Oracle Cloud Infrastructure Labs

Oracle OCI Function Lab

V2.0

ORACLE LAB BOOK | MAY 2018

By
Oracle Sales Consulting Norway

1. Disclaimer

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Overview

Lab Overview

The lab exercises are designed to complement your training, reinforcing the key concepts by applying and demonstrating what you learned in the presentation sessions. This lab book is comprised of individual exercises. These exercises allow you to get first hands-on exposure working with the Oracle Cloud Infrastructure, Oracle OCI, using a demo environment, where you will see how key features and functionality are deployed in the software. The lab specifically builds the initial demo environment for Oracle Functions workshop

Start with Oracle Cloud Infrastructure Services

A complete set of training labs for Oracle OCI is available at

https://github.com/bios62/Oracle-OCI-Labs

In this Lab the purpose is to:

- Creating a network
- Configuring network primitives
- Launching an instance VM, based on custom image with function installed

For this lab we will go through the allocation of OCI resources, proper configuration of Database Cloud Service, proper configuration of Linux environment to be prepared to install software. We will then install both open source and commercial software. Finally we will use Terraforms to create an infrastructure as a script.

Sign into the Console

User your cloud account or the oracle provided LAB account.

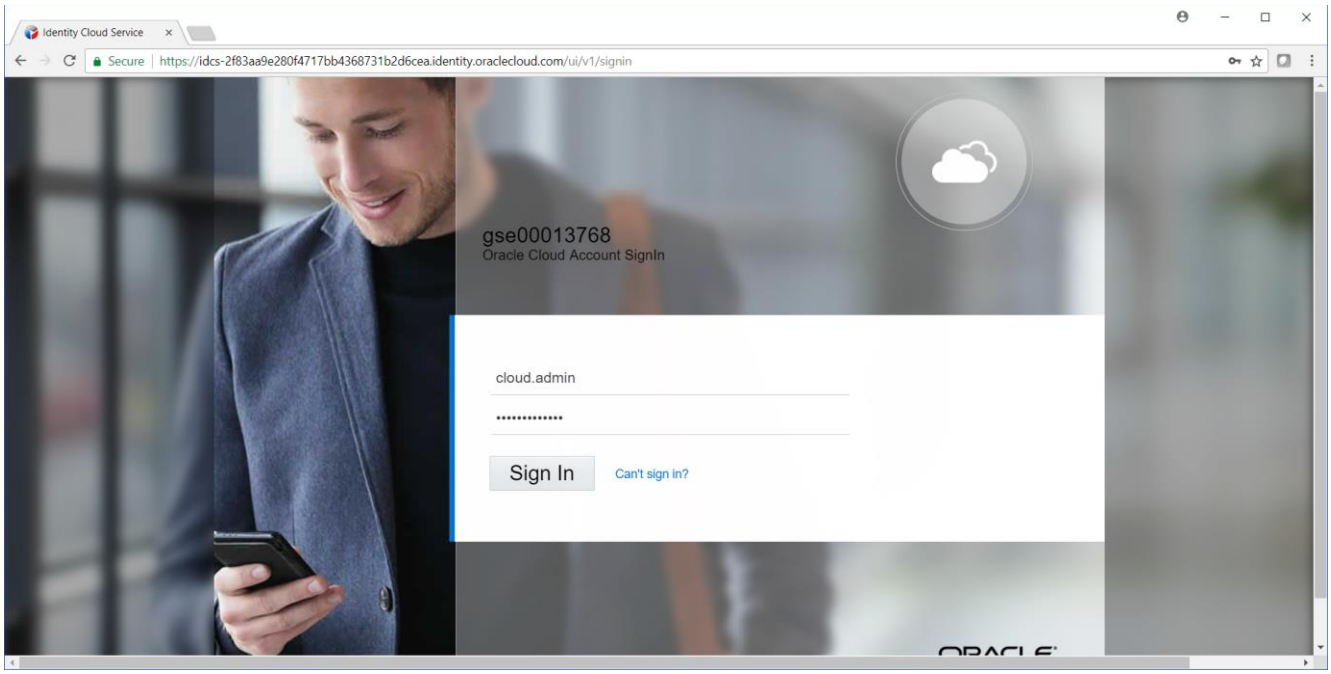
In order to sign on to the environment a tenant, username and password is required

1) Navigate to https://myservices-gse00013768.console.oraclecloud.com/mycloud/cloudportal/dashboard
2) Enter your credentials to sign-in:

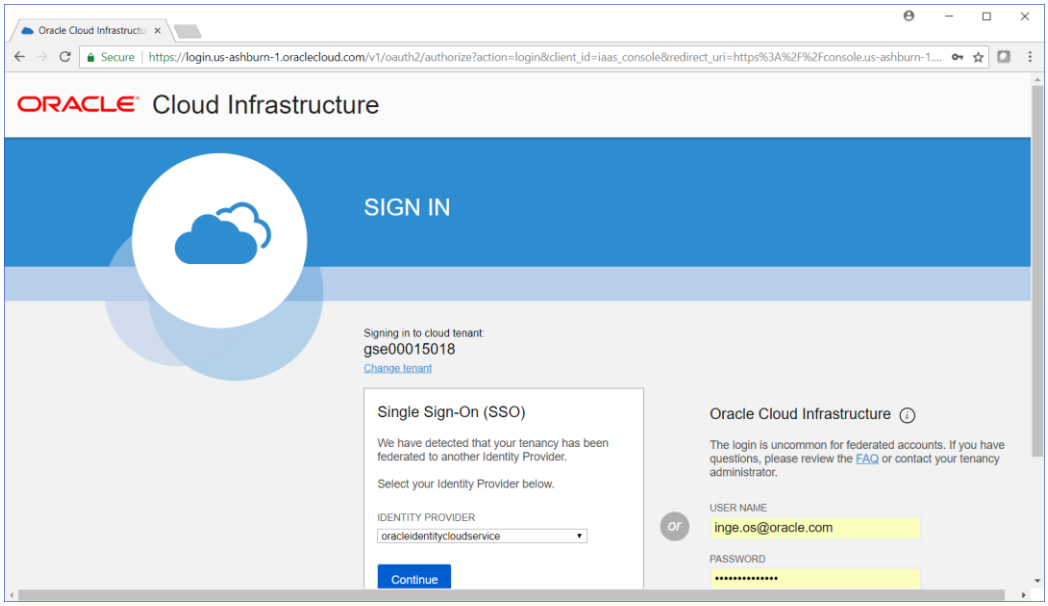
   User: cloud.admin

   Password: provided by instructor

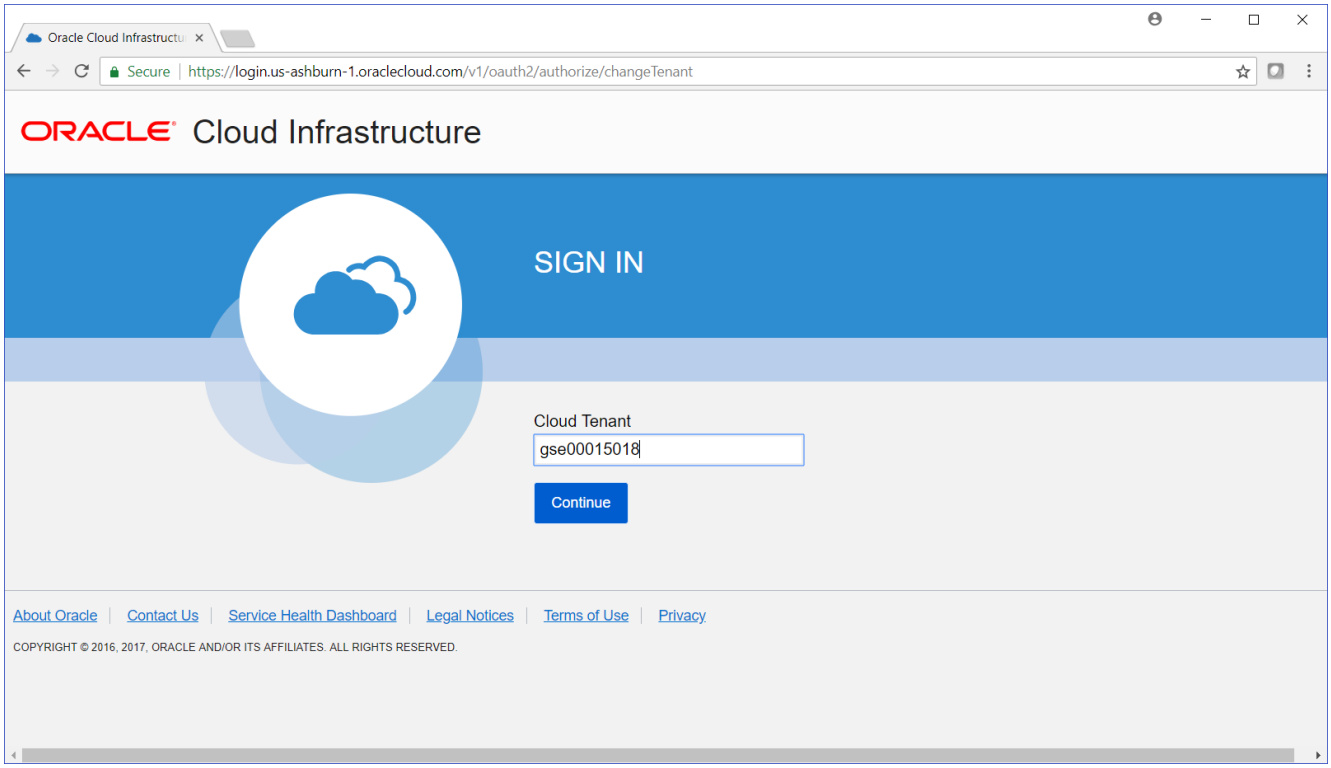
Reach out to your oracle Representative if you have any questions on account access. Oracle Cloud uses Oracle IDCS for authentication.



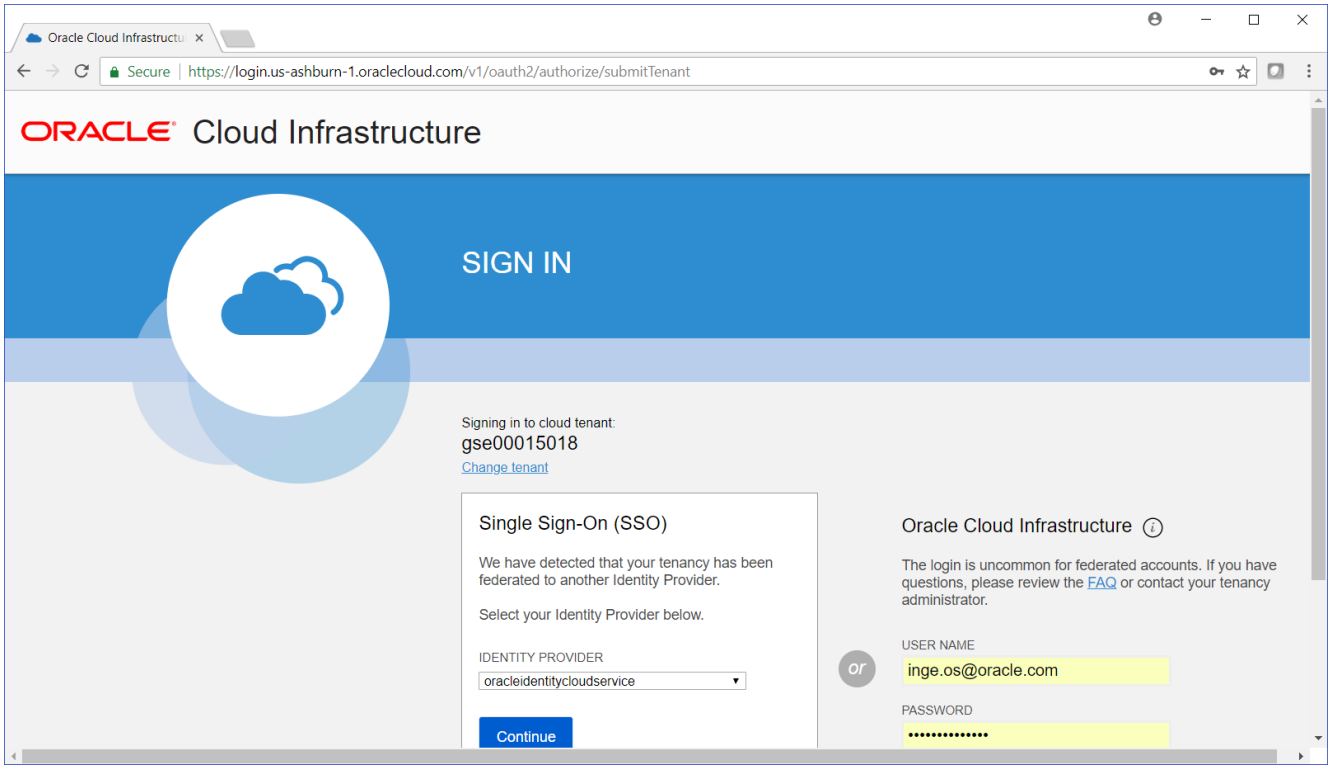
If you get this login screen, you need to go back to the IDCS login screen:



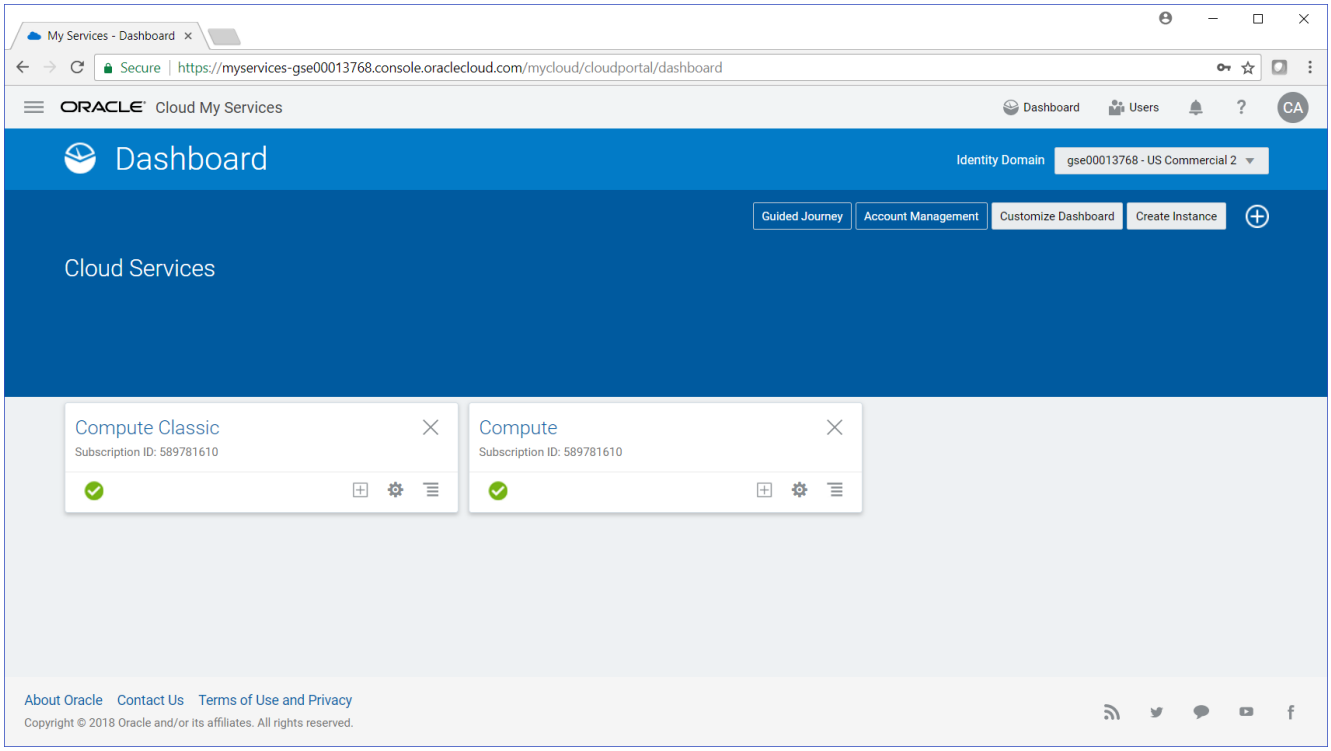
Select change tenant to select the correct tenant



Logon with Single Sign-On (IDCS)

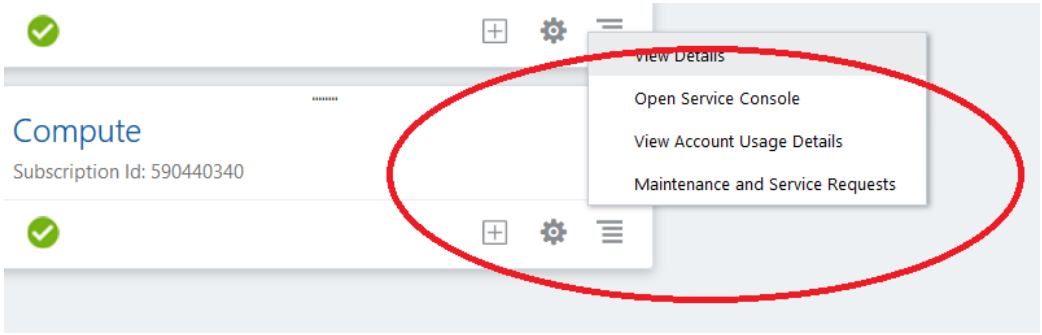


After login, dependent on your browser history you may either get the generic Cloud dashboard as shown below. Select Compute and open service console.

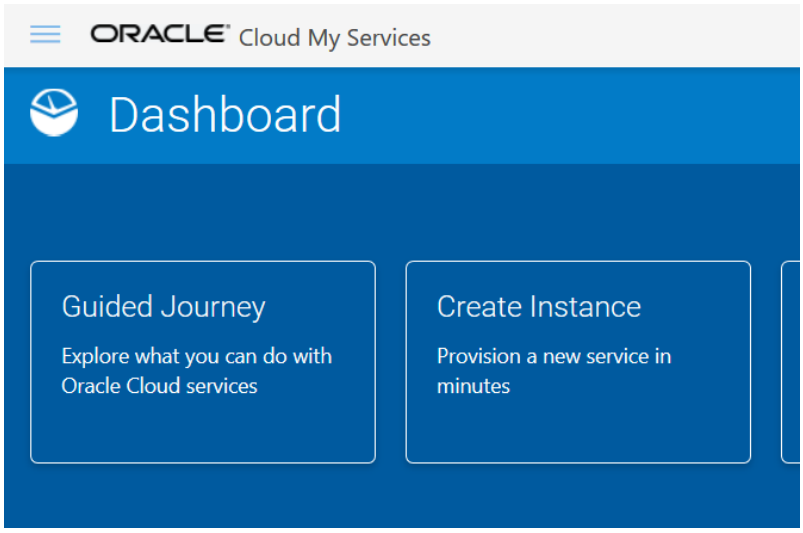


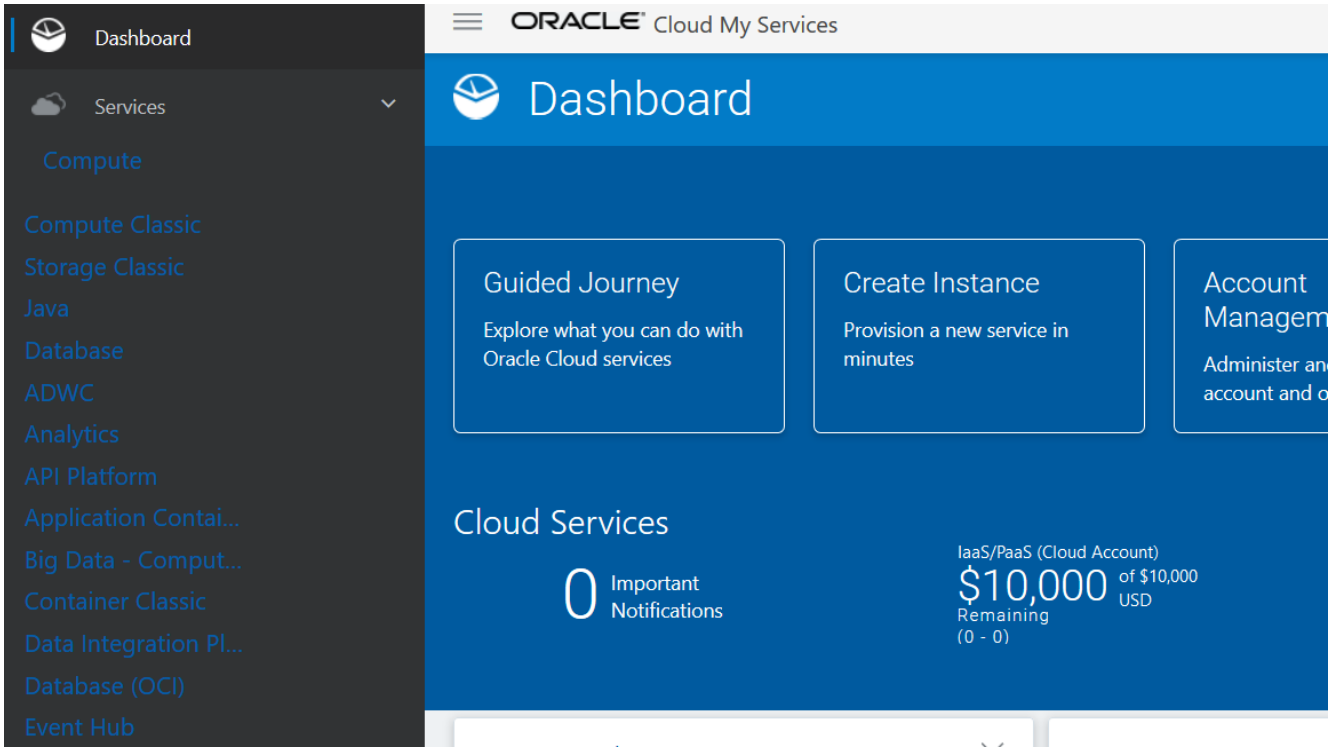
If the compute dashboard is not visible, navigate directly to the OCI service dashboard or customize your dashboard.

Select the menu bar in upper right corner of the compute tile and select service console.



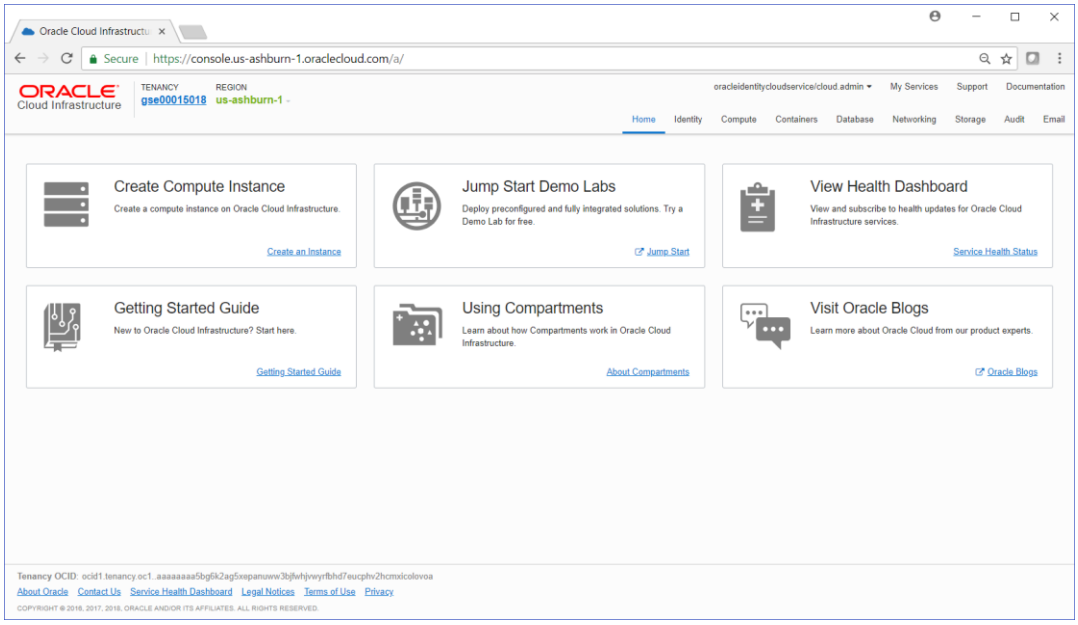
You may also use the menu in the upper left corner, and scroll down to compute. Do not use compute classic or database cloud service, this is the non OCI cloud services.





Select the compute service.

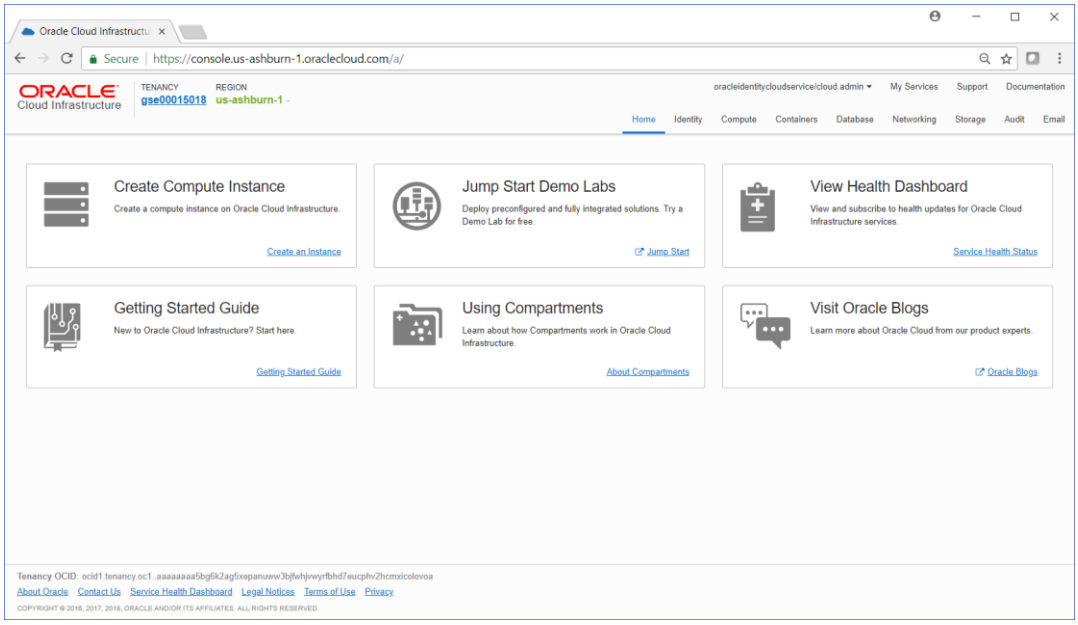
After selecting compute service console you will have the following screen:



The creation of the funtions lab require the following steps:

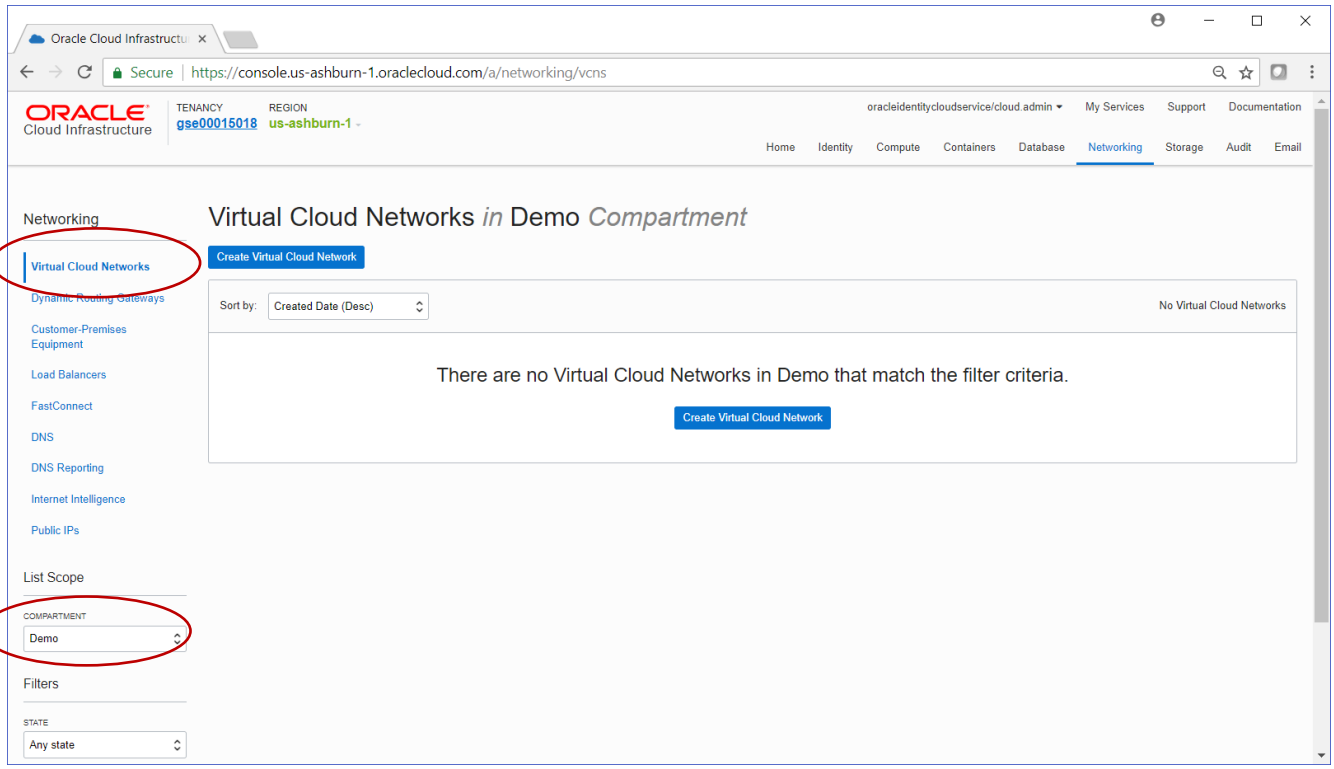
- Create Virtual cloud Network
- Create an image based on prebuilt custom image

After selecting compute service console you will have the following screen:

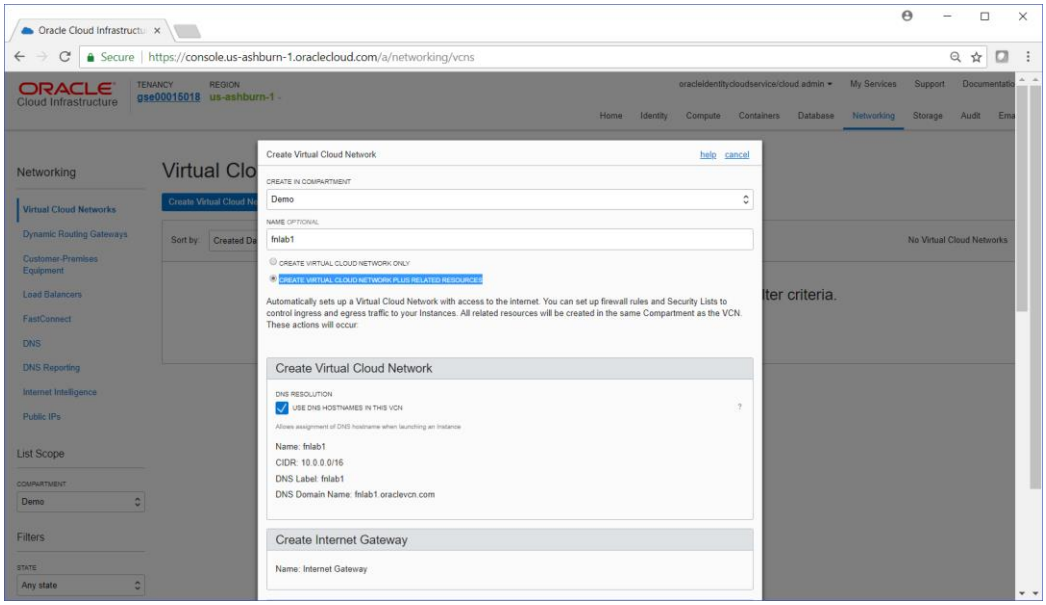


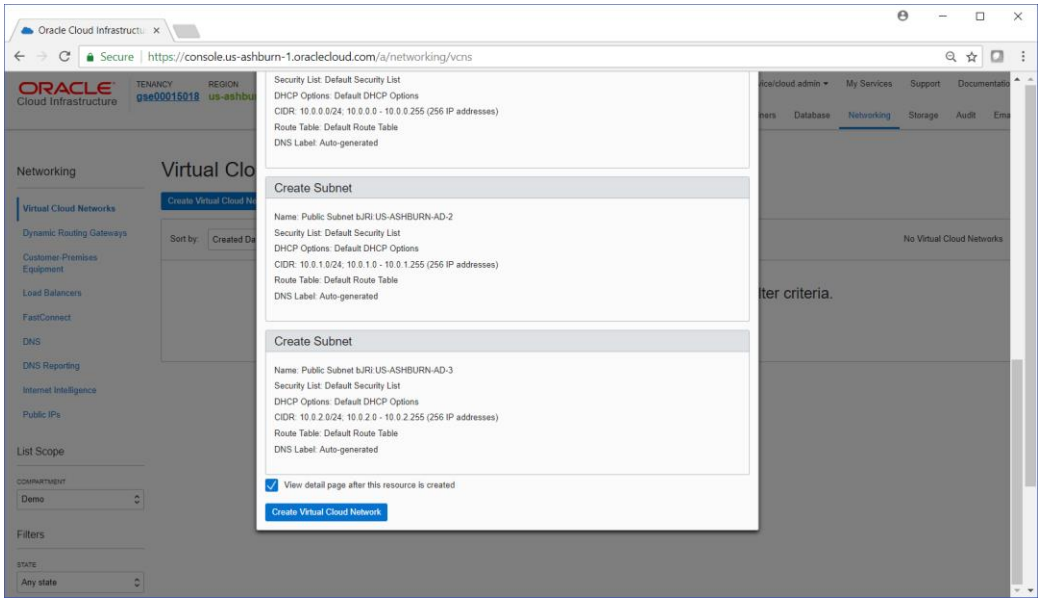
One key concept of Oracle OCI is a compartment, a logical distinction between users. For this all, all use the “Demo” Compartment.

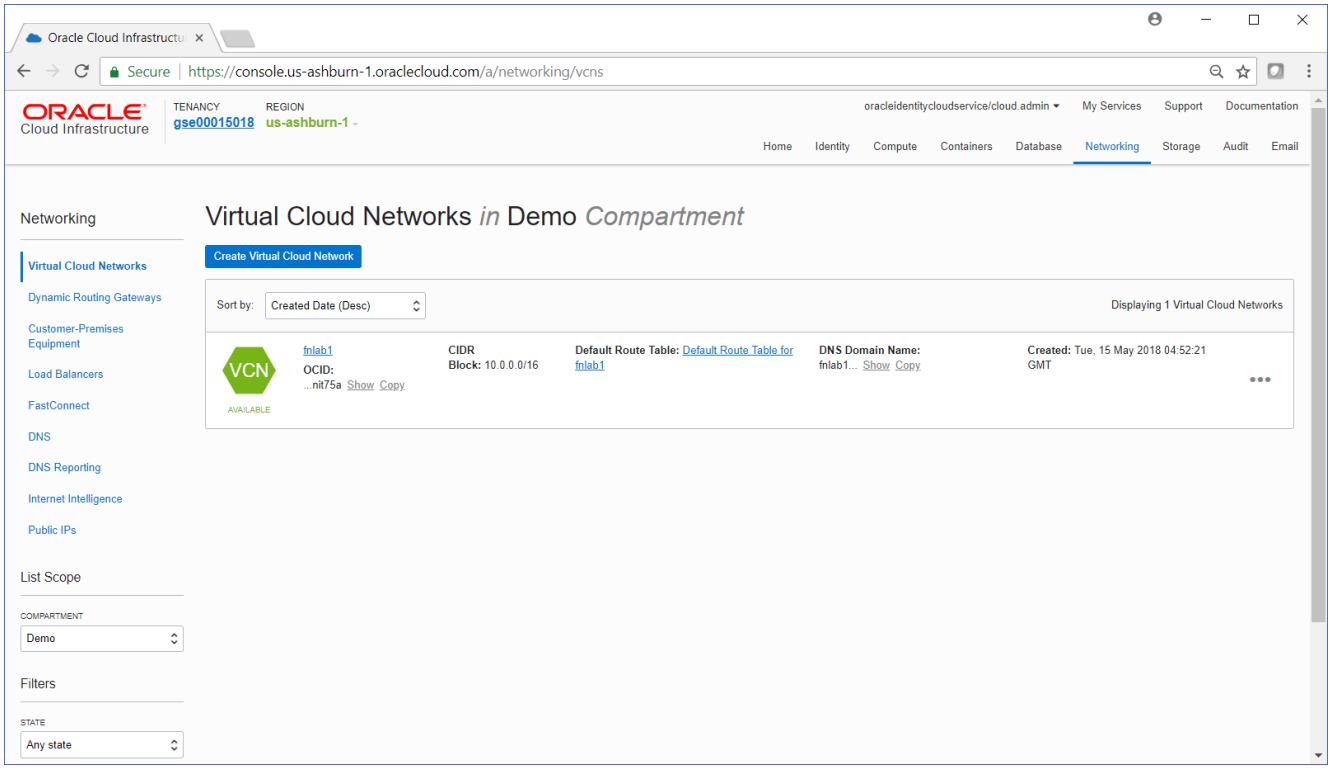
Select network, and select correct compartment.



Create Virtual Cloud Network, select CREATE VIRTUAL CLOUD NETWORK PLUS RELATED RESOURCES.


Oracle Cloud Infrastructure
Secure | https://console.us-ashburn-1.oraclecloud.com/a/networking/vcns
ORACLE Cloud Infrastructure
TENANCY gse00015018
REGION us-ashburn-1
Networking
Virtual Cloud Networks
Dynamic Routing Gateways
Customer-Premises Equipment
Load Balancers
FastConnect
DNS
DNS Reporting
Internet Intelligence
Public IPs
List Scope
Filters
Create Virtual Cloud Network
help cancel
CREATE IN COMPARTMENT
Demo
NAME OPTIONAL
fnlab1
CREATE VIRTUAL CLOUD NETWORK ONLY
CREATE VIRTUAL CLOUD NETWORK PLUS RELATED RESOURCES
Automatically sets up a Virtual Cloud Network with access to the internet. You can set up firewall rules and Security Lists to control ingress and egress traffic to your Instances. All related resources will be created in the same Compartment as the VCN. These actions will occur:
Create Virtual Cloud Network
DNS RESOLUTION
USE DNS HOSTNAMES IN THIS VCN
Name: fnlab1
CIDR: 10.0.0.0/16
DNS Label: fnlab1
DNS Domain Name: fnlab1.oraclevcn.com
Create Internet Gateway
Name: Internet Gateway
No Virtual Cloud Networks

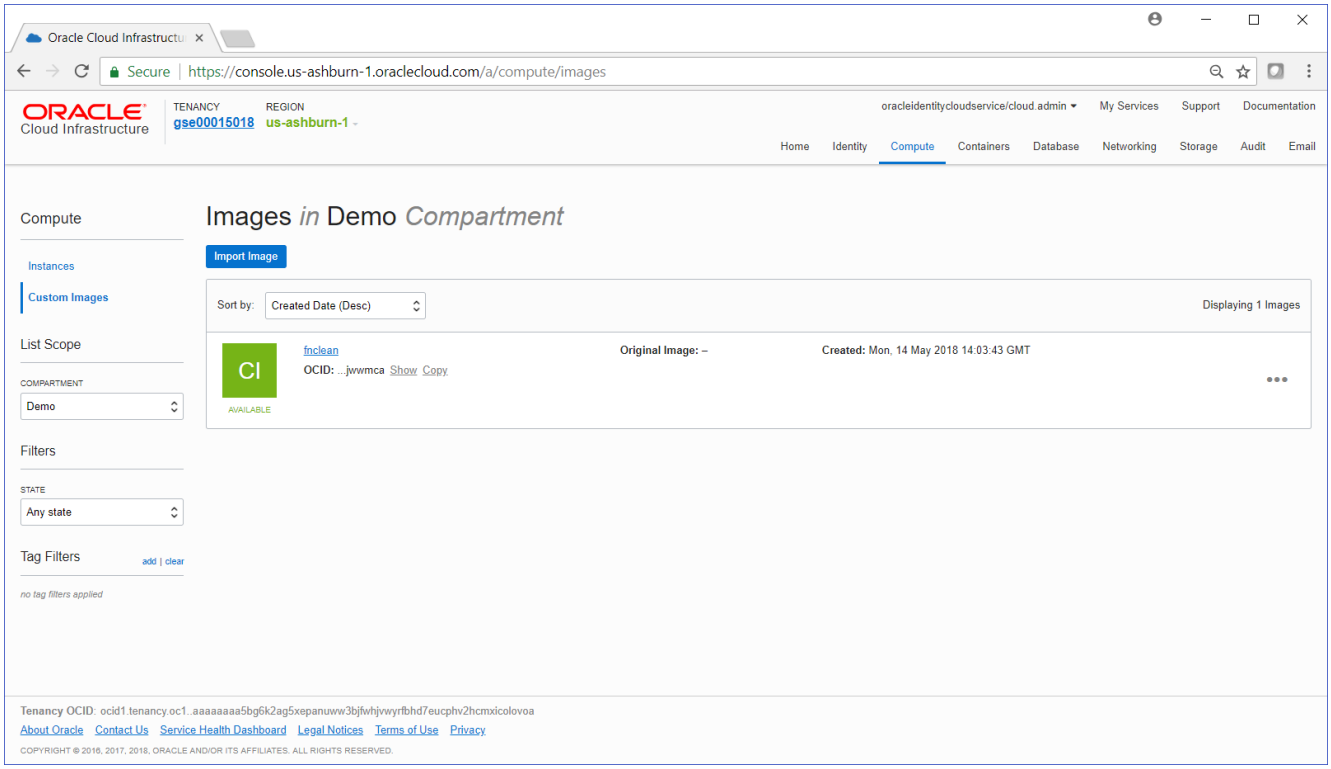

Oracle Cloud Infrastructure
Secure | https://console.us-ashburn-1.oraclecloud.com/a/networking/vcns
Security List: Default Security List
DHCP Options: Default DHCP Options
CIDR: 10.0.0.0/24; 10.0.0.0 - 10.0.0.255 (256 IP addresses)
Route Table: Default Route Table
DNS Label: Auto-generated
Create Subnet
Name: Public Subnet bJRI:US-ASHBURN-AD-2
Security List: Default Security List
DHCP Options: Default DHCP Options
CIDR: 10.0.1.0/24; 10.0.1.0 - 10.0.1.255 (256 IP addresses)
Route Table: Default Route Table
DNS Label: Auto-generated
Create Subnet
Name: Public Subnet bJRI:US-ASHBURN-AD-3
Security List: Default Security List
DHCP Options: Default DHCP Options
CIDR: 10.0.2.0/24; 10.0.2.0 - 10.0.2.255 (256 IP addresses)
Route Table: Default Route Table
DNS Label: Auto-generated
View detail page after this resource is created
Create Virtual Cloud Network



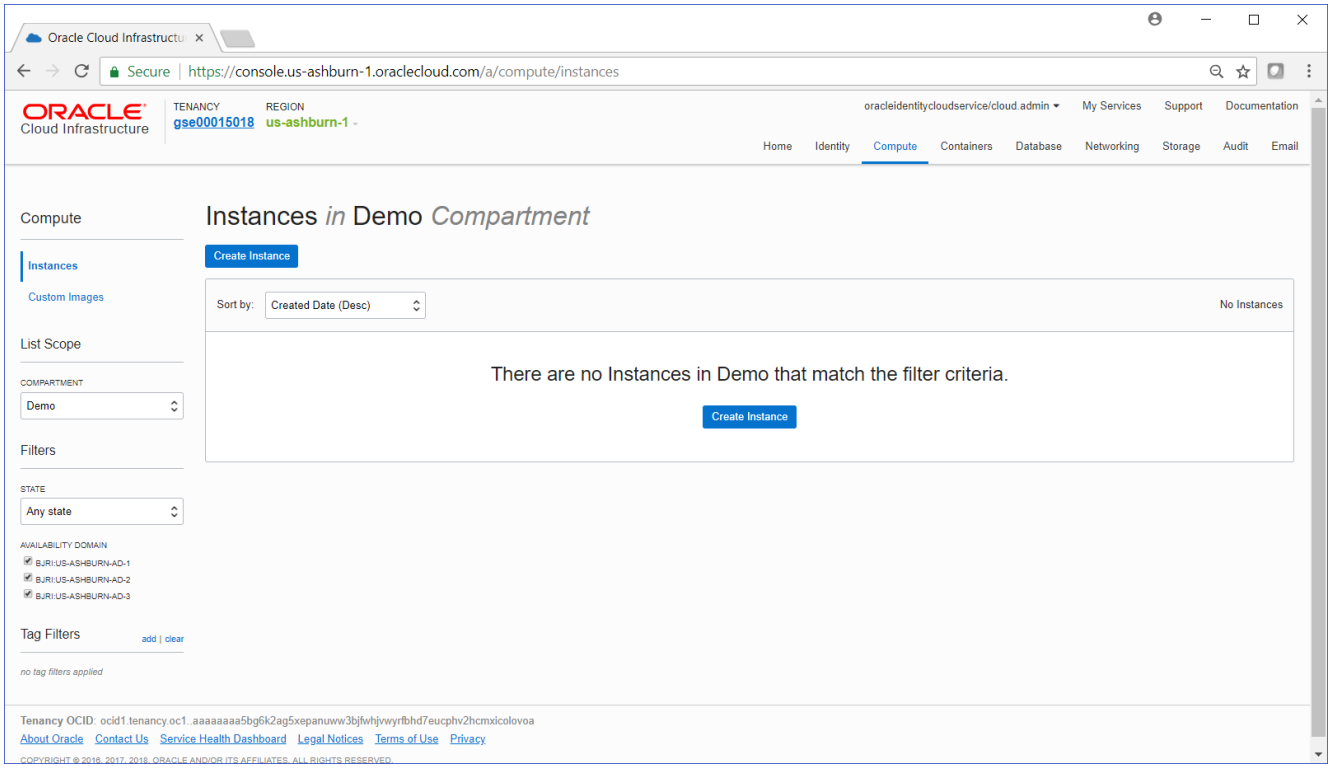
You have now create a virtual network with 3 subnets, one for each availability domain.

With the instructor supplied ssh public key, create a compute node, based on the prebaked custom image, with the prebuilt ssh key.

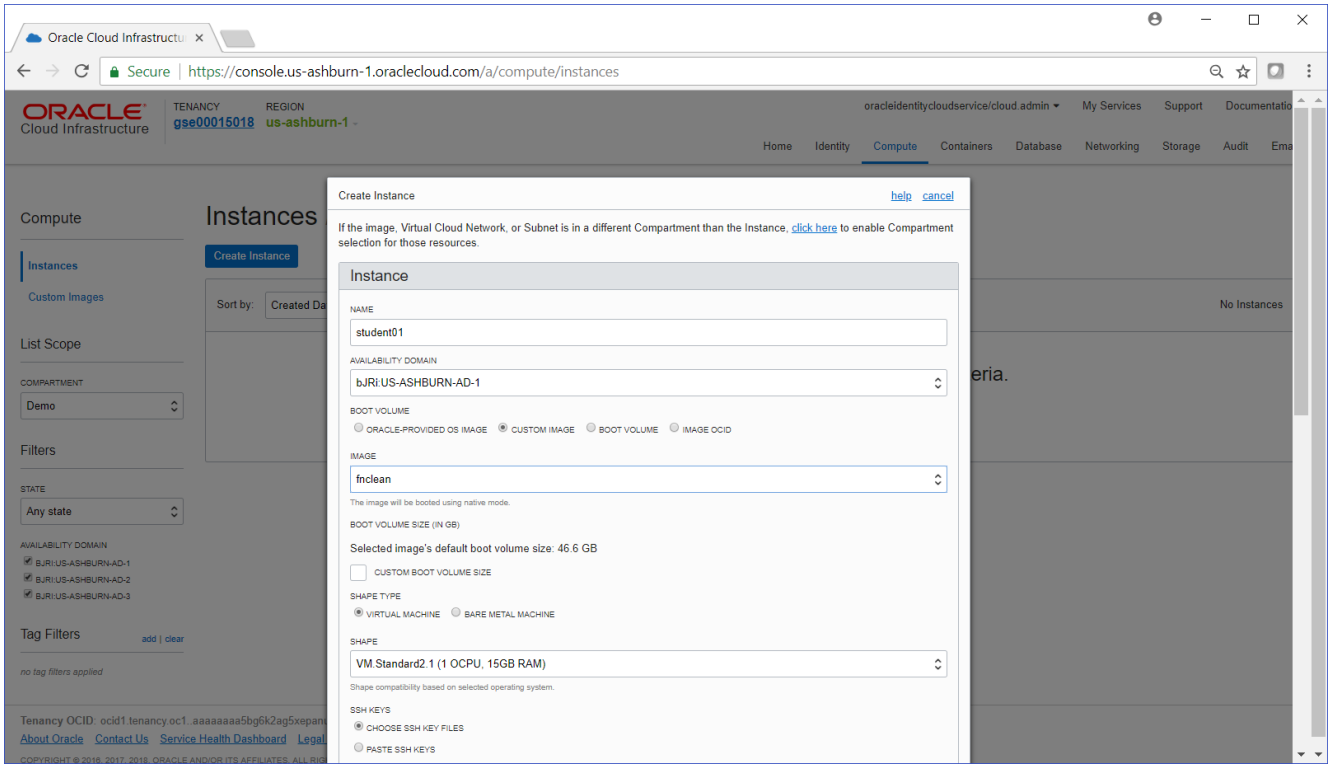
Navigate to compute and browse custom images



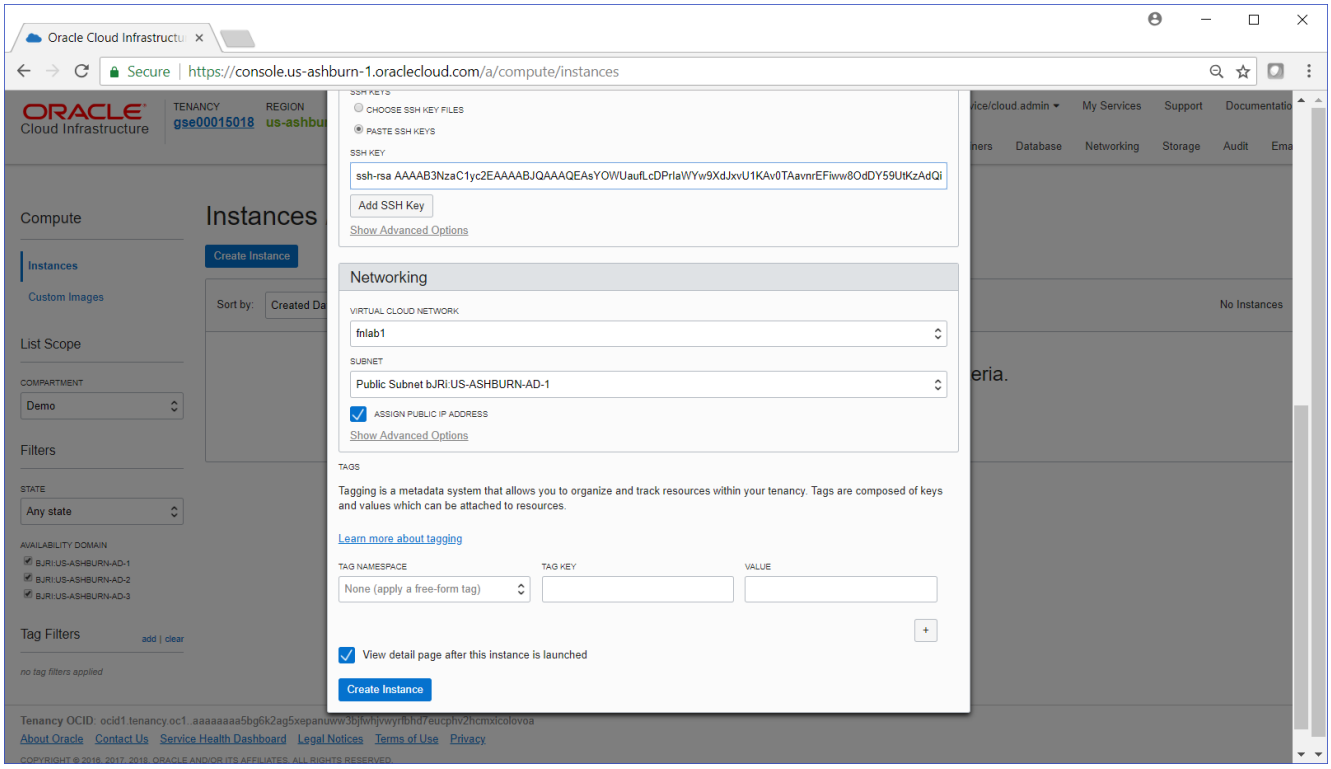
Navigate to instances and select create:



Give the instance a name, and select custom image:

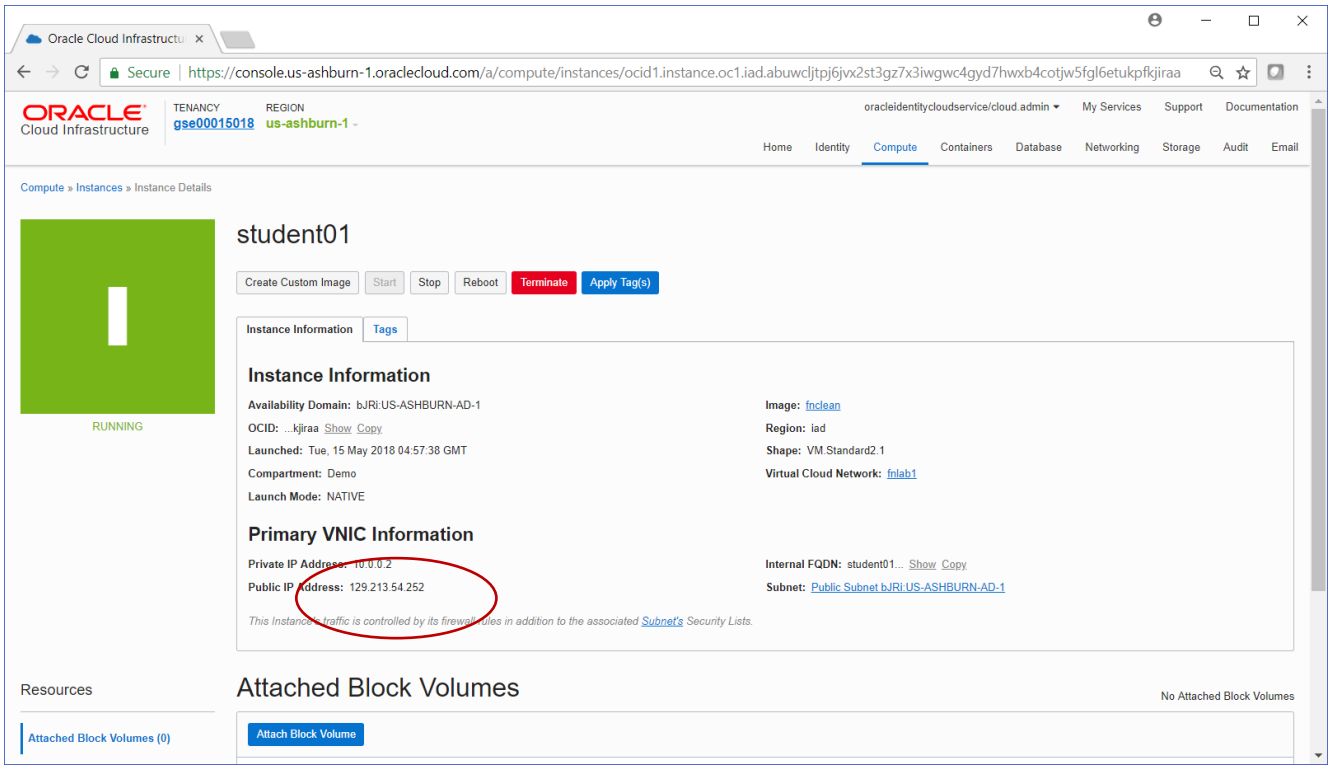


Select shape and paste ssh key (key air from instructor)



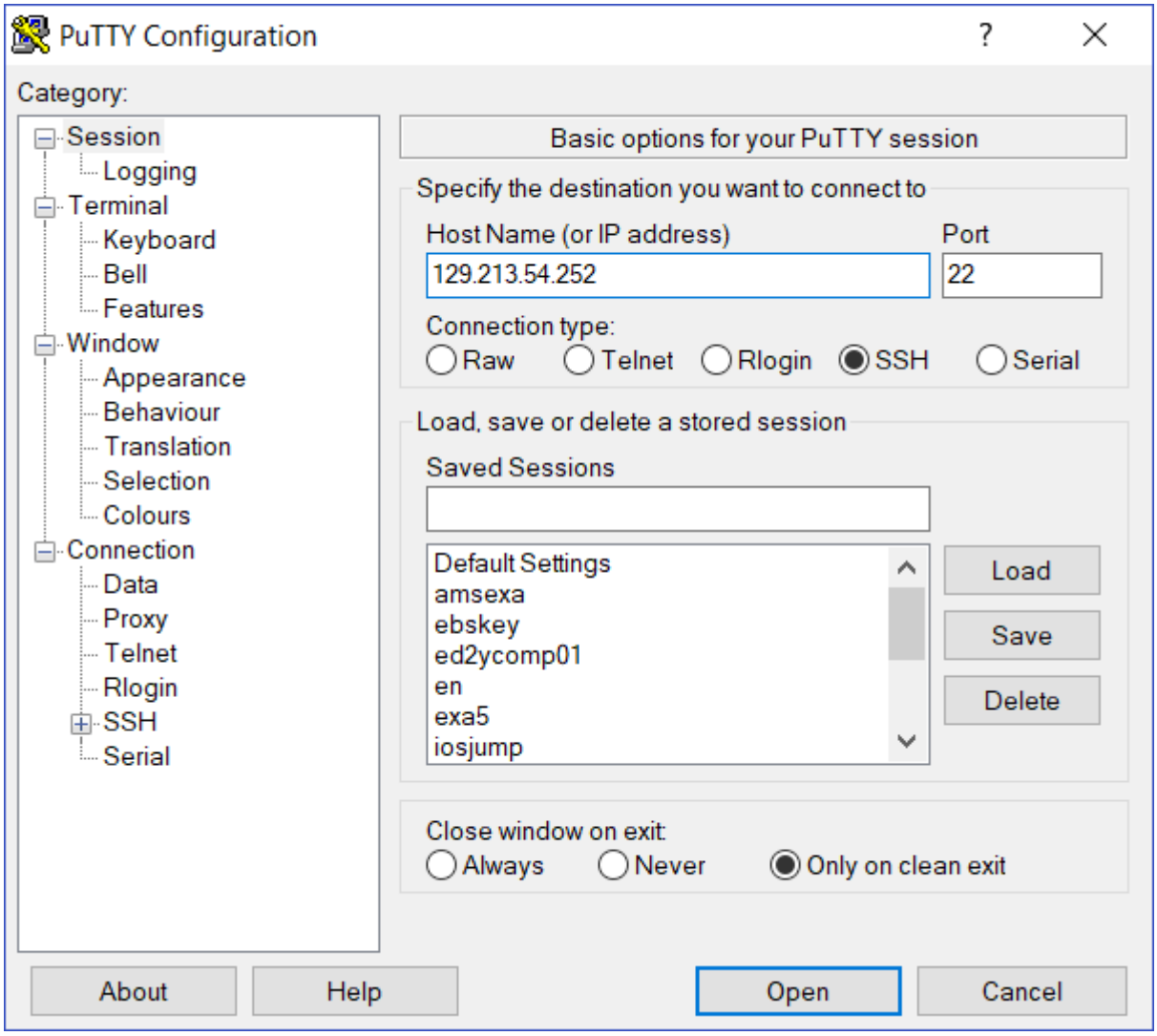
Select create Instance.

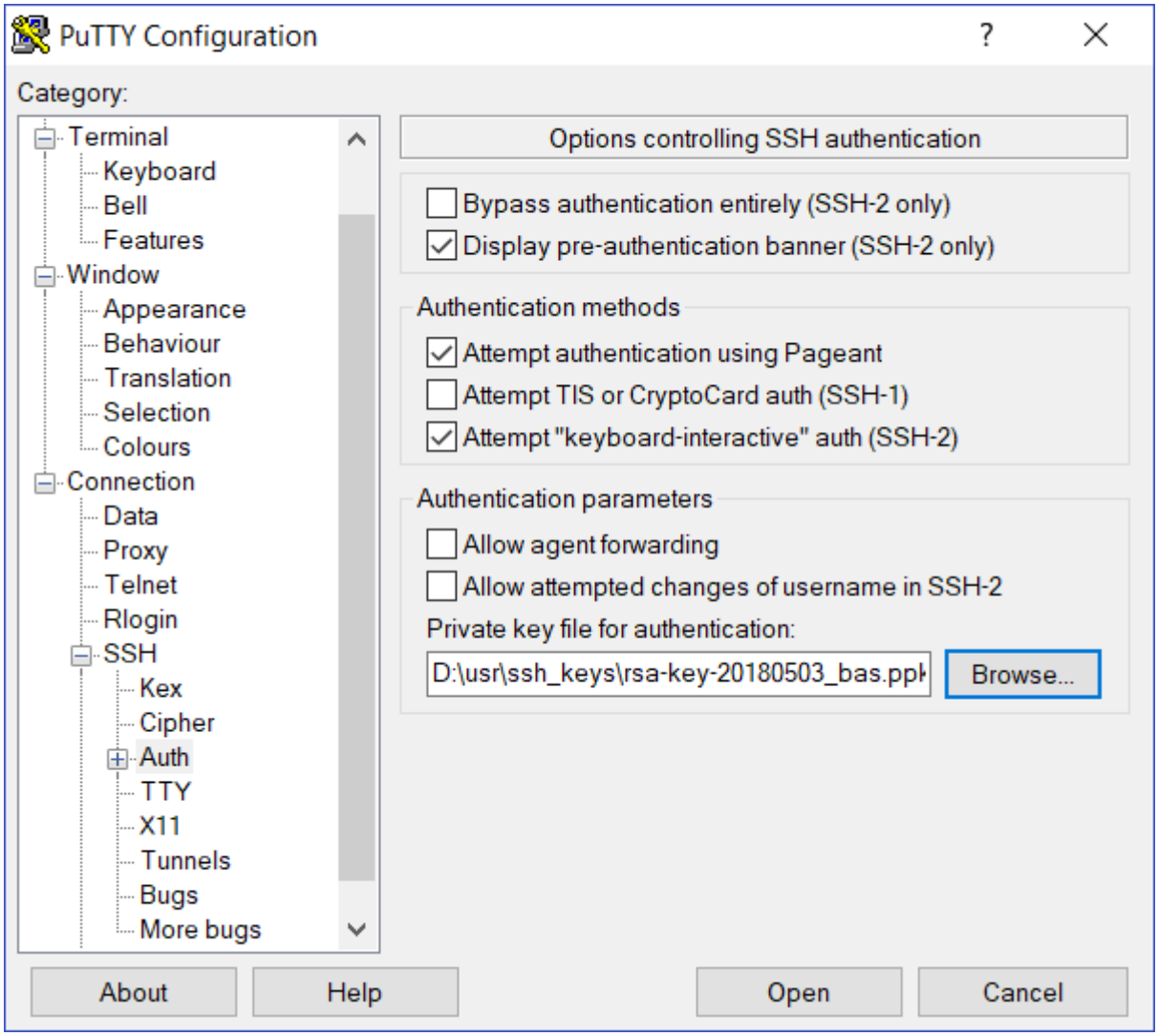
When the instance is created, grab a coffee and wait 2 more minutes….



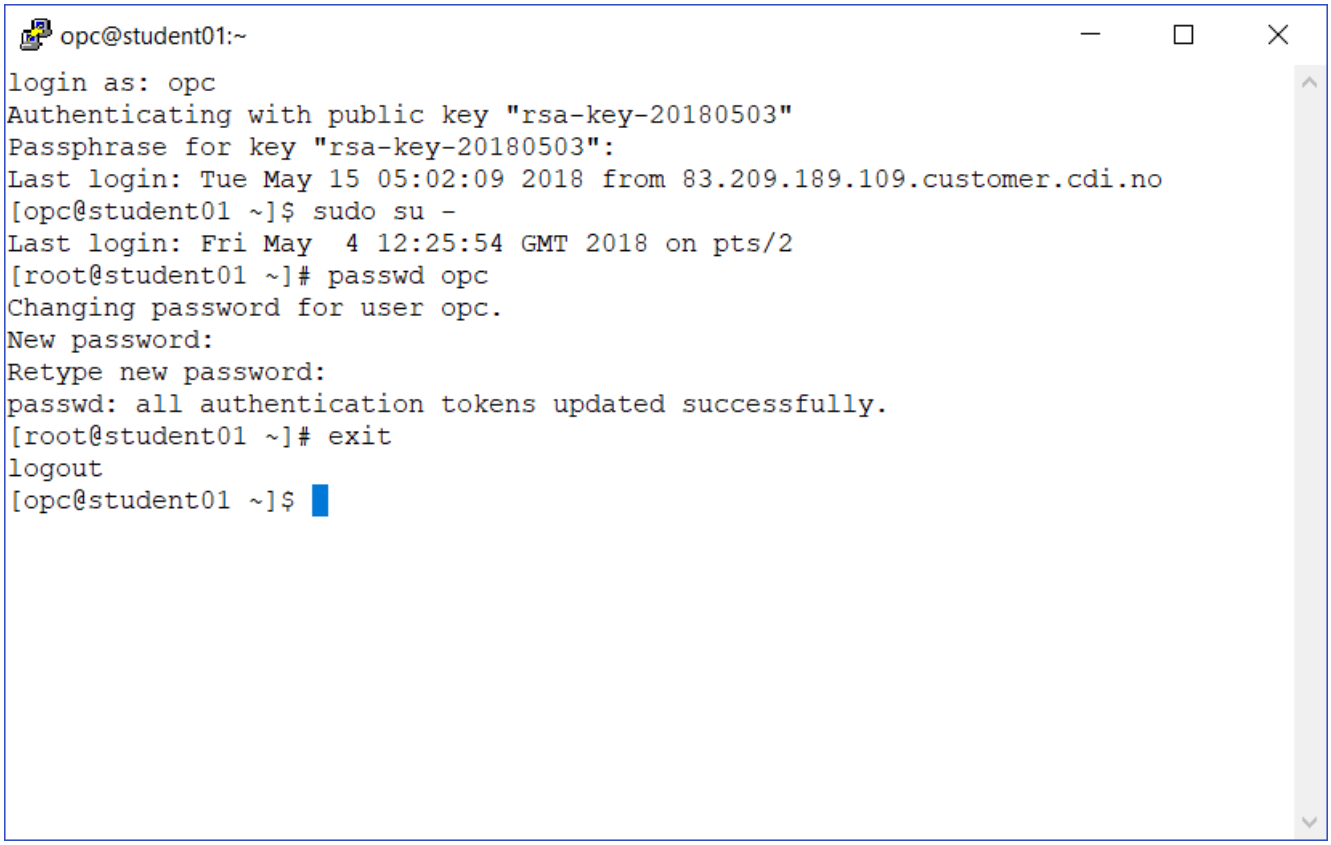
Logon with your favorite SSH client to the Instance. Note the public IP address. Userid is OPC, passphrase is given by instructor. Use the private ssh key provided for authentication.

Example with putty:


PuTTY Configuration
Category:
Session
Logging
Terminal
Keyboard
Bell
Features
Window
Appearance
Behaviour
Translation
Selection
Colours
Connection
Data
Proxy
Telnet
Rlogin
SSH
Serial
Basic options for your PuTTY session
Specify the destination you want to connect to
Host Name (or IP address)
Port
129.213.54.252
22
Connection type:
Raw
Telnet
Rlogin
SSH
Serial
Load, save or delete a stored session
Saved Sessions
Default Settings
amsexa
ebskey
ed2ycomp01
en
exa5
iosjump
Load
Save
Delete
Close window on exit:
Always
Never
Only on clean exit
About
Help
Open
Cancel


PuTTY Configuration
Category:
Terminal
Keyboard
Bell
Features
Window
Appearance
Behaviour
Translation
Selection
Colours
Connection
Data
Proxy
Telnet
Rlogin
SSH
Kex
Cipher
Auth
TTY
X11
Tunnels
Bugs
More bugs
Options controlling SSH authentication
Bypass authentication entirely (SSH-2 only)
Display pre-authentication banner (SSH-2 only)
Authentication methods
Attempt authentication using Pageant
Attempt TIS or CryptoCard auth (SSH-1)
Attempt "keyboard-interactive" auth (SSH-2)
Authentication parameters
Allow agent forwarding
Allow attempted changes of username in SSH-2
Private key file for authentication:
D:\usr\ssh_keys\rsa-key-20180503_bas.ppk
Browse...
About
Help
Open
Cancel

Oracle OCI provides image with password rotation. Even if the OPC password is not known, it is recommended to set it to a known value, for later password reset due to the password rotation. Sudo t rot an change the opc password as first action after login on.


opc@student01:~
login as: opc
Authenticating with public key "rsa-key-20180503"
Passphrase for key "rsa-key-20180503":
Last login: Tue May 15 05:02:09 2018 from 83.209.189.109.customer.cdi.no
[opc@student01 ~]$ sudo su -
Last login: Fri May 4 12:25:54 GMT 2018 on pts/2
[root@student01 ~]# passwd opc
Changing password for user opc.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@student01 ~]# exit
logout
[opc@student01 ~]$