Deploying Actifio Global Manager in a Google Cloud Platform

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Preface

The information presented in this guide is intended for users who are configuring Actific Global Manager for the Google Cloud Platform.

When you have finished configuring Actific Global Manager for the Google Cloud Platform, consult the AGM Online Help. It introduces basic concepts, processes and procedures for an Actific appliance.

The Actifio Now 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.

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 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 is 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 on the ActifioNOW Customer portal.

With AGM you can manage many 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 Google 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 Google Cloud: Securely migrating applications to Google Cloud Platform. Using an Actifio appliance's instant access, users can create a sandbox environment in Google Cloud Platform, conduct security, performance and scalability validation, before turning on the application in Google Cloud Platform.
- **Provides Global, standardized, Hybrid Cloud Data Management:** For Google 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,

This guide assumes the reader has an Google account and is familiar with Google processes and procedures.

After you have completed deploying AGM for Google, consult the AGM on line help. It provides an overview of the basic Actifio concepts and procedures as well as an introduction to the AGM user interface.

2 Configuring an Actifio Global Manager Instance

This chapter assumes that you have a valid Google Cloud Platform account, obtained an Actifio Global Manager image from your Actifio representative, and you are familiar with basic Google Cloud Platform processes and procedures.

This section has the following topics:

- AGM Requirements on page 3
- Configuring an Instance on page 5
- Verify Ports on page 11

AGM Requirements

You have the option of deploying AGM with or without the Catalog feature. Whether or not you can enable RM is determined by the resources assigned to the VM.

Use the VMware vSphere 6.7, 6.5, 6.0, 5.5 or 5.1 Web Client to assign minimum system requirements to the following supported configurations. As a best practice, Actifio recommends that the AGM virtual disks do not share the same datastore as the production virtual machines:

Note: The deployment and installation of the AGM-RM OVA using a standalone ESXi host is not supported.

AGM with Catalog and RM:

AGM with Catalog requires the following CPUs, memory, and storage:

- Reserved 10 virtual CPUs
- Reserved 28 GB of memory
- Four (4) 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
 - 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:

AGM with Catalog requires the following CPUs, memory, and storage:

- Reserved 8 virtual CPUs*
- Reserved 20 GB of memory
- Three (3) separate virtual disks for storage:

- o One 50 GB disk for the 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:

AGM with RM and no Catalog requires the following CPUs, memory, and storage:

- Reserved 6 virtual CPUs
- Reserved 16 GB of 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):

AGM requires the following CPUs, memory, and storage:

- 4 CPUs
- 8 GB of memory
- One 50 GB disk for the AGM operating system

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

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 and higher

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

Configuring an Instance

Before you begin, check AGM Requirements on page 3.

To configure a new Actifio Global Manager VM instance:

1. Log into your Google Cloud Platform account. The Dashboard opens.

1	Home		DASHBOARD ACTIVITY		/ CUST
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т	API Manager Billing	>	Project info Sky Deployment Project ID: actific-sky	-@- App Engine Summery (count/sec) -	 Google Cloud Platform status All services normal
	Cloud Launcher		#074335427003		→ Go to Cloud status dashboard
	Support	>	→ Go to project settings	There is no data for this chart	
,	IAM & Admin	>	 Resources 		 Billing \$2,775.40 Approximate charges so far this month
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	Container Engine		Cloud Storage 73 buckets	Compute Engine CPU (N) -	No sign of any errors. Have you set up Error Reporting?
	Cloud Functions			1	Learn how to set up Error Reporting
	Networking	20	Trace	" home home	
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	Bigtable		Get started with Stackdriver Trace	1	Solution guide: Building connected vehicle apps with Cloud
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	Spanner		Add dynamic logging to a running application	RFI APIS	→ Board all nears

Google Cloud Platform Dashboard

2. In the left-hand navigation menu, mouse over **Compute Engine** and a pop-up menu opens.

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19	API Manager Billing	Project info Sky Deployment Project ID actilio sky #974325427083	App Engine Summy (south)and ~		Google Cloud Platform status Al services normal Co to Cloud status deshboard
r,	Support	→ Go to project settings		There is no date for this shart	
0	IAM & Admin	© Resources			Billing S2,775.40 Approximate charges as far this month
9	App Engine	 Aco Ergina E versions 		-> Go to the App Engine dashboard	Yiew detailed charges
8	Compute Engine	VM instances Instance groups Instance templates Disks		Compute Engine Onu(N) -	Error Reporting Not sign of any others. Here you set up Drup Reporting?
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1	Datastore	Operations		K CPU 3.773	4 hours ago Linu: 500 a food the lumiterines in a samiles. COE 18s
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190	mode cloud google conscorigutelining	rtprimit-actific-sky			-> Read all news

Select Images From Compute Engine Menu

3. From the pop-up menu, select **Images** to see all available images. If you have a lot of images, use the filter to narrow the display to the Actifio image.

٢	Compute Engine	Images	[+] CREATE I	MAGE	C REFRESH	CREATE	INSTANCE	O DEPRECAT		
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Available Images

- 4. Select the image from which you will create the Actifio Global Manager instance.
- 5. In the top menu bar, click **Create Instance** and the Create Instance page opens.



Create Instance Page

- 6. In Name, enter a name for the instance this should be lower case only.
- 7. From the **Zone** drop down menu select the region to be used.
- 8. For Machine Type, click Customize and the customizable CPU and Memory options are displayed:

	Google Cloud Platform	Se Siky Deployment -	ч.					23	ø	0		A
۲	Compute Engine	← Create an instance										
8	VM instances	Name 🐵										
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â	Health checks	Extent memory E	10 08	1414 144								
56	Zones	CPU platform @										
¢		Automatic		*								



- 9. To enable AGM with Catalog and RM, select:
 - o 10 CPUs
 - o 28 GB of memory

Note: If you are enabling Catalog and RM, you must define 4 separate disks: 50GB, 250GB, another 250GB and 400GB.

- 10. To enable AGM with Catalog, select:
 - o 8 CPUs
 - o 20 GB of memory

Note: If you are enabling the Catalog feature, you must define 3 separate disks: 50GB, 250GM, and 400GB.

- 11. To enable AGM with RM, select:
 - o 6 CPUs
 - o 16 GB of memory

Note: If you are enabling the RM feature, you must define 2 separate disks: 50GB and 250GB.

- 12. To enable AGM without the Catalog feature, select:
 - o 4 CPUs
 - o 8 GB of RAM

Note: If you are not enabling the Catalog feature, then you will only need to define one 50 GB disk.

- 13. Scroll down to Firewall and enable HTTP and HTTPS
- 14. From Management, Disks, Networking, SSH keys and click **disks**:

Note: Under Firewall, be sure to select both Allow HTTP traffic and Allow HTTPS traffic.

Create an Instance	
	Allow default access Allow full access to all Cloud APts Set access for each APt
	Firewall Firewall Add tags and firewall rules to allow specific network traffic from the Internet Allow HTTP traffic Allow HTTPS traffic
	Management Security Disks Networking Sole Tenancy
	Boot disk Deletion rule Solution Delete boot disk when instance is deleted
	Encryption Data is encrypted automatically. Select an encryption key management solution. Google-managed key No configuration required Gustomer-managed key Manage via Google Cloud Key Management Service Gustomer-supplied key Manage outside of Google Cloud Device name Cused to reference the device for mounting or resizing.
	Based on instance name (default)
	additional disks @ (Octional)
	+ Add new disk + Attach existing disk
	☆ Less
	You will be billed for this instance. Compute Engine pricing L^{2}
	Create Cancel
	Equivalent REST or command line

Add Disks

15. Click +Add new disk. The New disk information page appears.



- 16. Choose the name for the new disk in the **Name** field.
- 17. Select the source type as **Blank disk** from the **Source type** field.
- 18. Enter the size of the disk as required in the Size (GB) field.

If you **are enabling Catalog and RM** and have define 10 CPUs and 28 GB of RAM, then create the following 4 disks:

- o 50 GB for the operating system
- o 250 GB for RM data store. Do not share the datastore with your production load.
- o 250 GB for index store. Do not share the datastore with your production load.
- o 400 GB for backup catalog data. Do not share the datastore with the production load.

If you are enabling Catalog and have define 8 CPUs and 20 GB of RAM, then create the following 3 disks:

- o 50 GB for the operating system
- o 250 GB for index store. Do not share the datastore with your production load.
- o 400 GB for backup catalog data. Do not share the datastore with the production load.

If you are enabling RM and have define 6 CPUs and 16 GB of RAM, then create the following 2 disks:

- o 50 GB for the operating system
- o 250 GB for RM data store. Do not share the datastore with your production load.

If you **are not enabling the Catalog feature** and have define 4 CPUs and 8 GB of RAM, then create one 50 GB disk.

- 19. For Encryption, keep the default Automatic (recommended).
- 20. Click Done.

New disk (disk-9490, Blank, 400 GB)	
New disk (disk-9491, Blank, 250 GB)	1
New disk (disk-9492, Blank, 250 GB)	1
+ Add new disk	+ Attach existing disk
2 Less	
fou will be billed for this instance. Compute Engl	ine pricing 🖸

Three Standard Disks are Created

- 21. Click **Create** and the disk is created.
- 22. Repeat this process until you have created all disks.
- 23. Once all disks are created, review the settings for the instance.
- 24. If all of your settings are correct, click **Create** and the Actifio instance is created.

Verify Ports

Once the instance is created, verify that ports are set correctly for your Actifio Global Manager instance. To Verify ports:

1. Return to the Google Cloud Platform Dashboard.

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A Home	DASHBOARD ACTIVITY		CUSTOMIZE
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v∯r Cloud Launcher	Project info Project name Sky Deployment	-@- App Engine Summary (count/sec) +	 Google Cloud Platform status All services normal
BPI APIs and Services >	Project ID actific-sky Project number 874335427093	There is no data for two chart	→ Go to Cloud status dashboard
👬 Support >			Billing
IAM & Admin	→ Go to project settings	_	Estimated charges \$1,519.08 For the billing period Aug 1 - 8, 2017
VPC network	G Resources Cnetworks	→ Go to the App Engine dashboard	-> View detailed charges
Network Services VPN PN	ternal IP addresses evail rules ites ge	Compute Engine CPU (%) +	Error Reporting No sign of any errors. Have you set up Error Reporting?
VP	C network peering ge		

Select VPC Network

- 2. In the left-hand navigation menu, mouse over **VPC network**.
- 3. From the pop-up menu, select **Firewall rules**. The Firewall rules page show Ingress related port settings.
- 4. Ensure that your port settings matches the following required port settings.

Ingre	Egress						
	Name	Targets	Source filters	Protocols / ports	Action	Priority	Network
	adhd	Apply to all	IP ranges: 0.0.0.0/0	tcp:5107	Allow	1000	default
	connector	Apply to all	IP ranges: 0.0.0.0/0	tcp:5106	Allow	1000	default
	default-allow-http	Apply to all	IP ranges: 0.0.0.0/0	tcp:80	Allow	1000	default
	default-allow-https	Apply to all	IP ranges: 0.0.0.0/0	tcp:443	Allow	1000	default
	iscsi	Apply to all	IP ranges: 10.240.0.0/16	tcp:3260	Allow	1000	default
	rdp	Apply to all	IP ranges: 0.0.0.0/0	tcp:3389, udp:3389	Allow	1000	default
	service-root	Apply to all	IP ranges: 0.0.0.0/0	tcp:26	Allow	1000	default (
	streamsnap	Apply to all	IP ranges: 0.0.0.0/0	tcp:5103	Allow	1000	default
	default-allow-internal	Apply to all	IP ranges: 10.240.0.0/16	tcp:0-65535, udp:0-65535, 1 more 🝷	Allow	65534	default
10-10	and a me that	100 a		11.1.1222.0	212		

Required Port Settings

5. Make changes to the port settings as needed.

3 Accessing Actifio Global Manager

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

Accessing AGM

After the AGM is configured and powered up, launch AGM in a web browser:

1. Obtain the AGM VM's Public IP from Google Cloud Platform's Compute Engine VM Instances page:

=	Google Cloud Platform	🕽 Sky Deployment 👻	٩					B 0	0	٠	E 🗛
۲	Compute Engine	VM instances	CREATE INSTANC	e 👻 💩	IMPORT VM	C REFRESH	-	U 🗊		HIDE INF	O PANEL
8	VM instances	• L'instances could'he res	ited to save you up to an e	timatari \$284	(Number of)	Select an ins	stance				
តំ	Instance groups	per month. Learn more	need to save you up to an e		Dismiss all						
	Instance templates					LABELS N	MONITORING				
	Disks			0	Columns +	Labels help organi	ze vour resour	rces (e.g., cos	L.center	r.sales or e	nv:prod).
1	Snapshots	<	Next >>			No instances	s selected.	(
	Images			-							
23	Committed use discounts	active-oco-sky	zone us-east1-b	Recommendation	10.240.0.11						
	Metadata	active-sol-source	us-east1-c		10.240.0.12						
ô	Health checks	act-live-sql-target	us-east1-c		10.240.0.14						
55	Zones	🗌 🥝 agm-81-262	us-central1-f	🕈 Save \$111 / 1	no 10.240.0.17						
0	Operations	🗆 🥝 agm803	us-central1-f	📍 Save \$110 / 1	no 10.240.0.23						
	Ouotas	O szupcpwin2016	us-east1-c		10.142.0.22						
		 O azuregcp2k8 	us-east1-c		10.142.0.20)					
-	settings	0	and a shareful a		10 140 0 01						

Actifio Global Manager Instance's Public IP

2. Open a browser and in the address space, enter the Public IP address of the AGM VM.



Actifio Global Manager Login Screen

3. In the AGM login page, enter the default login credentials.

The default login for AGM server is: username = <admin> and password = <password>. For AGM installation from the GCP marketplace image only, the default login is: username = admin and password = <agm server instance id>.

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.



- 4. Enter a new password of at least six (6) characters, it can be the same as your old password as well.
- 5. To save the new password, click **Save**. You are taken back to the login screen.
- 6. Enter your user name and new password.
- 7. Click **Login**. The AGM application opens and shows the EULA.
- 8. Read the license agreement in its entirety, and click **Agree**. You are prompted to add an appliance.



- 9. Click **OK** to open the Add Appliance page. Add the first appliance and subsequently add more appliances following guidelines Adding Actific Appliances in AGM.
- 10. Click the **?** in the upper right corner of the AGM browser to launch the AGM Online Help system. You can read up about the Dashboard, Domain Manager, SLA Architect, Application Manager, Catalog, System Monitor, and Upgrade services in the Help.
- 11. 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 used by AGM as the standard for comparison with all subsequent imported Actifio appliances for object consolidation.