



## Deployment Requirements

- [Required firewall ports and connectivity, on page 1](#)
- [Additional deployment requirements, on page 3](#)

### Required firewall ports and connectivity

- **Firewall Access:** Allow outbound access to [ciscoconnectdna.com](https://ciscoconnectdna.com).
- **Connectivity:** Ensure connectivity exists between the Catalyst Center Global Manager and the controllers. Catalyst Center Global Manager supports only one interface for the enterprise edition.
- **Supported Infrastructure:** includes:
  - Physical or virtual Catalyst Center appliances (single node or High Availability (HA) or Virtual Appliance (VA)).
  - VMware ESXi and vCenter, version 7.0.x or later
  - Network Time Protocol (NTP) needs to be synchronized between the Catalyst Center Global Manager and Catalyst Centers. Alternatively, ensure they maintain a maximum time difference of one second.
- **Ports required to be open on the firewall:** Open the following ports on the firewall to enable communication with the HTTPS-enabled browsers and allow Catalyst Center Global Manager to interact with Catalyst Centers globally.

| Port   | Service name                         | Purpose  | Recommended action  |
|--|--------------------------------------|--|---|
| Administering or configuring Catalyst Center Global Manager. |                                      |  |   |
| TCP 443  | UI, REST, HTTPS                      | GUI, REST, HTTPS management port.                    | Open the port.  |
| TCP 2222   | Catalyst Center Global Manager shell | Connect to the Catalyst Center Global Manager shell. | Keep the port open. Restrict the known IP address to be the source. |

| Port  | Service name        | Purpose   | Recommended action  |
|---|---------------------|---|---|
| TCP 9004  | Web UI installation | Serves the GUI-based installation page. (This port is required only if you decide to install Catalyst Center Global Manager using the web-based option.)    | Keep the port open until the node installation is complete.   |
| Catalyst Center Global Manager outbound to Catalyst Center and other systems. |                     |   |   |
| TCP 49  | TACACS+             | Needed only if you are using external authentication such as Cisco ISE with a TACACS+ server.   | Open the port only if you are using external authentication with a TACACS+ server.                        |
| UDP and TCP 53  | DNS                 | Used to resolve a DNS name to an IP address.  | Open the port when you use DNS names instead of IP addresses for other services, such as an NTP DNS name. |
| UDP 123   | NTP                 | Catalyst Center Global Manager uses NTP to synchronize the time from the source that you specify.   | Open the port for time synchronization.   |
| TCP 443   | HTTPS               | Catalyst Center Global Manager uses HTTPS for cloud-tethered upgrades, periodic polling from Catalyst Center and communication with HTTPS-enabled browsers. | Open the port.  |
| UDP 1645 or 1812  | RADIUS              | Needed only if you are using external authentication with a RADIUS server.  | Open the port only if an external RADIUS server is used to authenticate user login to Catalyst Center.    |
| 111   | NFS                 | Used for Assurance backups.   | Open the port.  |
| 2049  | NFS                 | Used for Assurance backups.   | Open the port.  |
| 20048   | NFS                 | Used for Assurance backups.   | Open the port.  |

| Port              | Service name | Purpose                     | Recommended action |
|-------------------|--------------|-----------------------------|--------------------|
| TCP and UDP 32767 | NFS          | Used for Assurance backups. | Open the port.     |

## Additional deployment requirements

Catalyst Center Global Manager is deployed as a virtual machine (VM) on VMware ESXi version 7.x or later.

You must meet these requirements listed here to deploy a Catalyst Center Global Manager virtual appliance. For performance tips on the most critical areas of VMware vSphere, refer to:

- VMware vSphere Client 7.0: [Performance Best Practices for VMware vSphere 7.0, Update 3](#) (PDF)
- VMware vSphere Client 8.0: [Performance Best Practices for VMware vSphere 8.0](#) (PDF)

### Virtual machine minimum requirements

| Requirement                                    | Detail   |
|--|--|
| Virtualization platform and hypervisor         | VMware vSphere (which includes ESXi and vCenter Server) 7.0.x or later, including all updates.   |
| Processors                                     | Intel Xeon Scalable server processor (Cascade Lake or newer) or AMD EPYC Gen2 with 2.1 GHz or better clock speed.<br>Dedicate 8 vCPUs with a 16 GHz reservation to the VM. |
| Hard Disk Drive (HDD)                          | 100 GB + 550 GB (2 HDDs).  |
| Memory   | 16 GB RAM.   |
| I/O Bandwidth                                  | 180 MB/sec.  |
| Input/output operations per second (IOPS) rate | 2000-2500, with less than 5 ms of I/O completion latency.  |
| Latency  | Catalyst Center Global Manager to Catalyst Center connectivity: 350 ms.  |
| Active Sessions                                | The system supports up to 20 active user connections when network administrators log in to Catalyst Center Global Manager.   |

### Server requirements

| Requirement      | Detail             |
|------------------|--------------------|
| vCenter and ESXi | 7.0x+.             |
| Intel CPU        | 2.1 GHz and later. |

### Supported browsers

The Catalyst Center Global Manager GUI is compatible with these HTTPS-enabled browsers:

- Google Chrome: Version 134 or later
- Mozilla Firefox: Version 120.0.1 or later

### Screen resolution:

- Minimum: 1368 x 768 pixels
- Recommended: 1920 x 1080 pixels

Ensure that the client systems used to log in to Catalyst Center Global Manager have 64-bit operating systems and browsers.

### Scale numbers

The table lists the number of controllers, users and sites that Catalyst Center Global Manager supports.

| Component   | Maximum Number Supported  |
|-------------|---|
| Controllers | 25 controllers<br><br><b>Note</b><br>3-node clusters are treated as a single controller within the 25-controller scale limit  |
| Users       | 20 active users   |
| Sites       | 25,000 (maximum aggregated sites) <ul style="list-style-type: none"> <li>• 100 (sites on multiple controllers)</li> <li>• 5 (same site on maximum number of controllers)</li> </ul> |

### Security limitations

Catalyst Center Global Manager does not support managing Catalyst Centers with:

- Disaster Recovery (DR)
- Federal Information Processing Standards (FIPS)
- IPv6 configurations-only setups
- Air-gapped configurations

### User access role requirements

- You have matching user accounts on both Catalyst Center Global Manager and Catalyst Center.
- You get the access permissions come from individual Catalyst Centers.