Deploying Actifio Sky in the Oracle Cloud

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Preface

The information presented in this guide is intended for users who are configuring Actifio Sky for the Oracle Cloud. If you are installing Actifio Sky for the Oracle Cloud in a production environment, before proceeding, consult with your Actifio representative to properly size your Actifio Sky appliance.

When you have finished configuring Actifio Sky for the Oracle Cloud, consult *Introduction to Actifio Copy Data Management*. It introduces basic concepts, processes and procedures for an Actifio appliance.

After you have familiarized yourself with the Actifio appliance, see *Oracle DBA's Guide to Actifio Copy Data Management*. This guide provides detailed instructions on how to best use your Actifio appliance to capture and manage Oracle databases.

The ActifioNOW Customer Portal

Actifio customers can access to the entire Actifio documentation set as well as the portal's knowledge base.

To log into the ActifioNOW Customer Portal:

- 1. Go to: https://now.actifio.com
- 2. When prompted, enter your user name and password you were provided when you purchased your Actifio appliance.

The Doctifio Public Documentation Library

The Doctifio Public Documentation Library provides a limited number of Actifio documents and is open to the public.

To access the Doctifio Public Documentation Library, in a web browser enter the address: **docs.actifio.com**.



1 Introduction

An Actifio Sky for the Oracle Cloud appliance is a virtual server designed to capture and manage data. An Actifio Sky appliance can be installed on servers in an Oracle Cloud.

Actifio Sky for the Oracle Cloud captures application data at the block level in its native format and manages its lifecycle efficiently, securely and seamlessly in a hybrid cloud across the enterprise data center and the Oracle Cloud. Data in the Oracle Cloud is instantly accessible and can be re-used for:

- Accelerates DevOps, CI/CD, and application dev/test processes: Provision virtual copies of databases instantly, with secure, role-based self-service access. This enables developers to perform development, test, QA, and integrate with continuous integration and continuous deployment tools.
- **Leverages instant access to data:** Actifio Sky allows users to failover to their Oracle Cloud environment delivering business resilience for on-premises enterprise applications.
- On-Demand analytics: The ability to capture, manage, and re-use databases and file systems
 also enables re-use of data in the Oracle Cloud for data warehousing and analytics
 applications.
- **Secure migration to the Oracle Cloud:** Securely migrating applications to Oracle Cloud. Using Actifio instant access, users can create a sandbox in the Oracle Cloud, conduct security, performance, and scalability validation, then turn on the application in the Oracle Cloud.
- Global, standardized, Hybrid Cloud Data Management: For Oracle Cloud-resident applications, Actifio can manage their data lifecycle and deliver the same benefits as for the on-premises applications; accelerate high quality application development, enhanced business resilience, meet compliance requirements and drive out infrastructure costs.

Actifio for Oracle Cloud delivers the following benefits:

Build Higher Quality Apps Faster: Actifio database virtualization in the Oracle cloud enables Dev, QA, and UAT teams to self-service provision on-demand virtual copies of production databases with secure data masking. This helps catch defects earlier in QA cycles, enabling the release of higher quality products, faster.

Improve Business Resiliency: By replicating on-premises and cloud-based data to any Oracle cloud location for instant recovery of critical applications, Actifio eliminates the fear of downtime for critical applications, and potential losses in revenue, reputation, and employee productivity.

Outsource Infrastructure: By delivering a modern data management platform in hybrid cloud environments, Actifio helps accelerate business transformation by making it easy for enterprises to leverage cloud technologies, allowing them to outsource costly infrastructure.

Data Warehouse, ETL, Analytics: Actifio makes it very easy for enterprises to provision virtual copies of production data in the Oracle Cloud, while feeding data into on-demand data warehousing, ETL, or analytics solutions. This accelerates the speed at which business analytics can be achieved in the cloud, while simultaneously eliminating the need to invest more in software tools and on premise infrastructure.

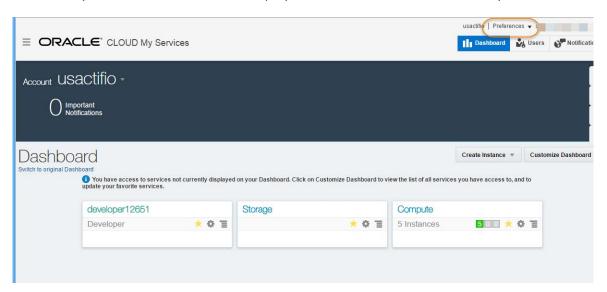
2 Setting Preferences and Displaying the Compute Service

Before you begin configuring your Oracle Cloud environment to accommodate an Actifio Sky appliance you must:

- Set Preferences on page 3
- Display the Compute Service Console on page 4

Set Preferences

1. From your Oracle Cloud account, display the Dashboard for Oracle Cloud My Services:



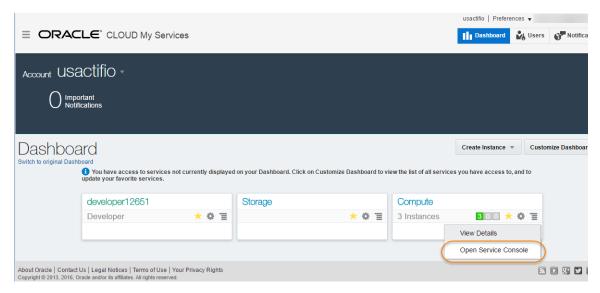
Oracle Cloud Dashboard

- 2. In the upper right-hand corner of the dashboard, click **Preferences** and the Preferences dialog box is displayed.
- 3. Ensure that the **Permission Settings** option is checked.
- 4. Click **OK** and the dialog box closes.

Display the Compute Service Console

To display the Compute Service dashboard:

1. From your Oracle Cloud account, display the Dashboard for Oracle Cloud My Services:



Open Service Console

2. Click the Compute drop down menu icon and select **Open Service Console** and the Service Console is displayed:



Compute Service Console

You are now ready to upload the Actifio Sky for Oracle Cloud image. See Obtaining an Actifio Image on page 5.

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3 Obtaining an Actifio Image

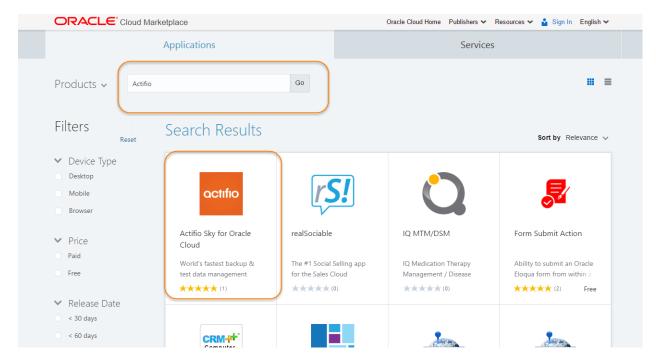
Actifio provides an Actifio Sky image for the Oracle Cloud. You can obtain a copy of that image one of two ways:

- From the Oracle Cloud Marketplace (recommended)
- From your Actifio representative see Chapter 3, Uploading an Image Provided by Your Actifio Representative

Obtaining an Actifio Image From the Oracle Cloud Marketplace

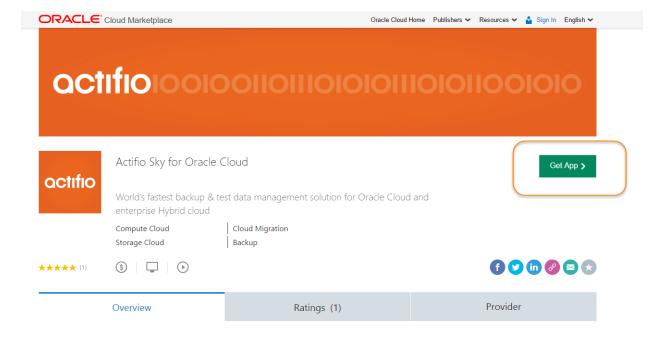
To obtain an Actifio Sky for Oracle Cloud image from the Oracle Cloud Marketplace.

Go to the Oracle Cloud Marketplace:



Oracle Cloud Marketplace

- 2. Use the Search box to search for **Actifio.**
- 3. Click the **Actifio** icon.
- 4. Actifio Sky for Oracle Cloud page is displayed:



App by Actifio

Actifio Sky for Oracle Cloud delivers the world's fastest data protection and test data management solutions for applications hosted in the Oracle Cloud. It also enables a seamless Hybrid cloud solution between your data center and Oracle cloud.

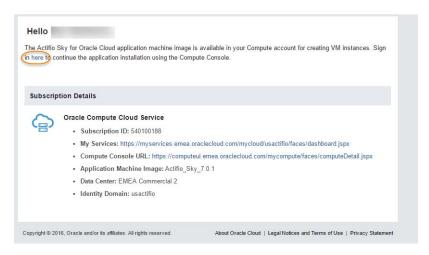
Activ Go to

Get The Actifio Sky for Oracle Cloud Image

5. Click Get App.

Note: You may be prompted to login to your Oracle Cloud account.

- 6. After you log in, the End User License Agreement (EULA) is displayed.
- 7. Read the EULA and when you finish, click **I read the terms of use** and click **I accept the Oracle Terms of Use.** The Customer Details page displayed:
- 8. In the fields provided, enter your contact information. The information provided in this form will be used to send you instructions on how to obtain the Actifio Sky for Oracle Cloud image.
 - On submit a thank you is displayed and you will be sent a Thank You email acknowledging your request for an Actifio Sky for Oracle Cloud image.
- Once the Actifio Sky for Oracle Cloud has been deployed in your Compute account, you will receive a second email with a link that will bring you to your Oracle Cloud Compute Service page:



Email With Link to Oracle Cloud Compute Service

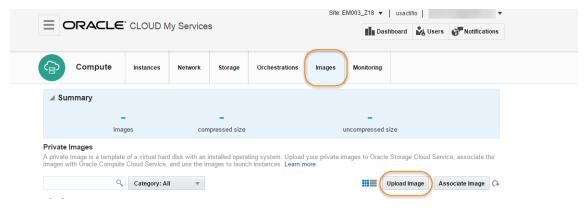
10. Click the link and your Compute Services dashboard is displayed.

You are now ready to begin configuring your Compute Service. Continue on to Configuring Oracle Network Security on page 9.

Uploading an Image Provided by Your Actifio Representative

Your Actifio representative can provide you with an Actifio Sky image for the Oracle Cloud. Once the image is provided, you will then upload the image to your Oracle Cloud's Compute Service:

 From the Oracle Service Console click the Images tab and the contents of the Images tab are displayed:



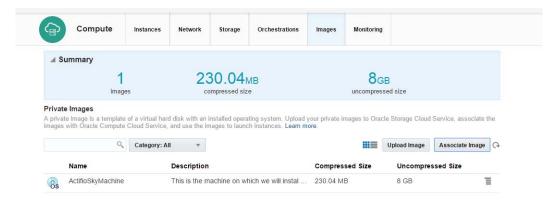
Images Tab

- From the Images tab click Upload Image.
- 3. You will be prompted to re-enter you password.
- 4. Click Continue.
- 5. From the browse window, browse to and select the image to upload.
- 6. Once the Image is uploaded, click **Associate Image** and the Associate Image dialog box opens.



Associate Image Dialog Box

- 7. In the spaces provided, enter a name and description as needed.
- 8. Click **Select File** and a dialog box opens with a list of available images.
- 9. Select the image you want to associate (name).
- 10. Click **OK** and the image will be associated:



Uploaded and Associated Image

Once the image is uploaded and associated, you can configure network security. See Configuring Oracle Network Security on page 9.

Dedup Pol	licies Used	Dedup Polic	ies Not Used
Instance Type	Actifio Sky Model	Instance Type	Actifio Sky Model
m5.xlarge	5 TB	M5.2XLarge	60 TB
m5.2xlarge	10 TB	M52XLarge	120 TB
m5.4xlarge	30 TB	M5.4XLarge	200 TB
r5.8xlarge	128 TB		-

Note: These sizes are the minimum sizes required based on your Actifio Solution Calculator entries. You may use a larger size instance type as you see fit.

4 Configuring Oracle Network Security

Before installing an Actifio Sky appliance in the Oracle Cloud you must have or create:

- A Security List that will be applied to all Security Rules
- Six Security Rules, one for each Security Application

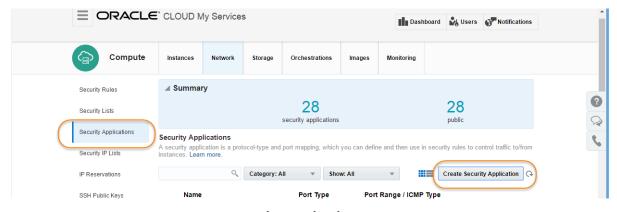
The security operations described in this chapter originate from the Compute Service Console. If you do not know how to display the Compute Service Console, see Chapter 2, Set Preferences.

Create Security Applications

Six Security Applications are needed for the Actifio Sky appliance. You create four.

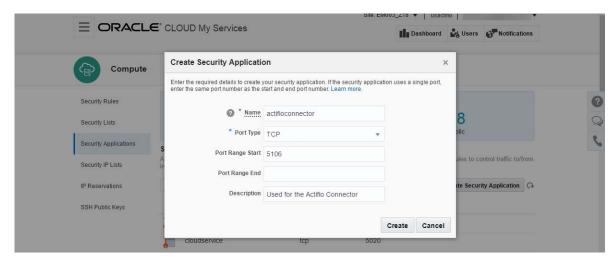
To create a Security Application:

- 1. From the Compute Service Console, click the **Network** tab. The Security Rules page is displayed.
- 2. In the left-hand navigation select **Security Applications.** The Security Applications page is displayed:



Security Application Page

3. Click Create Security Application and the Create Security Application dialog box is displayed:



Create Security Application Dialog Box

4. In the spaces provided enter a name, the required port type of TPC, the required Port Range Start, and the optional description. You must create four Security Applications with specific port start definitions:

Table 1: Port Range Starts

Security Application	Port Range Start
actifioconnector	Required port start of 5106
actifiodedup	Required port start of 5103
actifioiscsi	Required port start of 3260
actifioserviceroot	Required port start of 26

Note: The HTTP and HTTPS applications are automatically created by Oracle Cloud.

Create Security List

Once the applications are created, create the Security List:

1. From the Compute Service Console, click the **Network** tab and the Security Lists page is displayed.



Security Lists Page

- 2. In the left-hand navigation select **Security Lists** and the Security Lists page is displayed.
- 3. Click Create Security List and the Create Security List dialog box is displayed:



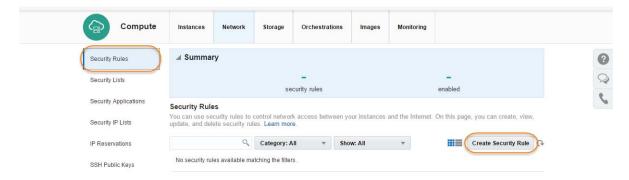
Create Security List Dialog Box

4. Click Create and the Security List is Created.

Create Security Rule

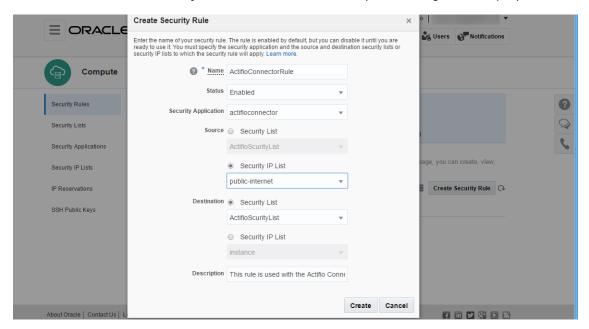
Once the Security List is created, create six Security Rules, one for each Security Application:

 From the Compute Service Console, click the **Network** tab and the Security Rules page is displayed:



Security Rules Page

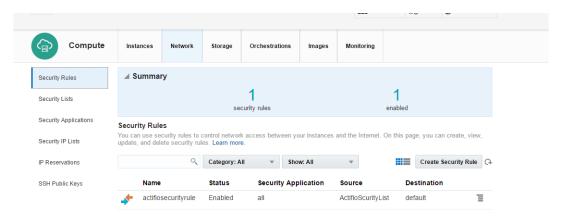
2. Click Create Security Rule and the Create Security Rule dialog box is displayed:



Security Rule Dialog Box

- 3. In the space provided, enter a name for the Security Rule.
- 4. Ensure the Status is set to **Enabled.**
- 5. Select a **Security Application** from the drop down list.
- 6. For Source, select Security IP List and from the drop-down menu select public-internet.
- 7. For **Destination** select **Security List** and from the drop-down menu, select the Security List you created for this instance.
- 8. In the space provided, enter a description as needed.

9. Click **Create**. It can take several minutes for the rule to be created. When completed and enabled, a rule appears in the list of available Security Rules:



Listed Security Rules

10. Repeat the process until you have created a Security Rule for each of the six Security Applications.

5 Creating an Actifio Sky Instance

Creating an Actifio Sky for the Oracle Cloud instance consists of selecting an Actifio Sky for the Oracle Cloud image, then:

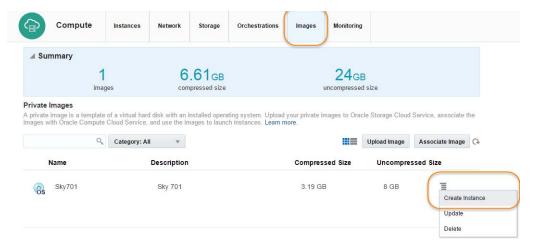
Shaping the instance according to the Actifio Sky license used.

Note: If you are installing Actifio Sky for the Oracle Cloud in a production environment, before proceeding consult with your Actifio representative to obtain a properly sized license.

- Naming the instance and applying a Security List.
- Configuring the instance with at least three, properly sized volumes for use by the Actifio Snapshot, Dedup, and Primary pools.
- Stopping and then starting the instance's Orchestration.

To create an instance:

From Compute Services, click the Images tab and a list of images is displayed:



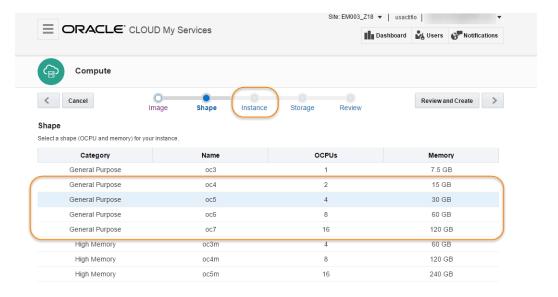
Available Images

- 2. Click the drop down menu next to the image from which you will create the instance.
- 3. Click Create Instance and the Image dialog box is displayed:



Image Dialog Box

- 4. Select the Image.
- 5. Click **Shape** and the Shape dialog box is displayed:



Shape Dialog Box

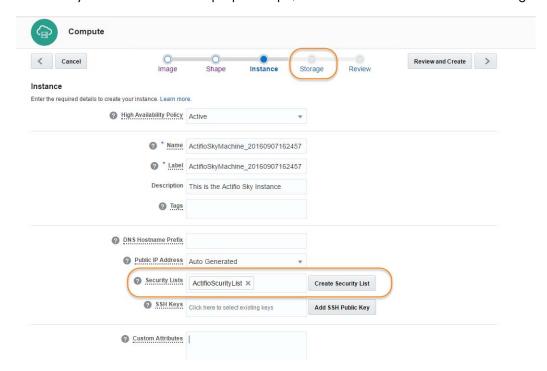
6. Each Actifio Sky license requires a specific Shape. Licenses are defined by both size and whether the Actifio Sky appliance will use deduplication. Use the following tables to determine the shape to select for your Actifio Sky appliance:

Note: If you are installing Actifio Sky for the Oracle Cloud in a production environment, before proceeding consult with your Actifio representative to obtain a properly sized license.

Deduplication Will Be Used				
Actifio License	Category	Name		
1TB	General Purpose	OC4		
5 TB Including evaluation	General Purpose	OC5		
10 TB	General Purpose	OC6		
30 TB	General Purpose	OC7		
50 TB	General Purpose	OC7		

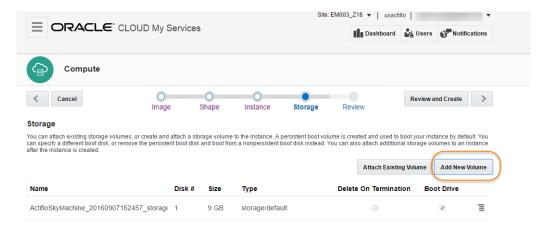
Deduplication Will NOT Be Used			
Actifio License	Category	Name	
60 TB	General Purpose	OC5	
120 TB	General Purpose	OC6	
200 TB	General Purpose	OC6	

7. Once you have selected the proper shape, click **Instance** and the Instance dialog box opens:



Define Instance Page

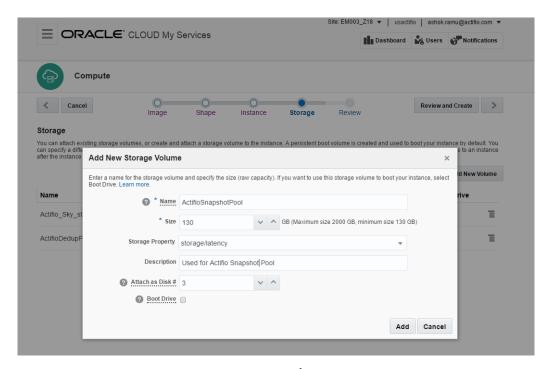
- 8. In the spaces provided, enter a name, label and description as needed.
- 9. From the **Security Lists** drop down menu, select the Security list you created for this instance.
- 10. Click **Storage**, and the Storage dialog box opens:



Add New Storage Volume Page

- 11. You must create three volumes. One for each of for the Actifio Sky appliance's:
 - o **Primary Pool:** Accommodates Actifio Sky system operations. One 200 GB volume is required.
 - Snapshot Pool: Accommodates the full copies (snapshots) to be retained, plus enough space for future growth. A minimum of 10 GB is required. You can at a later date, add additional storage to accommodate growth.

- o **Dedup Pool:** Accommodates the deduplicated data to be retained, plus enough space for future growth. A minimum of 1 TB is required. If your Actifio Sky appliance will not use deduplication, create a Dedup Pool with 1 TB of storage.
- 12. To add a new volume, click **Add New Volume** and the add new volume dialog box is displayed:



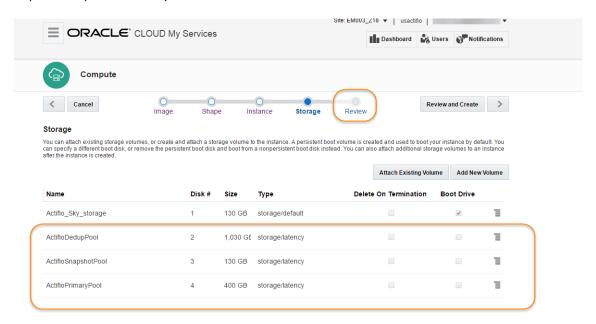
Add New Volume Dialog Box

- 13. In the space provided, enter a name for the volume.
- 14. Enter the size required for the volume.
- 15. From the Storage Property drop-down menu, select **storage/latency**.

Note: Each volume MUST have the Storage Property of storage/latency.

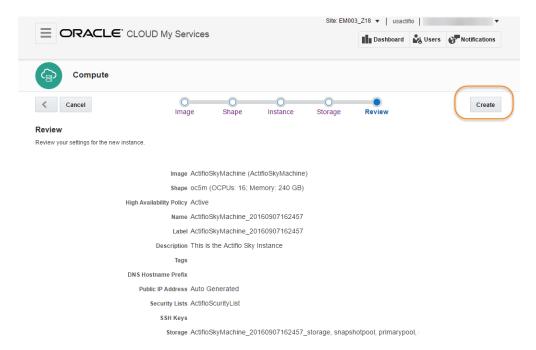
- 16. In the space provided, enter a description for the volume.
- 17. Click **Add** and the volume will be added to the instance.

18. Repeat this process until you have three volumes added to the instance:



Instance With Three Volumes

19. When you have finished adding storage, click **Review** and the Review dialog box opens:



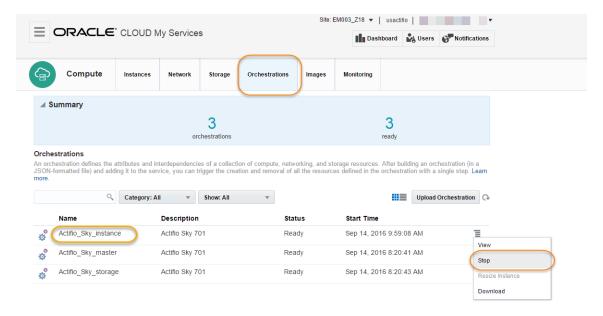
Review Dialog Box

20. Review your settings and if they match your requirements, click **Create** and the Actifio Sky for the Oracle Cloud instance is created and displayed in the Instances tab:



New Instance in the Instances Tab

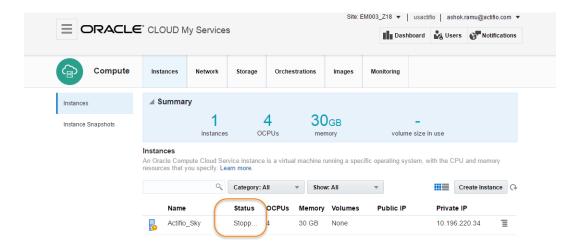
- 21. Wait for the instance's status to change to Running.
- 22. Click the **Orchestrations** tab and the Orchestrations are displayed:



Stop Orchestration

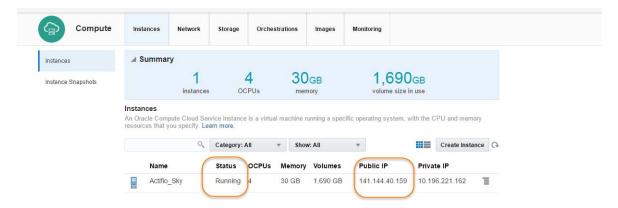
- 23. Click the drop down menu for the **Instance** Orchestration and select **Stop**.
- 24. A warning message is displayed. Click Yes.
- 25. Click the Instances tab and the instances are displayed.

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Instance Stopping

- 26. Status for the instance will be **Stopping**. The instance will disappear when it has stopped. This will take several minutes. You may have to manually refresh the page.
- 27. Once the Instance has disappeared, click the **Orchestration** tab and start the stopped instance orchestration.
- 28. Return to the Instances tab and wait for the instance to reappear and display a status of Running. You may have to manually refresh the page. This will take several minutes.
- 29. When the instance is ready, you can enter the **Public IP** in a browser and begin installing the Actifio Sky appliance in the instance. Copy this address for the next step.



Instance Ready With Public IP

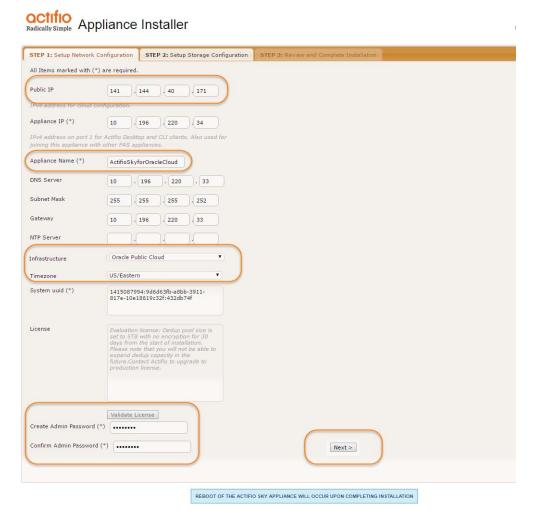
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6 Installing the Actifio Sky Appliance

When the Actifio Sky for the Oracle Cloud instance is ready, you can enter the instance's Public IP in a browser and begin installing the Actifio Sky appliance in the instance.

To install the Actifio Sky appliance:

 Enter the **Public IP** address in a browser's address space. The Actifio Appliance Installer is displayed:



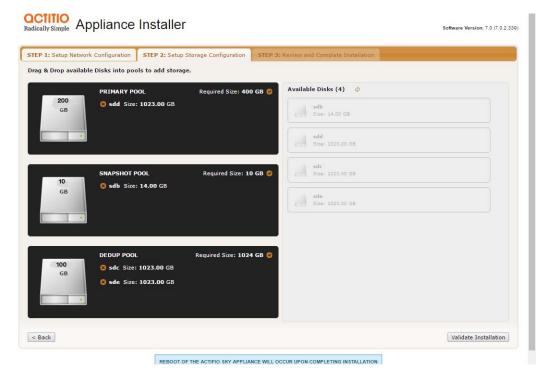
Actifio Sky Appliance Installer Step One

- 2. In the spaces provided enter the instance's Public IP.
- 3. Ensure that the auto discovered Actifio Sky appliance IP address is correct.
- 4. In the space provided, enter a name for the Actifio Sky appliance.
- 5. Ensure that the auto discovered network IP addresses are correct.
- 6. From the Infrastructure drop down menu, select Oracle.
- 7. Set the time zone as needed.
- 8. If you are installing the Actifio Sky appliance as an evaluation, leave the License Number field set to the default setting.:

Note: The 5TB license is used for evaluations. Once selected it cannot be increased. If you decide to purchase a Actifio Sky appliance you will either keep the current 5TB appliance or install a larger Actifio Sky appliance.

- 9. If you are NOT installing this Actifio Sky appliance as an evaluation:
 - o Capture the System UUID and pass it on to the Actifio representative. The Actifio representative will use the UUID to generate the Actifio Sky appliance license key.
 - In the space provided, paste a copy of the license key you obtained from the Actifio representative.
 - o Click **Validate License** to ensure the validity of the license entered.
 - o If the license is valid, the Managed Data License (MDL) size will be displayed in a popup window. If there are any optional add-ons included in the license they will also be shown here.
 - o If you are using an encryption license, a pass phrase field is displayed. Enter a pass phrase, record the pass phrase and keep it in a secure location.
- 10. In the spaces provided, create a password for the first Admin user of the Actifio Sky appliance. Record the password.
- 11. Click **Next** and the Step 2 tab contents are displayed:

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Actifio Sky Appliance Installer Step Two

12. Select and drag the **Available Disks** to their associated pools:

Note: These are the three storage volumes you created for the instance. Drag them to their corresponding pool.

Drag the 200 GB disk to the Primary Pool.

Drag a 10 GB (minimum) Snapshot Pool.

Drag a 100 GB (minimum) disk to the Dedup Pool.

CAUTION! Ensure you have configured the shape and volumes as described in Creating an Actifio Sky Instance on page 15

13. Click **Validate Installation**. The Actifio Sky installer validates the settings. Any issues will appear in a yellow field at the top of the page 2. If no issues are encountered, the third tab is displayed:



Actifio Sky Appliance Installer Step Three

- 14. The third tab provides the opportunity to review choices and go back and make changes as needed.
- 15. Once choices are verified, click **Complete Installation** and the Actifio Sky appliance will reboot. The reboot may take several minutes.

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