



Java Cloud Service Demo Guide: Side-by-side deployment

Description

For Use By	Oracle Sales / Pre-Sales, Consulting, Product Managers,
	Solution Managers, etc
Internal/External Consumption	Internal
Target Audience	Customer / Partner
	o Architects,
	 Development Leads
Demo Duration (Approximate)	Approximately 10 minutes, plus the time needed for Oracle
	Cloud to provision your service instance. (Provisioning is the
	process of allocating cloud resources for your service
	instance.)
Background Knowledge	Maven
Required/Suggested	WLS architecture
	WLST
	Git
Related Materials	Oracle Public Cloud Services
	 Java Cloud Services
	 Database Cloud Services
	Git or Downloaded Sources
	Java Development Kit 1.8+
	Apache Maven 3.2.5+

Feature Overview

Weblogic Server supports a feature called side-by-side deployment (or versioned deployment). This function is extremely useful when you need to deploy a new version of an application and still keep the old one up and running. So the running instances will still use the current version and all new instances will be able to invoke the new deployed version of the application.

As soon as all the sessions that are using the old version of the application are expired, Weblogic will recognize it and will deactivate the old version. So at this moment only the new deployed version is active and all new sessions will make us of it.

This is often referred to as Production Redeployment too.

Demo Overview

So how does this work?

You could either use shell scripting (WLST or weblogic.deployer) to deploy the application and specify the version number on deployment as one of the parameters or you can use the manifest.mf file. We'll be using the first one.

A viewlet of the same is available <u>here</u> as well.





We would be deploying V1 of an application, using it for some time. Then deploy V2 in Administration mode for the Admin / Developer to verify proper the functionality. Then V2 would be promoted. The sessions which are already logged in will be using the previous version (V1) of the application and the new sessions created will use the new version of application (V2). And once all the sessions that were using V1 are expired, it would finally be deactivated.

Requirements / Prerequisites

- Windows or Linux operating system
- Computer with 2 GB RAM
- Java Development Kit 1.8+
- Apache Maven 3.2.5
- Gif
- A web browser is required for working with Oracle Cloud services. These are the minimum requirements:
 - Microsoft Internet Explorer 9 or 10 with Browser Mode and Document Mode set to IE9 or IE10
 - o Mozilla Firefox 24 and later
 - Google Chrome 29 and later
 - o Apple Safari 6 and later
- Roles and Credentials You must have the following roles and credentials:
 - Roles and privileges described in Oracle Cloud User Roles and Privileges in Getting Started with Oracle Cloud
 - Log-in credentials for creating Oracle Java Cloud Service instances and for working with the associated database and storage services.
 - Java Administrator role (This role lets you create Oracle Java Cloud Service instances.)
 - For more information, see About Oracle Java Cloud Service Roles and User Accounts in Using Oracle Java Cloud Service.
- Existing Database and Java Cloud Services.

Tips

• Use FireFox for the demos.

Demo Steps

Setup & Dependencies

- 1. Install Java Development Kit and Apache Maven
- 2. Follow the steps outlined in <u>WInS Demo Guides Setup Clone Git repository</u> to get the necessary sources ready.
- 3. To create necessary (JCS and DBCS) environment follow the WInS Demo Guides JCS Setup.pdf
- 4. Environment variables and directories
 - a. This document will refer to the local clone of WInS remote repository as **WINS_SOURCE_REPOSITORY**. Every steps where it is used replace to your location.
 - b. Set JAVA_HOME to point your jdk location. Example:
 - Windows: set JAVA_HOME=c:\jdk1.8.0_31
 - Linux: export JAVA HOME=/usr/java/jdk1.8.0 31
 - c. Add Apache Maven to your PATH variable. In this case it is easier to execute maven. Example:
 - Windows: set PATH=%PATH%;c:\apache-maven-3.2.5\bin
 - Linux: export PATH=\$PATH:/usr/apache-maven-3.2.5/bin





Executing the Side by Side Deployment demo

- 1) Get the public IP address of your Java Cloud Service Instance Administration Server Java. To obtain this information there are two options.
 - a. Open terminal/command prompt and change directory to WINS_SOURCE_REPOSITORY\cloud.demos
 Execute the maven build with the following options:
 mvn install -Dgoal=jcs-get-instance-details
 The result output will show the IP address:

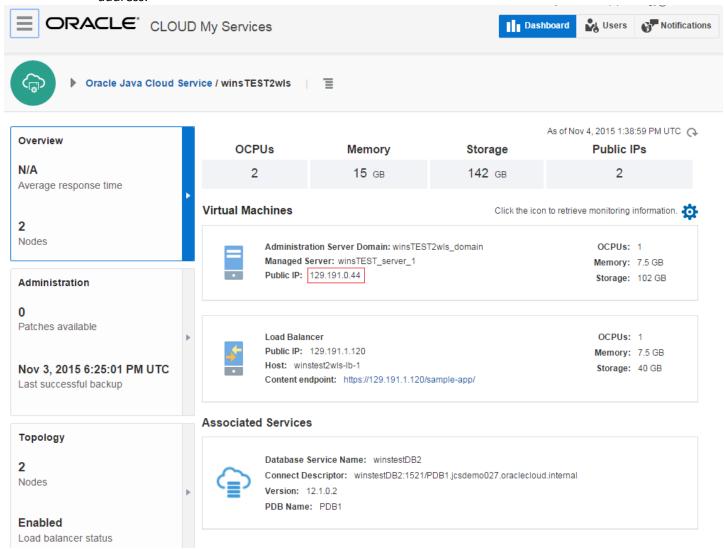




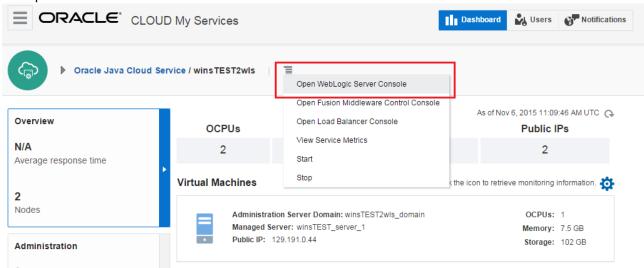
```
a\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\mvn install -DexecuteCloudUtil -Dgoal=jcs-get-instance-details
Scanning for projects...
       Reactor Build Order:
       wins-cloud
cloud-api
       Building wins-cloud 1.0.0-SNAPSHOT
        --- maven-install-plugin:2.4:install (default-install) @ vins-cloud ---
Installing c:\Java\git.repos\veblogic-innovation-seminars.cloud\cloud.demos\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\wins-cloud\1.0
SHOT\wins-cloud-1.0.0-SHNPSHOT.pom
       Building cloud-api 1.0.0-SNAPSHOT
       --- maven-resources-plugin:2.6:resources (default-resources) 0 cloud-common Using 'UTF-8' encoding to copy filtered resources. Copying 0 resource
       --- maven-compiler-plugin:3.1:compile (default-compile) @ cloud-common - Nothing to compile - all classes are up to date
       --- maven-resources-plugin:2.6:testResources (default-testResources) @ cloud-common - Using 'UTF-8' encoding to copy filtered resources. Copying 0 resource
       --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ cloud-common --- Nothing to compile - all classes are up to date
       --- maven-surefire-plugin:2.12.4:test (default-test) @ cloud-common ---
Tests are skipped.
        --- maven-jar-plugin:2.4:jar (default-jar) @ cloud-common
    01
Of --- maven-install-plugin:2.4:install (default-install) @ cloud-common ---
01 Installing C:\dava\git.repos\weblogic-innovation-seninars.cloud\cloud.demos\common\target\cloud-common.jar to C:\Users\pnagy\.m2\repository\com\oracle\w
loud\cloud-common\la.0=\SMP$SH0T\cloud-common\la.0=\SMP$SH0T\jar
01 Installing C:\dava\git.repos\weblogic-innovation-seninars.cloud\cloud.demos\common\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\cloud\-
n\la.0=\SMP$SH0T\cloud-common\la.0=\SMP$SH0T\po\.
INFO] --- maven-antrun-plugin:1.8:run (first) @ cloud-common ---
INFO] Executing tasks
   wins-cloud SUCCESS [ 0.265 s] cloud-api SUCCESS [ 5.658 s]
        Total time: 6.020 s
Finished at: 2015-11-04T14:29:58+01:00
Final Memory: 11M/227M
       a\git.rengs\weblogic-innovation-seminars.cloud\cloud.demos)
```



b. Or open the Java Cloud Service Console. Click on the desired JCS instance and you can see the public IP address.



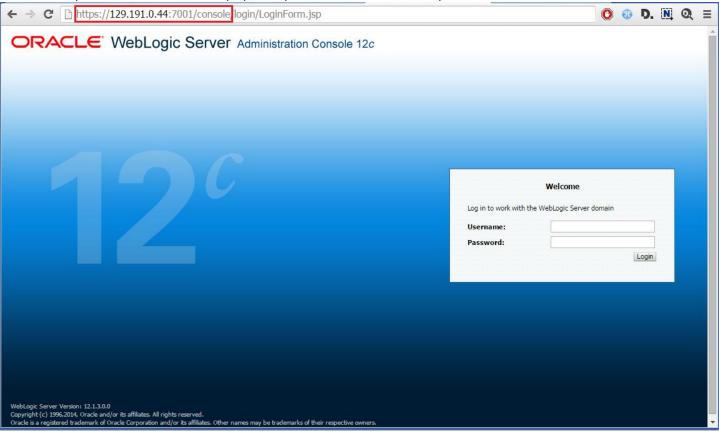
To check the current port availability –which will change below- open the Weblogic Admin Console. Click on the JCS console to open.







Or enter the public IP address with https prefix, port number and console path into a browser.



- 2) Setup and configure Java Cloud Service instance. Run the following maven build in the WINS_SOURCE_REPOSITORY\cloud.demos\side-by-side-deployment directory: mvn install -DprepareSideBySide -Djcs.ip=129.191.1.19 The preparation includes:
 - Stopping Managed Servers to apply administration port settings
 - o Enable administration port on 7200
 - o Enable Tunneling for Admin server.





```
a\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\side-by-side-deployment<mark>*mvn install -DprepareSideBySide -Djcs.ip=129.191.0.44</mark>
Scanning for projects...
               Building side-by-side-example 1.0.0-SNAPSHOT
             --- maven-resources-plugin:2.6:resources (default-resources) @ side-by-side-example ---
Using 'UTF-@' encoding to copy filtered resources.
skip non existing resourceDirectory c:\Javasqit.repos\weblogic-innovation-seminars.cloud\cloud.demos\side-by-side-deployment\src\main\resources
             --- maven-compiler-plugin:3.1:compile (default-compile) @ side-by-side-example --- No sources to compile
             --- maven-resources-plugin:2.6:testResources (default-testResources) @ side-by-side-example ---
Using 'UTF-8' encoding to copy filtered resources.
skip non existing resourceDirectory c:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\side-by-side-deployment\src\test\resources
             --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ side-by-side-example -- No sources to compile
             --- maven-surefire-plugin:2.12.4:test (default-test) @ side-by-side-example Tests are skipped.
           .
1 --- maven-jar-plugin:2.4:jar (default-jar) @ side-by-side-example ---
ING] JAR will be empty – no content was marked for inclusion!
       001
001 --- maven-install-plugin:2.4:install (default-install) @ side-by-side-example ---
001 --- maven-install-plugin:2.4:install (default-install) @ side-by-side-example ---
001 Installing c:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud\cloud\cloud-by-side-example\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\cloud\clou
 INPO] --- maven-antrun-plugin:1.8:run (replace) @ side-by-side-example -
INPO] Executing tasks
           |copy| Copying 5 files to c:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\side-by-side-deployment\scripts
| Executed tasks
 IMFOl --- maven-antrun-plugin:1.8:run (copy) @ side-by-side-example
IMFOl Executing tasks
       NFO] --- maven-antrun-plugin:1.8:run (wlstdeploy) @ side-by-side-example -
NFO] Executing tasks
 epeare-WLS:

[echol Execute WLST to initialize WLS environment.

[sshexec] Connecting to 129.191.0.44:22

[sshexec] cnd : sudo su - oracle -c /tmp/prepareJCS.sh oracle
 nitializing WebLogic Scripting Tool (WLST) ...
Velcome to WebLogic Server Administration Scripting Shell
Type help() for help on available commands
```



```
nnecting to t3://winsTEST2wls-wls-1.compute-jcsdemo027.oraclecloud.internal:7001 with userid weblogic ...
ccessfully connected to Admin Server "winsTEST_adminserver" that <u>belongs to domain "winsTEST2wls domai</u>n".
 larning: An insecure protocol was used to connect to the
server. To ensure on-the-wire security, the SSL port or
idmin port should be used instead.
 et managed server list
ocation changed to serverRuntime tree. This is a read-only tree with DomainMBean as the root.
or more help, use help('domainConfig')
    nnecting to Node Manager ...
ov 6, 2015 10:13:58 AM UTC> (Info> (Security> (BEA-090905> <Disabling the CryptoJ JCE Provider self-integrity check for better startup performance. To enable
is check, specify -Dueblogic.security.allowCryptoJDefaultJCEVerification-true.>
ov 6, 2015 10:13:58 AM UTC> (Info> (Security> (BEA-090906> (Changing the default Random Number Generator in RSA CryptoJ from ECDRBG128 to FIPS186PRNG. To disa
e this change, specify -Dueblogic.security.allowCryptoJDefaultPRNG-true.>
ov 6, 2015 10:13:58 AM UTC> (Info> (Security> (BEA-090909> (Using the configured custom SSL Hostname Verifier implementation: weblogic.security.utils.SSLWLSHo
nameUerifierSMullNostnameVerifier.>
ccessfully Connected to Node Manager.
 vinsTEST_adminserver status...RUNNING
RIINNTNG
winsTEST_server_1 status...RUNNING
 ineTEST ea
                                  1 to RUNNING
uinsTEST semier 1 15 RHWNING
Stopping winsTEST_server_1
Killing server winsTEST_server_1 ...
Successfully killed server winsTEST_server_1
      winsIEST_server_1 status is SHUIDOWN
cessfully disconnected from Node Manager.
ation changed to edit tree. This is a writable tree with
ainMBean as the root. To make changes you will need to start
edit session via startEditC\.
  or more help, use help('edit')
  tarting an edit session ...
tarted edit session, please be sure to save and activate your
hanges once you are done.
auing all your changes
 aved all your changes successfully.
Ictivating all your changes, this may take a while ...
   nce the activation is completed.
 ou will have to re-connect to the server due to some changes" "
jou have made."
Disconnected from weblogic server: winsTEST_adminserver
INPO1 Executed tasks
              BUILD SUCCESS
              Total time: 21.287 s
Finished at: 2015-11-06T11:14:02+01:00
Final Memory: 17M/322M
               a\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\side-by-side-deployment>_
```

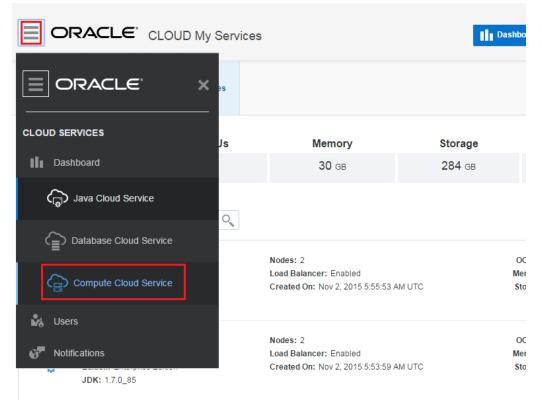
Important: after the modification you cannot access to the Weblogic Admin Console through the known and preconfigured port 7002. When the administration port is enabled you can access through only that port using ssl connection. So move forward to enable external access to the newly defined administration port which is by default disabled.

3) Now we need to enable a port on the JCS VM – so that external traffic can be channeled to the VM. Login to the Oracle Public Cloud and visit the Oracle Compute Cloud Service home page. From here click on 'Open Service Console'

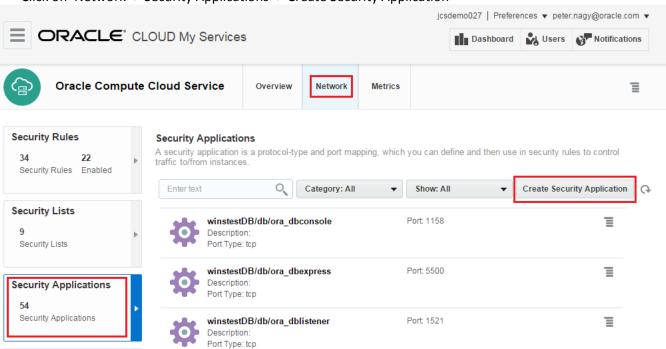


Or click on the console shortcut and select 'Compute Cloud Service'





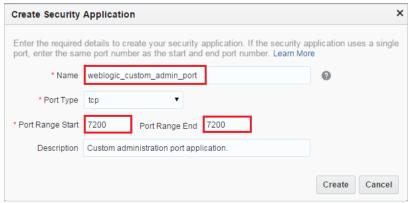
Click on 'Network -> Security Applications -> Create Security Application'



Now create a generic 'Security Application' which can enable top access through port 7200. Define the values as per mentioned in the image below:



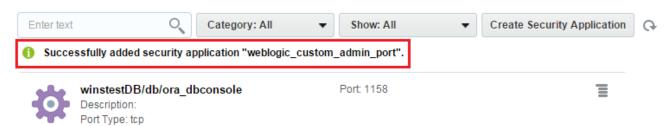




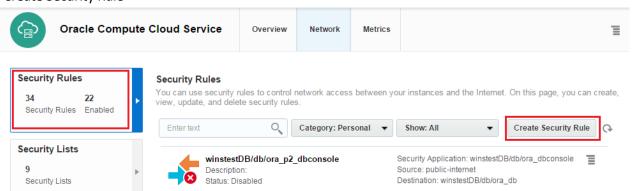
Once the protocol is created – a success message is shown.

Security Applications

A security application is a protocol-type and port mapping, which you can define and then use in security rules to control traffic to/from instances.



Now create the a new rule what will asssign the 'Security Application' to the desired instance. Click on 'Security Rules -> Create Security Rule'



Define the values for the new rule:

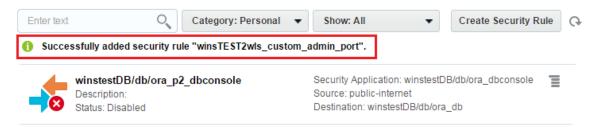
- Name: choose what you want
- Status: Enabled (default)
- Security Application: select the previously created Security Application.
- Source: select Security IP Lists and the predefined public-internet
 Note: Here you can also create specific source address to restrict external access for more security.
- Destination: select the predefined <JCS_INSTANCE>/wls/ora_admin
- Description: choose what you want.



Once the Access Rule is created, a success message is shown.

Security Rules

You can use security rules to control network access between your instances and the Internet. On this page, you can create, view, update, and delete security rules.



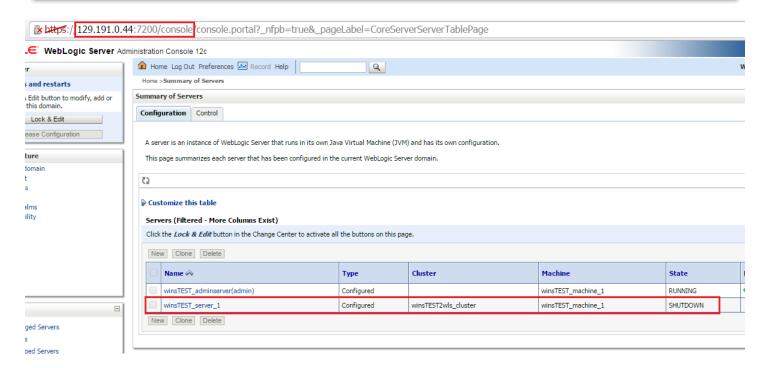
Now check the Weblogic Admin Console access through the new administration port. Don't try to open through JCS console because that will try through the 7002 port. You can check just for sure.



So change the port to 7200 in console url, accept the risks, add the exception and proceed to be able to access the WebLogic Server Admin Console. Optionally you can check the managed server's status. It should be shutdown.







4) Now is the time to deploy the application. Execute the following maven build in the WINS_SOURCE_REPOSITORY\cloud.demos directory:

mvn -DexecuteSh -Djcs.ip=129.191.0.44 -Dsh=Deploy-Aussie_tripper.sh

Note: use your instance's public IP address and don't forget to change the directory one level up. The result should be the following:





```
a\git.repos\weblogic-innovation-seminars.cloud\cloud.demos><mark>nvn -DexecuteSh -Djcs.ip=129.191.8.44 -Dsh=Deploy-Aussie_tripper.sh</mark>
Scanning for projects...
                 Reactor Build Order:
                 wins-cloud
cloud-api
                 Building wins-cloud 1.0.0-SNAPSHOT
                 --- maven-install-plugin:2.4:install (default-install) @ vins-cloud ---
Installing c:-Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\wins-cloud\1.0
$BHOT\wins-cloud-1.6.0-SHR$R$HOT.pom
                 Building cloud-api 1.0.0-SNAPSHOT
                             properties-maven-plugin:1.0-alpha-2:read-project-properties (default) @ cloud-common -
                 mayen-resources-plugin:2.6:resources (default-resources) @ cloud-common - Using 'UTF-8' encoding to copy filtered resources. Copying 0 resource
                 --- maven-compiler-plugin:3.1:compile (default-compile) @ cloud-common ---
Changes detected - recompiling the module!
Compiling 7 source files to C:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\common\target\classes
                 --- maven-resources-plugin:2.6:testResources (default-testResources) @ cloud-common Using 'UTF-8' encoding to copy filtered resources. Copying 0 resource
                 --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ cloud-common ---
Changes detected - recompiling the module?
Compiling 1 source file to C:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\common\target\test-classes
                 --- maven-surefire-plugin:2.12.4:test (default-test) @ cloud-common Tests are skipped.
                 --- maven-jar-plugin:2.4:jar (default-jar) @ cloud-common ---
Building jar: C:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\common\target\cloud-common.jar
           0]
--- mauen-install-plugin:2.4:install (default-install) @ cloud-common ---
01 Installing C:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\common\target\cloud-common.jar to C:\Users\pnagy\.m2\repository\com\oracle\w
loud\cloud-common\1.0.8-SMAPSHOT\cloud-common-1.0.0-SMAPSHOT.jar
01 Installing C:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\common\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\cloud-
n\1.0.8-SMAPSHOT\cloud-common-1.0.0-SMAPSHOT.pom
 INFOI --- maven-antrun-plugin:1.8:run (wlstdeploy) @ cloud-common ---
INFOI Executing tasks
main:

[Isshexec] Connecting to 129.191.0.44:22

[Isshexec] cmd : sudo su - oracle -c /tmp/Deploy-Aussie_tripper.sh oracle

[Isshexec] cmd : sudo su - oracle -c /tmp/Deploy-Aussie_tripper.sh oracle

[Isshexec] cmd : sudo su - oracle -c /tmp/Deploy-Aussie_tripper.sh oracle

[Isshexec] cmd : sudo su - oracle -c /tmp/Deploy-Aussie_tripper-v1

-deploy /tmp/aussie_tripper-v1.ear

(Nov 6, 2015 11:23:23 AM UTC) (Info) <Security > (BEA-090905> <Disable the CryptoJ JCE Provider self-integrity check for better startup performance. To enable

this check, specify -Dweblogic.security.allowCryptoJDefaultJCEUerification=true.>

(Nov 6, 2015 11:23:23 AM UTC) <Info> <Security > (BEA-090906> <Changing the default Random Number Generator in RSA CryptoJ from ECDRBG128 to FIPS186PRNG. To disa

ble this change. specify -Dweblogic.security.allowCryptoJDefaultFRNG=true.>

(Nov 6, 2015 11:23:23 AM UTC) <Info> <Security > (BEA-090908> <Using the configured custom SSL Hostname Verifier implementation: weblogic.security.utils.SSLWLSHo

stnameVerifier;MulHostnameVerifier.>

(Nov 6, 2015 11:23:25 AM UTC) <Info> <Useumity > (BEA-090908) <Using the configured custom SSL Hostname Verifier implementation: weblogic.security.utils.SSLWLSHo

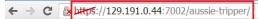
stnameVerifier;MulHostnameVerifier.>

(Nov 6, 2015 11:23:25 AM UTC) <Info> <Useumity > (BEA-090908) <Using the configured custom for application, aussie-tripper-v1 [archive: /tmp/aussie-tripper-v1 [archive: /tmp/aussie-tripper-
                 Reactor Summary:
                 wins-cloud SUCCESS [ 0.266 s] cloud-api SUCCESS [ 11.285 s]
                 BUILD SUCCESS
                  Total time: 11.668 s
Finished at: 2015-11-06T12:23:29+01:00
Final Memory: 21M/227M
                    git.repos\weblogic-innovation-seminars.cloud\cloud.demos
```

Access the application using the following url: <a href="https://<ip">https://<ip address of JCS VM>:7002/aussie-tripper/







The Little Aussie Tripper - Version 1.0

This is a simple application which is used to demonstrate the persistence of client state across multiple HTTP requests.

Instructions

- . Click on the a city name in the map below to visit it -- the cities you visit will be displayed in a list
- Click [Show Last Request] to see the hostname of the server which serviced the last request and the URL used
 Click [Clear Trips] to clear the list
- · Click [Invalidate] to invalidate the session

Select a Destination



Places Visited

[Invalidate Session] [Clear Trips] [Show Last Request]

Click on a couple of places and the same would be reflected on the screen.

← → C & bttps://129.191.0.44:7002/aussie-tripper/trip?city=Melbourne

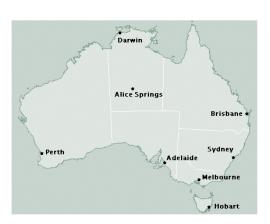
The Little Aussie Tripper - Version 1.0

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Instructions

- Click on the a city name in the map below to visit it -- the cities you visit will be displayed in a list
- · Click [Show Last Request] to see the hostname of the server which serviced the last request and the URL used
- Click [Clear Trips] to clear the listClick [Invalidate] to invalidate the session

Select a Destination



Places Visited ...

[Invalidate Session] [Clear Trips] [Show Last Request]

Host: winstest2wls-wls-1.compute-jcsdemo027.oraclecloud.internal WebLogic Server: winsTEST_adminserver

You have visited 5 cities

Nov 6, 2015 11:33:15 AM (Ver 1.0) Perth Alice Springs Nov 6, 2015 11:33:15 AM (Ver 1.0) Nov 6, 2015 11:33:17 AM (Ver 1.0) 3 Adelaide Nov 6, 2015 11:33:18 AM (Ver 1.0) Sydney 5 Nov 6, 2015 11:33:18 AM (Ver 1.0) Melbourne

5) Now, we will deploy a more newer version of the application. Execute the following maven build in the WINS SOURCE REPOSITORY\cloud.demos directory:





mvn install -DexecuteSh -Djcs.ip=129.191.0.44 -Dsh=DeployinAdminMode-Aussie_tripper_v2.sh Note: use your instance's public IP address. The result should be the following:

```
\git.repos\weblogic-innovation-seminars.cloud\cloud.demos<mark>tmvn install -DexecuteSh -Djcs.ip=129.191.0.44 -Dsh-DeployinAdminMode-Aussie_tripper_v2.sh</mark>
Scanning for projects...
                          Reactor Build Order:
                          wins-cloud
cloud-api
                           Building wins-cloud 1.0.0-SNAPSHOT
                           --- maven-install-plugin:2.4:install (default-install) @ vins-cloud ---
Installing c:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\wins-cloud\1.0
$HOT\wins-cloud-1.8-8-NRP$HOT.pom
                           Building cloud-api 1.0.0-SNAPSHOT
                                           properties-maven-plugin: 1.0-alpha-2: read-project-properties \ (default) \ @ \ cloud-common-plugin: 1.0-alpha-2: read-project-project-properties \ (default) \ @ \ cloud-common-plugin: 1.0-alpha-2: read-project-project-properties \ (default) \ @ \ cloud-common-plugin: 1.0-alpha-2: read-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-project-proje
                          --- maven-resources-plugin:2.6:resources (default-resources) 0 cloud-common - Using 'UTF-8' encoding to copy filtered resources. Copying 0 resource
                         --- maven-compiler-plugin:3.1:compile (default-compile) @ cloud-common --- Nothing to compile - all classes are up to date
                          --- maven-resources-plugin:2.6:testResources (default-testResources) @ cloud-common -- Using 'UTF-8' encoding to copy filtered resources. Copying Ø resource
                         --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ cloud-common - Nothing to compile - all classes are up to date
                         --- maven-surefire-plugin:2.12.4:test (default-test) @ cloud-common - Tests are skipped.
                                  -- maven-jar-plugin:2.4:jar (default-jar) 🛭 cloud-common -
                         --- maven-install-plugin:2.4:install (default-install) @ cloud-common ---
Installing C:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\common\target\cloud-common.jar to C:\Users\pnagy\.m2\repository\com\oracle\wi
ud\cloud-common\1.0.0-SNAPSHOT\cloud-common-1.0.0-SNAPSHOT.jar
Installing C:\Java\git.repos\veblogic-innovation-seminars.cloud\cloud.demos\common\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\cloud-c
1.0.0-SNAPSHOT\cloud-common-1.0.0-SNAPSHOT.pom
                         --- maven-antrun-plugin:1.8:run (wlstdeploy) @ cloud-common --- Executing tasks
main:

[sshexec] Connecting to 129.191.8.44:22

[sshexec] cmd: sudo su - oracle -c /tmp/DeployinAdminMode-Aussie_tripper_v2.sh oracle

[sshexec] cmd: sudo su - oracle -c /tmp/DeployinAdminMode-Aussie_tripper_v2.sh oracle

weblogic.Deployer invoked with options: -adminurl t3s://winsTEST2wls-wls-1.compute-jcsdemo027.oraclecloud.internal:7200 -user weblogic -adminmode -name aussie-
tripper-v1 -deploy /tmp/aussie-tripper-v2.ear -appwersion v2

Khov 6, 2015 11:35:53 AM UIC> (Info> (Security> (BEB-090905 C) Obisabling the CryptoJ JCE Provider self-integrity check for better startup performance. To enable

this check, specify -Dweblogic.security.allowCryptoJDefaultTkNictrue.>

(Nov 6, 2015 11:35:53 AM UIC> (Info> (Security> (BEB-090906) C(Changing the default Random Number Generator in RSA CryptoJ from ECDRBG128 to FIPS186PRNC. To disable this change, specify -Dweblogic.security.allowCryptoJDefaultTkNictrue.>

(Nov 6, 2015 11:35:53 AM UIC> (Info> (Security> (BEB-090909) (Using the configured custom SSL Hostname Uerifier implementation: weblogic.security.utils.SSLWLSHo staneoUerifiers, (Nov 6, 2015 11:35:54 AM UIC> (Info> (Security) (BEB-090909) (Using the configured custom SSL Hostname Uerifier implementation: weblogic.security.utils.SSLWLSHo staneoUerifier.>

(Nov 6, 2015 11:35:54 AM UIC> (Info> (SEE Deployment SPI> (BEB-260121> (Initiating deploy operation for application, aussie-tripper-v1 [archive: /tmp/aussie-tripper-v2.ear], to configured targets.)

Task 4 configured targets.

Task 4 initiated: | Denlower:149026| deploy application aussie-tripper-v1 | Uersion=v2| on winsIEST_adminserver.

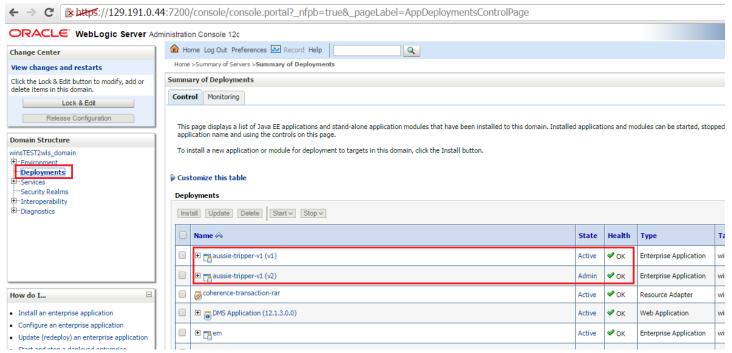
Task 4 completed: | Denlower:149026| deploy application aussie-tripper-v1 | Uersion=v2| on winsIEST_adminserver.
                           Executed tasks
                            Total time: 10.247 s
Finished at: 2015-11-06T12:35:59+01:00
Final Memory: 16M/322M
                                  git.repos\weblogic-innovation-seminars.cloud\cloud.demos>
```

Go back to the WebLogic Server admin console and notice that there are 2 versions of the application deployed. And both are in Active state.





▽ X



Launch a different browser and access the Version 2 of the application using the url: <a href="https://<ip">https://<ip address of the JCS VM>:7200/aussie-tripper. Login using the user name password which are used to login to the admin console It can be useful to use a different browser to avoid any caching issues.

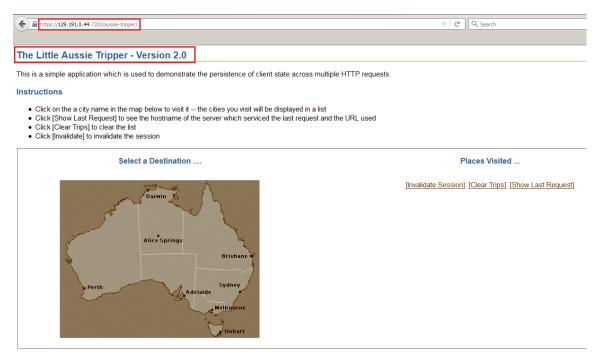


This should bring up the version 2 of the application.

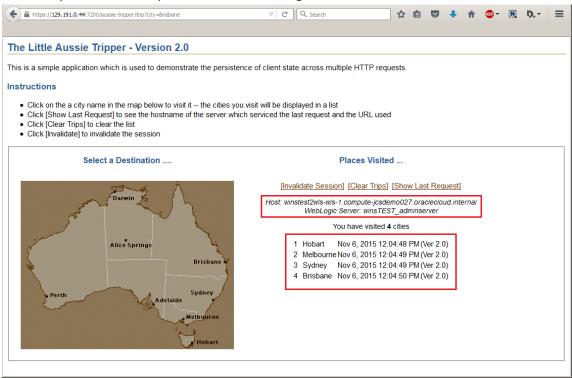
♦ https://129.191.0.44:7200/aussie-tripper/







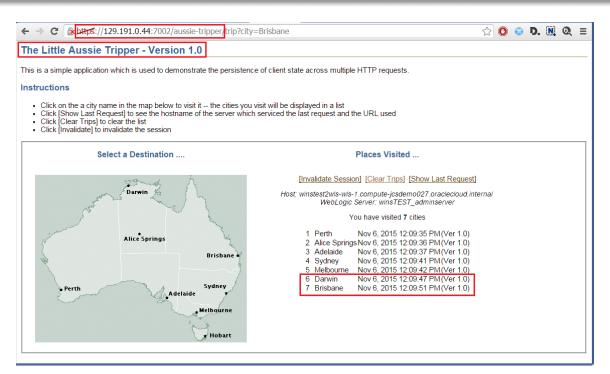
Click on a few places of the map and see that it is being reflected on the screen.



Go back to the other browser, where Version 1 was running and click on some more places on the map. You will notice that the state of the application of Version 1 was alive and more places are being continued to be clicked.







6) Now, you have to promote Version 2 of the application to go into production (change it from admin mode). Execute the following maven build in the WINS_SOURCE_REPOSITORY\cloud.demos directory:

mvn install -DexecuteSh -Djcs.ip=129.191.0.44 -Dsh=Promote-Aussie_tripper_v2.sh

Note: use your instance's public IP address. The result should be the following:

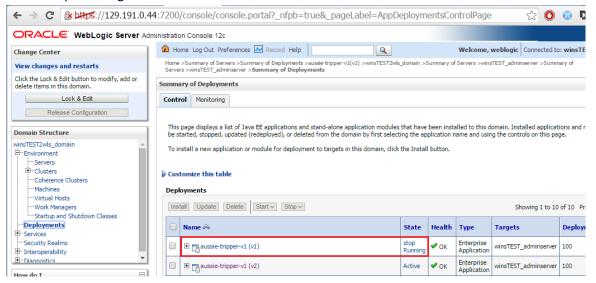




```
ava\git.repos\weblogic-innovation-seminars.cloud\cloud.demos<mark>mvn install -DexecuteSh -Djcs.ip=129.191.0.44 -Dsh=Promote-Aussie_tripper_v2.sh</mark>
Ol Scanning for projects...
          Reactor Build Order:
          wins-cloud
cloud-api
          Building wins-cloud 1.0.0-SNAPSHOT
         --- maven-install-plugin:2.4:install (default-install) @ wins-cloud ---
Installing c:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\wins-cloud\1.0
PSHOT\wins-cloud-1.6.9-SNRPSHOT.pom
          Building cloud-api 1.0.0-SNAPSHOT
               properties-maven-plugin:1.0-alpha-2:read-project-properties (default) @ cloud-common -
         --- maven-resources-plugin:2.6:resources (default-resources) @ cloud-common - Using 'UTF-8' encoding to copy filtered resources. Copying 8 resource
          --- maven-compiler-plugin:3.1:compile (default-compile) @ cloud-common --- Nothing to compile - all classes are up to date
                maven-resources-plugin:2.6:testResources (default-testResources) @ cloud-common -
g 'UTF-8' encoding to copy filtered resources.
ing 0 resource
          --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ cloud-common --- Nothing to compile - all classes are up to date
         --- maven-surefire-plugin:2.12.4:test (default-test) @ cloud-common - Tests are skipped.
          --- maven-jar-plugin:2.4:jar (default-jar) @ cloud-common
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ cloud-common ---
[INFO] Installing C:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\common\target\cloud-common.jar to C:\Users\pnagy\.m2\repository\com\oracle\w
ms\cloud\cloud-common\l.0.8-SMPSHOT\cloud-common-1.0.8-SMPSHOT.git
[INFO] Installing C:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\common\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\cloud\-
pmmon\l.0.8-SMPSHOT\cloud-common-1.0.8-SMPSHOT.pom
 упмон (1.0.0-5-xmrsnul c.loud-соммон-1.0.0-5-xmrsnul.pom
[INPO]
[INPO] --- maven-antrun-plugin:1.8:run ⟨vlstdeploy⟩ @ cloud-common ---
[INPO] Executing tasks
INFO] Executed tasks
          wins-cloud SUCCESS [ 9.263 sl
cloud-api SUCCESS [ 9.086 sl
          BUILD SUCCESS
          Total time: 9.462 s
Finished at: 2015-11-06T13:13:10+01:00
Final Memory: 16M/322M
          \git.repos\weblogic-innovation-seminars.cloud\cloud.demos\
```

The application is deployed. Go to the WebLogic Server admin console and refresh the deployments screen.

Version 1 is not in Stop Running state while Version 2 is in Active state.



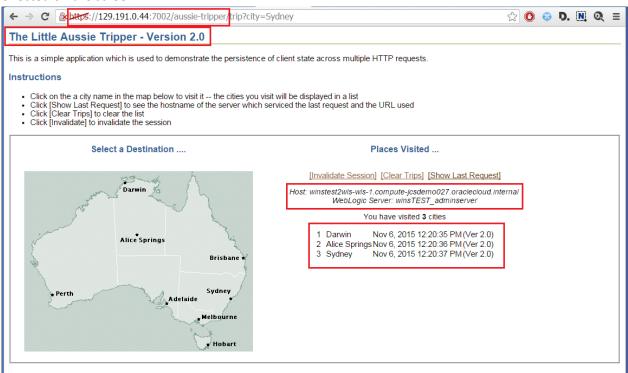




Go the browser where V1 was running and click on 'Invalidate Session'. A message will be shown that the session has ended. Click on the link to access the application again.



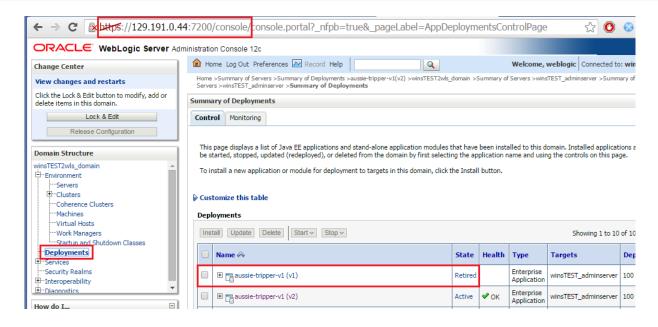
This time when the page loads it is version 2 of the application. You can click on various places on the map and the same will be reflected on the screen.



Close both application's browsers page/tab and login again to WebLogic Server Admin Console. Check out the Deployments page. This time you will notice that the Version 1 of the application is now in 'retired' state while Version 2 is in Active state.







Restore Java Cloud Service Instance

 In order to roll back the changes on JCS execute the following maven build in the WINS_SOURCE_REPOSITORY\cloud.demos directory:

mvn install -DexecuteSh -Djcs.ip=129.191.0.44 -Dsh=-Dsh=restoreJCS.sh Note: use your instance's public IP address. The result should be the following:





C:\Wi	ndows\System32\cmd.exe - mvn install -DexecuteSh -Djcs.ip=129.191.0.44 -Dsh=restoreJCs.sh		
	a\git.repos\weblogic-innovation-seminars.cloud\cloud.demos <mark>`mvn install -DexecuteSh -Djcs.ip=129.191.0.44 -Dsh=restoreJCS.sh</mark> Scanning for projects		
[INFO]	Reactor Build Order:		
[INFO]			
[INFO]	wins-cloud cloud-api		
[INF0] [INF0]			
[INFO]	Building wins-cloud 1.0.0-SNAPSHOT		
[INFO]			
CINFO1	Installing c:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\wins-cloud\1 PSHOT\wins-cloud-1.0.0-SNAPSHOT.pom	Ø	
[INFO]	randi wina-tibuu-i-a-a-amrandi-pun		
[INF0] [INF0]	Building cloud-api 1.0.0-SNAPSHOT		
[INFO]			
[INF0] [INF0]	properties-maven-plugin:1.0-alpha-2:read-project-properties (default) @ cloud-common		
[INFO]			
[ÎNFO] [INFO]	Copying O resource		
[INFO]	maven-compiler-plugin:3.1:compile (default-compile) @ cloud-common		
[INFO]			
[INF0] [INF0]	Using 'UTF-8' encoding to copy filtered resources.		
[INFO] [INFO]	Copying 8 resource		
[INFO]	maven-compiler-plugin:3.1:testCompile (default-testCompile) @ cloud-common Mothing to compile - all clases are up to date		
[INFO]	maven-surefire-plugin:2.12.4:test (default-test) @ cloud-common		
	Tests are skipped.		
[INFO]	maven-jar-plugin:2.4:jar (default-jar) @ cloud-common		
[INFO]	maven-install-plugin:2.4:install (default-install) @ cloud-common		
ns\clo	[INFO] Installing C:\Java\git.repos\weblogic-innovation-seminars.cloud\cloud.demos\common\target\cloud-common.jar to C:\Users\pnagy\.m2\repository\com\oracle\wi is\cloud\cloud-common\.d.0-8-SNMPSHOT\cloud-common-1.0-0-8-NMPSHOT.jar		
nmmnn\	Installing C:\Java\git.repos\weblogic-innovation-seminars.čloud\cloud.demos\common\pom.xml to C:\Users\pnagy\.m2\repository\com\oracle\wins\cloud\cloud 1.9.9-SNBSHOT\sloud-common-1.9.9-SNBPSHOT.pom	l-c	
[INFO] [INFO]			
	Executing tasks		
main:	10		
	exec] Connecting to 129.191.0.44:22 exec] cmd : sudo su - oracle -c /tmp/restoreJCS.sh oracle		
Initia	lizing WebLogic Scripting Tool (WLST)		
Welcom	e to WebLogic Server Administration Scripting Shell		
Туре һ	elp() for help on available commands		
Connec	ting to t3s://winsTEST2wls-wls-1.compute-jcsdemo027.oraclecloud.internal:7200 with userid weblogic , 2015 2:07:58 PM UTC> <info> <security> <bea-090905> <disabling better="" check="" cryptoj="" enable<="" for="" jce="" performance.="" provider="" self-integrity="" startup="" td="" the="" to=""><td></td></disabling></bea-090905></security></info>		
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KNov 6	, 2015 [°] 2:07 [°] 58 PM UTČ> <info> <Šecurity[°] 〈BEA-090906> 〈Changing the default Random Number Generator in RSA CryptoJ from ECDRBG128 to FIPS186PRNG. To dis s change, specify -Dweblogic.security.allowCryptoJDefaultPRNG-true.〉</info>	ab	
KNov 6	, 2015 2:07:58 PM UTC> <info> <security> <bea-090909> <using configured="" custom="" erifier\$nullhostnameverifier.="" hostname="" implementation:="" ssl="" the="" verifier="" weblogic.security.utils.sslwlsf=""></using></bea-090909></security></info>	os	
	erfiler, multipustion were frier" Stully connected to Admin Server "winsTEST_adminserver" that belongs to domain "winsTEST2wls_domain".		
Get ma	naged server list	~	





```
topping application aussie-tripper-v1.
Nov 6, 2015 2:88:81 PM UTC> (Info> <J2EE Deployment SPI> 〈BEA-260121〉 〈Initiating stop operation for application, aussie-tripper-v1#v1 [archive: null], to wins
         berwammserer./
Deployer:149192 Operation "stop" on application "aussie-tripper-v1 [Version=v1]" is in progress on "winsTESI_adminserver".
         Completed the stop of Application with status completed surent Status of your Deployment: exployment status of your Deployment: exployment status completed status completed sployment State : completed sployment Message : no message sployment Message : no message completed sployment 
                     '6. 2015 2:08:05 PM UTC/ (Info/ (UZEE Deployment)
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cent Status of your Deployment:
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Loynent State: completed
Loynent State: completed
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         Not be, 2015 2-00-07 PM of Section 1885 (insTEST_adminserver. >
Completed the undeployment of Application with status completed uppent Status of your Denloyment.
 Deployment command type: undeploy
Deployment State : completed
                  logment message: no message leployment SPI / (BEA-260121) (Initiating undeploy operation for application, aussie-tripper-v1#v2 [archive: null], to v 6, 2015 2:08:13 PM UTC) (Info) (JZEE Deployment SPI) (BEA-260121) (Initiating undeploy operation for application, aussie-tripper-v1#v2 [archive: null], to v 7.00 | v 7.0
                     ) 0.2013 2-100-15 11
TIEST_adminserver.>
Hyleted the undeployment of Application with status completed
reput Status of vour Denloyment;
 Deployment command type: undeploy
Deployment State : completed
             ployment message on member of the member of the property of th
         or more help, use help('edit')
                     rting an edit session ...
rted edit session ...
rted edit session. please be sure to save and activate your
nges once you are done.
ing all your changes ...
ed all your changes successfully.
ivating all your changes, this nay take a while ...
edit lock associated with this edit session is released
e the activation is completed.
ivation completed
necting to Node Manager ...
cessfully Connected to Node Manager.
    insTEST_adminserver status...RUNNING
   HUTDOWN
   vinsTEST_server_1 status...SHUTDOWN
winsTEST_server_1 is SHUTDOWN
Starting winsTEST_server_1
Starting server winsTEST_server_1 ...
Successfully started server winsTEST_server_1 ...
Now winsTEST_server_1 status is RUNNING
                                         ording disconnected from Node Handser.
, 2015 2:09:07 PM UTC> (Warning> <JNDI> <BEA-050001> <WLContext.close(> was called in a different thread than the one in which it was created.> Executed tasks
                                           BUILD SUCCESS
```

Troubleshooting

If the script fails the following steps need to be complete:

- Undeploy all versions of Aussie-tripper application
- Disable Administration port (Domain -> Configuration -> General)
- Disable Tunneling (Adminserver -> Protocol -> General)

Note: once you have apply changes (Disable Administration port) the Admin console will no longer available on port 7200.

Typical Questions

- Side by Side deployment importance and steps
 - Releasing a new version of the product is not an easy task. After finishing development cycles and QA cycles, finally it is time to deploy the new version to the application server. Servers are shut down, the new version of the product is swapped in, and then pray there is no issue once everything comes up. If





you are lucky, only a few issues will show up. However if you are not in luck then you have to roll back the old applications, and it is even more painful than deploying the new version, because sometimes you cannot roll back all of the changes.

- This is when it helps to have multiple versions on the application server and one could switch between each version without interrupting the system.
- Side-by-side application deployment controls the process for deploying new versions of Web-based applications without the need to disrupt service. The new version of an application is deployed alongside existing version WebLogic will gradually migrate the traffic. The older version is automatically un-deployed after all current clients complete their work. The Administrator explicitly un-deploys the older version, or a configured timeout is reached.
- Rolling back the new version is simple: just stop the redeployment process if problems are detected in the newer application version.
- For new applications, administrators can deploy an application in "administration mode," which makes it
 inaccessible to non-admin clients, in order to do sanity checks to ensure that the application is working
 as expected and then open it up to clients.
- List of the features of side-by-side deployment
 - Multiple application versions can coexist
 - Test versions before releasing to users
 - o Roll back to previous versions
 - o Automatic retirement: graceful, timeout, immediate
 - Creates version-aware application artifacts/resources
 - o Reduces hardware, software, maintenance, and support costs

Pre-requisite

- Prerequisite to deploy the application using "Side By Side Deployment" mechanism is that the previously deployed application has to be versioned.
- If previously deployed application is not versioned then the new application cannot be deployed using
 "Side By Side Deployment" mechanism. If attempted, it will throw
 weblogic.management.ManagementException: [Deployer:149081]You cannot deploy application,
 '[Your-App-Name]', with version '[App-Version]'. The application was previously deployed without
 version.

Wrap up / Overview

Sometimes, this is also referred to as Production Redeployment. This enables you to update and redeploy an application in a production environment without stopping the application or otherwise interrupting the application's availability to clients. Production redeployment saves you the trouble of scheduling application downtime, setting up redundant servers to host new application versions, manually managing client access to multiple application versions, and manually retiring older versions of an application.