Deploying Actifio Global Manager on AWS Cloud

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Preface

The information presented in this guide is intended for users who have an AWS account and are familiar with AWS processes and procedures.

Once you have finished configuring Actifio Global Manager (AGM), consult the AGM online help. It provides detailed instructions on using AGM.

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 the user name and password provided by your Actifio representative.
3. From the ActifioNOW customer portal you can access:
    - **Product Documentation** - View the user documentation for your Actifio products and releases.
    - **Knowledge Base** - Search across all of the available content for relevant articles.

Actifio Support and Service

Access these locations for help with your Actifio product suite:

Customer Support Phone	**From anywhere**: +1.315.261.7501 **US Toll Free**: +1.855.392.6810 **Australia**: 0011 80016165656 **Germany**: 00 80016165656 **New Zealand**: 00 80016165656 **UK**: 0 8000155019
Customer Support Email	support@actifio.com
Customer Support Portal	http://support.actifio.com/

1 Introduction

Actifio Global Manager (AGM) provides centralized management capabilities in a virtual appliance. From one centralized AGM management system, you use the AGM browser-based user interface (UI) to manage multiple Actifio CDS and Actifio Sky appliances and perform various day-to-day copy data operations.

Your Actifio solution may consist of Actifio CDS and Actifio Sky appliances interconnected and replicating data between each other.

Actifio CDS: An Actifio CDS appliance is a hardware and software solution. An Actifio CDS appliance captures and manages data locally, and can replicate captured data to other Actifio CDS and Sky appliances. Actifio CDS appliances are installed and configured by your Actifio representative.

Actifio Sky: An Actifio Sky appliance is a virtual machine (VM). Actifio Sky appliances can be installed at your location or in a cloud vendor's cloud. Actifio Sky appliances are licensed by capacity and may be used with other Actifio Sky appliances and Actifio CDS appliances.

Local and Remote Appliances: When two Actifio appliances are joined, local and remote are determined by the appliance you are logged in to. An exchange of certificates is required to join appliances.

We recommend that you read ***Getting Started with Actifio Copy Data Management*** to have a grasp of the basic concepts associated with an Actifio CDS and Sky appliance. It is included as part of the Actifio Documentation Library that comes with each appliance and is also available in the ActifioNOW Customer portal.

With AGM you can manage up to 40 Actifio CDS and Sky appliances. AGM communicates with each Actifio appliance by IP address or fully qualified domain name (FQDN) of the appliance. When you add an Actifio CDS or Sky appliance to AGM, all SLA templates, organizations, users, and roles are imported into the AGM database and become AGM-level objects. You can then utilize these objects across all managed Actifio appliances.

You can use AGM to perform tasks on the managed Actifio appliances, that:

- **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 appliances allows user to failover to their Cloud environment delivering business resilience for on-premises enterprise applications.
- **Provides On-Demand analytics:** The ability to capture, manage and re-use Microsoft SQL Server databases and other databases and file systems enables data warehousing and analytics applications.
- **Securely migrates to the AWS Cloud:** Securely migrating applications to AWS cloud. Using an Actifio appliance's instant access, users can create a sandbox environment in AWS, conduct security, performance and scalability validation, before turning on the application in AWS.
- **Provides Global, standardized, Hybrid Cloud Data Management:** For AWS Cloud Platform-resident applications, Actifio appliances can manage their data life cycle and deliver the same benefits as for the on-premises applications; accelerate high quality application development, enhanced business resilience,

2 Deploying the AGM AMI

This section assumes that you have an AWS account and is familiar with AWS processes and procedures. It has the following topics:

- Prerequisites on page 3
- AGM Image Requirements on page 4
- Configuring the AGM AMI on page 6

Prerequisites

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

- Your AWS Account Number. The Actifio representative will use your account number to set permissions on the AGM AMI:
  - Select the Actifio AGM Amazon Machine Image (AMI) image
  - From the Actions drop down menu select **Modify Image Permission**
  - In the displayed dialog box, enter the AWS Account Number
- The AWS region in which the AGM for AWS AMI will reside
- A Keypair for the Actifio representative's use
- The VPC in which the AGM 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 AGM for AWS AMI 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.*

Web Browser Requirements

The AGM UI supports the following minimum web browsers:

- Google Chrome version 74.0 and higher
- Microsoft Internet Explorer version 11.0 and higher
- Mozilla Firefox version 68.0 and higher

The recommended minimum display screen resolution is 1280 x 1024 for running the AGM UI in a web browser.

AGM Image Requirements

During deployment, AGM will optionally come up with additional services of Catalog and Report Manager depending on the instance type and disks configured.

AGM with Catalog and RM:

For AGM with Catalog and RM:

- Use the instance type of: **m4.4xlarge** (16 vCPU, 64GB RAM)

  Note: *AGM with Catalog and RM requires 10 reserved virtual CPUs and 28 GB of reserved memory.*

- Four (4) separate virtual disks for storage:
  - One 50 GB disk for the AGM operating system and AGM repository
  - One 250 GB disk for Report Manager data
  - One 250 GB disk for the catalog index
  - 400 GB disk to store backups of the catalog data

  As a best practice, Actifio recommends that the AGM virtual disks do not share the same datastore as the production virtual machines

AGM with Catalog:

For AGM with Catalog:

- Use the instance type of: **t2.2xlarge** (8 vCPU, 32GB RAM)

  Note: *AGM with Catalog requires 8 reserved virtual CPUs and 20 GB of reserved memory.*

- Three (3) separate virtual disks for storage:
  - One 50 GB disk for the AGM operating system and AGM repository.
  - One 250 GB disk for the catalog index.
  - 400 GB disk to store backups of the catalog data

  As a best practice, Actifio recommends that the AGM virtual disks do not share the same datastore as the production virtual machines.

  Note: *Any RM requirements for an AGM deployment with Catalog and RM will be in addition to the above.*

AGM with RM:

For AGM with RM:

- Use the instance type of: **t2.2xlarge** (8 vCPU, 32GB RAM)

  Note: *AGM with RM requires 6 reserved virtual CPUs and 16 GB of reserved memory.*

- Two (2) separate virtual disks for storage:
  - One 50 GB disk for the operating system and AGM repository
  - One 250 GB disk for Report Manager data

As a best practice, Actifio recommends that the AGM virtual disks do not share the same datastore as the production virtual machines.

Note: *Any Catalog requirements for an AGM deployment with RM and Catalog will be in addition to the above.*

AGM (without Catalog or RM):

For AGM:

- Use the instance type of: **t2.xlarge** (4 vCPU, 16GB RAM)

  Note: *The AGM instance requires 4 reserved virtual CPUs and 8 GB of reserved memory.*

- One 50 GB disk for the operating system and AGM repository

  As a best practice, Actifio recommends that the AGM virtual disks do not share the same datastore as the production virtual machines.

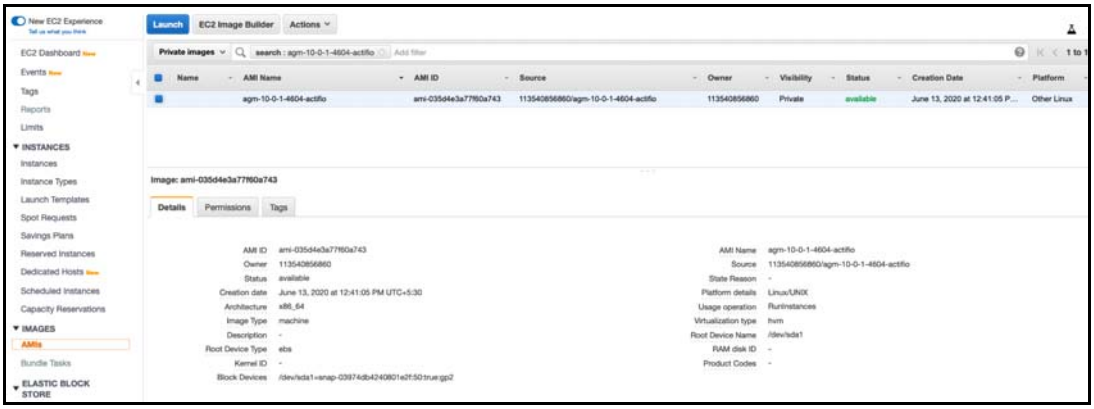
Configuring the AGM AMI

After you provide your Actifio representative with the Prerequisites on page 3, your Actifio representative will notify you when the Actifio AMI has been shared to your AWS account.

Once the Actifio AMI has been shared:

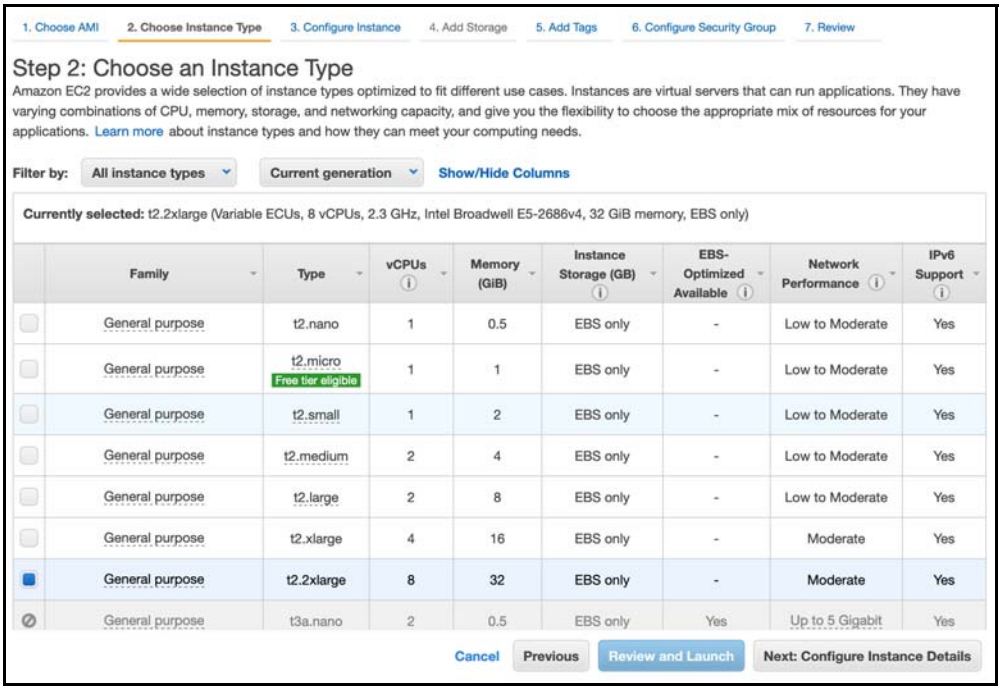
1. Log into your AWS account
2. Ensure you have selected the correct region in which the AMI is to be installed:

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



5. Select the Actifio AMI

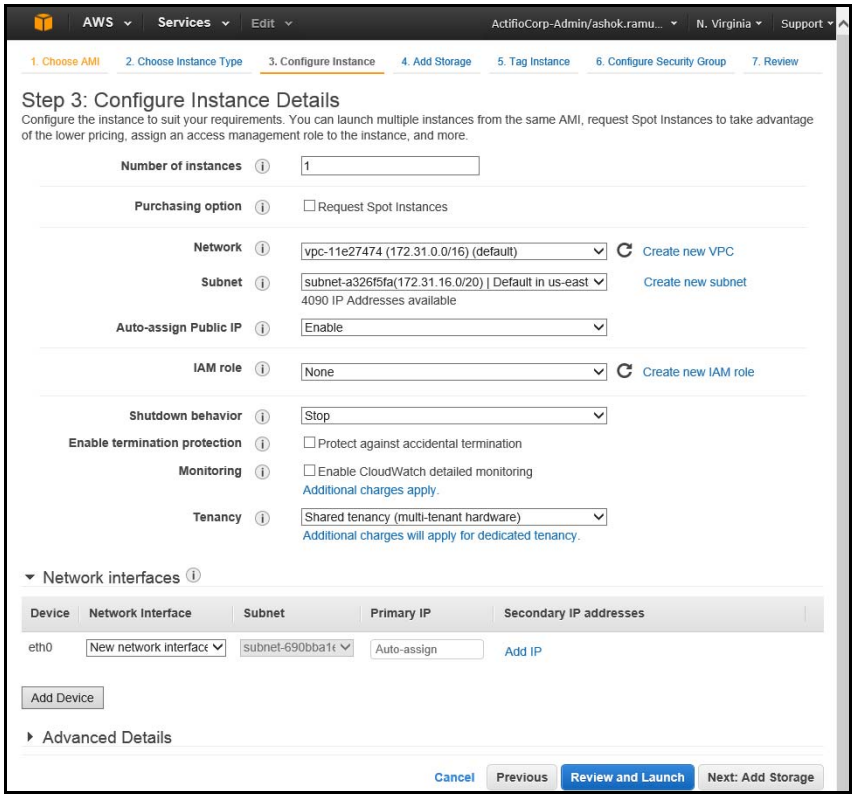
6. Click **Launch**, and Step 2 of the Configure Instance process is displayed:



7. Select the instance type according to whether or not you want to enable AGM's catalog feature:
   - To enable AGM's catalog feature, select the instance type of: **t2.2xlarge** (8 vCPU, 32GB RAM)
   - To enable AGM without catalog feature or RM, select the instance type of: **t2.xlarge** (4 vCPU, 8GB RAM)
   - To enable AGM with Catalog feature and RM, select the instance type of: **m4.4xlarge** (16 vCPU, 64GB RAM)
   - To enable AGM with RM, select the instance type of: **t2.2xlarge** (8 vCPU, 32GB RAM)

   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.

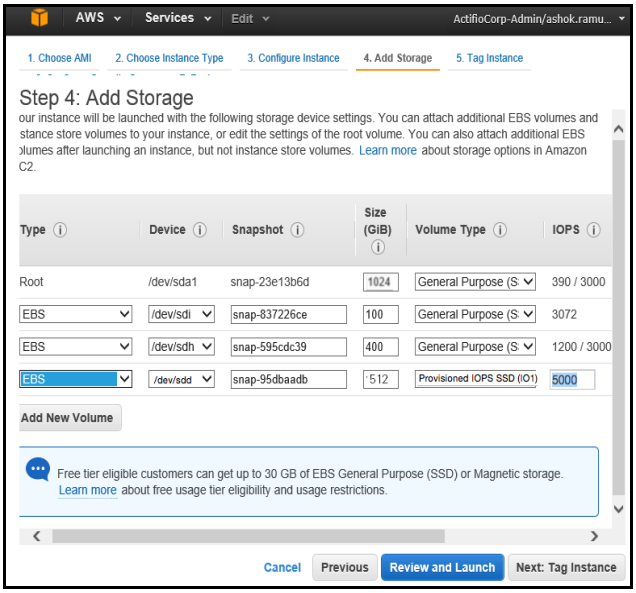
8. Click **Next: Configure Instance Details** and Step 3: Configure Instance Details is displayed:



9. Required settings for this step include:

   - **Network:** From the drop down list, select the VPC (network) for the AGM instance.
   - **Subnet:** From the drop down list, select the subnet for the AGM instance.
   - **Auto-assign Public IP:** From the drop down list, select **Enable** If this AGM 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 screen is displayed:



11. Add storage according to whether or not you want to enable AGM's catalog feature:

To configure storage for AGM with catalog feature, you must define three disks:

- 50 GB for the AGM operating system.
- 250 GB for the AGM Catalog index store
- 400 GB for Catalog index backup

Note: *MUST be used along with the instance type of:* ***t2.2xlarge*** *(8 vCPU, 32GB RAM)*

To configure storage for AGM without catalog feature and RM, you only need to define one disk:

- One 50 GB disk for the AGM operating system

Note: *MUST be used along with the instance type of:* ***t2.xlarge*** *(4 vCPU, 8GB RAM)*

To configure storage for AGM with catalog and RM, you must define four disks:

- 50 GB for the AGM operating system
- 250 GB for the AGM Catalog index store
- 400 GB for Catalog index backup
- 250 GB for Report Manager

Note: *MUST be used along with the instance type of:* ***m4.4xlarge*** *(16 vCPU, 64GB RAM)*

To configure storage for AGM with RM, you must define two disks:

- 50 GB disk for the AGM operating system
- 250 GB for Report Manager

Note: *MUST be used along with the instance type of:* ***t2.2xlarge*** *(8 vCPU, 32GB RAM)*

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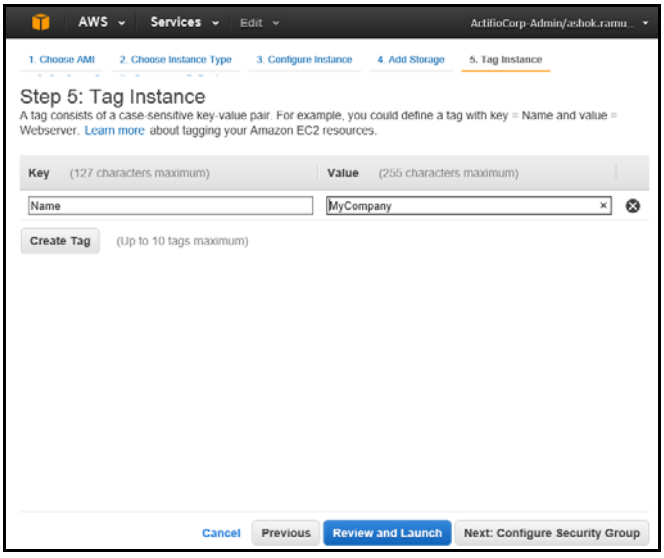
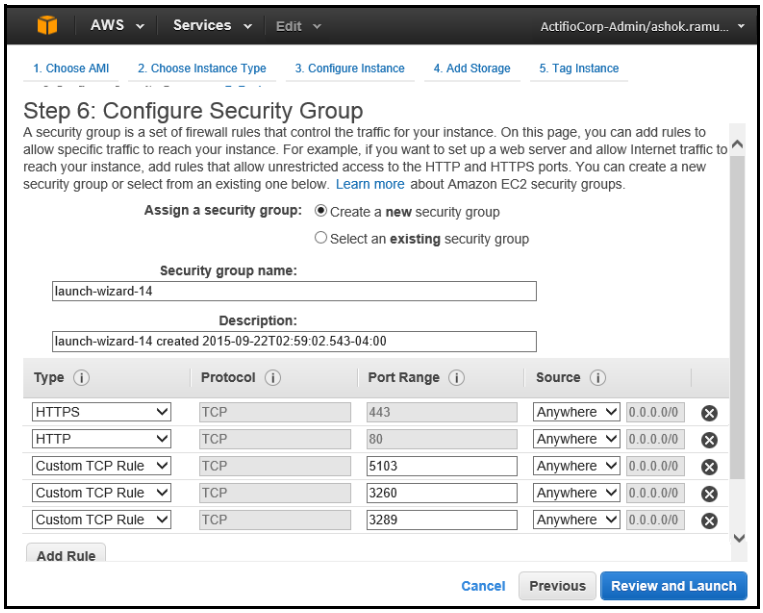
12. Click **Next: Tag Instance** and the Step 5 Tag Instance screen is displayed:



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

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



15. Ensure that the ports in your Security Group are set as follows:

Note: *You must ensure the following ports are open on AGM, the Actifio Sky appliances it manages, and the hosts managed by the Actifio Sky appliance(s).*

	Inbound Port Rules	Outbound Port Rules
AGM	ssh:26	adhd_tunnel:5103
	http:80	https:443
	https: 443	
Actifio Sky	ssh:26	streamsnap_secure:5107
	http:80	connector:5106
	https: 443	https:443
	adhd_tunnel:5103	adha:5103
	streamsnap_secure:5107	
	iSCSI:3260	
Host	http:80	iSCSI:3260
	connector:5106	

Caution! *When deploying AGM, do NOT use the* `booter-no-ports` *security group. Doing so will cause the deployment to fail.*

16. Click **Review and Launch**. The following pop-up menu is displayed.

17. Select either **Choose an existing key pair** or **Create a new key pair** from the drop-down menu.
18. Select the Acknowledgment check-box to indicate that you will access your selected private key file that is required to log into your instance.
19. If the selections and settings are correct, click **Launch Instance** and the AGM for AWS instance is deployed. Select **Cancel** if you want to make any changes to the selections or settings.

3 Accessing Actifio Global Manager

When the AGM instance is ready, you can enter the its Public IP in a browser and log in to the Actifio Global Manager.

Accessing AGM

After AGM is configured and powered up, you can launch AGM in a Web browser:

Note: *For the following procedure you will need the IP address of the AGM VM.*

1. Open a browser and in the address space, enter the Public IP address of the AGM VM and the AGM login screen is displayed:

Actifio Global Manager Login Screen

2. From the AGM Login window, enter the default username: admin, and the password: password. Actifio recommends changing the admin password after you log in to AGM.

   If you are using a Microsoft Internet Explorer browser to log in to AGM and the Username and Password fields are disabled in the Login window, access the Compatibility View Settings dialog box (select **Tools > Compatibility View settings**) and ensure that the **Display intranet site in Compatibility View** check box is checked.

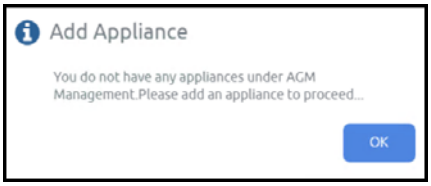
The AGM application opens and prompts you to change your password as part of security enhancement.

3. Enter a new password of at least six (6) characters, it can be the same as your old password as well.
4. Click **Save** to save then new password. You are taken back to the login screen.
5. Enter your user name and new password.
6. Click **Login**.

   The AGM application opens and shows the EULA.

7. Read the license agreement in its entirety, and click **Agree**.

   You are prompted to add an appliance.



8. Click **OK** to open the Add Appliance page. Add the first appliance and subsequently add more appliances following guidelines Adding Actifio Appliances in AGM.
9. Click the question mark icon (**?**) in the upper right corner of the AGM browser to launch the AGM Online Help system. You can also read about the Dashboard, Domain Manager, SLA Architect, Application Manager, Catalog, System Monitor, and Upgrade services in the online Help.
10. To logout of AGM or to change users, click the active user listed at the top of AGM and select **Logout**.

Adding Actifio Appliances in AGM

Actifio appliances must be added to AGM before they can be managed. Appliances are added through AGM's Domain Manager service. Adding each Actifio appliance imports into AGM its hosts, applications, organizations, users, and roles.

The first Actifio appliance that you plan to import into AGM should contain policy and security objects (Templates, Organizations, Roles, and Users) with names and configurations that are most representative of the typical operating environment of your organization. The first Actifio appliance that you add into AGM serves as the baseline appliance used by AGM as the standard for comparison with all subsequent imported Actifio appliances for object consolidation.

For a set of recommended best practices that you should follow prior to adding your Actifio appliances into AGM, see the *Adding Appliances to an AGM* topic in the AGM Online Help.