

# Dell EMC Unisphere 360

Version 9.1.0

## Installation Guide

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Dell EMC  
Hopkinton, Massachusetts 01748-9103  
1-508-435-1000 In North America 1-866-464-7381  
[www.DellEMC.com](http://www.DellEMC.com)

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# About this content

As part of an effort to improve its product lines, Dell EMC periodically releases revisions of its software and hardware. Therefore, some functions described in this document might not be supported by all versions of the software or hardware currently in use. The product release notes provide the most up-to-date information on product features.

Contact your Dell EMC technical support professional if a product does not function properly or does not function as described in this document.

This document was accurate at publication time. New versions of this document might be released on the Dell EMC Online Support website. Check the Dell EMC Online Support site <https://support.EMC.com> to ensure that you are using the latest version of this document.

## Purpose

This document describes how to configure and use Unisphere 360.

## Related documentation

The following publications provide additional information:

- *Dell EMC Unisphere for PowerMax Release Notes*
- *Dell EMC Unisphere for PowerMax Online Help*
- *Dell EMC Unisphere 360 Online Help*
- *Dell EMC Solutions Enabler Installation Guide*
- *Dell EMC Solutions Enabler Release Notes*
- *Dell EMC Solutions Enabler SRM CLI Product Guide*
- *Dell EMC Solutions Enabler CLI Command Reference*
- *Dell EMC PowerMax Family Security Configuration Guide*

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## Where to get help

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### Product information

Dell EMC support, product, and licensing information can be obtained on the Dell EMC Online Support site as described next. To open a service request through the Dell EMC Online Support site, you must have a valid support agreement. Contact your Dell EMC sales representative for details about obtaining a valid support agreement or to answer any questions about your account.

### Technical support

Dell EMC offers a variety of support options:

- **Support by Product** — Dell EMC offers consolidated, product-specific information on the Web at: <https://support.EMC.com/products>  
The Support by Product web pages offer quick links to Documentation, White Papers, Advisories (such as frequently used Knowledgebase articles), and Downloads, as well as more dynamic content, such as presentations, discussion, relevant Customer Support Forum entries, and a link to Dell EMC Live Chat.
- **Chat with Support** — Open a Chat or instant message session with a Dell EMC Support Engineer.

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If you are missing a LAC letter, or require further instructions on activating your licenses through the Online Support site, contact Dell EMC's worldwide Licensing team at [licensing@emc.com](mailto:licensing@emc.com) or call:

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- EMEA: +353 (0) 21 4879862 and follow the voice prompts.

### Your comments

Your suggestions help us improve the accuracy, organization, and overall quality of the documentation. Send your comments and feedback to: [VMAXContentFeedback@emc.com](mailto:VMAXContentFeedback@emc.com)



# CHAPTER 1

## Pre-installation considerations

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## Product description

Unisphere 360 is an on-premises management solution that provides an aggregated view of the storage environment. The enrolled Unisphere instances provide the information for this aggregated view.

The term Unisphere incorporates "Unisphere for PowerMax" for the management of PowerMax and All Flash storage systems using PowerMaxOS 5978, and "Unisphere for VMAX" for the management of VMAX All Flash and VMAX storage systems using HYPERMAX OS 5977 and Enginuity 5876.

Unisphere 360 consolidates and simplifies management of PowerMax and All Flash storage systems using PowerMaxOS 5978, and management of VMAX All Flash and VMAX storage systems using HYPERMAX OS 5977 and Enginuity OS 5876.

## Before you begin

The following section contains information to consider before beginning the installation:

- The user performing the installation must have operating system administrator permissions on the system.
- On Linux systems, before starting the installation procedure, create the `postgres` user and group. For more information about creating the `postgres` user and group, see [Setting up the PostgreSQL user on Linux](#) on page 11.

## Server operating system requirements

### Windows

The following Windows versions are supported:

- Windows Server 2016
- Windows Server 2012 R2
- Windows Server 2008 R2 (64-bit only)

### Linux

#### Note:

Before you attempt to install Unisphere 360 on Red Hat Linux 6.0 or a later release, verify that the correct `unzip` package is installed. Not all installer packages include these libraries by default so verify their presence before running the installation program. Do not attempt to run the installation process without them. Without this item, an error might occur at the end of the product install and sometimes the product might not function as intended. The package is:

```
unzip_XYZ_x86_64.rpm / corresponding package
```

The following Linux versions are supported:

- Red Hat Enterprise Linux 6.7 (64-bit)
- Red Hat Enterprise Linux 7.2 (64-bit)
- SUSE Linux Enterprise Server 11 (64-bit)

- SUSE Linux Enterprise Server 12 (64-bit)

## Server hardware requirements

The following hardware requirements apply for Unisphere 360:

**Table 1** Unisphere 360 server hardware requirements

Operating system	Windows	Linux
Minimum processor	2-core 1.8 GHz processor	2-core 1.8 GHz processor
Minimum available memory	16 GB	16 GB
Minimum available disk space	120 GB	120 GB

## Client operating system requirements

The following client operating systems are supported:

- Windows 7
- Windows 8
- Windows 10

## Client browser requirements

The minimum browser versions that are supported are:

- Firefox version 59.0
- Chrome version 65.0.3325
- Internet Explorer 11.0 (Desktop only)
- Microsoft Edge 38

## Setting up the PostgreSQL user on Linux

Before starting a new installation of Unisphere for PowerMax or Unisphere 360 on Linux, the PostgreSQL user (`postgres`) and group (`postgres`), must be present. Also, the user must be a member of the `postgres` group.

Use the following commands to create the `postgres` group and add the `postgres` user to the `postgres` group:

```
groupadd postgres
useradd -g postgres postgres
```



# CHAPTER 2

## Installing Unisphere 360

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## Installing Unisphere 360 on a Windows system

### About this task


The default installation method for Windows is the wizard, but you can launch the console mode using the following command:

```
UNISPHERE360_version_WINDOWS_X86_64.exe -i console
```

To install Unisphere 360:

### Procedure

1. To run the installer, double-click the executable file.
2. In the **Introduction** page, click **Next**.
3. In the **Choose Install Folder** page, do one of the following:
  - In the **Where Would You Like to Install** field, type the installation path.
  - Click **Choose** and go to the installation path.
4. Click **Next**.
5. In the **Ports Configuration** page, do the following:
  - a. In the **HTTPS Port No** field, type the HTTPS port number, or accept the default value of 8470.
  - b. In the **DB Port No** field, type the database port number, or accept the default value of 3424.
  - c. Click **Next**.
6. In the **X.509 Certificate-based Client Authentication** page, click **Next**.

 **Note:** X.509 user authentication is no longer supported. Selection of this installation option results in Unisphere 360 not functioning as expected.
7. In the **Pre-Installation Summary** page, review the summary information and click **Install**. A first-time fresh installation on Windows Server 2016 may ask for the Microsoft Visual C++ Redistributable Package. Click **OK**.

The installation operation completes.
8. In the **Install Complete** page, click **Done**.

### After you finish

The installation operation creates a shortcut on the Windows desktop. Double-click this shortcut to launch Unisphere 360.

## Installing Unisphere 360 on a Linux system

### About this task

The default installation method for Linux is the console mode, but you can launch the wizard mode using the following command:

```
./UNISPHERE360_version_LINUX_X86_64.bin -i swing
```


To install Unisphere 360:

## Procedure

1. To run the installer, run the following command:

```
./UNISPHERE360_version_LINUX_X86_64.bin -i console
```

2. In the **Introduction** panel, press Enter.
3. In the **Choose Install Folder** panel, do one of the following:
  - Type the installation path and press Enter.
  - Press Enter to accept the default installation path.
4. In the **Ports Configuration** panel, do the following:
  - a. Type the database port number and press Enter, or press Enter to accept the default value of 3424.
  - b. Type the HTTPS port number and press Enter, or press Enter to accept the default value of 8470.
5. In the **X.509 Certificate-based Client Authentication** panel, click **Next**.
 

 **Note:** X.509 user authentication is no longer supported. Selection of this installation option results in Unisphere 360 not functioning as expected.
6. In the **Pre-Installation Summary** panel, review the summary information and press Enter. The installation operation completes.
7. In the **Install Complete** panel, press Enter to exit the installer.

## Launching Unisphere 360

### About this task

When using Lightweight Directory Access Protocol (LDAP) or Active Directory (AD), ensure that you use the same user names as when signing in to Unisphere for PowerMax using LDAP/AD. For more information about configuring LDAP/AD, see [Using Lightweight Directory Access Protocol or Active Directory](#) on page 20.

To launch Unisphere 360:

### Procedure

1. Type the following URL in a browser:

```
https://host_IP|host_name:port_number/unisphere360
```

The port number is configured during installation. The default HTTPS port number is 8470.

If the host IP address is an IPv6 address, surround the IP address with square brackets, for example:

```
https://[2001:db8:ffff:ffff:ffff:ffff:ffff:ffff]:8470/unisphere360
```

If the host IP address is an IPv4 address, type the IP address as normal, for example:

```
https://198.51.100.255:8470/unisphere360
```

2. At the login window, type the Unisphere Initial Setup User username and password.

The default username for the Unisphere Initial Setup User in Unisphere 360 is `admin` and the default password is `admin`.

3. Click **Login**.

## Starting and stopping the Unisphere 360 server

### About this task

If required to do so, you can start and stop the Unisphere 360 server manually.

## Starting and stopping the Unisphere 360 server on Windows

### About this task

To start or stop the Unisphere 360 server in Windows, use the **Services** panel. Click **Control Panel > Administrative Tools > Services** to open the **Services** panel.

Right-click on the `EMCUnisphere360Server` service. Select **Start**, **Stop**, or **Restart**, as appropriate.

Alternatively, you can use the following commands to start or stop the Windows services using the CLI:

```
net start " EMCUnisphere360Server"
net stop " EMCUnisphere360Server"
```

## Starting and stopping the Unisphere 360 server on Linux


### About this task

To start or stop the Unisphere 360 server in Linux, change to this directory: `/etc/init.d` and use the following commands:

Action	Command
Start server	<code>./unisphere360 start</code>
Stop server	<code>./unisphere360 stop</code>
Restart server	<code>./unisphere360 restart</code>

## Upgrading Unisphere 360


### About this task

 **Note:** As part of the upgrade process, you must re-enroll all Unisphere for PowerMax instances to enhance security and system-to-system trust.

The following upgrade paths are supported:

- V9.0.x -> V9.1.x
- V8.4.x -> V9.0.x
- V8.3.x -> V9.0.x
- V8.3.x -> V8.4.x
- V8.2.x -> V8.4.x
- V8.2.x -> V8.3.x



 **Note:** Upgrading directly from V8.4.x to V9.1.x is not supported. Upgrade to V9.0.x first, and from there to V9.1.x.

To upgrade Unisphere 360:

**Procedure**

1. Take note of the Unisphere for PowerMax instances that are enrolled currently.
2. Navigate to the location of the kit and run the appropriate executable file for your operating system.
3. When prompted to do so, confirm that you want to upgrade the installed features.
4. Complete the upgrade by following the instructions on screen.

**After you finish**

Launch Unisphere 360 and re-enroll the required Unisphere for PowerMax instances.



# CHAPTER 3

## Configuring security settings

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# Using Lightweight Directory Access Protocol or Active Directory

## Before you begin

Lightweight Directory Access Protocol (LDAP) or Active Directory (AD) users must be configured as external users under `domain.com\username`.

## About this task

When using LDAP or AD, complete the following steps:

## Procedure

1. Configure LDAP or AD for a Unisphere for PowerMax instance.
2. Enroll that Unisphere for PowerMax in Unisphere 360.
3. Add users as external users to ensure that they can log in to Unisphere 360.

When signing in to Unisphere for PowerMax, specify the user name in the following format:

- AD users sign in specifying `domain\name`
- LDAP and local users sign in specifying `name`