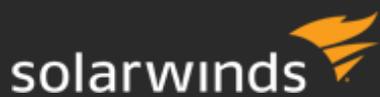




MULTI-PRODUCT LEGACY INSTALLATION GUIDE

Orion Platform products

Version 2017.3



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Retrieve the latest version from: https://support.solarwinds.com/Success_Center/Orion_Platform/Orion_Documentation

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SolarWinds Multi-Product Installation Guide

SolarWinds® Orion® Platform products monitor the health and performance of your network through ICMP, SNMP, WMI, API, and Syslog communication and data collection. This guide walks you through deployment planning, environment preparation, and important gotchas for installing multiple Orion Platform products and integrations in one environment. This guide provides information about:

- Gotchas and best practices for a successful deployment.
- Installation paths for installing SolarWinds products in the proper sequence.
- System requirements for best performance.
- Port requirements to ensure all products communicate properly after the installation.

Supported Orion Platform products

Depending on system requirements, you can install these together on the same Orion server or on dedicated servers with integration into the Orion server.

- [Network Performance Monitor \(NPM\)](#)
- [Server & Application Monitor \(SAM\)](#)
- [Network Configuration Manager \(NCM\)](#)
- [NetFlow Traffic Analyzer \(NTA\)](#)
- [Storage Resource Monitor \(SRM\)](#)
- [IP Address Manager \(IPAM\)](#)
- [User Device Tracker \(UDT\)](#)
- [VoIP & Network Quality Manager \(VNQM\)](#)
- [Web Performance Monitor \(WPM\)](#)
- [Virtualization Manager \(VMAN\)](#)
- [Patch Manager](#)
- [Database Performance Analyzer \(DPA\) / Database Performance Analyzer Integration Module \(DPA IM\)](#)

This guide supports the following installation scenarios:

- New installations into a fresh Orion Platform deployment.
- New installations into an existing Orion Platform deployment.

Build your installation path

When installing more Orion Platform products, you need to install them in a certain order. The [installation path](#) ensures that all products are compatible with your Orion Platform.

New installations

This installation scenario assumes you have not installed any SolarWinds Orion Platform products on the target server.

A simple Orion Platform production deployment includes at least two servers:

- A primary server where you install your Orion Platform products. The primary server includes the Main Polling Engine and the Orion Web Console.
- A separate server where you install the SolarWinds Orion database.

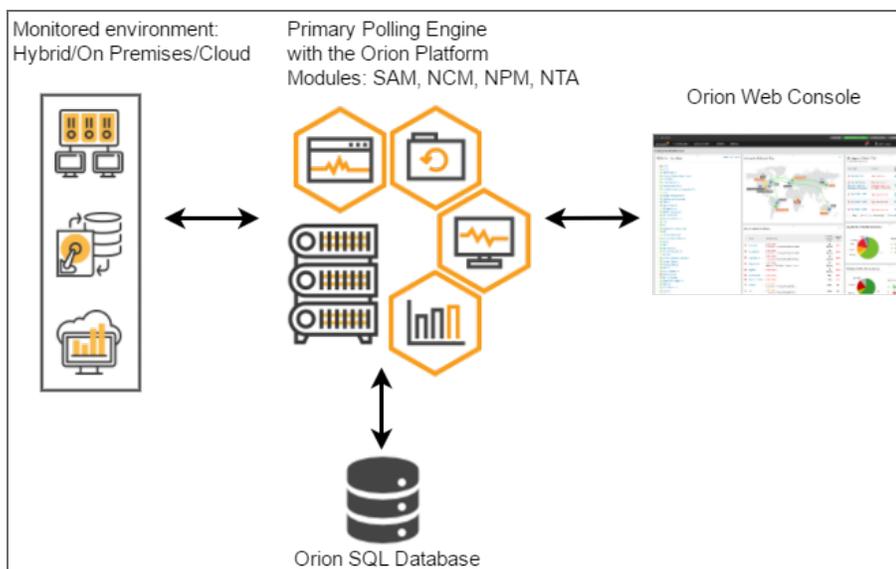
Evaluation installations require only one server.

The polling engine requests real-time statistics (through the selected polling method, such as SNMP or WMI) from monitored devices in your environment.

Polled data is further processed and stored in the SolarWinds Orion database.

Data is requested from the database and displayed in the Orion Web Console.

This diagram outlines a typical deployment for SAM, NCM, NPM, and NTA:



New installations integrated into an existing Orion Platform deployment

For [integrated installation into an existing Orion Platform deployment](#), you may install the products on the Orion server, to connect to the Orion SQL database. As part of this installation, [verify if installed products need to be upgraded prior to installing the new products](#). If your environment uses SolarWinds High Availability, follow the [additional instructions](#) as part of the installation.

Terminology

The following terms are used in this guide and provide context for the architecture and components of SolarWinds products.

Orion Platform: the common platform used by the SolarWinds Orion suite of products, including Network Performance Monitor (NPM), Server & Application Monitor (SAM), Network Configuration Manager (NCM), NetFlow Traffic Analyzer (NTA), and more. The platform provides the backbone for navigation, settings, and common features such as alerts and reports. It also provides a consistent look-and-feel across products, giving you a “single pane of glass” to view your SolarWinds Orion monitoring tools.

Orion Web Console: The web interface used to monitor, manage, and troubleshoot entities and nodes in your SolarWinds and corporate enterprise.

Orion server: the primary Orion Platform server. You can install one or more Orion Platform products on this server and access each product using the Orion Web Console and a supported web browser. This server is also known as the Orion Main Poller or Main Polling Engine.

Orion Database Server: A dedicated server running a supported Microsoft® Windows Server® operating system and SQL Server database in a production environment. This server is separate from the SolarWinds Orion Server and stores the SolarWinds Orion configuration data, collected performance data, and syslog data.

Polling Engine: a polling engine controls polling job scheduling, processes data, and queries your monitored devices for performance metrics, such as CPU or memory usage and up or down status. You can license Additional Polling Engines to provide additional scalability and capacity. By default, the Orion Server provides one polling engine (often referred to as the Main Polling Engine). For more information, see the [Scalability Engine Guidelines](#).

NTA Flow Storage Database: an independent database that stores flow data. Install this database on a dedicated server before you install SolarWinds NTA.

Node: a monitored device (such as a router, switch, or server).

Module: a software component that plugs in to the Orion Platform. Each Orion module (such as Network, Applications, and IP Address) displays as a menu in the Orion Web Console.

FIPS (Federal Information Processing Standard): A cryptography standard installed in U.S. Federal Government agencies and companies in a regulated industry (such as healthcare and financial institutions). FIPS allows computer systems to share and distribute sensitive but unclassified (SBU) information in a secure environment.

High Availability: provides High Availability (HA) failover and data protection for your SolarWinds Orion server and Additional Polling Engines. If your primary server fails for any reason, HA automatically transfers all services (such as polling and alerting) to the secondary server with minimal downtime. SolarWinds HA protects your main server (or Main Polling Engine) from data loss, but does not protect your database or additional web servers.

IIS: Internet Information Services is an extensible web server created by Microsoft.

Multi-product installation preflight checklist

Before installing, complete the pre-installation checklist below. This checklist helps you:

- Verify that system requirements are met, all required software is installed, and required roles and features are enabled.
- Gather the information required to complete the installation.

<input type="checkbox"/> Review release notes	<p>Review product release notes and available documentation in the Success Center.</p> <p>DPA 11.0 DPAIM 11.0</p> <p>IPAM 4.5 4.3.2</p> <p>NCM 7.6 7.5.1</p> <p>NPM 12.1 12.0.1</p> <p>NTA 4.2.2 4.2.1</p> <p>Patch Manager 2.1.5 2.1.4</p> <p>SAM 6.4 6.3</p> <p>SRM 6.4 6.3</p> <p>UDT 3.2.4 3.2.3</p> <p>VMAN 7.1 7.0</p> <p>VNQM 4.4 4.2.4</p> <p>WPM 2.2.1 2.2</p>
<input type="checkbox"/> Review system requirements	<p>Make sure your environment has all required hardware, software, and database requirements for your installations. You can verify the requirements for products and the Multi-module system guidelines.</p> <p>Product requirements include:</p> <p>DPA 11.0 10.2</p> <p>IPAM 4.5 4.3.2</p> <p>NCM 7.6 7.5</p> <p>NPM 12.1 12.0.1</p> <p>NTA 4.2.2 4.2</p>

	<p>Patch Manager 2.1.4</p> <p>SAM 6.4 6.3</p> <p>SRM 6.4 6.3</p> <p>UDT 3.2.4</p> <p>VMAN 7.1 7.0</p> <p>VNQM 4.4 4.2.4</p> <p>WPM 2.2.1</p> <p>See your product administrator guide for specific requirements.</p> <p>For port requirements, see Port Requirements for all SolarWinds products.</p>
<input type="checkbox"/>	<p>Review licenses and gather keys</p> <p>Review your current product licenses and determine if you need to make any changes. You can find license keys for your new Orion Platform products through your Customer Portal. Verify any license upgrades and needs with your SolarWinds account manager or contact SolarWinds.</p>
<input type="checkbox"/>	<p>Gather credentials</p> <p>Make sure you have all account credentials: your SQL database credentials, your SolarWinds account credentials, and your local admin server credentials.</p> <p>Use the Local Administrator Account for installation.</p> <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin: 5px 0;"> <p> The Local Administrator Account is not the same as a domain account with local admin rights. A domain account is subject to your domain group policies.</p> </div> <p>To download SolarWinds products and licenses, you need a SolarWinds Customer Portal account. To create your SolarWinds account, see Access the Customer Portal.</p>
<input type="checkbox"/>	<p>Schedule the installation</p> <p>Set up a maintenance window, preferably during off-peak hours. Depending on the number of products you are installing, the size of your databases, and the size of your environment, you may need hours to complete your installation.</p> <div style="border: 1px solid #ffc107; background-color: #fff3cd; padding: 5px; margin: 5px 0;"> <p> Installations in an existing Orion Platform environment require polling engines and SolarWinds services to be offline for a length of time, causing you to lose a portion of polling data.</p> </div>
<input type="checkbox"/>	<p>Notify your company</p> <p>Send a message to your company about the installation schedule and maintenance window. If you need additional help with the installation process, allocate staff to be available.</p>

Prepare the Orion SQL database

For Orion Platform products, use a new or existing SQL database. Prepare your database using the following guidelines.

- | | |
|--------------------------|---|
| <input type="checkbox"/> | Make sure the database and database server meet the system requirements. |
| <input type="checkbox"/> | Ensure that the SolarWinds Orion database and Orion server are installed in the same domain. |
| <input type="checkbox"/> | The selected SQL Server instance must support mixed-mode or SQL authentication with strong passwords. A strong password must meet at least three of the following four criteria: <ul style="list-style-type: none">• Contains at least one uppercase letter• Contains at least one lowercase letter• Contains at least one number• Contains at least one non-alphanumeric character, for example, #, %, or ^ |
| <input type="checkbox"/> | For a new database, the user account must be a member of the <code>dbcreator</code> server role. The <code>sysadmin</code> role and the security administrator (SA) user accounts are always members of <code>dbcreator</code> . |
| <input type="checkbox"/> | For a new SQL account, the user account must be a member of the <code>securityadmin</code> server role. The <code>sysadmin</code> role and the security administrator user accounts are always members of <code>securityadmin</code> . |
| <input type="checkbox"/> | Set the recovery model of the database to Simple. SolarWinds does not support other methods. |
| <input type="checkbox"/> | Select SQL Server Authentication or Windows Authentication. SolarWinds Orion users use these methods to access the SolarWinds Orion database. <div data-bbox="162 1323 1510 1470" style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"><p> SolarWinds uses SQL Server Authentication or Windows Authentication to ensure the SolarWinds Orion server can always access the SolarWinds Orion database, even when hosted remotely on a separate server.</p></div> <div data-bbox="162 1491 1510 1596" style="border: 1px solid #ffc107; padding: 5px; margin-top: 10px;"><p> For Windows Authentication, use an account without a password expiration policy. If the password expires, the server cannot write to the database and you may lose your data.</p></div> |

Prepare the servers for a multi-product installation

Depending on your licensed SolarWinds Orion Platform products, you may need to prepare multiple servers and configure ports in your firewall before installation.

<input type="checkbox"/> 1. Prepare the Orion server(s)	<p>Review the Multi-module system guidelines and specific product release notes.</p> <p>If adding SolarWinds High Availability (HA) into your environment, review the HA requirements and VIP address information. Prepare two matching servers for installation.</p>
<input type="checkbox"/> 2. Prepare the Scalability Servers	<p>Review the Scalability Engine Guidelines.</p>
<input type="checkbox"/> 3. Prepare the SQL Database	<p>You should verify the SQL Database requirements meet the deployment size of your environment and the Multi-module system guidelines.</p>
<input type="checkbox"/> 4. Prepare additional product-specific servers	<p>As needed, prepare servers for any dedicated products, or modules, such as the NTA Flow Storage Database. Review the system requirements for specific products.</p>
<input type="checkbox"/> 5. Run all Windows updates	<p>Before installation, check for and run all Microsoft Windows updates on all servers. As you install, if a Windows update runs, your system may reboot as needed by Windows. The installation cannot complete if your system is waiting to reboot.</p>
<input type="checkbox"/> 6. Back up existing database	<p>If you are installing with an existing database, back up the database. If you need help, check your vendor's site for documentation and instructions.</p> <p>If you have your database on a virtual machine (VM), create a snapshot or copy of your VM.</p> <p>If you need software to perform database backups and maintenance, you can install SQL Management Studio Express for your specific version of Microsoft SQL on your Orion SQL database server.</p> <p>Use one of the following links to download the installation:</p> <ul style="list-style-type: none"> • SQL Server Management Studio Express 2008 • SQL Server Management Studio Express 2012 • SQL Server Management Studio Express 2014

		<ul style="list-style-type: none"> • SQL Server Management Studio Express 2016 <p>If using SQL Management Studio Express, do the following:</p> <ol style="list-style-type: none"> 1. Open SQL Management Studio Express on the Orion SQL server using your Windows credentials. 2. From the Object explorer, expand Databases and locate the SolarWinds (Orion) database. 3. Right-click on the Orion database and select Tasks then Backup. 4. Create a backup of your SolarWinds SQL database.
<input type="checkbox"/>	<p>7. Open ports according to requirements</p>	<p>The Orion Platform products use specific ports to send and receive data, issue management commands, and perform additional actions depending on the features. For example, SolarWinds High Availability has additional port requirements beyond product needs.</p> <p>For more information, see Port requirements for all SolarWinds products.</p>
<input type="checkbox"/>	<p>8. Check for antivirus software</p>	<p>Determine if any antivirus software is installed on the server or servers where you plan to install. To ensure the installation goes smoothly, exclude the SolarWinds directory. For example, on Windows Server 2012 R2, exclude C:\ProgramData\SolarWinds\. For a full list of antivirus exclusions, see Files and directories to exclude from antivirus scanning.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> SolarWinds assumes that C:\ is the default volume.</p> </div>
<input type="checkbox"/>	<p>Enable FIPS</p>	<p>Enable FIPS, install your Orion Platform products, and run the FIPS manager.</p> <p>Before you enable FIPS, ensure that your servers' hardware is FIPS compliant. See the Microsoft Support knowledge base for more information.</p> <p>Not all Orion Platform products are FIPS compliant. SolarWinds recommends that you install all FIPS compliant SolarWinds software on FIPS compliant servers and maintain all non-compliant SolarWinds software on non-compliant servers.</p>

Multi-module system guidelines

If you are installing more than one SolarWinds Orion Platform product, use these **recommended guidelines** for hardware and software deployment. The information here should be considered guidelines only. You can choose to use more or less hardware, but your performance may vary depending on your deployment scenario.

If you have only one SolarWinds Orion module, see the system requirements listed in the installation guide for that module.

Small deployment guidelines

Modules	<p>Choose up to 3 modules:</p> <ul style="list-style-type: none"> • NPM SL100 - SL500 (including up to 10 remote agents for DPI) • SAM AL150 - AL300 • WPM 5 - WPM 20 • VNQM IPSLA 5 - IPSLA 25 (up to 5,000 operations) • NCM DL50 - DL200 • IPAM IP1000 - IP4000 • UDT UT2500 - 5000 <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> You can install NTA as part of a small deployment, but it is not included in this configuration. Use the Medium Deployment guidelines for NTA.</p> </div>
Orion server specifications	<p>Physical server or virtual machine</p> <ul style="list-style-type: none"> • Quad core processor or better • 8-16 GB RAM • 150 GB, 15,000 RPM • 1 x 1 Gb dedicated NIC • Windows Server 2016, 2012 R2, or 2012 <p>The SolarWinds Orion installer installs IIS (32-bit mode) and .NET 4.6.2 if they are not already on your server.</p>
SQL database server specifications	<p>Physical server recommended</p> <ul style="list-style-type: none"> • Quad core processor or better • 16 GB RAM • 100 GB¹ (or more) storage in RAID 1+0 configuration (RAID 5 not supported)

- Windows Server 2016, 2012 R2, or 2012
- SQL Server 2017, 2016, 2014, or 2012 Standard Edition

¹More or less space may be needed depending on your data retention policies, number of elements measured, and polling frequency.

Medium deployment guidelines

Modules	<p>NPM SL500 - SL2000</p> <p>NTA for NPM SL2000</p> <ul style="list-style-type: none"> • 50,000 FPS received sustained on the main poller <p>2 - 4 additional modules:</p> <ul style="list-style-type: none"> • SAM AL700 - AL1100 • WPM 50 - WPM 200 • VNQM IPSLA 25 - IPSLA 50 (up to 10,000 operations) • NCM DL500 - DL1000 • IPAM IP16,000 • UDT UT10,000 - 25,000
Orion server specifications	<p>Physical server or virtual machine</p> <ul style="list-style-type: none"> • Quad core processor or better • 16 GB RAM • 150 GB, 15,000 RPM • 1 x 1 Gb dedicated NIC • Windows Server 2016, 2012 R2, or 2012 <p>The SolarWinds Orion installer installs IIS (32-bit mode) and .NET 4.6.2 if they are not already on your server.</p>
SQL database server specifications	<p>Physical server recommended</p> <ul style="list-style-type: none"> • Dual quad core processor or better • 64 GB RAM • 250 GB² (or more) storage in RAID 1+0 configuration (RAID 5 not supported) • Hardware RAID Controller (software RAID not supported) • Windows Server 2016, 2012 R2, or 2012 • SQL Server 2017, 2016, 2014, or 2012 Standard Edition

NTA Flow Storage database server specifications

Physical server or virtual machine

- Quad core processor or better
- 16 GB³ RAM
- 100 GB - 1 TB⁴ of storage capacity on local NTFS disk
- 1 x 1 Gb dedicated NIC
- Windows Server 2012 R2 or 2012

²More or less space may be needed depending on your data retention policies, number of measured elements, and polling frequency.

³Increase the NTA Flow Storage database RAM as the database size increases.

⁴More or less space may be required, depending on your data retention policies and the number of stored flows. You need approximately 8 GB of additional storage for every 1000 flows retained for 30 days. For example, if you want 50,000 flows stored for 30 days, you need a base of 100 GB plus an additional 400 GB of storage.

NTA-SPECIFIC INFORMATION

- NTA 4.0: if the server is running a 32-bit operating system, NTA 4.0 stores the flow data in the SQL database (NTA Flow Storage database is not installed). For more information, see [NTA 4.0 Installation: Frequently Asked Questions](#).
- NTA 4.1 requires a 64-bit operating system. SolarWinds recommends a separate NTA Flow Storage database.

Large deployment guidelines

Modules

NPM SLX (with multiple pollers)

NTA for NPM SLX

- 50,000 FPS received sustained on the main poller
- Up to 6 pollers (5 in addition to the main poller) for 300,000 FPS received sustained

Any combination of these modules:

- SAM ALX
 - 1 APE for every 10,000 component monitors
 - Maximum of 50,000 component monitors per primary Orion SAM server + 4 APEs
- VNQM IPX
 - ~5,000 IP SLA operations per polling engine

	<ul style="list-style-type: none"> • NCM DLX <ul style="list-style-type: none"> • 1 APE for every 10,000 devices, for NCM 7.1 and later • Maximum of 30,000 devices per NCM instance (that is, NCM server + 2 NCM APEs) • IPAM IPX <ul style="list-style-type: none"> • 750,000 IP • UDT UTX <ul style="list-style-type: none"> • 150,000 ports per polling engine
Orion server specifications	<p>Physical server or virtual machine (VM)</p> <ul style="list-style-type: none"> • Quad core processor or better • 32 GB RAM • 150 GB, 15,000 RPM • 1 x 1 Gb dedicated NIC • Windows Server 2016, 2012 R2, or 2012 <p>The SolarWinds Orion installer installs IIS (32-bit mode) and .NET 4.6.2 if they are not already on your server.</p>
SQL database server specifications	<p>Physical server recommended</p> <ul style="list-style-type: none"> • Dual/quad core processor or better • 128 GB RAM • Hardware RAID Controller (software RAID not supported) • Disk Subsystem 1 Array 1: 2 x 146 GB 15,000 disks RAID 1 (mirroring) operating system • Disk Subsystem 2 Array 2: 2 x 146 GB 15,000 disks RAID 1 (Pagefile + extra storage) • Disk Subsystem 3 Array 3: with 6x 15,000 146 GB or 300 GB disks configured in a RAID 1+0 arrays to allow for maximum write performance. This is for your SQL MDF AND FILEGROUPS • Disk Subsystem 4 Array 4: with 4x 15,000 146 GB or 300 GB disks configured in a RAID 1+0 arrays to allow for maximum write performance. This is for your SQL LDF Transaction LOG file • Disk Subsystem 5 Array 5: with 4x 15k 146 GB or 300 GB disks configured in a RAID 1+0 array for your tempdb data file • Disk Subsystem 6 Array 6: with 4x 15k 146 GB or 300 GB disks configured in a RAID 0 array for your tempdb log file • 1 Gb LAN port • Windows Server 2016, 2012 R2, or 2012 Enterprise Edition

	<ul style="list-style-type: none"> • SQL Server 2017, 2016, 2014, or 2012 Enterprise Edition
NTA Flow Storage database server specifications	<p>Physical server or virtual machine</p> <ul style="list-style-type: none"> • Quad core processor or better • 16 GB³ RAM • 100 GB - 1 TB⁴ of storage capacity on local NTFS disk • 1 x 1 Gb dedicated NIC • Windows Server 2012 R2 or 2012
Additional Polling Engine server specifications	<p>Virtual machine recommended</p> <ul style="list-style-type: none"> • Quad core processor or better • 32 GB RAM • 150 GB, 15,000 RPM • 1 x 1 Gb dedicated NIC • Windows Server 2016, 2012 R2, or 2012 <p>The SolarWinds Orion installer installs IIS (32-bit mode) and .NET 4.6.2 if they are not already on your server.</p>

³Increase the NTA Flow Storage database RAM as the database size increases.

NTA-SPECIFIC INFORMATION

- NTA 4.0: if the server is running a 32-bit operating system, NTA 4.0 stores the flow data in the SQL database (NTA Flow Storage database is not installed). For more information, see [NTA 4.0 Installation: Frequently Asked Questions](#).
- NTA requires a 64-bit operating system. SolarWinds recommends a separate NTA Flow Storage database.

Installation path for multiple Orion Platform products

SolarWinds Orion products must be installed in a specific order. Before you install your SolarWinds Orion products, verify the following requirements:

- Check the compatibility of your SolarWinds Orion products using the [Product Upgrade Advisor](#). This tool provides the correct installation paths for installing multiple SolarWinds Orion products. The typical SolarWinds Orion Platform product installation follows this order: NPM, NTA, SAM, NCM, UDT, VMQM, followed by any additional SolarWinds products.
- If you purchased NTA, install the NTA Flow Storage Database first, and then install the remaining SolarWinds Orion products in the recommended order.
- Some NTA versions require a sequential installation path to upgrade to the latest version. If you are running multiple SolarWinds Orion products, see the table below for an overview of NPM and NTA compatibility.

	NPM 12.0.1	NPM 12.1	NPM 12.2
NTA 3.11	supported	supported	not supported
NTA 4.1.2	supported	not supported	not supported
NTA 4.2	supported	supported	not supported
NTA 4.2.1	supported	supported	not supported
NTA 4.2.2	not supported	supported	supported
NTA 4.2.3	not supported	not supported	supported

For example, NTA 4.1.2 can be upgraded to NTA 4.2 and 4.2.1. When you create your upgrade path, you will upgrade NTA 4.1.2 to 4.2.1 (the highest supported version for NPM 12.0.1), upgrade NPM 12.0.1 to 12.1, and NTA 4.2.1 to 4.2.2.

- For integrated modules (such as DPA or Patch Manager), install these products on dedicated servers and then install the integrated module.
- For VMAN 7.2 and earlier, install the VMAN appliance first, and then integrate VMAN with the SolarWinds Orion Platform.
- Back up your database to a separate location before you configure your environment.
- When you install new products into an existing Orion Platform deployment, you might be prompted to upgrade existing products prior to new installations.

The following table provides installation path examples for installing multiple Orion Platform products.

PRODUCTS	INSTALLATION SCENARIO	INSTALLATION PATH
<p>All Orion Platform products:</p> <ul style="list-style-type: none"> • NPM • SAM • NCM • NTA • SRM • IPAM • UDT • VNQM • Patch Manager 	<p>New Orion Platform product installations with the latest versions</p>	<ol style="list-style-type: none"> 1. Install NPM 2. Install SAM 3. Install NCM 4. Install NTA <div style="border: 1px solid orange; padding: 5px; margin: 5px 0;"> <p> The installation file for the NTA Flow Storage Database is a part of the NTA installation pack. The Flow Storage Database must be installed first.</p> </div> <ol style="list-style-type: none"> 5. Install SRM 6. Install IPAM 7. Install VNQM 8. Install Patch Manager 9. Install UDT
<ul style="list-style-type: none"> • SAM 6.2 • NTA 4.2.2 • UDT 3.2.4 	<ul style="list-style-type: none"> • Older version of SAM already installed • NTA and UDT installed fresh (latest versions) 	<ol style="list-style-type: none"> 1. Upgrade SAM from version 6.2 to version 6.3 2. Upgrade SAM from version 6.3 to version 6.4 3. Install NTA 4.2.2 4. Install UDT 3.2.4
<ul style="list-style-type: none"> • NPM 11.5 • NTA 4.1.2 • SAM 6.4 • NCM 7.6 	<ul style="list-style-type: none"> • Older version of NPM already installed • Older version of NTA already installed • SAM and NCM installed fresh (latest versions) 	<ol style="list-style-type: none"> 1. Upgrade NPM from version 11.5 to version 12.0.1 2. Upgrade NTA from version 4.1.2 to version 4.2.1 3. Upgrade NPM from version 12.0.1 to version 12.1 4. Upgrade NTA from version 4.2.1 to version 4.2.2 5. Install SAM 6.4 6. Install NCM 7.6

New installation of Orion Platform products

Before you install multiple SolarWinds Orion Platform products for the first time, perform the following procedures:

- Ensure that the targeted server has enough hard drive space to store the zipped and unzipped installers. One unzipped installer can consume two or more gigabytes of space.
- Run the Configuration wizard after you install each product. The Configuration wizard modifies the SQL server database tables and prevents issues with using the product.

These instructions provide stand-alone installation steps for installing Orion Platform products on a dedicated server. See [Enable FIPS](#) for more information about setting up FIPS.

<input type="checkbox"/> 1. Download installation files and license from Customer Portal	<p>If you have not yet created a SolarWinds account, create an account.</p> <ol style="list-style-type: none"> 1. Go to customerportal.solarwinds.com. 2. In the Log In tab, enter your organization's SolarWinds customer ID (SWID) and your email address. 3. In the Latest Downloads table, click Choose Download for the installation files for your product. Also check for and download any available hotfixes posted in the Customer Portal. 4. Depending on your environment, you may also need installers for the Additional Polling Engines and Additional Web Server. These installers include a bundle or a Scalability Engine. <div style="border: 1px solid #ccc; background-color: #fff9c4; padding: 5px; margin-top: 10px;"> <p> SolarWinds recommends using the Scalability Engine Installer for your Additional Polling Engine and Additional Web Server.</p> </div>
<input type="checkbox"/> 2. Run the installation file	<ol style="list-style-type: none"> 1. Log in as an administrator to the Orion server. 2. Extract the contents of the downloaded installation ZIP file to the server. 3. Run <code>SolarWinds-<product>-<version>-Full.exe</code>.
<input type="checkbox"/> 3. Complete the Installation wizard	<ol style="list-style-type: none"> 1. Click Next on the Welcome window. The system scans the environment to check system requirements. If there is an issue that needs to be resolved before the installation can proceed, the installer provides a link to a knowledge base article with the resolution. When resolved, run the installation again. 2. Select your preferred language. 3. If the wizard detects that IIS is not installed, select the recommended option to continue and install IIS automatically.

4. If the wizard detects that the Microsoft .NET Framework is not installed, select the recommended option to continue and install it automatically.

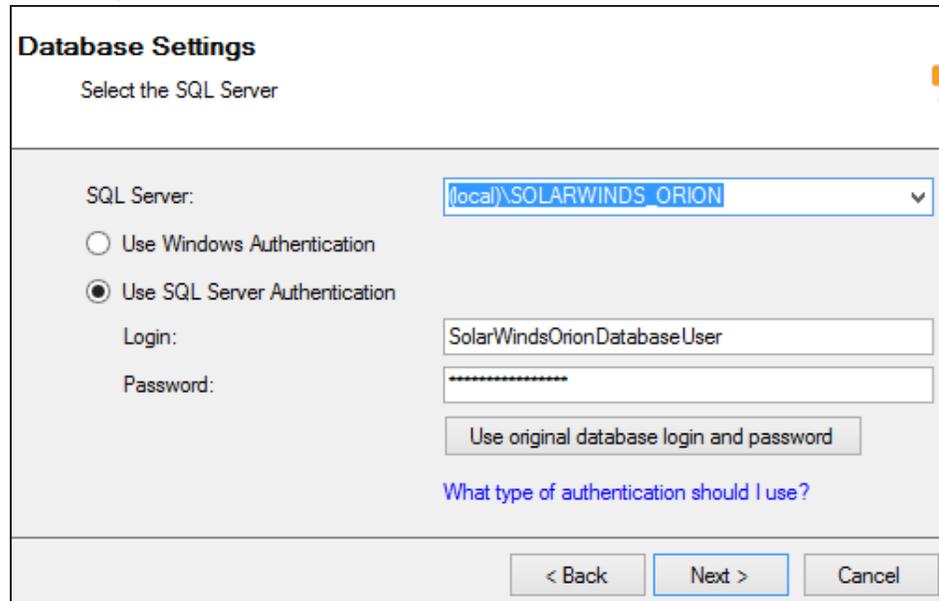
i Downloading and installing Microsoft .NET Framework 4.6.2 can take more than 20 minutes. If your system reboots, run the installation again.

5. If you agree, accept the terms of the license agreement.
6. Accept the default directory, or click Browse and select a directory.
7. Enable Quality of Experience (QoE) traffic monitoring.
Enabling QoE installs an agent on the Orion Main Polling Engine that collects packet-level traffic statistics (such as network and application response time) for any application traffic it sees going to or from the Orion Platform. SolarWinds recommends that you enable QoE.
8. Click Next to begin copying the files.
If you are using Microsoft Internet Explorer®, SolarWinds recommends you add the URL of your Orion website (`http://FullOrionServerName/`), the URL of SolarWinds support (<http://solarwinds.com/support>), and `about:blank` to the list of trusted sites.

4. Run the Configuration wizard

After the installation completes, the Configuration wizard automatically runs. If the Configuration wizard does not load automatically, start the Configuration wizard in the SolarWinds Orion > Configuration and Auto-Discovery program folder.

1. In the Welcome dialog box, click Next.
2. If prompted to stop services, click Yes.
3. In the Database Settings dialog box, select an SQL Server and authentication method, and click Next.



4. In the Database Settings dialog box, select a database server, and click Next. The installer creates the Orion database.

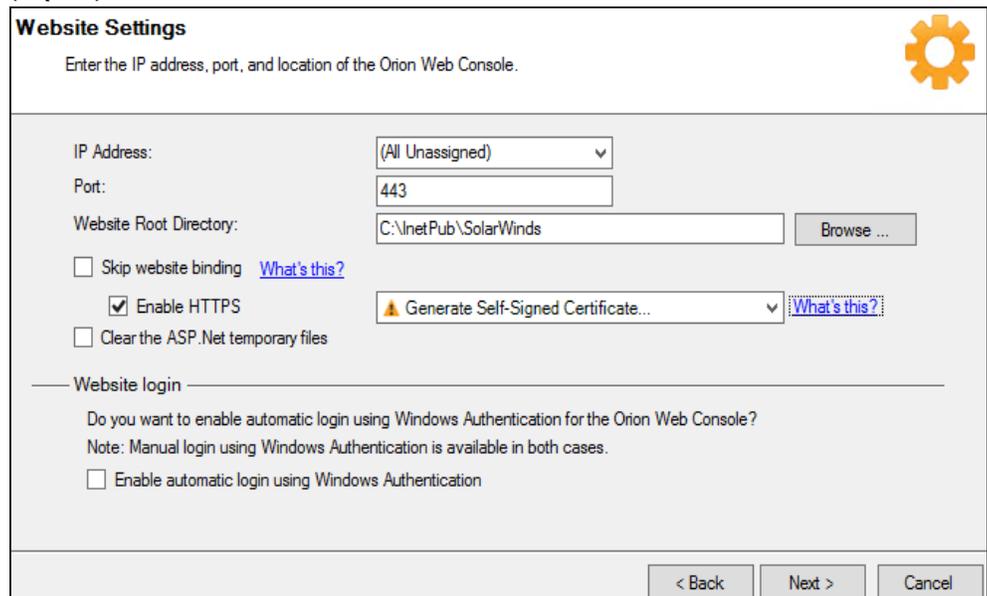
5. In the Database Account dialog box, create an account or enter the information for an existing account that the polling engine and Web Console will use to access the database, and click Next.
6. In the Website Settings dialog box, complete the following selections for your installation:

 If you select Skip website binding, the Configuration Wizard does not update the website configuration in your IIS.

- a. Select All Unassigned unless your environment requires a specific IP address for the Orion Web Console. The Port is 443 by default.
- 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 Web Console.

- c. To configure SSL, click Enable HTTPS and select your SSL certificate. If a certificate is not available, select Generate Self-Signed Certificate. The Configuration wizard automatically generates a self-signed certificate issued to the host name or the Fully Qualified Domain Name (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. In the Completing the Orion Configuration wizard dialog box, click Next.
11. If prompted to activate your installation, enter the License Key for your product that you can access in the [Customer Portal](#).

	<p>12. When completed, click Finish to launch the Orion Web Console. If the Orion Web Console does not launch automatically, start the Orion Web Console in Start > All Programs > SolarWinds > Orion Web Console</p> <p>or</p> <p>Open a web browser on your Orion server and enter <code>http://ipAddress</code> or <code>http://hostname</code>, where <code>ipAddress</code> is the IP address of your server and <code>hostname</code> is the host name of your server.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #e6f2ff;"> <p> If you entered a port other than 80, include that port in the URL used to access the Web Console.</p> </div> <p>13. Log in with user name <code>admin</code> and leave the password field blank. For security purposes, SolarWinds recommends that you change the password to your admin account.</p>
<p><input type="checkbox"/> 5. Install any available hotfixes (optional)</p>	<p>If the Customer Portal listed hotfixes for your product version, run those installations.</p> <ol style="list-style-type: none"> 1. Download the zip file. 2. Extract the zip files to the main polling engine or Orion server. 3. Review and follow the README file for details on the release and further instructions.
<p><input type="checkbox"/> 6. Add license key</p>	<p>If you were not prompted to activate the product license during installation, activate the license through the Orion Web Console.</p> <p>Get the license key for your product from the Customer Portal:</p> <ol style="list-style-type: none"> 1. Click Licenses > Manage Licenses or go to License Management. 2. Select the product. 3. Copy the license key. <p>Add and activate the license key from the Customer Portal.</p> <ol style="list-style-type: none"> 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. <p>To activate an offline license, see Activate licenses offline.</p>
<p><input type="checkbox"/> 7. Install on the additional polling engine</p>	<p>If you have an Additional Polling Engine (APE), download and install the product using the Scalability Engine Installer.</p> <ol style="list-style-type: none"> 1. In the Orion Web Console, click Settings > All Settings > Polling Engines.

<p>(optional)</p>	<ol style="list-style-type: none"> 2. Click Download Installer Now and move the downloaded file to the Additional Polling Engine server. 3. Run the installation file. The steps should mirror the installation steps completed on the main polling engine server. During installation, select the option for Additional Polling Engine. 4. To activate the license, access the Orion Web Console on the Main Polling Engine or Orion server. <div style="border: 1px solid orange; padding: 5px; margin: 5px 0;">  Do not activate the license directly on the additional polling engine. </div> <ol style="list-style-type: none"> 5. Click Settings > All Settings > License Manager. 6. Click Add/Upgrade License. 7. Enter the Activation Key and Registration Information, and click Activate. 8. You may need to assign the license to the additional polling engine. <ol style="list-style-type: none"> a. Click Assign. b. Select the additional polling engine and click Assign. 9. Repeat these instructions for multiple additional polling engines. <p>Best Practice: If the product included hotfixes, you can also run those directly on the Additional Polling Engines. These hotfixes are included with the Scalability Engine installer. If the hotfix installer indicates that the hotfixes are installed, do not continue. Otherwise, complete the installation instructions from the README file.</p>
<p><input type="checkbox"/> 8. Install on the additional web server (optional)</p>	<p>If you have an Additional Web Server (AWS), download and install the product using the Scalability Engine Installer.</p> <ol style="list-style-type: none"> 1. In the Orion Web Console, click Settings > All Settings > Web Console Settings. 2. Click Download Installer Now and move the downloaded file to the Additional Polling Engine server. 3. Run the installation file. The steps should mirror the installation steps completed on the Main Polling Engine server. During installation, select the option for Additional Web Server. 4. To activate the license, access the Orion Web Console on the Main Polling Engine or the SolarWinds Orion server. <div style="border: 1px solid orange; padding: 5px; margin: 5px 0;">  Do not activate the license directly on the Additional Polling Engine. </div> <ol style="list-style-type: none"> 5. Click Settings > All Settings > License Manager. 6. Click Add/Upgrade License. 7. Enter the Activation Key and Registration Information, and click Activate. 8. You may need to assign the license to the Additional Web Server. <ol style="list-style-type: none"> a. Click Assign. b. Select the Additional Web Server and click Assign.

Best Practice: If the product included hotfixes, you can also run those directly on the Additional Web Server. The hotfixes are included with the Scalability Engine installer. If the hotfix installer indicates that the hotfixes are installed, do not continue. Otherwise, complete the installation instructions from the README file.

Install new Orion Platform products into an existing Orion Platform deployment

The Orion Platform supports new installations into an existing Orion Platform deployment or server with other Orion Platform products already installed on it.

i Adding a new product into an existing Orion Platform may require upgrading the current products prior to the installation.

- Using compatibility information and the SolarWinds [Product Upgrade Advisor](#), determine if the currently-installed products must be upgraded prior to installing this product.
- Depending on the upgrade path, upgrade products following the [SolarWinds Upgrade Guide](#). When complete, install the new product following these instructions.
- When preparing the server, review the [multi-module system guidelines](#).

To integrate Orion Platform products with other Orion Platform products, you may need to install the stand-alone product onto the Orion server and perform additional steps. These instructions walk-through the specific installation steps, Configuration wizard selections, and any additional licensing and integration options to select.

Consider these gotchas for your installation:

- Ensure that user account includes the `db_owner` database role to integrate with the existing Orion SQL database.
- If you have High Availability as part of your Orion Platform installation, review [Install multiple SolarWinds Orion Platform products with High Availability](#).
- For SolarWinds NPM:
 - Install NPM on the Orion server with other products including NCM, SAM, and SRM.
 - Select the same Orion SQL database used by the current Orion server or Main Polling Engine.
 - If you want to migrate Orion products from an existing server to a new Orion server and install NPM onto the same new server, [migrate the Orion products](#) first.
- For SolarWinds NTA:
 - Starting with NTA 4.2, the NTA Flow Storage database is no longer supported on Additional Polling Engines and Additional Web Servers and must be installed on a dedicated server.
 - You must install the NTA Flow Storage Database before installing SolarWinds NTA.
 - When converting your evaluation license to a production license, change the location of the NTA Flow Storage database installed locally on the Main Polling Engine. See [Change the NTA Flow Storage Database](#).

- For SolarWinds SRM:
 - Use an account with local administrative rights.
 - Verify the account is not subject to any local or group policy restrictions.
 - Use the Run as administrator option when launching the installer on a system running Windows Server 2008.
 - Quit all other programs before running the installer.
- SolarWinds IPAM does not support Additional Polling Engines. For details, see [Additional Polling Engines and IPAM](#).
- For SolarWinds VMAN/VIM:
 - The existing Orion Platform in your environment may not include the latest VIM additions. Installing the latest VIM updates the Orion Platform with additional features and fixed issues for virtual environments. You will use the file `VMAN-Orion-Install-2nd.exe` to install the latest VIM and update your Orion Platform.
 - Make sure that VMAN is deployed and configured.
 - Verify that you have a licensed and supported version of NPM, SAM, NCM, or other Orion Platform product installed on the server where you want to install VIM and integrate VMAN.

 VIM 7.1 includes Orion Platform 2016.2. If you install SAM 6.4, you also receive VIM 7.1 and do not need to install VIM 7.1.

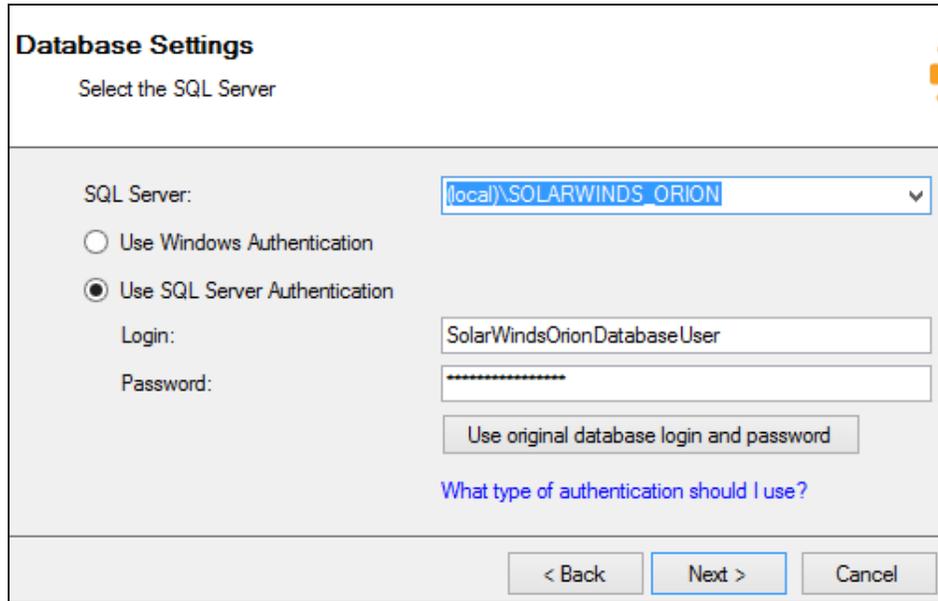
 You do not need a separate license for VMAN in an existing Orion Platform deployment with NPM, SAM, NCM, or VNQM. Actions like managing a node consume [VMAN license sockets](#) differently than other Orion Platform products.

- For SolarWinds Patch Manager:
 - To view SolarWinds Patch Manager on the Orion Web Console, install the SolarWinds Patch Manager Orion web interface on the Orion server (Main Polling Engine) and the Additional Web Server.
 - Install Patch Manager on a dedicated server with no additional SolarWinds Orion Platform products or third-party applications.
- For SolarWinds DPA/DPAIM
 - DPA and Orion Platform integration requires the following software versions:
 - SolarWinds Database Performance Analyzer 11.0
 - SolarWinds Orion Platform 2017.1 or later
 - SolarWinds SAM 6.4 or later
 - SolarWinds SRM 6.4 or later
 - To prevent a single point of failure, install SolarWinds DPA on a dedicated server with a separate database.
 - Consider taking additional steps to integrate SolarWinds DPA instances to SolarWinds SAM applications. See [Prepare SAM applications for integration](#) for more information.

1. Review the See [Installation path for multiple Orion Platform products](#).

installation path	 Orion Platform products must be installed in a specific order to ensure correct compatibility.
<input type="checkbox"/> 2. Install the product(s)	<p>Follow the instructions for installing fresh Orion Platform products.</p> <ol style="list-style-type: none"> Click Next on the Welcome window. The system scans the environment to ensure that the system requirements are met. If your system is not compatible, the installer provides a link to a knowledge base article with the resolution. When resolved, run the installation again. Select your preferred language. If the Installation wizard detects that IIS is not installed, select the recommended option to continue and install IIS automatically. If the wizard detects that the Microsoft .NET Framework is not installed, select the recommended option to continue and install it automatically. <div data-bbox="483 789 1513 1033" style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 10px; margin-top: 10px;"> <p> • Downloading and installing Microsoft .NET Framework 4.6.2 can take more than 20 minutes. If your system reboots, run the installation again.</p> <p>• For VMAN, if a reboot is required, click Install after restarting the computer to resume the installation.</p> </div> If you agree, accept the terms of the license agreement. Accept the default directory, or click Browse and select a directory. Enable Quality of Experience (QoE) traffic monitoring. Enabling QoE installs an agent on the Orion Main Polling Engine. This agent collects packet-level traffic statistics, like network response time and application response time, for any application traffic it sees going to or from the Orion Platform. SolarWinds recommends that you enable QoE. Click Next to begin copying the files. If you are using Microsoft Internet Explorer®, SolarWinds recommends you add the URL of your Orion website (http://FullOrionServerName/), the URL of SolarWinds support (http://solarwinds.com/support), and <code>about:blank</code> to the list of trusted sites.
<input type="checkbox"/> 3. Run the Configuration wizard	<p>After the installation completes, the Configuration wizard automatically runs. If the Configuration wizard does not load automatically, start the Configuration wizard in the SolarWinds Orion > Configuration and Auto-Discovery program folder.</p> <ol style="list-style-type: none"> In the Welcome dialog box, click Next. If prompted to stop services, click Yes.

3. In the Database Settings dialog box, select an SQL Server and authentication method, and click Next.



Database Settings
Select the SQL Server

SQL Server: (local)\SOLARWINDS_ORION

Use Windows Authentication

Use SQL Server Authentication

Login: SolarWindsOrionDatabaseUser

Password: *****

Use original database login and password

[What type of authentication should I use?](#)

< Back Next > Cancel

4. In the Database Settings dialog box, select a database server, and click Next. The installer creates the Orion database.
5. In the Database Account dialog box, create an account or use an existing account that the polling engine and Web Console use to access the database, and click Next.

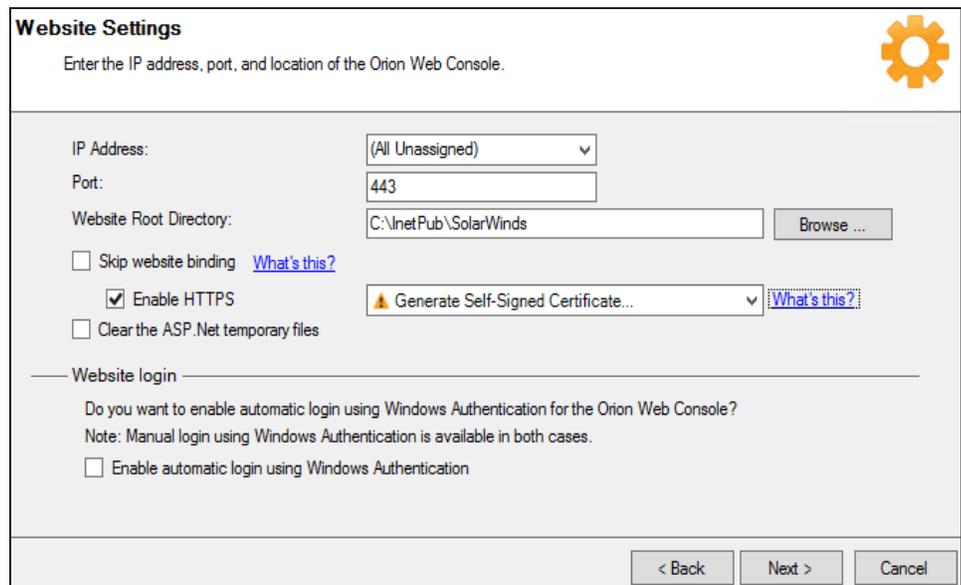
6. In the Website Settings dialog box, complete selections for your installation.

 If you select Skip website binding, the Configuration Wizard does not make changes within the website configuration in your IIS.

- a. Select All Unassigned unless your environment requires a specific IP address for the Orion Web Console. The default port is 443.
- 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 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. Click Yes if prompted to create a directory or website.
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. In the Completing the Orion Configuration wizard dialog box, click Next.
11. If prompted to activate your installation, enter the License Key for your product noted from the SolarWinds Customer Portal.

		<p>12. When completed, click Finish to launch the Orion Web Console. Click Start > All Programs > SolarWinds > Orion Web Console</p> <p>or</p> <p>Open a web browser on your Orion server and enter <code>http://ipAddress</code> or <code>http://hostname</code>, where <code>ipAddress</code> is the IP address of your server and <code>hostname</code> is the host name of your server.</p> <p>13. Log in with user name <code>admin</code> and leave the password field blank. For security purposes, SolarWinds recommends that you change the password to your admin account.</p>
<input type="checkbox"/>	<p>4. Install any available hotfixes (optional)</p>	<p>If the Customer Portal listed hotfixes for your downloaded product, run those installations.</p> <ol style="list-style-type: none"> 1. Download the zip file. 2. Extract the zip files to the Main Polling Engine or Orion server. 3. Review and follow the README for details on the release and additional instructions.
<input type="checkbox"/>	<p>5. Add license key</p>	<p>Add and activate the license key from the Customer Portal.</p> <ol style="list-style-type: none"> 1. Open the Orion Web Console in a web browser. Click Start > All Programs > SolarWinds > Orion Web Console or Open a web browser on your Orion server and enter <code>http://ipAddress</code> or <code>http://hostname</code>, where <code>ipAddress</code> is the IP address of your server and <code>hostname</code> is the host name of your server. 2. Click Settings > All Settings > License Manager. 3. Click Add/Upgrade License. 4. Enter the Activation Key and Registration Information, and click Activate. <p>To activate an offline license, see Activate licenses offline.</p>
<input type="checkbox"/>	<p>6. Install on the Additional Polling Engine (optional)</p>	<p>If you have an Additional Polling Engine (APE), download and install the product using the Scalability Engine Installer.</p> <div style="border: 1px solid orange; padding: 5px; margin: 10px 0;"> <p> Starting with NTA 4.2, the NTA Flow Storage database is no longer supported on Additional Polling Engines and Additional Web Servers, and must be installed on a dedicated server. This includes NTA version 4.2.1 and 4.2.2.</p> </div> <ol style="list-style-type: none"> 1. In the Orion Web Console, click Settings > All Settings > Polling Engines. 2. Click the Download Installer Now and move the downloaded file to the Additional Polling Engine server.

3. Run the installation file. The steps should mirror the installation steps completed on the Main Polling Engine server. During installation, select the option for Additional Polling Engine.

4. To activate the license, access the Orion Web Console on the Main Polling Engine or Orion server.

 Do not activate the license directly on the Additional Polling Engine.

5. Click Settings > All Settings > License Manager.

6. Click Add/Upgrade License.

7. Enter the Activation Key and Registration Information, and click Activate.

8. You may need to assign the license to the Additional Polling Engine.

a. Click Assign.

b. Select the Additional Polling Engine and click Assign.

9. Repeat these instructions for multiple Additional Polling Engines.

 **Best Practice:** If the product included hotfixes, you can also run those directly on the Additional Polling Engines. The hotfixes are included with the Scalability Engine installer. If the hotfix installer indicates that the hotfixes are installed, do not continue. Otherwise, complete the installation instructions from the README file.

7. Install on the Additional Web Server (optional)

If you have an Additional Web Server (AWS), download and install the product using the Scalability Engine Installer.

1. In the Orion Web Console, click Settings > All Settings > Web Console Settings.

2. Click the Download Installer Now and move the downloaded file to the Additional Polling Engine server.

3. Run the installation file. The steps should mirror the installation steps completed on the Main Polling Engine server. During installation, select the option for Additional Web Server.

4. To activate the license, access the Orion Web Console on the Main Polling Engine or Orion server.

 Do not activate the license directly on the Additional Web Server.

5. Click Settings > All Settings > License Manager.

6. Click Add/Upgrade License.

7. Enter the Activation Key and Registration Information, and click Activate.

8. You may need to assign the license to the Additional Web Server.

a. Click Assign.

b. Select the Additional Web Server and click Assign.



Best Practice: If the product included hotfixes, you can also run those directly on the Additional Web Server. The hotfixes are included with the Scalability Engine installer. If the hotfix installer indicates that the hotfixes are installed, do not continue. Otherwise, complete the installation instructions from the README file.

Install multiple SolarWinds Orion Platform products with High Availability

SolarWinds High Availability (HA) provides failover protection for your Orion server and additional polling engines to reduce data loss. If your primary server fails, the HA feature allows your secondary server to take over all services, such as polling and alerting, with minimal downtime. SolarWinds HA protects your main server, also known as your main polling engine, and additional polling engines. It does not protect your databases or your additional web servers.

Make your Orion Platform products highly available

These instructions define how to install your products with and create a failover server using SolarWinds HA. Both primary and secondary servers in the pool must have the exact same Orion Platform products and versions installed.

 If you have enabled SolarWinds High Availability, you must disable HA before you can install. All SolarWinds product versions must match on the primary and secondary servers before you can re-enable your HA pools.

 If you use a virtual host name, the browser and computer may cache the host name of the active server. If you are testing using the host names, you may need to flush your DNS cache.

For more information on SolarWinds HA, see [High Availability in SolarWinds products](#).

Before you begin, you need the following:

- A [virtual IP \(VIP\) address](#) (for single subnet installations)
- A virtual host name (for multiple subnet installations)
- The secondary HA server
- An available HA pool license

 The software automatically detects if you are installing on a single subnet or multiple subnets.

- | | |
|--|--|
| <input type="checkbox"/> 1. Prepare the secondary server | <ol style="list-style-type: none">1. Review the requirements and how to choose a VIP address or virtual host name.2. Build a standby server. SolarWinds recommends that your standby server has similar or the same specifications as the primary server.3. Open port 5671 (TCP) on the primary (incoming) and standby (outgoing) servers. |
|--|--|

		<ol style="list-style-type: none"> Open ports 4369 and 25672 (TCP) on the main Orion server and its standby server. These ports are not required when protecting additional polling engines.
<input type="checkbox"/>	2. Install on the primary server	<p>Follow the installation instructions to install the Orion Platform products on the primary server.</p> <p>Do not run the product installer on the secondary server. The HA process creates the secondary server installer.</p>
<input type="checkbox"/>	3. Activate the HA license	<p>Download and activate your HA license from the Customer Portal before you create a pool. The License Manager provides a 30-day evaluation license to test the HA features.</p> <div style="border: 1px solid #ccc; background-color: #fff9c4; padding: 10px; margin: 10px 0;"> <p> If you are setting up multiple pools, activate all of your HA pool licenses. When you set up your HA pools, each pool automatically consumes one HA pool license until no licenses are available.</p> </div> <ol style="list-style-type: none"> Click Settings > All Settings > License Manager. Select the HA license. Click Activate. Enter your license information. If you do not have a license key, enable the HA evaluation license.
<input type="checkbox"/>	4. Download and install secondary server	<p>HA provides a downloadable installer from the primary server with a list of all products and versions. This installer ensures both servers match.</p> <ol style="list-style-type: none"> In the Orion Web Console, click Settings > All Settings > High Availability Deployment Summary. Click Setup a new HA server. In the dialog box, click Get started setting up a server. In the Setup a High Availability Server dialog box, click Download installer now. Move the downloaded installer to your secondary server and run it. Select which type of backup server you want to install under High Availability. Enter your SQL or Windows credentials for your Orion SQL database when prompted.
<input type="checkbox"/>	5a. Create the HA pool for a single-subnet installation	<p>You can now add the backup server to a pool with your main server or additional polling engine.</p> <ol style="list-style-type: none"> In the Orion Web Console, click Settings > All Settings > High Availability Deployment Summary.

	<ol style="list-style-type: none">2. Click Setup High Availability pool next to your standby server.3. Enter the pool name and the virtual IP (VIP) address. The VIP must be unassigned and on the same subnet as the primary and secondary servers. You can proceed this step by using the virtual host name, too.4. Click Create Pool to complete the pool setup.
<input type="checkbox"/> 5b. Create the HA pool for a multiple subnet installation	<ol style="list-style-type: none">1. In the Orion Web Console, click Settings > All Settings > High Availability Deployment Summary.2. Click Setup High Availability pool next to your standby server.3. Enter the pool name and the virtual host name. Do not include the domain name in the virtual host name.4. Click Next.5. Select the DNS type and enter the appropriate credentials. <div data-bbox="522 768 1511 873" style="border: 1px solid #ccc; padding: 5px;"> Other - use this option if you do not want to use a DNS server or if you use scripts to update the DNS entry for the host name.</div>6. Click Test to validate your credentials and permissions.7. Click Next to complete the pool setup. The software validates the virtual host name against the selected DNS server. If the host entry already exists, you are prompted to overwrite the entry or change the virtual host name.

Install/upgrade Orion Platform products with HA enabled

These instructions describe how to install your Orion Platform products onto an existing server pair in a SolarWinds High Availability (HA) pool. Both primary and secondary servers in the pool must have the exact same Orion products and versions installed.

 If you have enabled SolarWinds High Availability, you must disable HA before you can install. All SolarWinds product versions and components must match on the primary and secondary servers before you can re-enable your HA pools.

These instructions assume you have an HA pool already created and enabled. For more information on SolarWinds HA, see [High Availability in SolarWinds products](#).

<input type="checkbox"/> 1. Disable the HA pool	<p>The HA pool must be disabled to begin installation.</p> <div data-bbox="435 1730 1511 1793" style="border: 1px solid #ccc; padding: 5px;"> Make sure that the active pool member is the primary server.</div> <ol style="list-style-type: none">1. In the Orion Web Console, click Settings > All Settings > High Availability Deployment Summary.
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		<ol style="list-style-type: none"> 2. Select the pool you want to disable. 3. Toggle High Availability to Off. <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin-top: 10px;"> <p> Do not modify the VIP or IP settings for the servers.</p> </div>
<input type="checkbox"/>	2. Install on the primary server	<p>Follow the install instructions for the products. Install on the primary server.</p> <p>Do not run the product installer on the secondary server. The HA process creates the secondary server installer.</p>
<input type="checkbox"/>	3. Install on the secondary server	<p>HA provides a downloadable installer from the primary server with a list of all products and versions. This installer ensures both servers match.</p> <ol style="list-style-type: none"> 1. In the Orion Web Console, click Settings > All Settings > High Availability Deployment Summary. 2. Click Setup a new HA server. 3. In the dialog box, click Get started setting up a server. 4. In the Setup a High Availability Server dialog box, click Download installer now. 5. Move the downloaded installer to your secondary server and run it. Select which type of backup server you want to install under High Availability. Enter your SQL or Windows credentials for your Orion SQL database when prompted.
<input type="checkbox"/>	4. Enable the HA pool	<p>After the servers are installed, enable the HA pool using the following instructions. You may need to recreate the HA pool. For details, see Set up an HA pool for NPM.</p> <ol style="list-style-type: none"> 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. <p>The Orion Web Console verifies all SolarWinds product versions match across the HA pair before enabling. If you receive errors, check your product versions.</p>

Enable FIPS

You can run your Orion Platform products in FIPS-compliant (Federal Information Processing Standard) mode to comply with computer security and interoperability standards used by non-military US government agencies and contractors.

 For the full list of tested Orion products for international standards for computer security, see [this site](#). For a certification letter of Orion FIPS compliance, [contact us](#) with your request.

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- If FIPS compliance is required, SolarWinds recommends that you enable FIPS as part of a fresh install instead of an upgrade.
 - Before you enable FIPS, ensure that the hardware is FIPS compliant. See the [Microsoft Support knowledge base](#) for more information.
 - Not all Orion Platform products are FIPS compliant. SolarWinds recommends that you install all FIPS compliant SolarWinds software on FIPS compliant servers and maintain all non-compliant SolarWinds software on non-compliant servers.

1. Run the SolarWinds FIPS manager

Click `SolarWinds.FipsManager.exe` to start the SolarWinds FIPS 140-2 Manager.

 By default, `SolarWinds.FipsManager.exe` is located in the `C:\Program Files (x86)\SolarWinds\Orion` folder.

<input type="checkbox"/> 2. Complete FIPS configuration	<p>Read the welcome text, and click Next. The SolarWinds FIPS 140-2 Manager confirms that the current configuration of your SolarWinds products is FIPS compliant.</p> <ol style="list-style-type: none"> 1. If an installed Orion Platform product is not FIPS compliant, click Close, remove the non-compliant product from the FIPS compliant server, and run the FIPS 140-2 Manager again. 2. If FIPS 140-2 is disabled, select Enable FIPS 140-2, and click Next. 3. If the FIPS Manager provides a list of objects or saved network discovery definitions that are not FIPS-enabled, complete the following steps. <div data-bbox="537 611 1511 716" style="border: 1px solid #ccc; padding: 5px; margin: 5px 0;"> <p> To refresh the list of non-compliant objects after editing the credentials, restart the FIPS 140-2 Manager.</p> </div> <ul style="list-style-type: none"> • Click the non-compliant monitored node, and edit its Polling Method to be FIPS compliant. <ol style="list-style-type: none"> a. Select SNMPv3 as the SNMP Version. b. Select FIPS-compliant Authentication and Privacy/Encryption methods, and provide the passwords. c. Click Submit. • Click the non-compliant network discovery, and edit SNMP credentials to be FIPS-compliant. <ol style="list-style-type: none"> a. Confirm that all SNMP credentials are SNMPv3. Delete or edit any credentials that are not FIPS-compliant SNMPv3. b. Confirm that all SNMP credentials use FIPS-compliant Authentication and Privacy/Encryption methods, and provide the passwords. c. Complete the Network Sonar Wizard using the updated credentials.
<input type="checkbox"/> 3. Restart the server	<p>Click Restart now to restart all relevant SolarWinds services.</p>

While the software is FIPS compliant, you must use FIPS compliant polling methods (such as SNMPv3) to monitor and discover nodes.

FIPS-COMPLIANT METHODS FOR SNMPv3

Authentication	SHA1
Privacy or encryption	AES128, AES192, AES256

Steps to take after installing your Orion Platform products

SolarWinds provides the following resources to help you learn how to get started using SolarWinds products.

- [SolarWinds Customer Success Center](#): provides documentation and Knowledge Base (KB) articles for all SolarWinds Orion Platform products.
- SolarWinds product documentation: Read the Getting Started Guide **first** to set up and get started using your SolarWinds products. See the Administrator Guide for detailed information about SolarWinds Orion Platform product features.
 - DPA: [Getting Started Guide](#) | [Administrator Guide](#)
 - IPAM: [Getting Started Guide](#) | [Administrator Guide](#)
 - NCM: [Getting Started Guide](#) | [Administrator Guide](#)
 - NPM: [Getting Started Guide](#) | [Administrator Guide](#)
 - NTA: [Getting Started Guide](#) | [Administrator Guide](#)
 - Patch Manager: [Getting Started Guide](#) | [Administrator Guide](#)
 - SAM: [Getting Started Guide](#) | [Administrator Guide](#)
 - SRM: [Getting Started Guide](#) | [Administrator Guide](#)
 - UDT: [Getting Started Guide](#) | [Administrator Guide](#)
 - VMAN: [Getting Started Guide](#) | [Administrator Guide](#)
 - VNQM: [Getting Started Guide](#) | [Administrator Guide](#)
 - WPM: [Administrator Guide](#)
- [SolarWinds THWACK](#): interact with SolarWinds pros who provide answers to your questions and share lessons learned.