

100 Oracle Public Cloud Workshop

Fusion Middleware Cloud Services

Contact: Dennis Foley <u>dennis.foley@oracle.com</u>

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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.

Outline

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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

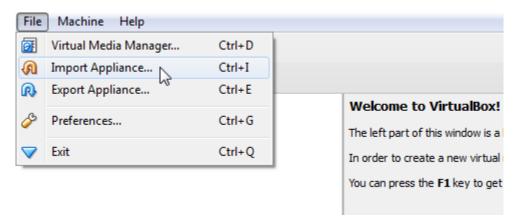
Windows = VirtualBox-5.0.12-104815-Win.exe

Mac = VirtualBox-5.0.12-104815-OSX.dmg

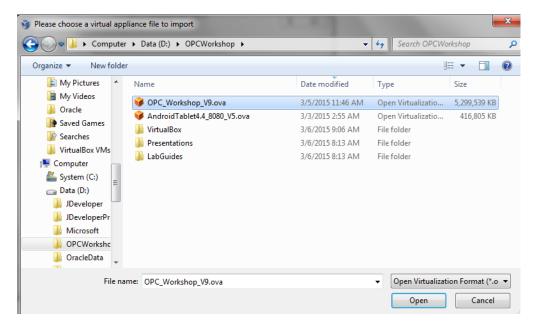
☐ Startup Oracle Virtual Box



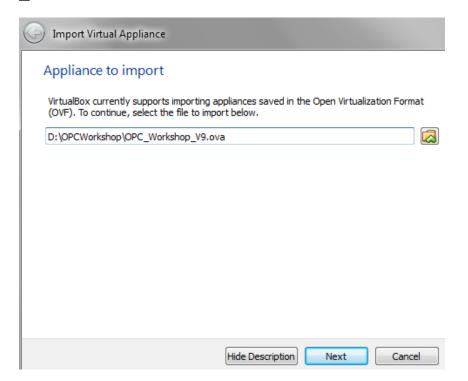
☐ From top left menu select File -> Import Appliance



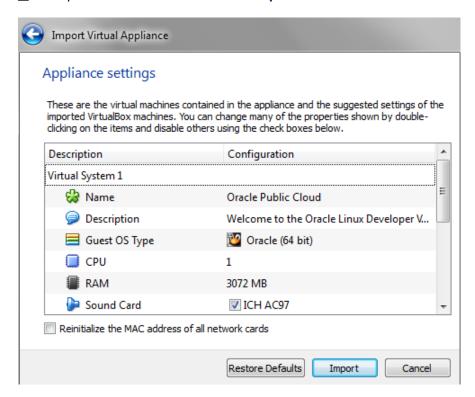
- Navigate to OPCWorkshop directory. In our example D:\OPCWorkshop and select OPC_Workshop_V##.ova, and Click Open



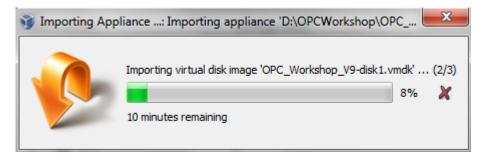
Once the File is selected click **Next** to continue.



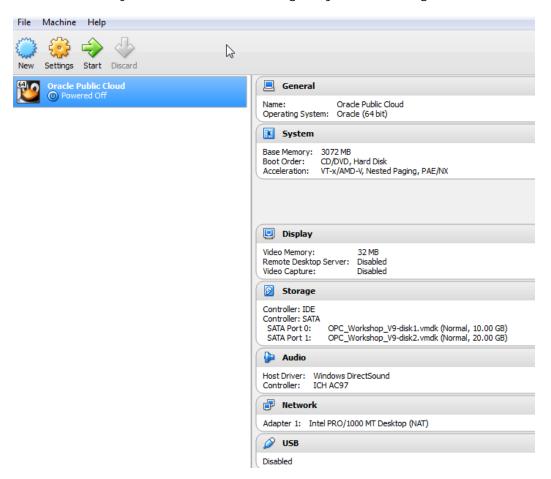
□ Keep all the defaults and click Import



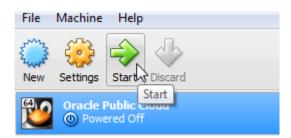
☐ Wait for import to complete. The time required to import will vary depending on the speed of your hard disk.



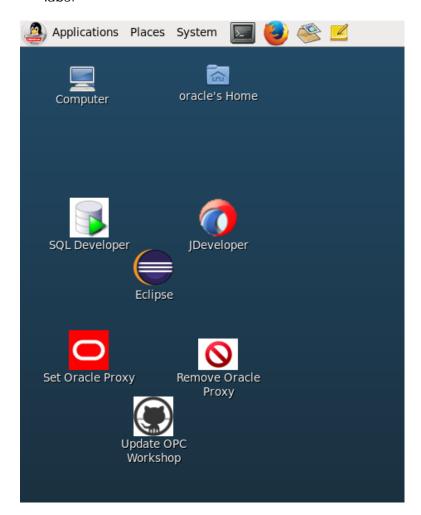
☐ After completion of the import, you should see the Oracle Public Cloud image in a Powered Off state. The default settings will work, but if you are familiar with Virtual Box, you are welcome to change any of the settings.



☐ 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.

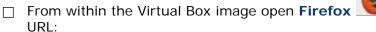


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Create and Explore Java Cloud Service

Create Java Cloud Service

STEP 2: Login to your Oracle Cloud account





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
- Obtain a list of your accounts from here

Select Data Center/Region

Public Cloud Services - US

Sign In to My Services >

☐ If your identity domain is not already set, enter it, check to box to save it, and click **Go**

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

Enter your Identity Domain



Once your Identity Domain is set, enter your User Name and Password and clickSign In

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

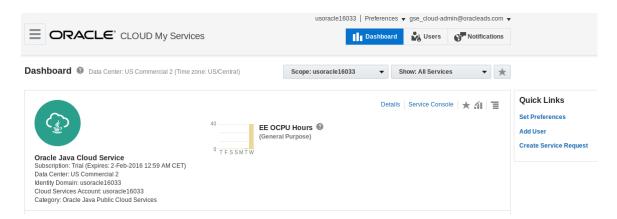
Welcome usoracle16033

gse_cloud-admin@oracleads.com

Can't access your account?

Sign In

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

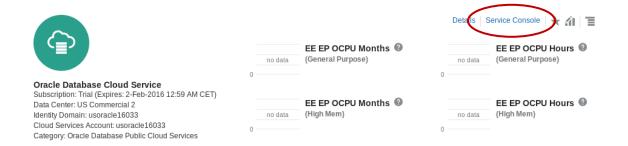


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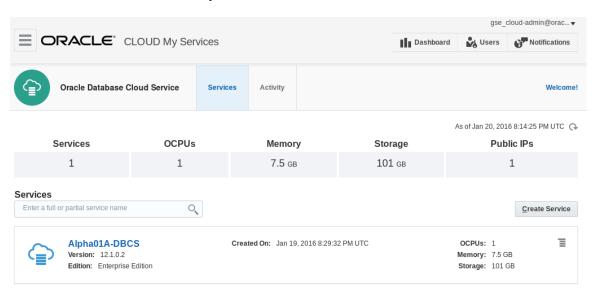
STEP 3: Explore Oracle Cloud Dashboard

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

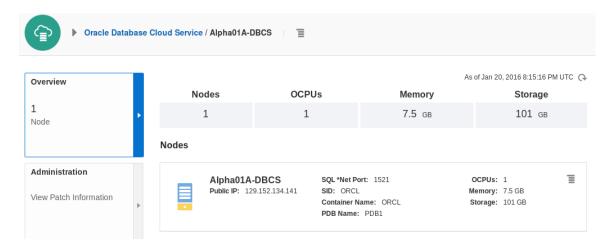


☐ The Service Console for Database Cloud Service will give you overall metrics for all created instances of the Database Cloud Service. We have pre-created an instance with the name Alpha01A-DBCS.

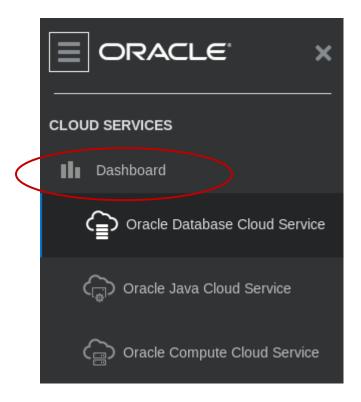


☐ Click on cloud icon service details.

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



☐ To navigate back to the Services Dashboard, click on hamburger menu in upper left hand corner. Select **Dashboard** to navigate back to the Services Dashboard.



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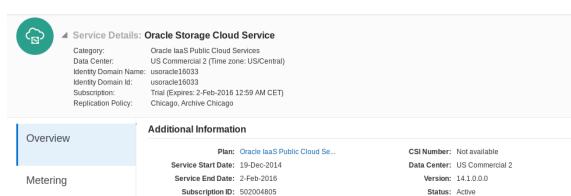
□ Next, we will take a look at the Storage Cloud Service. Scroll down and click on Oracle Storage Cloud Service to view details.



Expires: 1-Feb-2016 5:59 PM CST

☐ 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 🕨

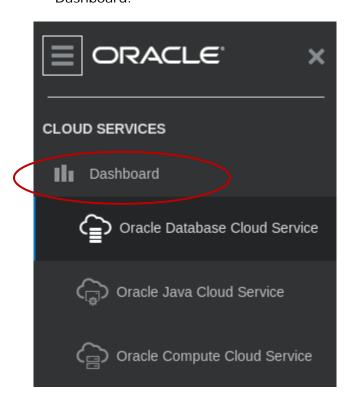


REST Endpoint: https://storage.us2.oracle

Service Instance ID: 16845

Customer Account: oracle (US)

☐ To navigate back to the Services Dashboard, click on hamburger menu in upper left hand corner. Select **Dashboard** to navigate back to the Services Dashboard.



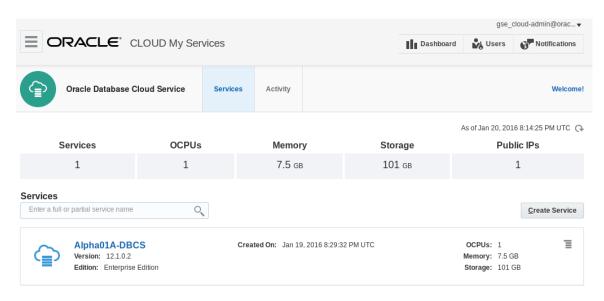
STEP 4: Create new Java Cloud Service from Service Console

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



Identity Domain: usoracle16033 Cloud Services Account: usoracle16033 Category: Oracle Java Public Cloud Services Page /100 - 14 Oracle Cloud Services

☐ From this screen you will be able to monitor and view all your **Oracle 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

Hourly
Pay 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

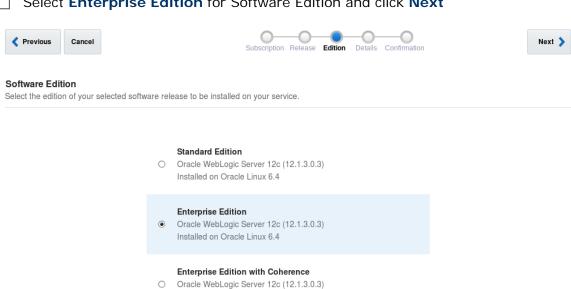


WebLogic Server and Fusion Middleware 12.1.3.0.3

☐ Select Enterprise Edition for Software Edition and click Next

Installed on Oracle Linux 6.4

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:

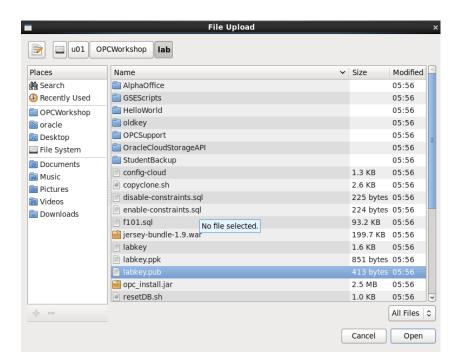
```
Service Name = Alpha01B-JCS
Description = Alpha Office Java Cloud Service
Click on the Edit button to browse for the labkey.pub file found here: /u01/OPCWorkshop/lab/labkey.pub
```

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_



* Username	weblogic	0
* Password	*********	0
* Confirm Password	********	0
Deploy Sample Application	✓ ②	

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
```

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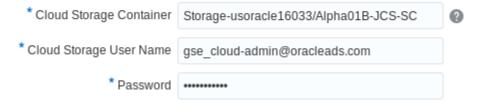


☐ Backup and Recovery Configuration:

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>

Backup and Recovery Configuration

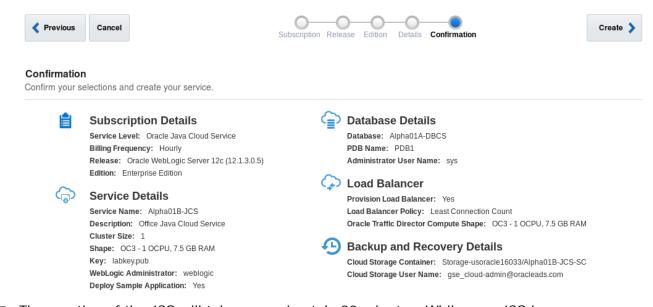


☐ Verify all fields have been correctly entered, and click on **Next**

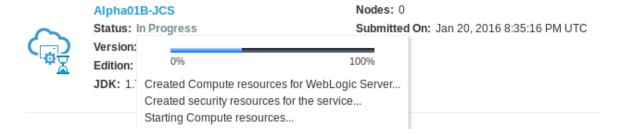
Service Details Provide details for your service. Service Configuration Database Configuration * Service Name | Alpha01B-JCS *Name Alpha01A-DBCS • PDB Name | <use default> Description Office Java Cloud Service 0 * Cluster Size: 1 ▼ * Administrator User Name sys * Shape OC3 - 1 OCPU, 7.5 GB RAM * Password ********* * SSH Public Key labkey.pub Edit 0 Load Balancer **WebLogic** * Provision Load Balancer Yes 🔻 * Username weblogic 0 Load Balancer Policy Least Connection Count ▼ * Password ********* 0 Shape OC3 - 1 OCPU, 7.5 GB RAM * Confirm Password ********** 0 Backup and Recovery Configuration Deploy Sample Application 🗹 👔 * Cloud Storage Container | Storage-usoracle16033/Alpha01B-JCS-SC 0 * Cloud Storage User Name | gse_cloud-admin@oracleads.com * Password **********

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On the Confirmation Page, view all the details of your service to ensure they are correct and then click the **Create** button.



☐ 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. Once completed, the status is no longer displayed.



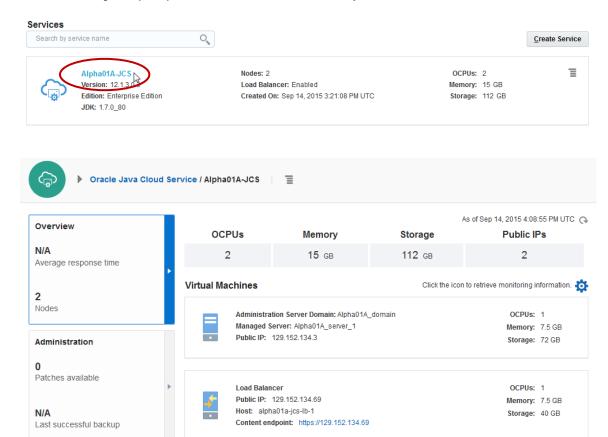
For the purposes of these labs, you can proceed to the next steps without waiting for this JCS to complete since **Alpha01A-JCS** has already been created.

Explore WebLogic Console

STEP 6: Open WebLogic Console

For all remaining labs you will be using a pre-created JCS titled Alpha01A-JCS

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



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☐ Click on icon ☐ located at the 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...

☐ Click Confirm Security Exception.



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

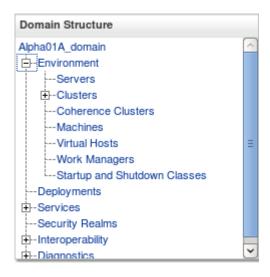
Username = weblogic Password = Alpha2014_



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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.

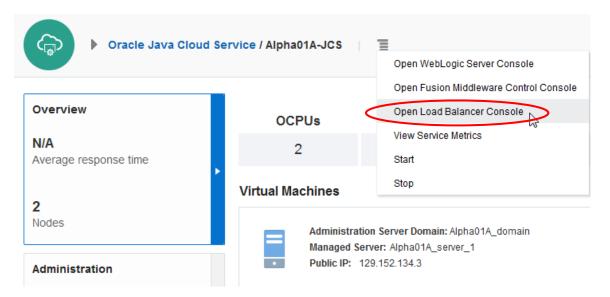




Explore Oracle Traffic Director Console

STEP 8: Open Oracle Traffic Director Console

- ☐ If you are not already on the **Java Cloud Service Console** page, click back to the tab that contains your Java Cloud Service.
- 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

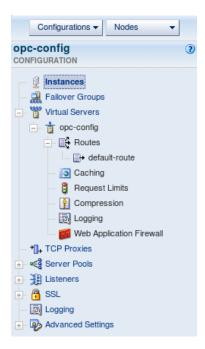
Username = weblogic
Password = Alpha2014_



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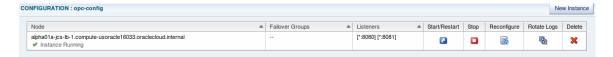
STEP 9: Explore Traffic Director Console

□ 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.

Note: IP tables have been setup to forward traffic on 443 to 8081 and traffic on 80 to 8080.



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



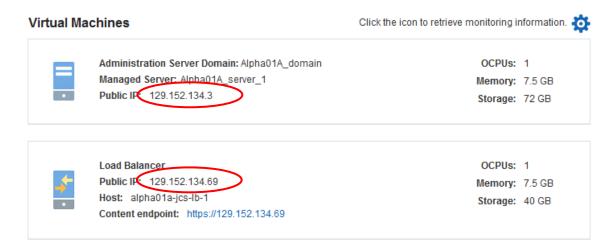
☐ You will see the Java Cloud Service entry, which is pointing to Weblogic Server running on the JCS Image.



Explore JCS image

STEP 10: Explore JCS Image via SSH

- ☐ If you are not already on the **Java Cloud Service Console** page, click back to the tab that contains your Java Cloud Service.
- Record the IP Addresses of both the **Administration Server** and the **Load Balancer**. You will use these IP addresses in subsequent steps.

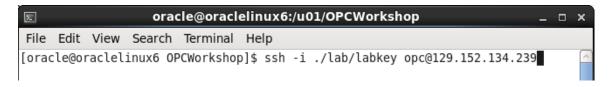


☐ Click on the **terminal icon** to open a terminal window.



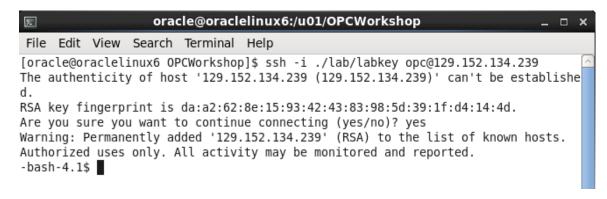
☐ SSH into the virtual machine.

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



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



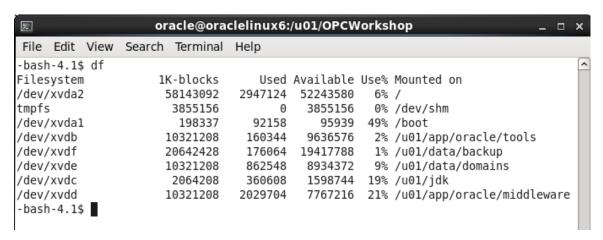
You are now logged into the virtual image on which the WebLogic Servers are running. Verify you are connected to the correct VM with **hostname** and switch to the Oracle user by entering the following command:

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



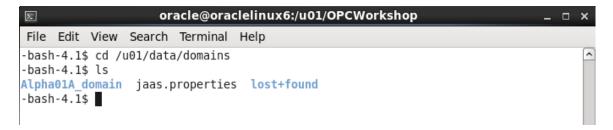
☐ Change to **WebLogic Home** directory and list contents of the directory where Weblogic software was installed.

```
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
                              logs
                                          oracle_common user_projects
                    em
                   install
                              lost+found oraInst.loc
coherence
                                                        wlserver
domain-registry.xml inventory OPatch
                                                        wlsserver 10.3
                                         oui
-bash-4.1$
```

☐ Change to **WebLogic Domain directory** and list contents. You should see the default **AlphaO1A_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