

100 Oracle Public Cloud Workshop

Fusion Middleware Cloud Services

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Introduction

In this lab, you will acquire a good overview of the next generation Oracle Java Cloud Service. You will create a new Java Cloud Service instance from scratch. You will explore various consoles and tools available to interact with your service. The exercise will get your familiar with all the tooling available to work with this instance.

Please direct comments to: Dennis Foley (dennis.foley@oracle.com)

Objectives

□ Create and Explore Java Cloud Service

Required Artifacts

☐ The following labs require a Virtual Box Image that will be supplied by your instructor.

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Virtual Box Client

Virtual Box Client Installation

STEP 1: Copy OVA file

- Copy directory **OPCWorkshop** from flash drive provided by the instructor onto your computer. For this lab guide we will assume it has been place on **D drive**.
- ☐ If not already done, install Oracle Virtual Box. The install file can be found in OPCWorkshop\VirtualBox

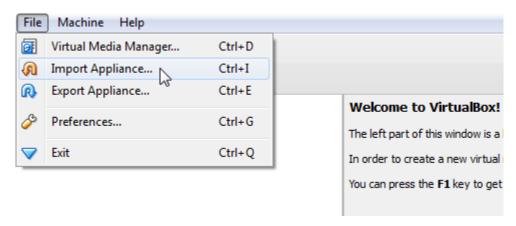
Windows = VirtualBox-4.3.26-98988-Win.exe

Mac = VirtualBox-4.3.26-98988-OSX.dmg

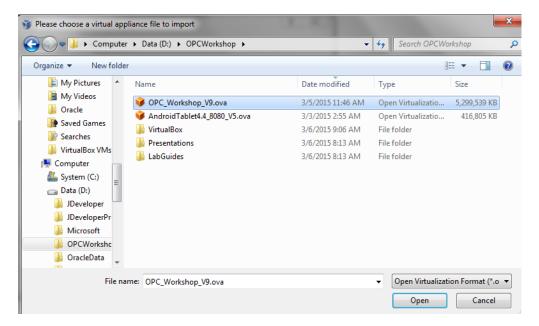
☐ Startup Oracle Virtual Box



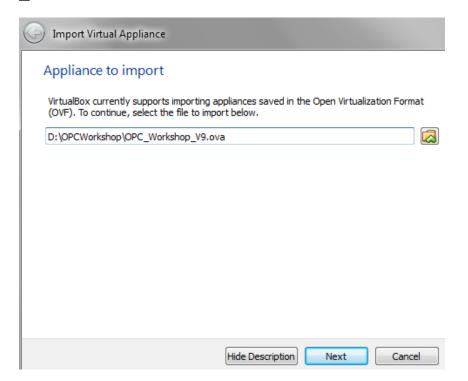
☐ From top left menu select File -> Import Appliance



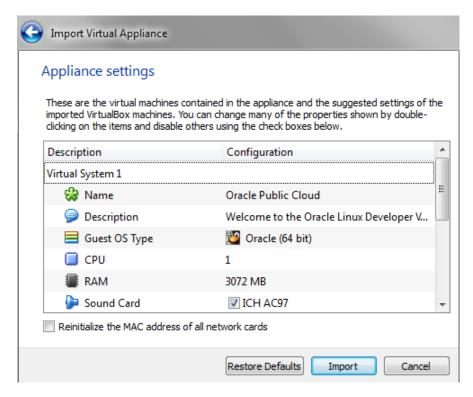
- ☐ Click on browse icon to select file to import.
- □ Navigate to OPCWorkshop directory. In our example D:\OPCWorkshop and select OPC_Workshop_V##.ova, and Click Open



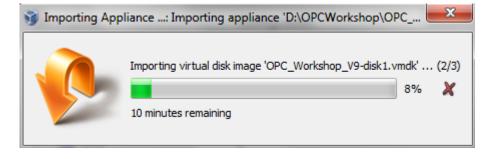
Once the File is selected click **Next** to continue.



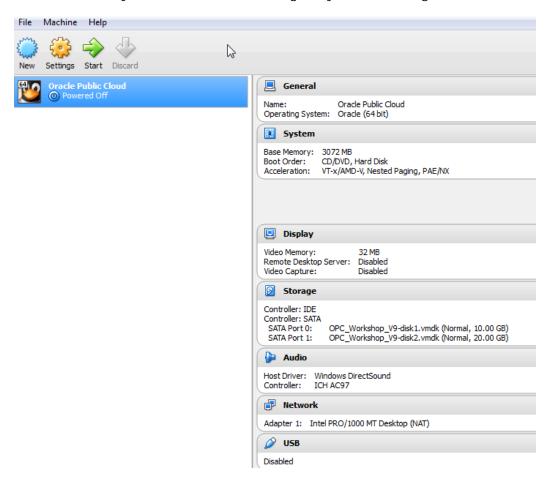
□ Keep all the defaults and click Import



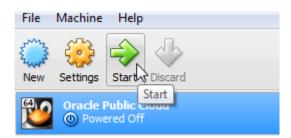
☐ Wait for import to complete. The time required to import will vary depending on the speed of your hard disk.



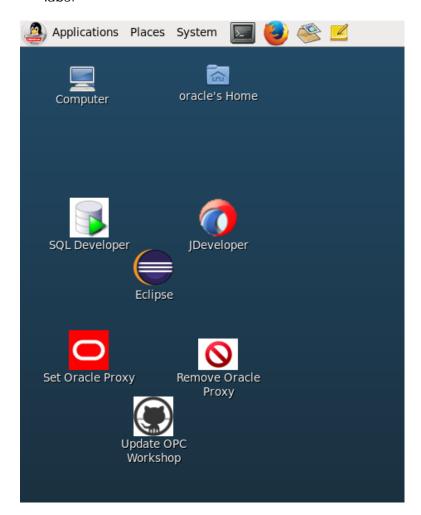
After completion of the import, you should see the Oracle Public Cloud image in a Powered Off state. The default settings will work, but if you are familiar with Virtual Box, you are welcome to change any of the settings.



☐ With the Oracle Public Cloud selected, click Start.



☐ After a few minutes you will have a running image that will be used for all of the labs.



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Create and Explore Java Cloud Service

Create Java Cloud Service

STEP 2: Login to your Oracle Cloud account

☐ Open Firefox and go to the Oracle Cloud Login:

https://cloud.oracle.com

- ☐ Click **Sign In** in the upper right hand corner of the browser
- ☐ IMPORTANT Under My Services, change Data Center to Public Cloud Services - US and click on Sign In to My Services



My Services

For service and identity domain administrators with an active Oracle Cloud service:

- · Administer cloud services
- Monitor utilization and uptime details
- · Manage users and roles for cloud services

Select Data Center/Region

Public Cloud Services - U\$ ▼

Sign In to My Services >

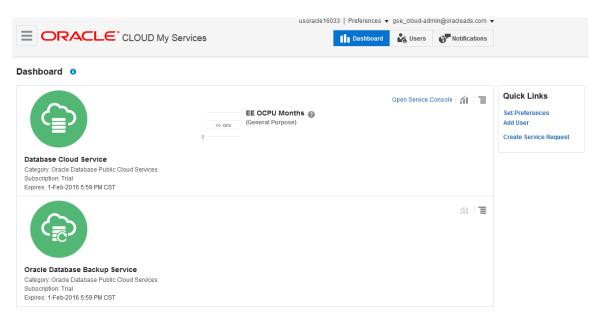
☐ Provide your Service Account information and click **Sign In**

NOTE: the **User Name**, **Identity Domain** and **Password** values will be given to you from your instructor.

Sign In to Oracle Cloud



☐ You will be presented with a Dashboard displaying the various cloud services available to this account.

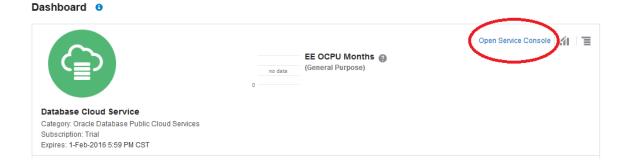


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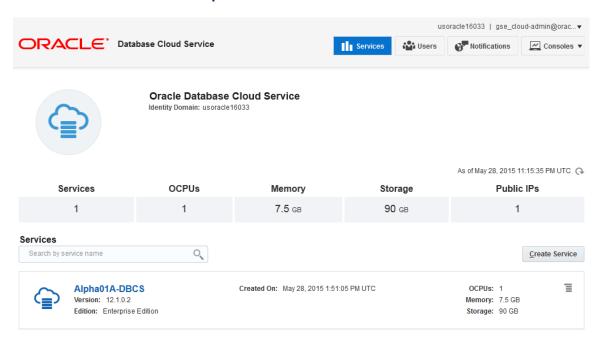
STEP 3: Explore Oracle Cloud Dashboard

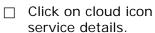
The Cloud Dashboard is the launching pad for all the cloud services in your account. You have access to the following Cloud service: **Database Cloud Service**, **Oracle Database Backup Service**, **Oracle Storage Cloud Service**, **Oracle Compute Cloud Service** and **Java Cloud Service**.

☐ Before we get into the Java Cloud Service, let's explore a few of the other services that will be used by the Java Cloud Service. From the Dashboard, click on **Open Service Console** for the **Database Cloud Service**

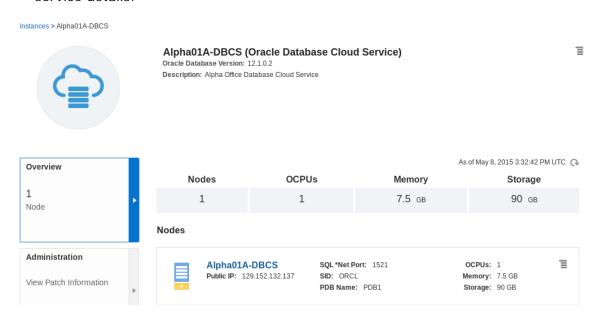


□ The Service Console for Database Cloud Service will give you overall metrics for all created instances of the Database Cloud Service. We have pre-created an instance with the name Alpha01A-DBCS.

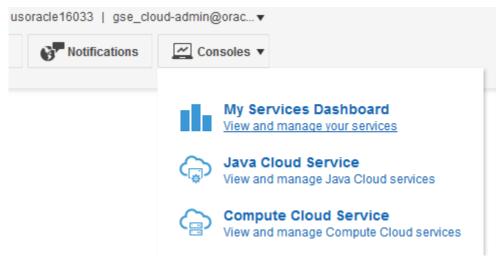




or service name $\ensuremath{\mathbf{Alpha01A\text{-}DBCS}}$ to navigate to the

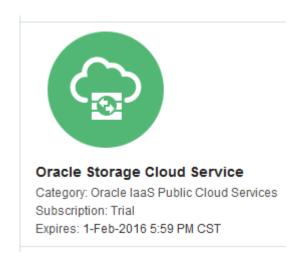


☐ To navigate back to the Services Dashboard, click **Consoles** from upper right and select **My Services Dashboard**.

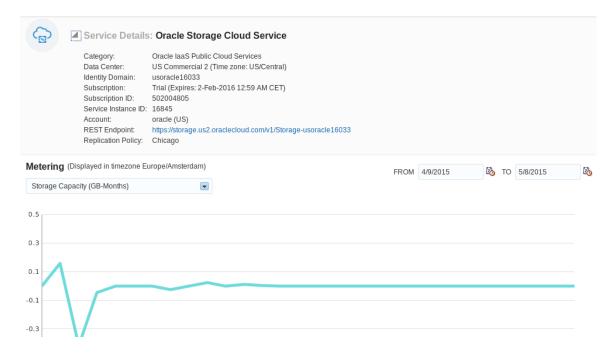


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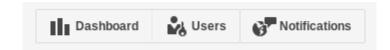
□ Next, we will take a look at the Storage Cloud Service. Scroll down and click on Oracle Storage Cloud Service to view details.



From the details screen we can view the Metering and storage usage. Also, this gives us the REST Endpoint for the storage service which can be used to programmatically interface with the storage service. If details are not displayed click



Click on Dashboard on upper right to navigate back to Cloud Dashboard.

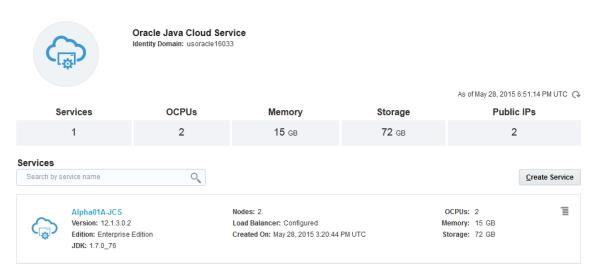


STEP 4: Create new Java Cloud Service from Service Console

☐ From the Dashboard, scroll to bottom of page and click on **Open Service**Console for the Java Cloud Service



From this screen you will be able to monitor and view all your **Java Cloud Service** instances.



☐ Click on the **Create Service** button.

Create Service

☐ Select **Oracle Java Cloud Service** for Subscription Type. Select **Hourly** for the Billing Frequency and click **Next**

Service Level

Oracle Java Cloud Service - Virtual Image

Oracle WebLogic Server installed on an Oracle Cloud virtual machine.
 No additional cloud tooling available.

Oracle Java Cloud Service

Oracle WebLogic Server installed on an Oracle Cloud virtual machine.
 All additional cloud tooling available.

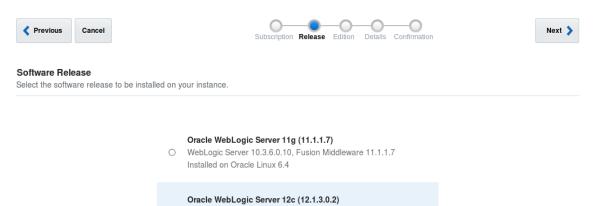
Billing Frequency

HourlyPay for the number of hours used.

Monthly

Pay one price for the entire month irrespective of the number of hours used.

☐ Select Oracle WebLogic 12c for Software Release and click Next



WebLogic Server and Fusion Middleware 12.1.3.0.2

Installed on Oracle Linux 6.4

☐ Select Enterprise Edition for Software Edition and click Next



Software Edition

Select the edition of your selected software release to be installed on your instance.

Enterprise Edition ● Oracle WebLogic Server 12c (12.1.3.0.2) Installed on Oracle Linux 6.4

Enterprise Edition with Coherence
Oracle WebLogic Server 12c (12.1.3.0.2)
Installed on Oracle Linux 6.4

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STEP 5: Identify the Instance Configuration

This next step is very important when provisioning or creating a service instance. In this step, you will shape the service and provide an identity **INSTANCE CONFIGURATION:**

When providing a name, please note you might have another service instance already created in your account, so the name must be unique.

For the purposes of this lab we have supplied you with a public SSH key.

☐ Enter the following for Instance Configuration:

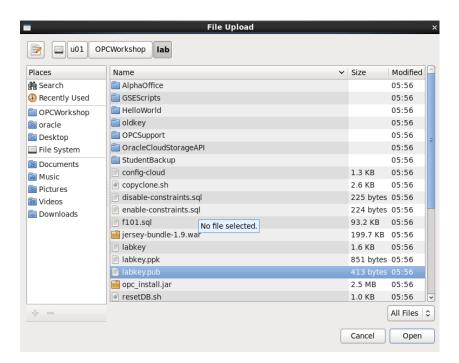
```
Instance Name = Alpha01B-JCS
Description = Alpha Office Java Cloud Service
Click on the Edit button to browse for the labkey.pub file found here: /u01/OPCWorkshop/lab/labkey.pub
```

Service Details

Provide details for your Oracle Java Cloud Service service.

Service Configuration





☐ Enter the following values for WebLogic Administrator:

WebLogic User Name = weblogic	
WebLogic Password = Alpha2014_	-





From the Database Configuration select **Alpha01A-DBCS** from the drop down and enter the following data for the configuration:

Note: The Database we reference in this step was previously created and loaded with test data.

```
Name = Alpha01A-DBCS
Database Admin User Name = sys
Password = Alpha2014_
```

Database Configuration



Select **YES** to include a Load Balancer. Use the default configuration:

Although a load balancer is not required, it is recommended that a JCS is fronted with a load balancer.

```
Provision Load Balancer = Yes
Load Balancer Policy = Least Connection Count
Compute Shape = OC3 - 1 OCPU, 7.5 GB RAM
```

Load Balancer



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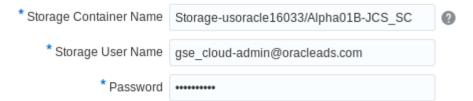
☐ Storage Container Configuration:

Like the Database Service, the Storage Container we will reference in this step was previously created.

Storage Container Name = Storage-<your domain Id>/Alpha01B-JCS-SC
Storage User Name = <your user name>
Password = <your password>



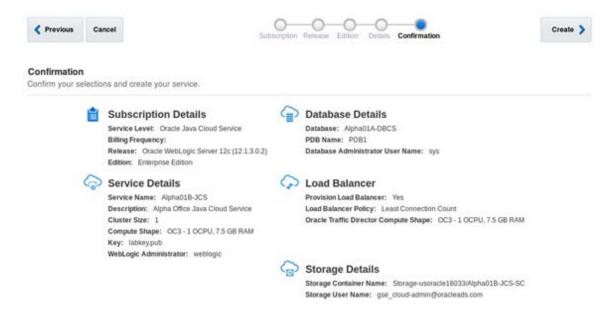
Storage Container Configuration



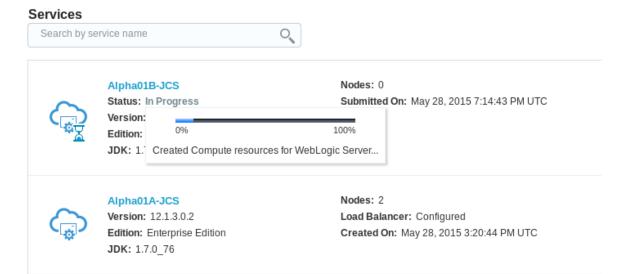
□ Verify all fields have been correctly entered, and click on Next

Service Details Provide details for your Oracle Java Cloud Service service. Service Configuration Database Configuration * Service Name | Alpha01B-JCS a *Name Alpha01A-DBCS -Description Alpha Office Java Cloud Service * Cluster Size: 1 🔻 * Database Administrator User Name sys * Compute Shape OC3 - 1 OCPU, 7.5 GB RAM * Password **** * VM Public Key labkey.pub Edit (2) 🗘 Load Balancer ય WebLogic Administrator * Provision Load Balancer Yes 🔻 * User Name | weblogic Load Balancer Policy Least Connection Count -0 * Password ********** Compute Shape OC3 - 1 OCPU, 7.5 GB RAM ▼ 0 * Confirm Password ********* Storage Container Configuration * Storage Container Name Storage-usoracle16033/Alpha01B-JCS-SC * Storage User Name | gse_cloud-admin@oracleads.com





☐ The creation of the JCS will take approximately 30 minutes. While your JCS is being created, you can monitor its progress by clicking the **Status** link. However, we will continue with the lab by utilizing a JCS instance already created following the exact steps you just performed.



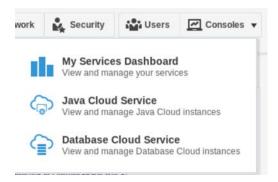
Explore WebLogic Console

STEP 6: Open WebLogic Console

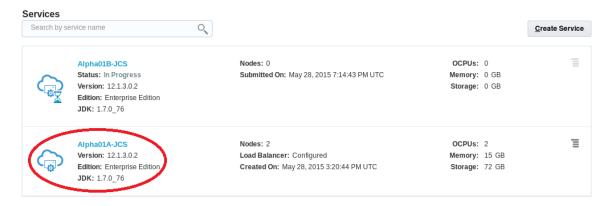
While we are waiting for your JCS to create, we have a pre-created JCS titled **Alpha01A-JCS** that we will use for the following labs.

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☐ If not already viewing the Oracle Java Cloud Service, Click on the Consoles drop down and select Java Cloud Service



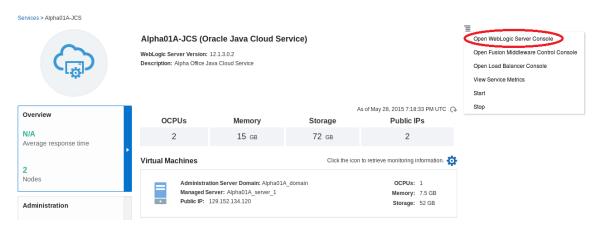
☐ Click on your pre-provisioned JCS instance Alpha01A-JCS to view details.





Services > Alpha01A-JCS

☐ Click on icon ☐ located at the far right side of the Alpha01A-JCS listing, and select **Open WebLogic Server Console**



☐ If you get security warning, expand I Understand the Risks and click Add Exception.



This Connection is Untrusted

You have asked Firefox to connect securely to **129.152.149.139:7002**, but we can't confirm that your connection is secure.

Normally, when you try to connect securely, sites will present trusted identification to prove that you are going to the right place. However, this site's identity can't be verified.

What Should I Do?

If you usually connect to this site without problems, this error could mean that someone is trying to impersonate the site, and you shouldn't continue.

Get me out of here!

Technical Details

I Understand the Risks

If you understand what's going on, you can tell Firefox to start trusting this site's identification. **Even if you trust the site, this error could mean that someone is tampering with your connection.**

Don't add an exception unless you know there's a good reason why this site doesn't use trusted identification.

Add Exception...

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☐ Click Confirm Security Exception.



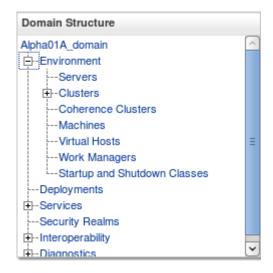
☐ A new tab will open. Enter username and password and click Login

Username = weblogic Password = Alpha2014_



STEP 7: Explore WebLogic Console

☐ Expand Domain Structure and click on **Environment > Servers**.



☐ Make note of the servers that have been created. Notice that there are two servers, and the managed server belongs to a cluster.



Now Click on **Clusters** from the Domain Structure. In a following Lab we add a Node, and you will see that the additional managed server will be added to this cluster.





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Explore Oracle Traffic Director Console

STEP 8: Open Oracle Traffic Director Console

- ☐ If you are not already on the **Java Cloud Service Console** page, you can return by clicking on the **Consoles** drop down found at the top right side of the screen.
- ☐ Make sure you are on the JCS Instance page for Alpha01A-JCS, then click on
 - and select **Open Load Balancer Console**. As before, add and confirm the exception if prompted by the browser.



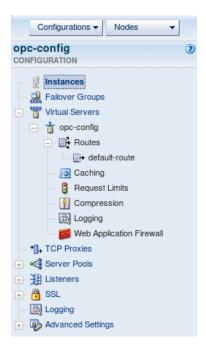
☐ A new tab will open. Enter username and password and click Login

Username = weblogic
Password = Alpha2014_

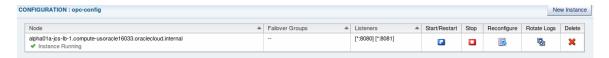


STEP 9: Explore Traffic Director Console

☐ On the left hand side navigation panel click Instances



□ Note that OTD configuration is listening on both 8080 and 8081. By default only 8081 is enabled.



☐ On the left hand side navigation panel Expand Server Pools -> origin-server-pool-1 and click on Origin Servers.



☐ You will see the Java Cloud Service entry, which is pointing to Weblogic Server running on the JCS Image.

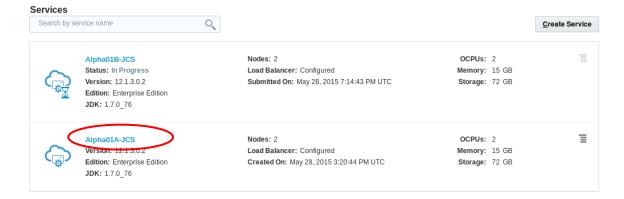


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Explore JCS image

STEP 10: Explore JCS Image via SSH

☐ From the Java Cloud Service Console, **click** on the pre-created **Alpha01A-JCS**Instance



☐ Record the IP Addresses of both the Administration Server and the Load Balancer. You will use these IP addresses in subsequent steps.

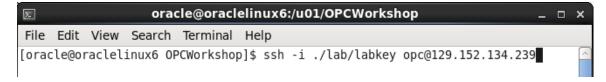


☐ Click on the **terminal icon** to open a terminal window.

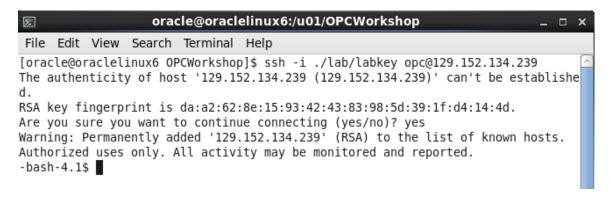


☐ SSH into the virtual machine.

ssh -i ./lab/labkey opc@<admin ip>



☐ If you are prompted to save the RSA key, enter **yes** and hit **return**



You are now logged into the virtual image on which the WebLogic Servers are running. Verify you are connected to the correct VM with **hostname** and switch to the Oracle user by entering the following command:

```
hostname
sudo su - oracle
```



☐ Display file systems running on the Image by entering the following command: You will notice that the WebLogic Home and the Domain locations along with directories for backups are in separate directories.

df

Σ						
File Edit View	Search Terminal	Help				
-bash-4.1\$ df					[^
Filesystem	1K-blocks	Used	Available	Use% Mounted on		
/dev/xvda2	58143092	2947124	52243580	6% /		
tmpfs	3855156	Θ	3855156	0% /dev/shm		
/dev/xvda1	198337	92158	95939	49% /boot		
/dev/xvdb	10321208	160344	9636576	2% /u01/app/oracle/tools		
/dev/xvdf	20642428	176064	19417788	1% /u01/data/backup		
/dev/xvde	10321208	862548	8934372	9% /u01/data/domains		
/dev/xvdc	2064208	360608	1598744	19% /u01/jdk		
/dev/xvdd	10321208	2029704	7767216	21% /u01/app/oracle/middlewa	are	
-bash-4.1\$						
_						

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☐ Change to **WebLogic Home** directory and list contents of the directory where Weblogic software was installed.

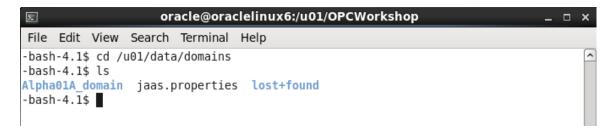
```
cd /u01/app/oracle/middleware ls
```

```
opc@alpha01jcs-wls-1:~

File Edit View Search Terminal Help
-bash-4.1$ cd /u01/app/oracle/middleware/
-bash-4.1$ ls
cfgtoollogs em logs oracle_common user_projects
coherence install lost+found oraInst.loc wlserver
domain-registry.xml inventory OPatch oui wlsserver_10.3
```

☐ Change to **WebLogic Domain directory** and list contents. You should see the default **Alpha01A_domain** that was created when the JCS was initialized.

```
cd /u01/data/domains ls
```



You now have a fully operational Environment onto which you can deploy your java applications. This Lab is completed