Avaya Solution & Interoperability Test Lab

Application Notes for DATEL Contact SWEET! Enterprise 5.4 with Avaya IP Office Server Edition 11.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for DATEL Contact SWEET! Enterprise 5.4 to interoperate with Avaya IP Office Server Edition 11.0.

DATEL Contact SWEET! Enterprise is a contact center management solution. In the compliance testing, DATEL Contact SWEET! Enterprise used the TFTP service and DevLink interfaces from Avaya IP Office Server Edition to obtain configuration and real-time data to produce measurements and reports on agents and hunt groups.

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

These Application Notes describe the configuration steps required for DATEL Contact SWEET! Enterprise (Contact SWEET!) 5.4 to interoperate with Avaya IP Office Server Edition 11.0.

Contact SWEET! is a contact center management solution. In the compliance testing, Contact SWEET! used the TFTP service and DevLink interfaces from IP Office to obtain configuration and real-time data to produce measurements and reports on agents and hunt groups.

The TFTP service was used by Contact SWEET! to obtain hunt groups and agent user data from IP Office, and the DevLink interface was used to obtain real-time call events for the hunt groups and agent users. The produced real-time measurements and reports were accessed via the DATEL UCCS Desktop client application.

The IP Office Server Edition configuration consisted of two IP Office systems, a primary Linux server and an expansion IP500V2 that were connected via a Small Community Network (SCN) trunk. In the compliance testing, one Contact SWEET! server was deployed with TFTP and DevLink connections to both IP Office systems.

All groups and agent users are required by Contact SWEET! to be configured on the primary IP Office system. For agents using telephones that registered to the expansion IP Office system, the Hot Desking feature was used to log into the primary IP Office system with primary agent user credentials.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the Contact SWEET! application, the application automatically sends TFTP requests to obtain configured agent users, groups, and group memberships from IP Office.

For the manual part of the testing, calls were made from the PSTN and from local users to the groups and agents. Necessary user actions such as answer/transfer were performed from the agent user telephones to generate DevLink events for the different call scenarios.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet connection to the Contact SWEET! server.

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.

2.1. Interoperability Compliance Testing

The compliance testing included feature and serviceability areas.

The feature testing focused on verifying the following on Contact SWEET!:

- Handling of TFTP responses for configured users, groups, and group membership information during application startup.
- Handling of TFTP responses for users and calls on regular intervals to determine agent state changes such as logged in/out and busy on personal/group calls.
- Handling of real-time DevLink event messages.
- Proper reporting of call scenarios involving log in, log out, do not disturb, busy, internal, external, inbound, outbound, group, non-group, drop, abandon, transfer, conference, group queue, overflow, fallback, multiple calls, multiple agents, and long duration.

The feature testing call flows included calls within a single IP Office system, as well as calls between the two IP Office systems.

The serviceability testing focused on verifying the ability of Contact SWEET! to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet connection to the Contact SWEET! server.

2.2. Test Results

All test cases were executed and verified. The following are observations on Contact SWEET! from the compliance testing:

- DevLink events vary slightly for agents with SIP telephones, as such, agents with SIP telephones are not supported in the current release.

- When an agent on the primary IP Office system placed a group call on hold, the Hold status was reflected in the Active Calls section of UCCS Desktop. However, when an agent on the expansion IP Office system placed a group call on hold, the Active Calls section continued to reflect the Connected status.

- In the event that a group call is transferred from an agent on the expansion IP Office system to an agent on the primary IP Office system, then Presented Calls and Handled Calls were incremented again.

- At the end of a conference scenario, depending on the order of party drops, the conference-from agent's state can be reflected as Handle or Unavailable in Agent State Compact and Agent State Grid. The incorrect state is cleared upon a subsequent agent state change such as going off-hook on the agent's telephone.

- The application does not support reflection of agent in wrap-up state as part of group call completion. The workaround is to use the hunt group disable/enable feature instead of the agent user wrap-up time setting for reflection of agent in busy wrap-up state.

- The current release of Contact SWEET! assumes the SCN line channel value in the DevLink event is always 250 plus the actual SCN line number, which is not guaranteed by IP Office. The recommendation is for the DATEL technician to verify the actual channel values and configure accordingly as part of initial deployment and subsequent upgrades.

- By design, multiple calls at a monitored agent are reflected in Live Call Viewer section of UCCS Desktop with one entry displayed for each call. However, when a call is on hold as part of an attended transfer scenario, then the held call is not reflected in Live Call Viewer.

2.3. Support

Technical support on Contact SWEET! can be obtained through the following:

- **Phone:** (724) 940-0400
- **Email:** support@datel-group.com

3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**. The detailed administration of general call center devices such as groups and agents are assumed to be in place and are not covered in these Application Notes.

In the compliance testing, Contact SWEET! monitored the groups and associated agent users shown in the table below. Note that all four agent users are members of both groups, and that agent users 21091 and 21092 are used by agents with telephones that registered to the expansion IP Office system.

Device Type	Device Number/Extension
Primary	
Groups	21991, 21992
Phone Extensions	21031, 21032
Agent Users	21031, 21032, 21091, 21092
Expansion	
Phone Extensions	22020, 22031

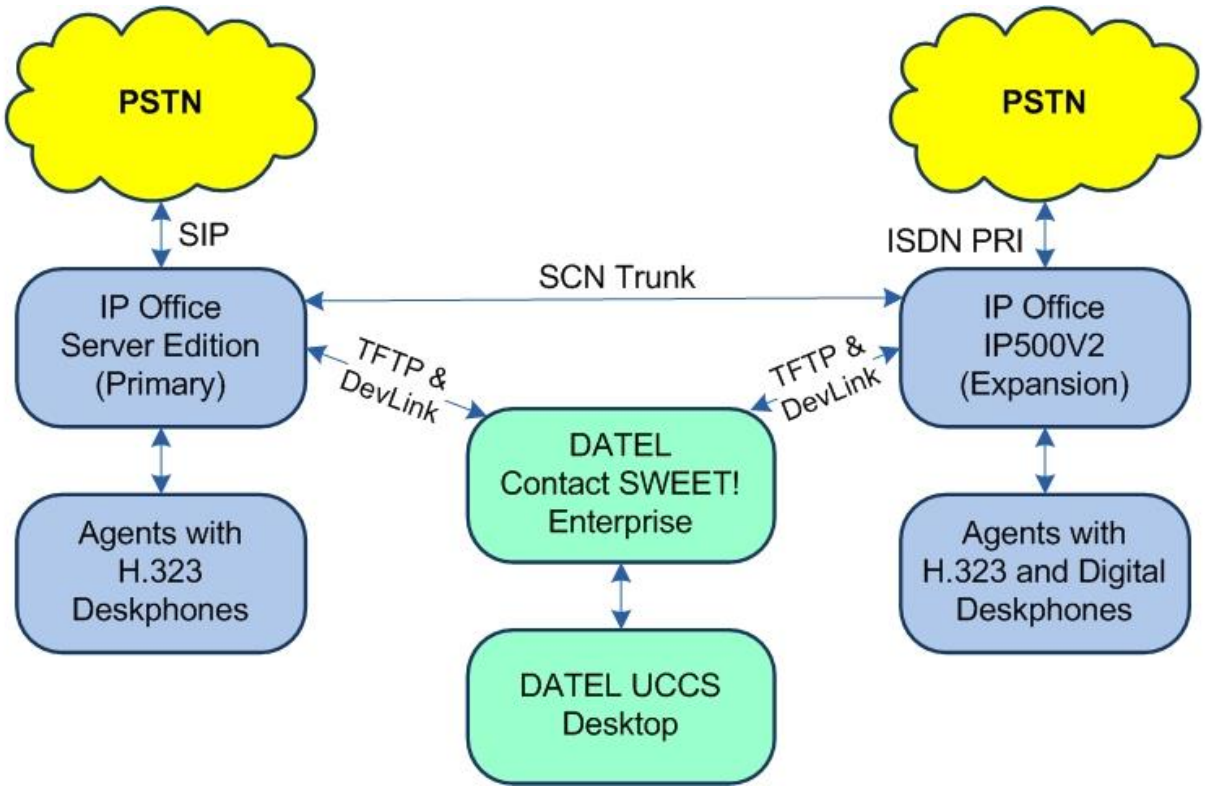


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office Server Edition (Primary) in Virtual Environment	11.0.4.1.0
Avaya IP Office on IP500V2 (Expansion)	11.0.4.1.0
Avaya 1408 Digital Deskphone	NA
Avaya 1608-I & 1616-I IP Deskphones (H.323)	1.3120
Avaya 9608 IP Deskphones (H.323)	6.8202
DATEL Contact SWEET! Enterprise on Windows Server 2016 • Collection • Engine • DTL_Overwatch • Avaya DevLink (devlink.dll)	5.4.3 Standard 5.4.3 5.4.3 5.3.8 1.0.0.5
DATEL UCCS Desktop on Windows 10 Pro	5.4.3

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

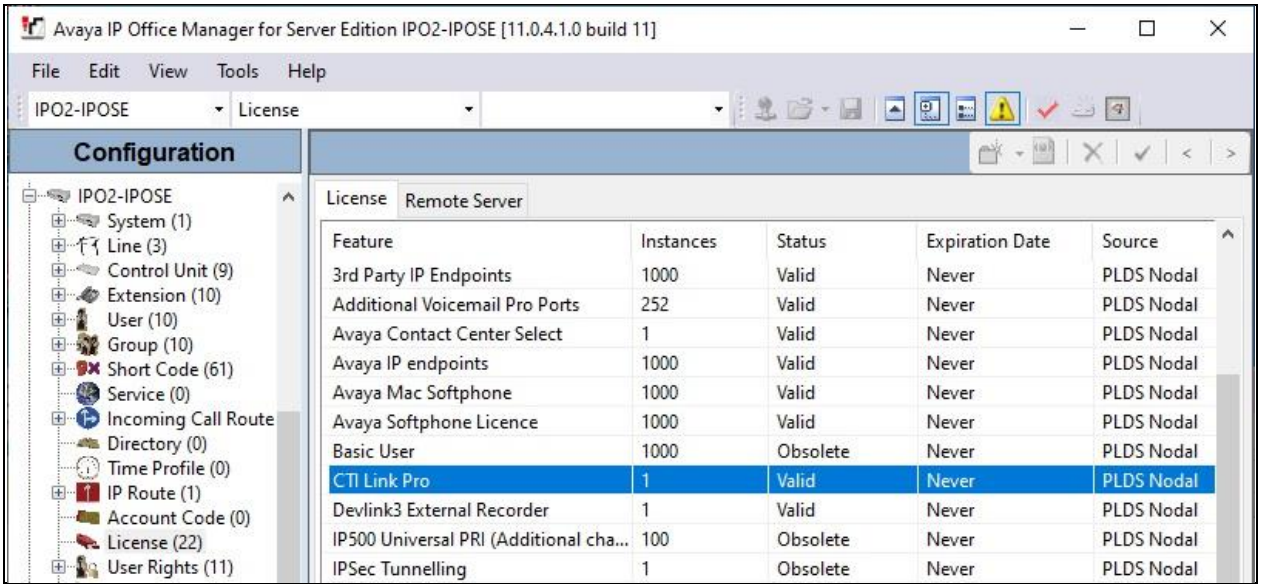
This section provides the procedures for configuring IP Office. Note that all procedures apply to both the primary and expansion IP Office systems.

- Verify licenses
- Administer agent users
- Obtain SCN line numbers
- Administer security settings

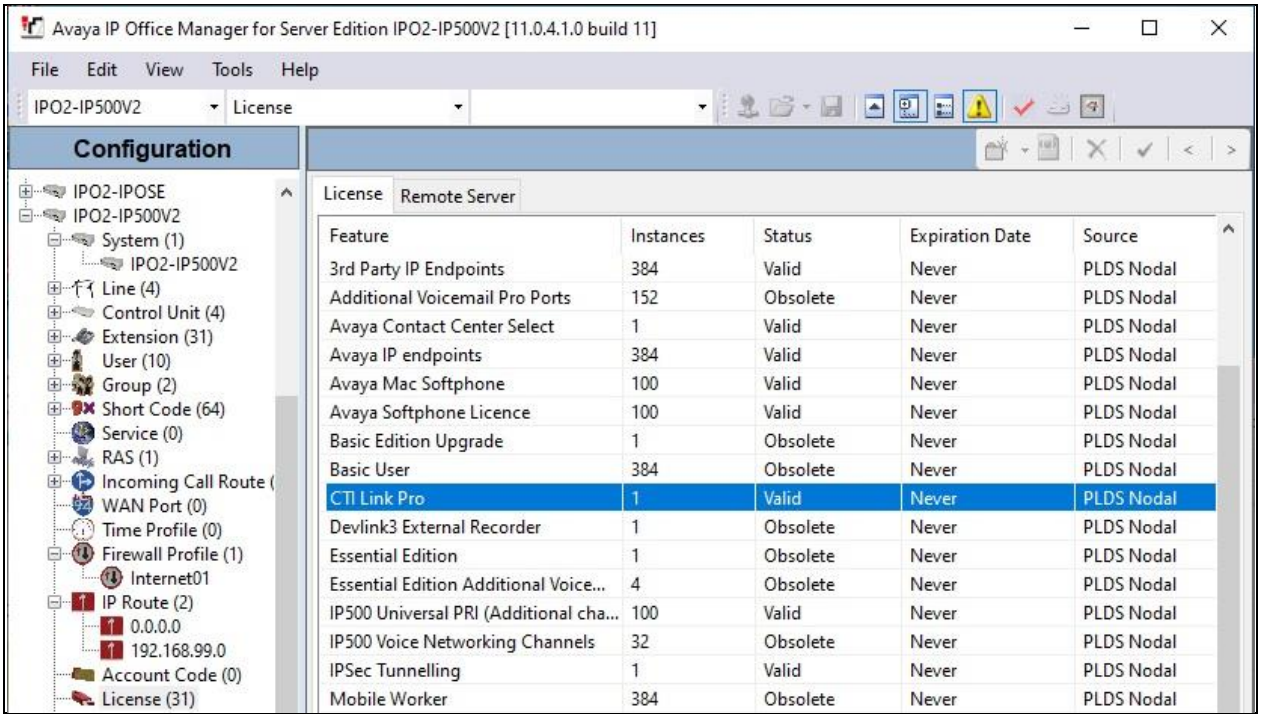
5.1. Verify Licenses

From a PC running the IP Office Manager application, select **Start → All Programs → IP Office → Manager** to launch the application. Select the primary IP Office system, and log in using the appropriate credentials. The **Avaya IP Office Manager for Server Edition IPO2-IPOSE** screen is displayed, where **IPO2-IPOSE** is the name of the primary IP Office system.

From the configuration tree in the left pane, select the primary IP Office system, in this case **IPO2-IPOSE**, followed by **License** to display licenses in the right pane. Verify that there is a license for **CTI Link Pro**, and with license **Status** being "Valid", as shown below.

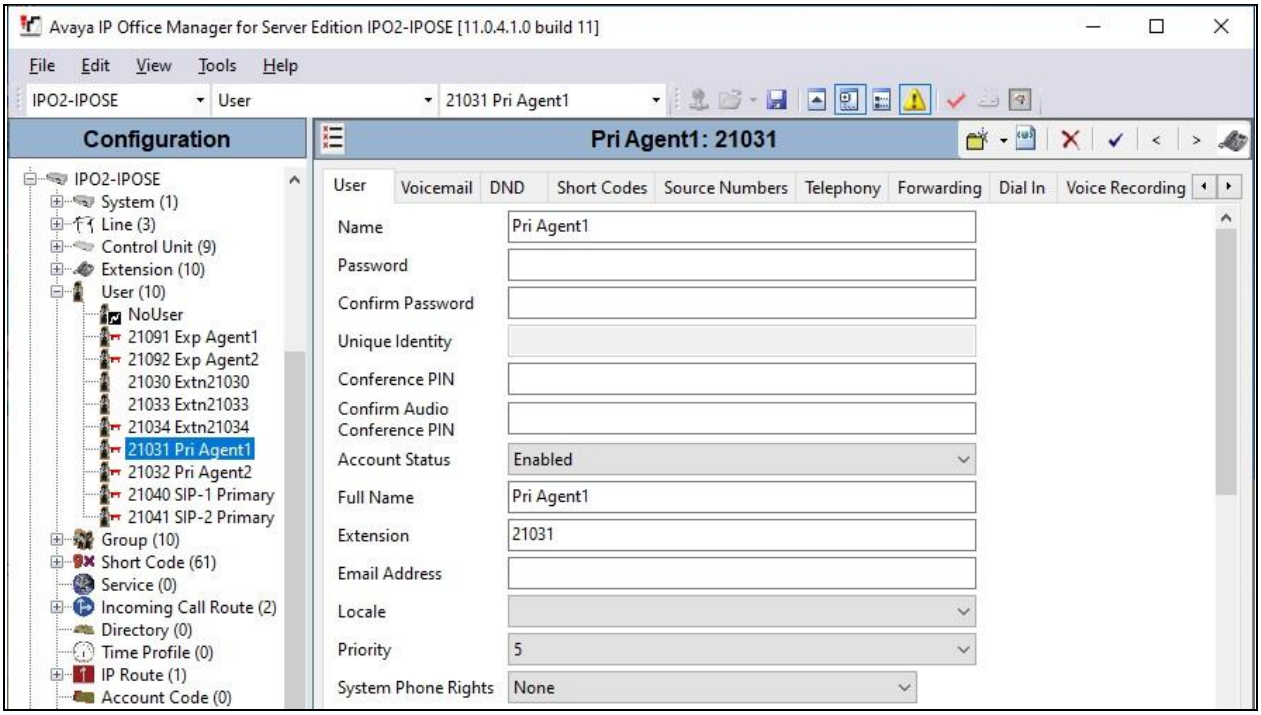


From the configuration tree in the left pane, select the expansion IP Office system, in this case **IPO2-IP500V2**, followed by **License** to display licenses in the right pane. Verify that there is a **CTI Link Pro** license, and with the license **Status** being "Valid", as shown below.



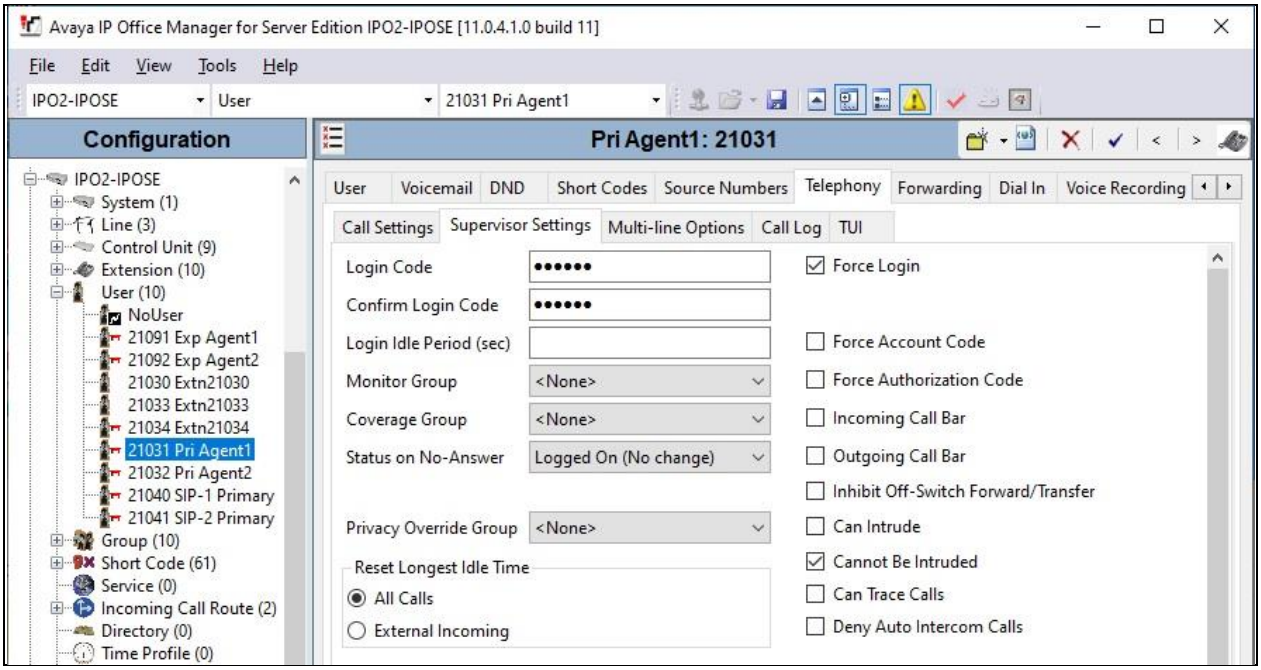
5.2. Administer Agent Users

From the configuration tree in the left pane, under the primary IP Office system, select the first agent user from **Section 3**, in this case "21031". Make certain **Full Name** is configured, which is used by Contact SWEET!.



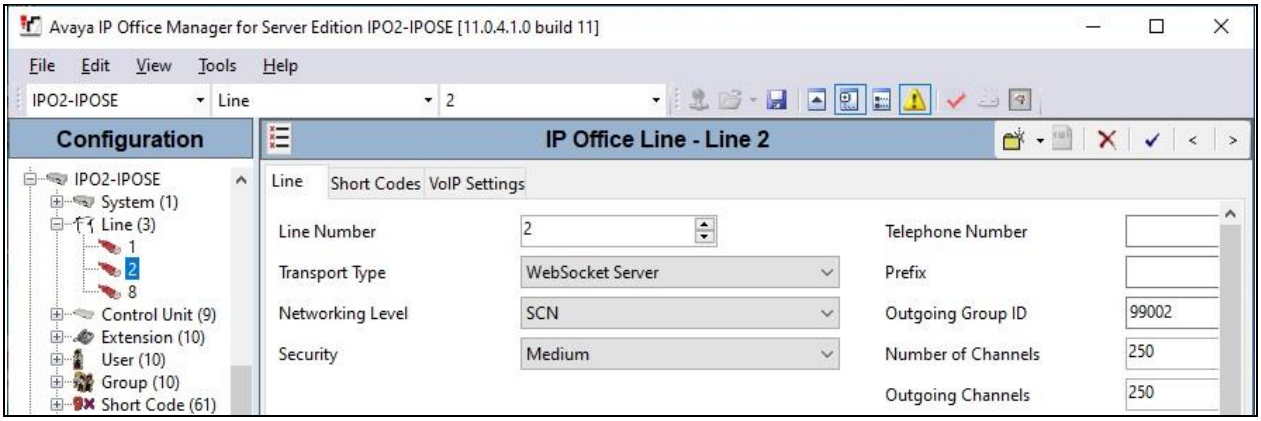
Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Set **Login Code** and **Confirm Login Code** to the desired value, and check **Force Login**, as required by Contact SWEET!.

Repeat this for all agent users from **Section 3**. In the compliance testing, four agent users with extensions 21031, 21032, 21091, 21092 were configured.

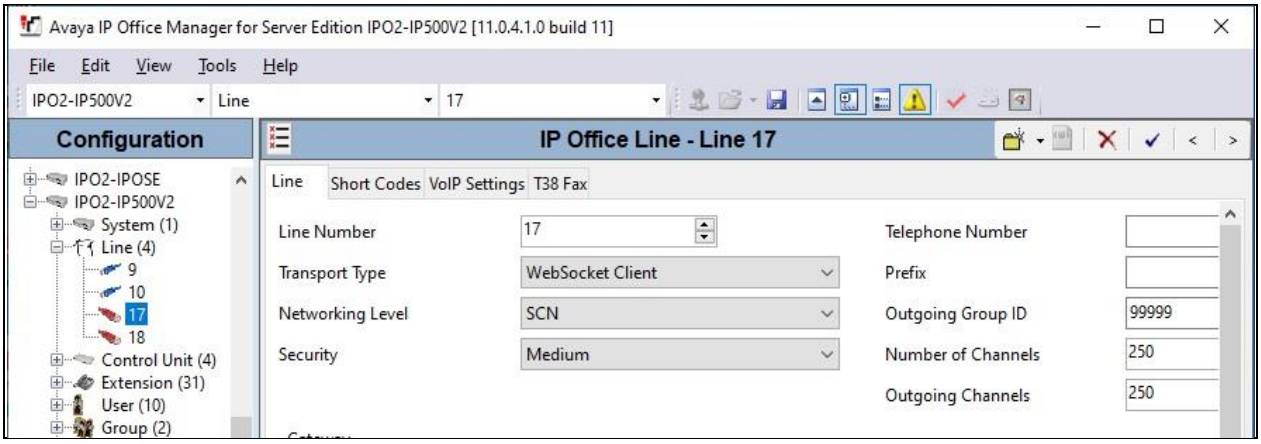


5.3. Obtain SCN Line Numbers

From the configuration tree in the left pane, under the primary IP Office system, select the line used for SCN connection with the expansion IP Office, in this case line "2". Make a note of the line number, which will be used later to configure Contact SWEET!.



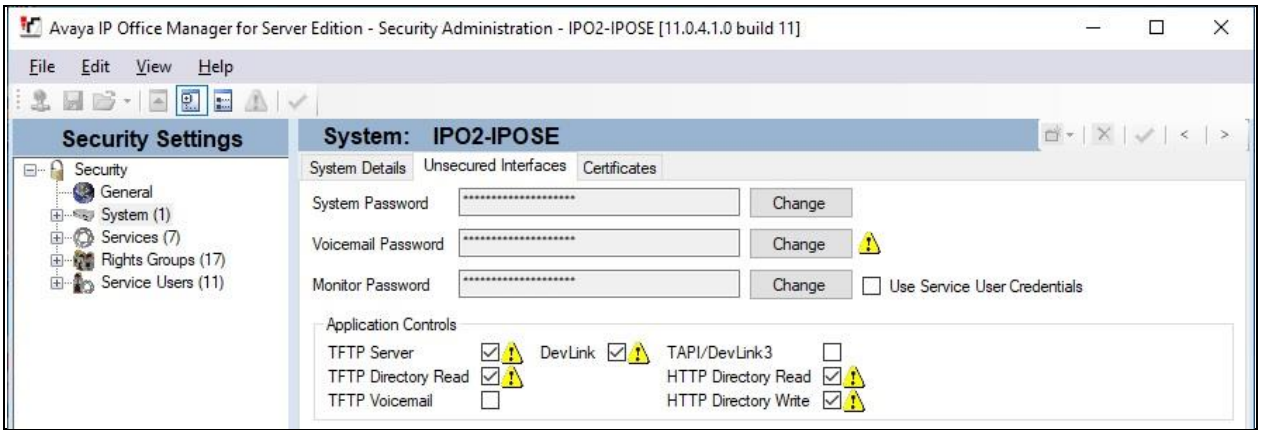
Repeat this section to obtain the line number from the expansion IP Office system used for SCN connection to the primary IP Office system, in this case line "17", as shown below.



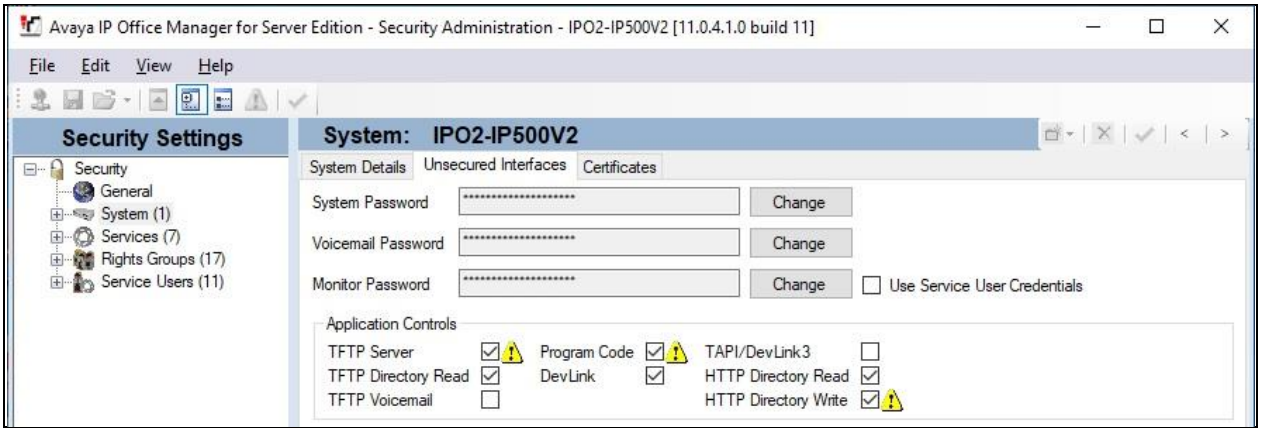
5.4. Administer Security Settings

From the configuration tree in the left pane, select the primary IP Office system, followed by **File → Advanced → Security Settings** from the top menu.

The **Avaya IP Office Manager for Server Edition – Security Administration - IPO2-IPOSE** screen is displayed, where **IPO2-IPOSE** is the name of the primary IP Office system. Select **Security → System** to display the **System** screen in the right pane. Select the **Unsecured Interfaces** tab, and check **TFTP Directory Read** and **DevLink** as shown below.



Repeat this section to enable **TFTP Directory Read** and **DevLink** for the expansion IP Office system.



6. Configure DATEL Contact SWEET! Enterprise

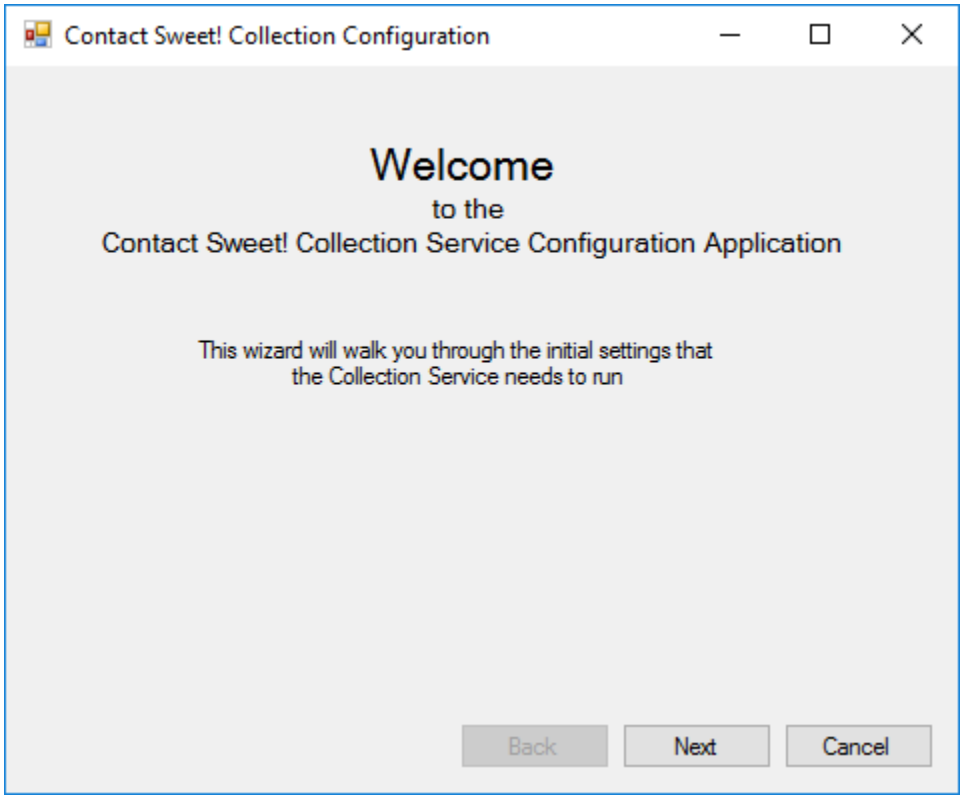
This section provides the procedures for configuring Contact SWEET!. The procedures include the following areas:

- Administer Collection
- Administer Engine
- Launch UCCS Desktop
- Administer licensed queues

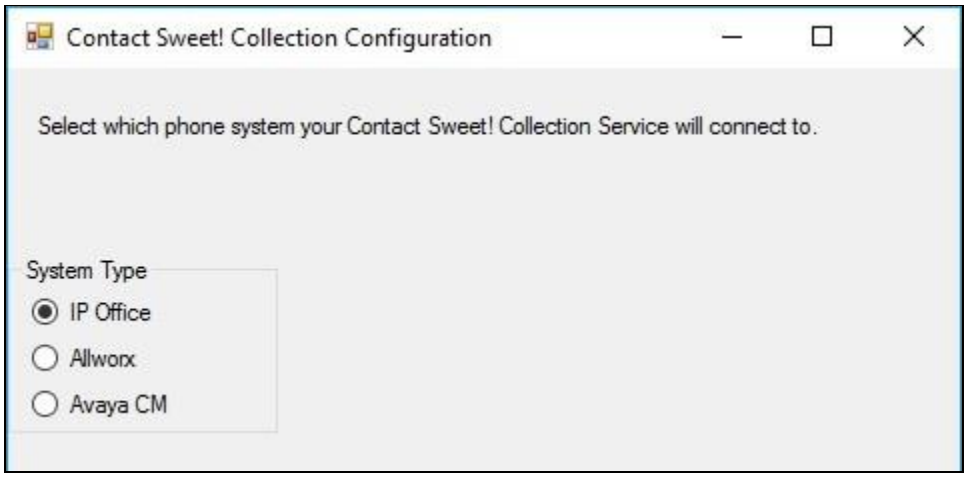
The configuration of Contact SWEET! is typically performed by DATEL support technicians. The procedural steps are presented in these Application Notes for informational purposes.

6.1. Administer Collection

As part of the Collection component installation, the **Contact Sweet! Collection Configuration** welcome screen below is displayed.

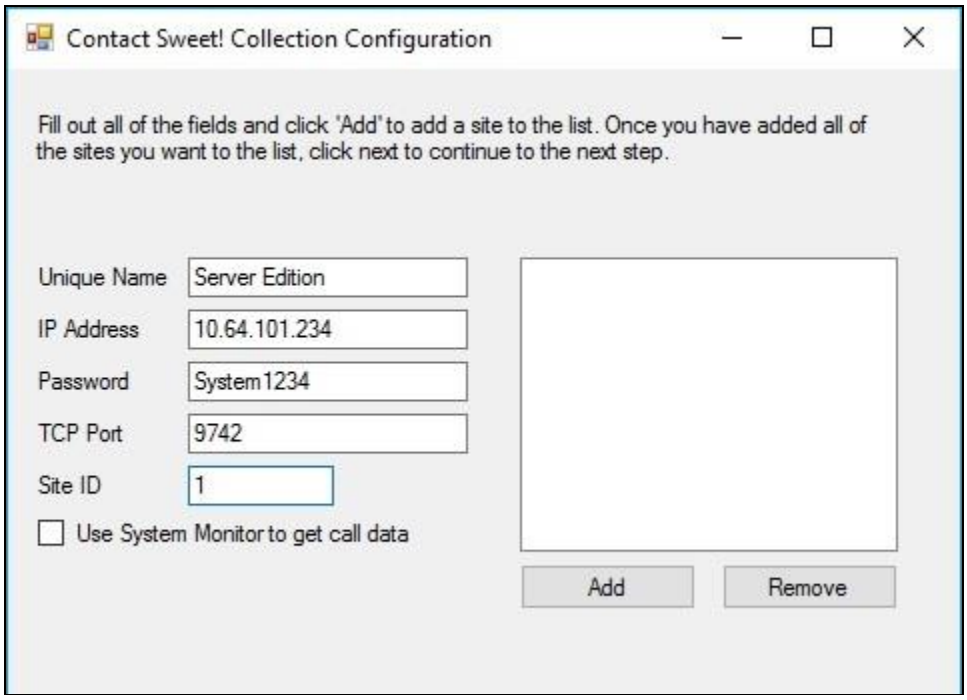


Proceed until the screen below is displayed. For **System Type**, select **IP Office**.

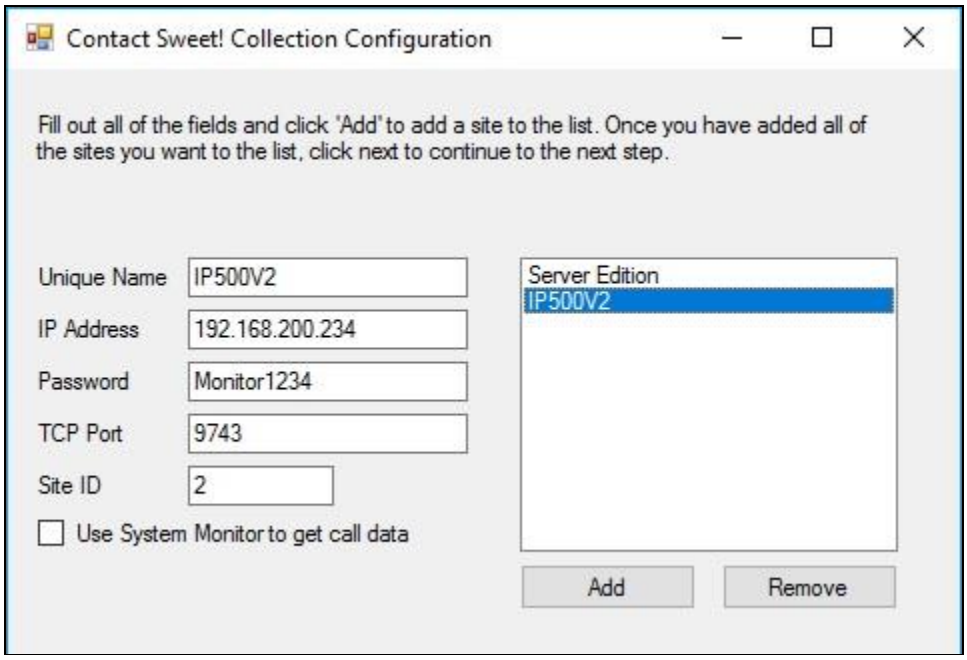


Proceed until the screen below is displayed. Enter the following values for the specified fields and retain the default values for the remaining fields. Click **Add** to add the entry.

- **Unique Name:** A desired and unique name.
- **IP Address:** The IP address of the primary IP Office system.
- **Password:** The Monitor password of the primary IP Office system.
- **TCP Port:** An available TCP port, in this case "9742".
- **Site ID:** An available site ID, in this case "1".

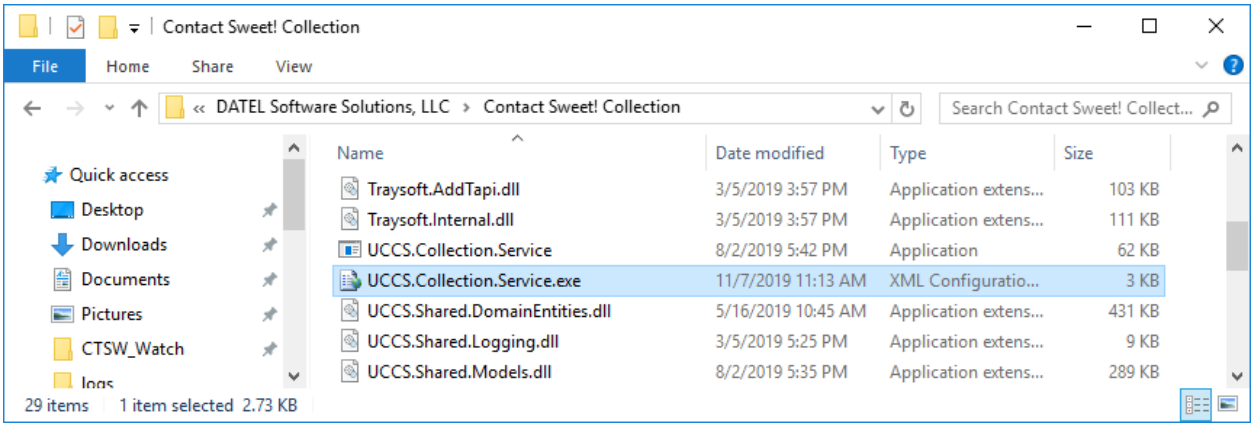


Repeat the procedures above to add an entry for the expansion IP Office system. The screen below shows the values used for the entry associated with the expansion IP Office system.

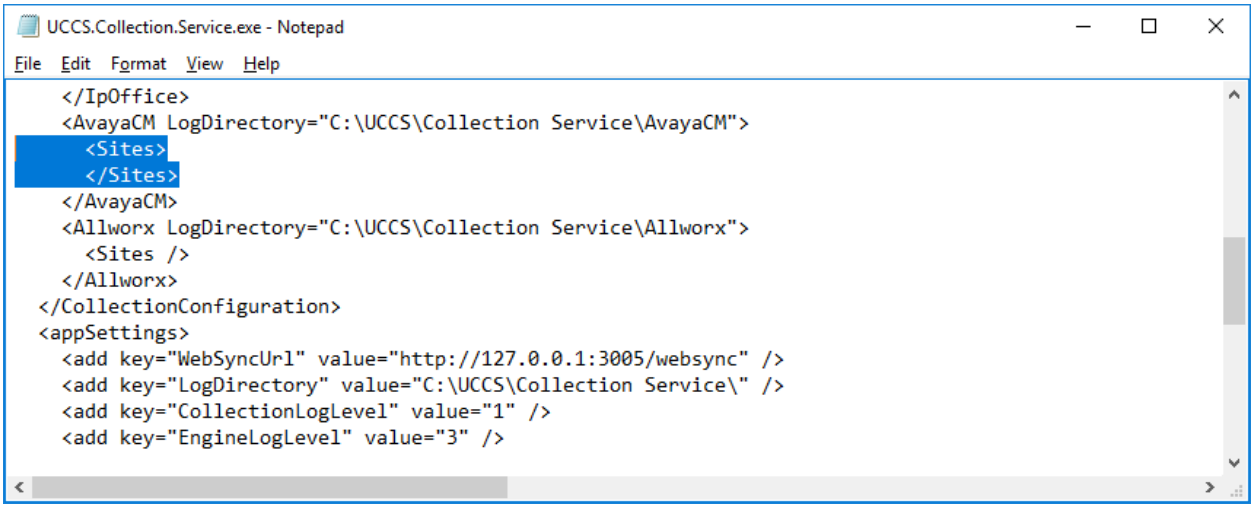


The screen below is displayed next. Check **Auto Sync Enabled** and retain the default values in the remaining fields. Continue to finish the Collection installation.

From the Contact SWEET! server, navigate to the **C:\Program Files (x86)\DATEL Software Solutions, LLC\Contact Sweet! Collection** directory to locate the **UCCS.Collection.Service.exe** configuration file shown below.



Open the **UCCS.Collection.Service.exe** file with the Notepad application. Navigate to the **AvayaCM LogDirectory** sub-section. Set the two **Sites** lines exactly as shown below.

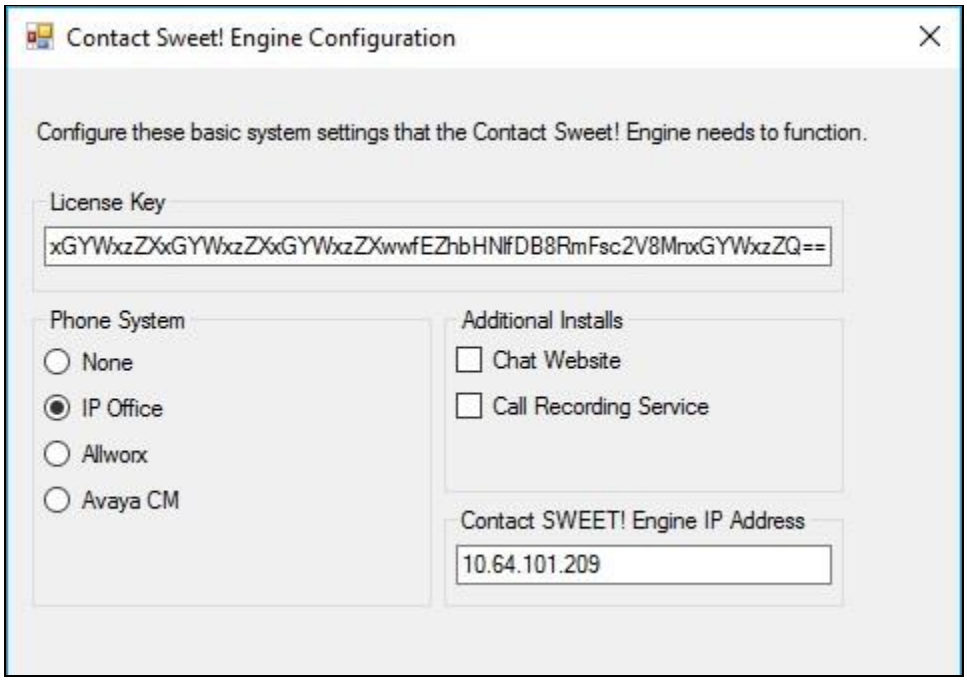


6.2. Administer Engine

As part of the Engine component installation, the **Contact Sweet! Engine Configuration** welcome screen below is displayed.

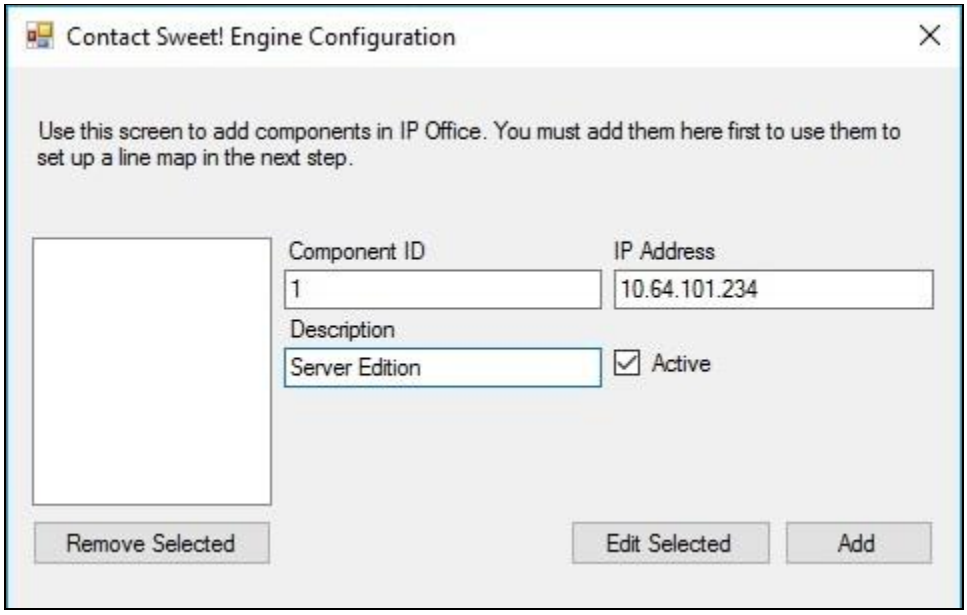
Proceed until the screen below is displayed. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **License Key:** The applicable license key.
- **Phone System:** "IP Office"
- **Contact SWEET! Engine IP Address:** IP address of the Contact SWEET! server.

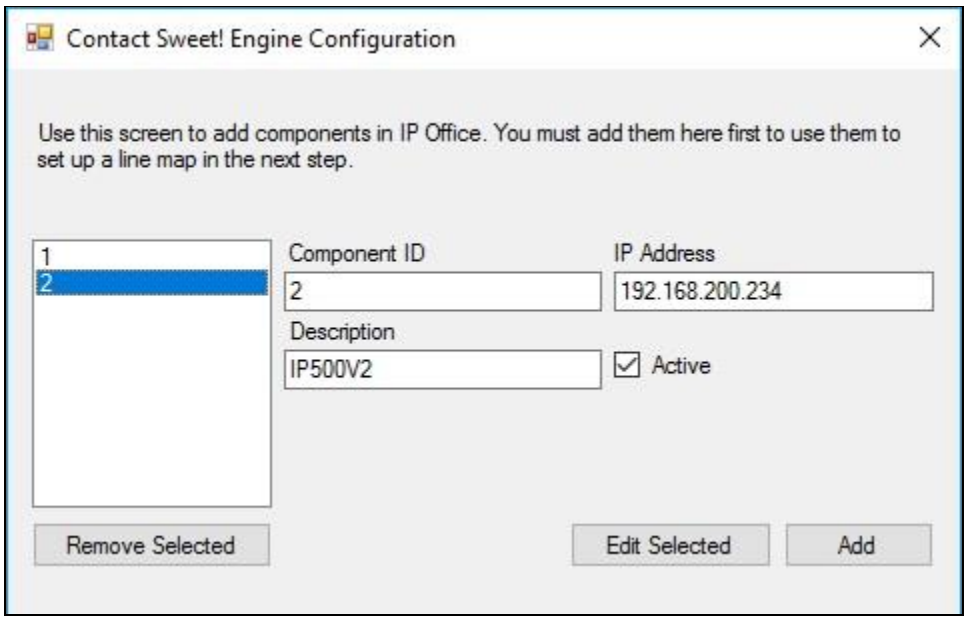


Proceed until the screen below is displayed. Enter the following values for the specified fields and retain the default values for the remaining fields. Click **Add** to add the entry.

- **Component ID:** The site ID for the primary IP Office system from **Section 6.1**.
- **IP Address:** The IP address of the primary IP Office system.
- **Description:** The unique name for the primary IP Office system from **Section 6.1**.
- **Active:** Check this field.



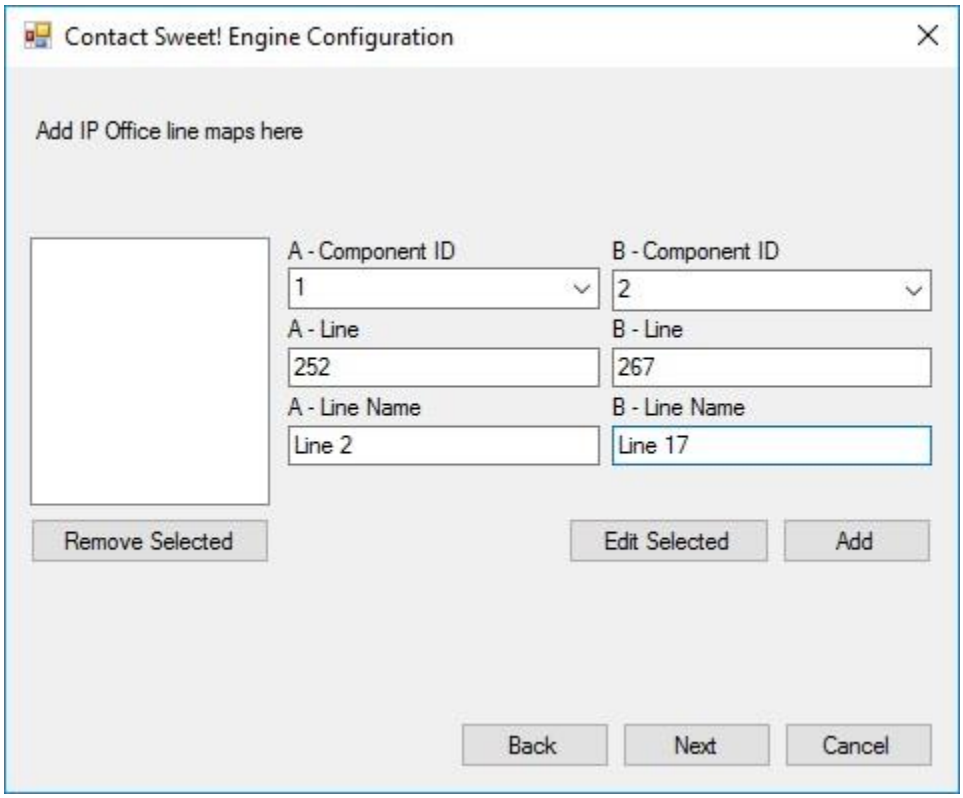
Repeat the procedures above to add an entry for the expansion IP Office system. The screen below shows the values used for the entry associated with the expansion IP Office system.



The screen below is displayed next. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **A - Component ID:** The site ID for the primary IP Office system from **Section 6.1**.
- **B - Component ID:** The site ID for the expansion IP Office system from **Section 6.1**.
- **A - Line:** 250 + SCN line number for primary IP Office from **Section 5.3**.
- **B - Line:** 250 + SCN line number for expansion IP Office from **Section 5.3**.
- **A - Line Name:** A descriptive name.
- **B - Line Name:** A descriptive name.

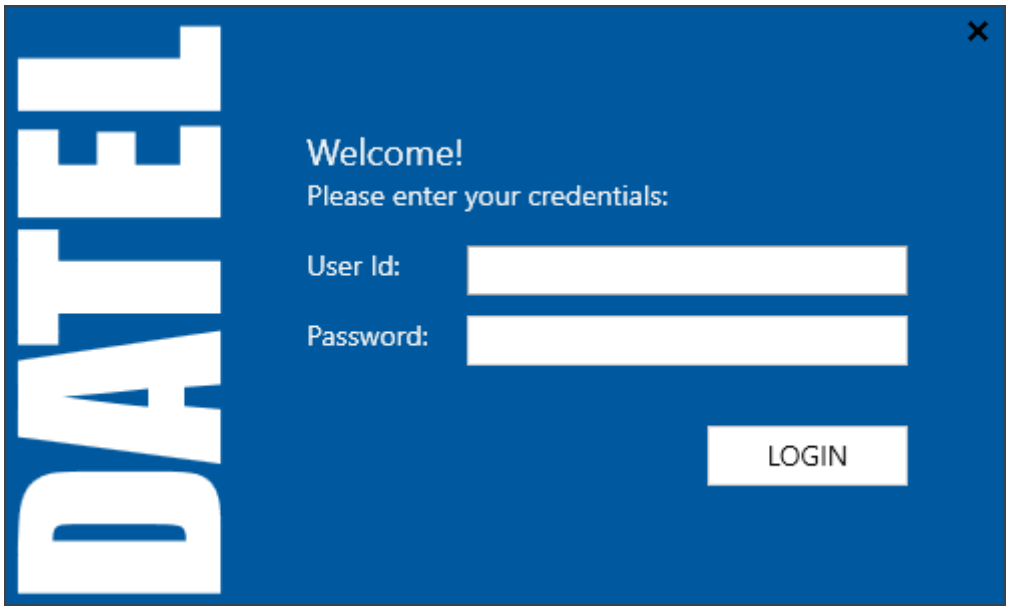
Click **Add** to add the entry and continue to finish the Collection installation.



6.3. Launch UCCS Desktop

From the PC running the UCCS Desktop application, double-click on the icon shown below, which was created as part of the UCCS Desktop installation.

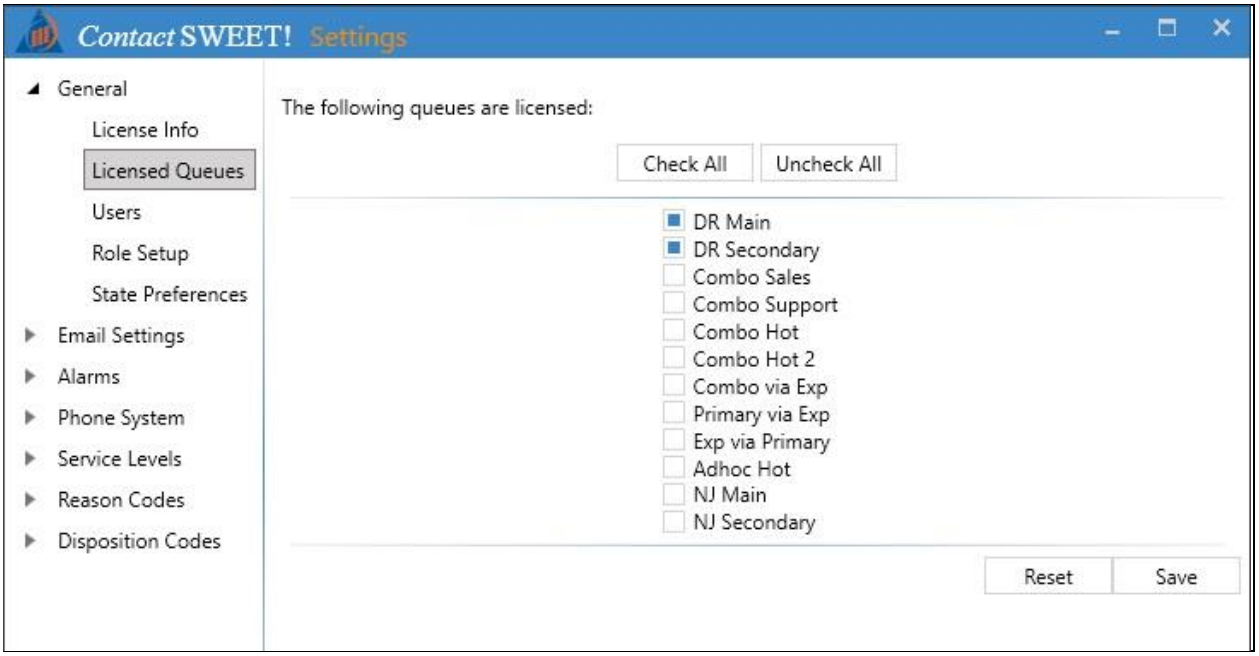
The screen below is displayed. Log in using the administrator credentials.



6.4. Administer Licensed Queues

The **Contact SWEET! Main** screen below is displayed. Click on the **Settings** icon shown below.

The **Contact SWEET! Settings** screen is displayed next. Select **General → Licensed Queues** to display all groups obtained from the IP Office systems via the TFTP interface. Select the desired groups to monitor and to apply license, in this case "DR Main" and "DR Secondary".

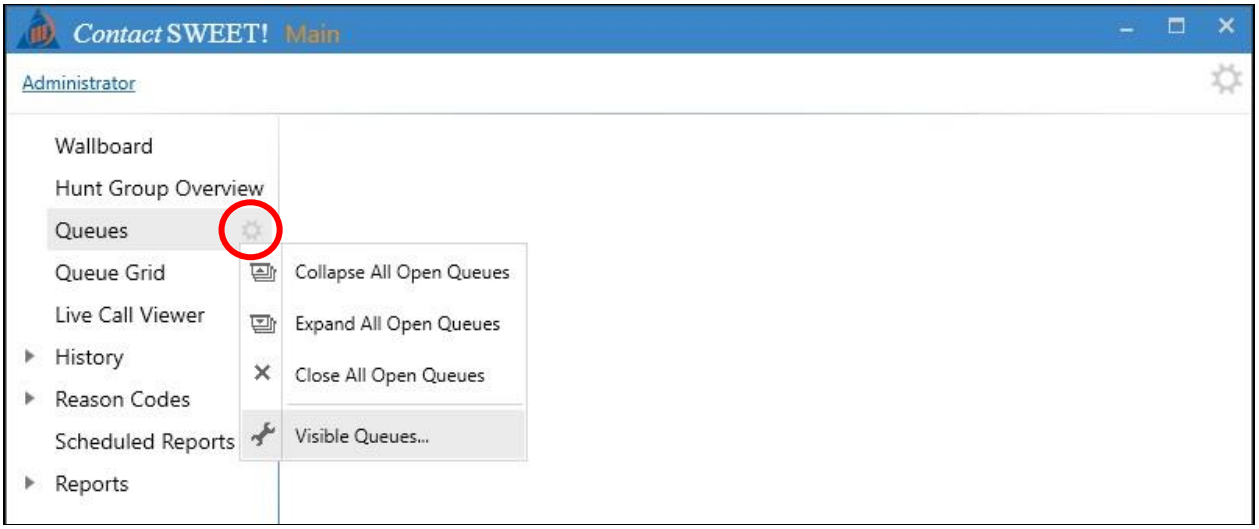


7. Verification Steps

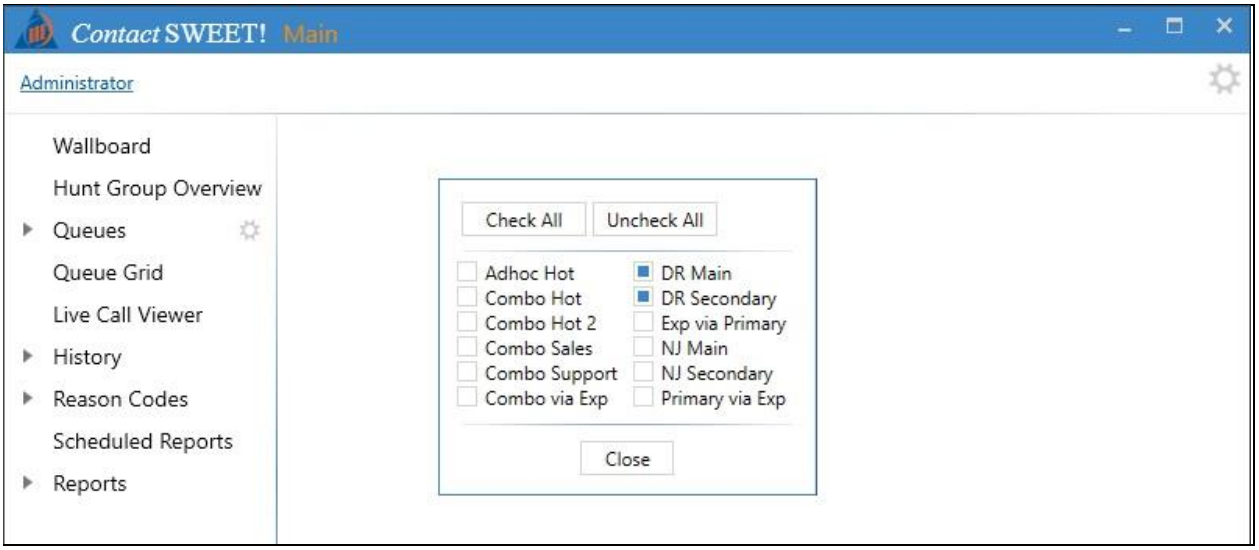
This section provides the tests that can be performed to verify proper configuration of IP Office and Contact SWEET!.

7.1. Verify Primary

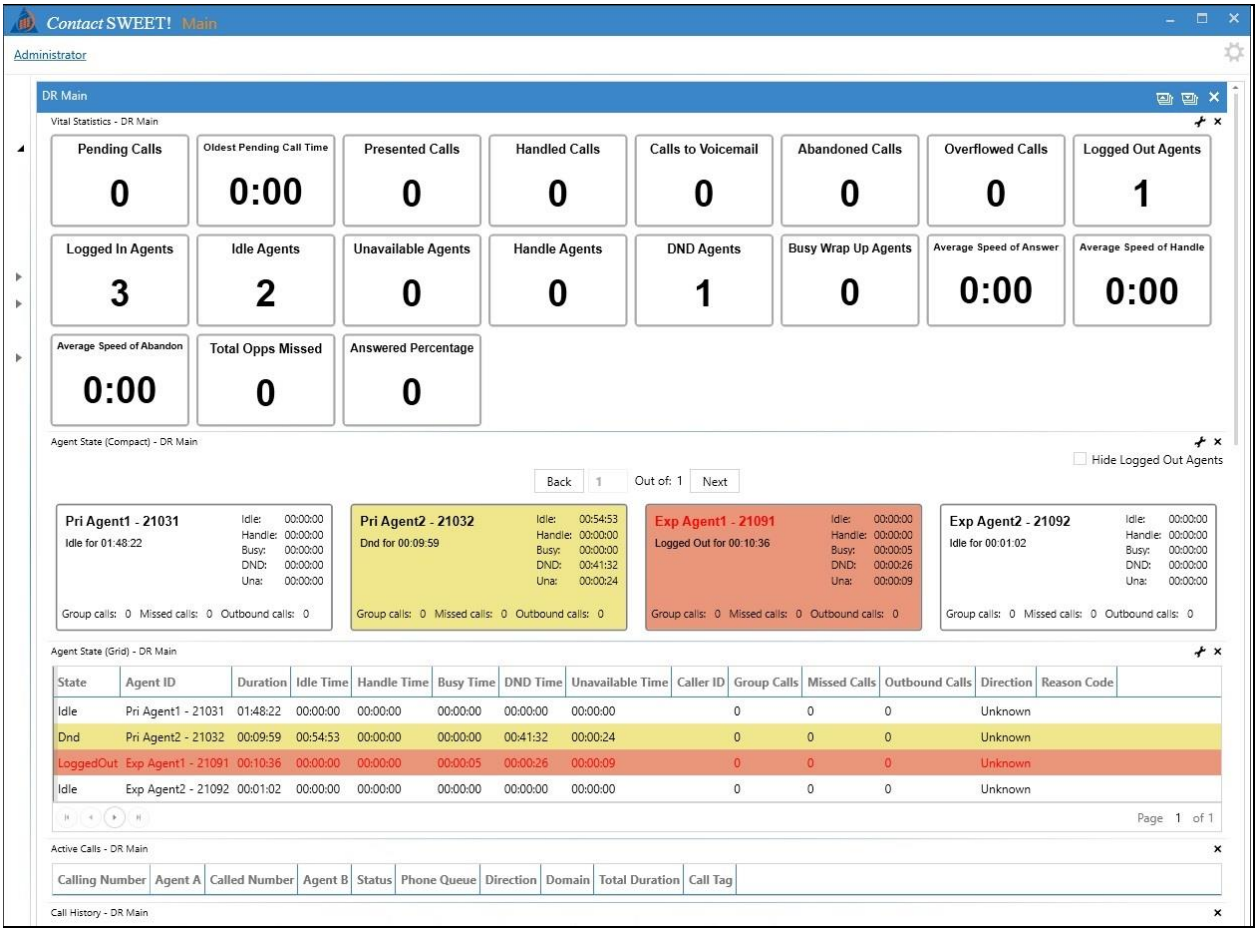
Follow the procedures in **Section 6.3** to launch the UCCS Desktop application and log in using appropriate credentials. Click on the **Queue Visibility Settings** icon shown below and select **Visible Queues** from the drop-down list.



The screen is updated with a pop-up box displaying all groups obtained from the IP Office systems via the TFTP interface. Select the desired groups to monitor that are also licensed in **Section 6.4**.



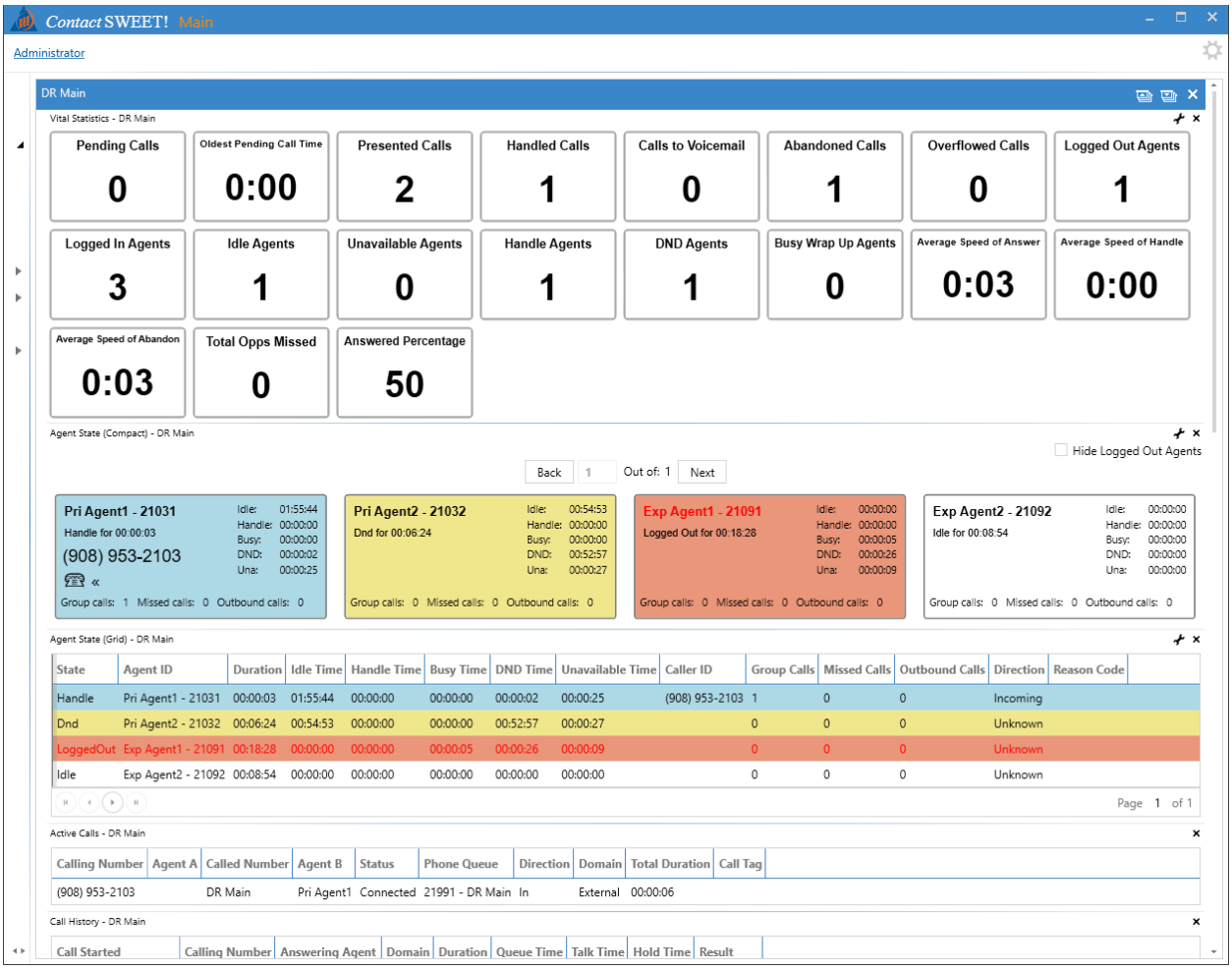
Verify that the screen is updated with proper reflection of group statistics and agent states as shown below.



Establish a call from the PSTN to a monitored group with answering agent on the primary IP Office system.

Select **Queues → DR Main** from the left pane, where **DR Main** is the pertinent monitored group. Verify that the relevant parameters under the **Vital Statistics** sub-section are updated to reflect the connected group call.

Verify that the **Agent State (Compact)** and **Agent State (Grid)** reflect the connected call with the answering agent, in this case "21031", along with the calling party number, as shown below.

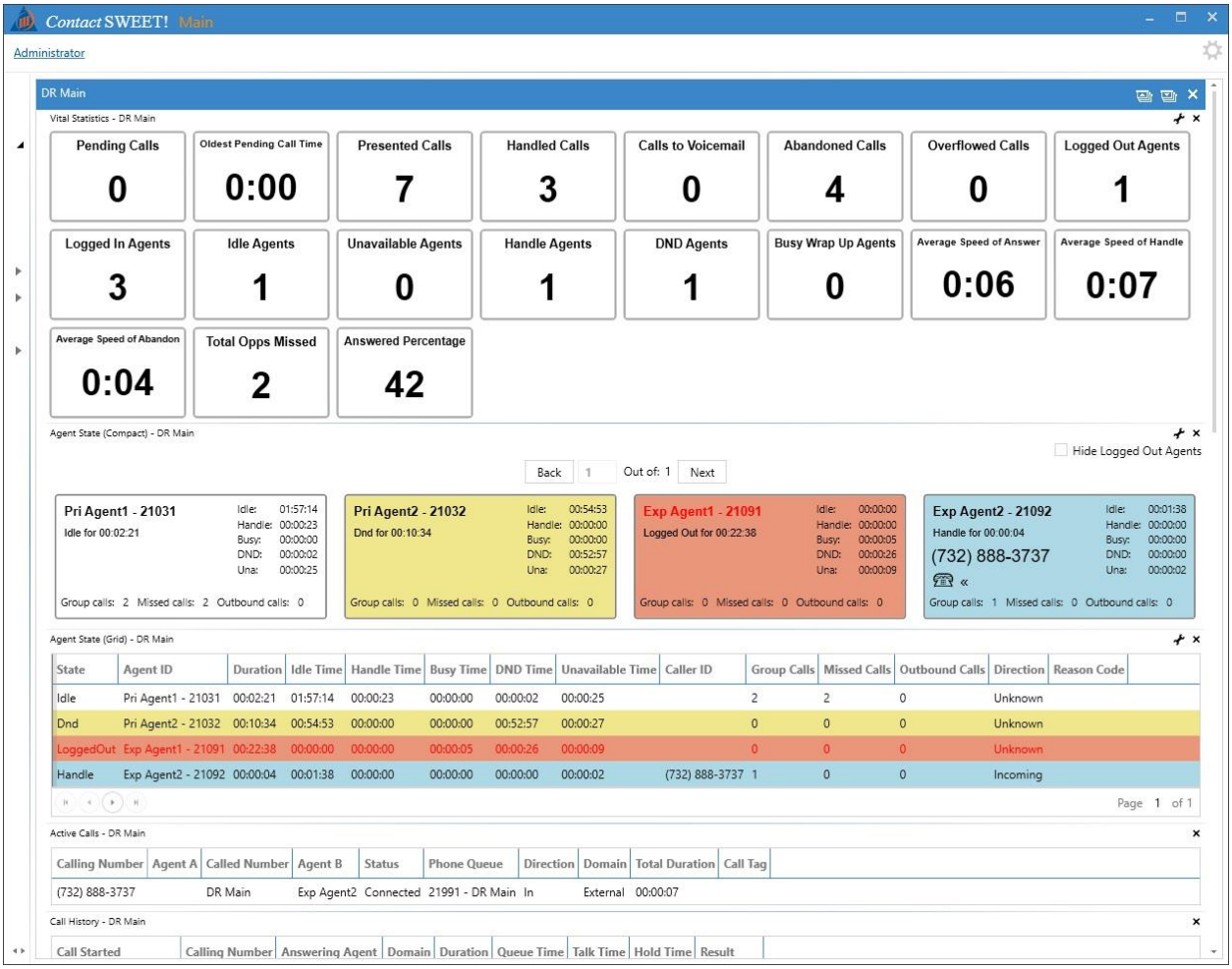


7.2. Verify Expansion

Establish a call from the PSTN to a monitored group with answering agent on the expansion IP Office system.

Select **Queues → DR Main** from the left pane, where **DR Main** is the pertinent monitored group. Verify that the relevant parameters under the **Vital Statistics** sub-section are updated appropriately to reflect the connected group call.

Verify that the **Agent State (Compact)** and **Agent State (Grid)** reflect the connected call with the answering agent, in this case "21092", along with the calling party number, as shown below.



8. Conclusion

These Application Notes describe the configuration steps required for DATEL Contact SWEET! Enterprise 5.4 to successfully interoperate with Avaya IP Office Server Edition 11.0. All feature and serviceability test cases were completed with an observation noted in **Section 0**.

9. Additional References

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

1. *Administering Avaya IP Office™ Platform with Manager*, Release 11.0, February 2019, available at http://support.avaya.com.

2. *Contact SWEET! User's Guide*, March 2019, available upon request to DATEL Support.

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.