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# Deploying Actifio Global Manager in the 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 ActifioNOW Customer Portal

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

To log into the ActifioNOW Customer Portal:

1. Go to: <https://now.actifio.com>
2. When prompted, enter the user name and password provided by your Actifio representative.
3. From the ActifioNOW customer portal you can access:
  - o **Product Documentation** - View the user documentation for your Actifio products and releases.
  - o **Knowledge Base** - Search across all of the available content for relevant articles.

## Actifio Support and Service

Access these locations for help with your Actifio product suite:

Customer Support Phone	<b>From anywhere:</b> +1.315.261.7501 <b>US Toll Free:</b> +1.855.392.6810 <b>Australia:</b> 0011 80016165656 <b>Germany:</b> 00 80016165656 <b>New Zealand:</b> 00 80016165656 <b>UK:</b> 0 8000155019
Customer Support Email	support@actifio.com
Customer Support Portal	<a href="http://support.actifio.com/">http://support.actifio.com/</a>



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# 1 Introduction

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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 different types of appliances interconnected and replicating data between each other.

- **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 appliances.
- **Actifio CDX:** A CDX appliance is a virtual machine (VM) that can be installed at your location or in a cloud vendor's cloud. CDX can protect a Fibre Channel-presented volume using storage virtualization. Actifio CDX is the newer generation of high-availability hardware for Actifio virtual Data Pipeline (VDP technology).
- **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.
- **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 appliance. It is available on the ActifioNOW Customer portal.

With AGM you can manage up to 40 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 utilize these objects across all managed Actifio appliances.





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# 2 Configuring the Actifio Global Manager VM

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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 3
- [Web Browser Requirements](#) on page 4
- [Configuring the AGM VM](#) on page 5
- [Required Ports](#) on page 12

## 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.

### For AGM with Catalog and RM:

- Use the size: **D16S\_V3** (16 vCPU, 64 GB RAM)

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

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- 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

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

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#### For AGM with Catalog:

- Use the size: **D8S\_V3** (8vCPU, 32GB RAM)

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*Note: AGM with Catalog requires 8 reserved virtual CPUs and 28 GB of memory.*

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- 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.

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

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#### For AGM with RM:

- Use the size: **D8S\_V3** (8vCPU, 32GB RAM)

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

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- 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.

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

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#### For AGM without Catalog or RM:

- Use the size: **D4S\_V3** (4vCPU, 8GB RAM)

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

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- 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.

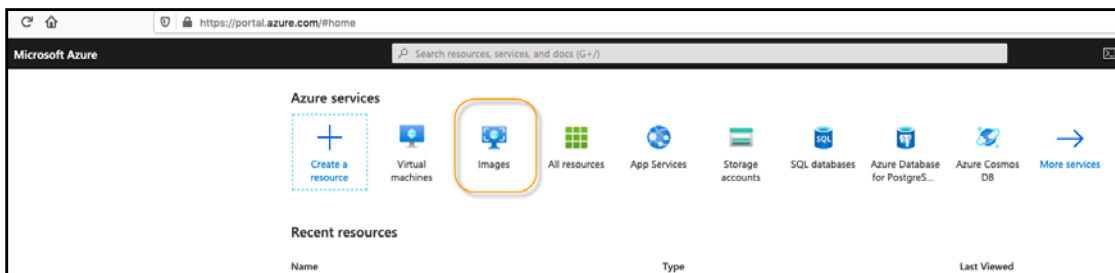
## Configuring the AGM VM

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

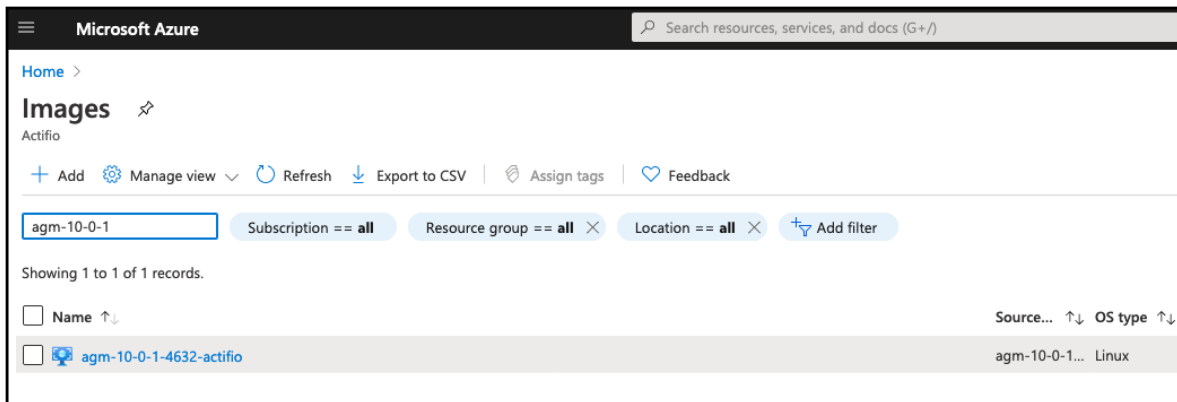
- Obtain the Actifio AGM image from your Actifio representative.
- Have an Azure storage account.
- Create a virtual machine that runs on either Linux or Windows.
- Create a new disk to store data on your virtual machine.
- Define network connectivity for your virtual machine by configuring network interface 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 **Image** from Azure services and the images page appears.

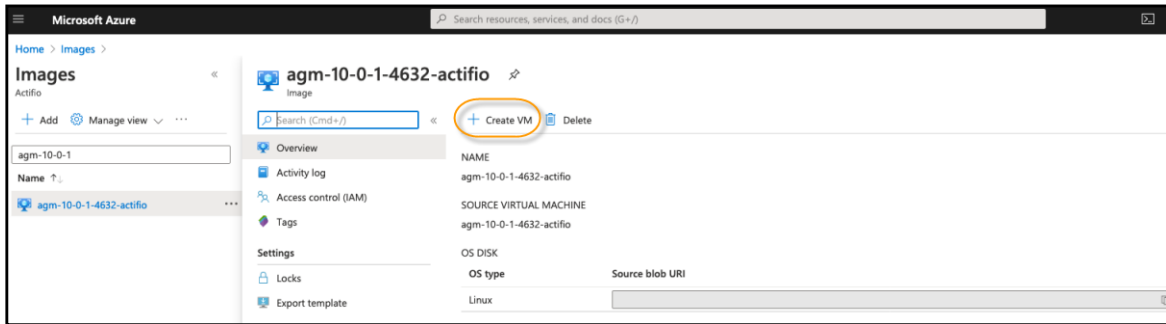


3. Select and click the required AGM image from the available images. Use the filter to narrow the image search.

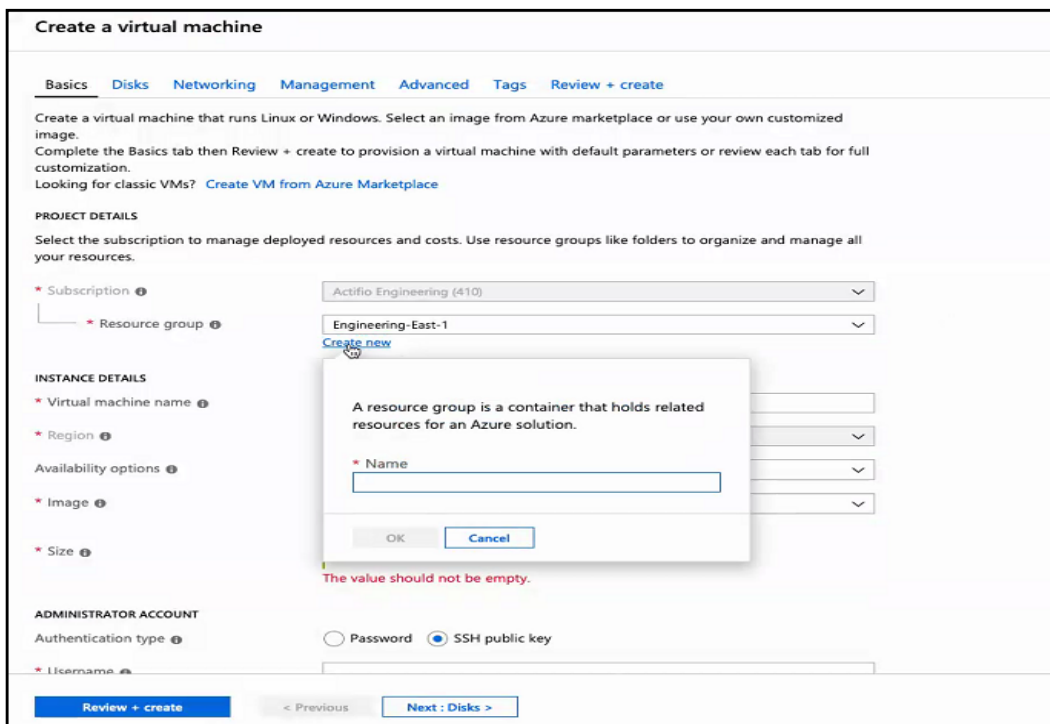


The selected image page displays the detailed information.

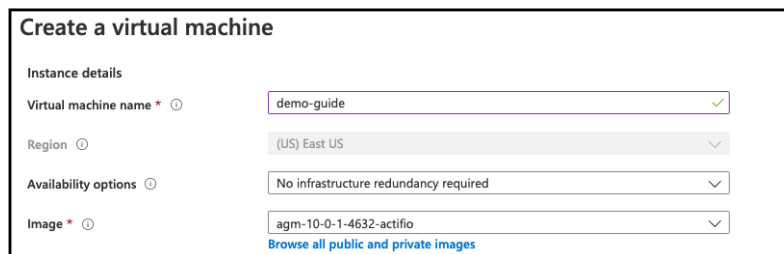
4. Click **Create VM**.



The Create a Virtual machine page appears.



5. 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 Select the required CPU and RAM from the **Size** drop-down.

Azure Spot instance  Yes  No

Size \*  [Select size](#)

- o You can also chose the required CPU and RAM by clicking the **Select size** option. The **Select a VM size** page appears.

Select a VM size

Search by VM size:  Display cost: Monthly vCPUs: All RAM (GiB): All Add filter

Most used sizes by Azure users

Showing 12 of 315 VM sizes | Subscription: Actifio Engineering (410) | Region: East US | Current size: Standard\_B4ms | Image: agn-10-0-1-4632-actfio | [Learn more about VM sizes](#)

VM Size	Family	vCPUs	RAM (GiB)	Data disks	Max IOPS	Temp storage (GiB)	Premium disk
D51_v2	General purpose	1	3.5	4	3200	7	Supported
D2s_v3	General purpose	2	8	4	3200	16	Supported
B2s	General purpose	2	4	4	1280	8	Supported
B1s	General purpose	1	1	2	320	4	Supported
B2ms	General purpose	2	8	4	1920	16	Supported
B1ms	General purpose	1	2	2	640	4	Supported
B1ls	General purpose	1	0.5	2	160	4	Supported
D52_v2	General purpose	2	7	8	6400	14	Supported
B4ms	General purpose	4	16	8	2880	32	Supported
D53_v2	General purpose	4	14	16	12800	28	Supported
D4s_v3	General purpose	4	16	8	6400	32	Supported
D8s_v3	General purpose	8	32	16	12800	64	Supported

[See all sizes](#)

[Select](#) 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. Final charges will appear in your local currency in cost analysis and billing calculator.

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

- o In **Administrator account** section, select the authentication type as **SSH public key** or **Password**.
- o if **SSH public key** type is selected, enter the **Username** and **Key pair name**, and select the appropriate key source option from the **SSH public key source** drop-down list.

Administrator account

Authentication type  SSH public key  Password

**i** Azure now automatically generates an SSH key pair for you and allows you to store it for future use. It is a fast, simple, and secure way to connect to your virtual machine.

Username \*  ✓

SSH public key source  ✓

Key pair name \*  ✓

- o If **Password** type is selected, provide a username and password.

- 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.*

6. Leave the remaining defaults and then select the **Next: Disks**.

7. 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.

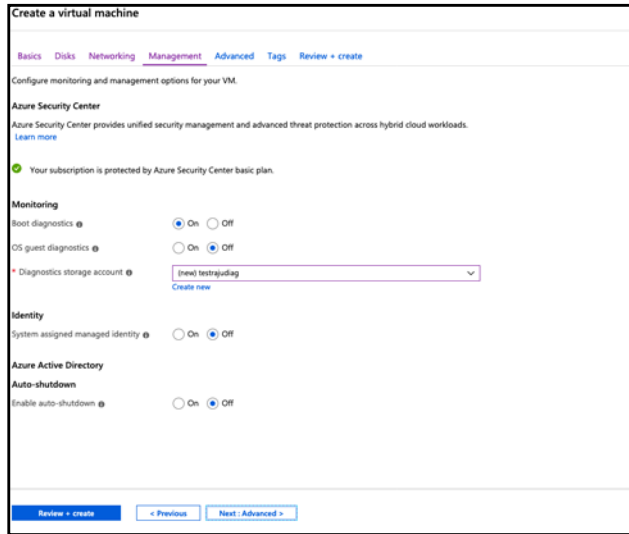
8. In **Networking** tab, perform the following:
- o Select a virtual network from the drop-down list or click **Create new** to create a new virtual network.
  - o Select a subnet from the drop-down menu.
  - o Select a public IP address from the drop-down menu if you want to use an existing public 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.

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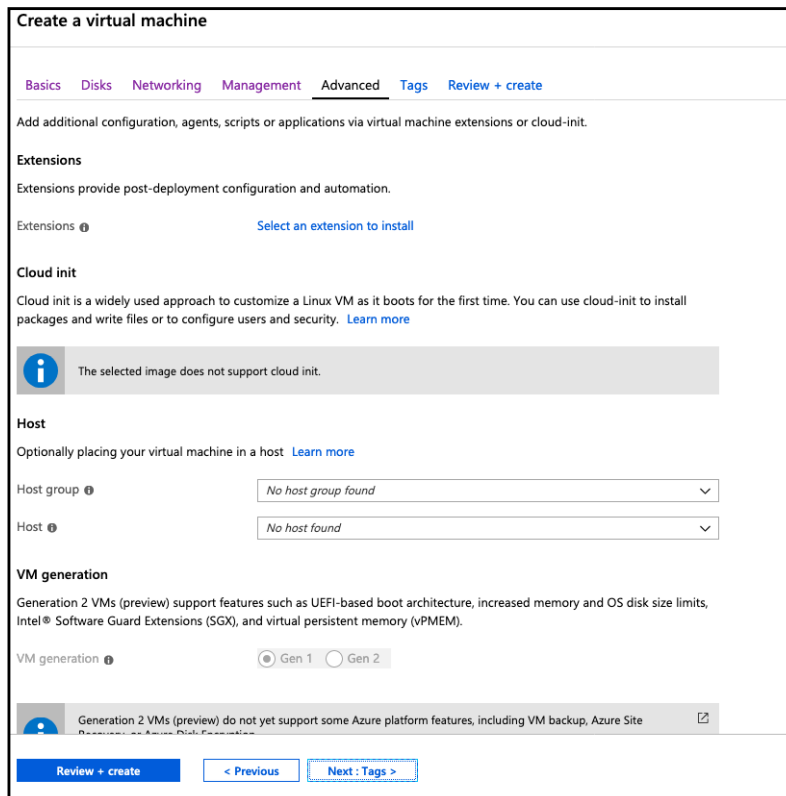
**Note:** If you want to create a new customized network security group, select the **Advanced** option and then click **Create new** from *Configure Network Security group*.

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- 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 appears.

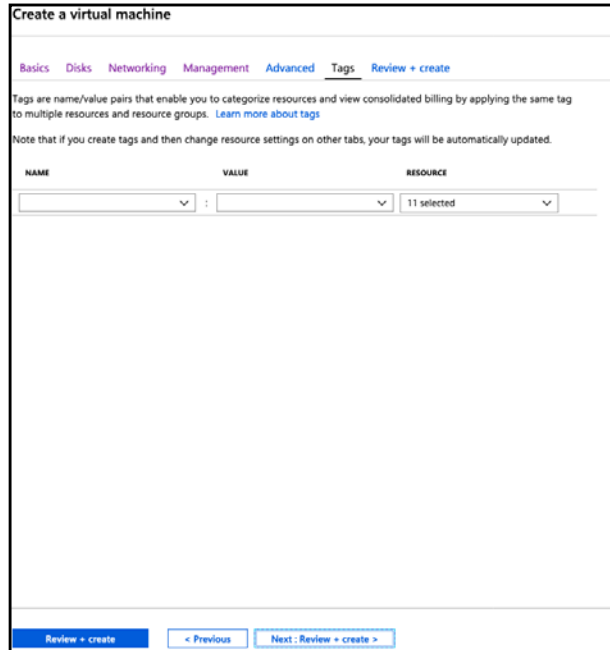


9. In **Management** tab, perform the following:
  - o Under **Monitoring**, either select an existing diagnostics storage account from the drop-down menu, or click **Create new** if you want to create a new diagnostics storage account.
  - o Click **Next: Advanced**. The **Advanced** page appears.

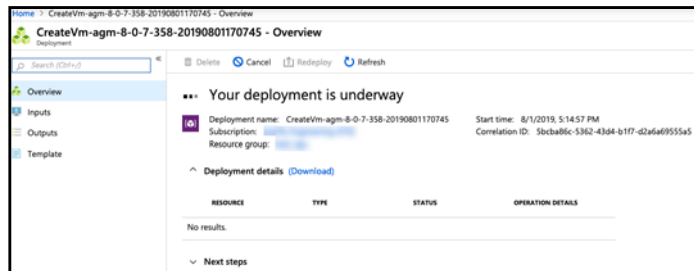


10. In **Advanced** tab, perform the following:
  - o (Optional) Under **Host**, select a host group and a host from the drop-down menus.
  - o (Optional) Under **VM generation**, select either **Gen 1** or **Gen 2**.
  - o Click **Next: Tags**. The **Tags** page appears.

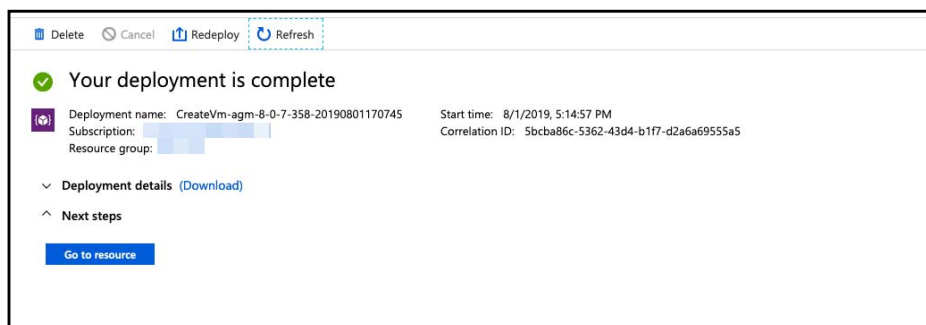




11. In **Tags** tab, perform the following:
  - o (Optional) To create a tag that enables you to categorize resources to multiple resources and resource groups, select a name, value, and resource from the drop-down menus.
  - o Click **Next: Review + create**>.The following page appears.



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



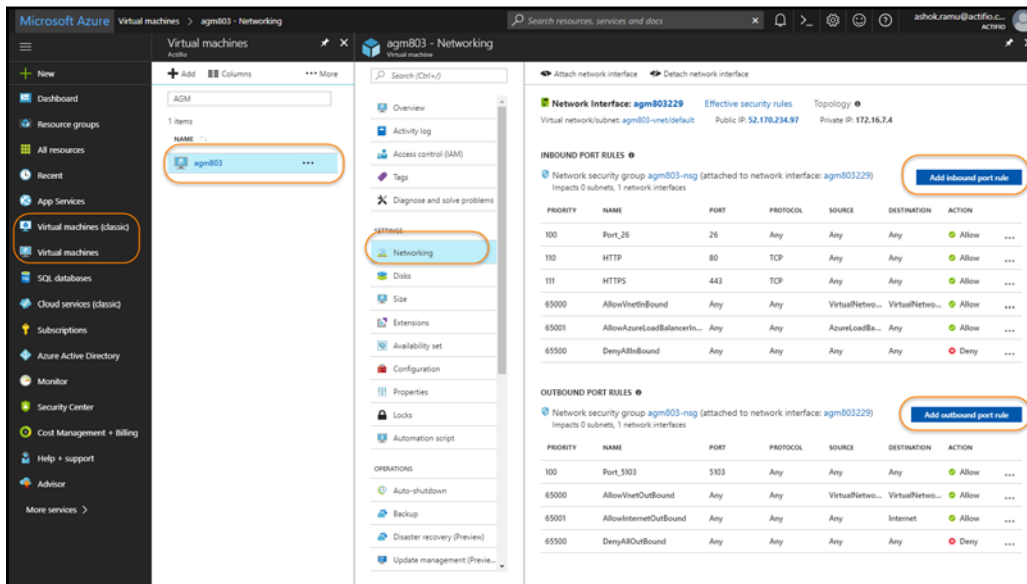
12. Proceed to [Required Ports](#) on page 12.

## 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
<b>AGM</b>	ssh:26	adhd_tunnel:5103
	http:80	
	https:443	
<b>Actifio Sky</b>	ssh:26	streamsnap_secure:5107
	http:80	
	https:443	
	adhd_tunnel:5103	
	streamsnap_secure:5107	
<b>Host</b>	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 13 for details.

# 3 Accessing Actifio Global Manager

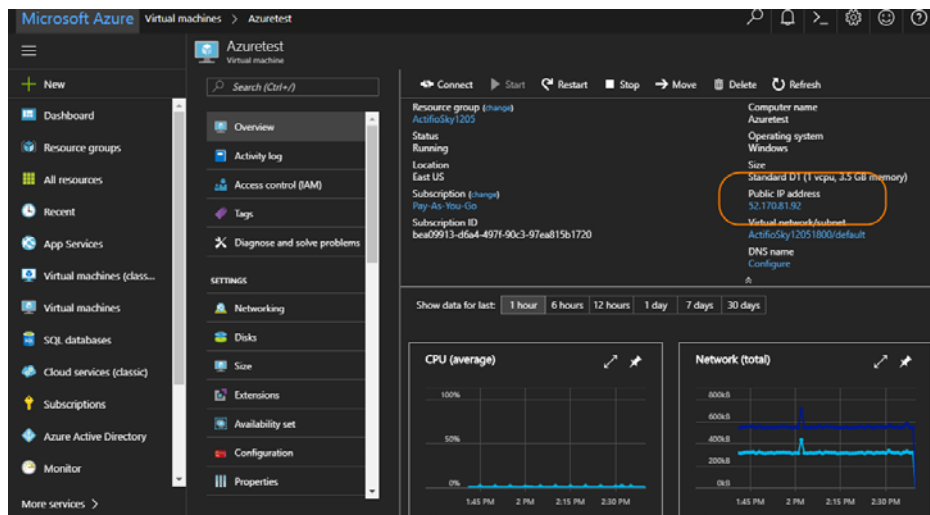
When the Microsoft Azure instance is ready, you can enter the instance's Public IP in a browser and log in to the Actifio Global Manager.

## 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.

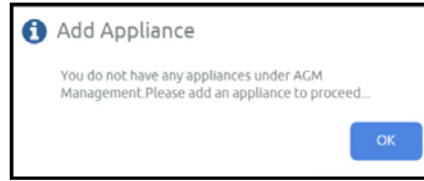


5. Enter a new password of at least six (6) characters, it can be the same as your old password as well.
6. Click **Save** to save then new password. You are taken back to the login screen.
7. Enter your user name and new password.
8. Click **Login**.

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.

