

# Deploy the ExtraHop Command Appliance in Azure

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The following procedures explain how to deploy an ExtraHop Command virtual appliance in a Microsoft Azure environment. You must have experience administering in an Azure environment to complete these procedures.

## Before you begin

- You must have experience deploying virtual machines in Azure within your virtual network infrastructure. To ensure that the deployment is successful, make sure you have access to, or the ability to create the required resources. You might need to work with other experts in your organization to ensure that the necessary resources are available.
- You must have a Linux, Mac, or Windows client with the latest version of [Azure CLI](#) installed.
- You must have the ExtraHop virtual hard disk (VHD) file, available on the [ExtraHop Customer Portal](#). Extract the VHD file from the downloaded .zip archive file.
- You must have an ExtraHop product key.

## System requirements

The table below shows the environmental parameters that you need to configure, or might have already configured in your Azure environment to successfully deploy your ExtraHop virtual appliance.

Parameter	Description
Azure account	Provides access to your Azure subscriptions.
Resource Group	A container that holds related resources for the ExtraHop appliance.
Location	The geographic region where the Azure resources are located to sustain your virtual appliances.
Storage account	The Azure storage account contains all of your Azure Storage data objects, including blobs and disks.
Blob storage container	The storage container where the ExtraHop appliance image is stored as a blob.
Managed disk	The disk required for ExtraHop appliance data storage.
Network security group	The network security group contains security rules that allow or deny inbound network traffic to, or outbound network traffic from the ExtraHop appliance.
Azure VM instance size	<p>An Azure instance size optimized for the number of connected ExtraHop Discover, Explore, and Trace appliances.</p> <p>The performance of the ExtraHop Command appliance depends on the number of sensors you are deploying in combination with the number</p>

Parameter	Description
	<p>of devices you expect the system to discover in your environment. To determine the appropriate sizing, see the <a href="#">Command Appliance Performance Guidelines</a>.</p> <ul style="list-style-type: none"> <li>• <b>Small Deployments:</b> Standard_D4_v3 (4 vCPU and 16 GiB RAM)</li> <li>• <b>Medium Deployments:</b> Standard_D8_v3 (8 vCPU and 32 GiB RAM)</li> <li>• <b>Large Deployments:</b> Standard_D16_v3 (16 vCPU and 64 GiB RAM)</li> <li>• <b>Extra Large Deployments :</b> Standard_D32_v3 (32 vCPU and 128 GiB RAM)</li> </ul>
Public or private IP address	The IP address that enables access to the ExtraHop system.

## Deploy the Command appliance

### Before you begin

The procedures below assume that you do not have the required resource group, storage account, storage container, and network security group configured. If you already have these parameters configured, you can proceed to step 6 after you log in to your Azure account.

1. Open a terminal application on your client and log in to your Azure account.

```
az login
```

2. Open <https://aka.ms/devicelogin> in a web browser and enter the code to authenticate, and then return to the command-line interface.
3. Create a resource group.

```
az group create --name <name> --location <location>
```

For example, create a new resource group in the West US region.

```
az group create --name exampleRG --location westus
```

4. Create a storage account.

```
az storage account create --resource-group <resource group name> --name <storage account name>
```

For example:

```
az storage account create --resource-group exampleRG --name examplesa
```

5. View the storage account key. The value for `key1` is required for step 6.

```
az storage account keys list --resource-group <resource group name> --account-name <storage account name>
```

For example:

```
az storage account keys list --resource-group exampleRG --account-name
examplesa
```

Output similar to the following appears:

```
[
  {
    "keyName": "key1",
    "permissions": "Full",
    "value":
    "CORuU8mTcxLxq0bbszhZ4RKTb93CqLpjZdAhCrNJugAorAyvJjhGmBSedjYPmnzXPikSRigd
5T5/YGYBoIzxNg=="
  },
  {
    "keyName": "key2",
    "permissions": "Full",
    "value": "D0lda4+6U3Cf5TUAng8/GKotfX1HHJuc3yljAlU+aktRAf4/
KwVQUuAUhndrw2yg5Pba5FpZn6oZYvRONcT8Q=="
  }
]
```

6. Set default Azure storage account environment variables. You can have multiple storage accounts in your Azure subscription. To select one account to apply to all subsequent storage commands, set these environment variables. If you do not set environment variables you will always have to specify `--account-name` and `--account-key` in the commands in the rest of this procedure.

```
export AZURE_STORAGE_ACCOUNT=<storage account name>
```

```
export AZURE_STORAGE_KEY=<key1>
```

Where `<key1>` is the storage account key value that appears in step 5.

For example:

```
export AZURE_STORAGE_ACCOUNT=examplesa
```

```
export AZURE_STORAGE_KEY=CORuU8mTcxLxq0bbszhZ4RKTb93CqLpjZdAhCrNJugAor
AyvJjhGmBSedjYPmnzXPikSRigd5T5/YGYBoIzxNg==
```



**Tip:** • Set environment variables in Windows PowerShell with the following syntax:

```
$Env:<variable-name> = "<value>"
```

- Set environment variables in the Windows command interpreter (cmd.exe) with the following syntax:

```
set <variable name>=<string>
```

7. Create a storage container.

```
az storage container create --name <storage container name>
```

For example:

```
az storage container create --name examplesc
```

- Upload the Command appliance VHD file to the blob storage.

```
az storage blob upload --container-name <container> --type page --name
<blob name> --file <path/to/file> --validate-content
```

For example:

```
az storage blob upload --container-name examplesc --type page
--name command_appliance.vhd --file /Users/admin/Downloads/extrahop-eca-
azure-7.2.0.5000.vhd --validate-content
```

- Retrieve the blob URI. You will need the URI when you create the managed disk in the next step.

```
az storage blob url --container-name <storage container name> --name
<blob name>
```

For example:

```
az storage blob url --container-name examplesc --name
command_appliance.vhd
```

Output similar to the following example appears:

```
https://examplesa.blob.core.windows.net/examplesc/command_appliance.vhd
```

- Create a managed disk, sourcing the Command VHD file.

```
az disk create --resource-group <resource group name> --location <Azure
region>
--name <disk name> --sku <Azure sku> --source <blob uri> --size-gb <size
gb>
```

Where `sku` specifies the type of disk and desired replication pattern. Managed disks support only Standard\_LRS and Premium\_LRS. Premium\_LRS has a maximum disk size of 1 TB and Standard\_LRS has a maximum disk size of 4TB.

Refer to the [Command Appliance Performance Guidelines](#) for the disk size for the recommended `--size-gb` parameter.

For example:

```
az disk create --resource-group exampleRG --location westus
--name exampleDisk --sku Standard_LRS --source https://
examplesa.blob.core.windows.net/examplesc/command_appliance.vhd
--size-gb 52
```

- Create the VM and attach the managed disk. This command creates the Command appliance VM with a default network security group and private IP address.

```
az vm create --resource-group <resource group name> --public-ip-address
"" --location <Azure region>
--name <vm name> --os-type linux --attach-os-disk <disk name> --size
<azure machine size>
```

For example:

```
az vm create --resource-group exampleRG --public-ip-address "" --location
westus --name exampleVM --os-type linux
--attach-os-disk exampleDisk --size Standard_D2_v3
```

12. Log in to the Azure portal through <https://portal.azure.com> and configure the networking rules for the appliance. The network security group must have the following rules configured:

**Table 1: Inbound Port Rules**

Name	Port	Protocol
HTTPS	443	TCP
SSH	22	TCP

**Table 2: Outbound Port Rules**

Name	Port	Protocol
DNS	53	UDP
HTTPS	443	TCP
SSH	22	TCP

#### Next steps

Open a web browser and log in to the ExtraHop system through the configured private IP address. The default login name is `setup` and the password is `default`.

Complete the following recommended procedures:

- [Register your ExtraHop system](#)
- [Configure the system time](#)
- [Configure email settings for notifications](#)
- [Connect the Discover and Command appliances to Explore appliances](#)
- [Connect the Discover and Command appliances to the Trace appliance](#)