Installing and Upgrading Actifio Global Manager on Hyper-V Server

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Preface

This guide provides step-by-step instructions on how to install and configure Actific Global Manager (AGM) on Hyper-V Manager.

Your Actifio appliance's Documentation Library contains detailed, application-specific instructions on how to capture and access your data. Each guide is in PDF format and may be viewed, downloaded, and printed on demand. The following documents will be of particular interest when using AGM:

- Actifio Global Manager Release Notes
- Getting Started With Actifio Copy Data Management

The Actifio Now Customer Portal

During the configuration and initialization of your Actific appliance your Actific representative provided you with a user name and password for the Actific Now customer portal.

From the customer portal you can obtain detailed reports about your Actifio appliance, access the Actifio product line documentation set, including release notes, and 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 provided by your Actifio representative.

Actifio Support Centers

To contact an Actifio support representative, you can:

- Send email to: support@actifio.com
- Call:

From anywhere: +1.315.261.7501 US Toll-Free: +1.855.392.6810 Australia: 0011 800-16165656 Germany: 00 800-16165656 New Zealand: 00 800-16165656 UK: 0 800-0155019

1 Introduction

Actifio Global Manager (AGM) is a virtual appliance. AGM provides centralized management capabilities that can be deployed on standard Microsoft Hyper-V servers and VMware hypervisors as well as in most cloud platforms. From one centralized AGM management system, you use the AGM web-based UI to manage multiple Actifio appliances and perform various day-to-day copy data operations. Actifio appliances are the highly scalable copy data platforms that virtualize application data to improve the resiliency, agility, and cloud mobility of your business.

With AGM you can manage many Actifio appliances. AGM communicates with each Actifio appliance by IP address or fully qualified domain name (FQDN) of the appliance. When you add an Actifio appliance to AGM, all SLA templates, organizations, users, and roles are imported into the AGM database and become AGM-level objects. You can then use these objects across all managed Actifio appliances.For more information on Catalog, see the AGM Online Help.For more information on Catalog, see the AGM Online Help.

As of AGM 8.0.4, you can install AGM with or without the Catalog feature. For more information on Catalog, see the AGM Online Help.

Actifio Report Manager (RM) Integration with AGM

As of AGM 9.0.2, Report Manager (RM) can now be installed as part of AGM and run in the same virtual machine (additional memory and CPU are required). This integration simplifies deployment and streamlines ongoing management. When deployed in this integrated configuration:

- User authentication to RM is done via AGM, instead of one of the appliances. This means that any AGM user
- can log in to RM.
- Organization membership information is pulled from AGM.
- All appliances managed by AGM are automatically added to RM. Additional appliances can be manually added to RM.
- All upgrades are done through the AGM UI and include upgrades to both AGM and RM components.
- The AGM version is always listed, even from the RM Help > About dialog.

For more information on new capabilities of RM 9.0 see the Report Manager 9.0 Release Notes.

2 Requirements

This chapter details the system requirements for AGM with or without Catalog and also the requirements for AGM and RM installation. These requirements include:

- Software Requirements on page 4
- AGM VM Requirements on page 4
- Port Requirements on page 5
- Web Browser Requirements on page 5

Software Requirements

AGM and RM support appliances running 8.x and 9.0.x.

AGM VM Requirements

During deployment, AGM will optionally come up with additional services of catalog and Report Manager according to the resources allocated to the VM.

AGM Only (Without Catalog or RM)

- Reserved 4 virtual CPUs*
- Reserved 8 GB of memory*
- 50 GB free datastore space
- One(1) virtual network interface card (vNIC)
- A static (and unique) IPv4 address**

*Both the virtual CPU as well as virtual RAM allocation should be reserved.

AGM With Catalog

- 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 One 400 GB disk to store backups of the catalog data

*Both the virtual CPU as well as virtual RAM allocation should be reserved.

AGM With RM

- Reserved 6 virtual CPUs*
- Reserved 16 GB of memory*
- 50 GB free datastore space
- 250 GB free datastore space for Report Manager data
- One (1) virtual network interface card (vNIC)
- A static (and unique) IPv4 address

*Both the virtual CPU as well as virtual RAM allocation should be reserved.

AGM With Catalog and RM

- 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 the catalog index
 - o One 400 GB disk to store backups of the catalog data
 - o One 250 GB disk for Report Manager.

- One(1) virtual network interface card (vNIC)
- A static (and unique) IPv4 address***

*Both the virtual CPU as well as virtual RAM allocation should be reserved. **Avoid sharing the datastore space with production load.

Supported AGM Configurations

The following table lists the supported AGM configurations.

Configuration	Cores (Virtual CPUs)	RAM (GB)	Base Partition Size (GB)	Additional Partitions (Minimum Size)
AGM (without Catalog or RM)	4	8	50	-
AGM with Catalog (no RM)	8	20	50	One 250 GB partition + One 400 GB partition
AGM with RM (no Catalog)	6	16	50	One 250 GB partition
AGM with Catalog and RM	10	28	50	Two 250 GB partitions + One 400 GB partition

Port Requirements

The following table details the required AGM port settings:*

Description	Port	Initial Connection Request*
Management of Actifio CDS and Sky appliances by AGM	TCP-5103 and TCP-443 if there is a firewall in the network	Outbound
Web browser access to AGM	TCP-443	Inbound
Remote CLI access to AGM	TCP-26 and, optionally, port TCP-22	Inbound
LDAP server authentication/ authorization	Plain text LDAP: TCP-389 LDAP over SSL: TCP-636	Outbound

Once the connection is established data flow is bidirectional.

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 for running the AGM UI in a web browser.

3 Deploying the AGM VHDX Using Hyper-V Manager

Before you begin:

- Review Requirements on page 3.
- Get a copy of the AGM VHDX file (AGM<version>.vhdx.zip) from Actific Support. Unzip the file and store it in a location that is accessible by the Hyper-V hypervisor that will host the AGM VM.

Note: Because the AGM VM is deployed like any other VHDX, only the sections that are specific to AGM deployment are called out in this section.

This section includes instructions on:

- Deploying the Actifio VHDX in SCVMM on page 7
- Deploying the Actifio VHDX using Hyper-V Manager on page 15

Deploying the Actifio VHDX in SCVMM

You deploy the AGM VHDX in SCVMM like any other Hyper-V VM. The following procedure show SCVMM running on Windows 2012 R2.

- 1. Copy the unzipped AGM VHDX file you received from Actifio Support into the VMM Library location.
- 2. Launch SCVMM.
- 3. Select Library in bottom left pane, then select Library Servers.
- 4. Right-click the server, click **Refresh** and verify the agm.vhdx file is listed in the library server.

Create Service Create VM Creat Template Create VM Creat Create	e	Add Library Server Add	Import Template Import	Export Physical Resource Export	Library Settings Settings	Jobs					
brary	•	Physical Library	y Objects (19)								
VM Templates					123		125	PLS 1	2.0	1.5	
Profiles		Name			Туре -	Library Server Family.	Opera	Owner	Name	Status	-
Equivalent Objects	E.	🕑 en_sql_sei	rver_2012_enterprise_edition_x	36_x64_dvd_8132	ISO Ima	Hyper-V-mg			Global	OK	
Claud Ubundar		🔮 en_windo	ws_server_2012_r2_with_update	e_x64_dvd_60527	ISO Ima	Hyper-V-mg			Global	OK	
Cloud cioraries		CentOS-6	.7-x86_64-bin-DVD1.iso		ISO Ima	Hyper-V-mg			Global	OK	
Self Service User Content		vc1-r4_dis	ik_1		VHDX	Hyper-V-mg	64-bit	SERVIC	Global	OK	
Library Servers		🔷 sky-710-1	550.vhdx		VHDX	Hyper-V-mg	Unkno		Global	OK	
 Hyper-V-momt.services.ai 		Win2K8R2	2-Ent_disk_1		VHDX	Hyper-V-mg	64-bit	SERVIC	Global	OK	
4 MSSCVMMLibrary	-	- ActifioRep	oortManager-7.0.0.129.vhdx		VHDX	Hyper-V-mg	Unkno		Global	OK	
		- ad1-2012	_disk_1		VHDX	Hyper-V-mg	64-bit	SERVIC	Global	OK	
pr VMs and Services		ActifioRep	portManager-7.0.0.129.vhdx.zip		Web Ap	Hyper-V-mg			Global	OK	
😥 Fabric		🧼 agm.vhdx			VHDX	Hyper-V-mg	Unkno		Global	OK	
🧱 Library	1										
FI John	-										-

5. Click **VMs and Services** in the bottom left pane. Then go to the top menu bar of the interface.

6. Click **Create Virtual Machine** drop-down and then select **Create Virtual Machine** from the list. The Create Virtual Machine Wizard opens and shows the Select Source page.

Select Source	Select the source for the new virtual machine
dentity	Use an existion virtual machine. VM template: or virtual hard disk
Configure Hardware	Required Browse
Select Destination	Create the new virtual machine with a blank virtual hard disk
Select Cloud	
Add Propertier	
Select Cloud Add Properties	
Select Cloud Add Properties Summary	

- 7. Keep the default selection of use an existing virtual machine, and click **Browse**.
- 8. From the select virtual machines list that opens, select the AGM vhdx file.

1						
Name	Туре	Operatin	Release	Family N	Virtualiza	Path
sys-win2k12-1	Virtual M	Windows			Microsoft	
Sys3-SQL2k8R2	Virtual M	64-bit edi			Microsoft	
sys-win2k8-1	Virtual M	64-bit edi			Microsoft	
SQL2K12-SYS-VM2	Virtual M	Windows			Microsoft	
sys-win2k12-7	Virtual M	Windows			Microsoft	
sys-win2k12-10	Virtual M	Windows			Microsoft	
Sys2-SQL2k16	Virtual M	Windows			Microsoft	
Sky-RC	Virtual M	Unknown			Microsoft	
Type: VM Template						
Win2k12	VM Temp	Unknown				
win2k12clust	VM Temp	Unknown				
win2k8	VM Temp	Unknown				
Type: VHDX						
Blank Disk - Large.vhdx	VHDX	None			Microsoft	\\Sys-SCV
win2k8_template.vhdx	VHDX	Unknown			Unknown	\\Sys-SCV
Blank Disk - Small.vhdx	VHDX	None			Microsoft	\\Sys-SCV
win2k12_template.vhdx	VHDX	Unknown			Unknown	\\Sys-SCV
sky.vhdx	VHDX	Unknown			Unknown	\\Sys-SCV
agm.vhdx	VHDX	Unknown			Unknown	\\Sys-SCV

- 9. Click **OK** to close the list and go back to the Select Source page.
- 10. Click **Next**. The Identity page opens.
- 11. In the Virtual machine name, add a unique name. This is the name Hyper-V will use. Optionally, add a description, and keep the default Generation 1.

8	Cr	eate Virtual Machine Wizard
Identity		
Select Source	Specify Virtual M	achine Identity
Identity	Virtual machine name:	AGM-DOC
Configure Hardware	Description:	DOC Install
Select Destination		
Select Cloud	Generation:	Generation 1
Add Properties		
Summary		
	 The virtual machinithe computer namin System Center C Generation 1 virtuz 2012 and other hossupport for the Ungeneration 1 virtua Windows Server 20 Learn about supported 	e name identifies the virtual machine to VMM. The name does not have to match e of the virtual machine. However, using the same name ensures consistent displays operations Manager. al machines have capabilities that were previously supported by Windows Server st operating systems. Generation 2 virtual machines have new capabilities, such as lifted Extensible Firmware Interface (UEFI), and the ability to boot in ways that al machines could not. For generation 2 virtual machines, the host must run 112 R2. d guest operating systems for generation 2 virtual machines
		Previous Next Cancel

- 12. Click **Next**. The Configure Hardware page opens.
- 13. Configure hardware specifications for the VM (optional). For example, in Startup Memory, enter 8192MB to deploy AGM without Catalog.

•	Create Virtual Machine Wizard	X
Configur	e Hardware	
Select Source Identity	Configure hardware for the virtual machine. You can import setting hardware profile or save a new profile based on your settings. Hardware profile: [Default - create new hardware configuration settings]	3s from a
Select Destination	🔚 Save As 🎝 New 🕅 Remove	
Select Host	Cloud Capabilit	
Configure Settings	General Specify how much memory (4 00 MB - 1,024 00 GB) to alloc: vitual machine. or specify a range to allow the vitualization i morey dynamically.	ate to the host to allocate
Select Networks	Memory enautra in the static	
Add Properties	Floppy Drive No Media Captured Virtual machine memory: 8192 MB	~
Summary	TODATE O Dynamic	
	The second secon	~
	Video Adapter Minimum memory: 32 🗘 MB	~
	* Bus Configuration	
	Previous Next	Cancel

For AGM with Catalog deployments, you can optionally create additional disks. If you want to create disks at a later time, or to deploy AGM without Catalog, go to step 14.

To create additional hard disk:

- a. In the Bus Configuration section, select IDE Devices.
- b. Click **New** and select **Disk** from the drop-down options.



- c. Optionally, click the **Channel** drop-down and select the channel to use.
- d. Keep the default disk selection of Create a new virtual hard disk and Type Dynamic.
- e. In Size, enter 250 GB for the Index hard disk or 400 GB for the Catalog disk.
- f. In **File name** give a unique name, for example, for the index hard disk, you can enter AGM-Index.

•	Cre	ate ۱	Virtual Machine Wizard
Configure	e Hardware		
Select Source Identity Configure Hardware Select Destination Select Cloud Add Properties Summary	Configure hardware fo profile or save a new p Hardware profile Default Save As Pow X R Compatibility Cloud Capability Pr Cloud Capability Pr General Processor Processor S12 MB Floppy Drive No Meda Captured COM 1 None COM 1 None Video Adapter Default video adapter S Devices attached Compatibility Com 2 None Video Adapter Devices attached Compatibility S000 GB, Primary Com AGM-DOC, Index 250.00 GB, Primary	emo	e virtual machine. You can import settings from a hardware ile based on your settings. te new hardware configuration settings te new hardware configuration setting
	No Media Captured SCSI Adapter 0 0 Devices attached		
	* Network Adapters	×	
			Previous Next Cancel

- 14. Click **Next**. The Destination page opens.
- 15. Keep the default selection of placing the virtual machine on a host (optional).



- 16. Click **Next**. The Select Host page opens.
- 17. Select a host from the drop-down options (optional).

	Create Virtual Machine Wizard	
Select Ho	ost	
Select Source	Select a destination for the virtual machine	
Identity	Destinations are rated based on the virtual machine requirements and on the default placement option	ons
Configure Hardware	Expected Utilization	
Select Destination		
Select Host	Search P v in All Hosts	_
	Rating Destination Warni Transfer Type Netwo	
Configure Settings	😭 😭 🏹 🏹 🚆 syshyperv3.sqa.actifio.com 🎿 Network	
Select Networks	☆ ☆ ☆ ☆ ☆ ightarrow is systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry is a systemetry in the systemetry in the systemetry in the systemetry in the systemetry is a systemetry in the systemetr	
Select Networks	☆☆☆☆☆ is syshyperv2.sqa.actifio.com ⊥ Network ☆☆☆☆☆☆ is outhurner/1 sna artifin nom Network	
Select Networks Add Properties Summary		
Select Networks Add Properties Summary	Image: Systyperv2.sqa.actifio.com Image: Network Image: Systyperv2.sqa.actifio.com Image: Network Image: Systyperv2.sqa.actifio.com Image: Network Placement has finished calculating ratings for each potential destination of this virtual machine. Image: Systyperv2.sqa.actifio.com Image: Network Placement has finished calculating ratings for each potential destination of this virtual machine. Image: Systyperv2.sqa.actific.com Image: Network	
Select Networks Add Properties Summary	Image: Systyperv2.sqa.actifio.com Image: Network Image: Systyperv2.sqa.actifio.com Image: Network Placement has finished calculating ratings for each potential destination of this virtual machine. Image: Systyperv2.sqa.actifio.com Image: Systyperv2.sqa.actifio.com <	
Select Networks Add Properties Summary	Image: Systyperv2.sqa.actifio.com Image: Network Image: Systyperv2.sqa.actifio.com Image: Network Placement has finished calculating ratings for each potential destination of this virtual machine. Image: Systyperv2.sqa.actifio.com	

- 18. Click **Next**. The Configure Settings page opens.
- 19. Specify the virtual location for the VM (optional).

Select Source	Review the virtual mac	hine settings	
Configure Hardware Select Destination Select Host	Locations Virtual Machine Lo C: UnderStorage V Networking Elim Channel	Specify the storage location on the host Virtual machine path: C:\ClusterStorage\Volume1	for the virtual machine files. Browse
Configure Settings Select Networks Add Properties Summary	Machine Resources Wittual Hard Disk agm.vhdx	Add this path to the list of default vir	tual machine paths on the h

- 20. Click **Next**. The Select Networks page opens.
- 21. Select the network connection for the AGM to use (optional).

3	Cre	eate Virtual Machin	ie \	Wizard					
Select Ne	tworks								
Select Source Identity	Specify which virt	ual switches to u yshyperv3.sqa.actifio.c	ise	for the virtua	۱n	hachir	ne.		
Configure Hardware	Virtual Network Ad	VM Network		Virtual Switch		Port	Classification	VLA	N
Select Destination	Network Adapter 1	external		external	•	No	Port Classificat	▼ VLAI	Ni
Select Networks Add Properties									
Summary									
							Re	estore de	faul
	The Virtual Switch of adapter on the host	olumn contains the vit.	irtu	al switches that are	e co	nfigure	ed for each phy	sical netv	vork
				Pr	revi	ous	Next	Can	cel

22. Click **Next**. The Add Properties page opens.

Add Prop	erties
ielect Source dentity Configure Hardware Select Destination Select Host Configure Settings Select Networks Add Properties Summary	Automatic actions Select an action to perform automatically when the virtualization server starts: Don't turn on the virtual machine Delay start up (seconds): Delay start up (seconds): Save State Operating system Specify the operating system you will install in the virtual machine: CentOS Linux 6 (64 bit) Performance and Resource Optimization (PRO) Use this option to prevent the virtual machine from being migrated by PRO or dynamic optimization. Exclude virtual machine from optimization actions

23. Configure the VM properties needed and click **Next**. The Summary page open.

	Create Virtual Machine Wizard	X
Summary		
Select Source Identity Configure Hardware Select Destination	Confirm the settings Virtual machine: AGM-DOC Destination host: syshyperv3.sqa.actifio.com	View Script
Select Host Configure Settings	Path: CA Operating System: CentOS Linux 6 (64 bit)	
Add Properties		
	Start the virtual machine after deploying it To create the virtual machine, click Create. You can track the progress of this job in the Jobs worksp	bace.
	Previous Create	Cancel

- 24. Review the summary. Check the Start the virtual machine after deploying it, if you want the VM to power on as soon as deployment is complete.
- 25. Click **Create**. You can view the progress of the VM creation in the Jobs workspace.
- 26. Continue to Adding or Removing Resources for Catalog on page 19.

Deploying the Actifio VHDX using Hyper-V Manager

To deploy the AGM VHDX:

- 1. Open the Hyper-V Manager.
- 2. Click **Action>New>Virtual Machine**. The New Virtual Machine Wizard opens the before you begin page. Read the instructions and click **Next** to open the Name and Location page.
- 3. In **Name**, enter a unique name for the AGM virtual machine. This is the name Hyper-V will use.

8	New Virtual Machine Wizard
Specify Nan	ne and Location
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Choose a name and location for this virtual machine. The name is displayed in Hyper-V Manager. We recommend that you use a name that helps you easily identify this virtual machine, such as the name of the guest operating system or workload. Name: AGM-DOC You can create a folder or use an existing folder to store the virtual machine. If you don't select a folder, the virtual machine is stored in the default folder configured for this server. Store the virtual machine in a different location Location: C:\ClusterStorage\volume 1\ If you plan to take checkpoints of this virtual machine, select a location that has enough free space. Checkpoints include virtual machine data and may require a large amount of space.
	< Previous Next > Finish Cancel

4. Click **Next**. The Specify Generation page opens.

8	New Virtual Machine Wizard
Specify Gene	ration
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	 Choose the generation of this virtual machine. Generation 1 This virtual machine generation provides the same virtual hardware to the virtual machine as in previous versions of Hyper-V. Generation 2 This virtual machine generation provides support for features such as Secure Boot, SCSI boot, and PXE boot using a standard network adapter. Guest operating systems must be running at least Windows Server 2012 or 64-bit versions of Windows 8. Once a virtual machine has been created, you cannot change its generation.
	< Previous Next > Finish Cancel

5. Keep the default selection of Generation 1 and click **Next**. The Assign Memory page opens.

6. In Startup Memory, enter 8192MB to deploy AGM without Catalog. If you plan to use AGM with Catalog, enter 20480 (1024x20).

a.	New Virtual Machine Wizard
Assign Memo	ory
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Specify the amount of memory to allocate to this virtual machine. You can specify an amount from 32 MB through 133806 MB. To improve performance, specify more than the minimum amount recommended for the operating system. Startup memory: 8193 MB Use Dynamic Memory for this virtual machine. When you decide how much memory to assign to a virtual machine, consider how you intend to use the virtual machine and the operating system that it will run.
	< Previous Next > Finish Cancel

- 7. Click **Next**. The Configure Networking page opens.
- 8. Click the **Connection** drop-down and select the network connection for the AGM to use.

3 0	New Virtual Machine Wizard
Configure Ne	tworking
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Each new virtual machine includes a network adapter. You can configure the network adapter to use a virtual switch, or it can remain disconnected.
	< Previous Next > Finish Cancel

- 9. Click **Next**. The Connect Virtual Hard Disk page opens.
- 10. Select **Use an existing virtual hard disk** (second option). For Location, click **Browse** and go to the where you stored the unzipped vhdx file on your Hyper-V server.

<u>ک</u>	New Virtual Machine Wizard	X
Connect Vi	rtual Hard Disk	
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking	A virtual machine requires storage so that you can install an operating system. You can specify the storage now or configure it later by modifying the virtual machine's properties. Create a virtual hard disk Use this option to create a VHDX dynamically expanding virtual hard disk.	5
Connect Virtual Hard Disk Summary	Location: Browse Size: 127 GB (Maximum: 64 TB) O Use an existing virtual hard disk Use this option to attach an existing virtual hard disk, either VHD or VHDX format. Location: Locatio	
	 Attach a virtual hard disk later Use this option to skip this step now and attach an existing virtual hard disk later. 	
	< Previous Next > Finish Cano	el

11. Click **Next**. The summary page opens. (See next page).

-2	
Before You Begin Specify Name and Location Specify Generation	You have successfully completed the New Virtual Machine Wizard. You are about to create the following virtual machine. Description:
Assign Memory Configure Networking Connect Virtual Hard Disk	Name: AGM-DOC Generation: Generation 1 Memory: 8192 MB Network: Prod-VS
Summary	Hard Disk: C:\ClusterStorage\volume1\agm-doc\agm.vhdx (VHDX, dynamically expanding)
	To create the virtual machine and dose the wizard, click Finish.

12. Review your selections and click **Finish** to complete VM deployment. The newly deployed VM is listed in the Virtual Machines list. Continue to Adding or Removing Resources for Catalog on page 19.

		Нуре	er-V Man	ager				x
File Action View Help								
🗢 🔿 📶 🚺 🗊								
Hyper-V Manager						^	Actions	
HYP-R4-U13	Virtual Machines						HYP-R4-U13	. ^
HYP-R4-U14	Name [▲]	State		CPU Usage	Assigned Memo		New	
	A-Linux-1	Runn	ning	0 %	1024 MB			
	2A-W2K8R2-2	Runn	ning	0 %	1024 MB		import Virtual Mac	
	ad1-dc	Runn	ning	0 %	1024 MB		🖆 Hyper-V Settings	
	AGM-DOC	Off					🗱 Virtual Switch Man	
	Ken-RM-HyperV	Off-C	ritical					≡
	<	Inux-1 Running 0 % 1024 MB V2K8R2-2 Running 0 % 1024 MB dc Running 0 % 1024 MB MOC Off RM-HyperV Off-Critical III kpoints -DOC -DOC ter Connection IP Addresses	💰 Edit Disk	-				
	Checkpoints					-	Inspect Disk	
	AGM-DOC						Stop Service	
							X Remove Server	
	Adapter		Connec	tion	IP Addresses		🔉 Refresh	
	Network Adapter (Dynamic I	MAC: N	Prod-VS				View	
							Help	
						H	AGM-DOC	
		-	h			~	onnect	
	<	ш			>		Settings	\sim

co

4 Configuring Resources

Once the AGM VM has been deployed, configure CPUs, change memory and add or remove the disks for the AGM VM using the instructions in this section.

- Adding or Removing Resources for Catalog on page 19
- Adding Resources for RM on page 24

Adding or Removing Resources for Catalog

For the AGM only configuration, the virtual size of the boot disk is 50 GB. For AGM with catalog capability, you will need to create two additional disks:

- for index store (disk-1)
- for backup catalog data (disk-2)

The virtual size of the index store is 250 GB and the virtual size of the backup disk is 400 GB. Actifio recommends using a server or a shared drive with adequate space for the boot, index and backup disks.

You will additionally need to:

- increase virtual CPUs
- increase memory

Note: Resource requirements for RM configuration will be in addition to the above. For details, see Supported AGM Configurations on page 5.

- 1. Verify the VM is powered off. (Select the VM, right click and select Shut Down to power off).
- 2. Select the AGM VM, right click and select **Settings** from the drop-down options.
- 3. Click **Memory**, and in **Startup RAM**, enter 8192 MB (for AGM without Catalog) or 20480 (for AGM with Catalog) as required.
- 4. Click **Processors**, then increase or decrease the number of virtual processors to 4 (for AGM without Catalog) or to 8 (for AGM with Catalog) as required.
- 5. If you are configuring AGM without Catalog, go to step 12. If you are configuring AGM with Catalog, create two new disks. To create a disk:
 - a. Go to IDE Controller 0, select Hard Drive and click Add.
 - b. Select the second option, Virtual hard disk. Click New and the New Virtual Hard Disk wizard opens.
 - c. Read the before you begin page and click **Next**. The Choose Disk format page opens. (See next page).



d. Select VHDX and click Next. The Choose Disk Type page opens.

Fixed size This type of disk provides better performance and is recommended for servers running applications with high levels of disk activity. The virtual hard disk file that is created initially uses the size of the virtual hard disk and does not change when data is deleted or added. Dynamically expanding This type of disk provides better use of physical storage space and is recommended for servers running applications that are not disk intensive. The virtual hard disk file that is created is small
Initially and changes as data is added. Differencing This type of disk is associated in a parent-child relationship with another disk that you want to leave intact. You can make changes to the data or operating system without affecting the parent disk, so that you can revert the changes easily. All children must have the same virtual hard disk format as the parent (VHD or VHDX).

e. Select the **Dynamically expanding** option and click **Next**. The Specify Name and Location page opens.

b	New Virtual Hard Disk Wizard
Specify Nan	ne and Location
Before You Begin Choose Disk Format Choose Disk Type Specify Name and Location Configure Disk Summary	Specify the name and location of the virtual hard disk file. Name: AGM-DOC-Index.vhdx Location: C:\ClusterStorage\volume1\u00f3gm-doc\ Browse
	< Previous Next > Finish Cancel

- f. Give a unique name and browse to select a location either on your Hyper-V server or on the network that has sufficient storage space of more than 250 GB.
- g. Click **Next**. The Configure Disk page opens. (See next page).

Before You Begin Choose Disk Format Choose Disk Type Specify Name and Location	You can create a blank virtual hard disk or copy the co Create a new blank virtual hard disk Size: 250 GB (Maximum: 64 TB)	ontents of an existing physical disk.	
Configure Disk Summary	Copy the contents of the specified physical data Physical Hard Disk (\\PHYSICALDRIVE0 (\\PHYSICALDRIVE2 (\\PHYSICALDRIVE3 (\\PHYSICALDRIVE5 (\\PHYSICALDRIVE5 (\\PHYSICALDRIVE5 (\\PHYSICALDRIVE6 (\\PHYSICALDRIV	Size 279 GB 39 GB 71 GB 1019 MB 2047 GB 2047 GB 1023 GB 1023 GB 8k	VSE

h. In Size, enter 250 GB for the Index hard disk and click Next.

6	New Virtual Hard Disk Wizard
Completing	the New Virtual Hard Disk Wizard
Before You Begin Choose Disk Format Choose Disk Type	You have successfully completed the New Virtual Hard Disk Wizard. You are about to create the following virtual hard disk. Description:
Specify Name and Location Configure Disk Summary	Format: VHUX Type: dynamically expanding Name: AGM-DOC-Index.vhdx Location: C:\ClusterStorage\volume1\agm-doc Size: 250 GB
	To create the virtual hard disk and close this wizard, click Finish.
	< Previous Next > Finish Cancel

- i. Review the summary page and click **Finish** to create the Index hard disk.
- j. Click **Apply** to save the configuration change.
- k. Repeat the steps above to create Catalog disk (you can, for example, name it AGM-DOC-Catalog.vhdx) with more than 400 GB for storing catalog backup data. (See next page).

- 6. Click **Network Adapter**, and verify the network connection for AGM VM deployment. If needed, select a different network connection.
- 7. Click **Apply** and then **OK** to save all configuration changes.
- 8. Go back to the Hyper-V Manager. Right click the AGM VM and select **Start**.
- 9. Once the console access is active, enter "alt+f2" to show the device panel.

[Make sel sysid : 54178 sth0 IP:	ection and press <enter> 1 2</enter>
1. 2. 3.	Refresh Diagnostics Configure Networking
	(Select)

- 10. Go to **Configure Network > Device configuration** and choose the available ethernet device (eth0).
- 11. Enter the following information:
 - o Static IP address of the VM
 - o Subnet mask or prefix for this VM
 - o Default gateway for this VM
 - o Primary and secondary DNS server

Note: AGM deployment supports DHCP in addition to static IP support.

Network Co	nfiguration
Name Device Use DHCP Static IP Netmask Default gateway IP Primary DNS Server Secondary DNS Server	eth1 eth1 III III III III
Ok	Cance 1

- 12. Select **OK**, then **Save**, and then **Save & Quit** to save your changes and close the console. The VM reboots and powers on.
- 13. Verify you can ping the AGM server.
- 14. Continue to Accessing AGM on page 25.

Adding Resources for RM

For the AGM only configuration, the virtual size of the boot disk is 50 GB. For AGM with RM, you will need to create an additional disk of 250 GB free datastore space for Report Manager data. Actifio recommends using a server or a shared drive with adequate space for the boot and additional disks.

You will additionally need to:

- increase virtual CPUs by 2 CPUs
- increase memory by 8GB

Note: Resource requirements for Catalog configuration will be in addition to the above. For details, see Supported AGM Configurations on page 5.

Refer to instructions in Adding or Removing Resources for Catalog on page 19 to step by step details on how to add the additional CPUs, Memory and the additional disk.

Adding the resources may take a long time (over an hour). While the resources are getting added, AGM will not be available for use.

Note: Do not remove the disk for RM under any circumstances. This will corrupt your AGM database.

5 Accessing AGM

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

Note: You will need the IP address of the AGM VM. You can find this IP address on the AGM VM's Networking tab.

- 1. Open a browser and in the address space, enter the IP address of the AGM VM:
 - Cicbal Manager Lezenware Dessuoar Lec m
- 2. In the AGM Login window, enter the default login credentials: USERNAME admin and PASSWORD password and click Login.

Note: 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.

https://<VM IP address>/

ac	ctifio
Glob	al Manager
Change Pass	word
Password policy require Please change your pas	s you to change your password. sword and login again.
USERNAME.	admin
NEW PASSWORD:*	
CONFIRM PASSWORD.*	

- 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.

End User License Agreement	
English v	ſ
International Program License Agreement	
Part 1 - General Terms	
BY DOWNLOADING, INSTALLING, COPYING, ACCESSING, CLICKING ON AN "ACCEPT" BUTTON, OR OTHERWISE USING THE PROGRAM, LICENSEE AGREES TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCEPTING THESE TERMS ON BENALF OF LICENSEE, YOU REPRESENT AND WARRANT THAT YOU HAVE FULL AUTHORITY TO BIND LICENSEE TO THESE TERMS. IF YOU DO NOT AGREE TO THESE TERMS,	
* DO NOT DOWNLOAD, INSTALL, COPY, ACCESS, CLICK ON AN "ACCEPT" BUTTON, OR USE THE PROGRAM; AND	
 PROMPTLY RETURN THE UNUSED MEDIA, DOCUMENTATION, AND PROOF OF ENTITLEMENT TO THE PARTY FROM WHOM IT WAS OBTAINED FOR A REFUND OF THE AMOUNT PAID. IF THE PROGRAM WAS DOWNLOADED, DESTROY ALL COPIES OF THE PROGRAM. 	
1. Definitions	l
Disagree Agree	

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

You are prompted to add an appliance.

0	Add Appliance
	You do not have any appliances under AGM Management.Please add an appliance to proceed
	ок

- 8. Click **OK** to open the Add Appliance page. Add the first appliance and subsequently add more appliances following guidelines Planning Your AGM Deployment After Installation on page 31.
- 9. 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.

10. To logout of AGM or to change users, click the active user listed at the top of AGM and select **Logout**.

6 Accessing RM

After you have launched AGM in a web browser, launch RM.

Note: RM uses the same IP address as AGM.

To access RM:

- 1. Open a browser and in the address space enter the IP address of the RM. https://<AGM IP address>/rm> or https://<AGM IP address>/report
- 2. Enter your AGM user name and password.

Note: AGM users with Administrator role can perform administrative tasks in RM.

3. Click Login.

7 Planning Your AGM Deployment After Installation

Before you add Actifio CDS and Sky appliances to AGM, Actifio recommends that you first perform a business requirements analysis of the SLA templates (and policies), roles, organizations, and users created on each of the Actifio appliances to be imported into AGM. Consistency is critical to ensuring a centralized and consolidated set of imported policy and security objects from your Actifio appliances into AGM. This is especially important for SLA templates and policies, as well as for user roles, that have been defined in your individual Actifio appliances.

Ideally, the SLA templates and policies used by the Actifio appliances in your operating environment follow a consistent governance for SLA template and policy naming conventions along with the definition of policy attributes across each appliance. However, SLA templates in multiple Actifio appliances may use the same name, but are configured differently. For example:

Two or more Actifio appliances can each have an SLA template named **Tier 1**. Upon closer inspection, there can be differences in the policies in each template. These inconsistencies will result in conflicts when you attempt to add those the Actifio appliances into AGM. You must resolve those differences before importing the Actifio appliances.

Object conflicts during the import process typically occur under the following conditions:

- o SLA templates of the same name have a different number of policies and/or defined attributes between the Actifio appliance and AGM.
- o Roles of the same name have differences in services and/or Access Control Level (ACL) rights between the Actifio appliance and AGM.

Note: During Actific appliance importing the mapping of LDAP groups will not be brought into AGM. For example, if there is an LDAP group named "DNSUpdateProxy" on Actific Appliance 1, after importing Actific Appliance 1 to AGM "DNSUpdateProxy" will not appear in AGM.

After you import your Actifio appliance(s) into AGM, configure the LDAP server on AGM and then recreate the missing mapped LDAP groups in AGM. Be sure to assign the proper organizations and roles to them. See the **Actifio Global Manager Online Help System**, the "Configuring LDAP Settings" and "Mapping LDAP Groups to Roles and Organizations" topics.

Review the following planning topics to help you pro-actively address potential conflicts and ensure a smooth import of your Actifio appliances and its associated policy and security objects:

- Selecting the First Actific Appliance to Import on page 32
- Managing SLA Templates Prior to Importing on page 32
- Managing Roles on page 33
- Resource Conflict Resolution Tool on page 34
- Managing Organizations on page 33

Selecting the First Actifio Appliance to Import

Choose an Actific appliance that is used in a production environment as the first appliance to add into AGM. This will help establish a baseline for the templates, organizations, roles, and users imported into the AGM database for addressing potential conflicts with subsequent appliances you add into AGM.

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 example, if you import an Actifio appliance that is used in a Test/Dev environment, the templates, organizations, roles, and users that are imported in AGM may contain actual object names but may contain atypical configuration settings. When you attempt to import additional Actifio appliances that contain Templates, Organizations, Roles, or Users with the same names, this can result in object conflicts between AGM and that Actifio appliance at the point of import.

Sharing Mode Options

When two Actifio appliances are joined with Sharing Mode enabled, when adding them to AGM, you can:

Add Just the Primary Appliance

In this case, AGM pushes templates only to the Primary appliance. The Primary appliance will then push templates to the Secondary appliance. AGM will be able to manage applications on the Primary appliance, but not on the Secondary appliance. You must log on to the Secondary appliance to manage its applications. Sharing Mode maintains the Organizations and users defined between the Primary and Secondary appliances.

Add Both the Primary and Secondary Appliances

In this case, you MUST add the Primary appliance first.

After both appliances are added, updated templates can be pushed to both appliances. When the Primary receives an updated template it will push the updated template to the Secondary.

AGM will be able to manage applications on both the Primary and Secondary appliances. Sharing Mode maintains the Organizations and users defined between the Primary and Secondary appliances.

Disable Sharing Mode Then Add Both Appliances

In this case, after Sharing Mode is disabled you can add each appliance to AGM.

After both appliances are added, templates can be pushed to both appliances. AGM will be able to manage applications on both appliances. You may have to log in to what was the Secondary appliance and configure/ reconfigure Organizations and users. Organizations and users on what was the Primary will remain in tact.

Managing SLA Templates Prior to Importing

Check the SLA template naming conventions used on two or more Actifio appliances that you plan to import into AGM. If multiple Actifio appliances contain SLA templates of the same name, but those templates contain either a different number of policies or different policy attributes, this will result in a conflict when you go to import those appliances.

Excluding the first Actific appliance that you plan to import as the baseline appliance, you can attempt an initial cleanup of the other Actific appliances in the following areas:

- Rename conflicting SLA templates.
- Modify a conflicting SLA template to either add the missing policies or remove the extra policies.
- Modify the attributes in the differing policy (or policies) in the conflicting SLA template to make them the same.

The Dry Run tool in AGM identifies conflicts between the in-coming Actifio appliance and what currently exists in AGM during the import process (see Resource Conflict Resolution Tool on page 34).

Managing Roles

Check the roles (names and attributes) used on the Actifio appliances that you plan to import into AGM. If you have multiple roles of the same name but those roles have differences in services and/or Access Control Level (ACL) rights, this will result in a conflict when you go to import those Actifio appliances.

Excluding the first Actific appliance that you plan to import as the baseline appliance, on the other Actific appliances you can attempt a clean-up of the services and/or rights associated with the conflicting role(s) to make them the same.

You may encounter an instance when AGM detects a conflict because of a missing role-right assignment on the Actifio appliance to be added yet the role-right assignments appear to be identical. In this case, if differences are detected in role-right assignments between the Actifio appliance and AGM, delete the problematic role from AGM and then retry adding the appliance to AGM.

The Dry Run tool in AGM identifies security conflicts between the in-coming Actific appliance and what currently exists in AGM during the import process (see Resource Conflict Resolution Tool on page 34).

Managing Organizations

When you add an Actifio CDS or Sky appliance to AGM, the organizations from each appliance are imported to AGM.Keep in mind that:

An appliance's organizations are imported to AGM when the appliance is added to AGM.

Existing organizations, new organizations or changes to organizations in AGM are not exported to appliances.

When two or more appliances use the same name for an organization, upon import to AGM, a single organization is created that has all of the resources specified in the imported organizations.

For Example before appliances are added to AGM:

Actifio Appliance1 has three organizations. Only the Public organization contains resources:

Organization: Private1

Organization: Private2

Organization: Public

User Ken

Host 172.10.111.11

Actifio Appliance2 has three organizations. Only the Public organization contains resources:

Organization: Administrators

Organization: Public

User Bob

Host 172.10.131.98

Organization: Test

AGM has two organizations:

Organization: Finance

Organization: Marketing

After the two appliances are added to AGM, both appliances keep their respective organizations. AGM will import copies of each appliance's organizations as follows:

Organization: Administrators (From Appliance2)

Organization: Finance (Original to AGM)

Organization: Marketing (Original to AGM)

Organization: Private1 (From Appliance1)

Organization: Private2 (From Appliance1)

Organization: Public (From Appliance1 and Appliance2)

User Ken (From Appliance1)

User Bob (From Appliance2)

Host 172.10.111.11 (From Appliance1)

Host 172.10.131.98 (From Appliance2)

Organization: Test (From Appliance2)

The organization Public from both appliances is imported in to a single organization named Public. AGM's Public organization contains the resources from the Public organizations from both appliances

Resource Conflict Resolution Tool

When you add a new Actifio appliance to AGM, AGM automatically runs the Dry Run Tool and performs a conflict analysis. This tool identifies conflicts between Actifio appliances currently managed by AGM and an Actifio appliance being imported.

The Dry Run tool resolves resource conflicts as follows:

- **SLA Templates**—Templates go through a conflict-resolution process by AGM.
- **Organizations**—Imported Actifio appliance-level organizations with the same name are merged with the AGM-level organizations, and their AGM-level objects (users and SLA templates) are associated with their respective AGM objects.
- Users—Users that already exist in AGM are ignored and are not imported from the Actifio appliance.
- **Roles**—Roles go through a conflict-resolution process by AGM.

During the dry-run phase of the Actifio appliance import process a log is displayed that details all import actions and decisions. For example, in the following screen capture of a log:

- Policies are missing from the Standard and Enterprise templates found in the in-coming Actifio appliance and AGM.
- Specific rights are missing from the Basic role found in the in-coming Actific appliance and AGM.

DOMAIN	MANAGER		Filter by	Applian	nces V Organizations V	
Appliances	Users	Roles	Organizations	Hosts	Storage Pools	
Add N	ew Appl	iance				
DRY RUN S	TATUS 🛞	Failure (Conflicts discovere	i between ir	in-coming appliance objects and existing AGM objects	
Log						
Error: Te Error: Ro	conflicts Found i mplate: Standar Policies missin Policies missin conflicts Found i le: Basic Rights missing	n Template d g from exis ise g from in-co n Role obje from existi	objects: ting ACM object: D-Deil oming appliance object: cts: ng ACM object: Applice	y abod tion Manage,	e,Backup Manage,Clone Manage,Dedup-Async Manage,Host Manage,Dedup-Async Test,Ressore Manage,LiveClone Manage,Mount Manage	
Object U:	s to be importe ers: name: Foo name: jon name: bestuse name: niva	d and addec r2	d to ACM:			
ь	name: testuse molates	r1				

If you encounter a conflict during Dry Run, we recommend that you resolve each conflict on the Actifio appliance that is experiencing the issue.

For example, based on the identified conflict flagged during Dry Run for the Actifio appliance you wish to import into AGM, you can:

- Rename conflicting SLA templates on the Actifio appliance.
- Modify a conflicting SLA template on the Actifio appliance to add the missing policies or remove the extra
 policies.
- Modify the attributes in the differing policy (or policies) in the conflicting SLA template on the Actifio appliance to make the attributes the same.
- Modify the services and/or rights associated with the conflicting role identified on the Actifio appliance to make the services and/or rights the same.

For details on the Actifio appliance import process, including import guidelines, recommendations, the step-by-step import process, and conflict troubleshooting, see the **Actifio Global Manager Online Help System**, the "Importing Overview," "Adding an Actifio Appliance to AGM," and "Troubleshooting Conflicts" topics.

For the best practices associated with creating and modifying SLA policy templates for use by an Actifio appliance, see **Best Practices for the Actifio SLA Architect's Policy Templates** located in the Actifio Documentation Library included with each Actifio appliance and also available on the **ActifioNow customer portal**.

For information on how use AGM, 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.

8 Upgrading the Actifio Global Manager

This section provides detailed instructions on how to upgrade the AGM. It includes the following topics:

- Before You Begin on page 37
- Upgrading AGM on page 38

Note: During an upgrade there will be a period of time when AGM synchronizes new data with the appliances. This may lead to incorrect values being shown on the AGM Dashboard. We recommend that you wait for a period of one to two hours for the inconsistencies to resolve. If they persist even after that time, contact Actifio support for help.

Before You Begin

Before you begin you must:

Take a Snapshot of the current AGM VM

In the unlikely event that you encounter an issue while upgrading, a snap shot will allow you to revert back to the previous state of your AGM VM.

Obtain the AGM.gpg upgrade file

Your Actifio representative will provide you with the latest AGM upgrade file. Place a copy of that file in a location that is easily accessible from the AGM browser-based UI.

Upgrading AGM

To upgrade AGM:

1. Open a browser, and in the address space enter the IP address of the AGM VM:

https://<VM IP address>/

- 2. From the AGM Login window, enter the username and password, then click Log In.
- 3. In the left-hand navigation, click the **Upgrade** icon. The Upgrade page opens:



- 4. You can either:
 - o Browse to the location of the AGM.gpg upgrade file and upload it into this window.
 - o Drag and drop the AGM.gpg upgrade file into this window.
- 5. AGM begins the upload process.

A progress bar shows the status of the upload. The file upload sequence undergoes three phases: file upload, file unpack, and file extraction.



- 6. When the file upload is complete and the upgrade image has been extracted, the Success dialog opens.
- 7. Click **Okay** to close the dialog.
- 8. Click **Update AGM** to initiate the software upgrade. AGM will always select and install the latest upgrade software even if there are multiple upgrade versions listed in the Updates section.

Note: If required, you can remove an older software upgrade version from AGM. AGM will automatically select the first item in the Updates listing on the left side of the window. Select the version you want to delete and then click **Remove**. You cannot select multiple upgrades for deletion.

<u> </u>	IPGRADE	Filter by	Appliances 🔻	Organizations 🕶	1	admin J	1 0	
								٦
								1
				Upload New Version				1
භ				ACM				l
*⊿	Updates(1)							
۷	patch-AGM		*					
φ								
۲								
			Ŧ					
	Remove							
AGH								

The Update confirmation dialog opens.

9. Click **Update AGM** again to confirm that you want to upgrade the AGM software. The software upgrade process begins and the AGM Upgrade page shows the progress.

Note: If you encounter issues during the AGM software upgrade procedure, please contact your Actifio Support representative for assistance.

UPGRADE	Filter by Appliances ¥	Organizations ¥	1 admin 🛔 🥹 🄺
	0	AGM is applying upgrade.	
9	2	Restarting the server Please do not reload or perform other operations	
d) 3	3	Server has restarted Please Log back into ACM	

10. After the software upgrade is completed, you get the success message.

AGM Upgrade	
AGM successfully upgrade to version	
	Okay

- 11. Click **OK** to close the dialog.
- 12. Log back into the AGM UI and confirm that the AGM upgrade was successful.