

# Oracle WebCenter Sites Audit Configuration

*Technical Notes*

*Pazhanikanthan Periasamy*

*paz.periasamy@oracle.com*

*ORACLE WebCenter Presales Team*

*August 2015*



## TABLE OF CONTENTS

OVERVIEW .....	3
APPLIES TO .....	3
TECHNICAL OVERVIEW .....	4
INSTALLATION INSTRUCTIONS .....	5
SCHEMA SETUP .....	7
<i>Oracle Schema setup</i> .....	7
APPLICATION SETUP .....	8
APPLICATION CONFIGURATION .....	10
ASSET LEVEL AUDIT CONFIGURATION .....	12
CONSOLIDATED AUDIT APPLICATION CONFIGURATION .....	13
DEBUGGING ASSET EVENT LISTENER .....	20

## REFERENCE DOCUMENT

Name	Description	Date
<b>Doc ID 1911760.1</b>	Sample Code for Asset Listeners (Including Asset Approvals) and Publishing Event Listeners	May 08 2015

## **Overview**

This document will describe how to register, implement and build audit reports based on WebCenter Sites Asset Listeners including Asset Approvals and Publishing Event Listeners.

## **Applies to**

Oracle WebCenter Sites - Version 11.1.1.8.0 and later. Information in this document applies to any platform.

## Technical Overview

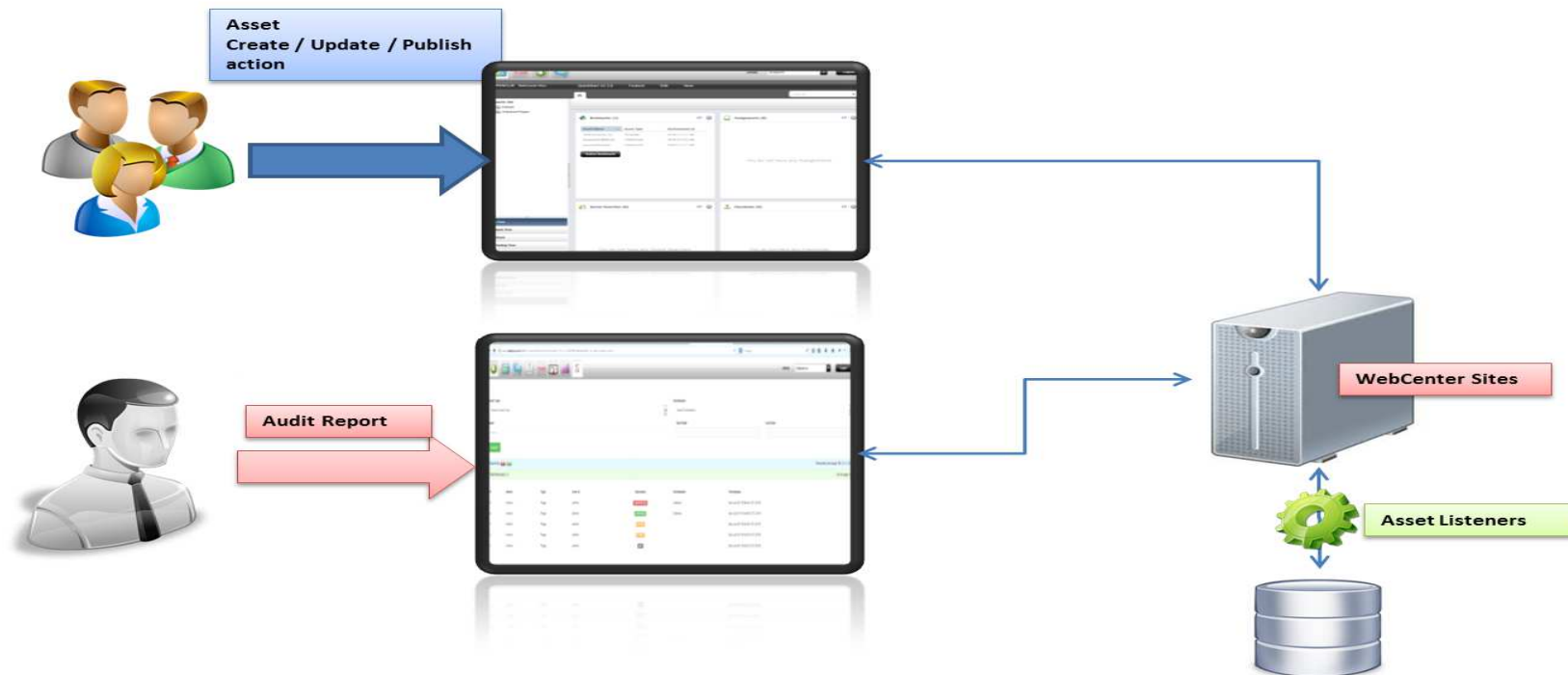


Figure 1 Technical Overview

- Content Contributors perform **create**, **update** or **publish** operations on any assets (Page, Articles, etc) within WebCenter Sites contributor application as a part of their business as usual activities.
- A custom **Audit listener** listens to these events and then writes the information into an audit schema within the Sites application database.
- Content Contributors can view **asset level** and **consolidated report** with search and download (as PDF/XLS) capabilities.

## Installation Instructions

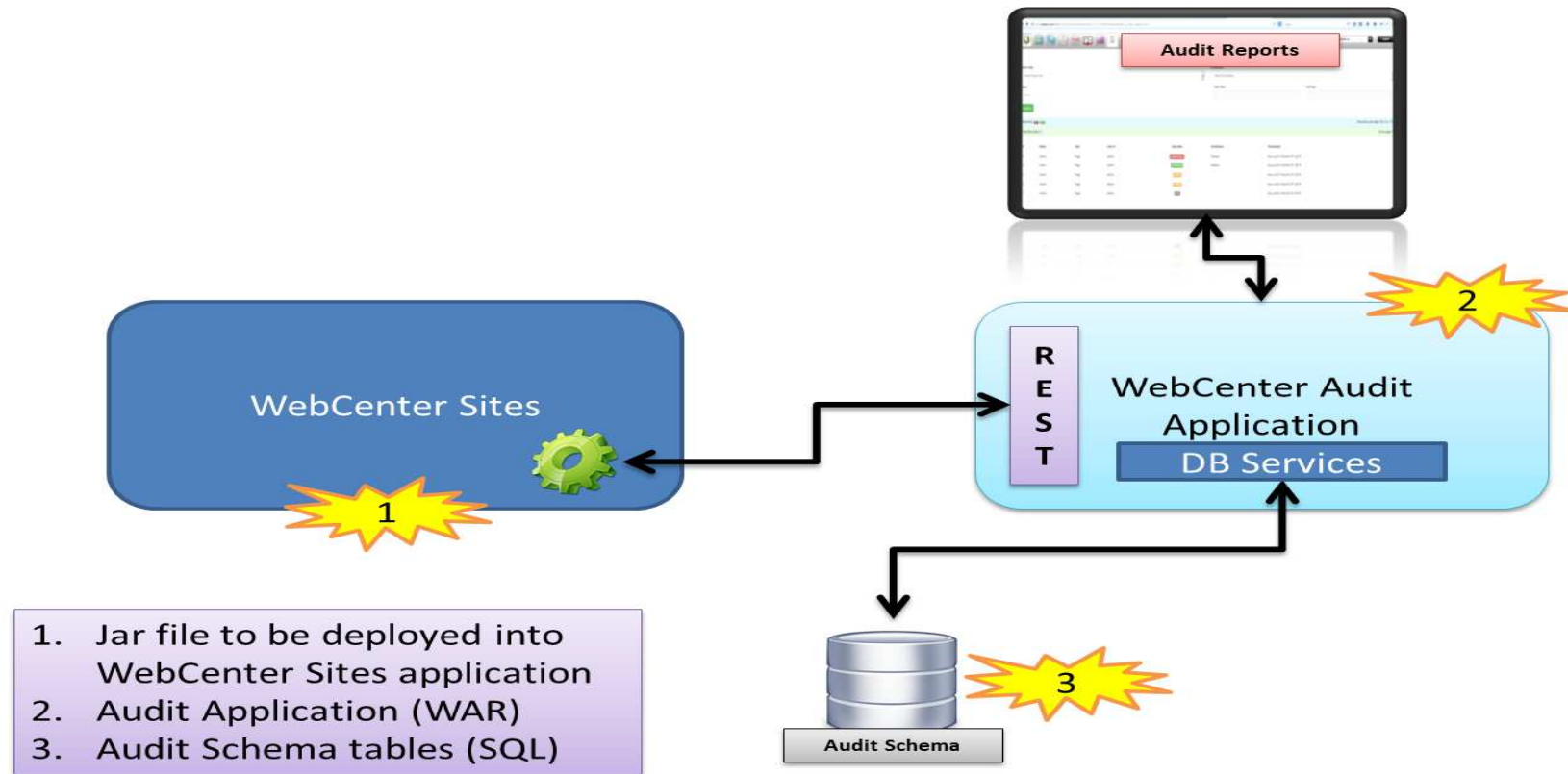
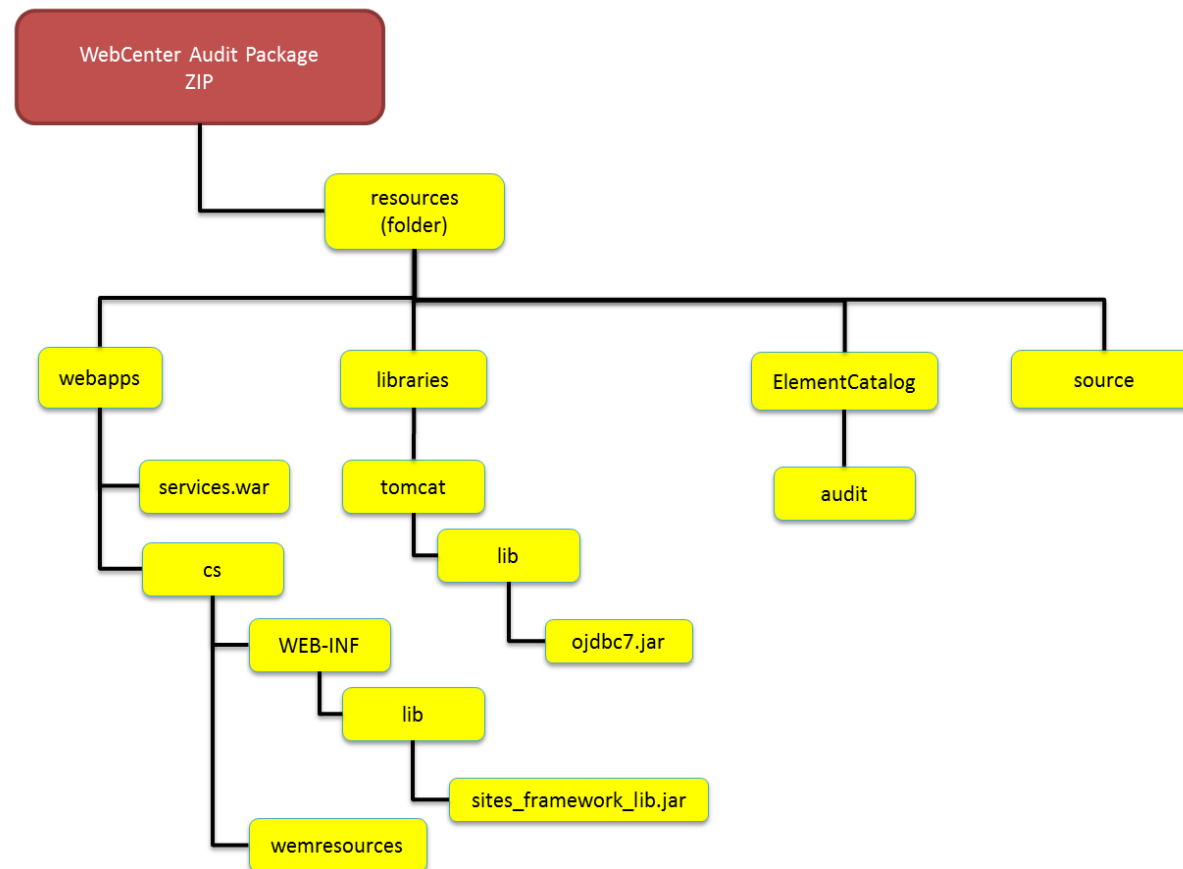


Figure 2 Installation Overview

Installation requires a set of steps to be followed in a sequential order. Each step may include a validation step to confirm that the installation has worked.

WebCenter Sites Audit installation is packaged as a ZIP (WCS\_Audit\_14082015.zip). The structure of the ZIP file is as follows.



## ***Schema setup***

This installation supports:

- Oracle Database

## **Oracle Schema setup**

Run the following SQL DDL commands within the Sites schema.

```
DROP TABLE audit_record;  
CREATE TABLE audit_record (  
    audit_id          NUMBER PRIMARY KEY NOT NULL,  
    asset_id          NUMBER NOT NULL,  
    asset_type        VARCHAR2 (50) NOT NULL,  
    asset_name        VARCHAR2 (200) NOT NULL,  
    target_asset_id    NUMBER NULL,  
    target_asset_type  VARCHAR2 (50) NULL,  
    target_asset_name  VARCHAR2 (200) NULL,  
    user_id           VARCHAR2 (50) NOT NULL,  
    operation          VARCHAR2 (20) NOT NULL,  
    audit_timestamp    TIMESTAMP NOT NULL  
);  
  
DROP SEQUENCE audit_seq;  
CREATE SEQUENCE audit_seq START WITH 1 INCREMENT BY 1 NOCACHE NOCYCLE;
```

**Note:** If using JSK/QSK, create a new Oracle schema and run the above DDL scripts.

## Application setup

- STEP 1 Shutdown the application server (Tomcat / WebLogic).
- STEP 2 (**Tomcat only**) Copy the file “resources/libraries/tomcat/lib/ojdbc7.jar” to tomcat server’s lib folder.
- STEP 3 Copy the file “resources/webapps/cs/WEB-INF/lib/sites\_framework\_lib.jar” to sites application WEB-INF/lib folder.
- STEP 4 Copy the icons under “resources/webapps/cs/wemresources/images/icons/apps” to sites application “/cs/wemresources/images/icons/apps” folder.
- STEP 5 Configure a datasource for data access within the application:
  - o (**Tomcat only**) Open the server configuration file under “tomcat/conf” folder and add the snippet with <Host> entry.

```
<!-- Audit Datasource start -->
<Context path="/services" docBase="services" debug="5" reloadable="true" crossContext="true">
    <Resource name="csDataSource" auth="Container" type="javax.sql.DataSource"
        driverClassName="oracle.jdbc.driver.OracleDriver"
        url="jdbc:oracle:thin:@<host>:<port>:<service-name>" username="<<sites application schema user>>"
        password="<<sites application schema password>>"
        maxActive="120" maxIdle="10" maxWait="-1"/>
</Context>
<!-- Audit Datasource stop -->
```

The file would look like:



```

<Host name="localhost"  appBase="webapps"
      unpackWARs="true" autoDeploy="true">

  <!-- SingleSignOn valve, share authentication between web applications
      Documentation at: /docs/config/valve.html -->
  <!--
  <Valve className="org.apache.catalina.authenticator.SingleSignOn" />
  -->

  <!-- Access log processes all example.
      Documentation at: /docs/config/valve.html
      Note: The pattern used is equivalent to using pattern="common" -->
  <Valve className="org.apache.catalina.valves.AccessLogValve" directory="logs"
        prefix="localhost_access_log." suffix=".txt"
        pattern="%h %l %u %t &quot;%r&quot; %s %b" />

  <!-- Jairam -->
  <Context path="/cs" docBase="cs" debug="5" reloadable="true" crossContext="true">
    <Resource name="csDataSource" auth="Container" type="javax.sql.DataSource"
      driverClassName="org.hsqldb.jdbcDriver" url="jdbc:hsqldb:D:/APPS/QuickStart_2.3.6/database/csdb" username="sa" password=""
      maxActive="120" maxIdle="10" maxWait="-1"/>
  </Context>
  <!--
  <Context path="/csagentservices" docBase="csagentservices" debug="5" reloadable="true" crossContext="true">
    <Resource name="csDataSource" auth="Container" type="javax.sql.DataSource"
      driverClassName="org.hsqldb.jdbcDriver" url="jdbc:hsqldb:D:/APPS/QuickStart_2.3.6/database/csdb" username="sa" password=""
      maxActive="120" maxIdle="10" maxWait="-1"/>
  </Context>
  -->
  <!-- Jairam -->

  <!-- Audit Datasource start -->
  <Context path="/services" docBase="services" debug="5" reloadable="true" crossContext="true">
    <Resource name="csDataSource" auth="Container" type="javax.sql.DataSource"
      driverClassName="oracle.jdbc.driver.OracleDriver" url="jdbc:oracle:thin:@localhost:1521:xe" username="scott" password="tiger"
      maxActive="120" maxIdle="10" maxWait="-1"/>
  </Context>
  <!-- Audit Datasource stop -->

</Host>
</Engine>
</Service>
</Server>

```

- **(WebLogic only)** The datasource should already exist. If the schema is different from sites application schema, then a new datasource need to be created and targeted to the sites managed server.

STEP 6 Copy services.war to

- **(Tomcat)** Tomcat's webapp folder.
- **(WebLogic only)** user\_projects's application folder.

STEP 7 Restart the application server.

STEP 8 **(WebLogic only)** Deploy the services.war from user\_projects's application folder and target to the sites managed server.

## Application configuration

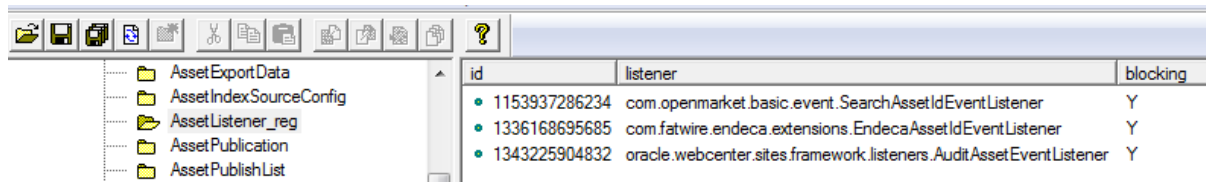
STEP 1 Open Sites Content Explorer. Login using the administrative details.

Host name or address:	Server Host
Username:	Administrator User Name
Password:	Administrator Password
Protocol:	http / https
Port:	Server Port
Application Server URL Path:	CS Servlet (/cs/CatalogManager)

STEP 2 To register the Audit Asset Listener, a row must be added into the 'AssetListener\_reg' table.

**Listener Class:** oracle.webcenter.sites.framework.listeners.AuditAssetEventListener



id	listener	blocking
1153937286234	com.openmarket.basic.event.SearchAssetIdEventListener	Y
1336168695685	com.fatwire.endeca.extensions.EndecaAssetIdEventListener	Y
1343225904832	oracle.webcenter.sites.framework.listeners.AuditAssetEventListener	Y

- STEP 3 Create a CSElement named "asset\_report" (of jsp) under the path "CustomElements/features ". Copy and paste the code from the attached file "resources/ CustomElements/features/asset\_report.jsp".
- STEP 4 Create a CSElement named "get\_attributes" (of jsp) under the path " CustomElements/features". Copy and paste the code from the attached file "resources/ CustomElements/features/get\_attributes.jsp".
- STEP 5 Create a Site Entry named "feature-audit-get-attributes " by selecting the "CustomElements/features/get\_attribute" CSElement created above. Ensure that Cache Rule is "Uncached" is selected.

SiteEntry:

\*Name: feature-audit-get-attributes

Description:

\*Pagename: feature-audit-get-attributes  
☐ Map to existing SiteCatalog entry with this pagename.

\*Rootelements: Select a CSElement to use as the rootelement.  
 CustomElements/features/get\_attrbu  
 Add Selected Items

Wrapper pages: ☐ Yes ☒ No

Pagelet only: ☐ True ☒ False

Pagelet parameters:

Parameter name	Value

Add Parameter

Cache Criteria: search.c,oid,context.siteLocale.p,ren

Cache Rules: ☐ Cached ☒ Uncached ☐ Advanced

Cache Rule (Sites): false

Cache Rule (Satellite): false

Access Control Lists:

- Any
- Browser
- ElementEditor
- ElementReader
- PageEditor
- PageReader
- RemoteClient
- SiteGod

Assignees have been selected. (Details)

STEP 6 Restart the application server.

## ***Asset level Audit configuration***

STEP 1 Navigate and open "[ElementCatalog\OpenMarket\Gator\FlexibleAssets\FlexAssets\ContentDetails.xml](#)" (For Article Assets) and "[ElementCatalog\OpenMarket\Xcelerate\AssetType\Page\ContentDetails.xml](#)" (For Page Assets). Add the following code to add a new tab

```
<!-- Audit CHANGES STARTS -->
<div dojoType="dijit.layout.ContentPane" title="Audit" REPLACEALL="Variables.tabVanityUrl">
<CALELEMENT NAME="CustomElements/features/asset_report">
<ARGUMENT NAME="assetId" VALUE="Variables.id"/>
<ARGUMENT NAME="assetType" VALUE="Variables.AssetType"/>
<ARGUMENT NAME="embedInIframe" VALUE="true"/>
</CALELEMENT>
</div>
<!-- Audit CHANGES ENDS -->
...

</div>
</div>
</div>
</FTCS>
```

STEP 2 When an asset is viewed in form view, Audit tab looks like:




STEP 3 On clicking the tab, the audit report specific to the current asset is displayed.

<div> <div>Home</div> <div>Search</div> </div> <div> <div>Form</div> <div></div> <div></div> <div></div> <div></div> <div></div> </div> <div> <div>Content</div> <div>Metadata</div> <div>URL</div> <div>Audit</div> </div>						
Export as: pdf   xls				Record(s) per page: 25   50   100		
Total Record(s): 1				Go to page: 1		
#	Name	Type	User Id	Operation	Destination	Timestamp
4	Home	Page	admin	UPDATE		Fri Aug 14 13:56:49 UTC 2015

### ***Consolidated Audit Application configuration***

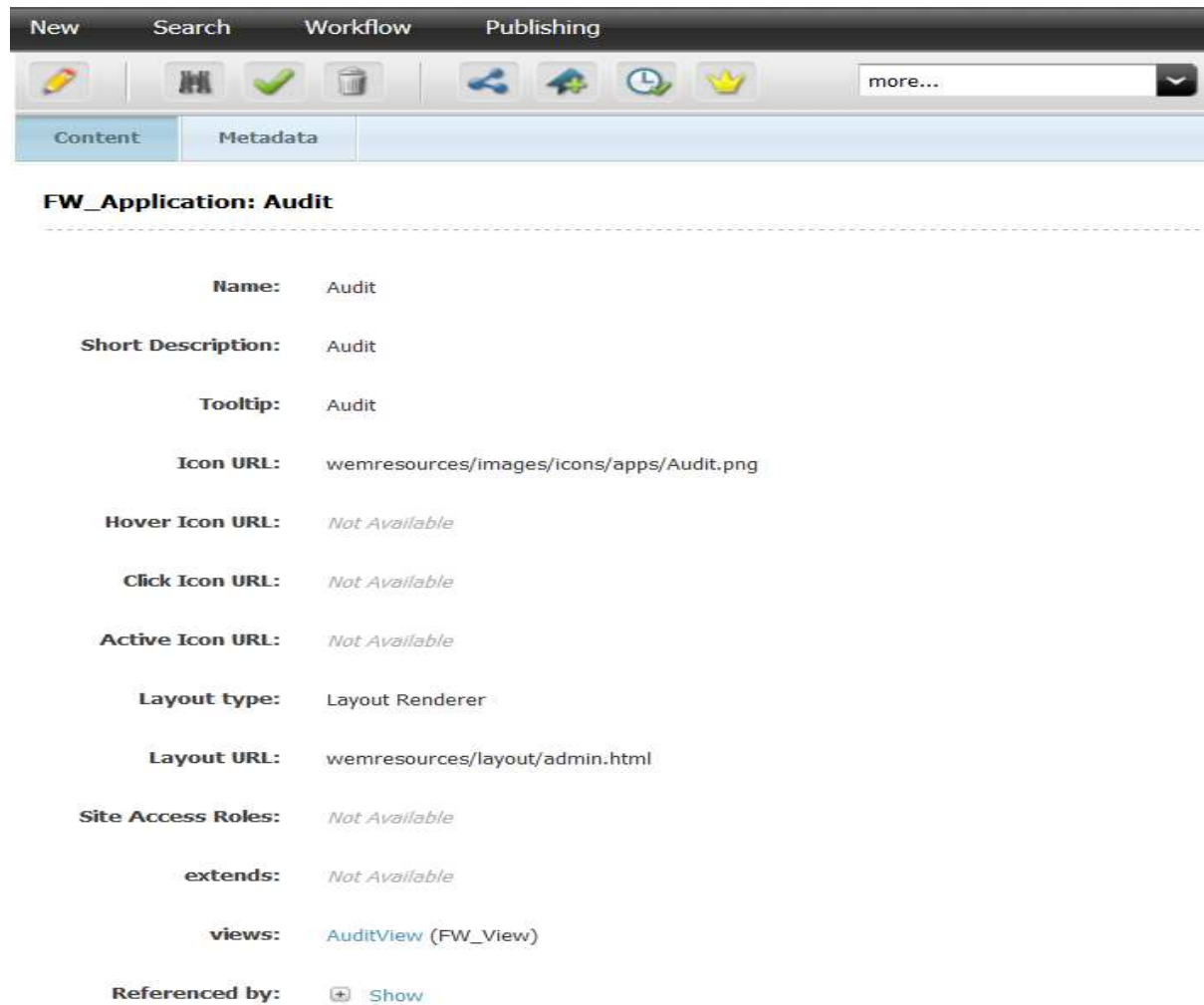
- STEP 1 To create a consolidated audit application within the WEM bar, you would need to create a “FW\_View” and “FW\_Application”.
- STEP 2 Login into WebCenter Sites as an Administrator and switch to Admin Site and view the Admin view.
- STEP 3 Create new FW\_View called “AuditView” with the Source URL as: “http://<host>:<port>/services/audit”



The screenshot shows the configuration page for 'FW\_View: AuditView'. At the top, there is a toolbar with icons for editing, deleting, and other actions. Below the toolbar are tabs for 'Content' and 'Metadata'. The 'FW\_View: AuditView' title is followed by a dashed line. The configuration details are as follows:

<b>Name:</b>	AuditView
<b>Parent Node:</b>	frame1
<b>View Type:</b>	Iframe
<b>Source Url:</b>	<a href="http://localhost:8001/services/audit/">http://localhost:8001/services/audit/</a>
<b>JavaScript:</b>	<i>Not Available</i>
<b>Content:</b>	<i>Not Available</i>
<b>Related:</b>	<i>No Related Assets</i>
<b>Referenced by:</b>	<a href="#">+</a> <a href="#">Show</a>

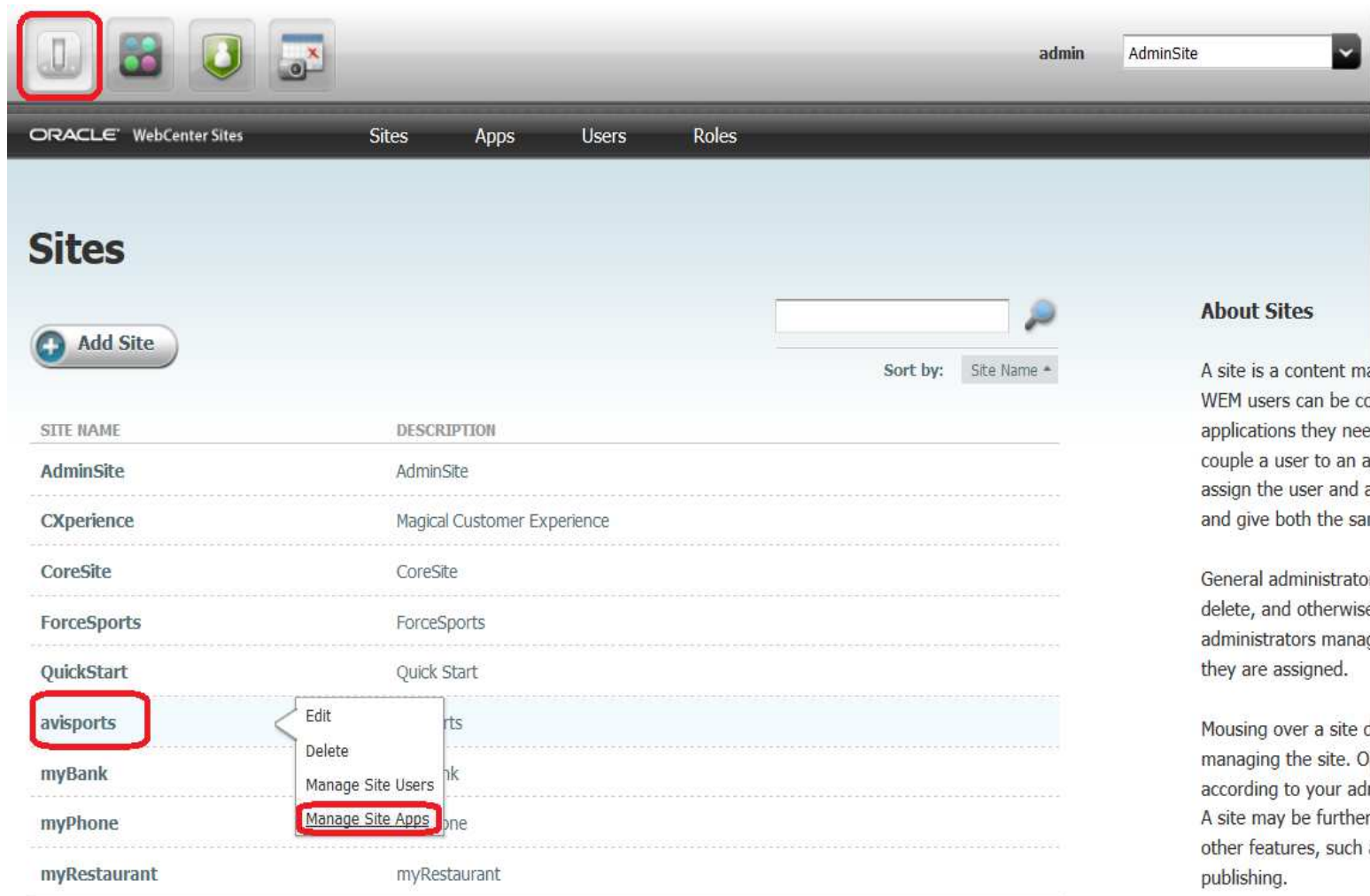
STEP 4 Create new FW\_Application called “Audit” with the Icon URL as: “[wemresources/images/icons/apps/Audit.png](#)” and views as the “[AuditView](#)” created in the above step.



The screenshot shows the Oracle WebCenter Sites configuration interface. At the top, there is a navigation bar with tabs for 'New', 'Search', 'Workflow', and 'Publishing'. Below this is a toolbar with various icons for editing, deleting, and publishing. The main content area is titled 'FW\_Application: Audit' and contains a list of configuration properties for the 'Audit' application.

Property	Value
Name:	Audit
Short Description:	Audit
Tooltip:	Audit
Icon URL:	wemresources/images/icons/apps/Audit.png
Hover Icon URL:	Not Available
Click Icon URL:	Not Available
Active Icon URL:	Not Available
Layout type:	Layout Renderer
Layout URL:	wemresources/layout/admin.html
Site Access Roles:	Not Available
extends:	Not Available
views:	AuditView (FW_View)
Referenced by:	<a href="#">+</a> Show

STEP 5 Switch to “[WEM Admin](#)” view and select the specific site where the Audit application needs to be added and select “[Manage Site Apps](#)”.



The screenshot shows the Oracle WebCenter Sites administration console. The top navigation bar includes 'ORACLE WebCenter Sites', 'Sites', 'Apps', 'Users', and 'Roles'. The 'Sites' tab is active. On the right, the user 'admin' is logged in, and the current site is 'AdminSite'. The main content area is titled 'Sites' and features an 'Add Site' button. Below this is a table listing sites. The 'avisports' site is selected, and a context menu is open, showing options: 'Edit', 'Delete', 'Manage Site Users', and 'Manage Site Apps'. The 'Manage Site Apps' option is highlighted with a red box. To the right of the table, there is an 'About Sites' section with descriptive text.

SITE NAME	DESCRIPTION
AdminSite	AdminSite
CXperience	Magical Customer Experience
CoreSite	CoreSite
ForceSports	ForceSports
QuickStart	Quick Start
avisports	
myBank	
myPhone	
myRestaurant	myRestaurant

**About Sites**

A site is a content management system (CMS) that allows WEM users to create and manage content. Applications they need to use can be coupled to a user and assigned the user and a role, and give both the same permissions.

General administrators can create, delete, and otherwise manage sites. Administrators manage sites that are assigned to them.


Mousing over a site displays a context menu for managing the site. Options include: Edit, Delete, Manage Site Users, and Manage Site Apps. A site may be further configured with other features, such as publishing.


STEP 6 Hit Assign Apps




## Manage Site Apps

avisports

 Assign Apps



Sort by: App Name ▲

APP NAME	ROLES
Admin	AdvancedUser
Community	AdvancedUser, Analytics, Approver, Author, ConnectorAdmin, D... 
Contributor	SitesUser, Author, Approver, Marketing
Eloqua	Author

STEP 7 Select the Audit application and hit continue.

## Select Apps for Site

avisports

**Available** (3)

 Filter List

- Gadgets
- SiteCapture
- WEM Admin





**Selected** (1)

- Audit

 Continue  Cancel

STEP 8 Assign appropriate roles and hit Save and close.

## Assign Roles to App

avisports

---

Available (0)		Selected (14)
<input type="text" value="Filter List"/>		
<div></div>	<div>➔</div> <div>➜</div>	<div>Author</div> <div>ConnectorAdmin</div> <div>Designer</div> <div>GeneralAdmin</div> <div>Marketing</div> <div>MobileSitesDeveloper</div> <div>Moderator</div> <div>SiteAdmin</div> <div>SitesUser</div> <div>WorkflowAdmin</div> <div>xceladmin</div>
<div><input checked="" type="button" value="Save and Close"/> <input type="button" value="Cancel"/></div>		

STEP 9 Now switch to the site where Audit application was added. Refresh the browser window. A new WEM application should appear on the WEM bar.



STEP 10 Click on the application to see a consolidated audit report.

Asset Type:

Destination:

Name:

Start Date:

End Date:

Export as: pdf | xls Record(s) per page: 25 | 50 | 100

Total Record(s): 13 Go to page: 1

#	Name	Type	User Id	Operation	Destination	Timestamp
15	AuditView	FW_View	admin	<input type="button" value="UPDATE"/>		Fri Aug 14 14:27:08 UTC 2015
14	Audit	FW_Application	admin	<input type="button" value="UPDATE"/>		Fri Aug 14 14:16:20 UTC 2015
13	Eloqua	FW_Application	admin	<input type="button" value="UPDATE"/>		Fri Aug 14 14:16:20 UTC 2015
12	Gadgets	FW_Application	admin	<input type="button" value="UPDATE"/>		Fri Aug 14 14:16:20 UTC 2015
11	Community	FW_Application	admin	<input type="button" value="UPDATE"/>		Fri Aug 14 14:16:20 UTC 2015
10	SiteCapture	FW_Application	admin	<input type="button" value="UPDATE"/>		Fri Aug 14 14:16:19 UTC 2015
9	Contributor	FW_Application	admin	<input type="button" value="UPDATE"/>		Fri Aug 14 14:16:19 UTC 2015
8	Admin	FW_Application	admin	<input type="button" value="UPDATE"/>		Fri Aug 14 14:16:18 UTC 2015
7	WEM Admin	FW_Application	admin	<input type="button" value="UPDATE"/>		Fri Aug 14 14:16:18 UTC 2015
6	Audit	FW_Application	admin	<input type="button" value="ADD"/>		Fri Aug 14 14:08:22 UTC 2015
5	AuditView	FW_View	admin	<input type="button" value="ADD"/>		Fri Aug 14 14:05:28 UTC 2015

STEP 11 Users can search based on specific “Asset Type”, “Destination”, “Name”, “Start Date” and “End Date”.

STEP 12 Users can also modify the number of results per page.

STEP 13 Users also have export functionality to export the report in excel or pdf format.

### ***Debugging Asset Event Listener***

STEP 1 Shutdown the application server (Tomcat / WebLogic).

STEP 2 Modify the log4j.properties file under the path “/cs/WEB-INF/classes” and the following line(s):

```
# PP : to debug Asset Event Listener
log4j.logger.oracle.sites.framework.listeners=TRACE
```

STEP 3 Restart the application server

STEP 4 The log file (sites.log) contains logs files specific to the Audit Event listener.