

## Avaya Solution & Interoperability Test Lab

# **Application Notes for HP Inc Qfiniti Observe 10.5 with Avaya Proactive Contact 5.1 with PG230 – Issue 1.0**

#### **Abstract**

These Application Notes describe the configuration steps required for HP Inc Qfiniti Observe 10.5 to interoperate with Avaya Proactive Contact 5.1 with PG230. HP Inc Qfiniti Observe is a call recording solution.

In the compliance testing, HP Inc 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.

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 HP Inc Qfiniti Observe 10.5 to interoperate with Avaya Proactive Contact 5.1 with PG230. HP Inc Qfiniti Observe is a call recording solution.

In the compliance testing, HP Inc 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 web interfaces 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, long duration, multiple agents, manual call, 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.

- All agent recordings contained audio up to agent finished work associated with the call.
- The held interval is included in the recording and contained audio from the agent.
- After the agent handled a call that was established during an Ethernet disruption to Qfiniti and ended post Ethernet recovery, subsequent calls for the agent were no longer associated with the agent until the agent logged out and back into Proactive Contact Agent. The unassociated recordings were still captured and appeared under Unknown Agent Recording Files.

## 2.3. Support

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

• **Phone:** +1 844-526-7397, +44 8000885706, +65 8003211077

• Web: http://customercare.hpengage.com

## 3. Reference Configuration

As shown in **Figure 1**, there is a physical connection between Proactive Contact and Communication Manager in the PG230 deployment option and used by Proactive Contact for agent headset connections. In the compliance testing, the TDM streams for the Proactive Contact agents were captured using a T1 splitter that replicated all audio over the agent headset trunks to the AudioCodes SmartTAP DP6409 PCIe board on Qfiniti Observe.

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.

The station extensions for the two agents used in the compliance testing were "65001" and "65002".

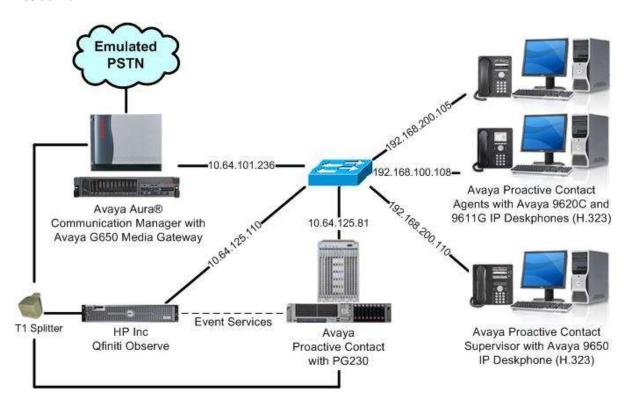


Figure 1: Compliance Testing Configuration

## 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	6.3 SP13 (R016x.03.0.124.0-22619)
<ul> <li>Avaya G650 Media Gateway</li> <li>TN464HP DS1 Interface</li> <li>TN799DP C-LAN Circuit Pack</li> <li>TN2302AP IP Media Processor</li> </ul>	HW02 FW025 HW01 FW044 HW12 FW121
Avaya Proactive Contact	5.1.1
Avaya Proactive Contact Agent	5.1.1
Avaya 9620C & 9650 IP Deskphones (H.323)	3.250A
Avaya 9611G IP Deskphone (H.323)	6.6029
HP Inc Qfiniti Observe on Microsoft Windows Server 2012  • AudioCodes SmartTAP DP6409 PCIe  • Avaya Event Service SDK  • OpenSSL Shared Library	10.5.0.525 R2 Standard 5.7.1.2863 5.1 1.0.2a

## 5. Configure Avaya Aura® Communication Manager

This section provides the procedures for obtaining the relevant DS1 board 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** parameter 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

Slip Detection? n Near-end CSU Type: other

Echo Cancellation? n

## 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 and RSA encryption
- Obtain headset ports

#### 6.1. Obtain Host Name

Log in to 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 2.6.18-371.1.2.el5PAE #1 SMP Mon Oct 7 16:41:57 EDT 2013 i686 i686 i386
GNU/Linux
LZPDS4B(xxx)@/opt/avaya/pds [1002]
$
```

## 6.2. Obtain Dialer ID and RSA Encryption

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.

Locate and make a note of the **RSA\_SHA\_CERTS** parameter value, in this case "YES". Note that this parameter relates to the use of RSA encryption for all digital certificates, and the default value is "YES".

```
DBSERVERIP:10.64.125.81

DDSTAPE:/dev/st0

DEBUGDIR:$ROOTDIR/debug

DEFAULT:vt100

DELETEDSTGDIR:$VOICEDIR/staging/deleted

DIALERID:1

DIAL_POUND:#

DIAL_STAR:*

DISABLE_EDIT_AUTOEND:NO

.

.

RSA_SHA_CERTS:YES

RTRM_CALLBACK_TIMEOUT:10000
```

#### 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 were **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::#0:10:1:1-1-21-1-9
N:2:273:0::#0:10:1:1-1-21-1-10
N:3:274:0::#0:10:1:1-1-21-1-11
N:4:275:0::#0:10:1:1-1-21-1-12
N:5:276:0::#0:10:1:1-1-21-1-13
N:6:277:0::#0:10:1:1-1-21-1-14
N:7:278:0::#0:10:1:1-1-21-1-15
N:8:279:0::#0:10:1:1-1-21-1-16
#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
#Transfer Ports
T:1:284:0::#T:12:1:1-1-21-1-21
```

## 7. Configure HP Inc Qfiniti Observe

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

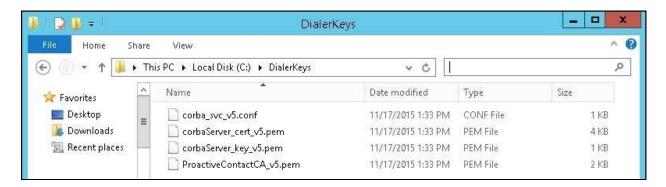
- Administer dialer files
- Administer SmartTAP
- Launch SysConfig web interface
- Administer switches
- Administer CTI server
- Administer board configuration
- Administer general
- Administer CTI sources
- Administer phone interface
- Administer logging data phone class of service
- Administer VRM
- Administer line data
- Enable use
- Launch Ofiniti web interface
- Administer observe settings
- Administer agents

The configuration of Qfiniti Observe is performed by HP Inc 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 a desired name, in this case **DialerKeys**. Note that Qfiniti Observe requires the full path to not contain any spaces.

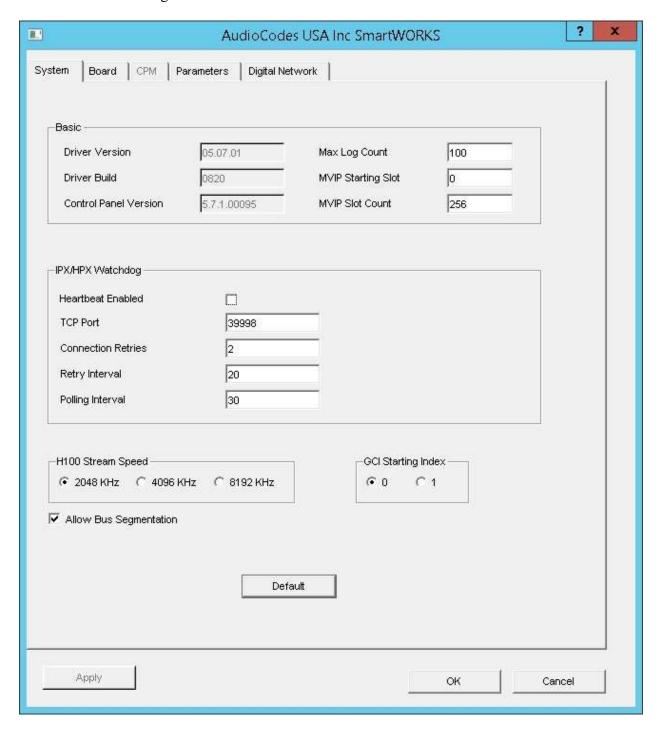
Copy the four files shown in the screenshot below from the C:\Program Files (x86)\Qfiniti\bin folder to the new folder. When the RSA\_SHA\_CERTS parameter is enabled on Proactive Contact from Section 6.2 for use of RSA encryption, then follow reference [3] to replace the three .pem files below with newer versions from patch PC511\_372 for the Avaya Event Services SDK. In the compliance testing, all three files were replaced.



#### 7.2. Administer SmartTAP

Select Start → Control Panel, and click on the SmartControl icon (not shown below). The AudioCodes USA Inc SmartWORKS screen is displayed.

Select the **System** tab. Check **Allow Bus Segmentation** as shown below, and retain the default values in the remaining fields.

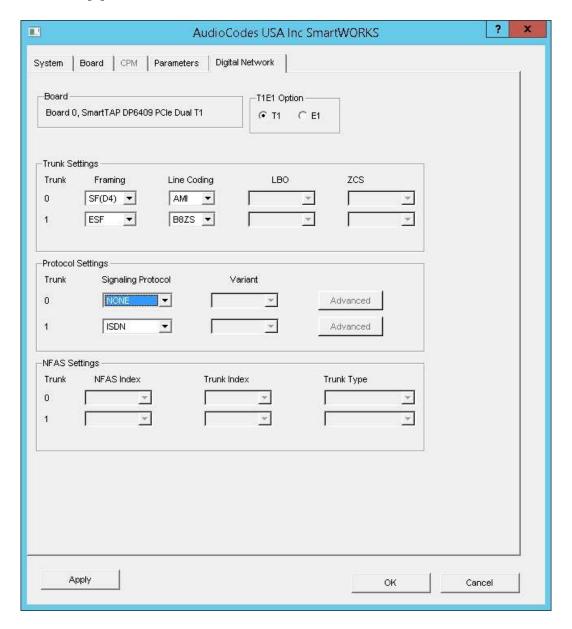


Select the **Digital Network** tab. Enter the following values for specified fields associated with the relevant trunk, and retain the default values for the remaining fields. In the compliance testing, trunk **0** was used.

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**.

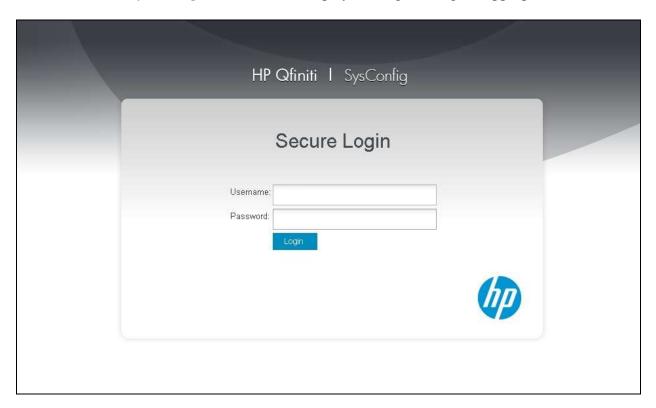
Follow reference [3] to reset the SmartTAP board.



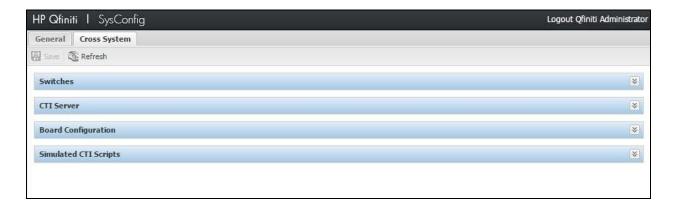
## 7.3. Launch SysConfig Web Interface

Access the SysConfig web interface by using the URL "http://ip-address/sysconfig" in an Internet browser window, where "ip-address" is the IP address of the Qfiniti Observe server.

The **HP Qfiniti** | **SysConfig** screen below is displayed. Log in using the appropriate credentials.



In the subsequent screen, select the **Cross System** tab to display the screen below.

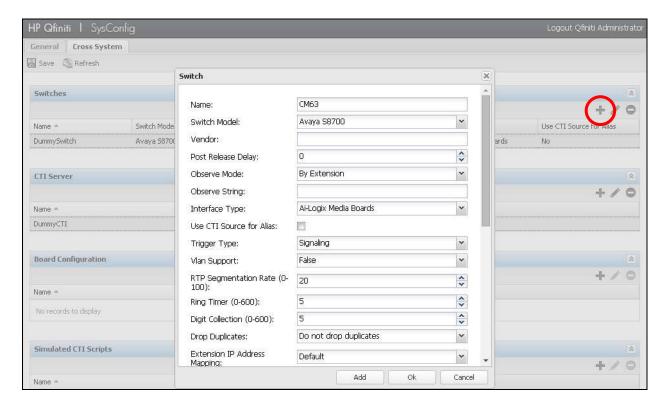


#### 7.4. Administer Switches

Expand the **Switches** sub-section, and click the **New Item** icon to add a new entry for Communication Manager. 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 Item** icon to add a new entry for Proactive Contact. 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.

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.

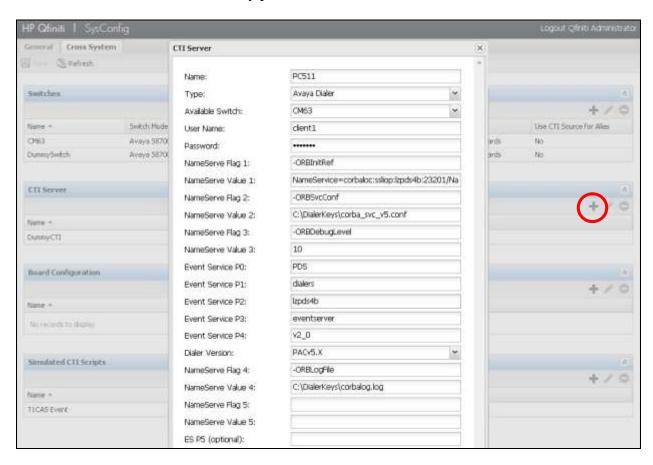
• NameServe Value 3: "10"

• **Event Service P2:** The host name of Proactive Contact from **Section 6.1**.

• Dialer Version: "PACv5.X"

• NameServe Value 4: "C:\DialerKeys\corbalog.log", where "C:\DialerKeys" is the

directory path from **Section 7.1**.

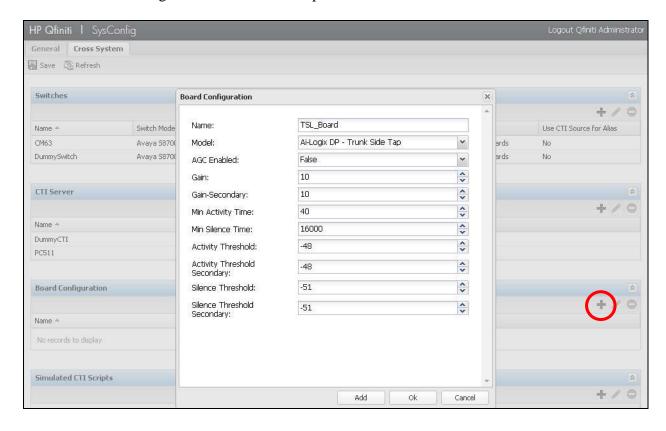


## 7.6. Administer Board Configuration

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

• Name: A descriptive name.

• Model: "Ai-Logix DP – Trunk Side Tap"



#### 7.7. Administer General

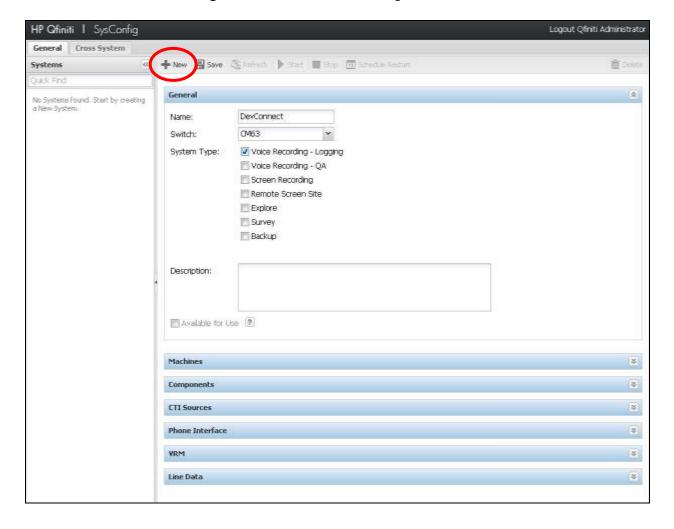
Select the **General** tab, and expand the **General** sub-section. Click **New** to add a new system. Enter the following values for the specified fields, and retain the default values for the remaining fields.

• Name: A descriptive name.

• **Switch:** Select the switch name from **Section 7.4**.

• System Type: Check Voice Recording - Logging.

Follow reference [3] to configure the Machines and Components sub-sections.



#### 7.8. Administer CTI Sources

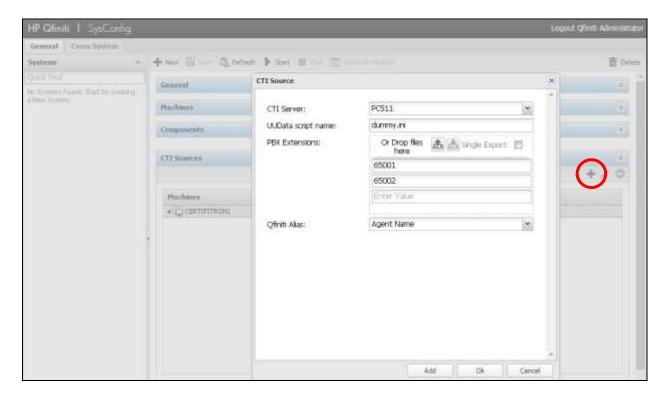
Expand the **CTI Sources** sub-section. Select the applicable **Machines** name, in this case **CERTIFITRON1**. Select the **Add CTI Source** icon. Enter the following values for the specified fields, and retain the default values for the remaining fields.

• **CTI Server:** Select the CTI server name from **Section 7.5**.

• **UUData script name:** Use the format "x.ini" where "x" is any desired script name.

• **PBX Extensions:** Enter the agent station extensions from **Section 3**.

• **Qfiniti Alias:** "Agent Name"

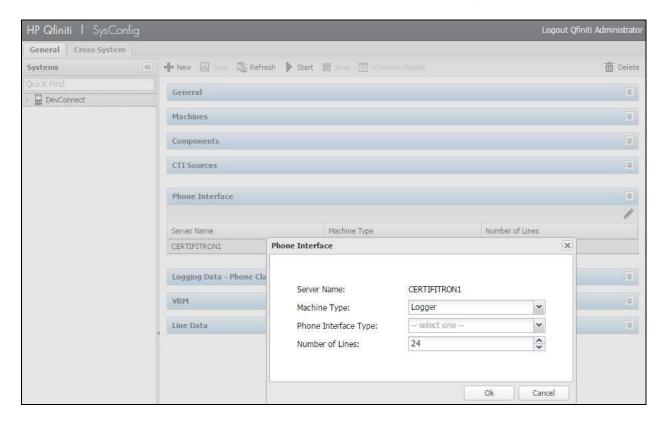


#### 7.9. Administer Phone Interface

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

• Machine Type: "Logger"

• Number of Lines: Enter the maximum number of voice channels, in this case "24".



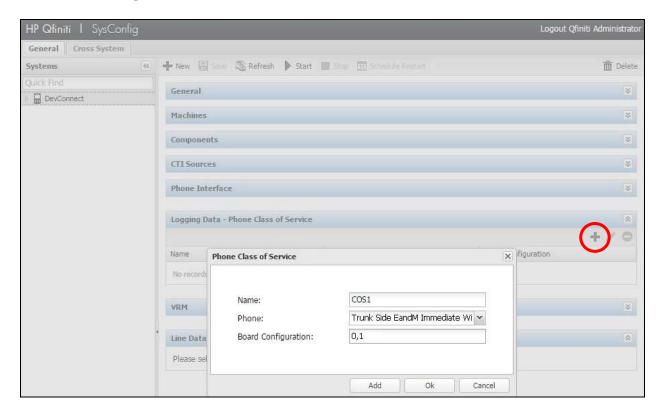
## 7.10. Administer Logging Data - Phone Class of Service

Expand the **Logging Data – Phone Class of Service** sub-section. Select the **New Item** icon. Enter the following values for the specified fields, and retain the default values for the remaining fields.

• Name: A desired name.

• **Phone:** "Trunk Side EandM Immediate Wink"

• **Record on lights:** "0,1"



#### 7.11. Administer VRM

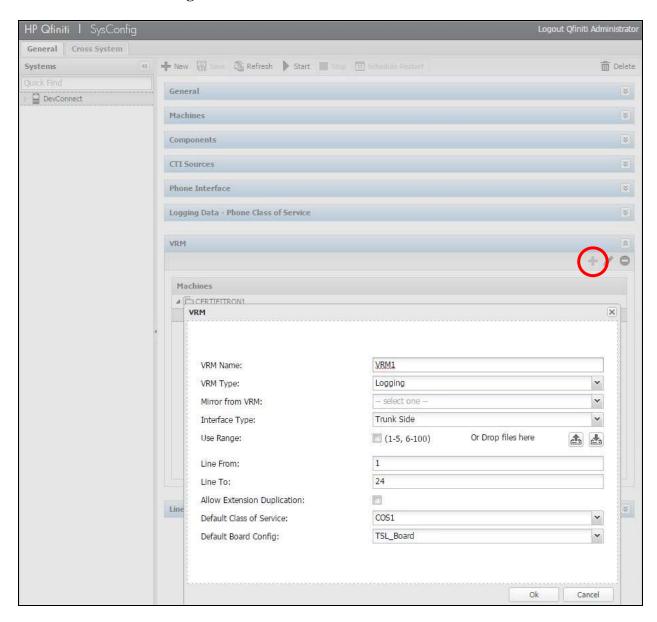
Expand the **VRM** sub-section. Select the applicable **Machines** name, followed by the **Add VRM** icon. Enter the following values for the specified fields.

VRM Name: A desired name.
VRM Type: "Logging"
Interface Type: "Trunk Side"

• Line From and Line To: The voice channels range, in this case "1" to "24".

• **Default Class of Service:** Select the phone class of service name from **Section 7.10**.

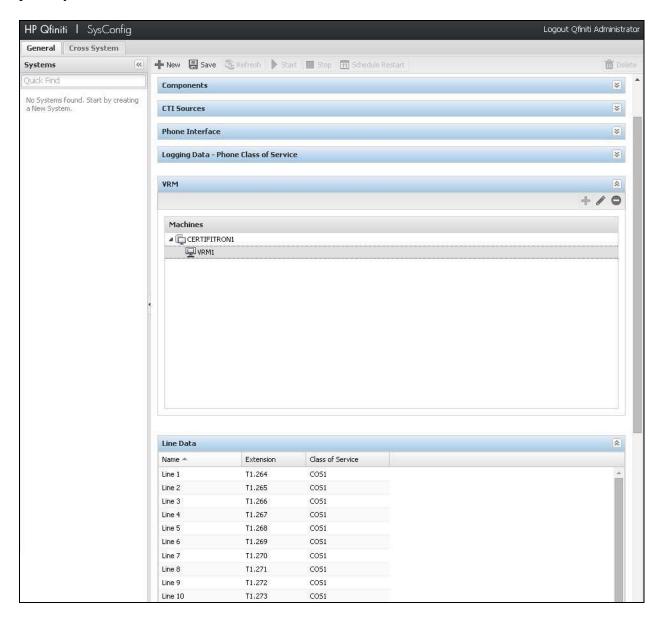
• **Default Board Config:** Select the board name from **Section 7.6**.



#### 7.12. Administer Line Data

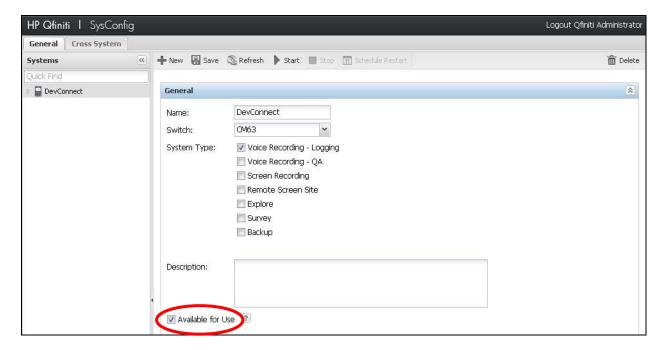
Select the newly added VRM from **Section 7.11**, as shown below. Expand the **Line Data** subsection. Select the first line. For **Extension**, enter value in the format of "Tx.y", where "x" is the dialer ID from **Section 6.2**, and "y" is the first headset port from **Section 6.3**. For **Class of Service**, select the phone class of service name from **Section 7.10**.

Repeat this section to administer all lines, using consecutive headset port numbers from **Section 6.3**. 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 Web Interface

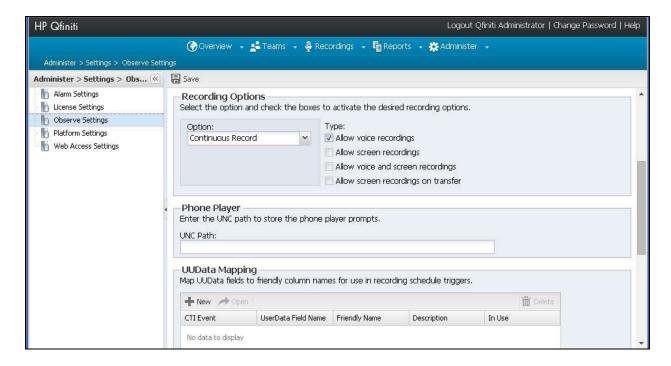
Access the Qfiniti web interface by using the URL "http://ip-address/QWA/Login.aspx" in an Internet browser window, where "ip-address" is the IP address of the Qfiniti Observe server. The **HP Qfiniti** screen below is displayed. Log in using the appropriate credentials.



## 7.15. Administer Observe Settings

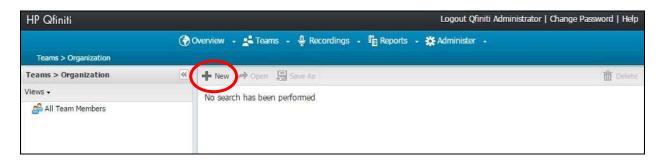
In the subsequent **HP Qfiniti** screen, select **Administer** → **Settings** from the top menu, followed by **Observe Settings** in the left pane to display the **Observe Settings** screen.

Scroll down to the **Recording Options** sub-section. For **Option**, select "Continuous Record". For **Type**, check **Allow voice recordings**, as shown below. Retain the default values for the remaining fields.



## 7.16. Administer Agents

Select **Teams**  $\rightarrow$  **Organization** from the top menu, to display the screen below. Select the **New** icon in the right pane to add an agent.



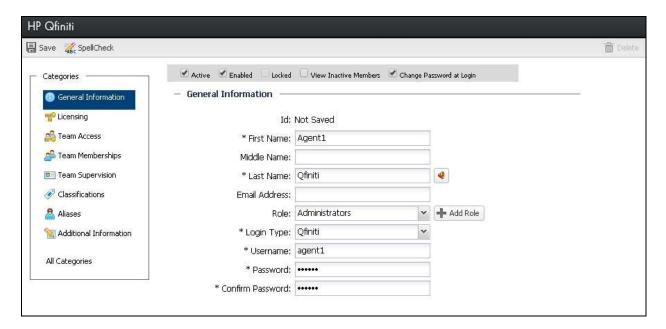
In the pop up screen below, enter the following values for the specified fields, and retain the default values for the remaining fields.

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.

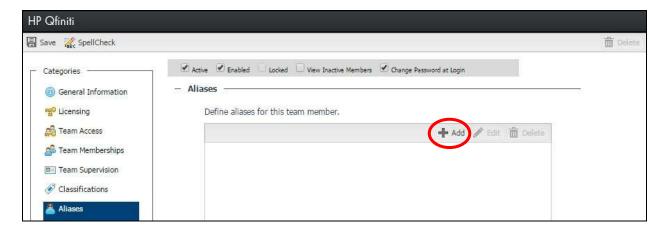
• **Role:** Select a desired and existing role.

• 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.

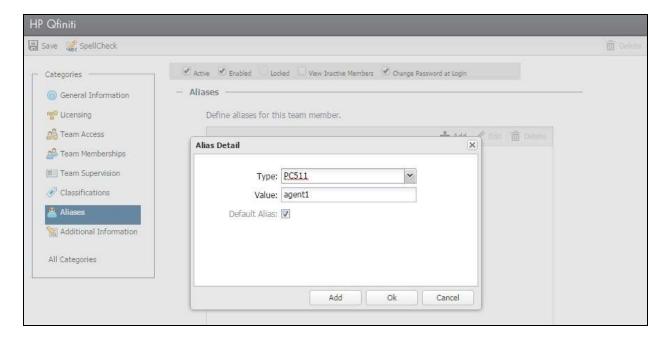


Follow reference [3] to configure subsequent steps for the new agent (not shown). Upon reaching the **Aliases** step, click the **Add** icon to create an alias.



The **Alias Detail** pop up 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". Retain the default value in the remaining field.

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



## 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
        lzpds4b:52853
        ESTABLISHED

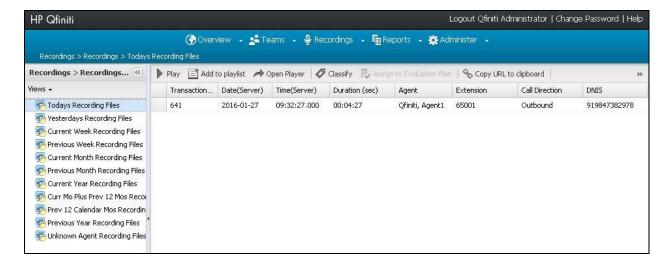
        tcp
        0
        0 lzpds4b:52853
        lzpds4b:enserver_ssl
        ESTABLISHED

        tcp
        0
        0 lzpds4b:enserver_ssl
        10.64.125.110:50827
        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 web interface, and log in using the appropriate user credentials.

Select **Recordings → Recordings** from the top menu, followed by **Todays Recording Files** from the left pane, to display a list of recordings for today. 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 HP Inc Qfiniti Observe 10.5 to successfully interoperate with Avaya Proactive Contact 5.1 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 10, Release 6.3, June 2014, available at <a href="http://support.avaya.com">http://support.avaya.com</a>.
- **2.** *Administering Avaya Proactive Contact*, Release 5.1, April 2013, available at <a href="http://support.avaya.com">http://support.avaya.com</a>.
- **3.** *Integration Guide for Avaya PCv5 & Qfiniti 3.5 sp2 u5 "Headset" Tieline Logger*, Revision D, February 2013, HP Inc internal only.
- **4.** *HP Inc Qfiniti User Guide*, Version 10.4, June 2015, available to existing customers at <a href="http://customercare.hpengage.com">http://customercare.hpengage.com</a>.

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