



**Application Notes for configuring blackchair Spotlight
Release Management V6 with Avaya Aura®
Communication Manager R6.3 and Avaya Aura®
Application Enablement Services R6.3 – Issue 1.0**

Abstract

These Application Notes describe the configuration steps required to integrate Spotlight Release Management V6.0 from blackchair with Avaya Aura® Communication Manager R6.3 using the SMS SDK from Avaya Aura® Application Enablement Services R6.3. Release Management is capable of publishing changes into Avaya Aura® Communication Manager.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the 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 to integrate Spotlight Release Management V6.0 from blackchair with Avaya Aura® Communication Manager R6.3 using the SMS SDK from Avaya Aura® Application Enablement Services R6.3. Spotlight Release Management is capable of publishing changes into Avaya Aura® Communication Manager using packages of objects built from the Spotlight Audit model. Packages can be built and published into the same Communication Manager to reconfigure that Communication Manager or into a different Communication Manager for example test to production.

Spotlight Release Management is a module of Spotlight that is installed on top of Spotlight Audit and therefore Spotlight Audit is required in order for Spotlight Release Management to operate. For information on Spotlight Audit please refer to the Application Notes called *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*, or contact blackchair using the information provided in **Section 2.3**.

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. All fields and values in Communication Manager are copied onto the Spotlight Release Management database. This database is then used to compose Release Management packages that can be uploaded to either the same Communication Manager or a secondary Communication Manager. Using System Administration Terminal (SAT) these new changes can be observed to ensure they were made correctly.

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 Release Management was installed on a virtual server running Microsoft Windows 2008 Server R2 and Microsoft SQL Server 2008 R2, with a client PC using the Microsoft Internet Explorer web browser to access the Spotlight Release Management Interface. All information on Communication Manager was noted using the SAT, changes were then published using Spotlight Release Management and these changes were noted again using SAT.

The test cases that were performed were conducted using objects that are listed in the SDK documentation as updatable through the SDK. A list of these relevant objects is included in the Appendix of these Application Notes and further information on the SDK can be obtained from the Avaya DevConnect outlined in **Section 10**.

During compliance testing two Communication Managers were used with one acting as “a test environment” UAT, and a second Communication Manager acting as “the production environment” called pre-prod. Objects were then copied from the test environment to the production environment. The following were tested successfully during compliance testing.

- AARAnalysis
- AbbreviatedDialingEnhanced
- Agent
- Announcement
- COR
- COS
- CoveragePath
- RoutePattern
- Station (H323 and SIP only)
- VDN
- Vector

Using the following rules when moving/copying the objects,

- This object **MAY** exist in the target; if it **DOES NOT** exist it is to be **CREATED**, if it **DOES** exist it is to be **MODIFIED**.
- This object **MUST NOT** exist in the target and is to be **CREATED**.
- This object **MUST** exist in the target and is to be **MODIFIED**.
- This object is to be **DELETED** from the target if it exists; if it does not exist, no action.

2.2. Test Results

All test cases passed and the following exceptions were noted.

- The moving/copying of a trunk group is not supported.
- The creation of a hunt group is not supported.
- Digital sets were not moved due to different port arrangements on each media gateway.

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 Release Management server was placed on the Avaya Telephony LAN. The SMS SDK on the AES provides the Spotlight Release Management server an interface to make changes on Communication Manager. A user browsing to the Spotlight Release Management server using a web browser is capable of publishing changes into Communication Manager using packages of objects built from the Spotlight Audit environment.

Note: Two Communication Managers were used for testing with one acting as the source PBX and the other as the target PBX.

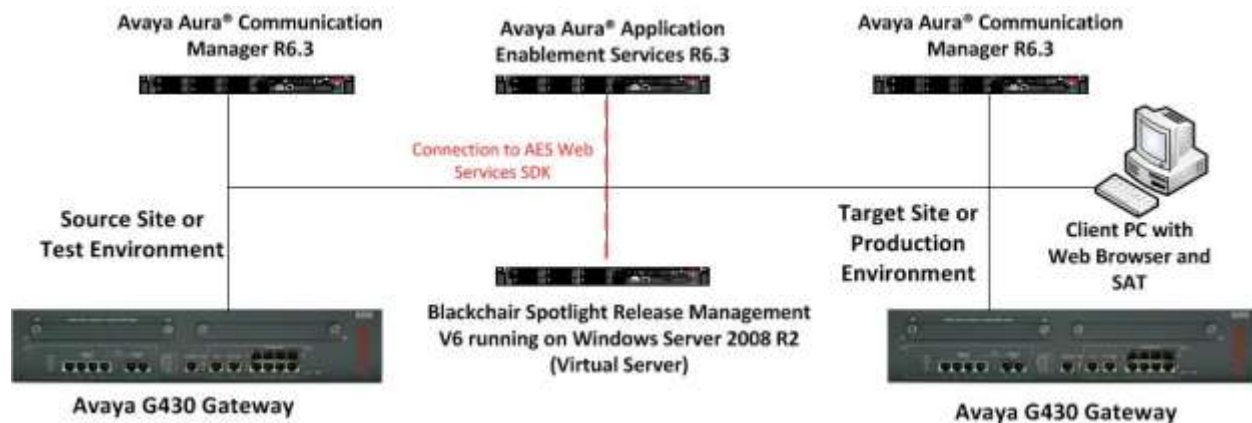


Figure 1: Network solution of blackchair Spotlight Release Management V6 and Avaya Aura® Communication Manager R6.3 with Avaya Aura® Application Enablement Services R6.3

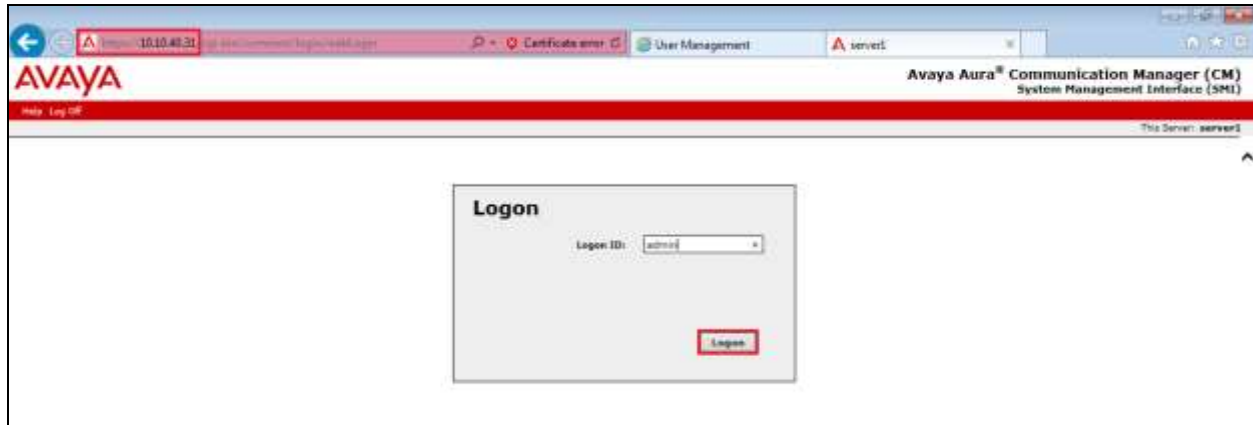
4. Equipment and Software Validated

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	R6.3 SP9 R016x.03.0.124.0
Avaya Aura® Application Enablement Services running on a virtual server	R6.3 SP3 Build No – 6.3.3.1.10-0
Avaya G430 Gateway	33.12.0 /1
Avaya Aura® Communication Manager running on a virtual server	R6.3 SP9 R016x.03.0.124.0
Avaya G430 Gateway	33.12.0 /1
blackchair Spotlight Release Management running on a Virtual Server <ul style="list-style-type: none">- Windows 2008 R2 O/S- MS SQL 2008 R2	V 6.0.43505.1202 Windows 2008 Server R2 MSSQL 2008 R2

5. Configure Avaya Aura® Communication Manager

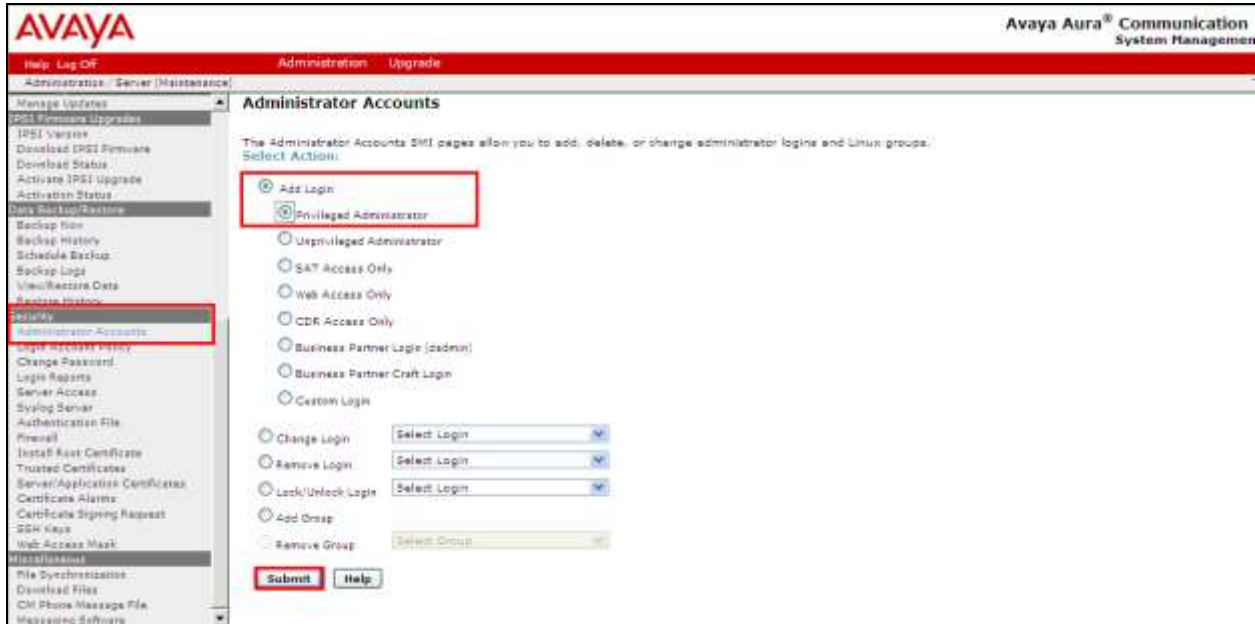
A new user for blackchair needs to be created on Communication Manager. Open a browser session to Communication Manager and log in as shown below. Enter the proper credentials and click on Logon.



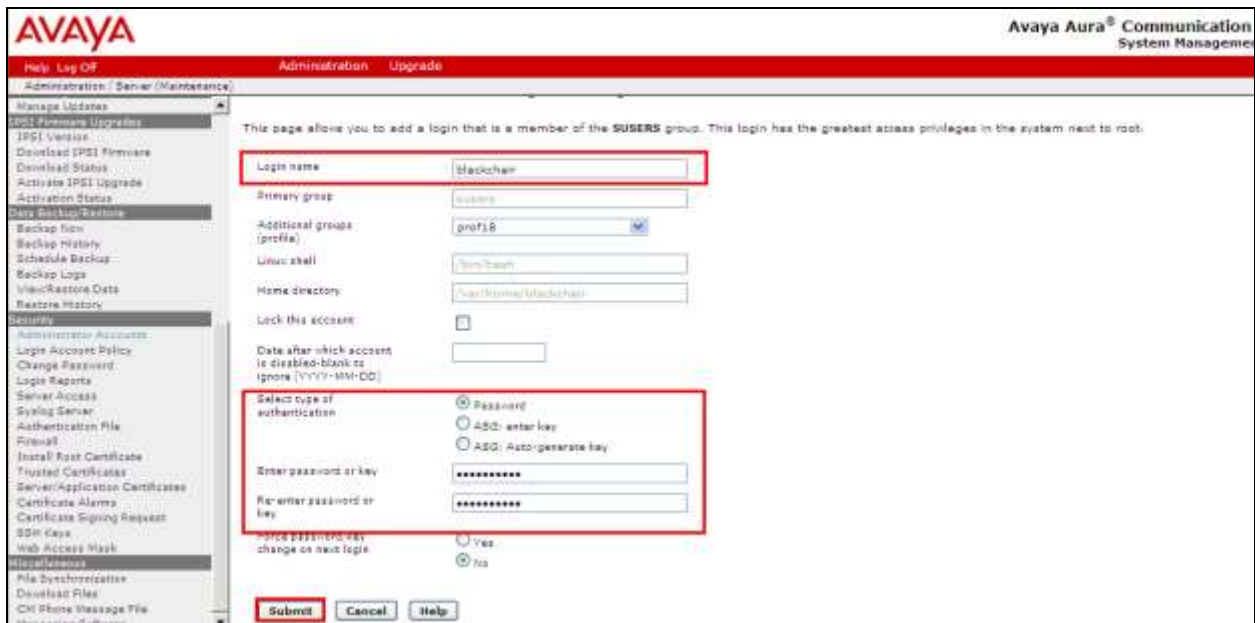
Once logged in click on **Administration** at the top of the page and select **Server (Maintenance)** from the drop-down menu.



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 and write to 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 servers' connection to the Avaya solution uses the SMS SDK on 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 Release Management

The installation and configuration of the Spotlight Release Management server from blackchair is performed by a blackchair engineer and is therefore outside the scope of these Application Notes. The configuration steps involve the manipulation of specific database configuration tables on the Spotlight Release Management server and this is not something that can be documented here. All 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 Release Management has successfully connected with the Avaya solution.

8.1. Verify connection to Avaya Aura® Application Enablement Services Web Services SDK

Open a browser session to **https://<AES Address>/smsxml/smsxml_test.php** this will open a web services test page as shown below.

Enter the proper credentials for the **CM Login ID** and **Password**. This will be the same username and password for the user created in **Section 5**. The CM Login ID should be in the format **username@CMIPAddress**. The **SMS Host** will be the IP Address of the AES server. Any **Model** and **Operation** can be selected from **ModelFields**. In the example below **AARAnalysis** and **List** were chosen, simply to list the AAR Analysis. Click on **Submit Request** at the bottom of the screen.

AVAYA XML Based - Web Service Request Form

SMS Resources
Model Documentation
Model Doc (No-Frames)
SMS XML WSDL
SMS XML Schema

Connection Information

CM Login ID: blackchair@10.10.4 login@<[IPv6]:port|hostname:port>
Password:
SMS Host: https://10.10.40.30
SOAP Request Timeout (Seconds): 30

Session Recording

Record SMS Request
 Record Result Data
Get Record
Clear Record

Request Parameters

ModelFields

Model: AARAnalysis
Field: ...
Value: ...
Position: Use For ArrayType Fields
ADD Field

Operation: list
Objectname: ...
Qualifier: ...

ModelFields - Generated XML
Note: You may also manually enter valid XML or modify the populated data, then click **Update XML**

Update XML

```
<?xml version="1.0"?>
<modelFields>
  <AARAnalysis/>
</modelFields>
```

Submit Request Release

If the SMS SDK is operational it should come back with a **Response** such as that shown below. If there is an issue an error message will be displayed.

ModelFields

Model	<input type="text" value="AARAnalysis"/>	Operation	<input type="text" value="list"/>
Field	<input type="text" value="..."/>	Objectname	<input type="text"/>
Value	<input type="text"/>	Qualifier	<input type="text"/>
Position	<input type="text"/>	Use For ArrayType Fields	

ModelFields - Generated XML
Note: You may also manually enter valid XML or modify the populated data, then click **Update XML**

```
<?xml version="1.0"?>
<modelFields>
  <AARAnalysis/>
</modelFields>
```

Last Request Response

Session ID [Duplicate Session](#)

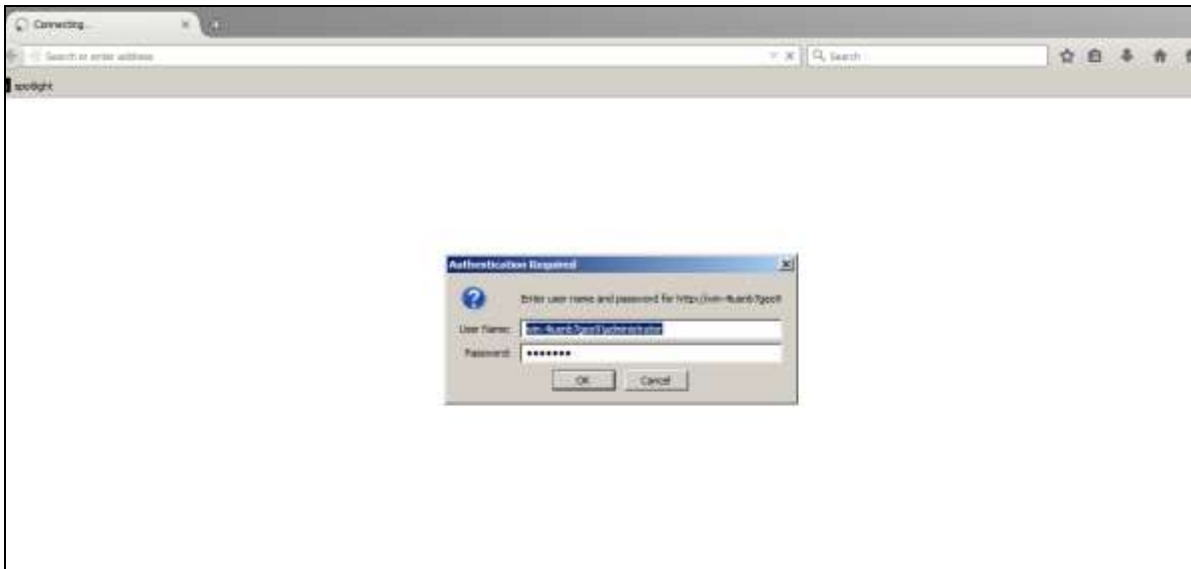
Response

```
Response {
  var $result_code = 0
  var $result_data =
'<?xml version="1.0"?>
<result_data>
  <AARAnalysis>
    <Dialed_String>1</Dialed_String>
    <Total_min>4</Total_min>
```

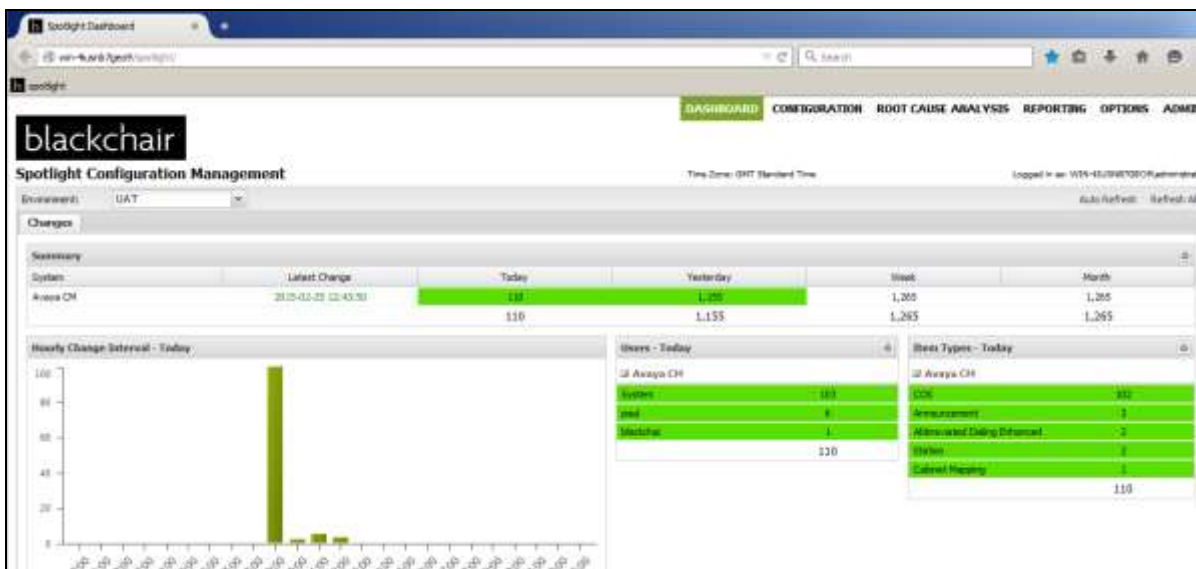
8.2. Verify Spotlight Release Management

This section will outline the steps necessary to place a configuration object into a Spotlight Release Management package, tailor the package, test the package and publish this package into a different Communication Manager environment.

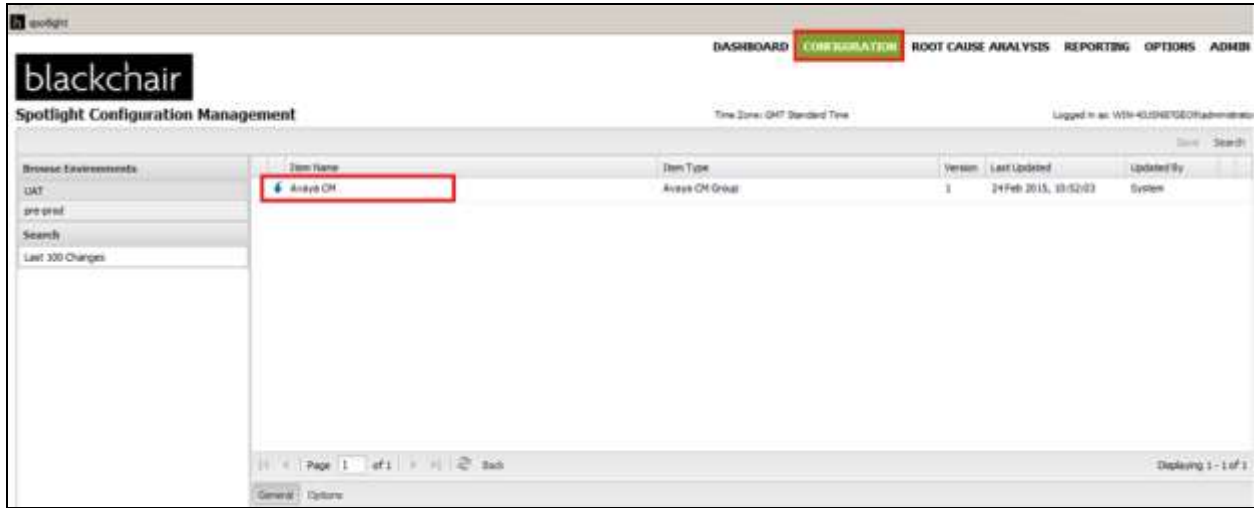
Open a web browser to the Spotlight Release Management server [<http://<IPAddressSpotlightRMServer>/spotlight>] and enter the proper credentials then click on **OK** as shown below. Spotlight Release Management uses pass-through windows authentication.



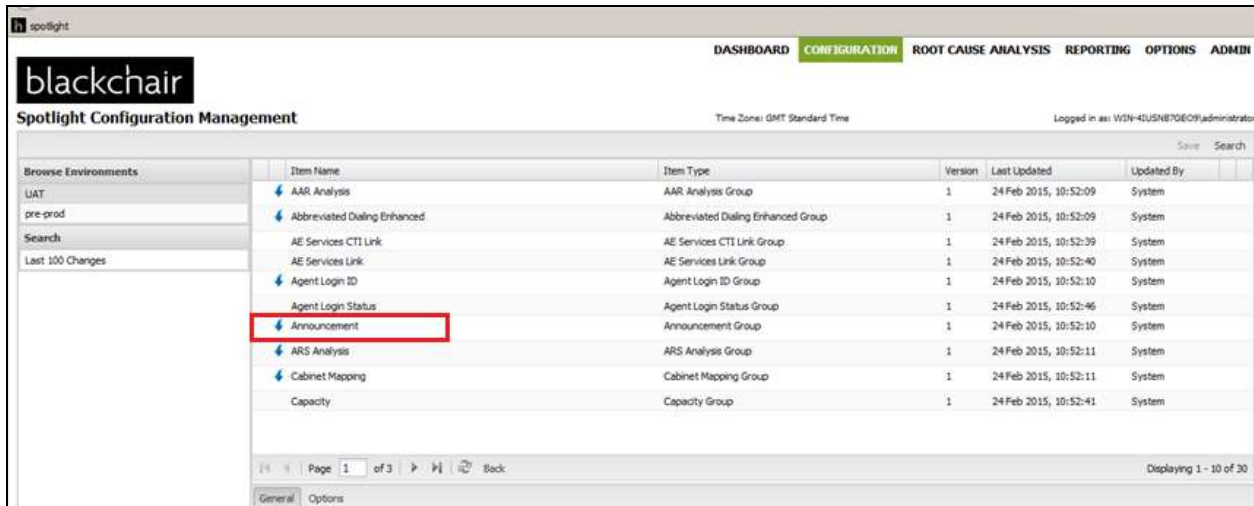
Once logged in the screen below is presented to the user.



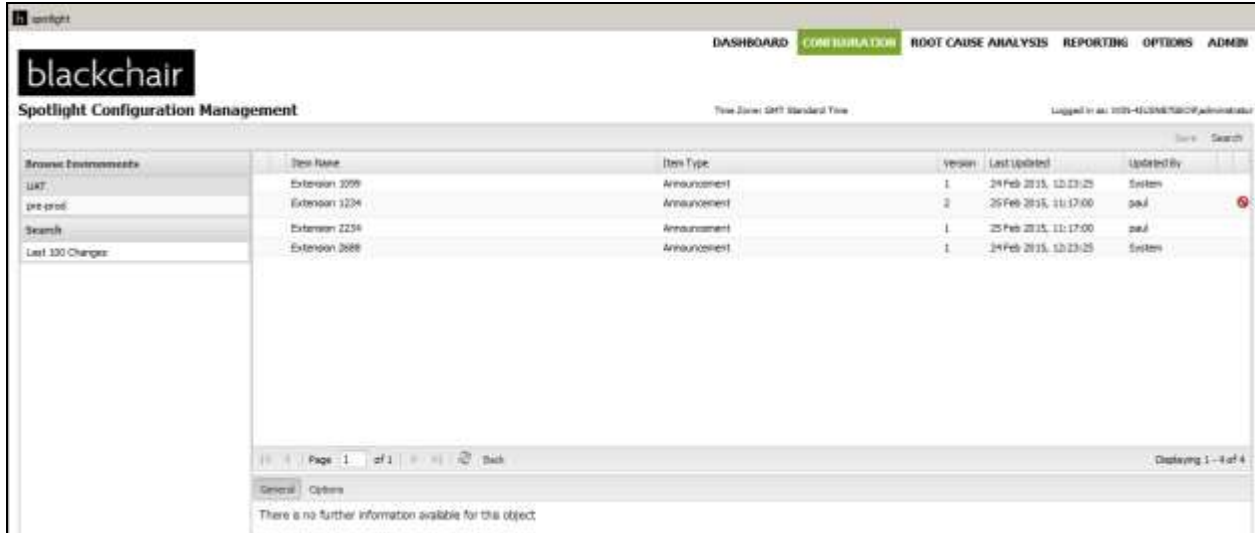
Select the **CONFIGURATION** tab from the top of the page. Double click on the **Avaya CM** item highlighted; note this may be a different name depending on the system.



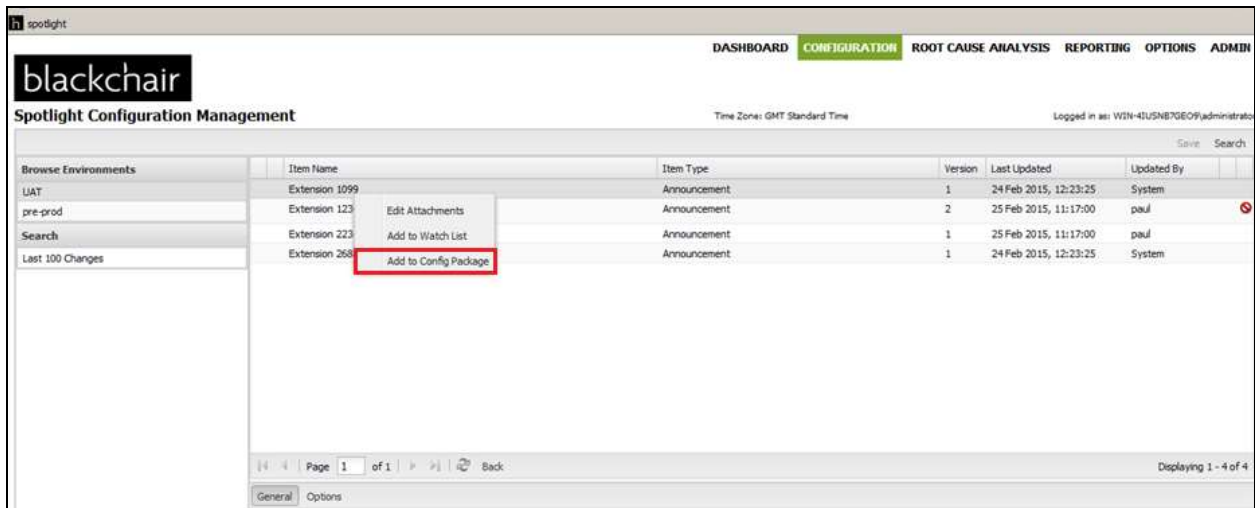
Double click on which ever item needs to be changed. In the example shown below this item is **Announcement**. The following steps will show an Announcement being copied from one Communication Manager system to another.



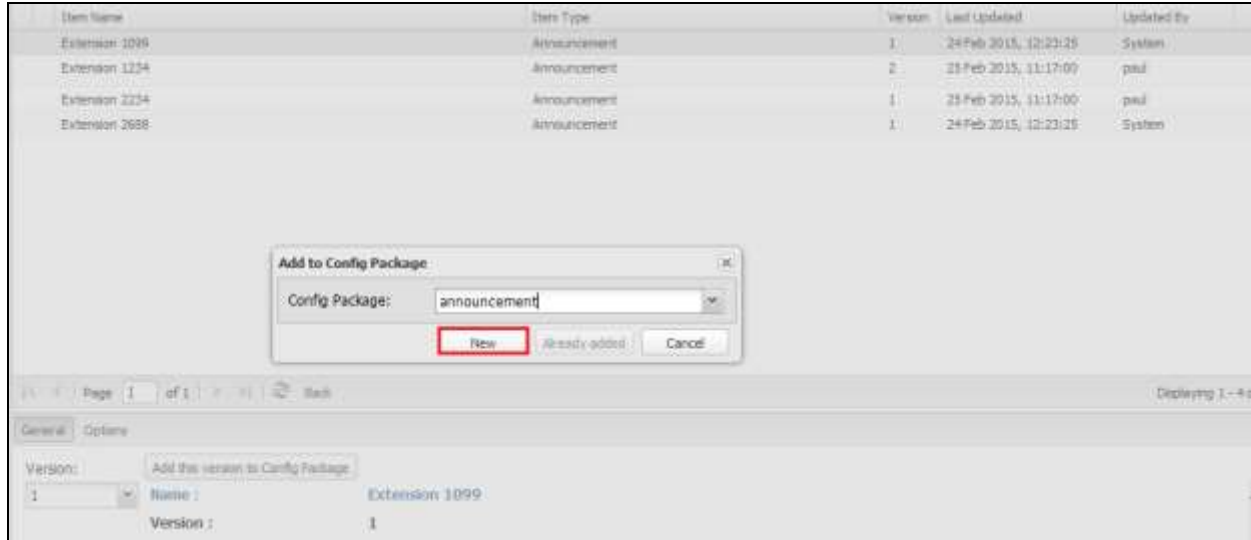
A list of announcements is then shown that exist on the source Communication Manager.



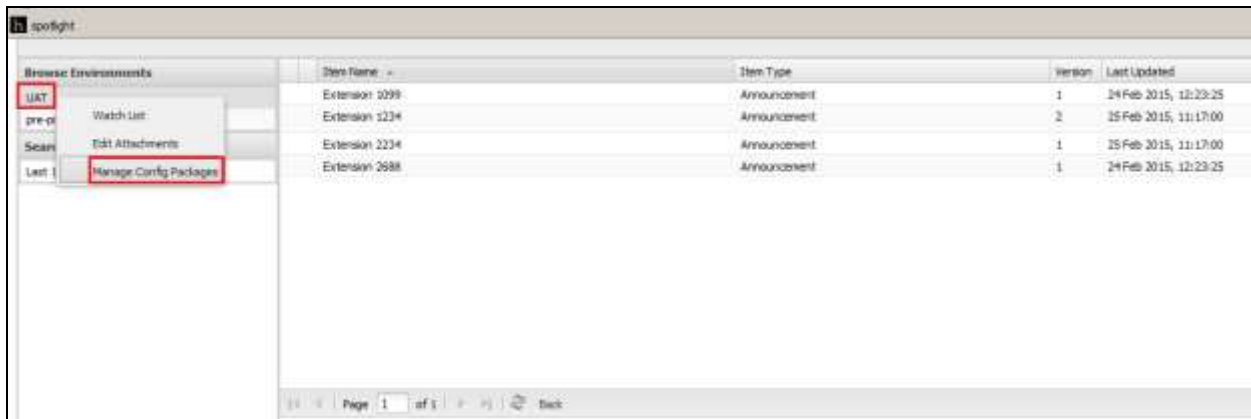
Right click on the announcement that is to be copied across to the target Communication Manager. In the example below this is **Extension 1099**. Select **Add to Config Package**.



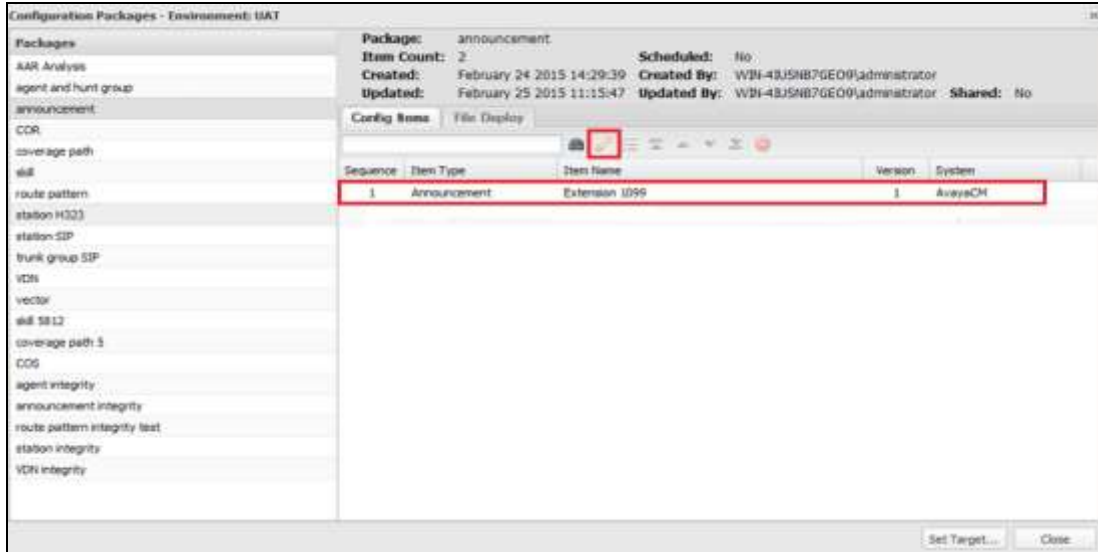
Add a suitable name for the **Config Package**, in this case simply **announcement**. Click on **New**.



The left pane shows the two environments, UAT represents the source Communication Manager and pre-prod represents the target Communication Manager. Right click on the source environment, in this case **UAT**, and select **Manage Config Packages**.



Highlight the announcement and click on the **edit icon** in the toolbar as highlighted below.



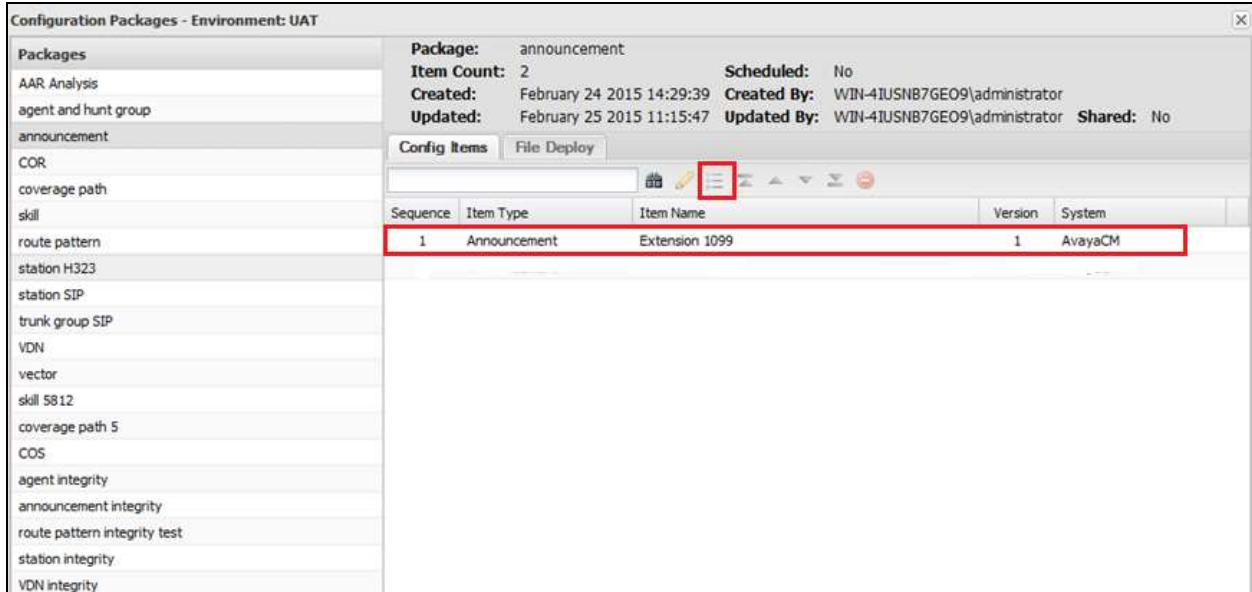
The following fields can be altered before the package is then sent to the target Communication Manager.

- **Announcement_Number**
- **Board**
- **COR**
- **Extension**
- **Name**

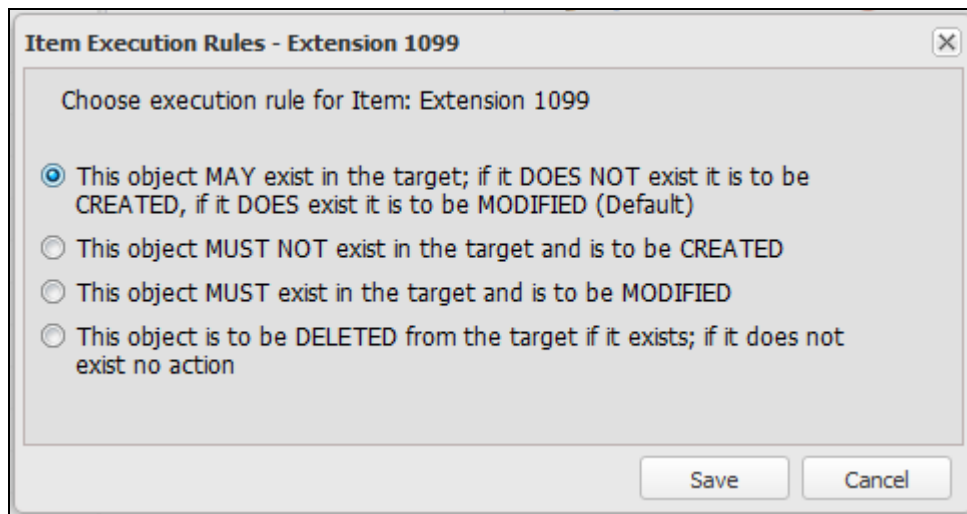
Click on **Save** at the bottom of the screen.



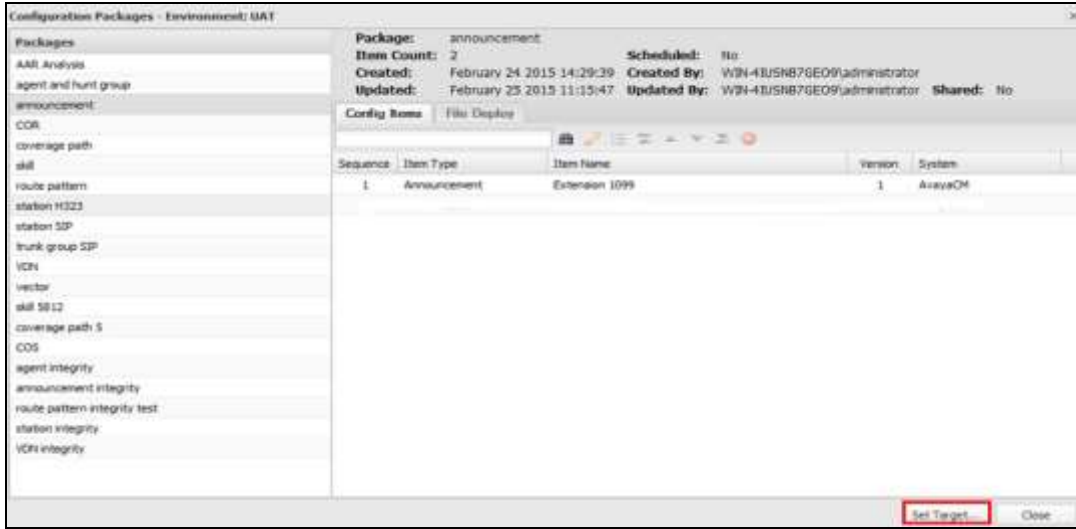
The package contents screen is again shown. Click on the **execution rules** button highlighted.



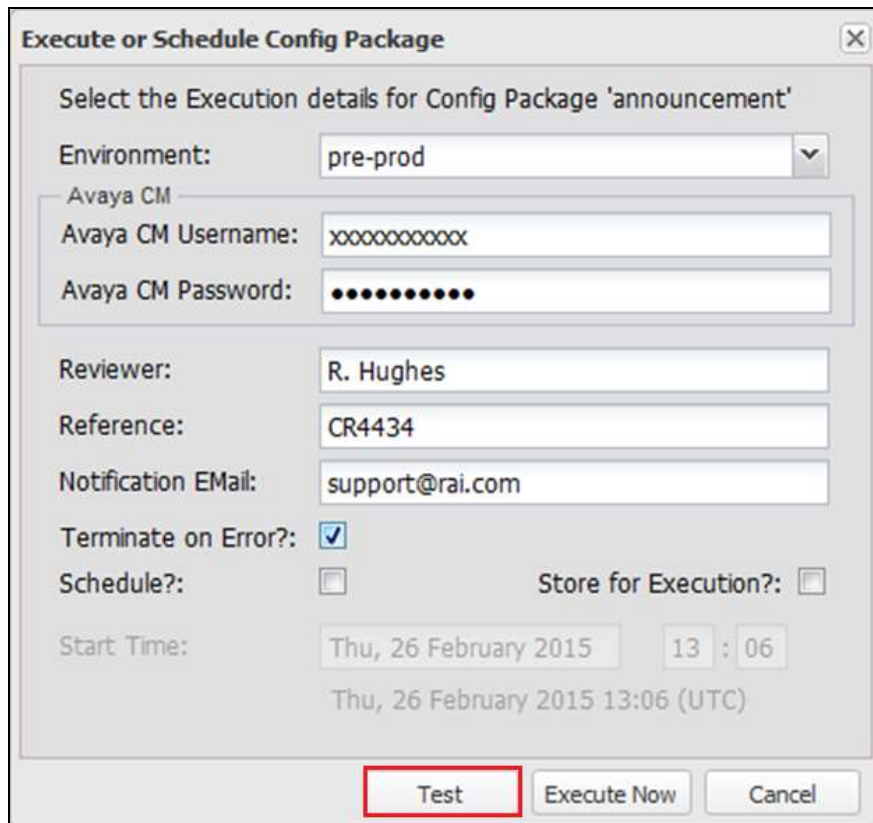
This brings up the execution rules window. Select the necessary rule that applies to this system, typically the following rule is selected, so as the specified announcement is created if it does not exist on the target system. Click on **Save** to continue.



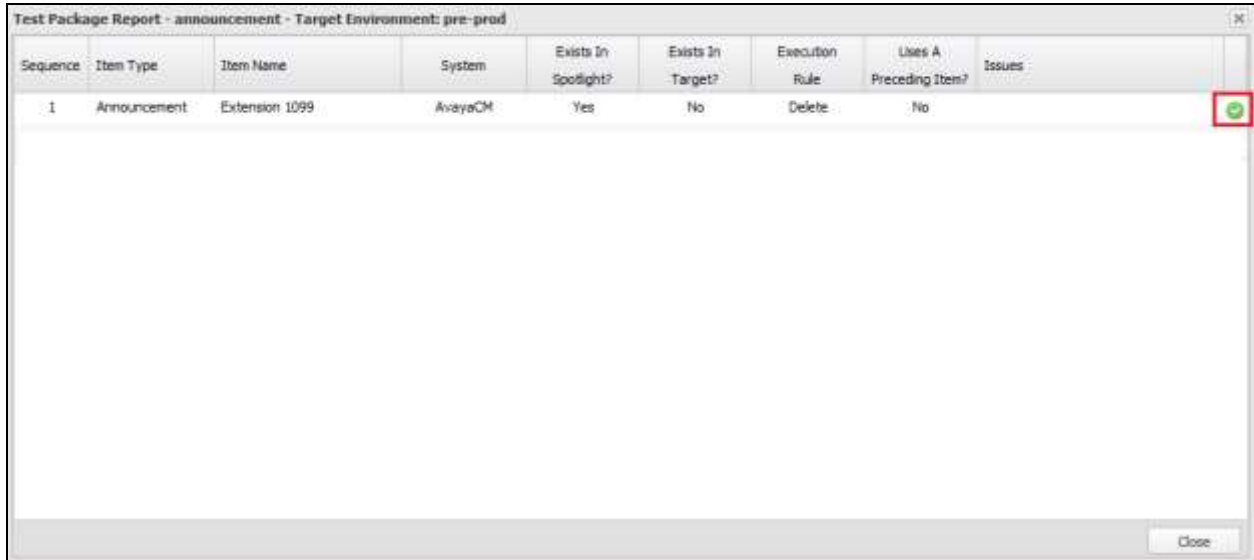
Click on **Set Target** at the bottom of the screen as shown below.



Enter the correct information for the target system, including the target system in our **case pre-prod** and the correct **CM Username** and **CM Password**. The other fields can be left blank but are used to keep records of the changes that are made by sending an email to a specified address. This package can be executed immediately, scheduled or tested prior to any execution. In the example below this was tested first, click on **Test**.



When the package is tested for errors and none are present the following window is displayed with a green tick on the right hand side as shown below.

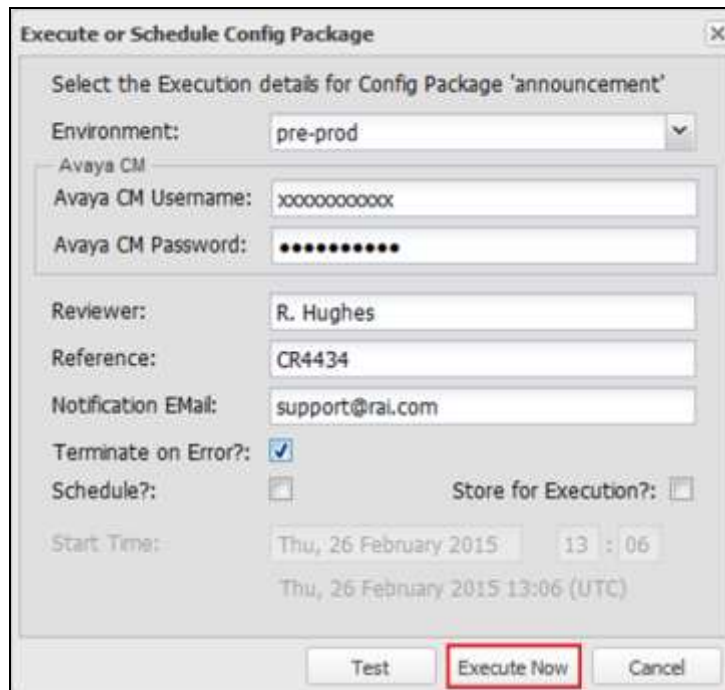


The screenshot shows a window titled "Test Package Report - announcement - Target Environment: pre-prod". It contains a table with the following data:

Sequence	Item Type	Item Name	System	Exists In Spotlight?	Exists In Target?	Execution Rule	Uses A Preceding Item?	Issues
1	Announcement	Extension 1099	AvayaCM	Yes	No	Delete	No	

A green checkmark icon is visible in the top right corner of the table area, indicating a successful test. A "Close" button is located at the bottom right of the window.

Once the test has completed successfully, click on **Execute Now** at the bottom of the screen to initiate the change to be made on pre-prod.

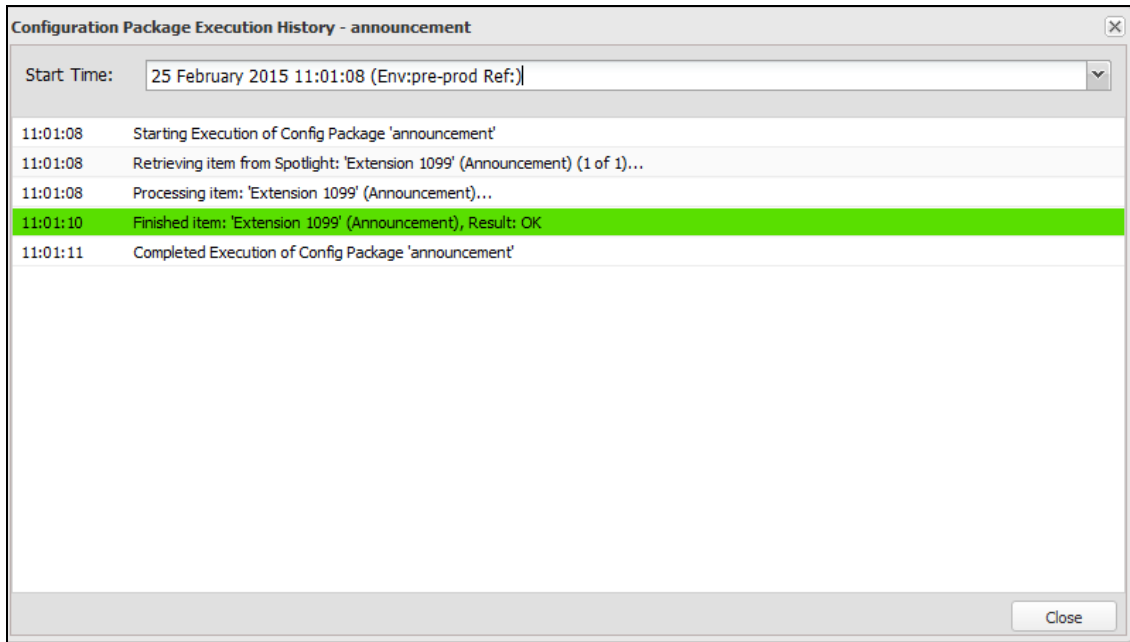


The screenshot shows a dialog box titled "Execute or Schedule Config Package". It contains the following fields and options:

- Environment: pre-prod (dropdown menu)
- Avaya CM section:
 - Avaya CM Username: xxxxxxxxxxxx
 - Avaya CM Password:
- Reviewer: R. Hughes
- Reference: CR4434
- Notification EMail: support@rai.com
- Terminate on Error?:
- Schedule?: Store for Execution?:
- Start Time: Thu, 26 February 2015 13 : 06
Thu, 26 February 2015 13:06 (UTC)

At the bottom, there are three buttons: "Test", "Execute Now" (highlighted with a red box), and "Cancel".

The following screen then appears showing the changes that are being made. This change can then be viewed on the target system using a program such as SAT to display the new announcement.



9. Conclusion

These Application Notes describe the configuration steps required for Spotlight Release Management V6 from blackchair to successfully interoperate with Avaya Aura® Communication Manager R6.3 using the SMS SDK on Avaya Aura® Application Enablement Services R6.3. 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 6.3

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

<https://www.devconnectprogram.com/fileMedia/download/021e2e74-3726-4ce9-b3be-0edf5e4d4599>

Other information on the Avaya Aura® Application Enablement Services SMS Web Services can be found by navigating to this link,

<https://www.devconnectprogram.com/site/global/downloads/index.gsp?item=9c899e0e-e0c8-48eb-bd9d-3d1ea5db52c8>

Product information on blackchair Spotlight Release Management can be found at

<http://www.theblackchair.com>

Appendix

Object Type	Add	Edit	Delete
AvayaSDKAARAnalysis	No	Yes	No
AvayaSDKAbbreviatedDialingEnhanced	Yes	Yes	Yes
AvayaSDKAgent	Yes	Yes	Yes
AvayaSDKAnnouncement	Yes	Yes	Yes
AvayaSDKConfiguration	No	No	No
AvayaSDKCOR	No	Yes	No
AvayaSDKCOS	No	Yes	No
AvayaSDKCoveragePath	Yes	Yes	Yes
AvayaSDKHuntGroup	No	Yes	Yes
AvayaSDKRoutePattern	No	Yes	Yes
AvayaSDKStation	Yes	Yes	No
AvayaSDKVDN	Yes	Yes	Yes
AvayaSDKVector	No	Yes	No

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