
Installing and Upgrading Actifio Global Manager on Hyper-V Server

Copyright, Trademarks, and other Legal Matter

Copyright © 2009 - 2020 Actifio, Inc. All rights reserved.

Actifio®, AnyIT®, Dedup Async®, OnVault®, Enterprise Data-as-a-Service®, FlashScan®, AppFlash DEVOPS Platform®, Copy Data Cloud®, and VDP® are registered trademarks of Actifio, Inc.

Actifio Sky™, Actifio One™, and Virtual Data Pipeline™ are trademarks of Actifio, Inc.

All other brands, product names, goods and/or services mentioned herein are trademarks or property of their respective owners.

Actifio, Inc., is a provider of data protection and availability products. Actifio's technology is used in products sold by the company and products and services sold and offered by its commercial partners. The current list of Actifio patents is available online at: <http://www.actifio.com/patents/>

Actifio believes the information in this publication is accurate as of its publication date. Actifio reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.

THE INFORMATION IN THIS PUBLICATION IS PROVIDED "AS IS." ACTIFIO, INC. MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WITH RESPECT TO THE INFORMATION IN THIS PUBLICATION, AND SPECIFICALLY DISCLAIMS IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This software and the associated documentation are proprietary and confidential to Actifio. Use, copying, and distribution of any Actifio software described in this publication requires an applicable software license. Any unauthorized use or reproduction of this software and the documentation may be subject to civil and/or criminal liability.

Actifio strives to produce quality documentation and welcomes your feedback. Please send comments and suggestions to docs@actifio.com.

Contents

Preface	v
The Actifio Now Customer Portal.....	v
Actifio Support Centers	v
Chapter 1 - Introduction	1
Actifio Report Manager (RM) Integration with AGM.....	1
Chapter 2 - Requirements	3
Software Requirements	4
AGM VM Requirements	4
Supported AGM Configurations	5
Port Requirements.....	5
Web Browser Requirements.....	5
Chapter 3 - Deploying the AGM VHDX Using Hyper-V Manager	7
Deploying the Actifio VHDX in SCVMM.....	7
Deploying the Actifio VHDX using Hyper-V Manager.....	15
Chapter 4 - Configuring Resources	19
Adding or Removing Resources for Catalog.....	19
Adding Resources for RM.....	24
Chapter 5 - Accessing AGM	25
Chapter 6 - Accessing RM	29
Chapter 7 - Planning Your AGM Deployment After Installation	31
Selecting the First Actifio Appliance to Import	32
Sharing Mode Options	32
Managing SLATemplates Prior to Importing	32
Managing Roles.....	33
Managing Organizations.....	33
Resource Conflict Resolution Tool.....	34
Chapter 8 - Upgrading the Actifio Global Manager	37
Before You Begin	37
Upgrading AGM	38

Preface

This guide provides step-by-step instructions on how to install and configure Actifio 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 Actifio appliance your Actifio representative provided you with a user name and password for the Actifio 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 Actifio 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.

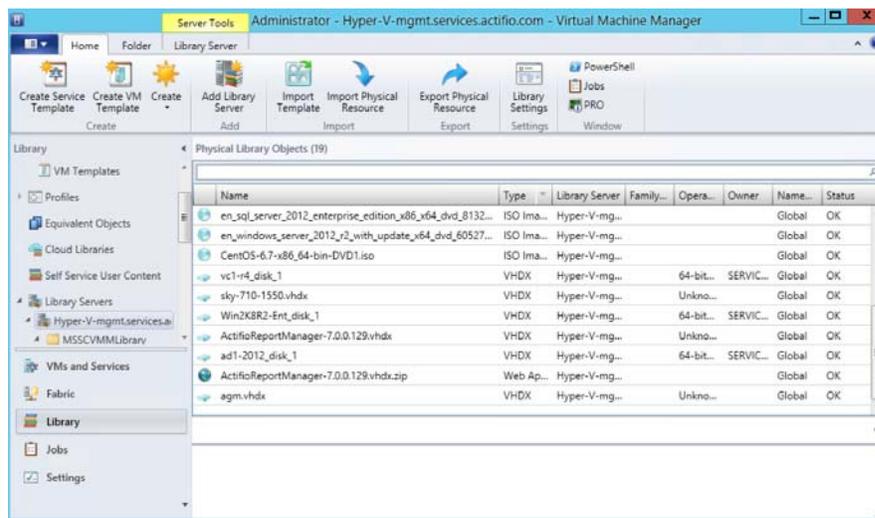
This section includes instructions on:

- [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

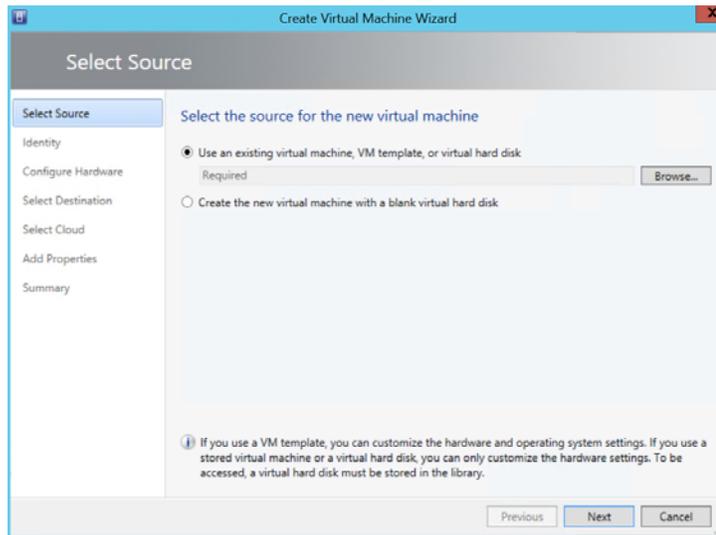
You deploy the AGM VHDX in SCVMM like any other Hyper-V VM. The following procedure show SCVMM running on Windows 2012 R2.

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.

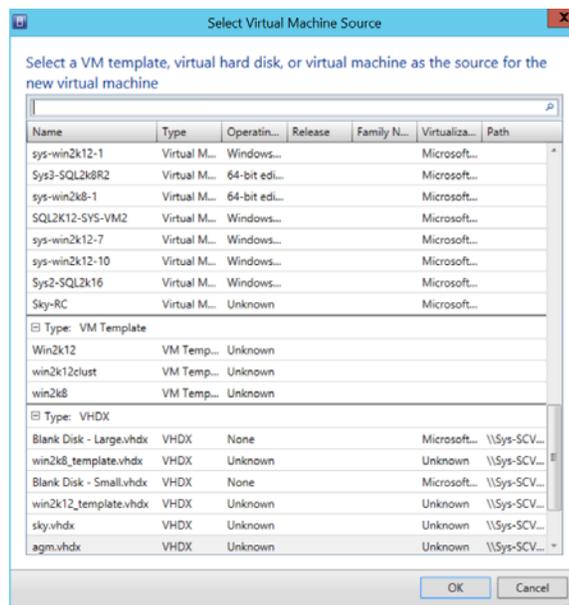


5. Click **VMs and Services** in the bottom left pane. Then go to the top menu bar of the interface.

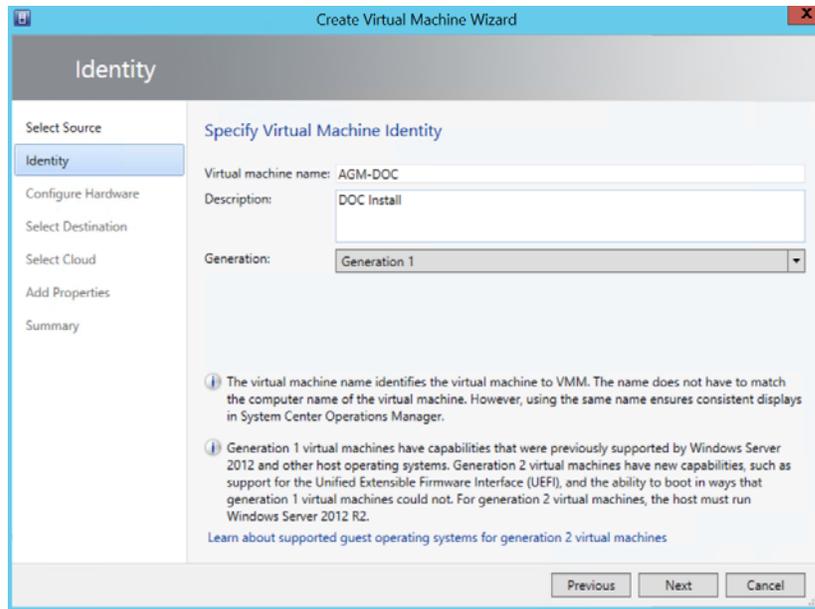
- Click **Create Virtual Machine** drop-down and then select **Create Virtual Machine** from the list. The Create Virtual Machine Wizard opens and shows the Select Source page.



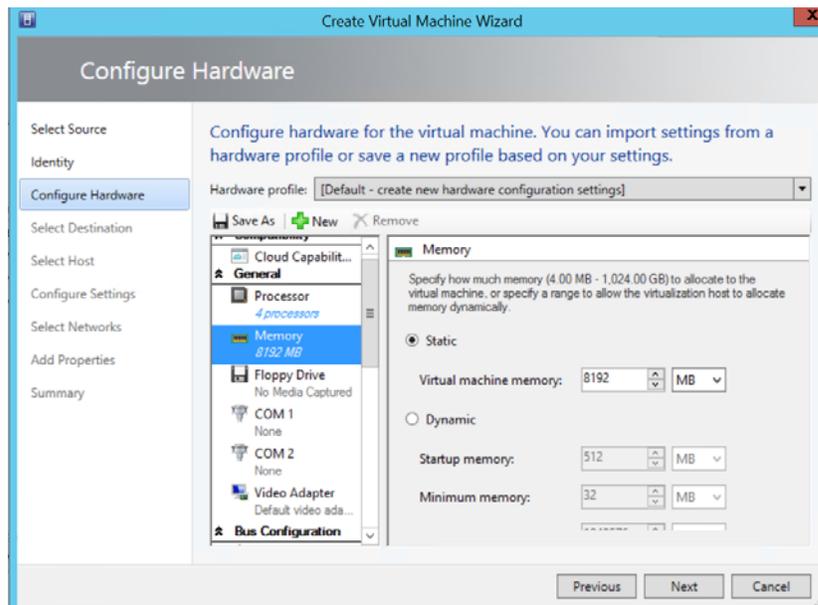
- Keep the default selection of use an existing virtual machine, and click **Browse**.
- From the select virtual machines list that opens, select the AGM vhd file.



- Click **OK** to close the list and go back to the Select Source page.
- Click **Next**. The Identity page opens.
- 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.



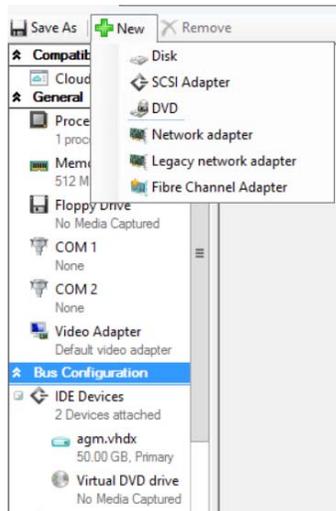
12. Click **Next**. The Configure Hardware page opens.
13. Configure hardware specifications for the VM (optional). For example, in Startup Memory, enter 8192MB to deploy AGM without Catalog.



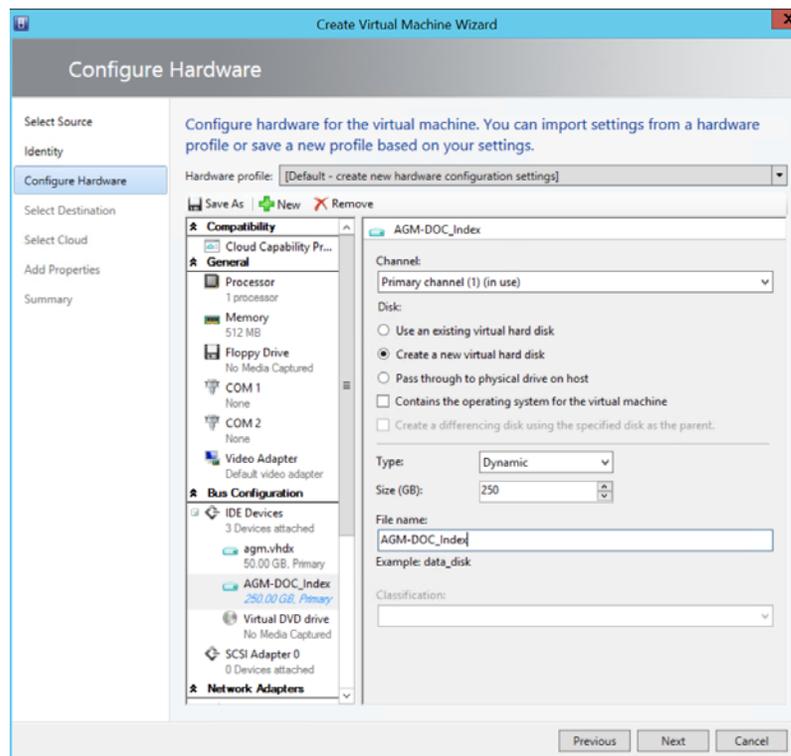
For AGM with Catalog deployments, you can optionally create additional disks. If you want to create disks at a later time, or to deploy AGM without Catalog, go to step 14.

To create additional hard disk:

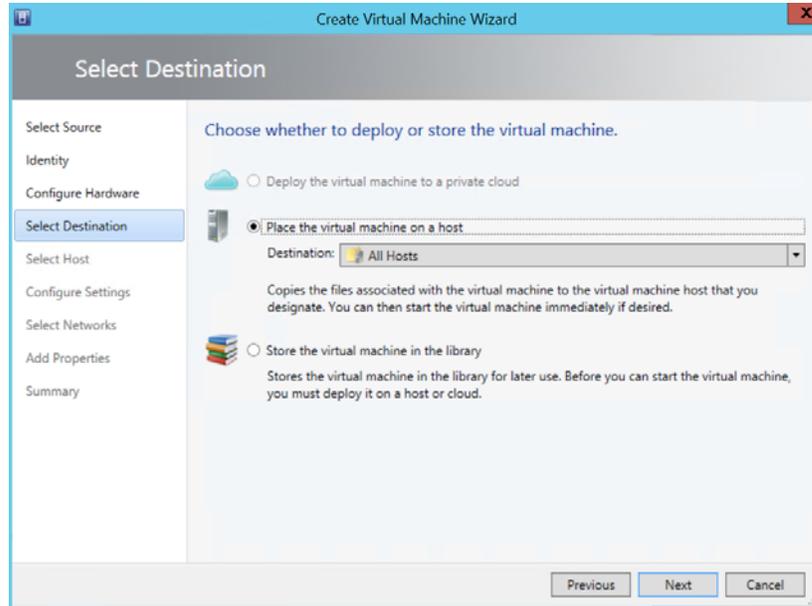
- a. In the **Bus Configuration** section, select **IDE Devices**.
- b. Click **New** and select **Disk** from the drop-down options.



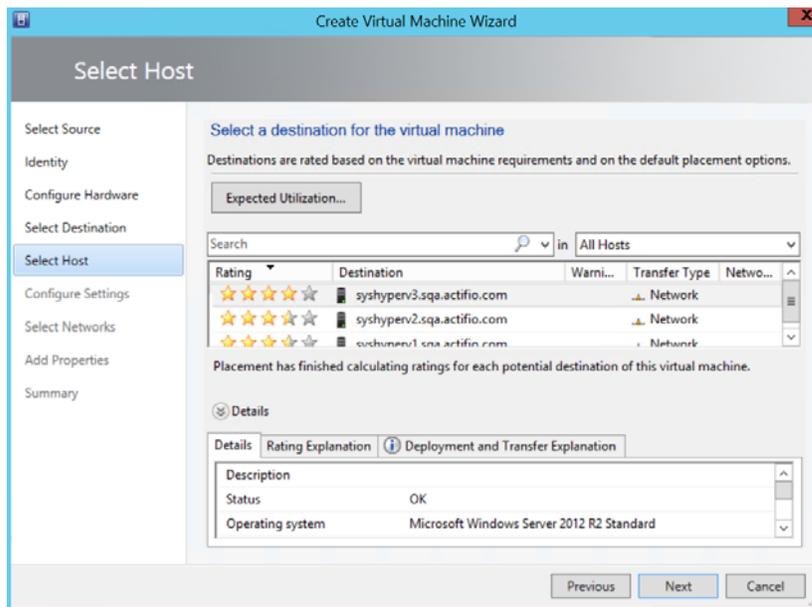
- c. Optionally, click the **Channel** drop-down and select the channel to use.
- d. Keep the default disk selection of Create a new virtual hard disk and Type Dynamic.
- e. In **Size**, enter 250 GB for the Index hard disk or 400 GB for the Catalog disk.
- f. In **File name** give a unique name, for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



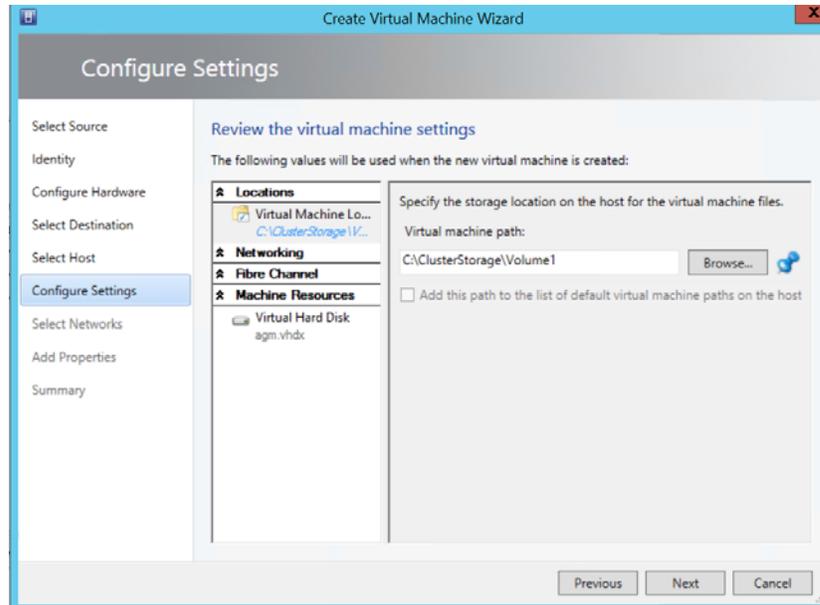
14. Click **Next**. The Destination page opens.
15. Keep the default selection of placing the virtual machine on a host (optional).



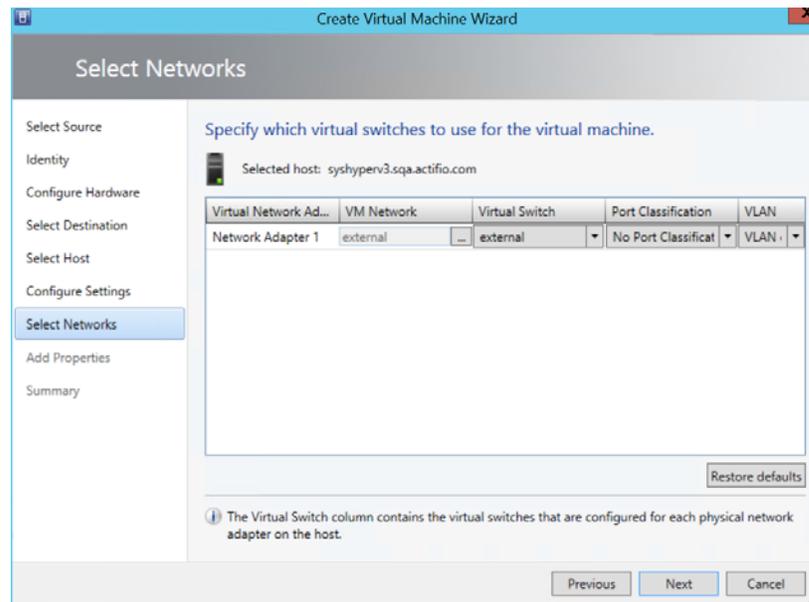
16. Click **Next**. The Select Host page opens.
17. Select a host from the drop-down options (optional).



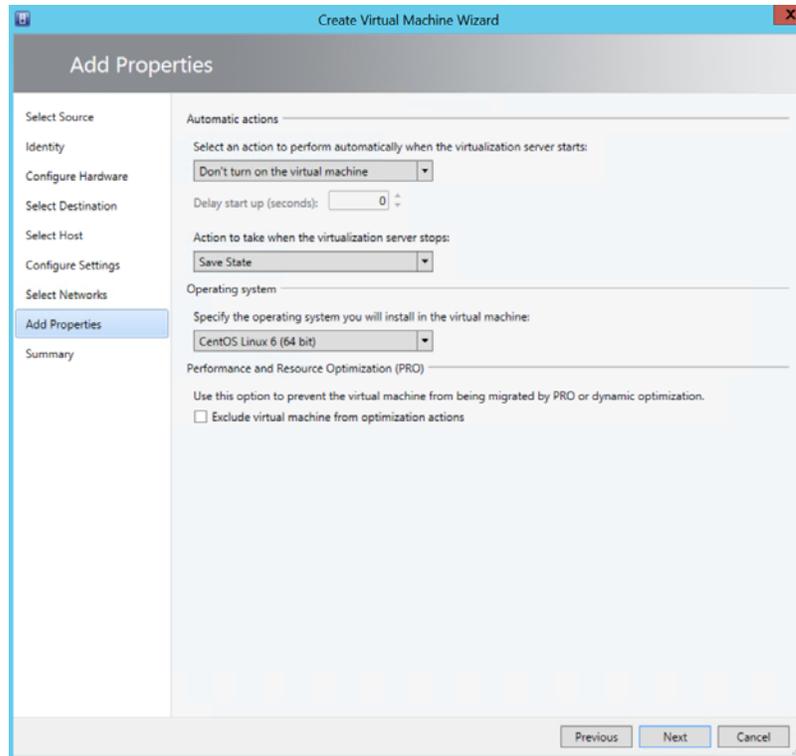
18. Click **Next**. The Configure Settings page opens.
19. Specify the virtual location for the VM (optional).



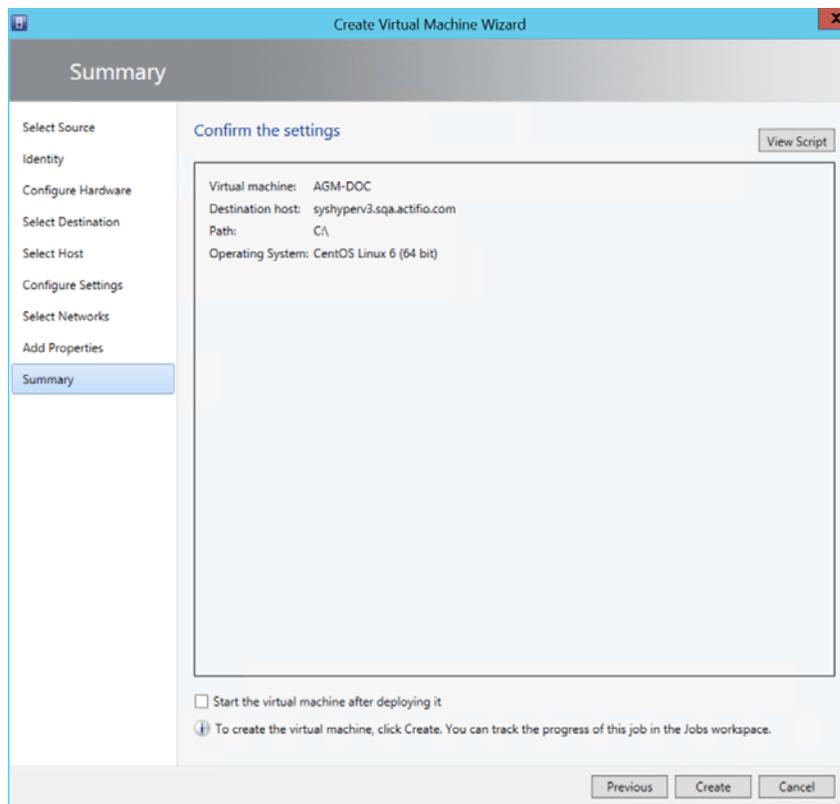
20. Click **Next**. The Select Networks page opens.
21. Select the network connection for the AGM to use (optional).



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



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

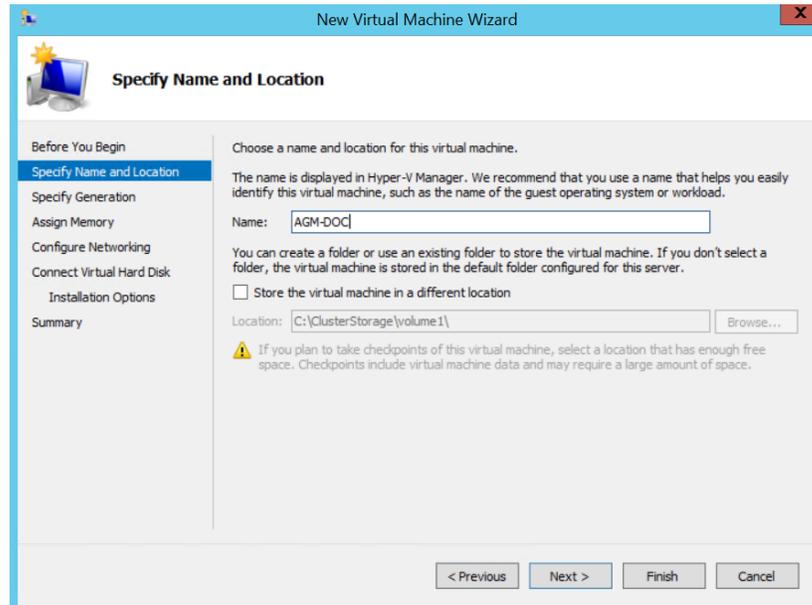


24. Review the summary. Check the Start the virtual machine after deploying it, if you want the VM to power on as soon as deployment is complete.
25. Click **Create**. You can view the progress of the VM creation in the Jobs workspace.
26. Continue to [Adding or Removing Resources for Catalog](#) on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

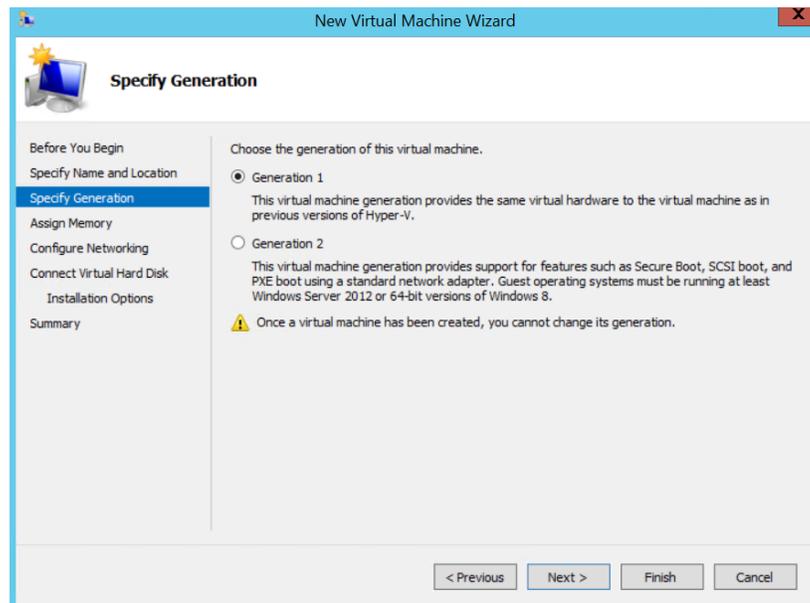
Deploying the Actifio VHDX using Hyper-V Manager

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.

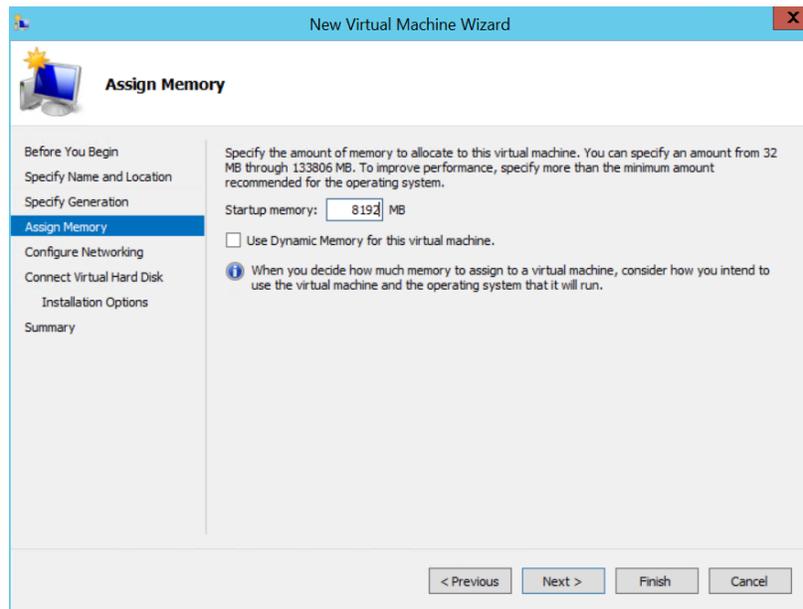


4. Click **Next**. The Specify Generation page opens.

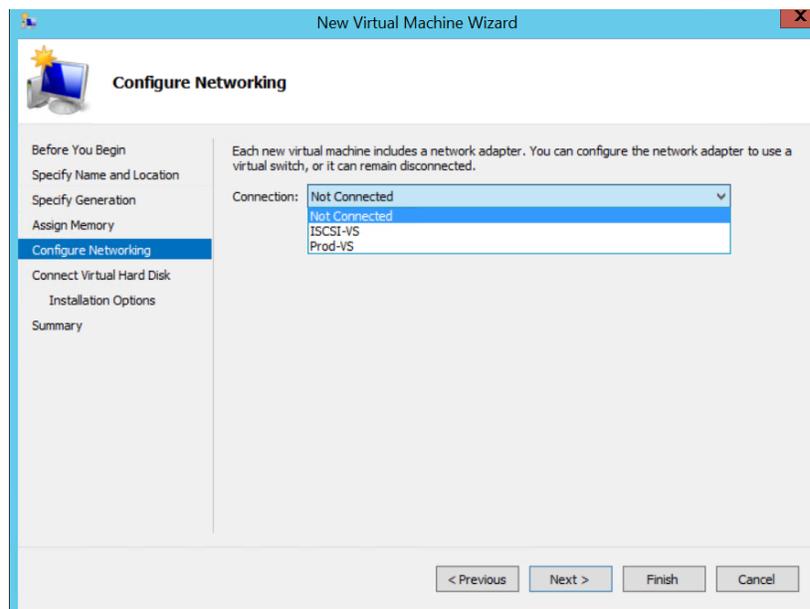


5. Keep the default selection of Generation 1 and click **Next**. The Assign Memory page opens.

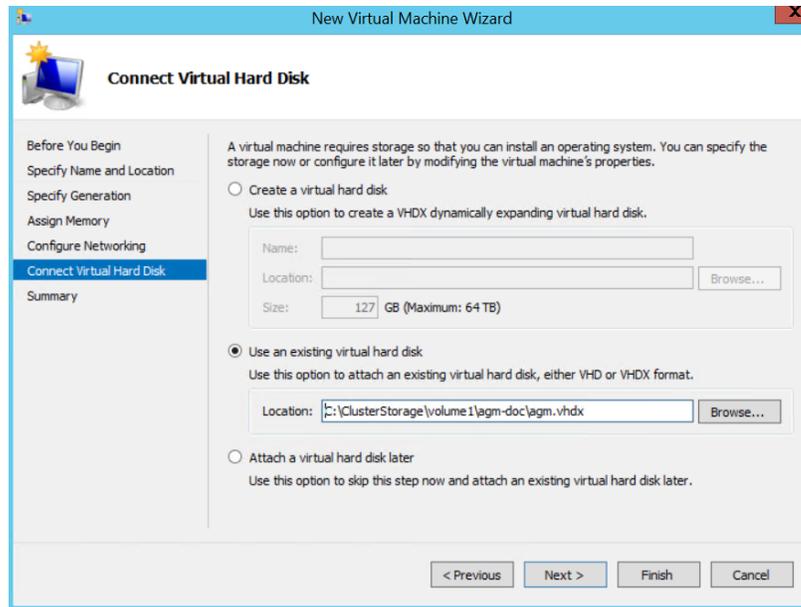
- In Startup Memory, enter 8192MB to deploy AGM without Catalog. If you plan to use AGM with Catalog, enter 20480 (1024x20).



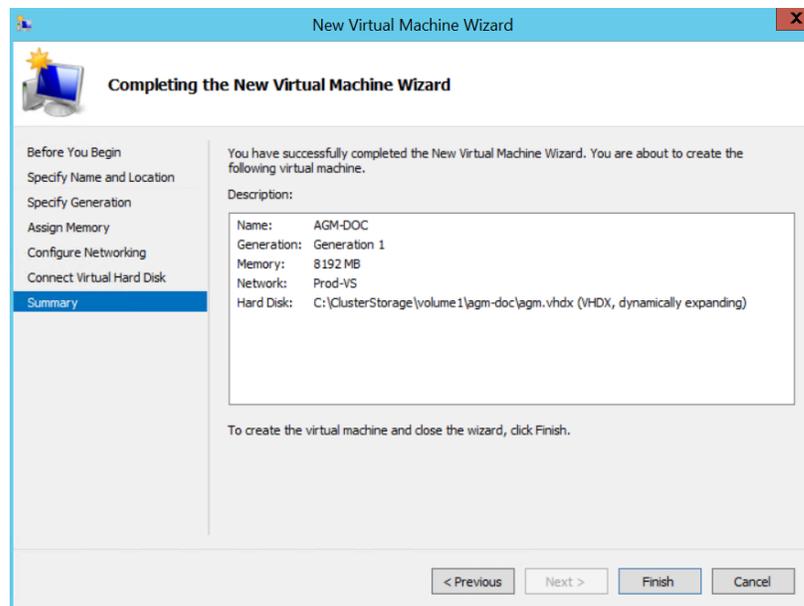
- Click **Next**. The Configure Networking page opens.
- Click the **Connection** drop-down and select the network connection for the AGM to use.



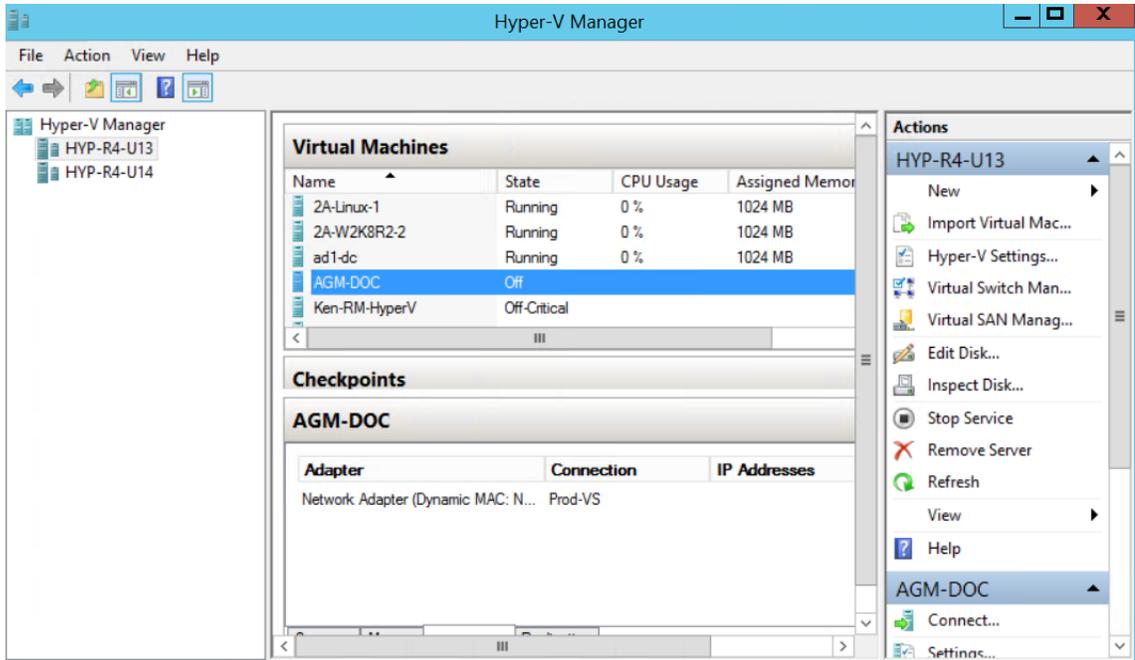
- Click **Next**. The Connect Virtual Hard Disk page opens.
- Select **Use an existing virtual hard disk** (second option). For Location, click **Browse** and go to the where you stored the unzipped vhdx file on your Hyper-V server.



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



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.



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)

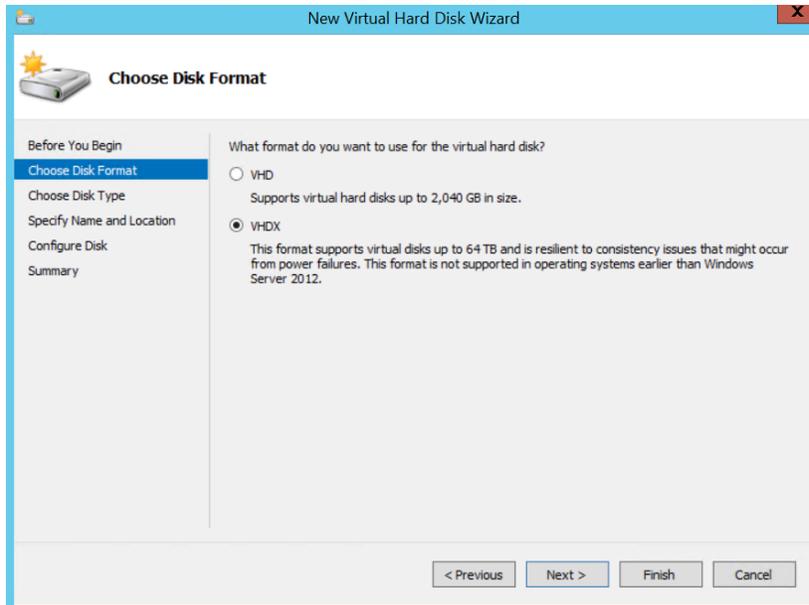
The virtual size of the index store is 250 GB and the virtual size of the backup disk is 400 GB. Actifio recommends using a server or a shared drive with adequate space for the boot, index and backup disks.

You will additionally need to:

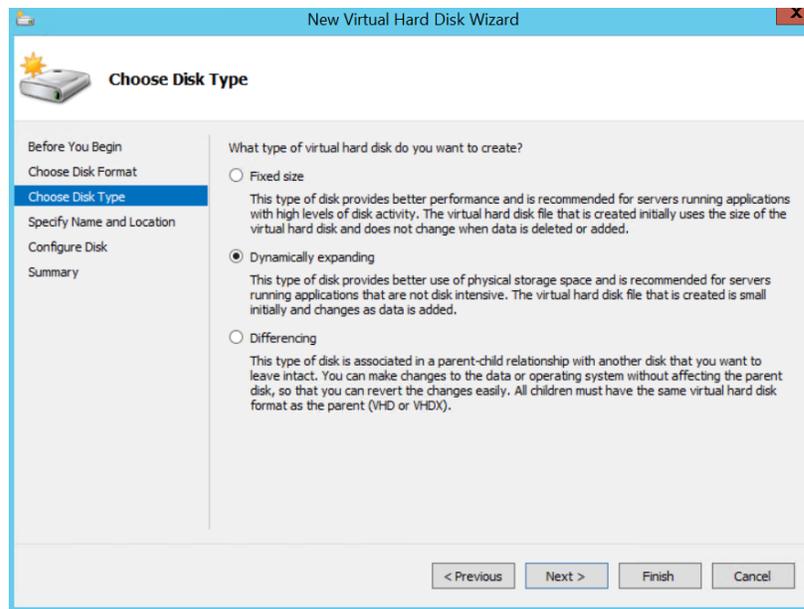
- increase virtual CPUs
- increase memory

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

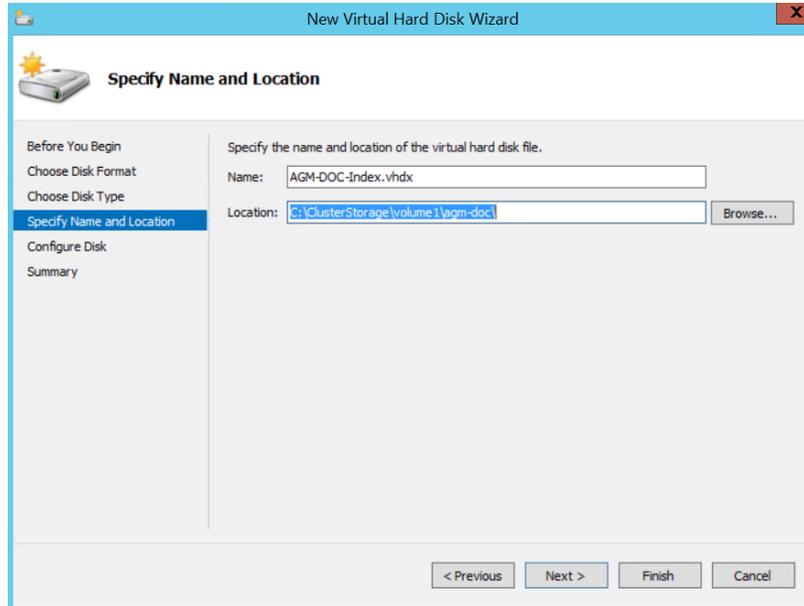
1. Verify the VM is powered off. (Select the VM, right click and select Shut Down to power off).
2. Select the AGM VM, right click and select **Settings** from the drop-down options.
3. Click **Memory**, and in **Startup RAM**, enter 8192 MB (for AGM without Catalog) or 20480 (for AGM with Catalog) as 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).



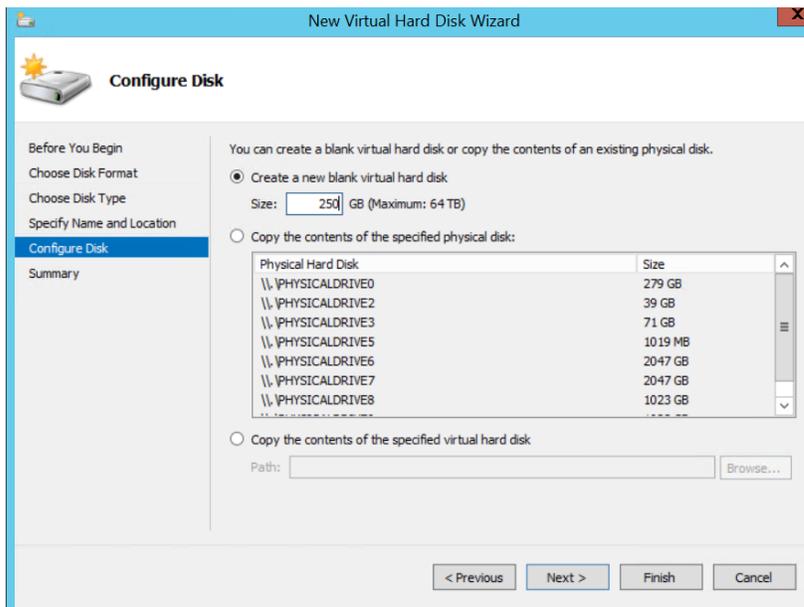
d. Select **VHDX** and click **Next**. The Choose Disk Type page opens.



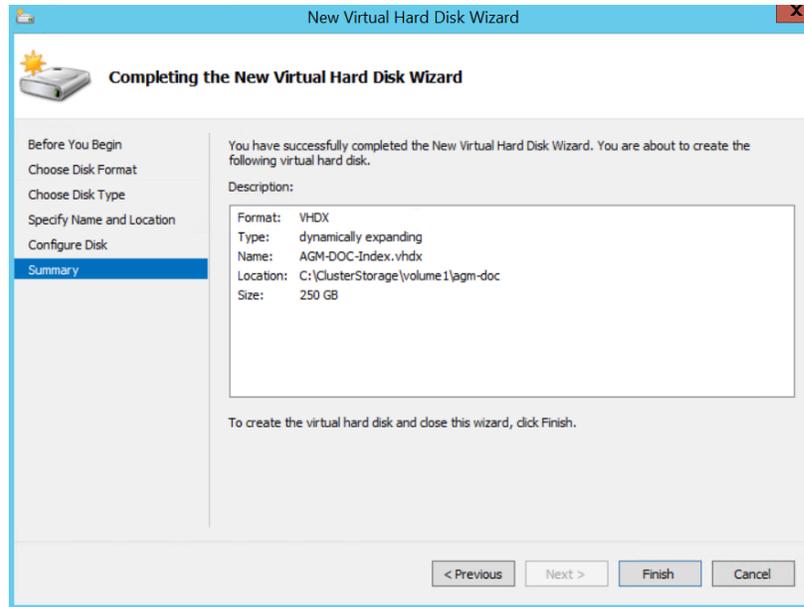
e. Select the **Dynamically expanding** option and click **Next**. The Specify Name and Location page opens.



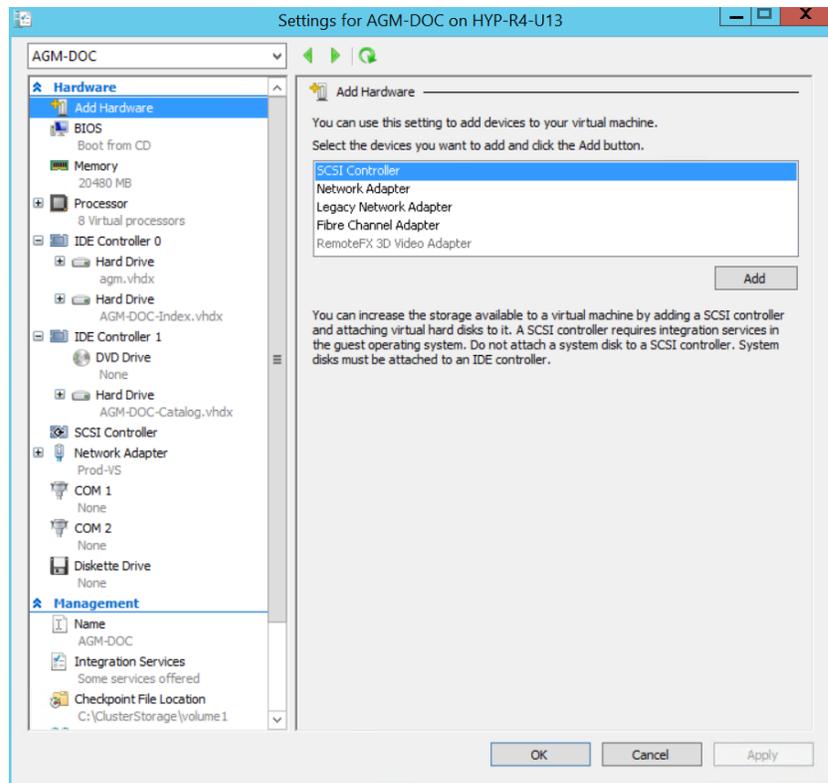
- f. Give a unique name and browse to select a location either on your Hyper-V server or on the network that has sufficient storage space of more than 250 GB.
- g. Click **Next**. The Configure Disk page opens. (See next page).



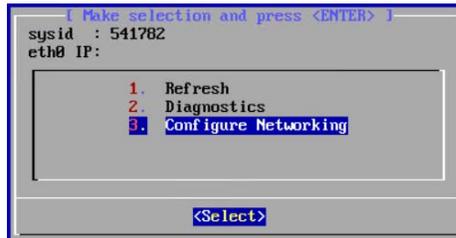
- h. In **Size**, enter 250 GB for the Index hard disk and click **Next**.



- 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).

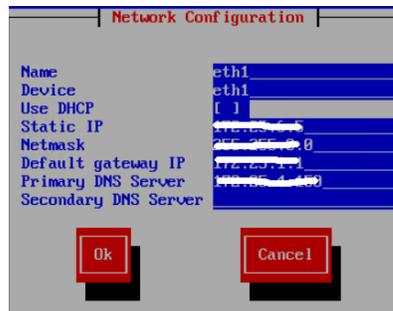


6. Click **Network Adapter**, and verify the network connection for AGM VM deployment. If needed, select a different network connection.
7. Click **Apply** and then **OK** to save all configuration changes.
8. Go back to the Hyper-V Manager. Right click the AGM VM and select **Start**.
9. Once the console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



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.



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:

https://<VM IP address>/



2. In the AGM Login window, enter the default login credentials: USERNAME `admin` and PASSWORD `password` and click **Login**.

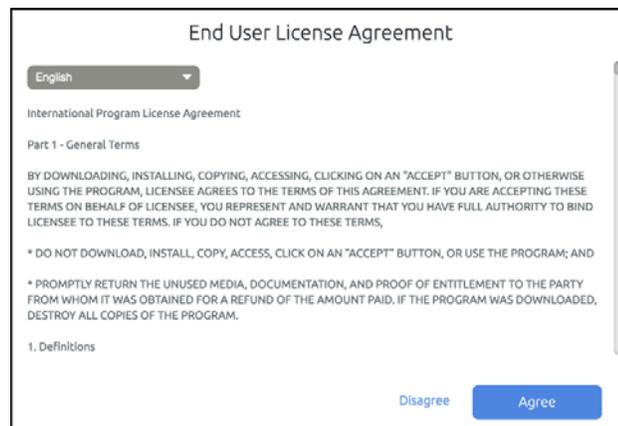
Note: If you are using a Microsoft Internet Explorer browser to log in to AGM and the Username and Password fields are disabled in the Login window, access the Compatibility View Settings dialog box (select **Tools > Compatibility View settings**) and ensure that the **Display intranet site in Compatibility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

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



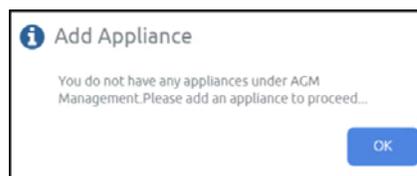
3. Enter a new password of at least six (6) characters, it can be the same as your old password as well.
4. Click **Save** to save then new password. You are taken back to the login screen.
5. Enter your user name and new password.
6. Click **Login**.

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 [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 Actifio appliance importing the mapping of LDAP groups will not be brought into AGM. For example, if there is an LDAP group named "DNSUpdateProxy" on Actifio Appliance 1, after importing Actifio 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 Actifio 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 Actifio 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 Actifio appliance that you plan to import as the baseline appliance, you can attempt an initial clean-up of the other Actifio 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 Actifio appliance that you plan to import as the baseline appliance, on the other Actifio 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 Actifio 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

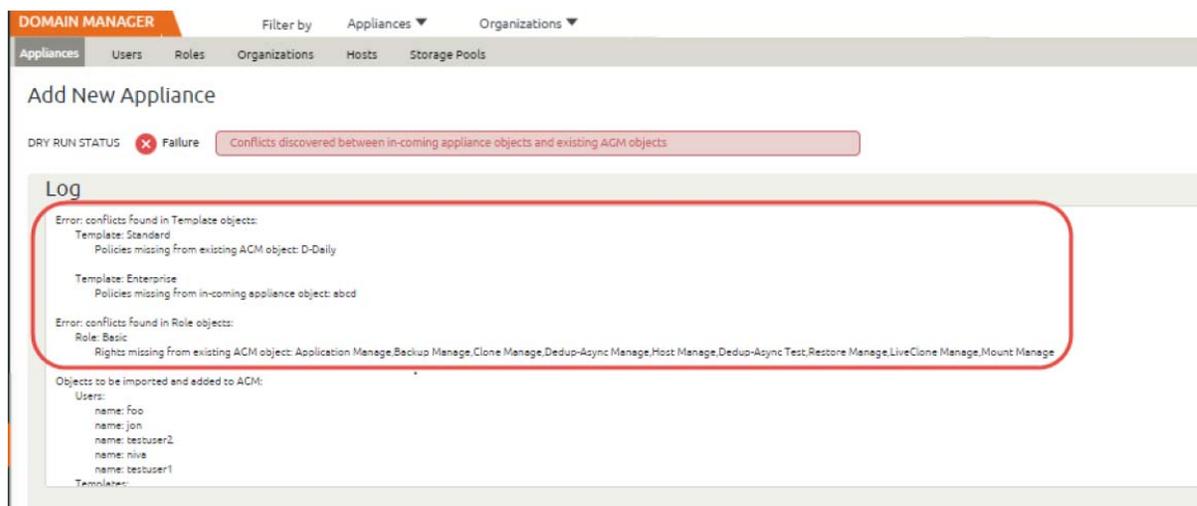
When you add a new Actifio appliance to AGM, AGM automatically runs the Dry Run Tool and performs a conflict analysis. This tool identifies conflicts between Actifio appliances currently managed by AGM and an Actifio appliance being imported.

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 Actifio appliance and AGM.



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.

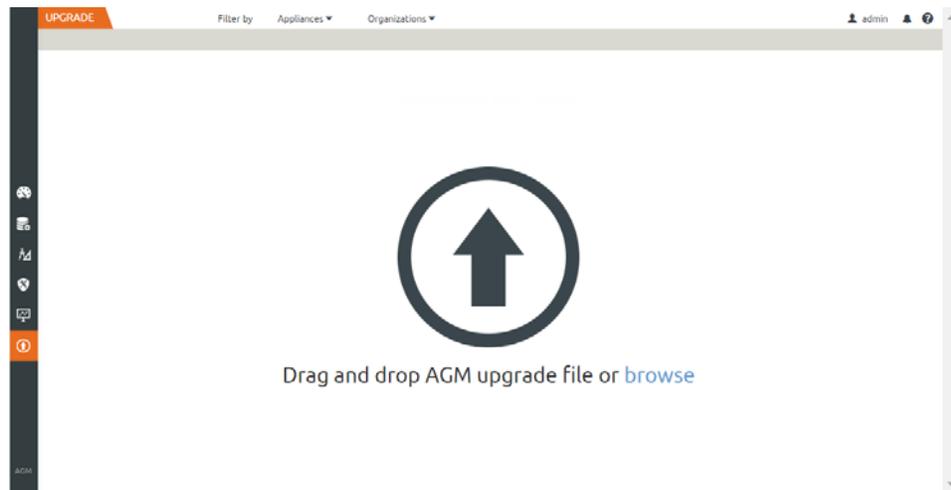
Obtain the AGM.gpg upgrade file

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:

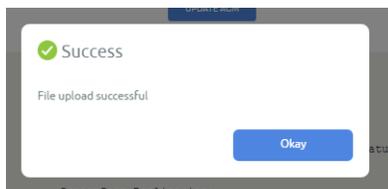
1. Open a browser, and in the address space enter the IP address of the AGM VM:
https://<VM IP address>/
2. From the AGM Login window, enter the username and password, then click **Log In**.
3. In the left-hand navigation, click the **Upgrade** icon. The Upgrade page opens:



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.

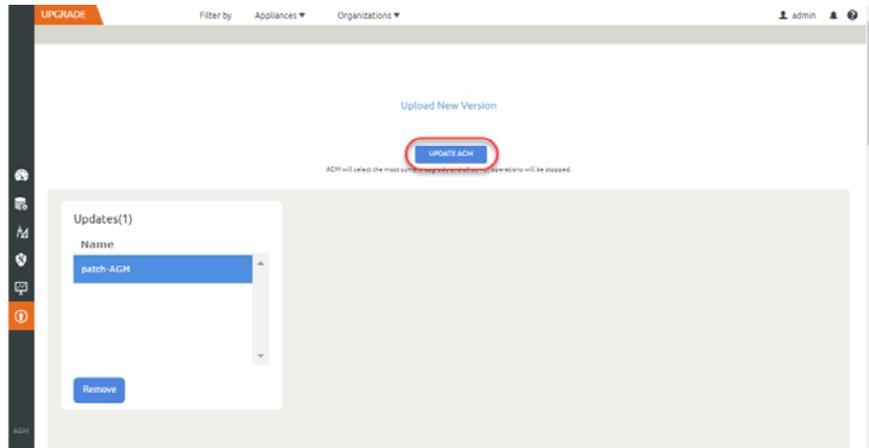
5. AGM begins the upload process.

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.

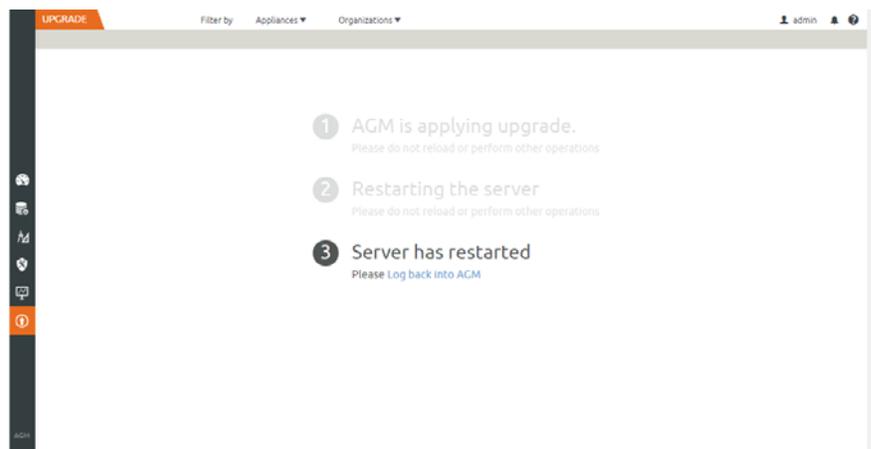
Note: If required, you can remove an older software upgrade version from AGM. AGM will automatically select the first item in the Updates listing on the left side of the window. Select the version you want to delete and then click **Remove**. You cannot select multiple upgrades for deletion.



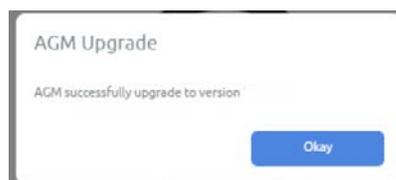
The Update confirmation dialog opens.

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.



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



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

