



Application Notes for configuring Blackchair Spotlight V5 with Avaya Aura® Communication Manager R6.2 and Avaya Aura® Application Enablement Services R6.2 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® Communication Manager R6.2 using the SMS SDK from Avaya Aura® Application Enablement Services. Spotlight is capable of monitoring changes that are made on the Avaya Aura® Communication Manager 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® Communication Manager R6.2 using the System Management Service (SMS) Software Development Toolkit (SDK) on Avaya Aura® Application Enablement Services. Spotlight is capable of monitoring changes that are made on the Avaya Aura® Communication Manager along with other Contact Centre environments and compiling data from these different sources to generate reports in a single desired format.

System Management Service (SMS) is a web service that exposes selected management features of Communication Manager. SMS enables SOAP clients to display, list, add, change and remove specific managed objects on Communication Manager. SMS allows programmatic access, via a standard protocol (SOAP), to functionality that is otherwise only accessible via a proprietary low-level protocol (OSSI) or terminal emulation via system administration (SAT) forms. Spotlight utilises the SMS web service to display changes that occur on Avaya Aura® Communication Manager.

2. General Test Approach and Test Results

All feature test cases were performed manually. Specific changes were made to various fields, referred to as Service models, on Communication Manager; 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 Communication Manager 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 the user the option to revert back to the original value by manually entering the data on Communication Manager.

The test cases that were performed were conducted according to the fields or service models described on the SDK. There were a number of service models on Communication Manager listed in the SDK document that are not displayed by the SDK and were therefore unable to be tested. A list of the service models tested are shown in the Appendix of these Application Notes.

Note: The Spotlight application has only “read” capabilities on Communication Manager.

2.2. Test Results

Because of the nature of the testing not every single service model change in Communication Manager was tested. A broad slice of testing across a range of fields was conducted to prove that compliance was achieved.

- Compliance testing was conducted with an Avaya G250 gateway and therefore some service models specific to other gateways were not applicable for this compliance test.
- The addition certain service models such as VDN's or Route Patterns that require a "Change" command rather than the "Add" or "Remove" command will not show as additions or deletions on Spotlight but a newer version of the initial version.
- The IP-Interface "Procr" was not picked up by the initial scan of Spotlight, only when a change was made on the IP-Interface did the Spotlight pickup the Procr IP-Interface.
- The Dashboard on Spotlight will not show "Volatile Data" information; however the data is being collected correctly and can be displayed in the SQL database on the Spotlight server.
- The display of duplicate entries in ARS analysis in CM is not supported by spotlight, for example here with 0, 101xxxx0 and 10xxx0.

display ars analysis 0 Page 1 of 2

ARS DIGIT ANALYSIS TABLE							
Location: all							
Percent Full: 1							
Dialed String	Total	Min	Max	Route Pattern	Call Type	Node Num	ANI Req'd
0	1	1		deny	op		n
0	8	8		deny	op		n
0	11	11		deny	op		n
00	2	2		deny	op		n
01	9	17		deny	iop		n
011	10	18		deny	intl		n
0141555	10	11		10	pubu		n
101xxxx0	8	8		deny	op		n
101xxxx0	18	18		deny	op		n
101xxxx01	16	24		deny	iop		n
101xxxx011	17	25		deny	intl		n
101xxxx1	18	18		deny	fnpa		n
10xxx0	6	6		deny	op		n
10xxx0	16	16		deny	op		n
10xxx01	14	22		deny	iop		n

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 SMS SDK on the AES provides the Spotlight server a history of moves and changes from Communication Manager. A user browsing to the Spotlight server using a web browser can then view these statistics for all changes that was made on Communication Manager.

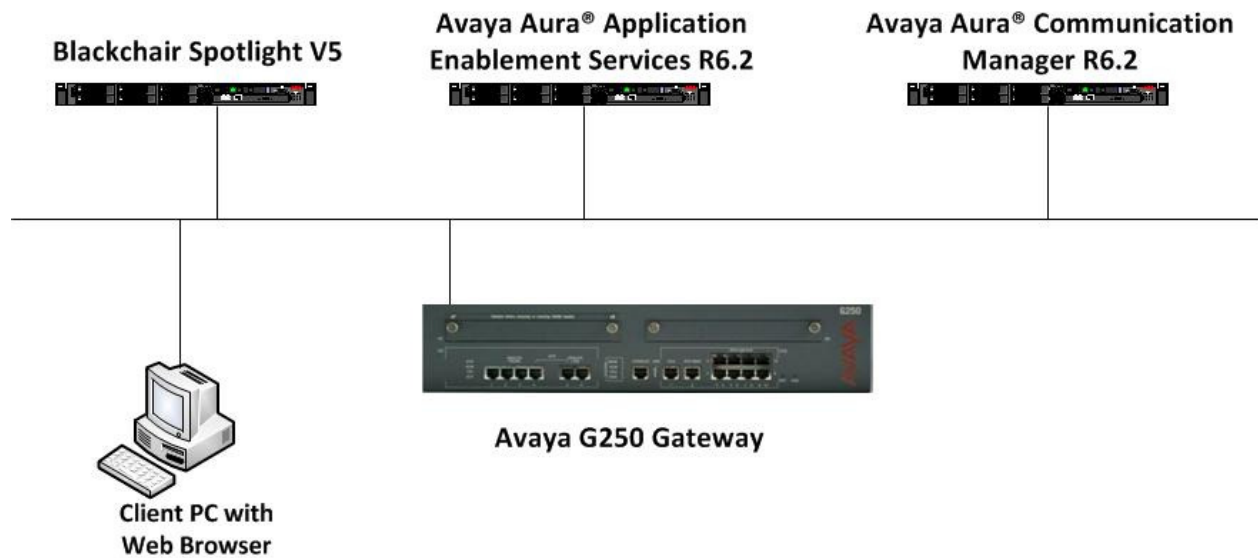


Figure 1: Network solution of Blackchair Spotlight V5 and Avaya Aura® Communication Manager R6.2 with Avaya Aura® Application Enablement Services R6.2

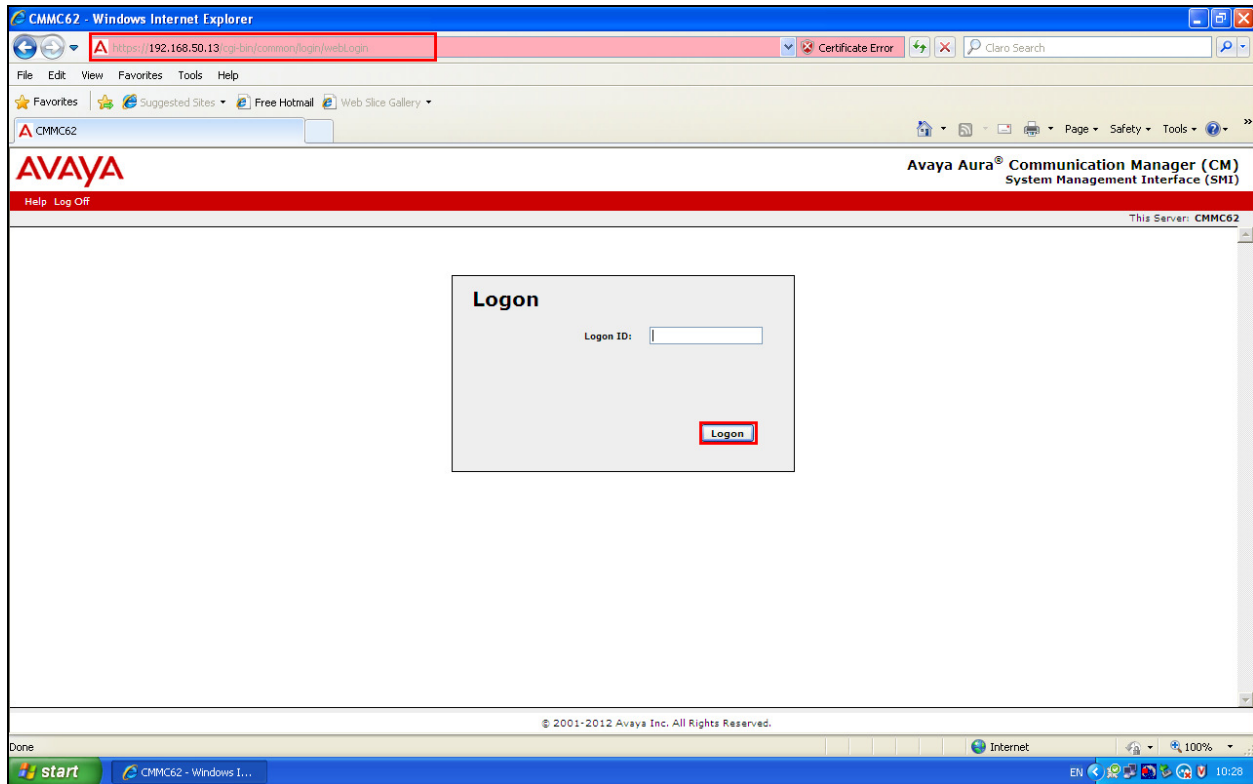
4. Equipment and Software Validated

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

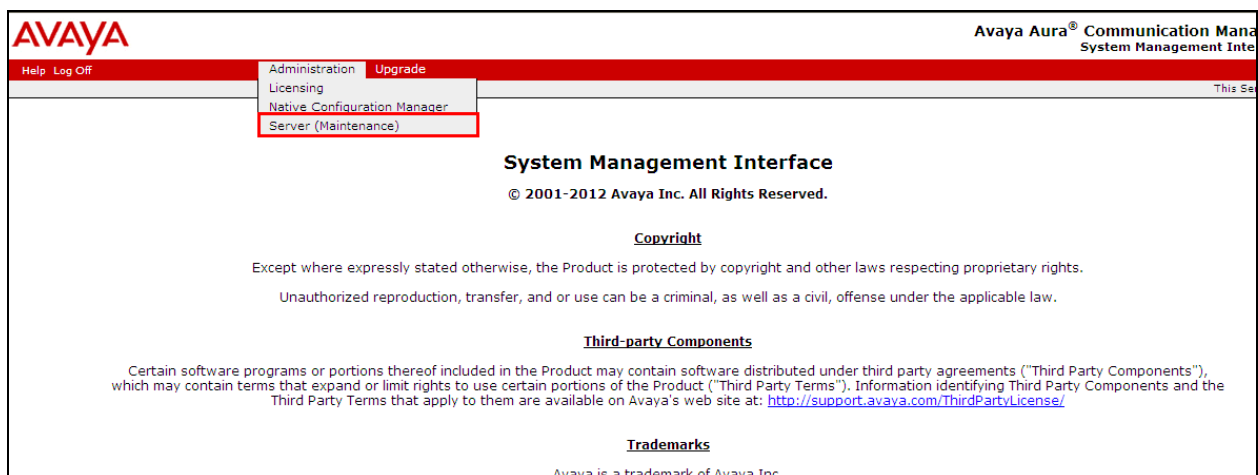
Equipment/Software	Release/Version
Avaya Aura® Communication Manager running on an Avaya S8800 Server	Release 6.2 (R016x.02.0.823.0)
Avaya Aura® Application Enablement Services running on an Avaya S8800 Server	Release 6.2 (R6.2.0.18.0)
Avaya G250 Media Gateway	Release 6.2
Blackchair Spotlight Running on a Virtual Server with Windows 2008 R2 OS	V 5.0.44810.735

5. Configure Avaya Aura® Communication Manager

A new user for Blackchair needs to be created on Communication Manager. Open a browser session to Communication Manager and log in as shown below.



Navigate to **Server (Maintenance)** as shown below.



In the left window select **Security**→**Administrator Accounts**. In the main window Select **Add Login**, for the compliance testing **Privileged Administrator** was chosen, but any account with privileges to use SAT is all that is required in order for a Spotlight user to read the fields in Communication Manager. Select **Submit** when done.

The screenshot shows the Avaya Aura Communication System Management interface. The left sidebar contains a tree view with 'Security' and 'Administrator Accounts' highlighted. The main window displays the 'Administrator Accounts' page. Under 'Select Action:', the 'Add Login' radio button is selected, and 'Privileged Administrator' is chosen from the list. Below this, there are fields for 'Change Login', 'Remove Login', 'Lock/Unlock Login', and 'Add Group', each with a 'Select Login' dropdown. The 'Submit' button is highlighted in red.

Enter the **Login name** and a suitable **Password**. Click on **Submit** when done.

The screenshot shows the 'Add Login' page in the Avaya Aura Communication System Management interface. The 'Login name' field is set to 'blackchair' and the 'Primary group' is 'susers'. The 'Additional groups (profile)' dropdown is set to 'prof18'. The 'Linux shell' is '/bin/bash' and the 'Home directory' is '/var/home/blackchair'. The 'Select type of authentication' section has 'Password' selected. The 'Enter password or key' and 'Re-enter password or key' fields are filled with asterisks. The 'Submit' button is highlighted in red.

6. Configure Avaya Aura® Application Enablement Services

Although the Spotlight servers' connection to the Avaya Solution is through the SMS SDK on the Avaya Aura® Application Enablement Services (AES) there is no configuration required on the AES server. The username and password utilised by Spotlight is that which was created above in **Section 5**. There are no other configurations required on the Avaya solution.

7. 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**.

8. Verification Steps

This section provides the tests that can be performed to verify that Blackchair Spotlight has successfully connected with the Avaya Solution.

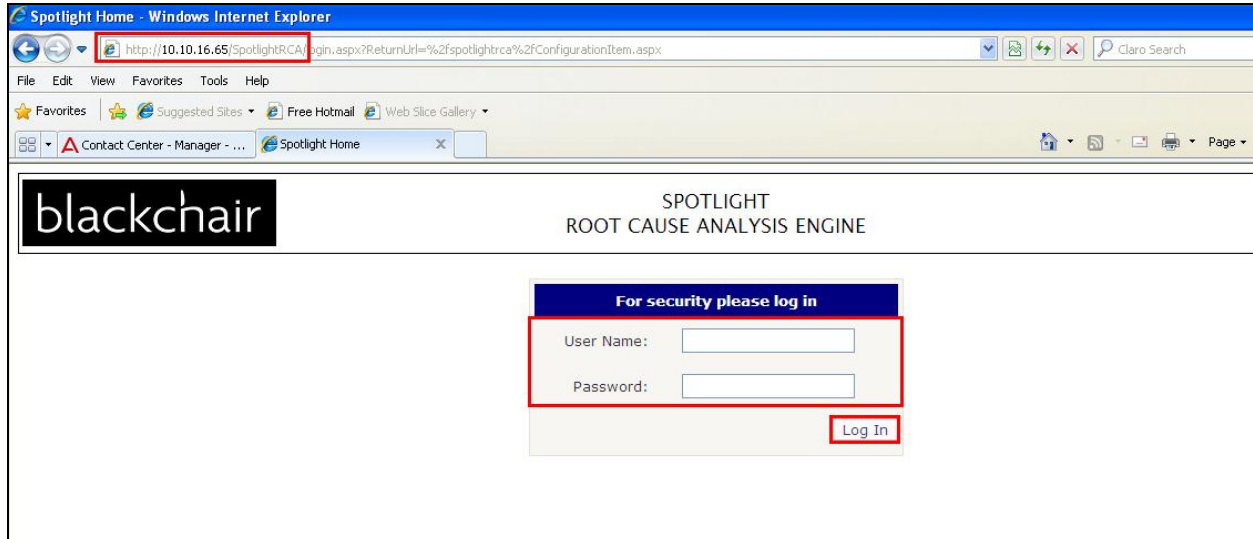
8.1. Verify connection to Avaya Aura® Application Enablement Services

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

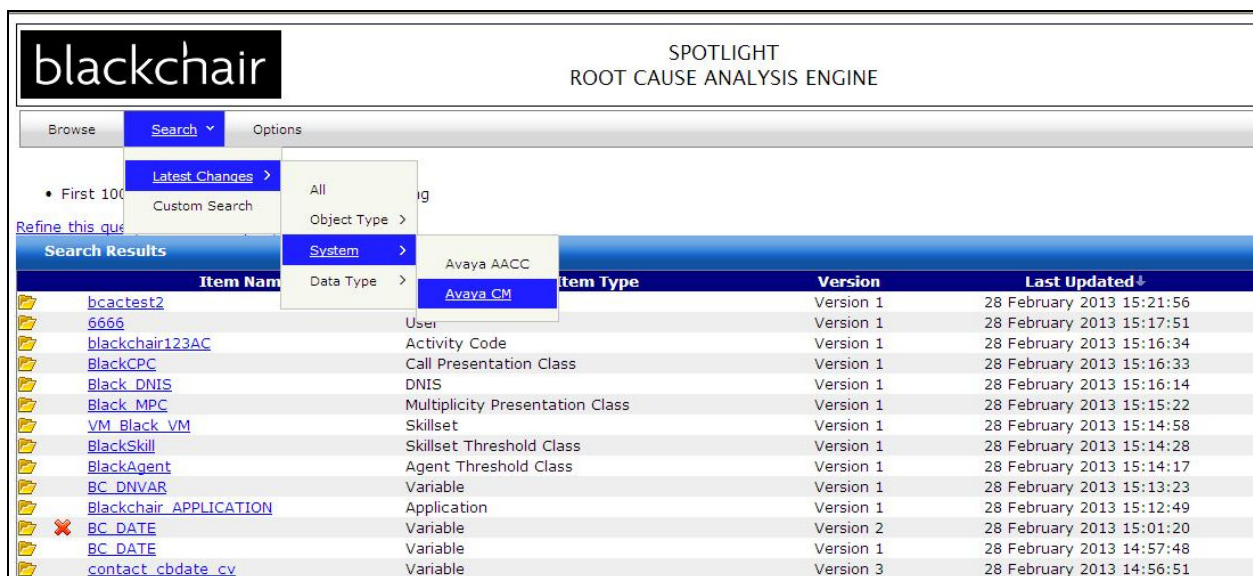
```
C:\Program Files (x86)\BlackChair\Spotlight Loader Service>spotlightloader
BC Data Uploader Version 5.0.735 (Build 44810)
=====
Starting upload at 16:18:12
Finished template 'AvayaCM' <successful>
Finished template 'AvayaCM' <successful>
Finished template 'AvayaCM' <successful>
Finished template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


8.2. Verify changes shown on Spotlight

Open a web browser to the Spotlight server [<http://<IP Address>/spotlightRCA>] and enter the proper credentials then click on **Log In** as shown below.



Select Search→Latest Changes→System→Avaya CM.



Item Name	Data Type	Item Type	Version	Last Updated
bcactest2			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_cy	Variable		Version 3	28 February 2013 14:56:51

Select one of the **Items** for example a **Skill** change for Hunt **Group 035 (Blackchair Test Skill)**.

blackchair

SPOTLIGHT
ROOT CAUSE ANALYSIS ENGINE

Browse

Search ▾

Options

• First 50 items sorted by [Name] Ascending

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

Search Results

	Item Name †	Item Type	Version	Last Updated	Updated By
	Extension 2004 (BlackChair)	VDN	Version 1	27 February 2013 17:20:00	paul
	Extension 2004 (BlackChair)	VDN	Version 2	27 February 2013 17:21:00	paul
	Extension 3300 (PresINBOUND)	VDN	Version 1	26 February 2013 14:59:35	System
	Extension 3301 (Blackchair)	VDN	Version 2	27 February 2013 17:06:00	paul
	Extension 3301 (Test3301)	VDN	Version 1	26 February 2013 14:59:35	System
	Extension 3302 (Test 3302)	VDN	Version 1	26 February 2013 14:59:35	System
	Extension 3400 (PresOUTBOUND)	VDN	Version 1	26 February 2013 14:59:36	System
	Group 001 (AAMessaging)	Skill	Version 1	26 February 2013 14:27:13	System
	Group 002 (group 2)	Skill	Version 1	26 February 2013 14:27:14	System
	Group 033 (HGPresINBOUND)	Skill	Version 1	26 February 2013 14:27:14	System
	Group 034 (PGPresOUTBOUND)	Skill	Version 1	26 February 2013 14:27:15	System
	Group 035 (Blackchair Test Skill)	Skill	Version 3	27 February 2013 16:56:00	paul
	Group 035 (Blackchair1)	Skill	Version 1	26 February 2013 17:36:00	paul
	Group 035 (Blackchair1)	Skill	Version 2	26 February 2013 17:58:00	paul
	Group 036 (BlackChair2)	Skill	Version 1	26 February 2013 17:37:00	paul
	Group 036 (BlackChair2)	Skill	Version 2	26 February 2013 17:59:00	paul
	Group 036 (BlackChair2)	Skill	Version 3	27 February 2013 17:30:00	paul

Once opened the changed item can be compared to a previous version by selecting, **Compare to Version 1** (not shown). In the example below a direct comparison between the latest version and earlier versions such as **version number 3** and **version number 1** is shown in red.

blackchair

SPOTLIGHT
ROOT CAUSE ANALYSIS ENGINE

Browse

Search ▾

Options

<< Return to item

Group 035 (Blackchair Test Skill)

Compare Versions

Compare

☐ version as at 1/29/2013 00 00 00

☒ version number 3

To

☐ version as at 2/28/2013 00 00 00

☒ version number 1

Go

Show Differences ONLY ☐

Field	Version 3	Version 1
Date Updated	27 February 2013 16:56:00	26 February 2013 17:36:00
*Spotlight Item Name	Group 035 (Blackchair Test Skill)	Group 035 (Blackchair1)
Is deleted?	No	No
Group Number	35	35
*Group Name	Blackchair Test Skill	Blackchair1
*Group Extension	3350	3335
Group Type	ucd-mia	ucd-mia
*Total Administered Members		0
*ACD?	y	n
*Measured	none	
*Queue?	y	n
*Vector	y	n
*Skill	y	
Coverage Path		

9. Conclusion

These Application Notes describe the configuration steps required for Spotlight from Blackchair to successfully interoperate with Avaya Aura® Communication Manager R6.2 using the SMS SDK on Avaya Aura® Application Enablement Services. Please refer to **Section 2.2** to see the compliance test results and observations.

10. 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® Application Enablement Services Administration and Maintenance Guide* Release 6.2

Information on the Avaya Aura® Application Enablement Services SMS SDK can be found by navigating to this link

<https://devconnect.avaya.com/public/download/AES/FactSheets/LB3873.pdf>

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

Appendix

Avaya CM Target List versioned Data	AAR Analysis
	AD Enhanced
	Agent Login ID
	Announcement
	ARS Analysis
	Cab Map
	COR
	COS
	Coverage Path
	IP Interface
	Media Gateway
	Route Pattern
	Skill
	Station
	Trunk Group
	VDN
	Vector
Volatile Data Target List	AE Services CTI Link
	AE Services Link
	Agent Login ID Status
	Capacity
	IP Codec Set
	IP Network Map
	IP Network Region
	IP Network Region Monitor
	IP Server Interface
	Logins (Registered IP Stations Group)
	Node Names

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