

Deploy the EDA 9300 sensor

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This guide explains how to install the rack-mounted EDA 9300 sensor.

This installation enables you to run network performance monitoring, network detection and response, and intrusion detection on a single sensor. By adding the IDS module, you can also upload and view IDS detections.

 **Important:** The IDS module requires the NDR module. Before you can enable the IDS module on this sensor, you must upgrade the sensor firmware to version 9.6 or later. When the upgrade completes, you can apply the new license to the sensor.

 **Note:** If you have enabled the IDS module on this sensor, and your ExtraHop system does not have direct access to the Internet and access to ExtraHop Cloud Services, you will need to upload IDS rules manually. For more information, see [Upload IDS rules to the ExtraHop system through the REST API](#).

Installation prerequisites

To install the sensor, your environment must meet the following requirements:

Sensor

2U of rack space and electrical connections for 2 x 800W power supply units (PSUs).

Management

One 10/100/1000 BASE-T network port or one 10G BASE-SR port for sensor management.

Monitoring (capture)

High performance interfaces: One to six network ports for connection to 25 GbE or 10 GbE sources of packet data.

Management + monitoring interfaces: One to two network ports for connection to 1 GbE sources of packet data.

Network Access

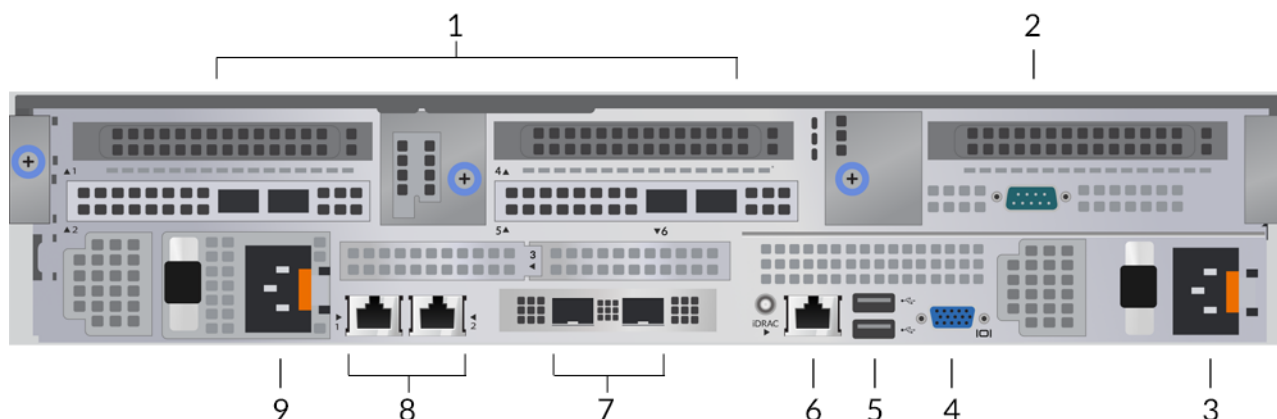
Ensure that administrators can access the Administration settings on the sensor over TCP port 443. Configure your firewall rules to allow outbound access over port 443 to [ExtraHop Cloud Services](#). For a list of default port specifications, see the [Default Port Specifications Reference](#).

For more information about the interfaces on the ExtraHop system, see the [ExtraHop Hardware FAQ](#).

Rear panel ports

Rear panel ports

EDA 9300



1. Four 25 GbE-capable ports on two network adapters. These ports can be configured as high-performance monitoring (capture) interfaces or high-performance ERSPAN/VXLAN/GENEVE targets.
2. One RS-232 serial port to connect a console device
3. Power supply unit (PSU2) to connect the sensor to an AC power source
4. One VGA port to connect an external display
5. Two USB 3.0 ports to connect input devices such as a keyboard and mouse
6. One iDRAC interface port
7. Two 10 GbE ports for management, monitoring, and RPCAP/ERSPAN/VXLAN/GENEVE targets.



Note: Traffic processing is limited to 1 Gbps per interface in "Management + RPCAP/ERSPAN/VXLAN/GENEVE Target" mode. However, the ports support up to 10 Gbps in "Monitoring (receive only)" and "High-Performance ERSPAN/VXLAN/GENEVE Target" modes.

8. Two 10/100/1000 BASE-T network ports. Port 1 is the default management port. These ports can be configured as a management port or management and RPCAP/ERSPAN/VXLAN/GENEVE target.



Tip: In environments with asymmetric routing adjacent to the high-performance interfaces, ping replies might not get back to the sender.

9. Power supply unit (PSU1) to connect the sensor to an AC power source

Supported packet source connectivity

The sensor accepts packets through ports 1 to 8. Connect the ports according to the table below.

Connector	Peer Connector for Packet Source	Customer-Supplied Cabling	Supported Operating Speeds
Transceiver-based Connectivity			
25 GbE SFP28 SR transceiver	25 GbE SFP28 SR transceiver	Multi-mode fiber LC connectors	25 Gbps, 10 Gbps

Connector	Peer Connector for Packet Source	Customer-Supplied Cabling	Supported Operating Speeds
	10 GbE SFP+ SR transceiver	Multi-mode fiber LC connectors	10 Gbps
10 GbE SFP+ SR transceiver	10 GbE SFP+ SR transceiver	Multi-mode fiber LC connectors	10 Gbps
10 GbE SFP+ SR transceiver	10 GbE SFP+ SR transceiver	Multi-mode fiber LC connectors	10 Gbps
Direct Attach Connectivity			
QSFP28-to-SFP28 adapter with customer-supplied SFP28 DAC cable, such as the Mellanox MCP2M00-Axxx series			25 Gbps
Customer-supplied RJ45 Ethernet cable			1 Gbps



Note: The packet processing capability of the sensor is 50 Gbps. While it is possible to oversubscribe the sensor by sending more than 50 Gbps of packet data across the four 25 GbE-capable ports and two 10 GbE-capable ports, inbound workloads that exceed 50 Gbps will result in dropped packets.

Traffic distribution guidelines

- Packets from the same flow should be received on the same interface, or on interfaces of the same network interface card (NIC).
- The ingest on each NIC should not exceed 75% of the rated analysis throughput for the sensor to ensure that traffic is balanced across system resources.
- If your data feed does not require both interfaces on the NIC, disable the unconfigured interfaces in the Administration settings. For example, configure the sensor with a single interface to ingest 50 Gbps on each NIC. Disable the extraneous ports on each NIC. This configuration optimizes performance for 100 Gbps.
- A single high-performance ERSPAN target is expected to process 20 to 30 Gbps. On larger sensors, distribute ERSPAN traffic to more interfaces to scale traffic ingest.

Set up the sensor

1. Rack mount the sensor.

Install the sensor in your data center with the included rack-mounting kit. The mounting kit supports most four-post racks with either round or square holes.

Orient the hardware to ensure proper airflow. The cold air intake is through the front of the sensor.

2. Connect port 1 to your management network.

This sensor has two 10/100/1000 BASE-T network ports. With a network patch cable, connect the management port on the sensor to your management network. Port 1 is the default management port.

3. Connect the monitoring port.

With the appropriate network cable, connect a monitoring port on the sensor to a network tap or mirror port on the switch. When configuring multiple high-performance monitoring ports, make sure that the transceivers are balanced across adapters. For example, with two transceivers, connect the cable to the transceivers on port 5 and port 7.

 **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.

 **Note:** The link lights on the monitoring interface ports do not illuminate until you register the ExtraHop sensor, recordstore, or packetstore with your product key.

4. Optional: Connect the iDRAC port.

To enable remote management of the sensor, connect your management network to the iDRAC port with a network patch cable.

5. Install the front bezel.

You must install the front bezel if you want to configure the sensor through the LCD display.

Insert the USB connector on the right side of the bezel into the USB port on the front of the sensor. Press and hold the release button on the left end of the bezel and push the bezel flush with the sensor until it snaps into place.

6. Connect the power cords.

Connect the two supplied power cords to the power supply units (PSUs) on the back of the sensor, and then plug the cords into a power outlet. If the sensor does not power on automatically, press the power button  on the front-right of the sensor.

 **Note:** Monitoring interfaces are enabled after a license is activated on the ExtraHop appliance.

Management IP address configuration

DHCP is enabled by default on the ExtraHop system. When you power on the system, the primary management interface attempts to acquire an IP address through DHCP. If successful, the IP address appears on the home screen of the LCD.

If your network does not support DHCP, you can configure a static IP address through the LCD menu on the front panel or through the command-line interface (CLI).

 **Important:** We strongly recommend [configuring a unique hostname](#). If the system IP address changes, the ExtraHop console can re-establish connection easily to the system by hostname.

Configure a static IP address through the LCD

Complete the following steps to manually configure an IP address through the front panel LCD controls.

1. Make sure that the primary management interface is connected to the network and the link status is active.
2. Press the select button (✓) to begin.
3. Press the down arrow button to select **Network**, and then press the select button.
4. Press the down arrow to select **Set static IP**, and then press the select button.
5. Press the left or right arrows to select the first digit to change, and then press the up or down arrows to change the digit to the desired number.
Repeat this step for each digit you need to change. After you configure the desired IP address, press the select button.
6. On the **Network mask** screen, press the left or right arrows to select the first digit to change, and then press the up or down arrows to change the digit to the desired number.
Repeat this step for each digit you need to change. After you configure the desired network mask, press the select button.

7. On the **Default gateway** screen, press the left or right arrows to select the first digit to change, and then press the up or down arrows to change the digit to the desired number.
Repeat this step for each digit you need to change. After you configure the desired default gateway, press the select button.
8. Confirm your modified network settings on the **Settings saved** screen, and then press any button to return to the **Network Menu**.
 **Note:** Each address is preceded by a letter that identifies whether it is the system IP address (I), the gateway address (G), or the netmask (N).
9. Press the down arrow and scroll to **Set DNS servers**, and then press the select button.
10. Press the left or right arrows on the **DNS1** screen to select the first digit to change, and then press the up or down arrows to change the digit to the desired number.
Repeat this step for each digit you need to change, and then press the select button to continue to the **DNS2** screen.
11. Configure a second DNS server.
12. Confirm the DNS settings on the **Settings saved** screen, and then press any button to return to the **Network Menu**.
13. Press the down arrow twice until **← Back** appears, and then press the select button.
14. Press the down arrow twice to select **iDRAC**.
15. Configure the iDRAC DHCP, IP, mask, gateway, and DNS in the same manner as the IP address.
16. Press the X button to return to the main menu.

Configure an IP address through the CLI

Before you begin

You can access the CLI by connecting a USB keyboard and SVGA monitor to the appliance or through an RS-232 serial (null modem) cable and a terminal emulator program. Set the terminal emulator to 115200 baud with 8 data bits, no parity, 1 stop bit (8N1), and hardware flow control disabled.

You can manually configure an IP address from the CLI.

1. Establish a connection to the ExtraHop system.
2. At the login prompt, type `shell` and then press ENTER.
3. At the password prompt, type the system serial number and then press ENTER.
The serial number is printed on a label on the back of the unit. The serial number can also be found on the LCD display on the front of the unit in the **Info** section.
4. Enable privileged commands:

```
enable
```

5. At the password prompt, type the serial number, and then press ENTER.
6. Enter configuration mode:

```
configure
```

7. Enter interface configuration mode:

```
interface
```

8. Run the `ip` command and specify the IP address and DNS settings in the following format:
`ip ipaddr <ip_address> <netmask> <gateway> <dns_server>`
For example:

```
ip ipaddr 10.10.2.14 255.255.0.0 10.10.1.253 10.10.1.254
```

9. Leave configuration mode:

```
exit
```

10. Save the running configuration file:

```
running_config save
```

11. Type y and then press ENTER.



Note: The system updates the running configuration file and applies the new settings when a link is detected on the interface.

(Optional) Configure the 10 GbE management interface

You can configure a 10 GbE port (port 1 or port 2) to manage the system.

The commands below demonstrate moving the settings from port 3 to port 1, and then disabling port 3, but the port numbers for 10 GbE interfaces vary by appliance model. Refer to [Rear panel ports](#) for the port numbers on your specific appliance.

1. Make sure that port 1 is connected to the 10 GbE network.
2. Establish an SSH connection to the ExtraHop system.
3. At the login prompt, type `shell` and then press ENTER.
4. At the password prompt, type the system serial number and then press ENTER.

The serial number is printed on a label on the back of the appliance. The serial number is also on the LCD display on the front of the appliance in the Info section.

5. Enable privileged commands:

```
enable
```

6. At the password prompt, type the serial number, and then press ENTER.
7. Enter configuration mode:

```
configure
```

8. Enter interface configuration mode:

```
interface 3
```

9. Move the interface settings:



Warning: This command overwrites the settings for Interface 1 with the settings from Interface 3. The current settings for Interface 1 will be lost and Interface 3 will be disabled.

```
take_settings 1
```

10. Type Y to proceed and then press ENTER.

Configure the sensor

Before you begin

Before you can configure the sensor, you must have already configured a management IP address.

1. Log in to the Administration settings on the ExtraHop system through `https://<extrahop-hostname-or-IP-address>/admin`.

The default login name is set up. The password is the system serial number that appears in the Info section of the LCD display and on the label on the back of the sensor.

2. Accept the license agreement and then log in.
3. 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.

Next steps

After the system is licensed, and you have verified that traffic is detected, complete the recommended procedures in the [post-deployment checklist](#).