Supplemental Installation Guide for Oracle Transportation Management Version 6.4.3

ORACLE®

PURPOSE STATEMENT

This document provides an overview of features and enhancements included in release 6.4.3. It is intended solely to help you assess the business benefits of upgrading to 6.4.3 and to plan your I.T. projects.

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Due to the nature of the product architecture, it may not be possible to safely include all features described in this document without risking significant destabilization of the code.

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DOWNLOADING ORACLE TRANSPORTATION MANAGEMENT

Go to https://edelivery.oracle.com and sign in.

Enter Oracle Transportation Management in the search field and press Search.

Select Oracle Transportation Management 6.4.3.0.0 (Oracle Transportation Management)

Click on the Shopping Cart

Select the software to download and the Platform and click Continue. The same platform will be used for all downloads.

Click Continue

Note : The Oracle Database Client Administration install is required to install OTM, but is not covered by this document.

Agree to the terms and click Continue.

Select the desired components and click Download to install the automatic downloader tool, or click on the individual links to download each one you need.

INSTALLING ORACLE FUSION MIDDLEWARE INFRASTRUCTURE (WEBLOGIC) 12.2.1.3.0

Unzip the V886426-01.zip and use the java -jar command for running the installer.

Note: You will need to have Java 1.8.0_110 or above for the middleware install.

java -jar fmw_12.2.1.3.0_infrastructure.jar

Provide the path to the oraInventory location you want to use for this installation and press OK.
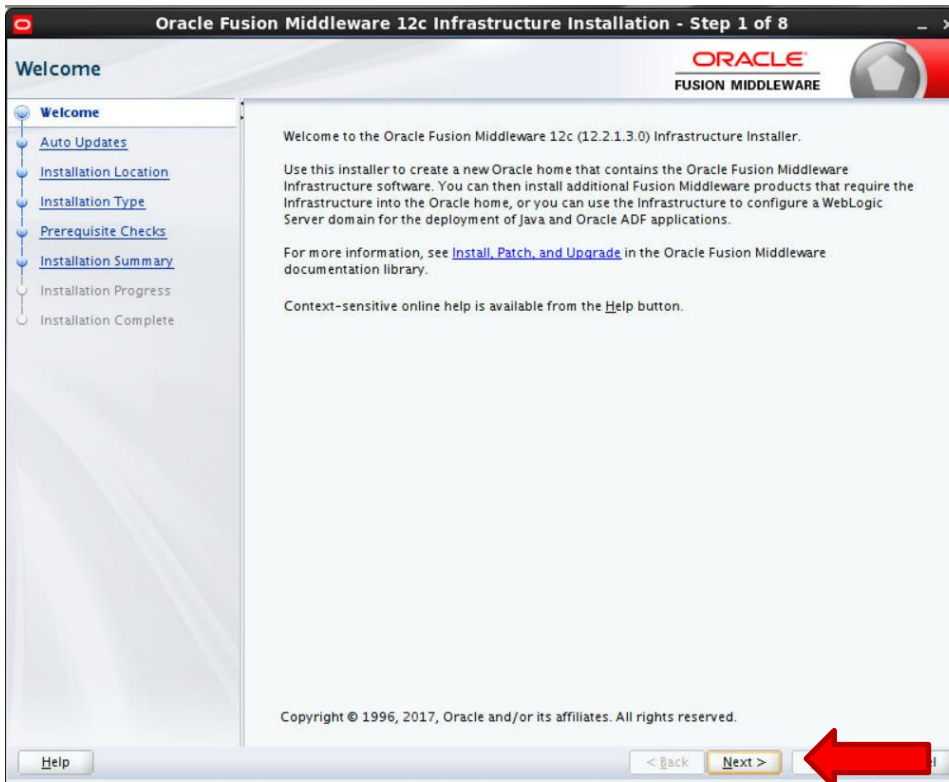
Press Next

Select the update option you want for your install and press Next.
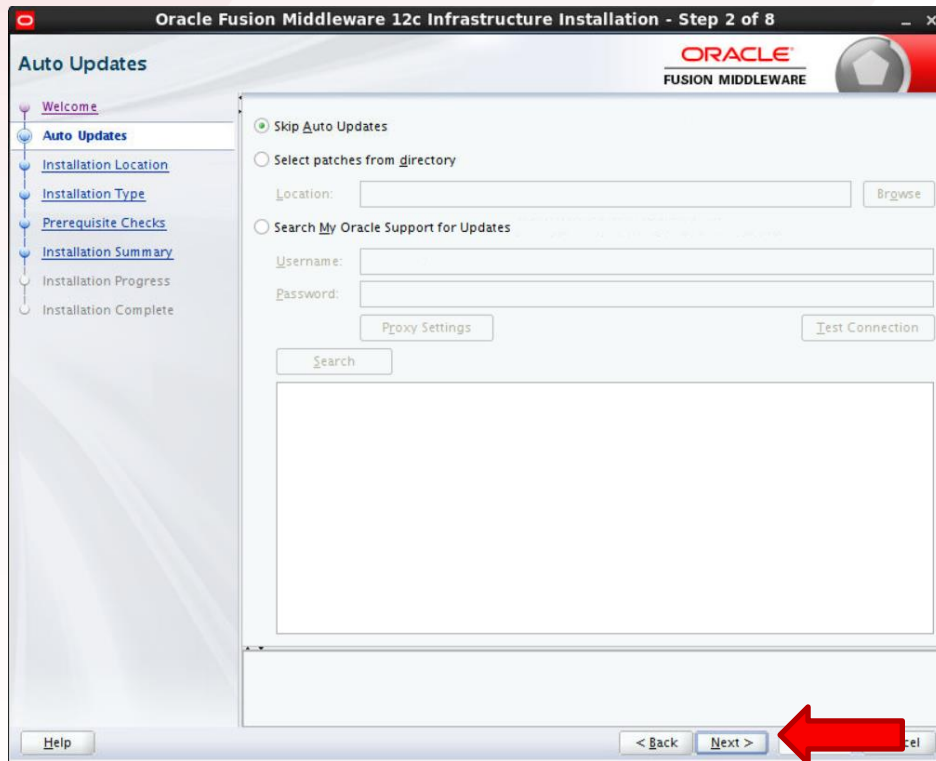
Enter the path you want Weblogic to be installed in and press Next. Be sure and keep track of this location, it will be needed for the OHS, Weblogic Patches and OTM installation.
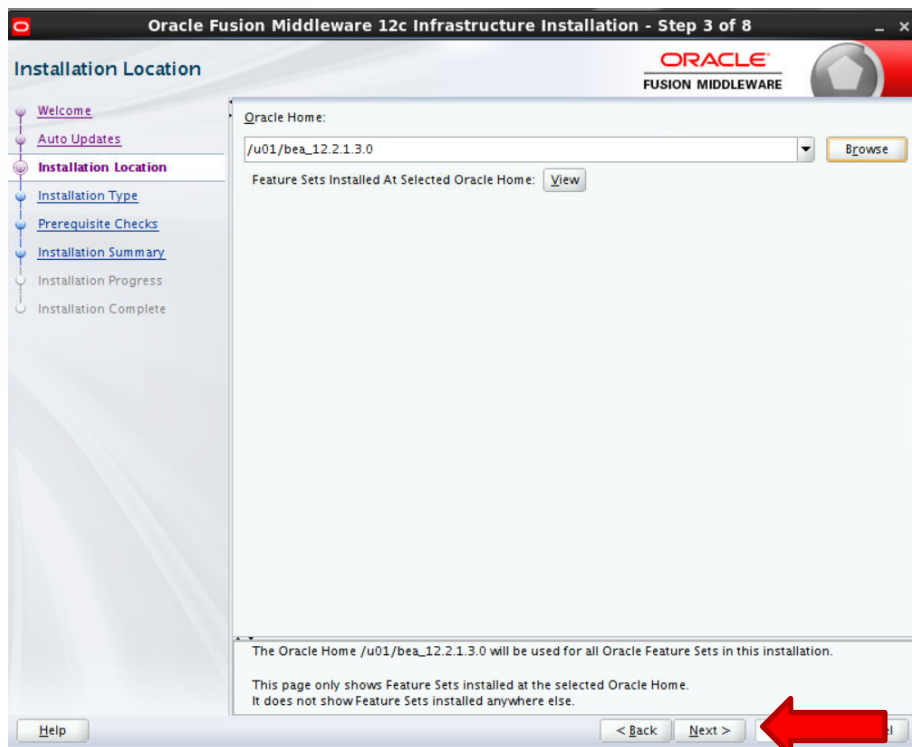
Leave Fusion Middleware Infrastructure selected and press Next.
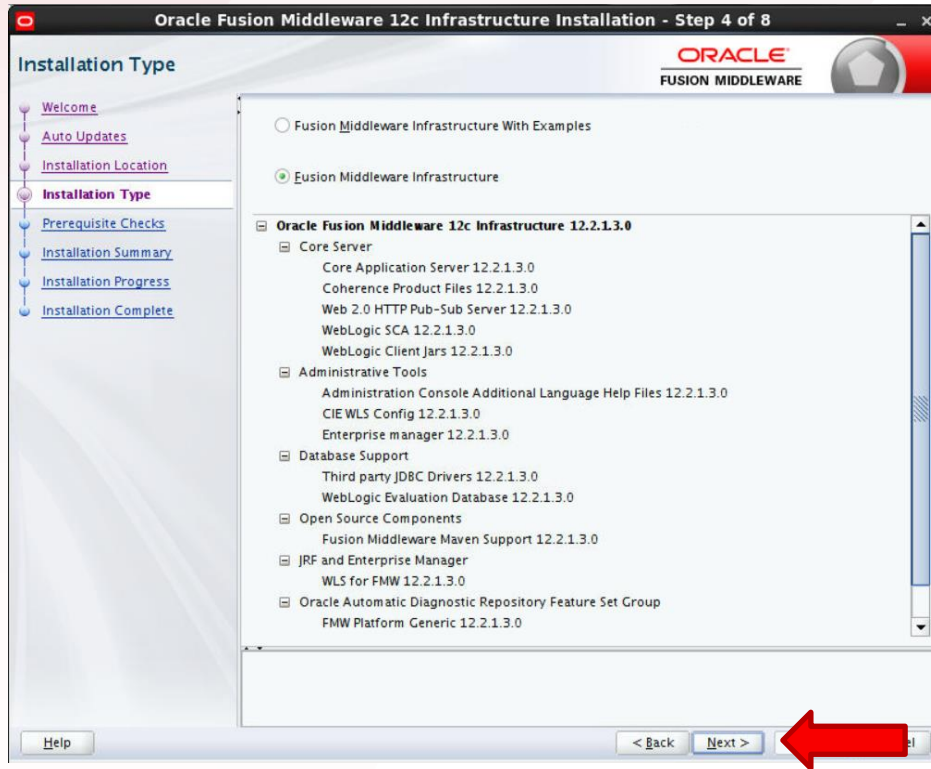
If the Prerequisite Checks complete successfully press Next.
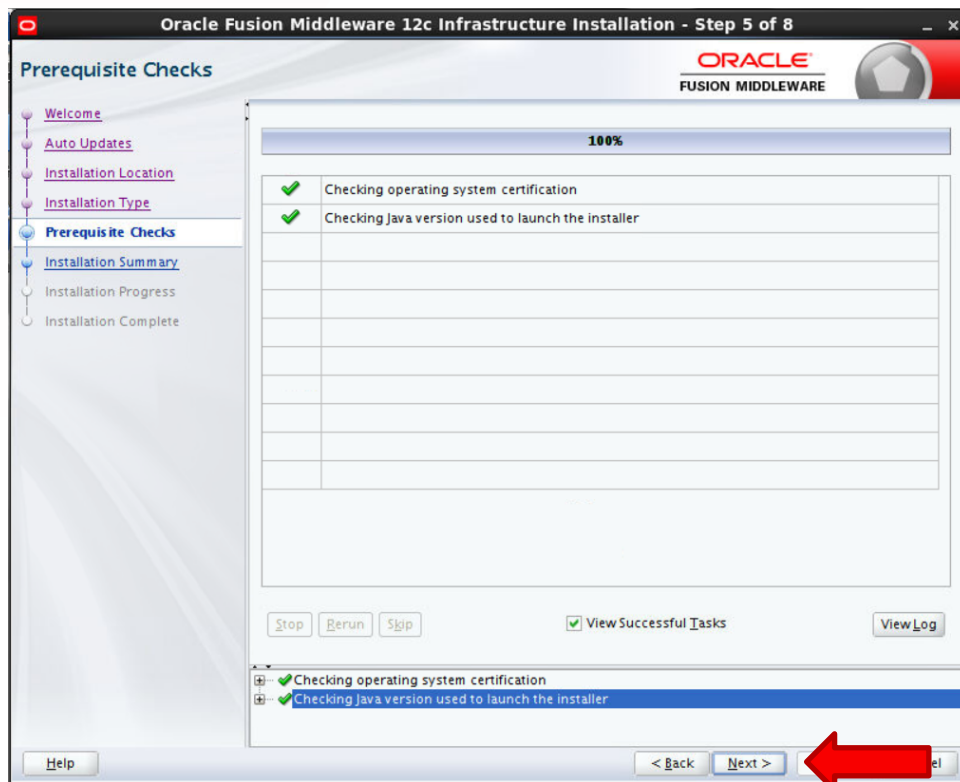
Confirm the installation information and press Install.
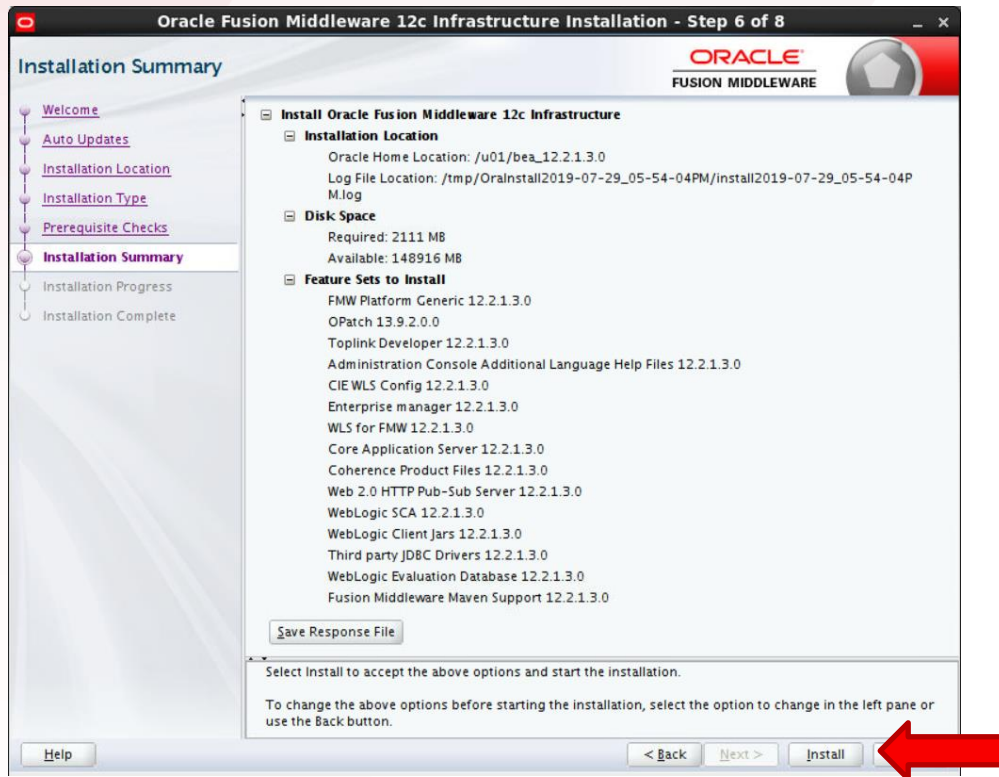
Once the install completes press Next.
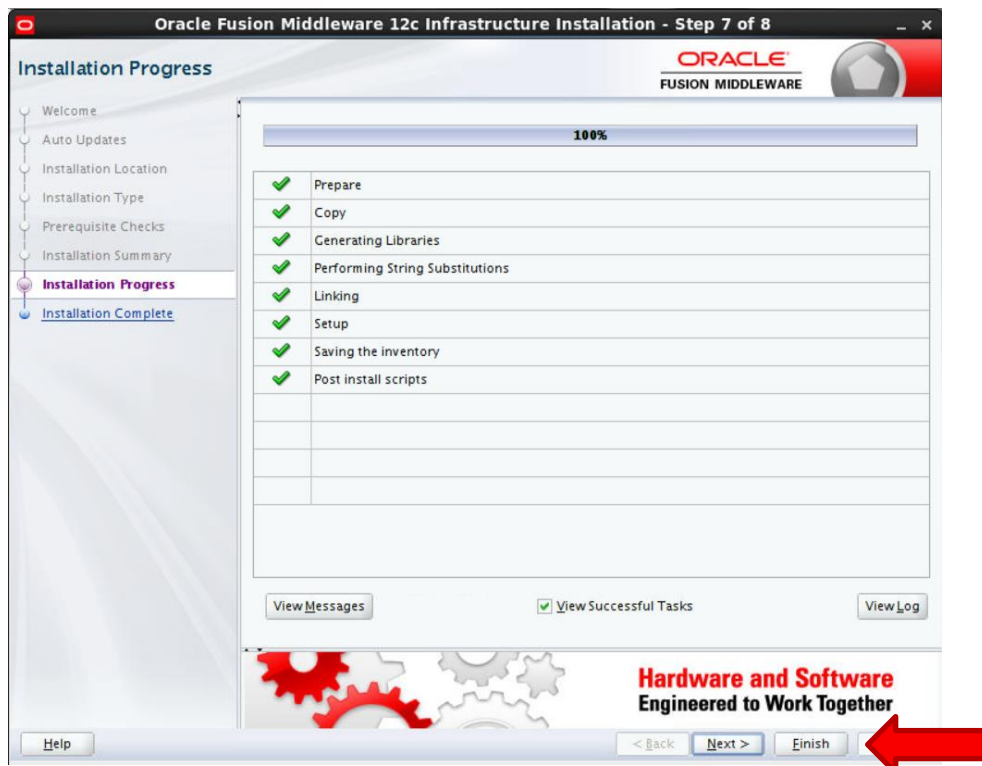
Press Finished
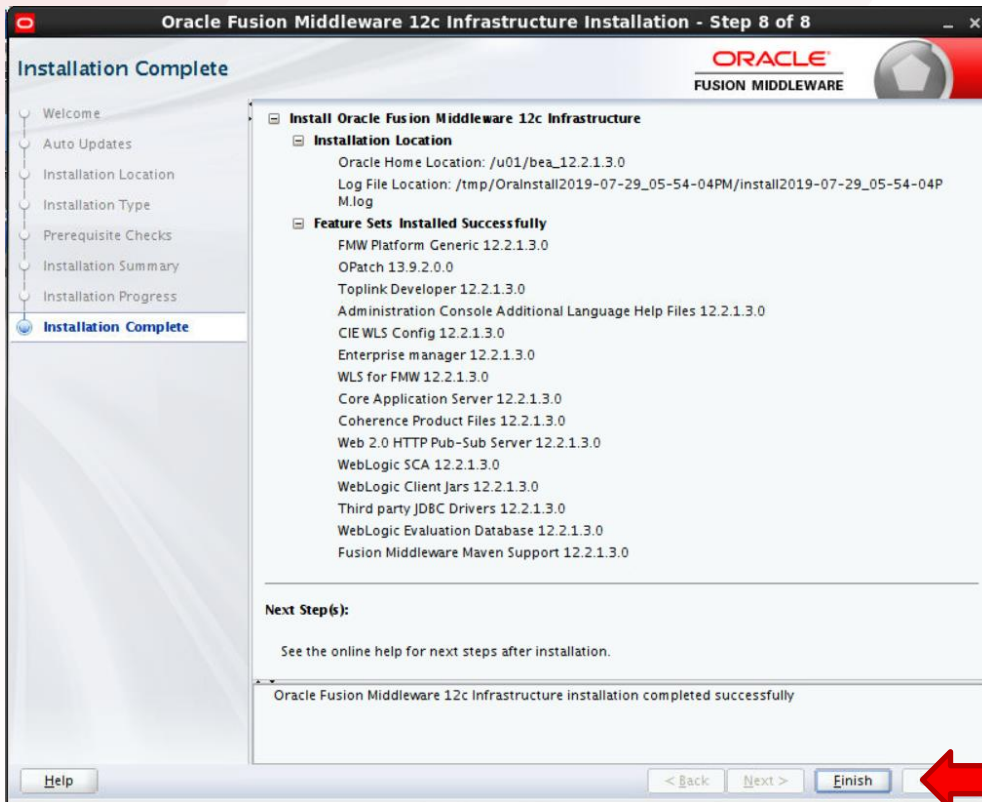
INSTALLING ORACLE HTTP SERVER (OHS) 12.2.1.3.0

Unzip the V 886427-01.zip file and run the fmw _12.2.1.3.0_ohs_linux64.bin file to start the installer.

Provide the path to the oraInventory location you w ant to use for this installation and press OK.
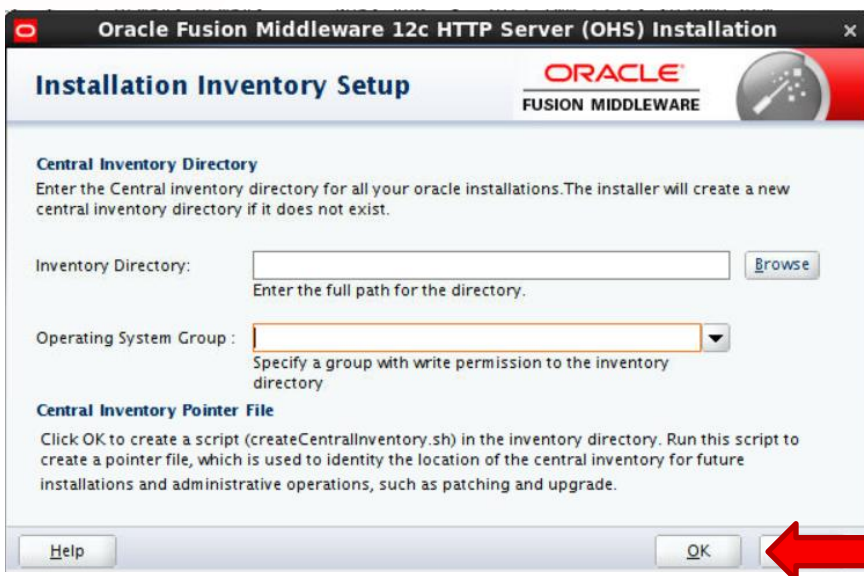
Press Next

Select the update option you want for your install and press Next.
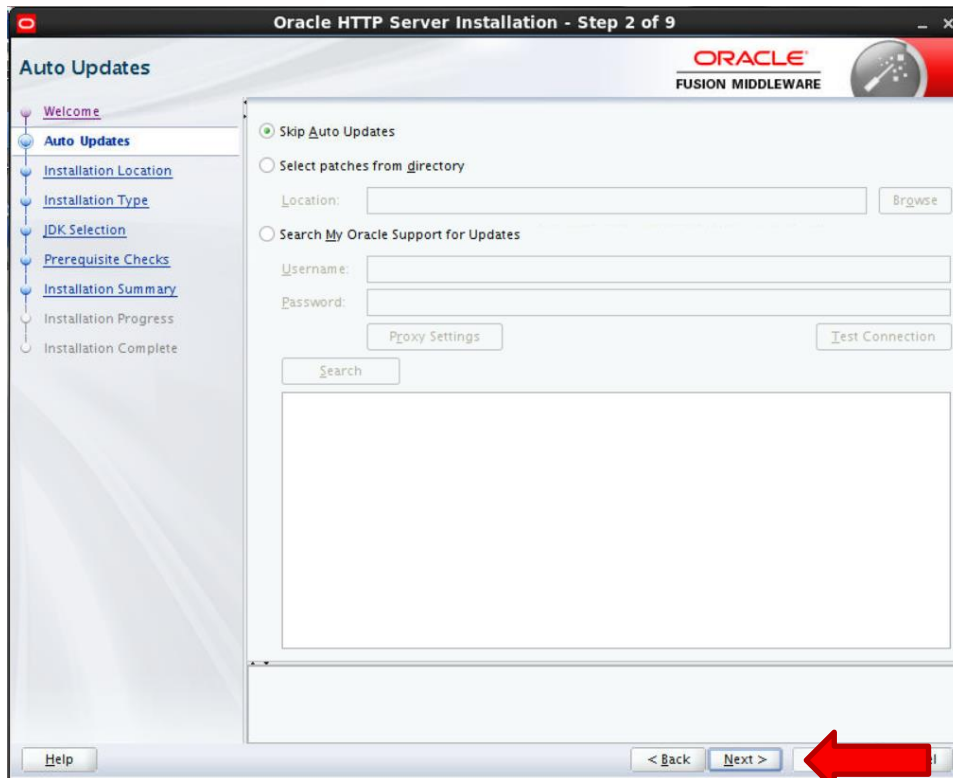
Enter the path you want OHS installed and press Next. This should be the same directory you used for the Weblogic Infrastructure install.
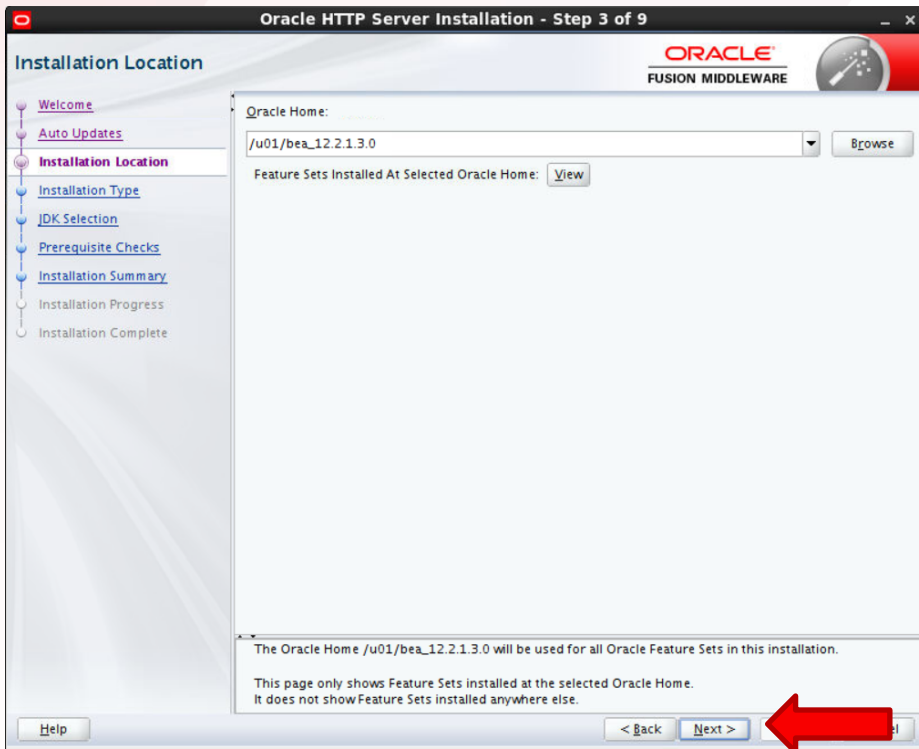
Leave the Collocated HTTP Server installation option selected and press Next.
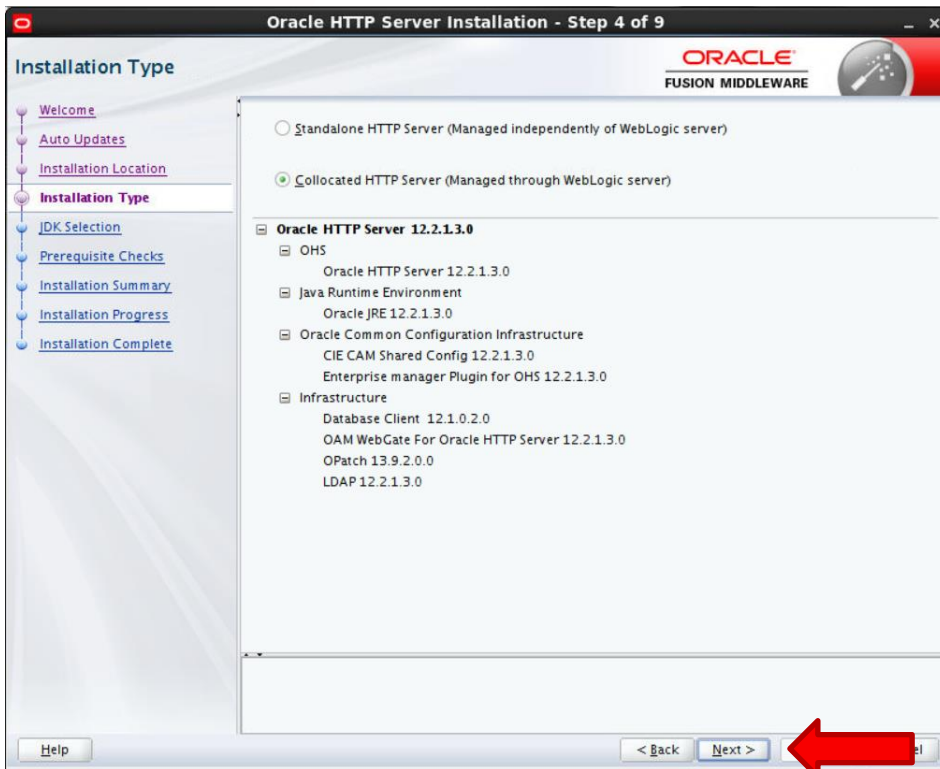
Set the JDK Home. This should be the same JAVA_HOME that was set when the Weblogic Infrastructure install was done.
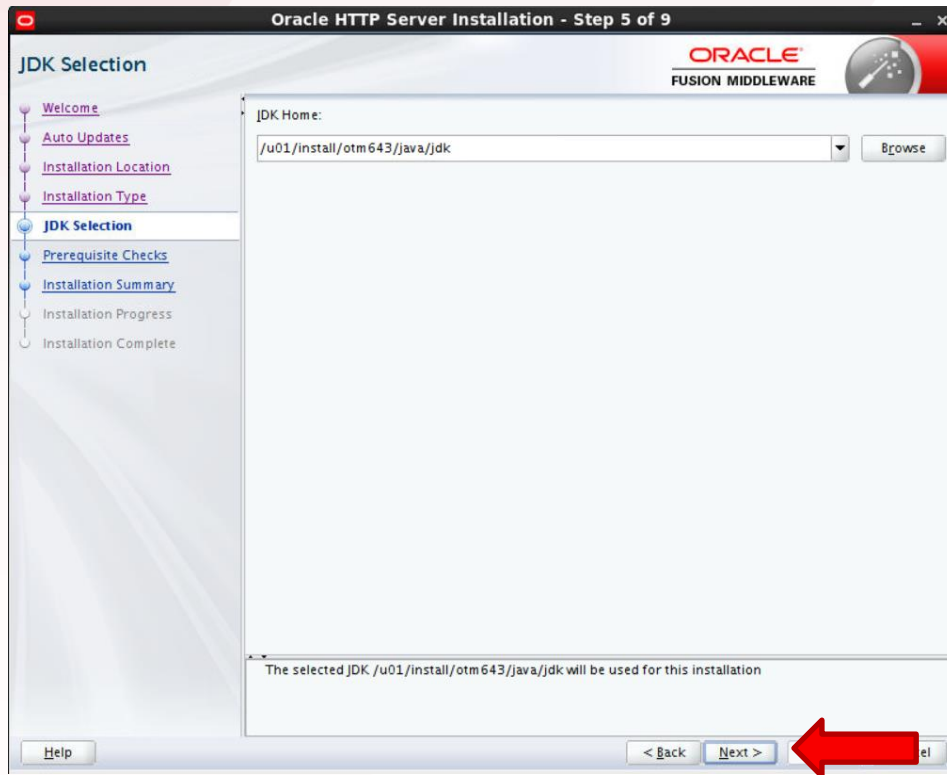
Once the Prerequisite Checks complete successfully press Next.
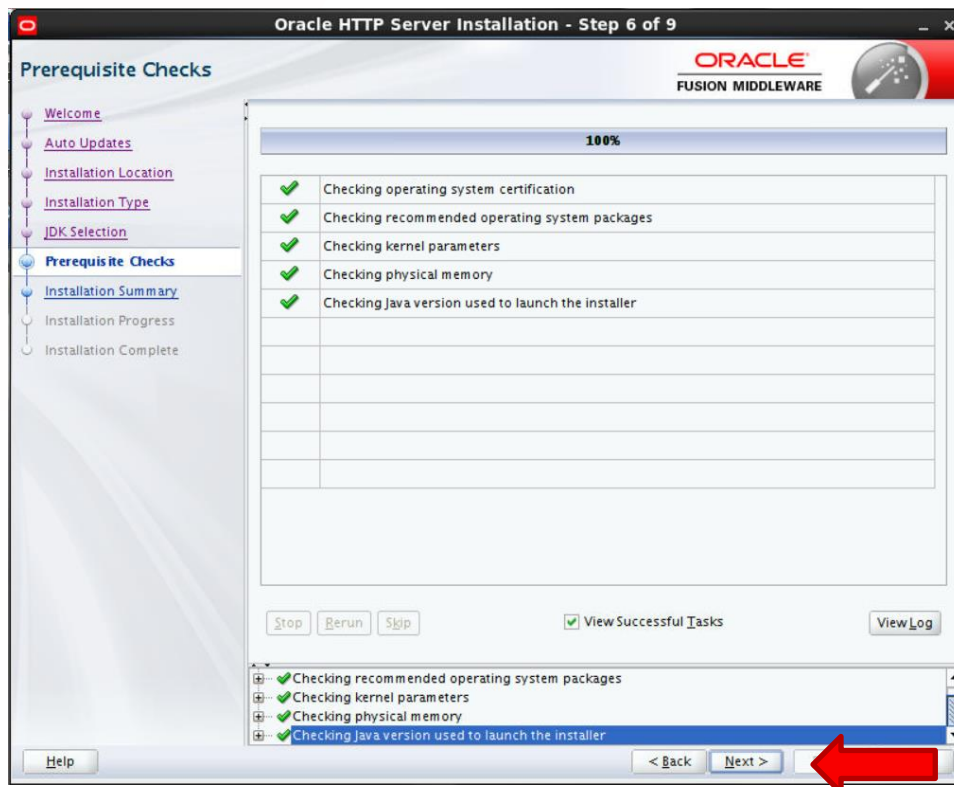
Confirm the installation information and press Install.
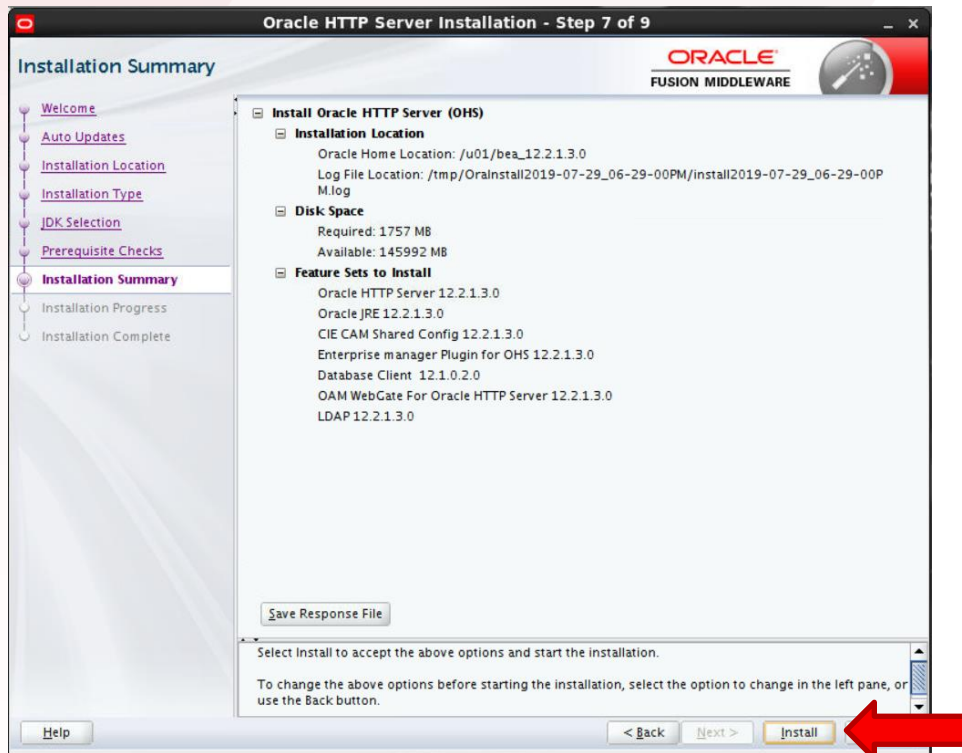
Once the install completes press Finish.
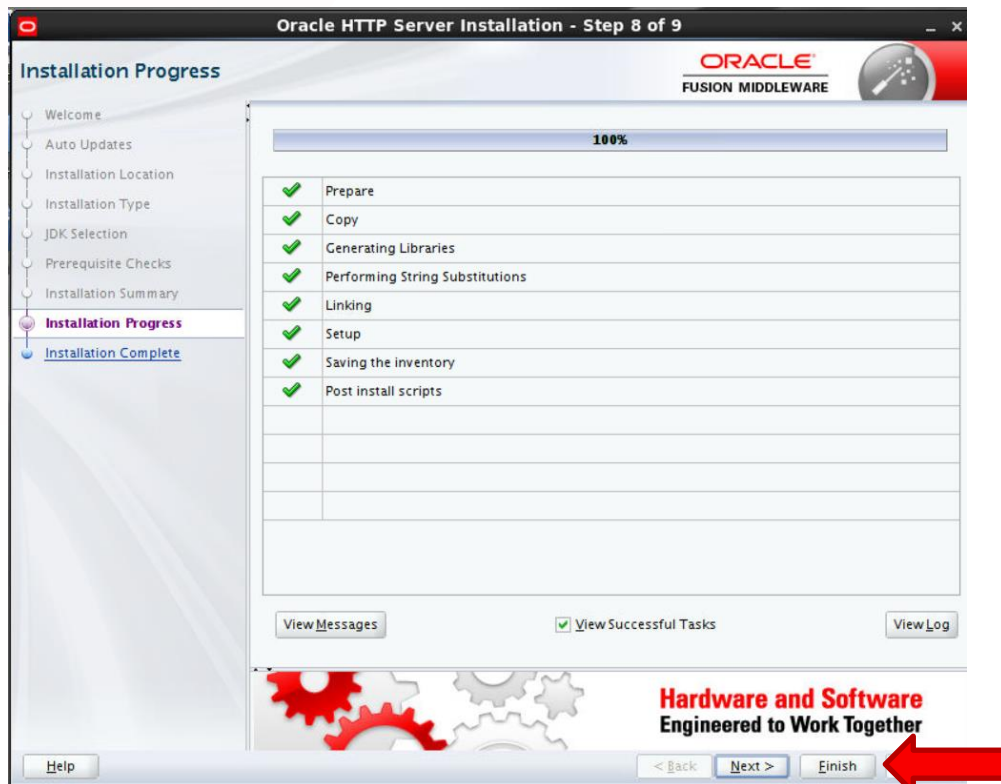
INSTALLING WEBLOGIC PATCH 25488428

Download Weblogic Patch 25488428 from MOS.

Copy the p25488428_122130_Generic.zip patch to the server and unzip it, a directory named 25488428 should be created.

Go into the 25488428 directory and review the instructions for installing the patch.

Set the following environment variable.

export ORACLE_HOME=<Weblogic Home> - this should be the same location you used for the infrastructure and OHS installation.

The following also need to be set:

export JAVA_HOME=$ORACLE_HOME/oracle_common/jdk

export PATH=$JAVA_HOME/bin:$ORACLE_HOME/OPatch:$PATH

From the 25488428 and run the following:

./opatch apply

Answer Y to run the prerequisite check and again to install the patch.

Once done the following should be displayed.

Patch 25488428 successfully applied.

Log file location: <Weblogic Home>/cfgtoollogs/opatch/opatch2019-07-29_19-04-08PM_1.log

OPatch succeeded.

INSTALLING WEBLOGIC PATCH 26045997

Download Weblogic Patch 26045997 from MOS.

Copy the p26045997_122130_Generic.zip patch to the server and unzip it, a directory named 26045997 should be created.

Go into the 26045997 directory and review the instructions for installing the patch.

Set the following environment variable.

export ORACLE_HOME=<Weblogic Home> - this should be the same location you used for the infrastructure and OHS installation.

The following also need to be set:

export JAVA_HOME=$ORACLE_HOME/oracle_common/jdk

export PATH=$JAVA_HOME/bin:$ORACLE_HOME/OPatch:$PATH

From the 26045997 and run the following:

./opatch apply

Answer Y to run the prerequisite check and again to install the patch.

Once done the following should be displayed.

Patch 26045997 successfully applied.

Log file location: <Weblogic Home>/cfgtoollogs/opatch/opatch2019-07-29_19-04-08PM_1.log

OPatch succeeded.

CREATING THE ADF REPOSITORY

Each OTM instance needs to have it's own repository created before the installation of OTM is started. Once installed additional changes can be made to point all OTM instance to a single repository for storing changes to screen layouts to avoid problems with users log into different machines within the same cluster.

Go to the <Weblogic Home>/oracle_common/bin directory and run the rcu command.

./rcu

The following screen should be displayed.

Press Next

Be sure the Create Repository and the System Load and Product Load option is selected and press Next.
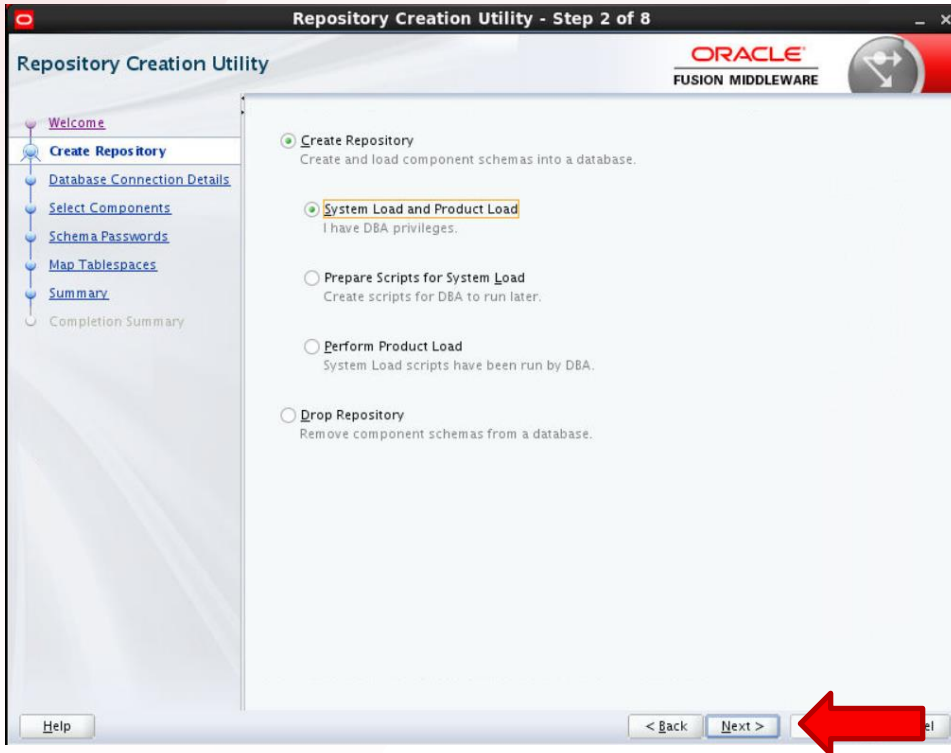
Enter the connection information, like HostName, Port, DBSid, User and Password for the database you want to create the repository in. This does not need to be the same DB used for OTM.
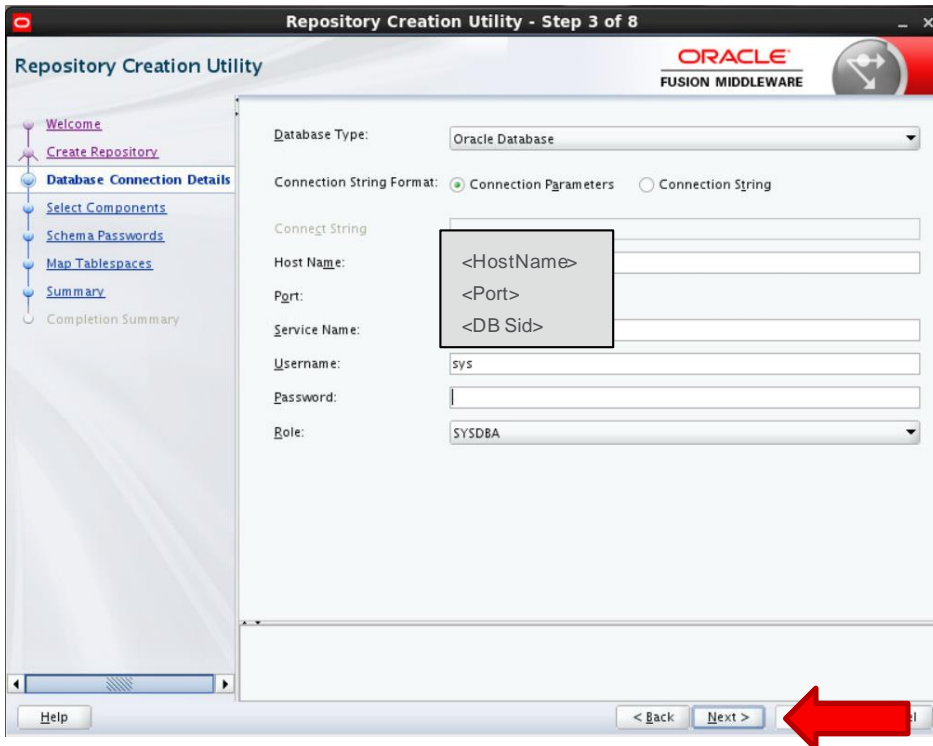
Press Next and a quick check is run to ensure you are able to connect to the DB. Press OK when the test completes.
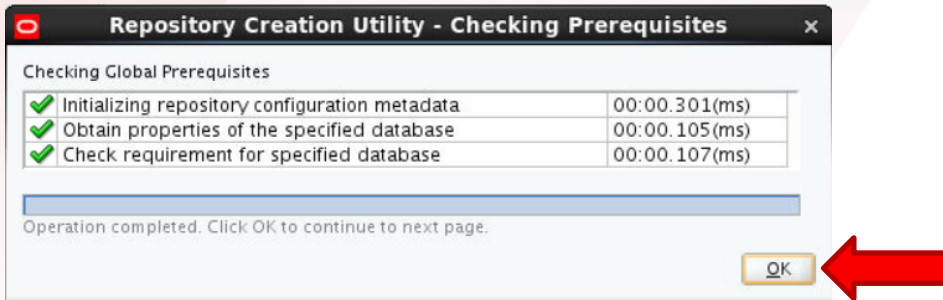
Enter the name of the repository you intend to use for the installation. The repository name needs to be unique for each OTM installation stored in the same DB. Be sure and check the Oracle AS Repository Components option before pressing Next. This is required for OTM installations.
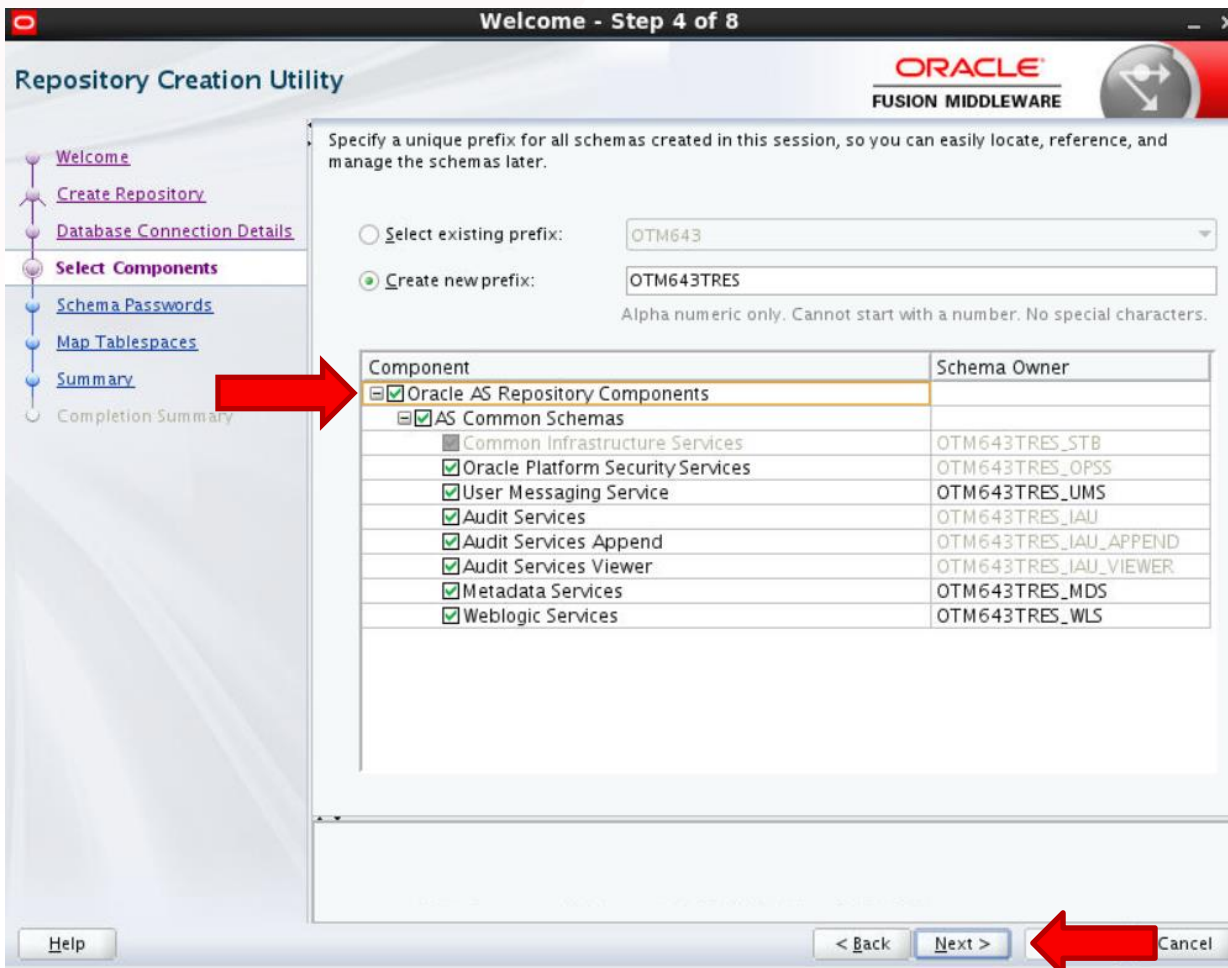
Press OK if the prerequisite checks all pass.
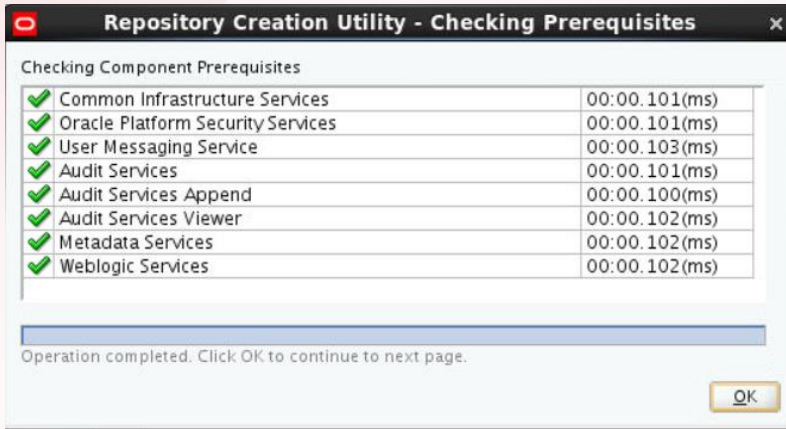
Select the passw ord option that meets your security needs. Be sure and keep track of the passw ord used for each user since several are used during the installation of OTM. Press Next.
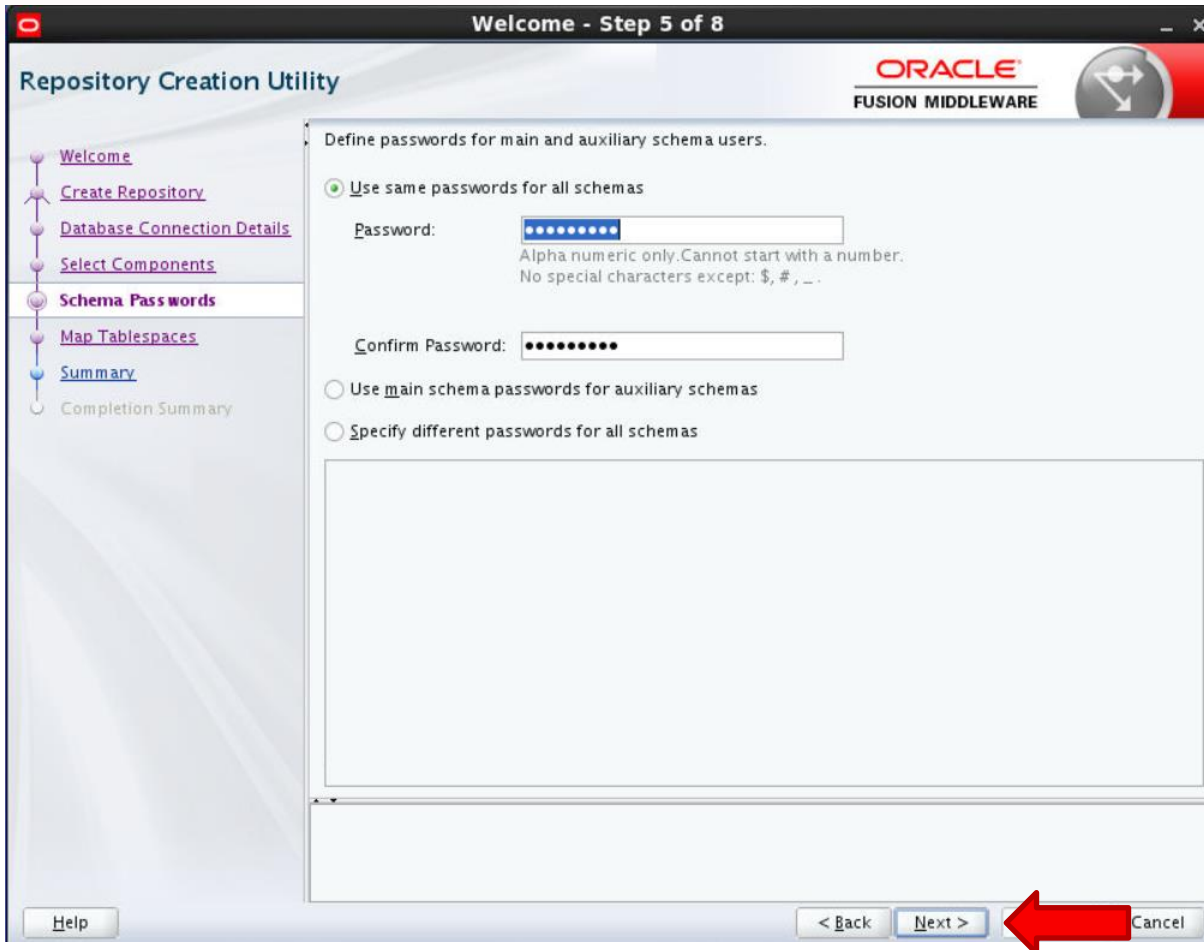
Note: The passw ord needs to be 8 chars long and have 1 number or special char or the follow ing error w ill occur during the installation of OTM.

Check the Oracle_Transportation_Management_v6.4.3_GA_Install_Log.log for the following error.

OTM Error:

        Status: FATAL ERROR

        Additional Notes: FATAL ERROR - Please enter the valid password for MDS STB Schema account. A valid password is 1) At least 8 characters long 2) Contains at least one number or special character. {ExitCode: -106}

Review the tablespaces being created for the repository. Press Next when done.
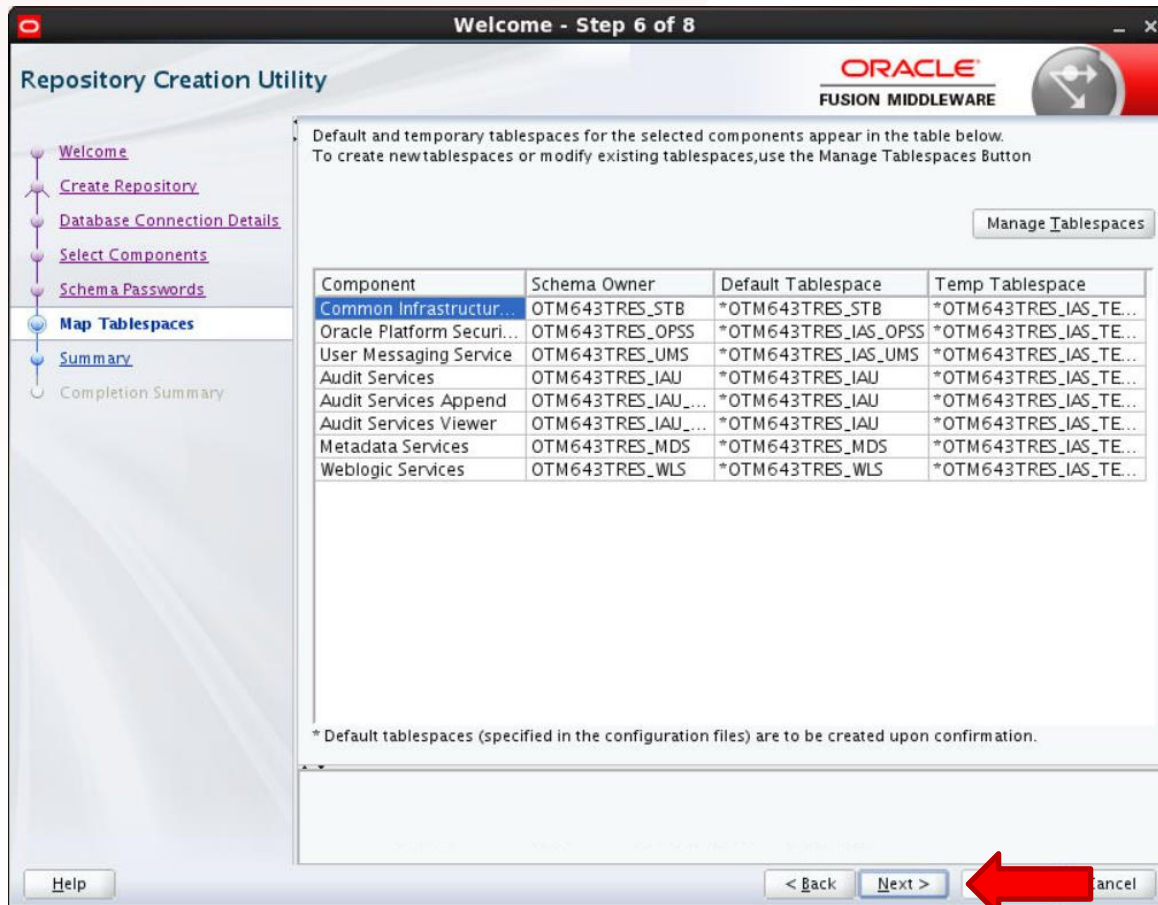
The following will be displayed telling you any tablespaces that are not available already will be created by the script. The amount of space the data is expected to take up is less than 1 GB.

Press OK and the required tablespaces will be created.

Press OK when the process completes.
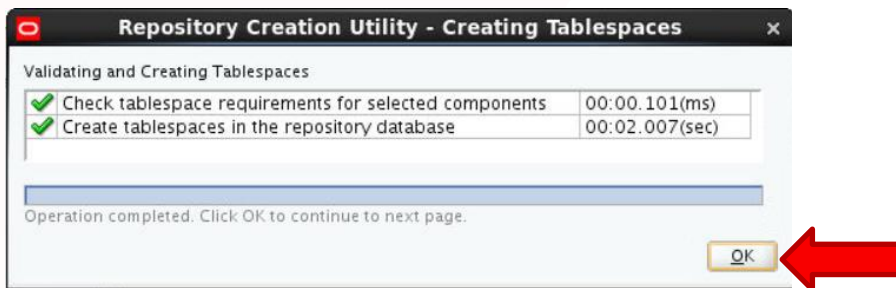
Press the Create button to create the repository.
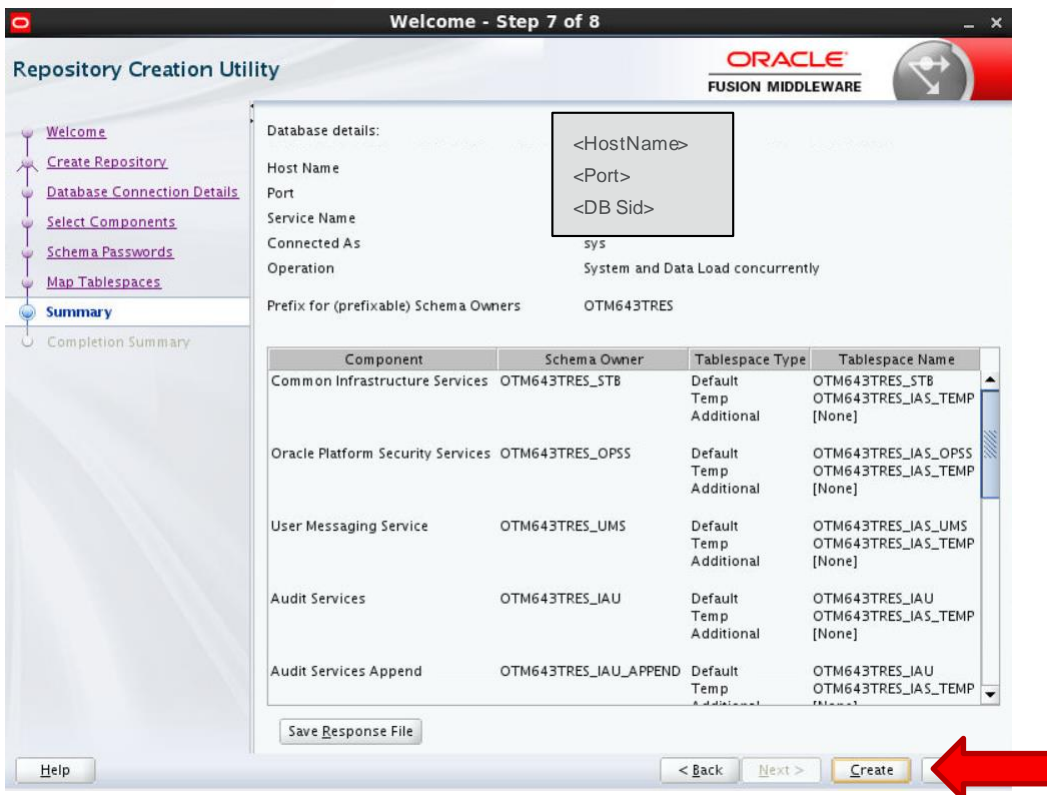
The follow ing w ill be displayed w hile the repository is being created.
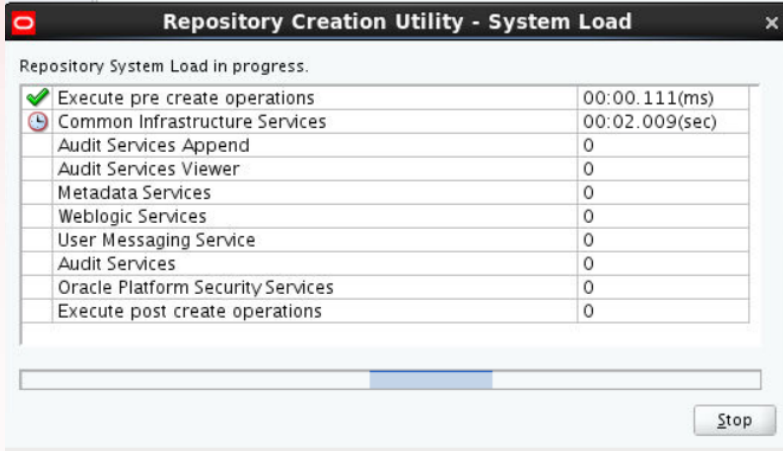
Press the Close button once the repository is created.
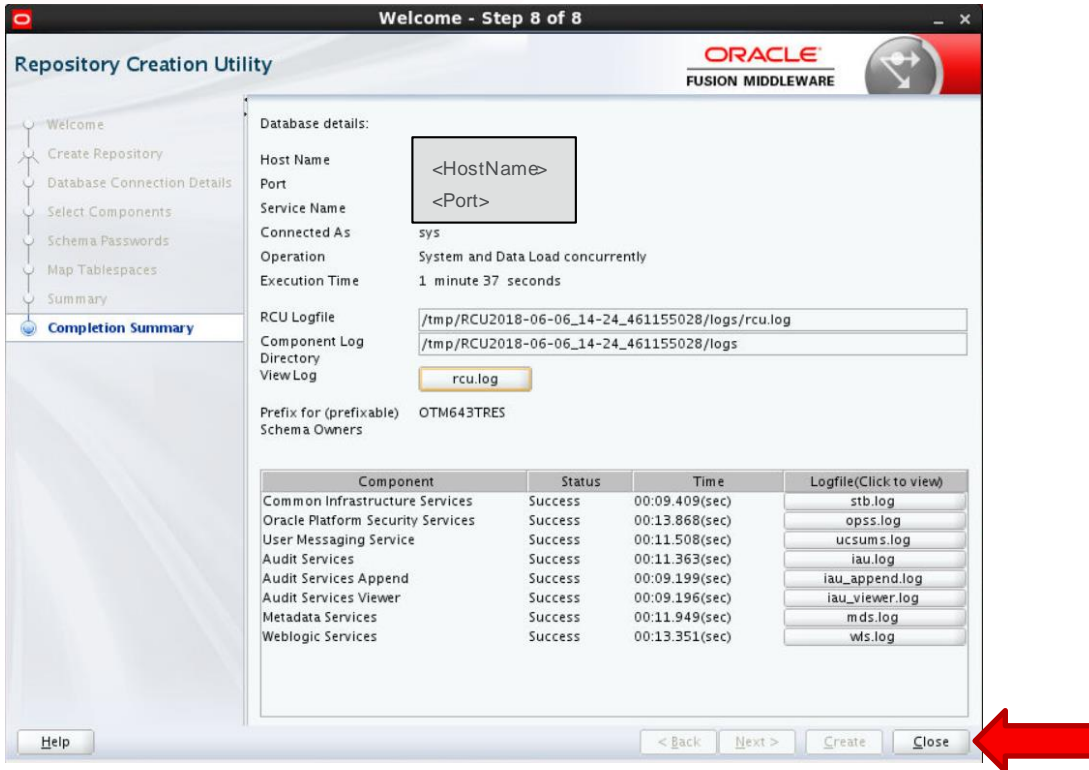
INSTALLING OTM 6.4.3 USING THE SILENT INSTALLER

There are several installation methods available for OTM 6.4.3, GUI, console and silent installer. This document will cover the installation using the silent install method.

Note: Regardless of the installation method being used you also need to be sure and install the

When you extract the download for OTM you will see the OTM installer, ReadMe.txt, example.installer.properties and the docs.zip file.

EDITING THE EXAMPLE.INSTALLER.PROPERTIES FILE

The example.installer.properties will be used by the silent installer to provide the answer to all of the questions asked during the OTM install.

Note: Make a copy of the example.installer.properties before making any of the changes needed for you installation.

The first section of the file you need to update is related to the user that is going to running the OTM processed on the server.

```
#***********************************************************************
#*** This file is to be used to install Oracle Transportation
#*** Management and Oracle In-Memory Logistics Command Center using
#*** the "silent installer" option.  For more information on how to
#*** do that, please see the OTM Admin Guide.
#***********************************************************************


#***********************************************************************
#***    SECURITY NOTE
#***********************************************************************
#*** This file contains passwords in clear text along with other
#*** information that could be used to compromise the integrity of
#*** your software installation.  Please safeguard this file
#*** appropriately!
#***********************************************************************


#***********************************************************************
#***    NOTES & TIPS
#***********************************************************************
#***
#*** 1) Unless otherwise indicated, all variables must be assigned a
#***    valid value.
#***
#*** 2) Variables may refer to another variable by enclosing the
#***    referenced variable's name in between dollar signs ($).  For
#***    example:
#***
#***      OTM_EXT_PORT=$OTM_PORT$
#***
#***    This will set the value of OTM_EXT_PORT to be the same as the
#***    value OTM_PORT at the moment it is evaluated.  This implies
#***    (correctly) that the referenced variable must be defined
#***    before the variable referencing it (i.e. OTM_PORT must be
#***    defined before using it to define OTM_EXT_PORT).
#***
#*** 3) When specifying paths for a Unix-based system, remember to use
#***    forward slashes:
#***
#***      GC3_INSTALL_PATH=/opt/otm
#***
#***    When on a Windows system, remember to use back slashes and a
#***    drive letter:
#***
#***      GC3_INSTALL_PATH=c:\otm
#***
#*** 4) The abbreviation 'FQDN' means 'Fully Qualified Domain Name',
```

```
#***    and refers to the full machine name (including TCP/IP domain name) of
#***    the server in question (e.g. mail.oracle.com, where 'mail' is
#***    the name of the machine and 'oracle.com' is the domain name).
#***
#*** 5) The heading sections below will indicate what platform the
#***    variables apply to (not all variables are needed on all
#***    platforms)
#***
#*** 6) If the installer cannot determine where the user's home
#***    directory is (either using OS-based rules or the value of
#***    UNIX_USER_HOME) then the installer running in silent mode will
#***    not be able to write out the log file should an error occur.
#***
#***    If the silent installer is run and no log file can be found,
#***    re-run the silent installer with the environment LAX_DEBUG set
#***    to 'true' (without the quotes). This will produce a lot of
#***    output but should also reveal what is going wrong.
#***
#***********************************************************************


#----------------------------------------------------------------------
#--- All configurations, Unix/Linux only
#----------------------------------------------------------------------

# UNIX_USER_NAME - the system user name of the user that will own OTM
# processes (usually the user logged in when doing the install
# itself); please see notes under USER_GROUP_CHECK_FAIL_OK below
UNIX_USER_NAME=otm64

# UNIX_GROUP_NAME - the system group name of the user that will own OTM
# processes (usually the user logged in when doing the install
# itself); please see notes under USER_GROUP_CHECK_FAIL_OK below
UNIX_GROUP_NAME=otm64

# UNIX_USER_HOME - the home directory of $UNIX_USER_NAME$
UNIX_USER_HOME=/home/$UNIX_USER_NAME$

# UNIX_USER_HOME - the home directory of $UNIX_USER_NAME$
UNIX_USER_HOME=/home/$UNIX_USER_NAME$

# USER_GROUP_CHECK_FAIL_OK - if your system is set up so that user or
# group names are not stored locally in the standard files
# (e.g. /etc/passwd, /etc/group) then the installer will not be able
# to validate that the names supplied are valid.  In this case, and in
# this case only, you should set this value to 'true' which will
# indicate to the installer that it's OK to fail this check.  Valid
# values are (without the quotes): 'true', 'false'.
#
# NOTE: Please do not use this value unless you are absolutely sure
# that the values supplied for UNIX_USER_NAME, UNIX_GROUP_NAME and
# UNIX_USER_HOME are valid and spelled correctly.  Setting this
# variable to 'true' while supplying invalid data will result in an
# unusable installation.
USER_GROUP_CHECK_FAIL_OK=false
```

Update the following lines with the correct values for your installation.

```
UNIX_USER_NAME=otm64
UNIX_GROUP_NAME=otm64
UNIX_USER_HOME=/home/$UNIX_USER_NAME$
```

The next section that needs to be updated requires information related to the installation and configuration of OTM.

```
#----------------------------------------------------------------------
#--- All configurations, all platforms
#----------------------------------------------------------------------

# USER_INSTALL_DIR - where OTM should be installed to
USER_INSTALL_DIR=/opt/otm

# DOMAIN_NAME - the TCP/IP domain name; not used directly by the
# installer, but could be used elsewhere in this properties file
DOMAIN_NAME=oracle.com

# BEA HOME
BEA_HOME=/opt/bea

# BEA Server Path
BEA_SERVER_PATH=$BEA_HOME$/wlserver

# OTM_HOSTNAME - OTM server's machine name
OTM_HOSTNAME=otm-hostname

# OTM_FQDN - The FQDN of the OTM server; this is the "real"
# machine name (see 'OTM_EXT_FQDN' below)
OTM_FQDN=$OTM_HOSTNAME$.$DOMAIN_NAME$

# OTM_PORT - The port that the OTM server is listening on
# NOTE: This port number must match what was used during the OHS install
#       unless some sort of port redirection was done (see the "Admin
#       Privileges" section of the OTM Security Guide)
OTM_PORT=7778

# OTM_SSL_PORT - the SSL port that the otm server listens on
OTM_SSL_PORT=4444

# OTM_EXT_FQDN - The external FQDN of the OTM server (could be
# different than the internal FQDN of the OTM server)
OTM_EXT_FQDN=$OTM_FQDN$

# OTM_EXT_PORT - The external port of the OTM server (could be
# different than the internal port of the OTM server)
OTM_EXT_PORT=$OTM_SSL_PORT$

# OTM URL PROTOCOL - Accessing url with http or https
# This need to be defined for both Internal and External FQDN
# Default value for both is https only.
OTM_INTERNAL_PROTOCOL=https
OTM_EXTERNAL_PROTOCOL=https
```

Update the USER_INSTALL_DIR property with the location where you want OTM installed. Be sure the user running the install has write permission to create the directory if it does not exist.

Update the DOMAIN_NAME property with the correct value for your installation. This value will be used throughout the installation.

For this install, if my server's Fully Qualified Domain Name (FQDN) is otm643.yourcompany.com the DOMAIN_NAME property should be set to yourcompany.com.

Update the BEA_HOME property with the path you used when you installed Weblogic 12.2.1.3.

The BEA_SERVER_PATH property should not need to be changed.

Update the OTM_HOSTNAME property with the beginning of the FQDN of your OTM server. Using the same FQDN mentioned above, otm643.yourcompany.com this should be set to "otm643"
Note: Installations using IP addresses are not supported.

The OTM_FQDN property should not need to be changed.

Note: During the installation of OTM you will be required to define ports for the Web, App and DB servers being used. If you decide to change any of the port setting from the default values, be sure the same port is not used later in the installation or by another application running on the same server.

Update the OTM_PORT with the port you want to use for the installation or leave the port set to 7778.

Update the OTM_SSL_PORT with the port you want to use for the installation or leave the port set to 4444.

Update the OTM_EXT_FQDN and OTM_EXT_PORT with new values if you are not expecting them to be same as the OTM_FQDN and OTM_PORT defined earlier.

This documentation will cover the http installation, so change the OTM_INTERNAL_PROTOCOL and the OTM_EXTERNAL_PROTOCOL property to http.

Per the example.installer.properties file.

```
# ------------------------------------------------------------------------------------
# if OTM_INTERNAL_PROTOCOL is set to "https" then below 7 variable need to set for OTM
# ------------------------------------------------------------------------------------

###  For OTM
# Full path to the location of the Identity keystore file created prior to OTM installation.
# and Identity Keystore Password: The password used when the keystore was generated.
IDENTITY_KEYSTORE_FILE_LOCATION=
IDENTITY_KEYSTORE_PASSWORD=
# Full path to the location of the Trust keystore file created prior to OTM installation.
# and Trust Keystore Password: The password used when the keystore was generated.
TRUST_KEYSTORE_LOCATION=
TRUST_KEYSTORE_PASSWORD=
# Private key alias: Alias associated to your java keystore.
#  Private Key Password: the passphrase associated to your alias.
PRIVATE_KEY_ALIAS=
PRIVATE_KEY_PASSWORD=
# Enter the KeyStore location created prior to the OTM installation
# This is the location till directory
WALLET_DIR_OHS=
# --------------------------------------------------------------------------------------


#--------------------------------------------------------------------------
#--- WALLET Configuration

# WALLET_EXIST variable holding boolean values (TRUE/FALSE)
# If WALLET already Exist then its value is TRUE and WALLET_DIRECTORY
# varibale hold the directory path where wallet is exist
# If new WALLET need to be get created then its value is FALSE and
# WALLET_DIRECTORY holds the value where the wallet need to be get created.
#--------------------------------------------------------------------------

WALLET_EXIST=FALSE

WALLET_DIRECTORY=$USER_INSTALL_DIR$/wallet
```

Note: Do not change the value of the WALLET_EXISTS from FALSE to false. This will cause problems with some of the values generated in the shared wallet.

The next section has information about the Database Server

```
# DB_FQDN - the internal FQDN of the OTM database server
DB_FQDN=otmdb.$DOMAIN_NAME$

# DB_PORT - the port that the OTM database instance is listening on
DB_PORT=1521

# DB_CONNECTSTRING - the connect string for the OTM database instance
DB_CONNECTSTRING=otmdb

# DB_SID - the service name for the OTM database instance (this could be
# the service name, the SID or the Scan Listener value)
DB_SID=$DB_CONNECTSTRING$

# DB_CLIENT_PATH - the full path to the Oracle database client install
DB_CLIENT_PATH=/u01/app/oracle/product/12c

# MAIL_SMTP_FQDN - the FQDN of the mail server used to send outbound
# emails
MAIL_SMTP_FQDN=smtp.$DOMAIN_NAME$

# MAIL_REPLYTO_EMAIL - the reply-to email address that all
# notification emails use
MAIL_REPLYTO_EMAIL=OtmAdvisor@$DOMAIN_NAME$

# GC3_MIGRATE - whether or not this instance should migrate custom
# configuration changes from a previous release's glog.properties
# file; see the OTM Admin Guide for more information on when this
# should be used.  Valid values are (without the quotes): 'Yes',
# 'No'.
#
# NOTE: OTM has been changed to work off of Service Names instead of
# SIDs.  Most non-RAC database instances will have the same value for
# both Service Name and SID, so this should not be an issue.  Please
# see the Install Guide for more information.
GC3_MIGRATE=No

# GC3_MIGRATE_PATH - the path with the old glog.properties file is
# located.  This is only used if GC3_MIGRATE is set to 'true'.
GC3_MIGRATE_PATH=/opt/old-otm/glog/config
```

Update the DB_FQDN to the correct value for your DB server. In most cases you only need to change otmdb to the name of your DB server, the $DOMAIN_NAME$ variable should pull in the remaining portion of the server name.

Update the DB_PORT with the port you are using.

Update the DB_CONNECTSTRING property with the Service Name of the DB instance.

The same value is used for the DB_SID property, so it is important this is set correctly for your instance. Failure to do so could cause connection failures and problems with the DB installation or migration to this version.

Update the DB_CLIENT_PATH property with the directory where you installed the Oracle DB client. The Oracle DB Client should be the Administrator Install.

Update the MAIL_SMTP_FQDN property. In most cases you only need to change the "smtp" to beginning portion of the FQDN of your SMTP server as long as the domain name is the same as the value you defined previously.

We do not recommend changing the value of the GC3_MIGRATE property to Yes. Any custom property settings used in a previous version should be checked to see if they are still needed for the new release.

Note: Review the AIX questions if it is being used for your installation.

```
#----------------------------------------------------------------------
#--- All configurations, AIX only
#----------------------------------------------------------------------

# EXTERNAL_JDK_PATH - OTM requires that a 1.6 JDK be installed on the
# machine prior to installing on one of the above-mentioned platforms.
# The OTM installer will create a symbolic link to this directory.
EXTERNAL_JDK_PATH=/opt/jdk-1.6



#----------------------------------------------------------------------
#--- All configurations, AIX only
#----------------------------------------------------------------------

# NUM_CPUS - the number of logical CPUs present; this is used to tune
# one of the Java garbage collection parameters.
NUM_CPUS=4
```

The next section allows you to define the OTM Server settings.

```
#----------------------------------------------------------------------
#--- OTM server installations only, all platforms
#----------------------------------------------------------------------

# OTM Server WebLogic Domain Settings {Name, PORT, SSL PORT, Node Manager Port}
OTM_DOMAIN_NAME=otm643
OTM_DOMAIN_LISTEN_PORT=8001
OTM_DOMAIN_SSL_LISTEN_PORT=8002
OTM_NODE_MANAGER_LISTEN_PORT=5556


# OHS_COMPONENT_NAME - the name of the OHS component
OHS_COMPONENT_NAME=otm643

#OTM OHS PORT
OTM_OHS_PORT=7777

#OTM OHS SSL PORT
OTM_OHS_SSL_PORT=4443

# OHS admin Port
OHS_ADMIN_PORT=9999

# COHERENCE CLUSTER PORT
COHERENCE_CLUSTER_PORT=7564

# OTM_SERVLET_JVM_MEMORY - amount of memory (in MB) to allocate to
# weblogic for OTM Server
OTM_SERVLET_JVM_MEMORY=4096

# OTM_LAUNCHER_PORT - the port number that the OTM  launcher is
# listening on -- NOTE: this must be unique for every Launcher instance
# on the box as it binds to localhost (127.0.0.1), not a specific IP
# address
OTM_LAUNCHER_PORT=32000
```

```
# Node Manager Service name for Windows
NODE_MANAGER_SERVICE=$OTM_DOMAIN_NAME$_NM

#### MDS DATABASE Settings {DB, PORT, Service Name, Prefix}
MDS_DB_FQDN=mdsdb.$DOMAIN_NAME$
MDS_DB_PORT=1521
MDS_DB_SERVICE_NAME=mdsdb
MDS_PREFIX=OTM

## MDS Schema Name
MDS_SCHEMA_STB=$MDS_PREFIX$_STB
MDS_SCHEMA_OPSS=$MDS_PREFIX$_OPSS
MDS_SCHEMA_IAU_VIEWER=$MDS_PREFIX$_IAU_VIEWER
MDS_SCHEMA_IAU_APPEND=$MDS_PREFIX$_IAU_APPEND
MDS_SCHEMA_MDS=$MDS_PREFIX$_MDS


# OTM Web/App Communication
OTM_APP_USER_NAME=OTMApp
OTM_APP_GROUP_NAME=OTMAppUser

#-------------------------------------------------------------------
#--- otm server installations only, Windows only
#-------------------------------------------------------------------

# OTM_SERVICE - the Windows service name for the OTM erver
OTM_SERVLET_SERVICE=otm643
```

The OTM_DOMAIN_NAME property can be left with the default or changed depending on your installation requirements.

The OTM_DOMAIN_LISTEN_PORT property can be left with the default or changed depending on your installation requirements.

The OTM_DOMAIN_SSL_LISTEN_PORT property can be left with the default or changed depending on your installation requirements.

The OTM_NODE_MANAGER_LISTEN_PORT property can be left with the default value.

The OHS_COMPONENT_NAME property can be left with the default or changed depending on your installation requirements.

The OTM_OHS_PORT property can be left with the default or changed depending on your installation requirements.

The OTM_OHS_SSL_PORT property can be left with the default or changed depending on your installation requirements.

The OHS_ADMIN_PORT property can be left with the default or changed depending on your installation requirements.

The COHERENCE_CLUSTER_PORT property can be left with the default or changed depending on your installation requirements.

The OTM_SERVLET_JVM_MEMORY is setup by default to use 4GB of memory. You should expect the application to use up to 8GB of memory depending on what actions are being run on the application. Be sure and plan your server resources to account for this additional memory usage.

The OTM_LAUNCHER_PORT property can be left with the port already defined or changed depending on your installation requirements.

The NODE_MANAGER_SERVICE property is only used for Windows based installations and can be left with the default value or changed depending on your installation requirements.

The MDS_DB_FQDN should only need to the "mdsdb" value update as long as the DOMAIN_NAME of the MDS DB server is the same as the value defined previously.

Update the MDS_DB_PORT with the port you are using.

Update the MDS_DB_SERVICE_NAME property with the Service Name of the DB instance.

Update the MDS_PREFIX with the value you used when you created the ADF Repository.

None of the MDS_SCHEMA properties should need to be updated.

The OTM_APP_USER_NAME and the OTM_APP_GROUP_NAME property can be left with the default value or changed to me your installation requirements. These do not need to be actual users on the OS where OTM is being installed. They are only used for internal communications.

Update the OTM_SERVLET_SERVICE with the service name you want to you use if you are doing a Windows installation.

The last section of the file is where you define the passwords for instance.

```
#--------------------------------------------------------------------
#--- Passwords
#--------------------------------------------------------------------


#++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
#+++
#+++ NOTE: The following values MUST BE changed from their default value
#+++                               ^^^^^^^
#++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++


#....................................................................
#... All configurations, all platforms
#....................................................................

# WEBLOGIC_ADMIN_PASSWORD - password for the WebLogic Admin user
WEBLOGIC_ADMIN_PASSWORD=default

# OTM_SYSTEM_PASSWORD - password for the otm system
OTM_SYSTEM_PASSWORD=default

# OTM_APP_WEB_USER_PASSWORD - password used for APP-to-WEB User communication
# authentication; this will not ever be typed in by a user.  In an OTM
# Scalability cluster (SCA) setup, the value for this variable must be
# the same on all systems in the cluster.
OTM_APP_WEB_USER_PASSWORD=APP2WEBPASS
```

```
# GUEST_USER_PASSWORD - Guest user account password
GUEST_USER_PASSWORD=default


# GLOGDBA_PASSWORD, GLOGLOAD_PASSWORD - database user
# passwords
GLOGDBA_PASSWORD=default
GLOGLOAD_PASSWORD=default

# ARCHIVE_C_USER_PASSWORD - To Run the Staged Archived reports
ARCHIVE_C_USER_PASSWORD=default


## MDS Schema passwords
# These passwords will be same that were entered during the MDS DB settings
# prior to the installation.
# They will be utilized during the combined installation
MDS_SCHEMA_STB_PWD=default
MDS_SCHEMA_OPSS_PWD=default
MDS_SCHEMA_IAU_VIEWER_PWD=default
MDS_SCHEMA_IAU_APPEND_PWD=default
MDS_SCHEMA_MDS_PWD=default


# Work bench Layout Migration
# To Enable the migration of the Work bench layout set the variable
# WB_MIGRATE  to Yes  elso No
WB_MIGRATE=No
# If Work Bench migration layout variable is set to "Yes" then the below
# variables need to be set. These variables will hold the value of the
# MDS DB details of the existing/Previous OTM version from it need to be migrated.
# After the install the values of existing/Previous and New MDS schema will be updated
# in the mds export and import files.
# Note: User need to manually update the files only for passwords both for (existing and NEW MDS Schema)
.
# Once the migration is completed user will remove the passwords from the file to comply with security n
orms

MDS_PREFIX_PREV=OTM
MDS_DB_FQDN_PREV=mdsdb.$DOMAIN_NAME$
MDS_DB_PORT_PREV=1521
MDS_DB_SERVICE_NAME_PREV=mdsdb
MDS_SCHEMA_MDS_PREV=$MDS_PREFIX_PREV$_MDS

#**********************************************************************
#***** EOF ***** EOF ***** EOF ***** EOF ***** EOF **********
```

Note: The passwords you use should be at least 8 characters and contain at least one number. The following characters should NOT be used:

[ ] $ % ? { } ` \ " ' |

Update the WEBLOGIC_ADMIN_PASSWORD with the password you want to use for this installation.

Update the OTM_SYSTEM_PASSWORD with the password you want to use for this installation. This should be the same password for the system user in the gl_user table.

Update the OTM_APP_WEB_PASSWORD with the password you want to use for this installation. This will be used by the OTM_APP_USER_NAME when communicating with the other OTM servers in this instance. This value should be the same for all OTM machines for an OTM cluster.

Update the GUEST_USER_PASSWORD with the password you want to use for this installation.

Update the GLOGDBA_PASSWORD with the password you want to use for this installation. This value should be the same for all OTM machines for an OTM cluster since they are all accessing the same database.

Update the GLOGLOAD_PASSWORD with the password you want to use for this installation. This value should be the same for all OTM machines for an OTM cluster since they are all accessing the same database.

Update the ARCHIVE_C_USER_PASSWORD with the password you want to use for this installation. This value should be the same for all OTM machines for an OTM cluster since they are all accessing the same database.

Update the following properties with the passwords you entered when you created the ADF repository.

MDS_SCHEMA_STB_PWD=default
MDS_SCHEMA_OPSS_PWD=default
MDS_SCHEMA_IAU_VIEWER_PWD=default
MDS_SCHEMA_IAU_APPEND_PWD=default
MDS_SCHEMA_MDS_PWD=default

Save the changes and copy the new file to the same directory where you have the OTM 6.4.3 installer.

Note: If any of the passwords do not meet the required length or have a number the installer will not continue.

```
[otm643@celotmovm043 otm643]$ ./otmv643_linux.bin -i silent -f sup643.installer.properties
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing SILENT Mode Installation...


========================================================================
Oracle Transportation Management v6.4.3 GA      (created with InstallAnywhere)
------------------------------------------------------------------------


[otm643@celotmovm043 otm643]$
[otm643@celotmovm043 otm643]$
[otm643@celotmovm043 otm643]$
[otm643@celotmovm043 otm643]$
[otm643@celotmovm043 otm643]$
```

If you check the Oracle_Transportation_Management_v6.4.3_GA_Install_Log.log in the users home directory you will likely find an error similar to this at the end of the file.

FATAL ERROR - Please enter the valid password for ARCHIVE_C account. A valid password is 1) At least 8 characters long 2) Contains at least one number or special character. {ExitCode: -106}

FATAL ERROR - Please enter the valid password for MDS STB Schema account. A valid password is 1) At least 8 characters long 2) Contains at least one number or special character. {ExitCode: -106}

RUNNING THE OTM SILENT INSTALLER

Start the silent install by running the following command. Notice the "-f" and name of the installer properties file is listed in the command line.

./otmv643_linux.bin -i silent -f <path and file name of the installer properties file>

Note: The path is only needed if the properties file is not in the same directory as the OTM installer.

./otmv643_linux.bin -i silent -f 643.installer.properties

You will only see limited information on the screen during the installation process, although you can monitor the progress by checking some of the logs that are created during the installation.

```
[otm643@celotmovm060 otm643]$ ./otmv643_linux.bin -i silent -f 643.installer.properties
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing SILENT Mode Installation...

========================================================================
Oracle Transportation Management v6.4.3 GA        (created with InstallAnywhere)
------------------------------------------------------------------------




========================================================================
Installing...
-------------

  [==================|==================|==================|==================]
  [------------------|---■
```

Note: If there is not enough space in the /tmp, the UNIX_USER_HOME, or the USER_INSTALL_DIR to complete the installation, the installer may fail part way through the installation process without generating an obvious error in the logs.

The first log to be created will be generated in the /tmp dir and have a filename similar to "7b4d2c815221a227f9.details". Do an "ls –ltr" in the tmp directory and look for the latest file ending with ".details" to check the beginning of the installation process if needed.

This file will be eventually renamed to "Oracle_Transportation_Management_v6.4.3_GA_InstallLog.log" and copied to the USER_INSTALL_DIR later during the install process.

The log will show some basic information about the installation method being used, basic environment information, summary of the install and some other steps of the install.

Once the installation reaches this point it will start creating the OHS domain and configuring the instance. During this portion of the installation Weblogic in restarted several times.

```
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing SILENT Mode Installation...


===============================================================================
Oracle Transportation Management v6.4.3 GA        (created with InstallAnywhere)
-------------------------------------------------------------------------------




===============================================================================
Installing...
------------


 [==================|==================|==================|==================]
 [------------------|------------------|------------------|------------------]
```

To follow the installation during this time you can run the following command.

tail -f < OTM Home >/logs/web_app_python_exec.log

Information similar to this should be displayed.

Wed Dec 13 20:02:18 GMT 2017
Start Running the CreateDomain.py script
Command executed /opt/bea_12.2.1.0/oracle_common/common/bin/wlst.sh /opt/otm643/wlst/webapp/CreateDomain.py
Initializing WebLogic Scripting Tool (WLST) …
Welcome to WebLogic Server Administration Scripting Shell
Type help() for help on available commands
Exiting WebLogic Scripting Tool.
CreateDomain.py script completed: 0

Wed Dec 13 20:06:21 GMT 2017
Start Running the CreateOHS.py script
Command executed /opt/bea_12.2.1.0/ohs/common/bin/wlst.sh /opt/otm643/wlst/webapp/CreateOHS.py
WARNING: This is a deprecated script. Please invoke the wlst.sh script under oracle_common/common/bin.
Initializing WebLogic Scripting Tool (WLST) …
Welcome to WebLogic Server Administration Scripting Shell
Type help() for help on available commands
Launching NodeManager …
Running startNodeManager.sh from the directory /opt/bea_12.2.1.0/user_projects/domains/otm643/bin
NMProcess: + /u01/otm643/jdk/bin/java -server -Xms32m -Xmx200m -
Dcoherence.home=/opt/bea_12.2.1.0/wlserver/../coherence -Dbea.home=/opt/bea_12.2.1.0/wlserver/.. -
Dohs.product.home=/u01/bea_12.2.1.0/ohs -DListenAddress=localhost -
DNodeManagerHome=/opt/bea_12.2.1.0/user_projects/domains/otm643/nodemanager -DQuitEnabled=true -
DListenPort=5556 -Dweblogic.RootDirectory=/opt/bea_12.2.1.0/user_projects/domains/otm643 -

Doracle.security.jps.config=/opt/bea_12.2.1.0/user_projects/domains/otm643/config/fmwconfig/jps-config-jse.xml -
Dcommon.components.home=/u01/bea_12.2.1.0/oracle_common -Dopss.version=12.2.1.2 -
Dweblogic.RootDirectory=/u01/bea_12.2.1.0/user_projects/domains/otm643 -
Djava.system.class.loader=com.oracle.classloader.weblogic.LaunchClassLoader -
Djava.security.policy=/opt/bea_12.2.1.0/wlserver/server/lib/weblogic.policy -
Dweblogic.nodemanager.JavaHome=/u01/otm643/jdk weblogic.NodeManager –v

Once the process completes you can run the following command to see if the installation was successful.

grep "script completed:" web_app_python_exec.log

The following should be displayed.

CreateDomain.py script completed: 0
CreateOHS.py script completed: 0
Https_Configure.py script completed: 0
MDSConfig.py script completed: 0
UserGroup.py script completed: 0
Deploy.py script completed: 0
DomainConfig.py script completed: 0
AuthenticatorAuthorizer.py script completed: 0

INSTALLATION PROBLEMS

If errors are encountered during the installation, you will need to do the following before running the OTM installer again.

1. Drop the repository by running the rcu command mentioned earlier and using the drop option. Then run RCU again and re-create the repository for the installation.
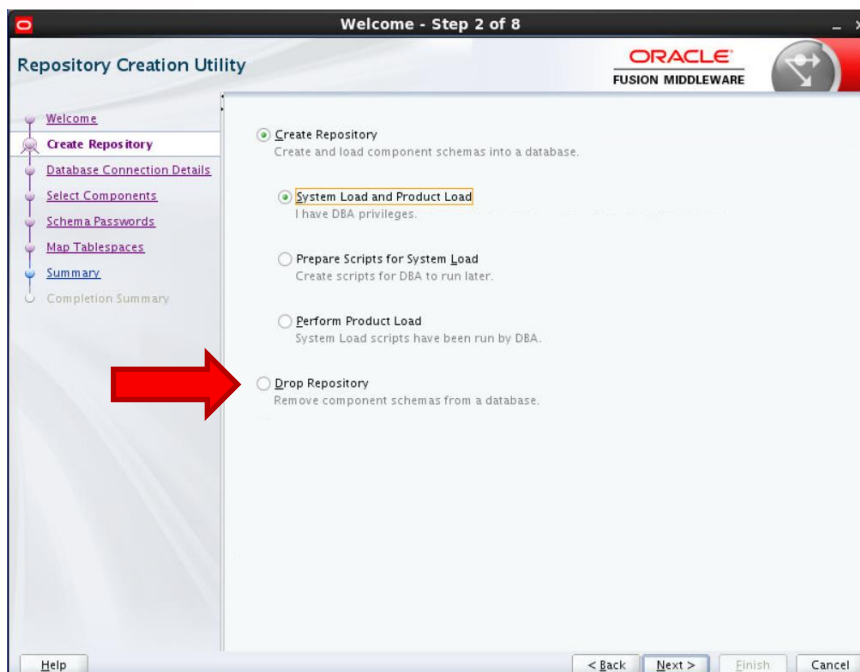
2. Go to the < Weblogic Home >/user_projects/domains dir and delete the domain you created for the installation.
3. Delete the contents of the < OTM Home > directory
4. Go to the user's home directory that is doing the installation and edit the .bashrc file. Remove the reference for the OTM installation or comment it out by adding a # in front of the command line calling gc3env.sh.
5. Re-run the OTM installer

POST INSTALLATION STEPS

We recommend all clients install the patches mentioned on the following note before running any of the database scripts used to create or migrate OTM instance.

Avoiding Known Issues When Migrating to OTM 6.4.3 (Doc ID 2361277.1)

When installing these patches do not run the DB scripts included with the patches. They will be used during the installation or migration needed to create the 6.4.3 database.

Clients migrating from older releases should be sure and read the migration guide carefully and run all pre-migration tasks.

These are the high level steps and the some additional information from the migration guide.

1) Run pre migration tasks and checks
2) Fix potential migration issues identified running the pre migration checks
3) Run the gen_obsolete_objects.sql and clean up obsolete tables and columns from previous versions. The script has two options, one to show you columns and tables that were marked obsolete in previous migration and a second option to remove them. We recommend clients run the script twice, once to generate the list of columns and tables and then run the script again to remove all obsolete tables and columns before starting a migration. This is especially true for clients migrating from older versions of OTM.

4) Move custom objects out of OTM schemas and remove any references to objects in the OTM Schema
5) Run pre migration check again
6) Take a backup or restore point – this is an important step since some migration errors are not recoverable and may require you to restore the DB to the previous version and start again.

The same information is outlined in the **OTM Migration Guide**.

EDITION ENABLED DATABASE SCHEMAS

As part of the 6.4.3 Release, all Oracle Transportation Management Database Schemas are going to be enabled with the database feature Edition Based Redefinition. This is necessary to provide future support for zero downtime patching. The OTM release 6.4.3 uses a new database edition "OTM643" as a default edition instead of the database default edition ORA$BASE. All of the OTM schemas have been editioned enabled except for GLOGOAQ schema, which contains Oracle Advanced Queue related objects.

All of the OTM tables have been converted into Editioned Views. Original tables have been renamed to the table name with the "_T" suffix to facilitate this conversion. After a successful migration to 6.4.3, OTM will use the Editioning view seamlessly. Customer-defined queries, saved queries, and reports will not be affected by this change; they will seamlessly use Editioned Views instead of tables.

Note : Any view, trigger, package, procedure, function, type, VPD policy or synonym will be dropped during 6.4.3 migration if the Oracle Transportation Management does not provide it and if it exists on the OTM database schema. In addition, configurations done to the OTM-provided view, trigger, package, procedure, function, type, VPD policy, or synonym will be lost and it will be replaced with the OTM definition. You must store copies of such objects on the file system and recreate them after migrating to 6.4.3. Database object on the customer-defined database schema may be affected if it references any OTM database object.

Any future configurations should use the Editioned View name in the customer-defined code for referencing the OTM table. You may not add non-edition objects which depend on the edition object provided by the Oracle Transportation Management.
Refer to "Using Edition-Based Redefinition" in Oracle Database Development guide.

PRE-MIGRATION TASKS

1. Ensure that following database init parameters are set to sufficient values for Oracle Transportation Management application. It is recommended that values are set to 3000 or higher.

Open_cursors = 3000
Processes = 3000

Run following query on the database to find values.

select name, value from v$parameter where name in ('open_cursors','processes');

Check with the DBA if values are lower than 3000.

2. Review agents that had used PRINT DOCUMENT or GENERATE DOCUMENT. As PRINT DOCUMENT worked on a Report Set, it should be replaced by a PREPARE REPORT action for each report in the Report Set. GENERATE DOCUMENT was available only to DOCUMENT agents. It would generate a report for an existing document wrapper. This concept was replaced by the GENERATE STANDARD DOCUMENT action on various business objects.

3. Review reports that specify "Both" for the Report Database field. You may want to copy these reports before migration and explicitly set one to be "On-Line Database", and one to be "Off-Line Database". This is not required, but may simplify the report upgrade process.

4. Run the following script to perform pre-migration checks. The script will check invalid objects, disabled constraints, missing database roles, deprecated data or any other checks required prior to starting migration. Check log file pre_migration_check_<dbsid>_<timestamp>.log and make sure that all checks are passed prior to starting migration.

Two command scripts are provided and the script you use is dependent on your operating system.

On the application server, change to directory <otm_install_path>/glog/oracle/script8
UNIX shell script:
./pre_migration_check.sh

or

Windows command line script:
pre_migration_check.cmd

5. Shut down all processes running against the database including Oracle Transportation Management application and web servers.

6. A database backup or database level flashback restore point should be created prior to starting the migration. It may be required to restore the database to pre-migration state in case of a problem during migration, depending on changes made on the database and errors.

CLIENTS WITH SCALABILITY ENABLED

The following section outlines some of the changes that needed to configure 6.4.3 for scalability. This should only be done after the database migration to 6.4.3 is complete, the instance successfully starts and users are able to log in.

Scalability has changed in 6.4.3 to streamline the installation, reduce the overhead of messaging and work transfer between instances. These changes require some changes to the URL's you have defined in the APP_MACHINE and other tables as well as other changes in glog.properties.

Note: Before making the changes to files like glog.properties be sure and make a backup copy.

CHANGING THE MACHINE_URL

If you are migrating to 6.4.3 and already have scalability enabled, you will need to update the MACHINE_URL in the APP_MACHINE table. In previous versions, the out of the box port used for scalability was 7001, this is changed to 8001 in 6.4.3, although this port could be different on your installation. Go to the < OTM Home >/glog/config/ directory and check the glog.properties file for the values associated with these properties.

```
appserver=
appserver.port=
```

Log in as DBA.ADMIN and go to Business Process Automation > Data Export > CSV Export > Press Run
Use the xcsv option
For the table select APP_MACHINE
Set the PUBLIC domain option to N
Press Run
Copy and paste the info displayed on the screen into notepad and save is a csv file called UPDATE_APP_MACHINE.csv.

Information similar to this should be displayed.

```
APP_MACHINE,,,
APP_MACHINE_GID,APP_MACHINE_XID,MACHINE_URL,DOMAIN_NAME
<Machine1Gid>,<Machine1Xid>UNO,t3://<FQDN Server1>:<Port>,PUBLIC
<Machine2Gid>,<Machine2Xid>,t3://<FQDN Server2>:<Port>,PUBLIC
ORACLEQUEUE,ORACLEQUEUE,n/a,PUBLIC
```

Set the MACHINE_URL to match the values associated with the appserver and appserver.port property values. These changes can be uploaded via the UI by logging in as DBA.ADMIN and going to Business Process Automation > Integration > Upload a XML/CSV file. Select the file you created and use the IU option to update the existing records. You can re-run the CSV Export process to confirm the records are updated.

The same changes can be made using update_onecsv.sh. Copy the UPDATE_APP_MACHINE.csv you created to the <OTM Home >/glog/oracle/script8/content_glogowner dir and run the update_onecsv.sh command in the <OTM Home >/glog/oracle/script8 directory.

./update_onecsv.sh UPDATE_APP_MACHINE ../../config <DBSid>

Once the file is loaded the instance should be bounced.

SCALABILITY PATCHES

There are a number of patches that should be installed when configuring scalability for 6.4.3.

Bug 26759498 - Validation Diagnostics Needed for Cloud Sca Installations
Bug 28213533 - GETTING ERROR DURING SCHEDULING REPORTS: SCHEDULEREPORT OF EJB REPORTSESSION
Enh 27185755 - Self-Service AWR/ADDM Style Reports for Cloud Clients
Bug 27350770 - Performance Collectors Still Shows Secure Information
Bug 27810012 - Provide the Ability to Download a ZIP File of a User Log
Bug 27925319 - Configuration Collection is Missing Sca Entries
Bug 28167410 - Cannot Schedule Report in Scalability
Bug 29272205 - SCA MESSAGE DIAGNOSTICS ARE THROWING A NPE WHEN RUN IN A NON
Bug 29618024 - JAVA.LANG.ABSTRACTMETHODERROR: GLOG.SERVER.DIAG.APPDIAGSESSIONSTUB.ACKNOWLEDGEJMSTEST

SCALABILITY PROPERTIES

After the patches are installed you will need to update glog.properties to enable scalability. These changes need to be made on each of the OTM installs where scalability will be enabled.

```
# scalability settings
glog.scalability.on=false - Change this to true
glog.log.ID.JMS.on=false - Change this to true
glog.log.ID.Scalability.on=false - Change this to true
glog.scalability.thisTarget=gc3app-<AppServer> - This needs to change to gc3webapp-<AppServer>
glog.scalability.thisMachine=DEFAULT - add {app} after the = and update the value to match an
APP_MACHINE_GID that points to this servers t3 URL.
glog.scalability.thisMachineURL=$appserver.protocol$$appserver$:$appserver.port$ - add {app} after
the = and update the values to match the appserver.protocol , appserver and appserver.port listed
at the top of the glog.properties file you are editing.
glog.scalability.defaultServer=DEFAULT - This should match the default record in the APP_SERVER
table.
glog.scalability.defaultMachineURL=$appserver.protocol$$appserver$:$appserver.port$ - this should
match the glog.scalability.thisMachine value
glog.scalability.defaultMachine=DEFAULT - this should match the glog.scalability.thisMachine value
glog.scalability.thisMachine={web} - this line needs to be added
glog.scalability.thisMachineURL={web} - this line needs to be added
```

Be sure and set the glog.scalability.topology MachineURL and glog.scalability.web.topologyMachineURL for each server in the scalable instance.

```
glog.scalability.omitMachines=DEFAULT
# list of avaliable app servers to poll for network topology - used only by web
server.  one per line.
!remove glog.scalability.topologyMachineURL
glog.scalability.topologyMachineURL=$appserver.protocol$$appserver$:$appserver.
port$
#glog.scalability.topologyMachineURL=<additional app server>


# list of available web servers
!remove glog.scalability.web.topologyMachineURL
glog.scalability.web.topologyMachineURL=http://$webserver$:$webserver.port$
#glog.scalability.web.topologyMachineURL=<additional web server>
```

Restart the instance and run the following check after all have been restarted.

The patches and changes mentioned above are mentioned in the following MOS notes.

1 Webserver property (thisMachine) must be blank Error Displayed When Checking Scalability Configuration (Doc ID 2400061.1)
OTM 6.4.3 Installer Incorrectly Sets the Value of glog.scalability.thisTarget During Installation (Doc ID 2415591.1)
Avoiding Known Issues When Enabling Scalability in 6.4.3 (Doc ID 2499800.1)

SCALABILITY VERIFICATION

1. Log in as DBA.ADMIN and go to Configuration and Administration > Technical Support > Configuration Collection
2. Move the SCALABILITY DATA, SCALABILITY MESSAGES and SCALABILITY PROPERTIES over to the right side of the screen and press collect
3. Review the completed collection to ensure scalability is working as expected.
4. If errors are noticed, right click in the middle of the screen and select, "This Frame" and then "View Source".
5. Copy and paste the html code into a file and save it as scalability_collection.html and upload to a SR for your setup to be reviewed.

DATA COLLECTIONS FOR SR

The following scripts should be used to provided information OTM SR's.

How to Use the qdlogs.pl Script to Collect Data for Service Requests for Oracle Transportation Management (Doc ID 1519887.1)

OTM Analyzer script for Analysis and Performance Monitoring (Doc ID 1579683.1)

Download both scripts your OTM instance and run the following command from the directory where the files are located.

perl qdlogs.pl -prop <path to glog.properties> -nopid -install -analyzer -sql <path to otm_analyzer.sql>

Note: Other data collections are available depending on the problem type. Review MOS 1519887.1 for additional collection options.

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Integrated Cloud Applications & Platform Services

White Paper **Supplemental Installation Guide for Oracle Transportation Management Version 6.4.3**
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