



## Avaya Solution & Interoperability Test Lab

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# Application Notes for iNEMSOFT CLASSONE® iCAS Dispatch Console and Avaya IP Office™ – Issue 1.0

### Abstract

These Application Notes describe the procedures for configuring iNEMSOFT CLASSONE® iCAS Dispatch Console which were compliance tested with Avaya IP Office™.

The overall objective of the interoperability compliance testing is to verify iNEMSOFT CLASSONE® iCAS Dispatch Console functions in an environment comprised of Avaya IP Office™ and various Avaya Endpoints.

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.

# 1. Introduction

The overall objective of the interoperability compliance testing is to verify iNEMSOFT CLASSONE® iCAS Dispatch Console (Dispatch Console) functions in an environment comprised of Avaya IP Office™ (IP Office) and various Avaya Endpoints. Dispatch Console registers to IP Office via UDP.

The Dispatch Console is installed on an operator console. The Dispatch Console is available in various models and screen sizes for use in mission-critical telephone and radio dispatch operations. Integrated console features are accessed through a flat, sturdy, touch-screen PC with numerous connectors. The touch-screen PC console is distinguished from standard PC systems by its silent operation and greater stability, robust aluminum housing and lack of moving parts.

These Application Notes assume that IP Office 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 references [1].

## 2. General Test Approach and Test Results

The interoperability compliance test included features and serviceability tests. The focus of the interoperability compliance testing was primarily on verifying call establishment on Dispatch Console. Dispatch Console supports operations such as inbound calls, outbound calls, hold/resume and other IP Office features. Dispatch Console interactions with IP Office were verified. The serviceability testing introduced failure scenarios to see if Dispatch Console can recover from failures.

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 Dispatch Console did not include use of any specific encryption features as requested by iNEMSOFT.

## 2.1. Interoperability Compliance Testing

The general test approach was to place calls to and from Dispatch Console and exercise basic telephone operations. The main objectives were to verify the following:

- Registration
- Codecs (G.711MU)
- Inbound calls
- Outbound calls
- DTMF (RFC2833 and Inband)
- Direct media on and off
- Hold/Resume
- Call termination (origination/destination)
- Blind and Consultative transfers (origination/destination)
- Three party conference (origination/destination)
- Call forwarding, Call Park and Unpark, and Call Pickup
- Serviceability

## 2.2. Test Results

The test objectives were verified. For serviceability testing, Dispatch Console operated properly after recovering from failures such as cable disconnects, and resets of Dispatch Console and Session Manager. Dispatch Console successfully negotiated the codec that was used. The features tested worked as expected.

## 2.3. Support

iNEMSOFT CLASSONE® iCAS Dispatch Console support can be obtained via following means:

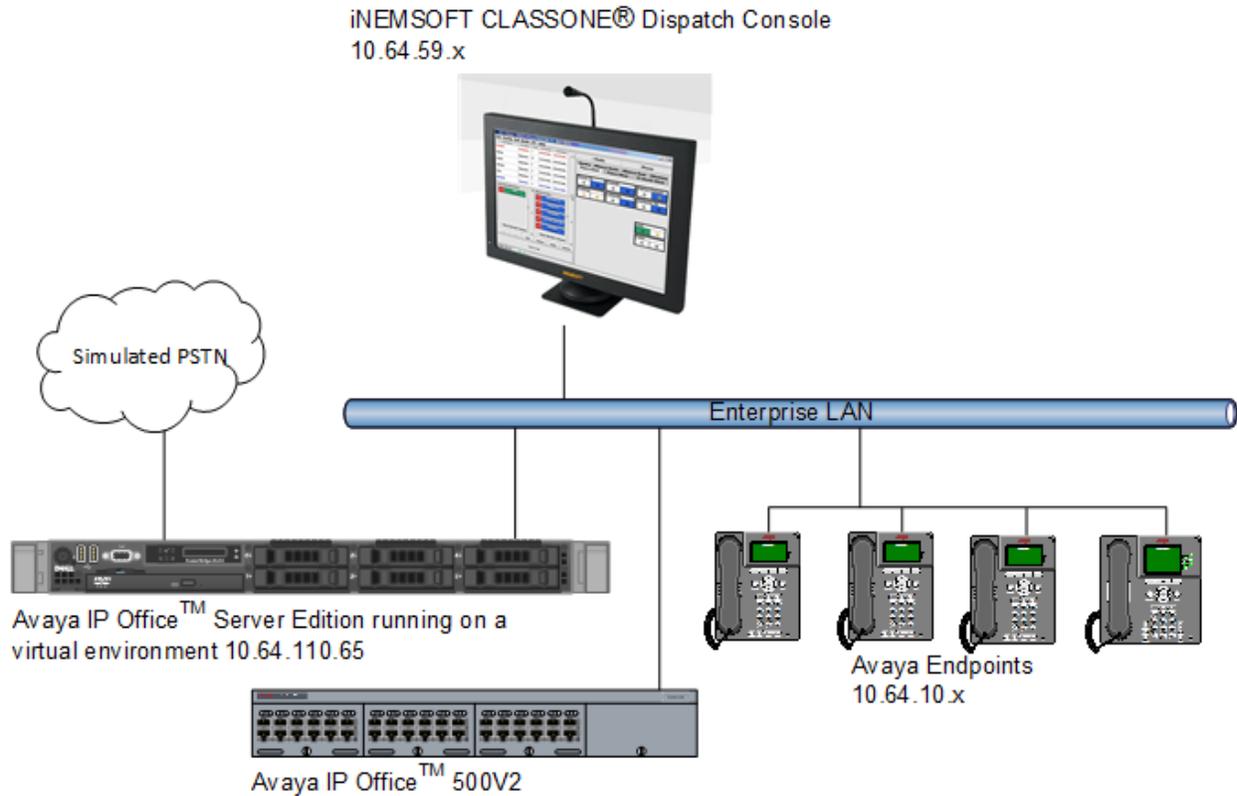
**Phone:** 214-423-2815

**Web:** [www.inemsoft.com](http://www.inemsoft.com)

**Email:** [rtisupport@inemsoft.com](mailto:rtisupport@inemsoft.com)

### 3. Reference Configuration

**Figure 1** illustrates a sample configuration consisting of an IP Office Server Edition, IP Office 500v2, Avaya Endpoints, Simulated PSTN, and Dispatch Console. The solution described herein is also extensible to Standalone IP Office systems.



**Figure 1: Test Configuration of CLASSONE® iCAS Dispatch Console by iNEMSOFT**

## 4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office Server Edition	11.0.0.1.0 Build 8
Avaya IP Office 500 V2 Expansion System	11.0.0.1.0 Build 8
Avaya IP Office Manager	11.0.0.1.0 Build 8
Avaya IP Office Monitor	11.0.0.1.0 Build 8
Avaya IP Office System Status	11.0.0.1.0 Build 8
Avaya 96x1 Series IP Deskphones	6.6604 (H.323)
Avaya J129 Deskphone	3.0.0.0.20
Avaya 1120E IP Deskphone	SIP 1120e.04.04.26.00
Avaya 1220 IP Deskphone	SIP 12x0.04.04.26.00
iNEMSOFT CLASSONE iCAS Dispatch Console	4.14.0

**Note:** Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office IP500V2 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:

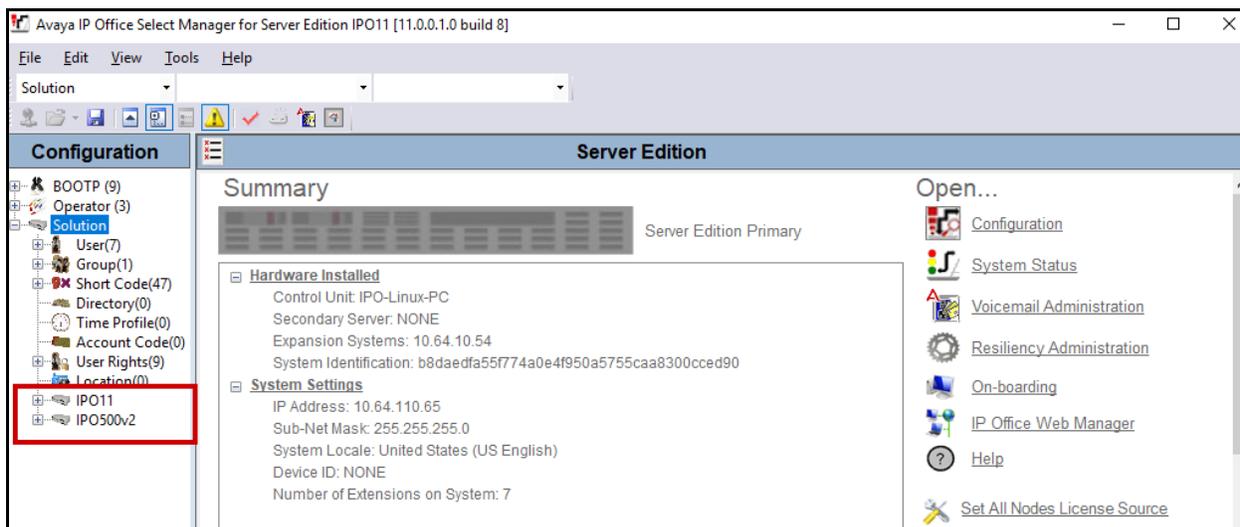
- Verify IP Office license
- Obtain LAN IP address
- Administer SIP registrar
- Administer SIP extensions
- Administer SIP users

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** → **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. As mentioned earlier, IP Office consisted of IP Office Server Edition and IP Office 500v2.



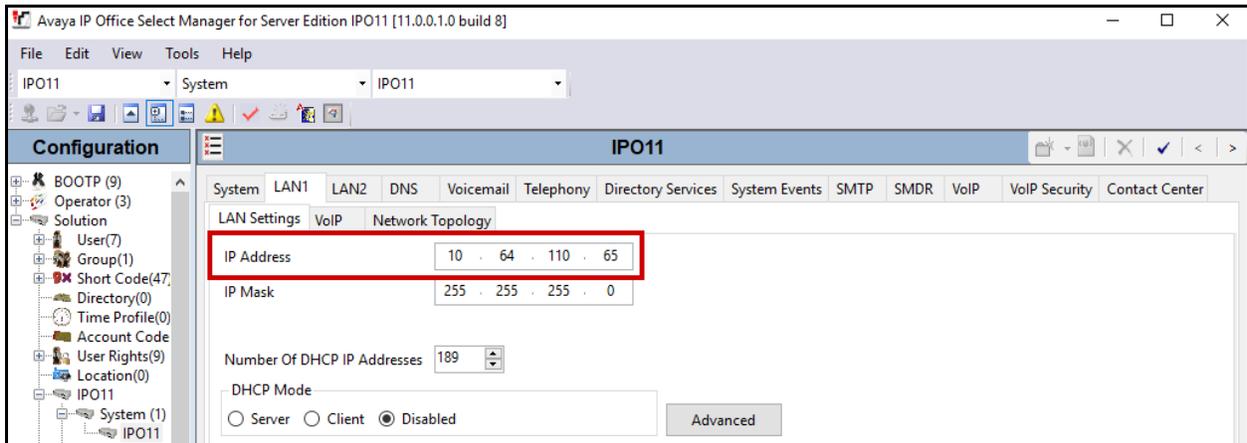
From the configuration tree in the left pane, select **License** → **3rd Party IP Endpoints** to display the License screen in the right pane. Verify that the License Status field is set to **Valid** and there are appropriate number of **Instances** available.

The screenshot shows the Avaya IP Office Select Manager interface. The left pane displays a configuration tree with 'License' selected under 'IPO11'. The right pane shows the 'License' configuration screen with a table of features and their instances.

Feature	Instances	Status	Expiration Date	Source
3rd Party IP Endpoints	1000	Valid	Never	PLDS Nodal
Additional Voicemail Pro Ports	252	Valid	Never	PLDS Nodal
Allow Virtualization	1	Valid	Never	PLDS Nodal
Avaya Contact Center Select	2	Valid	Never	PLDS Nodal
Avaya IP endpoints	1000	Valid	Never	PLDS Nodal
Avaya Mac Softphone	1000	Valid	Never	PLDS Nodal
Avaya Softphone Licence	1000	Valid	Never	PLDS Nodal
Basic User	1000	Obsolete	Never	PLDS Nodal
Call Analytics	1	Valid	Never	PLDS Nodal
CTI Link Pro	2	Valid	Never	PLDS Nodal
Customer Service Agent	100	Dormant	Never	PLDS Nodal
Customer Service Supervisor	100	Dormant	Never	PLDS Nodal
Devlink3 External Recorder	1	Valid	Never	PLDS Nodal
IP500 Universal PRI (Additional cha...	100	Obsolete	Never	PLDS Nodal
IPSec Tunnelling	1	Obsolete	Never	PLDS Nodal
Office Worker	1000	Valid	Never	PLDS Nodal
Power User	1000	Valid	Never	PLDS Nodal
Receptionist	10	Valid	Never	PLDS Nodal

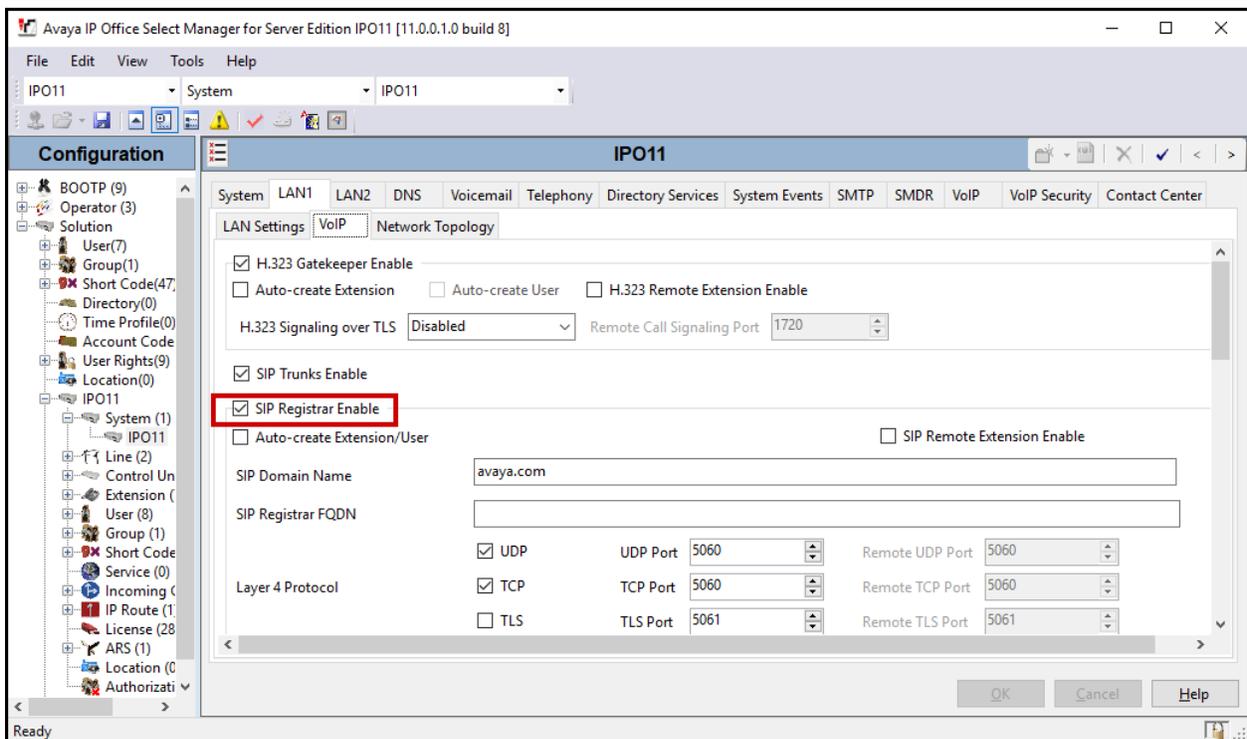
## 5.2. Obtain LAN IP Address

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 Dispatch Console to register with IP Office.



## 5.3. Administer SIP Registrar

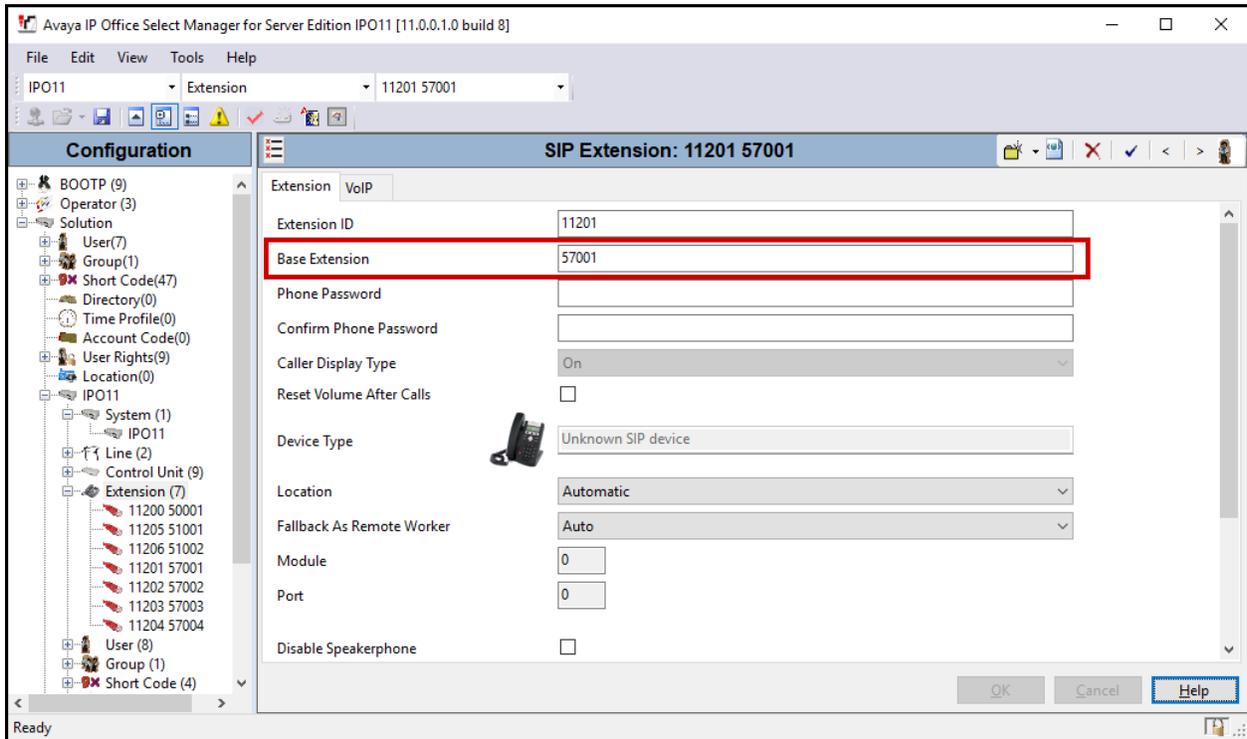
Continuing from above, select the **VoIP** sub-tab. Ensure that **SIP Registrar Enable** is checked, as shown below.





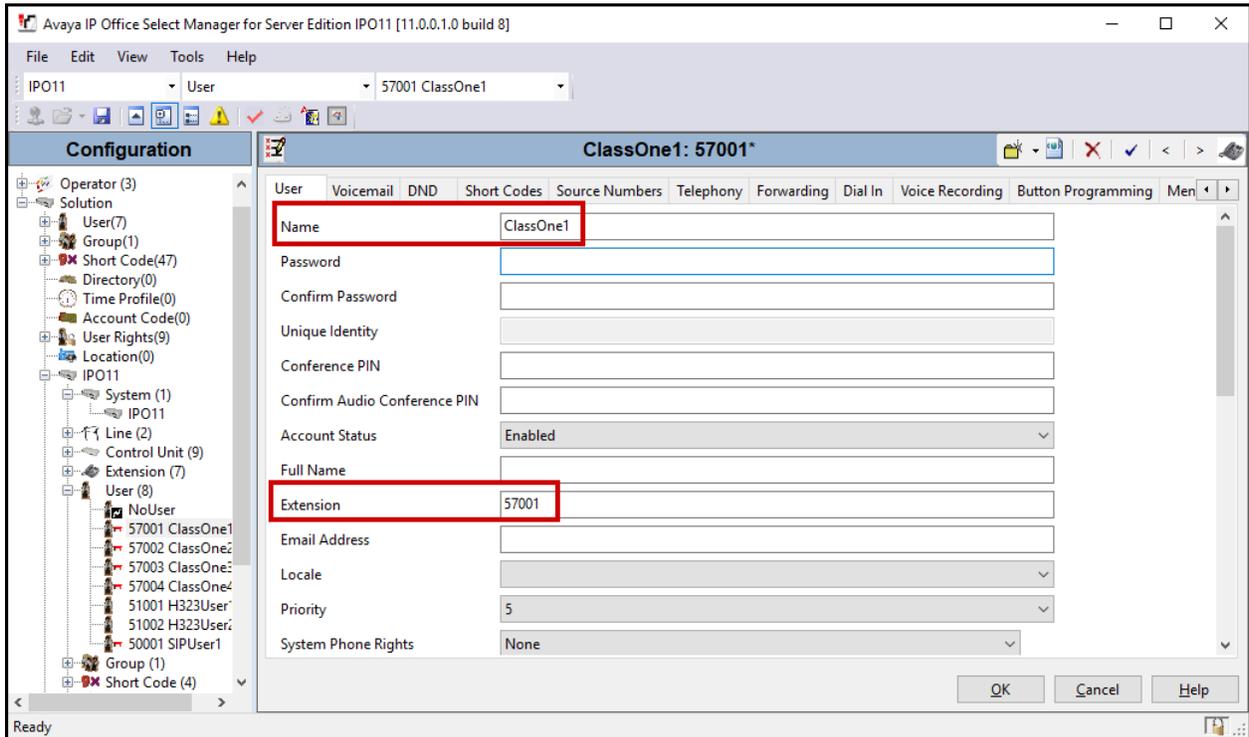
## 5.4. Administer SIP Extensions

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 the desired digits for the **Base Extension** field. Two Extensions are needed for Dispatch Console. These are the Extensions that will be used for Dispatch Console to log in. During compliance testing, 57001 and 57002 were created.

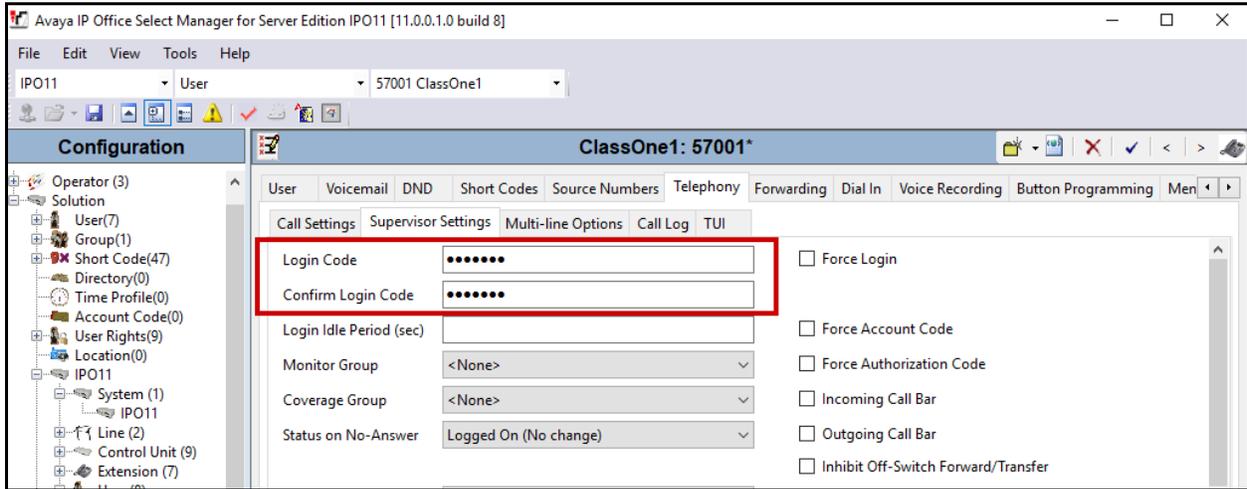


## 5.5. Administer SIP Users

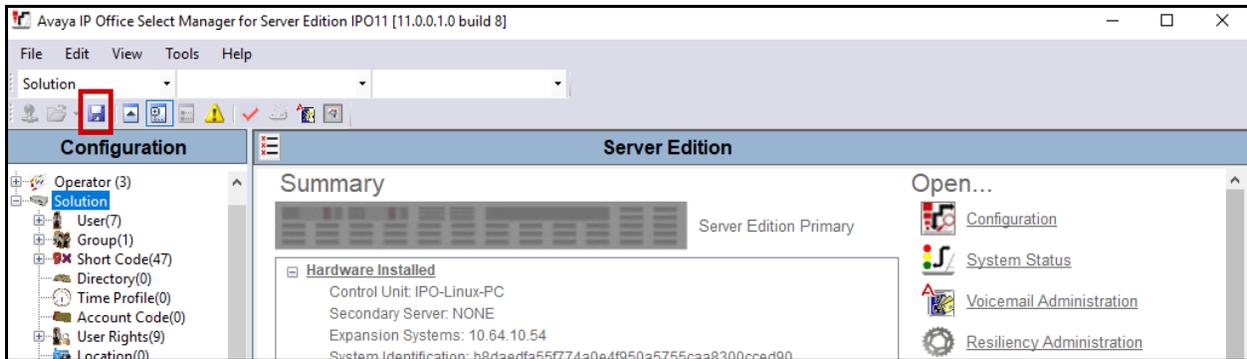
To create a new SIP User, from the configuration tree in left pane, right-click on **User**, and select **New** from the pop-up list (not shown). Enter desired values for the **Name** field. For the **Extension** field, enter the SIP extension created in **Section 5.4**. During compliance testing, two users, for 57001 and 57002, were created.



Select the **Supervisor Settings** tab and enter a desired **Login Code** and **Confirm Login Code**. This code will be used as a password for Dispatch Console.



Once done, save the configuration to IP office by selecting the save icon.



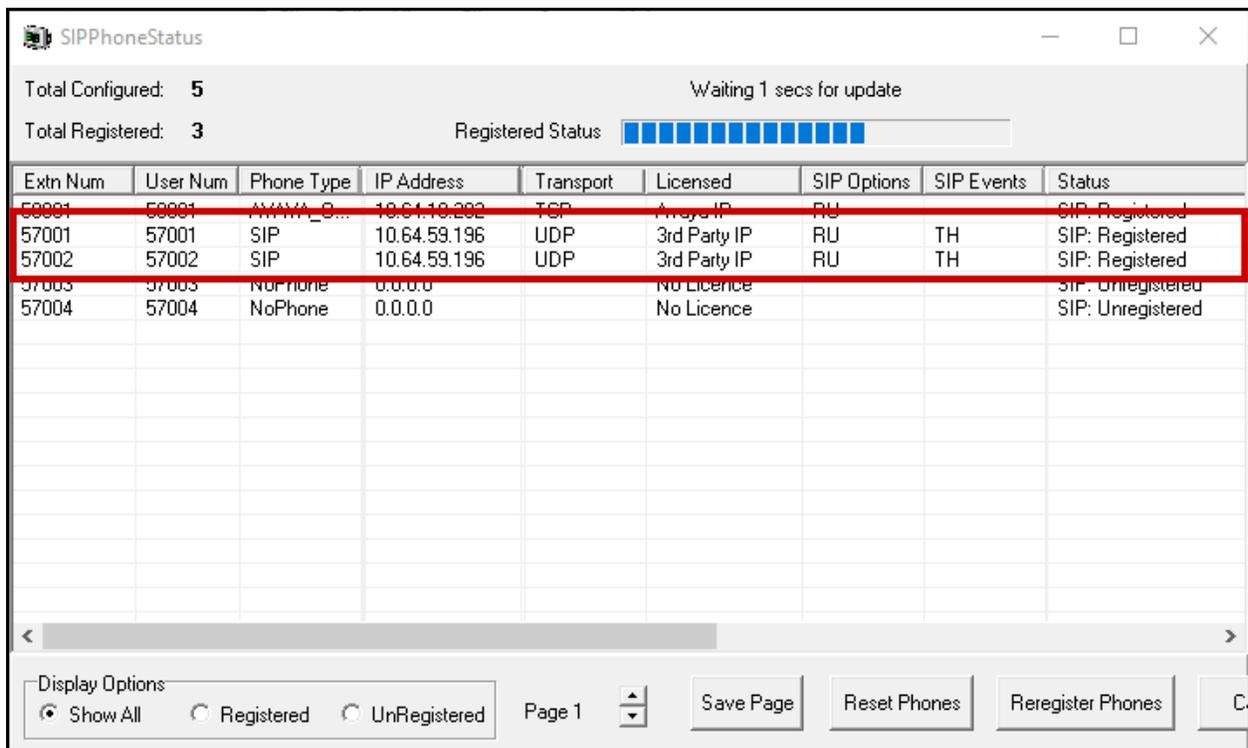
## 6. Configure iNEMSOFT iCAS CLASSONE® Dispatch Console

Installation and configuration of iNEMSOFT iCAS CLASSONE® Dispatch Console is done by designated iNEMSOFT engineers. Hence, no configuration is provided in this document.

## 7. Verification Steps

The following steps may be used to verify the configuration:

- Via Avaya IP Office SysMonitor application, SIP Messaging can be verified between Dispatch Console and IP Office
- Via Avaya IP Office SysMonitor application, the registration status of Dispatch Console can be verified. Navigate to **Status** → **SIP Phone Status**. The following screen displays successful registration of Dispatch Console Extensions with IP Office.



SIPPhoneStatus

Total Configured: 5  
Total Registered: 3

Registered Status: [Progress Bar]

Waiting 1 secs for update

Extn Num	User Num	Phone Type	IP Address	Transport	Licensed	SIP Options	SIP Events	Status
50001	50001	AWAY_B...	10.64.18.202	TCP	Avaya IP	RU		SIP: Registered
57001	57001	SIP	10.64.59.196	UDP	3rd Party IP	RU	TH	SIP: Registered
57002	57002	SIP	10.64.59.196	UDP	3rd Party IP	RU	TH	SIP: Registered
57003	57003	NoPhone	0.0.0.0		No Licence			SIP: Unregistered
57004	57004	NoPhone	0.0.0.0		No Licence			SIP: Unregistered

Display Options:  Show All  Registered  UnRegistered

Page 1

Save Page Reset Phones Reregister Phones

- Place calls to and from Dispatch Console and verify that the calls are successfully established with two-way talk path.
- Via IP Office System Status application, state of an active call can be verified. Select **Active Calls** on the left pane.

The screenshot displays the Avaya IP Office System Status application interface. The title bar indicates the system is running on IP Office Linux PC 11.0.0.1.0 build 8. The main window features a navigation pane on the left with options like System, Alarms (12), Extensions (5), Trunks (1), Active Calls, Resources, Voicemail, and IP Networking Locations. The 'Active Calls' section is expanded to show 'Call Details for Ca'. The main content area displays the following call details:

Call Details	
Call Ref: 10	Call length: 00:00:38
Originator	
Currently at:	Extn 50001, SIPUser1
Receive Jitter:	0ms
Receive Packet Loss Fraction:	0%
Dialed Digits:	57001
Codec:	G729 A
Media Stream:	RTP
Layer 4 Protocol:	TCP
Destination	
Currently at:	Extn 57001, ClassOne1
Codec:	G729 A
Media Stream:	RTP
Layer 4 Protocol:	UDP
Call target / Routing information	
Original Target:	Extn ClassOne1
Connection Type:	Direct Media
Call Recording:	No
Redirected to Twin:	No
Routed across SCN trunk:	No
Retargeting Count:	0
Trace Output:	
[Empty text area for trace output]	

At the bottom of the call details pane, there are several control buttons: Trace Clear, Pause, Back, Disconnect, Conference Details, Print..., and Save As... The system status bar at the bottom right shows the time as 5:50:34 PM and the user as Online.

## 8. Conclusion

iNEMSOFT CLASSONE® iCAS Dispatch Console was compliance tested with Avaya IP Office. iNEMSOFT CLASSONE® iCAS Dispatch Console functioned properly for feature and serviceability. During compliance testing, iNEMSOFT CLASSONE® iCAS Dispatch Console successfully registered with Avaya IP Office, placed and received calls to and from SIP, non-SIP telephones, and the PSTN.

## 9. Additional References

This section references the documentation relevant to these Application Notes. Additional Avaya product documentation is available at <http://support.avaya.com>.

[1] *Administering Avaya IP Office™ Platform Manager*, Release 11.0, May 2018.

Documentation related to Dispatch Console can be obtained directly from iNEMSOFT.

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