Internet Telephony Configuration Guide

OpenScape Office V2 / V3

Version: 1.3
Date: 2011-01-20

SEN VA SME MIC
Siemens Enterprise Communications GmbH & Co. KG

Siemens Enterprise Communications GmbH & Co. KG is a Trademark Licensee of Siemens AG

Communication for the open minded

Siemens Enterprise Communications
www.siemens.com/open
History of Change

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Status</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>2009-02-04</td>
<td>Released for HiPath OpenOffice ME V1</td>
<td>F. Kneissl / K.-W. Weigt</td>
</tr>
<tr>
<td>1.1</td>
<td>2010-09-01</td>
<td>Update for OpenScape Office MX V2 and hints for Fax</td>
<td>F. Kneissl</td>
</tr>
<tr>
<td>1.2</td>
<td>2010-09-28</td>
<td>Update layout and provider hints</td>
<td>F. Kneissl</td>
</tr>
<tr>
<td>1.3</td>
<td>2010-01-20</td>
<td>Additional information and update for V3</td>
<td>F. Kneissl / T. Ginis</td>
</tr>
</tbody>
</table>

Table of Content

1. Introduction ..............................................................................................................3

2. Internet Configuration ..............................................................................................4
   2.1 OpenScape Office MX used as Router ....................................................................4
   2.2 OpenScape Office with external Router .................................................................6

3. Internet Telephony Configuration ..............................................................................7

4. Appendix ....................................................................................................................15
   4.1 Fax Setup .............................................................................................................15
   4.2 Provider Hints ......................................................................................................16
   4.3 Configure STUN .....................................................................................................17
1 Introduction

This document describes how to set up the OpenScape Office MX communication system for Internet telephony via ITSP (Internet Telephony Service Provider) using Web-Based Management (WBM). The guide covers mostly VoIP trunks with SIP protocol which provide a range of call numbers for business users (direct dialing inward, DDI).

General administration is covered by the respective WBM administrator documentation.

Prerequisite for the configuration is that the Internet Explorer at a PC has a LAN connection to OpenScape Office, the WBM is started, and you are logged on as an administrator. Please use the menu items as described below.

Current technical information on the products, applications and solutions available from Siemens Enterprise Communications can be found under the following link:
http://wiki.siemens-enterprise.com

For general information see www.siemens-enterprise.com
2 Internet Configuration

An internet connection from your ITSP or other from another Internet Service Provider (ISP) is required for Internet Telephony. The DSL bandwidth at the customer site determines the maximum number of concurrent calls (128 kbit/s for a G.711 call up- and downstream).

2.1 OpenScape Office MX used as Router

If you have an Internet connection with no router the OpenScape Office MX system is configured as a DSL router as described below. The connection to the DSL Router is done via WAN interface.

Please use the Internet Configuration wizard to set up your Internet access selecting a predefined provider or the most common type ‘Internet Service Provider PPPoE’.

1. In the navigation bar, click Setup.
2. In the navigation tree, click Wizards > Network / Internet.

Remark: The actual WBM displays the „OpenScape Office“ logo.

3. Click Edit to start the Internet Configuration wizard.
4. Activate the radio button DSL at WAN Port directly and click OK & Next.
5. From the Internet Service Provider Selection drop-down list, select the standard ISP Type Provider PPPoE.
6. The settings in the IP Parameters area depend on whether or not you obtain a dynamic or fixed IP address from your ISP.
   a) Dynamic IP address: Make sure that the IP Parameters check box is disabled.
   b) Fixed IP address: Enable the IP Parameters check box. Under Remote IP Address of the PPP Connection, Local IP Address of the PPP Connection and
Max. Data Packet Size (bytes), enter the values that you have received from your ISP. From the IP Address Negotiation drop-down list, select the item Use configured IP address.

7. For Internet telephony set Full-Time Circuit to On in the Router Settings area. Under Forced Disconnect at (hour:min), enter the time (e.g., 04:59) at which the Internet connection is to be deactivated for a short time to avoid interruptions caused by internet provider’s resets.

8. The settings in the Authentication area depend on whether or not the ISP requires authentication via PPP.
   c) Authentication required by ISP: Make sure that the check box PPP Authentication is enabled. Enter the Internet access name of the ISP as the PPP user name. The customary standard is the CHAP Client authentication mode.
   d) Authentication not required by ISP: Make sure that the check box PPP Authentication is disabled.

9. Select the NAT check box in the Address Translation area if you want to use NAT (selected by default).

10. Select the Address Mapping check box in the Address Translation area if you want to use IP mapping (cleared by default).

11. Set the following values in the QoS Parameters of Interface area:
   e) Under Bandwidth for Downloads and Bandwidth for Uploads, enter the bandwidth in Kbps for downloads and uploads, respectively, as provided by your ISP.
   f) If you want to use Internet Telephony as well, open the drop-down list Bandwidth Control for Voice Connections and select the item Upload only or Upload and Download, as required. In the field Bandwidth Used for Voice/Fax (%), enter how much bandwidth is to be reserved for voice and fax connections as a percentage value (default value: 80%).

12. Click OK & Next. You are taken to the Configure DynDNS-Account window.

13. If you want to use a VPN or remote access, you will need to have already applied for and set up a DynDNS account (at DynDNS.org, for example).
   g) Enter the data of your DynDNS account.
   h) Test the DynDNS account with Connection test.
   i) After the test succeeds, click OK.
   j) Click OK & Next.

14. If you want to use neither a VPN nor remote access, click No DynDNS.

15. Click Finish to exit the Internet Configuration wizard. OpenScape Office MX performs a reboot.
2.2 OpenScape Office with external Router

If you have an OpenScape Office LX or want to use the DSL router from your Provider or another external router, please enter its default Gateway IP address in the Network Configuration wizard - DHCP Global settings - Default Gateway. Connection to the external Router is done via LAN port. OpenScape Office does not support routers with symmetric NAT. An Application Layer Gateway (ALG) in the router should be disabled.

Please use the Internet Configuration wizard to set up your Network and Internet access.

1. Go to Setup > Wizards > Network / Internet > Edit Internet Configuration

2. Choose “TCP/IP at LAN Port via an external router”

3. Configure the DNS server and the IP of your default router

4. Click Finish
3 Internet Telephony Configuration

The Internet Telephony wizard can be used to activate a predefined Internet Telephony Service Provider (ITSP) for the Internet telephony user connection. You can configure Internet telephony stations for up to four ITSP.

1. In the navigation bar, click Setup.
2. In the navigation tree, click Wizards > Central Telephony.
3. Click Edit to start the Internet Telephony wizard.
4. Clear the No call via Internet check box. A list of the configured ITSPs is displayed. The list contains the predefined ITSPs and possibly any newly added ITSPs.

   If required, click Display Status to check which ITSPs have already been activated and which Internet telephony subscribers have already been configured under each ITSP. You can activate a maximum of four ITSPs. Click OK when finished.

   Remark: OpenScape Office V3 shows a country specific view. When selecting ‘all countries’ you can see all providers.
5. Click Edit at your ITSP Profile to manage your accounts and ITSP Stations.

**Remark:**
If you just want to activate your existing profile then click OK & Next and continue with number 15.
6. Click OK & Next

7. Click **Add** in this screen
8. Enter the relevant account or number in Internet Telephony Station.

9. Enter the **Authorization Name** and **Password** which was given to you for the VoIP account by your provider, if necessary

10. a) For Accounts with single call numbers select the option **Internet Telephony Phone Number**
    
    Enter the phone number and click **Add** for every phone number you received from your provider.
    
    b) For DDI trunks / SIP trunking select the option **Internet telephony system phone number** in the Call number type area.
    
    Enter **System phone number** e.g. +44203002221
    
    Enter the DID number range for the Internet telephony station in the ‘from’ and ‘to’ fields after **Direct inward dialing band**. The range entered by default is 100 - 147.

11. Click **OK & Next**. An overview of your ITSP providers is shown. Click OK & Next

12. Assign one internal call number each to all Internet telephony phone numbers. For subscribers without Internet telephony phone number one number can be selected as **PABX number for outgoing calls**.
13. Click OK & Next. An overview of your ITSP providers is shown. Click OK & Next

14. At this step you will have to configure the Upload Bandwidth of your ADSL connection.

   The maximum number of simultaneous calls depends on the Upload. If voice quality falls as a result of network load, you must reduce the number here.

   E.g. for 512 kbps upload you can have up to 4 calls. If this is not the first time you run this wizard then these values will be filled in with your previous choices. Click OK when finished.
15. Next you can define the handling of special numbers in the **Dialed digits** column. The following station number entries are valid:

- 0 to 9: allowed digits
- -: Field separator
- X: Any digit from 0 to 9
- N: Any digit from 2 to 9
- Z: One or more digits to follow up to the end of dialling
- C: Simulated dial tone (can be entered up to three times)

16. Use the **Dial over Provider** column to specify whether the special number should be dialled via ISDN or an ITSP. Only the active ITSP is displayed. Ensure that emergency numbers can always be dialled. If you want to dial emergency numbers via an Internet Telephony Service Provider, you must make sure that the ITSP supports this feature.

17. Click **OK & Next**.
19. Here you can see the status of your ITSP. If the profile is successfully activated then you should see the status in green color. If the status color is orange, then this means that the activation was not successful. In this case please verify that you configured the correct credentials for your account. If the problem still exists then please check the STUN mode configuration. (For more details please see chapter 4.3)

<table>
<thead>
<tr>
<th>Special phone number</th>
<th>Dialed digits</th>
<th>Dial over Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0C112</td>
<td>Gamma with Register</td>
</tr>
<tr>
<td>2</td>
<td>0C110</td>
<td>ISDN</td>
</tr>
<tr>
<td>3</td>
<td>0C312372</td>
<td>ISDN</td>
</tr>
<tr>
<td>4</td>
<td>0C01362</td>
<td>ISDN</td>
</tr>
<tr>
<td>5</td>
<td>0C06002</td>
<td>ISDN</td>
</tr>
<tr>
<td>6</td>
<td>0C11122</td>
<td>ISDN</td>
</tr>
<tr>
<td>7</td>
<td>0C15116116</td>
<td>ISDN</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>ISDN</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>ISDN</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>ISDN</td>
</tr>
</tbody>
</table>

Note:
- Emergency calls should always be built up with ISDN or Analog Trunk for safety reasons.
- Please make sure that all special call numbers are supported by the selected provider without fail.
20. Click **Next** and then **Finish** to exit the **Internet Telephony** wizard.

21. Perform a data backup by clicking on Data Backup in the navigation bar and then on **Backup - Immediate** in the navigation tree.

Outgoing calls via the first configured provider can be made with default prefix 80. Further providers can be used via default prefixes 81, 82 and 83 respectively.
4 Appendix

4.1 Fax Setup

Fax is possible in two ways, either by protocol T.38 or by using clear channel with codec G.711. Fax over T.38 is more reliable and secure than fax over G.711. For OpenScape Office MX V2 Fax via VoIP Service Provider is only possible for Fax devices not for the OpenScape Office Application. For the fax configuration only two things are necessary:

1. Expert Mode > Telephony Server > Station > Analog Stations > switch the “Extension type” of the fax device to “Fax” instead of “standard” as seen below:

   ![Fax Configuration Screenshot](image-url)

2. Expert Mode > Telephony Server > Voice Gateway > Codec Parameters > Enable the flag “Fax T.38” for fax over T.38 or disable this flag if fax will be sent over G.711. All the other settings should remain at the default values. You can see this menu in the following screenshot:

   ![Codec Parameters Screenshot](image-url)
4.2 Provider Hints

You can find configuration hints how to enter account data for a specific provider at

http://wiki.siemens-enterprise.com/index.php/How_to_enter_SIP_Provider_Account_Data

Please feel free to add information from your experience to this web page.
4.3 Configure STUN

Go to: "Expert Mode > Voice Gateway > Internet Telephony Service Provider > Edit STUN Configuration"

If you are using a static IP on your ADSL modem/router then enter in the STUN Mode the value: “Use Static IP” and then enter the static IP and port.

Notes on setting STUN mode:

The necessary STUN mode depends on ITSP infrastructure and the used router. STUN is not required for ITSPs that resolve NAT traversal using infrastructure components in the provider network such as Session Border Controller (SBC). See also:


- “Automatic” (Default)
  If no ITSP is active, STUN is fully disabled (same behavior as for “Off”). With an active ITSP, STUN determines the used firewall type (NAT type) at system startup and detects IP address changes during runtime. Depending on the detected NAT type, STUN changes certain parameters in SIP messages (NAT traversal).
  Please note: symmetric NAT is not supported.

- “Always”
  STUN is always active, even if no ITSP is active, for example. Depending on the detected NAT type, some parameters in SIP messages (NAT traversal) are adapted.

- “Off”
  STUN is deactivated. IP address changes are not detected.

- “Use static IP” (When you are using static IP)

- “Port Preserving Router” (Use this option if none of the above is working, there are some specific Modem/Routers that have a special port for NAT and need this option to work properly)
Communication for the open minded

About Siemens Enterprise Communications Group (SEN Group)

The SEN Group is a premier provider of enterprise communications solutions. More than 14,000 employees in 80 countries carry on the tradition of voice and data excellence started more than 160 years ago with Werner von Siemens and the invention of the pointer telegraph. Today the company leads the market with its "Open Communications" approach that enables teams working within any IT infrastructure to improve productivity through a unified collaboration experience. SEN Group is a joint venture between the private equity firm, The Gores Group, and Siemens AG and incorporates Siemens Enterprise Communications, Enterasys Networks, SER Solutions, Cyxos and iSEC.

For more information about Siemens Enterprise Communications, please visit www.siemens.com/open

Communication for the open minded

Siemens Enterprise Communications
www.siemens.com/open

©Siemens Enterprise Communications GmbH & Co. KG

Siemens Enterprise Communications GmbH & Co. KG
is a Trademark Licensee of Siemens AG

Status 03/2010

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. Availability and technical specifications are subject to change without notice. OpenScape, OpenStage and HiPath are registered trademarks of Siemens Enterprise Communications GmbH & Co. KG. All other company, brand, product and service names are trademarks or registered trademarks of their respective holders.

Printed in Germany.