



Oracle Weblogic Server Apache Web Server Integration

V 1.0

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DigiTalk Channel: https://www.youtube.com/channel/UCCGTnI9vvF_ETMhGUXGdFWw

Weblogic Server Architecture: <https://youtu.be/gNqeIfLjUqw>

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Prerequisites

You should have a domain running with two managed servers in a cluster. You can test the web server configuration with single managed server as well, but you will not be able to validate the load balancing.

Note: - We have two nodes in this Lab, hence please follow below instructions on both node. If you have more than two nodes or independent OHS hosts (not installing in same machine where we have weblogic installed), then make sure to follow it on all nodes.

Install Apache Web Server (on both node)

Follow “Lab-ApacheWebServer_Installation_Linux.pdf” to install apache web server on each host.

Download Apache Web Serve Plugins from Oracle Website

Access below page -

<https://www.oracle.com/in/middleware/technologies/webtier-downloads.html>

Note - This link may change in future, so you can search for “Oracle Download apache plugin” in search engine to get latest link.

Scroll down and go the section according to your weblogic version. We have 14.1.1.0.

Oracle WebLogic Server Proxy Plugins

Oracle WebLogic Server Proxy Plugins 14.1.1.0

WebLogic Server Proxy Plug-Ins 14.1.1.0 are backward compatible with prior versions and support only 64-bit Web Servers, for more information refer to Oracle WebLogic Server Proxy Plug-In 14.1.1.0 documentation. They support:

- Apache 2.4.41+ Web Server
- Features supported in prior versions
- Support for Oracle WebLogic Server 14.1.1.0

Oracle WebLogic Server Proxy Plugins 14.1.1.0

Click on Oracle Weblogic Server Plugins 14.1.1.0 hyperlink. You will be directed to the oracle login page. If you don't have oracle id then you can create using create account link.

Oracle account sign in

Username

Password

[Need help?](#)

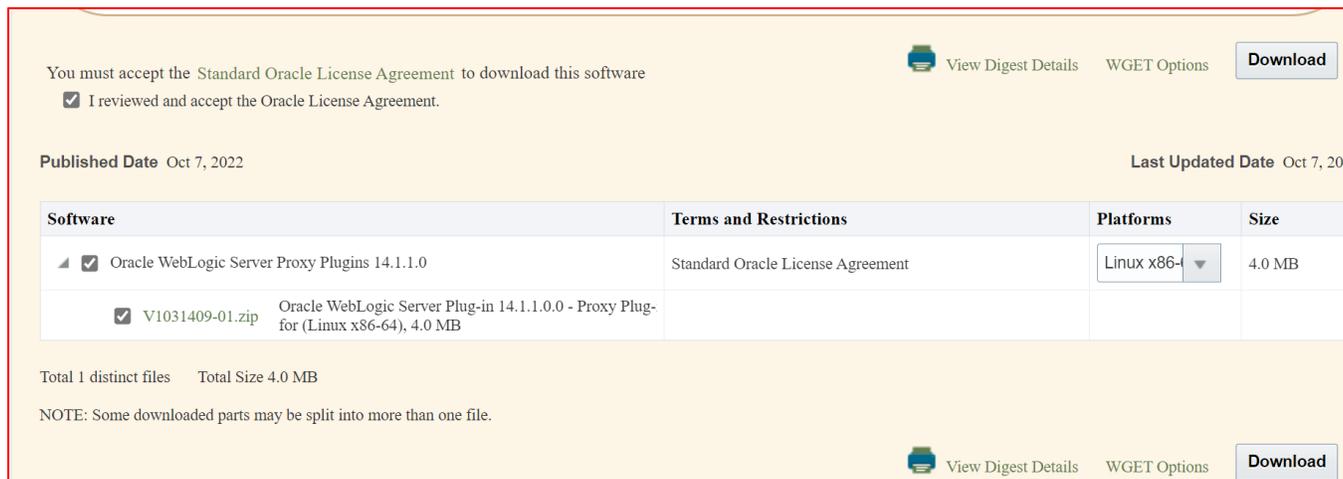
Don't have an Oracle Account?

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After login you will be directed to the edelivery.oracle.com. (You can directly access the edelivery.oracle.com and download plugins as well, there you have to search for “Oracle WebLogic Server Proxy Plugins 14.1.1.0” in the search box. Change the version in string accordingly).

Accept the agreement and click on WGET options (to directly download on Linux host)



The screenshot shows the Oracle WebLogic Server Proxy Plugins download page. At the top, there is a message: "You must accept the Standard Oracle License Agreement to download this software". Below this, there is a checkbox labeled "I reviewed and accept the Oracle License Agreement." which is checked. To the right of this message are links for "View Digest Details", "WGET Options", and a "Download" button. Below the message, the "Published Date" is "Oct 7, 2022" and the "Last Updated Date" is "Oct 7, 2022". A table lists the software details:

Software	Terms and Restrictions	Platforms	Size
<input checked="" type="checkbox"/> Oracle WebLogic Server Proxy Plugins 14.1.1.0	Standard Oracle License Agreement	Linux x86-	4.0 MB
<input checked="" type="checkbox"/> V1031409-01.zip	Oracle WebLogic Server Plug-in 14.1.1.0.0 - Proxy Plug-in for (Linux x86-64), 4.0 MB		

Below the table, it says "Total 1 distinct files" and "Total Size 4.0 MB". A note states: "NOTE: Some downloaded parts may be split into more than one file." At the bottom right, there are links for "View Digest Details", "WGET Options", and a "Download" button.

This will download a wget.sh file on your local machine (file name may change in future). Copy contents to a file in Linux host to download.

We have copied to download.sh. Now run it and initiate the install.

`vi download.sh` (copy contents of wget.sh file)

Change mode to 755

`chmod 755 download.sh`

run it:

`./download.sh` (it will prompt you for oracle username and password)

V1031409-01.zip will be downloaded. Extract it.

`unzip V1031409-01.zip`

`unzip WLSPlugin14c-14.1.1.0.0.zip`

`unzip WLSPlugin14.1.1.0.0-Apache2.4-Linux_x86_64.zip`

Contents of ZIP file.



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```
lW 1 1 . 1 1000 1000 4104002 Oct 26 14:55 WLSPlugin14.1.1.0.0-Apache2.4-Linux_x86_64.zip
[oracle@ip-172-31-34-27 software]$ unzip WLSPlugin14.1.1.0.0-Apache2.4-Linux_x86_64.zip
Archive:  WLSPlugin14.1.1.0.0-Apache2.4-Linux_x86_64.zip
  inflating: README.txt
  inflating: THIRD_PARTY_LICENSES.txt
   creating: bin/
  inflating: bin/export_wallet
  inflating: bin/orapki
   creating: jlib/
  inflating: jlib/oraclepki.jar
  inflating: jlib/osdt_core.jar
  inflating: jlib/osdt_cert.jar
  inflating: jlib/cryptoj.jar
  inflating: jlib/wlsplugin_wallet.jar
   creating: lib/
  inflating: lib/mod_wl_24.so
  inflating: lib/libdms2.so
   creating: lib/nghttp2/
  inflating: lib/nghttp2/libnghttp2.so.14
  inflating: lib/nghttp2/libnghttp2.so.14.20.1
  inflating: lib/nghttp2/libnghttp2.so
  inflating: lib/libonssys.so
[oracle@ip-172-31-34-27 software]$ █
```

Configure Apache Web Server Plugins

Copy mod_wl_24.so from ./lib folder to /usr/lib64/httpd/modules/ directory.

```
cp /u01/software/lib/mod_wl_24.so /usr/lib64/httpd/modules/
```

List and Check Copied

```
ls -lrt /usr/lib64/httpd/modules/mod_wl_24.so
```

```
[ec2-user@ip-172-31-34-27 ~]$ sudo cp /u01/software/lib/mod_wl_24.so /usr/lib64/httpd/modules/
[ec2-user@ip-172-31-34-27 ~]$ ls -lrt /usr/lib64/httpd/modules/mod_wl_24.so
-rwxr-x---. 1 root root 757725 Oct 26 14:45 /usr/lib64/httpd/modules/mod_wl_24.so
[ec2-user@ip-172-31-34-27 ~]$ █
```

Export LD_LIBRARY_PATH

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Weblogic Configuration

Edit httpd.conf file and add weblogic redirections

```
sudo vi /etc/httpd/conf/httpd.conf
```

Add below to access admin console via web server

```
<Location /console>  
SetHandler weblogic-handler  
WebLogicHost 172.31.41.120  
WebLogicPort 7001  
</Location>
```

172.31.41.120 is the I.P address of host where admin server is running.

```
# Load config files in the "/etc/httpd/conf.d" directory, if any  
IncludeOptional conf.d/*.conf  
  
<Location /console>  
SetHandler weblogic-handler  
WebLogicHost 172.31.41.120  
WebLogicPort 7001  
</Location>
```

Check is syntax is ok in the apache configuration file

```
apachectl -t
```

make sure output is Syntax OK

```
[ec2-user@ip-172-31-34-27 ~]$ apachectl -t  
Syntax OK  
[ec2-user@ip-172-31-34-27 ~]$
```

In case you get below error while accessing the console:

Failure of Web Server bridge:

No backend server available for connection: timed out after 10 seconds or idempotent set to OFF or method not idempotent.

At same time you will see below error in /var/log/httpd/messages log file

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SELinux is preventing /usr/sbin/httpd from name_connect access on the tcp_socket port 7001. Plugin catchall_boolean (89.3 confidence) suggests *****#012#012If you want to allow httpd to can network connect#012Then you must tell SELinux about this by enabling the 'httpd_can_network_connect' boolean.#012#012Do#012setsebool -P httpd_can_network_connect 1#012#012***** Plugin catchall (11.6 confidence) suggests *****#012#012If you believe that httpd should be allowed name_connect access on the port 7001 tcp_socket by default.#012Then you should report this as a bug.#012You can generate a local policy module to allow this access.#012Do#012allow this access for now by executing:#012# ausearch -c 'httpd' --raw | audit2allow -M my-httpd#012# semodule -X 300 -i my-httpd.pp#012

Run below command:

```
sudo setsebool -P httpd_can_network_connect 1
```

Restart apache web server:

```
sudo systemctl stop httpd
```

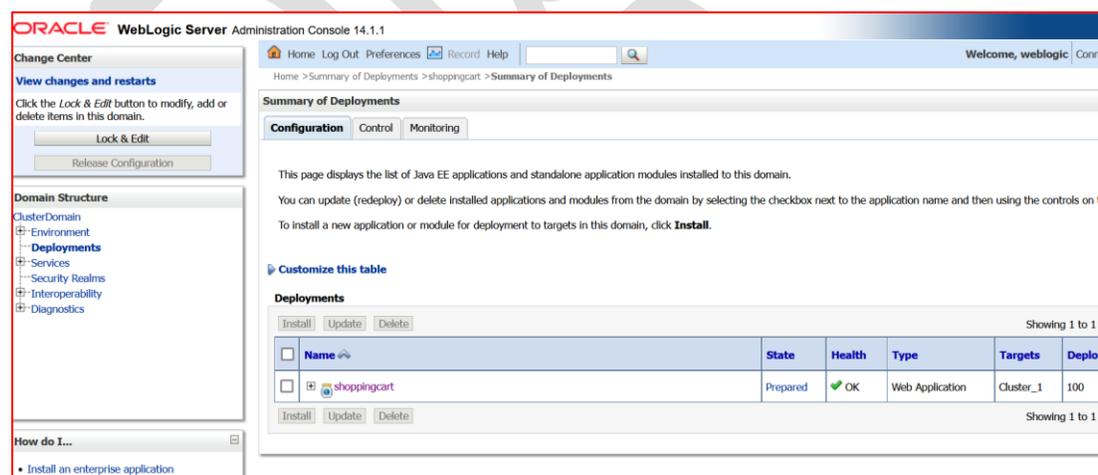
```
sudo systemctl start httpd
```

Now access.

Deploy and Test Application

Follow Lab-4_Deployment.pdf Lab to deploy some test application.

We have shoppingcart application deployed in cluster cluster_1 running two managed servers.



The screenshot shows the Oracle WebLogic Server Administration Console interface. The main content area displays the 'Summary of Deployments' for the 'shoppingcart' application. The application is listed in a table with the following details:

Name	State	Health	Type	Targets	Deploy
shoppingcart	Prepared	OK	Web Application	Cluster_1	100

Below the table, there are buttons for 'Install', 'Update', and 'Delete' for the application. The console also shows a 'Domain Structure' on the left and a 'Change Center' at the top.



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Update Apache configuration for application context redirection:

```
sudo vi /etc/httpd/conf/httpd.conf
```

```
# Add below to access application deploy on cluster with context /ShoppingCart
```

```
<Location /shoppingcart>
```

```
SetHandler weblogic-handler
```

```
WebLogicCluster 172.31.41.120:7003,172.31.34.27:7003
```

```
</Location>
```

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