Avaya Solution & Interoperability Test Lab

Application Notes for Aiphone IX Series Video Door Stations (IX-DV) and Avaya IP Office™ – Issue 1.0

Abstract

These Application Notes describe the procedures for configuring Aiphone IX Series Video Door Stations (IX-DV) which were compliance tested with Avaya IP Office™.

The overall objective of the interoperability compliance testing was to verify Aiphone IX Series Video Door Stations (IX-DV) functionalities in an environment comprised of Avaya IP Office™ and various Avaya endpoints. Aiphone IX Series Video Door Stations are SIP based door phones.

Readers should pay attention to **Section** Error! Reference source not found., in particular the scope of testing as outlined in **Section** Error! Reference source not found. as well as any observations noted in **Section** Error! Reference source not found., 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 for Aiphone IX Series Video Door Stations (IX-DV) to interoperate with Avaya IP Office (IP Office). During the compliance testing, Aiphone IX-DV was used.

The Aiphone IX Series Video Door Stations are part of Aiphone IX Series 2 Door Stations. The Video Door Stations act as SIP phones when connected to IP Office. Stations come in both surface mount and flush mount varieties, please see **Appendix A** regarding various versions of IX-DV devices. Aiphone IX Series 2 Door Stations have a camera on the front, that allows for one-way video and two-way audio. All door stations have two dry contacts that can be used to release doors when activated by another intercom or phone. They can also be used to trigger external signaling devices like strobes. Video stations can stream video via SIP when talking with a video capable SIP phone, and stream video to a Video Management System (VMS) using RTSP or ONVIF Profile S (not tested).

During the compliance test, Avaya IP Office Server Edition was used as a primary system and Avaya IP Office 500V2 as an expansion system. Aiphone IX-DV registered as a 3rd party SIP phone using UDP to the Avaya IP Office Server Edition.

2. General Test Approach and Test Results

The focus of this interoperability compliance testing was to verify that the Aiphone IX-DV can register as a SIP endpoint on IP Office, and is able to originate and receive both audio and video calls to and from the IP Office system.

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 these Application Notes, the interface between Avaya systems and Aiphone did not utilize secure capabilities.

2.1. Interoperability Compliance Testing

The general test approach was to place calls to and from, Aiphone IX-DV, and exercise basic telephone operations. The main objectives were to verify the following:

- Registration
- Audio and Video calls
- Calls to/from Avaya SIP Video & Audio endpoints
- Calls to/from Avaya H.323 Audio endpoints
- Calls to/from Avaya Digital & Analog endpoints
- Calls to/from PSTN via SIP Trunks
- Call termination (origination/destination)
- Serviceability

2.2. Test Results

The test objectives were verified, and the features tested worked as expected with the following observations.

- Video quality from Aiphone IX-DV was very pixelated. This issue was fixed by Aiphone in Release 3.00.
- When a call from IX-DV is placed on hold while direct media is disabled, un-hold action resulted in disconnection of the call. This issue was fixed by Aiphone in Release 3.00.
- When a call is placed from Aiphone IX-DV to Avaya IX™ Workplace client, resulted video was one-way. This issue was fixed by Aiphone in Release 3.00.

2.3. Support

For technical support on Aiphone IX-DV, please contact Aiphone via the following:

Japan

- Web: https://www.aiphone.co.jp/
- Phone: 052-228-9961

USA and Canada

- Web: https://www.aiphone.com/home
- Email: tech@aiphone.com
- Phone: 800-692-0200

France

- Web: https://www.aiphone.fr/
- Phone: 01 69 11 46 00

Australia and New Zealand

- Web: https://www.aiphone.com.au/
- Phone: (02)80364507

Singapore

- Web: http://www.aiphone.com.sg/
- Email: admin@aiphone.com.sg
- Phone: 6534-1135

United Kingdom

- Web: https://www.aiphone.co.uk/
- Phone: 020-7507-6250

3. Reference Configuration

Figure 1 illustrates a sample configuration consisting of Avaya IP Office components and Aiphone IX-DV.

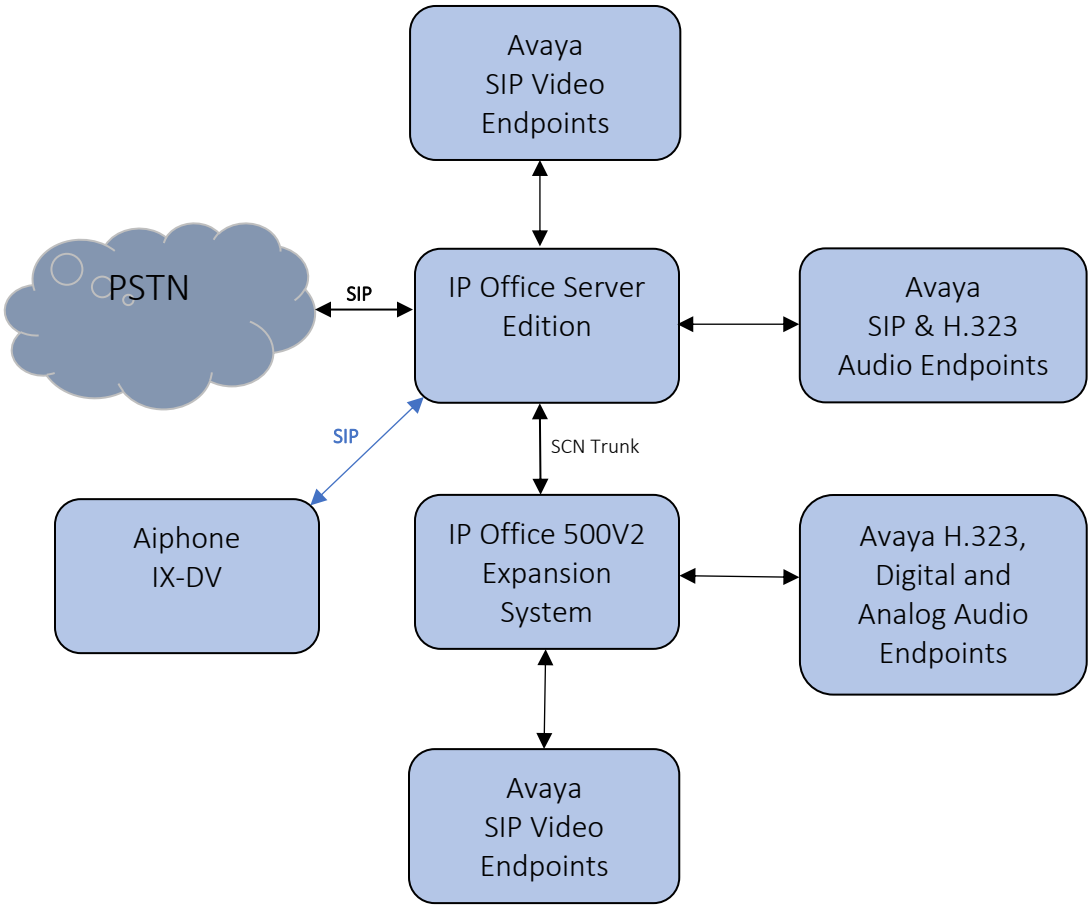


Figure 1: Test Configuration of Aiphone IX-DV with Avaya IP Office

4. Equipment and Software Validated

The following equipment and software were used for the test configuration.

Equipment	Software/Firmware
Avaya IP Office Server Edition	11.0.4.0.0 build 74
Avaya IP Office 500V2	11.0.4.0.0 build 74
Avaya IP Office Manager	11.0.4.0.0 build 74
Avaya 9600 Series H.323 IP Deskphones	6.8002
Avaya J129 SIP Phone	4.0.0.0.21
Avaya IX Workspace	3.7.0.102.3
Avaya H175 Collaboration Station	1.0.2.3
Avaya Vantage K175 Phone	3.5.0
Avaya 9504 Digital Phone	0.55
Avaya 6210 Analogue Telephone	-
Aiphone IX Series Video Door Station IX-DV	3.00.

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. Configure Avaya IP Office™

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

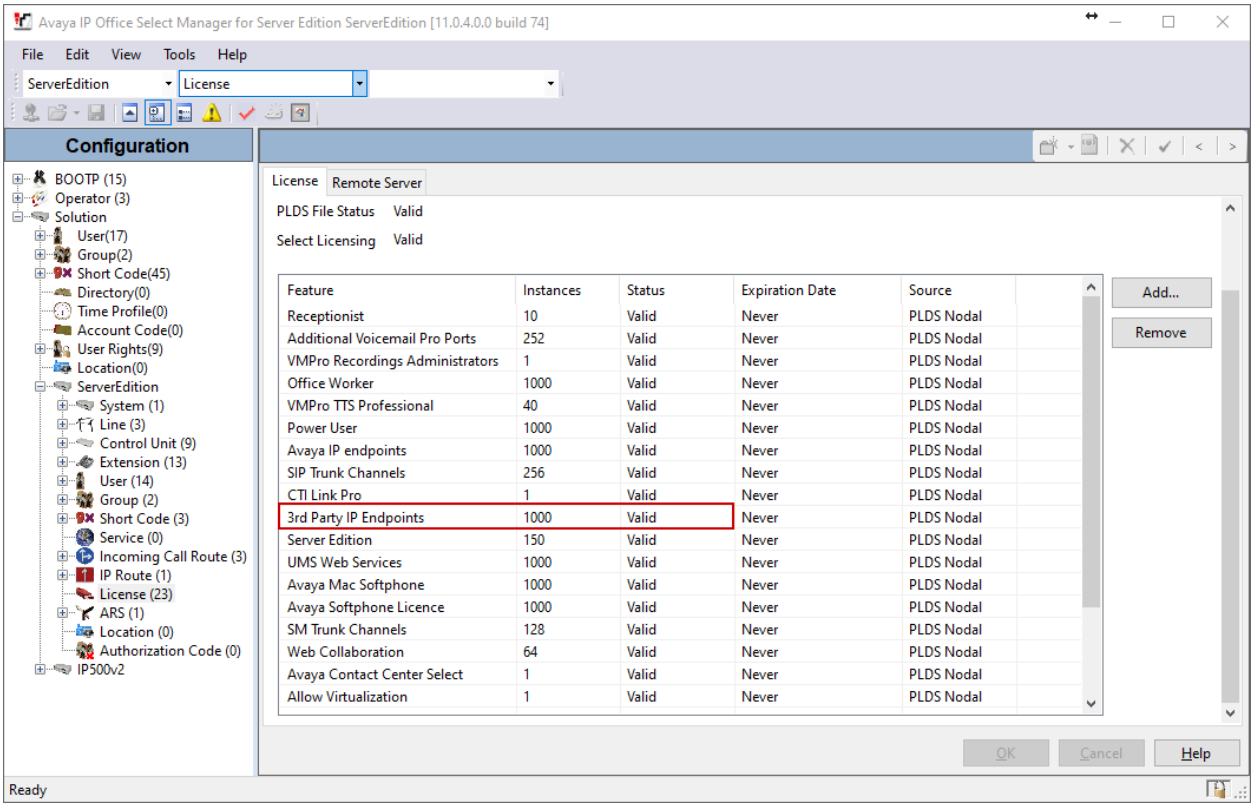
- Verify IP Office license
- Obtain LAN IP address
- Administer SIP registrar
- Administer SIP extensions
- Administer SIP users

These steps are performed from the Avaya IP Office Manager.

5.1. Verify IP Office License

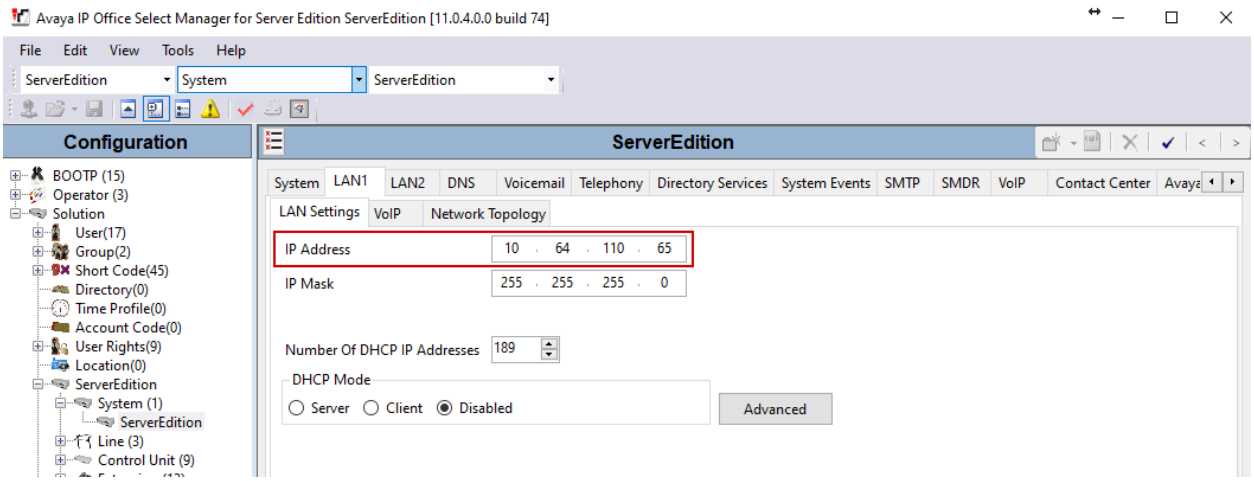
From a PC running the Avaya IP Office Manager application, select **Start → All Programs → IP Office → Manager** to launch the Manager application. Select the proper IP Office system if there are more than one IP Office system, and log in with the appropriate credentials.

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



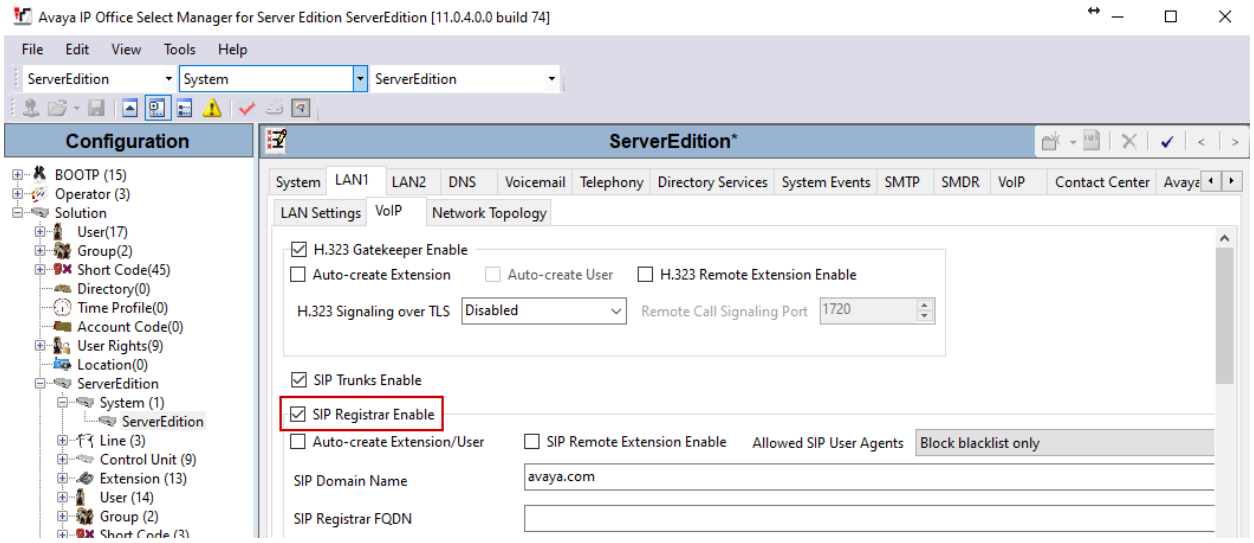
5.2. Obtain LAN IP Address

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 Aiphone IX-DV.



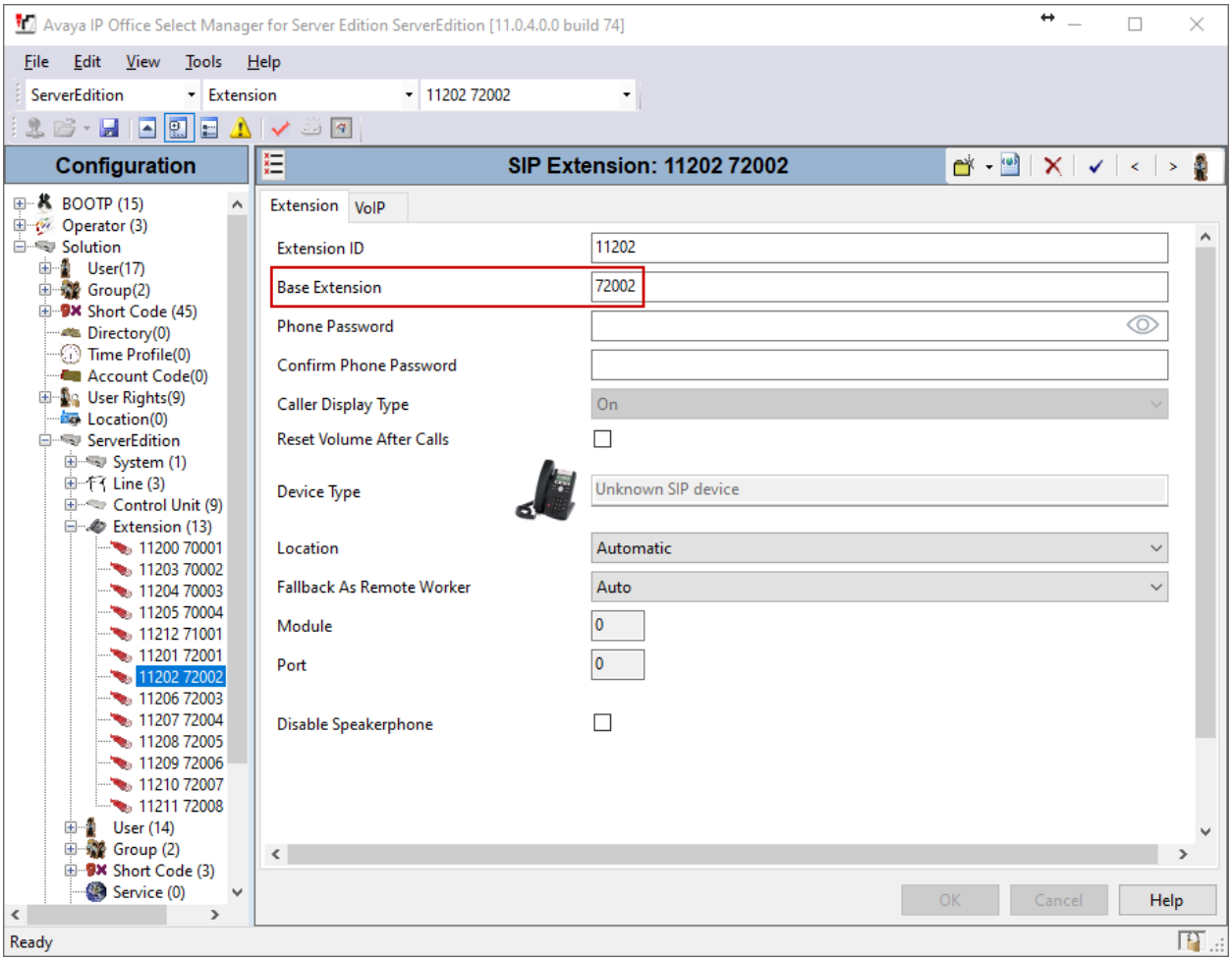
5.3. Administer SIP Registrar

Continuing from above, select the **VoIP** sub-tab. Ensure that **SIP Registrar Enable** is checked, as shown below.



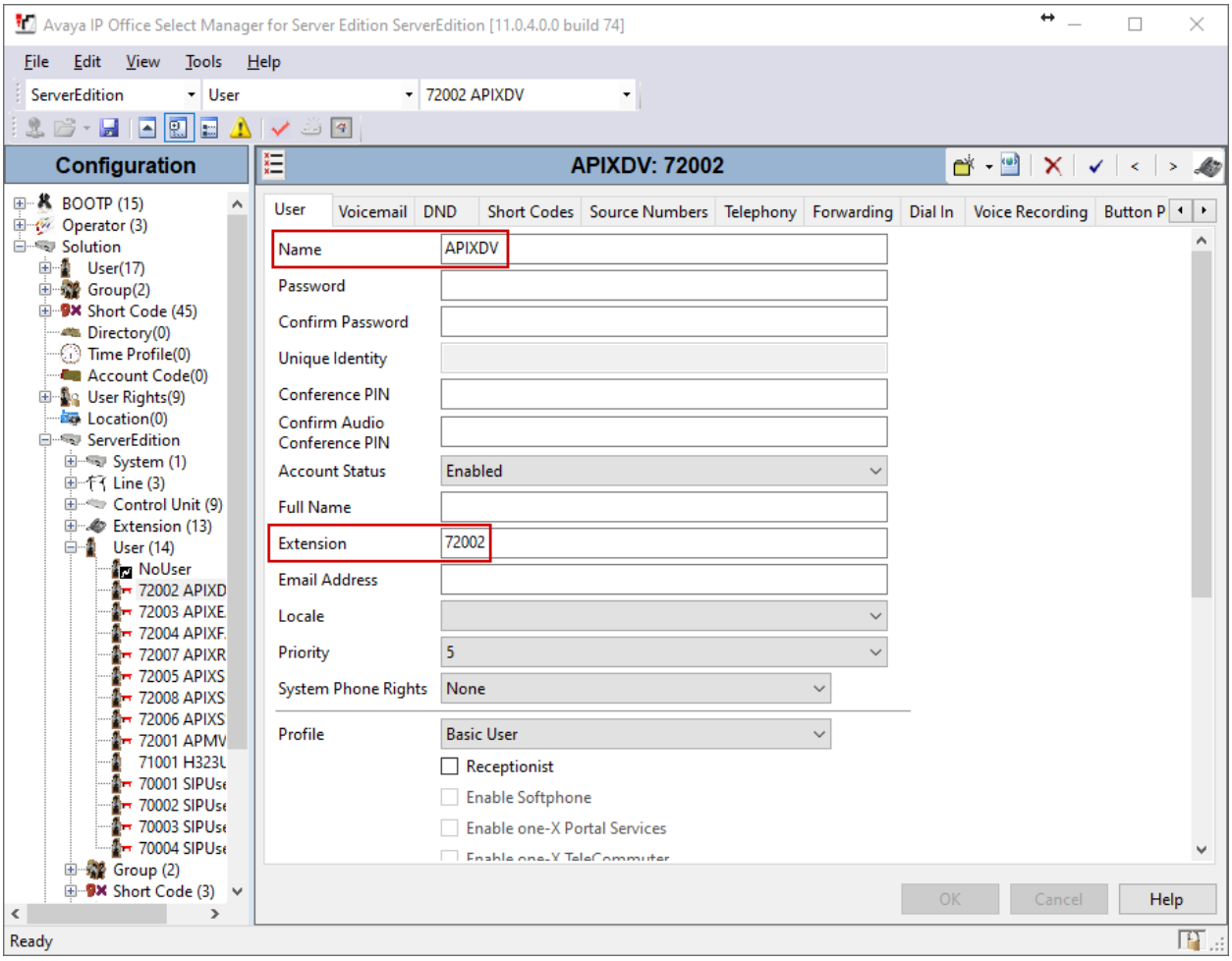
5.4. Administer SIP Extensions

To create a new SIP Extension, from the configuration tree in the left pane, right-click on **Extension,** and select **New ➔ SIP Extension** from the pop-up list (not shown). Enter desired digits for the **Base Extension** field. This is the Extension that will be used for Aiphone IX-DV to log in.

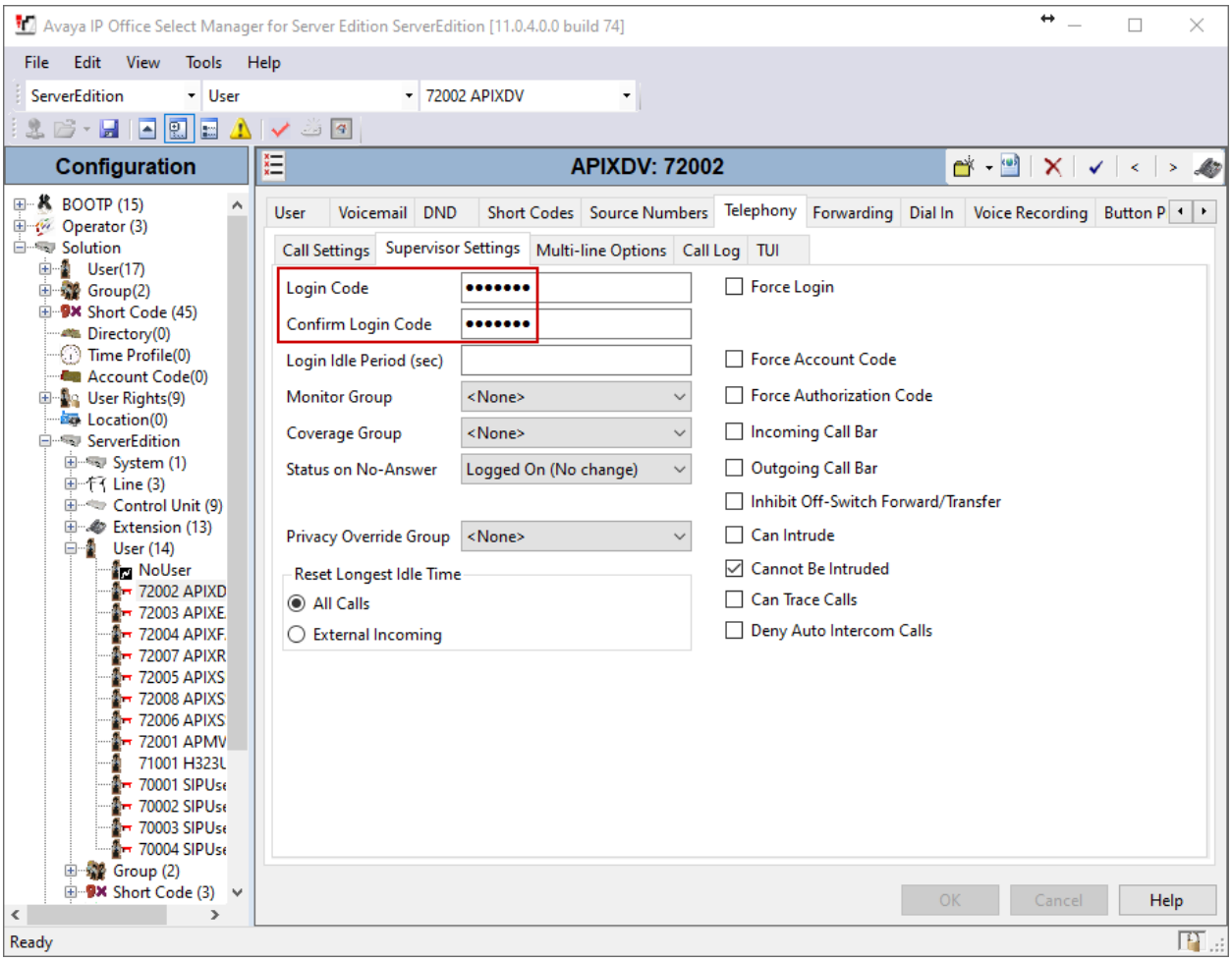


5.5. Administer SIP Users

To create a new SIP User, from the configuration tree in left pane, right-click on **User**, and select **New** from the pop-up list (not shown). Enter desired values for the **Name** field. For the **Extension** field, enter the SIP extension created in **Section 5.4**.



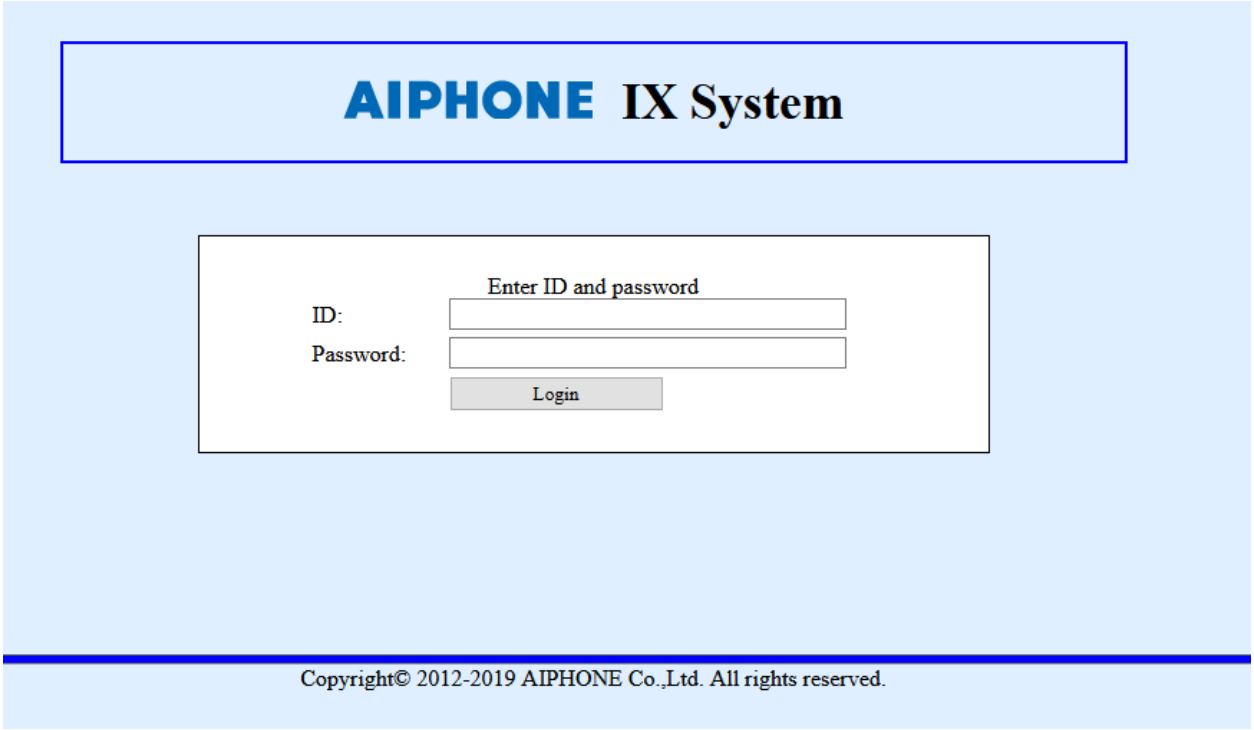
Select the **Supervisor Settings** tab, and enter a desired **Login Code** and **Confirm Login Code**. This code will be used as a password for Aiphone IX-DV.



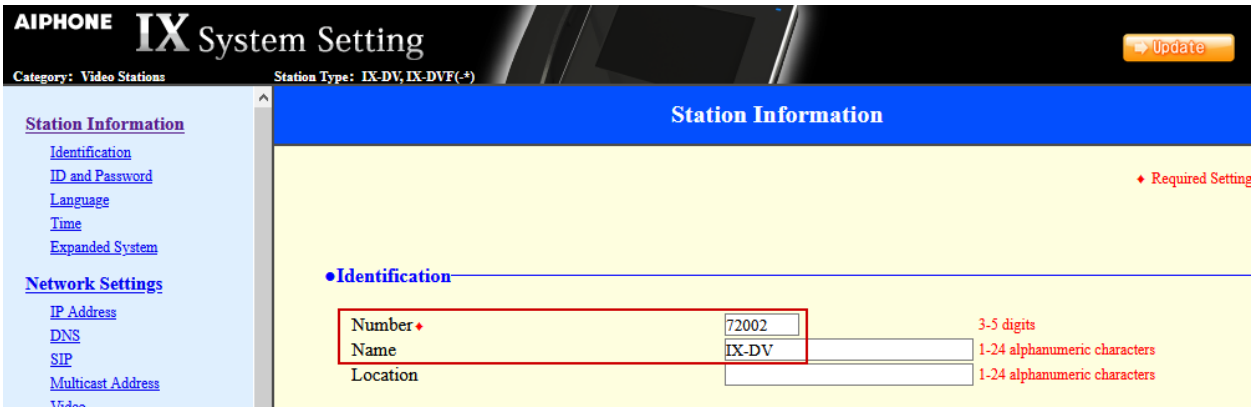
6. Configure Aiphone IX Series Video Door Station

This section provides steps to configure Aiphone IX-DV.

To configure Aiphone IX-DV, using a web browser, navigate to https://<IP Address of IX-DV>/webset.cgi?login and log in using appropriate credentials.



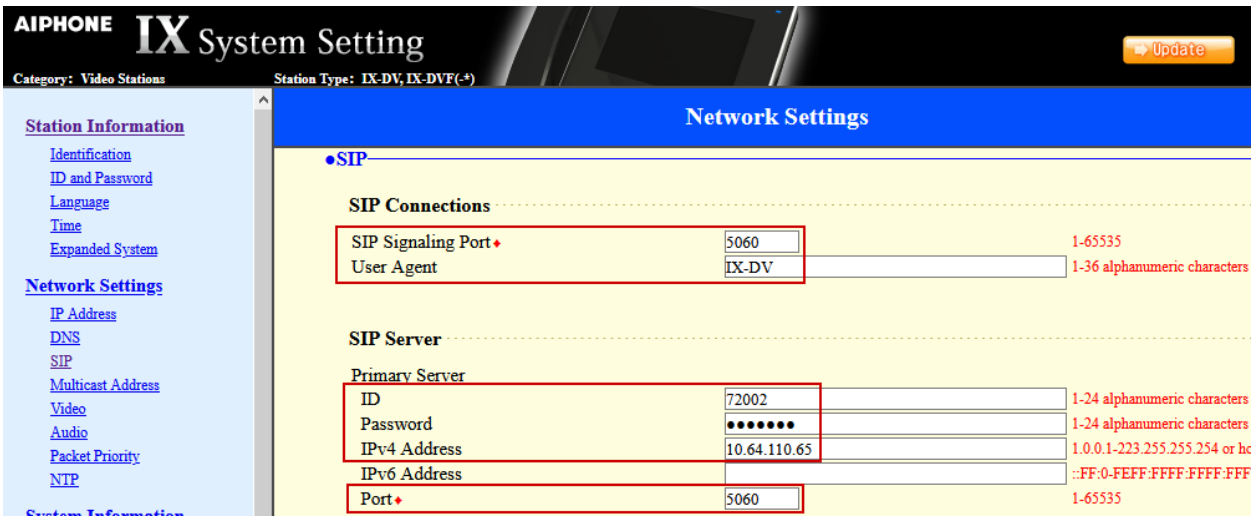
Once logged in, for the **Number** field, type in the SIP extension that is being configured (from **Section 5.4**), and a desired **Name.** Select **Update** to save change.



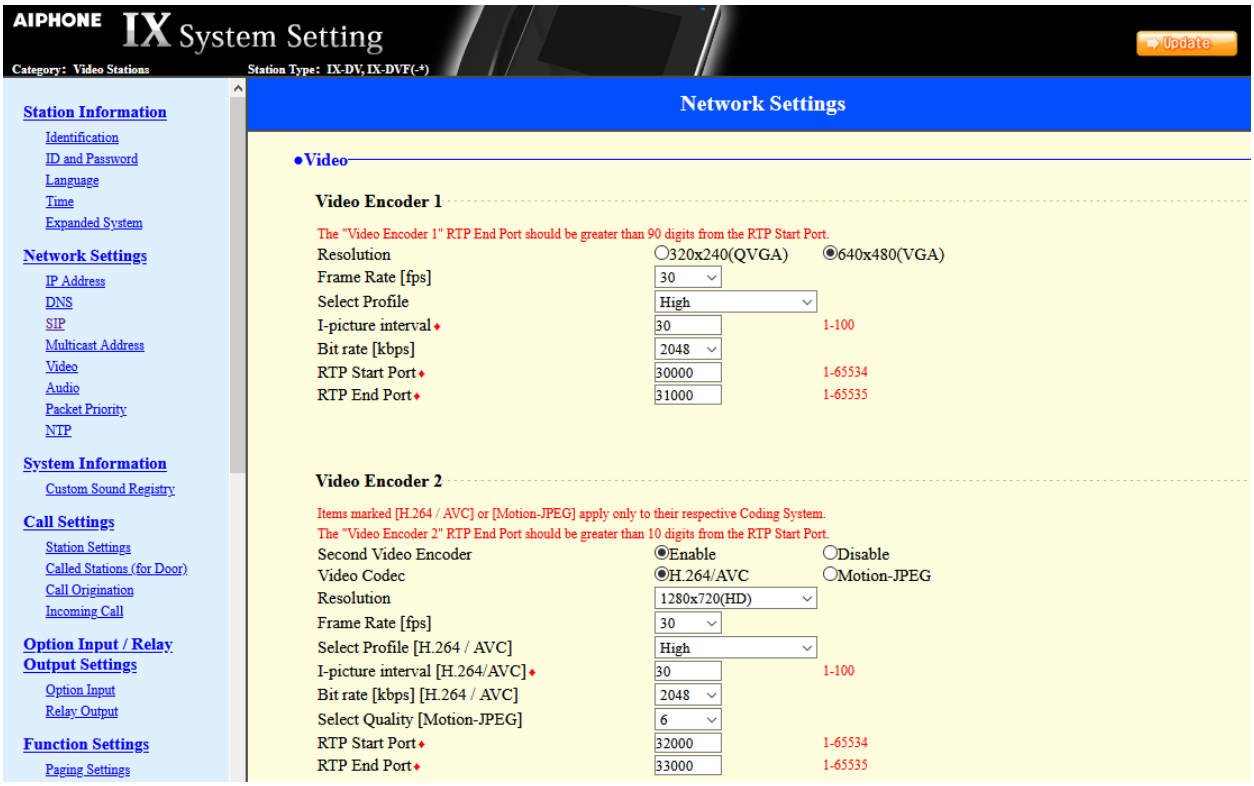
From the left, select **Network Settings → SIP** and configure as follows:

- **SIP Signaling Port:** Set to **5060**.
- **User Agent:** Type in a desired value.
- **ID:** SIP Extension number from **Section 5.4**.
- **Password:** SIP Extension password from **Section 5.4**.
- **IPv4 Address:** LAN IP Address of IP Office from **Section 5.2**.
- **Port:** Set to **5060**.

Once done, select **Update** to save changes.



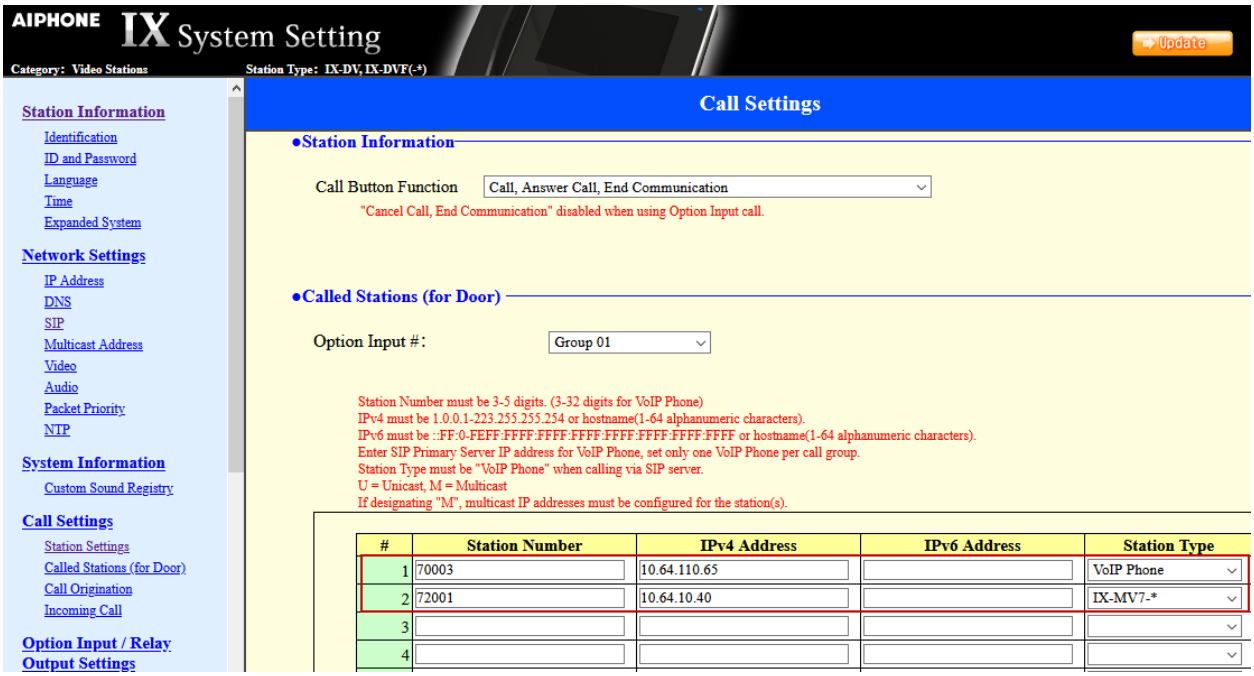
Continuing from above, scroll down to the **Video** sub section and verify the Video Encoder settings are as shown below.



From the left, select **Call Settings → Station Settings** and configure as follows:
The numbers configured here will be dialed when the button on the IX-DV is pressed.

- **Station Number:** Type in an extension number on IP Office that will be called for a given line.
- **IPv4:** Type in the LAN IP Address from **Section 5.2**.
- **Station Type:** Set to **VoIP Phone**.

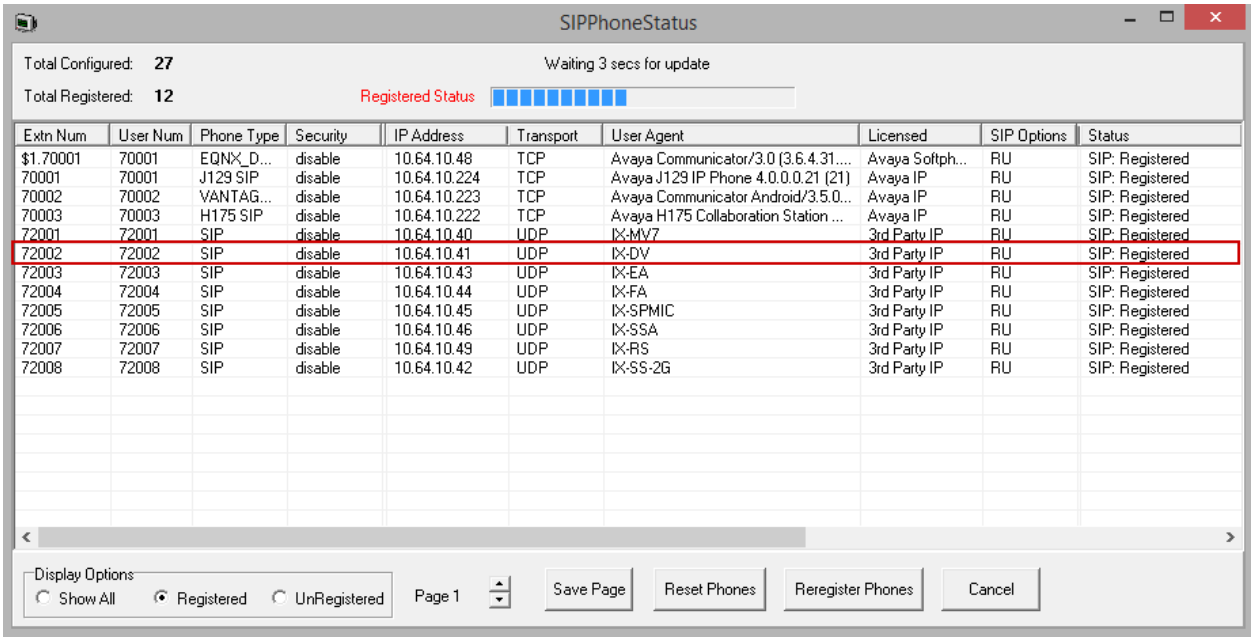
Select **Update** to save changes.



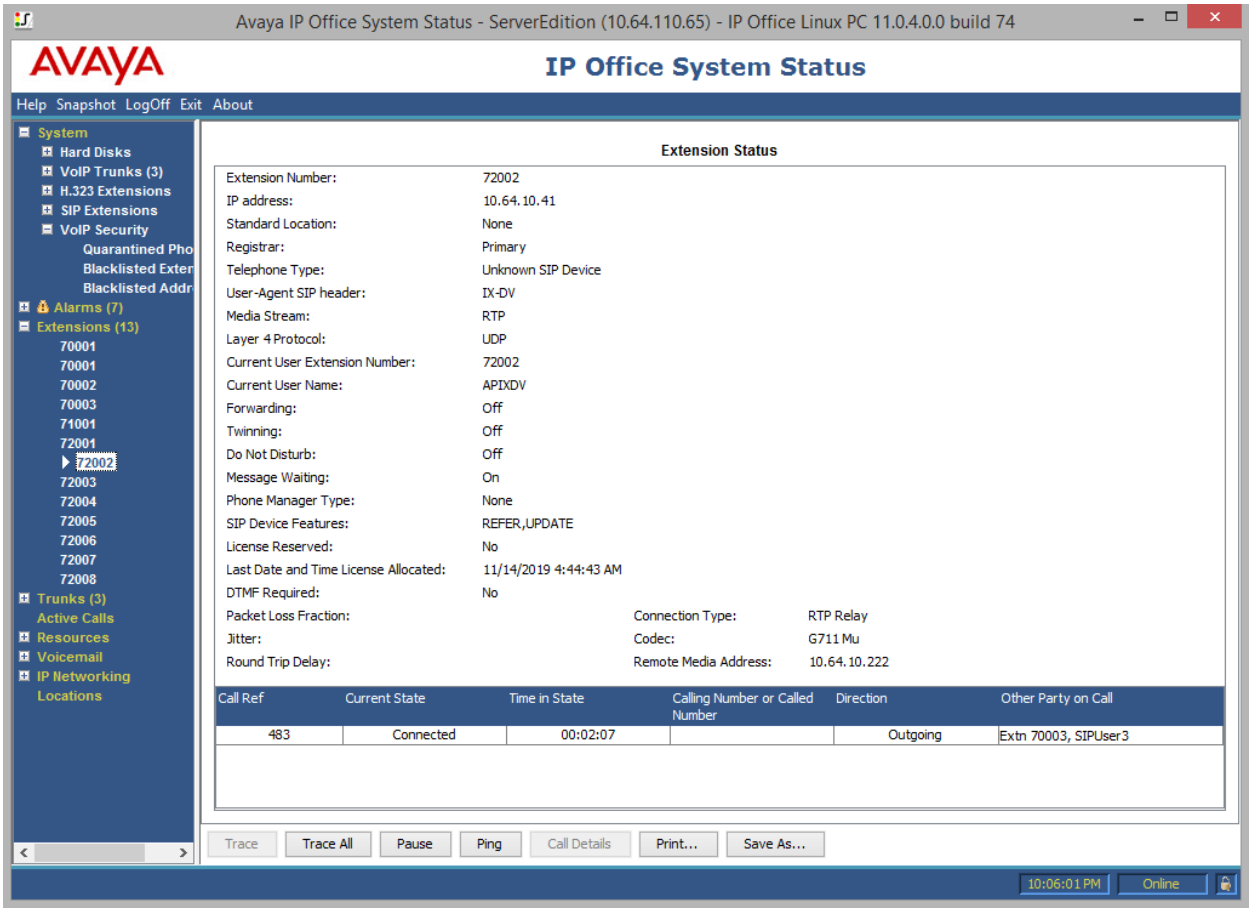
7. Verification Steps

The following steps may be used to verify the configuration:

- From a PC running the Avaya IP Office Monitor application. The **Avaya IP Office SysMonitor** screen is displayed (not shown). Select **Status → SIP Phone Status** from the top menu. Verify the SIP extension added from **Section 5.4** is displayed and the Status is **SIP: Registered**.



- Place a call from Aiphone IX-DV to an Avaya endpoint. The state of the call be viewed on a PC running the **Avaya IP Office System Status** application. Select **Extensions** → Aiphone IX-DV extension.



8. Conclusion

Aiphone IX-DV was compliance tested with Avaya IP Office. Aiphone IX-DV functioned properly for feature and serviceability. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

9. Additional References

Avaya IP Office product documentation can be found at:
https://ipofficekb.avaya.com/

Documentation related to Aiphone IX-DV can be found at:
Japan: https://www.aiphone.co.jp/products/business/ix/
USA, Canada: https://www.aiphone.com/home/products/ix-series
France: https://www.aiphone.fr/catalogue/interphonie-ip-protocole-sip-ix/
Australia, New Zealand: https://www.aiphone.com.au/product/ix/
Singapore: http://www.aiphone.com.sg/

United Kingdom: https://www.aiphone.co.uk/featured_item/ix2/

Appendix A

Following devices are based on the same firmware as IX-DV:

- IX-DV
- IX-DVF
- IX-DVF-P
- IX-DVF-RA
- IX-DVF-2RA
- IX-DVF-RA-FR
- IX-DVF-2RA-FR
- IX-DVF-4
- IXDVFL
- IXDVFLAC
- IXDVF2L
- IXDVF2LAC
- IXDVF4L
- IXDVF4LAC
- IXDVF6L
- IXDVF6LAC
- IXDVFA
- IX-4DVF
- IX-2DVF
- IX-DVF Slim
- IX-DVF-AC

The difference in each IX-DV devices is their mounting method and attachment:

- IX-DV
  - Surface mounting
- IX-DVF
- Flush mounting
- IX-DVF-P
  - Flush mounting
  - Card reader
- IX-DVF-RA
  - Flush mounting
  - Emergency call button
- IX-DVF-2RA
  - Flush mounting
  - Normal call button and emergency call button
- IX-DVF-RA-FR
  - Flush mounting
  - Emergency call button

    - French notation
- IX-DVF-2RA-FR
    - Flush mounting
    - Normal call button and emergency call button
    - French notation
- IX-DVF-4
    - Flush mounting
    - 4 call buttons
- IXDVFL
    - Flush mounting
    - Hearing aid
- IXDVFLAC
    - Flush mounting
    - Hearing aid
    - 10-key pad
- IXDVF2L
    - Flush mounting
    - Hearing aid
    - 2 call buttons
- IXDVF2LAC
    - Flush mounting
    - Hearing aid
    - 2 call buttons
    - 0-key pad
- IXDVF4L
    - Flush mounting
    - 4 call buttons
- IXDVF4LAC
    - Flush mounting
    - 4 call buttons
    - 10-key pad
- IXDVF6L
    - Flush mounting
    - 6 call buttons
- IXDVF6LAC
    - Flush mounting
    - 6 call buttons
    - 10-key pad
- IXDVFA
    - Flush mounting
- IX-4DVF
    - Flush mounting
    - 4 piezo buttons
- IX-2DVF
    - Flush mounting

    - 2 piezo buttons
- IX-DVF Slim
    - Flush mounting
    - Miniaturized panel
- IX-DVF-AC
    - Flush mounting
    - 10-key pad

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.