=19,srt=1,adc=011720000000250001001110001;
9
-

MDSH> roddp:dest=9;
EXTERNAL DESTINATION ROUTE DATA
DEST      DRN      ROU      CHO CUST      ADC                      TRC SRT NUMACK PRE
9         19      011720000000250001001110001 0 1

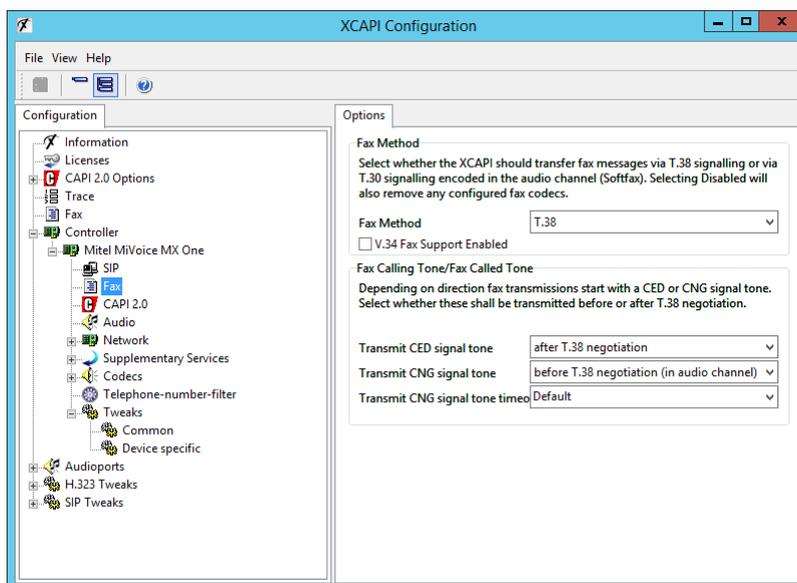
END
```

Configuration Notes

In these chapters you'll find some configuration hints and settings for supplementary services and configurations such as T.38 or call transfer via SIP refer. Such services should be enabled by default at least if using the XCAPI controller wizard. Nevertheless those configurations should be reviewed just as the according gateway parameters for appropriate interworking.

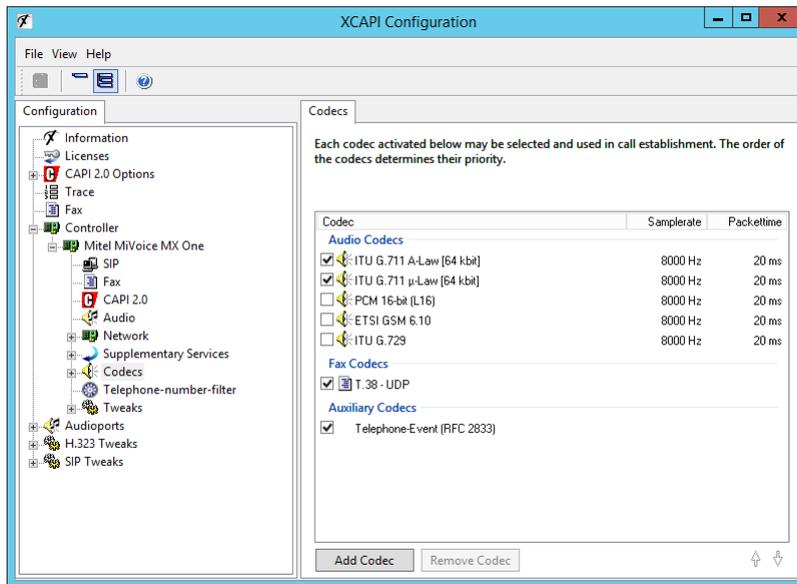
4.1 T.38

Please ensure that the **FAX Method** is set to **T.38**.



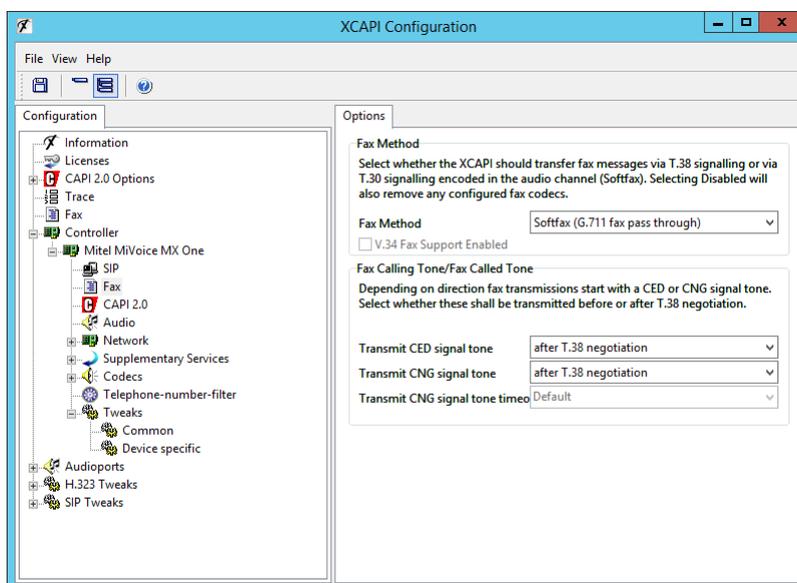


Beside of **Telephone-Event (RFC2833)** please ensure that at least one supported voice codec is available for initial call establishment. The **T.38 - UDP** codec, which is enabled by default when using the XCAPI controller wizard for creating XCAPI's controller, must be set.



4.2 Software Fax

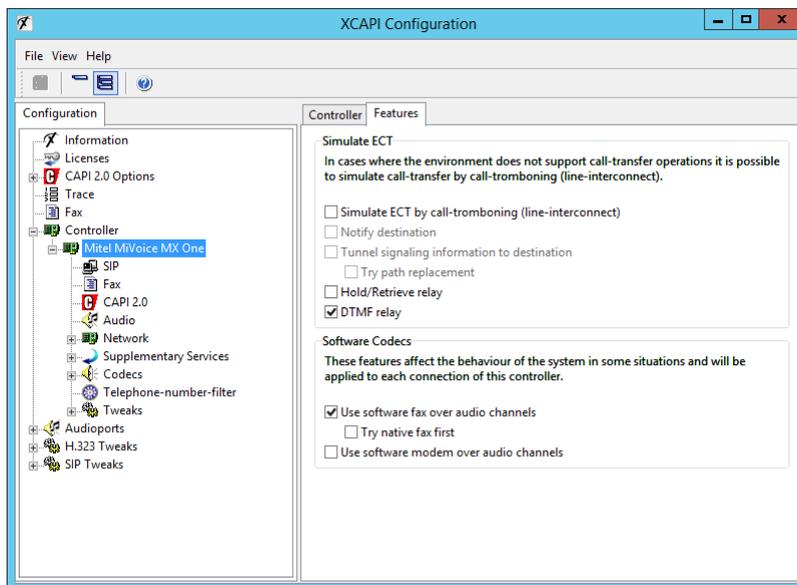
With the Softfax mode, the XCAPI simulates an analogue Fax device by transmitting modulated Fax-signals modem-like through the established G.711 audio channels. For enabling **Softfax (G.711 fax pass through)** must be set as **Fax Method** within the labeled Fax tab.





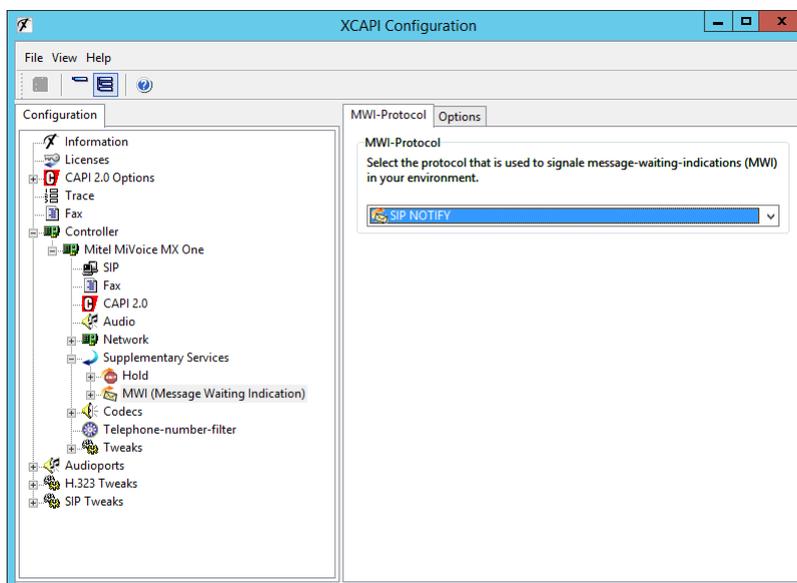
4.2.1 Call Transfer

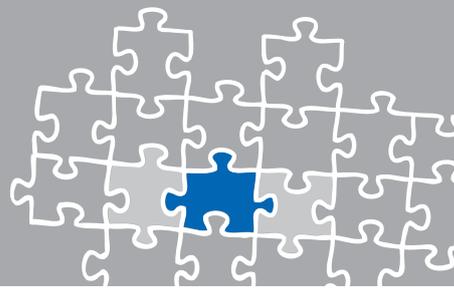
Please ensure that the **Simulated ECT by call-tromboning (line-interconnect)** parameter of the XCAPI controller **Features** dialog is disabled for supporting call transfer via SIP REFER.



4.3 MWI (Message Waiting Indication)

For appropriate MWI support, please ensure that the **SIP NOTIFY** method is enabled within the XCAPI controller configuration.





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