

**The structure of the link to the Application Express administration services is as follows:**

http://host:port/pls/apex/apex\_admin (Oracle HTTP Server with mod\_plsql)

http://host:port/apex/apex\_admin (Oracle XML DB HTTP listener with the embedded PL/SQL gateway)

http://host:port/apex/apex\_admin (Oracle REST Data Services)

The structure of the link to the Application Express development interface is as follows:

http://host:port/pls/apex (Oracle HTTP Server with mod\_plsql)

http://host:port/apex (Oracle XML DB HTTP listener with the embedded PL/SQL gateway)

http://host:port/apex (Oracle REST Data Services)

- 1) Download the ORDS
- 2) <https://www.oracle.com/database/technologies/appdev/rest-data-services-v192-downloads.html>
- 3) Unzip the folder
- 4) Rename the folder as Ords and keep in T:\cis\Ords where apex is there
- 5) Copy the Images folder from apex installation and pas in Ords Folder
- 6) Go to java path and perform the java -jar command

**To avoid Step 5 to 9 do the following setting in T:\CIS\ORDS\params\ords\_params.property**

```
db.hostname=localhost
db.port=1521
db.servicename=xe
db.sid=
db.username=APEX_PUBLIC_USER
migrate.apex.rest=false
rest.services.apex.add=false
rest.services.ords.add=true
schema.tablespace.default=SYSAUX
schema.tablespace.temp=TEMP
standalone.http.port=8080
standalone.static.images=t:\cis\ords\images
user.tablespace.default=USERS
user.tablespace.temp=TEMP
```

```
C:\Windows\system32\cmd.exe - java -jar T:\Software\ords-19.2.0.199.1647\or...
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\jignesh>cd C:\Program Files\Java\jdk1.8.0_241\bin
C:\Program Files\Java\jdk1.8.0_241\bin>java -jar T:\CIS\apex\ords\ords.war
Retrieving information.
Error the ORDS_VERSION does not exist.
C:\Program Files\Java\jdk1.8.0_241\bin>java -jar T:\Software\ords-19.2.0.199.1647\ords.war
This Oracle REST Data Services instance has not yet been configured.
Please complete the following prompts

Enter the location to store configuration data: T:\oracle\app\oracle\product\11.2.0\server
Enter the name of the database server [localhost]:_
```

- 7) Enter the Configuration data location :- T:\oracle\app\oracle\product\11.2.0\server
- 8) Database server :- Localhost
- 9) Listen port :-1521
- 10) Enter 2 for Service Name :- Xe

```
C:\Windows\system32\cmd.exe - java -jar T:\Software\ords-19.2.0.199.1647\or...
Enter the location to store configuration data: T:\oracle\app\oracle\product\11.2.0\server
Enter the name of the database server [localhost]:
Enter the database listen port [1521]:
Enter 1 to specify the database service name, or 2 to specify the database SID [1]:
Enter the database service name:xe
Enter the database password for ORDS_PUBLIC_USER:_
```

- 11) ORDS\_PUBLIC\_USER Passwor :- Manager 1

```
C:\Windows\system32\cmd.exe

t:\CIS\ORDS>java -jar ords.war
Enter the database password for ORDS_PUBLIC_USER:
Confirm password:
Requires to login with administrator privileges to verify Oracle REST Data Services schema.

Enter the administrator username:sys
Enter the database password for SYS AS SYSDBA:
Confirm password:

Retrieving information.
Enter 1 if you want to use PL/SQL Gateway or 2 to skip this step.
If using Oracle Application Express or migrating from mod_plsql then you must enter 1 [1]:1
Enter the database password for APEX_PUBLIC_USER:
Confirm password:
Enter the database password for APEX_LISTENER:
Confirm password:
Enter the database password for APEX_REST_PUBLIC_USER:
Confirm password:
Mar 31, 2020 6:07:30 AM
INFO: reloaded pools: []
Installing Oracle REST Data Services version 19.2.0.r1991647
... Log file written to C:\Users\jignesh\ords_install_core_2020-03-31_060731_001
```

- 12) Give Manager 1 for all password
- 13) Enter 2 for Exit from Installation

```
C:\Windows\system32\cmd.exe

Confirm password:
Mar 31, 2020 6:07:30 AM
INFO: reloaded pools: []
Installing Oracle REST Data Services version 19.2.0.r1991647
... Log file written to C:\Users\jignesh\ords_install_core_2020-03-31_060731_001
00.log
... Verified database prerequisites
... Created Oracle REST Data Services proxy user
... Created Oracle REST Data Services schema
... Granted privileges to Oracle REST Data Services
... Created Oracle REST Data Services database objects
... Log file written to C:\Users\jignesh\ords_install_datamodel_2020-03-31_060743_00920.log
... Log file written to C:\Users\jignesh\ords_install_apex_2020-03-31_060744_00873.log
Completed installation for Oracle REST Data Services version 19.2.0.r1991647. Elapsed time: 00:00:14.655

Enter 1 if you wish to start in standalone mode or 2 to exit [1]:2

t:\CIS\ORDS>java -jar ords.war static t:\cis\ords\images
WAR Generation complete
WAR location      : T:\CIS\ORDS\i.war
Context path      : /i
Static resources  : t:\cis\ords\images
```

- 14) Give static Image path

```
C:\Windows\system32\cmd.exe
... Log file written to C:\Users\jignesh\ords_install_core_2020-03-31_060731_001
00.log
... Verified database prerequisites
... Created Oracle REST Data Services proxy user
... Created Oracle REST Data Services schema
... Granted privileges to Oracle REST Data Services
... Created Oracle REST Data Services database objects
... Log file written to C:\Users\jignesh\ords_install_datamodel_2020-03-31_06074
3_00920.log
... Log file written to C:\Users\jignesh\ords_install_apex_2020-03-31_060744_008
73.log
Completed installation for Oracle REST Data Services version 19.2.0.r1991647. El
apsed time: 00:00:14.655

Enter 1 if you wish to start in standalone mode or 2 to exit [1]:2

t:\CIS\ORDS>java -jar ords.war static t:\cis\ords\images
WAR Generation complete
WAR location      : T:\CIS\ORDS\i.war
Context path      : /i
Static resources  : t:\cis\ords\images
Ensure the static resources are available at path: t:\cis\ords\images
on the server where the WAR is deployed

t:\CIS\ORDS>
```

15)


## Uninstall ORDS

```
on the server where the WAR is deployed
t:\CIS\ORDS>java -jar ords.war uninstall
```


## 1.7.4 Installing the Apache Tomcat Deployment

1) Download Tomcat

<https://tomcat.apache.org/download-80.cgi>



# Apache Tomcat®


[LEARN MORE](#)

[Save the date!](#)

## Apache Tomcat

- Home
- Taglibs
- Maven Plugin

## Download

Which version?

- Tomcat 10 (alpha)
- Tomcat 9**
- Tomcat 8
- Tomcat 7
- Tomcat Connectors
- Tomcat Native
- Taglibs
- Archives

## Documentation

- Tomcat 10.0 (alpha)

## Tomcat 9 Software Downloads

Welcome to the Apache Tomcat® 9.x software download page. This page provides download links for archives of older releases.

Unsure which version you need? [Specification versions implemented](#), [minimum Java version required](#)

### Quick Navigation

[KEYS](#) | [9.0.33](#) | [Browse](#) | [Archives](#)

### Release Integrity

You **must** [verify](#) the integrity of the downloaded files. We provide OpenPGP signatures for every release. We also provide [SHA-512](#) checksums for every release for download, and make sure it is the same as ours.

### Mirrors

You are currently using <https://mirror.its.dal.ca/apache/>. If you encounter a problem with this mirror (at the end of the mirrors list) that should be available.

Other mirrors:

- 1) Copy the contents of the <apex directory>/images folder to <Tomcat directory>/webapps/i/.

Where

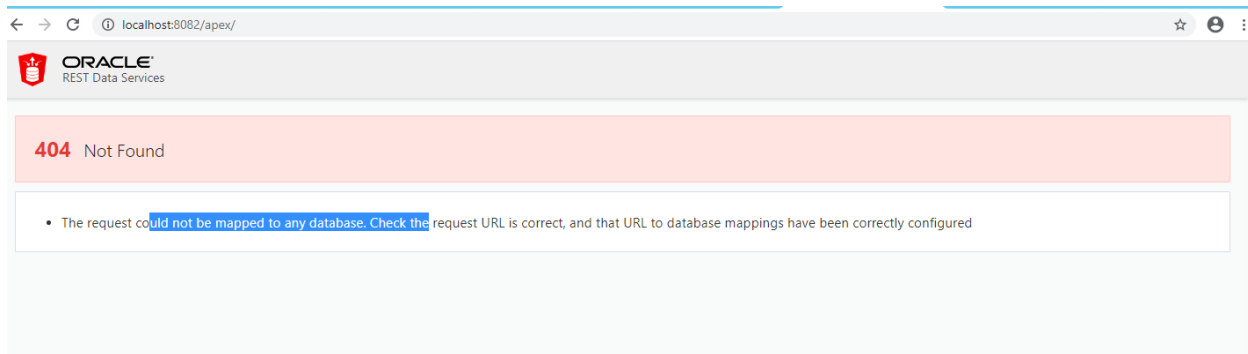
<apex directory> is the directory location of the Oracle Application Express distribution.

<Tomcat directory> is the folder where Apache Tomcat is installed.

- 2) Move the ords/apex.war file into the webapps folder where Apache Tomcat is installed

### 3) Run the URL Now

**(Tomcat ) ORDS database not mapped an database**



If Error Occurred then Perform the Below step

16 ) Perform Setup command

A)

Before Unlock All user

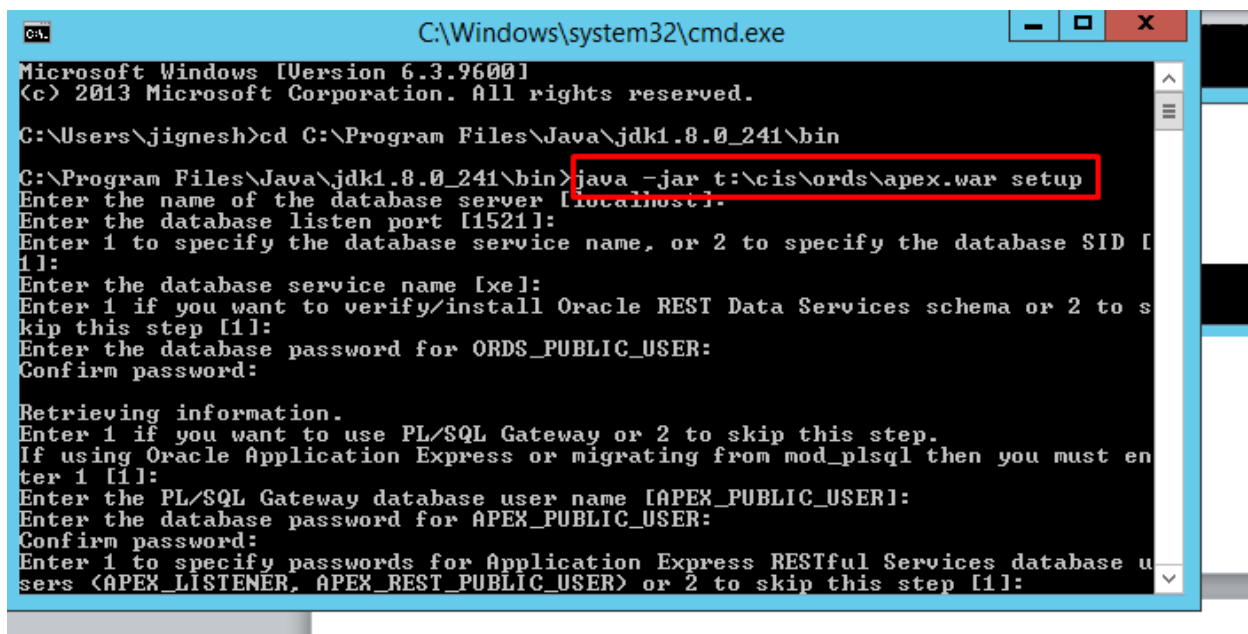
```
SELECT username, account_status, created, lock_date, expiry_date FROM dba_users WHERE  
account_status != 'OPEN';
```

\*= all apex and ORds user

```
ALTER USER * IDENTIFIED BY Manager1 ACCOUNT UNLOCK;
```

```
ALTER USER APEX_190200 IDENTIFIED BY Manager1 ACCOUNT UNLOCK;
```

B) java -jar apex.war setup



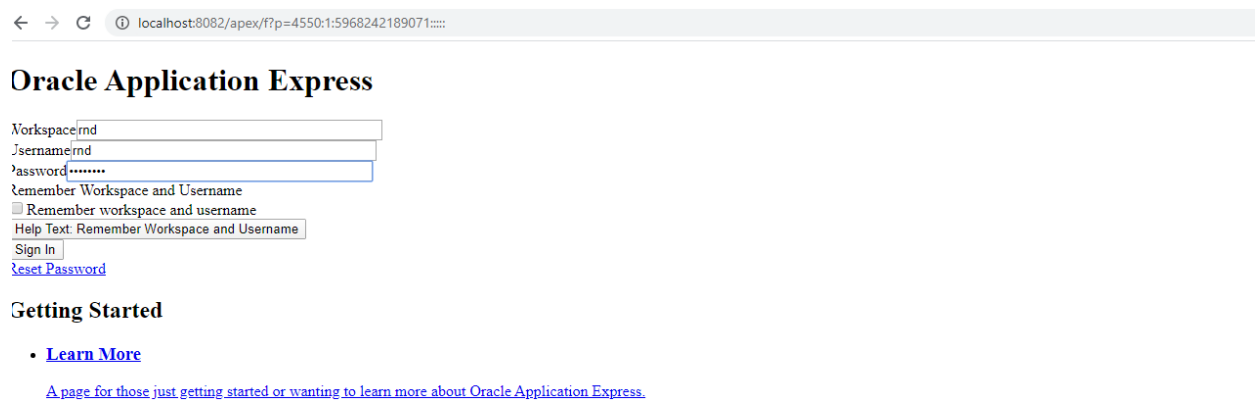
```
C:\Windows\system32\cmd.exe
kip this step [1]:
Enter the database password for ORDS_PUBLIC_USER:
Confirm password:

Retrieving information.
Enter 1 if you want to use PL/SQL Gateway or 2 to skip this step.
If using Oracle Application Express or migrating from mod_plsql then you must en
ter 1 [1]:
Enter the PL/SQL Gateway database user name [APEX_PUBLIC_USER]:
Enter the database password for APEX_PUBLIC_USER:
Confirm password:
Enter 1 to specify passwords for Application Express RESTful Services database u
sers (APEX_LISTENER, APEX_REST_PUBLIC_USER) or 2 to skip this step [1]:
Enter the database password for APEX_LISTENER:
Confirm password:
Enter the database password for APEX_REST_PUBLIC_USER:
Confirm password:
Mar 31, 2020 9:00:41 AM
INFO: reloaded pools: []
Mar 31, 2020 9:00:41 AM oracle.dbtools.rt.config.setup.SchemaSetup install
INFO: Oracle REST Data Services schema version 19.2.0.r1991647 is installed.
C:\Program Files\Java\jdk1.8.0_241\bin>_
```

16) Restart the Tomact Server form service.msc

Perform the URL Again

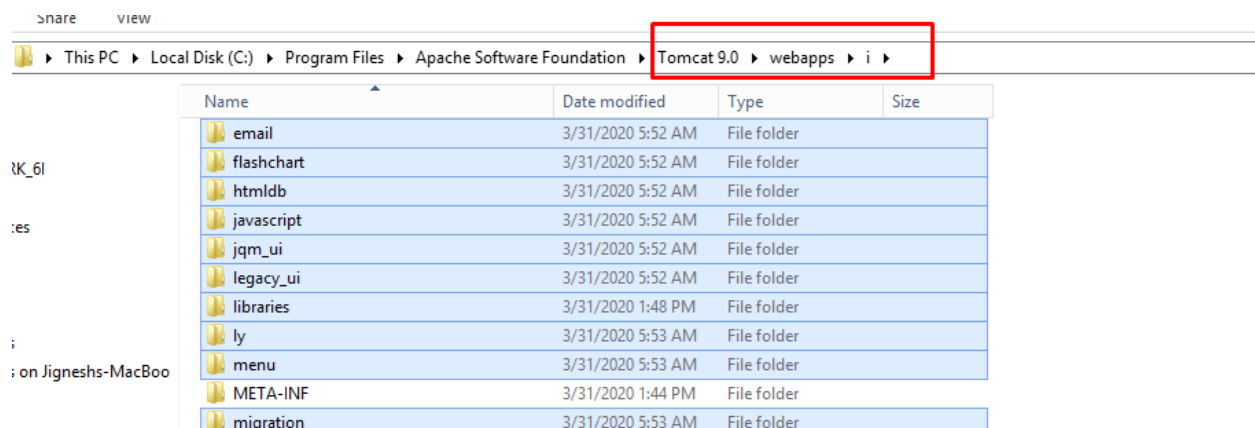
Localhost:8082/apex



## 4.6.1 Copying the Images Directory

Changing the image path and/or directory in Apex

Need to copy apex / Image folder content and past in Tomcat \webapps\i



Or

Go to the apex/utilities directory

perform SQL> @reset\_image\_prefix

SQL> set serveroutput on

SQL> begin

2 dbms\_output.put\_line(apex\_180100.wwv\_flow\_image\_prefix.g\_image\_prefix);

3 end;

4 /

/i/

## Configure Static File Support

For configuring static files, you must run **apex\_rest\_config.sql** after a new installation or upgrade of Oracle Application Express .

Oracle Application Express enables application developers to include static files with their applications. Static files can be associated with a workspace, an application, a plug-in, or an application theme. When using Oracle REST Data Services as your web listener, static files are served using RESTful service module built into Oracle Application Express. Therefore, you must run **apex\_rest\_config.sql** after a new installation or upgrade of Oracle Application Express.



```
C:\Windows\system32\cmd.exe - sqlplus
(c) 2013 Microsoft Corporation. All rights reserved.
C:\Users\jignesh>t:
T:\>cd cis
T:\CIS>cd apex
T:\CIS\apex>@apex_rest_config.sql
T:\CIS\apex>sqlplus
SQL*Plus: Release 11.2.0.2.0 Production on Tue Mar 31 14:38:21 2020
Copyright (c) 1982, 2014, Oracle. All rights reserved.
Enter user-name: sys/Manager1 as sysdba
Connected to:
Oracle Database 11g Express Edition Release 11.2.0.2.0 - 64bit Production
SQL> @apex_rest_config.sql
PL/SQL procedure successfully completed.
```

```
PL/SQL procedure successfully completed.

Enter a password for the APEX_LISTENER user          []
Enter a password for the APEX_REST_PUBLIC_USER user  []
...set_appun.sql
Procedure created.
```

## 4.6.2 Validating the Oracle REST Data Services Installation

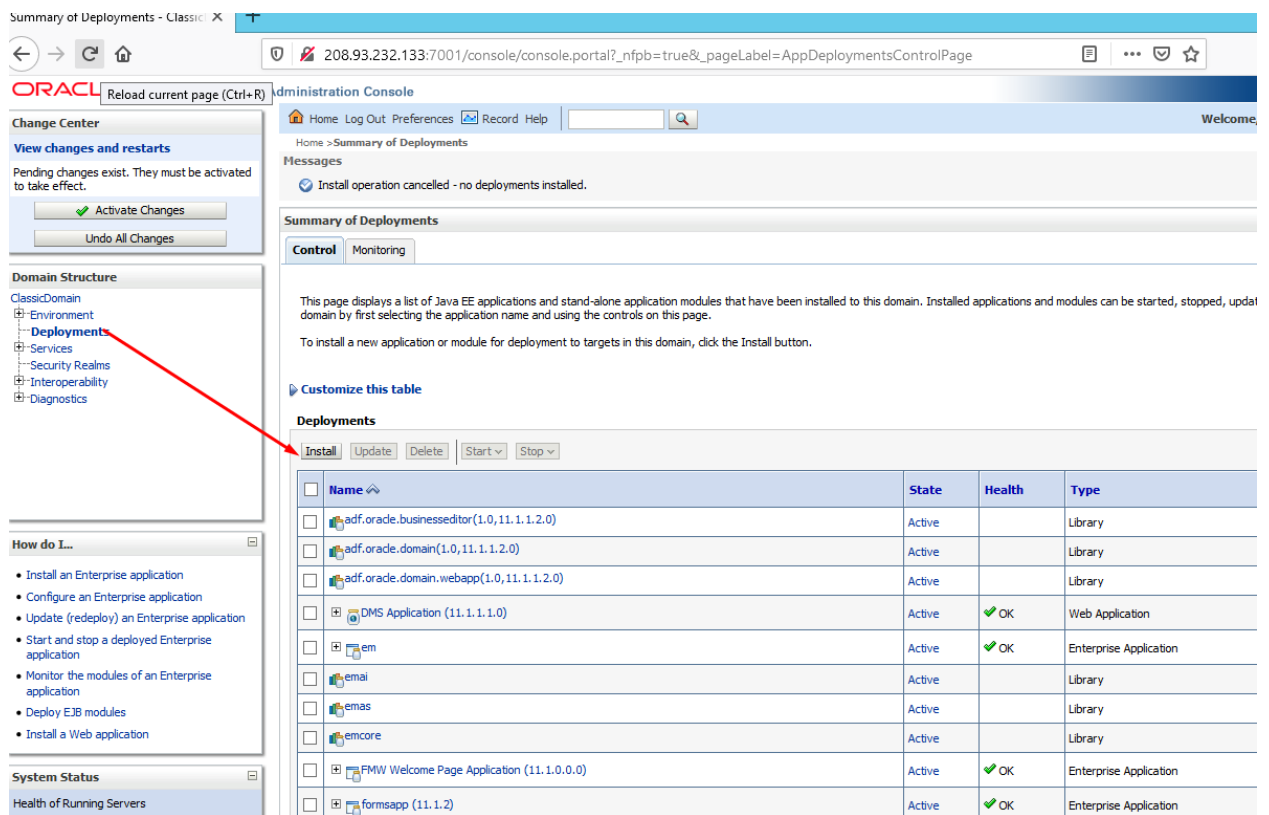
In a new installation or upgrade of Oracle Application Express, you must validate the Oracle REST Data Services installation.

For validating the Oracle REST Data Services installation in a new installation or upgrade of Oracle Application Express, run the following :

```
java -jar ords.war validate [--database <dbname>]
```

# Deployment with Web logic Server

## 1) Login with console



The screenshot shows the Oracle WebLogic Administration Console interface. The browser address bar displays the URL: 208.93.232.133:7001/console/console.portal?\_nfpb=true&\_pageLabel=AppDeploymentsControlPage. The page title is "Summary of Deployments - Classic". The left-hand navigation pane shows the "Domain Structure" tree with "Deployment" highlighted. The main content area shows the "Summary of Deployments" page with tabs for "Control" and "Monitoring". The "Control" tab is active, displaying a table of deployed applications and modules. The table has columns for Name, State, Health, and Type. The table lists several applications, including "adf.oracle.businesseditor(1.0,11.1.1.2.0)", "adf.oracle.domain(1.0,11.1.1.2.0)", "adf.oracle.domain.webapp(1.0,11.1.1.2.0)", "DMS Application (11.1.1.1.0)", "em", "emas", "emcore", "FMW Welcome Page Application (11.1.0.0.0)", and "formsapp (11.1.2)". The "State" column shows "Active" for all entries. The "Health" column shows "OK" for "DMS Application", "em", and "formsapp". The "Type" column shows "Library" for the first three entries, "Web Application" for "DMS Application", "Enterprise Application" for "em", "FMW Welcome Page Application", and "formsapp", and "Library" for "emas" and "emcore".

Name	State	Health	Type
adf.oracle.businesseditor(1.0,11.1.1.2.0)	Active		Library
adf.oracle.domain(1.0,11.1.1.2.0)	Active		Library
adf.oracle.domain.webapp(1.0,11.1.1.2.0)	Active		Library
DMS Application (11.1.1.1.0)	Active	OK	Web Application
em	Active	OK	Enterprise Application
emas	Active		Library
emcore	Active		Library
FMW Welcome Page Application (11.1.0.0.0)	Active	OK	Enterprise Application
formsapp (11.1.2)	Active	OK	Enterprise Application

WebLogic Server determines the context root from the file name of a WAR archive. If you need to keep backward compatibility, so that URLs are of the form `http://server/apex/...` rather than `http://server/ords/...`, then you must rename `ords.war` to `apex.war` before the deployment.

This PC ▸ Local Disk (T:) ▸ CIS ▸ ORDS

Name	Date modified	Type	Size
doc	3/31/2020 5:52 AM	File folder	
docs	3/31/2020 5:52 AM	File folder	
examples	3/31/2020 5:52 AM	File folder	
images	3/31/2020 5:53 AM	File folder	
installer	3/31/2020 5:52 AM	File folder	
META-INF	3/31/2020 5:52 AM	File folder	
oracle	3/31/2020 5:52 AM	File folder	
params	3/31/2020 5:52 AM	File folder	
apex.war	3/31/2020 5:27 AM	WAR File	60,991 KB
i.war	3/31/2020 6:12 AM	WAR File	2 KB
index.html	7/5/2019 6:26 PM	Chrome HTML Do...	38 KB
Installation_Step.docx	3/31/2020 6:32 AM	Microsoft Word D...	128 KB
ords - Copy.war	3/31/2020 5:27 AM	WAR File	60,991 KB

2) Click on Install Button and select the apex.war file and click on next

View changes and restarts  
Pending changes exist. They must be activated to take effect.  
[Activate Changes] [Undo All Changes]

Domain Structure  
ClassDomain  
[-] Environment  
[-] Deployment  
[-] Services  
[-] Security Realms  
[-] Interoperability  
[-] Diagnostics

How do I...  
• Start and stop a deployed Enterprise application  
• Configure an Enterprise application  
• Create a deployment plan

Home > Summary of Deployments

Install Application Assistant  
[Back] [Next] [Finish] [Cancel]

Locate deployment to install and prepare for deployment  
Select the file path that represents the application root directory, archive file, exploded archive directory, or application module descriptor that you want to install. You can also enter the path of the application directory in the Path field.  
Note: Only valid file paths are displayed below. If you cannot find your deployment files, upload your file(s) and/or confirm that your application contains the required deployment descriptors.

Path: T:\CIS\ORDS\apex.war

Recently Used Paths: (none)

Current Location: 208.93.232.133\T:\CIS\ORDS

docs  
examples  
images (open directory)  
META-INF  
oracle  
apex.war  
i.war  
ords - Copy.war

[Back] [Next] [Finish] [Cancel]

3)

Install Application Assistant  
[Back] [Next] [Finish] [Cancel]

Choose targeting style  
Targets are the servers, clusters, and virtual hosts on which this deployment will run. There are several ways you can target an application.

☒ Install this deployment as an application

The application and its components will be targeted to the same locations. This is the most common usage.

☐ Install this deployment as a library

Application libraries are deployments that are available for other deployments to share. Libraries should be available on all of the targets running their referencing applications.

[Back] [Next] [Finish] [Cancel]

### 3) Admin server

**new changes and restarts**  
Pending changes exist. They must be activated to take effect.

**Domain Structure**  
BasicDomain  
Environment  
Deployments  
Services  
Security Realms  
Interoperability  
Diagnostics

**How do I...**  
• Start and stop a deployed Enterprise application  
• Configure an Enterprise application  
• Create a deployment plan  
• Target an Enterprise application to a server  
• Test the modules in an Enterprise application

**System Status**  
Health of Running Servers

**Messages**  
The application has not been targeted yet. Please select targets.

**Install Application Assistant**

**Select deployment targets**  
Select the servers and/or clusters to which you want to deploy this application. (You can [reconfigure deployment targets](#) later).

**Available targets for apex :**

**Servers**  
☒ AdminServer

**Clusters**  
☐ cluster\_forms  
    ☐ All servers in the cluster  
    ☐ Part of the cluster  
        ☐ WLS\_FORMS  
☐ cluster\_reports  
    ☐ All servers in the cluster  
    ☐ Part of the cluster  
        ☐ WLS\_REPORTS

**In the Optional Settings, specify the following:**

- Name - Enter: Apex
- Security - Select the following: Custom Roles: Use roles that are defined in the Administration Console; use policies that are defined in the deployment descriptor
- Source accessibility - Select: Use the defaults defined by the deployment's targets

View changes and restarts

Pending changes exist. They must be activated to take effect.

Activate Changes

Undo All Changes

main Structure

ssicDomain

Environment

Deployments

Services

Security Realms

Interoperability

Diagnostics

How do I...

Start and stop a deployed Enterprise application

Configure an Enterprise application

Create a deployment plan

Target an Enterprise application to a server

Test the modules in an Enterprise application

System Status

Health of Running Servers

Failed (0)

Critical (0)

Overloaded (0)

Warning (0)

Home > Summary of Deployments

Install Application Assistant

BackNextFinishCancel

Optional Settings

You can modify these settings or accept the defaults

General

What do you want to name this deployment?

Name:apex

Security

What security model do you want to use with this application?

DD Only: Use only roles and policies that are defined in the deployment descriptors.

Custom Roles: Use roles that are defined in the Administration Console; use policies that are defined in the deployment descriptor.

Custom Roles and Policies: Use only roles and policies that are defined in the Administration Console.

Advanced: Use a custom model that you have configured on the realm's configuration page.

Source accessibility

How should the source files be made accessible?

Use the defaults defined by the deployment's targets

Recommended selection.

Copy this application onto every target for me

During deployment, the files will be copied automatically to the managed servers to which the application is targeted.

I will make the deployment accessible from the following location

Location:T:\CIS\ORDS\apex.war

View changes and restarts

Pending changes exist. They must be activated to take effect.

Activate Changes

Undo All Changes

Domain Structure

ClassicDomain

Environment

Deployments

Services

Security Realms

Interoperability

Diagnostics

How do I...

Start and stop a deployed Enterprise application

Configure an Enterprise application

Create a deployment plan

Target an Enterprise application to a server

Test the modules in an Enterprise application

Home > Summary of Deployments

Install Application Assistant

BackNextFinishCancel

Review your choices and click Finish

Click Finish to complete the deployment. This may take a few moments to complete.

Additional configuration

In order to work successfully, this application may require additional configuration. Do you want to review this application's configuration after completing this assistant?

Yes, take me to the deployment's configuration screen.

No, I will review the configuration later.

Summary

Deployment:T:\CIS\ORDS\apex.war

Name:apex

Staging mode:Use the defaults defined by the chosen targets

Security Model:CustomRoles: Use policies that are defined in the deployment descriptor. Create custom role mappings later.

Target Summary

Components	Targets
apex	AdminServer

BackNextFinishCancel

Click Finish.

Repeat the previous steps to deploy the i.war file.

**View changes and restarts**

Pending changes exist. They must be activated to take effect.

**Domain Structure**

- BasicDomain
  - Deployments
  - Services
  - Security Realms
  - Interoperability
  - Diagnostics

**How do I...**

- Start and stop a deployed Enterprise application
- Configure an Enterprise application
- Create a deployment plan
- Target an Enterprise application to a server
- Test the modules in an Enterprise application

**Home > Summary of Deployments > apex > Summary of Deployments**

**Install Application Assistant**

**Locate deployment to install and prepare for deployment**

Select the file path that represents the application root directory, archive file, exploded archive directory, or application module descriptor that you want to install. You can also enter the path of the application directory or file in the Path field.

**Note:** Only valid file paths are displayed below. If you cannot find your deployment files, upload your file(s) and/or confirm that your application contains the required deployment descriptors.

**Path:**

**Recently Used Paths:** T:\CIS\ORDS

**Current Location:** 208.93.232.183 \T: \CIS \ORDS

- docs
- examples
- ☐ images (open directory)
- META-INF
- orade
- ☒ apex.war
- ☒ i.war
- ☐ ords - Copy.war

## 1.6.8 Verifying the State and Health of apex and i

In the Summary of Deployments, select the Control tab and verify that both the apex and i State are Active and the Health status is OK.

[Customize this table](#)

**Deployments**

Showing 1 to 10 of 39 Previous | Next

<input type="checkbox"/>	Name	State	Health	Type	Deployment Order
<input type="checkbox"/>	adf.oracle.businesseditor(1.0,11.1.1.2.0)	Active		Library	100
<input type="checkbox"/>	adf.oracle.domain(1.0,11.1.1.2.0)	Active		Library	100
<input type="checkbox"/>	adf.oracle.domain.webapp(1.0,11.1.1.2.0)	Active		Library	100
<input checked="" type="checkbox"/>	apex	Prepared		Web Application	100
<input type="checkbox"/>	Select apex Application (11.1.1.1.0)	Active	OK	Web Application	5
<input type="checkbox"/>	em	Active	OK	Enterprise Application	400
<input type="checkbox"/>	email	Active		Library	100
<input type="checkbox"/>	emas	Active		Library	100
<input type="checkbox"/>	emcore	Active		Library	100
<input type="checkbox"/>	FMW Welcome Page Application (11.1.0.0.0)	Active	OK	Enterprise Application	5

Showing 1 to 10 of 39 Previous | Next

If apex or i are not Active, then enable them. In the Deployments table, select the check box adjacent to apex and/or i. Click Start and select Servicing all requests to make them active.

[Customize this table](#)

Deployments					
<input type="button" value="Install"/> <input type="button" value="Update"/> <input type="button" value="Delete"/>		<input type="button" value="Start"/> <input type="button" value="Stop"/>		Showing 1 to 10 of 39 Previous	
<input type="checkbox"/>	Name				
<input type="checkbox"/>	adf.oracle.businesseditor(1.0,11.1.1.2.0)	Active		Library	100
<input type="checkbox"/>	adf.oracle.domain(1.0,11.1.1.2.0)	Active		Library	100
<input type="checkbox"/>	adf.oracle.domain.webapp(1.0,11.1.1.2.0)	Active		Library	100
<input checked="" type="checkbox"/>	apex	Prepared		Web Application	100
<input type="checkbox"/>	DMS Application (11.1.1.1.0)	Active	OK	Web Application	5

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help

Welcome

Change Center

View changes and restarts

Pending changes exist. They must be activated to take effect.

Activate Changes

Undo All Changes

Domain Structure

ClassicDomain

Environment

Deployments

Services

Security Realms

Interoperability

Home > Summary of Deployments > apex > Summary of Deployments

Start Application Assistant

Yes No

Start Deployments

You have selected the following deployments to be started. Click 'Yes' to continue, or 'No' to cancel.

• apex

Yes No