Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Yealink VP530 SIP Video Phone Version 23.70.0.40 with Avaya IP Office 500 V2 Release 8.1 – Issue 1.0

Abstract

These Application Notes describe the procedures for configuring Yealink VP530 SIP Video Phone which was compliance tested with Avaya IP Office 500 V2 Release 8.1. The overall objective of the interoperability compliance testing is to verify Yealink P530 SIP Video Phone functionalities in an environment comprised of Avaya IP Office and various Avaya H.323, Avaya SIP, Avaya Digital and analog telephones.

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 procedures for configuring Yealink VP530 SIP Video phone which was compliance tested with Avaya IP Office 500 V2 Release 8.1. The Yealink VP530 SIP Video phone provides a powerful and flexible IP communication solution for Ethernet TCP/IP networks, delivering excellent voice quality. The compliance test used the Avaya IP Office 500 V2 Release 8.1 to test with Yealink VP530 SIP Video phone.

Application Notes assume that Avaya IP Office is already installed and basic configuration steps have been performed. Only steps relevant to this compliance test will be described in this document. For further details on configuration steps not covered in this document, consult S**ection 9**.

2. General Test Approach and Test Results

The general test approach was to place calls to and from Yealink VP530 SIP Video phone and exercise basic telephone operations. The main objectives were to verify the following:

- Registration.
- Codec Negotiation (G.711MU, G711MA, G722, G729, and G723).
- Basic video call between VP530 phones and between VP530 and Avaya Flare® and IP Office Softphone.
- Telephone functions: Inbound and outbound, hold/resume, call park/pickup, blind and attended transfers, call waiting and conference calls.
- Call termination (origination/destination).
- DTMF method: RFC2833 and INBAND.
- Voicemail and Messaging Waiting Indicator.
- T1/ISDN PSTN Calls.
- Serviceability.

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

2.1. Interoperability Compliance Testing

All test cases were performed manually. The general approach was to place various types of calls to and from Yealink VP530 SIP Video phone and Yealink VP530 SIP Video phone's operations such as inbound calls, outbound calls, hold, transfer, forward, conference and VP530 interactions with Avaya IP Office, Avaya SIP, H.323 and Digital telephones were verified. For serviceability testing, failures such as cable pulls and resets were applied.

2.2. Test Results

All test cases were passed and there is one note as described below.

- Avaya IP Office does not support local call forward on third party SIP phone therefore the call forward feature needs to be provisioned in the IP Office Manager.

2.3. Support

Technical support for Yealink VP530 SIP Video phone can be obtained by contacting Yealink as below.

Yealink Network Technology Co.,Ltd.
Address: 4th-5th Floor, South Building, No. 63 Wanghai Road, 2nd Software Park, Xiamen, China (361008).
Phone: +86-592-5702000
Email: support@yealink.com
Website: http://www.yealink.com

3. Reference Configuration

Figure 1 illustrates a sample configuration consisting of an Avaya IP Office system and Yealink VP530 SIP Video phone. The IP office has SIP trunk to Avaya Communication Server 1000 to exercise test cases over SIP trunk and has T1/ISDN trunk to Avaya Aura® Communication Manager to exercise test cases over PRI trunk. The testing used Voice Mail Pro which is a feature on the IP Office acting as a voice mail system.

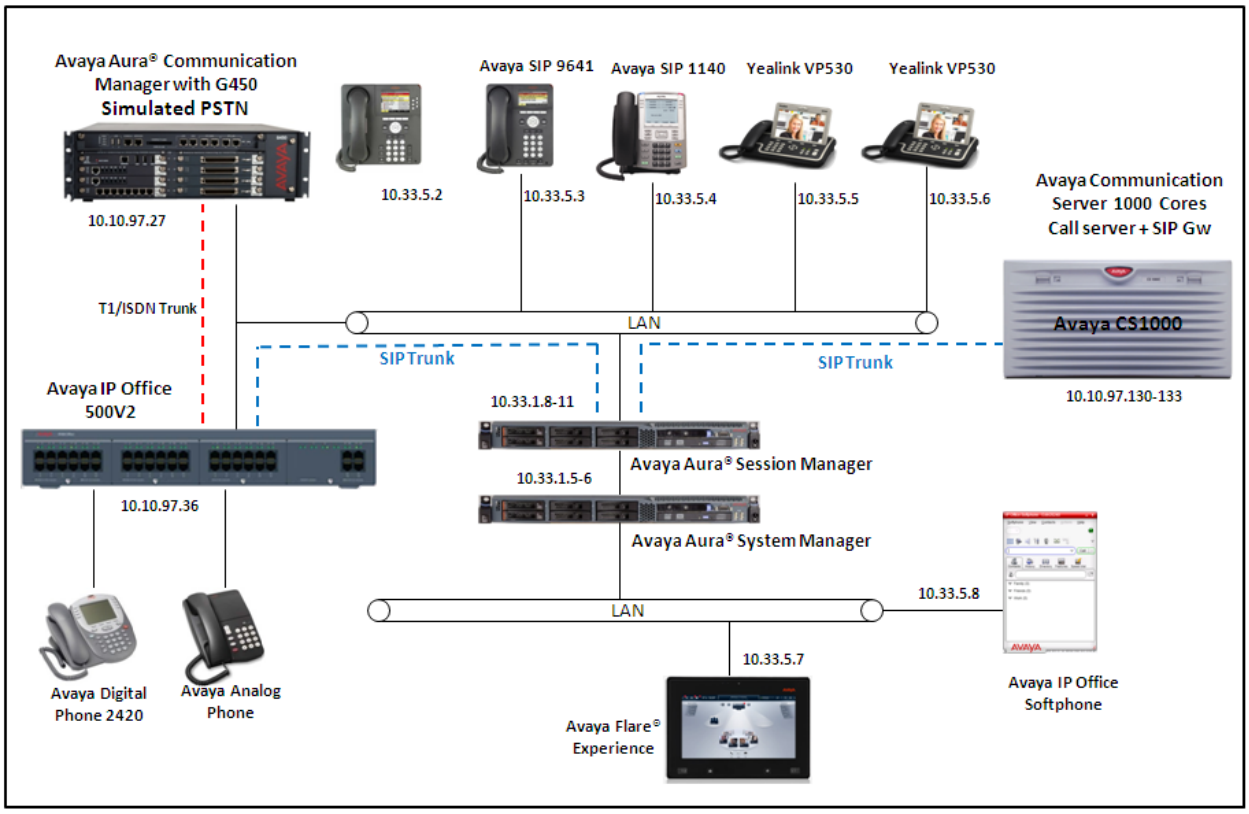


Figure 1: Test Configuration of Yealink VP530 SIP Video Phone with Avaya IP Office

4. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office 500 V2	8.1 Build 52
Avaya IP Office Manager	8.1 (52)
Avaya S8800 Communication Manager Server	R016x.00.1.510.1
Avaya Media Gateway G450	31 .22 .0.1
Avaya Communication Server 1000 CPPM	Release 7.5
Avaya S8800 System Manager Server	6.1 SP6
Avaya S8800 Session Manager Server	6.1 SP6
Avaya Flare® Experience	1.1.0
Avaya IP Office Softphone	3.2.3.20
Avaya IP H323 9650 Phone	3.104S
Avaya IP H323 9641 Phone	6.2.119
Avaya IP H.323 1608L Phone	1.302S
Avaya IP SIP 1140E Phone	4.03.12
Avaya Digital 2420 Phone	-
Avaya Analog Phone	-
YeaLink T28P SIP Phone	2.70.0.60
Yealink VP530 SIP Phone	23.70.0.40

Note: Testing was performed with IP Office 500 v2 R8.1, but it also applies to IP Office Server Edition R8.1 (single site configuration only).

5. Configure Avaya IP Office

This document assumes that Avaya IP Office system is already installed, configured, and operating. For more information on how to configure the Avaya IP Office system please refer to **Section 9**. This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

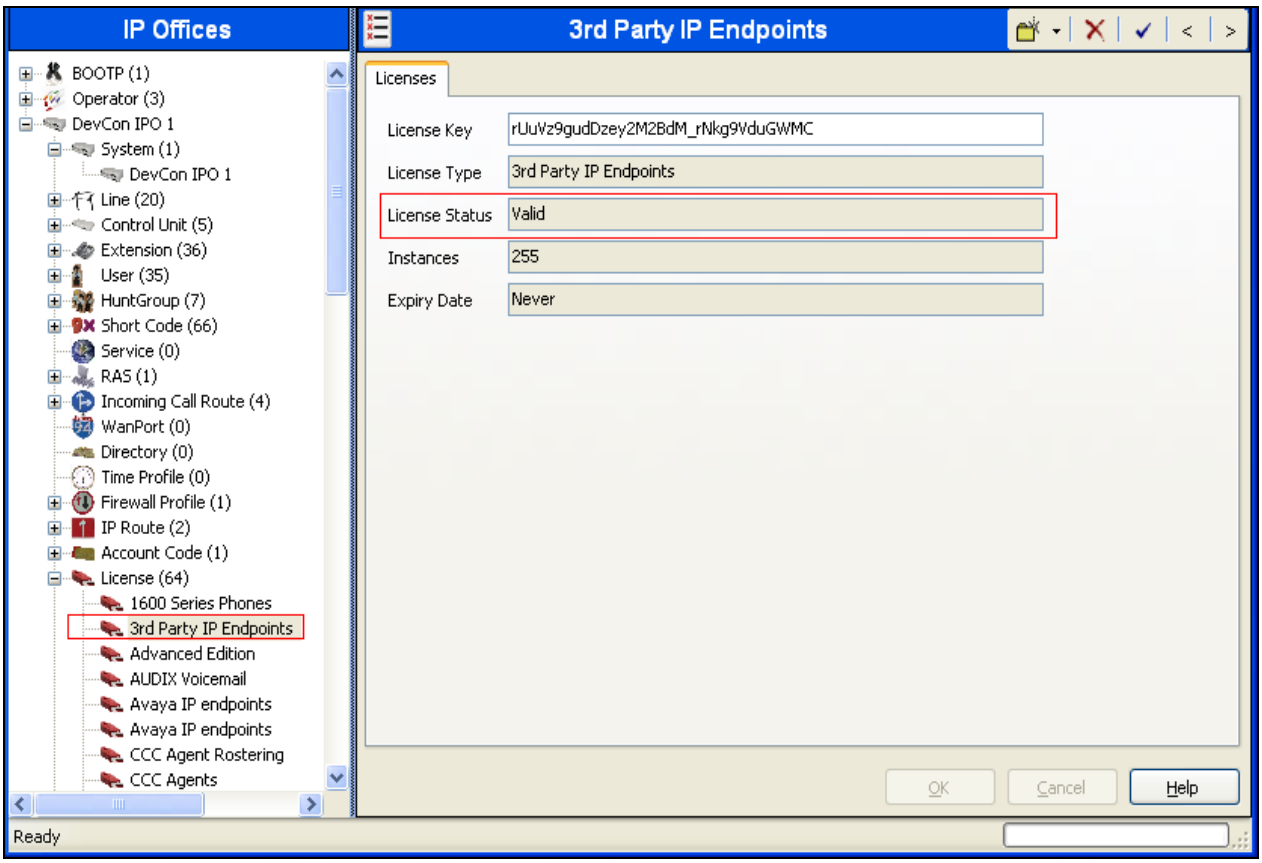
- Verify IP Office license
- Obtain LAN IP address
- Administer SIP registrar
- Administer SIP extensions
- Administer SIP users

These steps are performed from the Avaya IP Office Manager.

5.1. Verify IP Office License

From a PC running the Avaya IP Office Manager application, select **Start > All Programs > IP Office > Manager** (not shown) to launch the Manager application. Select the proper IP Office system if there are more than one IP Office system, and log in with the appropriate credentials.

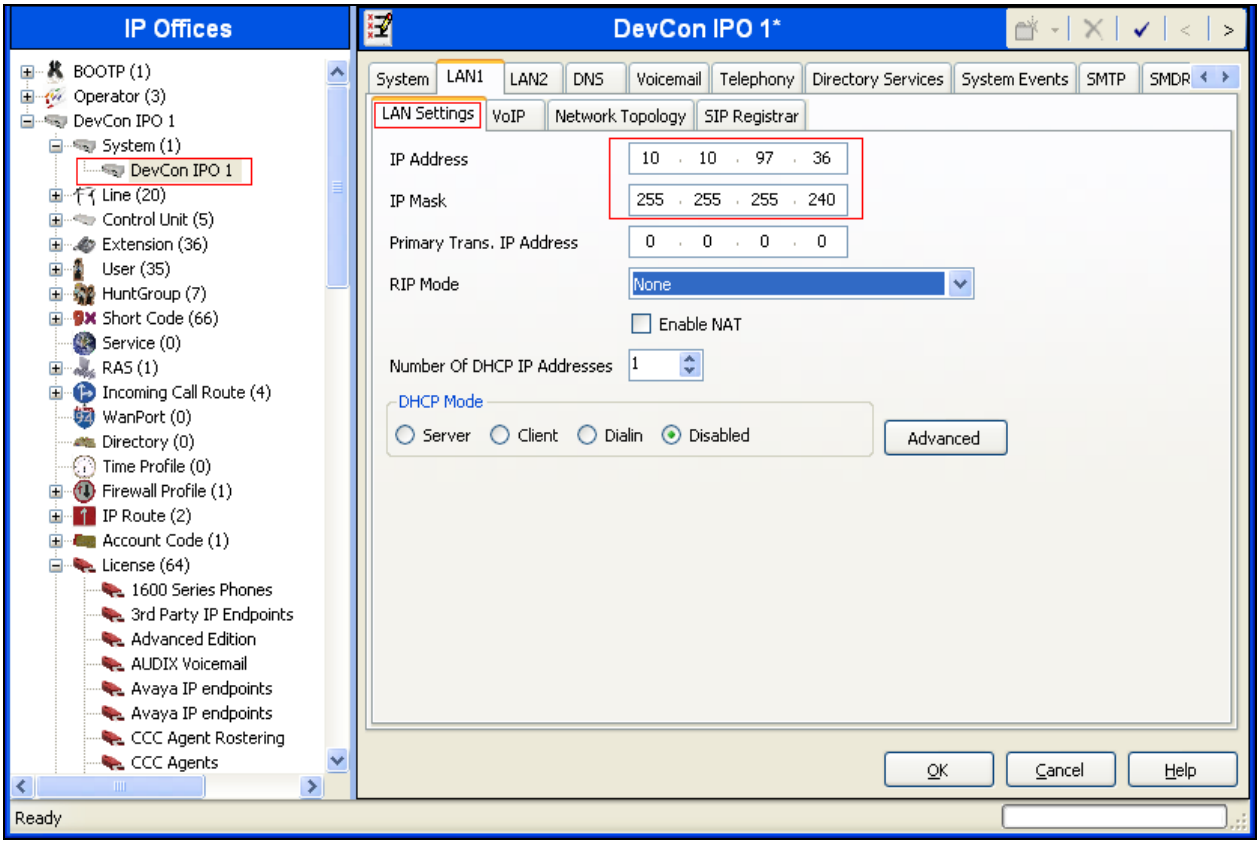
The Avaya IP Office Manager screen is displayed. From the configuration tree in the left pane, select **License > 3rd Party IP Endpoints** to display the Avaya IP endpoints screen in the right pane. Verify that the License Status field is set to **Valid**.



5.2. Obtain LAN IP Address

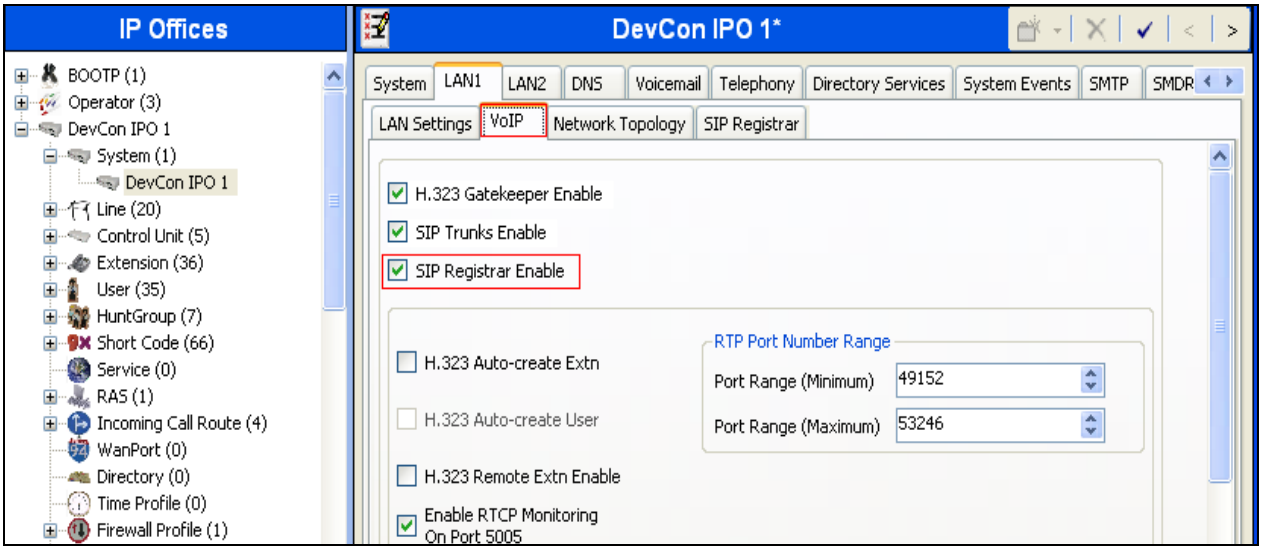
From the configuration tree in the left pane, select **System** to display the System screen in the right pane. Select the **LAN1** tab, followed by the **LAN Settings** sub-tab in the right pane. Make a note of the **IP Address**, which will be used later to configure Yealink VP530 SIP phone.

Note: During the initial configuration of Avaya IP Office, the LAN1 was configured on the private network side and LAN2 was configured on the public network side. Avaya IP Office can support SIP extensions on the LAN1 and/or LAN2 interfaces, but the compliance test used the LAN1 interface. Thus, only the LAN1 configuration will be discussed in these Application Notes.

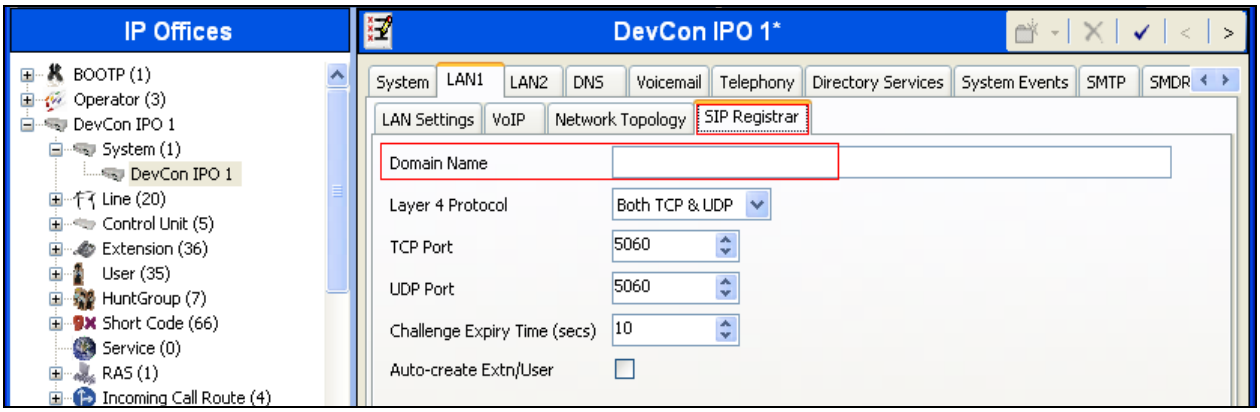


5.3. Administer SIP Registrar

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

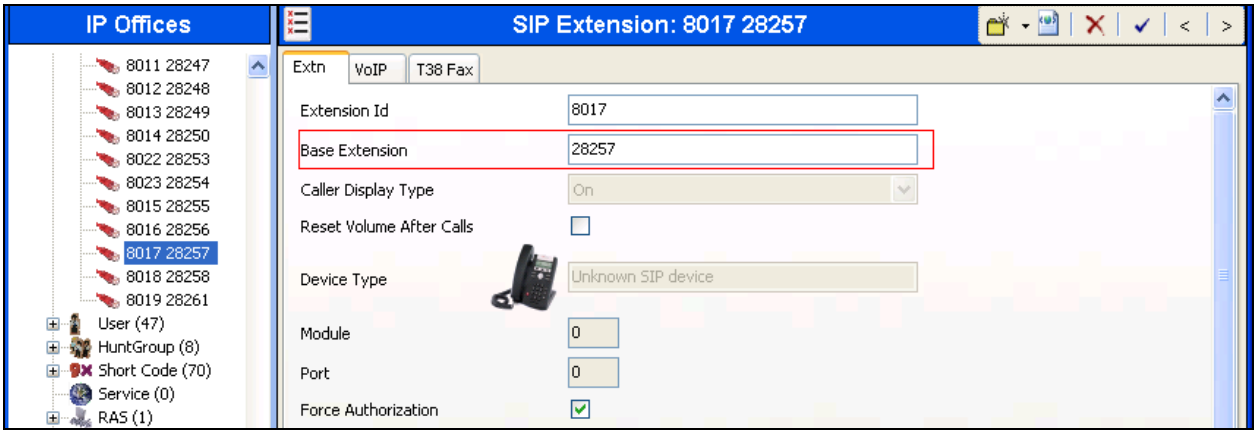


Select the **SIP Registrar** sub-tab, and either enter a valid Domain Name for SIP endpoints to use for registration with IP Office or leave it blank. In the compliance testing, the **Domain Name** field was left blank. If the **Domain Name** field is left blank, then the SIP endpoints will use the LAN IP address for registration. Keep the **TCP Port** and **UDP Port** fields at default as **5060**.

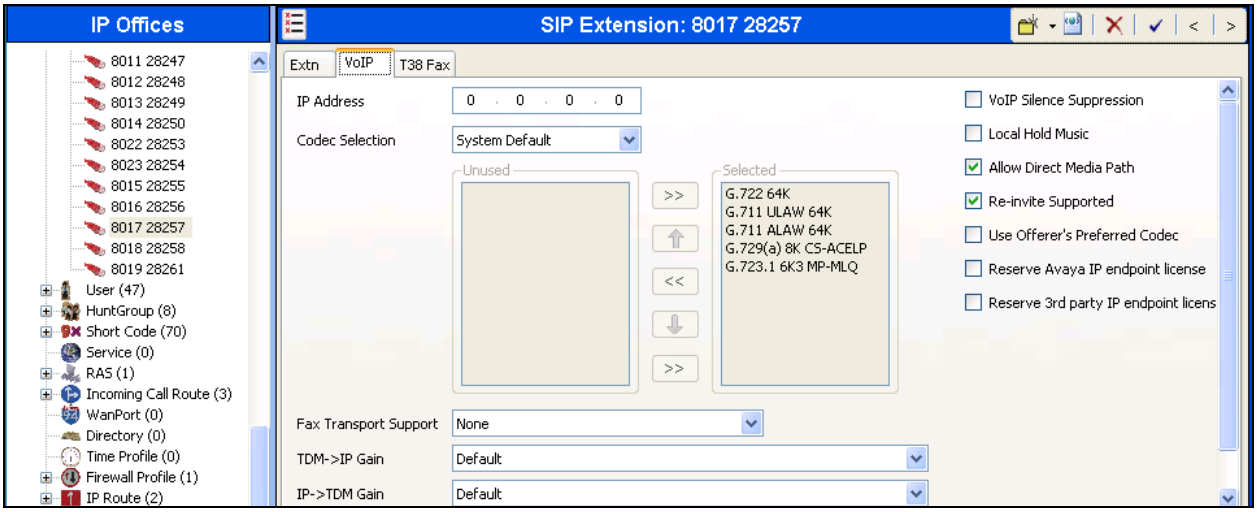


5.4. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension** and select **New > SIP Extension** (not shown) from the pop-up list to add a new SIP extension. Enter the desired extension in the **Base Extension** field, e.g. **28257**.

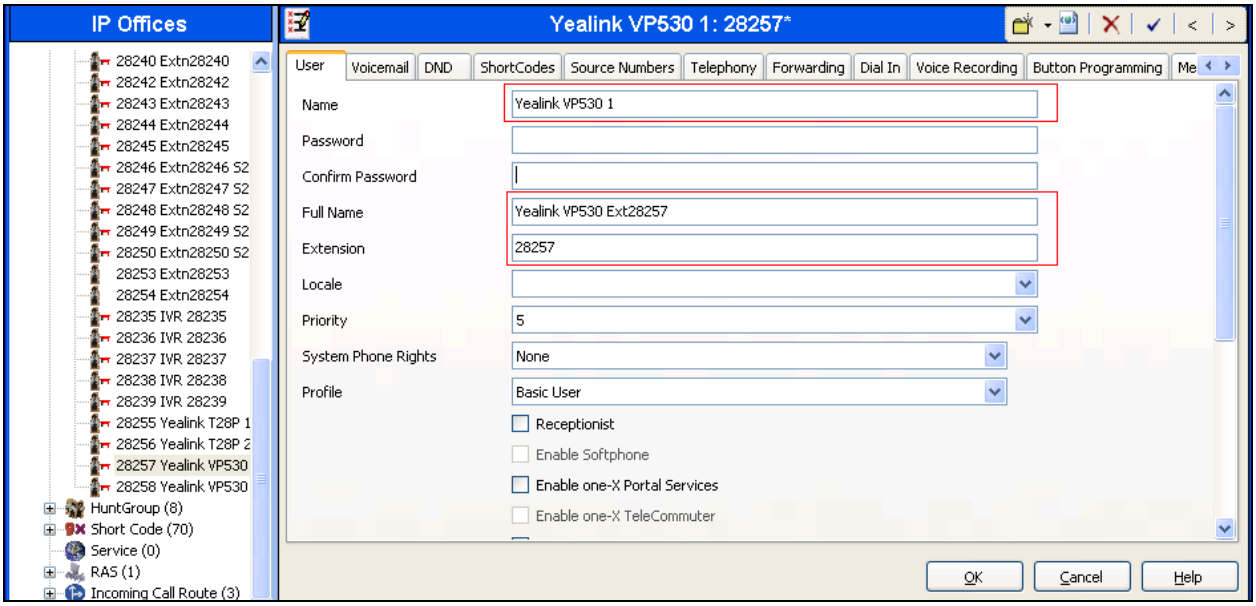


Select the **VoIP** tab, and retain the default values in all fields. Repeat this section to add another new SIP extension for a second Yealink VP530 SIP phone. During the compliance test, extensions **28257** and **28258** were created for two Yealink VP530 SIP phones.

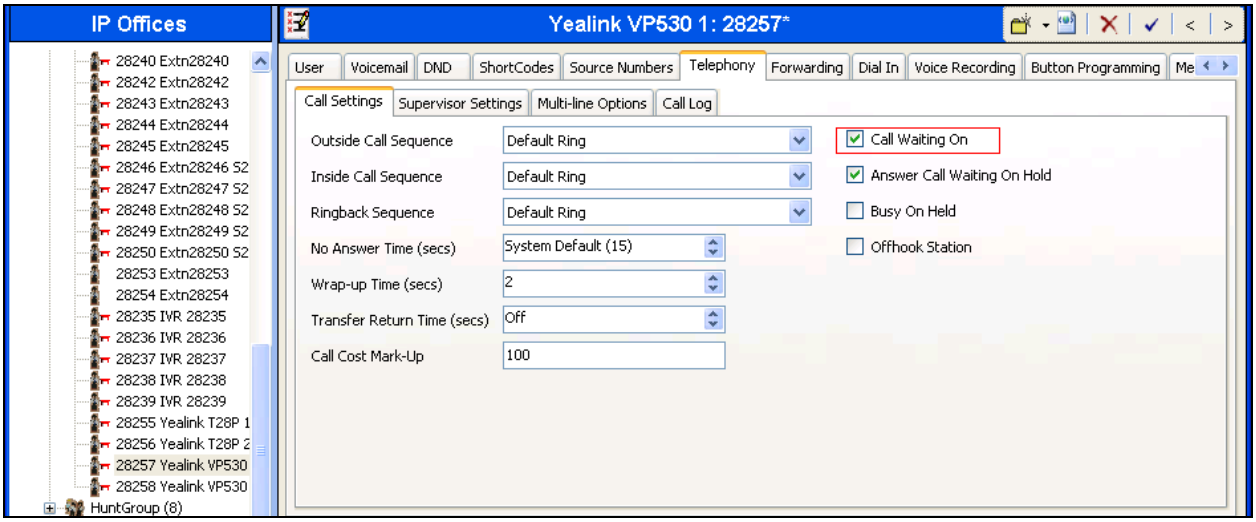


5.5. Administer SIP Users

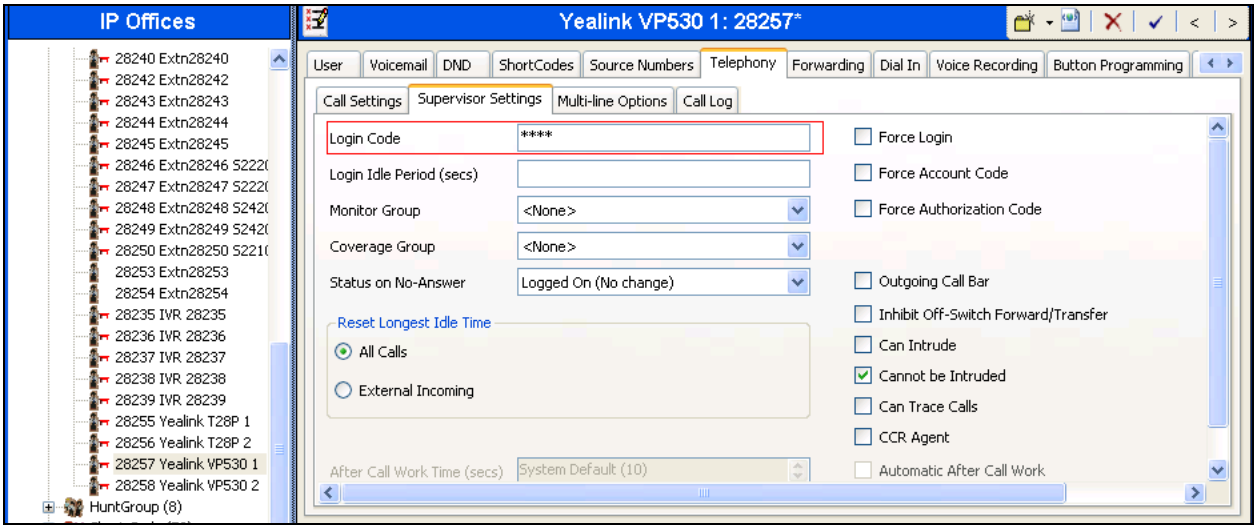
In the left navigation pane, right-click on **User** and select **New** from the pop-up list (not shown). Enter desired values in the **Name** and **Full Name** fields. For the **Extension** field, enter the SIP extension created in **Section 5.4**.



Select the **Telephony** tab, followed by the **Call Settings** sub-tab. Check the **Call Waiting On** field, as shown below. Note that the **Call Waiting On** must be enabled so that the call waiting, call transfer and conference on Yealink VP530 phone works properly.



Select the **Supervisor Settings** sub-tab, and enter a desired **Login Code**, e.g. **"1234"**. Repeat this section for each SIP extension from **Section 5.4**. This Login Code will be used when Yealink VP530 phone registers to the SIP user **28257** on the IP Office.



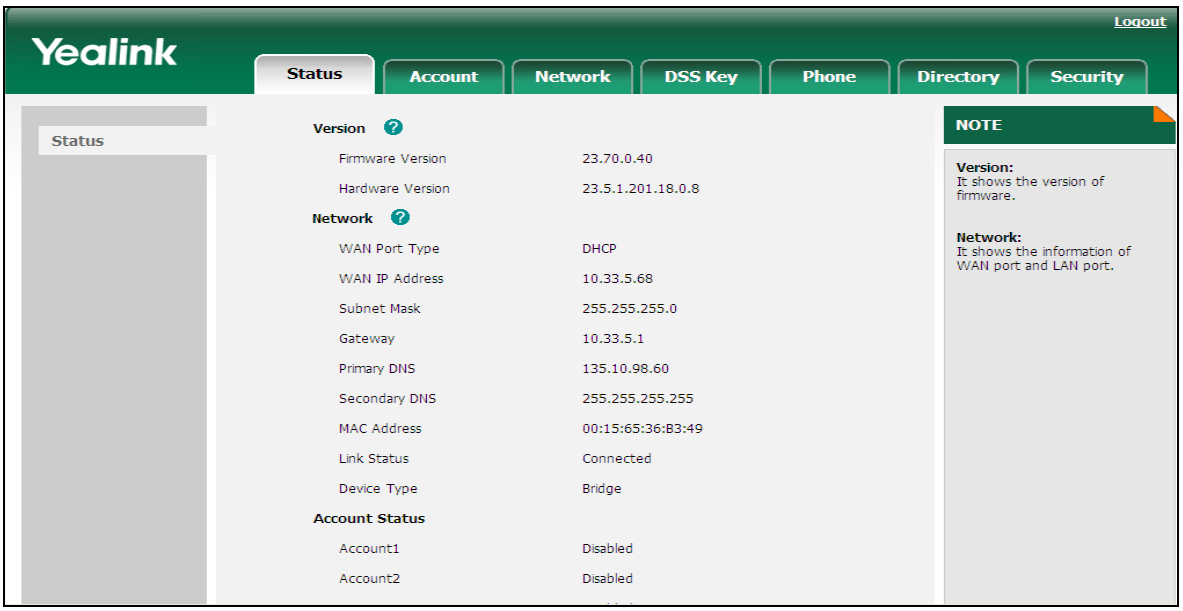
6. Configure Yealink VP530 SIP Video Phone

This section only provides steps to configure Yealink VP530 SIP Video phone to interface with Avaya IP Office. From a PC, launch webpage of Yealink VP530 phone by entering its IP address in to the address box of a browser as shown below. Note that the IP address of the phone can be found by pressing OK button on the physical phone.

6.1. Register VP530 SIP phone to Avaya IP Office

To register the VP530 to IP Office, login to the VP530 phone, the login page is displayed with password field, enter appropriate credentials of the VP530 phone and click the **OK** button to log in.

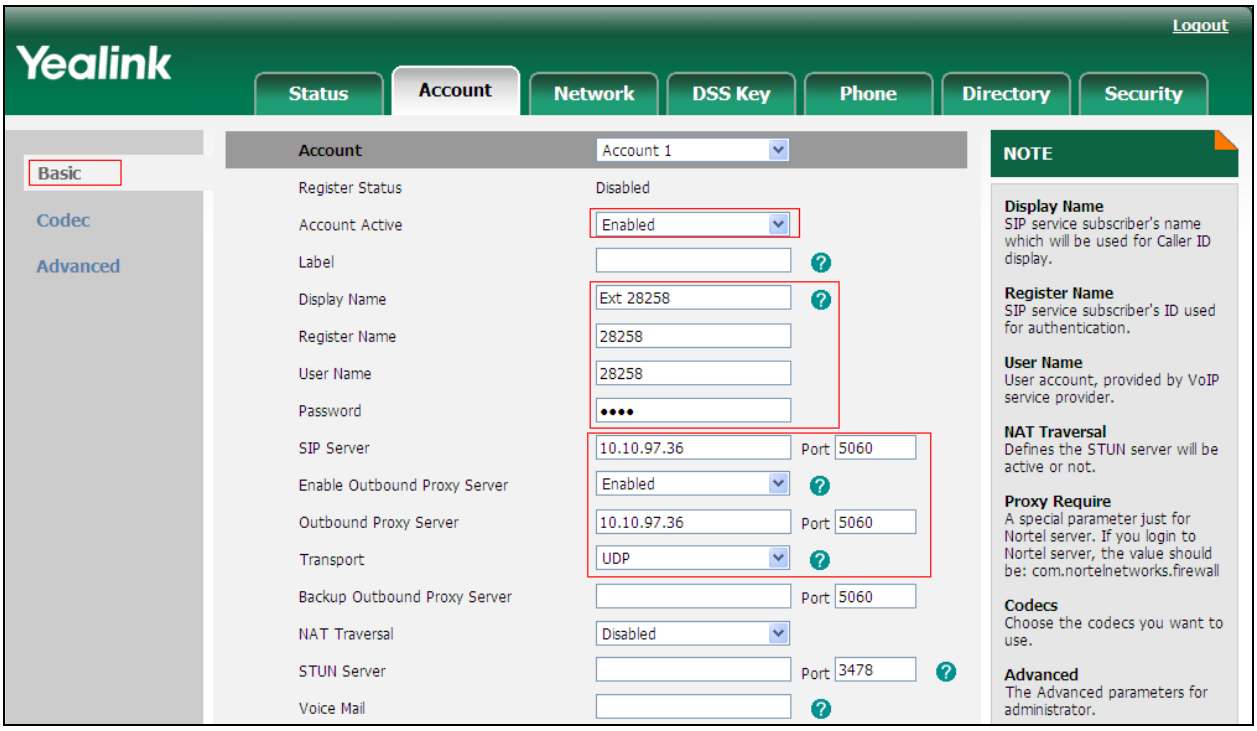
The **Status** page of Yealink VP530 phone is displayed. This displays the current status and information of the phone.



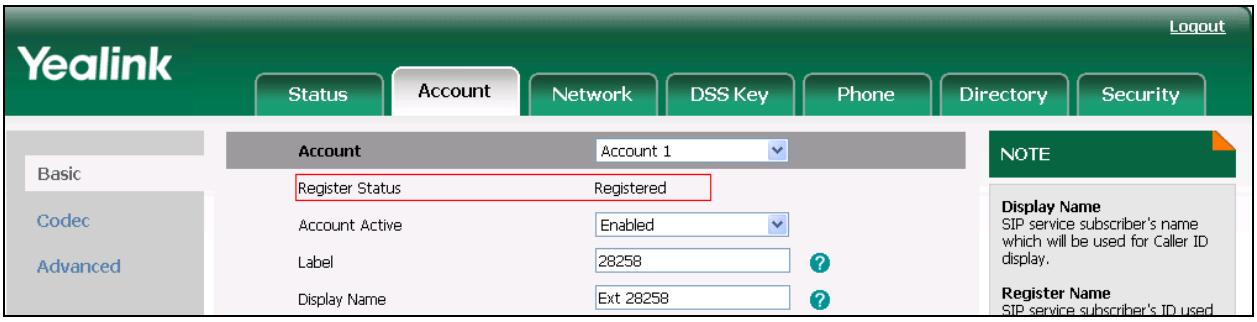
Click on the **Account** tab to display **Account** page. Select **Account1** in the **Account** dropdown list. Under the **Basic** section, enter the following information as shown below:

- **Account Active**: select **Enabled** to enable Account1.
- **Display Name**: enter a descriptive name, e.g. "**Ext 28258**".
- **Register Name**: enter the extension **28258** as configured in **Section 5.4**.
- **User Name**: enter the extension **28258** as configured in **Section 5.4**.
- **Password**: enter the Login Code "**1234**" as configured in **Section 5.5**.
- **SIP Server**: enter the LAN1 IP address "**10.10.97.36**" as defined in **Section 5.2** and leave port **5060** as default.
- **Enable Outbound Proxy Server**: select **Enabled** in the dropdown list.
- **Outbound Proxy Server**: enter the LAN1 IP address "**10.10.97.36**" as above.
- **Transport**: leave the default port 5060.

Click **Confirm** (not shown) button in the bottom of the Account page to save the change and apply configuration to the VP530 phone.



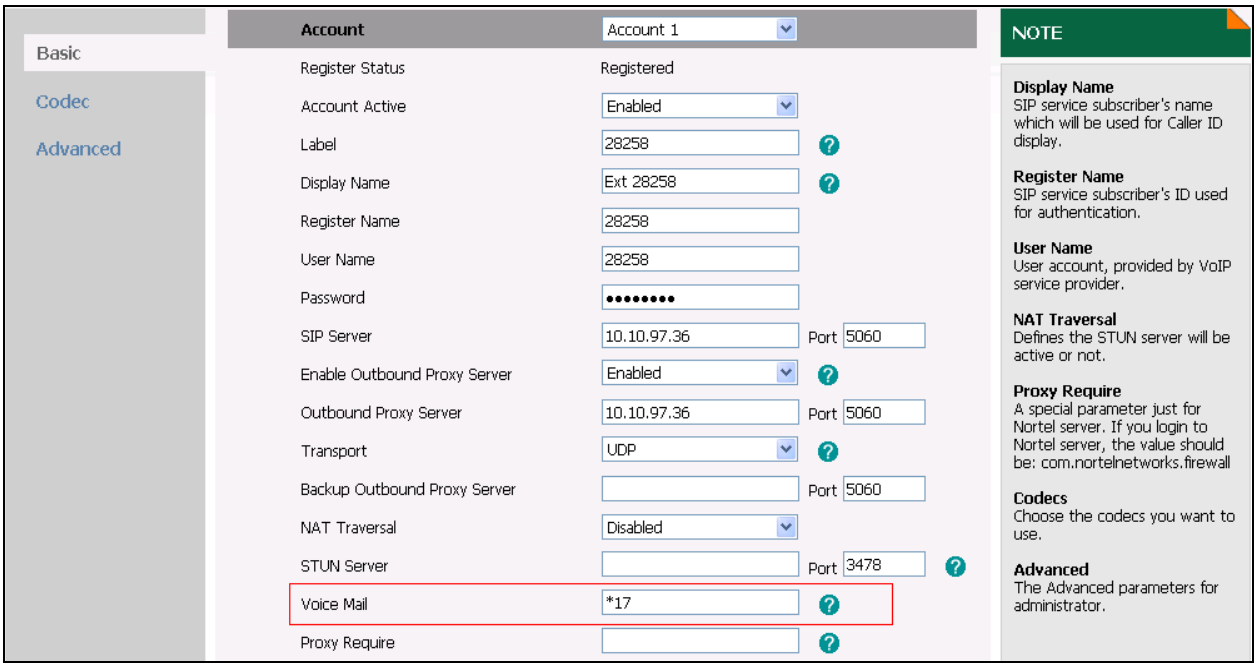
The screen below shows the VP530 phone registers successfully to SIP user 28258 on the IP Office.



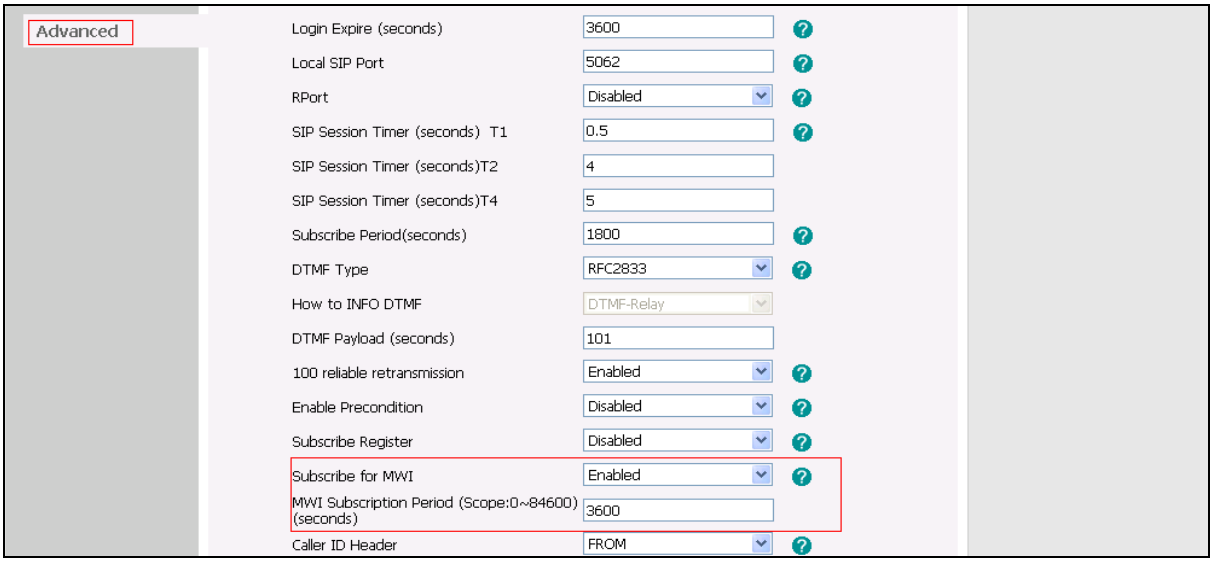
6.2. Configure Voice Mail

Configure the VP530 phone to subscribe MWI to IP Office and voicemail number so that if any new voice message is left for the phone the MWI light is turned on and user is able to press the voice mail key on the physical phone to check voicemail.

In the **Account** page and under the **Basic** section, enter ***17** as the short code in the **Voice Mail** field to access to voicemail pro application on the IP Office.

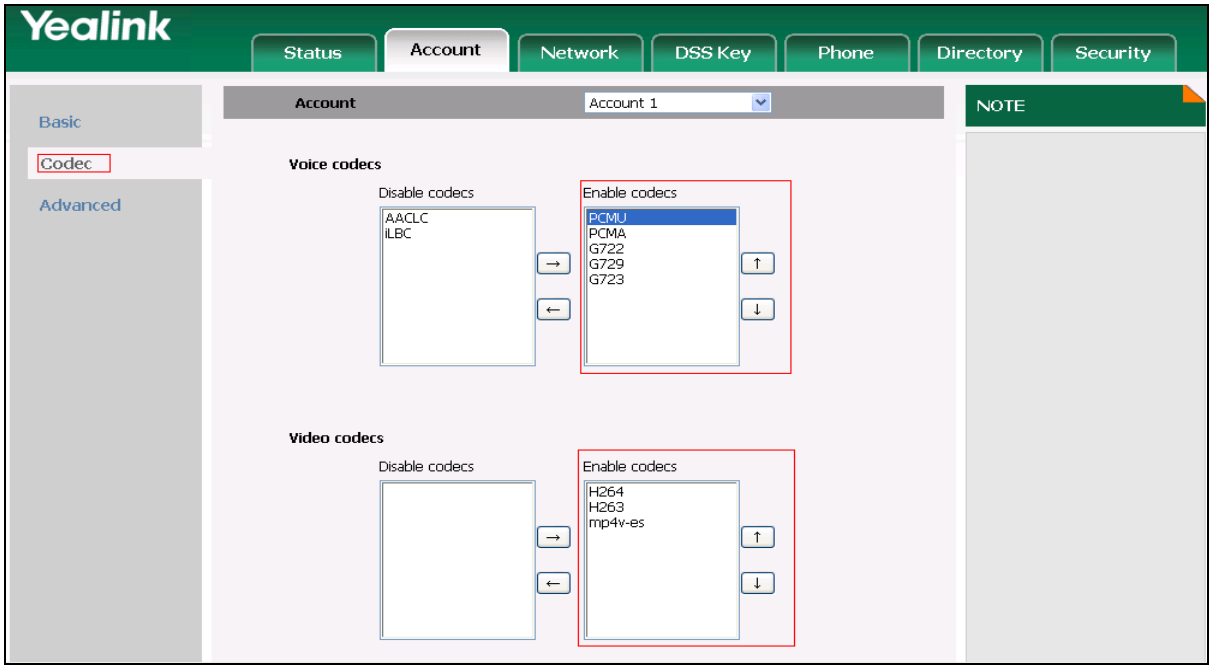


Expand the **Advance** section. Select **Enabled** in the **Subscribe for MWI** dropdown list and keep the **MWI Subscription Period (seconds)** field at default. Click **Confirm** (not shown) button at the bottom of the **Account** page to save the changes.



6.3. Administer Codec

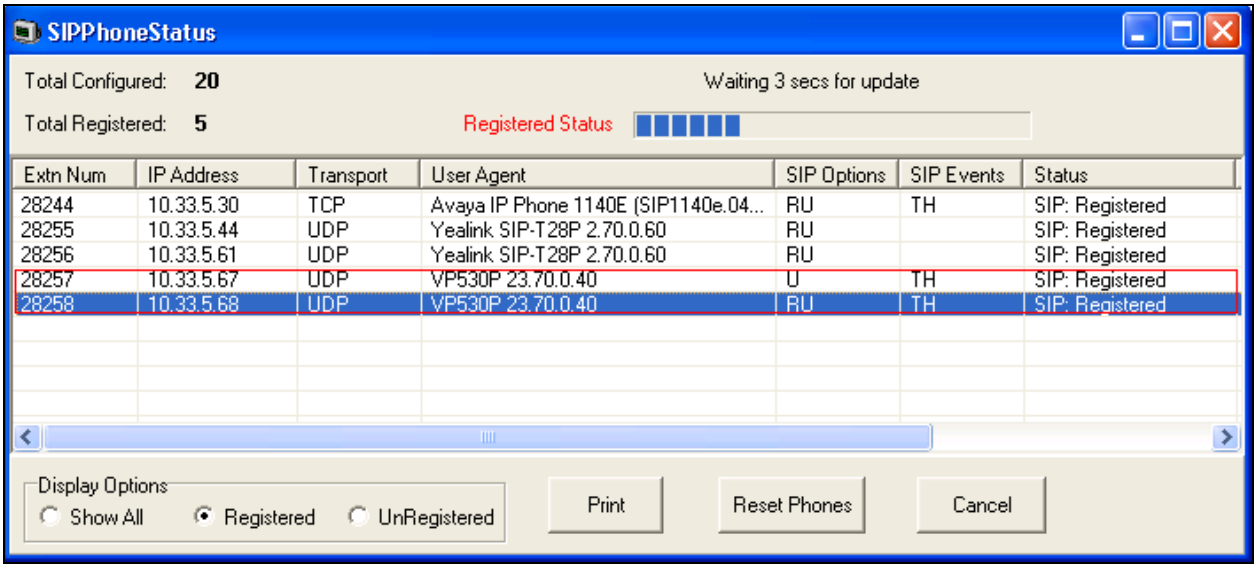
Expand the **Codecs** section in the **Account** page. Add desired voice and video codecs that the VP530 supports in the two **Enable Codecs** table. Note that the voice codec used to establish call in the IP Office is decided by the codec setting in the IP Office system and not by list of codes in the **Enable Codes** table on the VP530 phone. Click **Confirm** (not shown) button to save change in the Codec section.



7. Verification Steps

The following steps may be used to verify the configuration:

- From a PC which the **Avaya IP Office Monitor** application installed, select **Start** > **All Programs** > **IP Office** > **Monitor** to launch the application. The **Avaya IP Office SysMonitor** window is displayed (screen not shown) and then select **Status** > **SIP Phone Status** from the top menu. The **SIPPhoneStatus** window is displayed as below.



- Verify that there is an entry for each Yealink VP530 SIP extensions from **Section 5.4** and the Status is **SIP: Registered**.
- Place video calls from and to Yealink VP530 SIP phone and verify that the calls are successfully established with two-way video and talk path.

8. Conclusion

During compliance testing, Yealink VP530 SIP Video phone successfully registered with Avaya IP Office 500 V2 Release 8.1, placed and received calls to and from SIP and non-SIP telephones, and executed other telephony features like three-way conference, transfers, hold, etc. Yealink VP530 SIP Video phone was compliant with Avaya IP Office Release 8.1.

9. Additional References

The following Avaya product documentation can be found at http://support.avaya.com
[1] IP Office 8.1GA Knowledge Base Documentation, December 17, 2012.
[2] Avaya IP Office Application Server Installation and Management, Release 8.1, Oct 2012, Document number 15-601011.

The following Yealink VP530 SIP phone documents can be found at http://www.yealink.com
[1] Yealink VP530 Quick Installation Guide.pdf
[2] Yealink VP530 User Guide.pdf

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.