

# Deploy Reveal(x) Ultra on Google Cloud Platform

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The following procedures explain how to deploy an ExtraHop Ultra virtual packet sensor in a Google Cloud environment. You must have experience deploying virtual machines in Google Cloud within your virtual network infrastructure.

To ensure that the deployment is successful, make sure you have 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.

## System requirements

Your environment must meet the following requirements to deploy a virtual packet sensor on GCP:

- You must have a Google Cloud Platform (GCP) account
- You must have the ExtraHop deployment file, which is available on the [ExtraHop Customer Portal](#).
- You must have an ExtraHop product key.
- You must have packet mirroring enabled in GCP to forward network traffic to the ExtraHop system. Packet mirroring must be configured to send traffic to nic1 (not nic0) of the ExtraHop instance. See <https://cloud.google.com/vpc/docs/using-packet-mirroring>.

 **Important:** To ensure the best performance for initial device synchronization, connect all sensors to the console and then configure network traffic forwarding to the sensors.

- You must have firewall rules configured to allow DNS, HTTP, HTTPS, and SSH traffic for ExtraHop administration. See <https://cloud.google.com/vpc/docs/using-firewalls>.
- You must provision the GCP instance type that most closely matches the virtual sensor size, as follows:

Sensor	Recommended Instance Type
Reveal(x) Ultra 1 Gbps	n1-standard-8 (8 vCPU, 30 GB memory)
Reveal(x) Ultra 10 Gbps	n2-standard-32 (32 vCPU, 128 GB memory)

## Upload the ExtraHop deployment file

1. Sign in to your Google Cloud Platform account.
2. From the navigation menu, click **Cloud Storage** > **Browser**.
3. Click the name of the storage bucket where you want to upload the ExtraHop deployment file. If you do not have a preconfigured storage bucket, create one now.
4. Click **Upload files**.
5. Browse to the `extrahop-edaultra-gcp-<version>.tar.gz` file you previously downloaded and click **Open**. Wait for the file to upload, and then continue to the next procedure.

## Create the image

1. From the navigation menu, click **Compute Engine** > **Images**.
2. Click **Create Image** and complete the following steps:

- a) In the Name field, type a name to identify the sensor.
- b) From the Source drop-down list, select **Cloud Storage file**.
- c) Click **Browse**, locate the `extrahop-edaultra-gcp-<version>.tar.gz` file in your storage bucket and then click **Select**.
- d) Configure any additional fields that are required for your environment.
- e) (Reveal(x) Ultra 10 Gbps Only) Click **Equivalent Command Line**.

Click **Run in Cloud Shell**, add `--guest-os-features=GVNIC` to the end of the command and then press ENTER on your keyboard to run the command. After the command runs, close Cloud Shell and then click **Cancel**. Clicking **Cancel** does not cancel the creation of the image through Cloud Shell.

3. (Reveal(x) Ultra 1 Gbps Only) Click **Create**.

## Create the datastore disk

1. From the navigation menu, click **Compute Engine > Disks**.
2. Click **Create Disk** and complete the following steps:
  - a) In the Name field, type a name to identify the datastore disk.
  - b) From the **Disk source type** drop-down list, select **Image**.
  - c) From the Source image drop-down list, select the image you created in the previous procedure.
  - d) From the Disk type drop-down list, select **Balanced persistent disk**.
  - e) In the Size field, configure the disk size as follows:

Sensor	Disk size
Reveal(x) Ultra 1 Gbps	150
Reveal(x) Ultra 10 Gbps	1000

- f) Configure any additional fields that are required for your environment.
3. Click **Create**.

## Create the packetstore disk

1. Click **Create Disk** and complete the following steps:
  - a) In the Name field, type a name to identify the packetstore disk.
  - b) From the Disk source type drop-down list, select **Blank disk**.
  - c) In the Disk settings section, configure the disk type and size as follows:

Sensor	Disk type	Size
Reveal(x) Ultra 1 Gbps	Standard persistent disk	4000
Reveal(x) Ultra 10 Gbps	Balanced persistent disk	32000

- d) Configure any additional fields that are required for your environment.
2. Click **Create**.


## Create the VM instance

1. From the navigation menu, click **Compute Engine > VM instances**.
2. Click **Create Instance** and complete the following steps:

- a) In the Name field, type a name to identify the ExtraHop instance.
- b) From the Region drop-down list, select your geographic region.
- c) From the Zone drop-down list, select a location within your geographic zone.
- d) In the Machine configuration section, select the following options for your specific deployment.


Sensor	Machine family	Series	Machine type
Reveal(x) Ultra 1 Gbps	General Purpose	N1	n1-standard-8 (8 vCPU, 30 GB memory)
Reveal(x) Ultra 10 Gbps	General Purpose	N2	n2-standard-32 (32 vCPU, 128 GB memory)


- a) In the Boot disk section, click **Change**.
  - b) Click **Existing disks**.
  - c) From the Disk drop-down list, select the datastore disk you created previously.
  - d) Click **Select**.
3. Click **Advanced options**.
  4. Click **Networking**.
  5. In the Network tags field, type the following tag names:

 **Important:** Network tags are required to apply firewall rules to the ExtraHop instance. If you do not have existing firewall rules that allow this traffic, you must create the rules. See <https://cloud.google.com/vpc/docs/using-firewalls>.

- https-server
- http-server
- dns
- ssh-all



6. (Reveal(x) Ultra 10 Gbps Only) In the Network performance configuration section, select **gVNIC** from the Network interface card drop-down list.
7. In the Network interfaces section, click the edit icon  to edit the management interface.
  - a) From the **Network** drop-down list, select your management network.
  - b) From the **Subnetwork** drop-down list, select your management network subnet.
  - c) Configure any additional fields that are required for your environment.
  - d) Click **Done**.
8. Click **Add network interface** to configure the data capture interface.

 **Important:** The management interface and data capture interface must be in different Virtual Private Cloud (VPC) networks.

- a) From the **Network** drop-down list, select your network that will mirror traffic to the ExtraHop system.
- b) From the **Subnetwork** drop-down list, select your network subnet.
- c) From the **External IP** drop-down list, select **None**.
- d) Configure any additional fields that are required for your environment.
- e) Click **Done**.

9. Click **Disks**.
10. Click **Attach Existing Disk**.
11. Add the packetstore disk you created previously and then click **Save**.
12. Click **Create**.

## Register the system

Open a web browser and navigate to the ExtraHop system through the configured management IP address. Accept the license agreement and then log in with the `setup` user account. The password is the VM instance ID. Follow the prompts to enter the product key, change the default setup and shell user account passwords, connect to ExtraHop Cloud Services, and connect to an ExtraHop console.

## Configure L3 device discovery

You must configure the ExtraHop system to discover and track local and remote devices by their IP address (L3 Discovery). To learn how device discovery works in the ExtraHop system, see [Device discovery](#).

1. Log in to the Administration settings on the ExtraHop system through `https://<extrahop-hostname-or-IP-address>/admin`.
2. In the System Configuration section, click **Capture**.
3. Click **Device Discovery**.
4. In the Local Device Discovery section, select the **Enable local device discovery** checkbox to enable L3 Discovery.
5. In the Remote Device Discovery section, type the IP address in the IP address ranges field. You can specify one IP address or a CIDR notation, such as `192.168.0.0/24` for an IPv4 network or `2001:db8::/32` for an IPv6 network.
6. Click **Save**.