# AVAYA

**Avaya Solution & Interoperability Test Lab**

# Application Notes for configuring blackchair Spotlight V6 with Avaya Aura® Communication Manager R7.1 and Avaya Aura® Application Enablement Services R7.1 to monitor moves and changes – Issue 1.0

## Abstract

These Application Notes describe the configuration steps required to integrate Spotlight from blackchair with Avaya Aura® Communication Manager using the SMS SDK from Avaya Aura® Application Enablement Services. Spotlight is capable of monitoring changes that are made on 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.

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.

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Solution & Interoperability Test Lab Application Notes
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Spotlight_CM71

# 1. Introduction

These Application Notes describe the configuration steps required to integrate Spotlight V6 from blackchair with Avaya Aura® Communication Manager R7.1 using the System Management Service (SMS) Software Development Toolkit (SDK) on Avaya Aura® Application Enablement Services (AES) R7.1. Spotlight is capable of monitoring changes that are made on 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. Spotlight does not make the adds moves and changes but only reports on them.

# 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.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes 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.

For the testing associated with these Application Notes, the interface between Avaya systems and blackchair Spotlight did not include use of any specific encryption features.

## 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 is 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. The following observation was noted.

1. Dialplan Parameters - Only Inter-location and Intra-location changes are shown, the SAT or other fields are not updated, this may be as the SDK only offers these updates.
2. ListSurvivable – There are no fields that get updated on "change" only add and remove show any changes and that is because there are no "changeable" fields on the SDK.
3. Public Unknown Numbering – This is currently not supported by blackchair as there is no usable unique identifier of an entry.
4. System Features – There are two SDK objects, System Parameters Features and System Features. Information in both of these SDK's comes from the "System Parameters Features" pages. So, the 'SystemFeatures' only contains a portion of the fields displayed from Communication Manager System Parameters Features and the 'System Parameter Features' only contains a portion of the fields displayed on Communication Manager System Parameters Features. Blackchair is displaying everything that the SDK allows.

## 2.3. Support

For technical support on Spotlight, contact blackchair as shown below.
- Web: https://theblackchair.com/contact-us/ 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.
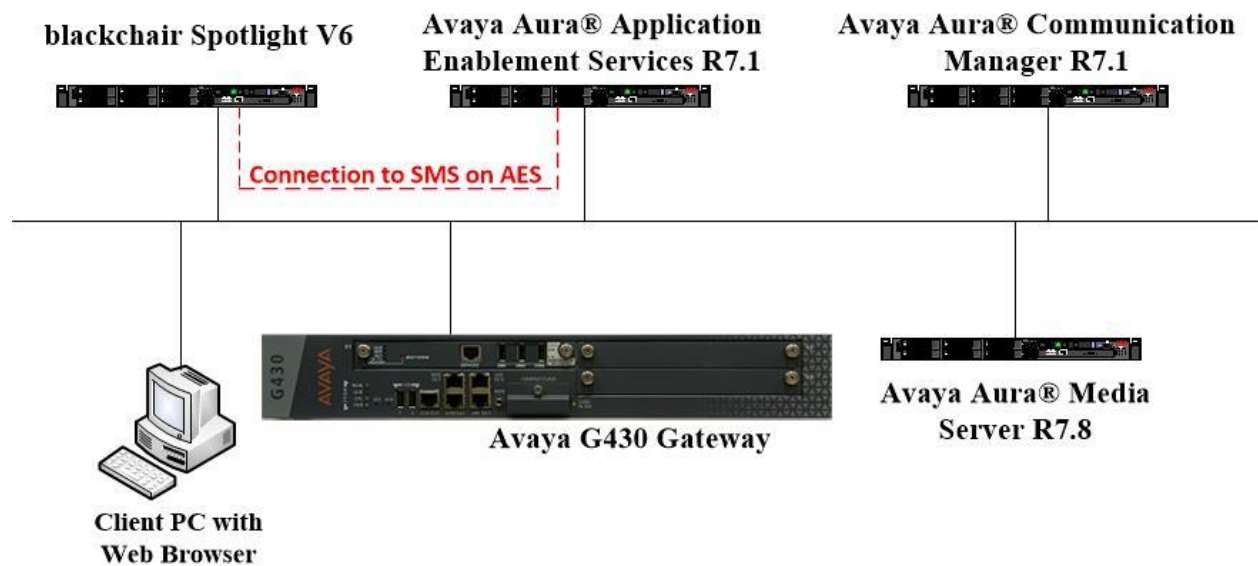


**Figure 1: Network solution of blackchair Spotlight V6 and Avaya Aura® Communication Manager R7.1 with Avaya Aura® Application Enablement Services R7.1**
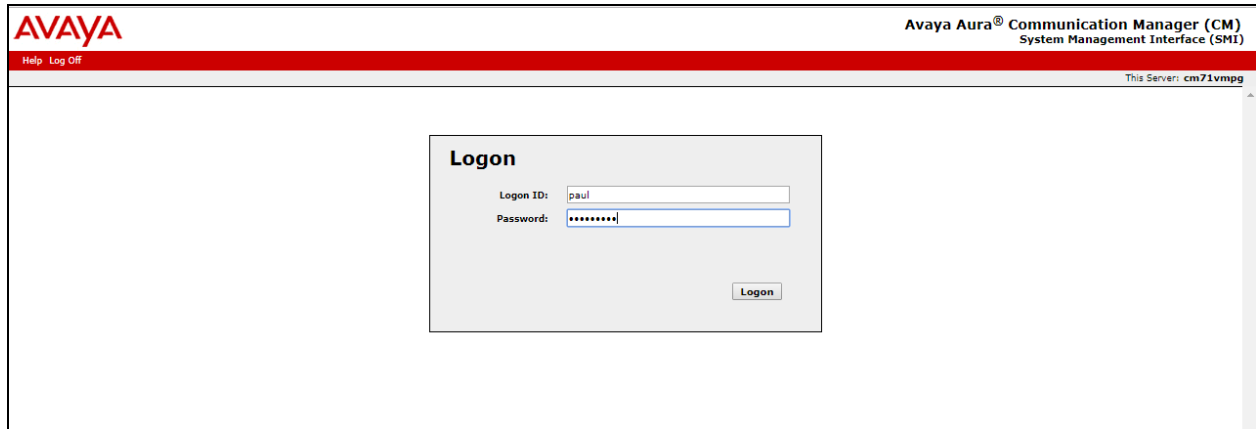
# 4. Equipment and Software Validated

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

| Equipment/Software | Release/Version |
|---|---|
| Avaya Aura® Communication Manager running on a virtual server | Release 7.1 (R017x.01.0.532.0) |
| Avaya Aura® Application Enablement Services running on a virtual server | R7.1.2.0.0.3-0 |
| Avaya G430 Media Gateway | R37.42.0 /1 |
| Avaya Aura® Media Server running on a virtual server | R7.8.0.10 |
| blackchair Spotlight running on a virtual server with Windows 2008 R2 OS | V6.41 |

# 5. Configure Avaya Aura® Communication Manager

A new user for a connection from Spotlight is created on Communication Manager. Open a browser session to Communication Manager and log in with the appropriate credentials as shown below.
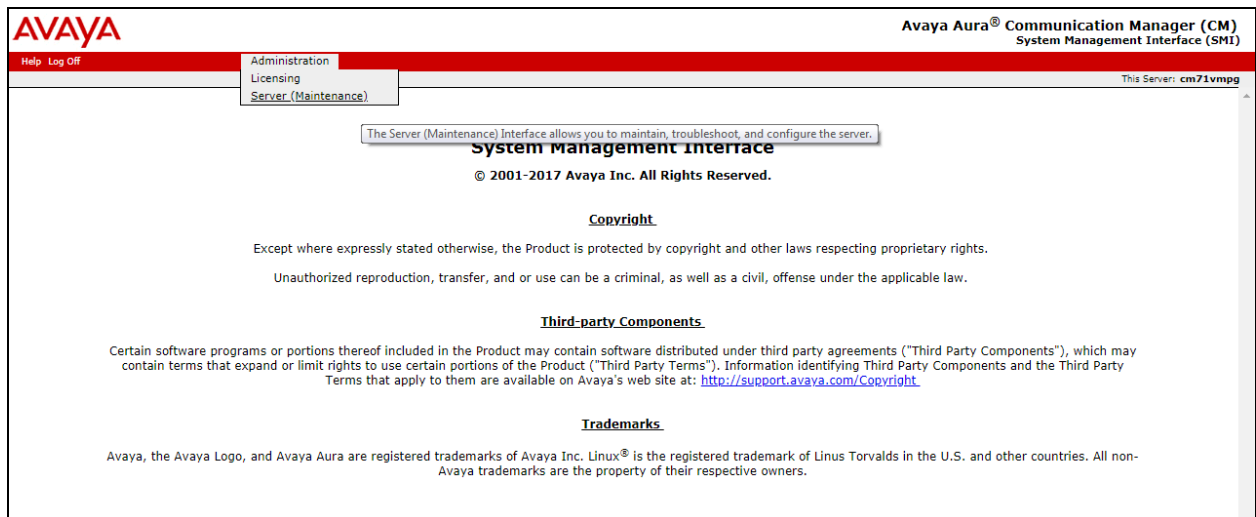


Navigate to **Server (Maintenance)** as shown below.

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.



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

# 6. Configure Avaya Aura® Application Enablement Services

Although the Spotlight server's connection to the Avaya solution is through the SMS SDK on the 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

AES contains a test web page that can be used to test the connection to Communication Manager using the SMS service.

Open a browser session to **https://<AESServerIP>/smsxml/smsxml_test.php**. The web page shown below should be opened. Enter the appropriate **CM Login ID** and **Password** and enter some **Request Parameters** as shown below where the "list station" command is entered. Click on **Submit Request** highlighted below.

The **Response** at the bottom of the screen should return data as shown below.

## 8.2. Verify changes shown on Spotlight

Open a web browser to the Spotlight server **http://<ServerAddress>/spotlight**. Enter the Windows credentials, then click on **OK** as shown below.
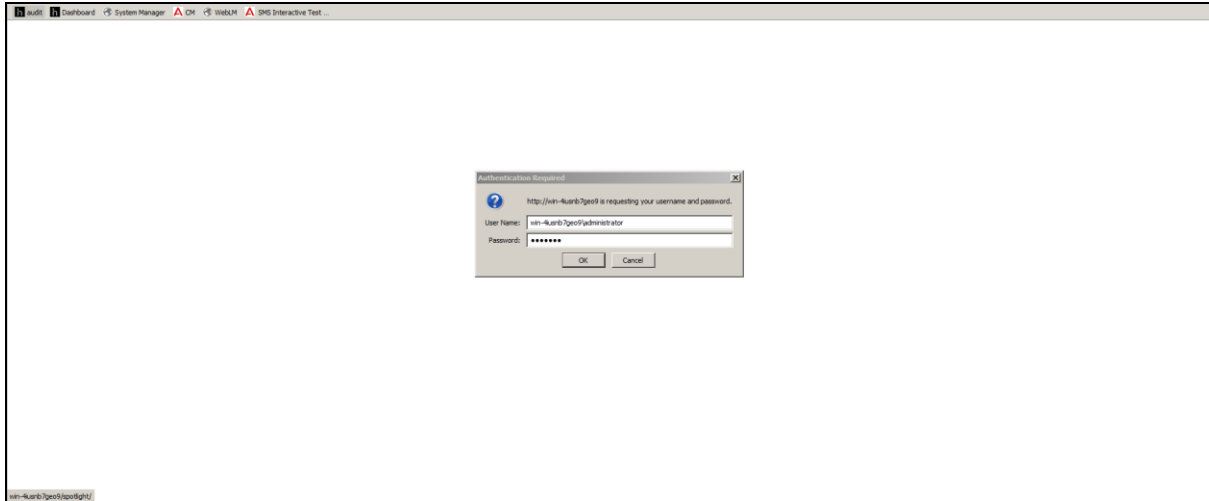


In the **Browse Environments** left window, click on the appropriate environment and then in the main window click on the appropriate **Item**.
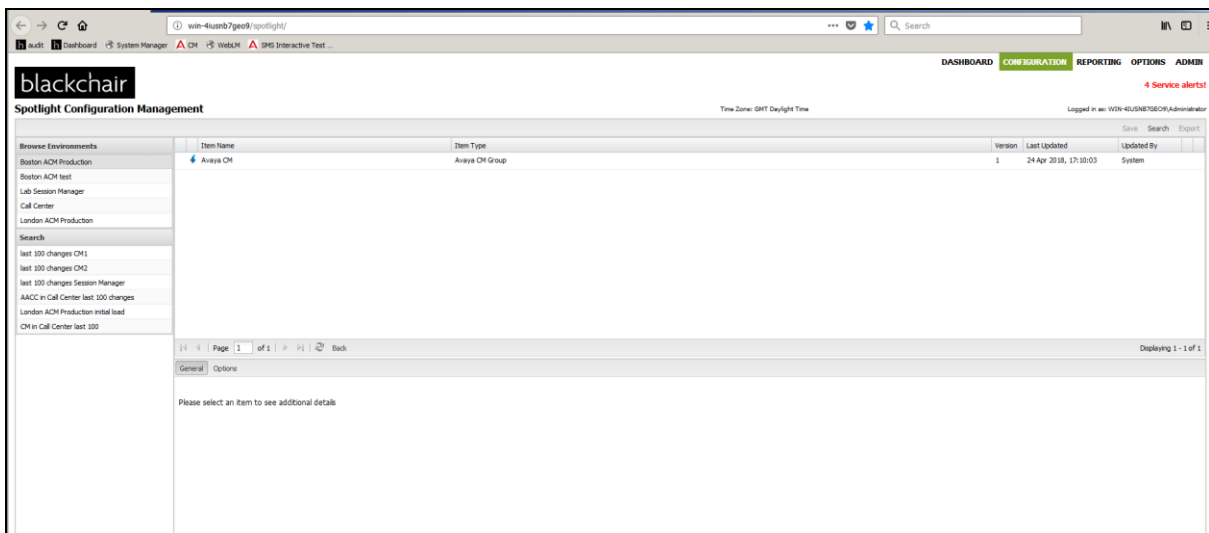
The main page shows various items that can be chosen to display. **Agent Login Status** is clicked on below and this displays the status of the agents configured on the system as shown below.



Another item can be chosen such as **Announcement**, as is shown below. The information on that announcement chosen is displayed.

# 9. Conclusion

These Application Notes describe the configuration steps required for Spotlight from blackchair to successfully interoperate with Avaya Aura® Communication Manager R7.1 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,* Release 7.1.3 Issue 7 May 2018
- [2] *Avaya Aura® Communication Manager Feature Description and Implementation,* Release 7.1.3 Issue 6 May 2018
- [3] *Administering and Maintaining Avaya Aura® Application Enablement Services* Release 7.1.3 Issue 5 May 2018

Information on the Avaya Aura® Application Enablement Services SMS SDK can be found by navigating to this link https://www.devconnectprogram.com/

The AE Services System Management Service Fact Sheet can be found by searching for the following file **LB3873.pdf**

Product information on blackchair Spotlight can be found at http://www.thebackchair.com

# Appendix

| | |
|---|---|
| **Existing** 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 |
| **New** Avaya CM Target List Versioned Data | AARDigitConversion |
| | ARSDigitConversion |
| | AuthorizationCode |
| | VRT |
| | CTILink |
| | DialPlan |
| | DialPlanParameters |
| | Locations |
| | HolidayTable |
| | IPServices |
| | ListSurvivable (not licensed) |
| | OffPBXFFeatureNameExtension |
| | OffPBXStationMapping |
| | PublicUnknownNumbering |
| | ReasonCodeNames |
| | RemoteAccess |
| | SystemFeatures |

| 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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