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Avaya Solution & Interoperability Test Lab

Application Notes for Oak Innovation Evolve 2.0 with Avaya IP Office 9.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Oak Innovation Evolve 2.0 to interoperate with Avaya IP Office 9.1. Oak Innovation Evolve is a web-based call center management solution.

In the compliance testing, Oak Innovation Evolve used the TFTP, DevLink, and TAPI interfaces from Avaya IP Office to provide real-time group and agent status, and basic feature and call control via the client web interface.

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.

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1. Introduction

These Application Notes describe the configuration steps required for Oak Innovation Evolve 2.0 to interoperate with Avaya IP Office 9.1. Oak Innovation Evolve is a web-based call center management solution.

In the compliance testing, Oak Innovation Evolve used the TFTP, DevLink, and TAPI interfaces from Avaya IP Office to provide real-time group and agent status, and basic feature and call control via the client web interface.

The TFTP interface is used by Oak Innovation Evolve to obtain IP Office group and agent information, the DevLink interface is used to obtain real-time group and agent status, and the TAPI 2 in third party mode interface is used to support agent login/logout, do not disturb, intrude, silent listen, drag call, and web phone features from the client web interface.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the Evolve application, the application automatically obtained lists of groups and users from IP Office.

For the manual part of the testing, calls were placed manually to groups and agents. Evolve used DevLink event messages to monitor group and agent activities, and provided real-time status via the client web interface. Necessary user actions such as do not disturb and answer call were performed from the client web interface to test various call scenarios.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet connection to Evolve.

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.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on Evolve:

- Proper handling of real-time TAPI and DevLink event messages.

- Proper handling of TAPI requests and responses for log in, log out, do not disturb, make call, intrude, silent listen, redirect call, answer call, and drop call.

- Handling of TFTP queries and responses for configured users, hunt groups, and hunt group membership information.

- Proper reporting of call scenarios involving log in, log out, inbound, outbound, internal, external, group, personal, answer, drop, hold/reconnect, do not disturb, park/unpark, queuing, abandon calls, voicemail, multiple calls, multiple agents, long duration, transfer, and conference.

The serviceability testing focused on verifying the ability of Evolve to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet connection to Evolve.

2.2. Test Results

All test cases were executed. The following were observations on Evolve from the compliance testing.

- The current release only supports log in and log out for agent users with 4 digits extension or less. In the compliance testing, a 4 digits extension and user were created separately for testing log in and log out.

- The whisper feature is not supported in the current release.

- The drag call feature is only for redirecting of a group call that is ringing at an agent.

- By design, the group sub-section of the Queue Status page shows the totals for the selected group, whereas the agent sub-section of the page shows the combined totals for all groups.

- After the supervisor intruded onto an active call at an agent, the supervisor web phone reflects the connected call without the Hangup option, and hence cannot drop the call via web phone. The workaround is for the supervisor to use the telephone to drop the call.

- When an active call was dropped post a 30 seconds Ethernet outage to the Evolve server, both the Answer and Lost counts were incremented post link recovery.

- When an active call was dropped during a 60 seconds Ethernet outage to the Evolve server, the agent web phone continued to reflect the non-existent call post link recovery. The workaround for the agent is to press the F5 function key for the browser to refresh and resync with the server.

2.3. Support

Technical support on Evolve can be obtained through the following:

- **Phone:** +1 0845 1362 625
- **Email:** customerservice@oak.co.uk
- **Web:** http://oak.co.uk/support

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3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**.

The detailed administration of call center devices is not the focus of these Application Notes and will not be described. The call center devices used in the compliance testing are shown in the table below.

Device Type	Extension
Hunt Groups	29000, 29001
Agent Users	20031, 20032
Supervisor	20035
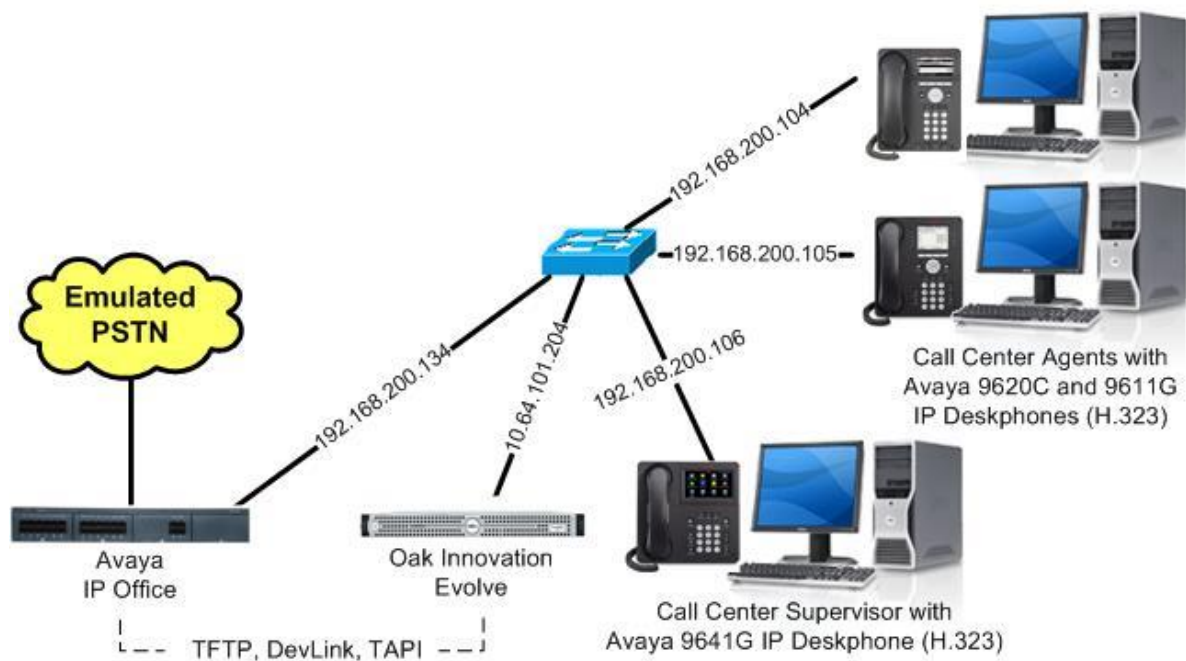
Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office on IP500V2	9.1 SP7 (9.1.701.1)
Avaya 9620C IP Deskphone (H.323)	3.270B
Avaya 9611G & 9641G IP Deskphones (H.323)	6.6302
Oak Innovation Evolve on Windows 7 Enterprise • Avaya IP Office TAPI2 Driver (tspi2w_64) • Avaya DevLink (devlink.dll)	2.0.4.0 SP1 1.0.0.43 1.0.0.5

Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 only.

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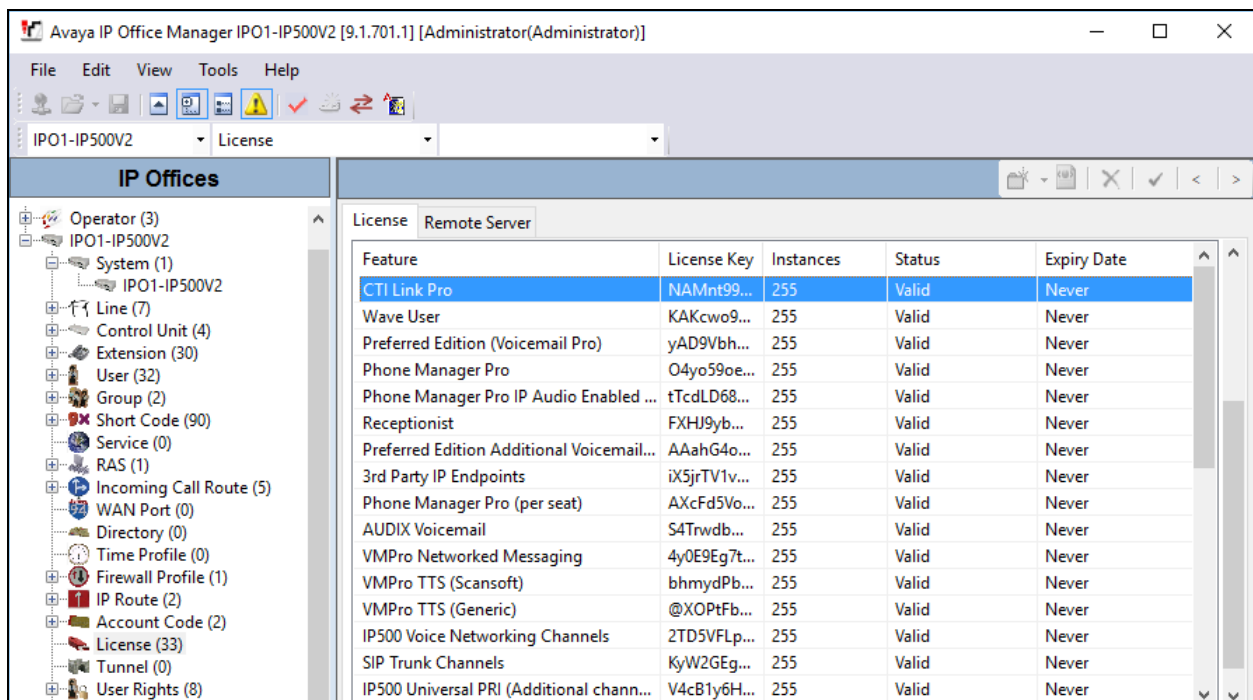
This section provides the procedures for configuring IP Office. The procedures include the following areas:

- Verify license
- Administer agent users
- Administer supervisor users
- Administer security settings

5.1. Verify License

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

The **Avaya IP Office Manager** screen is displayed. From the configuration tree in the left pane, select **License** to display a list of licenses in the right pane. Verify that there is a license for **CTI Link Pro** and that the **Status** is "Valid", as shown below.

5.2. Administer Agent Users

From the configuration tree in the left pane, expand **User** (not shown), and select the first agent user from **Section 3**, in this case "20031".

For **System Phone Rights**, select "Level 1" from the drop-down list to enable system phone options.

For **Ex Directory**, uncheck this field so that the agent user can appear in the directory and be picked up from Evolve.

For agents that will be using the client web-based interface to log in and log out, the value used for **Extension** must be an existing extension that's already configured. Also note that the current release of Evolve only supports log in and log out for extensions no more than 4 digits.

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Uncheck **Cannot be Intruded**, and set **Can Intrude** to the desired setting.

For agents that will be using the client web-based interface to log in and log out, the **Login Code** and **Confirm Login Code** parameters must be configured.

Repeat this section for all agent users from **Section 3**. In the compliance testing, two agent users with extensions "20031" and "20032" were configured.
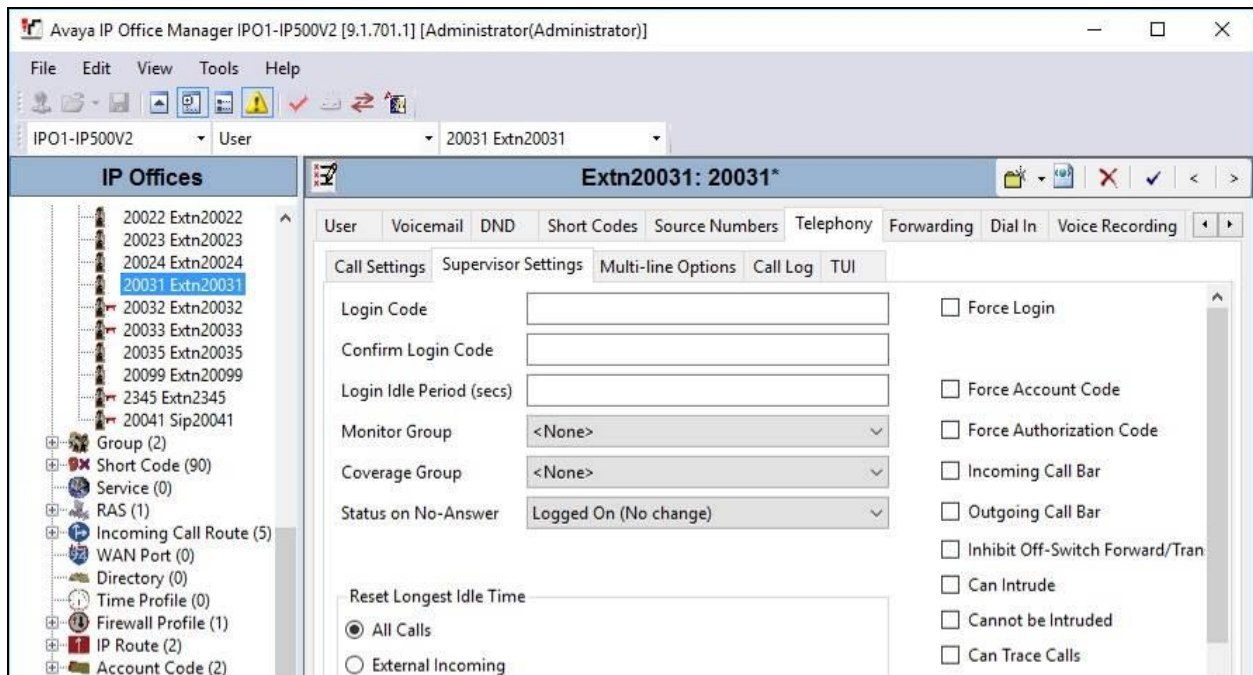
5.3. Administer Supervisor Users

From the configuration tree in the left pane, expand **User** (not shown), and select the first supervisor user from **Section 3**, in this case "20035".

For **System Phone Rights**, select "Level 1" from the drop-down list to enable system phone options.

For **Ex Directory**, uncheck this field so that the agent user can appear in directory and picked up from Evolve.

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Check **Can Intrude**, and set **Cannot be Intruded** to the desired setting. For **Monitor Group**, select the applicable existing group that the supervisor will be monitoring, in this case "Main". This setting is needed for the intrude feature.

Repeat this section for all supervisor users from **Section 3**. In the compliance testing, one supervisor user with extension "20035" was configured.

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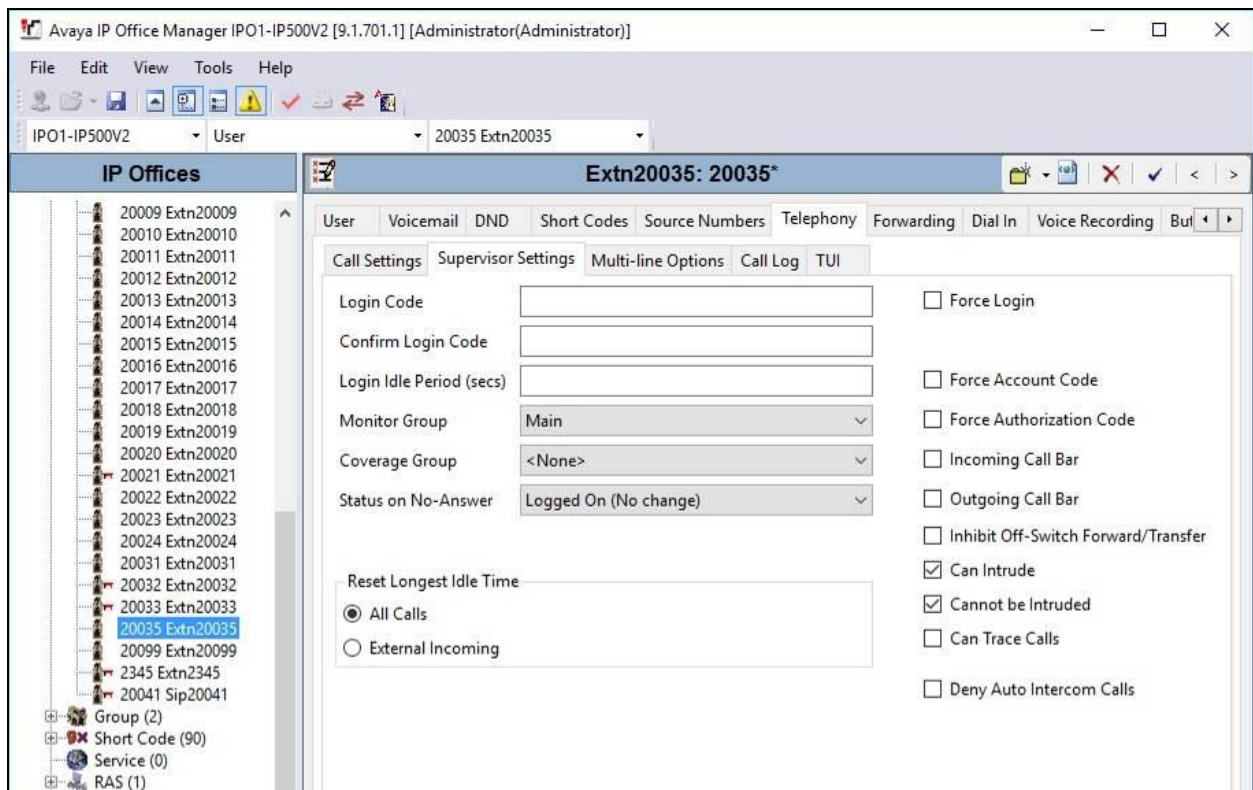
5.4. Administer Security Settings

From the configuration tree in the left pane, select **File → Advanced → Security Settings** from the top menu. The **Avaya IP Office Manager – Security Administration** screen is displayed.

Select **Security → System** to display the **System** screen in the right pane. Select the **Unsecured Interfaces** tab, and check **TFTP Directory Read**, **DevLink**, and **TAPI** as shown below.
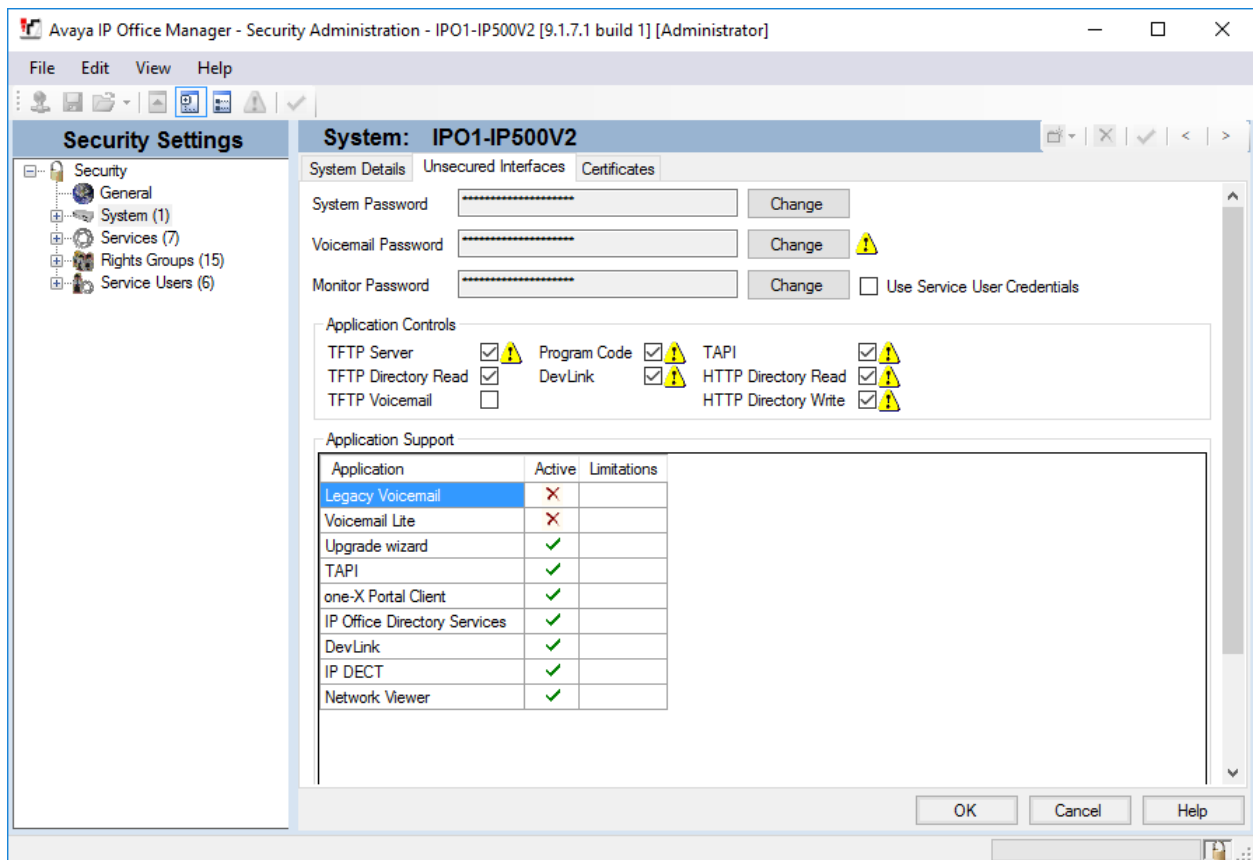
6. Configure Oak Innovation Evolve

This section provides the procedures for configuring Evolve. The procedures include the following areas:
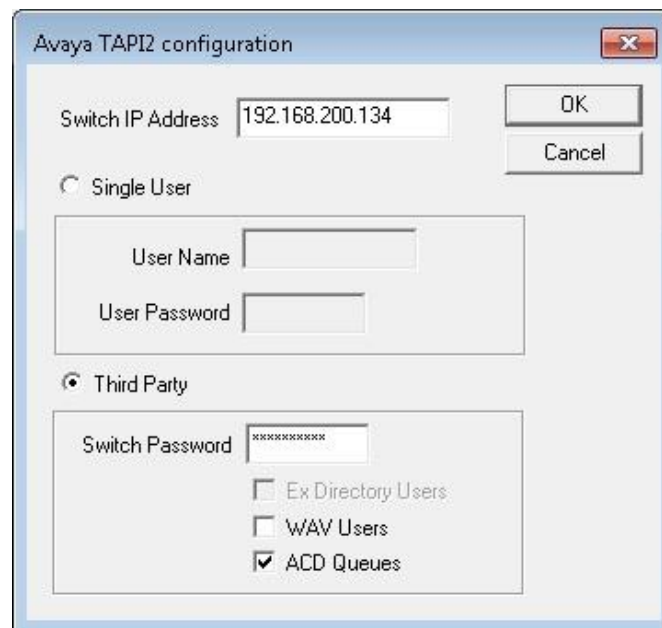
- Administer TAPI driver
- Launch web interface
- Administer sites
- Restart service
- Administer users

6.1. Administer TAPI Driver

From the Evolve server, select **Start → Control Panel → Phone and Modem**, to display the **Phone and Modem** screen below. Select the **Advanced** tab, followed by **Avaya IP Office TAPI2 Service Provider**, and click **Configure**.
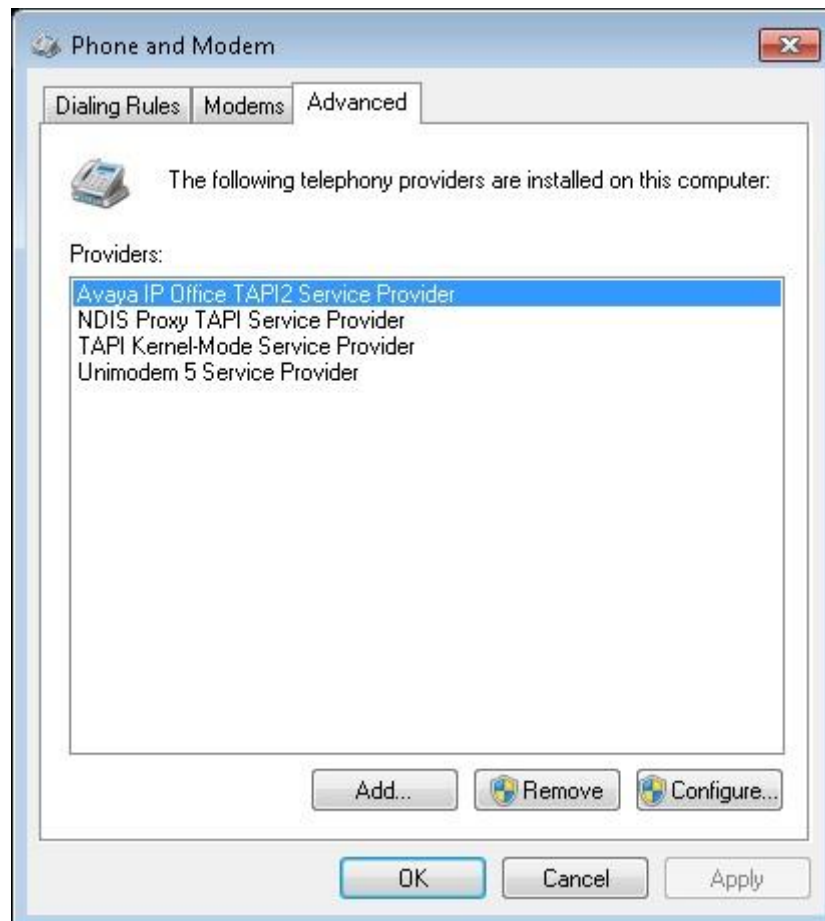
The **Avaya TAPI2 configuration** screen is displayed. For **Switch IP Address**, enter the IP address of IP Office. Select the radio button for **Third Party**, enter the IP Office password into the **Switch Password** field, and check **ACD Queues**. Reboot the Evolve server.

6.2. Launch Web Interface

Access the Evolve web interface by using the URL "http://ip-address:8040" in an Internet browser window, where "ip-address" is the IP address of the Evolve server. The screen below is displayed. Log in using the appropriate credentials.
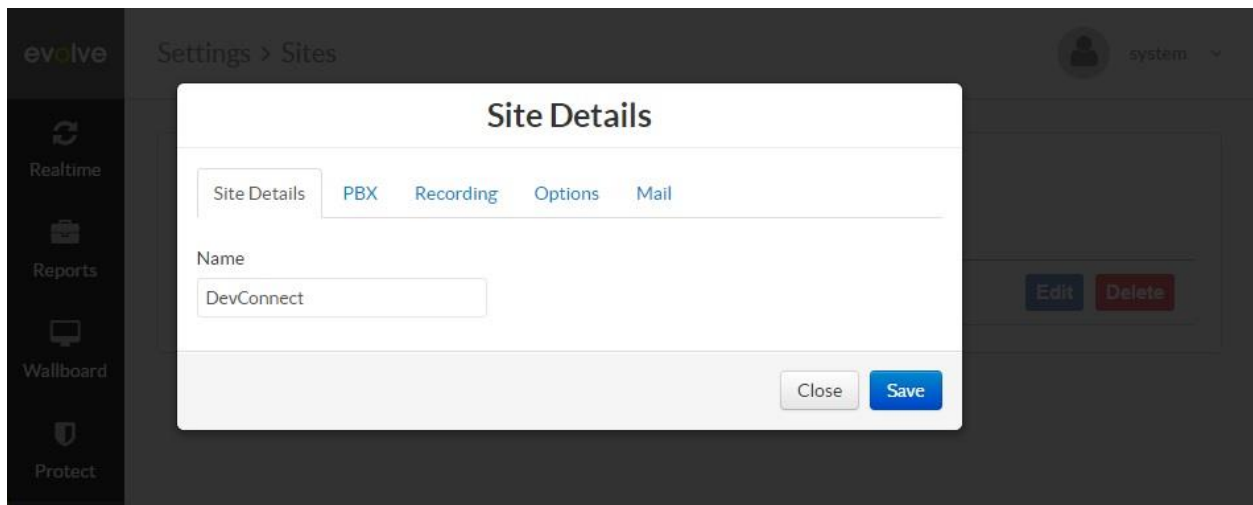
6.3. Administer Sites

The **evolve** screen is displayed. Select **Settings → Sites** (not shown) in the left pane to display the screen below. Click **New Site**.

The **Site Details** screen is displayed. In the **Site Details** tab, enter a desired **Name**, as shown below.

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Select the **PBX** tab. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Telephone System Type:**   "Avaya IP Office"
- **IP Office IP Address:**   The IP address of IP Office.
- **IP Office Monitor Password:** The proper IP Office password.

6.4. Restart Service

From the Evolve server, select **Start → Control Panel → Administrative Tools → Services** to display the **Services** screen. Restart the **Oak Evolve Collector** service shown below.
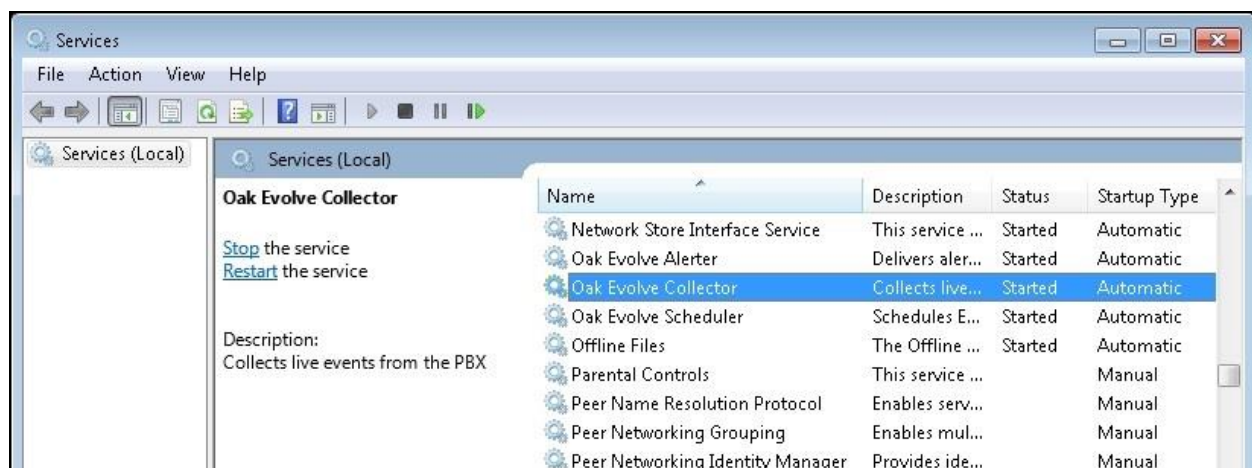
6.5. Administer Users

Follow the procedures in **Section 6.2** to launch the Evolve web interface, and log in using the appropriate credentials. Select **Settings → Users** (not shown) in the left pane to display the screen shown below. Click **New User** to create a new user.
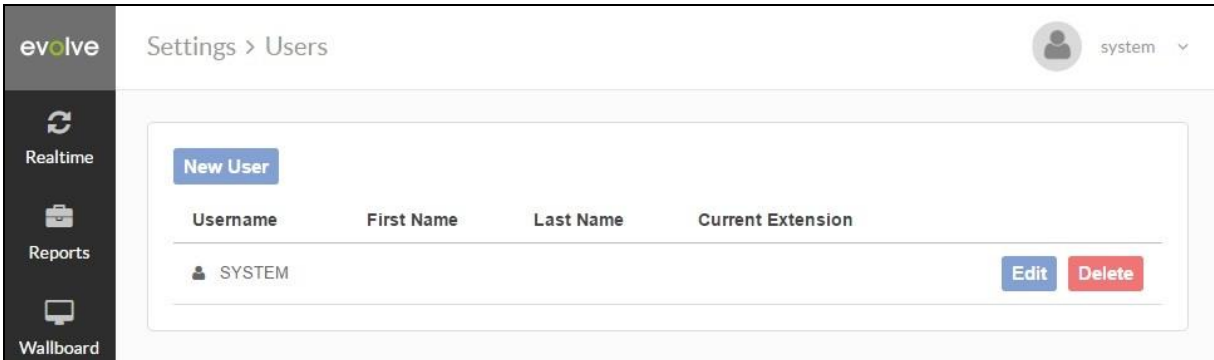
The **User Details** screen is displayed. Enter the following values for the specified fields, and retain the default values for the remaining fields if desired.

- **User Name:**   A desired name for the first agent user from **Section 3**.
- **Password:**   A desired password for the first agent user from **Section 3**.
- **Device Set:**   Select the applicable user from IP Office.
- **Policy:**   Select the desired policy.
- **Pop Web Phone on New Call:** Check this field.
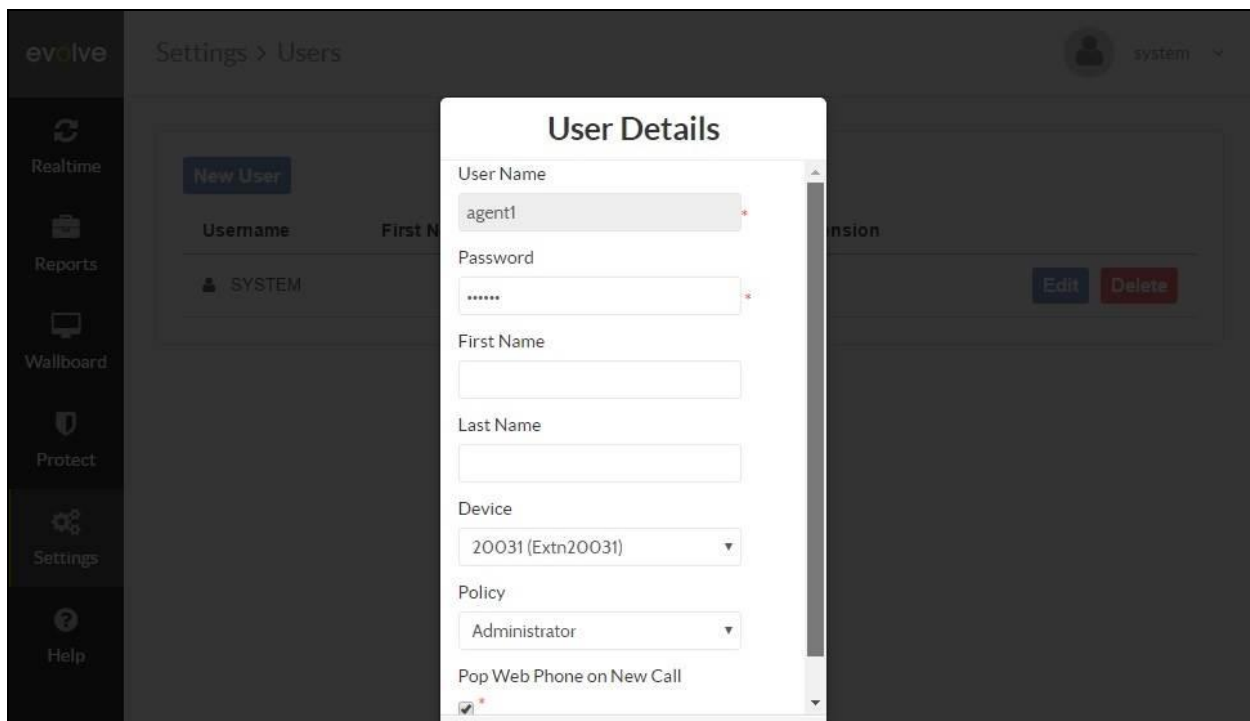
Repeat this section to create a user for each agent and supervisor from **Section 3**. In the compliance testing, two agent and one supervisor users were created, as shown below.

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7. Verification Steps

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

Follow the procedures in **Section 6.2** to launch the Evolve web interface, and log in using the first agent user credentials from **Section 6.5**. The **Dashboard** screen below is displayed.
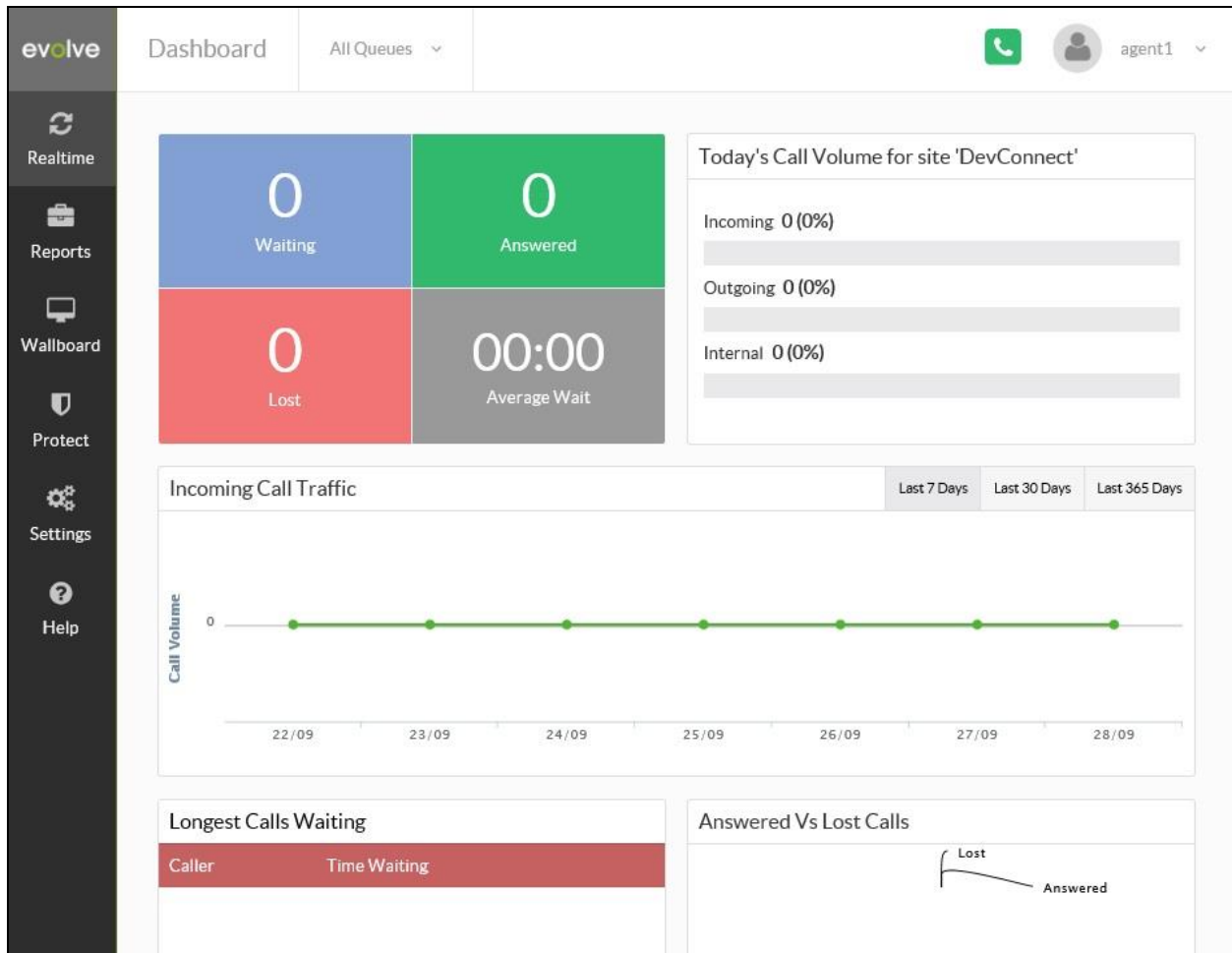
Place an incoming group call from the PSTN. Verify that an available agent's screen is updated to reflect the call in the **Waiting** and **Longest Calls Waiting** sub-sections, and that the agent's web phone box comes up automatically and is populated with pertinent call information, as shown below.

Click **Answer**.

Verify that the agent is connected with the PSTN caller with two-way talk paths, and that the call entry is removed from the **Waiting** and **Longest Calls Waiting** sub-sections. Also verify that the agent web phone box reflects the call **State** as **Talking**, as shown below.
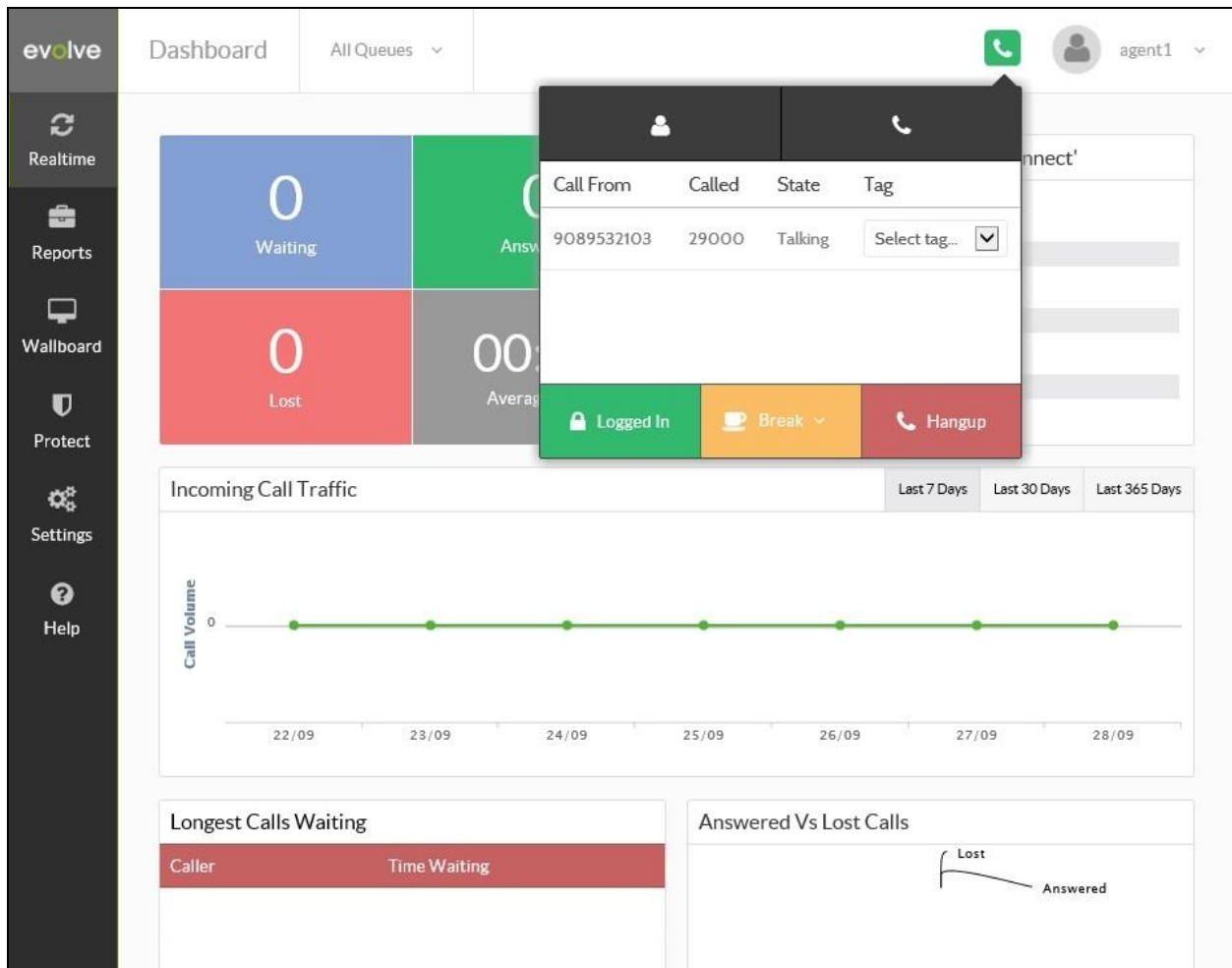
8. Conclusion

These Application Notes describe the configuration steps required for Oak Innovation Evolve 2.0 to successfully interoperate with Avaya IP Office 9.1.   All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

9. Additional References

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

1. *Administering Avaya IP Office™ Platform with Manager*, Release 9.1.2, Issue 10.38, February 2016, available at http://support.avaya.com.

2. *Evolve User Guide*, for Evolve version 2.0, 2015, https://support.oak.co.uk/help/evolve/Evolve-User-Guide.pdf .

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