



Avaya Solution & Interoperability Test Lab

Application Notes for configuring Blackchair Spotlight V5 with Avaya Aura® Contact Centre R6.3 (SIP) to monitor moves and changes – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate Spotlight V5.0 from Blackchair with Avaya Aura® Contact Centre R6.3 using the SDK from Avaya Aura® Contact Centre Web Services. Spotlight is capable of monitoring changes that are made on the Avaya Aura® Contact Centre along with other Contact Centre environments and compiling data from these different sources to generate reports in a single desired format.

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 to integrate Spotlight V5.0 from Blackchair with Avaya Aura® Contact Centre R6.3 using the Web Services SDK on Avaya Aura® Contact Center Manager Administrator (CCMA) module. Spotlight is capable of monitoring changes that are made on the Avaya Aura® Contact Centre along with other Contact Centre environments and compiling data from these different sources to generate reports in a single desired format.

The CCMA Open Interface incorporates SOAP- and REST-based Web service interfaces that can be used by third-party applications to access certain Contact Center management capabilities provided by CCMA. CCMA itself incorporates a graphical management interface for performing various aspects of Contact Center management. The latest release of the CCMA Web service provides methods which allow third-party applications to access the following CCMA capabilities:

- Get a list of all agents
- Get a list of all supervisors
- Get agent details, including assigned skillsets
- Get supervisor details, including assigned agents
- Get a list of all skillsets
- Get a list of agents assigned to a specific skillset
- Get a list of the configured servers
- Get a list of the Call Presentation Classes
- Get a list of the Multiplicity Presentation Classes
- Get a list of the Activity Codes
- Get a list of the Contact Types
- Get a list of the Agent Threshold Classes
- Get a list of all the Skillset Threshold Classes
- Get a list of the configured Communication Manager servers

2. General Test Approach and Test Results

All feature test cases were performed manually. Specific changes were made to various fields on Contact Centre; these changes were noted and compared to the report produced by Spotlight.

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

Blackchair Spotlight was installed on a Microsoft Windows 2008 Server R2 virtual Server, with a client PC using the Microsoft Internet Explorer to access the web browser on the Spotlight Server. Changes were made manually on Contact Centre using CCMA and Spotlight shows the initial value and the changed value giving the user an option to see both the changed value and the initial value and also allowing users to revert back to the original value by manually entering the data on Contact Centre.

The test cases that were performed were conducted according to the fields described on the SDK. There were a number of fields or configurable items on Contact Centre listed in the SDK document that are not compatible with the SDK and were therefore unable to be tested. A list of the fields that were tested are shown in **Appendix A** of these Application Notes.

Note: The Spotlight application has only “read” capabilities on Contact Centre, this can be setup in Access and Partition Management as shown in **Section 5** of these Application Notes.

The following steps were conducted in order to show compliance.

1. A comparison was made between the information stored on Contact Centre and the information displayed on Spotlight for each of the fields that were captured.
2. A new item in each field was added and compared to the latest information being displayed on Spotlight in order to determine that Spotlight was updated with the newly added information.
3. A change was made to the newly added field above and this change was observed on the Spotlight server.
4. The field that was added in point 2 above is now deleted from Contact Centre and this deletion is observed to have taken place on Spotlight as well.

2.2. Test Results

Because of the nature of the testing not every single field change in Contact Centre was tested. A broad slice of testing across a range of fields was conducted to prove that compliance was achieved. The information that is received into Spotlight from Contact Centre is as per the SDK document with is referenced in **Section 9** of these Application Notes.

- Some fields did not appear to be displayed in Spotlight but having read through the SDK for CCMA these fields were not a part of the SDK and so would not be shown.
- In some instances a change in a field shows up as a deletion of the old field and a creation of a new one replacing the old one showing the change.

2.3. Support

For technical support on Spotlight, contact Blackchair as shown below.

- Web: <http://www.theblackchair.com/contacts>
- Tel: +44 845 456 6751
- Email: enquiries@theblackchair.com

3. Reference Configuration

Figure 1 shows the network topology during compliance testing. The Spotlight server was placed on the Avaya Telephony LAN. The CCMA SDK on Contact Centre provides the Spotlight server a history of moves and changes from Contact Centre. A user browsing to the Spotlight server using a web browser can then view these statistics for all changes that was made on Contact Centre. The telephony solution connected to Contact Centre is also displayed in the diagram below.

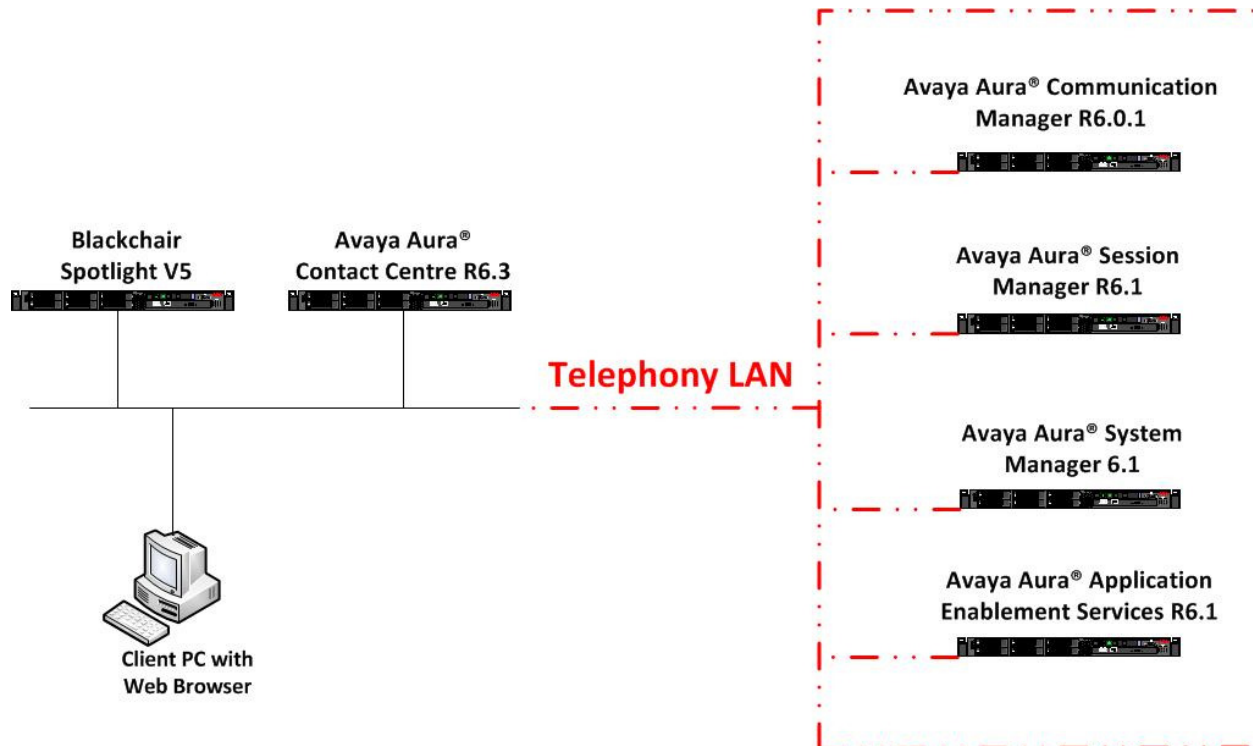


Figure 1: Network solution of Blackchair Spotlight V5 and Avaya Aura® Contact Centre R6.3 with Avaya Aura® Telephony Solution

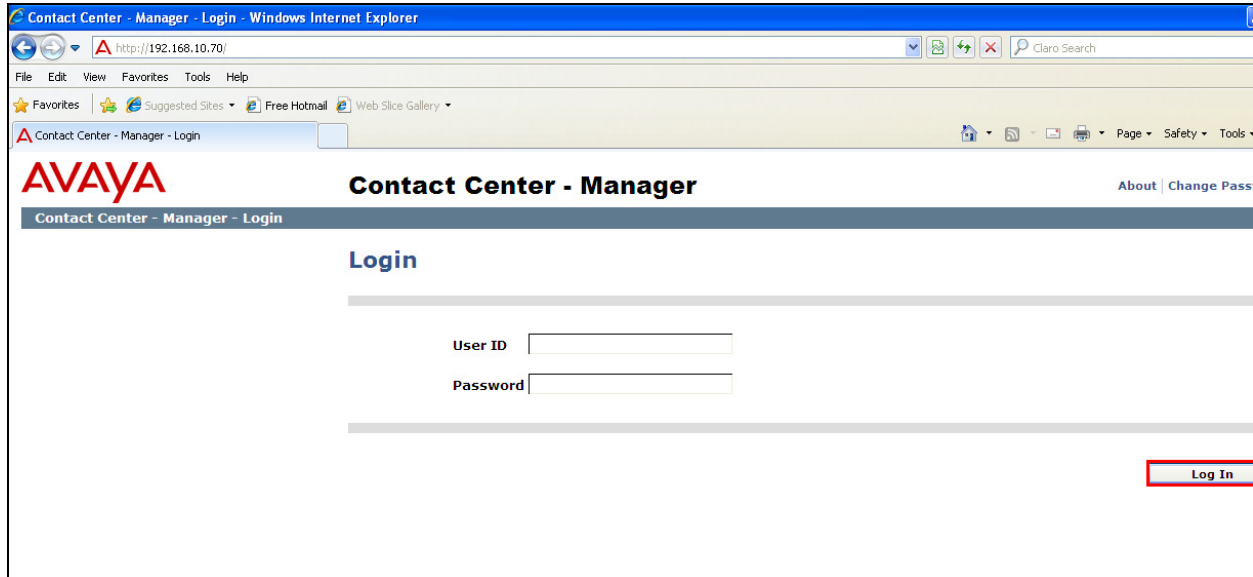
4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura [®] Contact Centre running on Avaya S8800 Server	R6.3 SP 8 [SIP Installation] (See Appendix for Patch list)
Avaya Aura [®] Communication Manager running on Avaya S8800 Server	R6.0.1 SP3
Avaya Aura [®] Session Manager running on Avaya S8800 Server	R6.1 SP4
Avaya Aura [®] Application Enablement Services running on Avaya S8800 Server	R6.1
Avaya Aura [®] System Manager running on Avaya S8800 Server	R6.1 SP4
Blackchair Spotlight Running on a Virtual Server Windows 2008 R2	V 5.0.44810.735

5. Configure Avaya Aura® Contact Centre

A new user for Blackchair was created on Contact Centre. Open a web browser and http to the Contact Centre and **Log In** as shown below.



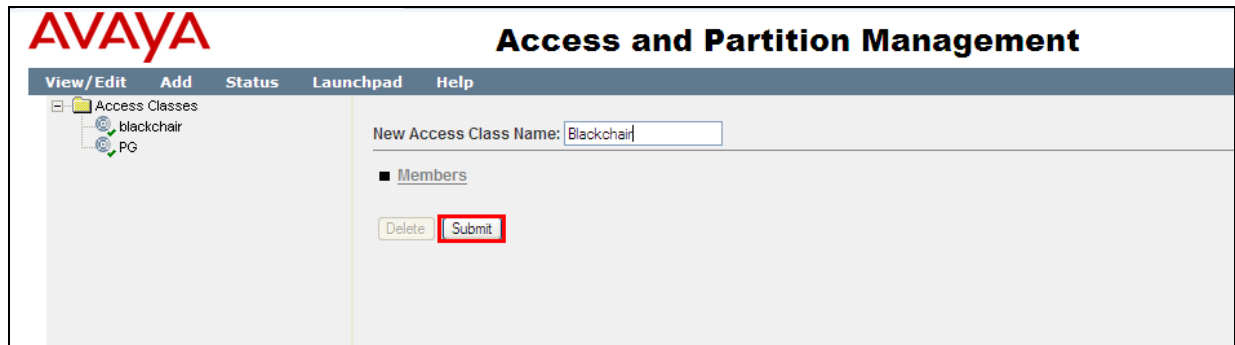
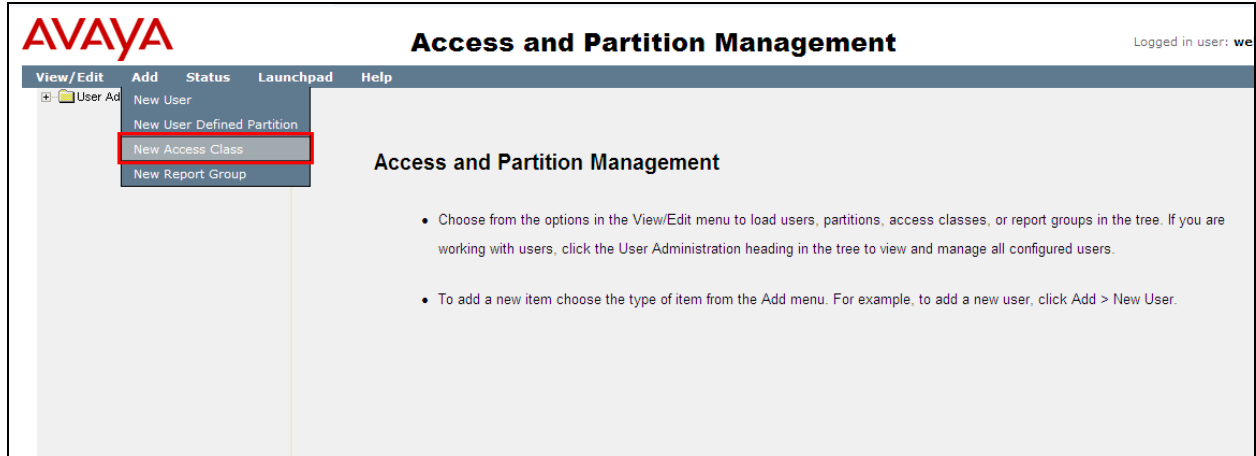
The screenshot shows a Windows Internet Explorer browser window with the address bar displaying 'http://192.168.10.70/'. The page title is 'Contact Center - Manager - Login'. The Avaya logo is on the left, and the page title 'Contact Center - Manager' is in the center. Below the title, there is a 'Login' section with two input fields: 'User ID' and 'Password'. A 'Log In' button is located at the bottom right of the login section, highlighted with a red rectangle.

Click on **Access and Partition Management**.



The screenshot shows the 'Launchpad' page of the Avaya Contact Center Manager. The Avaya logo is on the left, and the page title 'Contact Center - Manager' is in the center. Below the title, there is a 'Launchpad' section with a list of links. The link 'Access and Partition Management' is highlighted with a red rectangle. Other links include 'Contact Center Management', 'Real-Time Reporting', 'Historical Reporting', 'Call Recording and Quality Monitoring', 'Configuration', 'Scripting', 'Emergency Help', 'Outbound', and 'Multimedia'.

A new Access Class has to be added for the new Spotlight user that will also get added.



Ensure that **Read Only** or **View** is selected for each of the different **Access Class Properties**. Click on **Submit** once finished.



Access and Partition Management

View/Edit Add Status Launchpad Help

Access Classes

- blackchair
 - AACC62SIPSA
 - Administration
 - PG

Access Class Properties: **blackchair**

Activity Codes	Read Only
Threshold Classes	Read Only
CDNs (Route Points)	Read Only
Call Presentation Classes	Read Only
DNISs	Read Only
Formulas	Read Only
Global Settings	Read Only
Historical Statistics	Read Only
Real-Time Statistics	Read Only
Routes	Read Only

Submit

Historical Reporting	None
Real-time Tabular Displays	None
Real-time Graphical Displays	None
CCM	View Agent and Supervisor Properties
CCM - Network Admin View	Access based on CCM privilege level
Skillset Assignment	View Assignments
Supervisor Assignment	View Assignments
Media Servers	Read Only
Media Services Configuration	Read Only
Multiplicity Presentation Classes	Read Only

Submit

A further change to the **Access Class Properties** is required in order to show the changes in Agent-Skillset assignments. Under the **CCM** drop-down box select **Add/Edit/Delete Agents and Supervisors**.

AVAYA

Access and Partition Management

View/Edit Add Status Launchpad Help

Access Classes

- blackchair
 - AACC62SIPSA
 - Administration
 - PG

Access Class Properties: **blackchair**

Historical Reporting	None
Real-time Tabular Displays	None
Real-time Graphical Displays	None
CCM	Add/Edit/Delete Agents and Supervisors
CCM - Network Admin View	None
Skillset Assignment	View Agent Properties
Supervisor Assignment	Edit Agent Properties
Media Servers	Edit Agent Properties including Partitions
Media Services Configuration	Add/Edit/Delete Agents
Multiplicity Presentation Classes	View Agent and Supervisor Properties
	Edit Agent and Supervisor Properties
	Add/Edit/Delete Agents and Supervisors
	Read Only
	Read Only

Once submit is clicked above the following screen is displayed. Again select either **Read Only** or **Display** for the various **Access Class Properties**.

The screenshot shows the AVAYA Access and Partition Management interface. On the left, a tree view shows 'Access Classes' expanded, with 'blackchair' selected. Below the tree, a table lists properties for 'blackchair':

Access Class Properties: blackchair	
User Administration	Read Only
Access Classes	Read Only
User Defined Partitions	Read Only
Report Groups	Read Only
Grace Period Notifications	Display Notifications

Below the table is a red-bordered 'Submit' button.

Once the Access Class has been created a new user for Spotlight is created. Select **Add** → **New User** as shown below.

The screenshot shows the AVAYA Access and Partition Management interface. The 'Add' menu is open, showing options: 'New User', 'New User Defined Partition', 'New Access Class', and 'New Report Group'. The 'New User' option is highlighted with a red box. The main content area displays the title 'Access and Partition Management' and two bullet points:

- Choose from the options in the View/Edit menu to load users, partitions, access classes, or report groups in the tree. If you are working with users, click the User Administration heading in the tree to view and manage all configured users.
- To add a new item choose the type of item from the Add menu. For example, to add a new user, click Add > New User.

Enter the **User Details**, the **Launchpad Options** and select the newly created **Access Class**.
Click on Submit once all the details have been entered correctly.

AVAYA **Access and Partition Management** Logged in user: webad

View/Edit Add Status Launchpad Help

User Administration
Administrator Web
BCTEST BCTEST
blackchair blackchair

User Name : blackchair blackchair

▼ User Details

User ID: blackchair
First Name: blackchair
Last Name: blackchair

User Type: Standard
Account Type: CCMA Account
Password: *

▼ Launchpad Options

<input type="checkbox"/> Access and Partition Management	<input type="checkbox"/> Real-Time Reporting	<input type="checkbox"/> Historical Reporting
<input checked="" type="checkbox"/> Configuration	<input checked="" type="checkbox"/> Contact Center Management	<input checked="" type="checkbox"/> Scripting
<input type="checkbox"/> Emergency Help	<input checked="" type="checkbox"/> Audit Trail	<input type="checkbox"/> Outbound
<input type="checkbox"/> Call Recording and Quality Monitoring	<input checked="" type="checkbox"/> Multimedia	

▼ Access Classes

Access Class Name (2)	Select All
blackchair	<input checked="" type="checkbox"/>
PG	<input type="checkbox"/>

Partitions

Submit Create Copy Delete Unassign User Close All Sections

6. Configure Blackchair Spotlight

The installation and configuration of the Spotlight server from Blackchair is performed by a Blackchair engineer and is therefore outside the scope of these Application Notes. The information for support for Blackchair can be found in **Section 2.3**.

7. Verification Steps

This section provides the tests that can be performed to verify that Blackchair Spotlight.

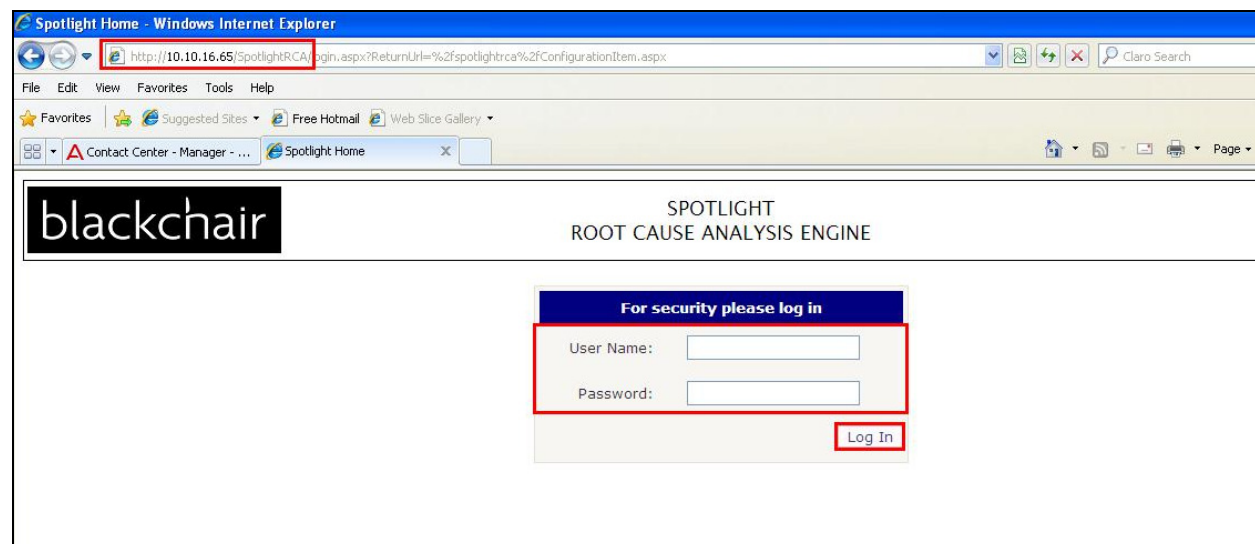
7.1. Verify connection to Contact Centre

Open the command prompt and navigate to **C:\program Files\Spotlight Loader Service**. Type **spotlightloader** as the > prompt. If the connection is successful the upload will show as **<successful>**.

```
C:\Program Files (x86)\BlackChair\Spotlight Loader Service>spotlightloader
BC Data Uploader version 5.0.735 (Build 44810)
=====
Starting upload at 16:18:12
Finished template 'SkillsetAssignmentInitialLoad' <successful>
Finished template 'AACC' <successful>
Finished template 'AACC' <successful>
Finished template 'AACC' <successful>
Finished template 'AACC' <successful>
Finished template 'SkillsetAssignmentInitialLoad' <successful>
Finished template 'AACC' <successful>
Finished template 'AACC' <successful>
Finished template 'AACC' <successful>
```

7.2. Verify changes shown on Spotlight

Open a web browser to the Spotlight server, enter the proper credentials and log in as shown below.



Once logged in a search is made for all the latest changes by selecting **Search→Latest Changes→All** as shown.

blackchair SPOTLIGHT ROOT CAUSE ANALYSIS ENGINE

Browse Search Options

Latest Changes > All

Custom Search

Object Type >

System >

Data Type >

Contact Centre **Infrastructure Library**

Item Properties	
Property	Value
Name	Contact Centre Infrastructure Library
Location	(Root element)
Version	Version 1 of 1
Updated By	System
Updated Date	Mon 25 February 2013 12:12:55

Note both **bcactest2** and **blackchair123AC** activity codes both show up as **Version 1**.

blackchair SPOTLIGHT ROOT CAUSE ANALYSIS ENGINE

Browse Search Options

• First 100 items sorted by AddedDate Descending

[Refine this query](#) | [Save this query](#)

Search Results

Item Name	Item Type	Version	Last Updated
bcactest2	Activity Code	Version 1	28 February 2013 15:21:56
6666	User	Version 1	28 February 2013 15:17:51
blackchair123AC	Activity Code	Version 1	28 February 2013 15:16:34
BlackCPC	Call Presentation Class	Version 1	28 February 2013 15:16:33
Black_DNIS	DNIS	Version 1	28 February 2013 15:16:14
Black MPC	Multiplicity Presentation Class	Version 1	28 February 2013 15:15:22
VM Black VM	Skillset	Version 1	28 February 2013 15:14:58
BlackSkill	Skillset Threshold Class	Version 1	28 February 2013 15:14:28
BlackAgent	Agent Threshold Class	Version 1	28 February 2013 15:14:17
BC_DNVAR	Variable	Version 1	28 February 2013 15:13:23
Blackchair APPLICATION	Application	Version 1	28 February 2013 15:12:49
BC_DATE	Variable	Version 2	28 February 2013 15:01:20
BC_DATE	Variable	Version 1	28 February 2013 14:57:48
contact_cbdate_cv	Variable	Version 3	28 February 2013 14:56:51

Changes are made on the Contact Centre to the activity codes and another search is performed on the Spotlight application. Both of the activity codes **bcactest2** and **blackchair123AC** now show up as **Version 2** showing that a change was made.

blackchair

SPOTLIGHT
ROOT CAUSE ANALYSIS ENGINE

Browse

Search ▾

Options

• First 100 items sorted by AddedDate Descending

[Refine this query](#) | [Save this query](#)

Search Results

Item Name	Item Type	Version	Last Updated↓
bcactest2	Activity Code	Version 2	28 February 2013 15:32:55
blackchair123AC	Activity Code	Version 2	28 February 2013 15:32:51
bcactest2	Activity Code	Version 1	28 February 2013 15:21:56
6666	User	Version 1	28 February 2013 15:17:51
blackchair123AC	Activity Code	Version 1	28 February 2013 15:16:34
BlackCPC	Call Presentation Class	Version 1	28 February 2013 15:16:33
Black DNIS	DNIS	Version 1	28 February 2013 15:16:14
Black MPC	Multiplicity Presentation Class	Version 1	28 February 2013 15:15:22
VM_Black_VM	Skillset	Version 1	28 February 2013 15:14:58
BlackSkill	Skillset Threshold Class	Version 1	28 February 2013 15:14:28
BlackAgent	Agent Threshold Class	Version 1	28 February 2013 15:14:17
BC_DNVAR	Variable	Version 1	28 February 2013 15:13:23
Blackchair_APPLICATION	Application	Version 1	28 February 2013 15:12:49

Double clicking on **bcactest2** brings up the screen below and by selecting **Compare to Version 1** the changes that were made can be observed.

blackchair

SPOTLIGHT
ROOT CAUSE ANALYSIS ENGINE

Browse

Search ▾

Options

Watch this item in y

Details

Notes (0)

Attachments (0)

Links (0)

bcactest2

Item Properties

Property	Value
Name	: bcactest2
Location	: <a>Contact Centre Infrastructure Library : <a>Avaya AACC : <a>Activity Code
Version	: Version 2 of 2
Updated By	: BCTEST
Updated Date	: Thu 28 February 2013 15:32:55
ID	: 12345
Name	: bcactest2
Display Name	: another test

Item History

Version	Last Updated↓	Updated By	Compare to
<div><div></div><div>✖</div><div><a>Version 2</div></div>	28 February 2013 15:32:55	BCTEST	<div><a>Compare to Version 1</div>
<div><div></div><div></div><div><a>Version 1</div></div>	28 February 2013 15:21:56	webadmin	

The change is highlighted in red showing that this activity code has been deleted.

blackchair


SPOTLIGHT
ROOT CAUSE ANALYSIS ENGINE

Browse

Search ▾

Options

[<< Return to item](#)

 **bcactest2**

Compare Versions

Compare

☐ version as at 1/29/2013 00 00 00

☒ version number 2

To

☐ version as at 2/28/2013 00 00 00

☒ version number 1

Go

Show Differences ONLY ☐

Field	Version 2	Version 1
Date Updated	28 February 2013 15:32:55	28 February 2013 15:21:56
Spotlight Item Name	bcactest2	bcactest2
Is deleted?	Yes	No
ID	12345	12345
Name	bcactest2	bcactest2
Display Name	another test	another test

8. Conclusion

These Application Notes describe the configuration steps required for Spotlight from Blackchair to successfully interoperate with Avaya Aura® Contact Centre R6.3 using the CCMA SDK on Avaya Aura® Contact Centre. Please refer to **Section 2.2** to see the compliance test results and observations.

9. Additional References

The following documents are available at <http://support.avaya.com>.

- [1] *Administering Avaya Aura® Communication Manager*, Document ID 03-300509
- [2] *Avaya Aura® Communication Manager Feature Description and Implementation*, Document ID 555-245-205
- [3] *Avaya Aura ® Contact Centre SIP Commissioning, Doc # NN44400-511, Issue 3.02 Release 6.2*
- [4] *Avaya Aura ® Contact Centre Planning and Engineering*, Doc # NN44400-210, Issue 3.03 Release 6.2
- [5] *Avaya Aura ® Contact Centre Installation*, Doc # NN44400-311, Issue 3.02 Release 6.2

Information on the Avaya Aura® Contact Centre CCMA Web Services SDK can be found by navigating to this link <https://devconnect.avaya.com>

Product information on Blackchair Spotlight can be found at <http://www.thebackchair.com>

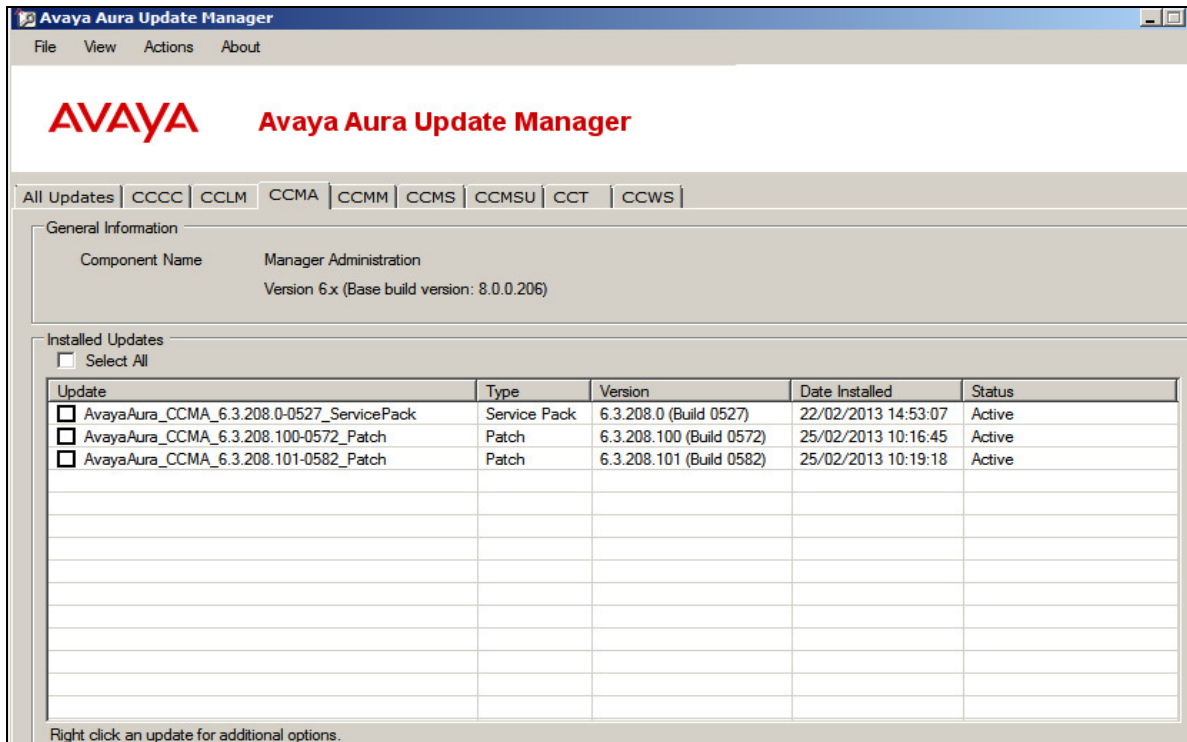
Appendix A

Avaya AACC Target List Versioned Data	Activity Code
	Agent Threshold
	Call Presentation Class
	CDN
	Communication Manager Server
	Contact Type
	DNIS
	Multiplicity Presentation Class
	Script Application
	Script Variable
	Server
	Skillset
	Skillset Threshold
	User

Appendix B

Avaya Aura® Contact Centre Patches

CCMA Patch Level



CCMM Patch Level

The screenshot shows the Avaya Aura Update Manager interface. The title bar is "Avaya Aura Update Manager". The menu bar includes "File", "View", "Actions", and "About". The Avaya logo and "Avaya Aura Update Manager" are displayed. Below the menu bar is a tabbed interface with tabs: "All Updates", "CCCC", "CCLM", "CCMA", "CCMM", "CCMS", "CCMSU", "CCT", and "CCWS". The "CCMM" tab is selected. The "General Information" section shows "Component Name: Multimedia / Outbound" and "Version 6x (Base build version: 8.0.0.172)". The "Installed Updates" section has a "Select All" checkbox and a table of installed updates.

Update	Type	Version	Date Installed	Status
<input type="checkbox"/> AvayaAura_CCMM_6.3.208.0-0018_ServicePack	Service Pack	6.3.208.0 (Build 0018)	22/02/2013 15:38:52	Active
<input type="checkbox"/> AvayaAura_CCMM_6.3.208.100-0383_Patch	Patch	6.3.208.100 (Build 0383)	25/02/2013 10:21:34	Active
<input type="checkbox"/> AvayaAura_CCMM_6.3.208.101-0390_Patch	Patch	6.3.208.101 (Build 0390)	25/02/2013 10:26:15	Active
<input type="checkbox"/> AvayaAura_CCMM_6.3.208.102-0407_Patch	Patch	6.3.208.102 (Build 0407)	25/02/2013 10:30:01	Active

Right click an update for additional options.

CCMS Patch Level

The screenshot shows the Avaya Aura Update Manager interface. The title bar is "Avaya Aura Update Manager". The menu bar includes "File", "View", "Actions", and "About". The Avaya logo and "Avaya Aura Update Manager" are displayed. Below the menu bar is a tabbed interface with tabs: "All Updates", "CCCC", "CCLM", "CCMA", "CCMM", "CCMS", "CCMSU", "CCT", and "CCWS". The "CCMS" tab is selected. The "General Information" section shows "Component Name: Manager Server" and "Version 6x (Base build version: 8.0.0.152)". The "Installed Updates" section has a "Select All" checkbox and a table of installed updates.

Update	Type	Version	Date Installed	Status
<input type="checkbox"/> AvayaAura_CCMS_6.3.208.0-0487_ServicePack	Service Pack	6.3.208.0 (Build 0487)	22/02/2013 15:43:56	Active
<input type="checkbox"/> AvayaAura_CCMS_6.3.208.100-0802_Patch	Patch	6.3.208.100 (Build 0802)	25/02/2013 10:33:36	Active
<input type="checkbox"/> AvayaAura_CCMS_6.3.208.101-0046_Patch	Patch	6.3.208.101 (Build 0046)	25/02/2013 10:35:55	Active
<input type="checkbox"/> AvayaAura_CCMS_6.3.208.102-0826_Patch	Patch	6.3.208.102 (Build 0826)	25/02/2013 10:37:03	Active
<input type="checkbox"/> AvayaAura_CCMS_6.3.208.103-0048_Patch	Patch	6.3.208.103 (Build 0048)	25/02/2013 10:38:31	Active
<input type="checkbox"/> AvayaAura_CCMS_6.3.208.104-0831_Patch	Patch	6.3.208.104 (Build 0831)	25/02/2013 10:39:30	Active

Right click an update for additional options.

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