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Avaya Solution & Interoperability Test Lab

Application Notes for Autonomy Qfiniti Observe with Avaya Proactive Contact 5.0.1 with PG230 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Autonomy Qfiniti Observe to interoperate with Avaya Proactive Contact 5.0.1 with PG230. Autonomy Qfiniti Observe is a call recording solution.

In the compliance testing, Autonomy Qfiniti Observe used the Event Service interface from Avaya Proactive Contact to obtain information on agent states and calls, and used the trunk tap method to capture the media associated with the monitored agents for call recording.

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 Autonomy Qfiniti Observe to interoperate with Avaya Proactive Contact 5.0.1 with PG230. Autonomy Qfiniti Observe is a call recording solution.

In the compliance testing, Autonomy Qfiniti Observe used the Event Service interface from Avaya Proactive Contact to obtain information on agent states and calls, and used the trunk tap method to capture the media associated with the monitored agents for call recording.

The compliance test covered the recording of calls that are delivered by Avaya Proactive Contact for the PG230 deployment option. The recording of inbound calls delivered by Communication Manager under the agent blending mode is outside the scope of this compliance test.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the Qfiniti Observe application, the application automatically establishes Event Services connection with Proactive Contact.

For the manual part of the testing, each call was handled manually on the agent user with generation of unique audio content for the recordings.   Necessary user actions such as hold and reconnect were performed from the Proactive Contact Agent application to test the different call scenarios.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet connection to Qfiniti Observe.

The verification of tests included using the Qfiniti Observe logs for proper message exchanges, and using the Qfiniti Desktop application for proper logging and playback of calls.

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 testing included feature and serviceability testing.

The feature testing focused on verifying the following on Qfiniti Observe:

- Handling of Event Services agent states and call events.

- Proper recording, logging, and playback of calls for scenarios involving agent drop, customer drop, hold, reconnect, simultaneous calls, conference, transfer, forward work, inbound call blending, outbound call blending, and outbound agent blending scenarios.

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

2.2. Test Results

All test cases were executed and verified. The following were observations on Qfiniti Observe from the compliance testing.

- The initial recording for each agent contained audio up to agent releases line, and subsequent recordings contained audio up to agent finishes work.

- The held interval is included in the recording and contained audio from the agent.

- After the agent handles a call that was established prior to a link disruption (i.e., disconnecting the Ethernet connection from the server) and ended post link recovery, subsequent calls for the agent no longer get associated with the agent until the agent logs out and back into Proactive Contact Agent. The unassociated recordings are shown in Qfiniti Desktop under the Unknown Agent Recording Files.

2.3. Support

Technical support on Qfiniti Observe can be obtained through the following:

- **Phone:** (800) 346-4436, (214) 981-1979
- **Email:** autonomy@autonomy.com
- **Web:** https://customers.autonomy.com

3. Reference Configuration

As shown in the test configuration below, the Qfiniti System Configuration and Qfiniti Desktop applications were running on the supervisor PC, used for configuration of Qfiniti Observe and for verification of proper logging and playback of calls.

There is a physical trunk between Proactive Contact and Communication Manager in the PG230 deployment option used by Proactive Contact for agent headset connections. In the compliance testing, the RTP streams for the Proactive Contact agents were captured using a PRI splitter that replicated all audio over the agent headset trunks to Qfiniti Observe. The station extensions for the two agents used in the compliance testing were "65001" and "65002".

The detailed administration of basic connectivity between Communication Manager and Proactive Contact is not the focus of these Application Notes and will not be described.
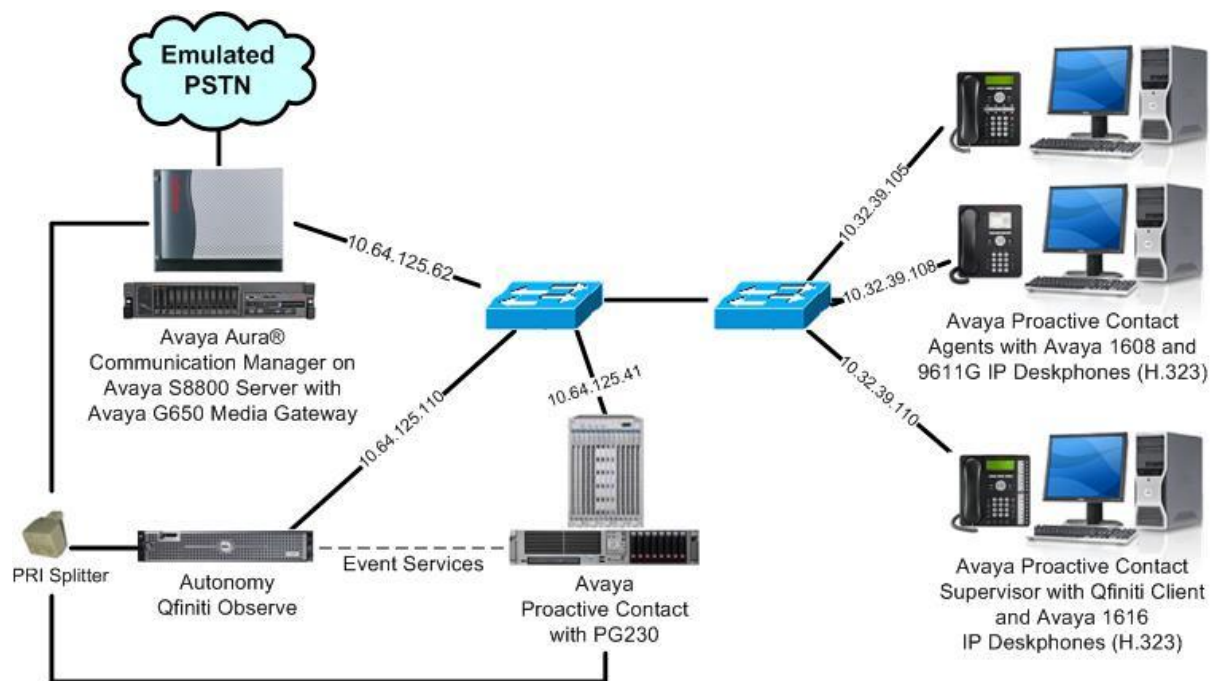
Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager on Avaya S8800 Server	6.2 SP3 (R016x.02.0.823.0-20001)
Avaya G650 Media Gateway • TN464HP DS1 Interface • TN799DP C-LAN Circuit Pack • TN2302AP IP Media Processor	HW02 FW025 HW01 FW040 HW12 FW121
Avaya Proactive Contact	5.0.1
Avaya 1600 Series IP Deskphones (H.323)	1.302S
Avaya 9611G IP Deskphone (H.323)	6.2209
Autonomy Qfiniti Observe on Microsoft Windows Server 2008 R2 Enterprise • Ai-Logix SmartWORKS DP6409 PCI • Avaya Event Service SDK	3.5.2305.5 SP1 5.6.0.817 5.0.1
Autonomy Qfiniti Client on Microsoft Windows XP Professional • Qfiniti System Configuration • Qfiniti Desktop	3.5.2305.5 2002 SP3

5. Configure Avaya Aura® Communication Manager

This section provides the procedures for obtaining the relevant DS1 configuration from Communication Manager.

Log in to the System Access Terminal (SAT) and issue the "display ds1 n" command, where "n" is the slot number of the DS1 circuit pack used for agent headset connections with Proactive Contact, in this case "1a05". Make a note of the **Line Coding**, **Framing Mode**, and **Signaling Mode** field values, which will be used later to configure Qfiniti Observe.

```
display ds1 1a05
                          DS1 CIRCUIT PACK

          Location: 01A05                       Name: Hard 1-21
          Bit Rate: 1.544              Line Coding: ami-basic
  Line Compensation: 1                Framing Mode: d4
     Signaling Mode: robbed-bit



Interface Companding: mulaw
         Idle Code: 11111111




      Slip Detection? n                Near-end CSU Type: other
```

6. Configure Avaya Proactive Contact

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

- Obtain host name
- Obtain dialer ID
- Obtain headset ports

6.1. Obtain Host Name

Log into the Linux shell of the Proactive Contact server. Use the "uname -a" command to obtain the host name, which will be used later for configuring Qfiniti Observe.

In the compliance testing, the host name of the Proactive Contact server is "lzpds4b", as shown below.

```
$ uname -a
Linux lzpds4b 2.6.18-238.1.1.el5PAE #1 SMP Tue Jan 4 13:53:16 EST 2011 i686 athlon
i386 GNU/Linux
LZPDS4B(admin)@/opt/avaya/pds [1001]
$
```

6.2. Obtain Dialer ID

Navigate to the **/opt/avaya/pds/etc** directory, and open the **master.cfg** file.

Locate and make a note of the **DIALERID** parameter value, in this case "1", which will be used later to configure Qfiniti Observe.

```
DBSERVERIP:10.64.125.41
DDSTAPE:/dev/st0
DEBUGDIR:$ROOTDIR/debug
DEFAULT:vt100
DELETEDSTGDIR:$VOICEDIR/staging/deleted
DIALERID:1
DIAL_POUND:#
DIAL_STAR:*
DISABLE_EDIT_AUTOEND:NO
DISP_MBOX_NUM:1
DNCDIR:$VOICEDIR/dnc
DONOTCALL:YES
DUPE_SKIP_LOCK_TIME:0
ENCODING_XML:UTF-8
```

6.3. Obtain Headset Ports

Navigate to the **//opt/avaya/pds/config** directory, and open the **dgswitch.cfg** file.

Make a note of the sequential port numbers under the **Headset Ports** section, which will be used later to configure Qfiniti Observe. In the compliance testing, the headset ports are **264-271**, as shown below.

```
#Headset Ports
H:1:264:0::#H:15:1:1-1-21-1-1
H:2:265:0::#H:15:1:1-1-21-1-2
H:3:266:0::#H:15:1:1-1-21-1-3
H:4:267:0::#H:15:1:1-1-21-1-4
H:5:268:0::#H:15:1:1-1-21-1-5
H:6:269:0::#H:15:1:1-1-21-1-6
H:7:270:0::#H:15:1:1-1-21-1-7
H:8:271:0::#H:15:1:1-1-21-1-8
#Outbound Ports
N:1:272:0::#O:10:1:1-1-21-1-9
N:2:273:0::#O:10:1:1-1-21-1-10
N:3:274:0::#O:10:1:1-1-21-1-11
N:4:275:0::#O:10:1:1-1-21-1-12
N:5:276:0::#O:10:1:1-1-21-1-13
N:6:277:0::#O:10:1:1-1-21-1-14
N:7:278:0::#O:10:1:1-1-21-1-15
N:8:279:0::#O:10:1:1-1-21-1-16
#Inbound Ports
N:9:280:0::#I:11:1:1-1-21-1-17
N:10:281:0::#I:11:1:1-1-21-1-18
N:11:282:0::#I:11:1:1-1-21-1-19
N:12:283:0::#I:11:1:1-1-21-1-20
```

7. Configure Autonomy Qfiniti Observe

This section provides the procedures for configuring Qfiniti Observe. The procedures include the following areas:

- Administer dialer files
- Administer SmartWORKS
- Launch System Configuration
- Administer switch
- Administer CTI server
- Administer CTI server data
- Administer board configuration
- Administer general
- Administer phone interface
- Administer logging data
- Administer VRM
- Administer line data
- Enable use
- Launch Qfiniti Desktop
- Administer agents

The configuration of Qfiniti Observe is performed by Autonomy field service engineers. The procedural steps are presented in these Application Notes for informational purposes.

7.1. Administer Dialer Files

From the Qfiniti Observe server, create a folder under the **C:** directory with desired name, in this case **DialerKeys**. Note that Qfiniti requires the full path to not contain any spaces.

Copy the four files shown in the screenshot below from the **C:\Program Files (x86)\Qfiniti\bin** folder to the newly created folder. Make a note of the complete path of the copied **corba_svc_v5.conf** file, which will be used later to configure the CTI server data.
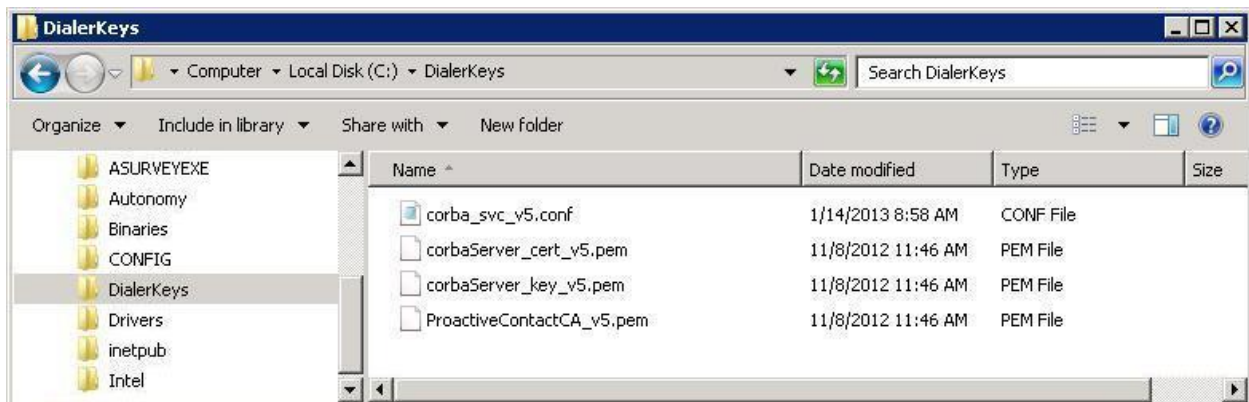
7.2. Administer SmartWORKS

From the Qfiniti Observe server, select **Start → Control Panel**, and click on the **SmartControl** icon (not shown below). The **AudioCodes USA Inc SmartWORKS** screen is displayed. Enter the following values for the specified fields associated with the relevant trunk, and retain the default values for the remaining fields. In the compliance testing, trunk **0** was used.

- **Framing:** Select "SF(D4)" to match the framing from **Section 5**.
- **Line Coding:** Select "AMI" to match the line encoding from **Section 5**.
- **Signaling Protocol:** Select "NONE" to match robbed-bit signaling mode from **Section 5**.

Follow [3] to reset the SmartWORKS card.

7.3. Launch System Configuration

From a PC running the Qfiniti Client application, double-click on the **System Configuration** icon shown below, which was created as part of installation.

The **Qfiniti System Configuration** screen below is displayed. Log in using the administrator credentials.

7.4. Administer Switch

The **Qfiniti - System Configuration** screen is displayed. Select the **Cross System Equipment** tab in the right pane.

Expand the **Switch** sub-section, and click the **New Switch** icon. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Name:**   A descriptive name.
- **Switch Model:**   "Avaya S8700"
- **Observe Mode:**   "By Extension"
- **Interface Type:**   "Ai-Logix Media Boards"

7.5. Administer CTI Server

Expand the **CTI Server** sub-section, and click the **New Server** icon. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Name:** A descriptive name.
- **Type:** "Avaya Dialer"
- **Available Switch:** Select the switch name from **Section 7.4**.

7.6. Administer CTI Server Data

Expand **CTI Server Data**, and select the CTI server name from **Section 7.5**. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **User Name:** Credential of the Proactive Contact Event Service client.
- **Password:** Credential of the Proactive Contact Event Service client.
- **NameServe Value 1:** "NameService=corbaloc:ssliop:**lzpds4b**:23201/NameService",
  where **lzpds4b** is the Proactive Contact hostname from **Section 6.1**.
- **NameServe Flag 2:** "-ORBSvcConf"
- **NameServe Value 2:** Complete path of the corba_svc_v5.conf file from **Section 7.1**.
- **NameServe Value 3:** "10"
- **NameServe Value 4:** "C:\DialerKeys\corbalog.log", where "C:\DialerKeys" is the
  directory path from **Section 7.1**.
- **ES P2:** The host name of Proactive Contact from **Section 6.1**.
- **UUData script name:** "dialer-script.ini"
- **PBX Extensions:** Enter the agent station extensions from **Section 3**.
- **Dialer Version:** Select "PACv5X" for version 5.
- **Qfiniti Alias:** "Agent Name"

7.7. Administer Board Configuration

Expand the **Board Configuration** sub-section, and click the **New Board** icon. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Name:** A descriptive name.
- **Board Model:** "Ai-Logix DP – Trunk Side Tap"

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SPOC 4/1/2013
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Qfiniti-PC5
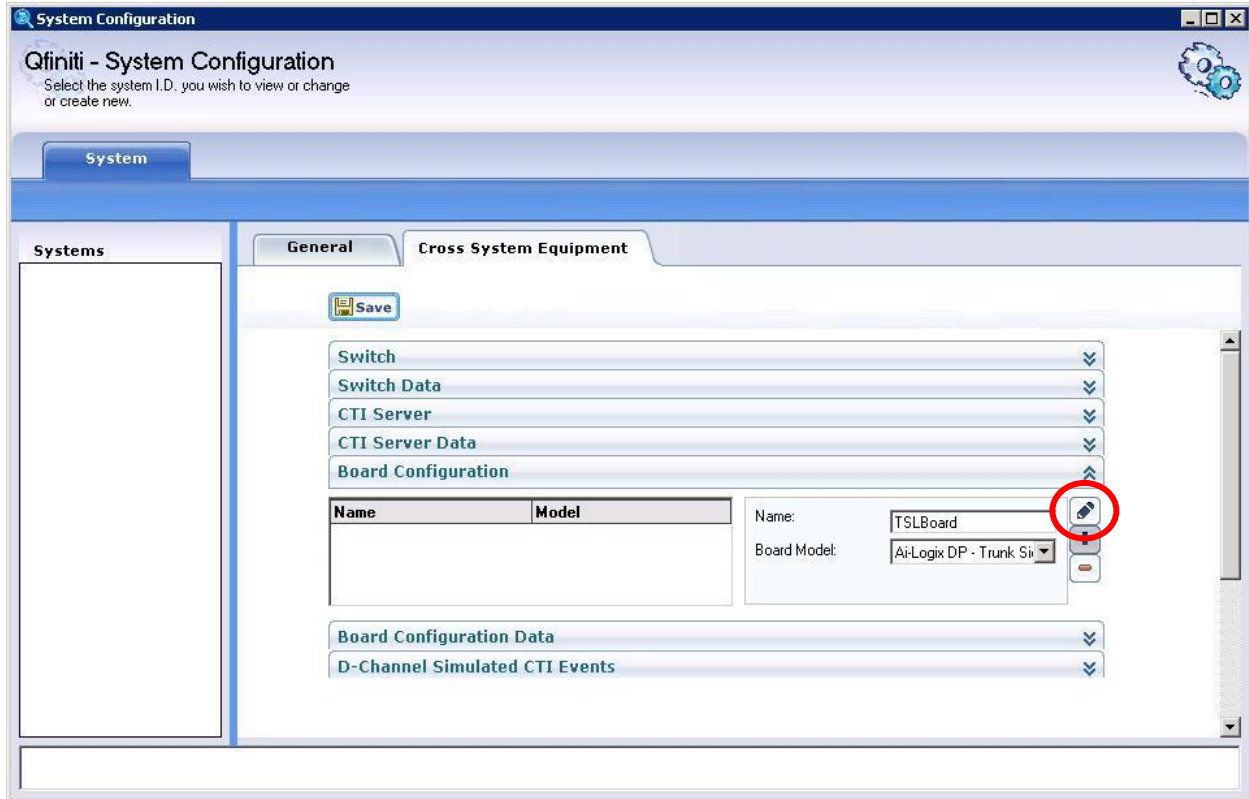
7.8. Administer General

Select the **General** tab, and expand the **General** sub-section. Click **New** to add a new system. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Name:**   A descriptive name.
- **Switch:**   Select the switch name from **Section 7.4**.
- **System Type:** Check **Voice Recording - Logging**.

Follow [3] to configure the **Machines**, **Components**, and **Component Data** sub-sections.

7.9. Administer Phone Interface

Expand the **Phone Interface** sub-section. Select the applicable **Machine** name, in this case **CERTIFITRON1**. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Machine Type:** "Logger"
- **Total Lines:** Enter the maximum number of voice channels, in this case "23".

7.10. Administer Logging Data

Expand the **Logging Data** sub-section. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **COS Name:**   A desired name.
- **Phone:**   "Trunk Side EandM Immediate Wink"
- **Record on lights:** "0,1"

7.11. Administer VRM

Expand the **VRM** sub-section. Select the applicable **Machine** name, in this case **CERTIFITRON1**. Enter the following values for the specified fields.

- **VRM Name:**   A desired name.
- **Default Class of Service:** The COS name from **Section 7.10**.
- **VRM Type:**   "Logging"
- **Interface Type:**   "Trunk Side"
- **Line From:**   The voice channels range, in this case "1" to "23".
- **Default Board Config:**   "TSLBoard"

7.12. Administer Line Data

Expand the **Line Data** sub-section. Select the applicable **Machine** name, in this case **CERTIFITRON1**. Expand the VRM name from **Section 7.11** to display all lines.

Select the first line. For **Extension**, enter the value "Tx.y", where "x" is the dialer ID from **Section 6.2**, and "y" is the first headset port from **Section 6.3**. For **Class of Service**, select the COS name from **Section 7.10**.

Repeat this section to administer all channels, using consecutive headset port numbers from **Section 7.10**. Note that Qfiniti Observe requires all channels to be configured, even if not used for headset ports by Proactive Contact.
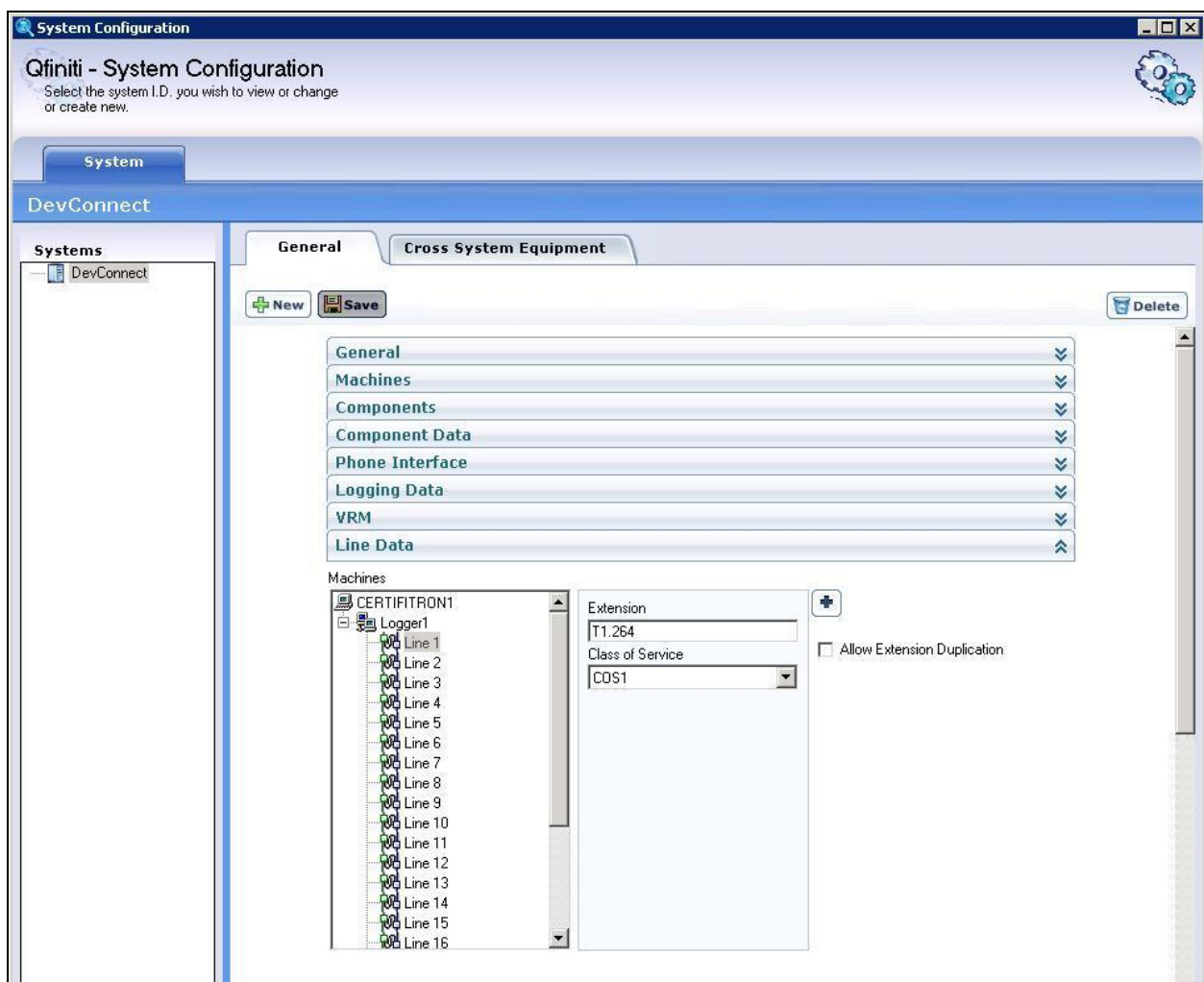
7.13. Enable Use

Scroll the right pane up to the **General** sub-section. Check **Available for Use**, as shown below.
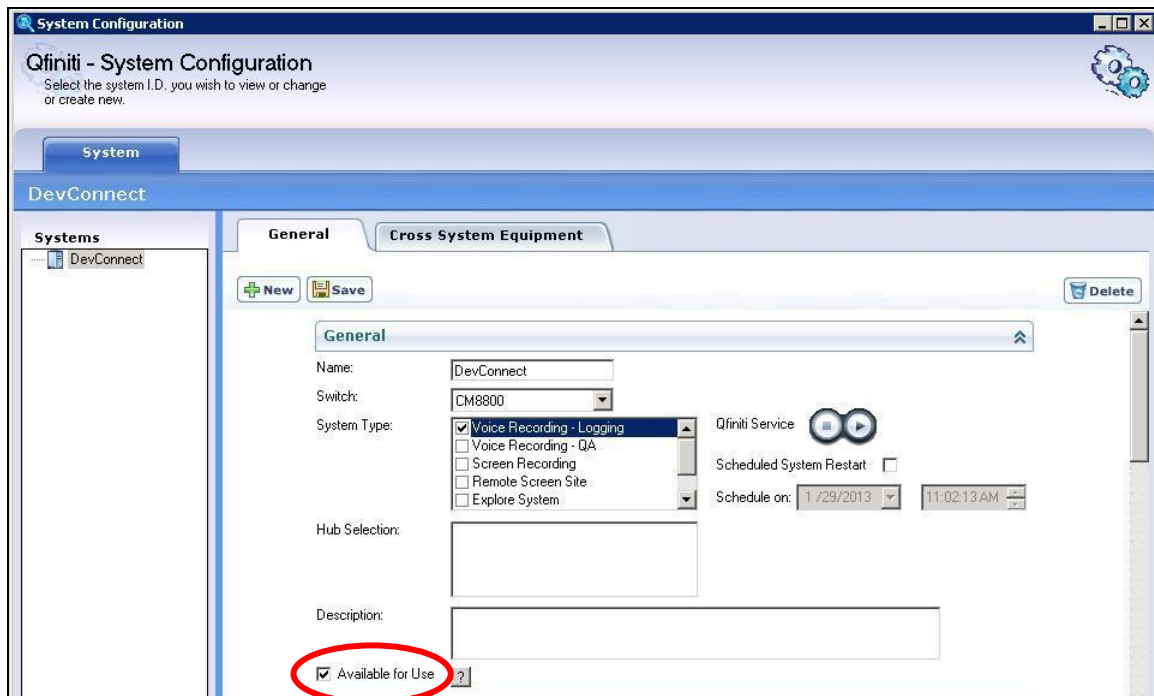
7.14. Launch Qfiniti Desktop

From a PC running Qfiniti Client, double-click on the **Qfiniti Desktop** icon shown below, which was created as part of installation.

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

7.15. Administer Agents

The **Qfiniti Desktop** screen is displayed. Select **Teams** from the top menu. The **Organization** tab is displayed. Select the **Detail** tab in the right pane, followed by **New** to add an agent. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **First Name:**   A desired first name for the first agent from **Section 3**.
- **Last Name:**   A desired last name for the first agent from **Section 3**.
- **Role:**   Select a desired role.
- **Login Type:**   "Qfiniti"
- **Login ID:**   A desired login credential for Qfiniti.
- **Password:**   A desired login credential for Qfiniti.
- **Confirm Password:** The same login credential for Qfiniti.

Follow [3] to configure the subsequent steps for the new agent (not shown). Upon reaching the **Aliases** step, click the **Add** icon to create an alias.
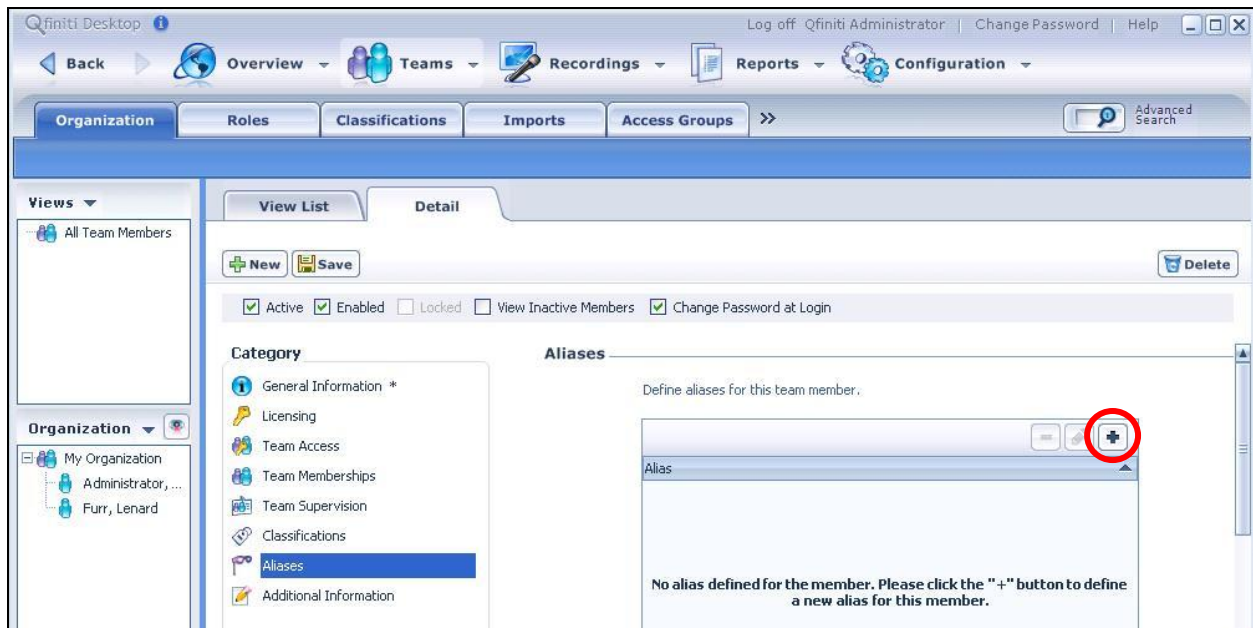
The **Alias** screen is displayed. For **Type**, select the CTI server name from **Section 7.5**. For **Value**, enter the agent ID the first agent in **Section 3** uses to log into Proactive Contact Agent, in this case "agent1".

Repeat this section to add all agents from **Section 3**. In the compliance testing, two agents with alias values "agent1" and "agent2" were configured.

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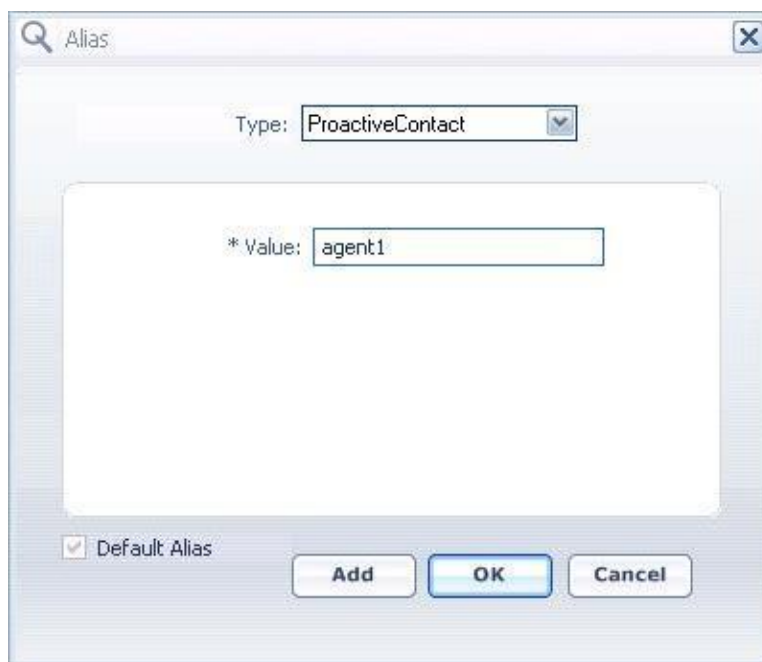
8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Proactive Contact and Qfiniti Observe.
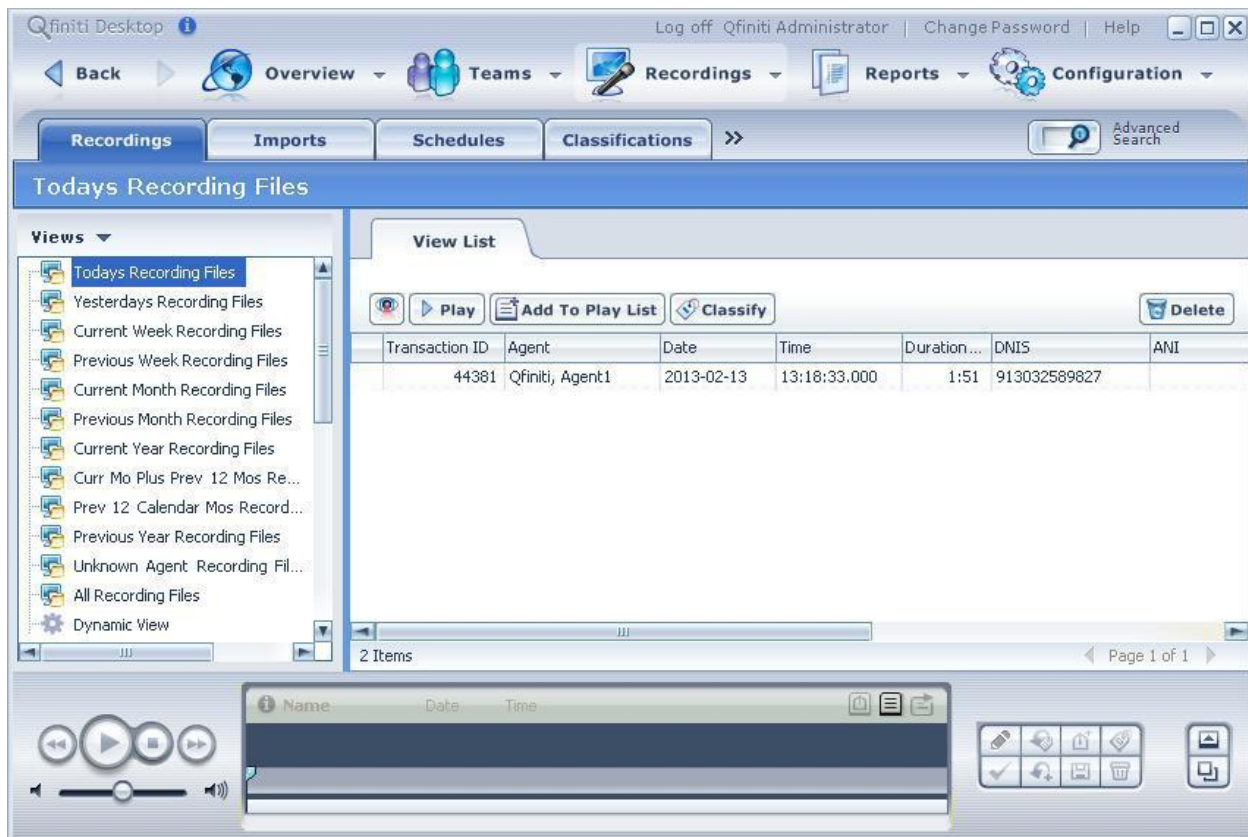
8.1. Verify Avaya Proactive Contact

Log in to the Linux shell of the Proactive Contact server, and issue the "netstat | grep enserver" command. Verify that there is an entry showing an **ESTABLISHED** connection with Qfiniti Observe, as shown below.

```
tcp        0      0 lzpds4b:enserver_ssl      10.64.125.110:49679      ESTABLISHED
tcp        0      0 lzpds4b:enserver_ssl      lzpds4b:39139            ESTABLISHED
```

8.2. Verify Qfiniti Observe

Start a job on Proactive Contact, and log an agent in to handle and complete an outbound call. Follow the procedural steps in **Section 7.14** to launch the Qfiniti Desktop application, and log in using the appropriate user credentials.

The **Qfiniti Desktop** screen is displayed. Select **Recordings** from the top menu, to display the **Recordings** tab. Select **Todays Recording Files** from the left pane. Verify that there is an entry reflecting the last call, with proper values in the relevant fields.

Double click on the entry, and verify that the recording can be played back.

9. Conclusion

These Application Notes describe the configuration steps required for Autonomy Qfiniti Observe to successfully interoperate with Avaya Proactive Contact 5.0.1 with PG230.   All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

10.   Additional References

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

1. *Administering Avaya Aura® Communication Manager*, Document 03-300509, Issue 7.0, Release 6.2, July 2012, available at http://support.avaya.com.

2. *Administering Avaya Proactive Contact*, Release 5.0, April 2012, available at http://support.avaya.com.

3. *Integration Guide for Avaya PCv5 & Qfiniti 3.5 sp2 u5 "Headset" Tieline Logger*, Revision D, February 2013, Autonomy internal only.

4. *Autonomy Qfiniti User Guide*, Version 3.5 SP2, December 2012, available to existing customers at https://customers.autonomy.com.

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