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# Deploying Actifio Sky in the Oracle<sup>®</sup> Cloud

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# Preface

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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.

In addition, the following guides provide general step-by-step instructions for using an Actifio appliance:

- **[Configuring Resources and Settings With the Domain Manager](#)**
- **[Setting Up Users and Roles With the Domain Manager](#)**
- **[Virtualizing and Protecting Copy Data with the Application Manager](#)**
- **[Managing Copy Data with the Application Manager](#)**
- **[Planning and Developing Service Level Agreements](#)**

Copies of these guides can be found in the [ActifioNOW Customer Portal](#), [Doctifio Public Documentation Library](#), and the Actifio user interface,

## 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](https://docs.actifio.com) and the library is displayed.



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# 1 Introduction

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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 allows an enterprise to leverage Oracle Cloud as their flexible hybrid cloud infrastructure to build higher quality applications faster and improve business resiliency and availability.

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 then instantly accessible and can be re-used for the following key use cases:

- **Accelerates DevOps, CI/CD, and application dev/test processes:** Provision virtual copies of databases instantly, in self-service manner with secure, role-based access controls. 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 Oracle, SQL and other 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 environment in the Oracle Cloud, conduct security, performance and scalability validation, before turning 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 mission critical applications, Actifio eliminates the fear of downtime for critical applications, thereby eliminating 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

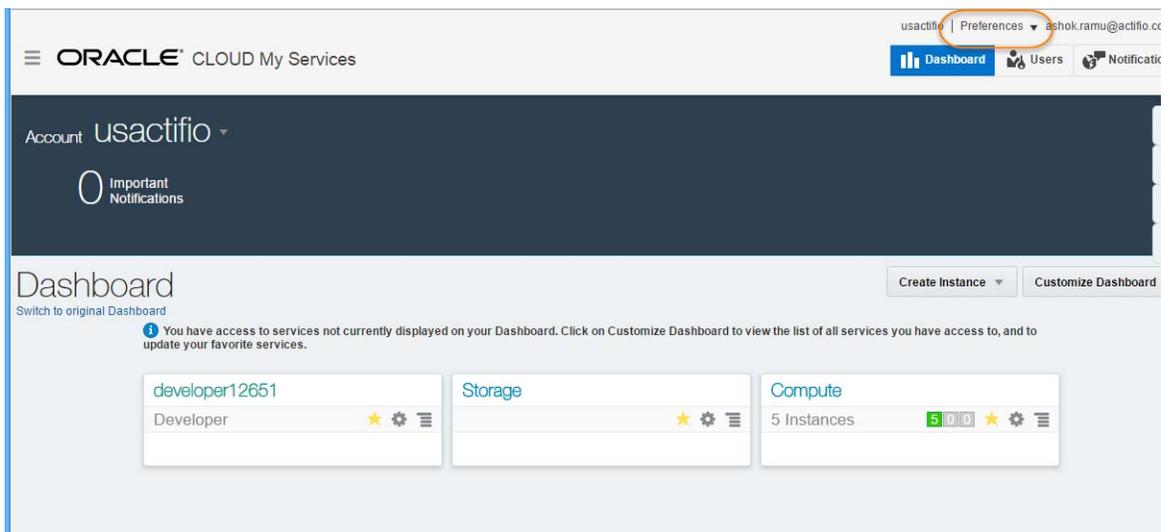
This chapter assumes the reader has a valid Oracle Cloud account and is familiar with basic Oracle Cloud processes and procedures.

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

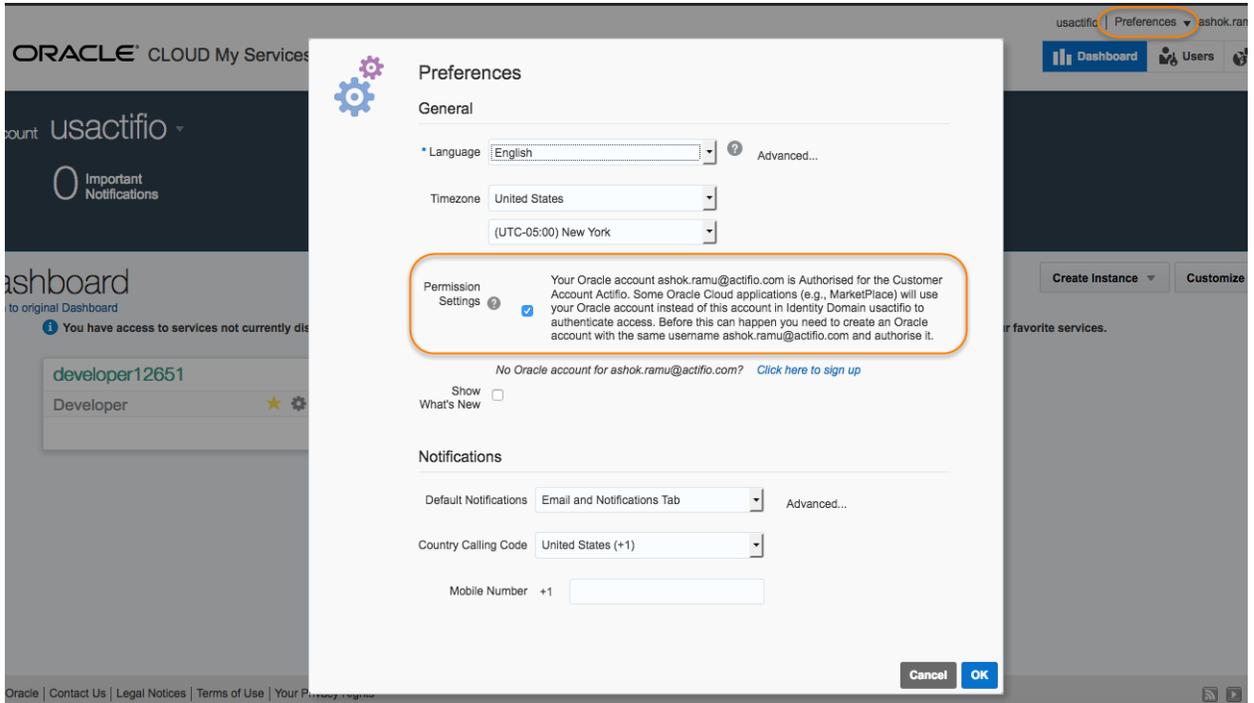
### Set Preferences

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:



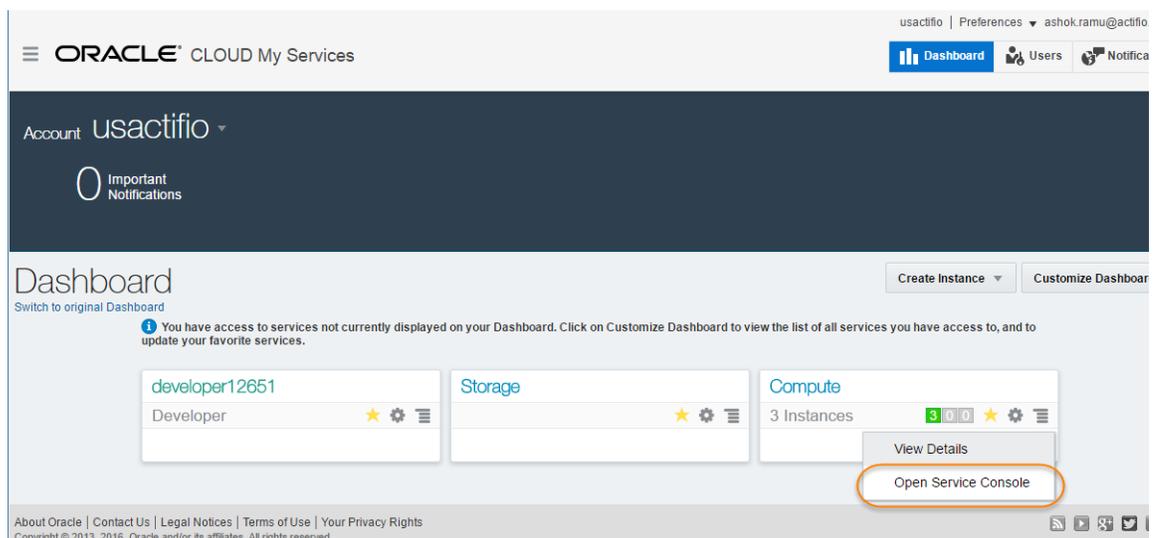
### Preferences

3. Ensure that the **Permission Settings** option is checked.
4. Click **OK** and the dialog box closes.

## Display the Compute Service Console

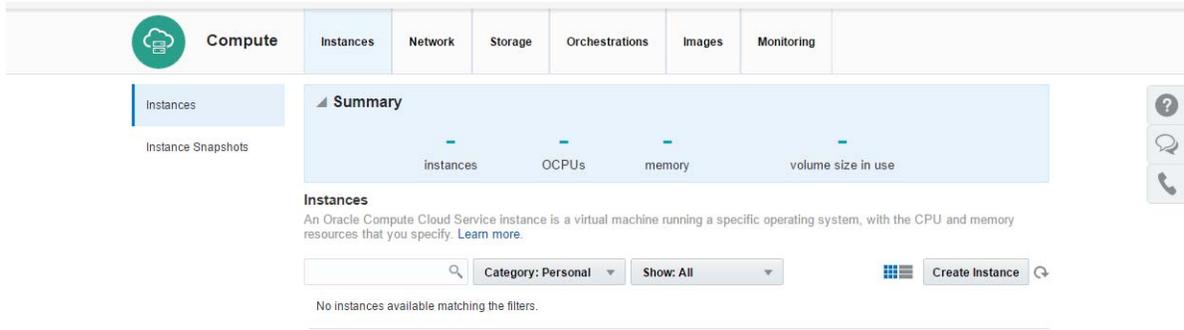
To display the Compute Service dashboard:

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 7.



# 3 Obtaining an Actifio Image

This chapter assumes that the reader has a valid Oracle Cloud account and is familiar with basic Oracle Cloud processes and procedures.

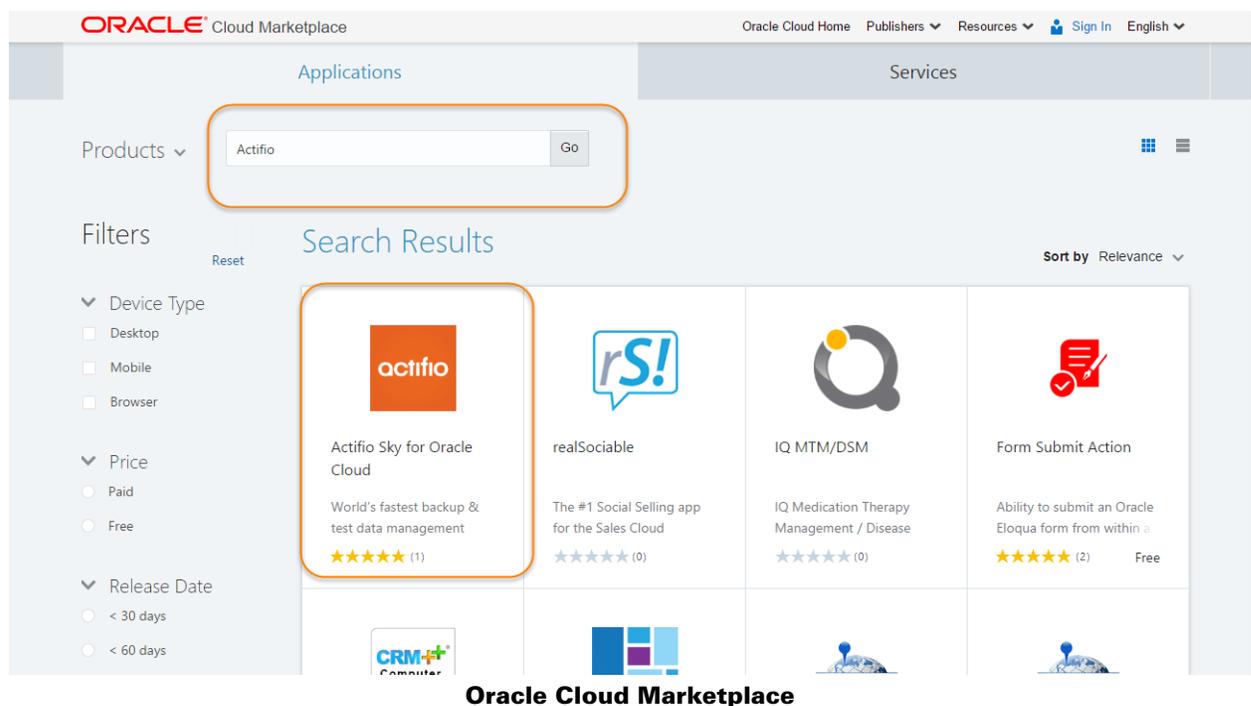
Actifio provides an Actifio Sky image for the Oracle Cloud. You can obtain a copy of that image one of two ways:

- From the Oracle Cloud Marketplace (Recommended)
- From your Actifio representative

## Obtaining an Actifio Image From the Oracle Cloud Marketplace

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

1. Go to the 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:



Actifio Sky for Oracle Cloud

[Get App >](#)

World's fastest backup &amp; test data management solution for Oracle Cloud and enterprise Hybrid cloud

Compute Cloud  
Storage CloudCloud Migration  
Backup

★★★★★ (1)

[Overview](#)[Ratings \(1\)](#)[Provider](#)

## 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 P

### Get The Actifio Sky for Oracle Cloud Image

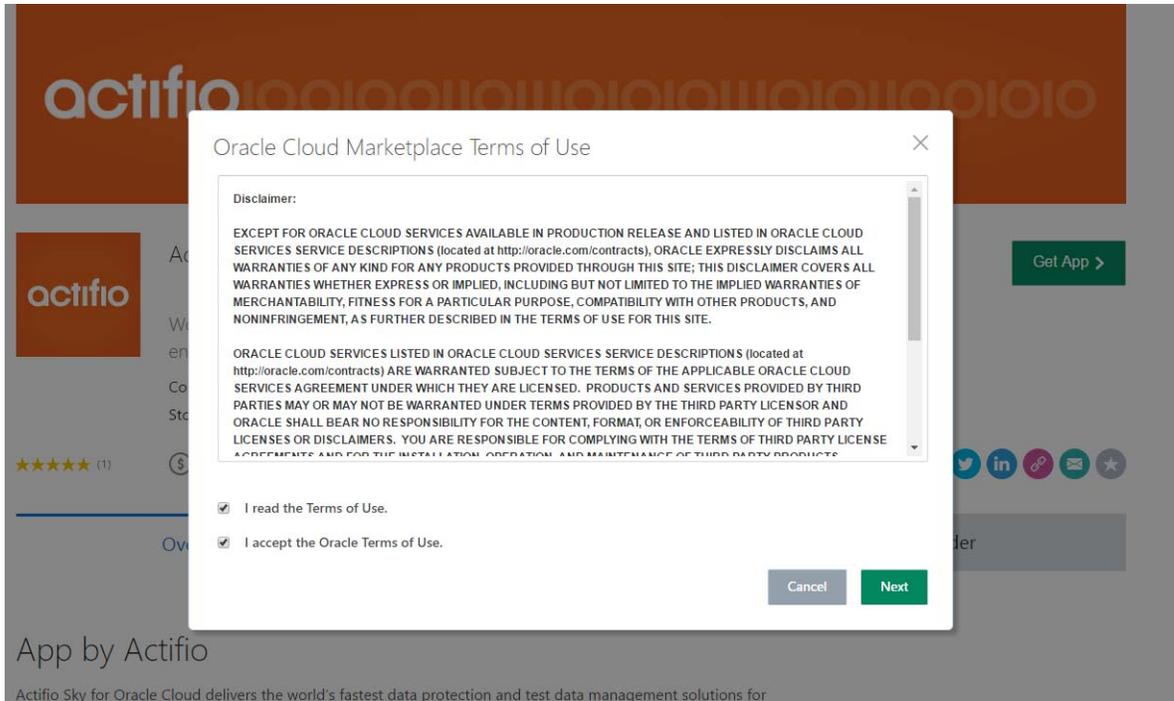
5. Click **Get App**

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

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6. After you log in, the End User License Agreement (EULA) is displayed:



### The End User License Agreement (EULA)

7. Read the EULA and when you finish, click **I read the terms of use**.
8. If you accept the terms, then click **I accept the Oracle Terms of Use** and the Customer Details page displayed:

Customer Details

To get the app, fill out this form and click Submit. We will share your information with the Oracle partner, who will contact you directly and provide you with the app.

\* Required Fields

\* First Name

\* Last Name

\* Company Name

Company Address

\* Email

Phone  -

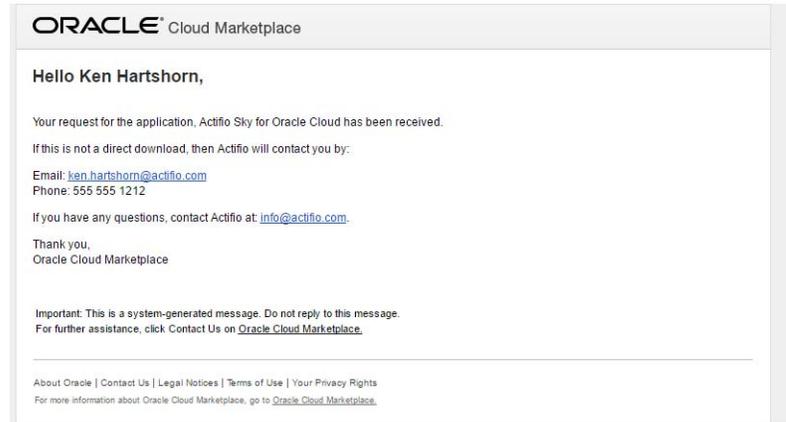
Additional Notes

Submit Cancel

### Customer Details Form

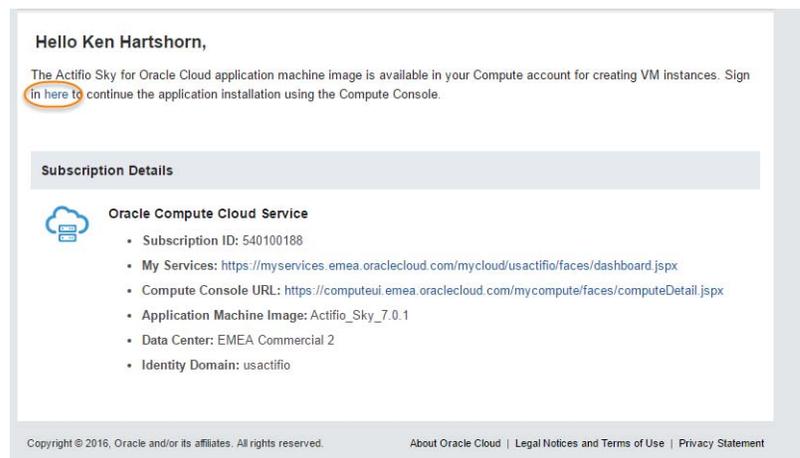
9. In the fields provided, enter your contact information. The information provided in this form will be used to send you instructions on how to obtain the Actifio Sky for Oracle Cloud image.

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:



### Thank You Email Example

10. 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

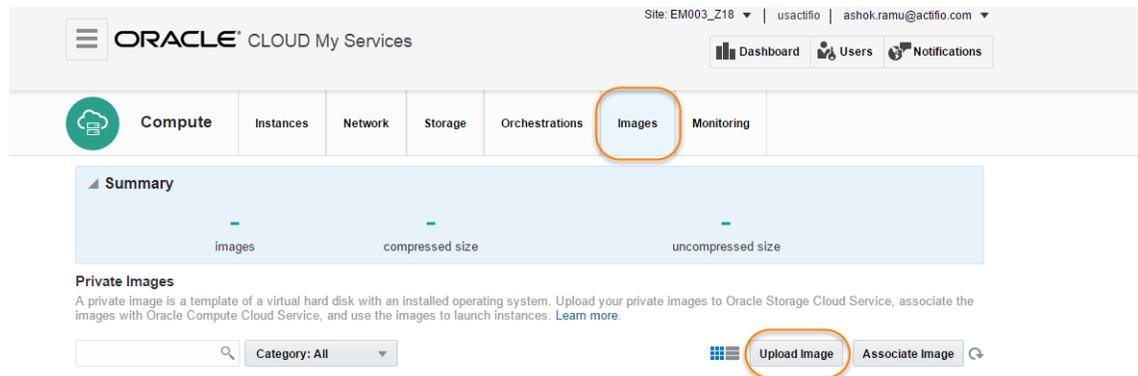
11. Click the link and your Compute Services dashboard is displayed:

You are now ready to begin configuring your Compute Service. Continue on to [Configuring Oracle Network Security](#) on page 13.

## 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:

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



### Images Tab

2. From the Images tab click **Upload Image**.
3. You will be prompted to re-enter your 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:

Compute Instances Network Storage Orchestration Images Monitoring

**Summary**

1 images      230.04MB compressed size      8GB uncompressed size

**Private Images**  
 A private image is a template of a virtual hard disk with an installed operating system. Upload your private images to Oracle Storage Cloud Service, associate the images with Oracle Compute Cloud Service, and use the images to launch instances. [Learn more](#)

Category: All      Upload Image      Associate Image

Name	Description	Compressed Size	Uncompressed Size
ActifioSkyMachine	This is the machine on which we will instal ...	230.04 MB	8 GB

### Uploaded and Associated Image

Once the image is uploaded and associated, you can configure network security. See [Configuring Oracle Network Security](#) on page 13.

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# 4 Configuring Oracle Network Security

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This chapter assumes that the reader has a valid Oracle Cloud account and is familiar with basic Oracle Cloud processes and procedures.

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

- Security Applications for:
  - o actifioconnector with a port start of 5106
  - o actifiodedup with a port start of 5103
  - o actifioiscsi with a port start of 3260
  - o actifioserviceroot with a port start of 26
  - o http with root start of 80. The http application is automatically created and should already be available.
  - o https with root start of 443. The https application is automatically created and should already be available.
- 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.

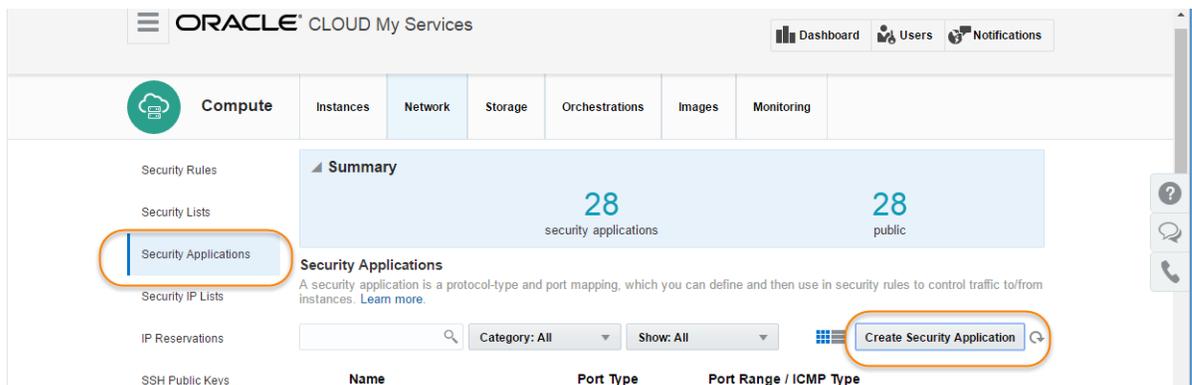
## Create Security Applications

Six Security Applications are needed for the Actifio Sky appliance:

- o actifiocconnector with required port start of 5106
- o actifiodedup with required port start of 5103
- o actifioiscsi with required port start of 3260
- o actifioserviceroot with required port start of 26
- o http with root start of 80. The http application is automatically created and should already be available.
- o https with root start of 443. The https application is automatically created and should already be available.

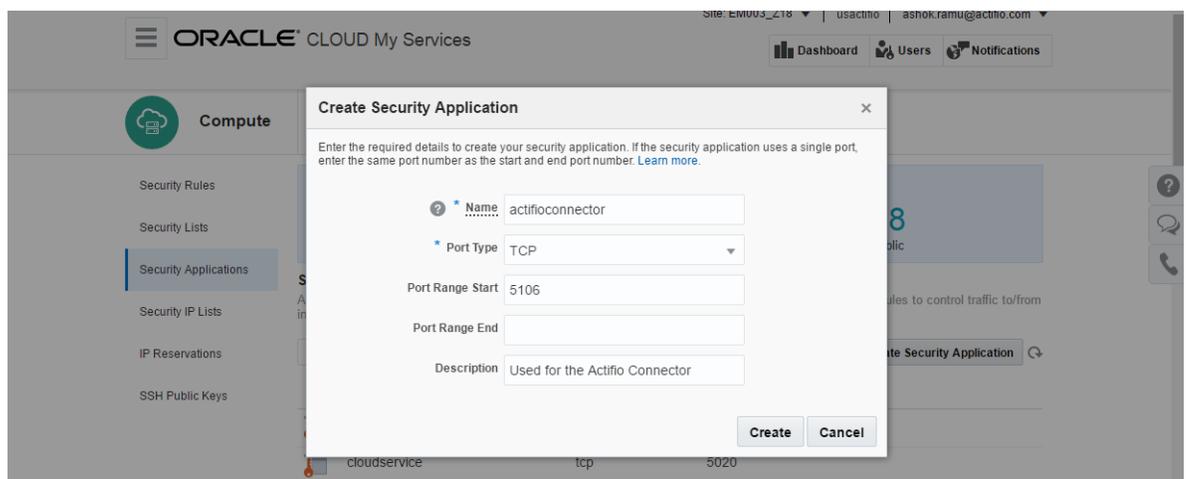
To create a Security Application:

1. From the Compute Service Console, click the **Network** tab and the Security Rules page is displayed.
2. In the left-hand navigation select **Security Applications** and 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:
  - o actifioconnector with required port start of 5106
  - o actifiodedup with required port start of 5103
  - o actifioiscsi with required port start of 3260
  - o actifioserviceroot with required port start of 26

---

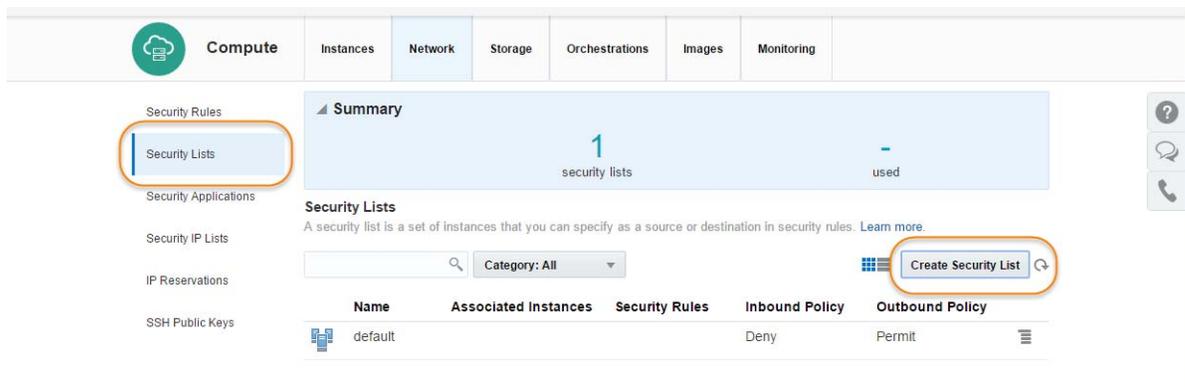
**Note:** The HTTP and HTTPS applications are automatically created by Oracle Cloud.

---

## Create Security List

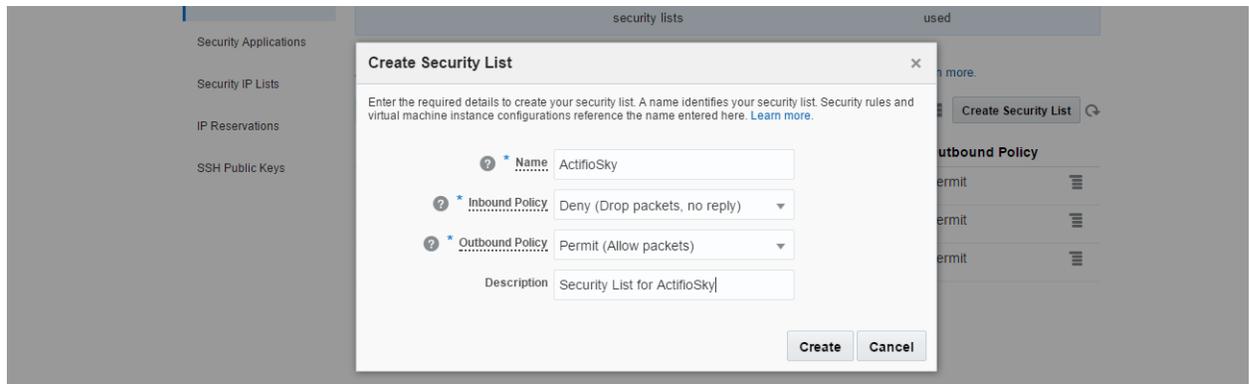
Once the applications are created, create the Security List:

1. From the Compute Service Console, click the **Network** tab and the Security Rules 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

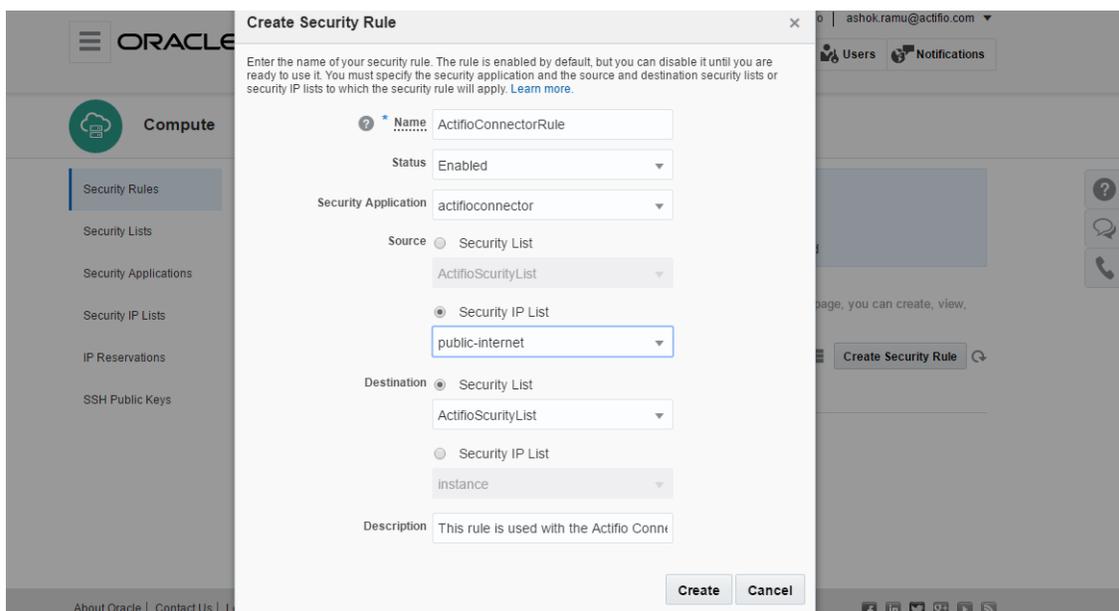
Once the Security List is created, create six Security Rules, one for each Security Application:

1. 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 won 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 for the list of available Security Rules:

The screenshot shows the Oracle Cloud console interface. At the top, there is a navigation bar with 'Compute' selected. Below it, a sidebar lists various services, with 'Security Rules' highlighted. The main content area features a 'Summary' card with two metrics: '1 security rules' and '1 enabled'. Below the summary, there is a section titled 'Security Rules' with a brief description and a 'Create Security Rule' button. A table below lists the existing security rules.

Name	Status	Security Application	Source	Destination
actifiosecurityrule	Enabled	all	ActifioSecurityList	default

### Listed Security Rules

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



# 5 Creating an Actifio Sky Instance

This chapter assumes that the reader has a valid Oracle Cloud account, is familiar with basic Oracle Cloud processes and procedures, and has obtained an Actifio Sky for Oracle Cloud image.

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
- Stopping and then starting the instance's Orchestration.

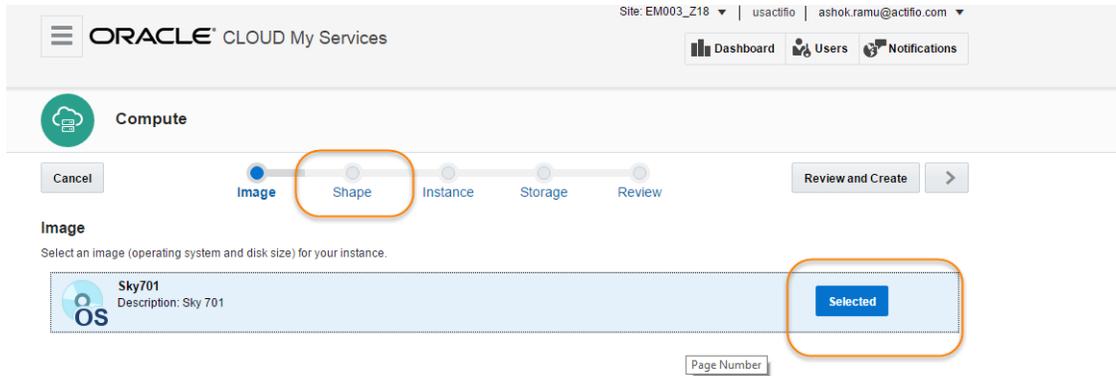
To create an instance:

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

The screenshot shows the Oracle Cloud console interface. At the top, there are navigation tabs: Compute, Instances, Network, Storage, Orchestrations, **Images**, and Monitoring. The 'Images' tab is selected and highlighted with an orange box. Below the tabs is a 'Summary' section with three metrics: 1 images, 6.61GB compressed size, and 24GB uncompressed size. Underneath is the 'Private Images' section, which includes a search bar, a 'Category: All' dropdown, and 'Upload Image' and 'Associate Image' buttons. A table lists available images with columns for Name, Description, Compressed Size, and Uncompressed Size. The table contains one entry: 'Sky 701' with a description of 'Sky 701', a compressed size of 3.19 GB, and an uncompressed size of 8 GB. To the right of the table, a dropdown menu is open for the 'Sky 701' image, showing three options: 'Create Instance', 'Update', and 'Delete'. The 'Create Instance' option is highlighted with an orange box.

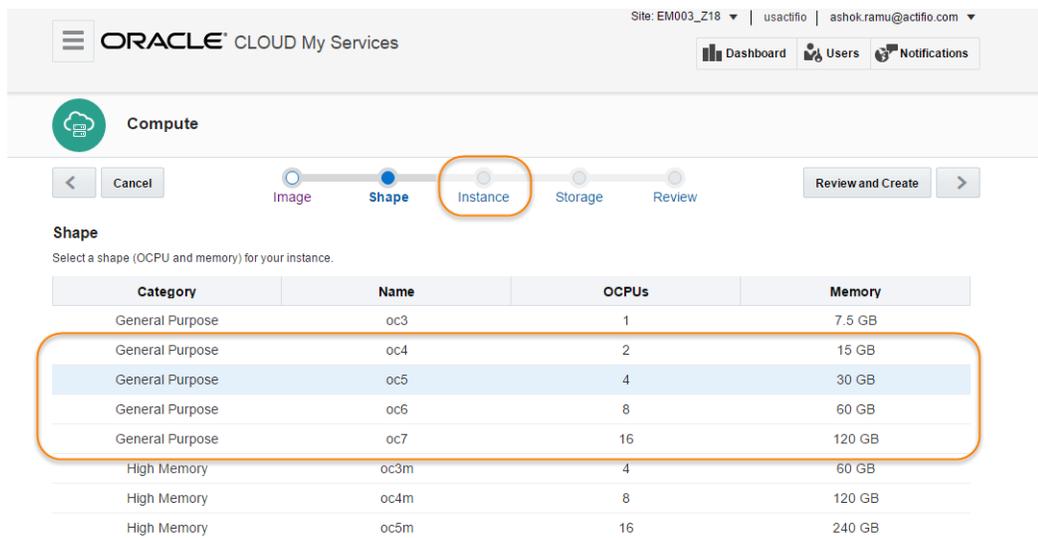
Name	Description	Compressed Size	Uncompressed Size
Sky 701	Sky 701	3.19 GB	8 GB

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:

---

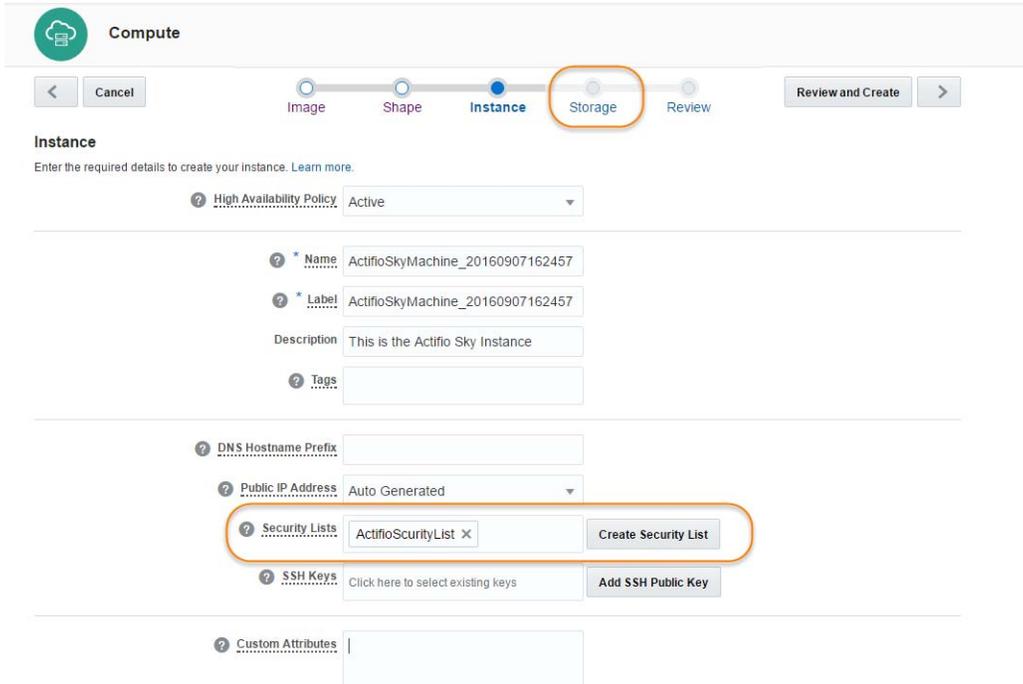
**Note:** If you are installing Actifio Sky for the Oracle Cloud in a production environment, before proceeding consult with your Actifio representative to obtain a properly sized license.

---

Deduplication Will Be Used		
Actifio License	Category	Name
1 TB	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

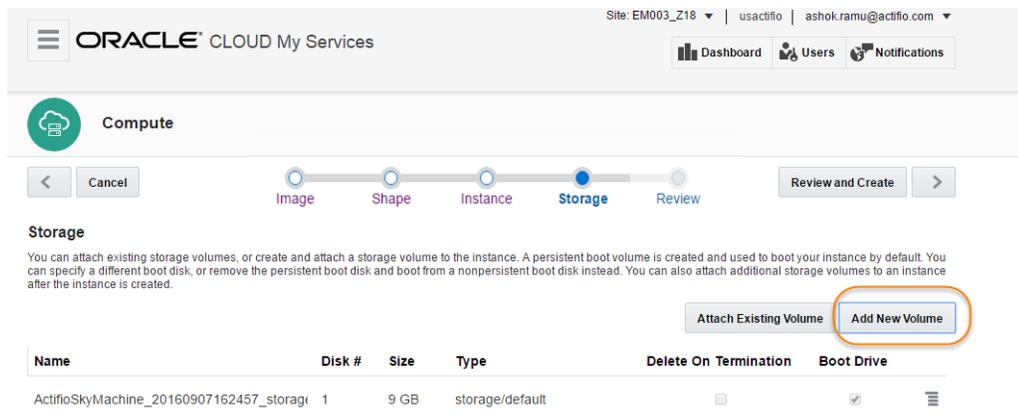
Deduplication Will NOT Be Used		
Actifio License	Category	Name
60 TB	General Purpose	OC5
120 TB	General Purpose	OC6
200 TB	General Purpose	OC6

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

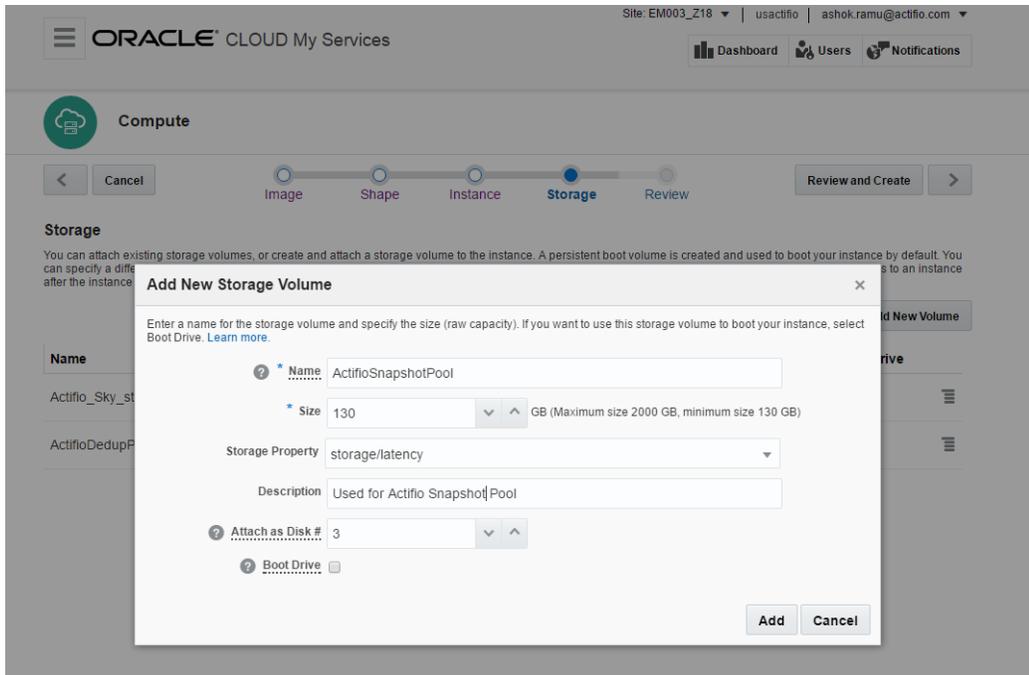
11. You must create three volumes. One for each of for the Actifio Sky appliance's:
  - **Primary Pool:** Accommodates Actifio Sky system operations. One 400 GB volume is required.
  - **Snapshot Pool:** Accommodates the full copies (snapshots) to be retained, plus enough space for future growth. A minimum of 10 GB is required. You can at a later date, add additional storage to accommodate growth.
  - **Dedup Pool:** Accommodates the deduplicated data to be retained, plus enough space for future growth. A minimum of 1TB is required. If your Actifio Sky appliance will not use deduplication, create a Dedup Pool with 1 TB of storage.

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

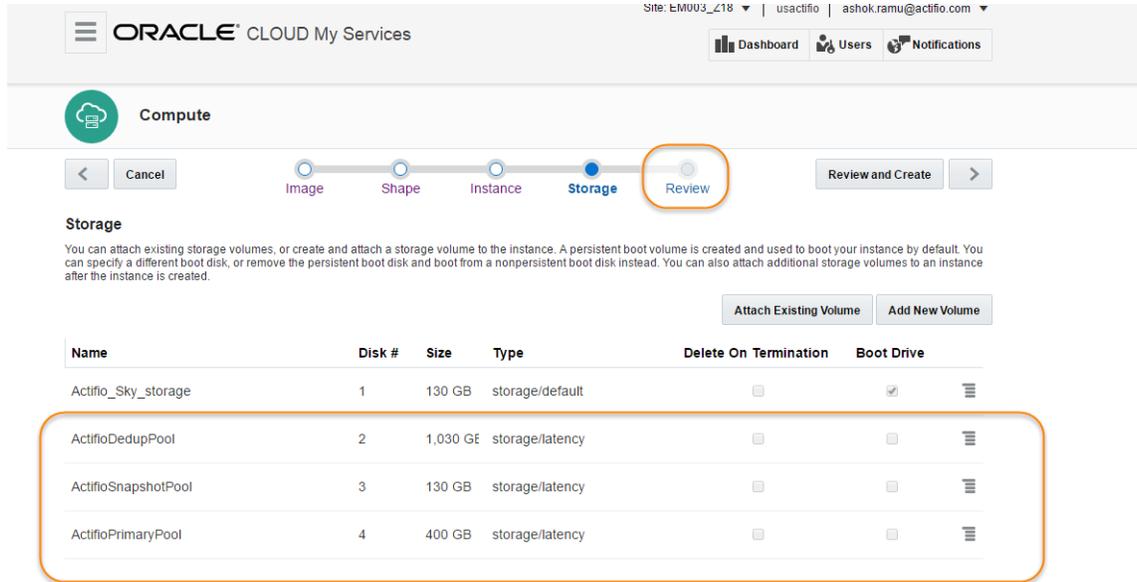
---

- To add a new volume, click **Add New Volume** and the add new volume dialog box is displayed:



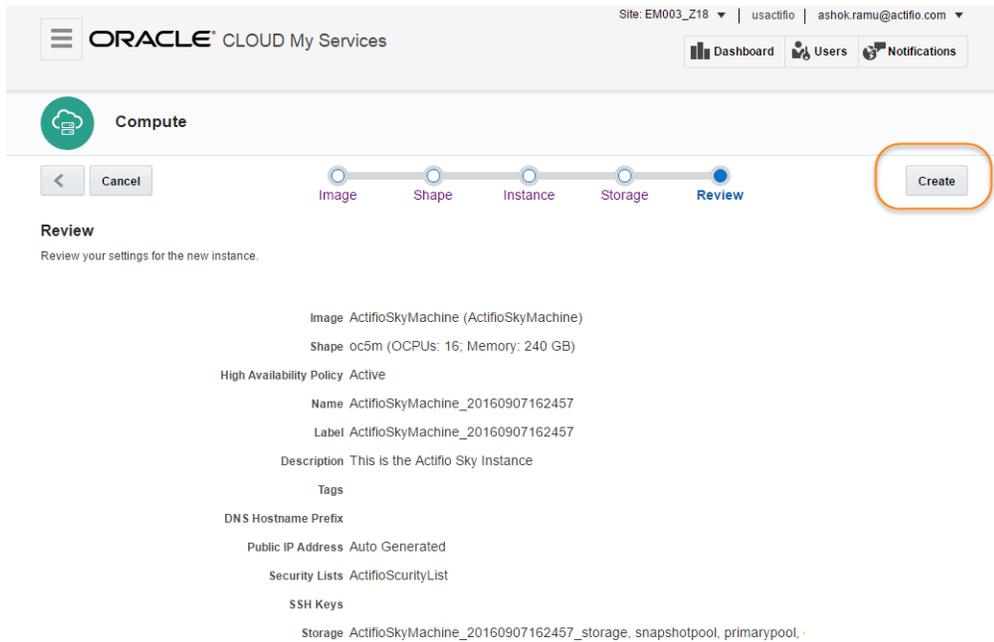
**Add new Volume Dialog Box**

- In the space provided, enter a name for the volume.
- Enter the size required for the volume.
- From the Storage Property drop down menu, select **storage/latency**.
- In the space provided, enter a description for the volume.
- Click **Add** and the volume will be added to the instance.
- 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 Actiflo Sky for the Oracle Cloud instance is created and displayed in the Instances tab:

**Compute** | Instances | Network | Storage | Orchestrations | Images | Monitoring

Instances | Instance Snapshots

**Summary**

1 instances | 1 OCPUs | 7.5GB memory | 36GB volume size in use

**Instances**  
An Oracle Compute Cloud Service instance is a virtual machine running a specific operating system, with the CPU and memory resources that you specify. [Learn more.](#)

Category: Personal | Show: All | Create Instance

Name	Status	OCPUs	Memory	Volumes	Public IP	Private IP
ActifioSkyMachin...	Running	1	7.5 GB	36 GB	141.144.34.107	10.196.192.62

### 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:

ORACLE CLOUD My Services | Site: EM003\_Z18 | usactifio | ashok.ramu@actifio.com

Dashboard | Users | Notifications

**Compute** | Instances | Network | Storage | **Orchestrations** | Images | Monitoring

**Summary**

3 orchestrations | 3 ready

**Orchestrations**  
An orchestration defines the attributes and interdependencies of a collection of compute, networking, and storage resources. After building an orchestration (in a JSON-formatted file) and adding it to the service, you can trigger the creation and removal of all the resources defined in the orchestration with a single step. [Learn more.](#)

Category: All | Show: All | Upload Orchestration

Name	Description	Status	Start Time
Actifio_Sky_instance	Actifio Sky 701	Ready	Sep 14, 2016 9:59:08 AM
Actifio_Sky_master	Actifio Sky 701	Ready	Sep 14, 2016 8:20:41 AM
Actifio_Sky_storage	Actifio Sky 701	Ready	Sep 14, 2016 8:20:43 AM

View | **Stop** | Resize Instance | Download

### 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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Dashboard Users Notifications

Compute Instances Network Storage Orchestrations Images Monitoring

Instances

Instance Snapshots

Summary

1 instances 4 OCPUs 30GB memory - volume size in use

Instances

An Oracle Compute Cloud Service instance is a virtual machine running a specific operating system, with the CPU and memory resources that you specify. [Learn more.](#)

Category: All Show: All Create Instance

Name	Status	OCPUs	Memory	Volumes	Public IP	Private IP
Actifio_Sky	Stopp...	4	30 GB	None		10.196.220.34

### 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.

Compute Instances Network Storage Orchestrations Images Monitoring

Instances

Instance Snapshots

Summary

1 instances 4 OCPUs 30GB memory 1,690GB volume size in use

Instances

An Oracle Compute Cloud Service instance is a virtual machine running a specific operating system, with the CPU and memory resources that you specify. [Learn more.](#)

Category: All Show: All Create Instance

Name	Status	OCPUs	Memory	Volumes	Public IP	Private IP
Actifio_Sky	Running	4	30 GB	1,690 GB	141.144.40.159	10.196.221.162

### Instance Ready With Public IP

# 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:

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

The screenshot shows the 'Actifio Appliance Installer' interface. At the top, it says 'actifio Radically Simple Appliance Installer'. Below this are three tabs: 'STEP 1: Setup Network Configuration', 'STEP 2: Setup Storage Configuration', and 'STEP 3: Review and Complete Installation'. A note states 'All Items marked with (\*) are required.' The form contains several fields: 'Public IP' (141.144.40.171), 'Appliance IP (\*)' (10.196.220.34), 'Appliance Name (\*)' (ActifioSkyforOracleCloud), 'DNS Server' (10.196.220.33), 'Subnet Mask' (255.255.255.252), 'Gateway' (10.196.220.33), 'NTP Server' (empty), 'Infrastructure' (Oracle Public Cloud), 'Timezone' (US/Eastern), 'System uuid (\*)' (1415087994:9d6d63fb-a8bb-3911-817e-10e18619c32f:432db74f), 'License' (Evaluation license: Dedup pool size is set to 5TB with no encryption for 30 days from the start of installation. Please note that you will not be able to expand dedup capacity in the future. Contact Actifio to upgrade to production license.), 'Create Admin Password (\*)' (masked with dots), 'Confirm Admin Password (\*)' (masked with dots), and a 'Next >' button. A blue box at the bottom states 'REBOOT OF THE ACTIFIO SKY APPLIANCE WILL OCCUR UPON COMPLETING INSTALLATION'. The footer says 'Copyright Actifio Inc. All Rights Reserved.'

## Actifio Sky Appliance Installer Step One

2. In the spaces provided enter the instance's Public IP.

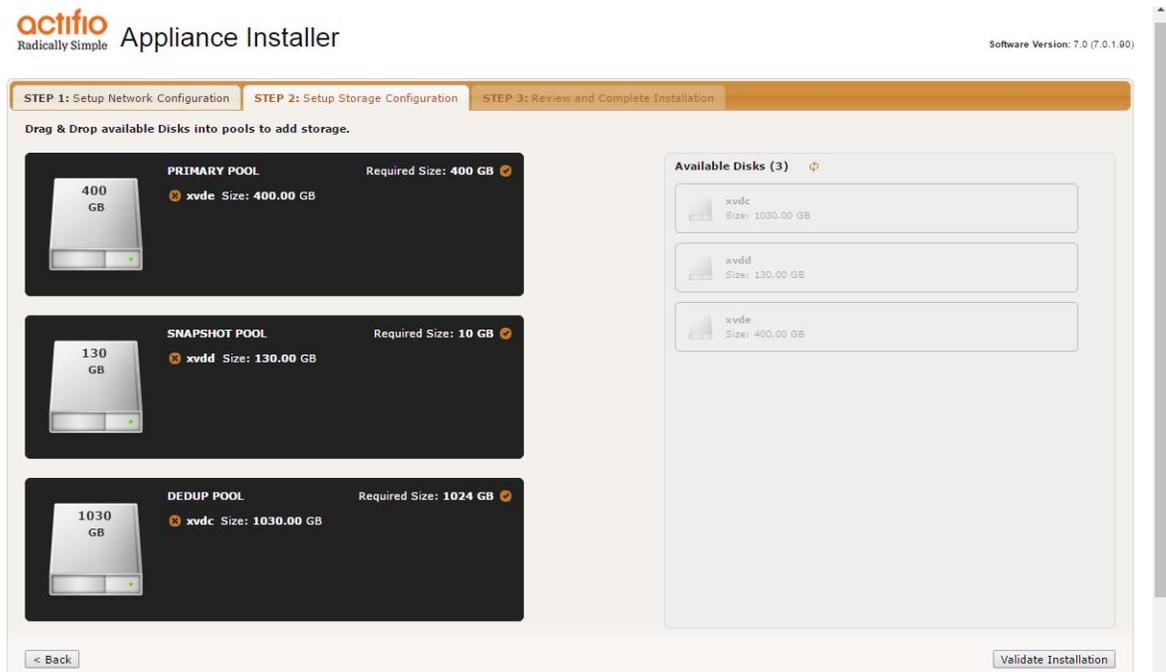
3. Ensure that the auto discovered Actifio Sky appliance IP address is correct.
4. In the space provided, enter a name for the Actifio Sky appliance.
5. Ensure that the auto discovered network IP addresses are correct.
6. From the Infrastructure drop down menu, select **Oracle**.
7. Set the time zone 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.
  - o 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 enter (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:



### 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 400GB disk to the Primary Pool.

Drag a 100GB (minimum) Snapshot Pool.

Drag a 1024GB (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 19

---

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:



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### 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.
16. When the reboot finishes continue on to [Installing the Actifio Desktop Client](#) on page 31



# 7 Installing the Actifio Desktop Client

When you have finished installing the Actifio Sky appliance you must install the Actifio Desktop Client (user interface) on your local system.

The Actifio Desktop Client is downloaded and installed from the Actifio Sky appliance's Resource Center.

**Note:** After the Actifio for Sky appliance is installed it may take up to ten minutes for the Actifio Resource Center to become activated.

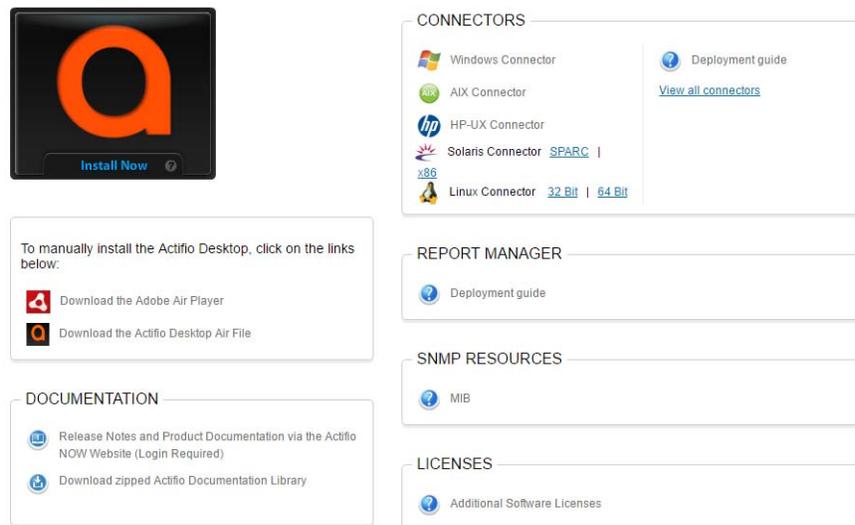
The Actifio Desktop user interface runs on Adobe Air Player. When you install the Actifio Desktop client, you will also install a copy of Adobe Air Player.

## Installing the Actifio Desktop Client

The Actifio Desktop Client is downloaded and installed from the Actifio Sky Resource Center.

To display the Actifio Sky Resource Center:

1. In a web browser, enter the **Public IP** for the Actifio Sky for Oracle Cloud Instance and the Actifio Resource Center is displayed:



### Actifio Resource Center

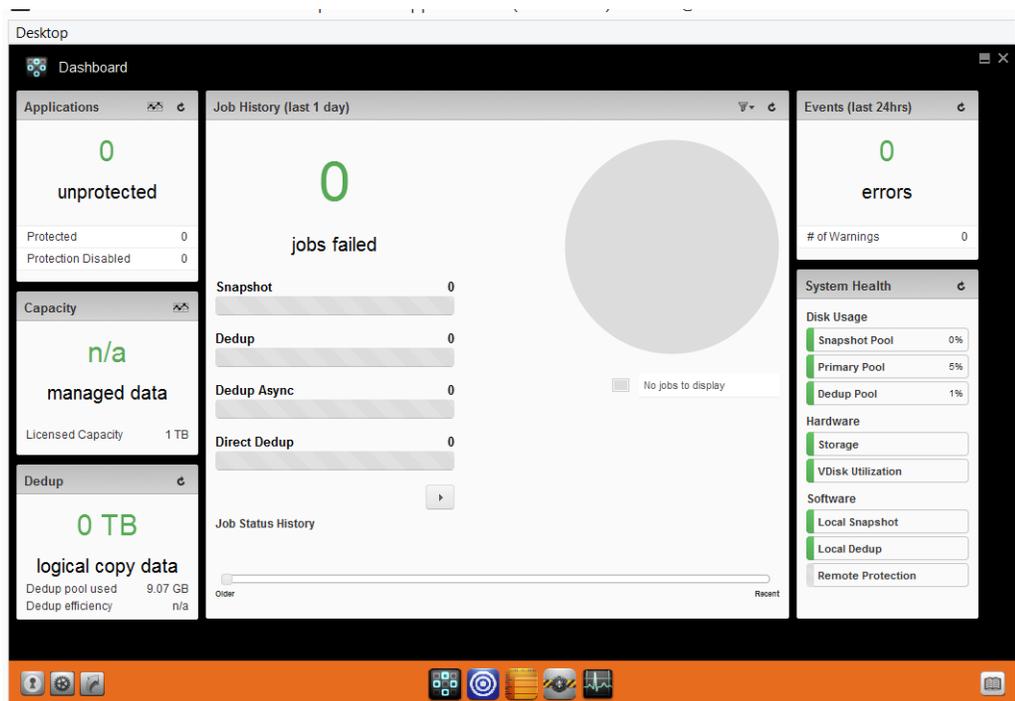
2. Install the Adobe Air Player and Actifio Desktop (UI):
  - o Click **Download the Adobe Air Player**. Follow the prompts to install Adobe Air Player. Wait for the Adobe Air Player installation to complete.
  - o Click **Download Actifio Desktop Air File**. Follow the prompts to install the Actifio Desktop Air File.

When the Actifio Desktop installation is complete, the Actifio Desktop log in page is displayed:



**Desktop Login page**

3. In the **Username** space: enter the username: **admin**
4. In the **Password** space enter the password you created when you installed the Actifio Sky appliance. See [Installing the Actifio Sky Appliance](#) on page 27.
5. In the **Appliance** space: Enter the **Public IP** for the Actifio Sky Instance.
6. Click **Sign in** and the Actifio Dashboard is displayed:



**Actifio Desktop Dashboard**

The Actifio Desktop Dashboard displays a high-level view of your Actifio appliance's status.

## Next Steps

Before using Actifio Sky for the Oracle Cloud, consult ***Getting Started with Actifio Copy Data Management***. It provides an overview of the basic Actifio concepts and procedures as well as an introduction to the Actifio user interface.

A copy of this guide can be found in the Actifio Now customer portal or by clicking the book icon in the lower right-hand corner of the Actifio Desktop user interface.

After you have familiarized yourself with the basic concepts and use of the Actifio Sky appliance:

- Install the Actifio Connector on the servers whose application data you want to capture. See [Install Actifio Connectors](#) on page 35 for details.
- Configure the Actifio Sky for the Oracle Cloud appliance's alerting capabilities. See ***Configuring Resources and Settings With the Domain Manager*** for details. A copy of this guide can be found in the Actifio Now customer portal or by clicking the book icon in the lower right-hand corner of the Actifio Desktop user interface.
- If you have a license for a second Actifio Sky appliance, install and configure the appliance in a separate region.
- If you will replicate data to another Actifio Sky appliance, see [Enabling Replication](#) on page 39



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# 8 Install Actifio Connectors

---

Before you can capture application data from servers running in your Oracle Cloud, you must install the Actifio connector on those servers.

The Actifio Connector is a small-footprint process installed on servers that host applications. The Actifio Connector is used to capture the data that resides on the application servers in your Oracle environment

Specifically, Actifio Connectors:

- Discover applications
- Capture individual and groups of applications including:
  - Microsoft® SQL Server clusters
  - Microsoft Exchange Database Availability Groups (DAGs)
- Quiesce applications, for application consistency during capture
- Enable change block tracking for Actifio's incremental forever capture strategy.
- Capture and manage transaction logs:
  - Capture database(s) and logs with one Policy Template
  - Truncate database transaction logs
  - Roll database transaction logs forward for point-in-time recovery when accessing virtual copies.
- Rescan storage buses, brings new devices on-line, assigns drive letters, imports volume groups, and mounts file systems, based on the operating system of the application host.
- Prepare application volumes for restore operations.
- Enable directory and file browsing, and packages selected files into a ZIP archive when restoring one or more files from a mounted backup.

Actifio Connectors are operating system specific. For details see:

- [The Actifio Windows Connector](#) on page 36
- [The Actifio Linux Connector](#) on page 37

## The Actifio Windows Connector

The Actifio Connector for Microsoft® Windows® runs as a Windows service under the Local System account. The Connector writes logs to a log file in its installation directory and writes significant events to the Windows application event log as well.

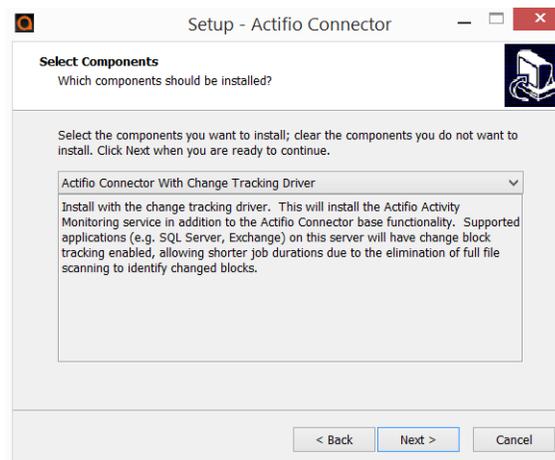
### Actifio Change Tracking Driver Option for Windows

When installing the Windows connector you will be given the option of installing the Actifio Change Tracking Driver. For Actifio Sky for the Oracle Cloud, always select the **Actifio Connector With Change Tracking Driver** option. The Change Tracking Driver enables Actifio's initial full then incremental forever approach to data capture.

### Installing the Actifio Windows Connector

To install the Actifio Connector on a Windows host:

1. Log on to the host as administrator.
2. Open a browser to `http://<ACTIFIO_APPLIANCE_IP>` to access the Actifio Resource Center.
3. Click the **Windows Connector** to download `connector-win32.exe`. Save the file.
4. Launch `connector-win32.exe`.
5. Click **Run** and follow the setup wizard instructions.



6. When prompted to select components, from drop down menu select **Actifio Connector With Change Tracking Driver**.
7. Click **Next**.
8. Follow the rest of the installation instructions.
9. Once the installation is complete, to verify that the Actifio Connector is installed and running correctly run the standard windows tool: `services.msc` on the server on which you installed the Actifio Connector.

If after the first full backup of an application, the Actifio appliance will perform incremental backups. If your backups are still always full backups, then check for the following:

- The Actifio Activity Monitor (change tracking driver) service may be stopped. In this case, check your Windows services and start the Actifio appliance's Activity Monitor service.
- The change tracking driver may be incorrectly configured or not installed. In this case, uninstall and then make a full install of the Actifio Connector.

### Uninstalling the Actifio Windows Connector

To uninstall the Connector from a Windows host:

1. From the `c:\program files\Actifio` folder select and double-click the uninstaller executable: `unins000.exe`.
2. Click **Yes** to confirm and then click **OK** to finish.

## The Actifio Linux Connector

The Actifio Connector for Linux runs as a daemon process under the username **root**. It listens on a TCP port 56789 for communication from the Actifio system. The Connector writes to a log file in the installation directory (`/var/act/log/UDSAgent.log`) and posts significant events to the `/var/log/` messages repository.

On Linux systems, the installer takes the form of an RPM package. Use the `rpm` utility to install the Connector. The installer creates `Init` RC scripts to start and stop the Connector that runs as a daemon. After the installation completes, use the RC script to start Connector for the first time.

### Installing the Actifio Connector on a Linux Host

On Linux systems, the installer takes the form of an RPM package. Use the `rpm` utility to install the Actifio Connector. The installer creates `Init` RC scripts to start and stop the Actifio Connector that runs as a daemon. After the installation completes, use the RC script to start the Actifio Connector for the first time.

To install the Actifio Connector on a Linux host:

1. Log on to the host as `root`.
2. Open a browser to `https://<ACTIFIO_APPLIANCE_IP>` to access the Actifio Resource Center.
3. Click the **Linux Connector** icon to download the Actifio Connector.
4. Click **OK** in the information dialog.
5. To check the RPM package before proceeding with installation, run `rpm --checksig <connector_filename>.rpm`
6. To install the Actifio Connector, run `rpm -ivh <connector_filename>.rpm` or `rpm -ivh <connector_filename>.rpm` (for the CentOS 5.7 32-bit installation)

---

**Note:** *The Actifio Connector is always installed at '/opt/act'.*

---

7. Run `/etc/init.d/udsagent status` to verify that the Actifio Connector is running.

### Uninstalling the Actifio Connector from a Linux Host

To uninstall the Actifio Connector from a Linux host:

1. Stop the Actifio Connector by running `/etc/init.d/udsagent stop`.
2. Learn the currently installed Linux Connector RPM name:  

```
[oracle@vq-oracle ~]$ rpm -qa udsagent
```

This returns the package name and version, such as: `udsagent-6.1.1-43975.x86_64`
3. Uninstall the package using `rpm -e udsagent` with the package name you obtained from the query. For example:  

```
rpm -e udsagent-6.1.1-43975.x86_64
```



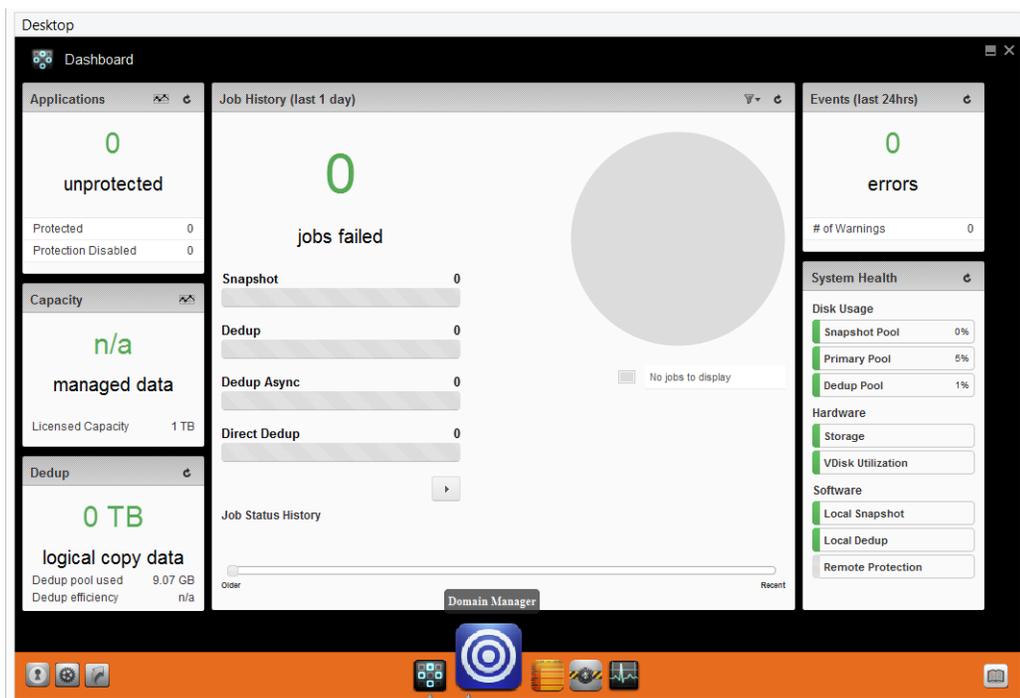
# 9 Enabling Replication

**Note:** Before proceeding, familiarize yourself with the concepts, processes and procedures in the **Getting Started with Actifio Copy Data Management** guide.

To replicate data, Actifio Sky appliances must first exchange certificates and then be joined.

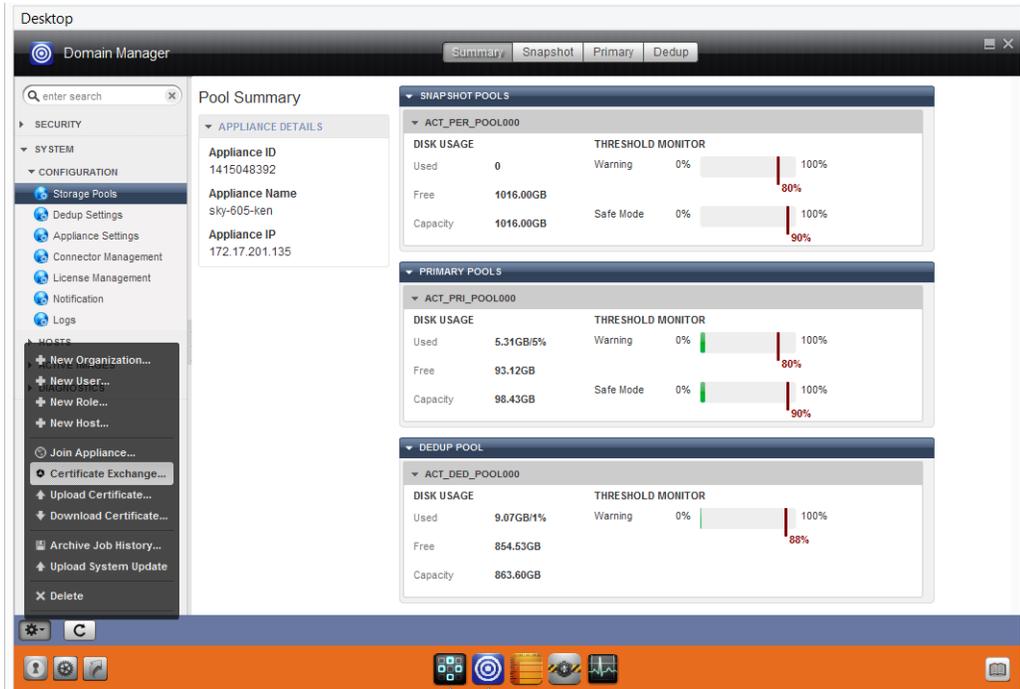
## Exchanging Certificates

Use the Actifio Domain Manager to exchange security certificates between Actifio Sky appliances:



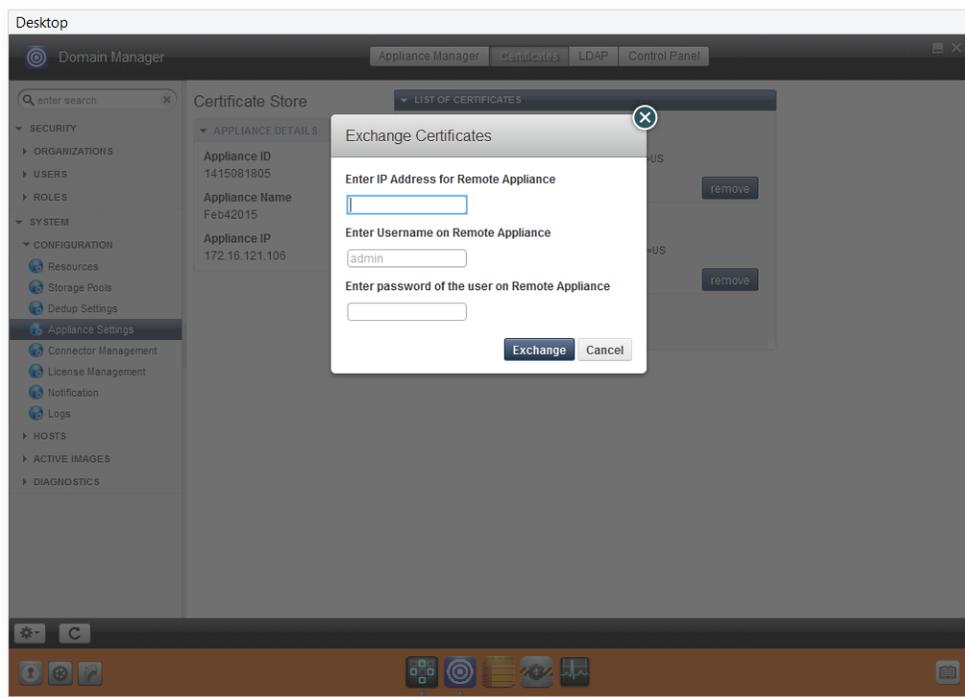
**Domain Manager Service Button**

1. From an Actifio Sky for the Oracle Cloud appliance, on the bottom strip of the Actifio Desktop, click the **Domain Manager** button and the Domain Manager is displayed.



**The Domain Manager with Service Menu Displayed and Certificate Exchange Selected**

2. In the left-hand corner of the Domain Manager, click the gear button and the Domain Manager's service menu is displayed.
3. From the service menu, click **Certificate Exchange...** and the Exchange Certificate dialog box is displayed:



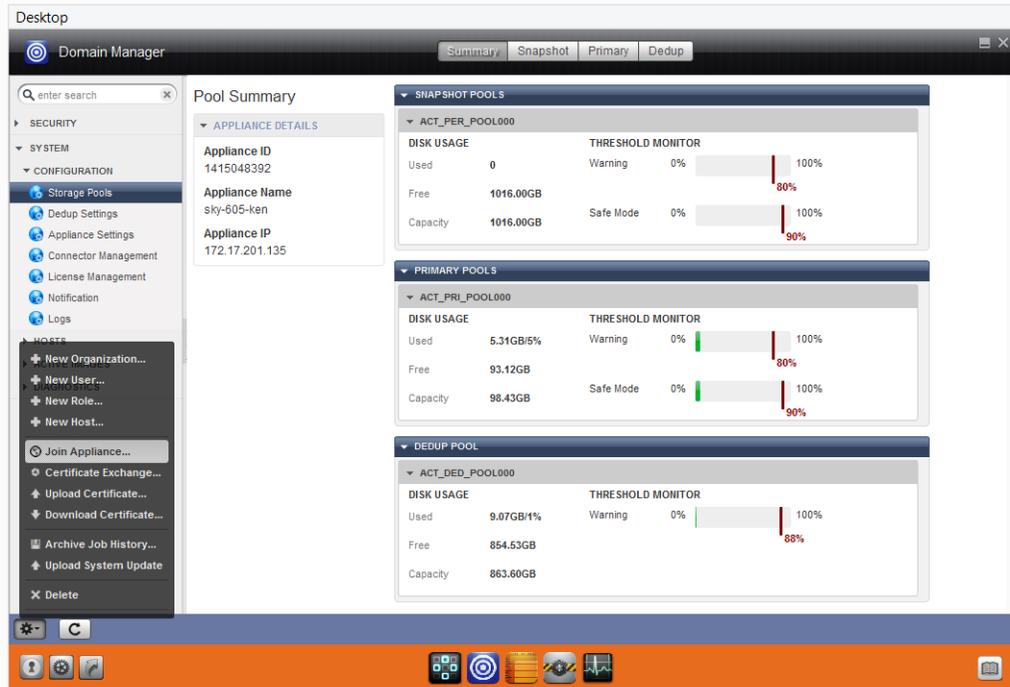
**The Exchange Certificate Dialog Box**

4. In the spaces provided, for the Actifio Sky appliance to be replicated to, enter:
  - o The Public IP address
  - o The username: **admin**.
  - o The password for the Actifio Sky appliance
5. Click **Exchange**. The security certificates are exchanged between the Actifio Sky appliances.

Once security certificates have been exchanged, the Actifio appliances are ready to be joined.

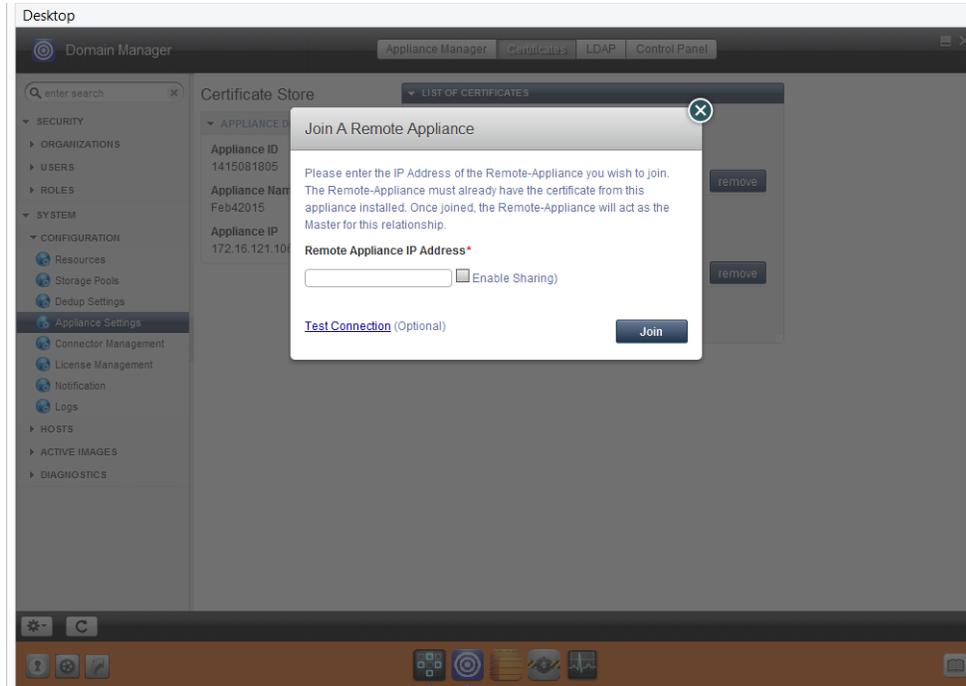
## Joining Actifio Appliances

To join the Actifio appliances:



### The Domain Manager with Service Menu Displayed and Join Appliance... Selected

1. From the Domain Manager's service menu select **Join Appliance...** The **Join a Remote Appliance** dialog box appears:



### Join Remote Appliance Dialog Box

2. Enter the Public IP address of the Actifio Sky appliance to which the current Actifio Sky appliance will replicate.
3. Ensure **Enable Sharing** is **NOT** checked.
4. Click **Join** and the Actifio appliances are joined.

---

**Note:** Before data can be captured and replicated, you must create a Resource Profile to define where to replicate data. For details, see **Virtualizing and Protecting Copy Data with the Application Manager**. This guide can be found in the Actifio Sky online library or in the Actifio Now customer portal.

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