

Deploy the ExtraHop Explore Appliance in Azure

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The following procedures explain how to deploy an ExtraHop Discover virtual appliance in a Microsoft Azure environment and join multiple Explore appliances to create an Explore cluster. 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 | An Azure instance size that most closely matches the Explore appliance VM size. See the table below. |
| Public or private IP address | The IP address that enables access to the ExtraHop system. |

Table 1: Azure datastore and instance sizes

| vCPUs | Memory | Datastore disk | Azure Instance Size |
|-------|-----------|------------------|---------------------|
| 4 | 8 GB RAM | 150 GB to 250 GB | Standard_F4s_v2 |
| 8 | 16 GB RAM | 150 GB to 500 GB | Standard_F8s_v2 |
| 16 | 32 GB RAM | 150 GB to 1 TB | Standard_F16s_v2 |
| 32 | 64 GB RAM | 150 GB to 2 TB | Standard_F32s_v2 |

Deploy the EXA 5100v

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 5 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/
      KwVQUuAUUnhdrw2yg5Pba5FpZn6oZYvROncnT8Q=="
    }
  ]

```

6. Set default Azure storage account environment variables. You can have multiple storage accounts in your Azure subscription. To select one of them 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.

PowerShell

```
$Env:AZURE_STORAGE_ACCOUNT = <storage account name>
```

```
$Env:AZURE_STORAGE_KEY = <key1>
```

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

For example:

```
$Env:AZURE_STORAGE_ACCOUNT=examplesa
```

```
$Env:AZURE_STORAGE_KEY=CORuU8mTcxLxq0bbszhZ4RKTb93CqLpjZdAhCrNJugAor
AyvJjhGmBSedjYPmnzXPikSRigd5T5/YGYBoIzxNg==
```



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

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

- Set environment variables in the Linux command-line interface with the following syntax:

```
export <variable name>=<string>
```

7. Create a storage container.

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

For example:

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

8. Upload the Explore 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 explore_appliance.vhd --file /Users/admin/Downloads/extrahop-
exa-5100v-azure-7.2.0.5000.vhd --validate-content
```

- Retrieve the blob URI. You 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 explore_appliance.vhd
```

Output similar to the following appears:

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

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

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

Where `storage SKU` specifies the type of disk and desired replication pattern. For example, `Premium_LRS`, `StandardSSD_LRS`, or `Standard_LRS`.

For example:

```
az disk create --resource-group exampleRG --location westus --name exampleDisk --sku Standard_LRS --source https://examplesa.blob.core.windows.net/examplesc/explore_appliance.vhd --size-gb 200
```

- Create the VM and attach the managed disk. This command creates the Explore 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_F4s_v2
```

- 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 2: Inbound Port Rules

| Name | Port | Protocol |
|-------|------|----------|
| EXA | 9443 | TCP |
| HTTPS | 443 | TCP |
| SSH | 22 | TCP |

Table 3: Outbound Port Rules

| Name | Port | Protocol |
|-------|------|----------|
| DNS | 53 | UDP |
| EXA | 9443 | ANY |
| HTTPS | 443 | TCP |
| SSH | 22 | TCP |






13. Repeat steps 10 - 12 to deploy additional Explore appliances to create your Explore cluster.

 **Important:** Do not create a copy of an existing ExtraHop virtual machine to deploy a new instance. Always start by creating a new managed disk from the original VHD file.

Next steps

Open a web browser and log in to the Administration settings on the ExtraHop system through `https://<extrahop-hostname-or-IP-address>/admin`. The default login name is `setup` and the password is `default`.

Complete the following procedures:

- [Register your ExtraHop system](#) 
- [Create an Explore cluster](#) 
- [Connect the Discover and Command appliances to Explore appliances](#) 
- [Send record data to the Explore appliance](#) 
- Review the [Explore Post-deployment Checklist](#)  and configure additional Explore appliance settings.