

Oracle Utilities Customer Self Service

Whitepaper:

Migration of XAI Services to IWS Services

Release 2.1.0 Service Pack 2

E67957-01

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Chapter 1

Overview

This whitepaper describes the steps necessary for OUCSS to connect to OUCCB services using JAX-WS based Inbound Web Services (IWS). Oracle Utilities Application Framework currently provides the capability to expose any object within the product as a web service via the XML Application Integration (XAI) component. OUCSS consumes these web services by directly connecting to CCB environment or through the Oracle SOA architecture.

In Oracle Utilities Application Framework V4.2.0.2.0, a new native Web Services facility was introduced that has several advantages over XAI. This facilitates tracking and management of individual web services using Oracle Enterprise Manager, providing enhanced security features with compliance for WS-Policy standards, as well as providing access to a wide range of authentication and encryption mechanisms, including web service clustering capabilities. This document describes how to consume IWS based web services hosted in OUCCB from within the OUCSS application.

Additional Resources

Resource	Location
Oracle Utilities Customer Self Service Installation Guide	Check Oracle Utilities Customer Self Service on the Oracle Technology Network (OTN) web site (http://www.oracle.com/technetwork/apps-tech/utilities/documentation/index.html) for the latest version of the documents
Oracle Utilities Customer Self Service Implementation Guide	Check Oracle Utilities Customer Self Service on the Oracle Technology Network (OTN) web site (http://www.oracle.com/technetwork/apps-tech/utilities/documentation/index.html) for the latest version of the documents

Acronyms

OUCSS - Oracle Utilities Customer Self Service

OUCCB – Oracle Utilities Customer Care & Billing

XAI – XML Application Integration

IWS – Inbound Web Services

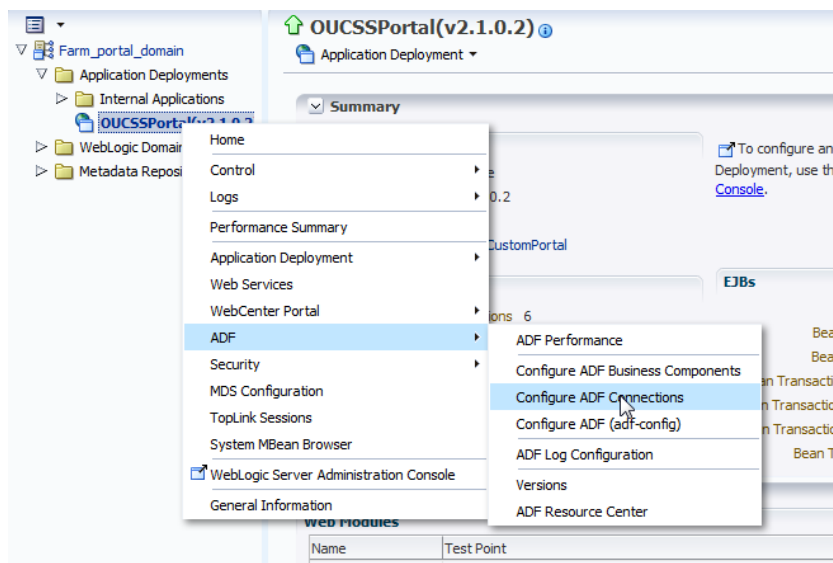
Chapter 2

Configuration

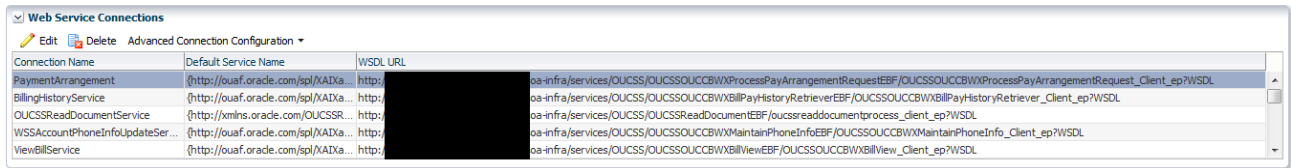
This section describes the settings and procedures for consuming IWS based web services instead of using XAI based web services. The settings depend on whether CSS is directly connected to CCB, or is connected via Oracle SOA. Both approaches are described below.

If CSS is Directly Connected to CCB

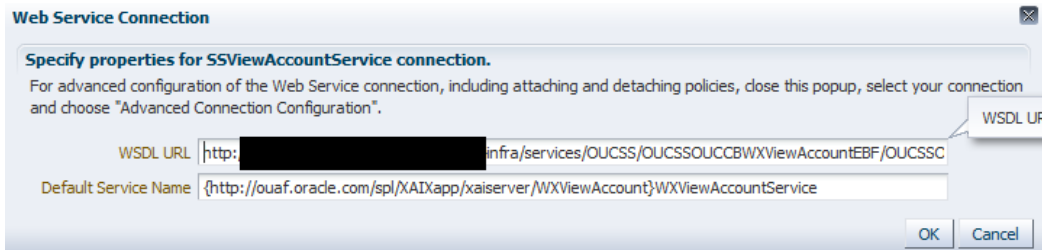
- 1 Change the CCB URLs to point to IWS instead of XAI. For example, the URL `http://HOST:PORT/APPROOT/XAIApp/xaiserver/WXViewAccount` would be changed to `http://HOST:PORT/APPROOT/webservices/WXViewAccount`.
- 2 Login to Oracle Enterprise Manager and navigate to **Application Deployments > OUCSSPortal**.
- 3 Right click on **OUCSSPortal**. Choose **ADF > Configure ADF Connections**. to open the **ADF Connections Configuration** page.



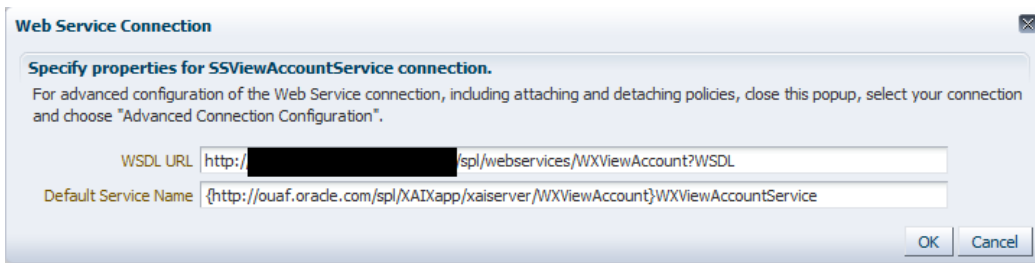
4 Go to **Web Service Connections**.



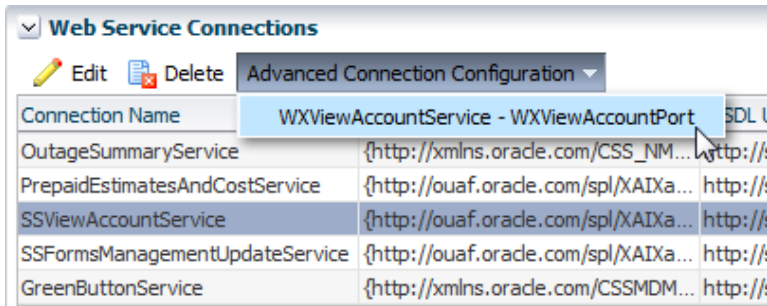
5 Select a connection from the list, then click **Edit**.



6 Modify the **WSDL URL** to point to an IWS service.



7 Select the same service again and choose **Advanced Connection Configuration > Service Name**.



- Modify the **Endpoint Address** on the **Configuration** tab with the IWS service URL (e.g., `http://HOST:PORT/APPROOT /webservices/WXViewAccount` (note: don't include "WSDL" in the URL)).

The screenshot shows the configuration page for the **WXViewAccountPort (Web Service Client)**. The **Configuration** tab is selected. The **General** section includes the **Endpoint Address** field, which is currently empty. Other fields include **Maintain Session**, **HTTP Chunking** (with **Stop Chunking** set to True and **Chunking Size** at 4096), and **HTTP Timeout** (with **HTTP Read Timeout** and **HTTP Connection Timeout** fields). The **HTTP Basic Authentication** section has **HTTP User Name** set to 'weblogic' and **HTTP User Password** masked with dots. The **HTTP Proxy** section includes fields for **Proxy Host**, **Proxy Port**, **Proxy User Name**, **Proxy Password**, **Proxy Realm**, and **Proxy Authentication Type**. **Apply** and **Revert** buttons are visible at the top right.

- Select the **OWSM Policies** tab. The security policy attached to this IWS service should be configured from this screen.

The screenshot shows the **OWSM Policies** tab for the **WXViewAccountPort (Web Service Client)**. The **Subject's Overall Policy Configuration Status** is shown as **Valid** and **Secured**. The **Globally Attached Policies** section is empty. The **Directly Attached Policies** section shows one policy attached: **oracle/wss_http_token_client_policy**, with **Category** Security, **Effective** True, and **Status** Enabled. The **Security Configuration Details** table is shown below:

Name	Current Value	Original Value
reference.priority		
csf.map		
csf.key	OUCSS_INTG_BASIC_KEY	basic.credentials

Apply and **Revert** buttons are visible at the bottom right.

- Note the **Attached Policies** for this web service. The policy should match the policy configured for this service on the CCB side.

- 11 If the policy declared on the CCB side is different that what is configured here, the policy must be changed. To change the policy, press the **Attach/Detach** button. A popup window will open to allow you to make the change.

Policy Attachment - Oracle Enterprise Manager

Warning
 Error in accessing compatible client policies. All policies will be shown for selection. Please check log for error details.

Attach/Detach Policies(WXViewAccountPort)

Globally Attached Policies

Name	Category	Policy Set	Enabled	Description
No rows yet				

Directly Attached Policies

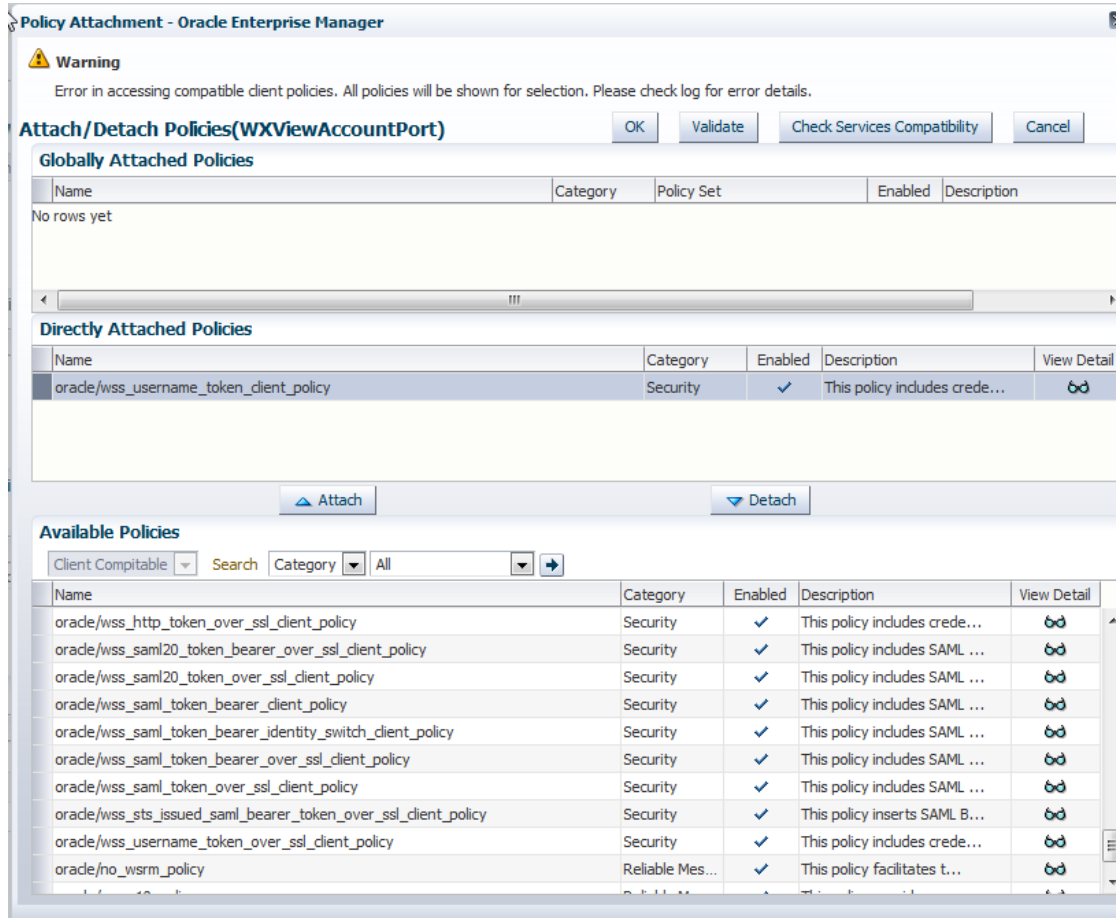
Name	Category	Enabled	Description	View Detail
oracle/wss_http_token_client_policy	Security	✓	This policy includes crede...	

Available Policies

Client Compitable Search Category All

Name	Category	Enabled	Description	View Detail
oracle/no_addressing_policy	WS-Addressi...	✓	This policy facilitates t...	
oracle/wsaddr_policy	WS-Addressi...	✓	This policy causes the pla...	
oracle/log_policy	Management	✓	This policy causes the req...	
oracle/no_mtom_policy	MTOM Attac...	✓	This policy facilitates t...	
oracle/wsmtom_policy	MTOM Attac...	✓	This Message Transmission ...	
oracle/http_basic_auth_over_ssl_client_policy	Security	✓	This policy includes usern...	
oracle/http_jwt_token_client_policy	Security	✓	This policy includes JWT t...	
oracle/http_jwt_token_identity_switch_client_policy	Security	✓	This policy includes JWT t...	
oracle/http_jwt_token_over_ssl_client_policy	Security	✓	This policy includes JWT t...	
oracle/http_oauth2_token_client_policy	Security	✓	This policy includes OAaut...	

- 12 Select the existing policy and click on **Detach**. Find the policy matching the configuration in CCB from within the **Available Policies** panel. If, for example, the policy `wss_username_token_client_policy` is configured for this service in CCB. When the policy is selected, press the **Attach** button to attach this policy to the service.

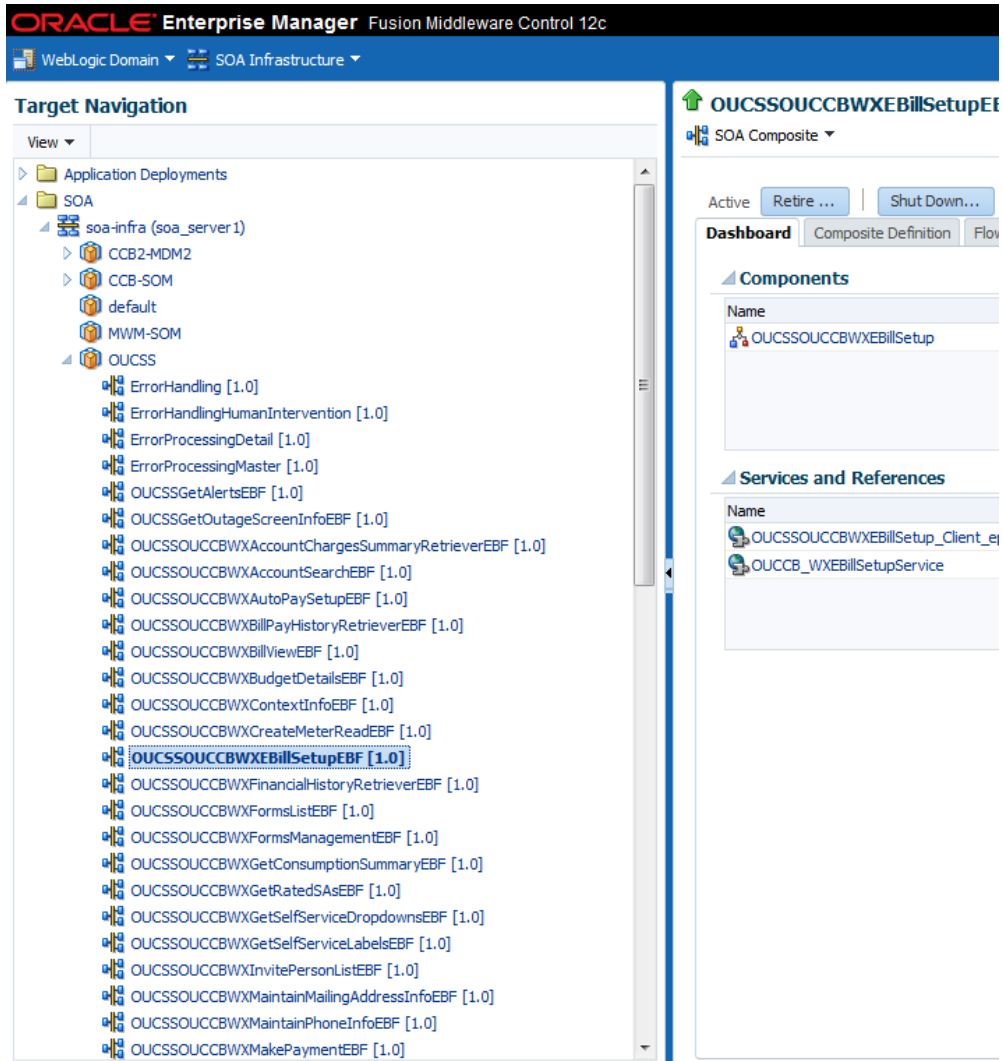


- 13 Click **OK** to return to the parent window. Make sure other **Security Configuration Details** are relevant and correct, (e.g., **csf-key**), then return to the **Configuration** tab and press **Apply**.
- 14 Repeat the procedure for all defined web services.
- 15 Restart the server hosting the OUCSSPortal web application.

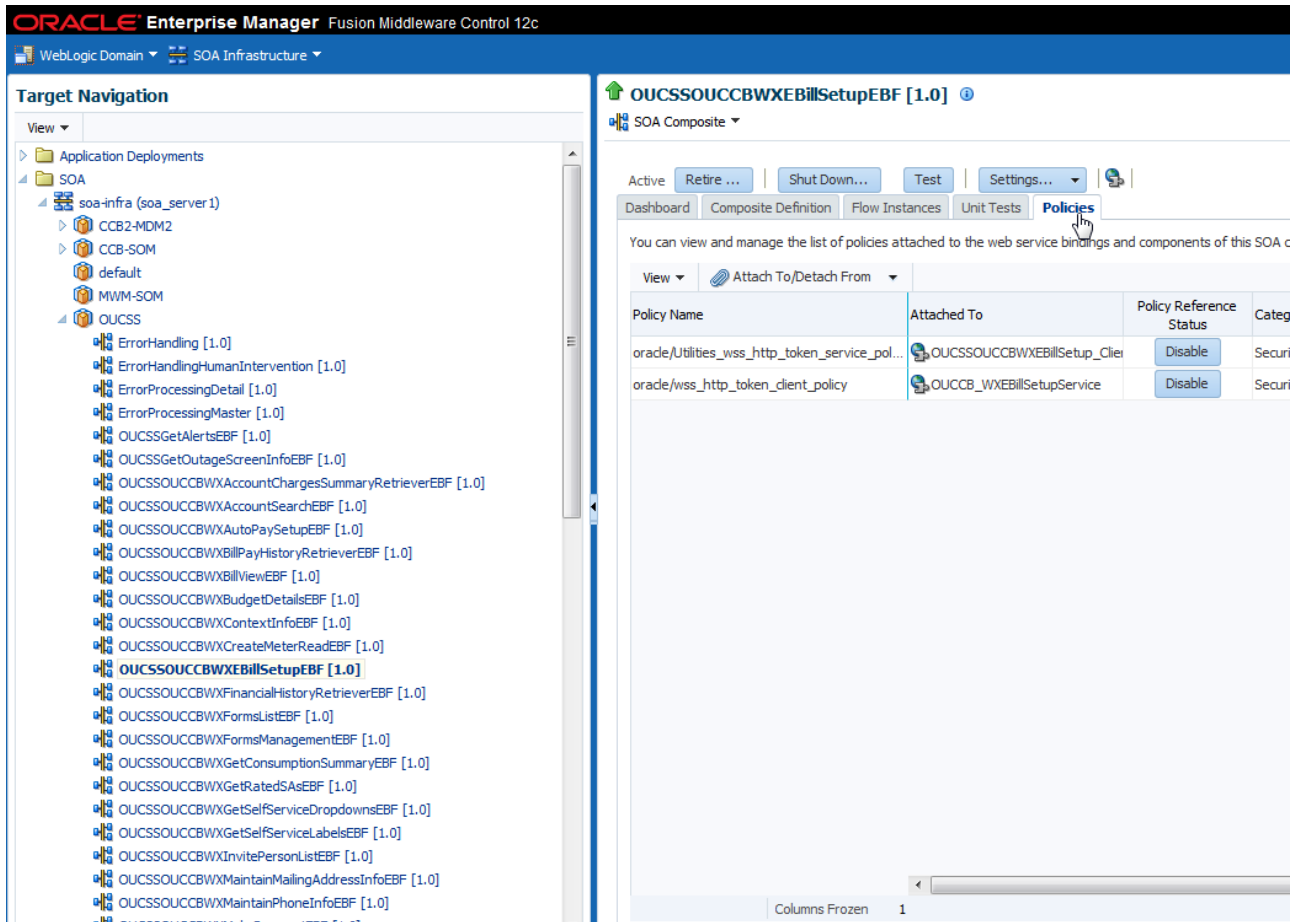
If CSS is Connected to CCB Through SOA

- 1 If CSS is connected to CCB through Oracle SOA, then migration from XAI to IWS requires changes on the SOA end. Note that no change is required on the CSS end since CSS will continue to interact with SOA in the same manner it did with XAI.
- 2 When consuming IWS-based services, the SOA endpoint URLs need to be modified to point to IWS instead of XAI. For example, the URL `http://HOST:PORT/APPROOT/XAIApp/xaiserver/WXViewAccount` would be changed to `http://HOST:PORT/APPROOT/webservices/WXViewAccount`.
- 3 Changing an endpoint URL to a partner link can be done in SOA by modifying the `CSSCCBConfigurationProperties.xml` file (which contains links to XAI-based services) from MDS.
- 4 Once the endpoint URLs are changed, the security policy attached to those composites in SOA also need to be changed to match the policy set in IWS.

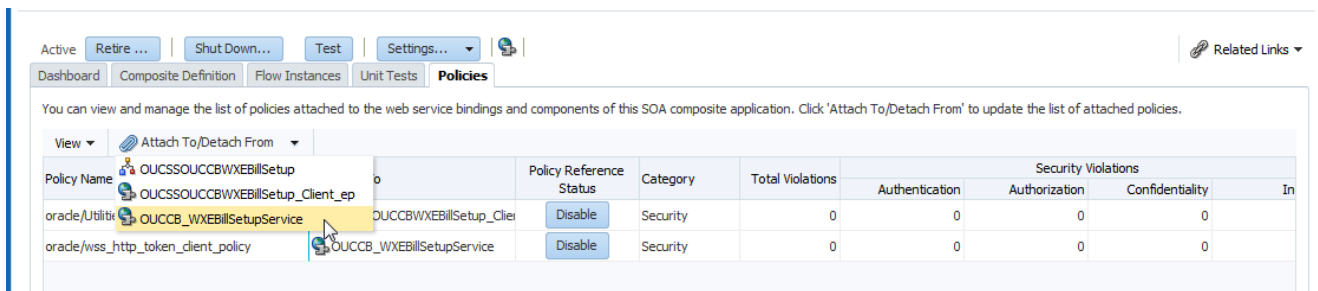
- To make the changes, log in to Oracle Enterprise Manager on the WebLogic server that hosts the SOA composites, then navigate to the composite that needs to be modified.



- 6 Select the **Policies** tab from panel on the right side of the window.



- 7 Select the policy on the partner link to modify.



- If the attached policy does not match the WS-Policy set on the IWS service, select the policy and press **Detach**.

Policy Attachment - Oracle Enterprise Manager

Warning
 Error in accessing compatible client policies. All policies will be shown for selection. Please check log for error details.

Attach/Detach Policies(OUCCB_WXEBillSetupService) Co...

Globally Attached Policies

Name	Category	Policy Set	Enabled	Description
No rows yet				

Directly Attached Policies

Name	Category	Enabled	Description	View Detail
oracle/wss_http_token_client_policy	Security	✓	This policy includes crede...	

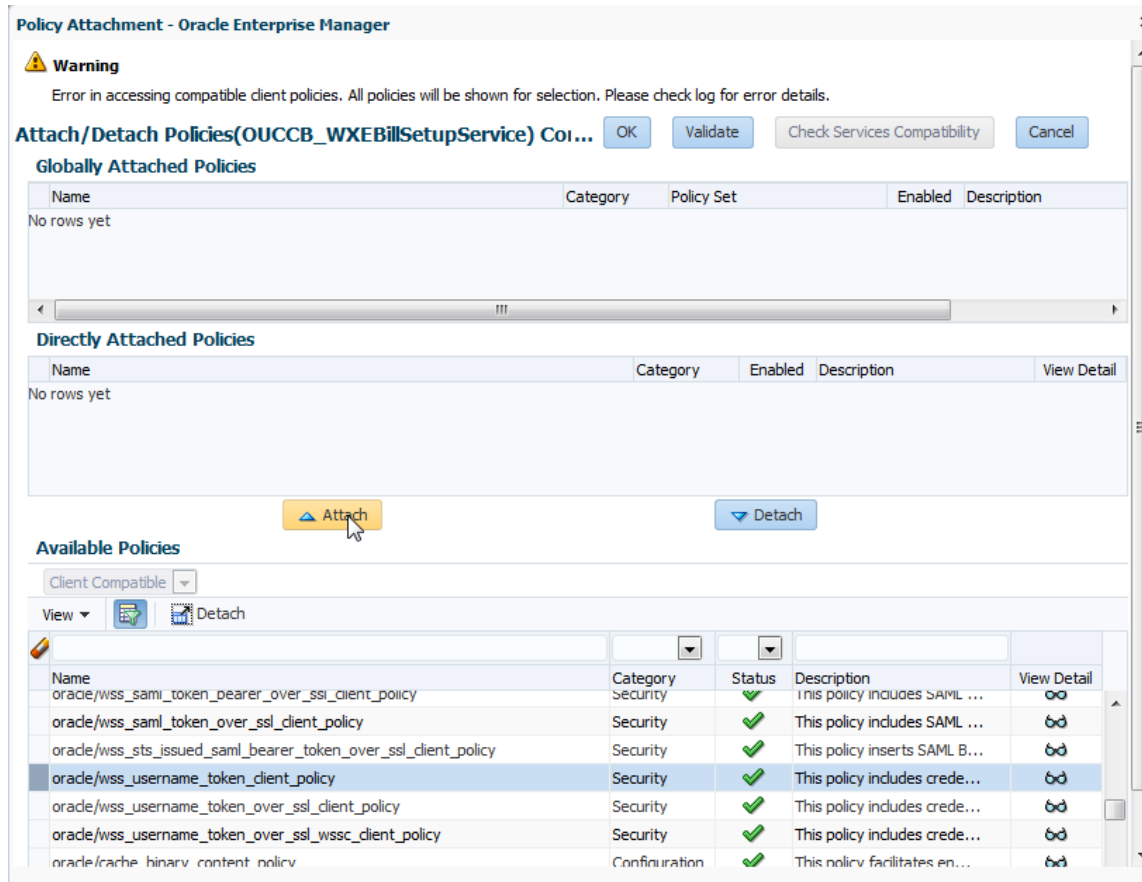
Available Policies

Client Compatible

View Detach

Name	Category	Status	Description	View Detail
oracle/no_addressing_policy	WS-Addressi...	✓	This policy facilitates t...	
oracle/wsaddr_policy	WS-Addressi...	✓	This policy causes the pla...	
oracle/log_policy	Management	✓	This policy causes the req...	
oracle/no_mtomo_policy	MTOM Attac...	✓	This policy facilitates t...	
oracle/wsmto_policy	MTOM Attac...	✓	This Message Transmission ...	
oracle/Utilities_wss_http_token_client_policy_OPT_ON	Security	✓	This policy includes crede...	

- 9 Choose appropriate policy from the list of policies within ‘Available Policies’ panel. Click on Attach.



- 9 Save this composite and repeat the procedure for all other composites.
- 10 Restart the SOA server after all composites are modified.

Using Scripts to Change XAI Connections to IWS

Changing XAI connections to IWS can also be achieved using provided scripts, as described in the following procedure:

- 1 Verify that InstallProperties.xml is updated as described elsewhere in this Installation Guide.
- 2 Set up the environment by performing steps 3 to 6 in the [Installing OUCSS Portal](#) section.
- 3 Run the following ant scripts with the additional `-DisIWS.enabled` parameters to change CCB connections from XAI to IWS. Note that each of the commands is a single line, and may require copying to a text editor and modifying accordingly before pasting into your command window.

If no security annotation is enabled on the CCB IWS service, run the following commands to use oracle/wss_http_token_client_policy OWSM policy for authentication:

On Linux/UNIX:

```
ant -f InstallBuild.xml detokenizePortalConnections -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -DisIWS.enabled=true -l
IWSConnections.log
```

On Windows:

```
ant -f InstallBuild.xml detokenizePortalConnections -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -DisIWS.enabled=true -l
IWSConnections.log
```

If the Username token annotation is enabled in CCB IWS services, run the following command to replace the default policy with the oracle/wss_username_token_client_policy:

On Linux/UNIX:

```
ant -f InstallBuild.xml detokenizePortalConnections -
DInstallProperties=$PRODUCT_HOME/config/InstallProperties.xml -DisIWS.enabled=true
-Dpolicy.name=oracle/wss_username_token_client_policy -l IWSConnections.log
```

On Windows:

```
ant -f InstallBuild.xml detokenizePortalConnections -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml -DisIWS.enabled=true
-Dpolicy.name=oracle/wss_username_token_client_policy -l IWSConnections.log
```