

October 20, 2023

# MiVO400 - Configure the MiVoice Office 400 7.1 for use with Ascom IP-DECT

**Description:** This document provides a reference to Mitel Authorized Solutions Providers for configuring the MiVoice Office 400 to host the Ascom IP-DECT.

**Environment:** MiVoice Office 400 7.1 (9335a1), 69XX 6.3.0.1033, 69XXw 6.3.2.85, ASCOM IP-DECT 11.9.11 and ASCOM D83 – 1.6.3

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Mitel Technical Configuration Notes – Configure the MiVoice Office 400 to use with Ascom IP-DECT

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## Overview


This document provides a reference to Mitel Authorized Solutions Providers for configuring the MiVoice Office 400 to host the ASCOM IP-DECT. The different devices can be configured in various configurations depending on your VoIP solution. This document covers a basic ASCOM IP-DECT setup as Endpoint with required options setup.

## Interop History

| Version | Date          | Reason  |
|---------|---------------|---|
| 1       | October, 2023 | Interop with MiVoice Office 400 7.1 and ASCOM IP-DECT (11.9.11) |

## Interop Status

The Interop of the ASCOM IP-DECT has been given a Certification status. This device will be included in the SIP CoE Reference Guide. The status of ASCOM IP-DECT achieved is:

|  |  |
|--|--|
|  | The most common certification which means the device/service has been tested and/or validated by the Mitel SIP CoE team. Product support will provide all necessary support related to the interop, but issues unique or specific to the 3rd party will be referred to the 3rd party as appropriate. |
|--|--|

## Software & Hardware Setup

The test setup generated basic SIP calls between the ASCOM IP-DECT and the MiVoice Office 400.


Note: Although this testing was performed on the below tested variants, the scope of this testing can be extended to other product variants that work with the same firmware. The list of components for which this testing can be considered applicable is given in the “Additional Applicable Variants” column of the following table –

| Manufacturer | Tested Variants        | Software Version | Additional Applicable Variants |
|--------------|------------------------|------------------|--------------------------------|
| Mitel        | MiVoice Office 400     | 7.1 (9335a1)     | NA                             |
| Ascom        | ASCOM IP-DECT IPBS3    | 11.9.11          | NA                             |
| Mitel        | 69XX                   | 6.3.0.1033       | 68XX                           |
| Mitel        | 69XXw                  | 6.3.2.85         | NA                             |
| Mitel        | MiVoice Border Gateway | 11.5.2.31        | NA                             |
| Mitel        | Micollab               | 9.7.1.110-01     | NA                             |
| Ascom        | D83 Protector          | 1.6.3            | NA                             |

## Tested Features

Listed below is an overview of the features tested during the Interop test cycle and not a detailed view of the test cases. Please see the SIP Line Side Interoperability Test Plans for detailed test cases.




| Feature                            | Feature Description  | Issues                              |
|------------------------------------|--|-------------------------------------|
| <b>Registration/Authentication</b> | Device registration w/o authentication                     | <input checked="" type="checkbox"/> |
| <b>Basic Call</b>                  | Making and receiving a call                                | <input checked="" type="checkbox"/> |
| <b>DTMF Signal</b>                 | Sending DTMF after call setup (i.e. mailbox password)      | <input checked="" type="checkbox"/> |
| <b>Call Hold</b>                   | Putting a call on hold                                     | <input checked="" type="checkbox"/> |
| <b>Call Transfer</b>               | Transferring a call to another destination                 | <input checked="" type="checkbox"/> |
| <b>Call Forward</b>                | Forwarding a call to another destination                   | <input checked="" type="checkbox"/> |
| <b>DND using FAC</b>               | Enabling Do Not Disturb                                    | <input checked="" type="checkbox"/> |
| <b>Conference</b>                  | Conferencing multiple calls together                       | <input checked="" type="checkbox"/> |
| <b>Redial</b>                      | Last Number Redial   | <input checked="" type="checkbox"/> |
| <b>TLS/SRTP</b>                    | Basic incoming/outgoing calls.                             | <input checked="" type="checkbox"/> |
| <b>MWI</b>                         | Message Waiting Indication                                 | <input checked="" type="checkbox"/> |
| <b>Conference</b>                  | Conferencing multiple calls together                       | <input checked="" type="checkbox"/> |
| <b>G.711/T.38 Fax</b>              | Fax Messages   | <input checked="" type="checkbox"/> |
| <b>Call Waiting</b>                | Call waiting between the calls                             | <input checked="" type="checkbox"/> |
| <b>Resiliency</b>                  | The device able to handle Server failure to another server | <input checked="" type="checkbox"/> |
| <b>Video</b>                       | Video Capabilities   | <input checked="" type="checkbox"/> |

- No issues found     - Issues found, cannot recommend using     - Issues found

## Resiliency

The following table lists the scenarios of resilience supported by this device when connected to the MiVoice Office 400 7.1.

| Device               | Scenario 1    | Scenario 2    | Scenario 3    | Scenario 4    |
|----------------------|---------------|---------------|---------------|---------------|
| <b>ASCOM IP-DECT</b> | Not Supported | Not Supported | Not Supported | Not Supported |

 - No issues found       - Issues found, cannot recommend use       - Issues found

*Note: Refer to list of device limitations and known issues later in the document for recommendations.*

The various scenarios are described below. The scenario names are a convenience for understanding this section of the configuration guide.

**Scenario 1:** Resiliency is achieved by utilizing the ability of DNS servers to provide multiple IP addresses against a single FQDN. This is generally achieved by using DNS SRV or A records. This scenario requires nothing from a SIP Endpoint except that it supports standard DNS behavior.

**Scenario 2:** The device has inherent knowledge of the primary and secondary 3300 ICPs and will switch between them if a SIP request (**REGISTER**, **INVITE**, or **SUBSCRIBE**) times out. The behavior will be characterized based on whether the device returns to primary ICP and when this occurs. This scenario has some dependency on user action to detect a failure, especially if configured with a long registration expiry time, so the chance of a user experiencing a long delay in making a call goes up.

**Scenario 3:** The behavior of the device is the same as that of scenario 2, except that the device will “ping” the currently active server with an **OPTIONS** request. If the **OPTIONS** request times out, the device will switch to the alternate server for all future requests. The intent of this scenario is to provide much faster failure detection by the device. This will allow devices to failover to their alternate ICP much more quickly, and much more unnoticeably. (If the device can detect a failure of the primary ICP, and can failover immediately, the chance that the user even notices a lack of service falls dramatically.)

**Scenario 4:** The device will support a new SIP header designed specifically for resiliency. The P-Alternate-Server header must be included in a 200 OK or 301 Moved Permanently response. This header will include d that designates the potential servers and which server the UA must use.

## Device Limitations

This is a list of problems or not supported features when the Ascom IP-DECT is connected to the MiVoice Office 400.

| Feature             | Problem Description  |
|---------------------|--|
| <b>Resiliency</b>   | MiVoice Office 400 does not support third party SIP devices resiliency.<br><br><b>Recommendations:</b> Please contact Mitel support for more information on this.    |
| <b>Video</b>        | ASCOM IP-DECT does not support Video calling.<br><br><b>Recommendation:</b> This is a known limitation. ASCOM IP-DECT does not support Video.                        |
| <b>Call Waiting</b> | MiVoice Office 400 does not support third party SIP devices Call Waiting.<br><br><b>Recommendations:</b> Please contact Mitel support for more information on this.  |
| <b>Conference</b>   | Conference cannot be initiated from Ascom IP-DECT handset.<br><br><b>Recommendation:</b> This is a known limitation. ASCOM IP-DECT does not Support Local Conference |

## Network Topology

This diagram shows how the testing network is configured for reference.

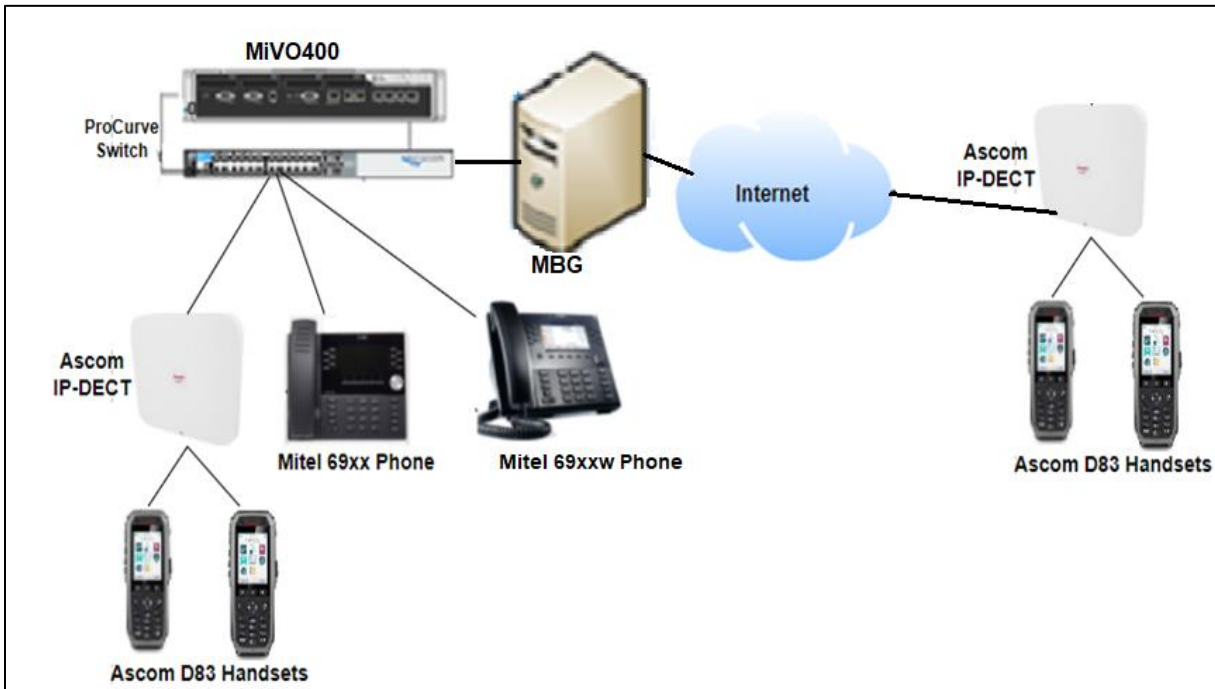


Figure 1 – Network Topology



## Configuration Notes

This section is a description of how the SIP Interop was configured. These notes should give a guideline as to how a device can be configured in a customer environment and how the ASCOM IP-DECT was configured in our test environment.

We recommend that the ASCOM IP-DECT is configured in Device Based mode. You will configure the Device Based mode in the SIP Device Capabilities Form as described in this section.

*Disclaimer: Although Mitel has attempted to set up the interop testing facility as closely as possible to a customer premise environment, implementation setup could be different onsite. YOU MUST EXERCISE YOUR OWN DUE DILIGENCE IN REVIEWING, planning, implementing, and testing a customer configuration.*

### MiVO 400 Configuration Notes

The following steps show how to program a MiVoice Office 400 to connect with the ASCOM IP-DECT.

#### *Network Requirements*

- There must be adequate bandwidth to support the voice over IP. As a guide, the Ethernet bandwidth is approx 85 Kb/s per G.711 voice session and 29 Kb/s per G.729 voice session (assumes 20ms packetization). As an example, for 20 simultaneous SIP sessions, the Ethernet bandwidth consumption will be approx 1.7 Mb/s for G.711 and 0.6Mb/s. Almost all Enterprise LAN networks can support this level of traffic without any special engineering. Please refer to the 3300 Engineering guidelines for further information.
- For high quality voice, the network connectivity must support a voice-quality grade of service (packet loss <1%, jitter < 30ms, one-way delay < 80ms).

#### *Assumptions for the MiVO 400 Programming*

- The SIP signaling connection uses UDP on Port 5060.

## Licensing and Option Selection – SIP Licensing

Ensure that Mitel MiVoice Office 400 is equipped with enough SIP Access Channel licenses for the connection to SIP Endpoints

The screenshot displays the Mitel MiVoice Office 400 configuration interface. The left sidebar contains navigation options: System overview, System information, State, Licenses, Security, Configuration, Summary, Users, Terminals, System, Routing, Services, IP network, Private networking, Hospitality, Charges, Phone book, Maintenance, and Setup wizard. The main content area shows the following configuration details:

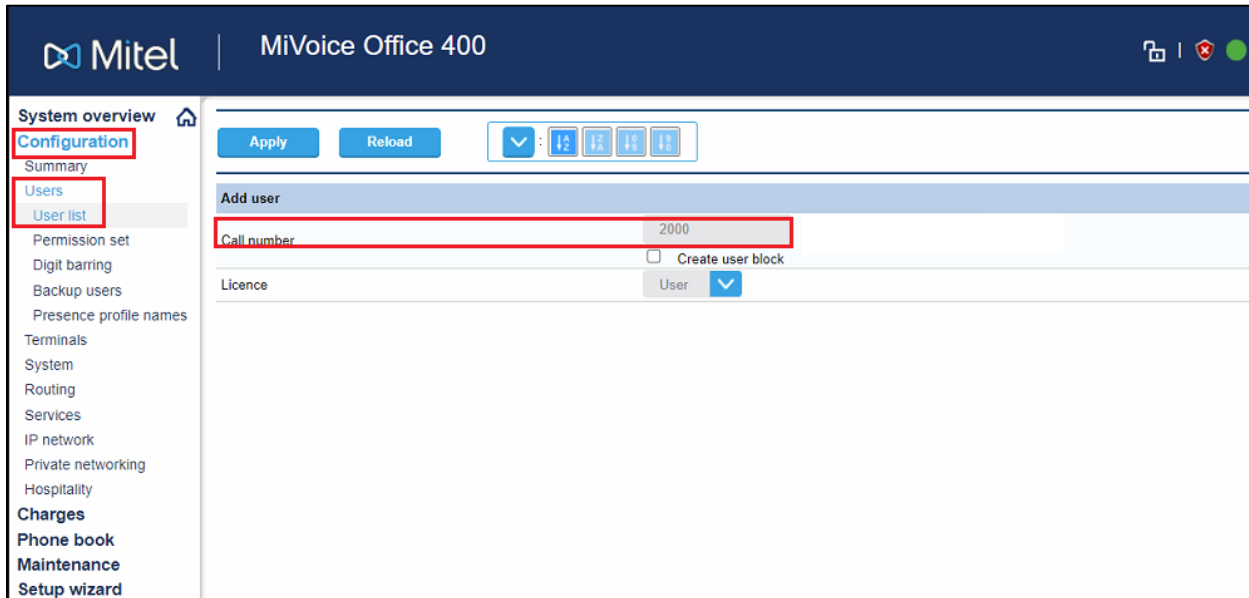
| System   |   |
|--|---|
| Equipment ID (EID)   | 49065AE28839FCABE32D70C753521E80ED97  |
| Online licence check (permanent internet connection required)  | ✓ Gateway EID:  |
| Sales channel  | GB-Freemarket   |
| Communication server   | Virtual Appliance   |
| Release  | 7.1   |
| Support ID   | 1627974   |
| Configured users   | 19  |
| User licences (used / available / total)   | User: 14 / 125 / 140 • IP User: 0 / 200 / 200 • Entry: 1 / 99 / 100 • Standard: 3 / 97 / 100 • Premium: 0 / 100 / 100 |
| Subscription   |   |
| State  | Not available   |
| Number   |   |
| Software Assurance (SWA)   |   |
| SWA state  | Active until: 14.01.2024  |
| SWA covered users  | 600   |
| Configured users requiring SWA   | 0   |
| Licence (LIC)  |   |
| Licence file   | 49065AE28839FCABE32D70C753521E80ED97_f1_virtualappliance_gp_interpinvol_3_20236966.lic <a href="#">Download...</a>    |
| Licenceable features   | Licence state: Additionally available without licence   |
| Software   |   |
| Software Release   | present   |
| Information stored in Licence Code - not needed if system has internet access - might differ from Licence Server |   |
| Subscription   | not present   |
| Software Assurance   | licensed until: 14.01.2024  |
| Software Assurance Users   | 600 50  |
| User Licences  |   |
| User   | 140   |
| IP User  | 200   |
| Entry UCC User   | 100   |
| Standard UCC User  | 100   |
| Premium UCC User   | 100   |
| Large System   | enabled   |

Figure 2 – Software License

## Creating Users on MiVoice Office 400 for the ASCOM IP-DECT

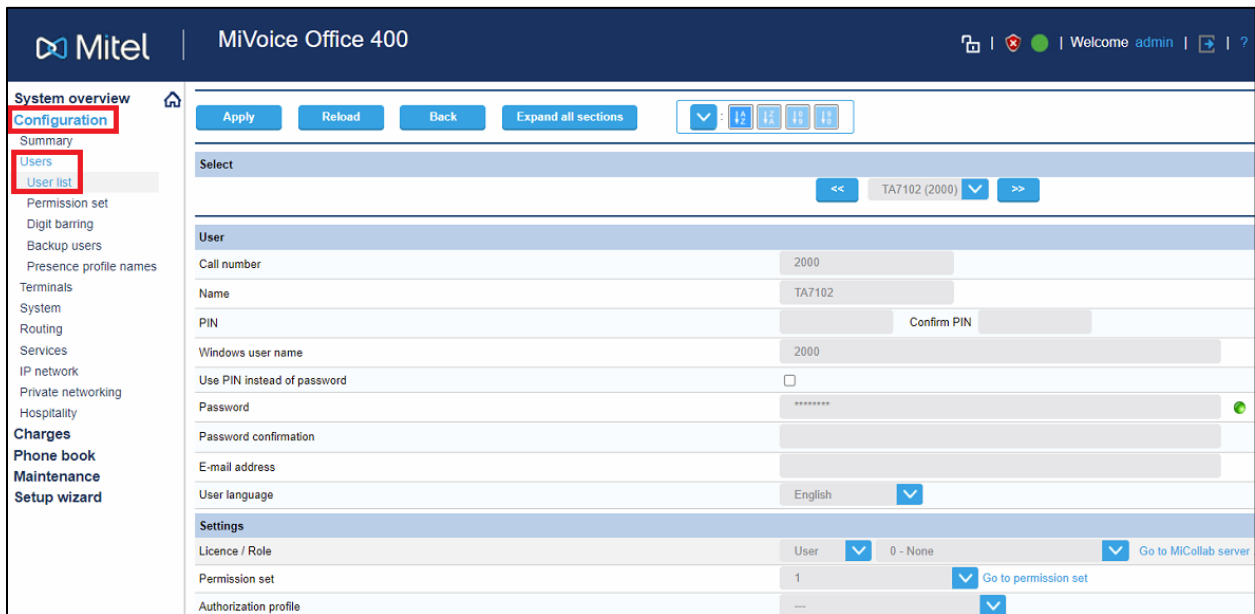
To assign and register Mitel SIP phones/Analog phones to MiVoice Office 400, make sure you create Users under Configuration → Users → User list.

Click on New and provide the Call number as shown below in Figure → Click on Apply.



The screenshot shows the Mitel MiVoice Office 400 Configuration page. The left sidebar contains a 'System overview' menu with 'Configuration' and 'Users' highlighted. The main content area shows the 'Add user' form. The 'Call number' field is set to '2000'. There is a checkbox for 'Create user block' and a 'Licence' dropdown menu set to 'User'. Buttons for 'Apply' and 'Reload' are visible at the top.

Below page will open

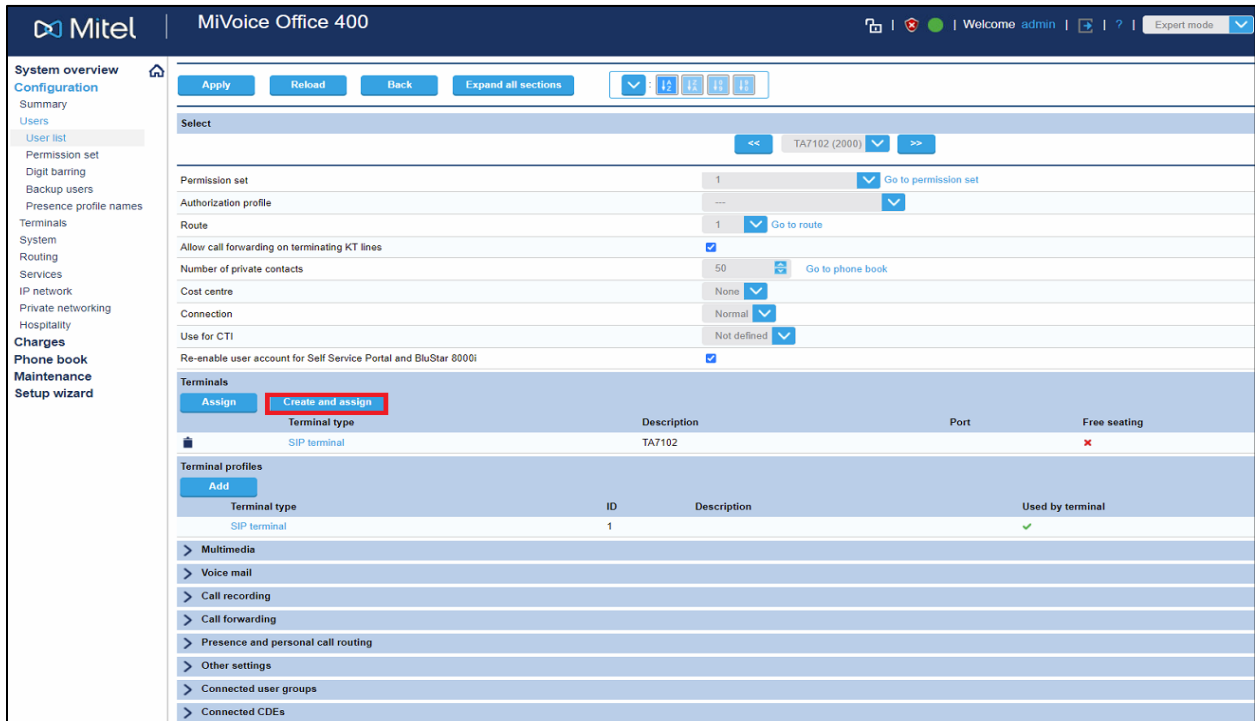


The screenshot shows the Mitel MiVoice Office 400 Configuration page with the 'User Details' form open. The left sidebar shows 'Configuration' and 'Users' highlighted. The main content area shows the 'User' form with the following details:

| User                        |  |
|-----------------------------|--|
| Call number                 | 2000                                     |
| Name                        | TA7102                                   |
| PIN                         | <input type="text"/>                     |
| Confirm PIN                 | <input type="text"/>                     |
| Windows user name           | 2000                                     |
| Use PIN instead of password | <input type="checkbox"/>                 |
| Password                    | *****                                    |
| Password confirmation       | <input type="text"/>                     |
| E-mail address              | <input type="text"/>                     |
| User language               | English                                  |
| Settings                    |  |
| Licence / Role              | User   0 - None                          |
| Permission set              | 1   <a href="#">Go to permission set</a> |
| Authorization profile       | ---                                      |

Figure 3 – User Details

Scroll down the above page and click on Create and assign terminal as shown below. A pop window will come to select terminal interface, select Standard SIP from drop down menu.



**Figure 4 – Create and Assign Terminals**

Enable Force UDP Usage and Provide SIP Username and SIP Password as shown below.

Same Username and Password must be configured in ASCOM IP-DECT for the extension. Click on Apply.

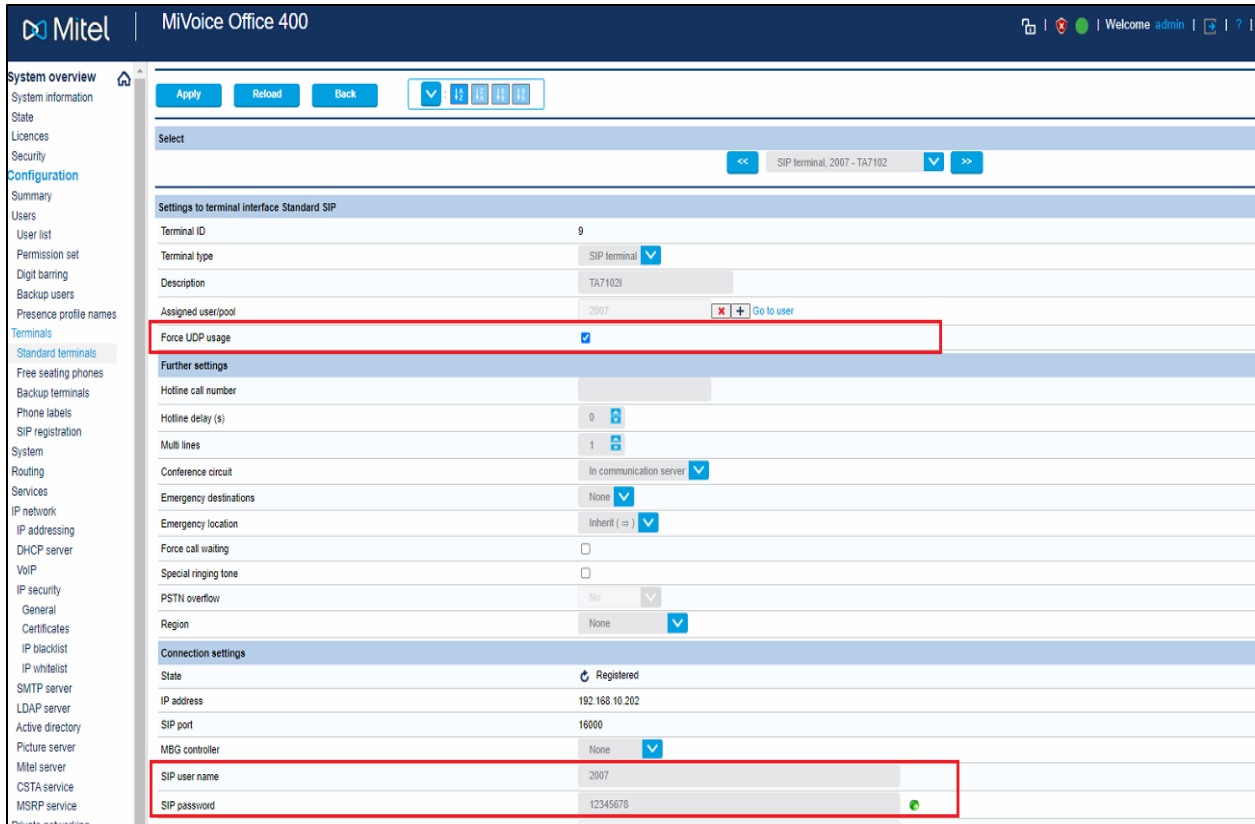


Figure 5 – Create and Assign Terminals

Enable TLS/SRTP Configuration

Check Under License--> Secure VOIP-->Enable.

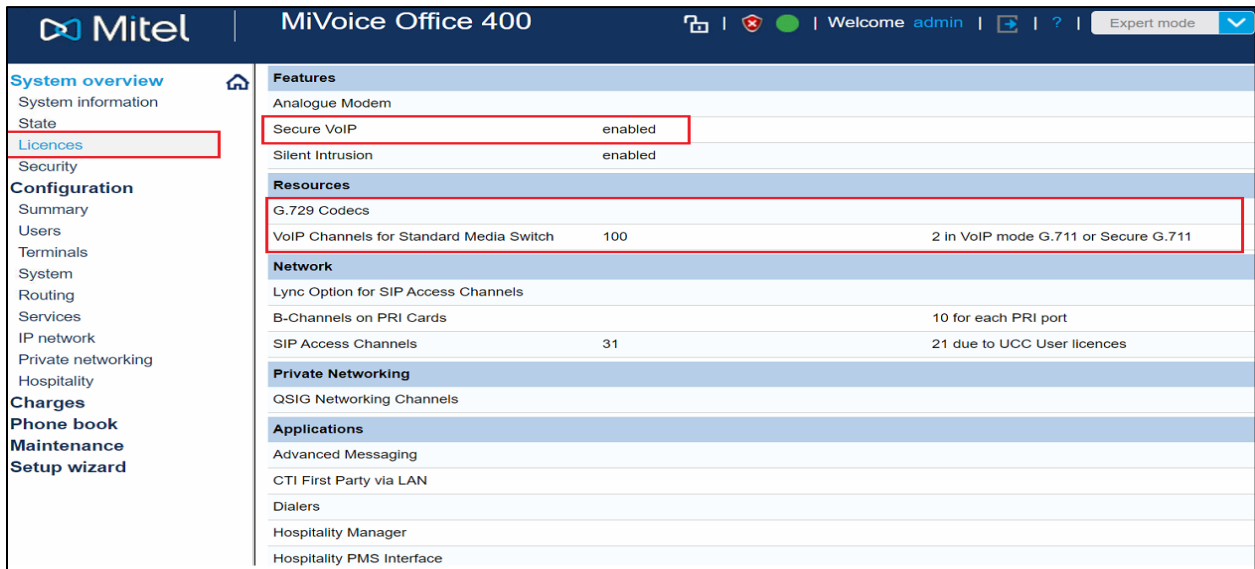


Figure 6 – SRTP License

For User, SIP Terminal-->Transport Protocol-->persistent TLS and Enable Use SAVP for SRTP

The screenshot shows the configuration page for a SIP terminal in the Mitel MiVoice Office 400. The left sidebar contains navigation options like 'System overview', 'Configuration', and 'Terminals'. The main content area is titled 'Settings to terminal interface Standard SIP' and includes fields for Terminal ID (15), Terminal type (SIP terminal), Description (TA), and Assigned user/pool (2008). A red box highlights the 'Force UDP usage' checkbox, which is currently unchecked.

| Settings to terminal interface Standard SIP |                                 |
|---|---------------------------------|
| Terminal ID                                 | 15                              |
| Terminal type                               | SIP terminal                    |
| Description                                 | TA                              |
| Assigned user/pool                          | 2008 <a href="#">Go to user</a> |
| Force UDP usage                             | <input type="checkbox"/>        |
| Further settings                            |                                 |
| Hotline call number                         |                                 |
| Hotline delay (s)                           | 0                               |
| Multi lines                                 | 1                               |
| Conference circuit                          | In communication server         |
| Emergency destinations                      | None                            |
| Emergency location                          | Inherit (⇒)                     |
| Force call waiting                          | <input type="checkbox"/>        |
| Special ringing tone                        | <input type="checkbox"/>        |
| PSTN overflow                               | No                              |
| Region                                      | None                            |

The screenshot shows the configuration page for a SIP terminal in the Mitel MiVoice Office 400, specifically the 'SIP user' section. The left sidebar is the same as in the previous screenshot. The main content area is titled 'SIP user' and includes fields for MBG controller (None), SIP user name (2008), SIP password (12345678), and MBG SIP user name. A red box highlights the 'Use SAVP for SRTP' checkbox, which is currently checked.

| SIP user   |   |
|--|---|
| MBG controller   | None  |
| SIP user name  | 2008  |
| SIP password   | 12345678                                      |
| MBG SIP user name  |   |
| MBG SIP password   |   |
| Used transport protocol                                      | UDP or TCP                                    |
| Enable keep alive  | <input type="checkbox"/>                      |
| Send redirecting information                                 | Yes, using 'Diversion header (non-recursing)' |
| Relay RTP data via communication server (indirect switching) | <input type="checkbox"/>                      |
| Fax device   | No fax device                                 |
| Bandwidth area   | Default Area                                  |
| Instant messages supported (MSRP)                            | <input type="checkbox"/>                      |
| Terminal supports session replacement                        | <input checked="" type="checkbox"/>           |
| Active line supervision (using session refresh)              | <input type="checkbox"/>                      |
| Calling party info E.164 compliant                           | <input type="checkbox"/>                      |
| Allows MWI notification without subscription                 | <input type="checkbox"/>                      |
| Use SAVP for SRTP  | <input checked="" type="checkbox"/>           |

Figure 7 – User Configuration

System-->Media Resources-->Secure G711/G729

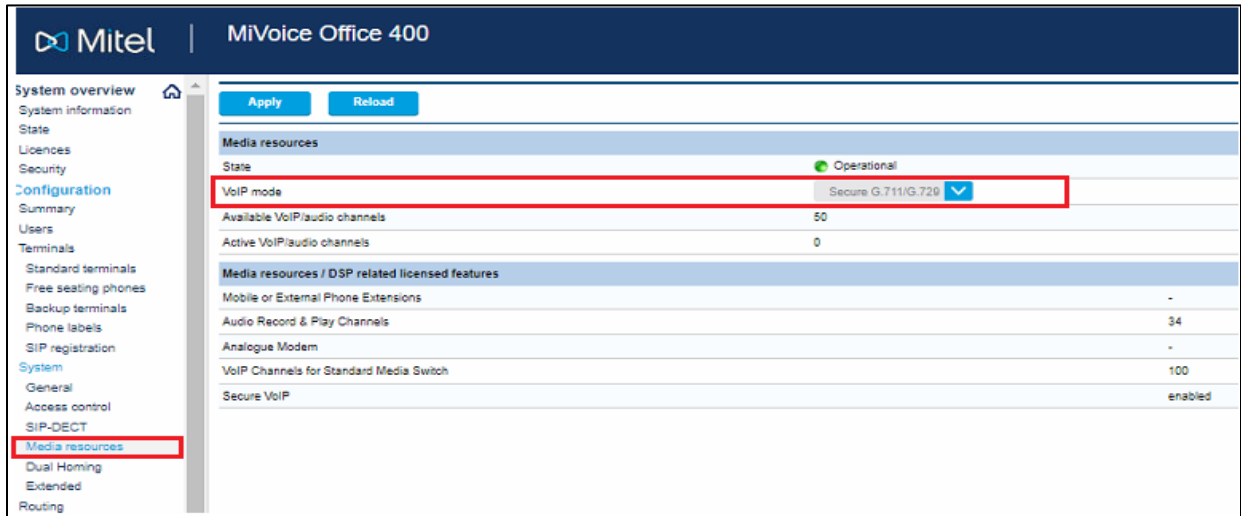


Figure 8 – Media Resources

IP Network-->IP Security-->General-->Enable VOIP Encryption

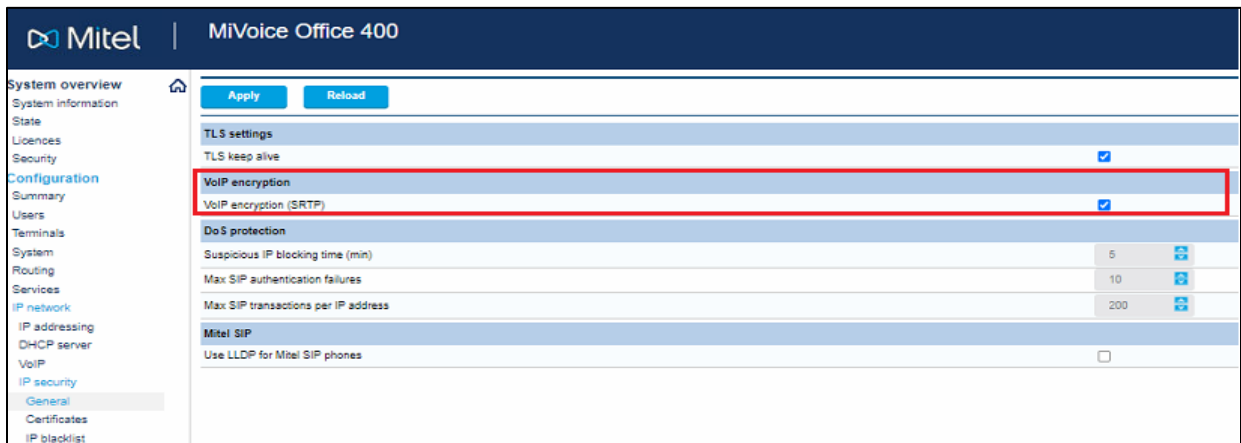


Figure 9 – Enable VOIP Encryption

## Ascom IP-DECT Base Station Configuration Notes

The configuration notes below cover basic necessary settings to log in to an Ascom IP-DECT base station and MiVB. For additional configuration of Ascom IP-DECT base station functionality refer to “Installation & Operation Manual Ascom IP-DECT guide”.

### *Accessing Ascom IP-DECT Base Station WEB GUI*

First connect the base station to a private network via standard ethernet cable and next use the IP search function on the handset to determine the IP address of the base station.

Default Ascom IP: 192.168.0.1

Ascom IP-DECT base station is configured with the following settings in test environment.

**IP Address: 192.168.10.20**

**Username: Default username and password**

Open a supported web browser and direct it to the IP address of the IP-DECT base station. For example, enter the following URL: <http://192.168.10.20>.

The browser prompts for authentication:



**Figure 10 – Login Page**

The browser displays the welcome page of the IP-DECT general interface. It lists the base station information.



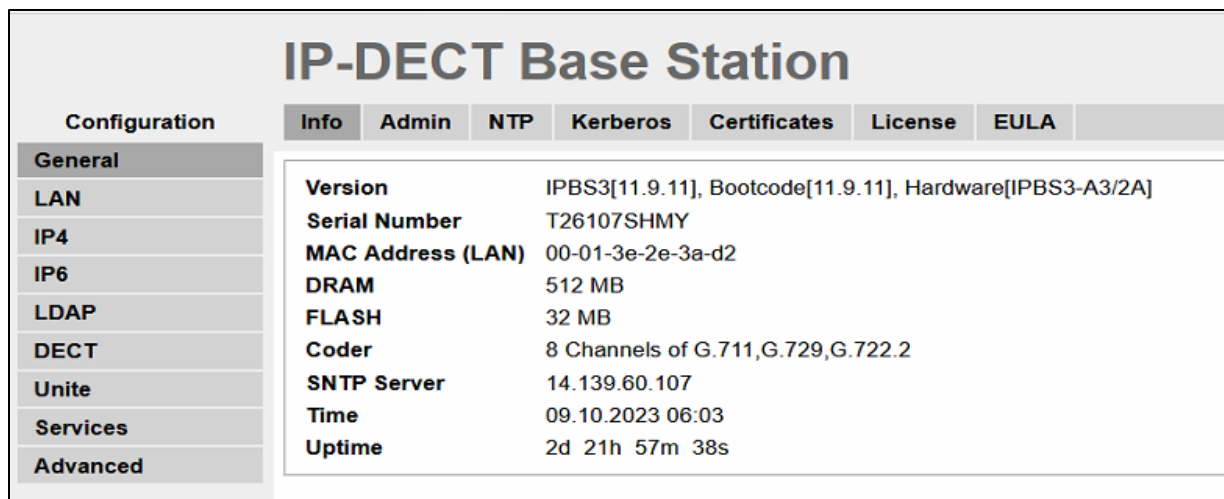


Figure 11 – Ascom IP-DECT base station information

*Configure Ascom IP-DECT System Parameters*

From the General interface, perform the following configuration.

Click on **DECT** tab and configure the system as per the screen shot below.

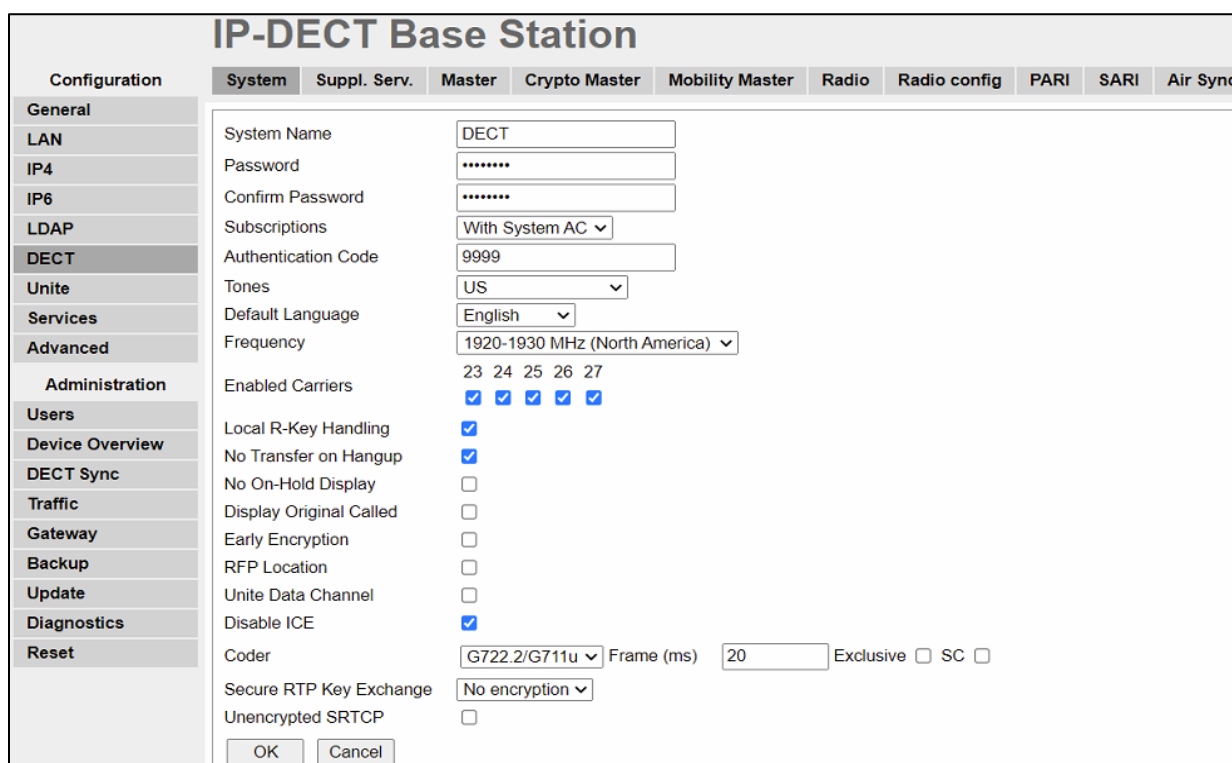


Figure 12 – System Tab

**Note** - DECT frequency setting is used “**North America**” in the test environment as a part of this Interop testing and that settings must be adjusted to the region where the system is deployed.

Next enable Supplementary Services

The screenshot shows the 'IP-DECT Base Station' configuration window with the 'Suppl. Serv.' tab selected. The 'Enable Supplementary Services' checkbox is checked. The configuration table is as follows:

| Service                       | Activate                          | Deactivate | Disable                             |
|-------------------------------|-----------------------------------|------------|-------------------------------------|
| Call Forwarding Unconditional | *21*\$#                           | #21#       | <input type="checkbox"/>            |
| Call Forwarding Busy          | *67*\$#                           | #67#       | <input type="checkbox"/>            |
| Call Forwarding No Reply      | *61*\$#                           | #61#       | <input type="checkbox"/>            |
| Do Not Disturb                | *42#                              | #42#       | <input type="checkbox"/>            |
| Call Waiting                  | .                                 | .          | <input checked="" type="checkbox"/> |
| Call Completion               | .                                 | .          | <input checked="" type="checkbox"/> |
| Call Park                     | .                                 | .          | <input checked="" type="checkbox"/> |
| Interception                  | .                                 | .          | <input checked="" type="checkbox"/> |
| Call Service URI              | .                                 | .          | <input checked="" type="checkbox"/> |
| Call Service URI (Argument)   | .                                 | .          | <input checked="" type="checkbox"/> |
| Soft key                      | .                                 | .          | <input checked="" type="checkbox"/> |
| Logout User                   | #11*\$#                           | .          | <input type="checkbox"/>            |
| Clear Local Setting           | *00#                              | .          | <input type="checkbox"/>            |
| MWI Mode                      | User dependent interrogate number |            |                                     |
| MWI Notify Number             | 899                               | .          |                                     |
| Local Clear of MWI            | .                                 | .          |                                     |
| External Idle Display         | .                                 | .          | <input type="checkbox"/>            |

Figure 13 – Supplementary Services Tab

**Note:** FAC codes should not be overlapping with Mivo400 Server FAC. Dect always takes FAC configured in DECT Configuration as Consideration

### Configure PARI

It is only necessary to change the PARI if there are other IP-DECT systems within radio coverage using the same System id. See Figure 14

The screenshot shows the 'IP-DECT Base Station' configuration window with the 'PARI' tab selected. The 'System ID' field contains the value '28'. There are 'OK' and 'Cancel' buttons at the bottom.

Figure 14 – Configure PARI

### Configure SARI

Click on the SARI tab. The SARI is an Ascom provided activation code which is needed for the system to function. Contact Ascom to obtain a SARI. Enter the SARI value (note the actual value has been hidden on the screen shown below for security reasons). Click the OK button to continue.

The screenshot shows the 'IP-DECT Base Station' configuration window with the 'SARI' tab selected. The 'SARI' field contains a masked value '01100101111010'. There are 'OK' and 'Cancel' buttons at the bottom.

Figure 15 – Configure PARI

### Configure Air Sync

At least one Radio must be in Sync Master mode, additional Radios can also be in Sync Master mode for backup reasons. Avoid configuring the Pari Master as Sync Master.

Click on the Air Sync tab and select Master from the Sync Mode dropdown box. Click the Resynchronize on command radio button. Click the OK button to continue. See Figure 16

| Configuration  | System | Suppl. Serv. | Master | Crypto Master | Mobility Master | Radio | Radio config | PARI | SARI | Air Sync |
|----------------|--------|--------------|--------|---------------|-----------------|-------|--------------|------|------|----------|
| General        |        |              |        |               |                 |       |              |      |      |          |
| LAN            |        |              |        |               |                 |       |              |      |      |          |
| IP             |        |              |        |               |                 |       |              |      |      |          |
| LDAP           |        |              |        |               |                 |       |              |      |      |          |
| DECT           |        |              |        |               |                 |       |              |      |      |          |
| VoIP           |        |              |        |               |                 |       |              |      |      |          |
| Unite          |        |              |        |               |                 |       |              |      |      |          |
| Services       |        |              |        |               |                 |       |              |      |      |          |
| Administration |        |              |        |               |                 |       |              |      |      |          |
| Users          |        |              |        |               |                 |       |              |      |      |          |

Sync Mode: Master

Reference RFPI: [ ]

Alternative reference RFPI: [ ]

Sync Region: 0

Action at reference sync failure:

- Resynchronize on command
- Resynchronize every day at 00:00
- Resynchronize every Sunday at 00:00

OK Cancel

**Figure 16 – Configure Air Sync**

Go to Master tab → Select transport protocol to SIP/UDP and then provide the MiVB IP/FQDN as Proxy  
→ Click on OK.

Configuration System Suppl. Serv. **Master** Crypto Master Mobility Master Radio Radio config PARI SARI Air Sync

General  
LAN  
IP4  
IP6  
LDAP  
**DECT**  
Unite  
Services  
Advanced  
Administration  
Users  
Device Overview  
DECT Sync  
Traffic  
Gateway  
Backup  
Update  
Diagnostics  
Reset

Mode Active

-Multi-Master  
Master ID 0  
Enable PARI Function   
Region Code

-IP-PBX  
Protocol SIP/UDP  
Proxy 192.168.10.151  
Alt. Proxy  
Alt. Proxy  
Alt. Proxy  
Domain  
Max. Internal Number Length  
International CPN Prefix  
Registration with system password   
Enbloc Dialing   
Enable Enbloc Send-Key   
Send Inband DTMF   
Allow DTMF Through RTP   
Short Disconnect Tone   
Treat rejected calls as Busy  
Configured With Local GK   
SIP Interoperability Settings  
Registration Time-To-Live 300 [sec]  
Subscription Time-To-Live 3600 [sec]  
STUN server  
Hold Signalling inactive  
Hold Before Transfer   
Accept Inbound Calls Not Routed Via Home Proxy   
Register With Number   
AOR as Line Identity   
KPML support

Registration For Anonymous Devices  
Registration Name / Number /  
Deactivate Master If No Connection

Conferencing Unit  
Conferencing Unit Number

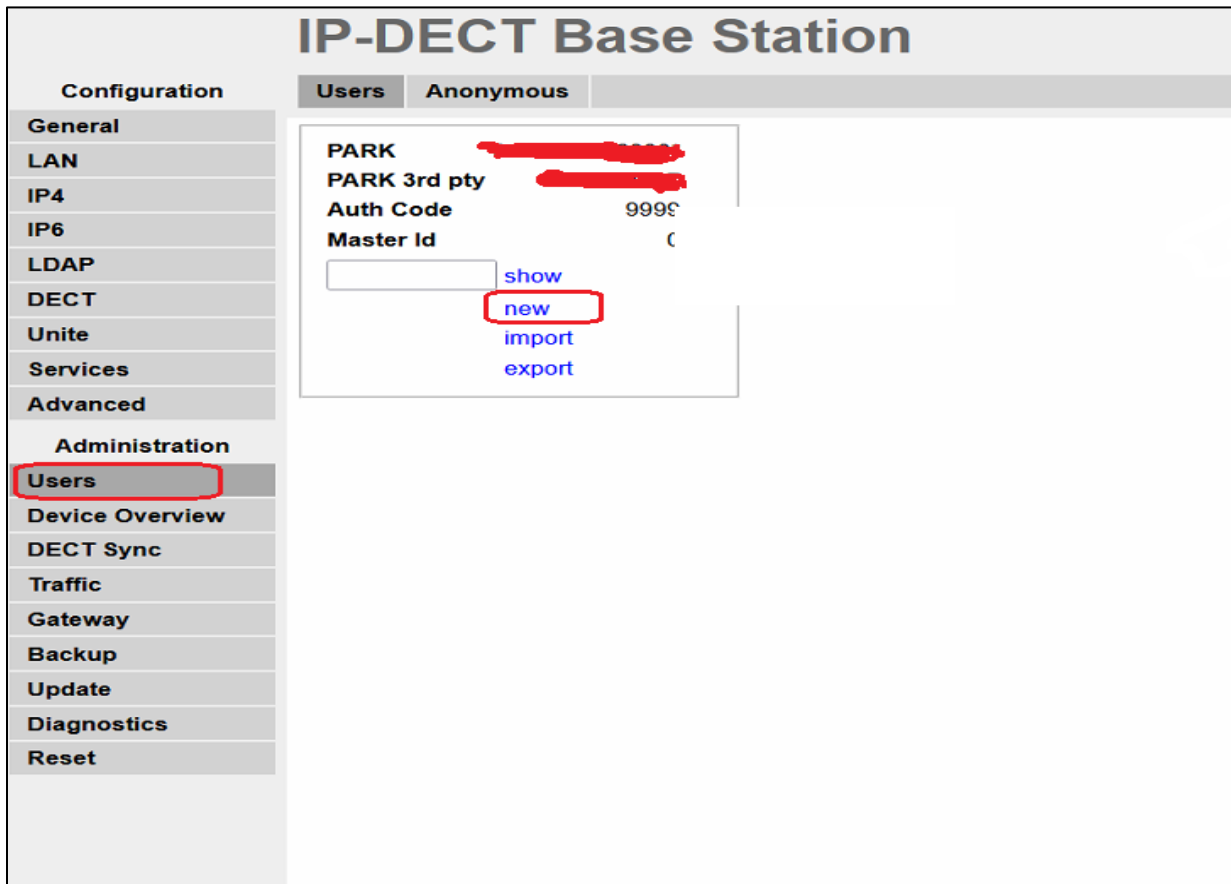
Mobility Master  
Name  
Password  
IP Address  
Alt. IP Address  
Status

OK Cancel

Figure 17 – Master Tab

*Adding Ascom D83 Handsets*

Click on **Users** and add the Ascom D83 handsets by clicking on **New**.



**Figure 18– Adding Users**

Enter the user necessary details and IPEI of the D83 handsets. The IPEI is printed on a label located under the handset batteries.

Click **OK**.

**Figure 19 – Users Details**

Check the status of registration for the users and D83 handsets on the IP-DECT base station.

| Long Name | Name      | No   | Fty       | Display   | IPEI / IPDI  | AC   | Prod          | SW    | EE | Registration   |
|-----------|-----------|------|-----------|-----------|--------------|------|---------------|-------|----|----------------|
| 51582     | Ascom2009 | 2009 | cfnr:2006 | Ascom2009 | 131600535158 | 9999 | d83-Protector | 1.6.3 |    | 192.168.10.151 |
| d83 2010  | 2010      | 2010 | +         | 2010      | 131600519687 |      | d83-Protector | 1.6.3 |    | 192.168.10.151 |

**Figure 20 – Registration Status**

## Advanced Configuration

### IP-DECT Base Station

Configuration
SIP
Certificates
SIP Responses

- General
- LAN
- IP4
- IP6
- LDAP
- DECT
- Unite
- Services
- Advanced
- Administration
- Users
- Device Overview
- DECT Sync
- Traffic
- Gateway
- Backup
- Update
- Diagnostics
- Reset

|  |   |
|--|---|
| Add Instance ID To The User Registration With The IP-PBX                         | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input type="checkbox"/> SIPS                                  |
| IP-PBX Supports Redirection Of Registration When Registered To Alternative Proxy | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input type="checkbox"/> SIPS                                  |
| Use Local Contact Port As Source Port For TCP/TLS Connections                    | <input type="checkbox"/> SIP <input checked="" type="checkbox"/> TSIP <input checked="" type="checkbox"/> SIPS            |
| Prefer P-Asserted-Identity As Calling Party Identity                             | <input checked="" type="checkbox"/> SIP <input checked="" type="checkbox"/> TSIP <input checked="" type="checkbox"/> SIPS |
| Do Not Send Identity Header  | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input type="checkbox"/> SIPS                                  |
| Use SBC for NAT traversal  | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input type="checkbox"/> SIPS                                  |
| No Server Certificate Subject Check For TLS Connections                          | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input checked="" type="checkbox"/> SIPS                       |
| No Server Certificate Trust Check For TLS Connections                            | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input type="checkbox"/> SIPS                                  |
| Accept Hold Signaling Using Remote Media Address 0.0.0.0                         | <input checked="" type="checkbox"/> SIP <input checked="" type="checkbox"/> TSIP <input checked="" type="checkbox"/> SIPS |
| Remove SRTP Lifetime in SDP  | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input checked="" type="checkbox"/> SIPS                       |
| Allow Multiple Codecs in Answer SDP  | <input checked="" type="checkbox"/> SIP <input checked="" type="checkbox"/> TSIP <input checked="" type="checkbox"/> SIPS |
| Send Early Progress Response   | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input type="checkbox"/> SIPS                                  |
| Ignore Retry-After in Registration Responses                                     | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input type="checkbox"/> SIPS                                  |
| Use STUN for NAT Traversal with TCP/TLS  | <input type="checkbox"/> SIP <input type="checkbox"/> TSIP <input type="checkbox"/> SIPS                                  |
| No Validation of Request URI   | <input checked="" type="checkbox"/> SIP <input checked="" type="checkbox"/> TSIP <input checked="" type="checkbox"/> SIPS |

Note: All settings require reset

Figure 21 – Advanced Configuration

**Note:** Enabling “No Validation of Request URI” was required in the test environment. Normally, this is not a recommended setting.

## TLS Configuration

General → Certificates → upload Mivo400 Server Certificate

### IP-DECT Base Station ascom

Configuration
Info
Admin
NTP
Kerberos
Certificates
License
EULA
Logout

- General
- LAN
- IP4
- IP6
- LDAP
- DECT
- Unite
- Services
- Advanced
- Administration
- Users
- Device Overview
- DECT Sync
- Traffic
- Gateway
- Backup
- Update
- Diagnostics
- Reset

Trust List

|                          | Subject                         | Issuer                          | Not Before | Not After  | Download |
|--------------------------|---------------------------------|---------------------------------|------------|------------|----------|
| <input type="checkbox"/> | Mitel-192.168.10.151-2141727245 | Mitel-192.168.10.151-2141727245 | 23.08.2023 | 22.08.2024 | PEM DER  |

[Download All](#)

Password ●●●●●●
 File  No file selected.

Device Certificate

|                          | Subject      | Issuer       | Not before | Not after  | Download |
|--------------------------|--------------|--------------|------------|------------|----------|
| <input type="checkbox"/> | 00013e2e3ad2 | 00013e2e3ad2 | 01.01.2000 | 31.12.2049 | PEM DER  |

[Create New](#)

Password ●●●●●●
 File  No file selected.

Figure 22 – Certificate Configuration

DECT → Dect System Configuration

The screenshot shows the 'IP-DECT Base Station' configuration page with the 'DECT' tab selected. The left sidebar lists various configuration categories, with 'DECT' highlighted. The main content area contains the following settings:

| Configuration Category | Parameter               | Value                               |
|------------------------|-------------------------|-------------------------------------|
| General                | System Name             | DECT                                |
| LAN                    | Password                | ••••••••                            |
| IP4                    | Confirm Password        | ••••••••                            |
| LDAP                   | Subscriptions           | With System AC                      |
| DECT                   | Authentication Code     | 9999                                |
| Unite                  | Tones                   | US                                  |
| Services               | Default Language        | English                             |
| Advanced               | Frequency               | 1920-1930 MHz (North America)       |
| Administration         | Enabled Carriers        | 23 24 25 26 27                      |
| Users                  | Local R-Key Handling    | <input checked="" type="checkbox"/> |
| Device Overview        | No Transfer on Hangup   | <input checked="" type="checkbox"/> |
| DECT Sync              | No On-Hold Display      | <input type="checkbox"/>            |
| Traffic                | Display Original Called | <input type="checkbox"/>            |
| Gateway                | Early Encryption        | <input type="checkbox"/>            |
| Backup                 | RFP Location            | <input type="checkbox"/>            |
| Update                 | Unite Data Channel      | <input type="checkbox"/>            |
| Diagnostics            | Disable ICE             | <input checked="" type="checkbox"/> |
| Reset                  | Coder                   | G722.2/G711A                        |
|                        | Frame (ms)              | 20                                  |
|                        | Exclusive               | <input type="checkbox"/>            |
|                        | SC                      | <input type="checkbox"/>            |
|                        | Secure RTP Key Exchange | SDES                                |
|                        | Secure RTP Cipher       | AES128/80                           |
|                        | Unencrypted SRTP        | <input type="checkbox"/>            |

Buttons: OK, Cancel

Figure 23 – Certificate Configuration

**Note** – Mivo400 does not support Secure RTP Cipher set to AES 128/32.

Go to Master tab → Select transport protocol to SIP/TLS and then provide the MiVB IP/FQDN as Proxy  
→ Click on OK



## IP-DECT Base Station

| Configuration   | System   | Suppl. Serv. | Master                                     | Crypto Master | Mobility Master | Radio | Radio config | PARI | SARI | Air Sync |
|-----------------|--|--------------|--|---------------|-----------------|-------|--------------|------|------|----------|
| <b>General</b>  | Mode <span>Active</span> ▾                     |              |  |               |                 |       |              |      |      |          |
| LAN             | Multi-Master                                   |              |  |               |                 |       |              |      |      |          |
| IP4             | Master ID                                      |              | <input type="text" value="0"/>             |               |                 |       |              |      |      |          |
| IP6             | Enable PARI Function                           |              | <input checked="" type="checkbox"/>        |               |                 |       |              |      |      |          |
| LDAP            | Region Code                                    |              | <input type="text"/>                       |               |                 |       |              |      |      |          |
| <b>DECT</b>     | IP-PBX   |              |  |               |                 |       |              |      |      |          |
| Unite           | Protocol                                       |              | <span>SIP/TLS</span> ▾                     |               |                 |       |              |      |      |          |
| Services        | Proxy  |              | <input type="text" value="192.168.10.73"/> |               |                 |       |              |      |      |          |
| Advanced        | Alt. Proxy                                     |              | <input type="text"/>                       |               |                 |       |              |      |      |          |
| Administration  | Alt. Proxy                                     |              | <input type="text"/>                       |               |                 |       |              |      |      |          |
| Users           | Alt. Proxy                                     |              | <input type="text"/>                       |               |                 |       |              |      |      |          |
| Device Overview | Domain   |              | <input type="text"/>                       |               |                 |       |              |      |      |          |
| DECT Sync       | Max. Internal Number Length                    |              | <input type="text"/>                       |               |                 |       |              |      |      |          |
| Traffic         | International CPN Prefix                       |              | <input type="text"/>                       |               |                 |       |              |      |      |          |
| Gateway         | Registration with system password              |              | <input type="checkbox"/>                   |               |                 |       |              |      |      |          |
| Backup          | Enbloc Dialing                                 |              | <input checked="" type="checkbox"/>        |               |                 |       |              |      |      |          |
| Update          | Enable Enbloc Send-Key                         |              | <input type="checkbox"/>                   |               |                 |       |              |      |      |          |
| Diagnostics     | Send Inband DTMF                               |              | <input type="checkbox"/>                   |               |                 |       |              |      |      |          |
| Reset           | Allow DTMF Through RTP                         |              | <input checked="" type="checkbox"/>        |               |                 |       |              |      |      |          |
|                 | Short Disconnect Tone                          |              | <input type="checkbox"/>                   |               |                 |       |              |      |      |          |
|                 | Treat rejected calls as                        |              | <span>Busy</span> ▾                        |               |                 |       |              |      |      |          |
|                 | Configured With Local GK                       |              | <input type="checkbox"/>                   |               |                 |       |              |      |      |          |
|                 | SIP Interoperability Settings                  |              |  |               |                 |       |              |      |      |          |
|                 | Registration Time-To-Live                      |              | <input type="text" value="300"/> [sec]     |               |                 |       |              |      |      |          |
|                 | Subscription Time-To-Live                      |              | <input type="text" value="3600"/> [sec]    |               |                 |       |              |      |      |          |
|                 | STUN server                                    |              | <input type="text"/>                       |               |                 |       |              |      |      |          |
|                 | Hold Signalling                                |              | <span>inactive</span> ▾                    |               |                 |       |              |      |      |          |
|                 | Hold Before Transfer                           |              | <input type="checkbox"/>                   |               |                 |       |              |      |      |          |
|                 | Accept Inbound Calls Not Routed Via Home Proxy |              | <input type="checkbox"/>                   |               |                 |       |              |      |      |          |
|                 | Register With Number                           |              | <input checked="" type="checkbox"/>        |               |                 |       |              |      |      |          |
|                 | AOR as Line Identity                           |              | <input type="checkbox"/>                   |               |                 |       |              |      |      |          |

**Figure 24 – Master Tab**

**Note:** Subscription TTL: Factory default is 3600. This is recommended to avoid using unnecessary short keep alive.

## MiVoice Border Gateway Setup Notes (for TW)

The following steps show how to program the MiVoice Border Gateway (MBG) server to allow connections between the Ascom IPBS3 and the MiVoice Office 400 for teleworking.

### Network Requirements

Please refer to the Multi-Protocol Border Gateway Engineering guidelines for further information.

### Assumptions for MBG Configuration

MiVO 400 configuration completed as per instructions in previous section.

The SIP signaling connection between the MiVO 400 and MBG server uses UDP on Port 5060.

MBG server installed and configured for SIP clients' support.

### Adding ICP for MiVoice Office 400

Select MiVoice Border Gateway → Network → ICPs and click + (Add an ICP) and enter ICP information (name, IP address, type) and select Save.

The screenshot shows the Mitel Standard Linux web interface. The 'Network' menu is selected, and the 'Manage ICP' form is displayed. The form contains the following fields and values:

| Field                  | Value                               |
|------------------------|-------------------------------------|
| Name                   | MiVO400_151                         |
| Type                   | MiVoice Office 400                  |
| Hostname or IP address | 192.168.10.151                      |
| SIP capabilities       | UDP                                 |
| Link to this ICP?      | <input type="checkbox"/>            |
| XML listen port        | 4430                                |
| XML destination port   | 443                                 |
| Enable                 | <input checked="" type="checkbox"/> |
| TLS?                   | <input checked="" type="checkbox"/> |
| TLS?                   | <input checked="" type="checkbox"/> |

The 'Save' button is located at the bottom right of the form and is highlighted with a red box.

Figure 25 – Adding ICP

## Adding SIP devices

Navigate to MiVoice Border Gateway → Teleworking → SIP → Click + (Add) a SIP Device as shown below. In the opened form, enter the data to create the new SIP device in MBG.

Enter all the required information. Set side credentials must match username and password provisioned on the phone. ICP side credentials must match Login PIN/password and Number provisioned on the MiVO 400. Click Save when you are done.

The screenshot displays the Mitel Standard Linux web interface for configuring a SIP device. The page title is "Mitel Standard Linux" and the user is logged in as "admin@mbg.sipcoe.com". The navigation menu on the left includes "Applications", "Administration", "Security", "Configuration", and "Miscellaneous". The main content area is titled "Manage SIP profile" and contains several sections:

- Profile:** Includes an "Enabled" checkbox (checked) and a "Description" field with the value "2000".
- Connection:** Includes a "Configured ICP" dropdown menu (set to "MiVO400\_151") and an "Availability" dropdown menu (set to "Everywhere").
- Set-side Authentication:** Includes a "Username" field (set to "2000"), a "Password" field, and a "Confirm" field.
- ICP-side Authentication:** Includes a "Username" field (set to "2000"), a "Password" field, and a "Confirm" field.
- Protocol:** Includes "PRACK support" (Use global setting), "Options keepalives" (Use global setting), "Heartbeat interval" (Use primary setting), and "Challenge methods" (Override).
- Media:** Includes "Local streaming between device calls" (Use global setting), "Codecs support" (Use global setting), and a "Tone Injection" section with an "Enable" checkbox.
- Set-side RTP security:** Includes "Inbound" (Use global setting), "Outbound" (Use global setting), and "Preferred cipher" (Use global setting).
- ICP-side RTP security:** Includes "Inbound" (Use global setting), "Outbound" (Use global setting), and "Preferred cipher" (Use global setting).

A "Save" button is located at the bottom right of the page.

Figure 26 – SIP Device

Mitel Standard Linux admin@mbg sipcoe.com Status

Applications System - Network - Teleworking - SIP trunking - Remote proxy - Call recording - Troubleshooting - Search

**ServiceLink**  
 Status  
 Administration  
 Web service  
 Backup  
 Restore  
 View log files  
 Event viewer  
 System information  
 System monitoring  
 System users  
 Shutdown or reboot  
 Virtualization  
 Security  
 Remote access  
 Port forwarding  
 Syslog  
 Web Server  
 MBO client certificates  
 Configuration  
 Networks  
 Email settings  
 Google Apps  
 Cloud Service Provider  
 DHCP  
 Date and Time  
 Hostnames and addresses  
 Domains  
 HybridP4 Tunnel  
 STUN  
 Ethernet Cards  
 Review configuration  
 Miscellaneous  
 Support and licensing  
 Help

Page updated: Mon Dec 27 2021 19:32:04 GMT+0530 (India Standard Time)  
 Sept. 21, 2021, 4:10 p.m. Note: Remote proxy is now found in the main MBG menu instead of the server manager menu on the left.

Below is a list of devices for this MBO server.  
 Note: To configure SIP profiles by uploading a CSV file, please see the [Bulk provisioning](#) page.

Sets per page:   
 Status:  Either  Enabled  Disabled  
 Simple filter:

| SIP profile information |                   |                   |              |                |             |                                 |                                      |
|-------------------------|-------------------|-------------------|--------------|----------------|-------------|---------------------------------|--------------------------------------|
| Enabled                 | Set-side username | ICP-side username | Availability | Configured ICP | Description | Local streaming between devices |                                      |
| ✓                       | 1003              |                   | Everywhere   | MVB_69         | 1003        | Use global setting              | <a href="#">/</a> <a href="#">🗑️</a> |
| ✓                       | 1043              | 1043              | Everywhere   | MVO250         | TW_SIP      | Use global setting              | <a href="#">/</a> <a href="#">🗑️</a> |
| ✓                       | 4000              | 4000              | Everywhere   | MXONE          | TW          | Use global setting              | <a href="#">/</a> <a href="#">🗑️</a> |
| ✓                       | 2001              | 2001              | Everywhere   | MVO400_151     | 2001        | Use global setting              | <a href="#">/</a> <a href="#">🗑️</a> |
| ✓                       | 2234              | 2234              | Everywhere   | MVB_69         | TW          | Use global setting              | <a href="#">/</a> <a href="#">🗑️</a> |
| ✓                       | 2000              | 2000              | Everywhere   | MVO400_151     | 2000        | Use global setting              | <a href="#">/</a> <a href="#">🗑️</a> |
| ✓                       | 4001              | 4001              | Everywhere   | MXONE          | TW          | Use global setting              | <a href="#">/</a> <a href="#">🗑️</a> |

Figure 27 – SIP Device Details