
Deploying Actifio Sky for AWS from an AMI

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Preface

The information presented in this guide is intended for users who are configuring Actifio Sky for AWS with an AMI supplied from Actifio. This guide assumes that the reader has a working knowledge of general Amazon AWS precesses and procedures.

Once you have finished installed and configuring the Actifio Sky AMI, consult ***Getting Started with Actifio Copy Data Management***. It provides detailed instructions on using the unique features of Actifio Sky. 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 user interface.

The following guides also reside in the Actifio Now portal and the Actifio user interface provide detailed, application-specific, step-by-step instructions and will be of particular interest:

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

The Actifio Now Customer Portal

From the customer portal you can obtain detailed reports about your Actifio appliance as well as search the portal's knowledge base for answers to specific questions.

To log into the Actifio Now customer portal:

1. Go to: <https://now.actifio.com>
2. When prompted, enter the user name and password you received from you Actifio representative.

1 Deploying the Actifio Sky AMI

An Actifio Sky for AWS appliance is a virtual server designed to capture, and manage data that resides on the servers in your AWS VPC.

Multiple Actifio Sky appliances can be deployed and configured. Each Actifio Sky appliance can capture local application data and replicate copies of the data to other Actifio Sky appliances in AWS.

Actifio Sky appliances outside of AWS can replicate data to Actifio Sky appliances in AWS.

After you have completed deploying Actifio Sky for AWS, 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.

Prerequisites

Before you begin, you must supply your Actifio representative with:

- Your AWS Account Number. To share the Actifio Sky AMI the Actifio representative will:
 - o Select the Actifio Sky AMI image
 - o From the Actions drop down menu select **Modify Image Permission**
 - o In the displayed dialog box, enter the AWS Account Number
- The AWS region in which the Actifio Sky appliance will reside
- A Keypair for the Actifio representative's use
- The VPC in which the Actifio Sky for AWS AMI will be installed
- The VPC must use either a VPN or Public IP for access.
- If you use a Public IP you must use Elastic IP and have defined a gateway for the VPC

Note: If you have multiple VPCs, configure your Actifio Sky for AWS appliance in the VPC that contains most of the applications to be protected. Applications that reside outside of the specified VPC can be protected if you provide a peering connection between VPCs via AWS.

- In addition, you will also need to know your Actifio Sky license size. You will be prompted to select an Instance Type. The instance type maps directly into the Actifio Sky license size:
 - o m3.xlarge - for 5TB license
 - o c4.2xlarge - for 10TB license
 - o m4.4xlarge - for 30TB license
 - o r3.4xlarge - for 50TB license

Configuring the Actifio Sky AMI

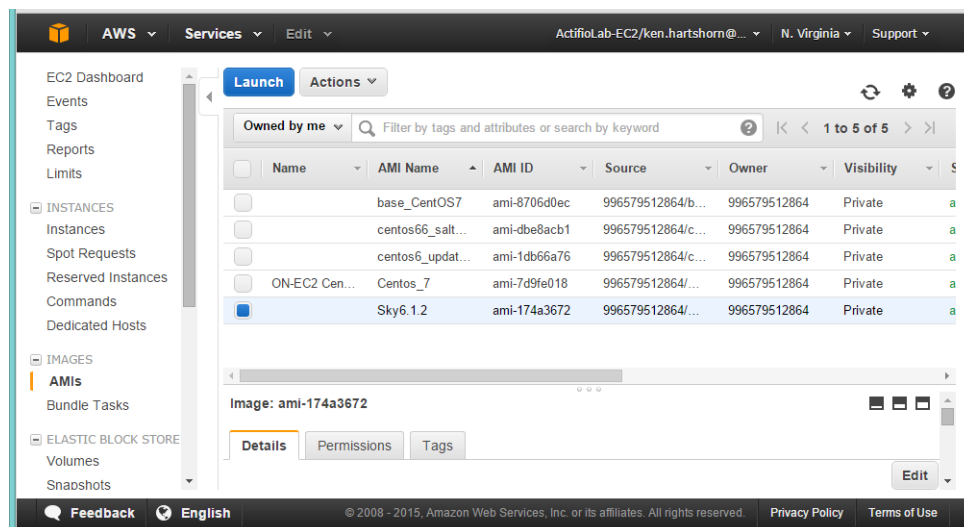
After you have supplied your Actifio representative with the [Prerequisites](#) on page 1, your Actifio representative will notify you when the Actifio AMI has been shared to your AWS account.

Once the Actifio AMI has been shared:

1. Log into your AWS account
2. Ensure you have selected the correct region in which the AMI is to be installed:



3. From the Services menu, select **EC2**.
4. In the left-hand menu, under **Images**, select **AMIs** and a list of all available AMIs is displayed:



5. Select the Actifio AMI
6. Click **Launch**, and Step 2 of the Configure Instance process is displayed:

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: m4.large (6.5 ECUs, 2 vCPUs, 2.4 GHz, Intel Xeon E5-2676v3, 8 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
<input type="checkbox"/>	General purpose	m4.xlarge	2	8	EBS only	-	Low to Moderate
<input checked="" type="checkbox"/>	General purpose	r3.4xlarge	2	8	EBS only	Yes	Moderate
<input type="checkbox"/>	General purpose	c4.2xlarge	2	7.5	EBS only	-	Moderate
<input type="checkbox"/>	General purpose	m3.xlarge	4	15	EBS only	Yes	High

Cancel Previous Review and Launch Next: Configure Instance Details

7. Select the Instance type to be used with the Actifio Sky appliance. The instance type is tied to the license size you purchased:
 - o m3.xlarge - for 5TB license
 - o c4.2xlarge - for 10TB license
 - o m4.4xlarge - for 30TB license
 - o r3.4xlarge - for 50TB license

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. Larger instance sizes typically incur additional charges from Amazon.

CAUTION! Once you have selected an instance type and the Actifio Sky appliance is installed, the license size cannot be increased.

8. Click **Next: Configure Instance Details** and Step 3: Configure Instance Details is displayed:

Step 3: Configure Instance Details
 Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot Instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances ⓘ 1

Purchasing option ⓘ ☐ Request Spot Instances

Network ⓘ vpc-11e27474 (172.31.0.0/16) (default) [Create new VPC](#)

Subnet ⓘ subnet-a326f5fa(172.31.16.0/20) | Default in us-east [Create new subnet](#)
 4090 IP Addresses available

Auto-assign Public IP ⓘ Enable

IAM role ⓘ None [Create new IAM role](#)

Shutdown behavior ⓘ Stop

Enable termination protection ⓘ ☐ Protect against accidental termination

Monitoring ⓘ ☐ Enable CloudWatch detailed monitoring
[Additional charges apply.](#)

Tenancy ⓘ Shared tenancy (multi-tenant hardware)
[Additional charges will apply for dedicated tenancy.](#)

Network interfaces ⓘ

Device	Network Interface	Subnet	Primary IP	Secondary IP addresses
eth0	New network interface	subnet-690bba1e	Auto-assign	Add IP

[Add Device](#)

Advanced Details

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

9. Required settings for this step include:
 - o **Network:** From the drop down list, select the VPC (network) for the Actifio Sky instance.
 - o **Subnet:** From the drop down list, select the subnet for the Actifio Sky instance.
 - o **Auto-assign Public IP:** From the drop down list, select **Enable** If this Actifio Sky instance requires access via the public Internet. This is not required if your IT infrastructure has a VPN.
10. Click **Next: Add Storage** and the Step 4 Add Storage page is displayed:

Step 4: Add Storage

your instance will be launched with the following storage device settings. You can attach additional EBS volumes and stance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS plumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon C2.

Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS
Root	/dev/sda1	snap-23e13b6d	130	General Purpose (SSD)	390 / 3000
EBS	/dev/sdi	snap-837226ce	100	General Purpose (SSD)	3072
EBS	/dev/sdh	snap-595cdc39	400	General Purpose (SSD)	1200 / 3000
EBS	/dev/sdj	snap-95dbaadb	1024	General Purpose (SSD)	3072

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Tag Instance](#)

11. Create three devices with a minimum of:
 - o 400GB - Will be used by the Actifio Sky Primary
 - o 100GB Minimum - Will be used by the Actifio Sky Snapshot Pool. Your Actifio representative will provided you with a recommended size based on the data involved.
 - o 1024GB Minimum - Will be used by the Actifio Sky Dedup Pool. Your Actifio representative will provided you with a recommended size based on the data involved.

These devices will be assigned to their respective Actifio pools in [Actifio Sky Appliance Installer](#) on page 7

12. Click **Next: Tag Instance** and Step 5 Tag Instance is displayed:

Step 5: Tag Instance

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. [Learn more](#) about tagging your Amazon EC2 resources.

Key (127 characters maximum)	Value (255 characters maximum)
Name	MyCompany

[Create Tag](#) (Up to 10 tags maximum)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Security Group](#)

13. Create a tag for the Actifio Sky instance that is easy to remember and identify.

14. Click **Next: Configure Security Group** and Step 6 Configure Security Group is displayed:

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a **new** security group
☐ Select an **existing** security group

Security group name:
 launch-wizard-14

Description:
 launch-wizard-14 created 2015-09-22T02:59:02.543-04:00

Type	Protocol	Port Range	Source	Custom TCP Rule
SSH	TCP	22	Anywhere	0.0.0.0/0
HTTPS	TCP	443	Anywhere	0.0.0.0/0
HTTP	TCP	80	Anywhere	0.0.0.0/0
Custom TCP Rule	TCP	5103	Anywhere	0.0.0.0/0
Custom TCP Rule	TCP	3260	Anywhere	0.0.0.0/0
Custom TCP Rule	TCP	3289	Anywhere	0.0.0.0/0

Add Rule

[Cancel](#) [Previous](#) [Review and Launch](#)

15. Ensure that the Security Group is set as follows:

Type	Protocol	Port Range	Source	Custom TCP Rule
SSH	TCP	22, 26	Anywhere	0.0.0/0
HTTPS	TCP	443	Anywhere	0.0.0/0
HTTP	TCP	80	Anywhere	0.0.0/0
Custom TCP Rule	TCP	5103	Anywhere	0.0.0/0
Custom TCP Rule	TCP	3260	Anywhere	0.0.0/0
Custom TCP Rule	TCP	3289	Anywhere	0.0.0/0
Custom TCP Rule	TCP	5107	Anywher	0.0.0/0
Custom UDP for Actifio secureconnect	UDP	1194	Anywhere	0.0.0/0

16. Click **Review and Launch** and a page is displayed detailing your selections and setting.
17. If the selections and settings are correct, click **Launch** and the Actifio Sky appliance is deployed.

2 Actifio Sky Appliance Installer

Once the AMI has been configured:

1. From the EC2 Instance's **Description** tab obtain the public IP for the Actifio Sky Instance:

Note: Ensure the Instance State is Running and the Status Checks are 2/2 before proceeding.

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

actifio Radically Simple Appliance Installer

STEP 1: Setup Network Configuration | STEP 2: Setup Storage Configuration | STEP 3: Review and Complete Installation

All Items marked with (*) are required.

Public IP

IPv4 address for cloud configuration.

Appliance IP (*) 172 17 205 106

IPv4 address on port 1 for Actifio Desktop and CLI clients. Also used for joining this appliance with other PAS appliances.

Appliance Name (*) localhost.localdom

DNS Server 172.17.1.10

Subnet Mask 255 255 0 0

Gateway 172 17 1 1

NTP Server

Infrastructure AWS

Timezone Africa/Abidjan

System uuid (*) 1415068751:c222a0bd-e7bd-37cc-913a-04a9cf86f4b:a4b7b9d7

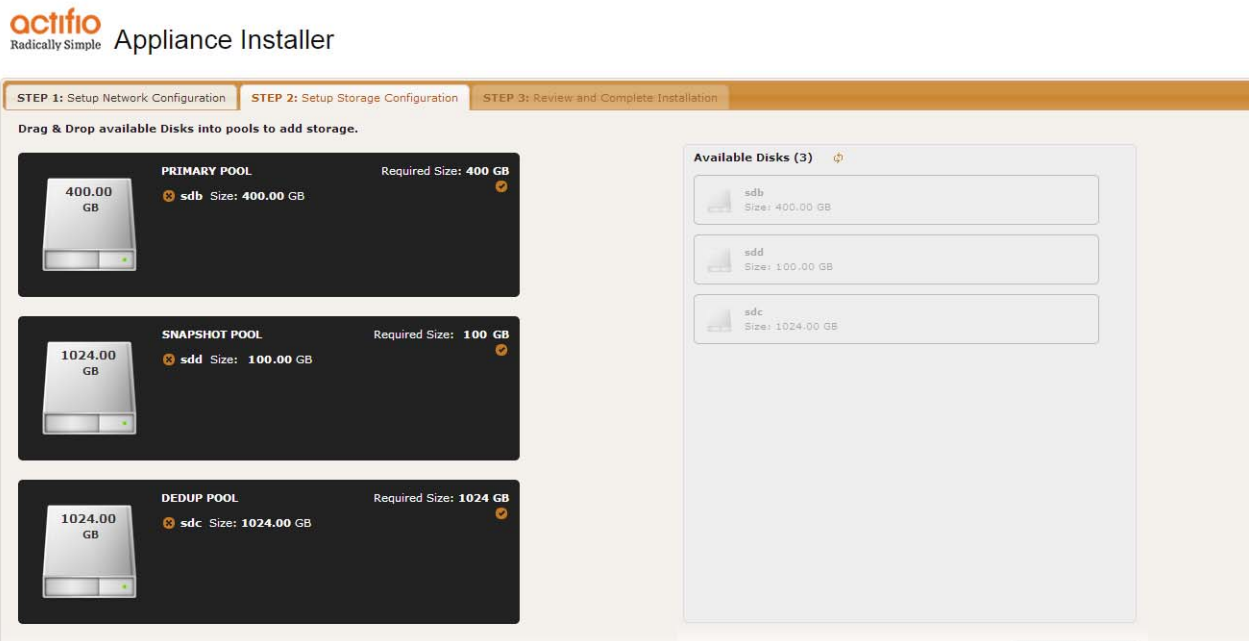
License
Evaluation license: Dedup pool size is set to 5TB with no encryption for 30 days from the start of installation. Please contact Actifio to upgrade to production licenses.

Create Admin Password (*)

Confirm Admin Password (*)

3. In the spaces provided, enter the Public IP.
4. Ensure that the auto discovered Actifio Sky appliance IP address is correct.
5. In the space provided, enter a name for the Actifio Sky appliance.
6. Ensure that the auto discovered network IP addresses are correct.

7. From the Infrastructure drop down menu, select AWS.
8. Set the time zone as needed.
9. If you are installing the Actifio Sky appliance as a 15-day evaluation:
 - o Leave the License Number field set to the default setting.
 - o Click Next and the Step 2 tab contents are displayed. See page 16.
10. If you are not installing this Actifio Sky appliance as an evaluation, capture the System UUID and pass it on to your Actifio representative. The Actifio representative will use the UUID to generate the Actifio Sky appliance license key.
11. In the space provided, paste a copy of the license key you obtained from the Actifio representative.
12. Click **Validate License** to ensure the validity of the license entered.
 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.
13. 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.
14. In the spaces provided enter (create) a password for the first Admin user of the Actifio Sky appliance.
15. Click **Next** and the Step 2 tab contents are displayed:



16. Select and drag the **Available Disks** to their associated pools:
 Drag the 400GB disk to the Primary Pool.
 Drag a 100GB (minimum) Snapshot Pool.
 Drag a 1024GB (minimum) disk to the Dedup Pool.
17. 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:

The screenshot shows a three-step installation wizard. The first two steps, 'STEP 1: Setup Network Configuration' and 'STEP 2: Setup Storage Configuration', are in a lighter orange box. The third step, 'STEP 3: Review and Complete Installation', is highlighted in a darker orange box. Below the steps, a message states: 'Your settings have been validated successfully. Once you click "Complete Installation", the system will complete the installation and reboot. You will be redirected to "Actifio Resource Page" but must wait approximately 30 minutes before the system is back online.' At the bottom left is a '< Back' button, and at the bottom right is a 'Complete Installation' button.

REBOOT OF THE ACTIFIO SKY APPLIANCE WILL OCCUR UPON COMPLETING INSTALLATION

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

Next Step

Install the Actifio Desktop Client.

3 Installing the Actifio Desktop Client

When you have finished deploying 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 deployed, it may take up to ten minutes for the Actifio Resource Center to become activated.

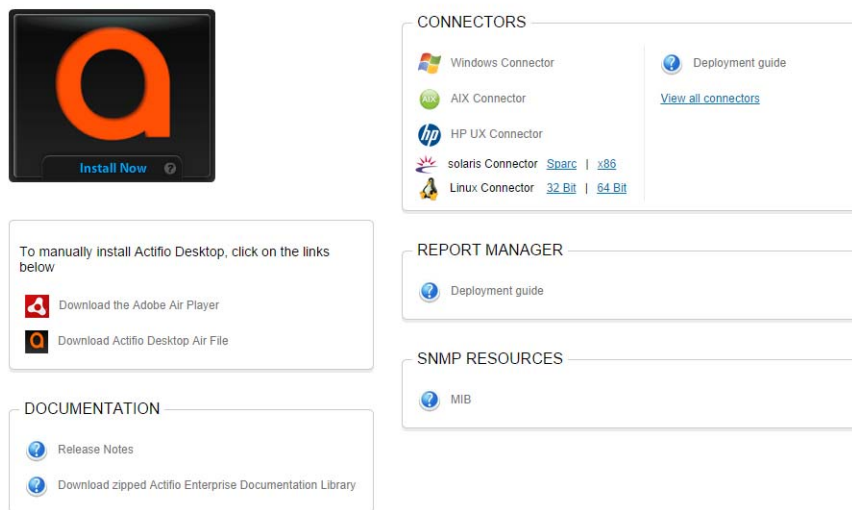
The Actifio Desktop user interface runs on Adobe Air Player. When you install the Actifio Desktop client, you will also install a copy of Adobe Air Player.

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 Actifio Sky for AWS Instance. You can find the public IP in the EC2 instance's **Description** tab.
2. Enter the public IP address in a browser's address space and the Actifio Resource Center is displayed:



3. Install the Adobe Air Player and Actifio Desktop (UI):

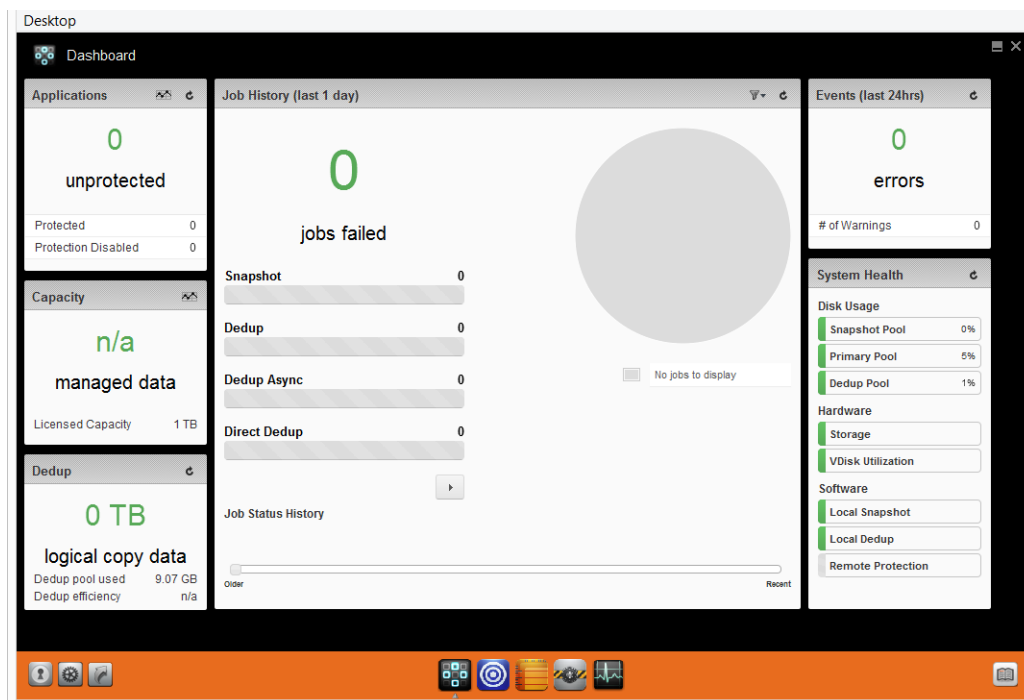
Click **Download the Adobe Air Player**. Follow the prompts to install Adobe Air Player. Wait for the Adobe Air Player installation to complete.

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:



4. In the **Username** space: enter the username: **admin**
5. In the **Password** space: enter the password you defined in [Actifio Sky Appliance Installer](#) on page 7.
6. In the **Appliance** space: Enter the **Public IP**. The public IP can be found in the EC2's Instances' **Description tab**.
7. 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 AWS, 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 for AWS appliance:

- Install the Actifio Connector on the servers whose application data you want to capture. See [Install Actifio Connectors](#) on page 15 for details.
- Configure the Actifio Sky for AWS 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 for AWS appliance, install and configure the appliance in a separate region and VPC.
- If you will replicate data from/to an on premise Actifio Sky appliance or from/to another Actifio Sky for AWS to/from this newly installed Sky for AWS appliance see [Enabling Replication](#) on page 19.
- If you need to add additional storage, see [Adding Storage](#) on page 23.

4 Install Actifio Connectors

Before you can capture application data from servers running in your AWS VPC, 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 AWS 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 16
- [The Actifio Linux Connector](#) on page 17

Note: You must open the Security Group's ports 5106 and 56789 on the EC2 server(s) hosting an Actifio Connector.

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.

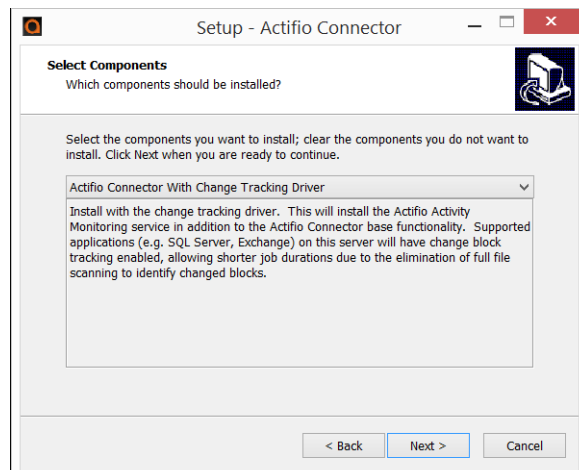
Actifio Change Tracking Driver Option for Windows

When installing the Windows connector you will be given the option of installing the Actifio Change Tracking Driver. For Actifio Sky for AWS, 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
```

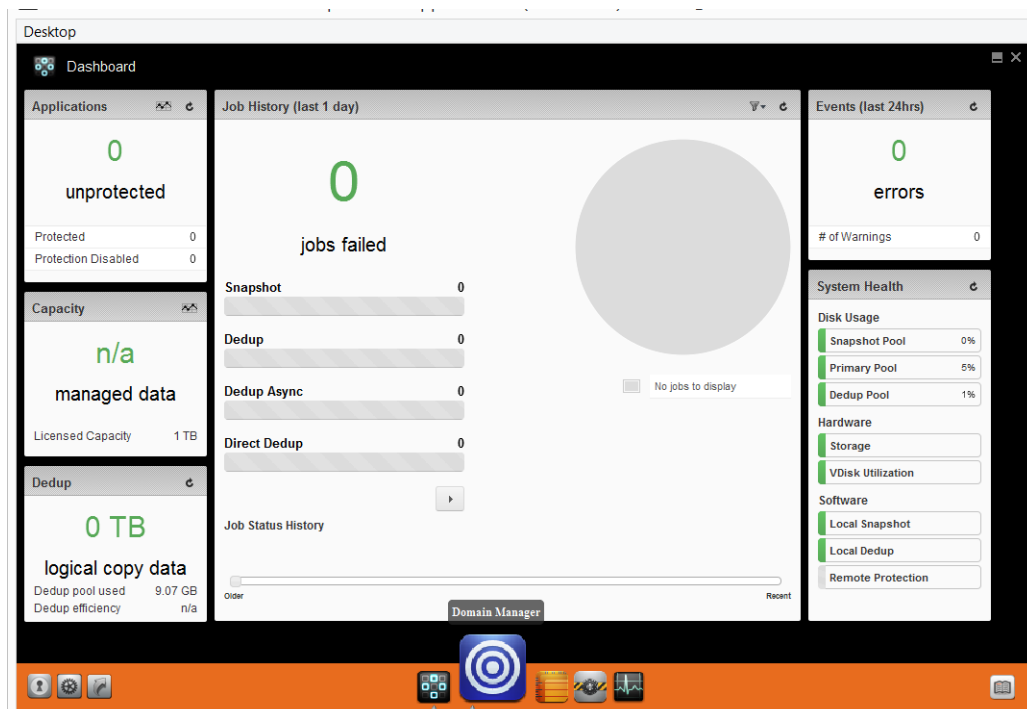

5 Enabling Replication

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 appliances must first exchange certificates and then be joined.

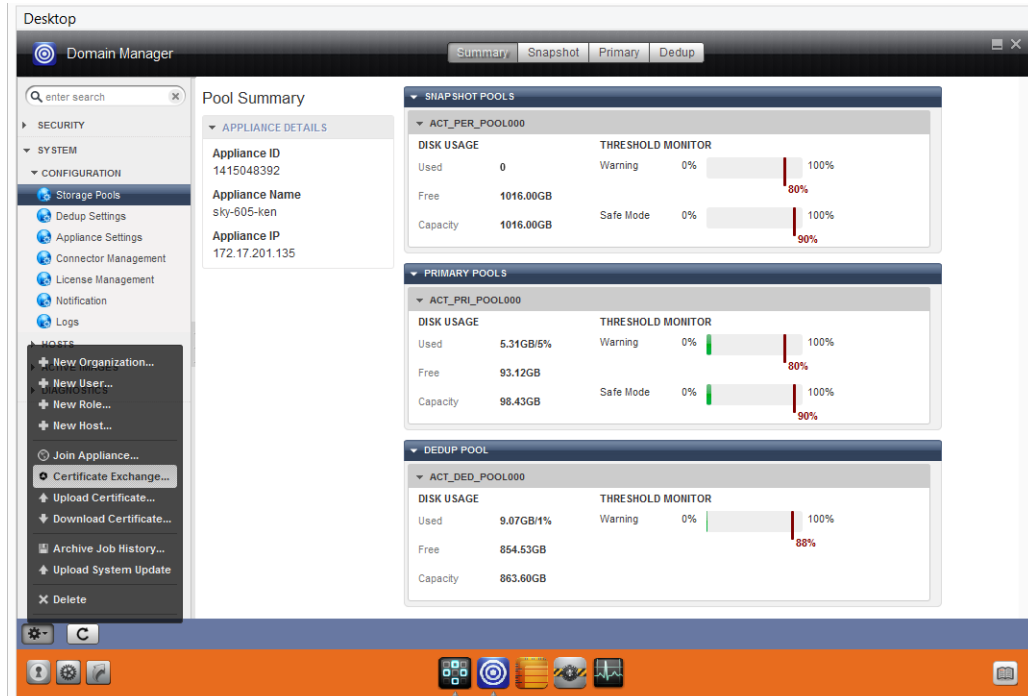
Exchanging Certificates

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



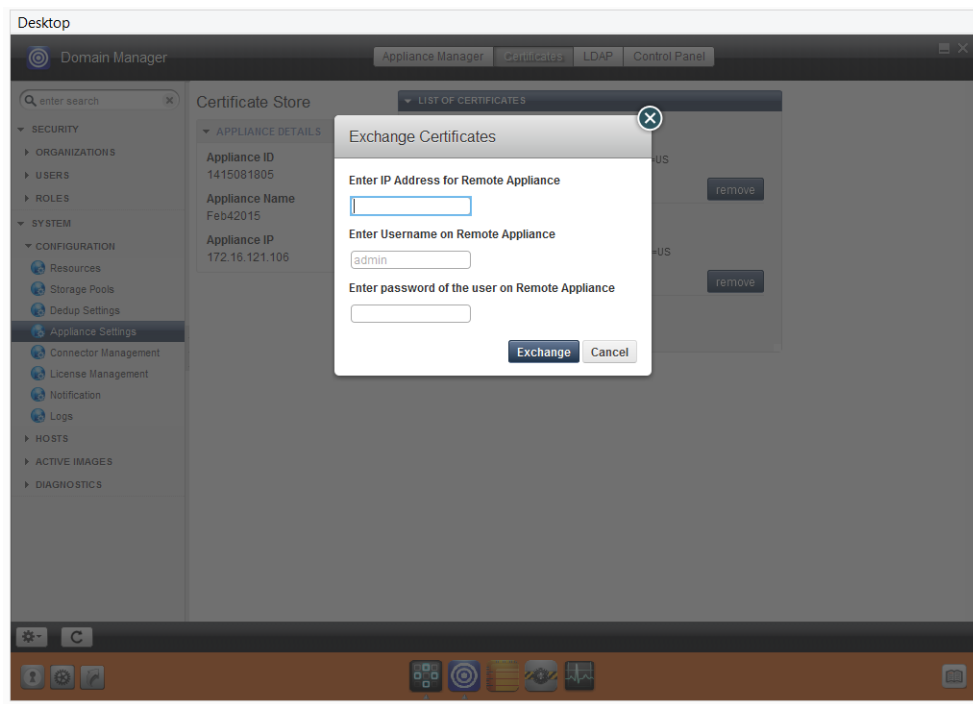
Domain Manager Service Button

1. From an Actifio Sky for AWS 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:



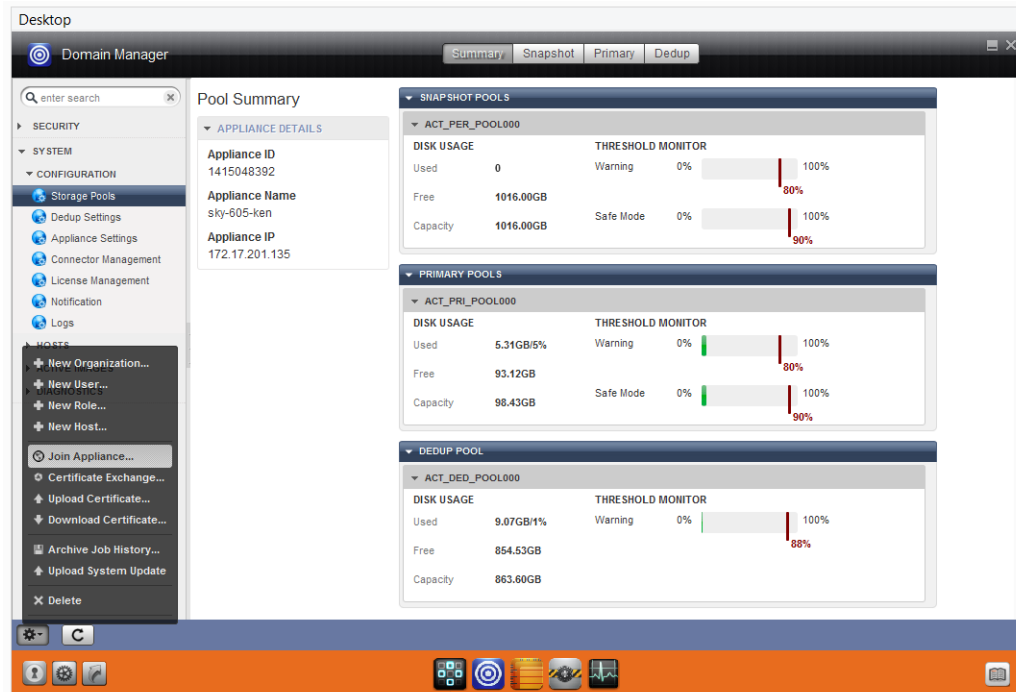
The Exchange Certificate Dialog Box

4. In the spaces provided, for the Sky appliance to be replicated to, enter:
 - o The Public IP address
 - o The username: **admin**.
 - o The password: The **InstancedId** of 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.

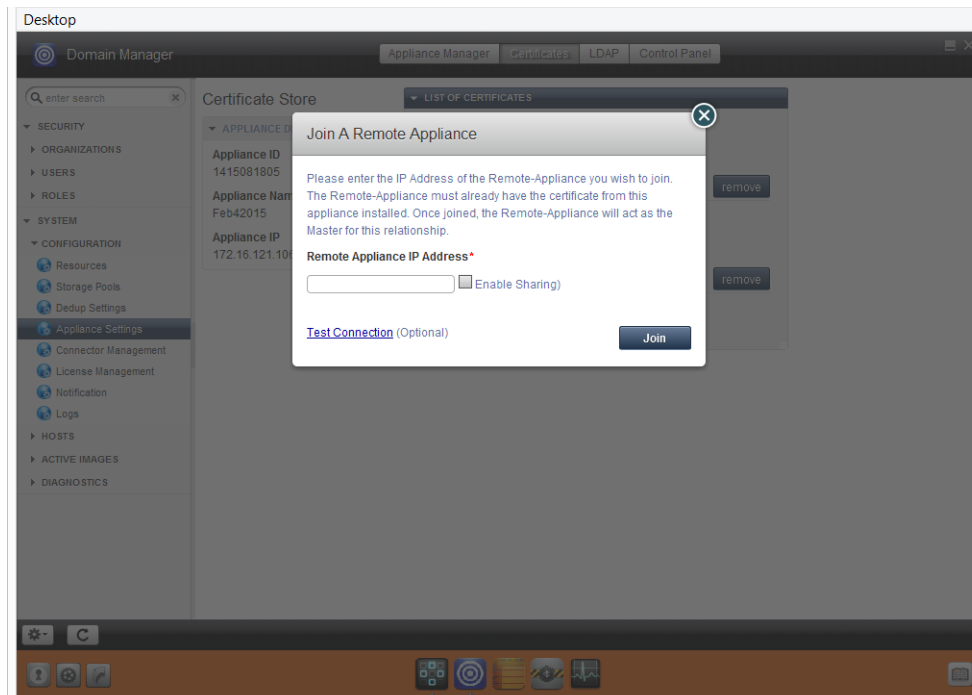
Joining Actifio Appliances

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:



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.

6 Adding Storage

Actifio Sky for AWS appliances allow you to add storage to the Dedup Pool and the Snapshot Pool.

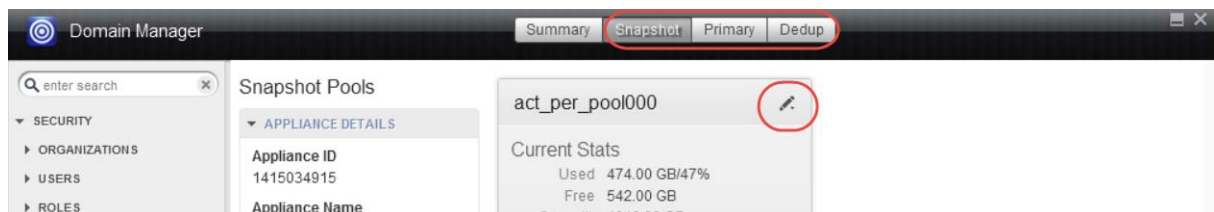
To add storage to an Actifio Sky for AWS appliance you must have access to the AWS account that will own the storage and to the Actifio Sky for AWS appliance that will use the storage.

From your AWS account

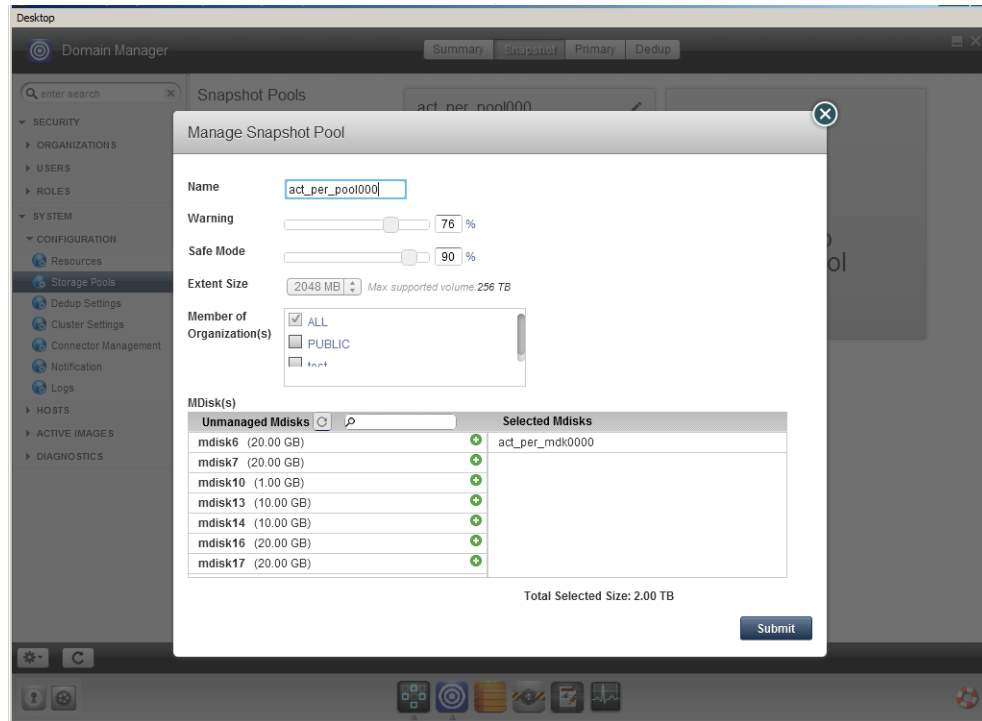
1. Obtain the AWS Instance ID of the Actifio Sky for AWS appliance.
2. Create a volume in the EC2 space in which the Actifio Sky for AWS appliance resides.
3. Attach the volume to the Actifio Sky for AWS appliance instance in the EC2 space.

From the Actifio Sky for AWS appliance to which you will add the storage:

1. Open the **Domain Manager** to **System > Configuration > Storage Pools**.
2. Select the **Snapshot** or **Dedup** tab. The Snapshot Pools or Dedup Pool information page opens.
3. Click the pencil edit icon next to the storage pool name:



4. The Manage Pool page for either the Snapshot or Dedup Pool appears:



5. The new volume will appear in the table under **Unmanaged Mdisks**.
 6. Click the + (plus) next to the new volume and it will appear under **Selected Mdisks**.
 7. Click **Submit**. A warning dialog appears. Enter **PROCEED** in the text box to confirm.
- The volume can now be used by the Actifio Sky for AWS appliance.

7 Adding an SSD to an Actifio Sky Appliance

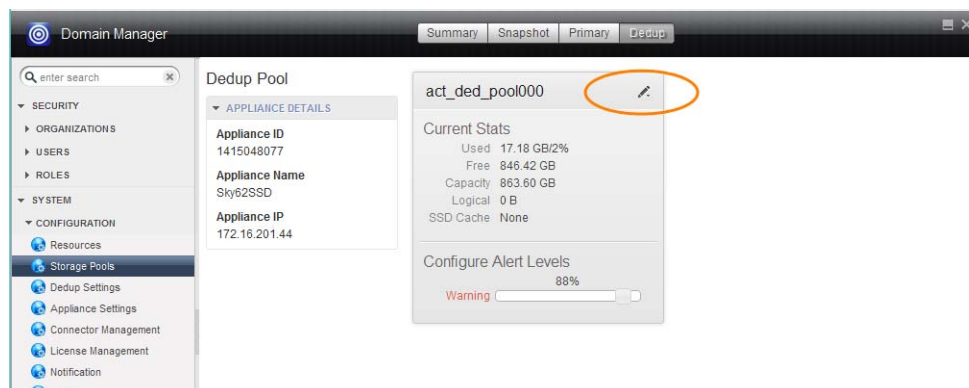
Actifio Sky appliances that have licenses of 30 TB and greater must use an SSD. Each Actifio Sky license type has its own SSD requirement:

Actifio Sky Appliance SSD Requirements

License	SSD Size	Optional/Required
50TB	512GB	Required
30TB	308GB	Required
10TB	103GB	Optional
5TB	53GB	Optional
1TB	1GB	Optional

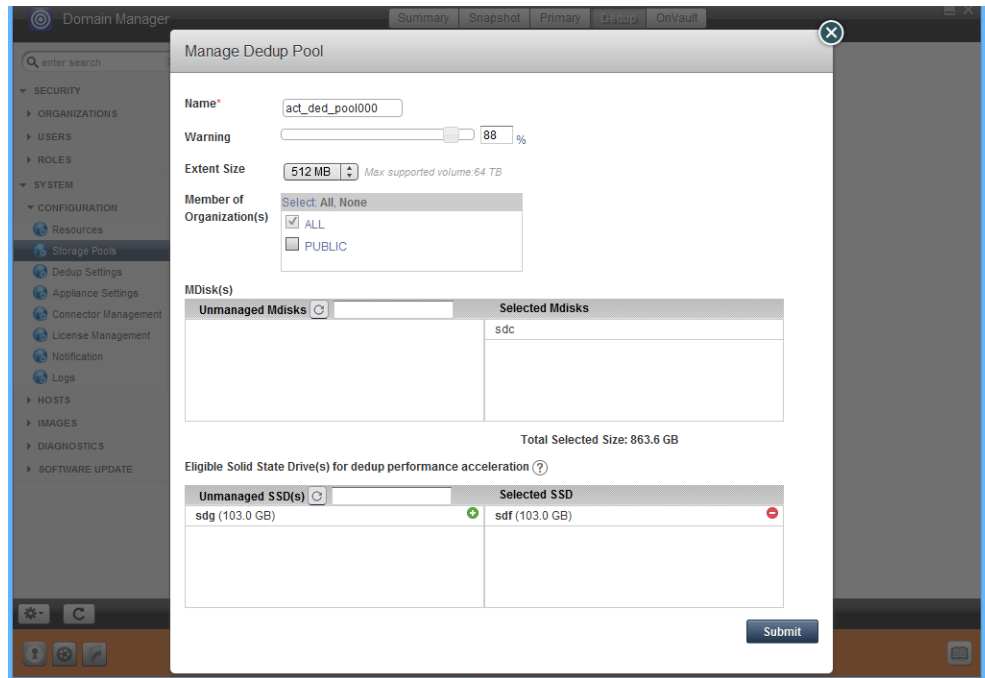
Once a hypervisor has been updated with the required SSD, modify the Actifio Sky appliance's Dedup Pool as follows:

1. Open **Domain Manager > System > Configuration > Storage Pools**.
2. Select the **Dedup** tab. The Dedup Pool information page opens.



3. Click the pencil icon next to the Dedup Pool name and the Manage Dedup Pool page is displayed:
If necessary, scroll down until the SSD section of the window is displayed.
4. In the Unmanaged SSDs column, click the "plus" sign next to the SSD you added for the Actifio Sky appliance and it will move to the Selected SSD(s) column.

Note: If the SSD you installed is listed under unmanaged MDisks and not under Unmanaged SSDs, select the SSD and then click the Tag link. This will tag the selected disk as an SSD and it will appear in the Selected SSD column.



5. Click **Submit** and the SSD is added to the Actifio Sky appliance.

Note: Only SSDs large enough to meet your Actifio Sky appliance's license requirements will appear in this dialog box.
