



# **Installation prerequisites**

## **OnCommand Insight**

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March 08, 2024

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# Installation prerequisites

Before you install OnCommand Insight, you must download the current software version, acquire the appropriate license, and set up your environment.

Before installing OnCommand Insight, ensure that you have the following:

- OnCommand Insight software files in the downloaded installation package for the current version
- A license to operate the downloaded OnCommand Insight version
- The minimum hardware and software environment

The current product might consume additional hardware resources (due to enhanced OnCommand Insight product functionality) that were not consumed with earlier versions of the OnCommand Insight product.

- A deployment plan that includes the hardware and network configurations for the OnCommand Insight Server, Data Warehouse and Reporting, and remote acquisition units.
- Disabled virus scan software

During the installation of OnCommand Insight, you must completely disable all virus scanners. Following installation, the paths used by the Insight component (install, backup, and archiver paths) must be excluded from virus scanning, in addition to excluding the entire `sanscreen` directory from the scan.

Additionally, you must also exclude the IBM/Db2 folder (for example `C:\Program Files\IBM\DB2`) from anti-virus scanning following installation.



If you are performing a full installation as an upgrade or as a migration to new hardware and your existing system contains a non-default security configuration, you must back up the security configuration before you perform the installation. After the installation is complete, you must restore the security configuration before you restore the Server (which includes the local acquisition unit) or Data Warehouse database. You must restore the security configuration to all of your Insight servers before you restore the DWH Database.

For in-place upgrade (available for Insight Server only), the security configuration is properly handled and you do not need to restore it.

You use the `securityadmin` tool to create a backup of the configuration and to restore the saved configuration. For more information, search for `securityadmin` in the OnCommand Insight Documentation Center: <http://docs.netapp.com/oci-73/index.jsp>

## Planning the deployment

To ensure a successful deployment, you must consider certain system elements before you install OnCommand Insight.

### About this task

Planning your Insight deployment includes considering these system elements:

- Insight architecture

- Your network components to be monitored
- Insight installation prerequisites and server requirements
- Insight web browser requirements

## Data source support information

As part of your configuration planning, you should ensure that the devices in your environment can be monitored by Insight. To do so, you can check the Data source support matrix for details about operating systems, specific devices, and protocols. Some data sources might not be available on all operating systems.

### Location of the most up-to-date version of the Data Source Support Matrix

The OnCommand Insight Data Source Support Matrix is updated with each service pack release. The most current version of the document can be found at the [NetApp Support Site](#).

## Device identification and data source planning

As part of your deployment planning, you should collect information about the devices in your environment.

You need the following software, connectivity, and information about each device in your environment:

- IP address or hostname resolvable by the OCI server
- Login name and password
- Type of access to the device, for example, controller and management station



Read-only access will be sufficient for most devices, but some devices require administrator permissions.

- Port connectivity to the device depending on data source port requirements
- For switches, SNMP read-only community string (user ID or password to give access to the switches)
- Any third-party software required on the device, for example, Solutions Enabler.
- See the "Vendor-specific data source reference" in the web UI Help or in the *OnCommand Insight Configuration and Administration Guide* for more information on data source permissions and requirements.

## Network traffic generated by OnCommand Insight

The network traffic that OnCommand Insight generates, the amount of processed data traversing the network, and the load that OnCommand Insight places on devices differ based on many factors.

The traffic, data, and load differ across environments based on the following factors:

- The raw data
- Configuration of devices

- Deployment topology of OnCommand Insight
- Different inventory and performance data source polling intervals, which can be reduced to allow for slow devices to be discovered or bandwidth to be conserved

The raw configuration data that OnCommand Insight collects can vary significantly.

The following example illustrates how the configuration data can vary and how traffic, data, and load are affected by many configuration factors. For example, you might have two arrays each having 1,000 disks:

- Array 1: Has 1,000 SATA disks all 1 TB in size. All 1,000 disks are in one storage pool, and there are 1,000 LUNs, all presented (mapped and masked) to the same 32 nodes in an ESX cluster.
- Array 2: Has 400 2-TB data disks, 560 600-GB FC disks, and 40 SSD. There are 3 storage pools, but 320 of the FC disks are used in traditional RAID groups. The LUNs carved on the RAID groups use a traditional masking type (symmaskdb), while the thin provisioned, pool-based LUNs use a newer masking type (symaccess). There are 600 LUNs presented to 150 different hosts. There are 200 BCVs (full block replica volumes of 200 of the 600 LUNs). There are also 200 R2 volumes, remote replica volumes of volumes that exist on an array in a different site.

These arrays each have 1,000 disks and 1,000 logical volumes. They might be physically identical in the amount of rack space they consume in the data center, and they might even be running the same firmware, but the second array is much more complex in its configuration than the first array.

## Virus scan software disablement

If antivirus software is active on your system, OnCommand Insight installation fails. You can prevent this problem by disabling the virus scan software before installation.

To prevent an installation failure due to active virus scan software, during the installation of each OnCommand Insight component, you must completely disable all virus scanners. Following installation, the paths used by the Insight component (install, backup, and archiver paths) must be excluded from virus scanning.

Additionally, you must also exclude the IBM/Db2 folder (for example *C:\Program Files\IBM\DB2*) from anti-virus scanning following installation.

## Insight Server requirements

A dedicated server is recommended. Do not install Insight on a server that has any other applications installed. Both physical and virtual servers are supported, provided that the product requirements are met.

You must have local administrator permissions to install the OnCommand Insight Server software.



Sizing for OnCommand Insight has multiple dependencies, such as data source type and size, number of assets in your environment, polling intervals, and more. The following sizing examples are guidelines only; they represent some of the environments in which Insight has been tested. Changing any of these or other factors in the environment can change the sizing requirements for Insight. These guidelines include disk space for up to 90 days of performance archive data.

It is recommended to contact your Sales Engineer for detailed sizing guidance before installing or upgrading Insight.

**Examples:**

Environment factors:	Disk space, CPUs, and Memory tested:
80 storage arrays4,000 Volumes 4,000 VMs 4,000 switch ports	250 GB disk space8 cores 32 GB RAM
160 storage arrays40,000 Volumes 8,000 VMs 8,000 switch ports	1 TB of disk space12 cores 48 GB RAM

**Requirements:**

Component	Required
Operating system	<p>A computer running 64-bit Microsoft Windows Server 2016, 2019, or 2022, with the latest service pack.</p> <p>The Resilient File System (ReFS) introduced with Windows Server 2012 is not compatible with OnCommand Insight. Windows installation of OnCommand Insight is only supported on the NTFS file system.</p> <p>A dedicated server is recommended.</p>
Virtual machine (VM)	<p>This component can run in a virtual environment, provided that the CPU and memory resources for your instance are reserved.</p>
Memory and CPU	<p>24 - 256 GB RAM</p> <p>8 - 32 cores</p> <p>It is strongly recommended to set the paging file size to "Windows managed". Small, fixed-size paging files may interfere with the successful storage of Insight performance data.</p>
Available disk space	<p>100 GB - 3 TB install disk space</p> <p>50 GB - 1 TB performance archive disk space</p> <p>SSD disks are recommended for the Insight installation space.</p>

Network	<p>Ethernet connection and ports:</p> <ul style="list-style-type: none"> <li>• 100 Mbps or 1 Gbps Ethernet connection with dedicated (static) IP address and IP connectivity to all components in the SAN, including FC devices and remote acquisition units.</li> <li>• Port requirements for the OnCommand Insight Server process are 80, 443, 1090 through 1100, 3873, 8083, 4444 through 4446, 5445, 5455, 4712 through 4714, 5500, and 5501.</li> <li>• Port requirements for the acquisition process are 12123 and 5679.</li> <li>• Port requirement for MySQL is 3306.</li> <li>• Port requirements for Elasticsearch are 9200 and 9310</li> <li>• Dynamic port requirements on Win2008/2012 are 49152 through 65535</li> </ul> <p>Ports 443 and 3306 require external access through any firewall that is present.</p>
Permissions	<p>Local administrator permissions are required on the OnCommand Insight Server.</p> <p>If any of the following folders are symbolic links, ensure that the destination directories have '755' permissions.</p> <ul style="list-style-type: none"> <li>• /opt/netapp</li> <li>• /var/lib/netapp</li> <li>• /var/log/netapp</li> </ul>
Remote connectivity	<p>Internet connectivity to allow WebEx access or a remote desktop connection to facilitate installation and post-installation support.</p>
Accessibility	<p>HTTPS access is required.</p>
Virus scan	<p>During the installation of this OnCommand Insight component, you must completely disable all virus scanners. Following installation, the paths used by the Insight component (install, backup, and archiver paths) must be excluded from virus scanning.</p> <p>Additionally, you must also exclude the IBM/Db2 folder (for example <i>C:\Program Files\IBM\DB2</i>) from anti-virus scanning following installation.</p>

HTTP or HTTPS servers	Microsoft Internet Information Services (IIS) or other HTTPS servers should not compete for the same ports (443) as the OnCommand Insight server, and should not start automatically. If they must listen to port 443, then you must configure the OnCommand Insight server to use other ports.
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## Data Warehouse and Reporting server requirements

You must run the Data Warehouse and the Reporting server on a computer that is compatible with established hardware and software requirements, ensuring that Apache web server or reporting software is not already installed on this machine.



Sizing for OnCommand Insight has multiple dependencies, such as number of assets in your environment, amount of historical data retained, and more. The following data warehouse sizing examples are guidelines only; they represent some of the environments in which Insight has been tested. Changing any of these or other factors in the environment can change the sizing requirements for Insight.

It is recommended to contact your Sales Engineer for detailed sizing guidance before installing or upgrading Insight.


### Examples:

Environment factors:	Disk space, CPUs, and Memory tested:
18 storage arrays 3,400 VMs 4,500 switch ports	200 GB hard disk 8 cores 32 GB RAM
110 storage arrays 11,500 VMs 14,500 switch ports	300 GB hard disk 8 cores 48 GB RAM

### Requirements:

Component	Required
Operating system	A computer running 64-bit Microsoft Windows Server 2016, 2019, or 2022, with the latest service pack.
Virtual machine (VM)	This component can run in a virtual environment, provided that the CPU and memory resources for your instance are reserved.
CPU	8 - 40 CPU cores



Memory	32 GB - 2 TB RAM Best Practice: It is strongly recommended to set the paging file size to “Windows managed”. Small, fixed-size paging files may interfere with the successful storage of Insight performance data.
Available disk space	<p>200 GB - 2 TB disk space Installation requires a minimum of 20 GB free on the C: drive.</p> <div>  <p>On Windows, Insight Data Warehouse with Reporting requires the 8dot3 name creation support be enabled on the installation drive prior to installing. The C: drive typically has this enabled by default. You can validate if 8dot3 name creation is enabled on the target installation drive by running the following command (substitute D: with target installation drive):</p> <pre>fsutil 8dot3name query D:</pre> <p>To enable 8dot3 name creation execute the following command (substitute D: with target installation drive):</p> <pre>fsutil 8dot3name set D: 0</pre> </div>
Network	<ul style="list-style-type: none"> <li>• 100 Mbps or 1 Gbps Ethernet connection</li> <li>• Static IP address</li> <li>• Port 50000 must be available before installing Data Warehouse with Reporting on Windows</li> <li>• For the OnCommand Insight DWH server process, ports 80, 443, 1098, 1099, 3873, 8083, and 4444 through 4446</li> <li>• For the reporting engine, ports 1527, 9362, 9300, and 9399</li> <li>• For MySQL, port 3306</li> <li>• Ensure that DNS is properly working by doing an <code>nslookup</code> against the host</li> </ul>
Virus Scan	During the installation of this OnCommand Insight component, you must completely disable all virus scanners. Following installation, the paths used by the Insight component (install, backup, and archiver paths) and all DWH component installation paths (SANscreen, DB2, and backup paths) must be excluded from virus scanning.

Visual Studio	Visual Studio 2019 <a href="#">redistributables</a> must be installed before installing Data Warehouse with Reporting on Windows.
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## Remote Acquisition Unit server requirements

You must install a Remote Acquisition Unit (RAU) to acquire information from SAN devices that are behind a firewall, at a remote site, on a private network, or in different network segments. Before you install the RAU, you should ensure that your environment meets RAU operating system, CPU, memory, and disk space requirements.

Component	Requirement
Operating system	A computer running 64-bit Microsoft Windows Server 2016, 2019, or 2022, with the latest service pack.
CPU	4 CPU cores
Memory	16 GB RAM
Available disk space	40 GB
Network	100 Mbps /1 Gbps Ethernet connection, static IP address, IP connectivity to all FC devices, and a required port to the OnCommand Insight server (80 or 443).
Permissions	Local Administrator permissions on the RAU server
Virus scan	During the installation of this OnCommand Insight component, you must completely disable all virus scanners. Following installation, the paths used by the Insight component must be excluded from virus scanning. Additionally, you must also exclude the IBM/Db2 folder (for example <i>C:\Program Files\IBM\DB2</i> ) from anti-virus scanning following installation.

## Browsers supported by OnCommand Insight

The browser-based OnCommand Insightweb UI can operate on several different browsers.

Insight supports newer, non-beta releases of the following browsers:

- Mozilla Firefox

- Google Chrome
- Microsoft Edge

For a full list of browser versions qualified for OnCommand Insight, please see the [NetApp Interoperability Matrix Tool](#).

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