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Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Ascom Myco Wireless Smartphones with Avaya IP Office 10 - Issue 1.0

Abstract

These Application Notes describe a solution for supporting wireless interoperability between Ascom Myco Wireless Smartphones with Avaya IP Office Server Edition release 10.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any 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.

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1 of 20
AscomMyco_IPO10

1. Introduction

These Application Notes describe the configuration steps for provisioning Ascom's Myco Wireless Smartphones to interoperate with Avaya IP Office Server Edition solution. Ascom's Myco Wireless Smartphones are configured on Avaya IP Office as SIP Users, therefore enabling them to make/receive internal and PSTN/external calls and have other telephony facilities available on Avaya IP Office. The Wireless communication is made using a Wireless Router connected to the same LAN as the Avaya IP Office.

Avaya IP Office Server Edition solution consists of a primary Linux Server Edition and a 500V2 expansion. Both systems are linked by IP Office Line IP trunks that can enable voice networking across these trunks to form a multi-site network. Each system in the solution automatically learns each other's extension numbers and user names. This allows calls between systems and support for a range of internal call features.

2. General Test Approach and Test Results

The general test approach was to configure the Ascom Myco Wireless Smartphones (Myco Smartphones) to communicate with Avaya IP Office (IP Office) as implemented on a customer's premises. The interoperability compliance testing evaluates the ability of the Ascom Myco Wireless Smartphone to make and receive calls to and from Avaya H.323, SIP, Digital desk phones and PSTN endpoints. The integrated IP Office Voicemail was used to test for DTMF on the Myco Smartphones. See **Figure 1** for a network diagram. The interoperability compliance test included both feature functionality and serviceability tests.

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's formal testing and Declaration of Conformity is provided only on the headsets/Smartphones that carry the Avaya brand or logo. Avaya may conduct testing of non-Avaya headset/Smartphone to determine interoperability with Avaya phones. However, Avaya does not conduct the testing of non-Avaya headsets/Smartphones for: Acoustic Pressure, Safety, Hearing Aid Compliance, EMC regulations, or any other tests to ensure conformity with safety, audio quality, long-term reliability or any regulation requirements. As a result, Avaya makes no representations whether a particular non-Avaya headset will work with Avaya's telephones or with a different generation of the same Avaya telephone.

Since there is no industry standard for Smartphone interfaces, different manufacturers utilize different Smartphone/headset interfaces with their telephones. Therefore, any claim made by a headset vendor that its product is compatible with Avaya telephones does not equate to a guarantee that the headset will provide adequate safety protection or audio quality.

2.1. Interoperability Compliance Testing

The testing included:
- Basic Calls, local and PSTN
- Hold and Retrieve
- Attended and Unattended Transfer
- Call Forwarding Unconditional, No Reply and Busy
- Call Waiting
- Call Park/Pickup
- Conference
- Do Not Disturb
- Calling Line Name/Identification
- Codec Support
- DTMF Support
- Hunt Groups
- Mobile twinning
- Message Waiting Indication

2.2. Test Results

Tests were performed to ensure full interoperability between Ascom Myco Wireless Smartphones and IP Office. The tests were all functional in nature and performance testing was not included. The following observations were noted during testing.
- For Call Waiting functionality to work on Myco, ensure that the **Call Waiting On** box seen under the Telephony tab of User is checked.

2.2.1. Not Supported by Myco Design
- Myco does not support local call diversion like Call Forward All, Call Forward Busy and Call Forward No Answer from the smartphones itself.
- Myco does not support initiating three-party conference calls however can be included in a conference call.
- Calling party name not shown on ringing but is updated on call answer.
- SIP Expires timer on Myco recommended setting at 180 seconds. This is hard coded in the IP Office and cannot be changed.

2.3. Support

Technical support for the Ascom Myco product can be obtained through a local Ascom supplier. Ascom global technical support:

- Email: support@ascom.com or Help desk: +46 31 559450

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SPOC 11/2/2016

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3 of 20
AscomMyco_IPO10

3. Reference Configuration

Figure 1 illustrates the network topology used during compliance testing. The Avaya solution consists of an IP Office which the Myco Smartphones were configured as SIP Users. Digital, H323 and Soft phones were configured on the IP Office. PRI and SIP trunks were configured to connect to the PSTN. The Wireless Router was connected to the IP Network which Myco Smartphones connect. IP Office Manager is used to manage IP Office.

A laptop on the network that can access and connect to the Ascom Device Manager is used to configure the Ascom Myco smartphones. The Ascom Unite Connectivity Manager (UniteCM) is the core software platform in the Ascom system.
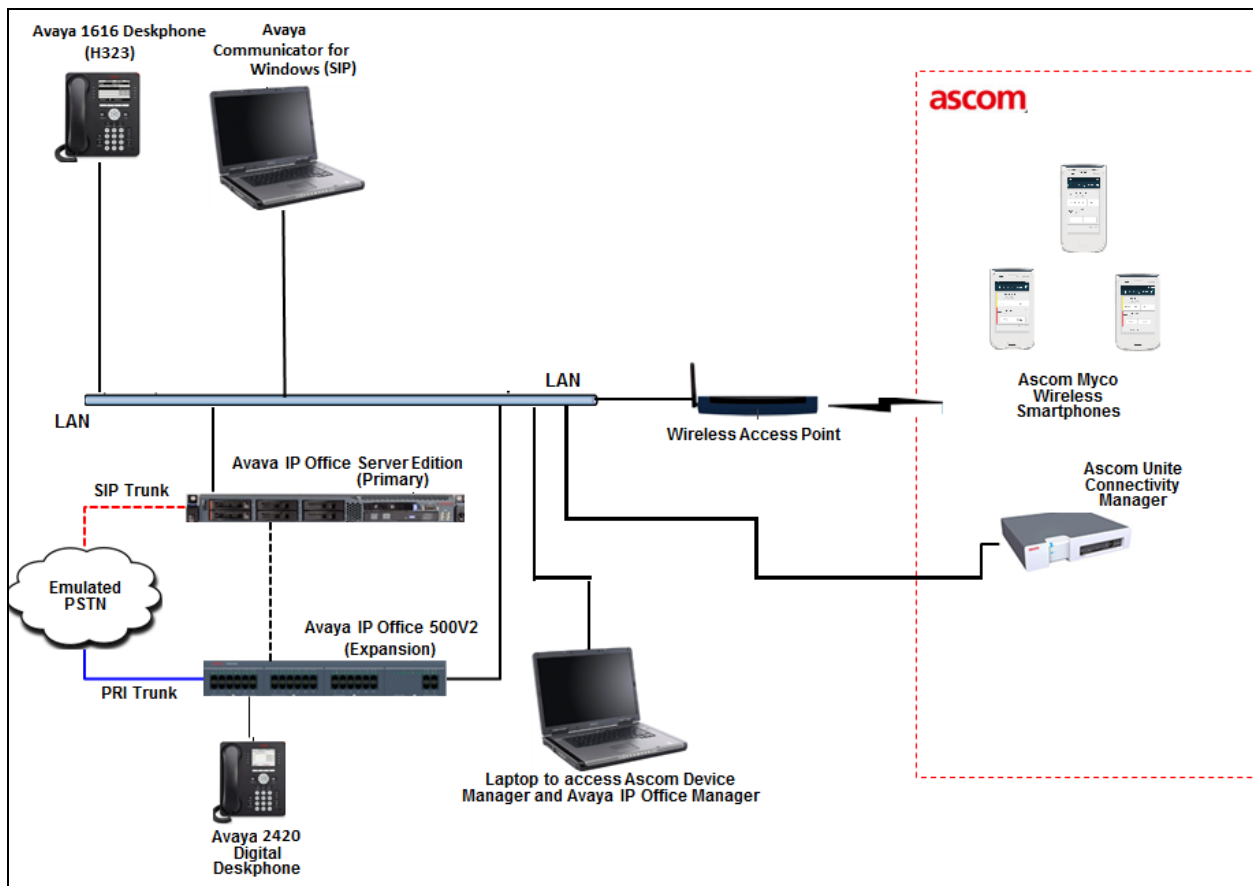
Figure 1: Avaya IP Office and Ascom Reference Configuration

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4 of 20
AscomMyco_IPO10

4. Equipment and Software Validated

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

Avaya Equipment	Software / Firmware Version
Avaya IP Office Linux PC Server (Primary)	10.0.0.0.0 build 550
Avaya IP Office IP500V2 (Expansion)	10.0.0.0.0 build 550
Avaya 1616 (H.323) Deskphone	3.2.5.0A
Avaya 9404 Digital Deskphone	N/A
Avaya Communicator for Windows	2.1.3.0
Ascom Equipment	**Software / Firmware Version**
Ascom WiFi Myco Smartphones	5.5.0 (SIP App version 1.5)
Ascom Unite Connectivity Manager	5.8.1

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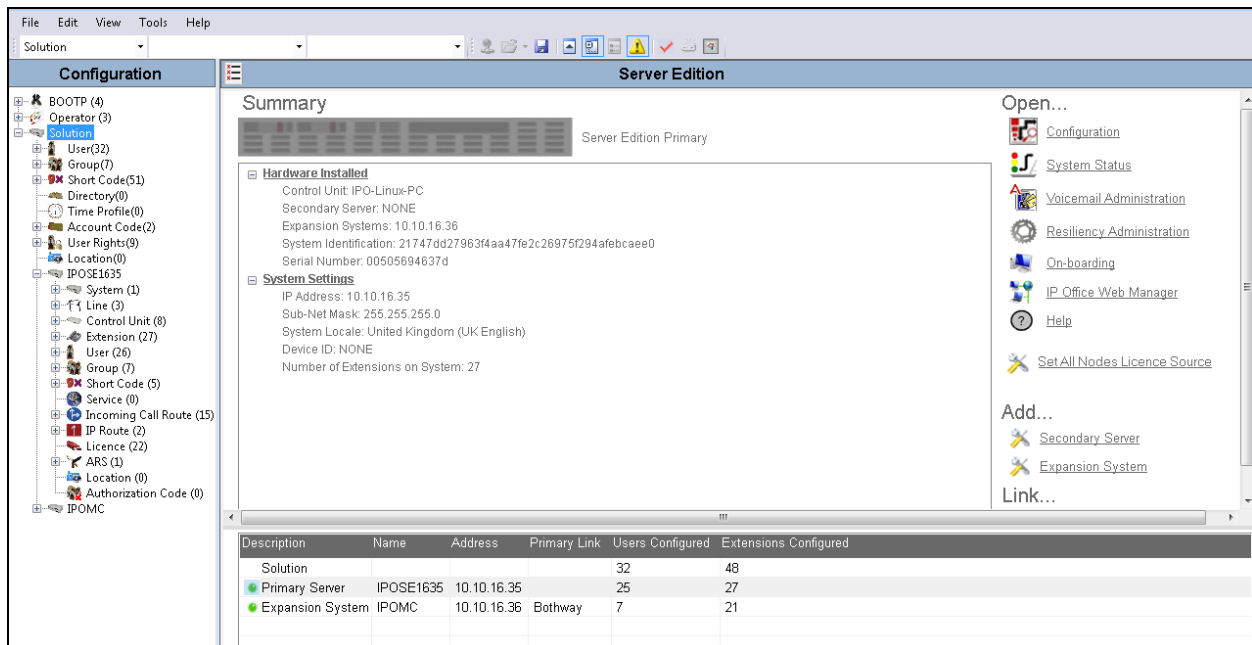
5. Avaya IP Office Configuration

The document assumes that Avaya IP Office Server Edition has been installed and configured to work with a 500V2 expansion. This section only describes the details on how to configure IP Office Server Edition (Primary). Similar configuration pertains to IP Office 500V2 (Expansion) box too. Configuration and verification operations on the Avaya IP Office illustrated in this section were all performed using Avaya IP Office Manager. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**. The configuration operations described in this section can be summarized as follows:

- Launch Avaya IP Office Manager
- LAN1 Configuration
- VoIP Configuration
- Create a SIP Extension for the Ascom Myco Smartphone
- Create a User for the Ascom Myco Smartphone
- Save Configuration

5.1. Launch Avaya IP Office Manager

From a PC running the IP Office Manager application, select **Start → Programs →IP Office → Manager** to launch the Manager application. Select the proper IP Office system, and log in using the appropriate credentials (not shown). The Avaya IP Office Manager for Server Edition screen is displayed as shown in the screen below. Click on **Configuration**.

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SPOC 11/2/2016

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6 of 20
AscomMyco_IPO10

From the configuration tree in the left pane, navigate to **IPOSE1635 → System** to display the Server Edition screen in the right pane.
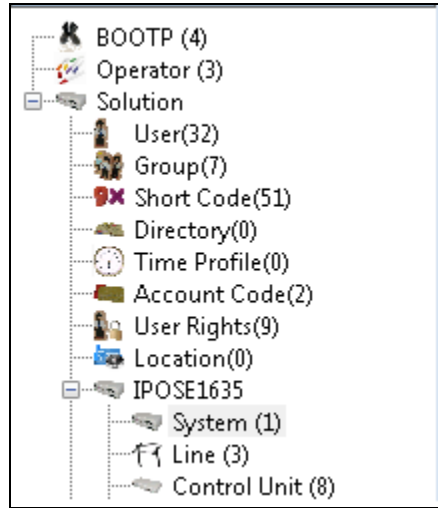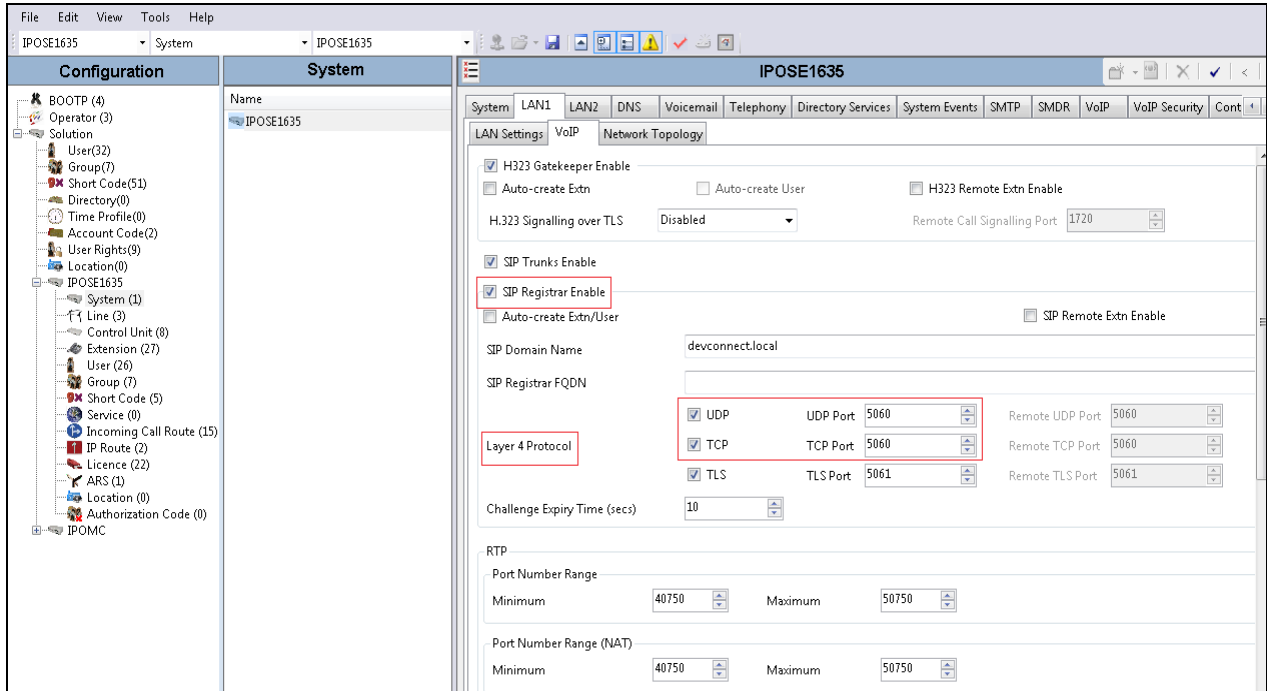

5.2. LAN1 configuration

From the **Configuration** pane, navigate to **Solution IPOSE1635 → System (1)→**. Select **LAN1** tab followed by the **LAN Settings** tab and click on the **Disabled** radio button in the **DHCP Mode** section. Note the **IP Address** *10.10.16.35*, which will be required to configure the Myco Smartphone in **Section 6**. Click the **OK** button (not shown) to save.
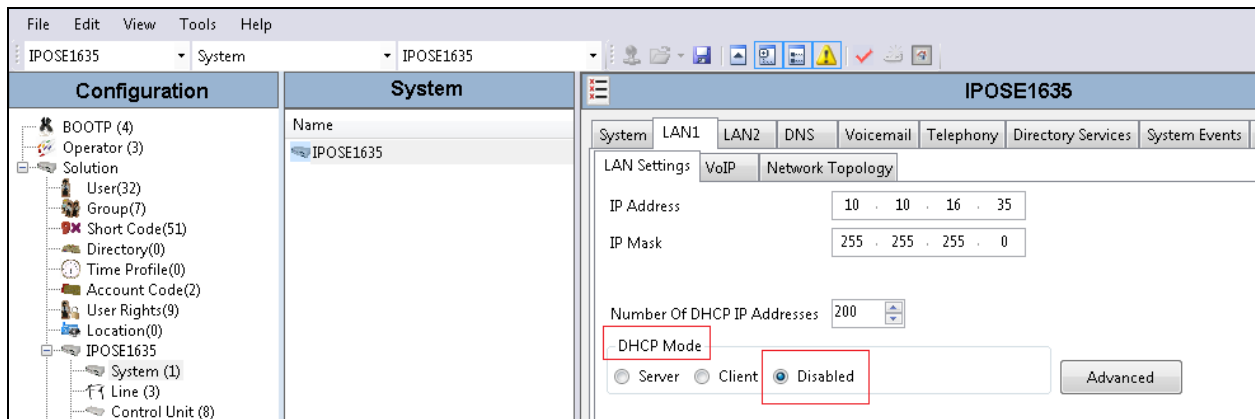
5.3. VoIP Configuration

Select the **VoIP** tab seen under **LAN1** tab. The following fields were configured during compliance testing.

- Check the **SIP Registrar Enable** box
- **Domain Name**: *devconnect.local*
- Check **UDP** and **TCP** boxes
- Select **UDP** and **TCP Port** to be *5060*

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SPOC 11/2/2016

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8 of 20
AscomMyco_IPO10

Under **DiffServ Settings**, select **DSCP** to be *46* and **SIG DSCP** to be *26.* Retain default values for all other fields. Click the **OK** button (not shown) to save.
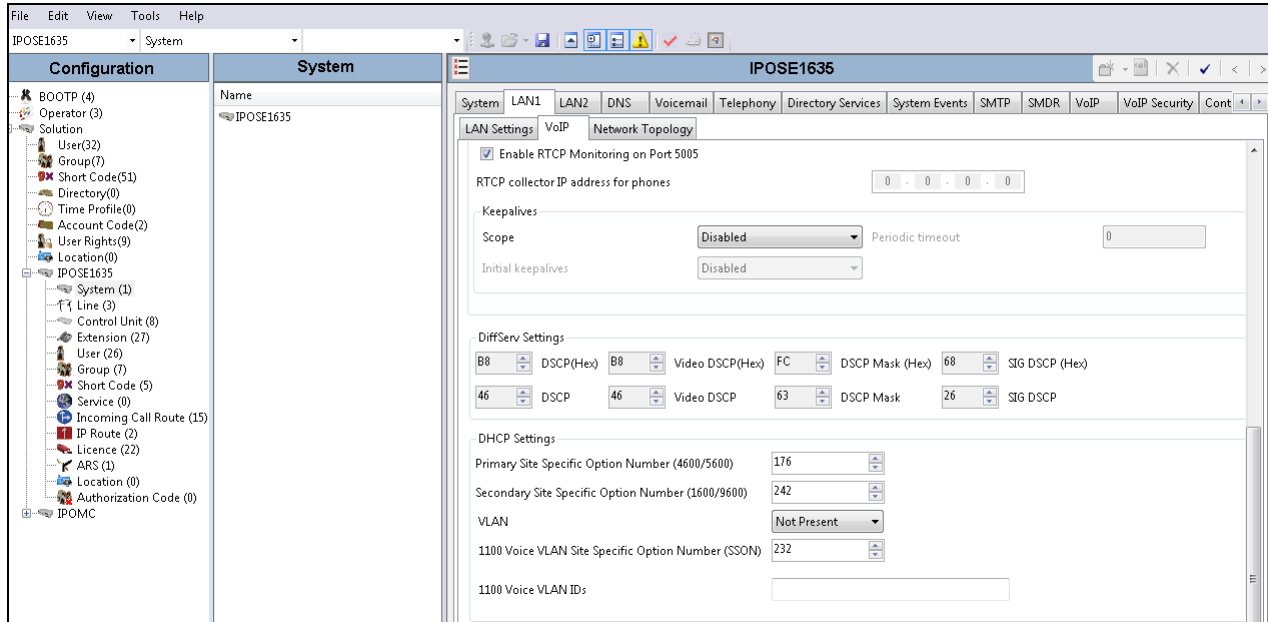
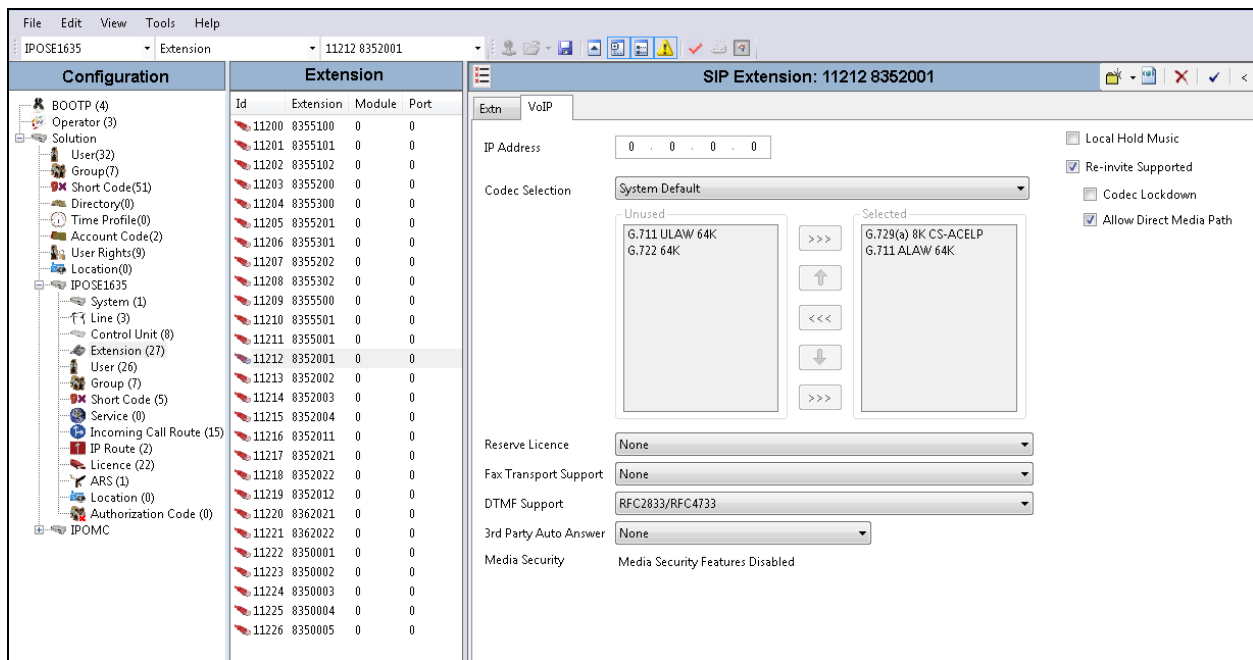## 5.4. Create a SIP Extension for the Ascom Myco Smartphone

The Myco Smartphones are configured as SIP Extensions on the IP Office. From the **Configuration** pane, navigate to **Solution → IPOSE1635 → Extension**, right click and select **New** followed by **SIP Extension**. The example below shows the extension *8352001*, repeat these steps for each Myco Smartphone extension.
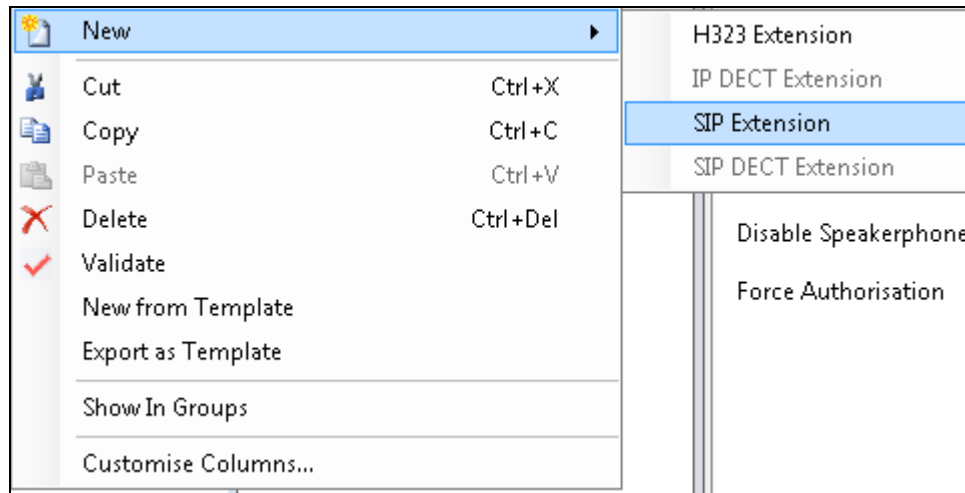
When the new window opens enter the **Base Extension**. The **Extension Id** will be automatically filled in. Click on the **VoIP** tab as highlighted in the screen below.
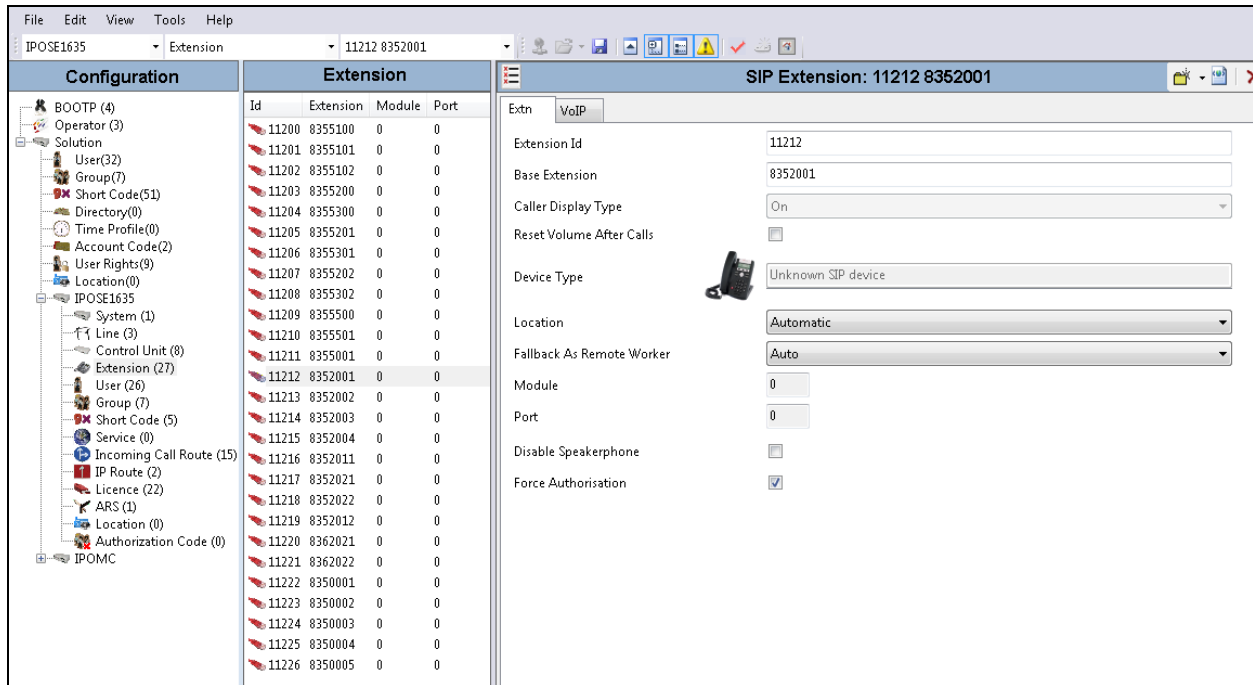

Under **VoIP** tab, ensure **Re-invite Supported** and **Allow Direct Media Path** boxes are checked. Retain default values for all other fields and click the **OK** (not shown) button to save.

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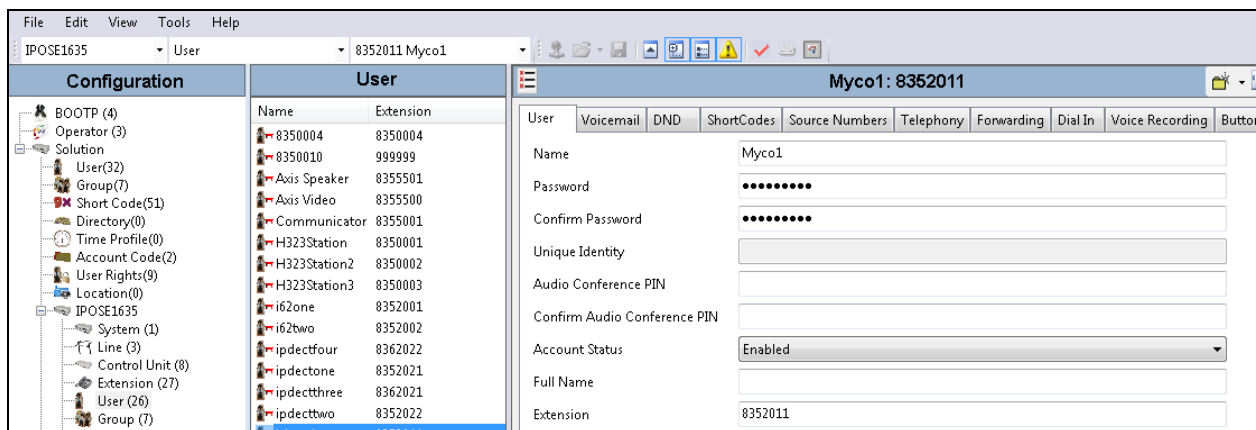
5.5. Create a User for the Ascom Myco Smartphone

A user must be configured for Ascom Myco Smartphone Extension. From the **Configuration** pane, navigate to **Solution → IPOSE1635 → User**, right click and select **New.** The example below shows the extension *8352011*, repeat these steps for each Myco Smartphone extension.
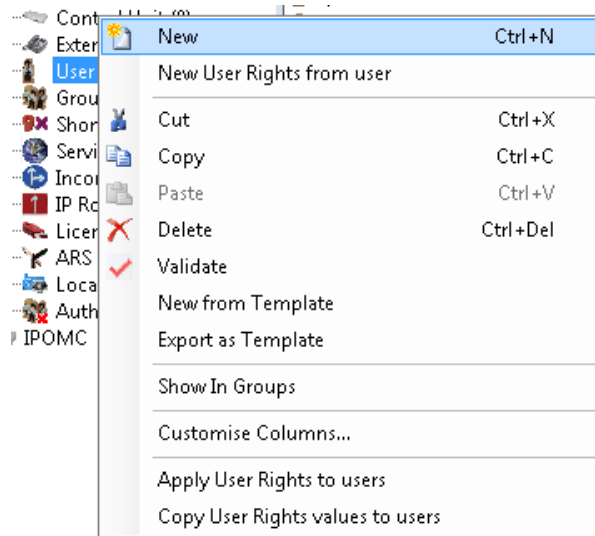
When the **User** window opens, select the **User** tab and enter the follow:
- **Name**: Enter a descriptive name
- **Password**: Enter a password
- **Confirm**: Confirm the above entered password
- **Full Name**: Enter a descriptive name
- **Extension**: Enter the extension which was created in **Section 5.4** above

Retain default values for all other fields.

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SPOC 11/2/2016

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11 of 20
AscomMyco_IPO10

Select **Telephony** tab followed by the **Supervisor Settings** tab, enter a login Code in the **Login Code** field and confirm the same in the **Confirm Login Code** field. The login Code is used by the Myco Smartphone to log in to the IP Office in **Section 6**.

Retain default values for all other fields and click the **OK** (not shown) button to save.
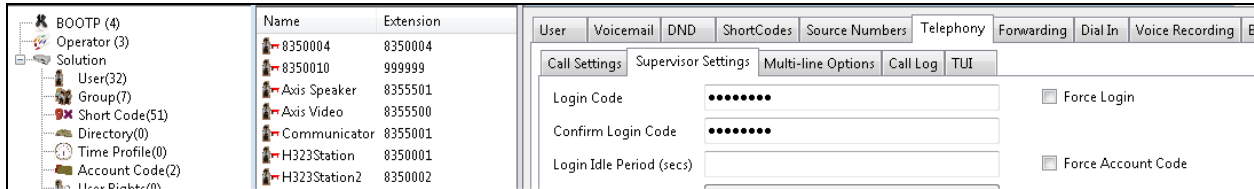
5.6. Save Configuration

Navigate to **File → Save Configuration** (not shown) in the menu bar at the top of the screen or click on the **Save** Icon as shown below to save the configuration performed in the preceding sections.
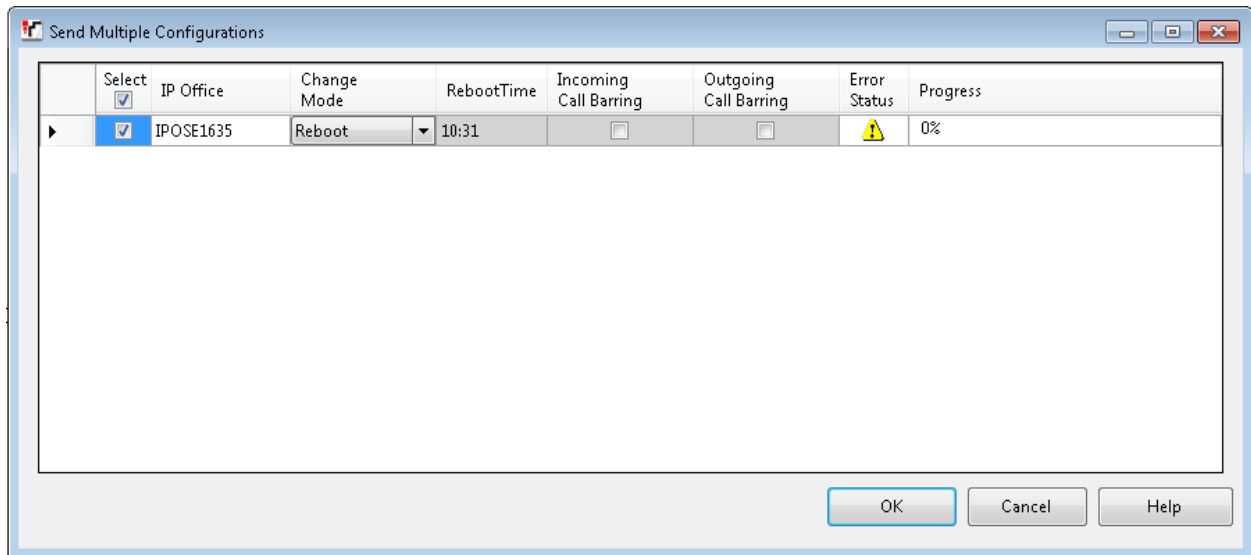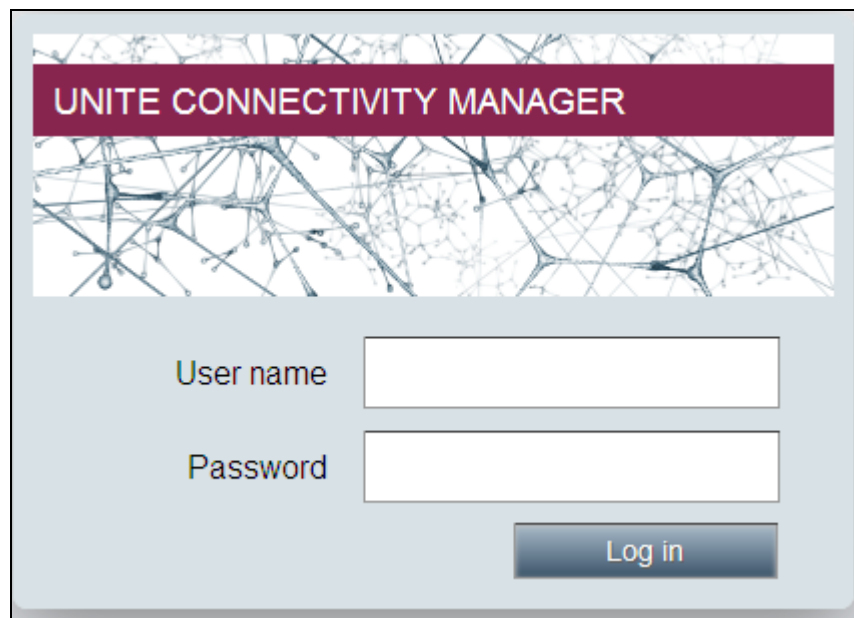
6. Configure Ascom Myco Wireless Smartphones

This section describes how to access and configure the Myco Wifi Smartphone via the Device Manager. It is implied that the Wifi network has been configured and operational and the Ascom UniteCM box has an IP address assigned.

Note: The Wireless router and Ascom UniteCM configuration are outside the scope of these Application Notes.

Access the UniteCM box by typing the URL, http://<ip address> in a web browser (not shown). Screen below shows the login screen. Enter the required credentials in the **User name** and **Password** fields and click on **Log in**.
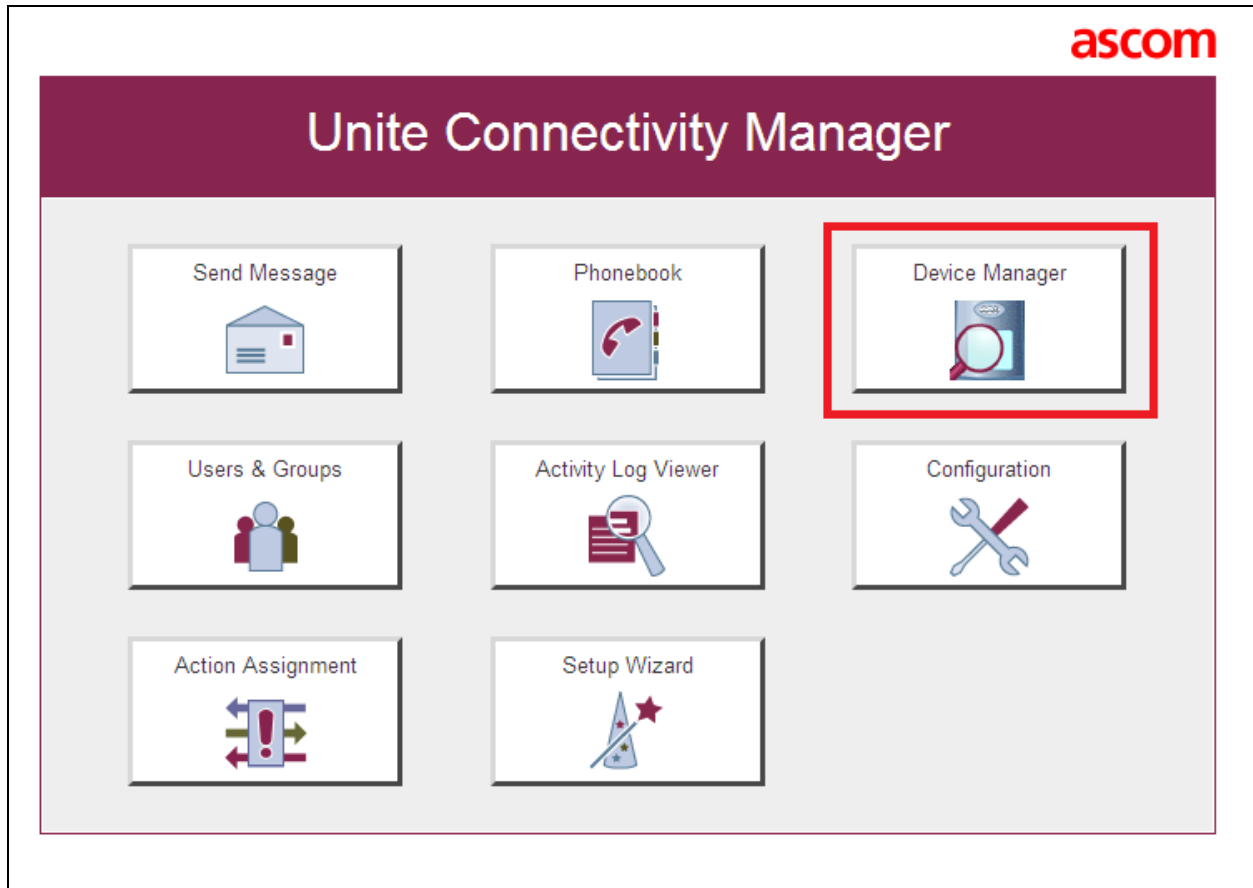
SJW; Reviewed:
SPOC 11/2/2016

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13 of 20
AscomMyco_IPO10
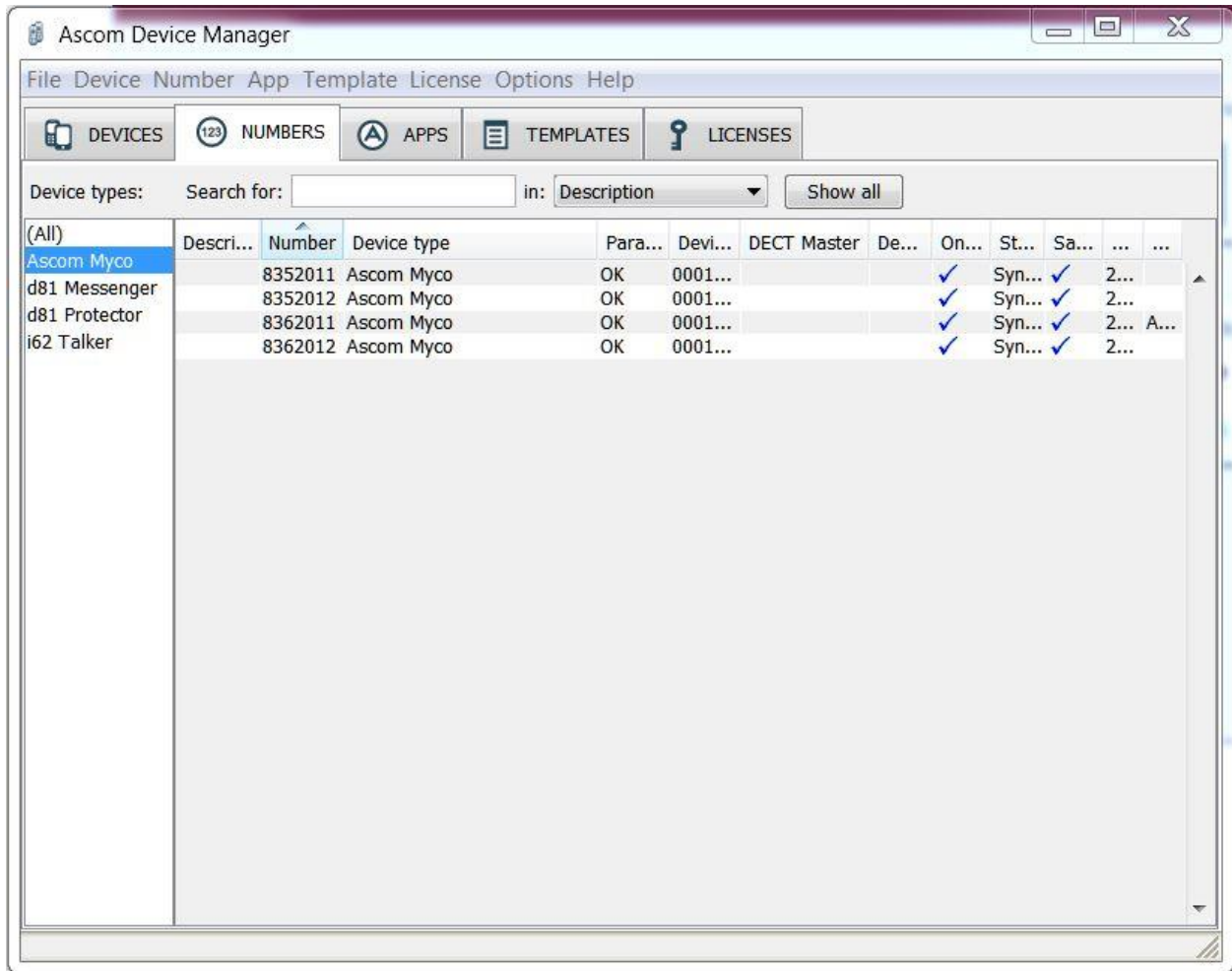
The main screen of Unite Connectivity Manager is seen as shown below. Click on the Device Manager application.

The Ascom Device Manager screen is seen as shown below. In the screen below, devices with numbers *8352011,8352012,8362011* and *8362012* are discovered. Double click on any number such as *8352011*.
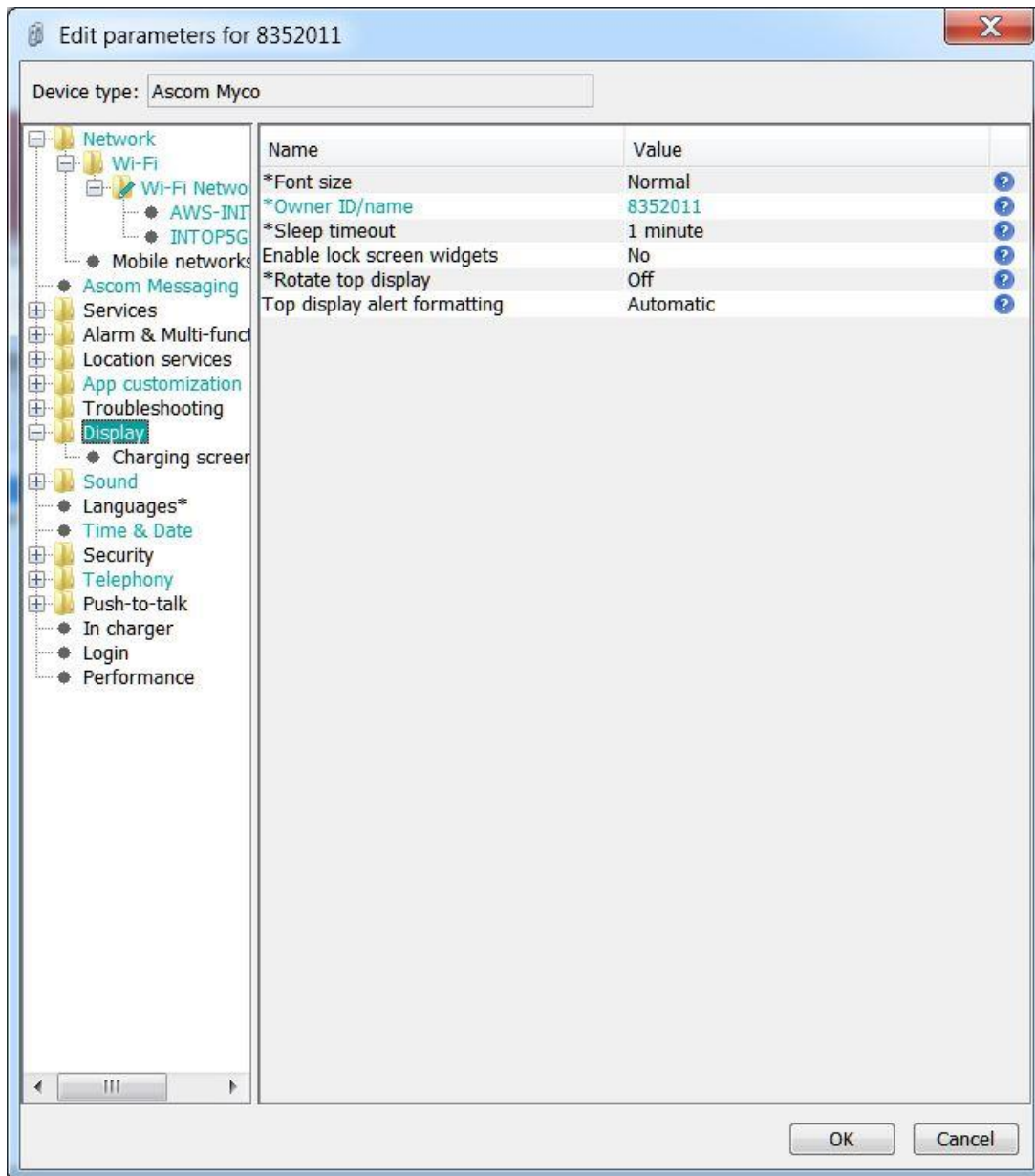
The **Edit parameters for 8352011** screen is seen as shown below. Click on **Ascom VoIP** that is seen on the left hand side and configure the following values.

- **SIP Transport**: *TCP*
- **Primary SIP proxy**: *10.10.16.35*; this is the IP address of IP Office LAN as shown in **Section 5.2**
- **Listening port**: *5060;* this is the SIP port configured on IP Office in **Section 5.3**
  Endpoint ID: *8352011*; this is the Extension configured in IP Office in **Section 5.5**
- **Password**: As defined in **Section 5.5** while configuring Login Code
- **Codec configuration**: In this example *G711 A-law* is selected
- **Direct signaling**: *no*

Retain default values for all other fields.
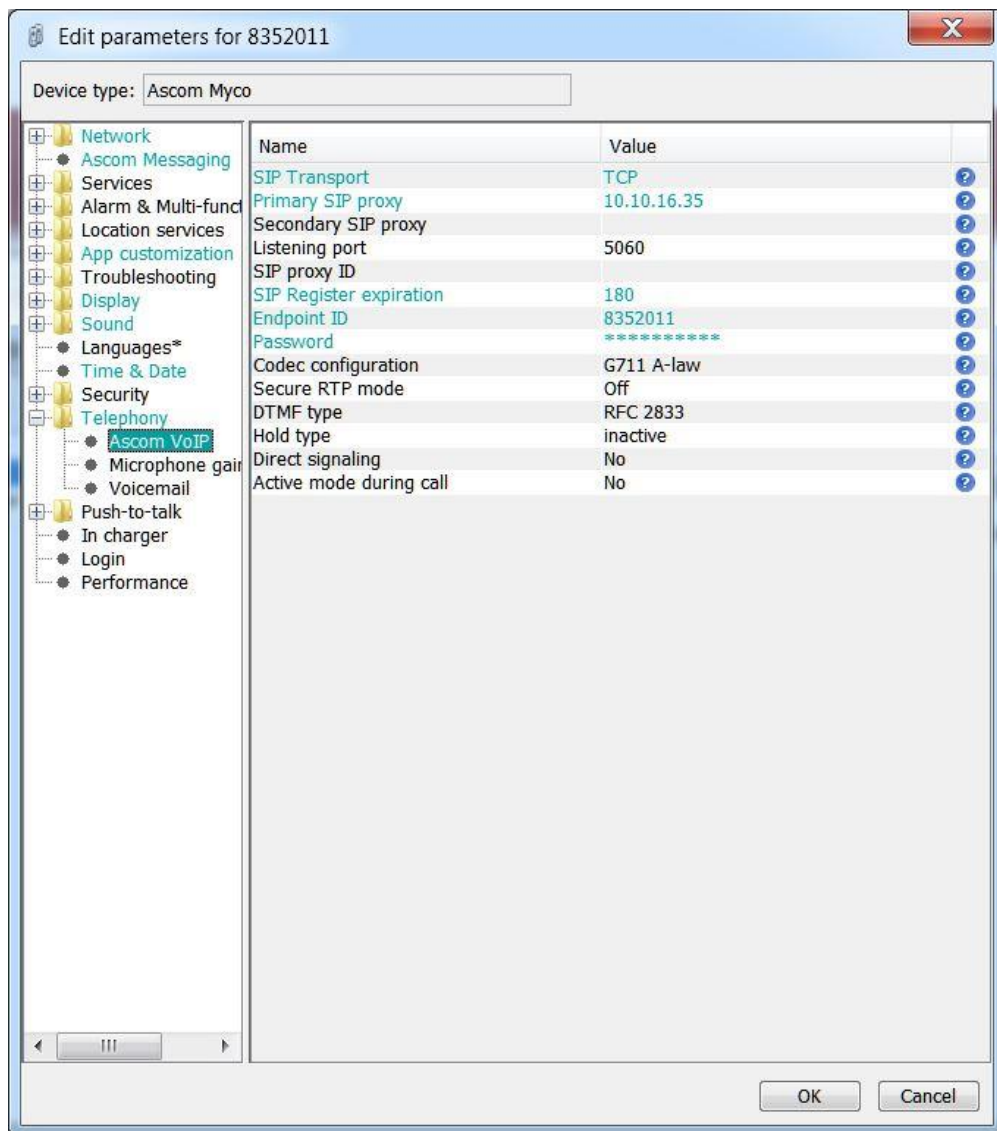
The following step is optional. From the same screen as above, click on **Display** and configure the **Owner ID/name** field with the directory number configured, in this case *8352011* as shown below. Retain default values for all other fields and click on **OK** to complete the configuration.

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SPOC 11/2/2016

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17 of 20
AscomMyco_IPO10

7. Verification Steps

This section provides the tests that can be performed to verify correct configuration of the IP Office and Ascom solution.

7.1. Verify the Ascom Myco Wireless Smartphone status

Using the IP Office System Monitor program click on **Status → SIP Phone Status** (not shown) to verify that the Ascom Myco Smartphones are registered. The screen shot below shows that the Myco Smartphones *8352011* and *8352012* were registered.

Extension Number	Current User Extension	Current User Name	Module/ Slot/ IP Address	Port Number/ MAC Address
8350001	8350001	H323Station	10.10.16.248	64-C3-54-99-54-9B
8350002	8350002	H323Station2	10.10.16.122	64-C3-54-99-54-98
8350003	8350003	H323Station3	10.10.16.202	00-1B-4F-06-E4-47
8352001	8352001	i62one	10.10.16.134	
8352011	8352011	Myco1	10.10.16.128	
8352012	8352012	Myco2	10.10.16.126	
8352021	8352021	ipdectone	10.10.16.8	
8352022	8352022	ipdecttwo	10.10.16.8	
8355001	8355001	Communicator - Simultaneous 1	10.10.16.85	

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SPOC 11/2/2016
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18 of 20
AscomMyco_IPO10

8. Conclusion

A full and comprehensive set of feature and functional test cases were preformed during Compliance testing. Ascom Wireless Smartphone is considered compliant with Avaya IP Office 10. All test cases passed with observations noted in **Section 2.2**

9. Additional References

These documents form part of the Avaya official technical reference documentation suite. Further information may be had from *http://support.avaya.com* or from your Avaya representative.

[1] Administering Avaya IP Office^{TM} Platform with Manager, Release 10, Issue 1.
[2] Avaya IP Office^{TM} Platform Documentation Catalog Release 10, Document number 16-604278 Issue 1
[3] Avaya IP Office^{TM} Platform 10. Deploying Avaya IP Office^{TM} Platform IP500 V2, Document number 15-601042.

Product Documentation for Ascom Products can be obtained from an Ascom supplier or may be accessed at https://www.ascom-ws.com/AscomPartnerWeb/Templates/WebLogin.aspx (login required).

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