



## **Avaya Solution & Interoperability Test Lab**

---

# **Application Notes for Snom M900 Multicell DECT Phones with Avaya IP Office - Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps required to integrate Snom M900 Multicell DECT Phones with Avaya IP Office Server Edition 11.1 and Avaya IP Office 500 V2 Expansion System 11.1. The Snom M900 DECT base station was connected to the LAN which, in turn, registered M-series DECT phones to Avaya IP Office via SIP. The base station converts IP protocol to DECT protocol and transmits phone calls to and from the M-series DECT phones. For the compliance test, the Snom M65 DECT Handsets were used.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

# 1. Introduction

These Application Notes describe the configuration steps required to integrate Snom M900 Multicell DECT Phones with Avaya IP Office Server Edition 11.1 and Avaya IP Office 500 V2 Expansion System 11.1. The Snom M900 DECT base station was connected to the LAN which, in turn, registered M-series DECT phones to Avaya IP Office via SIP. The base station converts IP protocol to DECT protocol and transmits phone calls to and from the M-series DECT phones.

For the compliance test, the Snom M65 DECT Handsets were used. There are other DECT M-Series handsets that share the same firmware version as the Snom M65 DECT Handset, and therefore the testing also applies to them. See Attachment 1 for additional details.

## 2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on establishing calls between Snom M65 DECT Handsets and Avaya SIP/H.323 telephones, and exercising basic telephony features, such as hold, mute, and transfer. The M65 handsets gained network access via the M900 DECT base station. Additional telephony features, such as call forward, follow me, call park/unpark, and call pickup were also verified using Avaya IP Office Short Codes.

The serviceability testing focused on verifying that the Snom M900 Multicell Base Station came back into service after re-connecting the Ethernet or rebooting the Snom M65 DECT Handsets.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with this Application Note, the interface between Avaya systems and Snom M900 Multicell DECT Phones utilized signaling encryption using TLS, but no media encryption (RTP was used).

## 2.1. Interoperability Compliance Testing

Interoperability compliance testing covered the following features and functionality:

- SIP registration of M65 DECT handsets with IP Office Server Edition and IP Office 500 V2 Expansion System. M900 DECT base station controls the traffic in the air and works as the link between the M65 DECT handsets and IP Office.
- Calls between M65 DECT handsets and Avaya SIP/H.323 deskphones with Direct Media enabled and disabled. Direct Media was verified with M65 DECT handsets and Avaya SIP deskphones only.
- Calls between M65 DECT handsets and the PSTN.
- Calls with TLS enabled.
- TLS using secure PFS cipher of TLS\_ECDHE\_RSA\_WITH\_AES\_128\_GCM\_SHA256.
- Support of G.711 and G.722 codecs.
- Proper recognition of DTMF tones.
- Basic telephony features, including hold, mute, redial, multiple calls, blind/attended transfer, and long duration calls.
- Voicemail coverage, MWI support, and logging into voicemail system to retrieve messages.
- Extended telephony features using IP Office short codes for Call Forward, Follow Me, Call Park/Unpark, and Call Pickup.
- Proper system recovery after a restart of M900 Multicell base station and M65 DECT handsets.

## 2.2. Test Results

All test cases passed with the following observations noted:

- Currently, the Snom M900 Multicell Base Station doesn't support TLS authentication with a Subject Alternate Name (SAN) in the certificate. Therefore, the M900 was configured to accept all certificates by disabling the **Use Only Trusted Certificates** option under **Security** in the M900 configuration as described in **Section 6.6**.
- Secure RTP (SRTP) is not supported. When an Avaya H.323 deskphone originates a call to an M65 DECT handset, places the call on hold, and then resumes the call, there's only one-way audio from the Avaya H.323 deskphone to the M65 DECT handset when SRTP is enabled. The workaround is to disable SRTP. Avaya is investigating this issue.

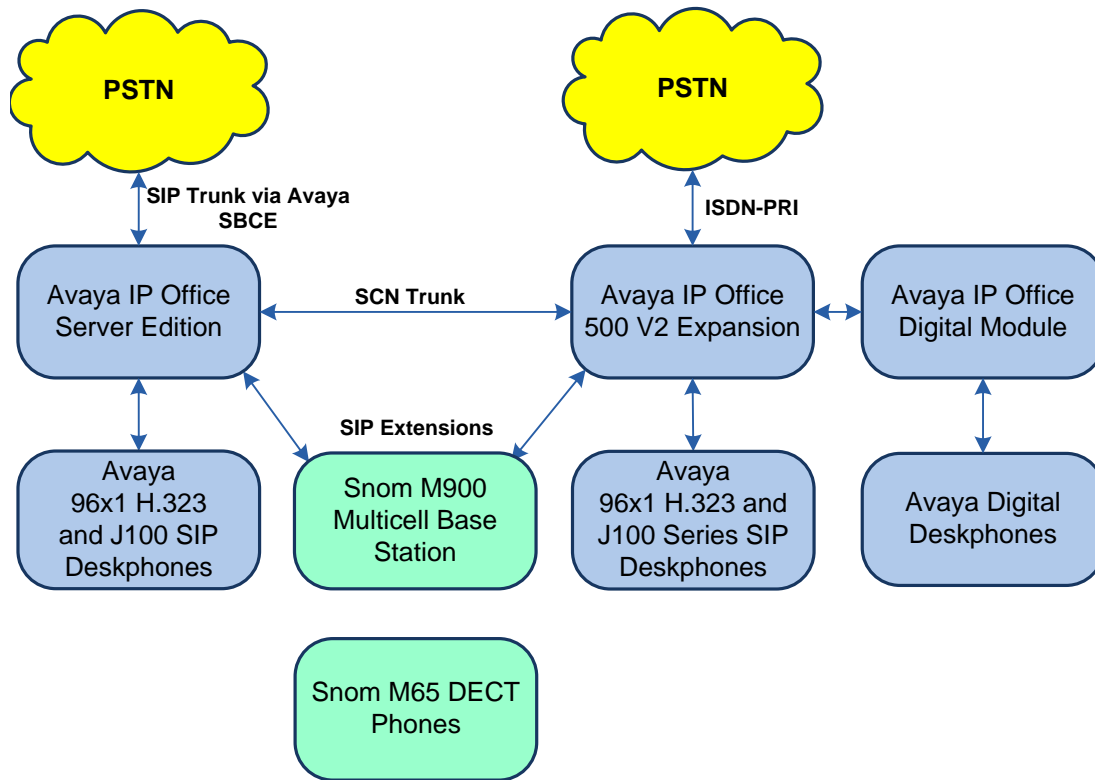
## 2.3. Support

For technical support on the Snom M900 Multicell DECT Phones, contact Snom Support via phone, email, or website.

- **Phone:** +1 (339) 227-6160 Option 2
- **Web:** <https://service.snom.com>
- **Email:** [supportusa@snom.com](mailto:supportusa@snom.com)

### 3. Reference Configuration

**Figure 1** illustrates a sample configuration consisting of Snom M900 Multicell DECT Phones with Avaya IP Office Server Edition and Avaya IP Office 500 V2 (Expansion System). The Snom M65 DECT Phones registered with Avaya IP Office via SIP through the Snom M900 Multicell Base Station. Avaya Embedded Voicemail served as the voicemail system. Avaya 96x1 Series H.323 Deskphones and an Avaya J100 Series SIP Deskphones were used for placing and receiving calls.



**Figure 1: Avaya SIP Network with Snom M900 Multicell DECT Phones**

## 4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment/Software	Release/Version
Avaya IP Office Server Edition	11.1.1.0.0 build 209
Avaya IP Office 500 V2 Expansion	11.1.1.0.0 build 209
Avaya 96x1 Series IP Deskphones	6.8304 (H.323)
Avaya J100 Series IP Deskphones	4.0.7.0.7 (SIP)
Snom M900 Multicell Base Station	05.30/B0002
Snom M65 DECT Handsets	05.30/B0002

**Note:** Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 and also when deployed in all configurations with IP Office Server Edition.

## 5. Configure Avaya IP Office Server Edition

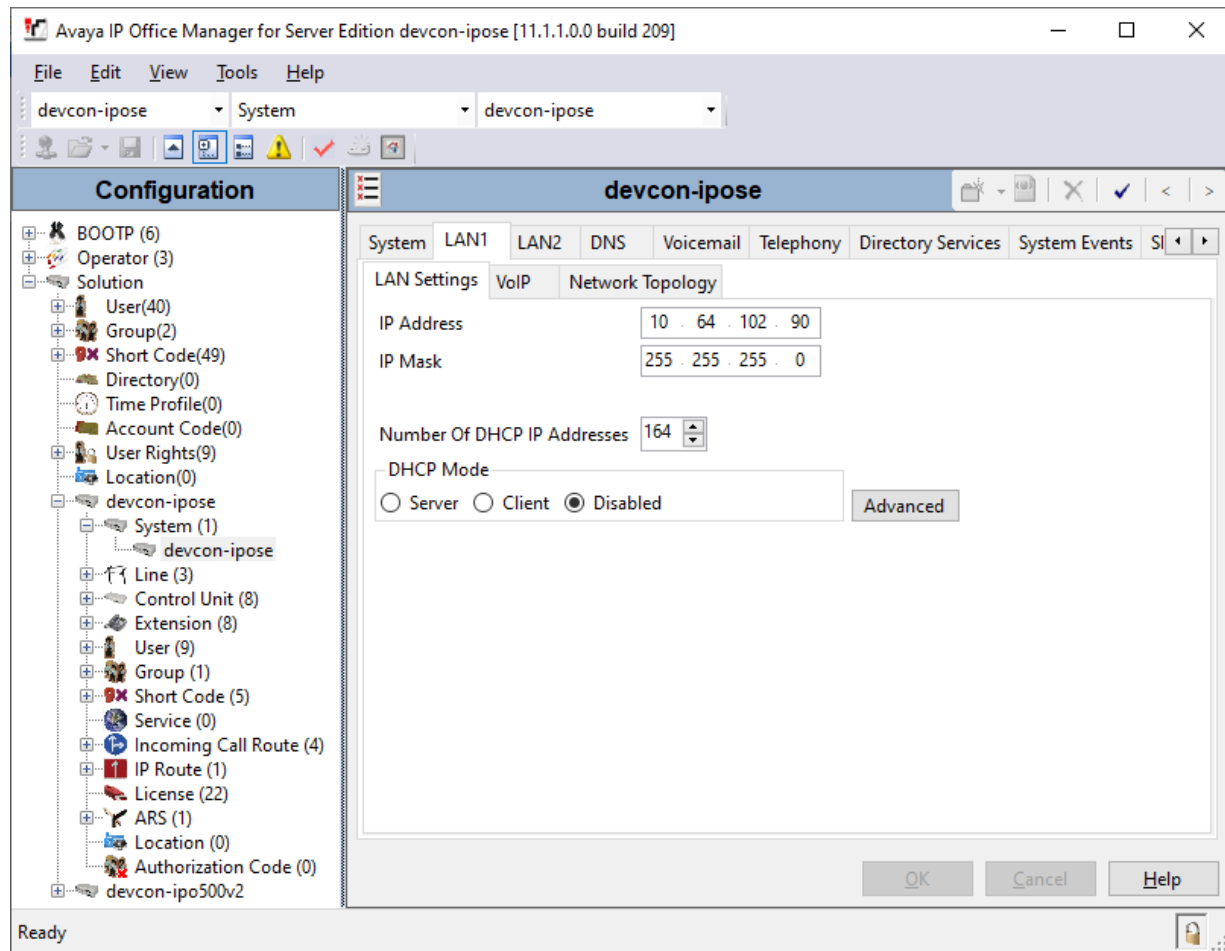
This section provides the procedures for configuring Avaya IP Office Server Edition. The procedures include the following areas:

- Obtain LAN IP address
- Administer SIP registrar
- Administer SIP extension for M65 handsets
- Administer SIP user for M65 handsets

**Note:** This section covers the configuration of Avaya IP Office Server Edition, but the configuration is the same for Avaya IP Office 500 V2 Expansion System.

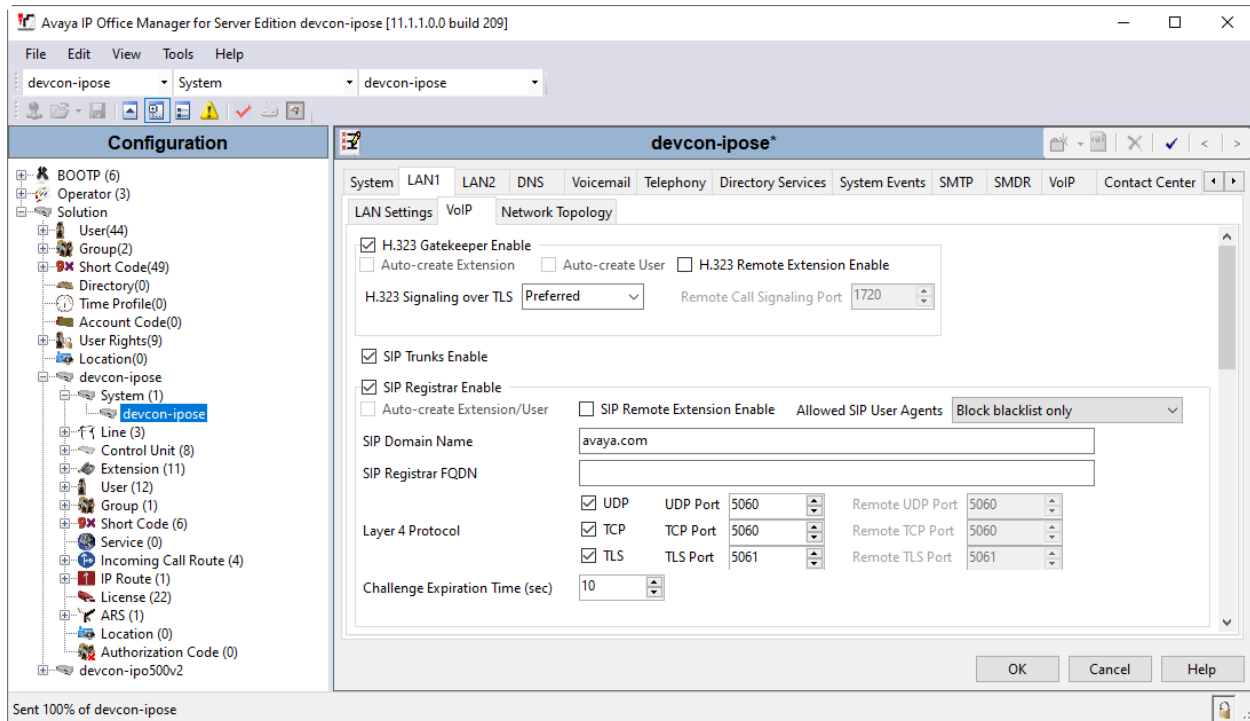
### 5.1. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** to display the **System** screen for the IP Office Server Edition in the right pane. Select the **LAN1** tab, followed by the **LAN Settings** sub-tab in the right pane. Make a note of the **IP Address**, which will be used later to configure the M900 Multicell base station.



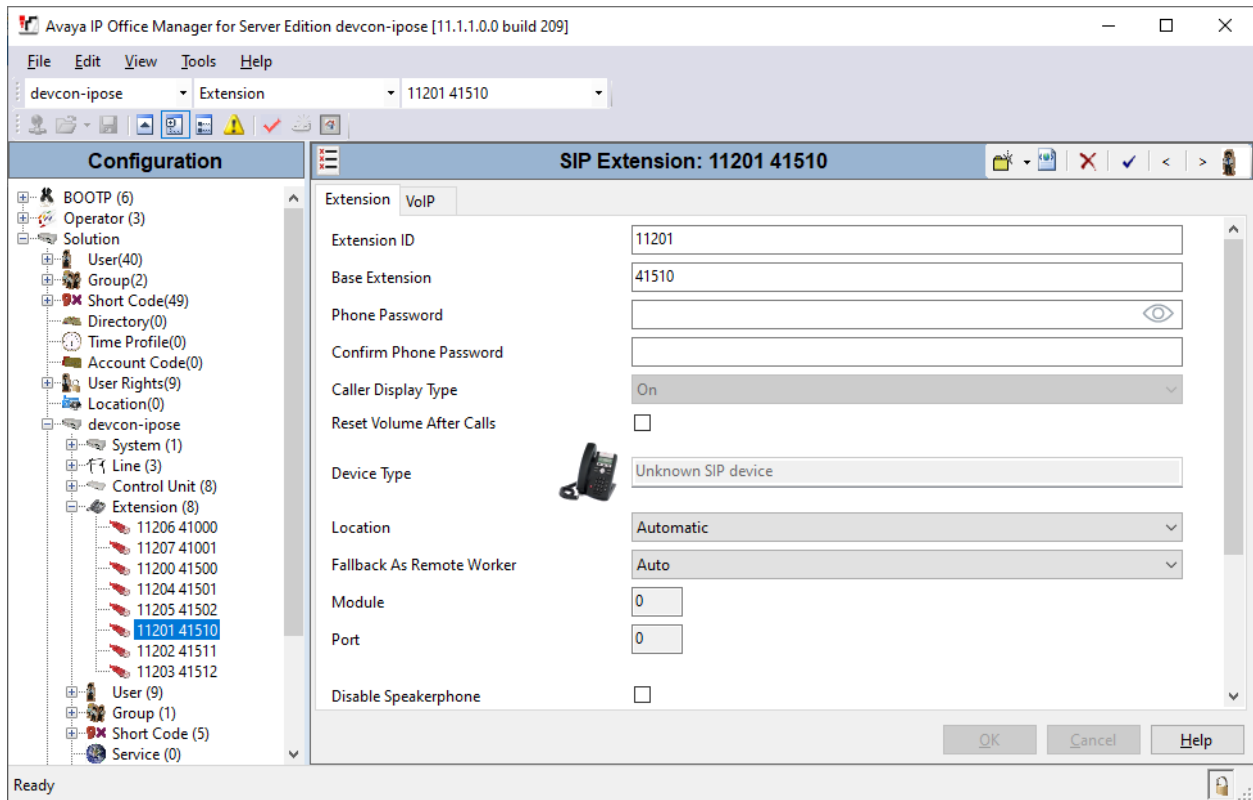
## 5.2. Administer SIP Registrar

Select the **VoIP** sub-tab. Ensure that **SIP Registrar Enable** is checked and enter a valid **Domain Name**. In the compliance testing, the **Domain Name** field was set to *avaya.com*. TLS transport protocol was enabled for the **Layer 4 Protocol**, which was also used by the M900 Multicell base station.



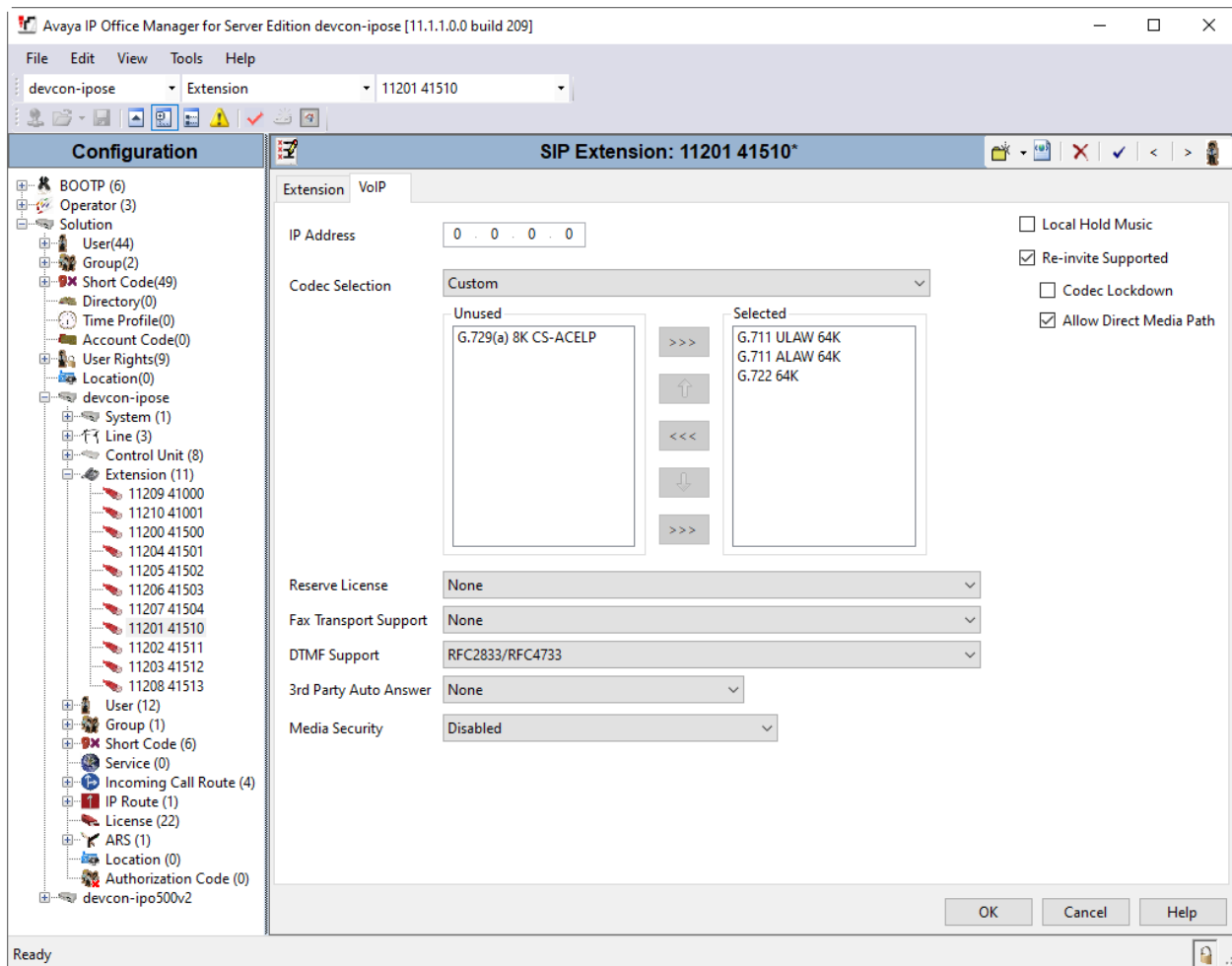
### 5.3. Administer SIP Extension for M65 DECT Handsets

From the configuration tree in the left pane, right-click on **Extension** and select **New → SIP** from the pop-up list (not shown) to add a new SIP extension. Enter the desired extension for the **Base Extension** field as shown below. In this example, M65 DECT handset was assigned extension **41510**. This is the extension that the M65 DECT handset will use to register the handsets with IP Office Server Edition.





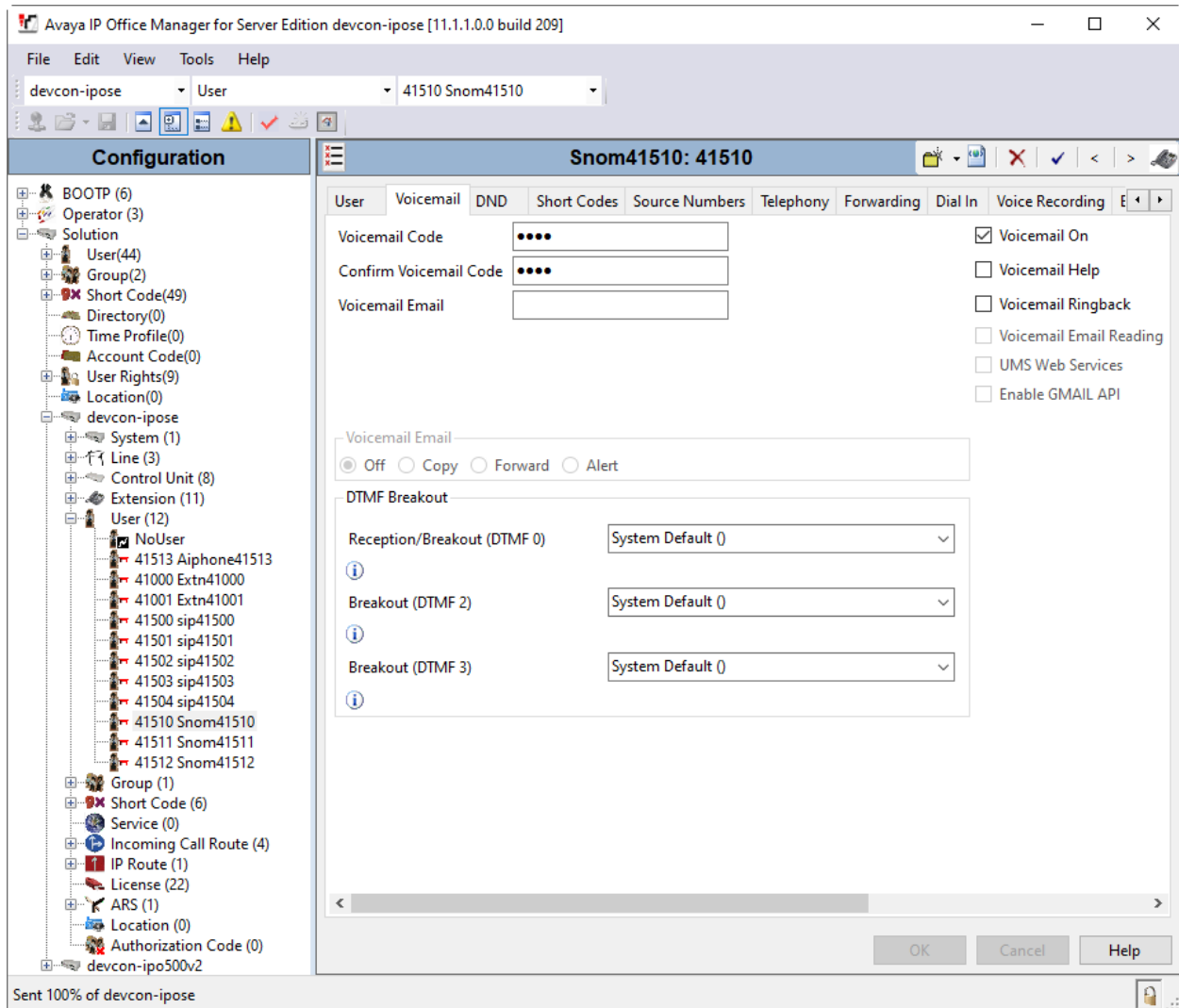
Select the **VoIP** tab. Configure the codec selection as shown below. Enable **Allow Direct Media Path** so that audio/RTP flows directly between two SIP endpoints without using media resources in Avaya IP Office Server Edition. Disable **Media Security**.



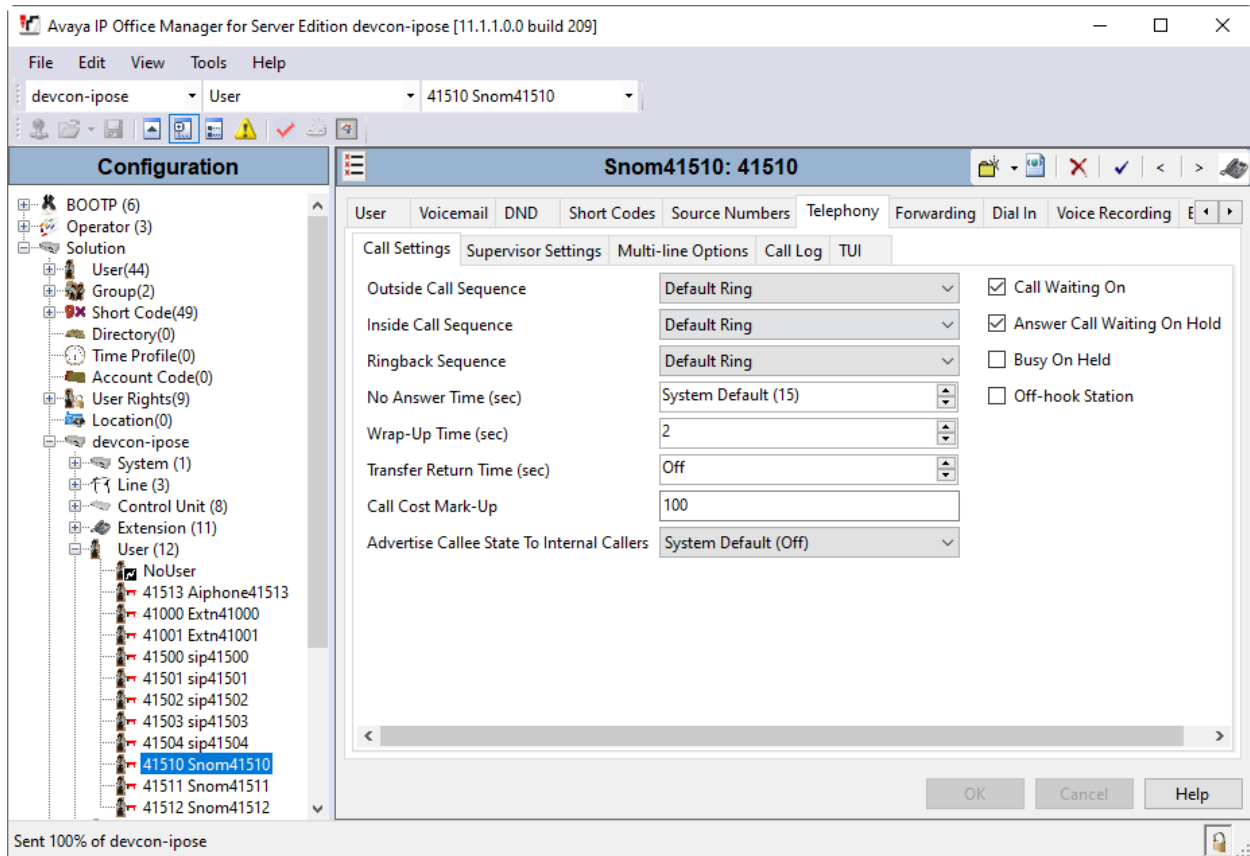
From the configuration tree in the left pane, right-click on **User** and select **New** from the pop-up list (not shown). Enter desired values for the **Name** and **Full Name** fields. For the **Extension** field, enter the SIP extension created above.



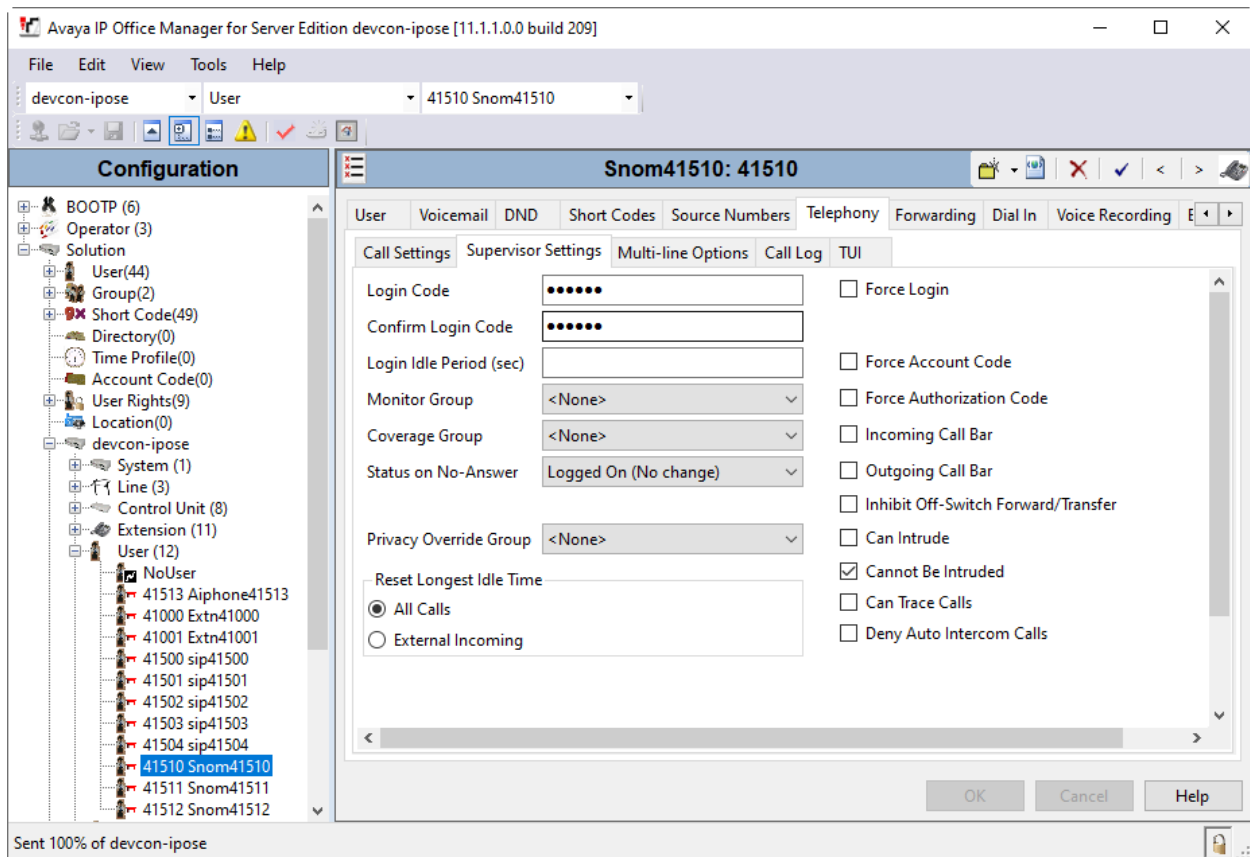
Select the **Voicemail** tab and select **Voicemail On** to enable voicemail for the M65 DECT handset. Specify a **Voicemail Code** to be used when logging into voicemail.



Select the **Telephony** tab followed by the **Call Settings** sub-tab. Note the settings below for the user.



Select the **Supervisor Settings** sub-tab and enter a desired **Login Code**. The **Login Code** is the password that will be used by the M65 DECT handset to register the SIP extension with IP Office Server Edition.



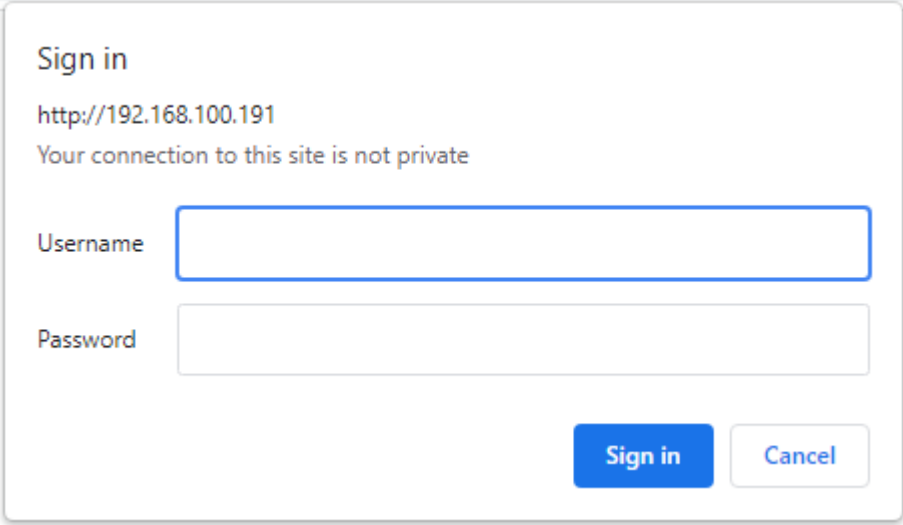
## 6. Configure Snom M900 Multicell DECT Phones

This section provides the procedure for configuring the M900. The procedure covers the following areas:

- Open Web User Interface
- Administer Network Settings
- Administer Country/Time Settings
- Administer Servers
- Administer Extensions
- Administer Security

### 6.1. Open Web User Interface

The Snom M900 Multicell Base Station was configured through the web user interface by using the URL “http://ip-address” in an Internet browser window, where “ip-address” is the IP address of the base station. Log in using the appropriate credentials and then click **OK**.



The screenshot shows a web browser window displaying the sign-in page for the Snom M900 Multicell Base Station. The page has a light gray background. At the top, it says "Sign in" in a dark gray font. Below that, the URL "http://192.168.100.191" is displayed in a smaller font. Underneath the URL, a warning message states "Your connection to this site is not private" in a red font. There are two input fields: one for "Username" and one for "Password". The "Username" field is highlighted with a blue border. At the bottom right, there are two buttons: a blue "Sign in" button and a light gray "Cancel" button.

## 6.2. Administer Network Settings

To configure network settings, click **Network** in the left pane. The M900 is pre-configured to use DHCP, but a static IP address may be used. For the compliance test, DHCP was used as shown below.

snom

M900

Home/Status

Extensions

Servers

Network

Management

Firmware Update

Country

Security

Central Directory

Multi Cell

Dial Plans

Repeaters

Alarm

Statistics

Generic Statistics

Diagnostics

Configuration

Syslog

SIP Log

Logout

Network Settings

IP Settings

DHCP/Static IP: 

DHCP

IP Address: 

192.168.100.191

Subnet Mask: 

255.255.255.0

Default Gateway: 

192.168.100.1

DNS (Primary): 

192.168.1.1

DNS (Secondary):

MDNS: 

Disabled

VLAN Settings

ID: 

0

User Priority: 

0

Synchronization: 

Enabled

DHCP Options

Plug-n-Play: 

Enabled

TCP Options

TCP Keep Alive Interval: 

120

Discovery

LLDP-MED Send: 

Enabled

LLDP-MED Send delay: 

30

VLAN via LLDP-MED: 

Enabled

NAT Settings

Enable STUN: 

Disabled

STUN Server:

STUN Bindtime Determine: 

Enabled

STUN Bindtime Guard: 

80

Enable RPORT: 

Enabled

Keep alive time: 

90

SIP/RTP Settings

Use Different SIP Ports: 

Disabled

RTP Collision Detection: 

Disabled

Always reboot on check-sync: 

Disabled

Outbound Proxy Mode: 

Use Always

Failover SIP Timer B: 

5

Failover SIP Timer F: 

5

Failover Reconnect Timer: 

60

Local SIP port: 

5060

SIP ToS/QoS: 

0xA0

RTP port: 

50004

RTP port range: 

254

RTP ToS/QoS: 

0xA0

SIP registration mode: 

Plug-n-Play

Save and Reboot

Save

Cancel

## 6.3. Administer Country/Time Settings

Navigate to **Country** in the left pane to configure the Time Server and set the correct time.

**Note:** It is important to use correct date and time of the system when using trusted certificates. In case of undefined time/date, the certificate validation can fail.

snom

M900

Home/Status

Extensions

Servers

Network

Management

Firmware Update

Country

Security

Central Directory

Multi Cell

Dial Plans

Repeaters

Alarm

Statistics

Generic Statistics

Diagnostics

Configuration

Syslog

SIP Log

Logout

### Country/Time Settings

Select country:US

State / Region:New Jersey

Notes:

Select Language:English

Time PC

Time Server:168.61.215.74

Allow broadcast NTP:☒

Refresh time (h):1

Set timezone by country/region:☒

Timezone:-5:00

Set DST by country/region:☒

Daylight Saving Time (DST):Automatic

DST Fixed By Day:Use Month and Day of Week

DST Start Month:March

DST Start Date:0

DST Start Time:2

DST Start Day of Week:Sunday

DST Start Day of Week Last in Month:Second First In Month

DST Stop Month:November

DST Stop Date:0

DST Stop Time:2

DST Stop Day of Week:Sunday

DST Stop Day of Week Last in Month:First In Month

Save and Reboot

Save

Cancel



## 6.4. Administer Servers

To configure SIP server, click **Servers** in the left pane, and then click **Add Server** (not shown). Configure the following fields:

- **Server Alias:** Specify a server alias (e.g., *ipose*).
- **Registrar:** Specify the SIP server proxy IP address (e.g., *10.64.102.90*). Specifying the port number is optional.
- **SIP Transport:** Set to *TLS*.
- **Codec Priority:** Specify the codec priority. For the compliance test, G.711 and G.722 were verified.

**Note:** With the configuration specified above, the M900 will send the IP address in the SIP URI and From/To headers of SIP Invite message. To send the domain instead, configure the domain (e.g., *avaya.com*) in **Registrar** and the SIP server proxy IP address in **Outbound Proxy**.

**Snom M900**

**Servers**

**devcon-sm**  
10.64.102.117

**devcon-sbc**  
10.64.101.102

**ipose:**  
10.64.102.90

[Add Server](#)  
[Remove Server](#)

**ipose:**

Server Alias: ipose

NAT Adaption: Enabled

Registrar: 10.64.102.90

Outbound Proxy:

Conference Server:

Call Log Server:

Music on Hold Server:

Reregistration time (s): 3600

Deregister After Failback: Disabled

SIP Session Timers: Enabled

Session Timer Value (s): 3600

Dial Plan ID: 2

Use SIP as XSI Authentication: Disabled

SIP Transport: TLS

Signal TCP Source Port: Enabled

Use One TCP Connection per SIP Extension: Disabled

RTP from own base station: Disabled

Keep Alive: Enabled

Show Extension on Handset Idle Screen: Enabled

Hold Behaviour: RFC 3264

Remote Ring Tone Control: Enabled

Attended Transfer Behaviour: Hold 2nd Call

Semi-Attended Transfer Behaviour: Allow Semi-Attended Transfer

Use Own Codec Priority: Disabled

DTMF Signalling: RFC 2833

DTMF Payload Type: 101

Remote Caller ID Source Priority: PAI - FROM

Enable Blind Transfer: Enabled

XSI User Services: Enabled

Codec Priority:  
- Max number of codecs is 5

G711U  
G711A  
G726  
G722

Scroll down to configure the following fields:

- **Secure RTP:** Set to *Disabled*.

Accept the default values for the remaining fields. Restart the M900 after saving the changes to Servers.

RTP Packet Size:	20 ms
Secure RTP:	Disabled
Secure RTP Auth:	Enabled
SRTP Crypto Suites:	<div>AES_CM_128_HMAC_SHA1_32 AES_CM_128_HMAC_SHA1_80</div> <div>UpDown</div>
Media Security:	Disabled
Media Security only for TLS:	Disabled
Client Initiated Connections (RFC5626):	Disabled
<div>SaveCancel</div>	

## 6.5. Administer Extensions

To create an extension for an M65 handset, click **Extensions** in the left pane to display the **Extensions** page below. Click **Add extension**.

snom

M900

Home/Status

Extensions

Servers

Network

Management

Firmware Update

Country

Security

Central Directory

Multi Cell

Dial Plans

Repeaters

Extensions

AC:

Add extension

	Idx	IPEI	Handset State	Handset Type FW Info	FWU Progress		VoIP Idx	Extension	Display Name	Server	Server Alias	State
<input type="checkbox"/>	1	0328DCAF32	Present@RPN00	M65 530.2	Complete	<input type="checkbox"/>	1	41510		10.64.102.90	ipose	SIP Registered@RPN00
<input type="checkbox"/>	2	0328DCAF77	Present@RPN00	M65 530.2	Complete	<input type="checkbox"/>	2	41511		10.64.102.90	ipose	SIP Registered@RPN00
<input type="checkbox"/>	3	0328DCAF5A	Present@RPN00	M65 530.2	Complete	<input type="checkbox"/>	3	41512		10.64.102.90	ipose	SIP Registered@RPN00

[Check All /](#)  
[Uncheck All](#)

[Check All Extensions /](#)  
[Uncheck All Extensions](#)

With selected: [Delete Handset\(s\)](#) [Register Handset\(s\)](#) [Deregister Handset\(s\)](#) [Start SIP Registration\(s\)](#) [SIP Delete Extension\(s\)](#)

In the **Add Extension** page, configure the following fields:

- **Line name:** Specify a line name for extension (e.g., *41510*).
- **Extension:** Enter SIP extension (e.g., *41510*).
- **Authentication User Name:** Specify the user name (e.g., *41510*) used to register with Session Manager.
- **Authentication Password:** Specify the password used to register with Session Manager.
- **Mailbox Name:** Specify the mailbox number for the SIP user (e.g., *41510*).
- **Mailbox Number:** Specify the voicemail number (e.g., *\*17*).
- **Server:** Specify the SIP server proxy configured in **Section 6.4**.

SNOM
M900

[Home/Status](#)  
[Extensions](#)  
[Servers](#)  
[Network](#)  
[Management](#)  
[Firmware Update](#)  
[Country](#)  
[Security](#)  
[Central Directory](#)  
[Multi Cell](#)  
[Dial Plans](#)  
[Repeaters](#)  
[Alarm](#)  
[Statistics](#)  
[Generic Statistics](#)  
[Diagnostics](#)  
[Configuration](#)  
[Syslog](#)  
[SIP Log](#)  
[Logout](#)

### Edit extension

Line name:	<input style="width: 90%;" type="text" value="41510"/>
Handset:	<input style="width: 90%;" type="text" value="Handset Idx 1"/>
Push-To-Talk:	<input style="width: 90%;" type="text" value="Disabled"/>
Extension:	<input style="width: 90%;" type="text" value="41510"/>
Authentication User Name:	<input style="width: 90%;" type="text" value="41510"/>
Authentication Password:	<input style="width: 90%;" type="password" value="....."/>
Display Name:	<input style="width: 90%;" type="text"/>
XSI Username:	<input style="width: 90%;" type="text"/>
XSI Password:	<input style="width: 90%;" type="password" value="....."/>
PIN:	<input style="width: 90%;" type="text"/>
Mailbox Name:	<input style="width: 90%;" type="text" value="41510"/>
Mailbox Number:	<input style="width: 90%;" type="text" value="*17"/>
Server:	<input style="width: 90%;" type="text" value="ipose: 10.64.102.90"/>
Call waiting feature:	<input style="width: 90%;" type="text" value="Enabled"/>
BroadWorks Shared Call Appearance:	<input style="width: 90%;" type="text" value="Disabled"/>
BroadWorks Feature Event Package:	<input style="width: 90%;" type="text" value="Disabled"/>
UaCSTA:	<input style="width: 90%;" type="text" value="Disabled"/>
Forwarding Unconditional Number:	<input style="width: 90%;" type="text"/> <input style="width: 10%;" type="text" value="Disabled"/>
Forwarding No Answer Number:	<input style="width: 90%;" type="text"/> <input style="width: 10%;" type="text" value="Disabled"/> <input style="width: 10%;" type="text" value="90"/> s
Forwarding on Busy Number:	<input style="width: 90%;" type="text"/> <input style="width: 10%;" type="text" value="Disabled"/>

## 6.6. Administer Security

Navigate to Security in the left pane to disable **Use Only Trusted Certificates** as shown below. This will allow all certificates received from Session Manager to be accepted. This setting must be disabled, because the M900 currently doesn't support a SAN in the certificate as mentioned in **Section Error! Reference source not found.** Since the **Use Only Trusted Certificates** option is disabled, there's no need to download TLS certificates to the M900.

**Note:** It is important to use correct date and time of the system when using trusted certificates. In case of undefined time/date, the certificate validation can fail.

[Alarm](#)  
[Statistics](#)  
[Generic Statistics](#)  
[Diagnostics](#)  
[Configuration](#)  
[Syslog](#)  
[SIP Log](#)  
[Logout](#)

### Trusted Root Certificates

	Idx	Issued To	Issued By	Valid Until
<input type="checkbox"/>	0	Avaya	Avaya	23/03 08:59:21 2040
<input type="checkbox"/>	1	Chambers of Commerce Root	Chambers of Commerce Root	30/09 16:13:44 2037
<input type="checkbox"/>	2	Chambers of Commerce Root - 2008	Chambers of Commerce Root - 2008	31/07 12:29:50 2038
<input type="checkbox"/>	3	Global Chambersign Root	Global Chambersign Root	30/09 16:14:18 2037
<input type="checkbox"/>	4	Global Chambersign Root - 2008	Global Chambersign Root - 2008	31/07 12:31:40 2038
<input type="checkbox"/>	5	Actalis Authentication Root CA	Actalis Authentication Root CA	22/09 11:22:02 2030
<input type="checkbox"/>	6	Amazon Root CA 1	Amazon Root CA 1	17/01 00:00:00 2038
<input type="checkbox"/>	7	Amazon Root CA 2	Amazon Root CA 2	26/05 00:00:00 2040
<input type="checkbox"/>	8	Amazon Root CA 3	Amazon Root CA 3	26/05 00:00:00 2040
<input type="checkbox"/>	9	Amazon Root CA 4	Amazon Root CA 4	26/05 00:00:00 2040
<input type="checkbox"/>	10	Starfield Services Root Certificate Authority - G2	Starfield Services Root Certificate Authority - G2	31/12 23:59:59 2037
<input type="checkbox"/>	11	IdenTrust Public Sector Root CA 1	IdenTrust Public Sector Root CA 1	16/01 17:53:32 2034
<input type="checkbox"/>	12	ISRG Root X1	ISRG Root X1	04/06 11:04:38 2035
<input type="checkbox"/>	13	ISRG Root X1	ISRG Root X1	04/06 11:04:38 2035

[Check All](#) / [Uncheck All](#)  
With selected: [Delete Certificate\(s\)](#)

**Import Root Certificate:**  
Filename:  No file chosen

Use Only Trusted Certificates:

### Secure Web Server:

HTTPS:

### Password:

Username:

Current Password:

New Password:

Confirm Password:

## 7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Snom M900 Multicell DECT Phones.

1. Verify that M65 handsets have successfully registered with IP Office. In **IP Office System Status**, navigate to the SIP extension and verify **Media Stream** is set to *RTP*, **Layer 4 Protocol** is set to *TLS*, and **Current State** is shown as *Idle*.

The screenshot shows the Avaya IP Office System Status web interface. The title bar indicates the connection to devcon-ipose (10.64.102.90) on an IP Office Linux PC (11.1.1.0.0 build 209). The interface includes a sidebar with navigation options: System, Alarms (30), Extensions (7), Trunks (3), Active Calls, Resources, Voicemail, IP Networking, and Locations. The 'Extensions (7)' section is expanded, and extension 41510 is selected. The main content area displays the 'Extension Status' for 41510, including details like IP address (192.168.100.191), Media Stream (RTP), Layer 4 Protocol (TLS), and Current State (Idle). A table at the bottom shows call logs, with the current state 'Idle' and time in state '00:06:49'. The status bar at the bottom right shows the time as 12:32:54 PM and the extension as 'Online'.

Avaya IP Office System Status - devcon-ipose (10.64.102.90) - IP Office Linux PC 11.1.1.0.0 build 209

**AVAYA** IP Office System Status

Help Snapshot LogOff Exit About

**System**  
Alarms (30)  
Extensions (7)  
41000  
41001  
41501  
41502  
▶ 41510  
41511  
41512  
Trunks (3)  
Active Calls  
Resources  
Voicemail  
IP Networking  
Locations

**Extension Status**

Extension Number: 41510  
IP address: 192.168.100.191  
Standard Location: None  
Registrar: Primary  
Telephone Type: Unknown SIP Device  
User-Agent SIP header: snomM900/05.30.0002 (MAC=000413B66E9B; SER= 00000; HW=2)  
Media Stream: RTP  
Layer 4 Protocol: TLS  
Current User Extension Number: 41510  
Current User Name: Snom41510  
Forwarding: Off  
Twinning: Off  
Do Not Disturb: Off  
Message Waiting: Off  
Number of New Messages: 0  
Phone Manager Type: None  
SIP Device Features: REFER,UPDATE  
License Reserved: No  
Last Date and Time License Allocated: 10/11/2021 12:26:05 PM  
Packet Loss Fraction: Connection Type:  
Jitter: Codec:  
Round Trip Delay: Remote Media Address:

Call Ref	Current State	Time in State	Calling Number or Called Number	Direction	Other Party on Call
	Idle	00:06:49			

Trace Trace All Pause Ping Call Details Print... Save As...

12:32:54 PM Online

2. Alternatively, the SIP registration status may be verified by navigating to **Extensions** in the M900 web user interface.

SNOM

Home/Status

Extensions

Servers

Network

Management

Firmware Update

Country

Security

Central Directory

Multi Cell

Dial Plans

Repeaters

M900

Extensions

AC: 0000

Save

Cancel

Add extension

	Idx	IPEI	Handset State	Handset Type FW Info	FWU Progress		VoIP Idx	Extension	Display Name	Server	Server Alias	State
<input type="checkbox"/>	1	0328DCAF32	Present@RPN00	M65 530.2	Complete	<input type="checkbox"/>	1	41510		10.64.102.90	ipose	SIP Registered@RPN00
<input type="checkbox"/>	2	0328DCAF77	Present@RPN00	M65 530.2	Complete	<input type="checkbox"/>	2	41511		10.64.102.90	ipose	SIP Registered@RPN00
<input type="checkbox"/>	3	0328DCAF5A	Present@RPN00	M65 530.2	Complete	<input type="checkbox"/>	3	41512		10.64.102.90	ipose	SIP Registered@RPN00

Check All /

Uncheck All

Check All Extensions /

Uncheck All Extensions

With selected: Delete Handset(s) Register Handset(s) Deregister Handset(s) Start SIP Registration(s) SIP Delete Extension(s)

- Establish a call between M65 handset and a local Avaya SIP deskphone. In **IP Office System Status**, navigate to the SIP extension and verify that the **Connection Type** is *Direct Media* as shown below, if SRTP is disabled on the Avaya SIP deskphone. If SRTP is enabled on the Avaya SIP deskphone, the **Connection Type** would be set to *VCM (SRTP)*.

**Avaya IP Office System Status**

Help Snapshot LogOff Exit About

**System**

- Alarms (30)
- Extensions (7)
  - 41000
  - 41001
  - 41501
  - 41502
  - 41510
  - 41511
  - 41512
- Trunks (3)
- Active Calls
- Resources
- Voicemail
- IP Networking Locations

**Extension Status**

Extension Number: 41510  
 IP address: 192.168.100.191  
 Standard Location: None  
 Registrar: Primary  
 Telephone Type: Unknown SIP Device  
 User-Agent SIP header: snomM900/05.30.0002 (MAC=000413B66E9B; SER= 00000; HW=2)  
 Media Stream: RTP  
 Layer 4 Protocol: TLS  
 Current User Extension Number: 41510  
 Current User Name: Snom41510  
 Forwarding: Off  
 Twinning: Off  
 Do Not Disturb: Off  
 Message Waiting: Off  
 Number of New Messages: 0  
 Phone Manager Type: None  
 SIP Device Features: REFER,UPDATE  
 License Reserved: No  
 Last Date and Time License Allocated: 10/11/2021 12:26:05 PM  
 Packet Loss Fraction: Connection Type: Direct Media  
 Jitter: Codec: G711 Mu  
 Round Trip Delay: Remote Media Address: 192.168.100.195

Call Ref	Current State	Time in State	Calling Number or Called Number	Direction	Other Party on Call
208	Connected	00:00:30		Outgoing	Extn 41501, sip41501

Trace Trace All Pause Ping Call Details Print... Save As...

12:42:05 PM Online

- While the call is active, basic telephony features can be exercised to verify proper operation.



## 8. Conclusion

These Application Notes describe the configuration steps required to integrate Snom M900 Multicell DECT Phones with Avaya IP Office. The Snom M900 Multicell DECT Phones registered to Avaya IP Office Server Edition or Avaya IP Office 500 V2 Expansion System. Calls were then established to H.323 / SIP deskphones and the PSTN with TLS. In addition, basic telephony features were verified. All feature and serviceability test cases were completed successfully with observations noted in **Section 2.2**.

## 9. References

This section references the Avaya documentation relevant to these Application Notes. The Avaya product documentation is available at <http://support.avaya.com> and the Snom product documentation is available at <https://service.snom.com/display/wiki/M900>.

- [1] *Administering Avaya IP Office Platform with Manager*, Release 11.1.1, Issue 28.1.1, June 2021.
- [2] *Snom M900 and M900 Outdoor Base Station Admin and Installation Guide v1.03*.

---

**©2021 Avaya Inc. All Rights Reserved.**

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at [devconnect@avaya.com](mailto:devconnect@avaya.com).



VTech Technologies Canada Ltd.

Date: November 15, 2021

**Declaration of Conformance**

We, VTech Technologies Canada LTD., declare under sole responsibility that product series DECT M-Series handsets all share the same firmware version. Therefore; the products are expected to behave in the same manner. The differences between the different models in the series are detailed in the table below.

Model	Description
M25	DECT Office Handset, color display, and 3.5 mm headset jack
M65	DECT Professional Handset, Wideband speakerphone
M70	DECT Ruggedized Office Handset, HD Audio, Color LCD, Bluetooth, Alarm
M80	DECT M80 Ruggedized Handset, IP65 Rating, Bluetooth, Alarm
M85	DECT Industrial Handset, IP65 Rating, Bluetooth, Alarm
M90	Antibacterial DECT Handset, JIS-Z 2801 tested, MIL-STD-810g 516.6 tested, IP65 Rating, Bluetooth, Alarm

Please do not hesitate to contact should you require further information.

Thank you,

A handwritten signature in black ink, appearing to read "R. Tischler".

Ralph Tischler  
Director of Engineering  
Vtech Technologies Canada Ltd  
604-233-5203