Avaya Solution & Interoperability Test Lab

Application Notes for Teledex iPhone SIP LD4200 Series IP Telephones with Avaya IP Office – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Teledex iPhone SIP LD4200 Series IP Telephones to interoperate with Avaya IP Office. Teledex iPhone SIP LD4200 Series are SIP-based IP telephones that integrate with Avaya IP Office as SIP endpoints.

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. Introduction

These Application Notes describe the configuration steps required for Teledex iPhone SIP LD4200 Series IP Telephones to interoperate with Avaya IP Office. Teledex iPhone SIP LD4200 Series are SIP-based IP telephones that integrate with Avaya IP Office as SIP endpoints.

The compliance testing used a Teledex iPhone SIP LD4210S IP Telephone.

1.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing included registration, basic call, display, hold/reconnect, conference, media shuffling, G.711, G.729, G.723, MWI, DTMF, do not disturb and call forwarding unconditional short code scenarios.

The serviceability testing focused on verifying the ability of Teledex iPhone SIP LD4210S to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable to the device.

1.2. Support

Technical support on Teledex iPhone SIP LD4210S can be obtained through the following:

- **Phone:** (800) 794-8353
- **Web:** http://www.teledex.com

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2. Reference Configuration

Figure 1 below shows the configuration used for the compliance testing. The Avaya IP Office Voicemail Pro was used to provide voicemail functionality.

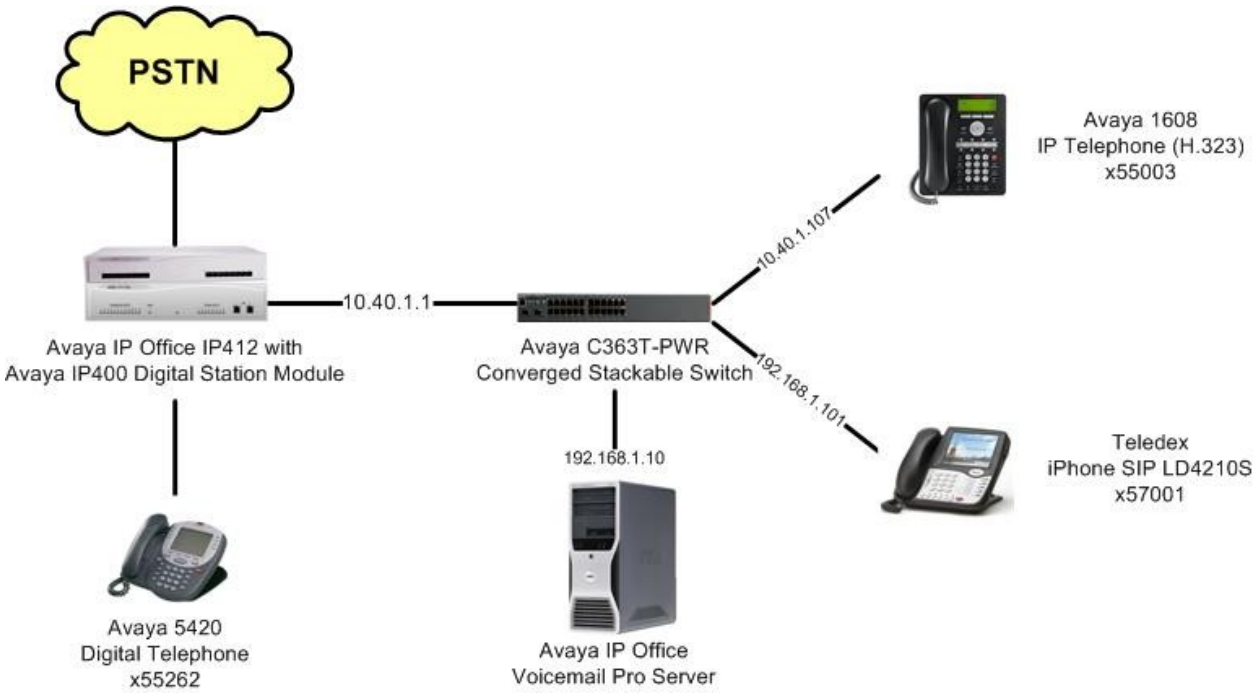

Figure 1: Teledex iPhone SIP LD4210S with Avaya IP Office

3. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office IP412	5.0 (4)
Avaya IP Office VoiceMail Pro	5.0 (18)
Avaya 1608 IP Telephone (H.323)	1.21
Avaya 5420 Digital Telephone	NA
Teledex iPhone SIP LD4210S	1.15.15

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4. Configure Avaya IP Office

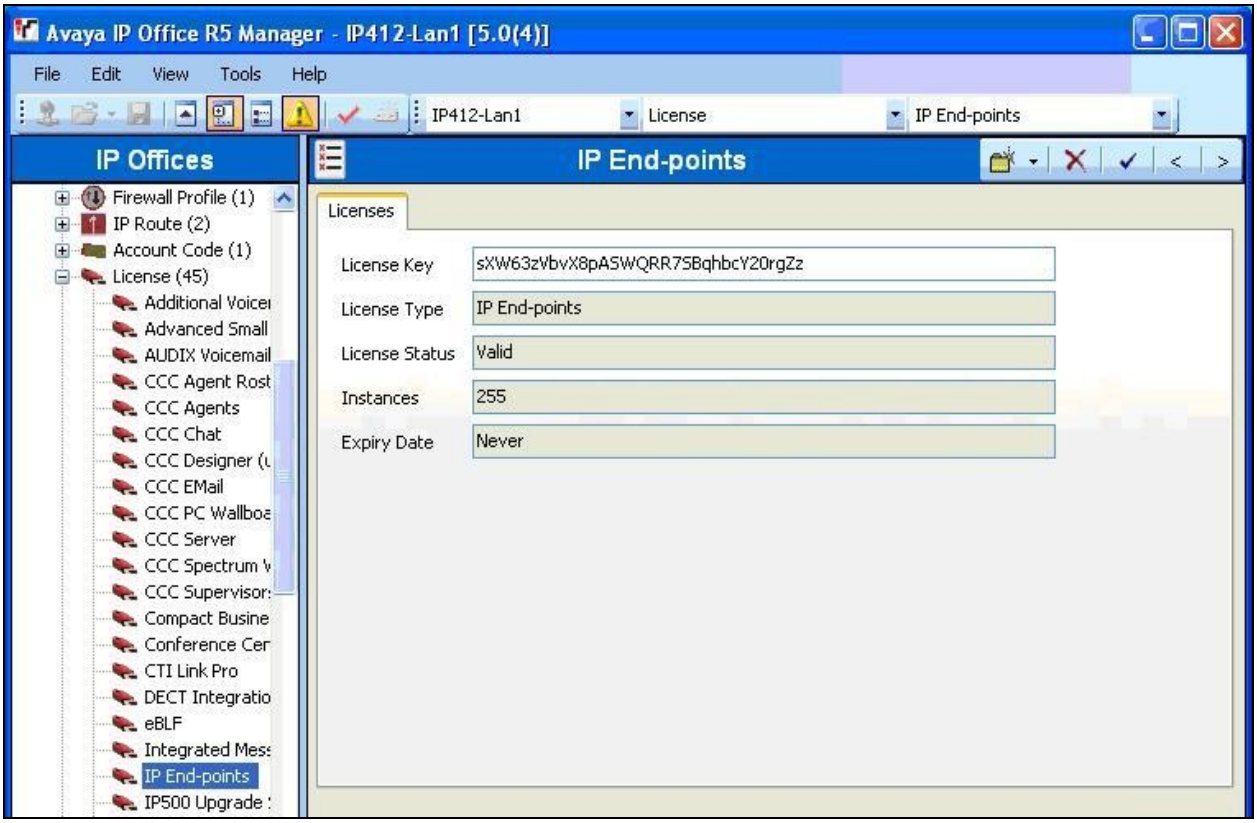
This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- Verify IP Office license
- Obtain LAN IP address
- Administer SIP registrar
- Administer SIP extensions
- Administer SIP users

4.1. Verify IP Office License

From a PC running the Avaya IP Office Manager application, select **Start > Programs > IP Office > Manager** to launch the Manager application. Select the proper IP Office system, and log in with the appropriate credentials.

The **Avaya IP Office Manager** screen is displayed. From the configuration tree in the left pane, select **License > IP End-points** to display the **IP End-points** screen in the right pane. Verify that the **License Status** is "Valid".



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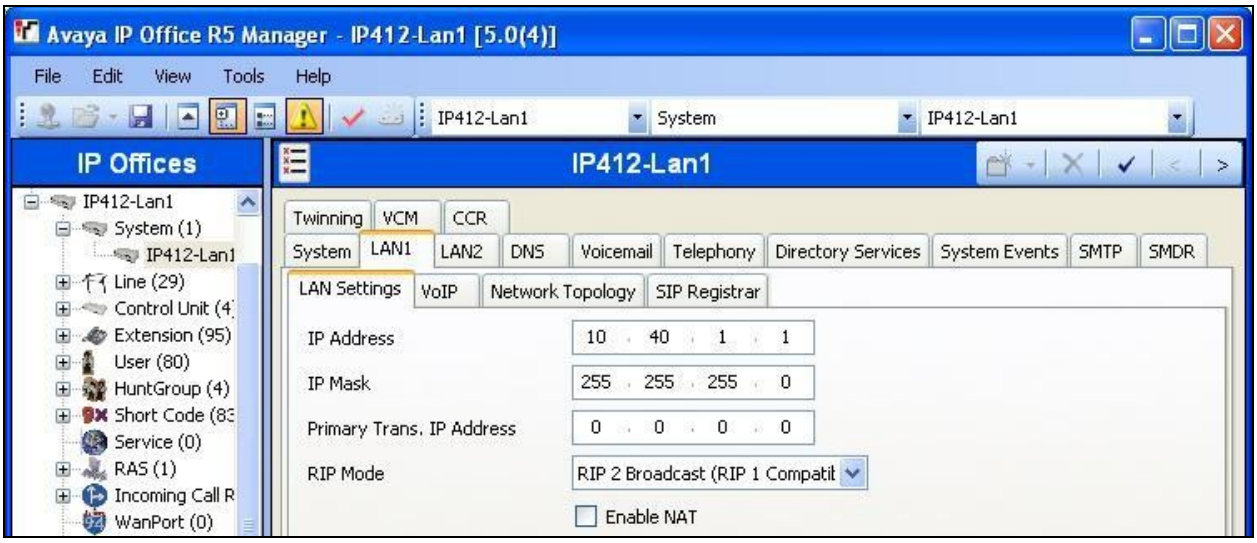
4.2. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** to display the **IP412-Lan1** screen 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 Teledex. Note that IP Office can support SIP extensions on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.



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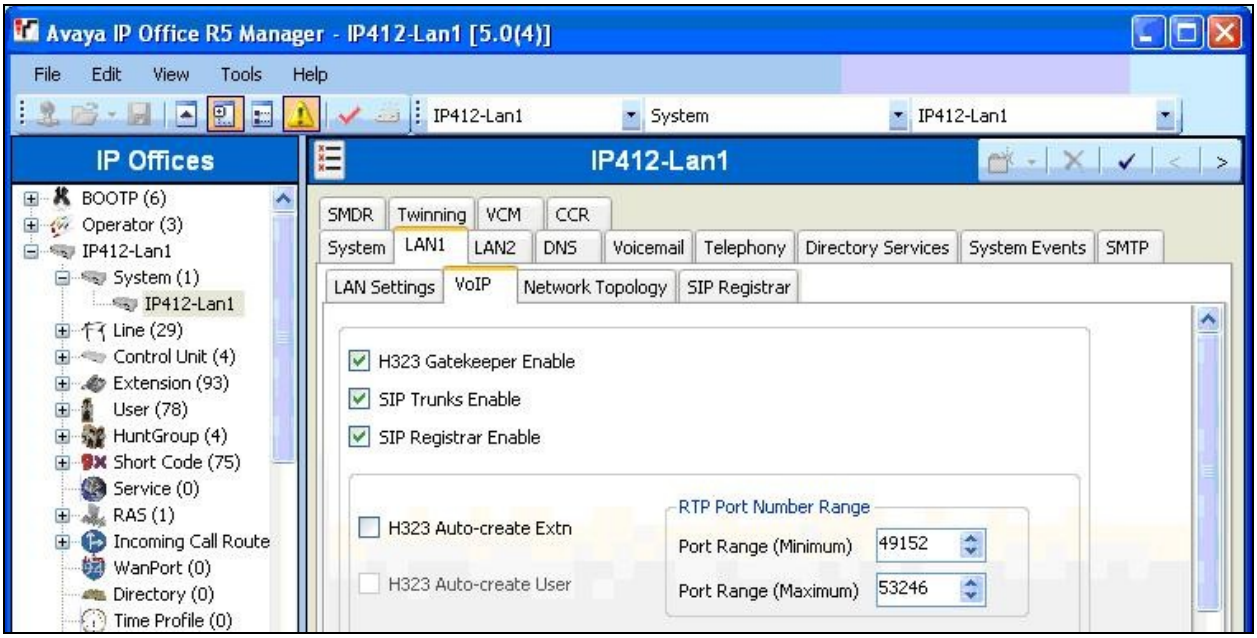
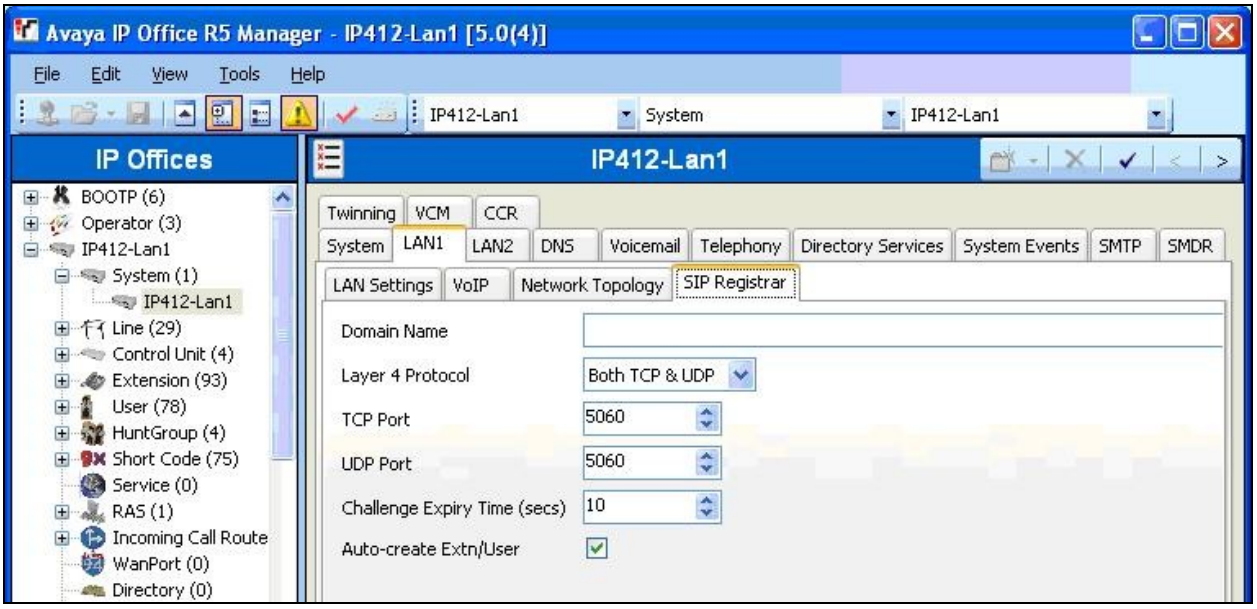
4.3. Administer SIP Registrar

Select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below.



Select the **SIP Registrar** sub-tab, and enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was left blank, so the SIP endpoints used the LAN IP address for registration.



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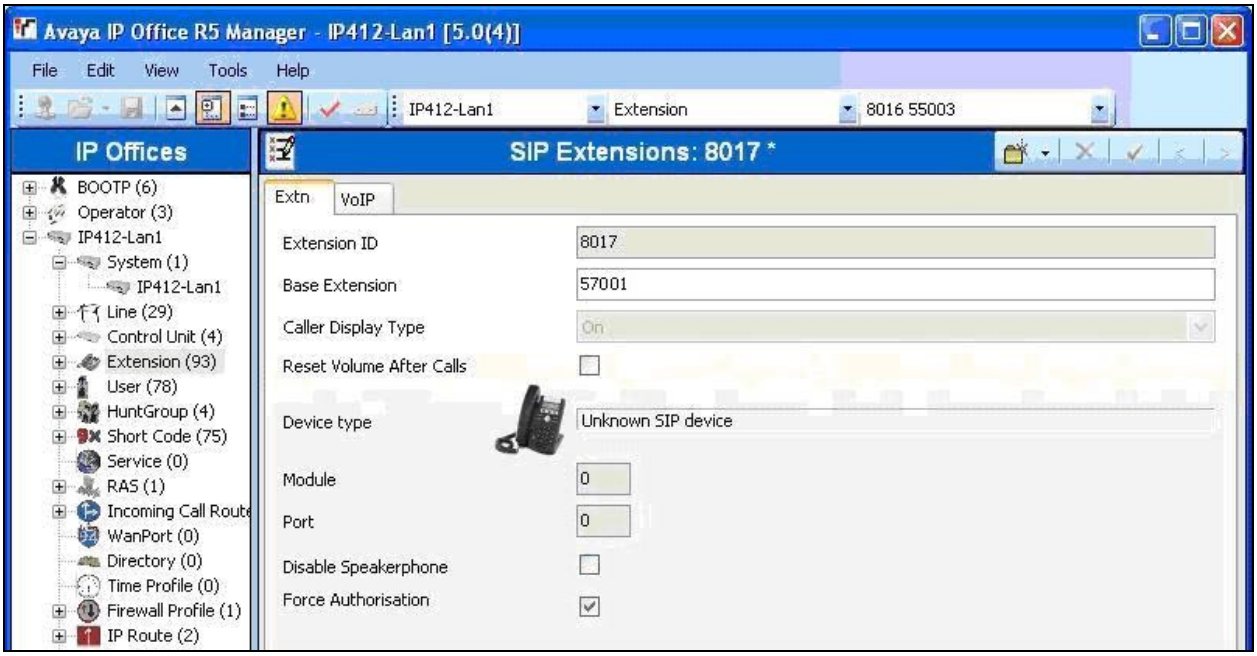
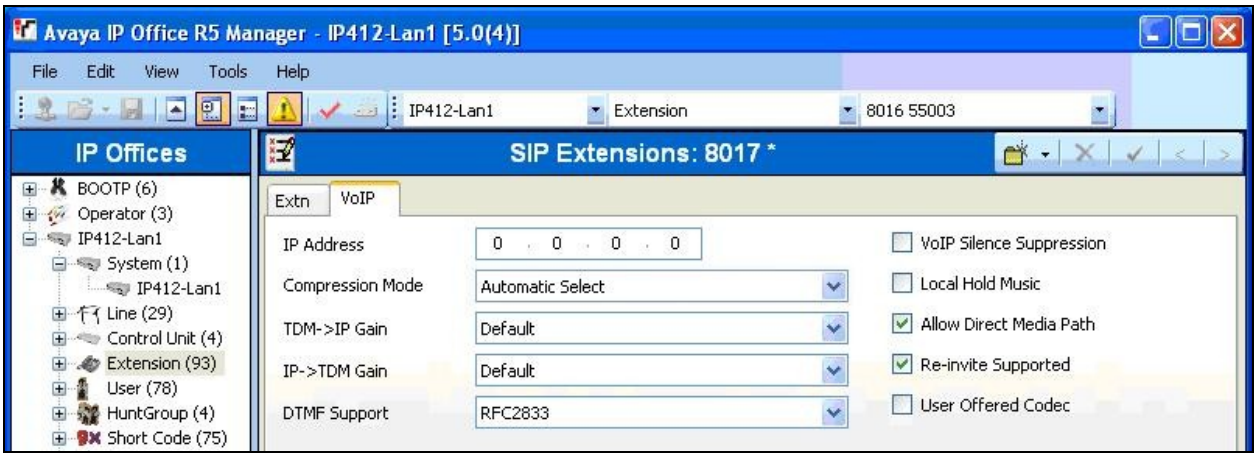
4.4. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension** and select **New > SIP Extension** from the pop-up list to add a new SIP extension. Enter the desired digits for **Base Extension**, and retain the default check in the **Force Authorisation** field as shown below.



Select the **VoIP** tab, and retain the default values in all fields.

Repeat this section to add a new SIP extension for each Teledex iPhone SIP LD4200 Series IP telephone. In the compliance testing, one SIP extension with base extension of "57001" was created.



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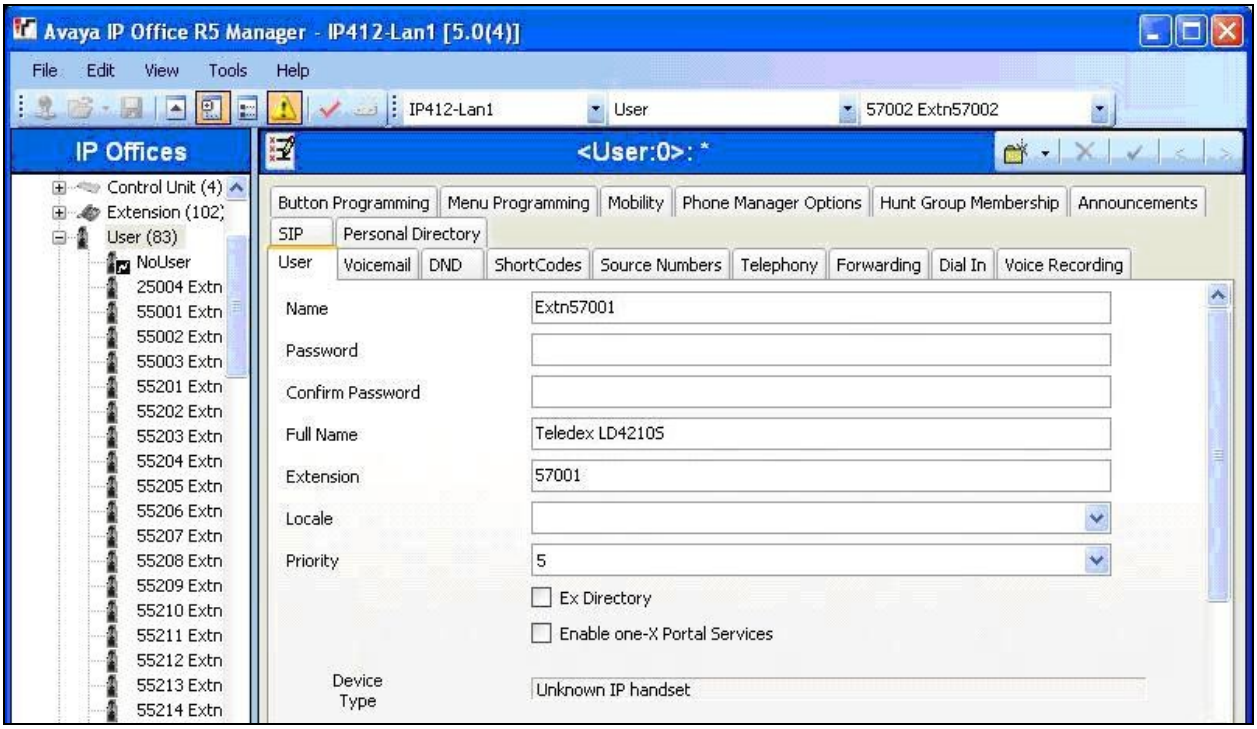
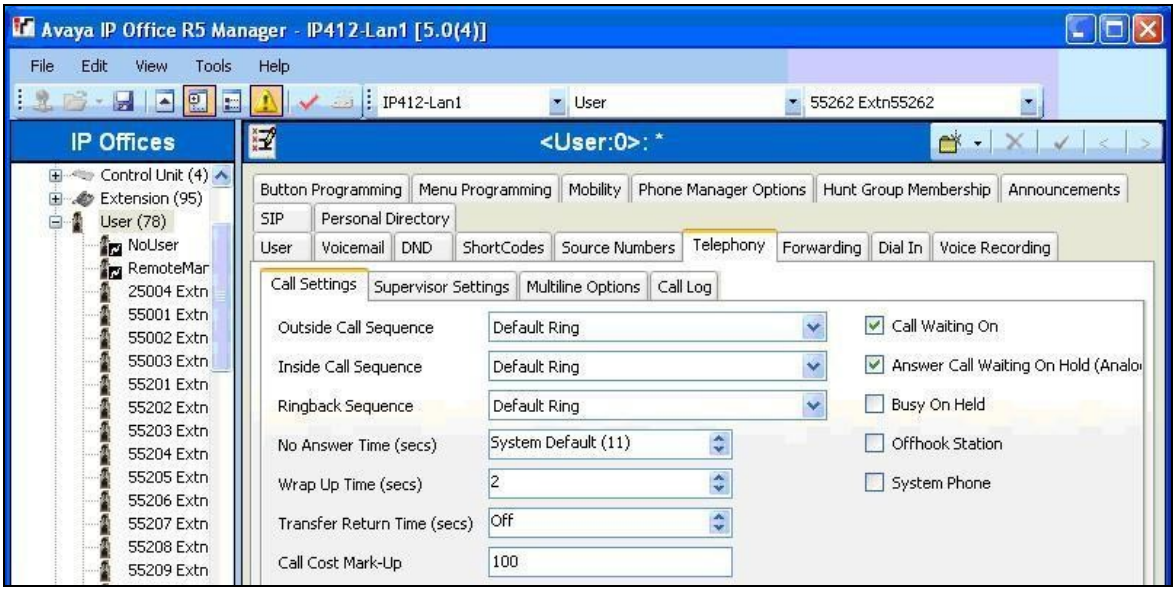
4.5. Administer SIP Users

From the configuration tree in the left pane, right-click on **User**, and select **New** from the pop-up list. For **Name**, enter the SIP extension from **Section 4.4**, and prefix with "Extn". Enter a descriptive **Full Name**. For **Extension**, enter the SIP extension from **Section 4.4**.



Select the **Telephony** tab, followed by the **Call Settings** sub-tab. Check the **Call Waiting On** field, as shown below.



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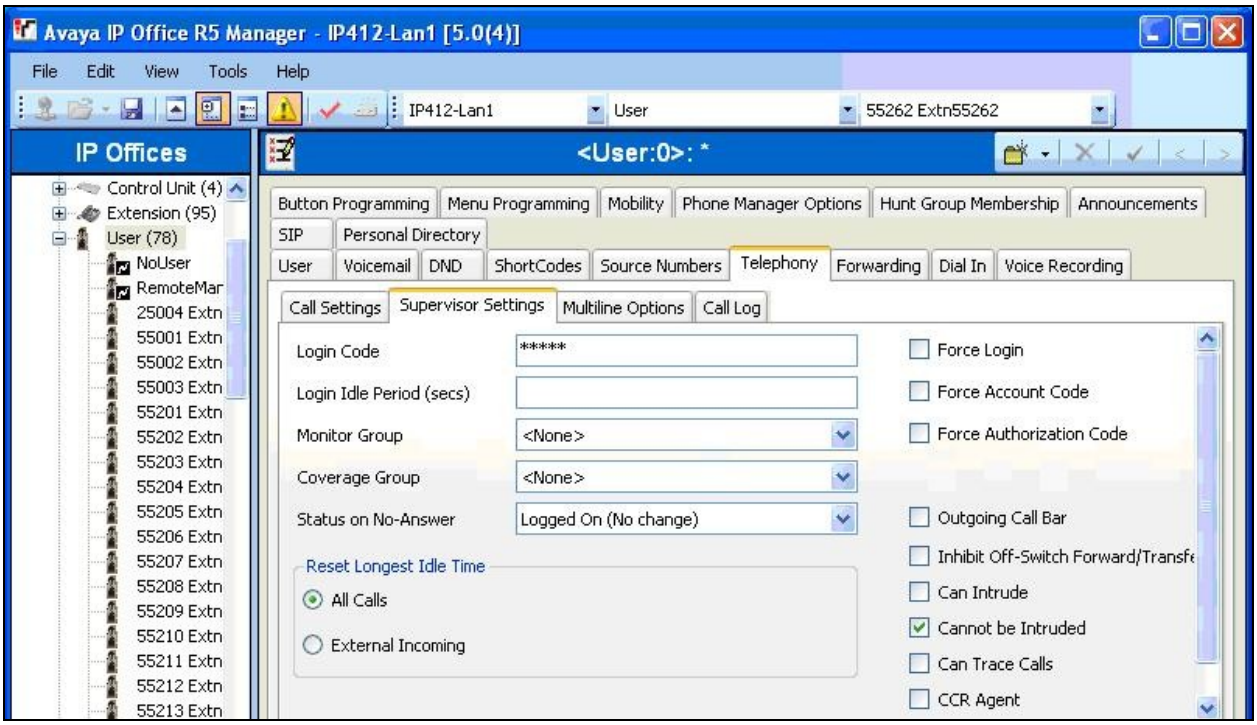
Select the **Supervisor Settings** tab, and enter a desired **Login Code**.

Repeat this section to add a new user for each SIP extension from **Section 4.4**. In the compliance testing, one user with name of "Extn57001" was created.



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5. Configure Teledex iPhone SIP LD4210S

This section provides the procedures for configuring Teledex iPhone SIP LD4210S. The procedures include the following areas:

- Launch web interface
- Administer network
- Administer line
- Administer call feature
- Reboot phone

Prior to configuration, follow the procedures in [2] to manually set or obtain the IP address of iPhone SIP LD4210S.

5.1. Launch Web Interface

Access the Teledex Phone Configuration Portal by using the URL "http://ip-address:8080" in an Internet browser window, where "ip-address" is the IP address of the iPhone SIP LD4210S. Log in with the appropriate credentials.

The **Teledex iPhone SIP LD4210S Web Portal** screen is displayed, as shown below.

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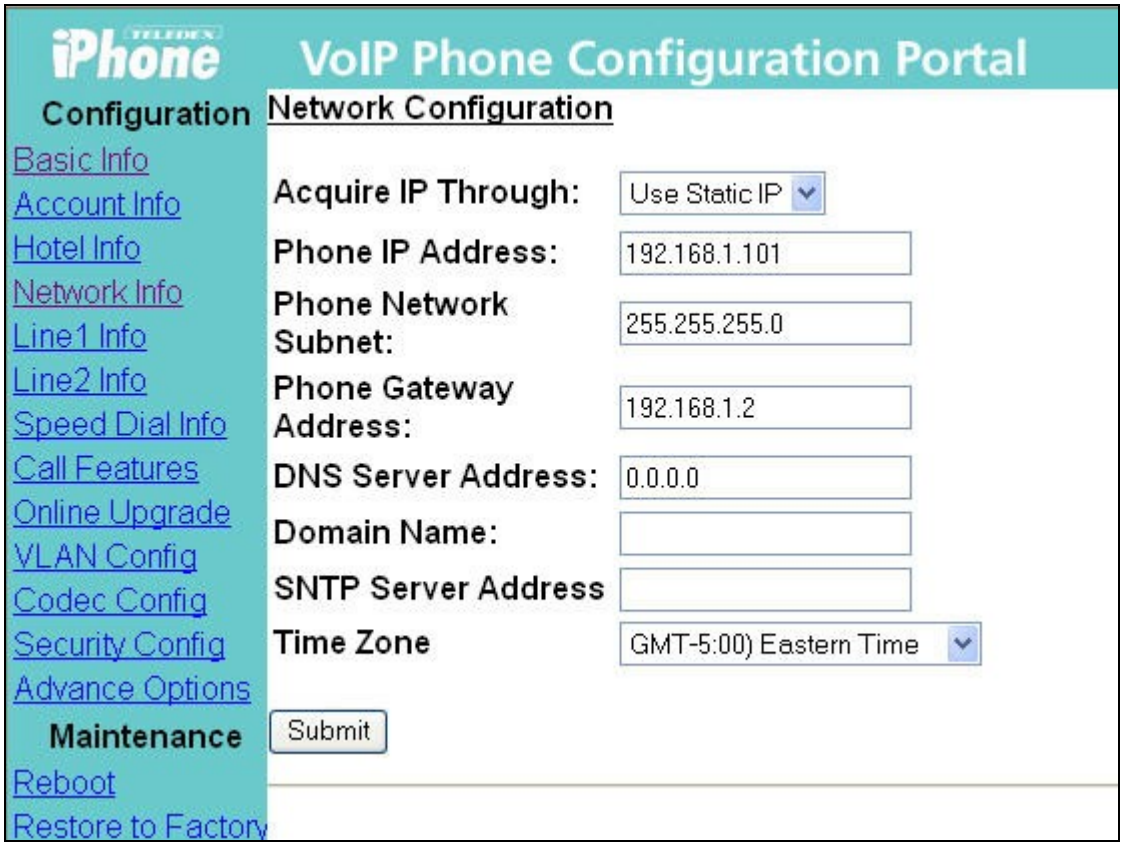
5.2. Administer Network

Select **Network Info** from the left pane to display the **Network Configuration** screen. Update the desired parameters to reflect the network configuration.

In the compliance testing, the **Phone IP Address**, **Phone Network Subnet**, and **Phone Gateway Address** parameters were updated, as shown below.



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5.3. Administer Line

Select **Line1 Info** from the left pane to display the **Line 1 Configuration** screen. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Phone Name:** The SIP user name from **Section 4.5**.
- **Phone Number:** The SIP base extension from **Section 4.4**.
- **Phone Password:** The SIP user login code from **Section 4.5**.
- **Proxy Server:** The LAN IP address from **Section 4.2**.
- **Registrar Server:** The LAN IP address from **Section 4.2**.
- **Message Waiting Number:** The dial string for the voicemail pilot number on IP Office.
- **MWI Server:** The LAN IP address from **Section 4.2**
- **Dial Plan:** Appropriate values to match the Avaya IP Office dial plan.
- **PRACK:** "Disabled"

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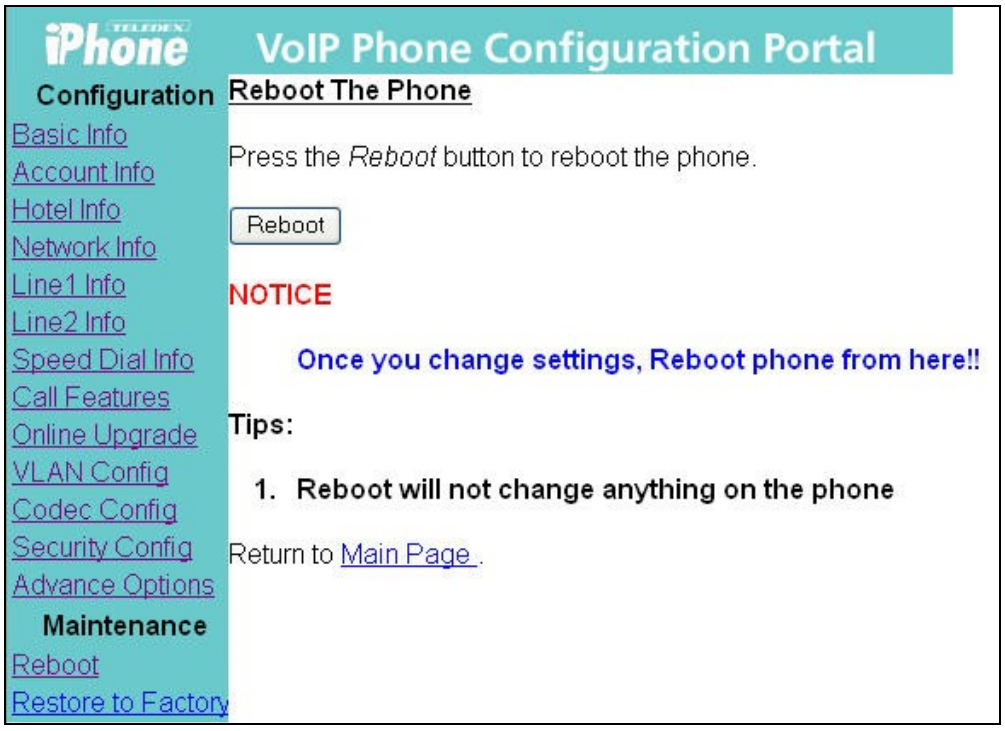
5.4. Administer Call Feature

Select **Call Features** from the left pane to display the **Local Call Feature Configuration** screen. Check **Call Transfer**, and retain the default values for the remaining fields.

5.5. Reboot Phone

Select **Reboot** from the left pane to display the **Reboot The Phone** screen. Click **Reboot**.



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6. General Test Approach and Test Results

The feature test cases were performed manually. Calls were manually established between Teledex iPhone SIP LD4210S with the Avaya H.323, Avaya Digital, or PSTN endpoints, and call controls such as hold and conference were performed from the Teledex iPhone SIP LD4210S.

The serviceability test cases were performed manually by disconnecting and reconnecting the LAN cables to the Teledex iPhone SIP LD4210S.

All test cases were executed.

The following are the observations from the compliance testing:

- The Teledex iPhone SIP LD4210S do not support re-authentication using user name, therefore the workaround is to provision the SIP user name as shown in **Section 4.5** to enable re-authentication by extension.

- Avaya IP Office can successfully activate Do Not Disturb, but sends back 503 Service Unavailable for the activation request.

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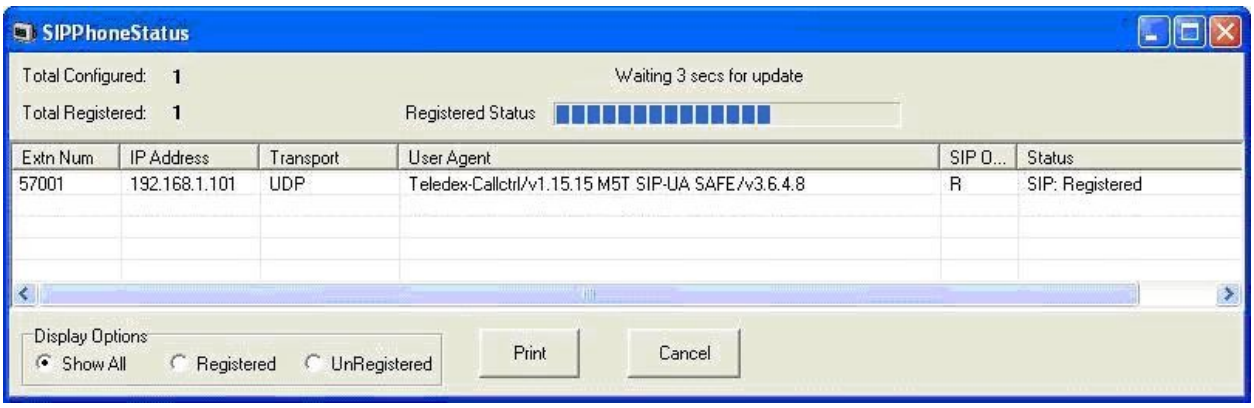
7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Teledex iPhone SIP LD4210S.

7.1. Verify Avaya IP Office

From a PC running the Avaya IP Office Monitor application, select **Start > Programs > IP Office > Monitor** to launch the application. The **Avaya IP Office R5 SysMonitor** screen is displayed, as shown below. Select **Status > SIP Phone Status** from the top menu.

The **SIPPhoneStatus** screen is displayed. Verify that there is an entry for each SIP extension from **Section 4.4**, and that the **User Agent** is "Teledex-Callctrl", and the **Status** is "SIP: Registered", as shown below.



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8. Conclusion

These Application Notes describe the configuration steps required for Teledex iPhone SIP LD4210S IP Telephone to successfully interoperate with Avaya IP Office. All feature and serviceability test cases were completed with observations noted in **Section 6**.

9. Additional References

This section references the product documentation relevant to these Application Notes.

1. *IP Office 5.0 Documentation CD*, August 2009, available at http://support.avaya.com.

2. *Teledex iPhone SIP LD4100/4200 Series User's Guide*, available at http://teledex.com.

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