SSL Configurations Setup Guide

Oracle Banking Trade Finance Process Management

Release 14.7.2.0.0

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1. Preface

1.1 Introduction

This guide details out the configurations for SSL on Oracle Weblogic application server.

1.2 Audience

This document is intended for WebLogic admin or ops-web team who are responsible for installing the OFSS banking products.

1.3 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

1.4 Related Documents

- ANNEXURE-1
- Oracle Banking Installer Product Installation Guide

2. Configuring SSL on Oracle Weblogic

2.1 Introduction

This chapter details out the configurations for SSL on Oracle Weblogic application server.

2.2 Setting up SSL on Oracle Weblogic

1. To setup SSL on Oracle Weblogic application server, you need to perform the following tasks:
2. Obtain an identity (private key and digital certificates) and trust (certificates of trusted certificate authorities) for Oracle Weblogic application server.
3. Store the identity and trust. Private keys and trust CA certificates are stored in keystores.
4. Configure the identity and trust the keystores for Oracle Weblogic application server in the administration console.
5. Set SSL attributes for the private key alias and password in Oracle Weblogic administration console.

2.3 Certificates and Keypairs

Certificates are used for validating the authenticity of the server. Certificates contains the name of the owner, certificate usage, duration of validity, resource location or distinguished name (DN), which includes the common name (CN - web site address or e-mail address depending of the usage) and the certificate ID of the person who certified (signs) these information. It also contains the public key and a hash to ensure that the certificate has not been tampered with. A certificate is insecure until it is signed. Signed certificates cannot be modified.

A certificate can be self signed or obtained from a reputable certificate authority such as Verisign, Inc., Entrust.net, Thawte, GeoTrust or InstantSSL.

SSL uses a pair of cryptographic keys - a **public key** and a **private key**. These keys are similar in nature and can be used alternatively. What one key encrypts can be decrypted by the other key of the pair. The private key is kept secret, while the public key is distributed using the certificate.

A **keytool** stores the keys and certificates in a **keystore**. The default keystore implementation implements it as a file. It protects private keys with a password. The different entities (key pairs and the certificates) are distinguished by a unique ‘alias’. Through its keystore, Oracle Weblogic server can authenticate itself to other parties.

In Java, a keystore is a ‘java.security.KeyStore’ instance that you can create and manipulate using the **keytool** utility provided with the Java Runtime.

There are two keystores to be managed by Oracle Weblogic server to configure SSL.

Identity Keystore: Contains the key pairs and the Digital certificate. This can also contain certificates of intermediate CAs.

Trust Keystore: Contains the trusted CA certificates.

3. Choosing the Identity and Trust Stores

3.1 Introduction

Oracle Financial Services Software recommends that the choice of Identity and Trust stores be made up front. Oracle Weblogic server supports the following combinations of Identity and Trust stores:

1. Custom Identity and Command Line Trust
2. Custom Identity and Custom Trust
3. Custom Identity and Java Standard Trust
4. Demo Identity and Demo Trust

Oracle Financial Services does not recommend choosing Demo Identity and Demo Trust for production environments.

It is recommended to separate the identity and trust stores, since each Weblogic server tends to have its own identity, but might have the same set of trust CA certificates. Trust stores are usually copied across Oracle Weblogic servers, to standardize trust rules; it is acceptable to copy trust stores since they contain public keys and certificates of CAs. Unlike trust stores, identity stores contain private keys of the Oracle Weblogic server, and hence should be protected against unauthorized access.

Command Line Trust, if chosen requires the trust store to be specified as a command line argument in the Weblogic Server startup script. No additional configuration of the trust store is required in the Weblogic Server Administration Console.

Java Standard Trust would rely on the cacerts files provided by the Java Runtime. This file contains the list of trust CA certificates that ship with the Java Runtime, and is located in the

'JAVA_HOME/jre/lib/security' directory. It is highly recommended to change the default Java standard trust store password from 'changeit' (without quotes), and the default access permission of the file. Certificates of most commercial CAs are already present in the Java Standard Trust store. Therefore, it is recommended to use the Java Standard Trust store whenever possible. The rest of the document will assume the use of Java Standard Trust, since most CA certificates are already present in it.

One can also create custom trust stores containing the list of certificates of trusted CAs. For further details on identity and trust stores, please refer the Oracle Weblogic Server documentation on Securing Oracle Weblogic Server.

4. Obtaining the Identity Store

4.1 Creating Identity Store with Self-Signed Certificates

Self-signed certificates are acceptable for use in a testing or development environment. Oracle Financial Services does not recommend the use of self-signed certificates in a production environment.

In order to create a self-signed certificate, the genkeypair option provided by the keytool utility of Sun Java 6 needs to be utilized.

4.1.1 Creation of Self-Signed Certificate

Browse to the bin folder of JRE from the command prompt and type the following command.

NOTE: The items highlighted in blue are placeholders, and should be replaced with suitable values when running the command.

```
keytool -genkeypair -alias alias -keyalg RSA -keysize 1024 -sigalg
SHA1withRSA -validity 365 -keystore keystore
```

In the above command,

1. ***alias*** is used to identify the public and private key pair created. This alias is required later when configuring the SSL attributes for the managed servers in Oracle Weblogic Server.
2. ***keystore*** is used to specify the location of the JKS file. If no JKS file is present in the path provided, one will be created.

   The command will prompt for the following attributes of the certificate and keystore:

1. **Keystore Password**: Specify a password that will be used to access the keystore. This password needs to be specified later, when configuring the identity store in Oracle Weblogic Server.
2. **Key Password**: Specify a password that will be used to access the private key stored in the keystore. This password needs to be specified later, when configuring the SSL attributes of the managed server(s) in Oracle Weblogic Server.
3. **First and Last Name (CN)**: Enter the domain name of the machine used to access
4. OBREMO, for instance, www.example.com
5. **Name of your Organizational Unit**: The name of the department or unit making the request, for example, BPD. Use this field to further identify the SSL Certificate you are creating, for example, by department or by physical server.
6. **Name of your Organization:** The name of the organization making the certificate request, for example, Oracle Financial Services. It is recommended to use the company or organization's formal name, and this name entered here must match the name found in official records.
7. **Name of your City or Locality**: The city in which your organization is physically located, for example Mumbai.
8. **Name of your State or Province**: The state/province in which your organization is physically located, for example Maharashtra.
9. **Two-Letter Country Code for this Unit**: The country in which your organization is physically located, for example US, UK, IN etc.

NOTE: The key generation algorithm has been specified as RSA, the key size as 1024 bits, the signature algorithm as SHA1withRSA, and the validity days as 365. These can be changed to suitable values if the need arises. For further details, please refer to the documentation of the keytool utility in the JDK utilized by Oracle Weblogic Server.

For example:

Listed below is the result of a sample execution of the command:

```
D:\Oracle\weblogic11g\jrockit_160_05_R27.6.2-20\bin>keytool -
genkeypair -alias selfcert -keyalg RSA -keysize 1024 -sigalg
SHA1withRSA -validity 365 -keystore
D:\keystores\AdminOBREMOKeyStore.jks

Enter keystore password:<Enter a password to protect the keystore>

Re-enter new password:<Confirm the password keyed above>

What is your first and last name?

  [Unknown]:  cvrhp0729.oracle.com

What is the name of your organizational unit?

  [Unknown]:  BPD

What is the name of your organization?

  [Unknown]:  Oracle Financial Services

What is the name of your City or Locality?

  [Unknown]:  Mumbai

What is the name of your State or Province?

  [Unknown]:  Maharashtra

What is the two-letter country code for this unit?

  [Unknown]:  IN

Is  CN=cvrhp0729.i-flex.com,  OU=BPD,  O=Oracle  Financial  Services,
L=Mumbai, ST=Maharashtra, C=IN correct?

  [no]:  yes


Enter key password for <selfcert>

        (RETURN if same as keystore password):<Enter a password to
protect the key>

Re-enter new password:<Confirm the password keyed above>
```

4.2 Keystore Creation

keytool -genkeypair -keystore <keystore_name.jks> -alias <alias_name> -dname "CN=<hostname>, OU=<Organization Unit>, O=<Organization>, L=<Location>, ST=<State>, C=<Country_Code>" -keyalg <Key Algorithm> -sigalg <Signature Algorithm> -keysize <key size> -validity <Number of Days> -keypass <Private key Password> -storepass <Store Password>

For example:

keytool -genkeypair -keystore AdminOBREMOKeyStore.jks -alias OBREMOCert -dname "CN=ofss00001.in.oracle.com, OU=OFSS, O=OFSS, L=Chennai, ST=TN, C=IN" -keyalg "RSA" -sigalg "SHA1withRSA" -keysize 2048 -validity 3650 -keypass Password@123 -storepass Password@123

NOTE: CN=ofss00001.in.oracle.com is the Host Name of the weblogic server

4.3 Creating Identity Store with Trusted Certificates Issued by CA

4.3.1 Creation of Public and Private Key Pair

Browse to the bin folder of JRE from the command prompt and type the following command.

NOTE: The items highlighted in blue are placeholders, and should be replaced with suitable values when running the command.

```
keytool -genkeypair -alias alias -keyalg keyalg -keysize
keysize - sigalg sigalg -validity valDays -keystore keystore
```

In the above command,

1. ***alias***is used to identify the public and private key pair created. This alias is required later when configuring the SSL attributes for the managed servers in Oracle Weblogic Server.
2. ***keyalg***is the key algorithm used to generate the public and private key pair. The RSA key algorithm is recommended.
3. ***keysize***is the size of the public and private key pairs generated. A key size of 1024 or more is recommended. Please consult with your CA on the key size support for different types of certificates.
4. ***sigalg***is the algorithm used to generate the signature. This algorithm should be compatible with the key algorithm and should be one of the values specified in the Java Cryptography API Specification and Reference.
5. ***valdays***is the number of days for which the certificate is to be considered valid. Please consult with your CA on this period.
6. ***keystore***is used to specify the location of the JKS file. If no JKS file is present in the path provided, one will be created.

The command will prompt for the following attributes of the certificate and keystore:

1. **Keystore Password**: Specify a password that will be used to access the keystore. This password needs to be specified later, when configuring the identity store in Oracle Weblogic Server.
2. **Key Password**: Specify a password that will be used to access the private key stored in the keystore. This password needs to be specified later, when configuring the SSL attributes of the managed server(s) in Oracle Weblogic Server.

3. **First and Last Name (CN)**: Enter the domain name of the machine used to access
4. OBREMO, for instance, www.example.com
5. **Name of your Organizational Unit**: The name of the department or unit making the request, for example, BPD. Use this field to further identify the SSL Certificate you are creating, for example, by department or by physical server.
6. **Name of your Organization:** The name of the organization making the certificate request, for example, Oracle Financial Services. It is recommended to use the company or organization's formal name, and this name entered here must match the name found in official records.
7. **Name of your City or Locality**: The city in which your organization is physically located, for example Mumbai.
8. **Name of your State or Province**: The state/province in which your organization is physically located, for example Maharashtra.
9. **Two-letter Country Code for this Unit**: The country in which your organization is physically located, for example US, UK, IN etc.

For example:

Listed below is the result of a sample execution of the command:

```
D:\Oracle\weblogic11g\jrockit_160_05_R27.6.2-20\bin>keytool -
genkeypair -alias cvrhp0729 -keyalg RSA -keysize 1024 -sigalg
SHA1withRSA -validity 365 -keystore
D:\keystores\AdminOBREMOKeyStore.jks

Enter keystore password:<Enter a password to protect the keystore>

Re-enter new password:<Confirm the password keyed above>

What is your first and last name?

  [Unknown]:  cvrhp0729.i-flex.com

What is the name of your organizational unit?

  [Unknown]:  BPD

What is the name of your organization?

  [Unknown]: Oracle Financial Services

What is the name of your City or Locality?

  [Unknown]:  Mumbai

What is the name of your State or Province?

  [Unknown]:  Maharashtra

What is the two-letter country code for this unit?

  [Unknown]:  IN

Is  CN=cvrhp0729.i-flex.com,  OU=BPD,  O=Oracle  Financial  Services,
L=Mumbai, ST=Maharashtra, C=IN correct?

  [no]:  yes


Enter key password for <cvrhp0729>

        (RETURN if same as keystore password):<Enter a password to
protect the key>

Re-enter new password:<Confirm the password keyed above>
```

4.3.2 Generating CSR

To purchase an SSL certificate, one needs to generate a Certificate Signing Request (CSR) for the server where the certificate will be installed.

A CSR is generated from the server and is the server's unique "fingerprint". The CSR includes the server's public key, which enables server authentication and secure communication.

NOTE: If the keystore file or the password is lost and a new one is generated, the SSL certificate and the private key will no longer match. A new SSL Certificate will have to be requested.

The CSR is created by running the following command in the bin directory of the JRE:

```
keytool -certreq -alias alias –file certreq_file -keystore keystore
```

In the above command,

1. ***alias*** is used to identify the public and private key pair. The private key associated with the alias will be utilized to create the CSR. Specify the alias of the key pair created in the previous step.
2. ***certreq_file*** is the file in which the CSR will be stored.
3. ***keystore*** is the location of the keystore containing the public and private key pair.

For Example:

Listed below is the result of a sample execution of the command

```
D:\Oracle\Weblogic11g\jrockit_160_05_R27.6.2-20\bin>keytool -certreq
-alias cvrhp0729 -file D:\keystores\certreq.csr -keystore
D:\keystores\AdminOBREMOKeyStore.jks

Enter keystore password:[Enter the password used to access
the keystore]

Enter key password for <cvrhp0729>[Enter the password used to
access the key in the keystore]
```

4.4 Export private key as certificate

keytool -export -v -alias <alias_name> -file <export_certificate_file_name_with_location.cer> -keystore <keystore_name.jks> > -keypass <Private key Password> -storepass <Store Password>

For example:

keytool -export -v -alias OBREMOCert -file AdminOBREMOCert.cer -keystore AdminOBREMOKeyStore.jks -keypass Oracle123 -storepass Oracle123

If successful the following message will be displayed:

Certificate stored in file < AdminOBREMOCert.cer>

4.4.1 Obtaining Trusted Certificate from CA

The processes of obtaining a trusted certificate vary from one CA to another. The CA might perform additional offline verification. Consult the CA issuing the certificate for details on the process to be followed for submission of the CSR and for obtaining the certificate.

4.4.2 Importing Certificate into Identity Store

Store the certificate obtained from the CA in the previous step, in a file, preferably in PEM format. Other formats like the p7b file format would require conversion to the PEM format. Details on performing the conversion are not listed here. Please refer to the Oracle Weblogic Server documentation on Securing Oracle Weblogic Server, for details on converting a Microsoft p7b file to the PEM format.

The command to be executed for importing a certificate into the identity store depend on whether the trust store chosen (in the earlier step; see section 2 of this document). It is highly recommended to verify the trust path when importing a certificate into the identity store. The commands provided below assume the use of the Java Standard Trust store.

4.4.2.1 Importing the Intermediate CA Certificate

Most Certificate Authorities do not use the root CA certificates to issue identity certificates for use by customers. Instead, Intermediate CAs issue identity certificates in response to the submitted CSRs.

If the Intermediate CA certificate is absent in the Java Standard Trust store, the trust path for the certificate will be incomplete for the certificate, resulting in warnings issued by Weblogic Server during runtime. To avoid this, the intermediate CA certificate should be imported into the identity keystore. Although the intermediate CA certificate can be imported into the Java Standard Trust store, this is not recommended unless the intermediate CA can be trusted.

The following command should be executed to import the intermediate CA certificate into the keystore.

`keytool -importcert -alias` *alias* `-file` *cert_file* `-trustcacerts -keystore` *keystore*

In the above command,

1. ***alias*** is used to identify the public and private key pair. Specify the alias of the key pair used to create the CSR in the earlier step.
2. ***cert_file*** is the location of the file containing the intermediate CA certificate in a PKCS#7 format (PEM or DER file).
3. ***keystore*** is the location of the keystore containing the public and private key pair.

NOTE: The trustcacerts flag is used to consider other certificates (higher intermediaries and the root CA) in the chain of trust. If no chain of trust is established during verification, the certificate will be displayed and one would be prompted to verify it. It is recommended that due diligence be observed, when the prompt is displayed to verify a certificate when a chain of trust is absent.

Listed below is a sample execution of the command:

```
D:\Oracle\weblogic11g\jrockit_160_05_R27.6.2-20\bin>keytool -
importcert -alias verisigntrialintermediateca -file
D:\keystores\VerisignIntermediateCA.cer  -trustcacerts  -keystore
D:\keystoreworkarea\AdminOBREMOKeyStore.jks
```

```
Enter keystore password:<Enter the password used to access the
keystore>

Certificate was added to keystore
```

4.4.2.2 Importing the Identity Certificate

The following command should be executed to import the identity certificate into the keystore.

```
keytool -importcert -alias alias  -file cert_file  -
trustcacerts -keystore
keystore
```

In the above command,

1. ***alias*** is used to identify the public and private key pair. Specify the alias of the key pair used to create the CSR in the earlier step.
2. ***cert_file*** is the location of the file containing the PKCS#7 formatted reply from the CA, containing the signed certificate.
3. ***keystore*** is the location of the keystore containing the public and private key pair.

The trustcacerts flag is used to consider other certificates (intermediate CAs and the root CA) in the chain of trust. If no chain of trust is established during verification, the certificate will be displayed and one would be prompted to verify it. It is recommended that due diligence be observed, when the prompt is displayed to verify a certificate when a chain of trust is absent.

Listed below is a sample execution of the command

```
D:\Oracle\weblogic11g\jrockit_160_05_R27.6.2-20\bin>keytool -
importcert -alias cvrhp0729 -file D:\keystores\cvrhp0729.cer -
trustcacerts -keystore
D:\keystoreworkarea\AdminOBREMOKeyStore.jks

Enter keystore password:<Enter the password used to access the
keystore>

Enter key password for <cvrhp0729>:<Enter the password used to
access the private key>

Certificate reply was installed in keystore
```

NOTE: The previous set of commands assumed the presence of the appropriate root CA certificate (in the chain of trust) in the Java Standard Trust store, i.e. in the cacerts file. If the CA issuing the identity certificate (for the Weblogic Server) does not have the root CA certificate in the Java Standard Trust store, one can opt to import the root CA certificate into cacerts, or into the identity store, depending on factors including trustworthiness of the CA, necessity of transporting the trust store across machine, among others.

4.5 Import as trusted certificate

keytool -import -v -trustcacerts -alias rootcacert -file <export_certificate_file_name_with_location.cer> -keystore <keystore_name.jks> > -keypass <Private key Password> -storepass <Store Password>

For example:

keytool -import -v -trustcacerts -alias rootcacert -file AdminOBREMOCert.cer -keystore AdminOBREMOKeyStore.jks -keypass Oracle123 -storepass Oracle123

5. Configuring Identity and Trust Stores for Weblogic

5.1 Enabling SSL on Oracle Weblogic Server

To configure SSL on Oracle Weblogic server, login in to the Admin Console and follow the steps given below:

1. Under **Change Center**, click the button **Lock & Edit**.
2. Expand **Servers** node.
3. Select the name of the server for which you want to enable SSL (example - exampleserver).
4. Go to **Configuration** and select **General** tab.
5. Select the option **SSL Listen Port Enabled** and specify the SSL listen port.
6. Against **Listen Address**, specify the hostname of the machine in which the application server is installed.

5.2 Configuring Identity and Trust Stores

To configure the Identity and Trust stores in Oracle Weblogic Server, log in to the Admin Console of Weblogic Server.

1. Under **Change Center**, click the button **Lock & Edit**.
2. Expand **Servers** node.
3. Select the name of the server for which you want to configure the keystores (example - exampleserver).
4. Go to **Configuration** and select **Keystores** tab.
5. In the filed **Keystores**, select the method for storing and managing private keys/digital certificate pairs and trusted CA certificates. This choice should match the one made in Section 2 of this document (Choosing the Identity and Trust Stores).
6. In the 'Identity' section, provide the following details:
   - **Custom Identity Keystore File Name**: Fully qualified path to the Identity keystore.
   - **Custom Identity Keystore Type**: Set this attribute to JKS, the type of the keystore. If left blank, it is defaulted to JKS (Java KeyStore).
   - **Custom Identity Keystore PassPhrase**: The password you enter when reading or writing to the keystore. This attribute is optional or required depending on the type of keystore. All keystores require the passphrase in order to write to the keystore. However, some keystores do not require the passphrase to read from the keystore. Oracle Weblogic server only reads from the keystore. So whether or not you define this property depends on the requirements of the keystore.
7. In the **Trust** section, provide the following details:

   If you choose **Java Standard Trust**, specify the password used to access the trust store.
   If you choose **Custom Trust**, the following attributes have to be provided:
   - **Custom Trust Keystore**: The fully qualified path to the trust keystore.
   - **Custom Trust Keystore Type**: Set this attribute to JKS, the type of the keystore. If left blank, it defaults to JKS (Java KeyStore).

- **Custom Trust Keystore Passphrase**: The password you enter when reading or writing to the keystore. This attribute is optional or required depending on the type of keystore. All keystores require the passphrase in order to write to the keystore. However, some keystores do not require the passphrase to read from the keystore. Oracle Weblogic.

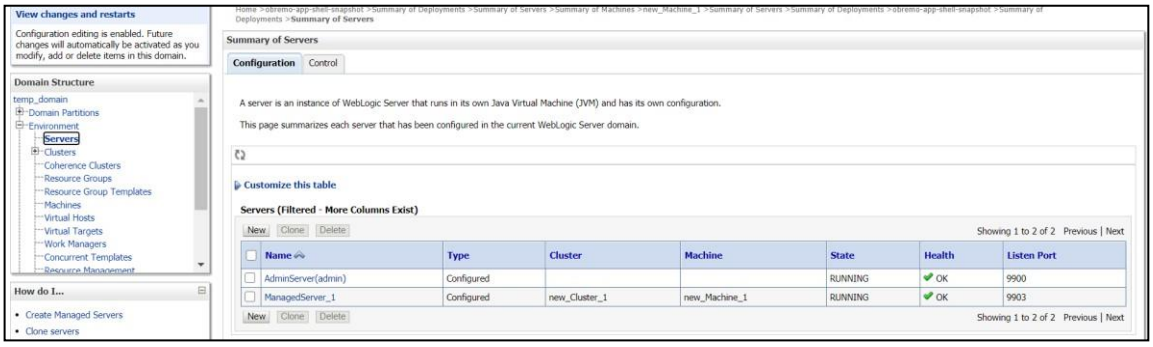
Server only reads from the keystore. So, whether or not you define this property depends on the requirements of the keystore.

NOTE: When identity and trust stores are of the JKS format, the passphrases are not required.

6. Configuring Weblogic Console

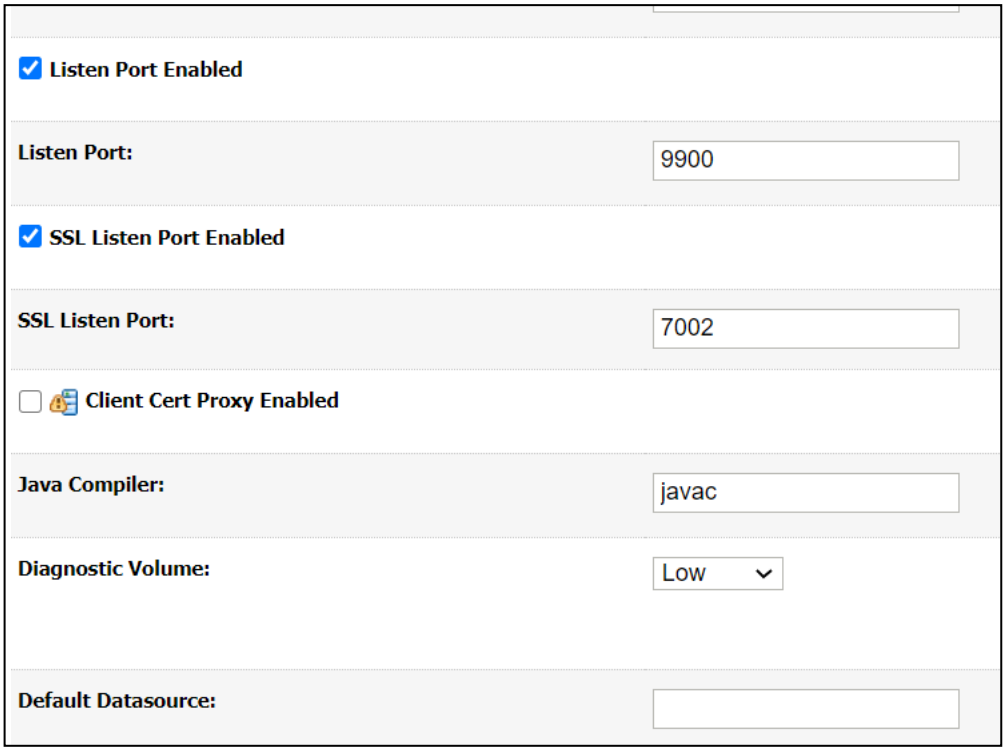
After domain creation, follow the below steps to enable SSL in weblogic Admin server.

6.1 Select Admin Server to Enable SSL Options



6.1.1 Follow the steps in General Tab

1. Select SSL Listen Port Enabled, Client Cert Proxy Enabled, Weblogic Plug-In Enabled.
2. Click **Save**.

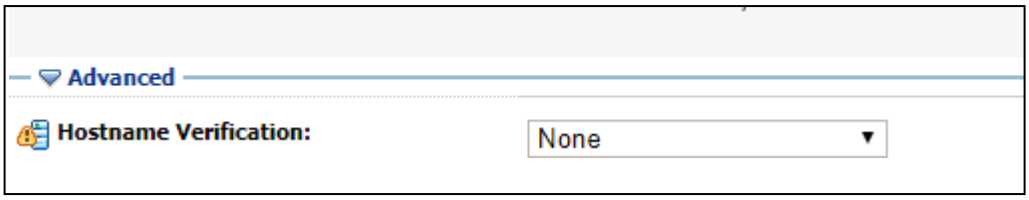


6.1.2 Follow the steps in Keystores Tab:

1. Enter Custom Identity Keystore and Custom Trust Keystore same as the Keystore Name created in above steps with full path.
2. Enter Custom Identity Keystore Type and Custom Trust Keystore Type as jks.
3. Enter Custom Identity Keystore Passphrase, Confirm Custom Identity Keystore Passphrase, Custom Trust Keystore Passphrase and Confirm Custom Trust Keystore Passphrase same as the Store Password entered in above steps.
4. Click **Save**.

6.1.3 Follow the steps in SSL Tab:

1. Enter Private Key Alias as same as the alias name entered in above steps.
2. Enter Private Key Passphrase and Confirm Private Key Passphrase as same as the Private Key Password entered in above steps.
3. Change the Hostname Verification to None.
4. Click **Save**. The following screen is displayed:



5. Repeat the same steps for all the managed servers as well.
6. Now the admin server and managed servers are SSL enabled. Restart all the servers.

7. Configuring SSL Mode in Node Manager for Clustered Environment

1. Edit the nodemanager.properties with SSL configurations and restart the node manager. The following screen is displayed:

```
LogLimit=0
PropertiesVersion=12.2.1.3.0
AuthenticationEnabled=true
NodeManagerHome=D\:\\Oracle\\Middleware\\12cPs3\\Oracle_home_new\\user_projects\\domains\\platoinfra_domain\\nodemanager
JavaHome=C\:\\PROGRA~1\\Java\\JDK18~1.0_1
LogLevel=INFO
DomainsFileEnabled=true
ListenAddress=localhost
NativeVersionEnabled=true
ListenPort=5556
LogToStderr=true
weblogic.StartScriptName=startWebLogic.cmd


SecureListener=true
ListenPort=5557
KeyStores=CustomIdentityAndCustomTrust
CustomIdentityKeystoreType=jks
CustomIdentityKeystoreFileName=C\:\\AdminOBVAMKeyStore.jks
CustomIdentityKeyStorePassPhrase=Oracle123
CustomIdentityPrivateKeyPassPhrase=Oracle123
CustomIdentityAlias=OBVAMCert
CustomTrustKeyStoreType=jks
CustomTrustKeyStoreFileName=C\:\\AdminOBVAMKeyStore.jks
CustomTrustKeyStorePassPhrase=Oracle123

LogCount=1
QuitEnabled=false
LogAppend=true
weblogic.StopScriptEnabled=false
StateCheckInterval=500
CrashRecoveryEnabled=false
weblogic.StartScriptEnabled=true
LogFile=D\:\\Oracle\\Middleware\\12cPs3\\Oracle_home_new\\user_projects\\domains\\platoinfra_domain\\nodemanager\\nodemanager.log
LogFormatter=weblogic.nodemanager.server.LogFormatter
ListenBacklog=50
```

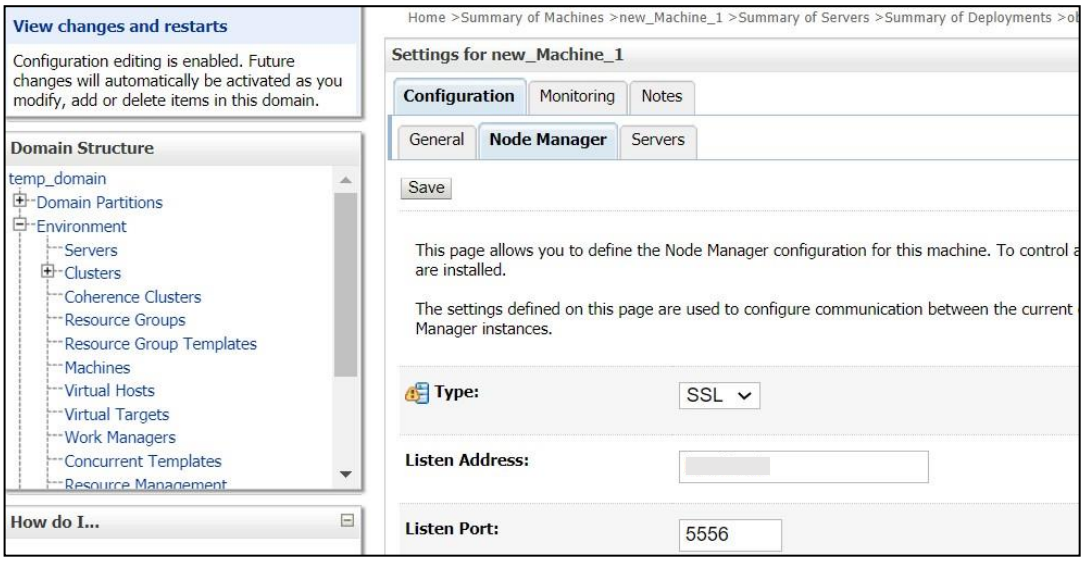
2. Make sure the SSL configuration is done in other artifacts as well, like startNodeManager.cmd/.sh, startup.properties, config.xml(enable jsse)

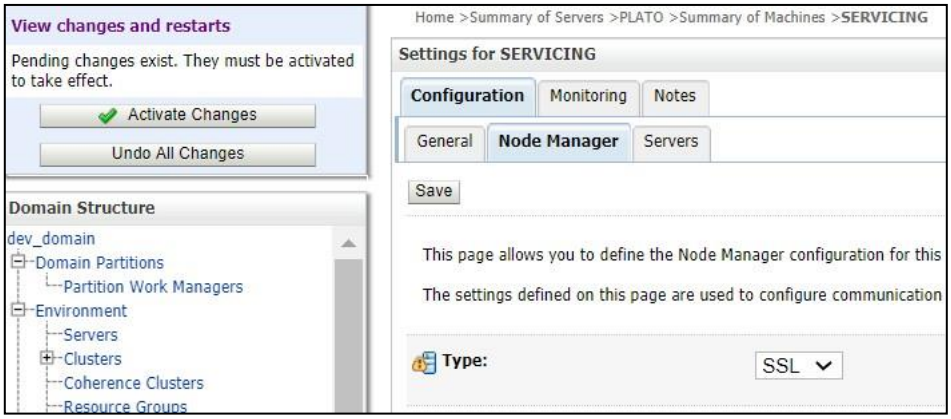
8. Setting SSL Attributes for Managed Servers

8.1 Setting SSL Attributes for Private Key Alias and Password

To configure the private key alias and password, log in to the Oracle Weblogic Server Admin Console.

1. Under **Change Center**, click the button **Lock & Edit**.
2. Expand **Servers** node.
3. Select the name of the server for which you want to configure keystores (example - exampleserver).
4. Go to **Configuration** and select **SSL** tab.
5. Select **Keystores** from **Identity and Trust Locations**.
6. Under **Identity** section, specify the following details:
   - **Private Key Alias**: set this attribute to the alias name defined for the key pair when creating the key pair in the Identity keystore.
   - **Private Key Passphrase**: The password defined for the key pair (alias_password), at the time of its creation. Confirm the password.
7. Click **Save**.
8. Under **Change Center**, click **Activate changes**.
9. Go to **Controls** tab, check the appropriate server and click **Restart SSL**. Confirm when it prompts. The following screen is displayed:




View changes and restarts
Pending changes exist. They must be activated to take effect.
Activate Changes
Undo All Changes
Domain Structure
dev_domain
Domain Partitions
Partition Work Managers
Environment
Servers
Clusters
Coherence Clusters
Resource Groups
Home >Summary of Servers >PLATO >Summary of Machines >SERVICING
Settings for SERVICING
Configuration
Monitoring
Notes
General
Node Manager
Servers
Save
This page allows you to define the Node Manager configuration for this
The settings defined on this page are used to configure communication
Type:
SSL


View changes and restarts
Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.
Domain Structure
temp_domain
Domain Partitions
Environment
Servers
Clusters
Coherence Clusters
Resource Groups
Resource Group Templates
Machines
Virtual Hosts
Virtual Targets
Work Managers
Concurrent Templates
How do I...
Start and stop servers
Start Managed Servers from the Administration Console
Summary of Servers
Configuration
Control
Use this page to change the state of the servers in this WebLogic Server domain. Control operations on Managed Servers require starting the Node Manager. Starting Managed
wide administration port.
Customize this table
Servers (Filtered - More Columns Exist)
Start
Resume
Suspend
Shutdown
Restart SSL
Server
Machine
State
Status of Last Action
AdminServer(admin)
RUNNING
None
ManagedServer_1
new_Machine_1
RUNNING
TASK COMPLETED

9. Testing Configuration

9.1 Testing Configuration

Once the Oracle Weblogic has been configured for SSL, deploy the application in the usual manner. After deployment, you can test the application in SSL mode. To launch the application in SSL mode you need to enter the URL in the following format:

https://(Machine Name):(SSL_Listener_port_no)/(Context_root)

NOTE: It is recommended that the Retail Operations web application be accessed via the HTTPS channel, instead of the HTTP channel.

SSL Configurations Setup Guide

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