



A MITEL
PRODUCT
GUIDE

Unify OpenScape 4000 V11

Mitel SIP DECT Phone

Mitel SIP DECT Phone Configuration guide

12/2024

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1 Introduction

This guide describes the steps needed for the basic configuration of SIP-DECT 9.2 to interconnect with OpenScape 4000 V11 system.

The configuration settings below refer to SIP specific configuration.

For detailed information regarding the SIP DECT phones basic system setup and network you can refer to SIP DECT phones Mitel administration manuals.

For detailed information regarding the OpenScape 4000 configuration you can refer to OpenScape 4000 administration manuals.

1.1 Supported Features

The following features are supported in SIP DECT phones with OpenScape 4000 V11 communication system:

- Call transfer: unattended, attended, blind
- Call forward (CFU, CFNR, CFB)
- Call hold
- Call reject
- Call swap
- Call resume
- CLIR
- Call waiting
- Call log
- Call pickup group
- CLIP (Display the call number or name from caller)
- Consultation (via R key from SIP-DECT devices)
- Distinctive ringing (Different ringtones for internal, external)
- MWI
- DTMF
- 3rd-party call control (make call, reject call, clear connection)
- Standby OMM
- Gatekeeper Redundancy

The following restrictions apply for the supported features:

- Call forward (CFU, CFNR, CFB): Call forward can be activated on SIP-DECT device diversion information is present on display but destination is not shown.
- Call waiting: On SIP-DECT device Call waiting can be activated or deactivated. If Call Waiting is activated and second call is answered the third call received is notified but cannot be answered. Third call handling is not supported, will lead to unwanted transfer or alternate call if is signaled and handled. The "third line" cannot be switched off.
- Call Pickup group: supported with min. version SIP-DECT V9.2 HF1. Call pickup notification presented on DECT device contains string "Call Back" and Feature access code for pickup as information.

Two SIP-DECT configurable options available:

Pickup tone – 5 knocking tones (default)

Splash ring - pickup notification is signaled also acoustically to the user.

- 3rd-party call control (make call, reject call, clear connection): When SIP-DECT User is used as 3rd party Call Control device, only Make Call, Reject call and Clear Call (Connection) are supported
- When call is initiated from UC Client DECT device will ring for ~2s and auto-answer is activated afterward. After auto-answer SIP-DECT microphone is muted with SIP-DECT default settings. Auto-answer timer is not configurable.
- Call log is not available if DECT device is out of range or powered off.

The telephony features that are not listed above are not supported. For example:

- Conference
- Do Not Disturb
- Reverse lookup for LDAP directories (Search type is "Surname")
- SIP-DECT messaging: SIP-DECT messaging between SIP-DECT devices and Desk phones e.g. CP
- SIP-DECT - Paging, vCard Receive, Locating
- SIP@home

For more information, you may refer to OpenScape 4000 V11 IP Solutions, Service Documentation.

1.2 Software License

Make sure that the OpenScape 4000 licenses are available prior to SIP-DECT configuration.

SIP-DECT start up

Configuring the local DECT Base Station Configuration

2 SIP-DECT start up

Below steps describe a configuration example for initial setup of SIP-DECT.

For detailed information, check SIP-DECT OM System Manual Administrator guide.

Before you start configuring the SIP DECT system with OpenScape 4000 system you have to configure the Open Mobility Manager IP network.

2.1 Configuring the local DECT Base Station Configuration

To access the Open Mobility Manager you have to configure the local DECT Base Station through the Open Mobility Configurator tool.

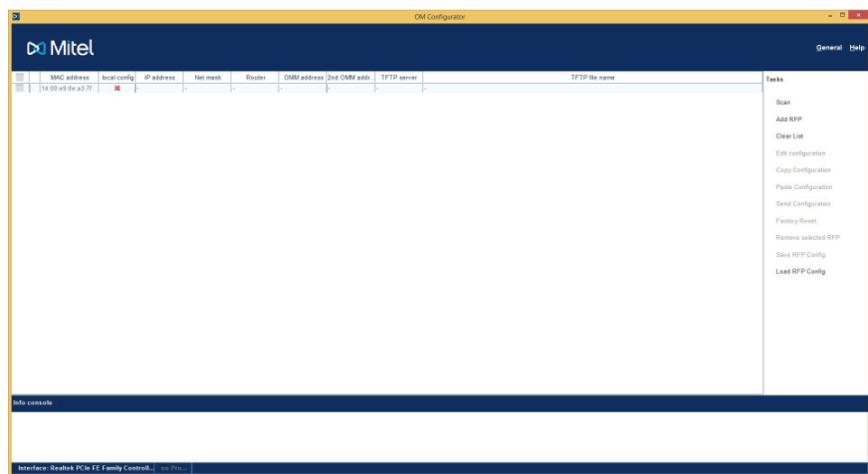
Prerequisites

You have to install Open Mobility Configurator tool.

The bellow example shows static IP address configuration, for other options, e.g DHCP, please check SIP-DECT OM System Manual.

Step by Step

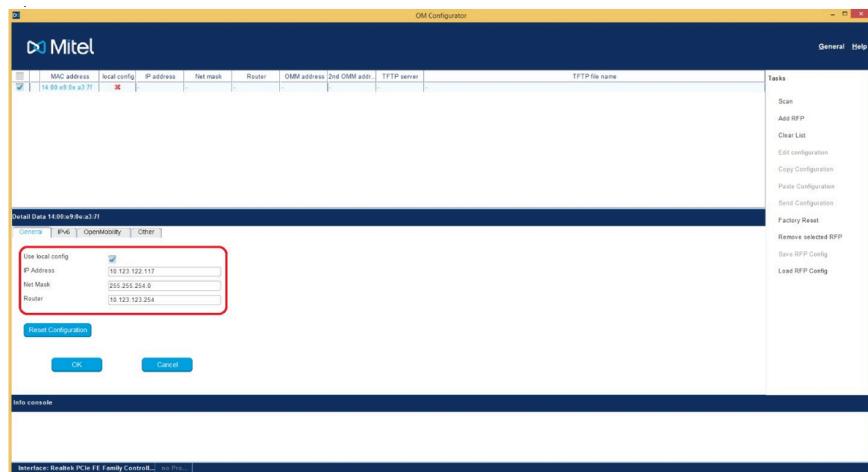
- 1) Connect the DECT base station(s) to your LAN and power up the units.
- 2) Open the Open Mobility Configurator and navigate to **General > Options** to select your network interface.
- 3) Click **Scan** to find the base stations connected to your LAN.
- 4) Enter the following credentials for the initial start up:
 - **username : omm**
 - **password : omm**
 - Click **OK**.



- 5) Select a base station entry and double click for configuration.

6) In the **General** tab provide the following information:

- a) Select the **Use local config** option
- b) Enter the **IP Address** of the DECT base station
- c) Enter the **Net Mask**
- d) Enter the IP of the **Router**
- e) Click **OK**.



7) In the **OpenMobility** tab provide the following information:

- a) Enter the **OMM address** or OMM1 and OMM2 if active standby is required for OM Standby feature.
- b) Enter the **DNS addresses**.
- c) Click **OK**.
- 8) Click **Send Configuration** to apply the configuration to the DECT base station.

2.2 Accessing Open Mobility Manager

You can access the Open Mobility Manager (OMM) as follows.

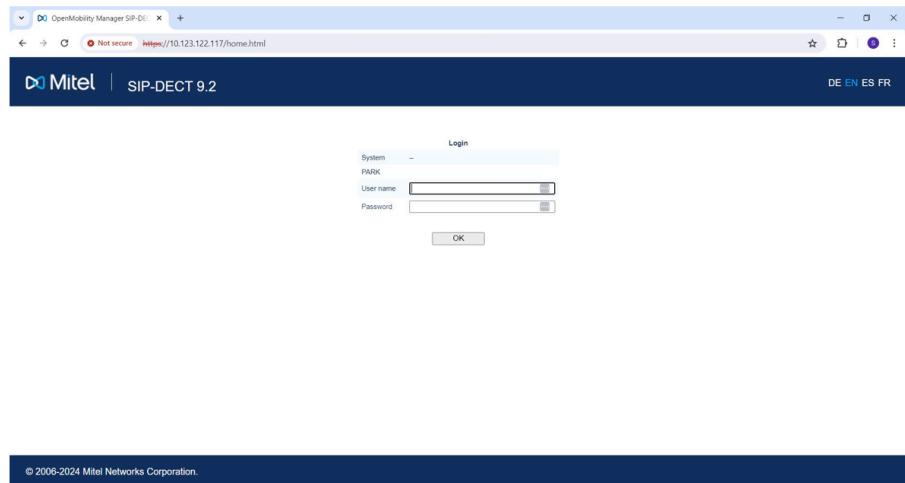
Step by Step

- 1) Enter the IP address of the base station that you have configured into a browser.

SIP-DECT start up

2) Enter the default credentials:

- a) username: omm
- b) password: omm



3) Click **OK**.

4) Click Accept to accept the End User License Agreement.

5) The first time that you login with the default credentials you have to change the password:

- a) Navigate to **System > User Administration**.
- b) Enter the new password in the **Password** field.
- c) Enter gain the password in the **Password confirmation** field.
- d) Click **OK**.

6) Navigate to **System Settings > Interfaces** and in the **Remote access** field enable the SSH access.

3 SIP-DECT licensing

Licenses are required based on the SIP-DECT system size and feature set. For small systems for up to 5 RFPs no license is required. For more details, check SIP-DECT OMM System Manual chapter Licensing.

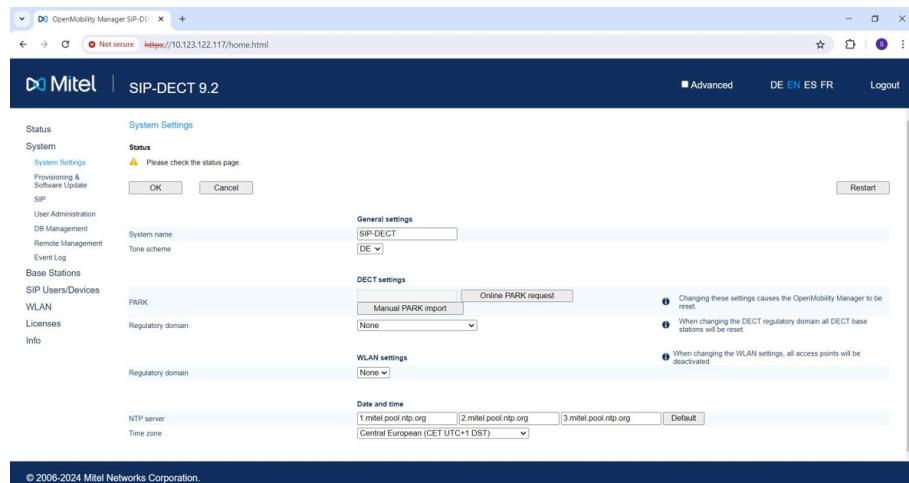
3.1 Configuring a Portable Access Rights Key

Licenses are required based on the SIP-DECT system size and feature set. For systems with up to 5 RFPs no license is required. For more details, check SIPDECT OM System manual, chapter Licensing.

You have to configure a Portable Access Rights Key (PARK) to operate a SIPDECT system with up to five DECT base stations.

Step by Step

- 1) Navigate to **System > System Settings** in the Open Mobility Manager.
- 2) In the **PARK** field select one of the following options:
 - a) Click **Online PARK request** to generate a license-request file that contains the PARK code.
 - b) Click **Offline PARK request**, if no internet connection is available. From the **PARK request file** download the request file by clicking **Save**. In the **Import PARK file** field select the PARK file and **Import** it into the OMM system.
 - c) Follow the instructions provided to get a valid PARK from Mitels PARK Manager. Upload PARK file provided by Mitel PARK Manager into the OMM system.



- 3) In the **General settings > Regulatory domain** click on the drop down menu and select a domain.
- 4) Configure the **NTP server** if necessary.
- 5) Select a **Time zone** from the drop down menu.
- 6) Click **OK** at the top of the page.

3.2 Adding new base stations

You can add new base stations from the base Stations menu.

Prerequisites

You have to perform steps described in chapter Configuring the local DECT Base Station on page 6 before you start adding new Base stations.

Step by Step

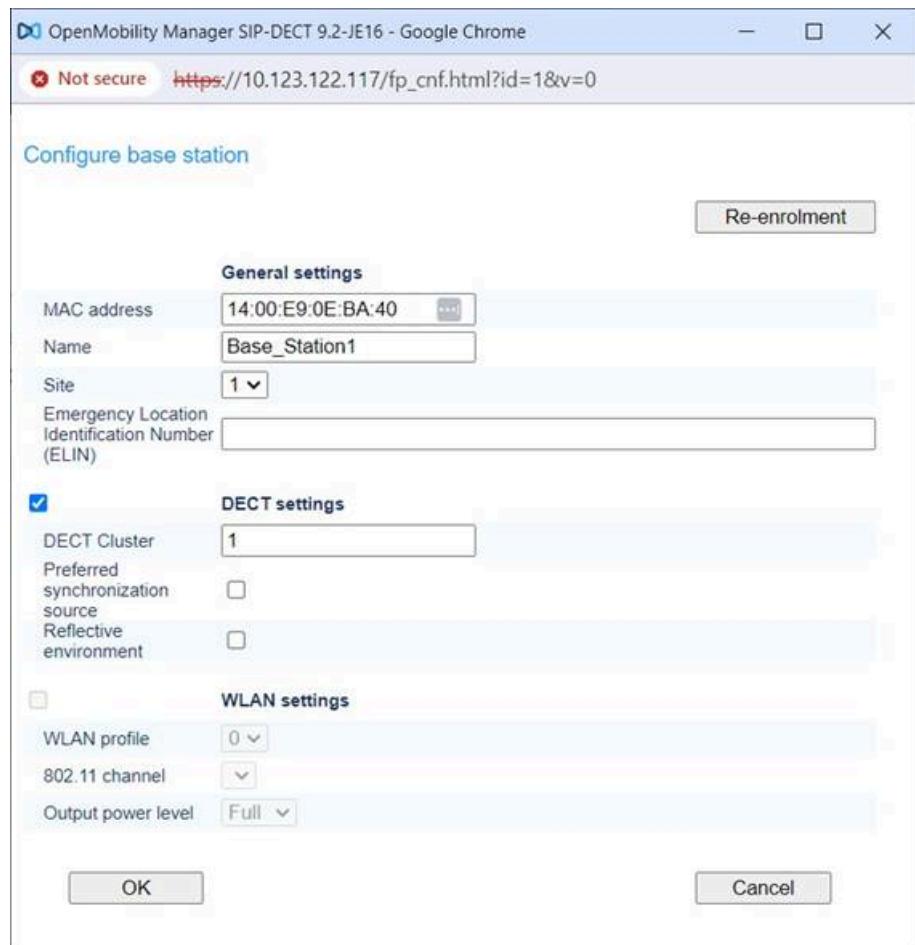
- 1) Navigate to **Base Stations** in the Open Mobility Manager.

1 Base station								
DECT Cluster 1: 1 Base station		ID	Name	MAC address	IP address	HW type	Site	RPN
		0000	OMM RFP 1	14:00:E9:0E:A3:7F	10.123.122.117	RFP 45	1	00
Unconfigured: 1 Base station								
		-	-	14:00:E9:0E:BA:40	10.123.122.27	RFP 44	-	-

- 2) Click **Capturing unconfigured base stations**.
- 3) Click **Edit RFP**, when new captured RFPs pop in the unconfigured section.

4) Click **Edit**.

The **New base station** pop up window is displayed.



5) Enter the name information for the base station:

6) Enable the **DECT settings** by clicking on the check box and assign the DECT Cluster the RFP belongs to.

7) Click **OK**.

Upon successful configuration the new base station is displayed in the list with the connected and active Base Stations.

Basic SIP configuration

Configuring the Proxy server

4 Basic SIP configuration

You can configure the basic SIP settings for the SIP DECT phones.

4.1 Configuring the Proxy server

You can set an IP address for the SIP proxy server.

Prerequisites

The **Advanced** check box must be selected to access the following settings.

Step by Step

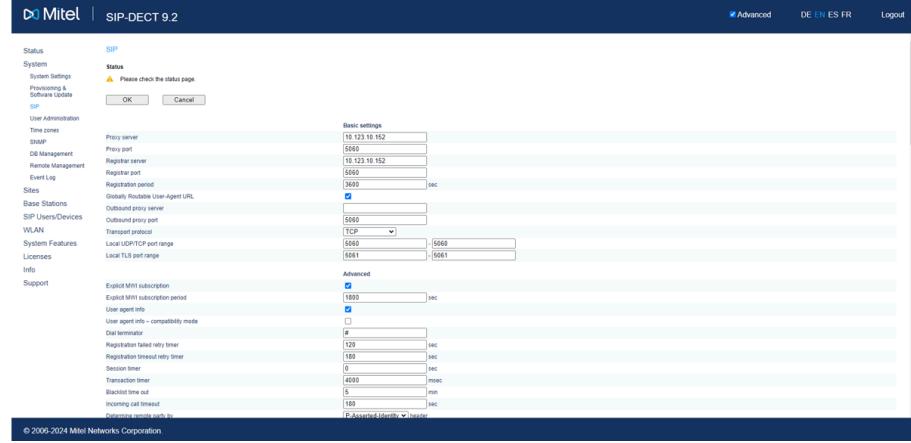
- 1) Navigate to **System > SIP** in the Open Mobility Manager.
- 2) In the **Proxy server**, enter the IP address of the OpenScape 4000 vHG 3500 SIP gateway.
- 3) In the **Registrar server**, enter the IP address of the OpenScape 4000 vHG 3500 SIP gateway.
- 4) Disable the **Microphone mute** option by clicking on the check box.

By default this option is enabled.

- 5) Disable the **Send SIPS over TLS** option by clicking on the check box.

Relevant only when transport protocol is set to TLS.

- 6) Click **OK**.



4.2 Configuring Sites menu

Option SRTP+RTP should be selected if TLS is used, SRTP is disabled by default.

SRTP+RTP: All calls will be initiated as secured but accepted if they are not secured (the audio part of the SDP contains 2 m-lines RTP/SAVP and RTP/AVP).

Step by Step

- 1) Navigate to **Sites** in the Open Mobility Manager.
- 2) Locate the site of your interest and click the edit button .

- 3)
 - a) If TCP/UDP protocol is used as transport protocol verify that SRTP parameter is disabled.
 - b) If TLS transport protocol is used select SRTP+RTP option.

5 SIP Users/Devices

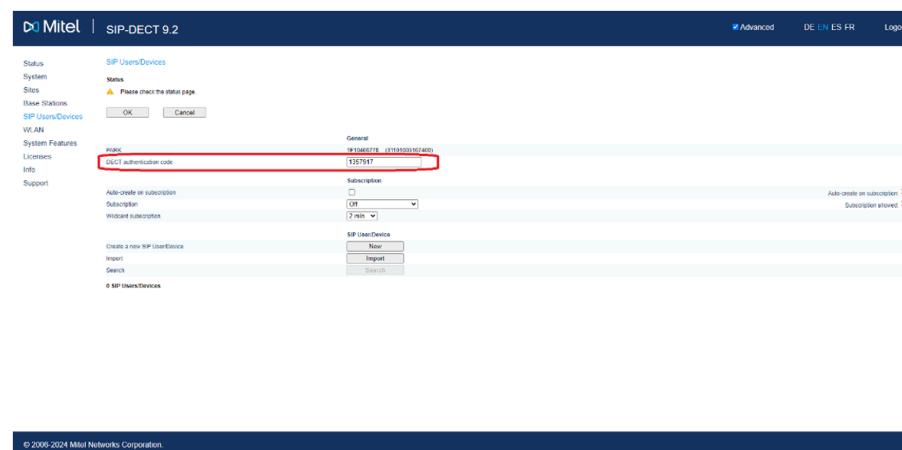
The SIP Users/Devices menu provides an overview of all configured SIP users and devices sorted by their phone number.

5.1 SIP-DECT subscription

Enable the following setting for SIP users:

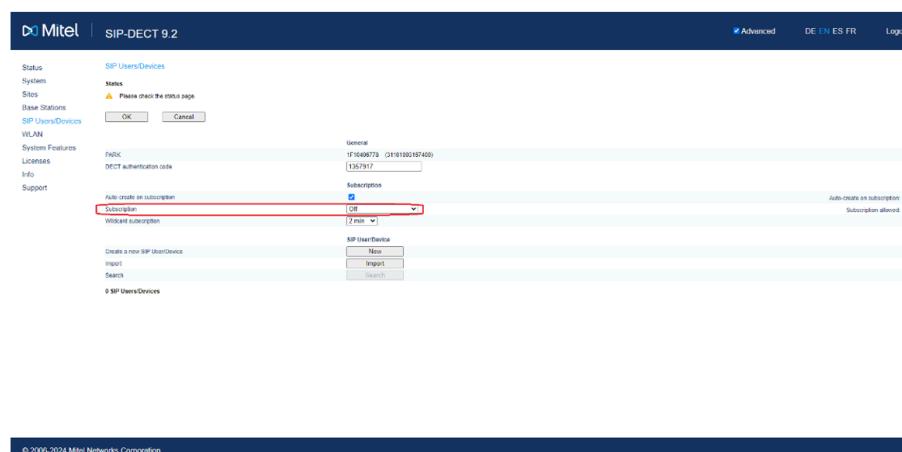
Step by Step

- 1) Navigate to **SIP Users/Devices** in the Open Mobility Manager.
- 2) Add “DECT authentication code”

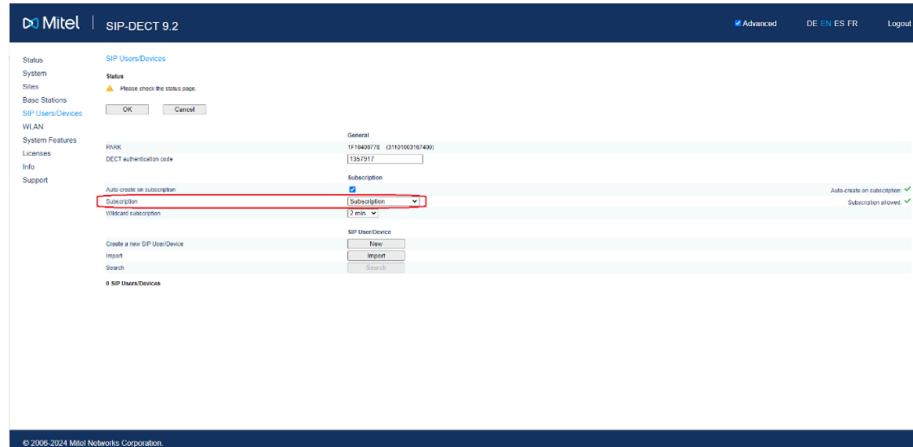


- 3) Enable the **Auto-create on subscription** by clicking on the check box.

Auto-create on subscription allows the automatic subscription of DECT phones, without any device administration. This subscription method creates an unbound device dataset. The device is mapped to a specific user dataset when the user logs in to the phone.



4) Select the **Subscription** option from the drop down menu in the **Subscription** field.



5) Click **OK**.

5.2 Adding new user

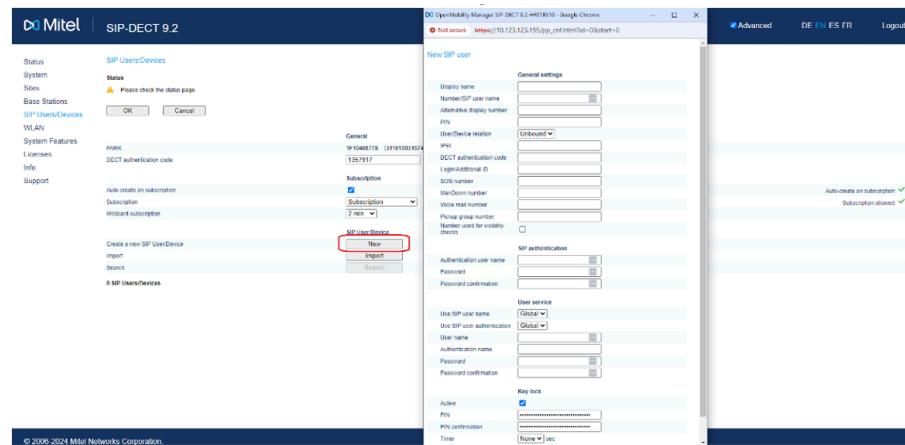
You can create new unbound SIP- DECT phone users. No relation between user and DECT device so user can login on any DECT device.

Only the mandatory parameters are described below.

Step by Step

- 1) Navigate to **SIP Users/Devices** in the Open Mobility Manager.
- 2) In the **Create a new SIP User/Device** field, click **New**.

The **New SIP user** pop window is displayed.



- 3) Enter the following required information in the **General settings** section:

- a) **Display name** b) **Number/SIP user name** c) **PIN**

The PIN that is configured is used for DECT authentication of the phone on SIP-DECT system.

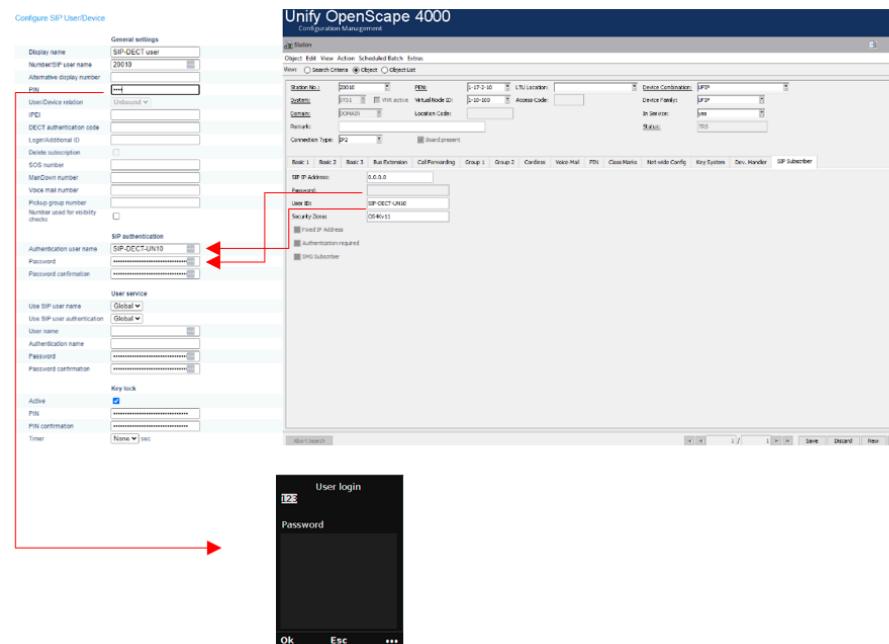
4) Enter the following required information in the **SIP authentication** section:

- **a) User name**
- **Password/Password confirmation**
- **User/Device Relation = unbound**

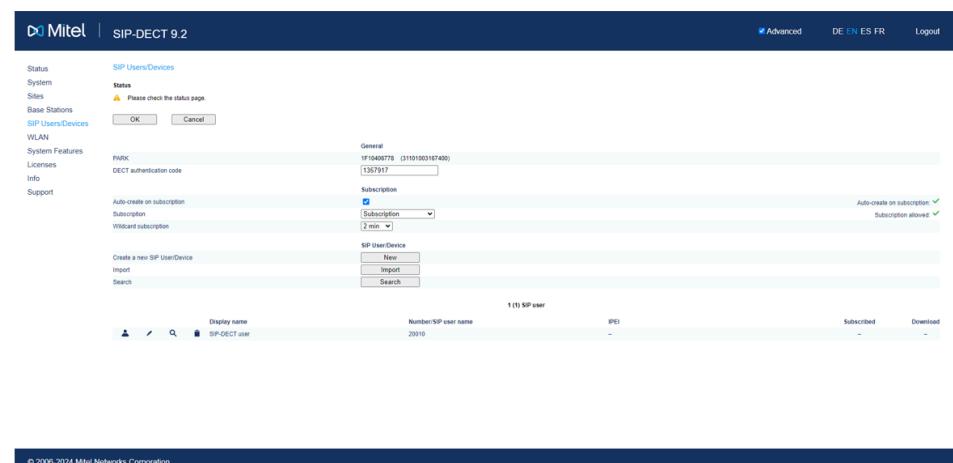
If no name is specified, the number will be used by default during SIP registration and authentication.

NOTICE: Alternative display number must not be configured.

See the example below for adding a new user:



Check that the new user is added in the **SIP Users/Devices** list.



After SIP-DECT phone login IPEI will be shown on SIP User/ Devices page.
Successful registration can be checked in OpenScape 4000 vHG 3500 board

UFP SIP Clients																
Port Number	Station Number	EPID	ONS Number	User Name Client	Realm	Use Fixed IP Address	Authentication required	IP Address	TLS used	Cipher	RMX blocked	Use DHC	Group Policy DAB	Central Conference DAB	Hunt Group DAB	E164 Phone Number
10	20010		SIP-DECT-UN10	054kv11	false	No	10.123.123.195	No	No	No	No	*70	*30	#61	4026840620010	
12	20012	471fdcae2			false	No	10.123.122.127	No	No	No	Yes	*70	*30	#61	4026840620012	
13	20013				false	No		No	No	No	Yes	*70	*30	#61	4026840620013	
14	20014				false	No		No	No	No	Yes	*70	*30	#61	4026840620014	

System features workarounds and hits

Music on Hold - MoH

6 System features workarounds and hits

6.1 Music on Hold - MoH

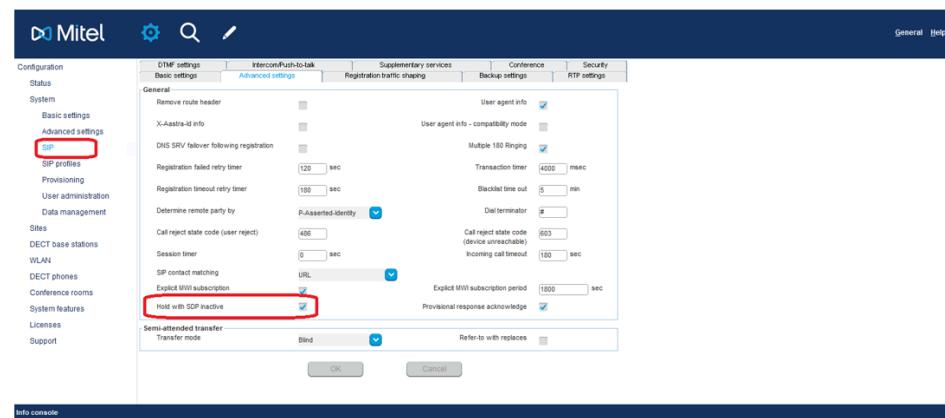
SIP-DECT configuration parameter “Hold with SDP inactive” has to be enabled for MoH

Prerequisites

OM Management portal must be installed.

Step by Step

- To activate a system-wide voicemail number proceed with the following configuration:
 - 1) Navigate to **System > SIP > Advanced settings** in the Open Mobility Manager.
 - 2) Activate checkbox in the **Hold with SDP inactive** field,
 - 3) Click **OK**.



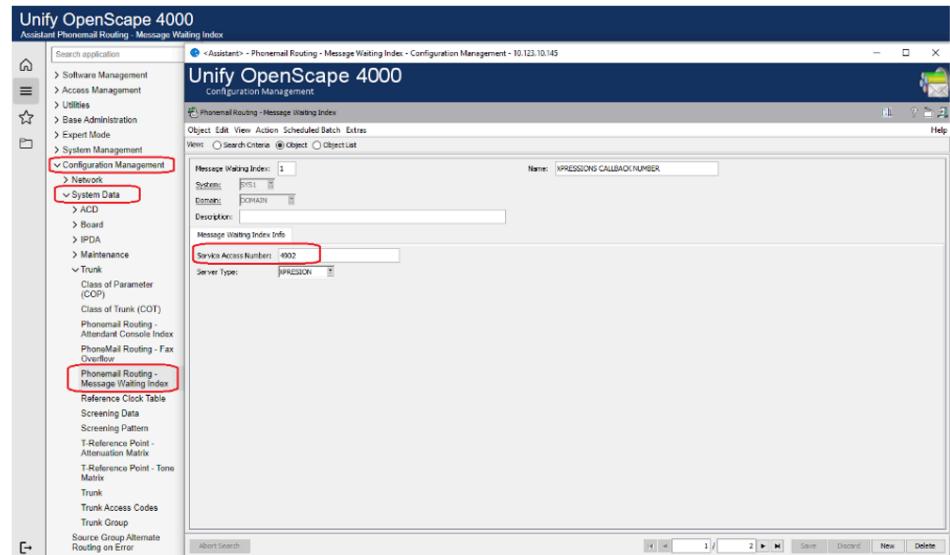
6.2 Voicemail

You can configure a system-wide voicemail number or a user-specific voicemail number. The voicemail number is used by the DECT phone when a voice box call is initiated. The system-wide voice mail number can be overruled by a user specific voicemail number.

Prerequisites

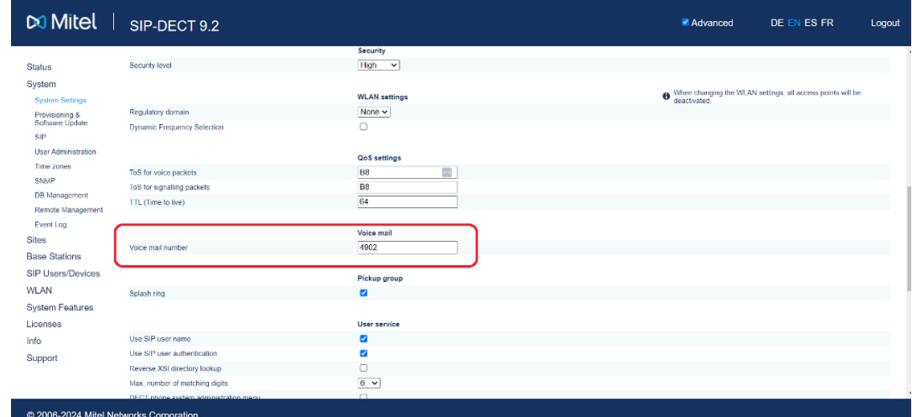
The **Advanced** check box must be selected to access the following settings.

Check voice mail number configured in OpenScape 4000 system. E.g. OpenScape 4000 Assistant. Navigate to Configuration Management > **System Data > Phonemail Routing > Service Access number** and verify the voicemail Callback Access Number.



Step by Step

- 1) To activate a system-wide voicemail number proceed with the following configuration:
 - a) Navigate to **System > System Settings** in the Open Mobility Manager.
 - b) In the **Voice mail number** field, enter the phone number that is used when initiating a voice box call.
 - c) Click **OK**.



- 2) Navigate to **System > SIP** in Open Mobility Manager and activate **Explicit MWI subscription**.
Explicit MWI subscription period must be configured to 1800s.
- 3) To activate a user-specific voicemail number proceed with the following configuration:
 - a) Navigate to **SIP Users/Devices** in the Open Mobility Manager.
 - b) Select the user of your choice and click the edit button (pencil icon).
 - c) Navigate to the **Voice mail number** parameter and enter the voicemail number.

System features workarounds and hits

Setting a Distinctive ring

6.3 Setting a Distinctive ring

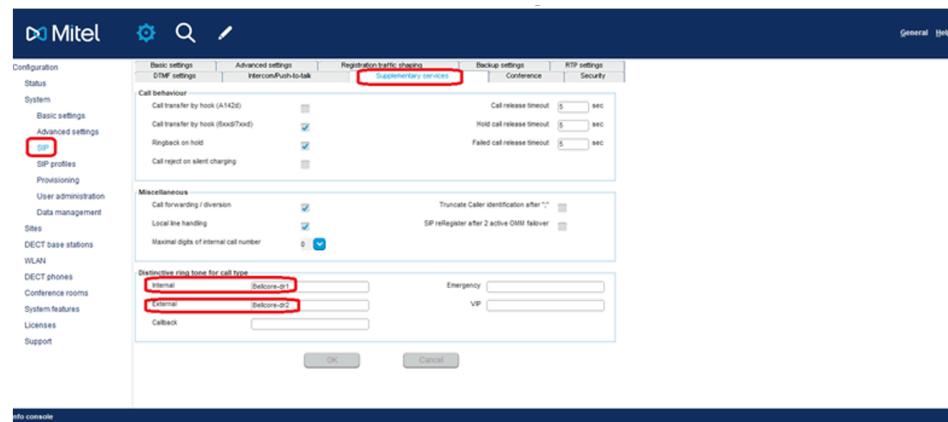
Distinctive ring tones can be set for call types.

Prerequisites

OM Management portal must be installed.

Step by Step

- 1) Navigate to **Configuration > System > SIP** in the OM Management portal .
- 2) Click on the **Supplementary Services** tab.
- 3) Navigate to the **Distinctive ring tone for call type** area.
- 4) In the **Internal** field, add Bellcore-dr1 for internal call.
- 5) In the **External** field, add Bellcore-dr2 for external call.
- 6) Click **OK**.



6.4 Disabling conference calls

Conference calls are not supported in SIP-DECT phones with OpenScape 4000 system.

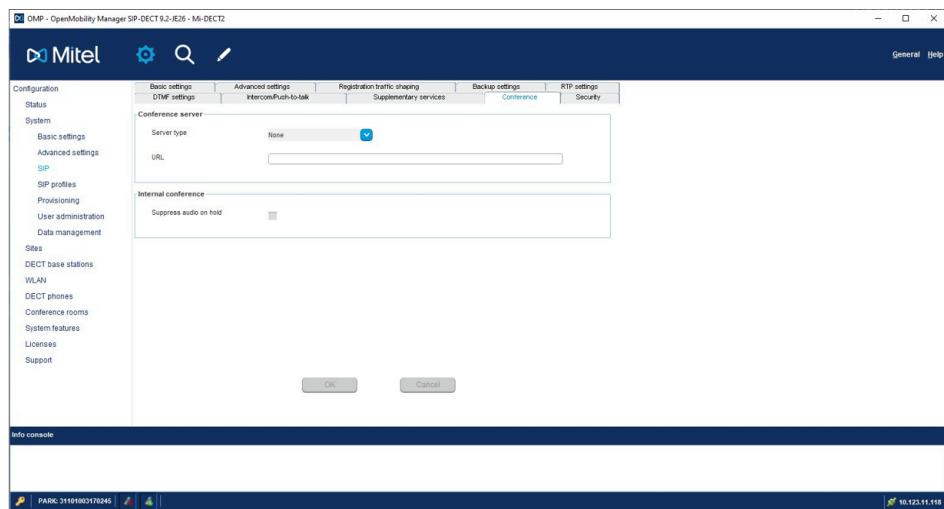
Prerequisites

OM Management portal must be installed.

You have to disable the conference option in the OM Management portal.

Step by Step

- 1) Navigate to **Configuration > System > SIP** in the OM Management portal .
- 2) Click on the **Conference** tab.
- 3) In the **Server type** field select the option **None** from the drop-down menu.



6.5 Configuring CoA profiles

You can import a variable list on the Mitel handsets with supported OpenScape 4000 feature access codes.

Prerequisites

OM Management portal must be installed.

Step by Step

- 1) Navigate to **Configuration > System features > CoA profiles** in the OM Management portal .
- 2) Click **Create** in the **Tasks** list on the right-hand side of the CoA profiles window.

The **New CoA profile** pop up window is displayed.

- 3) Configure the settings for the CoA profile:

- a) **Name:** Specify a name for the CoA profile
- b) **Default:** Indicate whether this is the default CoA profile that is used
- c) **ID:** Select an ID for the CoA profile from the drop-down menu.

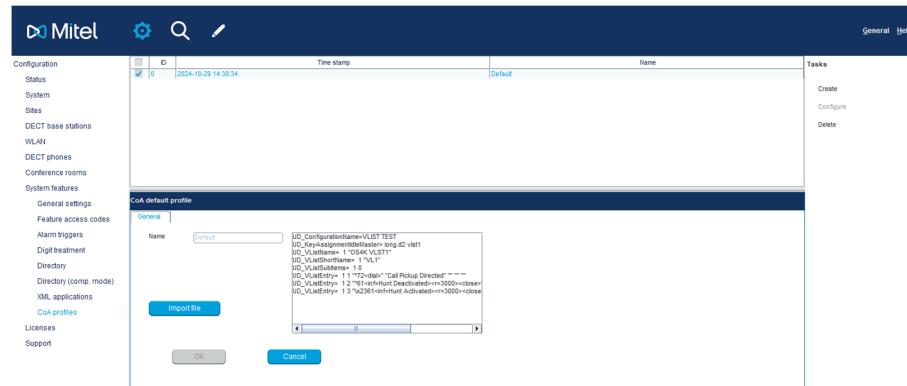
System features workarounds and hits

Pickup Group Notification

- 4) Click **Import file** to import the CoA file.

The new CoA profile is available in the **CoA profiles** page.

For example by long pressing Key 2 in the SIP-DECT device the following features are available:



CoA template Editing the CoA template requires a UTF-8 without BOM (byte order mark) editor.

For example:

```
UD_ConfigurationName=VLST TEST
UD_KeyAssignmentIdleMaster= long.d2 vlst1
UD_VListName = 1 "OS4K VLST1" # Titel
UD_VListShortName = 1 "VL1" # Softkey
UD_VListSubItems = 1 0
UD_VListEntry = 1 1 "*72<dial>" "Call Pickup Directed" "" ""
UD_VListEntry = 1 2 "*61<inf=Hunt Deactivated><r=3000><close>" "Deactivation of hunt member" "" ""
UD_VListEntry = 1 3 "x2361<inf=Hunt Activated><r=3000><close>" "Reactivation of hunt member" "" ""
```

For detailed information, see Mitel SIP-DECT administration documentation.

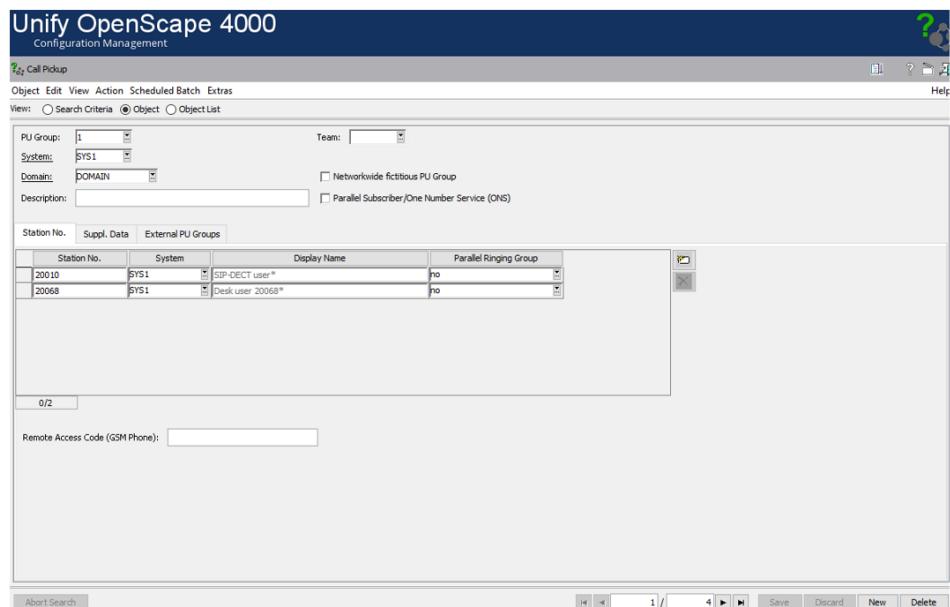
6.6 Pickup Group Notification

Call pickup groups are groups of stations in which each station is notified and can accept calls for the other stations in the group

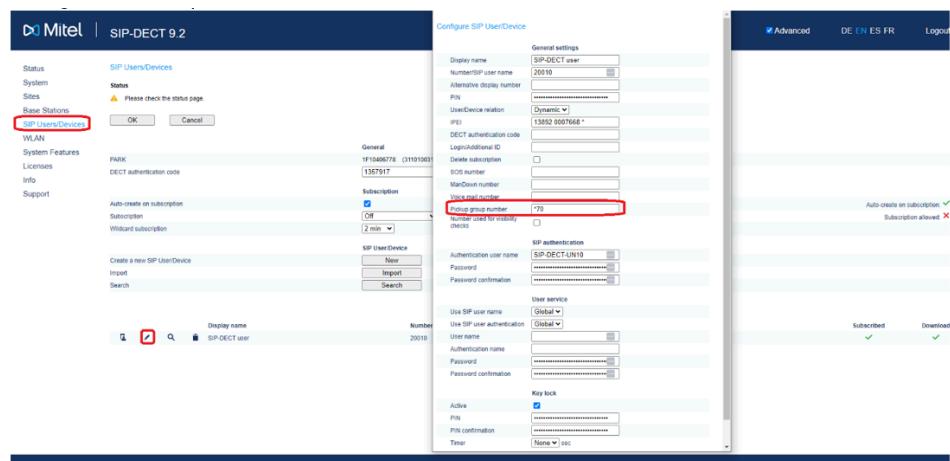
Pickup Group allows a member to be notified and answer a call on behalf of another member.

Administrator can activate Group pickup for each subscriber by Configuring pickup Feature code e.g. *70

Configuration example OpenScape 4000 Assistant



Configuration example SIP-DECT



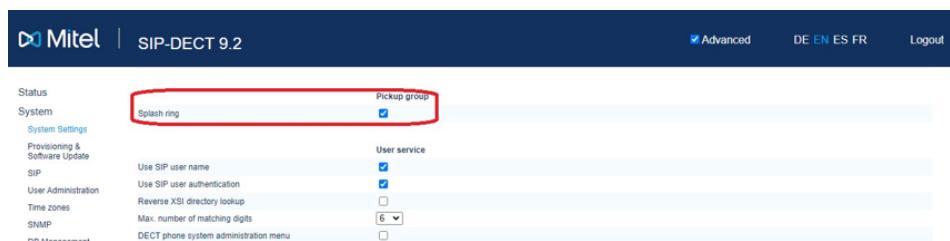
Beside display notification a pickup is signaled also acoustically to the user. Two SIP-DECT configurable options available by administrator:

Pickup tone – 5 knocking tones (default).

Splash ring - pickup notification is signaled also acoustically to the user for loud environment.

Configuration example Splash ring:

In OMM select Splash ring option from System, System Settings



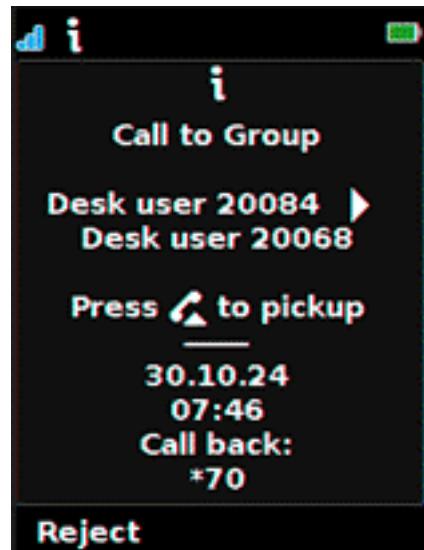
System features workarounds and hits

Multiple SIP profiles up to 20

The phone number or name of the subscriber originally called and the phone number or name of the caller are shown on the SIP-DECT Call Pickup notification.

Group Call can be picked up by pressing off hook key or ignored by pressing Reject Key.

If call is not picked up will not be shown in Caller list.



For more information, see OpenScape 4000 Administration manual.

6.7 Multiple SIP profiles up to 20

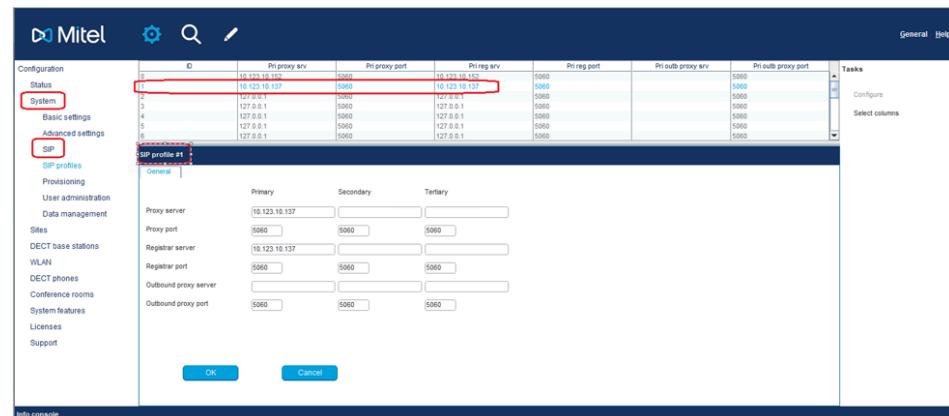
By assigning a SIP-DECT user to such a SIP profile, the users of a SIP-DECT system can be distributed to the different OpenScape 4000 vHG 3500 gateways.

One SIP profile necessary for each OpenScape 4000 vHG 3500 gateway. Each SIP profile has an unique identifier and will be assigned in SIP-DECT user configuration.

Prerequisites

OM Management portal must be installed.

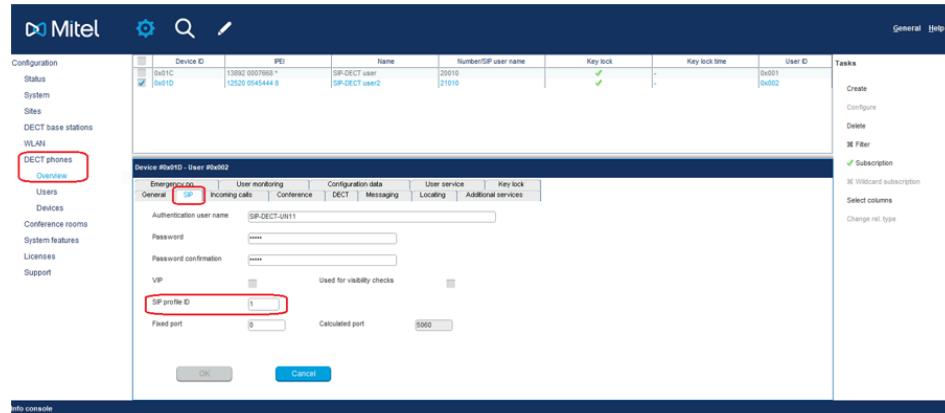
Example of SIP profiles configuration in OMP.



Unique identifier (ID) from 0 to 19. Default value of SIP profile ID is 0 therefore no.

The profile with the ID 0 corresponds to SIP Proxy / Registrar server configured in **System > SIP Basic > Settings** menu.

e.g. SIP-DECT assignment to a "SIP profile"



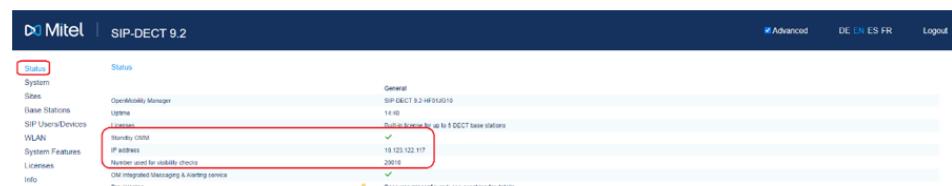
All profiles will share same configuration e.g. Transport protocol.

Transport Protocol e.g. TLS, can be configured in **System > SIP Basic > Settings** menu and this will apply to all profiles.

After Transport protocol is switched from TCP/UDP to TLS all proxy/registrar port settings with a 5060 value are automatically changed to 5061.

6.8 Standby OMM

For SIP-DECT resiliency Standby OMM can be configured using OM Configurator tool. Check SIP DECT OM System Manual for more details. Standby OMM can be verified in Status menu



6.9 Gatekeeper Redundancy

OpenScape 4000 feature Gatekeeper redundancy can be configured to increase the availability of SIP-DECT devices.

Prerequisites

OM Management portal must be installed.

System features workarounds and hits

SIP profile #1

Primary	Secondary	Primary	Secondary
Proxy server	10.123.10.137	10.123.10.154	
Proxy port	5060	5060	5060
Registrar server	10.123.10.137	10.123.10.154	
Registrar port	5060	5060	5060
Outbound proxy server			
Outbound proxy port			5060

e.g. OpenScape 4000 vHG 3500 SIP gateway overview

IP Address	Type	RMX Status	Progress	Running LW	Available LW on RMX	Transfer Time	Remote access
10.123.10.134	vHG3500	READY		pksgv50.A9.311	pksgv50.A9.311	Activation Time	
10.123.10.154	ST1000R	READY		pksgv50.A9.311	pksgv50.A9.311		
10.123.10.142	Integrated SoftGate (Simplex)	READY		pksgv50.A9.311	pksgv50.A9.311		
10.123.10.118	404P10SOFTGATE (it16)	READY		pksgv50.A9.311	pksgv50.A9.311		
10.123.10.134	Survivable SoftGate	READY		pksgv50.A9.311	pksgv50.A9.311		
10.123.10.159	vHG3500	READY		pksgv50.A9.311	pksgv50.A9.311		
10.123.10.137	SIP	READY		pksgv50.A9.311	pksgv50.A9.311		

E.g. Configuration example of Board pool in OpenScape 4000 Assistant

Board Pool Information: SG17-18 POOL

Automatic Hop: Single Hop (radio button selected)

LTU	SLOT	LTU	SLOT	Description
1	4	1	5	10.123.10.137 - 10.123.10.154

For detailed description of Gatekeeper Redundancy feature description and configuration please check OpenScape 4000 V11 IP Solutions, Service Documentation) chapter Gatekeeper Redundancy for HFA/ SIP Subscriber.

