
Deploying Actifio Global Manager in Microsoft® Azure Cloud

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Preface

The information presented in this guide is intended for users who are configuring Actifio Global Manager (AGM) for the Azure Cloud.

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

The Actifio Now Customer Portal

Actifio customers can access to the entire Actifio documentation set as well as the portal's knowledge base.

To log into the Actifio Now Customer Portal:

1. Go to: <https://now.actifio.com>
2. When prompted, enter your user name and password you were provided when you purchased your Actifio appliance.

1 Introduction

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

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

- **Actifio CDS:** An Actifio CDS appliance is a hardware and software solution. An Actifio CDS appliance captures and manages data locally, and can replicate captured data to other Actifio CDS and Sky appliances. Actifio CDS appliances are installed and configured by your Actifio representative.
- **Actifio Sky:** An Actifio Sky appliance is a virtual machine (VM). Actifio Sky appliances can be installed at your location or in a cloud vendor's cloud. Actifio Sky appliances are licensed by capacity and may be used with other Actifio Sky appliances and Actifio CDS appliances.
- **Local and Remote Appliances:** When two Actifio appliances are joined, local and remote is determined by the appliance you are logged in to. An exchange of certificates is required to join appliances.

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

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

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

- **Accelerates DevOps, CI/CD, and application dev/test processes:** Provision virtual copies of databases instantly, in self-service manner with secure, role-based access controls. This enables developers to perform development, test, QA and integrate with continuous integration and continuous deployment tools.
- **Leverages instant access to data:** Actifio appliances allows user to failover to their Azure Cloud environment delivering business resilience for on-premises enterprise applications.
- **Provides On-Demand analytics:** The ability to capture, manage and re-use Microsoft SQL Server databases and other databases and file systems enables data warehousing and analytics applications.
- **Securely migrates to the Azure Cloud:** Securely migrating applications to Azure Cloud. Using an Actifio appliance's instant access, users can create a sandbox environment in Azure Cloud, conduct security, performance and scalability validation, before turning on the application in Azure Cloud.
- **Provides Global, standardized, Hybrid Cloud Data Management:** For Azure Cloud resident applications, Actifio appliances can manage their data life cycle and deliver the same benefits as for the on-premises applications; accelerate high quality application development, enhanced business resilience,

2 Configuring the Actifio Global Manager VM

This section assumes that the reader has a valid Microsoft® Azure Cloud account, and is familiar with basic Azure Cloud processes and procedures. It has the following topics:

[AGM Requirements](#) on page 4

[Web Browser Requirements](#) on page 5

[Configuring the AGM VM](#) on page 6

[Required Ports](#) on page 13

AGM Requirements

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

Actifio Global Manager with Catalog and RM:

For AGM with Catalog and RM:

- Use the size: **D16S_V3** (16 vCPU, 64 GB RAM)

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

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

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

Actifio Global Manager with Catalog

For AGM with Catalog:

- Use the size: **D8S_V3** (8vCPU, 32GB RAM)

Note: *AGM with Catalog requires 8 reserved virtual CPUs and 28 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 disk

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

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

Actifio Global Manager with RM:

For AGM with RM:

- Use the size: **D8S_V3** (8vCPU, 32GB RAM)

Note: *The AGM instance requires 6 reserved virtual CPUs and 16 reserved GB of memory.*

- Two (2) separate virtual disks for storage:

- o One 50 GB disk for the operating system and AGM repository
- o One 250 GB disk for Report Manager data

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

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

AGM without Catalog or RM:

For AGM:

- Use the size: **D4S_V3** (4vCPU, 8GB RAM)

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

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

Web Browser Requirements

The AGM UI supports the following minimum web browsers:

- Google Chrome version 74.0 and higher
- Microsoft Internet Explorer version 11.0 and higher
- Mozilla Firefox version 68 and higher

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

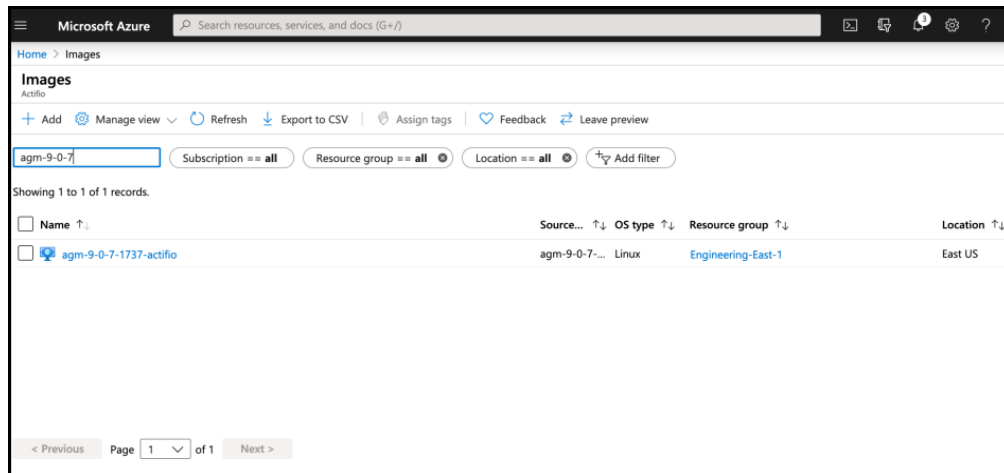
Configuring the AGM VM

To configure AGM VM from your Azure account, you must:

- Obtain the Actifio AGM image from your Actifio representative.
- Have an Azure storage account.
- Create a virtual machine that runs on either Linux or Windows.
- Create a new disk to store data on your virtual machine.
- Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can create security group rules to control ports and inbound and outbound network connectivity.

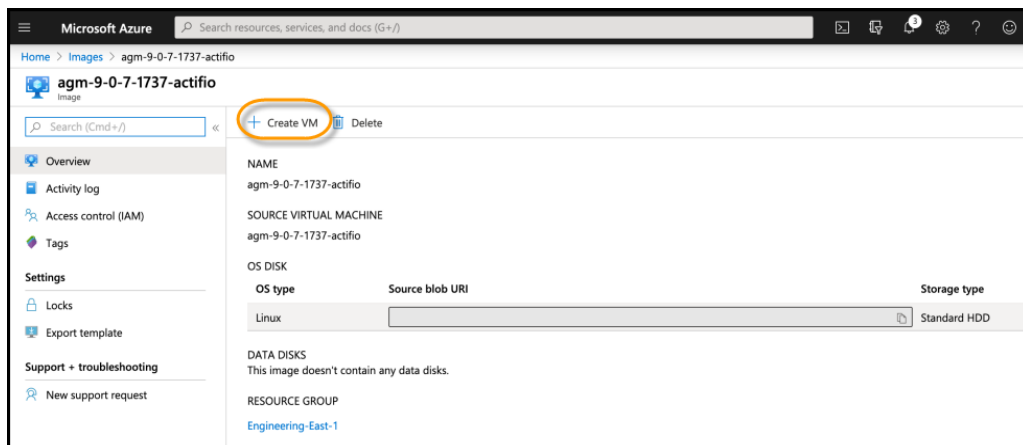
Create Virtual Machine

1. Log into your Microsoft Azure portal.
2. Select and click the required AGM image from the images list. Use the filter to narrow the image search.

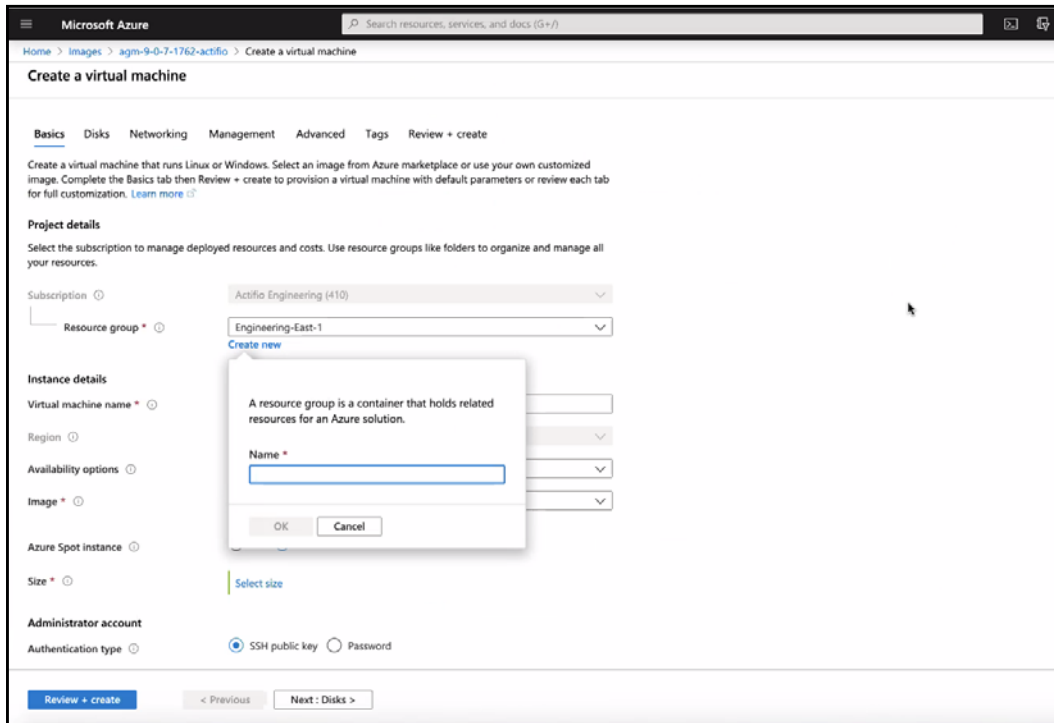


The selected image page displays the detailed information.

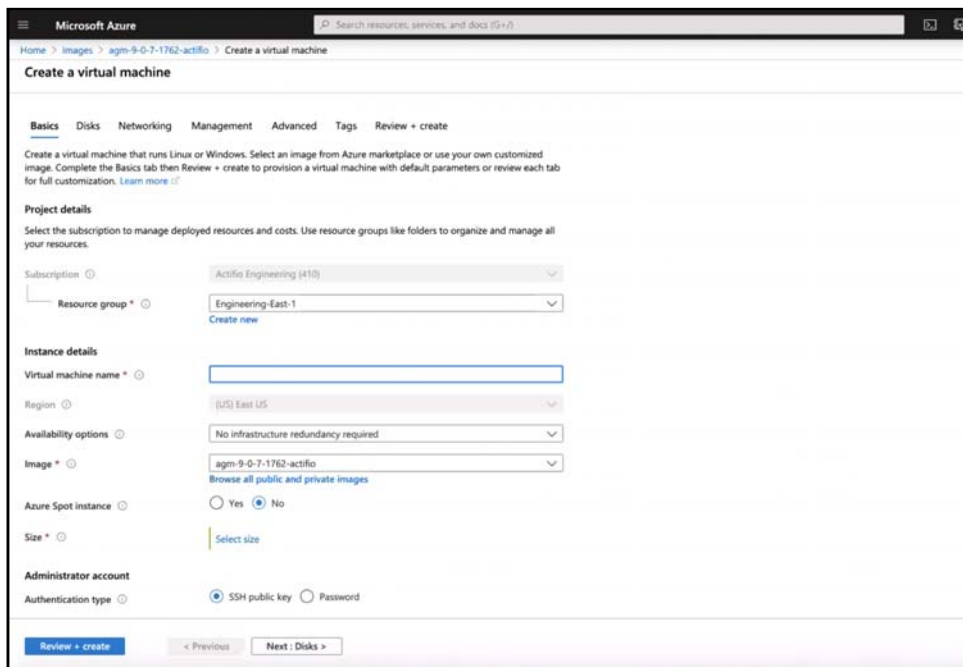
3. Click **Create VM**.



The Create a Virtual machine page appears.



4. In the **Basics** tab, perform the following:
 - o In **Project details** section, select the existing resource group from the **Resource group** drop-down list or create a new resource group by using the **Create new** option.
 - o In **Instance details** section, enter the name for the virtual machine in the **Virtual machine name** field.



- o Click the **Select size** option to choose CPU and RAM requirements. The **Select a VM size** page appears.

Microsoft Azure

Home > Images > agm-9-0-7-1762-actifio > Create a virtual machine > Select a VM size

Select a VM size

Browse available virtual machine sizes and their features

VM Size	Standard	General purpose	vCPUs	RAM	Storage	Price	Yes/No	
D4_v3	Standard	General purpose	4	16	8x500	100	No	
D48_v3	Standard	General purpose	48	192	32x500	1200	No	
D4s_v3	Standard	General purpose	4	16	8x500	32	Yes	
D64_v3	Standard	General purpose	64	256	32x500	1600	No	
D8_v3	Standard	General purpose	8	32	16x500	200	No	
D8s_v3	Standard	General purpose	8	32	16x500	64	Yes	
DC1s_v2	Standard	Confidential com...	1	4	1	1600	50	Yes
DC2s_v2	Standard	Confidential com...	2	8	2	3200	100	Yes
DC4s_v2	Standard	Confidential com...	4	16	4	6400	200	Yes
DC8_v2	Standard	Confidential com...	8	32	8	12800	400	No
DS1	Standard	General purpose	1	3.5	4	3200	7	Yes
DS1_v2	Standard	General purpose	1	3.5	4	3200	7	Yes
DS11	Standard	Memory optimized	2	14	8	6400	28	Yes
DS11_v2	Standard	Memory optimized	2	14	8	6400	28	Yes
DS11-1_v2	Standard	Memory optimized	1	14	8	6400	28	Yes
DS12	Standard	Memory optimized	4	28	16	12800	56	Yes
DS12_v2	Standard	Memory optimized	4	28	16	12800	56	Yes
DS12-1_v2	Standard	Memory optimized	1	28	16	12800	56	Yes
DS12-2_v2	Standard	Memory optimized	2	28	16	12800	56	Yes
DS13	Standard	Memory optimized	8	56	32	25600	112	Yes
DS13_v2	Standard	Memory optimized	8	56	32	25600	112	Yes
DS13-2_v2	Standard	Memory optimized	2	56	32	25600	112	Yes

Prices presented are estimates in your local currency that include only Azure infrastructure costs and any discounts for the subscription and location. The prices don't include any applicable software costs and billing views. [View Azure pricing calculator.](#)

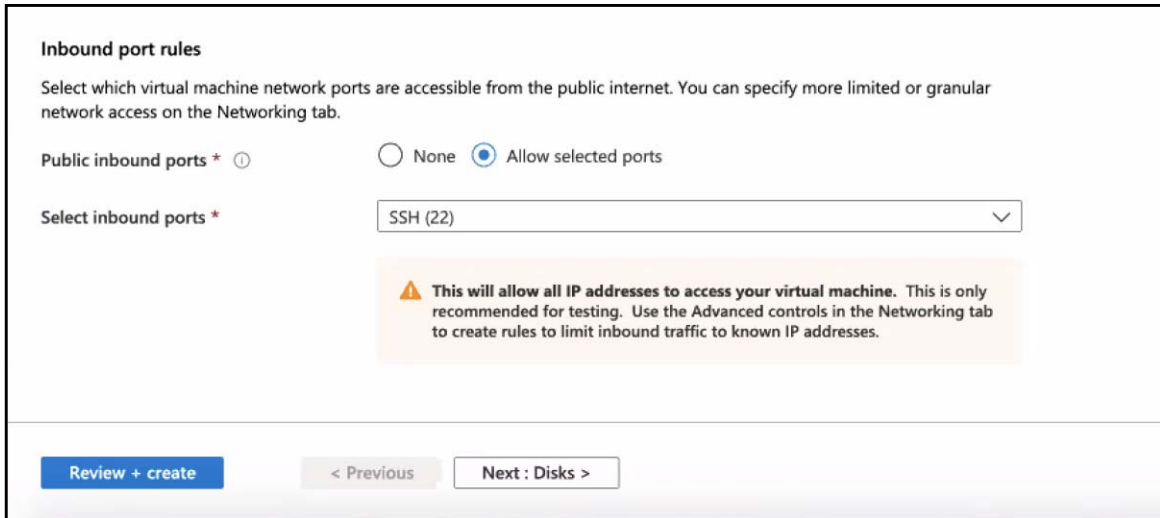
Note: Select the appropriate VM size based on the AGM configuration. See the [AGM Requirements section](#).

- o In **Administrator account** section, provide a username and password. The password must be a minimum of 12 characters and must not contain any special characters.

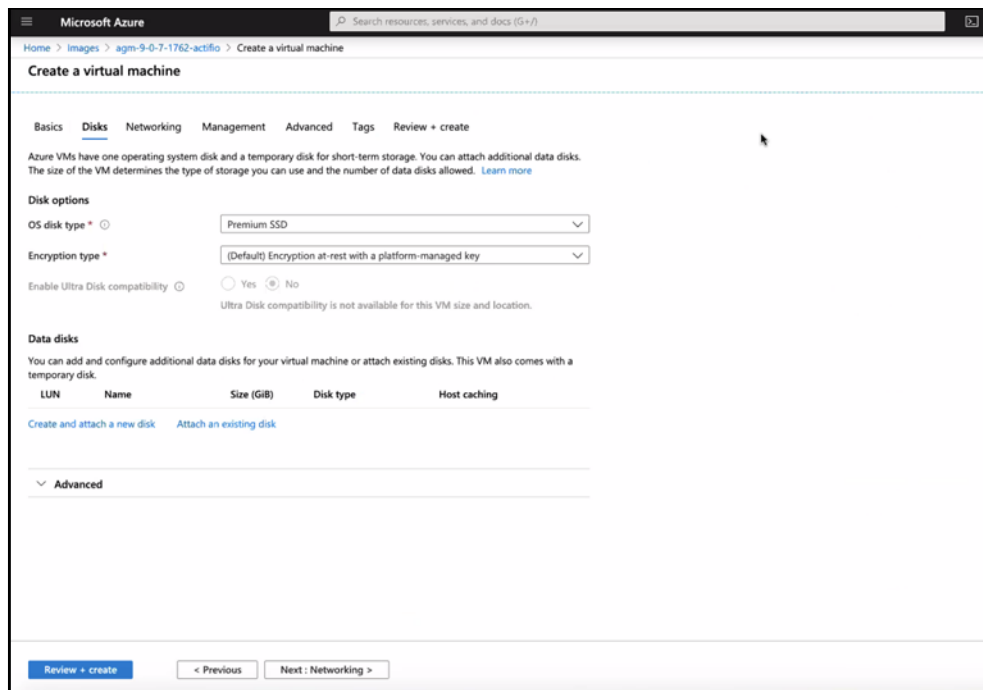
- ✔ Azure resource names cannot contain special characters `\/[]|<>+ =,?*@&` or begin with `_'` or end with `.' or '-'`
- ✔ Virtual machine name must be unique in the current resource group.
- ✔ The value is in between 1 and 64 characters long.
- ✔ All characters are valid for Linux OS computename.

- o In **Inbound Rules** section, you may skip this by choosing the default selection of Inbound ports.

Note: You can change the inbound ports based on your firewalls rules.



5. Leave the remaining defaults and then select the **Next: Disks**.
6. In the **Disks** tab, perform the following:
 - o Select the OS disk type as **Standard HDD** or **Standard SSD**.



- o Leave the **Encryption type** to the default selection.
- o Select either **Create and attach a new disk** or **Attach an existing disk**.

- o Click **Next: Networking**. The **Networking** page appears.

Create a virtual machine

Basics Disks **Networking** Management Advanced Tags Review + create

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more](#)

NETWORK INTERFACE

When creating a virtual machine, a network interface will be created for you.

* Virtual network [Create new](#)

* Subnet

Public IP [Create new](#)

NIC network security group None Basic Advanced

* Public inbound ports None Allow selected ports

Select inbound ports

i All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.

Accelerated networking On Off The selected image does not support accelerated networking.

LOAD BALANCING

You can place this virtual machine in the backend pool of an existing Azure load balancing solution. [Learn more](#)

Place this virtual machine behind an existing load balancing solution? Yes No

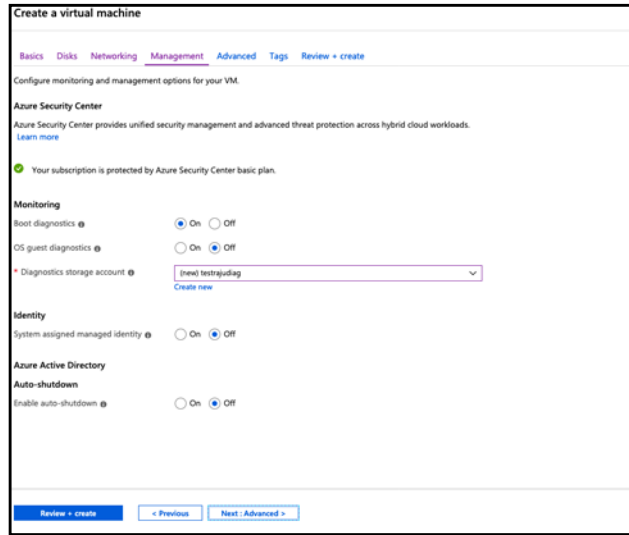
[Review + create](#) [< Previous](#) [Next: Management >](#)

7. In **Networking** tab, perform the following:
- o Select a virtual network from the drop-down list or click **Create new** to create a new virtual network.
 - o Select a subnet from the drop-down menu.
 - o Select a public IP address from the drop-down menu if you want to use an existing public IP address, or select **Create new** if you want to create a new public IP address.
 - o Select **None**, **Basic**, or **Advanced** from the NIC network security group selections.

Note: If you want to create a new customized network security group, select the **Advanced** option and then click **Create new** from *Configure Network Security group*.

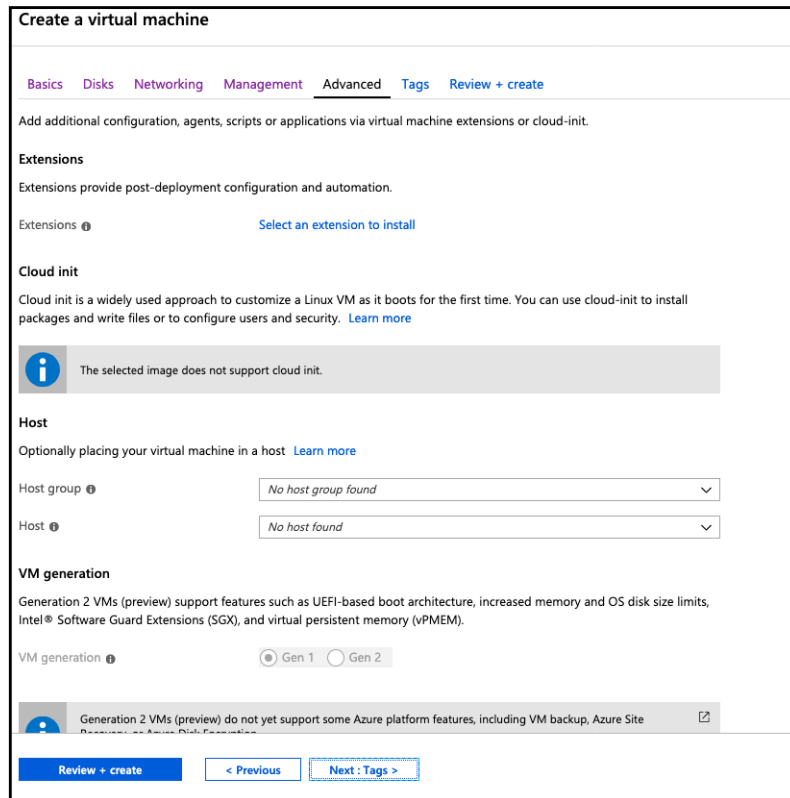
- o For **Public Inbound Ports**, select either **None** or **Allow selected ports**.
- o (Optional) Select inbound ports from the drop-down menu.
- o (Optional) Select either **On** or **Off** for **Accelerated networking**.
- o (Optional) Select **Yes** if you want to place your virtual machine behind an existing load balancing solution. Select **No** if you do not want to place your virtual machine behind an existing load balancing solution.

- o Click **Next: Management >**. The **Management** page opens.

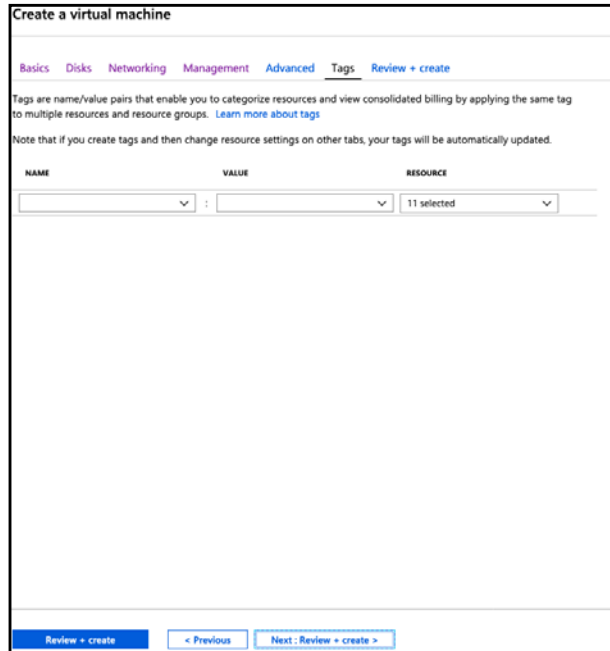


8. In **Management** tab, perform the following:

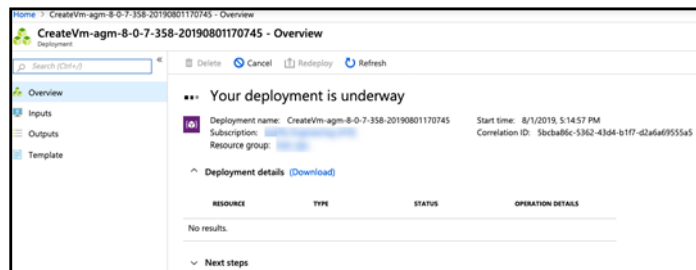
- o Under **Monitoring**, either select an existing diagnostics storage account from the drop-down menu, or click **Create new** if you want to create a new diagnostics storage account.
- o Click **Next: Advanced**. The **Advanced** page appears.



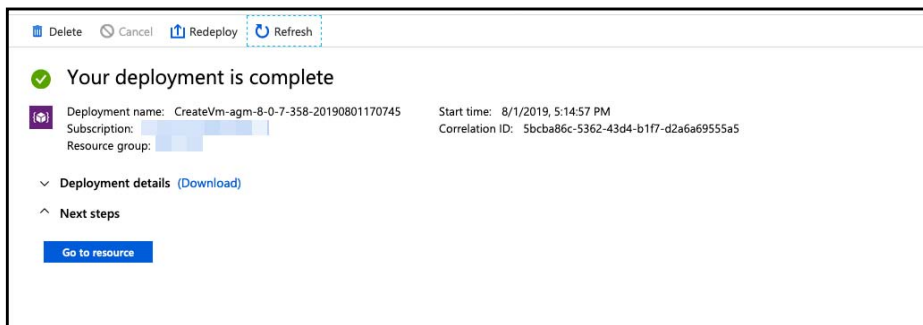
9. In **Advanced** tab, perform the following:
 - o (Optional) Under **Host**, select a host group and a host from the drop-down menus.
 - o (Optional) Under **VM generation**, select either **Gen 1** or **Gen 2**.
 - o Click **Next: Tags**. The **Tags** page appears.



10. In **Tags** tab, perform the following:
 - o (Optional) To create a tag that enables you to categorize resources to multiple resources and resource groups, select a name, value, and resource from the drop-down menus.
 - o Click **Next: Review + create >**. The following page appears.



You will see the following page when the VM deployment is complete.



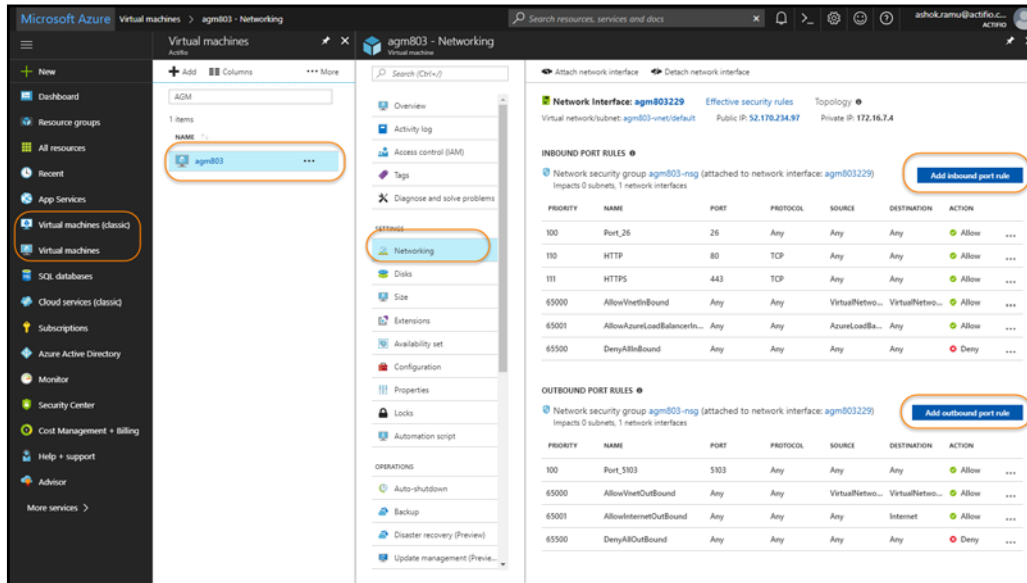
11. Proceed to [Required Ports](#) on page 13.

Required Ports

After installing AGM in Microsoft Azure, you must ensure the proper ports are open on AGM, the Actifio Sky appliances it manages, and the hosts managed by the Actifio Sky appliance.

	Inbound Port Rules	Outbound Port Rules
AGM	ssh:26	adhd_tunnel:5103
	http:80	
	https443	
Actifio Sky	ssh:26	streamsnap_secure:5107
	http:80	
	https443	
	adhd_tunnel:5103	
	streamsnap_secure:5107	
Host	http:80	
	connector:5106	

Inbound and outbound ports are set from Microsoft Azure from the virtual machine's Networking page:



Inbound and Outbound Ports

Once you have set the ports, you are ready to use AGM. See [Accessing Actifio Global Manager](#) on page 15 for details.

3 Accessing Actifio Global Manager

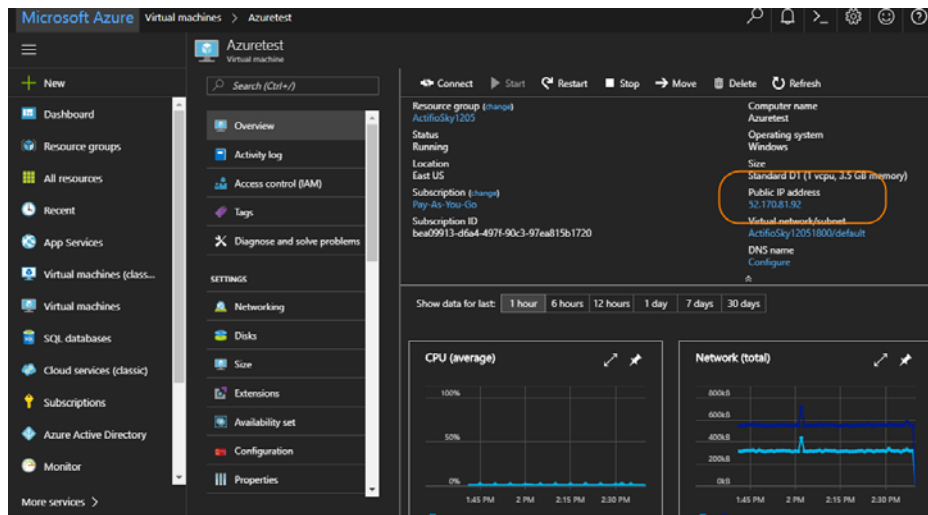
When the Microsoft Azure instance is ready, you can enter the instance’s Public IP in a browser and log in to the Actifio Global Manager.

Accessing AGM

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

Note: For the following procedure you will need the IP address of the AGM VM. You can find this IP address on the AGM VM’s Summary tab.

1. Obtain the AGM VM’s Public IP, from Microsoft Azure, select the AGM VM from the list of available VMs.
2. Click **Overview** and the Public IP will be displayed under **Essentials**:



Actifio Global Manager Public IP

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



Actifio Global Manager Login Screen

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

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

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

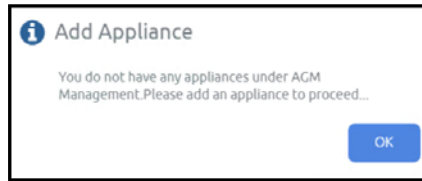


5. Enter a new password of at least six (6) characters, it can be the same as your old password as well.
6. Click **Save** to save then new password. You are taken back to the login screen.
7. Enter your user name and new password.
8. Click **Login**.

The AGM application opens and shows the EULA.

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

You are prompted to add an appliance.



10. Click **OK** to open the Add Appliance page. Add the first appliance and subsequently add more appliances following guidelines [Adding Actifio Appliances in AGM](#).
11. 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.
12. To logout of AGM or to change users, click the active user listed at the top of AGM and select **Logout**.

Adding Actifio Appliances in AGM

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

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

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

