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:
 - o Product Documentation View the user documentation for your Actifio products and releases.
 - o 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:
 - o Select the Actifio AGM Amazon Machine Image (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 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:
 - o One 50 GB disk for the AGM operating system and AGM repository
 - o One 250 GB disk for Report Manager data
 - o One 250 GB disk for the catalog index
 - o 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:
 - o One 50 GB disk for the AGM operating system and AGM repository.
 - o One 250 GB disk for the catalog index.
 - o 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:
 - o One 50 GB disk for the operating system and AGM repository
 - o 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:

New EC2 Experience Tel us what you then	Launch EC2 Image Bulk	fer Actions ~							Δ.
EC2 Dashboard New	Private images ~ Q, ar	arch : agm-10-0-1-4604-actifio .	Add ther						⊖ IC < 1 to
Events +	a Nama - AMI	tame	- ANI ID -	Source	- Owner	- Visibility	- Status -	Creation Date	- Platform
Taga Reporta	agn-	10-0-1-4604-actifio	atti-03564e3a77%0a743	113540856860/agm-10-0-1-4604-actific	113540856860	Private	available	June 13, 2020 at 12:41:05 P.	Other Linux
INSTANCES Instances									
Instance Types	Image: ami-035d4e3a77f60a	743							
Launch Templates Spot Requests	Details Permissions	Tags							
Savings Plans							10000		
Reserved Instances	A3/8 1					agm-10-0-1-460			
Dedicated Hosts	Owner				State Reason		gm-10-0-1-4604-act	fio	
Scheduled Instances	Creation dat		41177-6-00		Platform details				
Capacity Reservations	Architectur				Usage operation				
		e machine			Virtualization type				
IMAGES	Descriptio				Root Device Name				
AMIs	Root Device Typ	e ebs			RAM disk ID				
Bundle Tasks	Kerrei I	· ·			Product Codes	-			
ELASTIC BLOCK	Block Device	a /dev/ada1=anap-03974db424	40801e2f:50:true:gp2						

5. Select the Actifio AMI

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

Amazon E0 arying cor	C2 provides a wide selection mbinations of CPU, memory, is. Learn more about instance	of instance types op storage, and netwo	rking capa	city, and give you t	he flexibility to choo			
ilter by:	All instance types 💙	Current general	tion 👻	Show/Hide Colu	mns			
Currently	y selected: t2.2xlarge (Variab	le ECUs, 8 vCPUs, 3	2.3 GHz, li	ntel Broadwell E5-2	686v4, 32 GiB mer	nory, EBS only)		
	Family	т Туре -	vCPUs	, Memory (GiB)	Instance Storage (GB) ~	EBS- Optimized * Available (i)	Network Performance ①*	IPv6 Support
	General purpose	t2.nano	1	0.5	EBS only	÷	Low to Moderate	Yes
	General purpose	t2.micro Free tier eligible	1	1	EBS only		Low to Moderate	Yes
	General purpose	t2.small	1	2	EBS only	ō	Low to Moderate	Yes
	General purpose	t2.medium	2	4	EBS only		Low to Moderate	Yes
	General purpose	t2.large	2	8	EBS only	•	Low to Moderate	Yes
	General purpose	t2.xlarge	4	16	EBS only		Moderate	Yes
	General purpose	t2.2xlarge	8	32	EBS only		Moderate	Yes
0	General purpose	t3a.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes

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

	er pricing, assign an access ma		1	ince, and more.			
	Purchasing option	0	Request Spo	ot Instances			
	Network	()	vpc-11e27474	(172.31.0.0/16) (d	efault) 🗸	C Create	new VPC
	Subnet	()	subnet-a326f5f 4090 IP Addres		Default in us-east 🗸	Create	new subnet
	Auto-assign Public IP	(1)	Enable	sco urandbic	~		
	IAM role	1	None		~	C Create	new IAM role
	Shutdown behavior	()	Stop		~		
E	nable termination protection	(i)	Protect agair	nst accidental term	nination		
	Monitoring	(j)	Additional charge	dWatch detailed m ges apply.	nonitoring		
	Tenancy	(i)		y (multi-tenant har	dware) V		
Note	ork interfaces 🕕		Auditional charg	ges will apply for o	edicated tenancy.		
evice		Subnet	Pri	mary IP	Secondary IP add	resses	
h0	New network interface V		00bba1t V		- 19		

- 9. Required settings for this step include:
 - o Network: From the drop down list, select the VPC (network) for the AGM instance.
 - o **Subnet:** From the drop down list, select the subnet for the AGM instance.
 - o **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:

🎁 AWS 🗸	Services 🗸	Edit 🗸		ActifioCorp-Admin	/ashok.ramu 👻
1. Choose AMI 2. C	hoose Instance Type	3. Configure Instance	4. Add Storage	5. Tag Instance	
stance store volumes t	nched with the fol o your instance, o	lowing storage device se r edit the settings of the r ot instance store volume	oot volume. You ca	an also attach additio	onal EBS
Туре ()	Device (j)	Snapshot (j)	Size (GiB) Volu (i)	те Туре і	IOPS (j)
Root	/dev/sda1	snap-23e13b6d	1024 Gen	eral Purpose (S: 🗸	390 / 3000
EBS V	/dev/sdi 🗸	snap-837226ce	100 Gen	eral Purpose (S: 🗸	3072
EBS 🗸	/dev/sdh 🗸	snap-595cdc39	400 Gen	eral Purpose (S 🗸	1200 / 3000
EBS 🗸	/dev/sdd 🗸	snap-95dbaadb	·512 Provi	isioned IOPS SSD (IO1)	5000
		et up to 30 GB of EBS G r eligibility and usage res		SD) or Magnetic stor	age.
<					>
		Cancel Prev	ious Review a	nd Launch Next	: Tag Instance

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:

- o 50 GB for the AGM operating system.
- o 250 GB for the AGM Catalog index store
- o 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:

o 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:

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

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

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

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

🎁 🛛 AWS	v Services v E	dit 👻		ActifioCorp-Admin/ashok.ramu
1. Choose AMI		3. Configure Instan	e 4. Add Storage	5. Tag Instance
Step 5: Ta	ag Instance			ag with key = Name and value =
Key (127 ch	aracters maximum)	Va	ue (255 character	rs maximum)
Name		Му	Company	×
	Cancel	Previous R	eview and Launch	Next: Configure Security Grou

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:

1. Choose AMI 2. Choos			
	e Instance Type 3. Co	nfigure Instance 4. Add Storage	5. Tag Instance
allow specific traffic to reac each your instance, add ru security group or select fro	firewall rules that contro h your instance. For ex- illes that allow unrestrict m an existing one below	ol the traffic for your instance. On ample, if you want to set up a well ted access to the HTTP and HTTF V. Learn more about Amazon EC	b server and allow Internet traffic to PS ports. You can create a new
Assig	_	Create a new security group	-
) Select an existing security grou	ip
sec launch-wizard-14	urity group name:		
indifer wizard 14	B		
launch-wizard-14 crea	Description: ed 2015-09-22T02:59:02	2.543-04:00	7
Туре ()	Protocol (j)	Port Range (i)	Source (i)
HTTPS V	TCP	443	Anywhere V 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			
Add Male		Cancel	Previous Review and Laund

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.

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- 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.

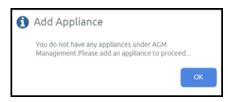


- 3. Enter a new password of at least six (6) characters, it can be the same as your old password as well.
- 4. Click **Save** to save then new password. You are taken back to the login screen.
- 5. Enter your user name and new password.
- 6. Click Login.

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.