Oracle® Utilities Work and Asset Management

Installation Guide for Linux Platform

Release 1.9.1.3

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Oracle® Utilities Work and Asset Management Installation Guide Release 1.9.1.3 on Linux Doc v1 rev.0 5/9/19

Contents

Preface

This guide provides information needed to install Oracle Utilities Work and Asset Management in a Linux operating system application server.

Audience

Oracle Utilities Work and Asset Management Installation Guide is intended for anyone installing Oracle Utilities Work and Asset Management Release 1.9.1.2 on Linux.

Related Documents

For more information on this release, refer to the following related documentation.

User Documentation
Please visit the UGBU Documentation portal for Oracle Utilities Work and Asset Management user documentation:

http://docs.oracle.com/cd/E55384_01/index.htm

- *Oracle Utilities Work and Asset Management Configuration Guide*
- *Oracle Utilities Work and Asset Management Online Help*
- *Oracle Utilities Work and Asset Management User Guide*
- *Oracle Utilities Work and Asset Management Customization Guide*

Installation Documentation

About the Release
- *Oracle Utilities Work and Asset Management Quick Install Guide for Release 1.9.1.3*
- *Oracle Utilities Work and Asset Management Release Notes Guide for Release 1.9.1.3*

New Installations
- *Oracle Utilities Work and Asset Management Installation Guide for Release 1.9.1.3 on Linux*
- *Oracle Utilities Work and Asset Management Installation Guide for Release 1.9.1.3 on Windows*

Supporting Docs
- Oracle WebLogic Server 12.2.1.3.0 Documentation:
  https://docs.oracle.com/middleware/12213/wls/index.html

- Oracle Fusion Middleware Oracle Forms and Reports 12.2.1.3.0 Documentation: https://docs.oracle.com/middleware/12213/formsandreports/index.html

Knowledge Base Articles

Please access https://support.oracle.com to find related knowledge base articles.

- Support for Add-ons (Article ID 1336258.1)
- Practical Example for demonstrating Oracle Utilities Work and Asset Management 1.9.1.3 Installation and Configuration (Doc ID 2530422.1)

Supported Platforms and Hardware Requirements

This section provides information regarding the operating systems and servers on which this release has been tested and certified.

Supported Platforms

The installation has been certified to operate on many operating system, application server, and database server combinations. See below for details on the browser, operating system and application server combinations on which this release has been tested and certified. If you are consulting this matrix in between releases (including service pack and patch releases), you should contact customer support for the most up to date version.

Operating System	Chipset	Application Server	Database Server	Client Operating System
*AIX 7.1 TL4 (64-bit)	Power 64-bit	Not Supported	Supported Oracle Database versions include 12c Standard or Enterprise Edition 12.2.0.2.0 - 64-bit and Oracle Database 12c Standard or Enterprise Edition 12.1.0.2.0 - 64bit	Microsoft Windows10 x86 (64-bit)
Oracle Linux 6.5+, 7.x (64-bit) Red Hat Enterprise Linux 6.5+, 7.x (64-bit)	x86_64	Weblogic Server 12.2.1.3. Forms and Reports12.2.1.3		
*Oracle Solaris 11 (64-bit)	SPARC	Not Supported		
Microsoft Windows 2012/ 2012R2 Server Enterprise Edition (64-bit)	x86_64	Weblogic Server 12.2.1.3. Forms and Reports12.2.1.3		
Microsoft Windows 2016 Standard (64-bit)	x86_64	Weblogic Server 12.2.1.3. Forms and Reports12.2.1.3		

Client Operating System Specific

Browsers
- Internet Explorer 11 (32-bit)
- Mozilla Firefox ESR 60+ (32-bit)

Java
- Java Runtime Environment (JRE) / Java Virtual Machine (JVM) Plug-in for Browser
  This list reflects the highest supported versions. Refer to the community website for a full list.
    - 1.8.0_201-b09 (32-bit)

Application Server Specific

Java
- JDBC Driver 12c (WebLogic)

Integrations
- GIS - ESRI ArcGIS 10.x
- Oracle Business Intelligence Publisher 11g Release 1 (11.1.1.7.0)
- Oracle Integration Pack for Oracle Utilities Field Work v12.1

Notes
- Fine Grain Access functionality requires Enterprise Edition Database Server.
- * If your database server is installed on AIX, HP or Solaris, please refer to the database support document for these servers.
- You can also refer to the Oracle Utilities Work and Asset Management community website for more information on this release and interaction with the application community.
  https://communities.oracle.com/portal/server.pt/community/
  work_and_asset_management/527

Support for Software Patches and Upgrades

Due to the ongoing nature of software improvement, outside vendors and other Oracle products will issue patches and service packs for the operating systems, application servers and database servers on top of specific versions that Oracle Utilities Work and Asset Management has been tested with. If it is necessary to apply an upgrade, please do that in a test environment prior to updating the Oracle Utilities Work and Asset Management production environment.

Always contact Oracle support prior to applying vendor updates that do not guarantee backward compatibility.

Installation Guide for Linux

This guide provides information and steps needed to for new installations of Oracle Utilities Work and Asset Management Release 1.9.1.3 on a Weblogic server in a Linux operating system application server.

Because Oracle Utilities Work and Asset 1.9.1.3 is installed on the latest Oracle Weblogic Server and Oracle Forms and Reports versions, a new install is required. The database schema can still be upgraded by following the process outlined in Appendix B.

Before Installation

Review this entire guide before you begin your installation. Please also note the following:

- Refer to the Supported Platforms and Hardware Requirements section to verify hardware, software and platforms compatible with this release.
- Please note that the person completing the installation must have sufficient DBA privileges. This can be added using:

```
grant create type to <synergen_schema_owner>;
```

Prerequisite Software

Before you install Oracle Utilities Work and Asset Management, you must install prerequisite software.

Refer to the respective installation documentation of the specific software for instructions on downloading and installing.

This section includes information on the following:

- Prerequisite Software for Database Server
- Prerequisite Software for Application Server
- Installing Prerequisite Software

Prerequisite Software for Database Server

The prerequisite software for the database component includes:

- Oracle Database 12c (12.1.0.2.0) Enterprise or Standard Edition

    or

- Oracle Database 12c (12.2.0.1.0) Enterprise or Standard Edition

Prerequisite Software for Application Server

The prerequisite software for the application component of Oracle Utilities Work and Asset Management is as follows:

- JDK 1.8.0_131 and up (64-bit)
- Oracle WebLogic v12.2.1.3
- Oracle Forms and Reports v12.2.1.3
- Patch 27944496 - FRM-41068 : ERROR IN SET_MENU_ITEM_PROPERTY
- Synergen data source

Installing Prerequisite Software

This section describes the documentation references and notes related to installing the prerequisite software. Refer to the Knowledge Base article and respective installation documentation of the specific software for instructions on downloading and installing.

Oracle Database

Please note the following for installing the Oracle Database:

- Review the Oracle Database documentation for complete instructions http://www.oracle.com/technetwork/database/enterprise-edition/documentation/index.html
- Install the supported Oracle database server
- Create a WAM database instance - Refer to Appendix A: Create a Database Instance
    - **Existing installations**: Created by the existing data source
    - **New installations**: Created by this DEMO data source

JDK 1.8.0_131 and up (64-bit)

Download and install JDK 1.8.0_131+ as appropriate.

Oracle WebLogic v12.2.1.3

Please note the following for installing Oracle WebLogic v12.2.1.3:

- Review the Oracle WebLogic Server 12.2.1.3 Release installation guide for instructions. https://docs.oracle.com/en/middleware/lifecycle/12.2.1.3/infin/index.html

- Refer to Oracle Support Knowledge Base article Practical Example for demonstrating Oracle Utilities Work and Asset Management 1.9.1.3 Installation and Configuration (Doc ID 2530422.1) for detailed installation instructions.

Oracle Forms and Reports v12.2.1.3

Please note the following for installing Oracle Forms and Reports v12.2.1.3:

- Review Fusion Middleware Installing Forsms and Reports. https://docs.oracle.com/middleware/12213/formsandreports/install-fnr/installation-and-configuration-overview.htm

- For detailed steps, see Knowledge Base article: How to Install and Configure Oracle Forms & Reports 12cR2 with OHS 12cR2 Using a Single Domain (Doc ID 2127048.1)

- Refer to Oracle Support Knowledge Base article Practical Example for demonstrating Oracle Utilities Work and Asset Management 1.9.1.3 Installation and Configuration (Doc ID 2530422.1) for detailed installation instructions.

Patch 27944496 - FRM-41068 : ERROR IN SET_MENU_ITEM_PROP-ERTY

Download and apply Patch 27944496 from My Oracle Support. Follow instructions in the patch readme file.

Create a "synergen" JDBC Data Source

1. Login to the **WebLogic Server Administration** console. http://myvm.us.oracle.com:7001/console/login/LoginForm.jsp

2. Select **Data Sources** and click **Lock & Edit.**

3. On the **Configuration** tab, click New and select **Generic Data Source**.

4. On the **Create a new JDBC Data Source** page, enter "synergen" as the name of the JDBC source and "jdbc/synergen" as the JNDI name.

5. Click **Next**.

6. When asked to choose the database driver, select "**Oracle's Driver (Thin) for Service connections: Versions:Any**" and click **Next**.

7. On the **Transaction Options** page, make sure **Supports Global Transactions and One-Phase Commit** is selected and click **Next**.

8. On the **Connection Properties** page, enter in the information that is relevant to your environment and click **Next**. Note that the Database Username that you enter here must have superuser role.

   Example:

   - Database Name: wam19130db

   - Host Name: DB_HOST

   - Port: 1521

   - Database User Name: xadmin_synergen

   - and password for xadmin_synergen

   Note: the Database User Name must be xadmin_synergen

9. On the **Test Database** page, click **Test Configuration** to check database connectivity. If the test is successful, click **Next** else re-enter the correct values.

10. On the **Select Targets** page, check the boxes as shown and click **Finish**.

11. Click **Activate Changes** to commit.

Target Environment

Throughout this document, reference is made to a 'target environment'. An 'environment' is a complete *Oracle Utilities Work and Asset Management* application environment (Oracle Database instance, SIA instance, ect) configured for a 'purpose' such as 'training', 'test', 'production', etc. The installation program will ask you to select the target environment you want to install.

When installing the various components (potentially on different servers), it is essential that you select the same target environment on each server.

Install Components in Target Environment

The installation for Linux is delivered in a tar file:

1. Extract the contents of WAM19130.tar.gz to a directory of your choice.

2. When asked to 'Enter the name of the environment you wish to setup during this installation', the name entered here will be used to create a number of items, including directory folder names, Oracle OC4Jinstances, database alias pointers, etc. The name must match the instance name that was used when creating the OC4J in the Mid-Tier configuration step.

You must use the same 'case' when entering the environment name in all four installation types - for example, you must enter 'DEMO' in all four installations, and not mix 'DEMO', 'demo' and 'Demo' -otherwise, you will encounter problems in the application.

Installation

1.   Install Oracle Utilities Work and Asset Management 1.9.1.3

1.1   The install program creates the WAM1913 folder under the 'synergen' directory and configures the key components needed for Oracle Utilities Work and Asset Management to run.

1.2   1.2Run WAMSIAInstall.sh and respond to the prompts:

bash-4.2$ ./WAMSIAInstall.sh

Enter the Oracle Home directory that was specified during the 'Installation Location' step (ex: /u01/Oracle/Middleware/Oracle_Home): /u01/Oracle/Middleware/Oracle_Home

Enter the Oracle Domain name that was specified during the 'Create Domain' configuration step (ex: base_domain): base_domain

Enter Forms PORT (ex: 9001): 9001

Enter Report Port (ex: 9002): 9002

Enter WAM SIA Directory (ex: /home/oracle/synergen): /u01/synergen

Enter WAM Instance Forms Name (ex: PROD19): PROD1913

Enter WAM DB Name (ex: PROD19): PROD1913DB

Enter Report Name (ex: rep_linserver1): rep_linserver1

Enter Mail Server (ex: mail.server.com): mail.server.com

Enter Repcache name (ex: repcache): repcache

The Fusion Middleware directory is:

   The Oracle Home directory is: /u01/Oracle/Middleware/Oracle_Home

   The Oracle Domain directory is: /u01/Oracle/Middleware/Oracle_Home/user_projects/domains/base_domain

   The Oracle Forms port is: 9001

   The Oracle Report port is: 9002

   The WAM SIA directory is: /scratch/gbuora/synergen

   The WAM Instance name is: PROD1913

   The DB Instance name is: PROD1913DB

   The Report name is: rep_linserver1

   The Mail Server is: mail.server.com

   The Repcache name is: repcache

Are these values correct (y/n)?

2.   Deploy Oracle Utilities Work and Asset Management 1.9.1.3

2.1   Login to the WebLogic Server Administration console.

http://myvm.us.oracle.com:7001/console/login/LoginForms.jsp

2.2   Select Deployments and click Lock & Edit.

2.3   On the **Summary of Deployments** page, click Install.

2.4   On the **Locate Deployment** page, navigate to where the root of the WAM instance was installed in the **Current Location** file path.

2.5   Select the "synergen" folder.

2.6   Select the WAM1913 folder.

2.7   Select the "sia (open directory)" radio button.

2.8 Select the "Install this deployment as an application" radio button.

2.9 Check the selections according to the following and click **Next**:
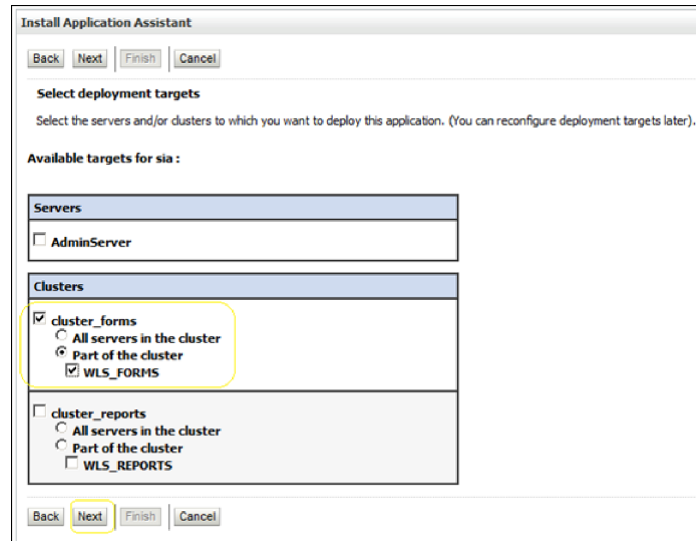
2.10 On the **Optional Settings** page, enter the name of the deployment in the **General** section.
Ex: WAM1913.

2.11 Select "DD only" as the security model.

2.12 Select "I will make the deployment accessible from the following location" in the **Source Accessibility** section.

Location: /home/oracle/synergen/WAM1913/sia

2.13 Select 'Use the same accessibility as the application" in the **Plan Source Accessibility** section.

2.14 Click **Next**.

2.15 On the **Additional Configuration** page, select "Yes, take me to the deployment's configuration screen" and click **Finish**.

2.16 From the main page of the **Administration** console, click the **Configuration** tab.

2.17 Verify the settings and click **Save**.

2.18 On the **General** sub tab enter the following and click Save.

• Session Timeout: 1800

• Context Root: /WAM1913/synergen

Note: Context Root has to be /DeployName/synergen

2.19 On the **Save Deployment Plan** page, click **OK**.

2.20 In the **Change Center**, click **Activate Changes**.

2.21 On the **Overview** tab, verify the deployment.

Post Installation

Complete the following after installation, as needed for your organization:

1. Reboot the Weblogic Server and Test

1.1   Reboot the WebLogic server.

This task activates the processes that require a restart after installation.

1.2   Test the application.

1.2.1 Sign in to the application website.

URL http://$APPLICATION_SERVER:9001/WAM1912/synergen
9001 is the default WLS_FORMS port.

1.2.2 Launch a WAM module.

2. Deploy the Oracle Utilities Work and Asset Management Spell Check Application

2.1   Create a "formspell" folder under $SYNERGEN_HOME.

Execute the command: mkdir formspell.

2.2   Extract formspell.war.

Execute the command: jar -xvf formspell.war.

2.3   Login to the **WebLogic Server Administration Console**.

2.4   Click the **Lock & Edit** button.

2.5   Select "**Deployments**" under **Domain Structure**.

2.6   Click the **Install** button.

2.7   Set the file path as: $SYNERGEN/formspell.

2.8   Select the formspell radio button and click **Next**.

2.9   Select the "Install this deployment as an application" radio button and click **Next**.

2.10   Select cluster_forms > part of the cluster > WLS_FORMS and click **Next**.

2.11   Select the "DD Only: Use only roles and policies that are defined in the deployment descriptors"radio button.

2.12   Select the "I will make the deployment accessible from the following location," enter /home/wams/synergen/formspell and click **Finish**.

2.13   In the **Change Center,** click the **Activate Changes** button.

The system displays a confirmation screen notifying you that all changes have been activated.

2.14   Under **Domain Structure**, **ClassicDomain** (my domain home), click **Deployments**.

2.15   Start the service by checking the box next to "formspell".

2.16   Click the **Lock & Edit** button then select the **Configuration** tab.

2.17   Set the **Session Timeout** (in seconds).
Recommended value = 1800

2.18   Set the **Context Root** as /formspell and click **Save**.

2.19   Confirm the settings in the **Save Deployment Plan** screen then click **OK**.

2.20   Click the **Activate Changes** button.

2.21   Stop **WLS_Forms** and update the permissions files.

chmod for the files: SNDSPELL.JDX and ServletLog.txt to 777 (rwx)

2.22   Edit the **jspell.properties** file:

```
[wams@njwin20-v06 WEB-INF]$ cat jspell.properties
index=/home/wams/synergen/formspell/WEB-INF/SNDSPELL.JDX
log=/home/wams/synergen/formspell/WEB-INF/ServletLog.txt
[wams@njwin20-v06 WEB-INF]$ pwd
/home/wams/synergen/formspell/WEB-INF
```

2.23   Edit the **Edit web.xml** file.

```
                              <param-name>propertiesFile</param-name>
                              <param-value>/home/wams/synergen/formspell/WEB-I
NF/jspell.properties</param-value>
```

2.24   Verify your spell checker configuration by re-starting WLS_FORMS then navigating to the URL:

http://njwin20-v02.us.oracle.com:9001/formspell/jspell?text=check%20tehat%20T%20F%201

If the "JSpell Results" screen displays with test values, formspell setup is configured correctly.

2.25   Verify that spell checking is turned on by opening the **Installation Parameters** module and reviewing the setting for the **SPELL CHECK** object.

This should be set to **ON**.

2.26   In the **Oracle Utilities Work and Asset Management** application, configure the **Spell Check Business Rule** with the following:

Key	YES/NO	Value
Debug Messages	YES	Set the YES/NO value to YES to send debug messages to the java console. No is the default.
Dictionary Port	YES	Set to 80. This allows a non-default value to be entered in the dictionary server value
Dictionary Server	YES	Set to YES and enter the <server>:<port> combination for the SIA server. In this example: njwin20-v02.us.oracle.com:9001/formspell
Dictionary Type	YES	Set to SERVLET.
Ignore First		Set to YES if you want to ignore irregular capitalization on the first word. NO is the default.
Ignore Irregular		Set to YES to ignore irregular words. NO is the default.
Ignore Upper		Set to YES to ignore words in all caps. YES is the default.

2.27   Test spell checking in the application by logging in and typing text in some field. Click the **Spell Check** icon to verify that you do not receive any errors and that the spell checker is working.

3.   Grant Execute

Provide a grant execute to the DBMS packages listed below. Log into the database as the sysdba owner and execute the commands indicated. (This must be done prior to executing manual scripts)

This adds an "execute" privilege on each package to application users (directly or through a common role). Note that only the 'SYS' user is capable of granting privileges to the package.

'superuser' is the role in the synergen schema. You can find this by executing the following sql statement in the synergen schema:

select key_value from sa_installation_parameters where key_name like 'SUPER%';

- SYS.DBMS_LOCK

  Command: grant execute on dbms_lock to superuser;

- SYS.DBMS_CRYPTO

  Command: grant execute on dbms_crypto to public;

- SYS.DBMS_ASSERT

  Command: grant execute on dbms_assert to public;

4.   Copy Record

If your user base requires the ability to use **COPY RECORD** functionality or needs to access reports from the actions list that are added in the Modules Administration - Forms module Module Reports view, you must also grant access to the all_cons_columns view using the following:

```
grant select on all_cons_columns to SUPERUSER;
```

5.   12G Database

Database Parameters of Note:

These database parameters should be considered and set, if applicable, according to your business needs following installation.

- SEC_CASE_SENSITIVITY_LOGON (Oracle Database 11g only)- This is set to TRUE as default you must set this value to FALSE to avoid logon errors related to case sensitive passwords.
- PASSWORD_LIFE_TIME - by default, passwords expire after 180 days, however, expiration is managed within Oracle Utilities Work and Asset Management, so to avoid conflicts, this should be set to UNLIMITED.

Appendix A

Create a Database Instance

Load a clean or new Oracle Utilities Work and Asset Management database instance prior to installing the application.

Load Clean or New Database

There are two options to create a database instance:

- Existing customers can use their own current production data to create and configure the database instance.
- Alternately, you can use the sample data as indicated in the following steps.

1. Run setup.exe.

   The **Install Shield Welcome** screen opens. Select Database Objects 19.1.3 and follow the prompts.

2. Create a database and an INDX tablespace for the database.

3. Run the createuser.sql script, found in the1.9.1.3 tools directory, as the system user from a sqlplus session.

4. Do a full import of the wamnew1913 or wamsmp1913 database, depending on your requirements. The file must be uncompressed first.

   Wamsmp1913 contains an Oracle Work and Asset Management database export with sample data. Wamnew1913 is essentially an empty database with no sample data.

5. After the import is complete, run the servpk19130.sql script, found in the1.9.1.3 tools directory, as the synergen user from a sqlplus session.

6. In the event there are objects that have not compiled, execute the jobview.sql script, found in the 1.9.1.3 tools directory, as the synergen system user from a sqlplus session.

   Sample Objects:

   - SDBP_MWM_INTEGRATION
   - PROCEDURE SDBP_CCB_SERVICE_REQ_INTERFACE

- SDBP_JOB_ERROR_LOG

In the event there are objects that have the key word PROJECT in them that have not compiled, do the following:

1. Log into a sqlplusw session as the synergen user.

2. Run the servpk19130.sql script, found in the 1.9.1.3 tools directory.

3. At the sql prompt, connect as projuser/<password>@<db name>.

4. At the sql prompt, run the projuser_grantsyn.sql script, found in the V1.9.1.3 tools directory.

5. At the sql prompt, connect as synergen<password>@<db name>

6. At the sql prompt, run the recompile.sql script, found in the 1.9.1.3 tools directory.

7. Run the cres7syn.sql script, found in the1.9.1.3 tools directory, as the synergen user from a sqlplus session.

8. Run the cres7grt.sql script, found in the 1.9.1.3 tools directory, as the synergen user from a sqlplus session.

9. Log into a sqlplus session as the sysdba user and execute the admin_dbms_job.pkg and admin_dbms_job.pkb located in the 1.9.1.3tools/s60obj folder.

Appendix B

Upgrade the Oracle Utilities Work and Asset Management Database Instance to 1.9.1.3

All database objects and scripts for Oracle Utilities Work and Asset Management 1.9.13 are delivered enabling customers to upgrade from any 1.9.1.2 version. For example, a customer at 1.9.1.2 can upgrade directly to 1.9.1.3 and a customer at 1.9.1.2.9 can upgrade directly to 1.9.1.3.

1. Make a backup of the database to be upgraded prior to running the 1.9.1.3 upgrade scripts.

2. Untar the WAM1913.tar file.
3. Apply the scripts to the database instance.

Move or copy the **ServicePack1913** folder to the database server.

Run the **servpk19130.sql** script as the schema owner (usually synergen)

Review the **servpk19130.log** file.

Note: All database objects and scripts for Oracle Utilities Work and Asset Management 1.9.13 are delivered enabling customers to upgrade from any 1.9.1.2 version. As a result, the upgrade might produce errors in the servpk19130.log like these and can be ignored:

```
Executing 17913309.sql
Start execute 17913309.sql
INSERTING into SA_FORM_NAMES_TOPBAR
Insert into SA_FORM_NAMES_TOPBAR
*
ERROR at line 1:
ORA-00001: unique constraint (SYNERGEN.PK_SA_FORM_NAMES_TOPBAR)
violated
Commit
Commit complete.
End execute 17913309.sql
Executing 18898786.sql
Start execute 18898786.sql
ADD ORIGIN_WORK_ORDER_NO VARCHAR2(7)
      *
ERROR at line 2:
ORA-01430: column being added already exists in table
```