

# How to Deploy Real User Experience Insight to Oracle Cloud and Monitor E-Business Suite

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Step-by-step instructions for deploying Real User Experience Insight (RUEI) as an app on Oracle Cloud Marketplace and monitoring the E-Business Suite Demo application



## **Purpose statement**

This document provides an overview of features and enhancements included in Real User Experience Insight (RUEI) App on Oracle Cloud Marketplace. It is intended solely to help you assess the business benefits of using RUEI App and to plan your I.T. projects.

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## Purpose

Oracle Real User Experience Insight (RUEI) monitors real-user experience, can be used to define Key Performance Indicators (KPIs) and Service Level Agreements (SLAs), and enables alert notifications when thresholds are crossed.

This white paper introduces RUEI as an app in Oracle Cloud Marketplace, and showcases how you can easily deploy, and start the monitoring of the Oracle E-Business suite (EBS) Demo application (Oracle EBS 12.2.9 Demo Install Image) running in the Oracle Cloud.



## Introduction

Oracle Real User Experience Insight (RUEI) is a utility that reports real-user traffic from business-critical applications. For more than a decade, RUEI has been helping enterprises to maximize the value of their on-premises based Web infrastructures, by delivering insight into real end-user experiences. On the other hand, RUEI in the Cloud has been a popular enhancement request. To respond to the increasing customer demand, we have made the product available as an app on Oracle Cloud Marketplace. Setting up RUEI as an app drastically simplifies the product installation process as well as monitoring cloud-based and on-premises applications.

RUEI App in the Oracle Cloud Marketplace is a pre-configured stack which contains the RUEI server and repository, deployed on a single Linux host. By following the steps described in this paper, you can deploy RUEI on an OCI compartment without undergoing traditional RUEI installation steps.

The sample application monitored by RUEI in this example is the EBS Demo application (Oracle EBS 12.2.9 Demo Install Image), an app available in the Oracle Cloud Marketplace, deployed on the same Virtual Cloud Network (VCN).

Once the RUEI App and EBS App deployments are completed, there are additional steps to configure Virtual Ethernet Network TAP and Layer Two Tunneling Protocol (L2TP) tunnel, so that traffic flows from the EBS instance, to RUEI instance.

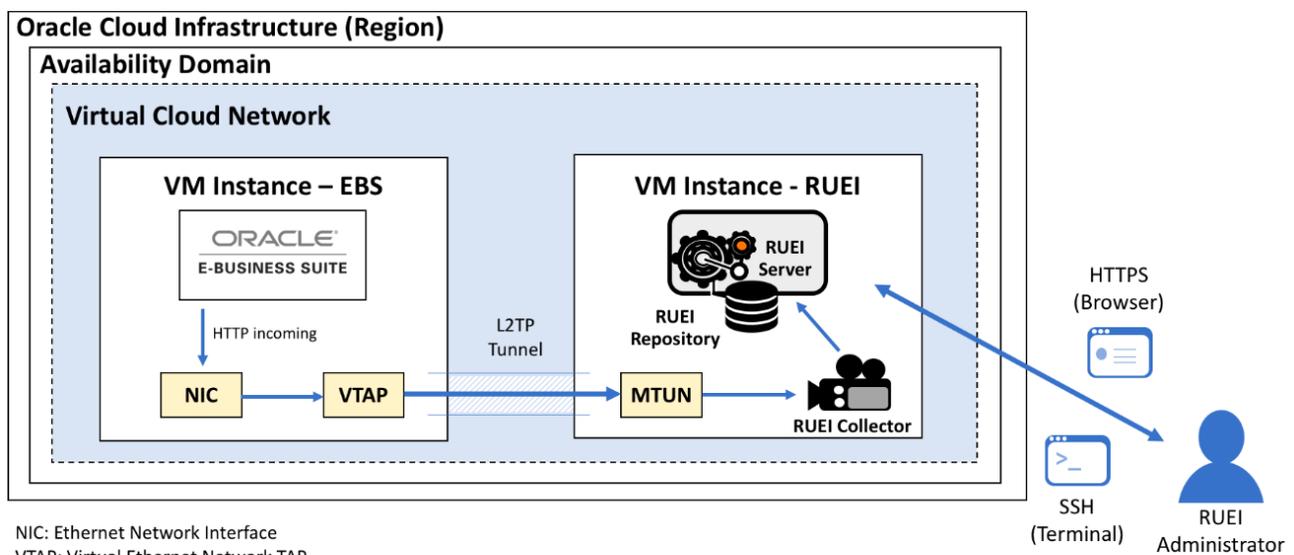


Figure 1. RUEI and EBS deployed on Oracle Cloud Infrastructure

## Deploy RUEI App in an Oracle Cloud compartment

There are two high-level steps involved in the setup of the RUEI app: **Deploy** the app and **Set Up** the tunneling.

This section provides instructions on deploying the RUEI app on an existing compartment in the Oracle Cloud. First, we will configure the Virtual Cloud Network, then launch the app from the Marketplace. The approximate time to complete the RUEI app deployment is 30 min.

### Configure the Virtual Cloud Network

1. Go to Oracle Cloud console using the URL provided in the Welcome email. Enter the user name and password to log in.



Figure 2. Oracle Cloud login screen

2. From the Main menu, select “Networking”, then “Virtual Cloud Networks”. In the Virtual Cloud Networks page, select the compartment from the pull-down menu.

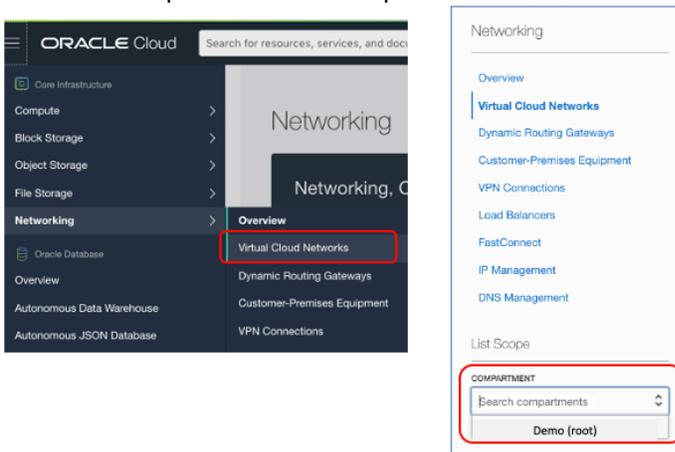


Figure 3. Main menu - Virtual Cloud Networks

3. Click “Start VCN Wizard”.



Figure 4. Virtual Cloud Networks in Compartment screen

4. “VCN with Internet Connectivity” is selected by default. Click “Start VCN Wizard”.

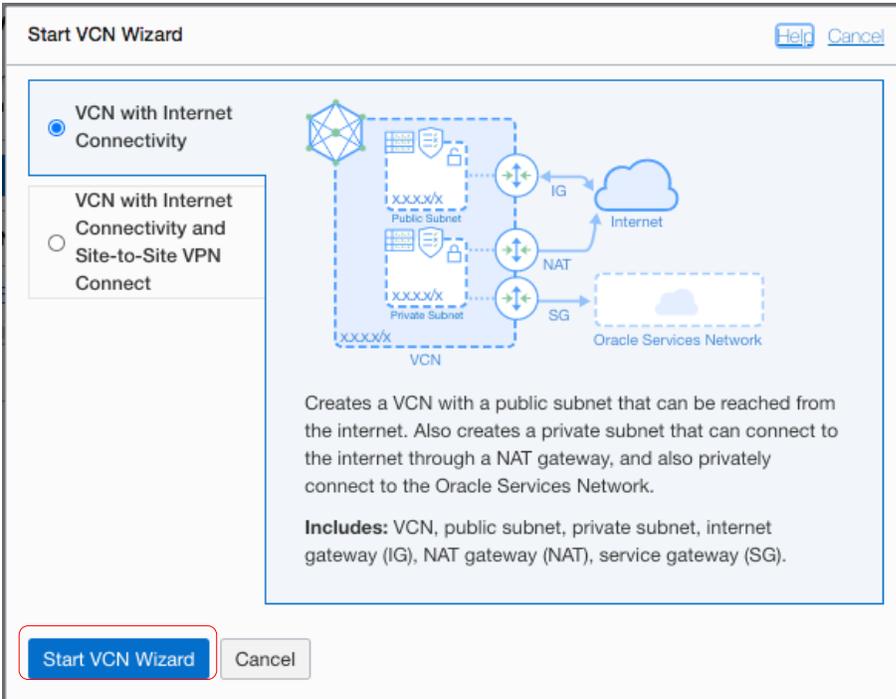


Figure 5. Start VCN Wizard screen

5. The “Create a VCN with Internet Connectivity” page opens. Enter the basic information such as VCN name and compartment. In the example below, the VCN name is “RUEI\_VCN” and the compartment is “RUEI\_demo”, which is created in our tenancy.

**NOTE:** To create a new compartment, select main menu Identity > Compartments, then Click “Create Compartment”

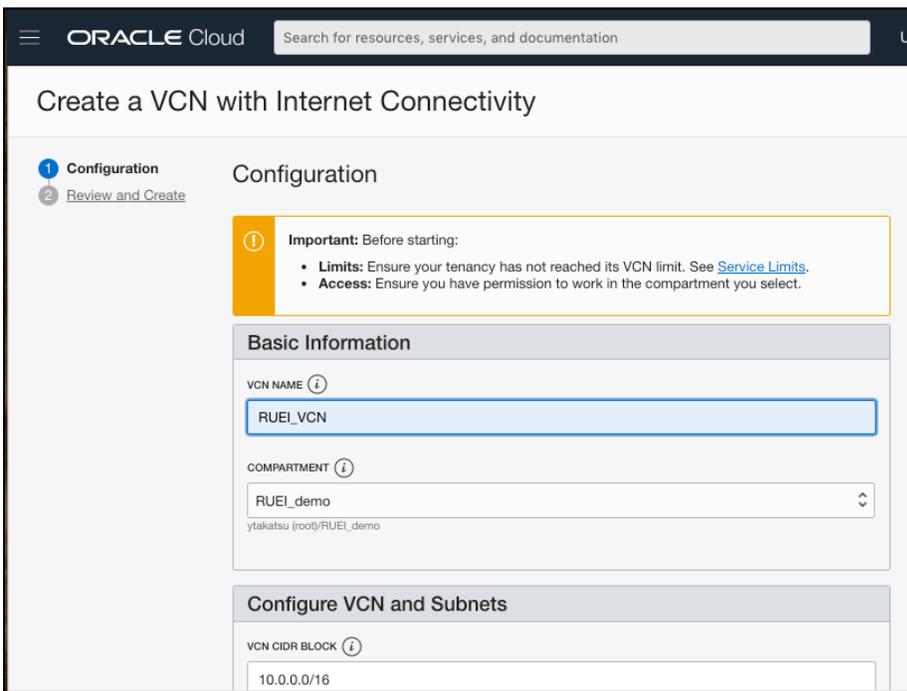


Figure 6. Create a VCN with Internet Connectivity Screen

6. Scroll down to find “Configure VCN and Subnets” section. Modify or accept the default values. Click Next.

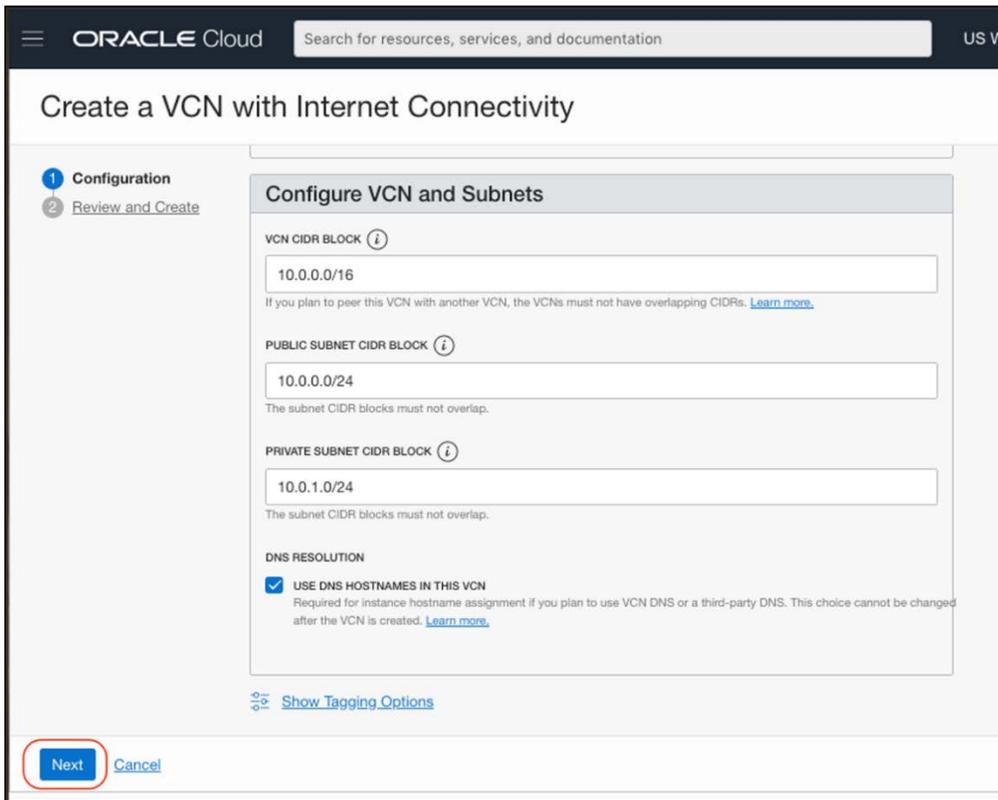


Figure 7. Create a VCN with Internet Connectivity Screen

7. Review the configuration and click “Create”.

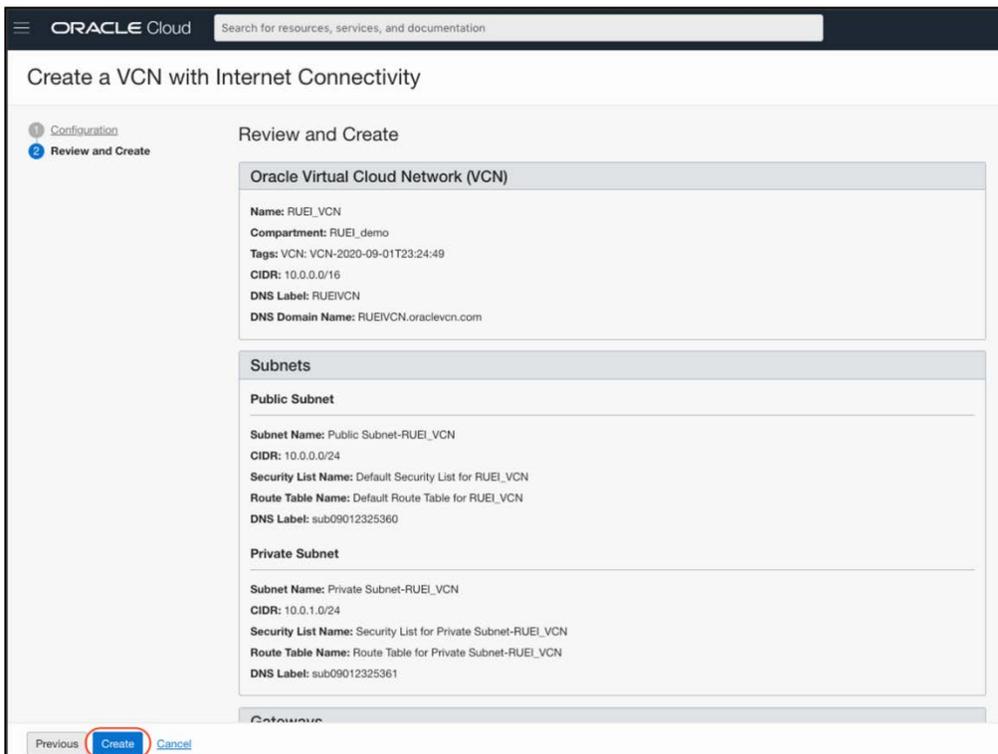


Figure 8. Create a VCN with Internet Connectivity Screen

8. Once the check marks are updated, click “View Virtual Cloud Network”.

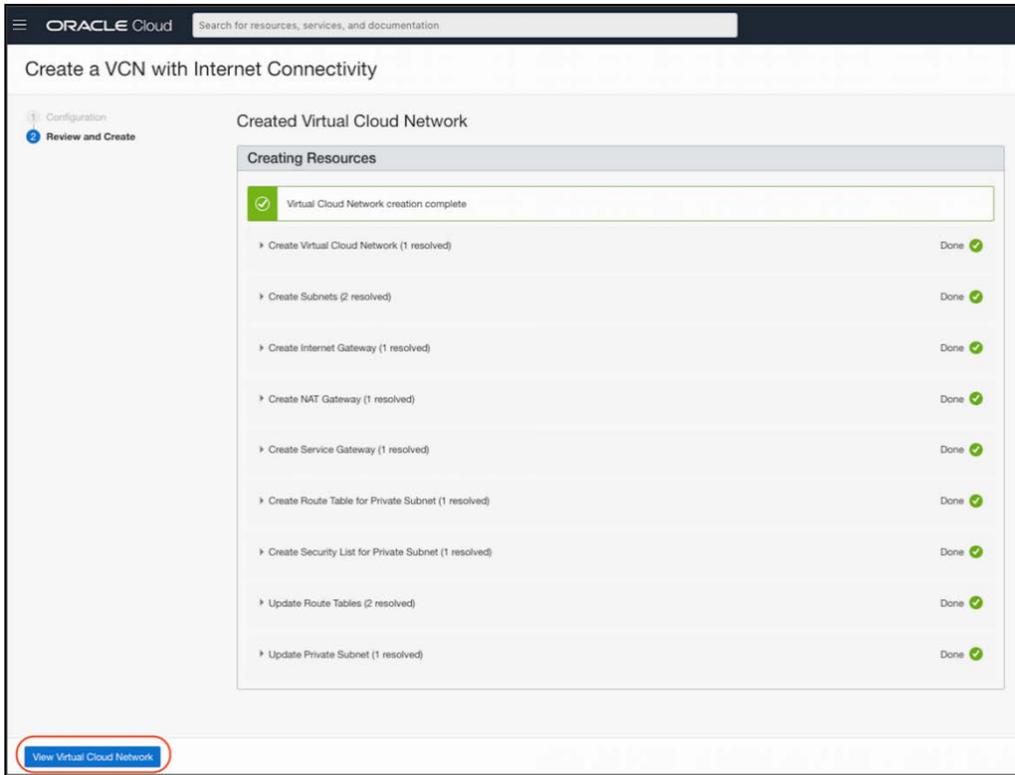


Figure 9. Create a VCN with Internet Connectivity Screen

### Configure Security List settings

9. Once the VCN is created, click “Security List”, which is located under “Resources”.

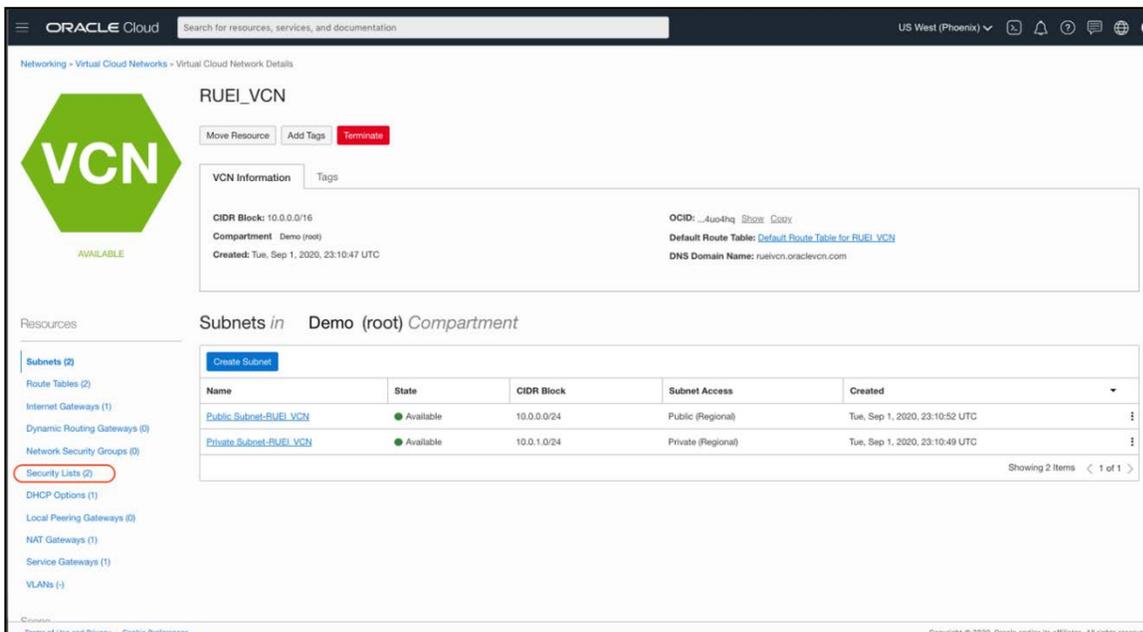


Figure 10. Virtual Cloud Network page

- Click “Default Security List for < VCN name>” link from the table. This is the default security list for your public subnet.

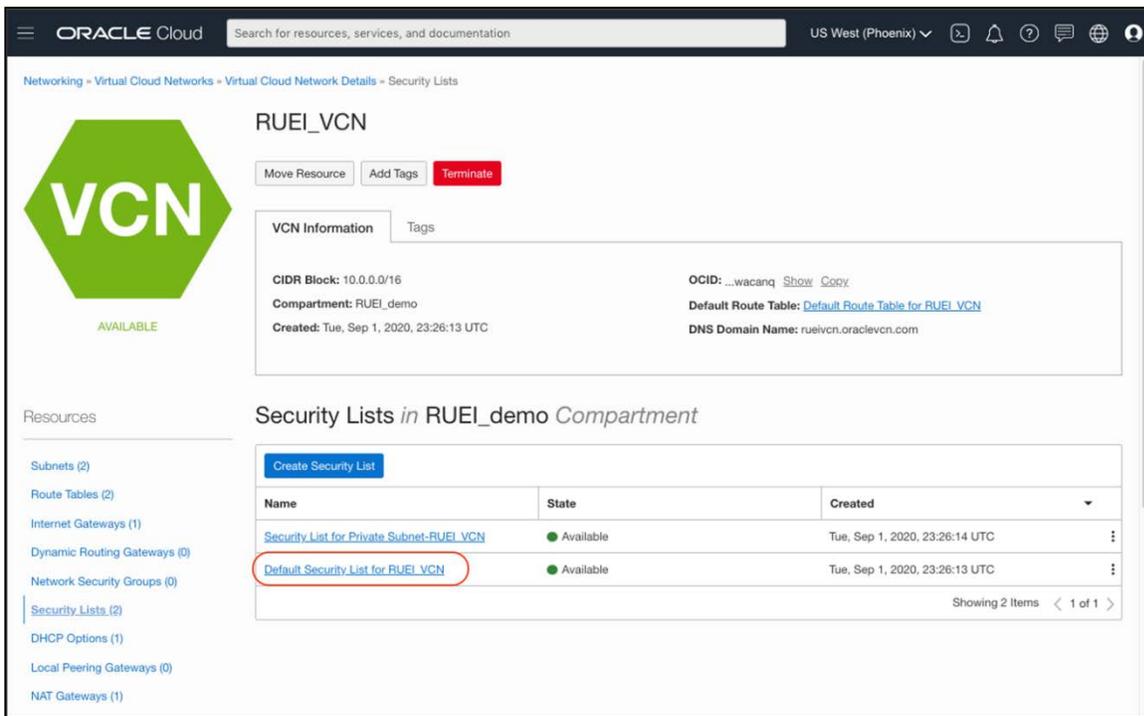


Figure 11. Security Lists screen in VCN page

- Select “Ingress Rules” link. Ensure that there is a security rule configured for the port 22 by default. Click “Add Ingress Rules”.

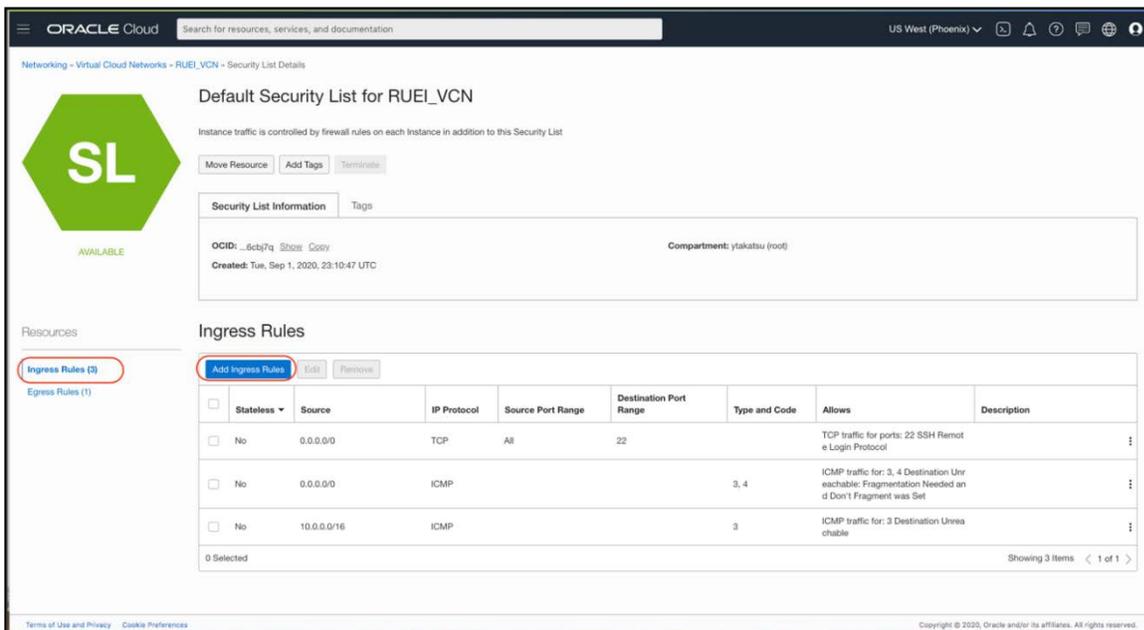


Figure 12. Default Security List for VCN page

12. The “Ingress Rule” page opens. Enter the following entries to create new rules, then click “Add Ingress Rules”.

- Stateless: no, type: CIDR, source: 0.0.0.0/0, protocol: TCP, destination port: 443, description: web-https
- Stateless: no, type: CIDR, source: 0.0.0.0/0, protocol: L2TP, description: L2TP

The screenshot shows the 'Add Ingress Rules' dialog box. At the top, it says 'Ingress Rule 1' and 'Allows TCP traffic 443 HTTPS'. There is a 'STATELESS' checkbox which is unchecked. The 'SOURCE TYPE' is set to 'CIDR' and the 'SOURCE CIDR' is '0.0.0.0/0'. The 'IP PROTOCOL' is set to 'TCP'. The 'SOURCE PORT RANGE' is 'All' and the 'DESTINATION PORT RANGE' is '443'. The 'DESCRIPTION' is 'web-https'. At the bottom, there are 'Add Ingress Rules' and 'Cancel' buttons.

Figure 13. Add Ingress Rules Screen – HTTPS

The screenshot shows the 'Add Ingress Rules' dialog box. At the top, it says 'Ingress Rule 1' and 'Allows L2TP traffic'. There is a 'STATELESS' checkbox which is unchecked. The 'SOURCE TYPE' is set to 'CIDR' and the 'SOURCE CIDR' is '0.0.0.0/0'. The 'IP PROTOCOL' is set to 'L2TP'. The 'DESCRIPTION' is 'L2TP'. At the bottom, there are 'Add Ingress Rules' and 'Cancel' buttons.

Figure 14. Add ingress Rules screen – L2TP

13. Review the configuration change in the Ingress Rules screen for the default security list.

The screenshot shows the 'Ingress Rules' screen with a table of rules. The table has columns for Stateless, Source, IP Protocol, Source Port Range, Destination Port Range, Type and Code, Allows, and Description. There are five rules listed, including the ones just added for HTTPS and L2TP.

Stateless	Source	IP Protocol	Source Port Range	Destination Port Range	Type and Code	Allows	Description
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	22	TCP traffic for ports: 22 SSH Remote Login Protocol	
<input type="checkbox"/>	No	0.0.0.0/0	ICMP		3, 4	ICMP traffic for: 3, 4 Destination Unreachable: Fragmentation Needed and Don't Fragment was Set	
<input type="checkbox"/>	No	10.0.0.0/16	ICMP		3	ICMP traffic for: 3 Destination Unreachable	
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	443	TCP traffic for ports: 443 HTTPS	web-https
<input type="checkbox"/>	No	0.0.0.0/0	L2TP			L2TP traffic	L2TP

Figure 15. Ingress Rules Screen

## Deploy the RUEI App

- Next, deploy the RUEI App from the Marketplace. From the main menu, select “Marketplace”, then “Applications”.



Figure 16. Main menu – Marketplace, Applications

- In the Marketplace page, enter “Real User Experience Insight” to search for the RUEI App in the All Applications section. Click the RUEI App.

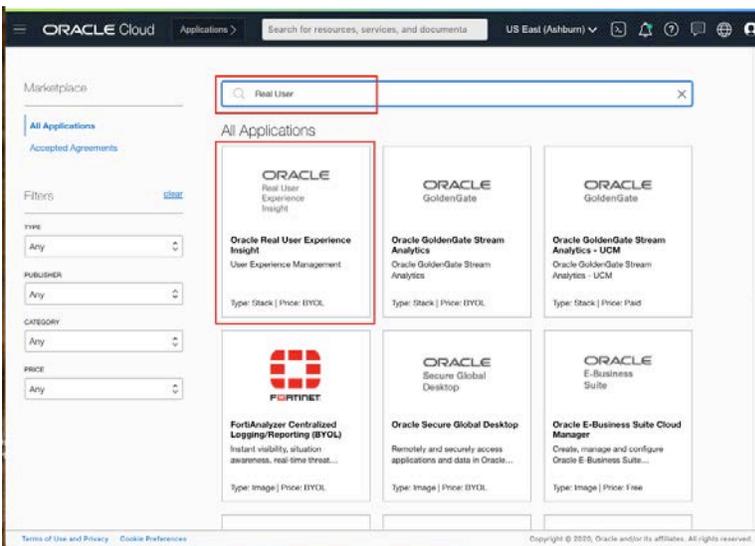


Figure 17. Marketplace page

- Select the compartment, agree to the term and restrictions, and click “Launch Stack”

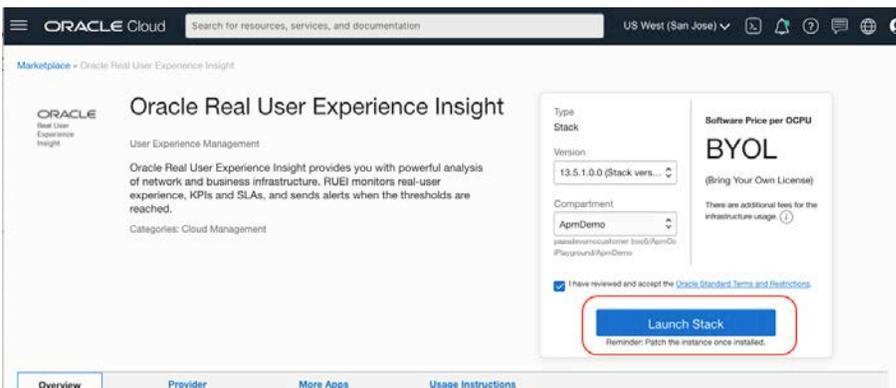


Figure 18. RUEI Application page

17. Enter the Name and Description. Optionally, you can select tags. Click Next.

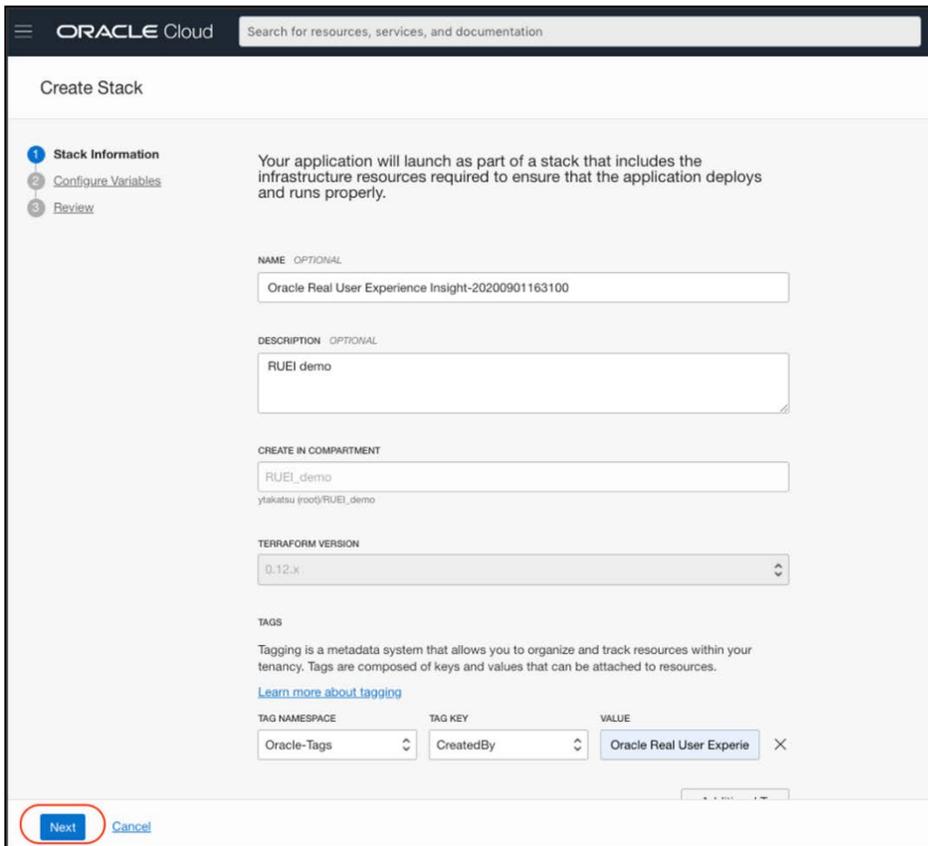


Figure 19. Create Stack page 1/5

18. In the “General Settings” section, select region, target compartment and availability domain.

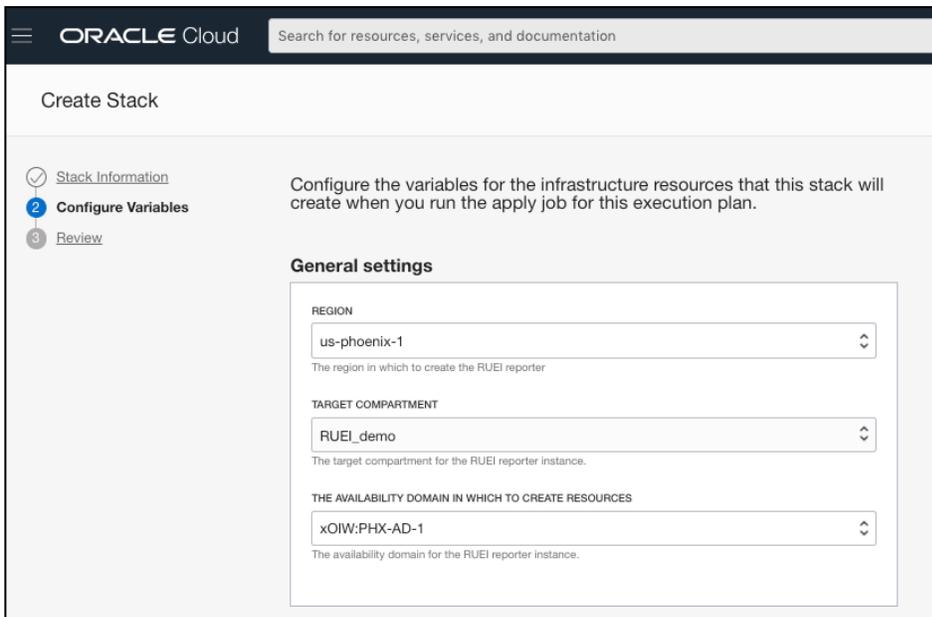


Figure 20. Create Stack page 2/5

19. In the “RUEI reporter details” section, enter the RUEI password, select Instance shape, and enter SSH Public key. You will need the SSH key in order to access RUEI instance. Refer to [Creating a Key Pair](#) section in the OCI document for information on creating SSH keys.

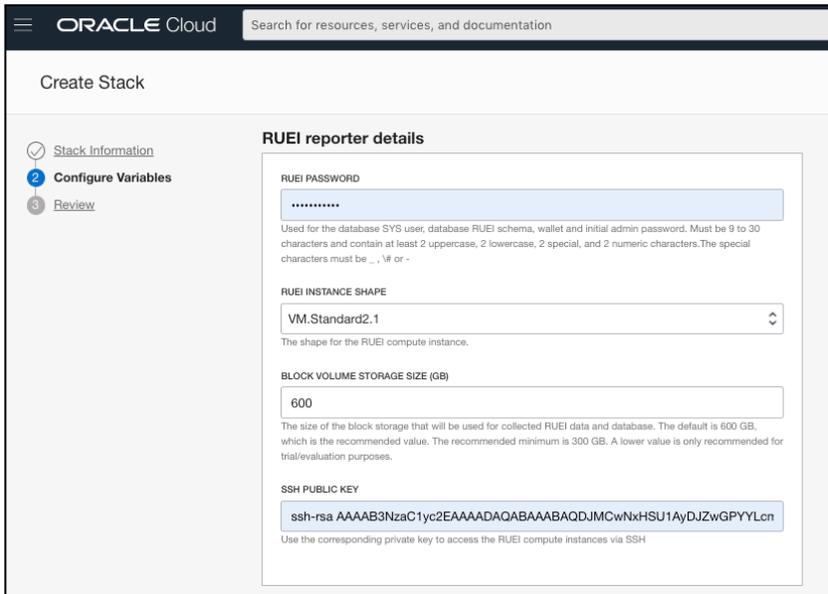


Figure 21. Create Stack page 3/5

20. In the “Networking details for RUEI and Oracle Database” section, select compartment, VCN and subnet. Select the VCN you created above. A Public subnet is selected in this example. Click Next.

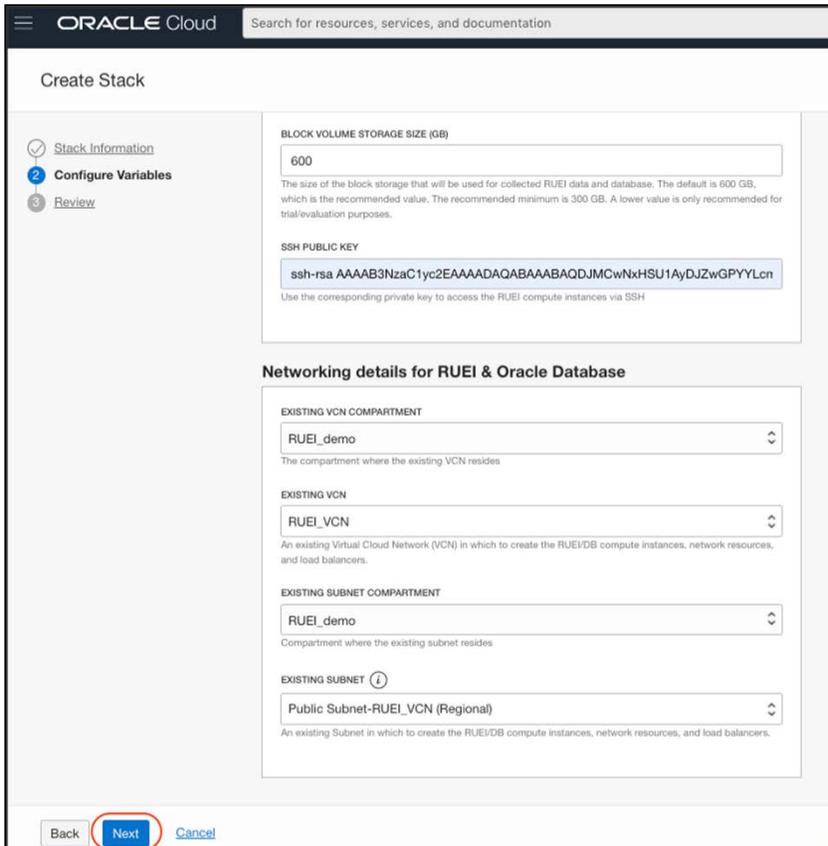


Figure 22. Create Stack page 4/5

21. Review the configuration and click “Create”.

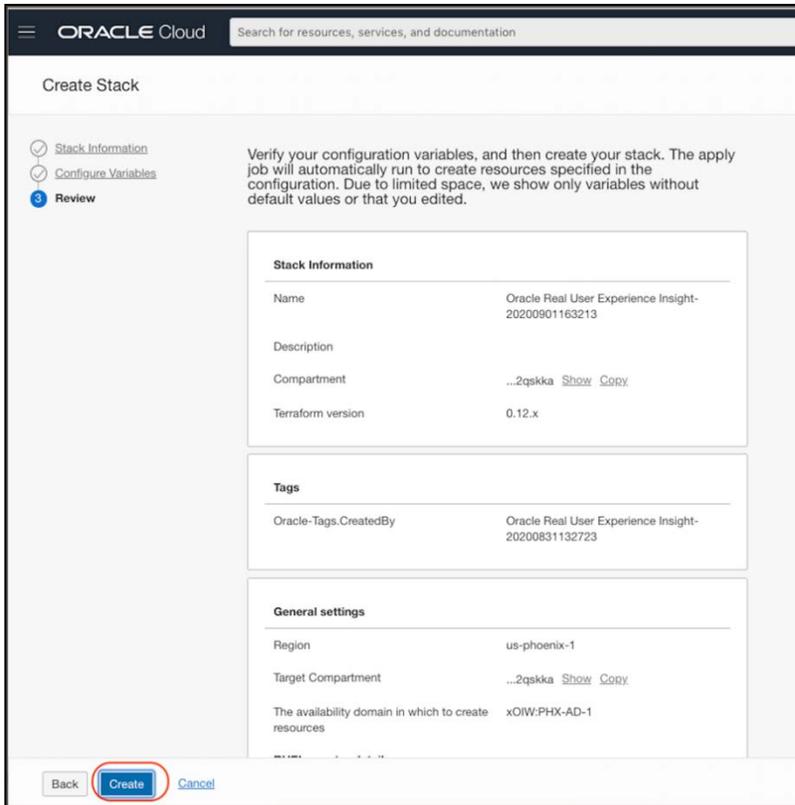


Figure 23. Create Stack page 5/5

22. The “Resource Manager Job” screen opens, and the Job starts to run. This takes approximately 10 to 12 minutes to complete.

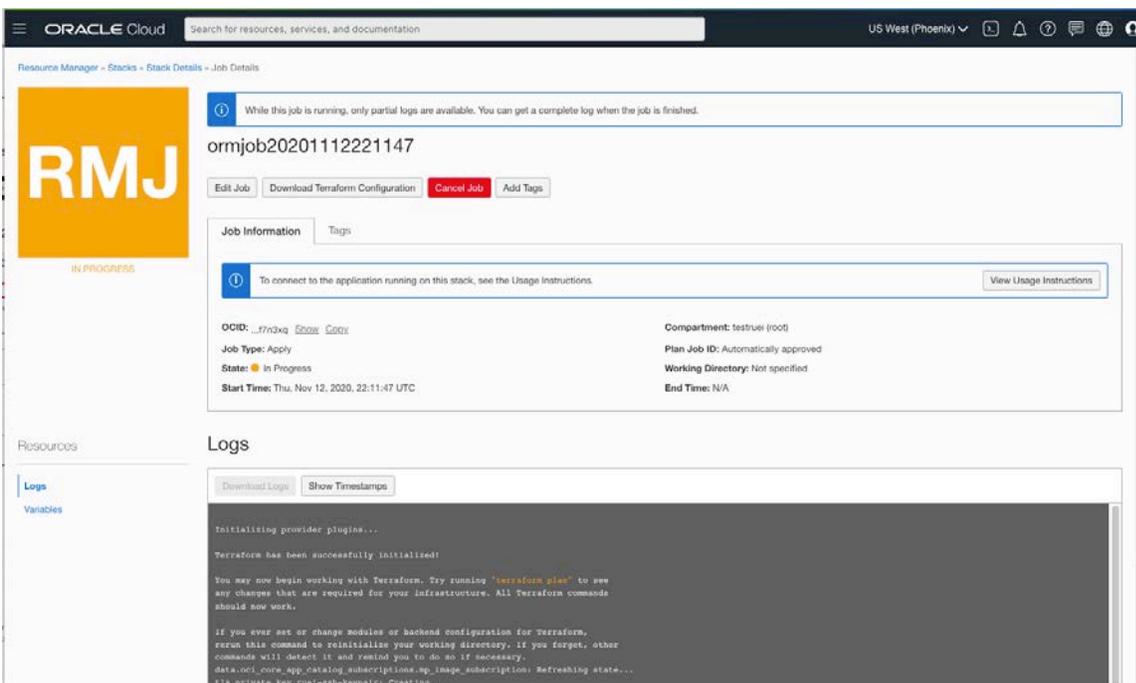


Figure 24. Resource Manager Job page – In Progress

23. Once the job is completed, wait for few seconds and refresh the page. Repeat this until you see the “Application Information” tab. Alternatively, click the “Stack Details” in the breadcrumb. Then click the “Application Information” tab.

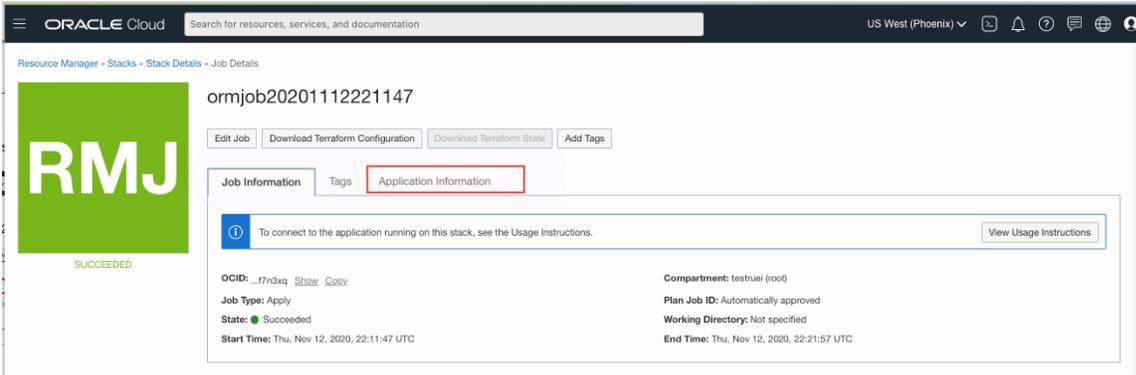


Figure 25. Resource Manager Job page - Succeeded

24. Click the “Open RUEI” button. You can also see the RUEI URL on the screen.

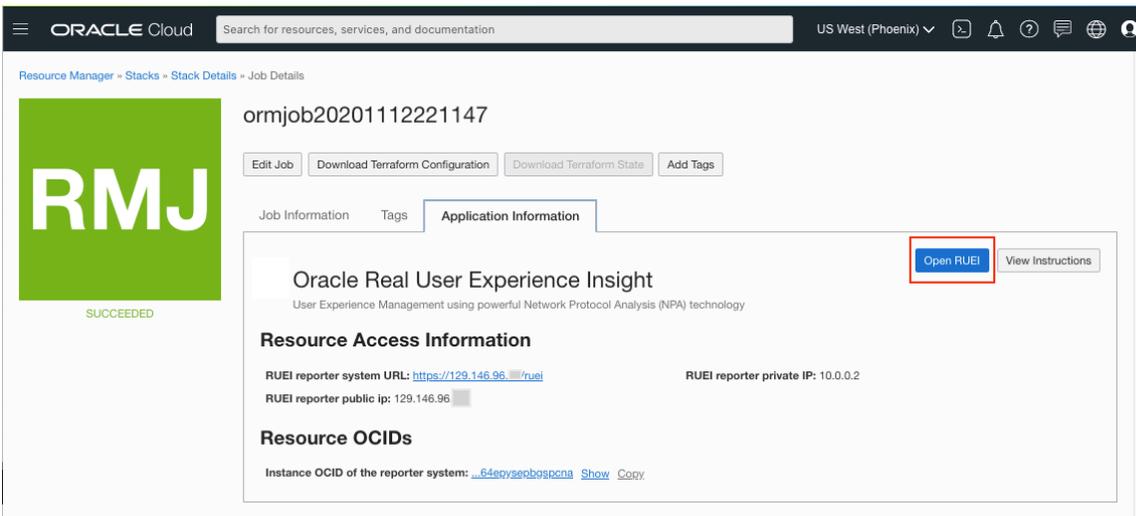


Figure 26. Resource Manager Job page – Application Information tab

25. This opens the RUEI login page in a new browser tab. Alternatively, you can copy the public IP address from the screen in the previous step, and type **https://<public IP address>/ruei/** in the address bar. Enter “admin” as a Username. The Password is the RUEI password you specified during the app deployment.

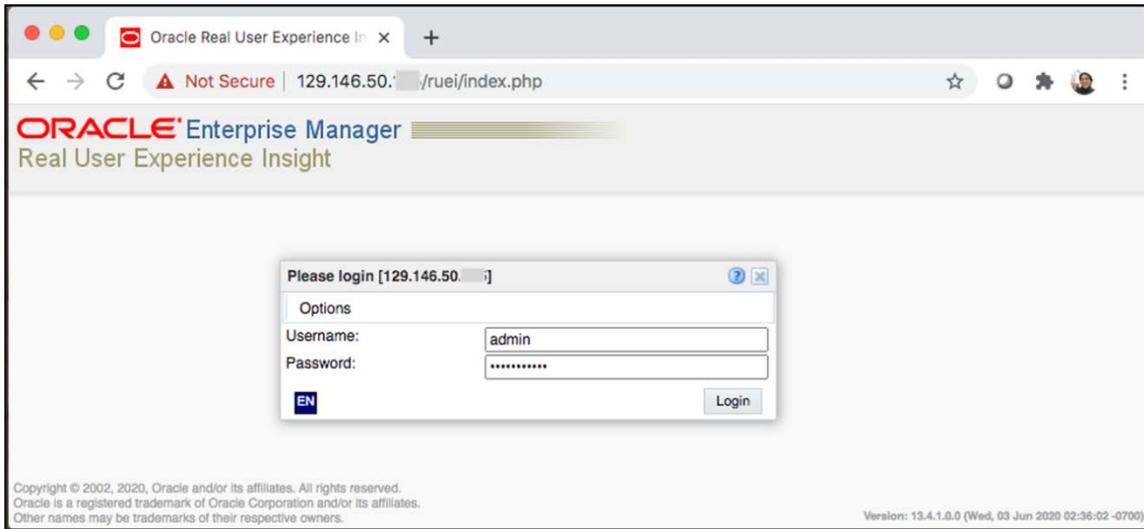


Figure 27. RUEI login page

26. You are now logged into the RUEI app deployed on Oracle Cloud. Congratulations!

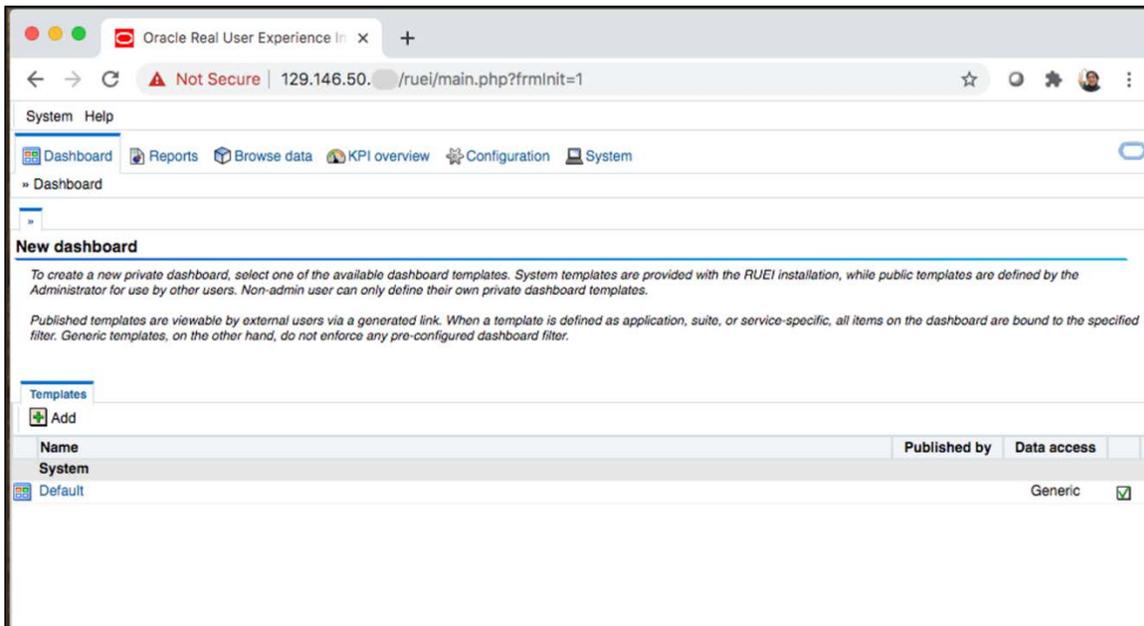


Figure 28. RUEI landing page

## Deploy the E-Business Suite App

Next, you will need an application that you monitor with RUEI. In this example, we will use Oracle EBS 12.2.9 Demo Install Image to create another instance in the OCI compartment. The image includes EBS 12.2.9 and Oracle Database 19c running on Oracle Linux 7.

The deployment of the EBS 12.2.9 Demo App is not in the scope of this paper, but the details are documented in the MOS note “[Provision a New Oracle E-Business Suite Installation on a Single Node on Oracle Cloud Infrastructure \(Doc ID 2764690.1\)](#)”.

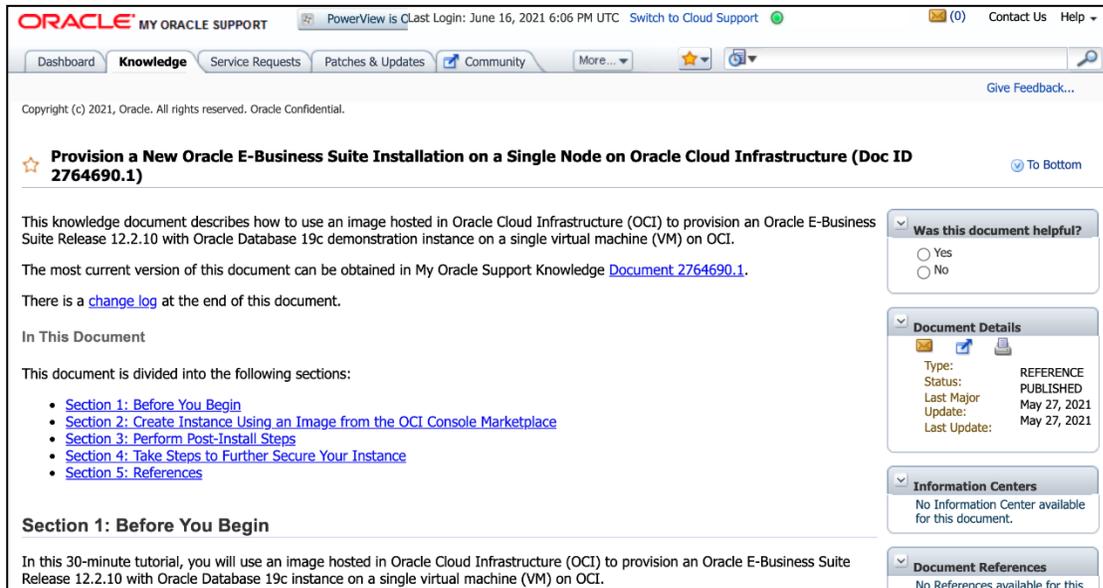


Figure 29. EBS app setup instruction page

1. Follow the [step-by-step guide](#) to find the EBS 12.2.2.9 Demo image in the Oracle Cloud Marketplace, configure VCN and deploy the EBS App. The approximate time to complete this process is 30 minutes.

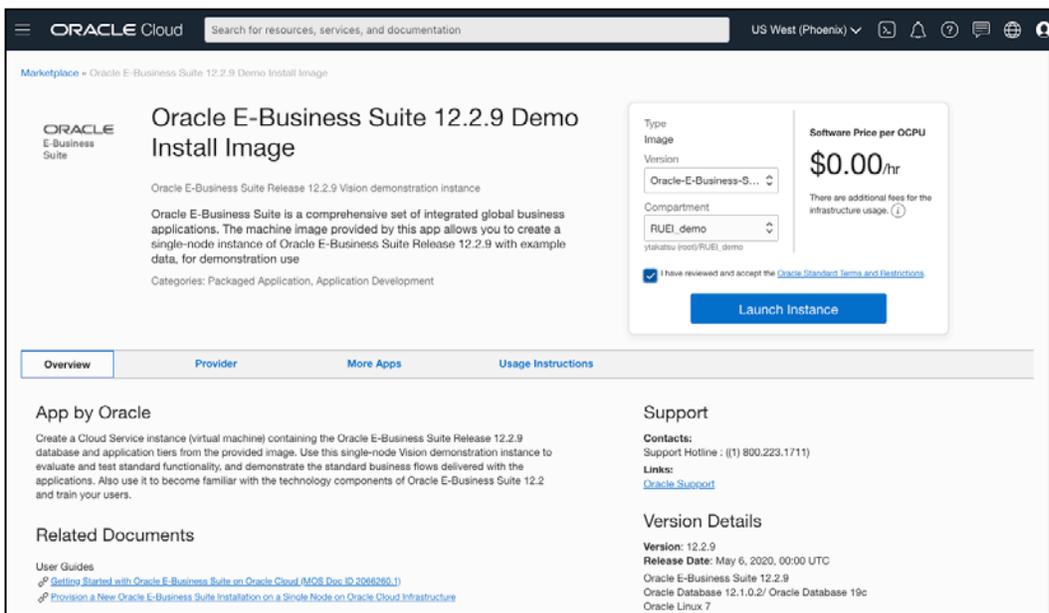


Figure 30. EBS 12.2.9 Demo Install Image page

- In our example, the EBS App is configured on the same VCN with the RUEI app to simplify the security list settings. This way the EBS web entry port can be added to the same security list that the RUEI reporter uses.

**NOTE:** See the [EBS app setup document](#), section 3, step 3.5 for more details on configuring the VCN for the EBS App.

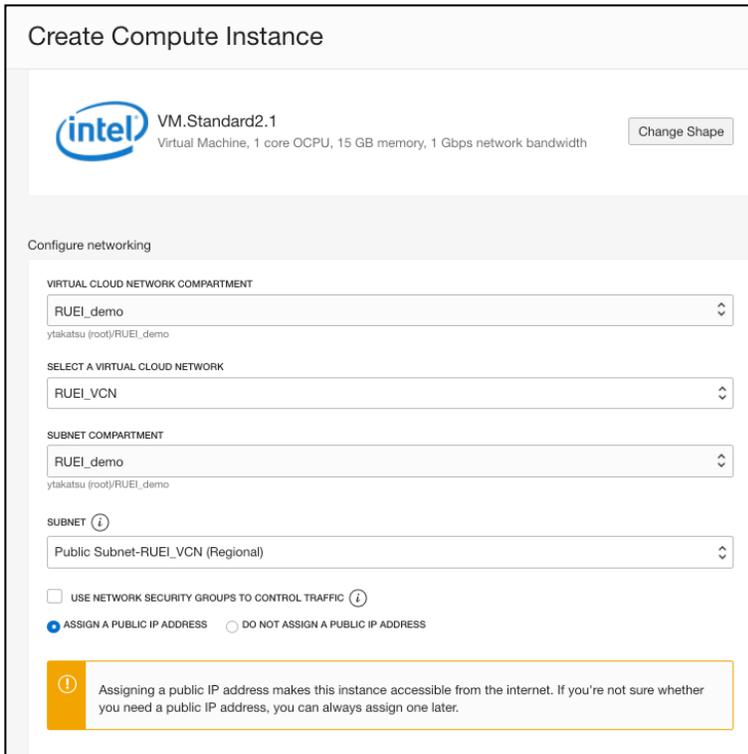
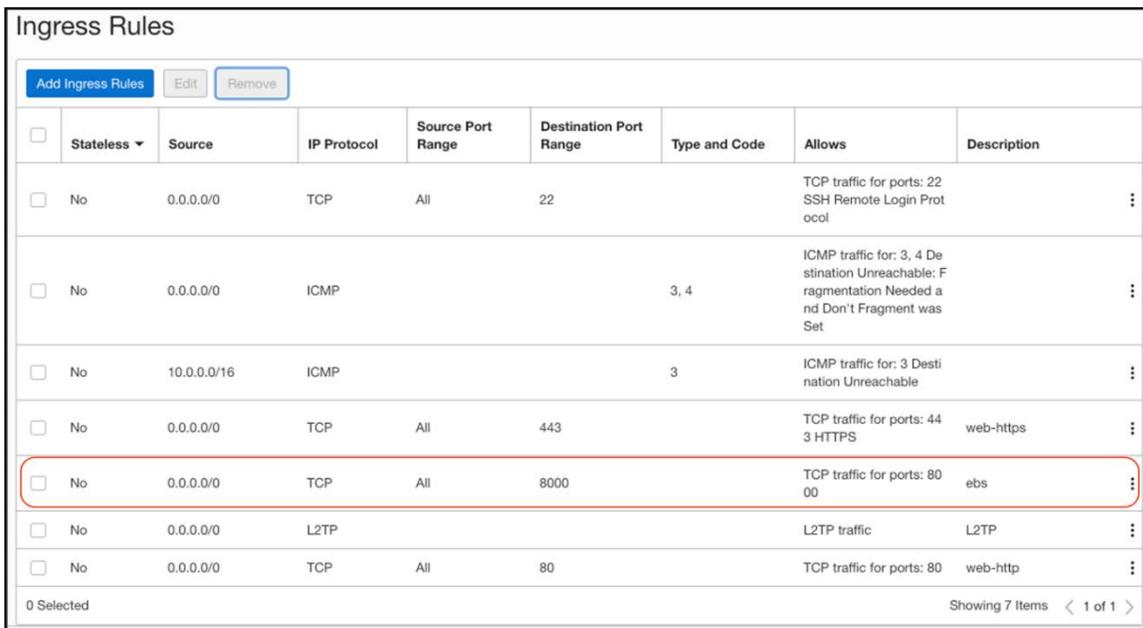


Figure 31. Configure Network screen in the EBS 12.2.9 Demo Install setup page



<input type="checkbox"/>	Stateless	Source	IP Protocol	Source Port Range	Destination Port Range	Type and Code	Allows	Description
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	22		TCP traffic for ports: 22 SSH Remote Login Protocol	
<input type="checkbox"/>	No	0.0.0.0/0	ICMP			3, 4	ICMP traffic for: 3, 4 Destination Unreachable: Fragmentation Needed and Don't Fragment was Set	
<input type="checkbox"/>	No	10.0.0.0/16	ICMP			3	ICMP traffic for: 3 Destination Unreachable	
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	443		TCP traffic for ports: 443 HTTPS	web-https
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	8000		TCP traffic for ports: 8000	ebs
<input type="checkbox"/>	No	0.0.0.0/0	L2TP				L2TP traffic	L2TP
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	80		TCP traffic for ports: 80	web-http

Figure 32. Ingress Rules screen in the Security List Details page

- The EBS app is configured as host + domain “app.example.com” by default. This is not an example, although it could look like one. It is the actual domain name you need to refer to in the browser’s address bar, in order to logon to the EBS application.

```

6. Configure Web Entry Point (Optional).

Use the configwebentry.sh script provided in the /u01/install/scripts directory to change the
default webentry point, which is apps.example.com. For instance, you could follow the steps in this example to
set the webentry point to myapps.example.com and access the application using
http://myapps.example.com:8000/OA_HTML/AppsLogin:

$ /u01/install/scripts/configwebentry.sh
Enter the Web Entry Protocol (Eg: https/http): http
Enter the Web Entry Host Name (Eg: public): myapps
Enter the Web Entry Domain Name (Eg: example.com): example.com
Enter the Web Entry Port: (Eg: 443/80): 8000
Enter the ORACLE_SID: (Eg: EBSDB): ebsdb

Running AutoConfig to complete the configuration

Enter the APPS user password: apps_password (for example, apps)

```

Figure 33. Configure Web Entry Point step in the EBS set up documentation

- The EBS app provides an option to modify the web entry information including the host and domain. In our example, host + domain is “ebsdemo.demo.com”. This is the actual domain that has to be configured in the RUEI Web interface, discussed later in this paper.

**NOTE:** See the [EBS app setup document](#), section 3, step 3.6 for more details on how to modify the web entries.

```

yutakats — oracle@apps:/u01/install/scripts — ssh -i ~/rsa/rsa_opc@129.146.1...
Enter the values for the following parameters to configure the Web Entry Point
Enter the Web Entry Protocol (Eg: https/http):
Enter the Web Entry Host Name (Eg: public):ebsdemo
Enter the Web Entry Domain Name (Eg: domain.com):demo.com
Enter the Web Entry Port: (Eg: 443/80):8000
Enter the ORACLE_SID: (Eg: EBSDB):ebsdb

```

Figure 34. Command line interface – Configure Entry Point

- Once the EBS app is deployed, you will be able to login to the application using the browser.

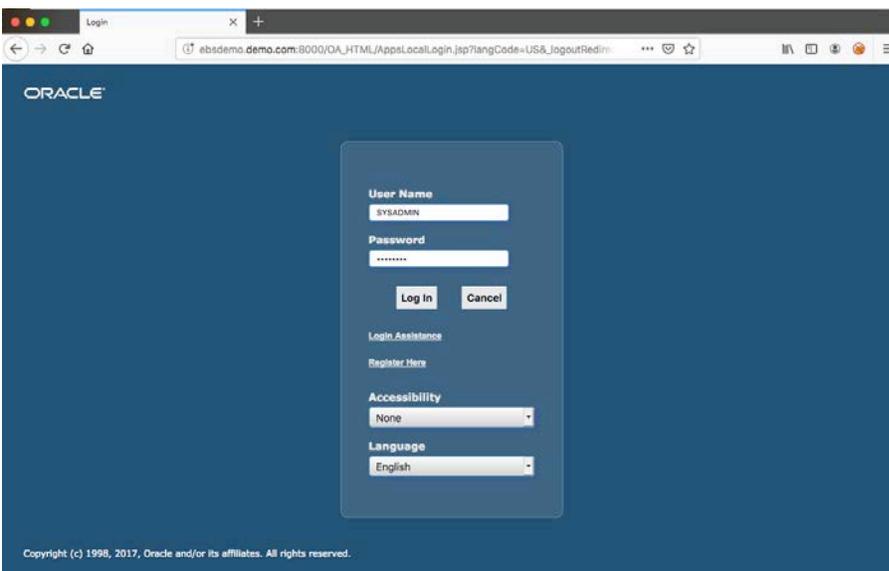


Figure 35. EBS Login page

## Set up Tunneling

### Tunnel Setup for RUEI

You have now successfully deployed the RUEI and EBS apps by following the steps in the previous sections. However, at this point RUEI is not collecting any data yet. In this section, we will set up a Virtual Ethernet Network TAP and L2TP tunnel, which allows traffic to flow from the EBS application to the RUEI instance. Note that the steps in this section are specific to setting up the RUEI and EBS Apps in the Oracle Cloud. For more information on tunneling, refer to the RUEI Administration guide Appendix B, "[Setting Up a Virtual Network TAP and L2TP Tunnel](#)". The approximate time to complete this step is 30 minutes.

1. Login to OCI. From the main menu, select "Compute", then "Instances".

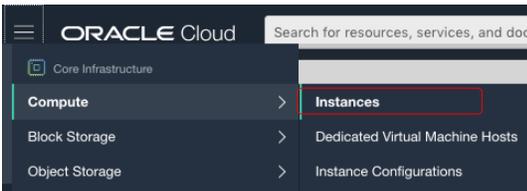


Figure 36. Main menu > Instances

2. You will see two instances, assuming you deployed the EBS and RUEI in the same compartment. Click the RUEI reporter instance link.

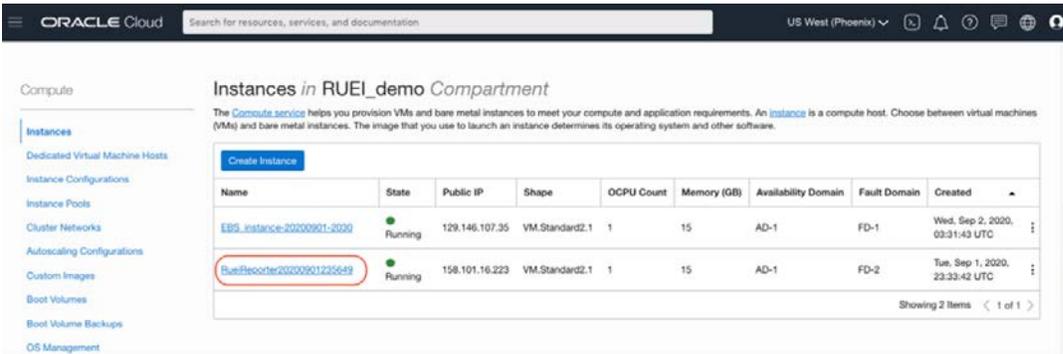


Figure 37. Instances in Compartment page

3. From the RUEI reporter instance page, note down the Public & Private IP address. You will need this information later.

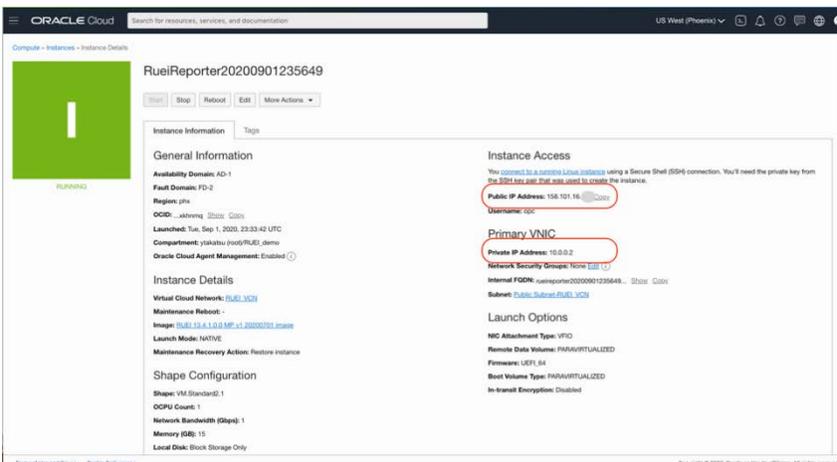


Figure 38. RUEI Reporter Instance page



Next, you will need to copy the **RUEI Virtual Ethernet TAP** and **L2TP tunnel transmit helper tooling RPM (ux-tunnel-transmit)** to the EBS instance. The ux-tunnel-transmit RPM is already extracted in: /root/ruei/rpms/ux-tunnel-transmit-\*.rpm. The suggested approach to copy the RPM is through the "scp" from the RUEI Reporter instance.

7. On the RUEI Reporter instance, as the "root" user, execute the following command to generate SSH identity:

```
$ sudo su
$ ssh-keygen
```

Then execute the following command to display the generated key:

```
$ cat ~/.ssh/id_rsa.pub
```

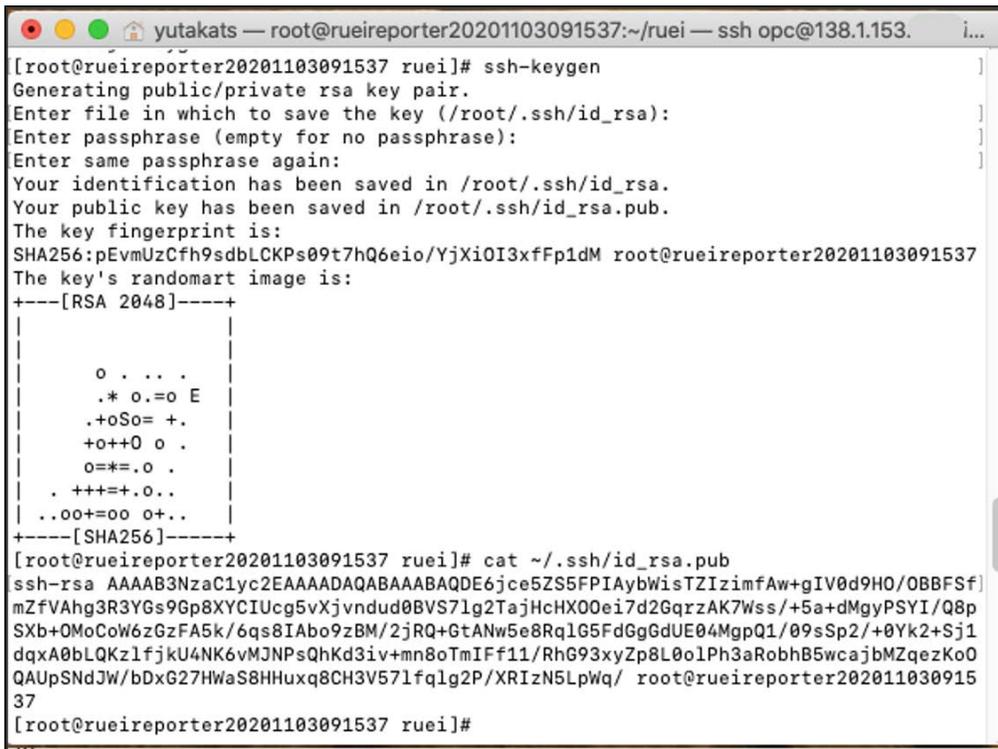


Figure 40. Command line interface – ssh key 1/2

8. Copy the content of id\_rsa.pub to your clipboard (note that the content of this file consists of one line). You will need this SSH identity in order to copy the RPM to the EBS instance in the next section. Do not close the terminal window yet.

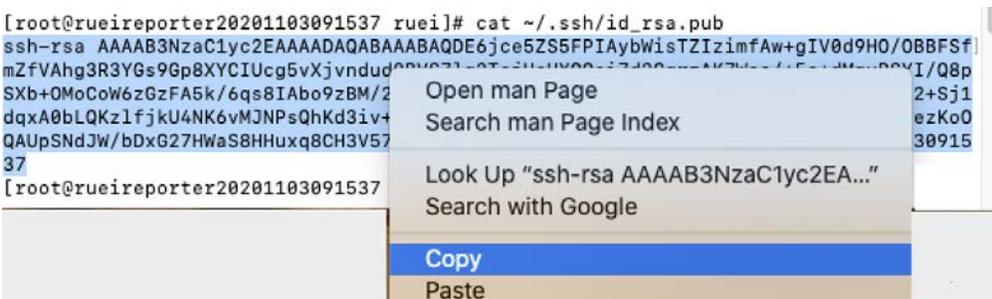


Figure 41. Command line interface – ssh key 2/2

## Tunnel Setup for EBS

- Next, connect to the application instance monitored by RUEI. In this example, we use the EBS application running in the same compartment. Log in to OCI, from the main menu, select “Compute” then “Instances”, and select the EBS instance. Note down the Public and Private IPs.

From the screen, click the VCN name link located next to “Virtual Cloud Network:”. In this example, the VCN is “RUEI\_VCN”. This will open the VCN page. Click “Security Lists” from the VCN page, then select “Default Security List” link.

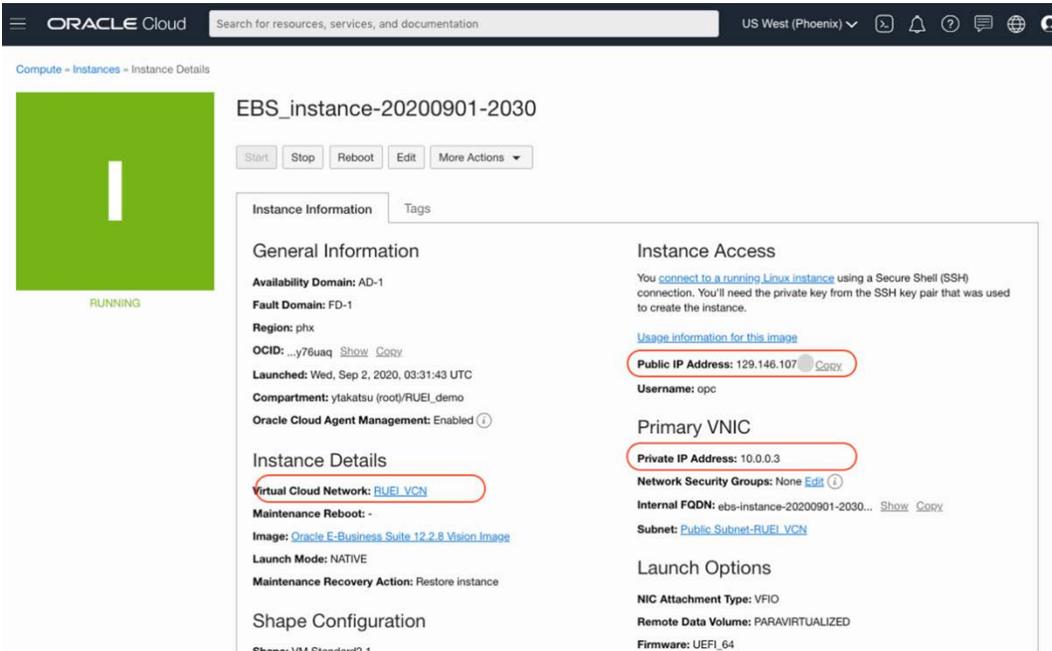


Figure 42. EBS instance page

- In this example, L2TP is already set because the same VCN is used for both RUEI and EBS instances. If you have a different VCN set for the EBS instance, add a new ingress rule for the L2TP protocol. Refer to the “Configure Security Settings” section in this paper for more details.

Ingress Rules								
<input type="button" value="Add Ingress Rules"/> <input type="button" value="Edit"/> <input type="button" value="Remove"/>								
<input type="checkbox"/>	Stateless	Source	IP Protocol	Source Port Range	Destination Port Range	Type and Code	Allows	Description
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	22		TCP traffic for port s: 22 SSH Remote Login Protocol	:
<input type="checkbox"/>	No	0.0.0.0/0	ICMP			3, 4	ICMP traffic for: 3, 4 Destination Unreachable: Fragmentation Needed and Don't Fragment was Set	:
<input type="checkbox"/>	No	10.0.0.0/16	ICMP			3	ICMP traffic for: 3 Destination Unreachable	:
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	443		TCP traffic for port s: 443 HTTPS	web-https :
<input type="checkbox"/>	No	0.0.0.0/0	L2TP				L2TP traffic	L2TP :
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	8000		TCP traffic for port s: 8000	ebs :
0 Selected								
Showing 6 Items < 1 of 1 >								

Figure 43. Ingress Rules screen

11. Open a terminal window, connect to the EBS instance using the below format.

```
$ ssh -i <private_key> <username>@<public-ip-address>
```

For example,

```
$ ssh -i "/Users/demo/rsa/id_rsa" opc@129.146.107.xx
```

12. On the EBS instance, as the "opc" user, open ~/.ssh/authorized\_keys in an editor. (E.g., vi editor).

```
$ vi ~/.ssh/authorized_keys
```



Figure 44. Command line interface – Authorized keys 1/3

13. Notice there is already at least one entry. Paste the contents of the id\_rsa.pub file, which you copied from the RUEI Reporter instance on a new line. If needed go back to the step 8 to copy the SSH identity to your clipboard.

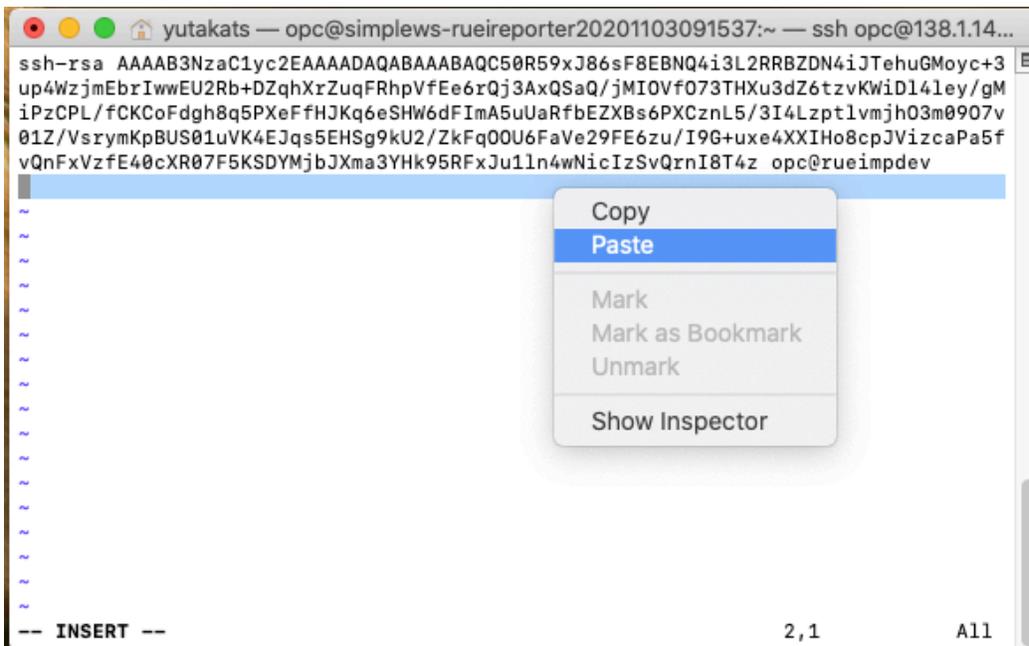


Figure 45. Command line interface – Authorized keys 2/3

14. The key is copied to the file. Save the file.



Figure 46. Command line interface – Authorized keys 3/3

You should now be able to open an SSH session from the "root" user on the RUEI Reporter instance to the "opc" user on the EBS instance.

15. Go back to the terminal window of the **RUEI instance**. As the "root" user, execute the following commands to discover the web services that are running in the EBS application.

```
$ sudo su (this will switch to the root user)
$ cd /opt/ruei/tunnel/receive
$ ./ux-tunnel-receive discover tunnel -c opc@EBS_IP -i IDENTITY_FILE >detect.info
```

For example,

```
$ ./ux-tunnel-receive discover tunnel -c opc@138.1.159.xx -i ~/.ssh/id_rsa >detect.info
```

The command output is shown below:

```
[root@rueireporter receive]# ./ux-tunnel-receive discover tunnel -c opc@138.1.159.xx -i ~/.ssh/id_rsa >detect.info
[local:info ] Auto detect VTAP/L2TP tunnel configuration of '138.1.159.xx'
[local:info ] Remote connection established
[local:info ] Detected OS: "Oracle Linux Server" - "7.9"
[local:info ] Start HTTP(S) port detection...
[remote:info ] Done HTTP(S) port detect (3 HTTP, 1 HTTPS of 23 open ports)
[local:info ] Detected HTTP(s) mirror ports:
[local:info ] - n/a
[local:info ] - Port      : 4443
[local:info ] - Protocol   : HTTPS
[local:info ] - HTTP status : 200
[local:info ] - SSL version : TLSv1/SSLv3
[local:info ] - SSL cipher  : AES256-GCM-SHA384
[local:info ] - SSL ephemeral: no-ephemeral
[local:info ] - n/a
[local:info ] - Port      : 7775
```

```

[local:info ] - Protocol : HTTP
[local:info ] - HTTP status : 404
[local:info ] - n/a
[local:info ] - Port : 7776
[local:info ] - Protocol : HTTP
[local:info ] - HTTP status : 404
[local:info ] - n/a
[local:info ] - Port : 8000
[local:info ] - Protocol : HTTP
[local:info ] - HTTP status : 200
[local:info ] Detected mirror interface: ens3
[local:info ] Detected transmitter tunnel endpoint:
[local:info ] - Local IP : 10.0.0.101
[local:info ] - Receiver IP : 130.35.13.xx
[local:info ] Detected receiver tunnel endpoint:
[local:info ] - Local IP : 10.0.0.157
[local:info ] - Transmitter IP: 138.1.159.xx
[local:info ] Detected NAT for receiver IP
[local:info ] Detected NAT for transmitter IP
[root@rueireporter receive]#

```

- Optionally, review the content of the info file. The information will be used to configure the Virtual Ethernet Network TAP in the next step.

```

[root@rueireporter receive]# more detect.info
transmit: 130.35.13.xx 10.0.0.101 ens3 i4443,i7775,i7776,i8000 10.0.0.101
receive: 10.0.0.157 138.1.159.xx - 10.0.0.101

```

- Execute the command below to install the ux-tunnel-transmit RPM on the EBS host, remotely from the RUEI server. RPM files can be found in the /root/ruei/rpms directory, on the RUEI instance host.

```

$ ./ux-tunnel-receive discover tunnel-install -c opc@EBS_IP -i IDENTITY-FILE -f detect.info -a ux-tunnel-transmit-<version>.rpm

```

For example,

```

$ ./ux-tunnel-receive discover tunnel-install -c opc@138.1.159.xx -i ~/.ssh/id_rsa -f detect.info -a /root/ruei/rpms/ux-tunnel-transmit-13.5.1.0.0-20210415.x86_64.rpm

```

```

[root@rueireporter receive]# ./ux-tunnel-receive discover tunnel-install -c opc@138.1.xx.xx -i ~/.ssh/id_rsa -f detect.info -a /root/ruei/rpms/ux-tunnel-transmit-13.5.1.0.0-20210415.x86_64.rpm
[local:info ] Imported config (detect.info)
[local:info ] Install VTAP/L2TP tunnel configuration on '138.1.159.xx'
[local:info ] Remote connection established
[local:info ] Detected OS: "Oracle Linux Server" - "7.9"
[local:info ] Transmitted 'ux-tunnel-transmit-13.5.1.0.0-20210415.x86_64.rpm'
[remote:info ] (Re-)installing ux-tunnel-transmit RPM dependencies using yum
[local:info ] (Re-)installed rpm 'ux-tunnel-transmit-13.5.1.0.0-20210415.x86_64.rpm' on remote system
[remote:info ] Adding/updating transmitter tunnel configuration:
[remote:info ] * Local IP : 10.0.0.101
[remote:info ] * Receiver IP : 130.35.13.xx
[remote:info ] * Monitored interface: ens3
[remote:info ] * Monitored ports : i4443,i7775,i7776,i8000
[remote:info ] * Tunnel ID : 10.0.0.101 (167772261)
[local:info ] Successfully updated tunnel configuration
[remote:info ] • ux-tunnel-transmit.service - LSB: Bring up/down RUEI mirror tunnel
[remote:info ] Loaded: loaded (/etc/rc.d/init.d/ux-tunnel-transmit; bad; vendor preset: disabled)
[remote:info ] Active: active (running) since Sat 2021-06-12 11:57:44 CDT; 56ms ago
[remote:info ] Docs: man:systemd-sysv-generator(8)
[remote:info ] Process: 9244 ExecStart=/etc/rc.d/init.d/ux-tunnel-transmit start (code=exited, status=0/SUCCESS)

```

```
[remote:info ] Memory: 3.3M
[remote:info ] CGroup: /system.slice/ux-tunnel-transmit.service
[remote:info ]   └─ 9684 tund
[remote:info ]   └─10112 sleep 20
[remote:info ]
[remote:info ] Jun 12 11:57:44 2104-eps-yutaka systemd[1]: Started LSB: Bring up/down RUEI mirror tunnel.
[local:info ] Successfully (re)started the ux-tunnel-transmit service
[local:info ] Adding/Updating receiver tunnel configuration:
[local:info ] * Local IP      : 10.0.0.157
[local:info ] * Transmitter IP : 138.1.159.xx
[local:info ] * Tunnel ID     : 10.0.0.101 (167772261)
[local:info ] Config added tunnel.
[local:info ] Multi tunnel receiver updating
[local:info ] L2TP updating
[local:info ] L2TP updating '1' configured tunnels
[local:info ] L2TP tunnel #0: device 'ruei-mtun-00001' successfully added and linked to 'ruei-mtun'.
[local:info ] L2TP '0' tunnel(s) removed
[local:info ] L2TP '1' tunnel(s) added
[local:info ] L2TP update completed.
[local:info ] Multi tunnel receiver successfully updated.
[local:info ] Successfully updated receiver tunnel configuration
[root@rueireporter receive]#
```

Upon completing the steps above, HTTP traffic flows between the instances. If you see any errors running the command above, consult the RUEI Administration guide Appendix B, "Setting Up a Virtual Network TAP and L2TP Tunnel", "[Diagnostics](#)" section for troubleshooting tips.

## Set up EBS monitoring in the RUEI Web Interface

Now you are all set with the RUEI and EBS deployments and the tunnel setup. The final step, before you start monitoring, is to configure the EBS suite in the RUEI web interface. This section walks you through these steps:

- i. Create a “Suite” for EBS, which provides out-of-the-box monitoring capabilities for Oracle packaged applications
- ii. Create a dashboard, to visualize the monitoring information
- iii. Enable “Full session replay”, which allows you to deep-dive into the page details.

### Create a Suite for EBS

1. Open a browser tab, login to the RUEI page, with the URL “<https://<public IP address>/ruei/>”.
2. Click the Configuration Tab, then click “Protocols” link, which is located at the second row in the table.

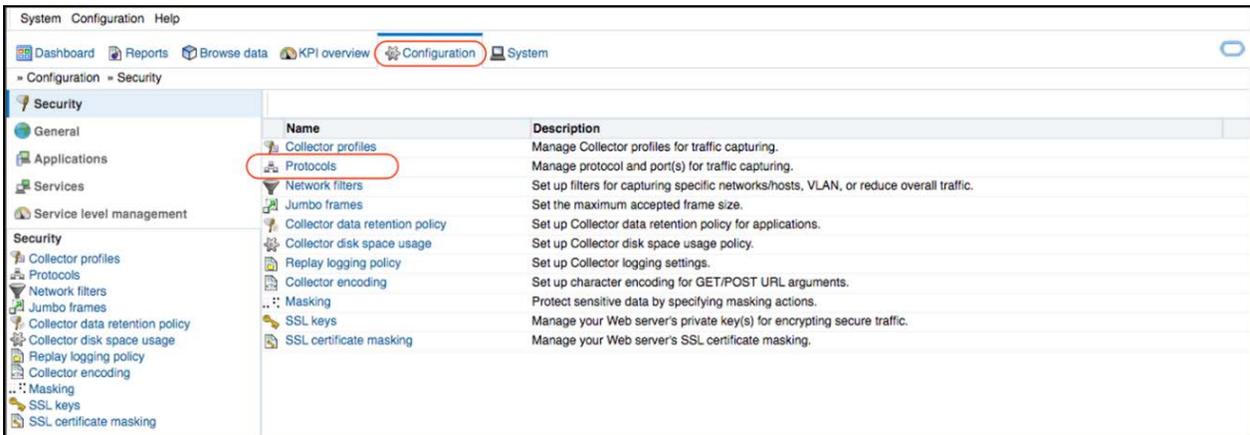


Figure 47. RUEI Configuration page

3. Click “HTTP”.

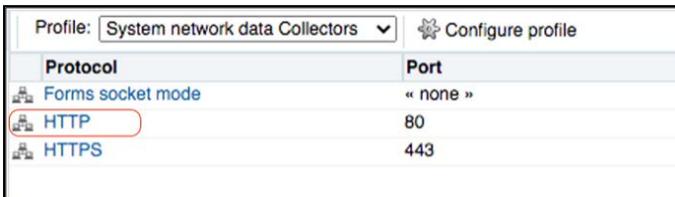


Figure 48. Protocols screen

4. Add “8000”, click Save.

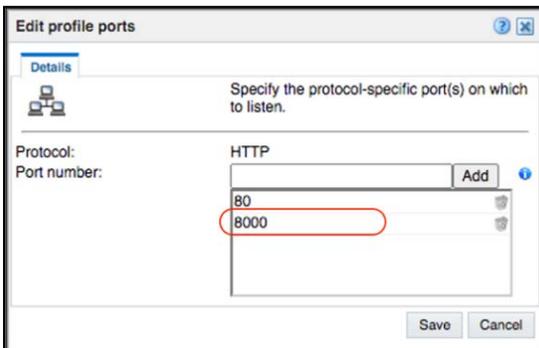


Figure49. Edit profile ports screen

5. Click “Applications”. This opens the Application pane. Then click “Suites”.

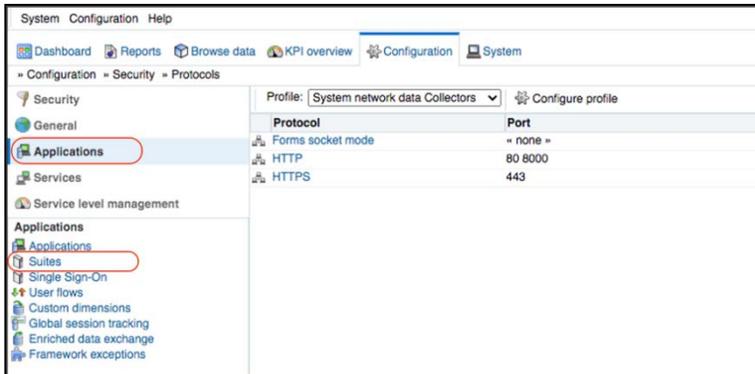


Figure 50. RUEI Configuration page

6. Click “New Suite” icon.

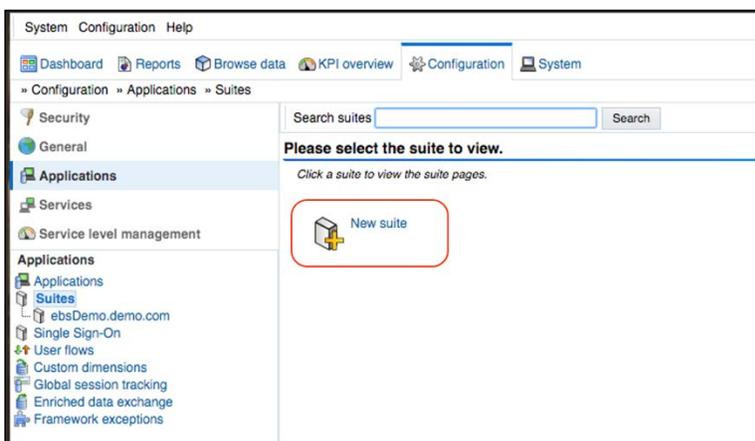


Figure 51. RUEI Configuration page – Suites

7. Enter the Suite name, domain and port. By default, EBS 12.2.9 App sets “**app.example.com**” as it’s domain. You can customize this value during the EBS App setup. In this example, the domain name is “**ebdemo.demo.com**”. Click Next.

**NOTE:** “app.example.com” is not an example, but the actual domain set by the EBS app. Please see the [EBS app set up document](#), section 3, step 3.6 for more details on how to modify the web entries.

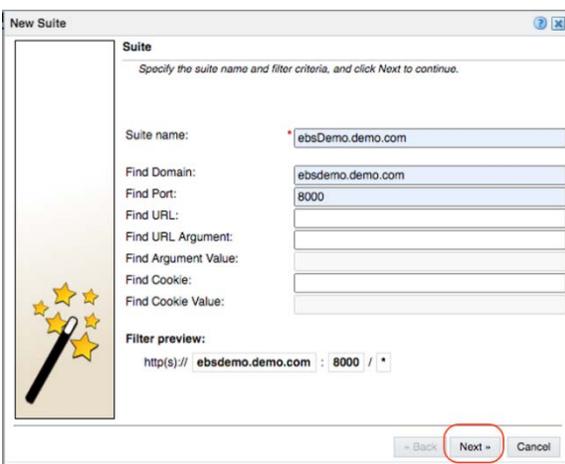


Figure 52. New Suite screen

- Verify the entries for the “Suite” you created for the EBS application.

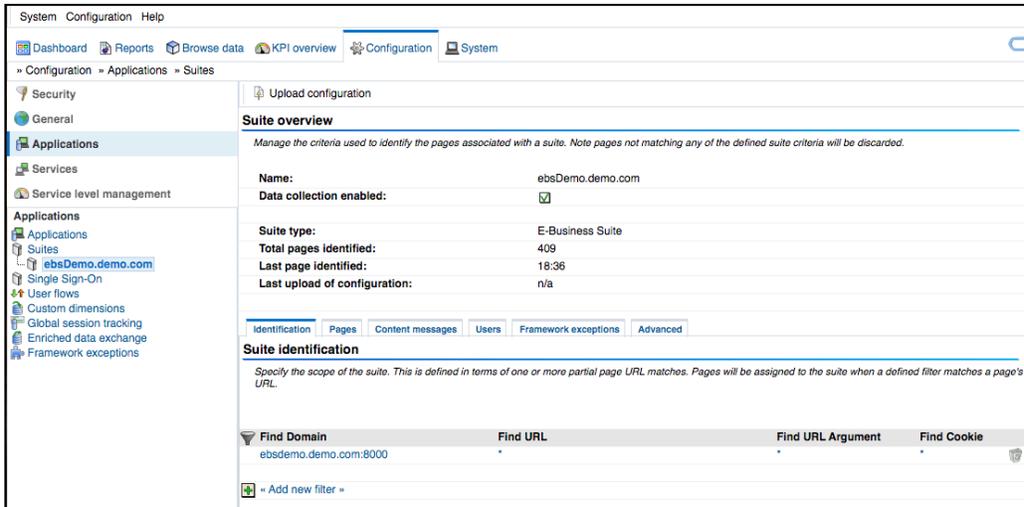


Figure 53. RUEI Configuration page – Suite overview screen

## Create a Dashboard

- Click the “Dashboard” tab. Then click “Default”, located under “Templates”.

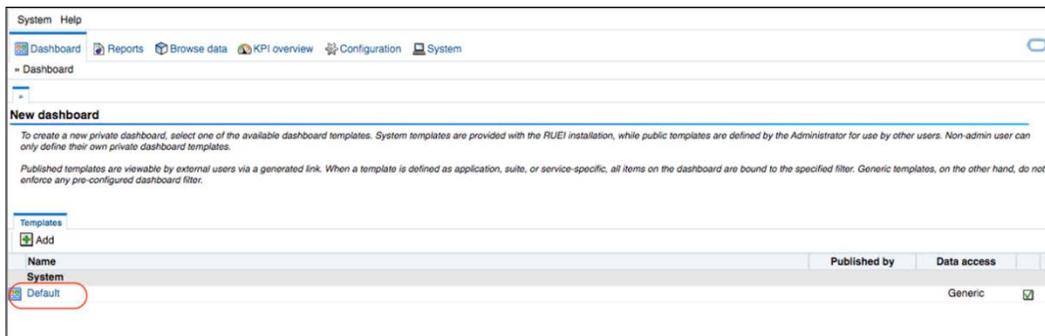


Figure 54. RUEI Dashboard page – New dashboard

- Enter a name of the dashboard, select “Suite-specific” for Data access, “E-business Suite” for Suite type, and the suite name you specified for the EBS above, for application. Click “Save”.

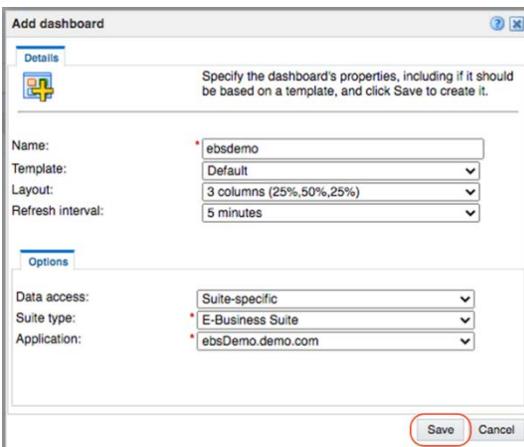


Figure 55. Add Dashboard screen

11. The Dashboard is created. Note it may take up to 5 minutes (by default) to see the traffic on the RUEI screen.

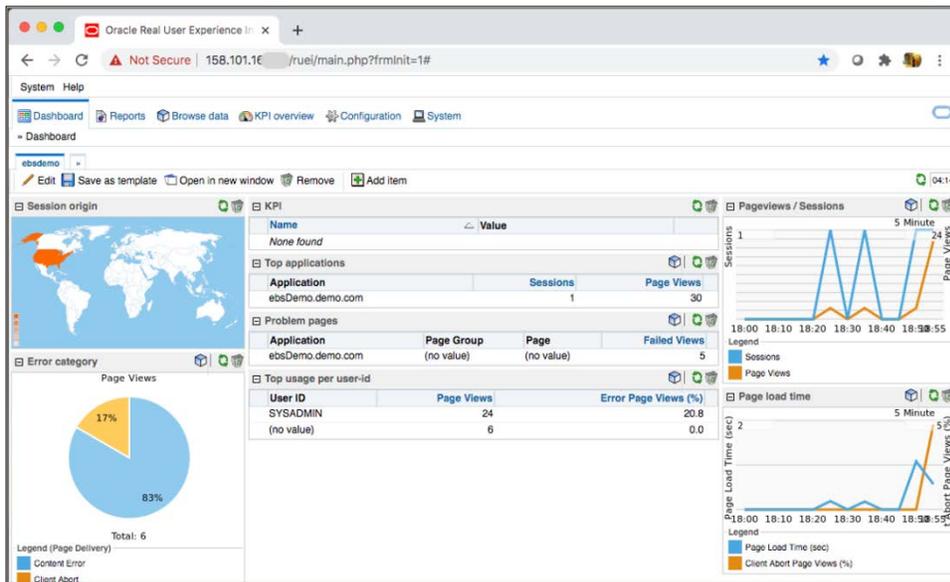


Figure 56. RUEI Dashboard page

## Enable Full Session Replay

12. Optionally, you can enable Session Replay to store the complete user session data, which allows you to review each page viewed by the users during the session. Click “Configuration” tab. Select “Security”, then “Replay logging policy”. Click the text “No replay”.

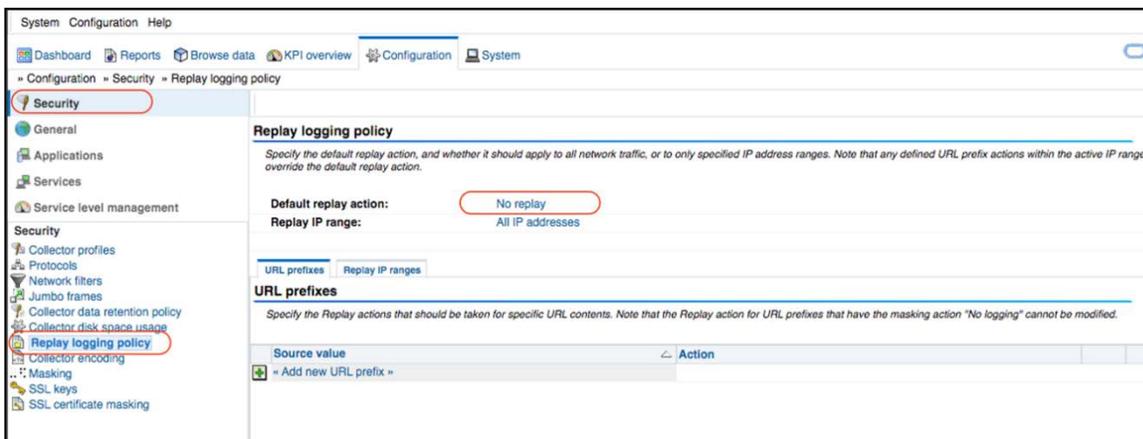


Figure 57. RUEI Configuration page – Replay logging policy screen

13. “Edit default replay action” window opens. By default, the session replay setting is disabled. Click the pulldown menu, then change the value from “No replay” to “Complete logging”. Click Save.

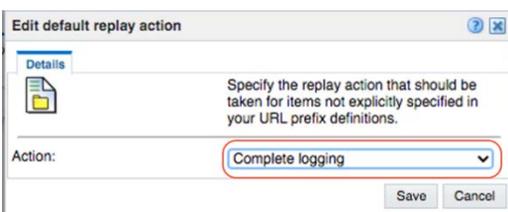


Figure 58. Edit default replay action screen

- Click “Browse Data” tab. Select “All sessions” from the pulldown menu at the lower left side of the screen, then select “Session Diagnostics”. Select your EBS suite for the “Application” filter, and SYSADMIN (or a user used for logging into EBS) for the User ID. Click “Search”.

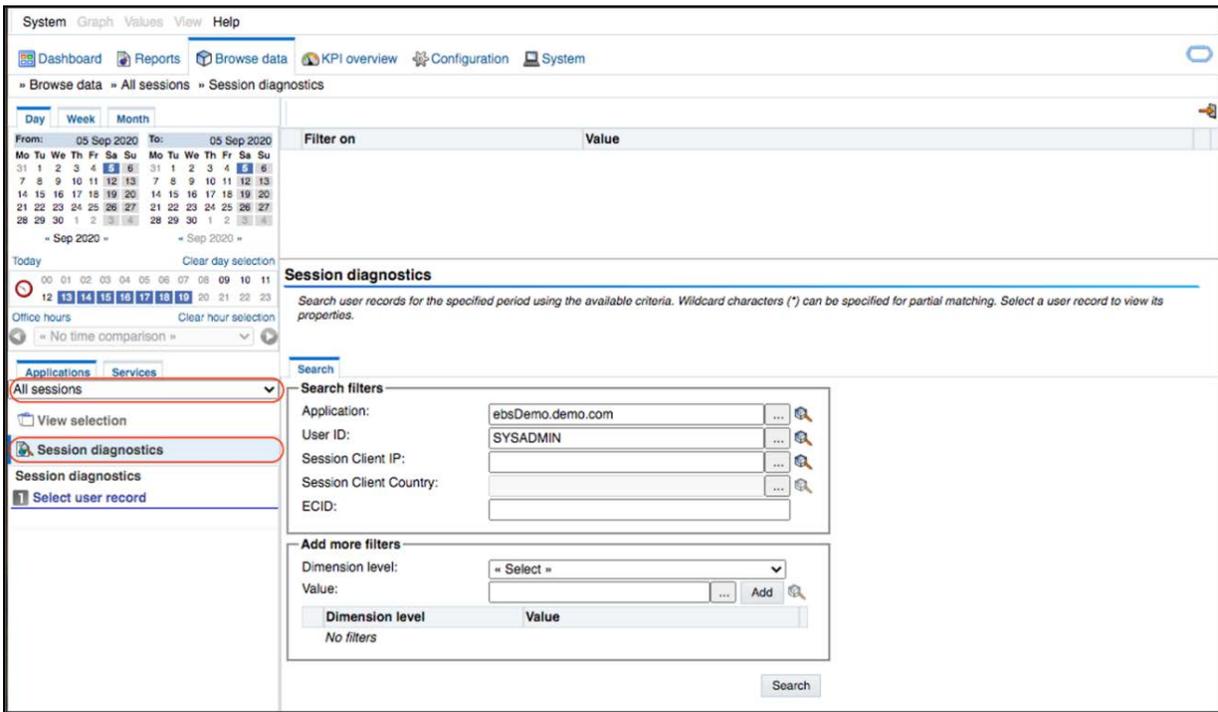


Figure 59. RUEI Browser data page -Session diagnostics, Search filters screen 1/3

- The session information is displayed. Select the date/time link under the “Period” column.

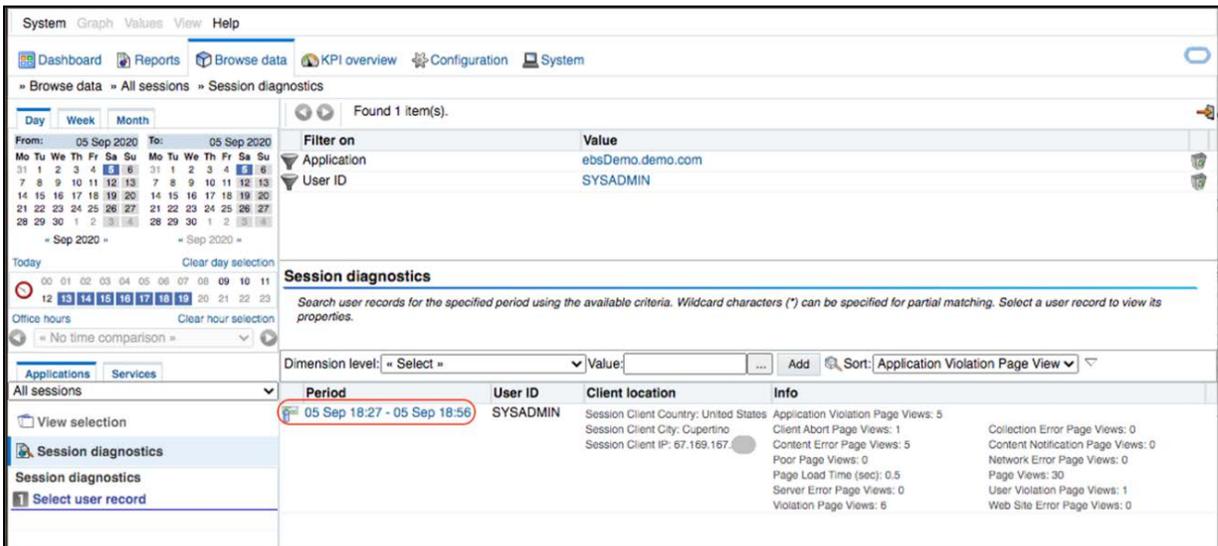


Figure 60. RUEI Browser data page -Session diagnostics screen 2/3

- Select any session link to narrow down to the session details, or click the camera icon to view the session replay.

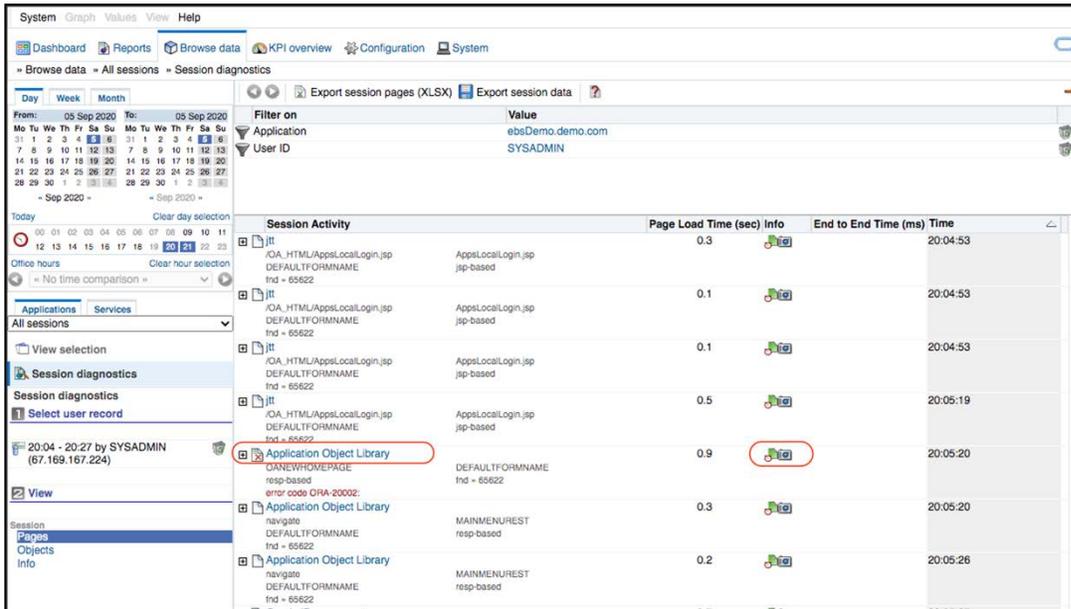


Figure 61. RUEI Browser data page -Session diagnostics screen 3/3

- Here is the sample session replay page with the rendered HTML view.

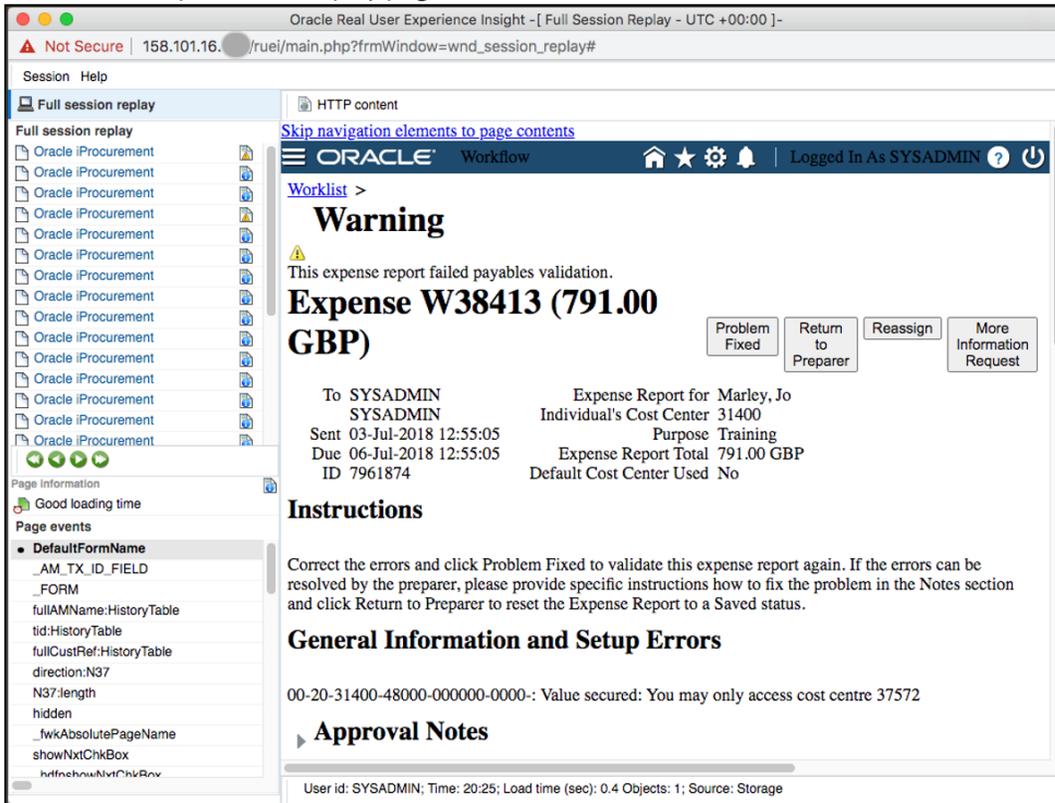


Figure 62. RUEI Full Session Replay page

## Conclusion

Real User Experience Insight is a passive monitoring utility that enables IT stakeholders to develop shared understanding into their application users' experience. It can be deployed to production without modifying or instrumenting applications. By using the RUEI App in Oracle Cloud Marketplace, you can deploy Oracle Real User Experience Insight on Oracle Cloud and quickly start the monitoring of your Cloud applications.

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