

Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Avotus Enhanced Usage Reporting for Unified Communications with Avaya Aura® Presence Services Snap-in running on Avaya BreezeTM Platform – Issue 1.0

Abstract

These Application Notes describe the configuration procedures required to allow Avotus Enhanced Usage Reporting for Unified Communications to collect Instant Message records from Avaya Aura® Presence Services snap-in over an IP network connection. Avotus Enhanced Usage Reporting for Unified Communications collects, stores and processes these Instant Message records to provide usage analysis, call costing and billing capabilities.

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 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 describes a compliance-tested collection of Instant Messages records (IM) solution comprised of Avaya Breeze TM, Avaya Aura® Presence Services snap-in and Avotus Enhanced Usage Reporting for Unified Communications (Avotus EUR). Avotus EUR is a call accounting software application that uses collected IM records to provide reporting capabilities to business and IT managers to track and manage call usage and telecom expenses.

Avotus EUR is a Call Accounting and Billing package that utilizes the IM records output from Avaya Aura® Presence Services. Avotus EUR collects, stores, and processes the IM records to provide usage analysis, call costing and billing capabilities. An Avaya softphone can be configured to have Presence and Instant Messaging capabilities. The IM records can be archived by Presence Services and transferred to a server that has Secure File transfer Protocol (SFTP) capabilities. Avotus EUR connects to this server over the local or wide area network using SFTP to access these IM archived records and downloads XML files to the local Avotus EUR server for reports.

The assumption is made that the installation and configuration of the Avaya BreezeTM server with Avaya Aura® Session Manager is already in place. For additional documentation, refer to **Section 10**.

2. General Test Approach and Test Results

The general test approach was to generate IM using Avaya softphones (during compliance testing Avaya one-X® Communicator was used) and ensure that Presence Services is able to archive these messages and transfer it to a server of user's choice using SFTP. Avotus EUR will then connect to this server also using SFTP and collect the archived files and delete the files once the collection is completed. For serviceability testing LAN failures and restart of Avotus EUR server were simulated.

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 this DevConnect Application Note 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 interoperability compliance testing included feature and serviceability testing. The feature testing evaluated the ability of Avotus EUR to collect and process IM. The source, destination and message body of each IM was verified on the Avotus EUR application. The interoperability compliance testing includes the following cases.

- IM between two Avaya softphones.
- IM between two Avaya softphones and inviting another Avaya softphone to the chat.
- IM and Voice calls simultaneously.
- IM and transfer of files using chat window.

The serviceability testing introduced failure scenarios to see if Avotus EUR could resume IM records collection after failure recovery.

2.2. Test Results

All feature and performance tests passed.

2.3. Support

Technical support for the Avotus EUR solution can be obtained by contacting Avotus:

- URL http://www.avotus.com/contact_support.asp
- Phone (800) 840-2580

3. Reference Configuration

Figure 1 illustrates a sample configuration with an Avaya network that includes the following Avaya products:

- Avaya Aura® Presence Services Snap-in running on Avaya BreezeTM Platform.
- Avaya Aura® System Manager used to configure Avaya Breeze TM Platform.

For IM chat window, Avaya one-X® Communicator softphones in SIP mode were used.

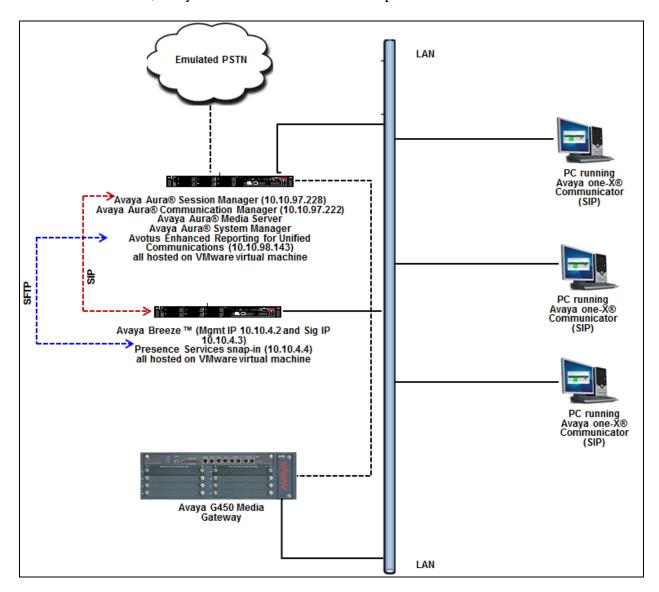


Figure 1: Test configuration for Avotus EUR Compliance Test

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® System Manager running on virtualized environment	7.1.0.0.1125193
Avaya Aura® Session Manager running on virtualized environment	7.1.0.0.710028
Avaya Aura® Presence Services Snap-in	7.1.0.0.584
Avaya Breeze TM Platform	3.3.0.0.330019
Avaya one-X®Communicator (SIP)	6.2.12.04-SP12
Avotus Enhanced Usage Reporting for Unified	9.10
Communications running on Windows Server	
2008 R2 Standard SP1	

5. Configure Avaya Aura® Session Manager for Presence Services

This section provides the procedures for configuring Session Manager for Presence Services. The procedures include the following areas:

- Launch Avaya Aura® System Manager
- Administer Domain
- Administer locations
- Administer SIP entities

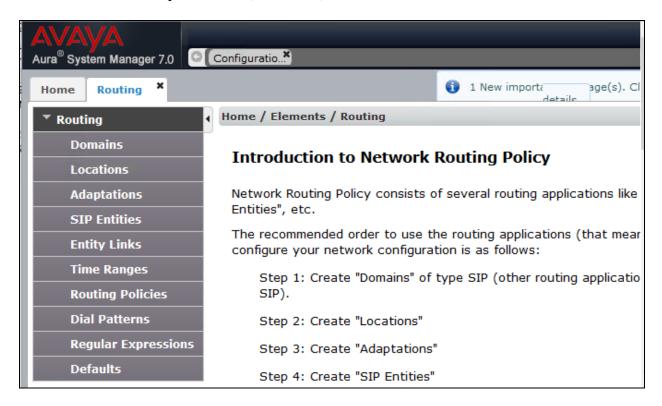
5.1. Launch Avaya Aura® System Manager

Access the System Manager web interface by using the URL "https://ip-address" in an Internet browser window, where "ip-address" is the IP address of System Manager. Log in using the appropriate credentials.

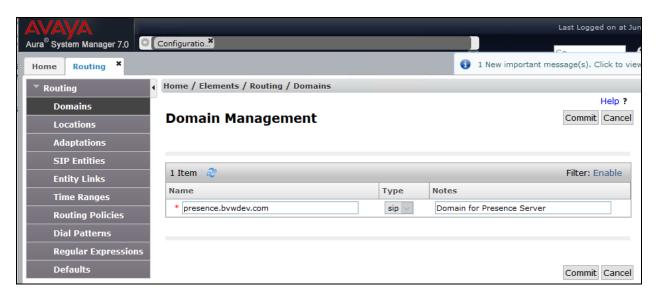


5.2. Administer Domain

In the subsequent screen (not shown), select **Elements** \rightarrow **Routing** to display the **Introduction** to **Network Routing Policy** screen below. Select **Routing** \rightarrow **Domains** from the left pane, and click **New** in the subsequent screen (not shown) to add a new domain



The **Domain Management** screen is displayed. In the **Name** field enter the domain name, select *sip* from the **Type** drop down menu and provide any optional **Notes**.



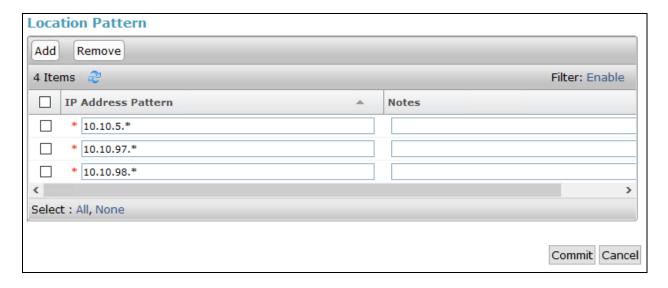
5.3. Administer Locations

Select **Routing** → **Locations** from the left pane, and click **New** in the subsequent screen (not shown) to add a new location.

The **Location Details** screen is displayed. In the **General** sub-section, enter a descriptive **Name** and optional **Notes**. Retain the default values in the remaining fields.



Scroll down to the **Location Pattern** sub-section, click **Add** and enter the IP address of all devices involved in the compliance testing in **IP Address Pattern**, as shown below. Retain the default values in the remaining fields.



5.4. Administer SIP Entity

This section explains the adding of a SIP entity for the Presence Server.

Select **Routing** → **SIP Entities** from the left pane, and click **New** in the subsequent screen (not shown) to add a new SIP entity for Presence Services.

The **SIP Entity Details** screen is displayed. Enter the following values for the specified fields, and retain the default values for the remaining fields.

• Name: A descriptive name.

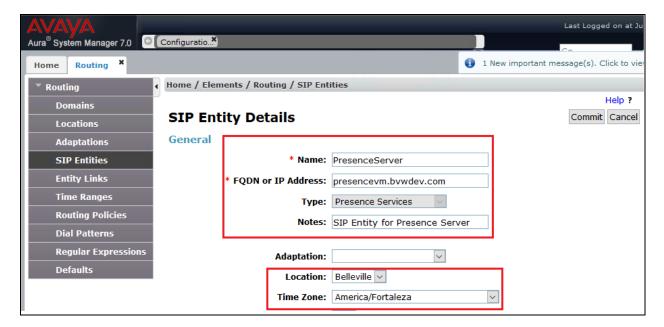
• **FQDN or IP Address:** The FQDN of Presence Server.

• **Type:** Select *Presence Services* from the drop down menu.

• **Notes:** Any desired notes.

• **Location:** Select the location name configured in **Section 5.3**.

• **Time Zone:** Select the applicable time zone.



Scroll down to the **Entity Links** sub-section, and click **Add** to add an entity link. Enter the following values for the specified fields, and retain the default values for the remaining fields.

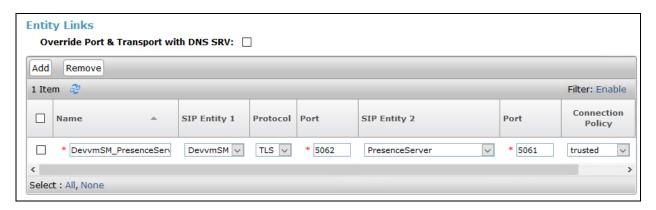
• Name: A descriptive name.

• **SIP Entity 1:** The Session Manager entity name, in this case *DevvmSM*.

Protocol: *TLS* Port: 5062

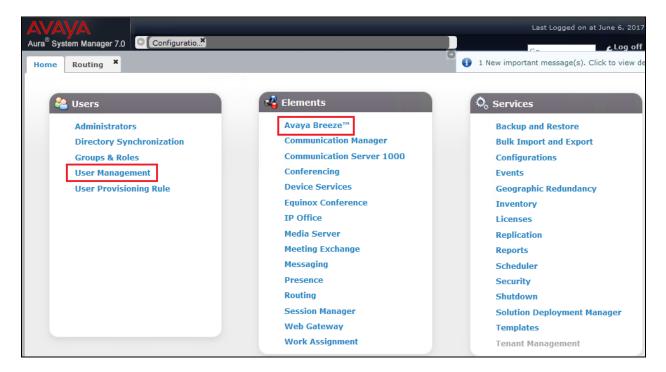
• **SIP Entity 2:** The Presence Server entity name from this section.

Port: 5061 Connection Policy: trusted



6. Configure Avaya Aura® Presence Services Snap-in, Instant Messaging and Presence for SIP Users

Configuration for Presence Services is accomplished by accessing the browser-based GUI of System Manager using the URL "https://<*ip-address*>/SMGR", where <*ip-address*> is the IP address of System Manager. Log in with the appropriate credentials. The initial screen is displayed as shown below. The configuration in this section will be performed under **Avaya Breeze**TM and **User Management** listed within the **Elements** and **Users** section.



6.1. Install Avaya Aura® Presence Services Snap-in

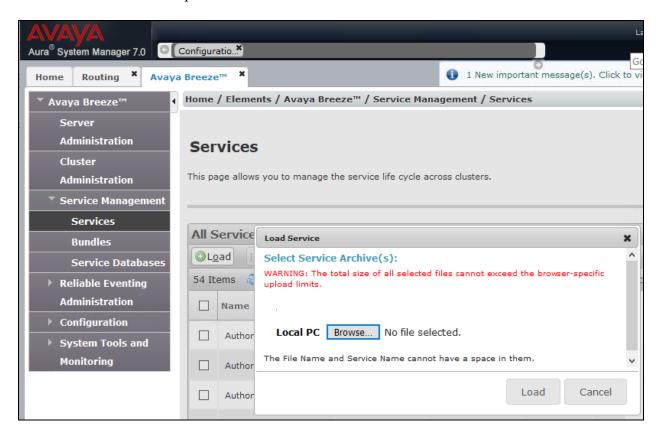
It is assumed that the Avaya BreezeTM Platform has already been installed and configured. For additional information, see the documentation under **References** in **Section 10**.

Navigate to Home \rightarrow Elements \rightarrow Avaya BreezeTM.

To install the Presence Services Snap-in, navigate to **Avaya Breeze**TM → **Service Management** → **Services** as shown in the screen below.

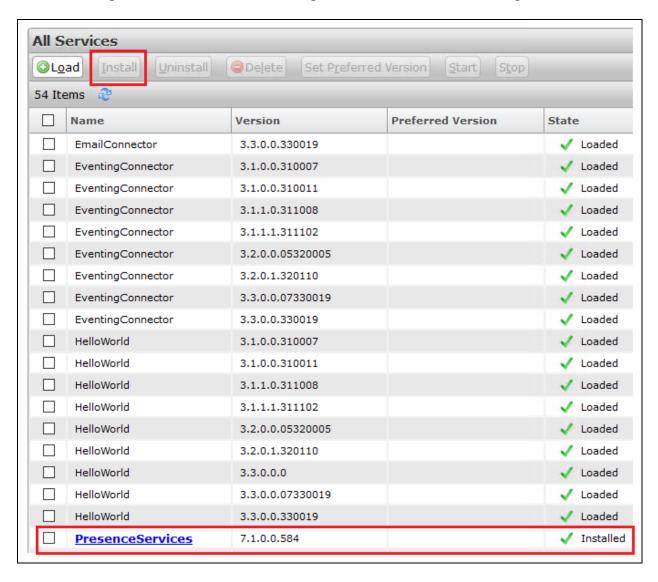


Select **Load** (see above screen) to upload the Presence Services Snap-in, click **Browse** and select the Presence Services Snap-in. Click **Load** to continue.



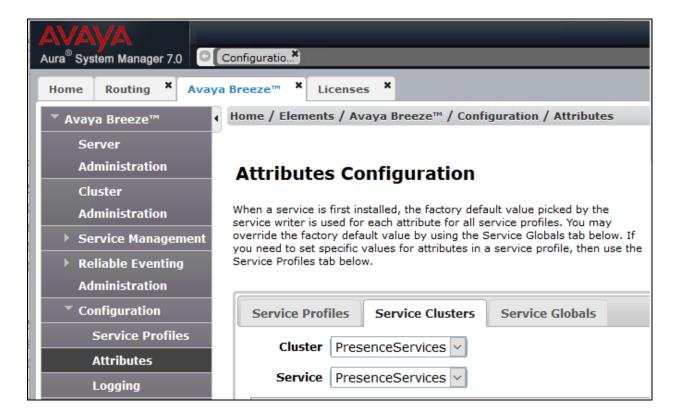
Follow the steps and ensure that the **PresenceServices** snap-in now has a state of **Loaded** (not shown).

To install the snap-in, check the box for **PresenceServices** and select **Install** and follow the installation steps. Screen below shows the snap-in after the installation is complete.



6.2. Configure Instant Message Archiving

This section shows the configuration required in Presence Services to archive IM records. Navigate to **Avaya Breeze® Configuration Attributes** as shown in the screen below. From the **Service Clusters** tab, select *PresenceServices* from the drop down menu for both **Cluster** and **Service** fields.



Scroll down to the **Instant Messaging** section and configure the following values,

• Message Archiving Enabled: Check the box in Override Default

column and enter *True* under **Effective Value** column

• Message Archiving Remote Server Address: Check the box in Override Default

column and enter the IP address of the remote SFTP server where the archived IM will be uploaded.

• Message Archiving Remote User: Check the box in Override Default

column and enter the user name of the remote SFTP server where the archived IM will be uploaded.

• Message Archiving Remote Password: Check the box in Override Default

column and enter the password of the

remote SFTP server where the archived IM will be uploaded.

• Message Archiving Remote Path: Check the box in Override Default

column and enter the folder name where the archived IM will be uploaded to in the SFTP server.

• Message Archiving Remote Upload Frequency: Check the box in Override Default

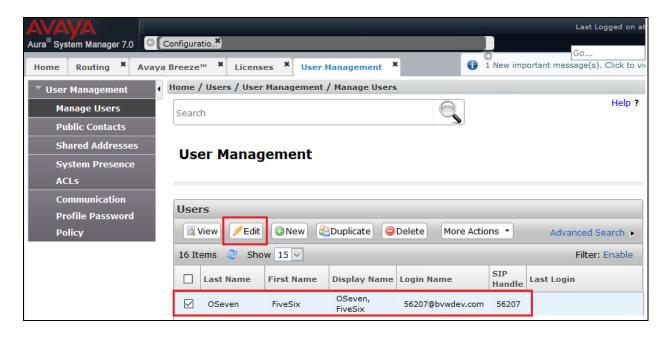
column and enter the duration in hour for the archived IM upload frequency to the SFTP server

Retain default values for all other fields and click on the **Commit** button (not shown) to save the configuration.

10 Items				
lame	Override Default	Effective Value	Description	
Message Archiving Enabled		True	Enable message archiving for IM's (True/False)	
Message Archiving Remote Server Address	\square	10.10.4.2	Server address of the remote SFTP site to upload archived IM's	
Message Archiving Remote User	\square	admin	Login name of the remote SFTP site to upload archived IM's	
Message Archiving Remote Password		•••••	Password of the remote SFTP site to upload archived IM's	
Message Archiving Remote Path	abla	backup2	Remote directory name under user's home to upload archived IM's (optional)	
Message Archiving Remote Upload Frequency	☑	1	Frequency (1-24 hours) to upload archived IM's	
Message Archiving Remote Upload Failures Threshold		5	The number of days (1-15) of consecutive remote upload failure before Message Archiver is disabled	
Offline IM Storage Enabled		True	Enable storing IMs sent to offline users (True/False)	
Offline IM Storage Targeted Maximum IMs Per User		25	The maximum number of IMs that will be stored when a user is offline on a puser basis (min 25, max 100). This may be exceeded during heavy traffic loads	
Block IMs for users in Do-Not-Disturb (DND) state		False	Enable blocking and delayed delivery of IMs to recipients in Do-Not-Disturb (DND	

6.3. Add Presence Users

This section only shows the adding of Presence to an already configured SIP User. Navigate to Users → User Management → Manager Users. Select an already configured SIP user. The screen below shows user 56207 selected. Click on the **Edit** button.

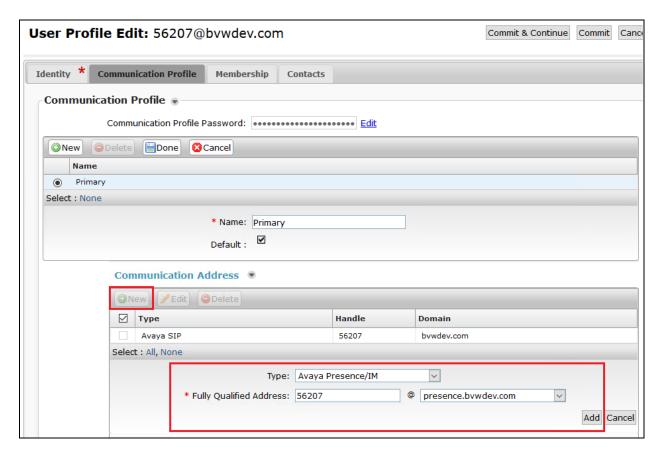


Under the **Communication Profile** tab:

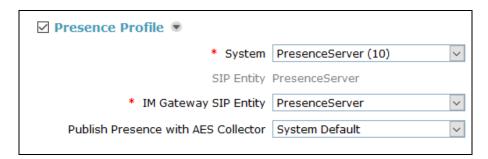
Select **New** in the **Communication Address** section:

- Select *Avaya Presence/IM* from the **Type** drop down menu.
- For the **Fully Qualified Address**, type in the extension number that will be used by the SIP user to log in. For the domain, select the domain created (**Section 5.2**) for the Presence Services from the drop down menu.

Once done, select Add.



Continuing from above, scroll down and enable the check box for **Presence Profile.** For the **System** and **IM Gateway SIP Entity** (**Section 5.4**) drop down menu, select the **PresenceServer** and then click on the **Commit** button to add the user.



7. Configure Avotus Enhanced Usage Reporting for Unified Communications

This section describes the configuration of Avotus EUR. Avotus installs, configures, and customizes the EUR application for the end customers. Thus, this section only describes the interface configuration, so that Avotus EUR can collect IM archived data from a SFTP server. The procedure covers the following areas:

- Login to Avotus EUR.
- Configure a site.
- Configure script and collection
- Start collection.

7.1. Login to Avotus EUR

To configure Avotus EUR, double click on the Avotus EUR icon from the desktop as shown below.

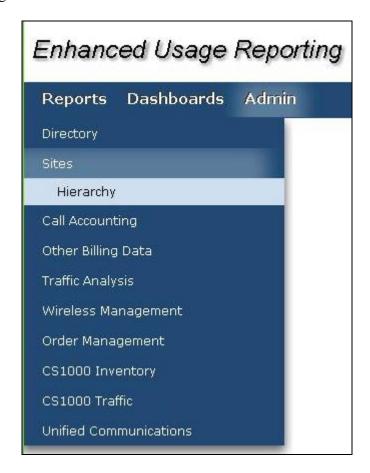


Provide credentials to gain access into Avotus EUR in the Sign In window shown below.

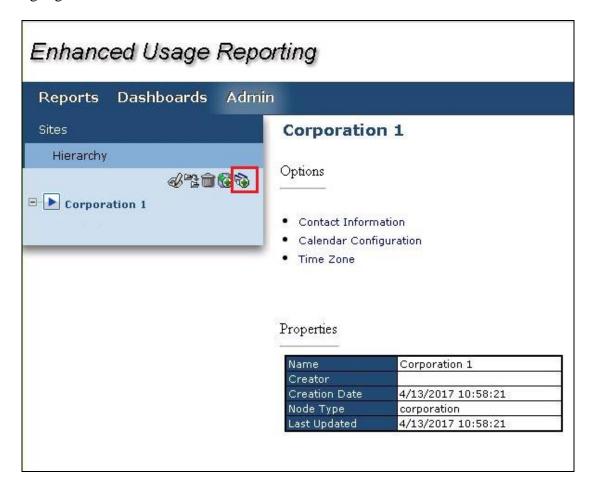


7.2. Configure a Site

From the **Enhanced Usage Reporting** screen shown below, navigate to **Admin** \rightarrow **Sites** \rightarrow **Hierarchy** to configure a site.



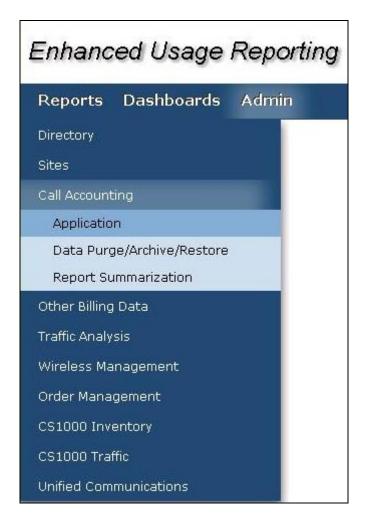
In the screen shown below, **Corporation 1** is created by default. Click on the top right **Add Site** icon highlighted below to add a site.



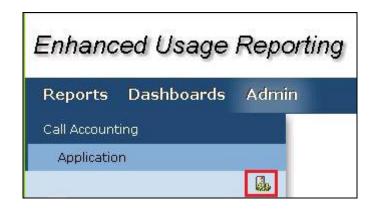
In the **Add Site** window shown below, enter an appropriate name for **Site Name** field and click on the **OK** icon highlighted below.



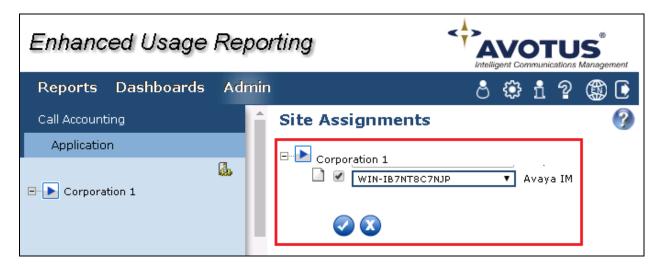
To assign the site created above for collection of data; navigate to Admin → Call Accounting → Application as shown in the screen below.



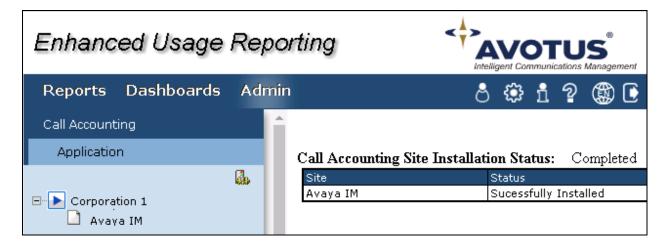
In the **Application** section, start the configuration by clicking on the **Configure** icon as highlighted in the screen below.



In the **Site Assignments** window seen below, select the server name from the drop down menu to assign it to the site. In the example below, "WIN-IB7NT8C7NJP" is the Windows server name and "Avaya IM" is the site created earlier in this section.

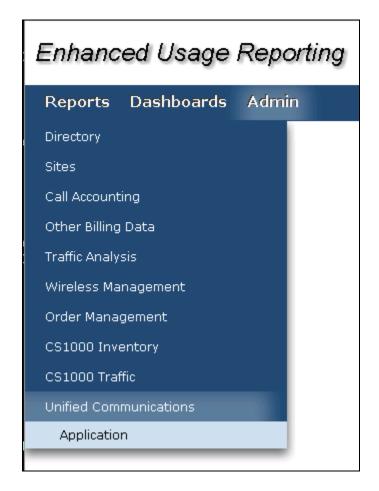


Screen below shows the successful assigning of the site for collection.



7.3. Configure Collection

To configure the collection for data, navigate to Admin \rightarrow Unified Communications \rightarrow Application as shown in the screen below.



From the left navigation menu, click on Avaya Collection and from the right hand window of Avaya IM Data Collection click on Add Configuration Setting and configure the following values,

Site: Select the site configured in **Section 7.2**.

• Configuration Name: Type a descriptive name.

• Collection For: Select "Avaya IM Data" from the drop down menu. During compliance testing default value was retained. • Extension length:

Ensure "SFTP" is selected from the drop down menu. • File Protocol:

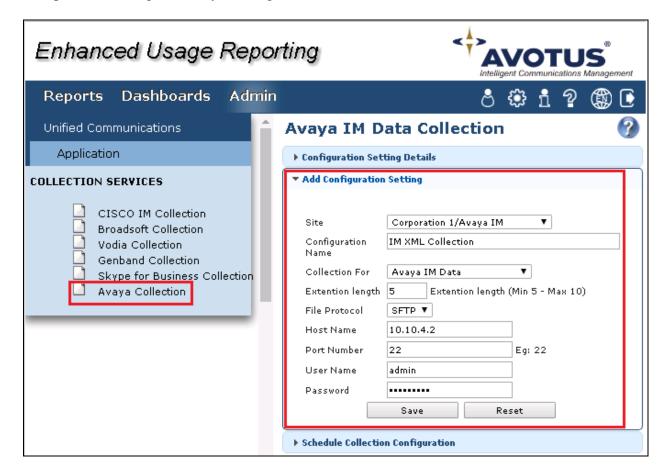
IP Address of an SFTP server as mentioned in **Section 6.2**. • Host Name: • Port Number:

During compliance testing default value was retained. **User Name:** The user name of the SFTP server as mentioned in **Section**

Password: The password configured for the SFTP server as mentioned

in Section 6.2.

Complete the configuration by clicking on the **Save** button.



7.4. Start Collection

From the left navigation menu, click on **Avaya Collection** and from the right hand window of **Avaya IM Data Collection** click on **Schedule Collection Configuration** and configure the following values,

• **Select Options**: Select the collection configured in **Section 7.3**.

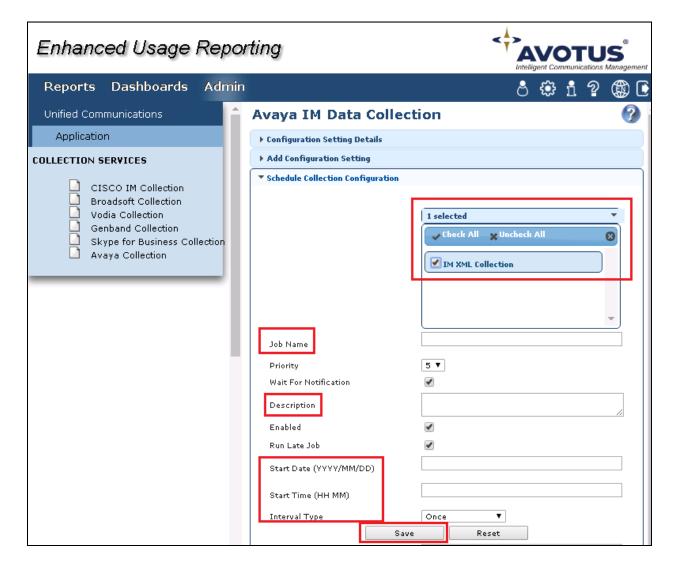
• **Job Name**: Type a descriptive job name.

• **Description**: Provide a description for the collection job.

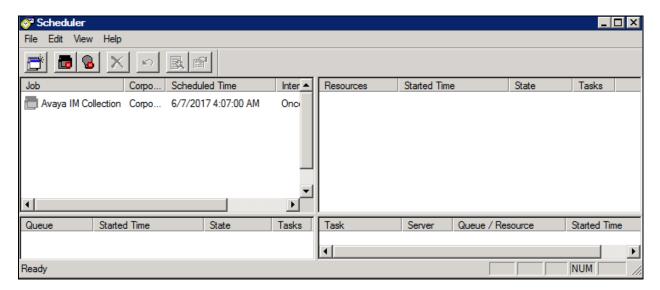
Start Date (YYYY/MM/DD: Provide a start date.
 Start Time (HH MM: Provide a start time.

• **Interval Type**: Select an interval frequency for the collection.

Retain default values for all other fields and click on the **Save** button.



The collection job is created in the scheduler as shown below.



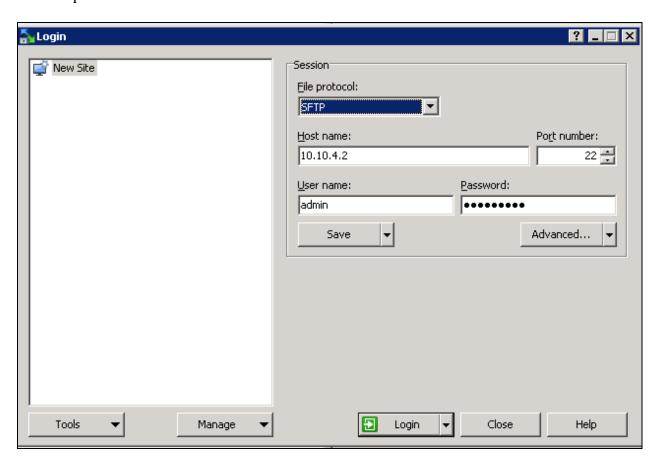
The collected raw IM XML data can be found in the "ProcessedFileBkp" folder, which is under the "\Avotus ICM\Execs\Avotus.UM.Avaya.IMDataCollect\IM_CollectionData" folder.

8. Verification Steps

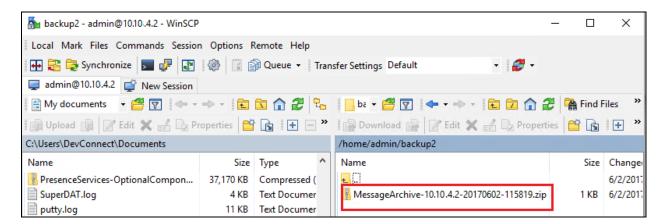
The following steps may be used to verify the configuration.

8.1. Instant Messages information is being collected by an SFTP Server

Use a secure FTP application, e.g., WinSCP to connect to the server where the IM archived data will be uploaded.



Exchange IM between Avaya softphones; wait for the frequency duration as when Presence Service will upload the archived IM data to an user specified folder in the SFTP sever as shown in the screen below.



8.2. Instant Message Data Collected by Avotus Enhanced Usage Reporting for Unified Communications

Generate some IM data and verify that Avotus EUR can download the archived IM data from the SFTP server. Compare the values of data fields of the IM records with the expected values and verify that the values match. Screen below shows the raw IM data collected by Avotus EUR which was then compared with the IM data archived in the SFTP server.

```
<?xml version="1.0" encoding="UTF-8"?>
<messages>
  <message direction="IN">
      <timestamp>2017-06-02T14:57:28-UTC</timestamp>
      <threadId>AF86488C-2C55-47B7-DA4F3D8</threadId>
      <sender>56208@presence.bvwdev.com/19618f06-ab79-5bcb-9742-ae07213a6fdb</sender>
      <recipient>56207@presence.bvwdev.com</recipient>
     - <body>
        - <![CDATA[</p>
             hi from 56208
         ]]>
      </body>
   </message>
   <message direction="OUT">
      <timestamp>2017-06-02T14:57:28-UTC</timestamp>
      <threadId>AF86488C-2C55-47B7-DA4F3D8</threadId>
      <sender>56208@presence.bvwdev.com/19618f06-ab79-5bcb-9742-ae07213a6fdb</sender>
      <recipient>56207@presence.bvwdev.com</recipient>
     - <body>
         <![CDATA[
            hi from 56208
         ]]>
      </body>
   </message>
   <message direction="IN">
      <timestamp>2017-06-02T14:57:37-UTC</timestamp>
      <threadId>AF86488C-2C55-47B7-DA4F3D8</threadId>
      <sender>56207@presence.bvwdev.com/fc57fb25-0813-5b4a-9f09-77c2ef551e7d
      <recipient>56208@presence.bvwdev.com</recipient>
     - <body>
        - <![CDATA[</p>
             ok
         11>
      </body>
   </message>
   <message direction="OUT">
      <timestamp>2017-06-02T14:57:37-UTC</timestamp>
      <threadId>AF86488C-2C55-47B7-DA4F3D8</threadId>
      <sender>56207@presence.bvwdev.com/fc57fb25-0813-5b4a-9f09-77c2ef551e7d</sender>
      <recipient>56208@presence.bvwdev.com</recipient>
     - <body>
        - <![CDATA[
            ok
         ]]>
      </body>
   </message>
</messages>
```

9. Conclusion

These Application Notes describe the steps required to configure Avotus Enhanced Usage Reporting for Unified Communications to interoperate with Avaya Aura® Presence Services snap-in and capturing/processing archived Instant Message records. All feature and serviceability test cases described in **Section 2.1**were passed with observations if any pointed in **Section 2.2**.

10. Additional References

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

Product documentation for Avaya products may be found at http://support.avaya.com.

- 1. Administering Avaya Aura® Session Manager, Release 7.1, Issue 1 May 2017
- 2. Deploying Avaya Aura® System Manager, Release 7.1, Issue 1 May 2017
- 3. Administering Avaya Aura® System Manager for Release 7.1, Release 7.1, Issue 2 May 2017
- 4. Avaya Aura® Communication Manager Feature Description and Implementation, Release 7.1, Issue 1 May 2017
- 5. Deploying Avaya BreezeTM, Release 3.3, Issue 1 May 2017
- 6. Administering Avaya BreezeTM, Release 3.3, Issue 1 May 2017
- 7. Avaya Aura® Presence Services Snap-in Reference, Release 7.1, Issue 1 May 2017

Product documentation for Avotus products may be found at, http://avotus.com/telecom-enhanced-usage-reporting.asp

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