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About installing or upgrading Orion Platform products and scalability engines

Use the information in this guide to install or upgrade Orion Platform products and scalability engines.

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For new Orion Platform product installations in Amazon Web Services in a virtual private cloud (VPC), see Deploy SolarWinds Orion Platform products to Amazon Web Services.

For new Orion Platform product installations in Microsoft Azure in an Azure Virtual Network (VNet), see Deploy SolarWinds Orion Platform products to Microsoft Azure.

About the Orion Installer

The SolarWinds Orion Installer is an all-in-one application for installations and upgrades. You use the same installer to:

- Install or upgrade multiple Orion Platform products.
- Install or upgrade scalability engines (Additional Polling Engines, Additional Web Servers, and High Availability servers).

The installer:

- Provides an easy-to-follow installation path for your environment, and guides you through every product installation and upgrade. The installer checks for product updates, and then presents
installation steps to complete complex upgrades and installations with ease. No need to figure out your upgrade path before you begin. The installer does it for you.

You can run the installer at any time to determine your upgrade path, even if you’re not ready to upgrade yet. This step does not shut down or affect any existing Orion services.

- Runs **preflight checks to ensure your environment specifications** match the system requirements for selected product installations. If you need to make any changes, the installer provides guidance to resolve the issues.

- Automatically runs the **Configuration Wizard** as needed after product installations to complete database and configuration tasks.

- Checks for **scalability engines** that also need to be upgraded. If the scalability engines are reachable and you choose to start the upgrade process, the installer downloads the executable and **starts running the upgrades**. Scalability engines are upgraded in parallel to minimize the time required to upgrade.

To enable the primary Orion server to reach your scalability engines, do not stop the SolarWinds Administration Service on your scalability engines before the upgrade.

### How do I get the Orion Installer?

When you download an Orion Platform product from the Customer Portal or from [www.solarwinds.com](http://www.solarwinds.com), the Orion Installer is included in the download.

The name of the downloaded .exe file reflects the product that you downloaded, but you can install or upgrade multiple products.

For example, when you run `Solarwinds-Orion-SAM.exe` to install SolarWinds SAM, SAM is selected by default. But you can select other products as well. In most cases, you need to download only one **SolarWinds Orion Installer**, even if you plan to install or upgrade multiple products.

### What you should know

- Each time you run the online installer, it **checks for product updates** and provides the latest Orion Platform product versions.

- If you have **older versions** of products, you can still use this installer for **upgrade paths, download links**, and links to **release notes**.
• You can save an **installation report** to capture specifics about your progress and any issues that the installer encountered.

• All products are upgraded to the **latest compatible versions** when possible. If a product is not compatible with the latest Orion Platform version, you cannot continue with the installation or upgrade. The installer provides resolution options.

**Always have the latest Orion Installer**

• If you are using the **online installer** and your server has an **Internet connection**, the Orion Installer automatically checks for updates and downloads the latest available version.

  If you see a progress bar for an Orion Installer update, let it continue. When the download is complete, the new and improved installer starts automatically.

• If you are using the **offline installer**, or if your server does **not** have an Internet connection, the Orion Installer cannot check to be sure you have the latest version. In that case, you should check the Customer Portal to make sure you have the latest version of the installer.
Prepare to install or upgrade Orion Platform products

Use the following sections to plan your installation or upgrade and to prepare your environment.

Plan your installation or upgrade

Use this checklist to verify product requirements before you get started. The Orion Installer will alert you to warning or critical level requirement issues during the System Check.

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- DPAIM [Current version](#) | [Previous versions](#)

  **Note**: DPAIM is installed automatically with SAM, but can be [installed without SAM](#).

- EOC [Current version](#) | [Previous versions](#)

  **Note**: For information about installing EOC 2.0 and later, see [SolarWinds Orion Installer for EOC](#).

- IPAM [Current version](#) | [Previous versions](#)

- LA (formerly Log Manager) [Current version](#) | [Previous versions](#)

- NCM [Current version](#) | [Previous versions](#)

- NPM [Current version](#) | [Previous versions](#)

- NTA [Current version](#) | [Previous versions](#)

- Orion Platform [Current version](#) | [Previous versions](#)

- SAM [Current version](#) | SAM previous versions

- SCM [Current version](#) | [Previous versions](#)

- SRM [Current version](#) | [Previous versions](#)

- UDT [Current version](#) | [Previous versions](#)

- VMAN [Current version](#) | [Previous versions](#)

- VNQM [Current version](#) | [Previous versions](#)

- WPM [Current version](#) | [Previous versions](#)

- [Orion Platform hotfixes](#)
## INSTALLATION AND UPGRADE CHECKLIST

- **Review** system requirements.
  
  Use the following links and the multi-module environments guidelines to make sure your environment has all of the required hardware and software.

  - DPAIM [Current version](#) | [Previous versions](#)
  - EOC [Current version](#) | [Previous versions](#)
  - IPAM [Current version](#) | [Previous versions](#)
  - LA (formerly Log Manager) [Current version](#) | [Previous versions](#)
  - NCM [Current version](#) | [Previous versions](#)
  - NPM [Current version](#) | [Previous versions](#)
  - NTA [Current version](#) | [Previous versions](#)
  - Orion Platform [Current version](#) | [Previous versions](#)
  - SAM [Current version](#) | [Previous versions](#)
  - SCM [Current version](#) | [Previous versions](#)
  - SRM [Current version](#) | [Previous versions](#)
  - UDT [Current version](#) | [Previous versions](#)
  - VMAN [Current version](#) | [Previous versions](#)
  - VNQM [Current version](#) | [Previous versions](#)
  - WPM [Current version](#) | [Previous versions](#)

  See [URLs used by the Orion Platform](#) for a list of URLs to add as exceptions to your firewall.

- **Review** licenses, gather keys, and review maintenance status.

  Review your product licenses and maintenance status and determine if you need to make any changes. You can download license keys for your new Orion Platform products through the [Customer Portal](#). Discuss license upgrades with your SolarWinds account manager or [contact SolarWinds](#).

- **Gather** credentials.

  Make sure you have all account credentials, Orion Platform database credentials, your SolarWinds account, and local admin server credentials.

## Considerations for upgrades

The following situations can affect your upgrade process.

## Do you need to migrate?

If product requirements have changed, you might need to migrate products and databases to new dedicated servers before you can upgrade to the latest version. [Determine whether you need to migrate](#) by reviewing new product requirements, performance, and company needs.
Migrating adds time to your upgrade, but upgrades provide a good opportunity to update your environment. See the Migration Guide for more information.

Do you have products out of maintenance?

If you have a product that is out of maintenance (that is, the license has expired), the Orion Installer upgrades the product to the latest version that became available before maintenance expired and is compatible with other installed products.

Be aware that having an out-of-maintenance product can prevent you from upgrading products that are currently under maintenance. This occurs when the out-of-maintenance product is not compatible with the latest version of the Orion Platform.

Example: You have IPAM out of maintenance. You want to upgrade NPM to the latest version. Upgrading NPM would also upgrade the Orion Platform. However, your version of IPAM is incompatible with the latest version of the Orion Platform. The installer reports the issue and suggests resolutions, but it does not allow you to upgrade NPM until the issue is resolved.

Recommendations:

- Renew. SolarWinds highly recommends renewing. Products under maintenance have access to technical support and all the latest upgrades.
- Uninstall the product that restricts your upgrade.
- Move the out-of-maintenance product to a different server. See the Migration Guide for details.

Do you have product versions that cannot be upgraded by the Orion Installer?

If you have legacy product versions that are not supported by the Orion Installer, the installer runs a system check that provides a full upgrade path for legacy products. Use the links supplied in the system check details to download legacy installers for the versions you need. See Upgrade older versions of Orion Platform products for details.
Prepare for an upgrade

**Upgrade Checklist**

- **Schedule** the upgrade.
  
  Set up the maintenance window, preferably during off-peak hours. Depending on the number of products, size of database(s), and size of environment, you might need several hours to complete your installation.

  - If you upgrade or install new Orion Platform products into an existing Orion Platform installation, all SolarWinds services and polling must be offline for a length of time, causing you to lose a portion of polled data.

- **Notify your company** of the upgrade schedule and maintenance window.

- **Back up** your database and **snapshot** your VMs.
  
  Back up your SolarWinds Orion database. If you need help, check your vendor's site for instructions. If you'd like to use SolarWinds Backup, click [here](#) for information.

  If your Orion server is on a virtual machine, create a snapshot or copy of your VM.

  *You cannot roll back an upgrade. Always back up your database.*

- **If you have written** [custom code](#), back it up.

**Prepare the servers**

Depending on your licensed Orion Platform products, you might need to prepare multiple servers and configure ports in your firewall before installation.
**Server Preparation Checklist**

- **Prepare servers** for your Orion Platform products and deployment:
  - **Orion server**: See your product's system requirements.
  - **Orion database server**: See your product's system requirements.
  - **Primary and Secondary servers for SolarWinds High Availability**: Review the HA requirements and VIP address information and prepare matching servers.
  - **Additional Polling Engine servers**: See the SolarWinds Scalability Guidelines.
  - **Additional Web Server**: See the SolarWinds Scalability Guidelines.
  - **Additional databases**: Some products require additional databases. For example:
    - NTA requires a SQL Server database to store flow data, and Log Analyzer requires a SQL Server database to store log data. These databases can be on the same server as the Orion database, or they can be on different servers. For more information, see Databases used by SolarWinds modules.
    - Integrated products, such as DPA and Patch Manager, require a separate, dedicated database.
  - For upgrades, be aware of changes to server and other requirements. For example:
    - VMAN 8.0 and later versions no longer require a separate virtual appliance. Existing customers can choose to retire the appliance or continue to use the appliance by upgrading it separately.
    - NTA 4.2.3 and earlier used a FastBit database to store flow storage data. NTA 4.4 and later versions use a SQL Server database. Data from earlier versions cannot be migrated to NTA 4.4 and later.

- **Run all Microsoft Windows updates.**

  Before installation, check for and run any Windows Updates on all servers. If a Windows update runs during the installation, your system might reboot. The installation cannot complete if your system is waiting to reboot.

- **Open required ports.**

  Open the ports required by your products and any additional features you have enabled. For example, SolarWinds High Availability has additional port requirements beyond product needs. The Orion Platform uses these ports to issue management commands and to send and receive data.

- **Exclude files from anti-virus scans.**

  To ensure a smooth installation and optimal product performance, exclude specific file paths and directories from anti-virus software scans. See Files and directories to exclude from antivirus scanning.
Gotchas for Orion Platform products

Be aware of the following changes or considerations that frequently affect installations or upgrades. For information about product-specific issues that could affect upgrades, see your product’s release notes.

- Installing Orion Platform products and **Access Rights Manager** (ARM) on the same server causes a conflict with the RabbitMQ service. To avoid this, ARM and Orion Platform products must be installed on separate servers. Note that ARM is **not** an Orion Platform product.

- Products that run on Orion Platform 2018.4 and later (such as NPM 12.4) are no longer compatible with the following platforms:
  - Windows Server 2012 and 2012 R2
  - SQL Server 2012, 2012 SP1, 2012 SP2, 2012 SP3, and 2012 SP4

To use the new features introduced in Orion Platform 2018.4 products, upgrade your environment at your earliest convenience.

- Carefully review the port requirements for your products. Incorrect ports can cause communication and polling issues. See the [Port requirements for all SolarWinds products](#) for details.

- If Patch Manager is part of your environment, SolarWinds recommends upgrading to version 2.1.5 or higher before running the Orion Installer.

- If you have **NTA 4.2.3** or earlier, SolarWinds does **not** recommend performing an upgrade. Instead, uninstall the earlier version and then install the current version. Because of a change in the type of database used as the Flow Storage Database, flow data cannot be migrated during an upgrade. For more information, see [this article](#).

Next steps

- If you do not already have Orion Platform products installed, see [Install Orion Platform products in a new environment](#).

- To install new products into an existing Orion Platform deployment, see [Install or upgrade products in an existing Orion deployment](#).

- To upgrade products that run on Orion Platform 2019.2 or later, see [Perform a centralized upgrade of the primary Orion server and all scalability engines](#).
Install Orion Platform products in a new environment

Complete the following tasks to install one or more Orion Platform products on a server that does not already have Orion Platform products installed.

If you have already installed one or more Orion Platform products, see this topic for information about installing additional products in an existing Orion deployment.

Before you start

Use the information in this topic to prepare for your installation. Use the checklists to prepare your environment, and review the list of "gotchas".

Task 1: Get the installer

If you are new to SolarWinds, you can download a trial version of any product from the product page on https://www.solarwinds.com.

If you are a SolarWinds customer, download the Orion Installer from the Customer Portal:

1. Log in to the Customer Portal.
2. Select an Orion Platform product under Latest Downloads for Your Products, and click Choose.

   In most cases, you need to download only one product module, even if you plan to install multiple products.

   To install the DPA Integration Module without SolarWinds SAM, you must download the DPAIM installer. Other product installers do not include DPAIM in the list of products. See DPAIM installation options.

3. Click Download to download either the online or offline installer:

   - **Online**: Use this option if your Orion server has internet access. This option guarantees that you have an up-to-date installer with the latest optimizations and fixes. It is the most efficient option, because it downloads only what it needs and nothing more.

     Also use online installation to install a scalability engine, even in environments without Internet access. Installing a scalability engine doesn't require Internet access. See Install an Additional Polling Engine, Additional Web Server, or HA server for details.

   - **Offline**: Use this option for installations without Internet access. The offline installer is a prepackaged file that includes everything you need for a large combination of dependencies and products.

4. Save the installer on your Orion server.
Task 2: Run the installer on the primary Orion server

Some third-party software, such as .NET 4.8, is required. If it is not found on the server, it is downloaded and installed when you run the installer.

1. Run the installer .exe file on your primary Orion server as Administrator.
   If you are installing Orion Platform Products in a new environment (not updating an existing installation), the Welcome page is displayed.

   ![SolarWinds Setup Wizard](image)
   The Setup Wizard will guide you through installing SolarWinds products. After installation, the Configuration Wizard will guide you through configuring your products.

   **Welcome**
   The Setup Wizard will guide you through installing SolarWinds products. After installation, the Configuration Wizard will guide you through configuring your products.

   **Lightweight Installation**
   - Installs SQL Server Express locally
   - Database size limited to 1GB
   - Good for evaluating Orion

   **Standard Installation**
   - Requires SQL Server
   - Database size limited by storage
   - Required for production environments

   **Add a Scalability Engine**
   - Requires an existing primary Orion server installation
   - Add another poller or website
   - Protect an existing server with HA

   Setup will install files in the following folder:
   DESTINATION FOLDER:
   C:\Program Files (x86)\SolarWinds\Orion

2. On the Welcome page:
   a. Select the type of installation:

   - **Lightweight Installation**: Use this option only for evaluations or Enterprise Operations Console (EOC) installations. It installs SQL Server Express locally and then installs Orion Platform products as quickly as possible using global settings. You select only the installation location and your preferred product language.

   SQL Server Express has a 10 GB storage limit, which is not sufficient for production installations of SolarWinds products other than EOC. If you choose Lightweight Installation and later require a larger database, you will have to migrate to a SQL Server database.

   - **Standard Installation**: Install Orion Platform products with an existing or licensed SQL Server database.

   - **Add a scalability engine**: Install an Additional Polling Engine, Additional Web Server, or
High Availability server. If you are installing a new scalability engine, see Install an Additional Polling Engine, Additional Web Server, or HA server.

b. Set the Destination Folder.

Orion Platform products cannot be installed on a remote mapped drive, read-only drive, compressed drive, or compressed HDD.

c. Click Next.

The Select Products page lists the products that you can install.

Not sure what these release acronyms mean?
- HF = Hotfix
- RC = Release Candidate

3. On the Select Products page:
   a. Select the products to install.
      - Click the release notes link to learn more about a product.
   b. Optionally, select the option to Send usage metrics to help SolarWinds improve products. We receive only data collected for the installation and upgrade.
   c. Click Next.

4. On the System Check page, review the information under System Check Results.

The installer runs a series of checks per product to verify that your server meets system requirements and recommendations. If your environment does not meet specifications, the installer displays one or more messages:

- **Informational and warning messages** recommend actions and best practices to optimize performance. These do not block the installation.
- **Critical issues** describe changes that are required to support the products. These block the installation until they are resolved.

a. Investigate and resolve any issues:
   - Click the details link to display additional information and suggested resolutions.
   - Optionally, click Save Report to save the list of issues.
   - After resolving any blocking issues, click Run Checks Again.

b. Click Next.

5. Review the EULA. If you agree, click I accept, and then click Next.

The Installation page displays progress messages. If the installer encounters any issues, the installation stops so you can resolve them. The installer might run multiple product installations before running the Configuration wizard.

If a reboot is required as part of the installation, a message is displayed.
Task 3: Complete the Configuration wizard

If database configuration is required, the Configuration wizard automatically opens. Depending on your products, the wizard might include options and pages not described here.

1. On the Welcome page, click Next.
2. If prompted to stop services, click Yes.
3. If you performed a Standard installation with an existing SQL Server database, select one of the following for authentication:
   - **Authenticate as currently logged in user**: Pass through authentication to the database server using the account currently logged in for installing the Orion Platform product.
   - **Switch user**: Provide credentials automatically detected as either SQL or Windows credentials, allowing Windows authentication for the initial setup even if the Orion server is not joined to a domain or the current account does not have permissions to the database server.

   ![Image showing the Configuration wizard with options for authentication]

   - If you intend to use Windows authentication for the Orion Platform, remember to exempt that user account from any password change policies. An expired password will cause the Orion Platform to stop data collection and interrupt Orion Web Console access.

4. On the Database Settings page, select your existing Orion database, or create a new database for a new installation, and click Next.
5. On the Database Account page, create an account or specify an existing account that the polling engine and Orion Web Console will use to access the database. The account can be a Windows or SQL Server account.
6. On the Website Settings page:
   a. Select All Unassigned unless your environment requires a specific IP address for the Orion website. If SSL is selected, port 443 is used. Otherwise, port 80 is used.
   b. Specify the Port and the Website Root Directory where the system installs the web console files.

   If you specify any port other than 80, include that port in the URL used to access the Orion Web Console.

   c. To configure SSL, click Enable HTTPS and select your SSL certificate.

   If a certificate is not available, select the option to Generate Self-Signed Certificate. The Configuration wizard automatically generates a self-signed certificate issued to the hostname or FQDN and adds it to the trusted certificate store.

7. If prompted to create a directory or website, click Yes.
8. Review the list of services to install, and click Next.

9. Click Yes if prompted to disable the SNMP Trap Service and enable the SolarWinds Trap Service.

10. On the Completing the Orion Configuration Wizard page, click Next.

11. When the configuration is complete, click Finish to launch the Orion Web Console.

If the Orion Web Console doesn't open automatically (for example, if it times out before opening), do one of the following to open it manually:

- Click Start > All Programs > SolarWinds > Orion Web Console.
- Open a web browser on your Orion server and enter http://ipAddress or http://hostname, where ipAddress is the IP address of your server and hostname is the host name of your server. This is https:// if SSL was selected.

12. Log in with user name admin. Enter a password for the admin account, confirm the password, and then click Save & Login.

**Task 4: Activate licenses**

Activate the licenses for your new products.

Get the license key for your product from the Customer Portal. You might need multiple licenses: one for each product, HA, Additional Polling Engine, and Additional Web Server.

1. In the Customer Portal, select License Management.

2. Select the product.
3. Copy the license key.

Add and activate the license key using the web-based License Manager in the Orion Web Console.

1. Open the Orion Web Console in a web browser.
2. Click Settings > All Settings > License Manager.
3. Click Add/Upgrade License.
4. Enter the Activation Key and Registration Information, and click Activate.

To activate an offline license, see Activate licenses offline.
Install or upgrade products in an existing Orion deployment

Complete the following tasks as needed to install additional Orion Platform products into an existing Orion deployment, or to upgrade existing products.

Use this procedure if any of the following conditions apply to your environment:

- You are installing additional products into an existing Orion deployment.
- You are upgrading products that run on Orion Platform 2018.4 or earlier.
- You are upgrading products in an offline environment.

If your products run on Orion Platform 2019.2 or later in an online environment, you can perform a centralized upgrade of your entire Orion deployment.

If you do not have existing Orion Platform products installed, see Install Orion Platform products in a new environment.

If you are upgrading, SolarWinds recommends testing the upgrade in a test or staging environment. You cannot roll back an upgrade after it is complete.

Before you start

Use the information in this topic to prepare for your installation or upgrade. Use the checklists to prepare your environment, and review the list of "gotchas".

Task 1: If you are upgrading with HA, disable the HA pool

The HA pool must be disabled to upgrade. If you upgrade without disabling it, the pool is automatically disabled.

1. In the Orion Web Console, click Settings > All Settings.
2. Under Product Specific Settings, click High Availability Deployment Summary.
3. Select the pool you want to disable.
4. Toggle High Availability to Off.

Do not modify the VIP, IP address, or virtual host settings for the servers.
Task 2: If you are upgrading, stop services

If the required SolarWinds services are not stopped before the upgrade, the Orion Installer attempts to stop them. To ensure a smooth upgrade, SolarWinds recommends that you stop the required services before upgrading.

1. In the Orion Web Console, click Settings > All Settings.
2. Under Product Specific Settings, click Orion Service Manager.
3. Stop all services listed in the Orion Service Manager on the main polling engine, all additional polling engines, and all web servers.

If you use the Windows Control Panel to stop services, do not stop the SolarWinds Administration Service on your scalability engines. If you stop the SolarWinds Administration Service, the installer cannot reach the scalability engines to upgrade them in parallel.

Services are restarted automatically when the upgrade is complete.

Task 3: Get the installer

1. Log in to the Customer Portal.
2. Under Latest Downloads for Your Products, locate one of your Orion Platform products and click Choose.

   In most cases, you need to download only one product module, even if you plan to install or upgrade multiple products.

   To install the DPA Integration Module without SolarWinds SAM, you must download the DPAIM installer. Other product installers do not include DPAIM in the list of products. See DPAIM installation options.

3. Click Download to download either the online or offline installer:
   - **Online**: Use this option if your Orion server has internet access. This option guarantees that you have an up-to-date installer with the latest optimizations and fixes. It is the most efficient option, because it downloads only what it needs and nothing more.
     
     Also use online installation to install a scalability engine, even in environments without Internet access. Installing a scalability engine doesn't require Internet access. See Install an Additional Polling Engine, Additional Web Server, or HA server for details.
   - **Offline**: Use this option for installations without Internet access. The offline installer is a prepackaged file that includes everything you need for a large combination of dependencies and products.

4. Save the installer on your Orion server.
Task 4: Run the installer on the primary Orion server

Some third-party software, such as .NET 4.8, is required. If it is not found on the server, it is downloaded and installed when you run the installer.

1. Run the installer .exe file on your primary Orion server as Administrator.
   The Select Products page lists the products that you can install and any existing products that will be upgraded.

   Not sure what these release acronyms mean?
   - HF = Hotfix
   - RC = Release Candidate

2. Select the products to install, and click Next.
   
   Existing products that will be upgraded are also listed. You cannot deselect items from this list. The installer must ensure all versions of your products are compatible.

   The System Check page asks you to confirm that you backed up your database.

3. Under System Check Confirmations, click Choose how to proceed. If you have backed up your database, select Confirm and then click Confirm.

   If not, you should back up now. New products and versions can modify your database tables. Click here for information about SolarWinds Backup.

4. On the System Check page, review the information under System Check Results.
   The installer runs a series of checks per product to verify that your server meets system requirements and recommendations. If your environment does not meet specifications, the installer displays one or more messages:

   - **Informational and warning messages** recommend actions and best practices to optimize performance. These do not block the installation.
   - **Critical issues** describe changes that are required to support the products. These block the installation until they are resolved.

   a. Investigate and resolve any issues:
      - Click the details link to display additional information and suggested resolutions.
      - Optionally, click Save Report to save the list of issues.
      - After resolving any blocking issues, click Run Checks Again.

   b. Click Next.

5. Review the EULA. If you agree, click I accept, and then click Next to begin the installation.
   The Installation page displays progress messages. If the installer encounters any issues, the installation stops so you can resolve them. The installer might run multiple product installations before running the Configuration wizard.

   If a reboot is required as part of the installation, a message is displayed.
Task 5: Complete the Configuration wizard

If database configuration is required, the Configuration wizard automatically opens. Depending on your products, the wizard might include options and pages not described here.

1. On the Welcome page, click Next.
2. If prompted to stop services, click Yes.
3. If you performed a Standard installation with an existing SQL Server database, select one of the following for authentication:
   - **Authenticate as currently logged in user**: Pass through authentication to the database server using the account currently logged in for installing the Orion Platform product.
   - **Switch user**: Provide credentials automatically detected as either SQL or Windows credentials, allowing Windows authentication for the initial setup even if the Orion server is not joined to a domain or the current account does not have permissions to the database server.

   If you intend to use Windows authentication for the Orion Platform, remember to exempt that user account from any password change policies. An expired password will cause the Orion Platform to stop data collection and interrupt Orion Web Console access.

4. On the Database Settings page, select your existing Orion database, or create a new database for a new installation, and click Next.

5. On the Database Account page, create an account or specify an existing account that the polling engine and Orion Web Console will use to access the database. The account can be a Windows or SQL Server account.
6. On the Website Settings page:
   a. Select All Unassigned unless your environment requires a specific IP address for the Orion website. If SSL is selected, port 443 is used. Otherwise, port 80 is used.
   b. Specify the Port and the Website Root Directory where the system installs the web console files.
      
      If you specify any port other than 80, include that port in the URL used to access the Orion Web Console.
   c. To configure SSL, click Enable HTTPS and select your SSL certificate.
      If a certificate is not available, select the option to Generate Self-Signed Certificate. The Configuration wizard automatically generates a self-signed certificate issued to the hostname or FQDN and adds it to the trusted certificate store.

7. If prompted to create a directory or website, click Yes.
8. Review the list of services to install, and click Next.
9. Click Yes if prompted to disable the SNMP Trap Service and enable the SolarWinds Trap Service.
10. On the Completing the Orion Configuration Wizard page, click Next.
11. When the configuration is complete, click Finish to launch the Orion Web Console.

If the Orion Web Console doesn't open automatically (for example, if it times out before opening), do one of the following to open it manually:
- Click Start > All Programs > SolarWinds > Orion Web Console.
- Open a web browser on your Orion server and enter http://ipAddress or http://hostname, where ipAddress is the IP address of your server and hostname is the host name of your server. This is https:// if SSL was selected.

Task 6: Upgrade scalability engines

If you don't have any scalability engines (additional polling engines, additional Web servers, or high availability backup servers), skip this section.

If you have scalability engines, complete the following steps to perform a centralized upgrade, which upgrades all reachable scalability engines in parallel. If you cannot upgrade one or more scalability engines through a centralized upgrade, you can upgrade them individually.

Do not stop the SolarWinds Administration Service on your scalability engines before the centralized upgrade. If you stop this service, the scalability engines are not reachable.

1. Access the Orion Upgrade Wizard:
   - If you left the Launch Orion Web Console option selected on the last step of the Configuration Wizard, the My Orion Deployment page opens and launches the Orion Upgrade Wizard.
   - If you deselected Launch Orion Web Console:
     a. Log in to the Orion Web Console.
     b. Click Settings > My Orion Deployment.
c. Click the Updates Available tab.
   The Orion Upgrade Wizard opens.

2. Review the information on the Welcome page, and click Check Readiness.
   The wizard attempts to contact all scalability engines, and determines whether updates are needed.
   
   If any scalability engines are unavailable, a message tells you which server cannot be reached.
   Click Start Preflight Checks for additional information about the issue. You can either:
   - Fix the issue now and restart the wizard.
   - Continue upgrading other scalability engines now and upgrade that scalability engine later.

3. If scalability engines are reachable and need updates, click Start Preflight Checks.
   As on the main server, the installer runs a series of system checks to verify that each scalability engine meets the system requirements.

4. If any issues are found:
   a. Click the details link to display additional information and suggested resolutions.
   b. Optionally, click Save System Check Results to save the list of issues.
   c. Resolve any blocking issues.
d. Click the Back button, and then click Start Preflight Checks to run the system checks again.

5. When you are ready to upgrade, click Start Upgrade. The Orion Installer copies the installation file to all scalability engines, and then upgrades and configures them.

<table>
<thead>
<tr>
<th>Update Your Servers</th>
</tr>
</thead>
<tbody>
<tr>
<td>The installer file will be copied to the other servers in your environment and then the servers will be automatically upgraded and configured in parallel.</td>
</tr>
</tbody>
</table>

- MKULA-VIRT-W16T MainPoller
- MKULA-VIRT-W16U AdditionalPoller
- MKULA-VIRT-W16W AdditionalPoller

The RDP link is available in case you need to connect to the scalability engine and correct an issue.

After each successful upgrade, the Orion Upgrade wizard on your main server displays the message Upgrade complete.

<table>
<thead>
<tr>
<th>Update Your Servers</th>
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</thead>
<tbody>
<tr>
<td>The installer file will be copied to the other servers in your environment and then the servers will be automatically upgraded and configured in parallel.</td>
</tr>
</tbody>
</table>

- MKULA-VIRT-W16T MainPoller

6. When all upgrades are complete, click Finish.

**Task 7: Upgrade Orion Agents**

If the Allow automatic agent updates setting is enabled (default option), the Orion Agents are automatically upgraded in the background. Agents are tied to their release version. You can skip manually upgrading agents if the option is enabled.

To enable the option to allow automatic agent updates:

1. Click Settings > All Settings.
2. Under Product Specific Settings, click Agent Settings.
3. Click Define Global Agent Settings, and select Allow automatic agent updates.

The upgrades take some time to complete but do not require any actions. Agents are upgraded at a throttled number of 10 at a time to limit the impact on the polling engine. As soon as one agent upgrade is complete, another agent takes its place so there are always 10 active threads until all agents are upgraded.
If automatic upgrades are **disabled**, upgrade the Orion Agents:

1. Open the Manage Agents page. Orion Agents requiring upgrades display the message **Update Required**.
2. Select all agents needing updates and click More Actions > Update. The agents are upgraded in the background.

**Task 8: If you are upgrading with HA, enable the HA pool**

When the installation is complete, enable the HA pool using the following instructions. You might need to [recreate the HA pool](#).

1. In the Orion Web Console, click Settings > All Settings > High Availability Deployment Summary.
2. Select the pool you want to enable.
3. Toggle High Availability to On.

The Orion Web Console verifies all SolarWinds product versions match across the HA pair before enabling. If you receive errors, check your product versions.

**Task 9: For new installations, activate licenses**

If you have installed new products, activate your licenses.

Get the license key for your product from the Customer Portal. You might need multiple licenses: one for each product, HA, Additional Polling Engine, and Additional Web Server.

1. In the Customer Portal, select License Management.
2. Select the product.
3. Copy the license key.

Add and activate the license key using the [web-based License Manager](#) in the Orion Web Console.

1. Open the Orion Web Console in a web browser.
2. Click Settings > All Settings > License Manager.
3. Click Add/Upgrade License.
4. Enter the Activation Key and Registration Information, and click Activate.

To activate an offline license, see [Activate licenses offline](#).
Perform a centralized upgrade of the primary Orion server and all scalability engines

When you perform a centralized upgrade of your entire Orion deployment, you initiate the upgrade from your primary Orion server. Then your primary server and all scalability engines (additional polling engines, additional Web servers, and HA backup servers) are upgraded in parallel.

You can perform a centralized upgrade if your Orion deployment meets all of the following conditions:

- You are not installing any additional products.
- You are upgrading products that run on Orion Platform 2019.2 or later.
- You are upgrading products in an online environment.

To upgrade products in an environment that does not meet all of these conditions, see this topic.

If you do not have existing Orion Platform products installed, see Install Orion Platform products in a new environment.

Before you start

Use the information in this topic to prepare for your installation or upgrade. Use the checklists to prepare your environment, and review the list of "gotchas".

Task 1: If you are upgrading with HA, disable the HA pool

The HA pool must be disabled to upgrade. If you upgrade without disabling it, the pool is automatically disabled.

1. In the Orion Web Console, click Settings > All Settings.
2. Under Product Specific Settings, click High Availability Deployment Summary.
3. Select the pool you want to disable.
4. Toggle High Availability to Off.

Do not modify the VIP, IP address, or virtual host settings for the servers.

Task 2: If you are upgrading, stop services

If the required SolarWinds services are not stopped before the upgrade, the Orion Installer attempts to stop them. To ensure a smooth upgrade, SolarWinds recommends that you stop the required services before upgrading.
1. In the Orion Web Console, click Settings > All Settings.

2. Under Product Specific Settings, click Orion Service Manager.

3. Stop all services listed in the Orion Service Manager on the main polling engine, all additional polling engines, and all web servers.

**Tip:** If you use the Windows Control Panel to stop services, do not stop the SolarWinds Administration Service on your scalability engines. If you stop the SolarWinds Administration Service, the installer cannot reach the scalability engines to upgrade them in parallel.

If you stop the SolarWinds Administration Service, the installer cannot reach the scalability engines to upgrade them in parallel.

Services are restarted automatically when the upgrade is complete.

**Task 3: Upgrade your deployment**

Some third-party software, such as .NET 4.8, is required. If it is not found on the server, it is downloaded and installed when you upgrade.

1. In the Orion Web Console, click Settings > My Orion Deployment.

2. Click the Updates Available tab.

   The tab lists all available updates, including hotfixes and new versions, and provides links to release notes.

   ![My Orion Deployment](image)

3. Click Check Readiness.

   The Orion Upgrade Wizard connects to any scalability engines to verify that they are reachable.
If any scalability engines are unavailable, a message tells you which server cannot be reached. The systems check can provide additional information about the issue. You can either:

- Fix the issue now and restart the upgrade.
- Continue upgrading other scalability engines now and upgrade that scalability engine individually later.

4. Click Next to start the systems check.

The System Check page asks you to confirm that you backed up your database.

3. Under System Check Confirmations, click Choose how to proceed. If you have backed up your database, select Confirm and then click Confirm.

- If not, you should back up now. New products and versions can modify your database tables. Click here for information about SolarWinds Backup.

4. On the System Check page, review the information under System Check Results.

The installer runs a series of checks per product to verify that your servers meet system requirements and recommendations. If your environment does not meet specifications, the installer displays one or more messages:

- **Informational and warning messages** recommend actions and best practices to optimize performance. These do not block the installation.
- **Critical issues** describe changes that are required to support the products. These block the installation until they are resolved.

a. Investigate and resolve any issues:

- Click the details link to display additional information and suggested resolutions.
- Optionally, click Save Report to save the list of issues.
- After resolving any blocking issues, click Run Checks Again.

b. Click Next.

5. Review the EULA. If you agree, click I accept, and then click Next to begin the upgrade.

The installer is downloaded to your primary Orion server and copied to each scalability engine. All servers are upgraded in parallel. Your primary Orion server is down while it is being upgraded, and so the Orion Web Console is not available. You are redirected to a SolarWinds-hosted Web page where you can monitor the progress of the upgrade.

**Update Your Servers**

The installer file will be copied to the other servers in your environment and then the servers will be automatically updated.
When the primary Orion server has been upgraded, you are returned to your Orion Web Console.

6. When the upgrade is complete, click Finish.

Task 4: Upgrade Orion Agents

If the Allow automatic agent updates setting is enabled (default option), the Orion Agents are automatically upgraded in the background. Agents are tied to their release version. You can skip manually upgrading agents if the option is enabled.

To enable the option to allow automatic agent updates:

1. Click Settings > All Settings.
2. Under Product Specific Settings, click Agent Settings.
3. Click Define Global Agent Settings, and select Allow automatic agent updates.

The upgrades take some time to complete but do not require any actions. Agents are upgraded at a throttled number of 10 at a time to limit the impact on the polling engine. As soon as one agent upgrade is complete, another agent takes its place so there are always 10 active threads until all agents are upgraded.

If automatic upgrades are disabled, upgrade the Orion Agents:

1. Open the Manage Agents page. Orion Agents requiring upgrades display the message Update Required.
2. Select all agents needing updates and click More Actions > Update. The agents are upgraded in the background.

Task 5: If you are upgrading with HA, enable the HA pool

When the installation is complete, enable the HA pool using the following instructions. You might need to recreate the HA pool.

1. In the Orion Web Console, click Settings > All Settings > High Availability Deployment Summary.
2. Select the pool you want to enable.
3. Toggle High Availability to On.

The Orion Web Console verifies all SolarWinds product versions match across the HA pair before enabling. If you receive errors, check your product versions.
Options for upgrading scalability engines

After upgrading your primary Orion server, you must also upgrade any additional polling engines (APEs), additional Web servers (AWS), and high availability (HA) backup servers. The primary Orion server and all scalability engines must run the same version of the Orion Platform. The following options are available for upgrading scalability engines.

Centralized upgrades

If you have upgraded your primary Orion server to Orion Platform 2018.4 or later, you can save time by performing a centralized upgrade to upgrade your scalability engines. When you start the centralized upgrade, the Orion Deployment Wizard:

1. Contacts all reachable scalability engines, performs preflight checks, and reports any issues.
2. Downloads the installer to all reachable scalability engines.
3. Starts the installer and upgrades the scalability engines in parallel. You can track the progress of all upgrades from the Orion Web Console.

For more information about performing a centralized upgrade for your scalability engines, see these instructions.

For information about centralized upgrades for your primary Orion server and your scalability engines, see this topic.
Individual upgrades

If centralized upgrades are not available to you, perform the following tasks to upgrade one or more scalability engines individually. For example, if a scalability engine is not reachable during a centralized upgrade, you can upgrade it individually after the issue is resolved.

1. Upgrade your primary Orion server.
2. Download the **online** installer from the Customer Portal or from either of the following locations in the Orion Web Console:
   - Settings > All Settings > Details > Polling Engines
   - Settings > All Settings > Product Specific Settings > Web Console Settings
   
   ▪️ To upgrade a scalability engine, the online installer does **not** require Internet access.
3. Save the installer on each scalability engine.
4. Start the installer on each scalability engine and perform the upgrade.
   
   You can run the upgrades in parallel.
Install an additional polling engine, additional Web server, or high availability server

Use the Orion Installer to install scalability engines (additional polling engines, additional Web servers, and high availability backup servers).

Additional polling engines (APEs) or an additional Web server (AWS) can be used to increase the monitoring capacity of your Orion Platform products. High availability (HA) provides a backup server to protect your main Orion server.

- For more information about options to scale your SolarWinds implementation, see Scalability Engine Guidelines for SolarWinds Orion Products.
- For details about implementing High Availability, see the full HA documentation.
- License stacking does not require installing a scalability engine. License stacking increases polling capacity by assigning multiple licenses to a polling engine.

Requirements and recommendations

Before you begin, be sure your scalability engine servers meet the following requirements.

- Installing an APE and an AWS on the same host is not supported.
- All APEs must be set to the same time zone as the Orion database server.
  
  If APEs and the Orion database server are set to different time zones, polled data can be confusing or misleading. For example, data can have a time stamp that is in the future.
- Orion Platform 2017.3 HF3 or later is required to install scalability engines with the Orion Installer.

To determine the Orion Platform version, log in to the Orion Web Console and find the Orion Platform version in the footer. If the version is between 2016.2 and 2017.3 HF2, use the legacy Orion Scalability Engine Installer.

SolarWinds recommends using the online installer to install scalability engines, even if the server does not have access to the Internet. Internet access is not required. When you install a scalability engine, the installer downloads the required product information from your primary Orion server.

Preflight checklist

Before you install a scalability engine in your environment, complete the following actions:

- Install or upgrade the primary Orion server first. Then install each APE.
When you install an APE or AWS, verify the **port requirements**:

- Verify [port requirements for your SolarWinds product](#).
- Port 17777 is required for communication with the Main Polling Engine.

If you are going to install a backup server for High Availability, review the [SolarWinds High Availability requirements](#).

Acquire a user name and password with administrative privileges to the Orion Web Console on your primary Orion server.

Be sure the APE uses the same SQL Server database as the primary Orion server.

Verify the latency between your Orion database server and the APE. Performance degradation can begin around 200 ms. Ping the Orion database server to find the current latency.

If you configured an alert with a Send Email action to trigger on a node monitored by an APE, confirm that the APE can access your SMTP server.

Add the IP address of your APE to Windows Servers on the Security tab.

Make sure that the following options are set:

- Ensure that a case-sensitive community name has been specified.
- Ensure that Accept SNMP packets from any host is selected or ensure that the ipMonitor system is listed within the Accept SNMP packets from these hosts list.
- Ensure that your network devices allow SNMP access from the new polling engine. For example, on Cisco devices, you can modify the Access Control List.

## Install the scalability engine

**Task 1: Download the installer**

1. Download the **online** installer from either of the following locations:
   - Download the online installer from the Customer Portal.

   ![To install a scalability engine, the online installer does not require Internet access.](#)

   a. Log in to the [Customer Portal](#).
   b. Under Latest Downloads for Your Products, locate one of your Orion Platform products and click Choose.
   c. In the **online** installation box, click Download.
   - Download the installer through the Orion Web Console:
     a. Click Settings > All Settings.
     b. Under Product Specific Settings, click High Availability Deployment Summary.
     c. Click Set Up a New HA Server.
d. Click the How Do I Set It Up tab, and then click Download the Orion HA Installer.

e. Click the Download Installer Now button.

2. Save the installer on the server where you want to install the APE, AWS, or HA backup server.

Task 2: Run the installer

The installer checks your Main Polling Engine for products and versions, and then it downloads the latest versions and any hotfixes from the Main Polling Engine.

Keep the Orion services running on the Main Polling Engine when installing an Additional Polling Engine or Additional Web Server.

1. Run the installer .exe file on your scalability engine server as Administrator.

   The Welcome screen is displayed. (If you do not see the Welcome screen, you have already installed Orion Platform components on the server.)

2. On the Welcome screen:
   a. Select Add a Scalability Engine.
   b. Set the Destination Folder.

   ![Warning]
   You cannot install on a remote mapped drive, read-only drive, compressed drive, or compressed HDD.

   c. Click Next.
3. Enter the following information, and then click Next:
   - IP address or host name of your primary Orion server
   - User name and password used to log in to the Orion server

![Select Server]

You're about to add a supporting server to your current Orion installation. If you don't already

The new server needs to contact your primary Orion server and access the Orion Web Console:

**Primary Orion server address**

Enter the IP address or hostname of your main Orion server/poller.

**Orion Web Console username**

Enter the username for the Orion Web Console.

**Orion Web Console password**

Enter the password for the Orion Web Console.

The installer connects to your Orion server and verifies compatibility.

4. Select the type of scalability engine to install, and then click Next.

<table>
<thead>
<tr>
<th>OPTION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Polling Engine</td>
<td>Installs an APE that collects data for any Orion Platform product.</td>
</tr>
<tr>
<td>Additional Polling Engine for Storage Resource Monitor, Virtualization Manager, or Log Manager for Orion</td>
<td>Installs a free APE available to SRM, VMAN, and Log Manager users. These APEs collect only SRM, VMAN, or Log Manager data.</td>
</tr>
<tr>
<td>Additional Website</td>
<td>Installs an Additional Web Server.</td>
</tr>
<tr>
<td>High Availability - Backup Server for Main Server Protection</td>
<td>Installs a secondary server in an HA pair to protect the Orion primary server. All modules that are installed on your primary server will also be installed on this server.</td>
</tr>
<tr>
<td>High Availability - Backup Server for Orion module Additional Polling Engine(s)</td>
<td>Installs a secondary server in an HA pair to protect one or more Additional Polling Engines.</td>
</tr>
<tr>
<td>OPTION</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>High Availability - Backup Server for Storage Resource Monitor or Virtualization Manager Additional Polling Engine(s)</td>
<td>Installs a secondary server in an HA pair to protect an SRM or VMAN Additional Polling Engine.</td>
</tr>
</tbody>
</table>

5. On the System Check page, review the information under System Check Results.

The installer runs a series of checks per product to verify that your server meets system requirements and recommendations. If your environment does not meet specifications, the installer displays one or more messages:

- **Informational and warning messages** recommend actions and best practices to optimize performance. These do not block the installation.
- **Critical issues** describe changes that are required to support the products. These block the installation until they are resolved.

a. Investigate and resolve any issues:
   - Click the details link to display additional information and suggested resolutions.
   - Optionally, click Save Report to save the list of issues.
   - After resolving any blocking issues, click Run Checks Again.

b. Click Next.

6. Review the EULA. If you agree, click the accept option, and then click Next.

The Installation page displays progress messages. If the installer encounters any issues, the installation stops so you can resolve them. The installer might run multiple product installations before running the Configuration wizard.

If a reboot is required as part of the installation, a message is displayed.

**Task 3: Complete the Configuration wizard**

When the installation is complete, the Configuration wizard opens. Depending on the component you installed, the wizard might include additional options and screens.

1. In the Welcome dialog box, click Next.
2. If prompted to stop services, click Yes.
3. On the Database Settings panel:
   a. Select your existing Orion SQL server.
   b. Select the authentication method used by your existing Orion database, and enter login credentials if necessary.
   c. Click Next.
4. If you receive a warning message that the user does not have permission to create a new database, click OK.
5. Select your existing database from the drop-down menu, and click Next.
6. If you receive a message that the user does not have permission to create a new database account, click OK.

7. Select your SQL Server account and enter your password.

8. At the SNMP Trap Service not disabled message, click Yes.

9. Click Next to start the configuration.

**Task 4: For an APE, specify the nodes to be polled**

If you installed an Additional Polling Engine, specify which nodes you want it to poll.
Upgrade older versions of Orion Platform products

Upgrading earlier versions of Orion Platform products sometimes requires multiple steps. The following sections walk you through the process of preparing your environment, building your upgrade path, and upgrading to the latest version:

- Minimum product versions that can be upgraded with the Orion Installer
- Before you start
- Considerations for upgrading older product versions
- Upgrade your products

Minimum product versions that can be upgraded with the Orion Installer

If you have the following product versions or later, you can use the Orion Installer to upgrade directly to the latest product version:

- ACM 2017.3
- DPAIM, all versions
- Engineers Web Toolset 11.0
- EOC 2.0
- IPAM 4.3.0
- LA (formerly Log Manager) 1.0
- NAM/NOM 2017.3
- NCM 7.5
- NPM 12.0
- NTA 4.2
- SAM 6.2.4
- SCM 1.0
- SRM 6.3
- UDT 3.2.2
- VMAN 6.3

If you are upgrading VMAN, see the VMAN Upgrade Guide for information about your options for retiring or keeping the VMAN appliance, and how your choice affects the upgrade.

- VNQM 4.2.3
- WPM 2.2
If you have earlier versions, use the Orion Installer to plan your upgrade, and then use a legacy product installer to upgrade to the earliest supported version, as described in the following sections.

**Before you start**

Use the information in this topic to prepare for your installation or upgrade. Use the checklists to prepare your environment, and review the list of "gotchas".

**Considerations for upgrading older product versions**

Before you upgrade from an older product version, review the following upgrade considerations.

**Orion Platform upgrade considerations**

- If you experience issues and are not on the latest product versions, upgrade all products to the latest versions.
- If you wrote your own code by changing SolarWinds .css files or adding .js files, or you were directed to make changes by SolarWinds Support, the code might be overwitten during the upgrade. See Upgrading if you have custom code.
- Always verify that you have enough hard drive space for zipped and unzipped installers. One unzipped installer can consume several GBs of space.
- If you are upgrading Orion products with Dell Carbon Black installed, we recommend stopping or removing Carbon Black. This security product causes issues with MSMQ starting. For details, please see this article.
- During your upgrade, use the Scalability Engine Installer. If you use downloaded installers or the installer bundle, you must install one product and version at a time. The versions must match between the main and additional polling engines or you will receive a Database Configuration Failure Error.
- If upgrading from a very early or End of Life SolarWinds product version, you might want to install a new product instead of performing an upgrade or migrating data. SolarWinds Support can provide the best advice for these upgrade scenarios.
- If you enabled SolarWinds High Availability, you must disable High Availability before you can upgrade. You must have the same versions of SolarWinds products on your primary and secondary servers before you can reenable your HA pools.
- Orion Platform 2016.1 and later products have new port requirements: 5671 (Rabbit MQ messaging), 17791 (agent communication to 2008 R2 SP1), and 17778 (SW Information Service, agent communication to 2012).

**Product-specific upgrade considerations**

- **NTA**: NTA 4.4 and later uses a different type of Flow Storage Database than NTA 4.2.3 and earlier. If you upgrade from NTA 4.2.3 or earlier, flow data cannot be migrated. (For more information, see this)
Because of this change, SolarWinds does not recommend upgrading from NTA 4.3.2 or earlier. Instead, uninstall the earlier version and then install the current version.

- **NPM**: NPM 12 and later no longer includes the Orion Global Search. This feature was a technical preview available in NPM 11.5.X. For details, see this article.
- **VMAN**: If you are upgrading from VMAN 7.2 or earlier, refer to the VMAN Upgrade Guide.

## Upgrade your products

### Task 1: Build your upgrade path and download the required installers

SolarWinds recommends using the Orion Installer to build your upgrade path. Regardless of how old your products are, the Orion Installer provides:

- A thorough upgrade path that you can download using the Save Upgrade Path option
- Links to release notes for each installation
- Links to download the installers that you need

Generating an upgrade path does not start the upgrade or affect your current environment.

1. Download the Orion Installer:
   a. Log in to the Customer Portal.
   b. Under Latest Downloads for Your Products, locate one of your Orion Platform products and click Choose.

   You can download the installer for only one product module, even if you are upgrading multiple products.

   c. Click Download to download either the online or offline installer:
      - **Online**: Use this option if your Orion server has internet access. This option guarantees that you have an up-to-date installer with the latest optimizations and fixes. It is the most efficient option, because it downloads only what it needs and nothing more.
      - **Offline**: Use this option for installations without Internet access. The offline installer is a prepackaged file that includes everything you need for a large combination of dependencies and products.

   d. Save the installer on your Orion server.

2. Run the Orion Installer to generate the upgrade path.

The installer generates the upgrade path for all of your SolarWinds products. This example shows the installer’s ability to generate complex upgrade paths:
3. Use the provided links to download the installation files for each product version.

   If you are using the offline installer, use a computer that is connected to the Internet to download the product installation files from the Customer Portal.

   You can download all files at once, or you can download each installation file when you are ready to run it. Some installation files can be large. Make sure you have enough space to download and unzip the files.

4. Click the link below the upgrade path to download the path for reference.

   You can rerun the Orion Installer at any time during the upgrade process. It detects the currently installed products and generates an updated upgrade path.

Task 2: Disable alerting actions and stop services

1. To prevent false alert storms during upgrades, SolarWinds recommends disabling alert actions:
   a. From the Orion Web Console, click Alerts & Activity > Alerts.
   b. In the upper-right corner, click More.
   c. Select Pause actions of all alerts.

2. Open the Orion Service Manager and stop services on the main polling engine, all additional polling engines, and all web servers.
Task 3: If you are upgrading with HA, disable the HA pool

The HA pool must be disabled to upgrade. If you upgrade without disabling it, the pool is automatically disabled.

1. In the Orion Web Console, click Settings > All Settings > High Availability Deployment Summary.
2. Select the pool you want to disable.
3. Toggle High Availability to Off.

Do not modify the VIP, IP address, or virtual host settings for the servers.

Task 4: Upgrade each product version in the upgrade path

Complete the following steps to upgrade your entire Orion deployment to a product version. Then mark that product version as complete on your downloaded upgrade path. Be sure to upgrade product versions in order, based on the upgrade path.

Repeat these steps until all products are upgraded to a version that is supported by the Orion Installer.

Depending on the product version, you might have a smart bundle that includes all of the installation files required for an upgrade, or you might need to download files separately.

If you have problems running an installer, check the following:

- Verify that the installer is not blocked. Right-click the installer file, and select Properties. If Unblock is available, select it.
- Right-click the installer file and select Run as Administrator.

1. Upgrade the main polling engine, and run the Configuration Wizard.

   Upgrade tip: If you upgrade multiple versions of the same product, skip the website optimization step in the Configuration Wizard. To save time, run this step only with the last installation.

2. If you have scalability engines (APEs, additional Web servers, and HA servers) and the download bundle does not include the scalability engine installers, download them through the Orion Web Console:
   a. Click Settings > All Settings.
   b. Select the settings:
      - APEs or HA servers: In the Details group, click Polling Engines.
      - Additional Web servers: In the Product Settings group, click Web Console Settings.
   c. Click Download Installer Now.
   d. Copy the installer to your APEs, HA servers, or additional Web servers.
3. Upgrade all APEs to the same version as the main polling engine, and run the Configuration Wizard.

   **Upgrade tip:** Save time by upgrading all APEs simultaneously.

4. Upgrade each additional Web server to the same version as the main polling engine, and run the Configuration Wizard.

5. If you are upgrading with HA, upgrade the secondary server to the same version as the main polling engine.

During an additional web server upgrade, you can point users to the website of the main polling engine, or to any web server that is already upgraded.

Task 5: Upgrade all products to the current version with the Orion Installer

When you have upgraded all products to versions that are supported by the Orion Installer, run the installer again to upgrade all products to the current version. See Install or upgrade Orion Platform products for details.

Task 6: Upgrade Orion Agents

If you have the Global Agent Setting to Allow automatic updates (enabled by default), the Orion Agents automatically upgrade in the background. Agents are tied to their release version. You can skip manually upgrading agents if the option is enabled.

The upgrades take a bit of time to complete, but will not require any actions. Agents update at a throttled number of 10 to limit the impact on the polling engine. As soon as one agent completes upgrading, another agent takes its place so there are always 10 active threads until all agents are upgraded.

If automatic upgrades are disabled, upgrade the Orion Agents:

1. Open the Manage Agents page. Orion Agents requiring upgrades display Update Required.
2. Select all agents needing updates and click More Actions > Update. The agents upgrade in the background.

   You can enable the option through Settings > All Settings > Agent Settings and click Define Global Agent Settings.

Task 7: Restart services and re-enable alert actions

1. Open the Orion Service Manager and start services on the main polling engine, all additional polling engines, and all Web servers.
2. If you disabled alert actions, complete the following steps to enable them again.
If you have alerts configured to notify you when certain entities have not been polled for a certain time, wait at least two polling intervals between restarting services and re-enabling alerts. This ensures that polling has caught up, which prevents false alerts.

a. From the Orion Web Console, click Alerts & Activity > Alerts.
b. In the upper-right corner, click More.
c. Deselect Pause actions of all alerts.

Task 8: If you are installing with HA, enable the HA pool

When the upgrade is complete, enable the HA pool. You might need to recreate the HA pool. For details, see this article.

All SolarWinds product versions must match on the primary and secondary servers before you can re-enable your HA pools.

1. In the Orion Web Console, click Settings > All Settings > High Availability Deployment Summary.
2. Select the pool you want to enable.
3. Toggle High Availability to On. The Orion Web Console verifies all SolarWinds product versions match across the HA pair before enabling. If you receive errors, check your product versions.

Task 9: Check your system after the upgrade

Open the Orion Web Console and verify that the upgraded version number is displayed in the footer. Try current and new features with your system to check performance and expected functionality. If you run into issues, see the troubleshooting tips.
Troubleshoot an Orion Platform product installation

If you receive errors after you run the Orion Installer, try the following:

- If you experience issues and are not on the latest product versions, SolarWinds recommends upgrading all products to the latest versions.
- Check our Success Center for troubleshooting. SolarWinds recommends searching the name of the product, the version number, any error codes or messages displayed, and the general issue you found.
- Check your Customer Portal for any new hotfixes.
- If you receive (500) internal server error after an upgrade, use the Orion permission checker to make sure your Group Policy is not locked. See this article for details.
- If your views are not loaded when you first open the Orion Web Console, run the Configuration wizard again.

If you need additional help with an issue, contact Support. We recommend gathering diagnostics, a screenshot of the issue, and any error codes you receive. Attach and add this information to your ticket. You might also want to gather additional diagnostics on your additional polling engines and additional web servers.