



# EMC<sup>®</sup> PowerPath<sup>®</sup> Virtual Appliance

Version 1.2

## Administration Guide

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REV 01

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# CHAPTER 1

## Overview

This section contains the following topic:

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## The PowerPath Virtual Appliance web console

PowerPath Virtual Appliance web console is a browser-based graphical user interface to configure, administer, and use the EMC PowerPath Virtual Appliance.

EMC PowerPath Virtual Appliance is shipped and installed separately from PowerPath/VE. It provides licensing support for PowerPath/VE for VMware vSphere while simplifying user experience for licensing of PowerPath/VE for VMware vSphere.

Through the PowerPath Virtual Appliance web console, an administrator can provision and administer the EMC PowerPath Virtual Appliance. An administrator can also perform the following operations:

- ◆ Configure connections to one or more VMware vCenter Servers.
- ◆ Add PowerPath/VE licenses to the EMC PowerPath Virtual Appliance.
- ◆ View PowerPath/VE license needs, license inventory, and license details.
- ◆ View and export PowerPath/VE license usage data.
- ◆ View VMware ESX and PowerPath/VE host details.

# CHAPTER 2

## Setting up PowerPath Virtual Appliance

This section contains the following topics:

- ◆ [Adding a VMware vCenter server](#) ..... 8
- ◆ [Editing VMware vCenter user credentials](#) ..... 8
- ◆ [Removing a VMware vCenter server](#) ..... 8

## Adding a VMware vCenter server

Add a VMware vCenter server to set up PowerPath Virtual Appliance web console for license deployment and management.

### Procedure

1. Log in to PowerPath Virtual Appliance web console.
2. From the PowerPath Virtual Appliance web console, navigate to **VMware vCenter Server**.
3. Select **Add vCenter**.
4. Type the host name or IP address of the VMware vCenter server.
5. Type a username for the administrator.
6. Type the administrator password.
7. Click **OK**.

### Results

After a VMware vCenter server is added, the following information is displayed in the **VMware vCenter Servers** page.

- ◆ VMware vCenter server name or IP address
- ◆ Username
- ◆ Number of PowerPath hosts
- ◆ Number of ESX hosts
- ◆ Status of the sever connection - Connected or Disconnected

## Editing VMware vCenter user credentials

Change credentials for VMware vCenter user if you have re-imaged the VMware vCenter or disconnected and reconnected the VMware vCenter server.

### Procedure

1. From the PowerPath Virtual Appliance web console, navigate to **VMware vCenter Servers**.
2. Select the VMware vCenter for which you want to change the credentials.
3. Click **Edit Credentials**.
4. Change the username or password, or both.
5. Click **OK**.

## Removing a VMware vCenter server

Remove a disconnected VMware vCenter server and reconnect it.

### Procedure

1. Log in to PowerPath Virtual Appliance web console and navigate to **VMware vCenter Servers**.
2. Select the VMware vCenter server you want to remove and select **Remove**.
3. Click **OK**.

The PowerPath/VE hosts are removed from the EMC PowerPath Virtual Appliance but remain licensed.



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**Note**

When a VMware vCenter server is removed from the virtual appliance, the PowerPath/VE licenses for the ESX hosts managed by that VMware vCenter server are not removed. The Trial licenses applied to any of PowerPath/VE 5.9 hosts remain continue to be valid. However, the number is reflected in the **Installed License Summary** tab.

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# CHAPTER 3

## License management

This section contains the following topics:

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- ◆ [Viewing PowerPath/VE license usage](#)..... 14
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## Types of licenses

Explains the types of license supported by PowerPath/VE.

### Served license

The Served licensing model uses a license server to store, distribute and manage PowerPath/VE licenses. In this model, the Electronic License Management Server (ELMS) distributes the PowerPath/VE licenses to vSphere hosts. You install the license configuration file on the PPVE ELMS and it manages the licenses for all the PowerPath/VE hosts for which the license was generated.

### Unserved license

The Unserved licensing model binds PowerPath/VE to a specific vSphere host. More accurately, to an ESX unique system ID. An Unserved license is only valid for the specific vSphere host for which it was generated. An Unserved license is static; it cannot be used on another vSphere host.

It does not use a license server. Rather, the PowerPath/VE license is stored on the remote (rpowermt) PowerPath server. This type of license is also known as the Node Locked license.

### Master Key license

The Master Key license is a special case of Unserved license. This license model is available to customers with an Enterprise License Agreement only. A Master Key license is locked to a domain subnet, for example \*.abc.def.com. In this case, it must contain the Virtual Appliance's subnet. It allows `rpowermt` commands to be run against any PowerPath/VE host regardless of the host's address or domain.

For more information on licensing, refer the following documents available on EMC Online Support.

- ◆ *EMC PowerPath Family Electronic License Ordering Process Technical Notes*
- ◆ *PowerPath/VE for VMware vSphere Master Key License Process*
- ◆ *PowerPath/VE for VMware vSphere Licensing Guide*

### Trial license

The PowerPath Virtual Appliance 1.2 comes with a 45-day trial license period for an unlimited number of PowerPath/VE version 5.9 hosts. The addition of Permanent or Temporary license keys to the PowerPath/VE 5.9 hosts that are using Trial licenses will transition respective licenses that are added.

The Trial licenses are automatically pushed to all unlicensed PowerPath/VE 5.9 hosts.

## Overdraft

Served licenses contain an overdraft count which provides a temporary buffer of 10% above the count of licenses purchased.

The overdraft feature provides a temporary buffer license when the number of PowerPath/VE hosts exceed the number of PowerPath/VE licenses. The overdraft count applies to the Served licenses only. Unmanaged hosts are not included in the overdraft count.

In the PowerPath Virtual Appliance web console:

- ◆ the **Licenses > Installed License Summary** tab displays the overdraft quantity only when the overdrafts are used.
- ◆ the **Licenses > Installed License Summary** tab displays the overdraft licenses applied to PowerPath/VE hosts as Temporary even though the Served license is Permanent.
- ◆ the **Licenses > Permanent Licenses Needed** tab displays the overdraft licenses as 'Permanent Licenses Needed'.

- ◆ The overdraft count in a license key/file is not displayed.

## Adding a license

Add Served, Unserved, and Master licenses to the EMC PowerPath Virtual Appliance to license the PowerPath/VE hosts.

### Before you begin

If you are uploading the license key from your local machine, download the license key to your local machine.

### Procedure

1. Log in to PowerPath Virtual Appliance web console.
2. From the PowerPath Virtual Appliance web console, navigate to **License Inventory** > **Add License**.
3. You can add license in two ways:
  - Copy and paste the license key in the **Add License** dialog box.
  - Upload the license key to EMC PowerPath Virtual Appliance.
    - a. Click **Browse**.
    - b. Navigate to the license key location on your local computer.
    - c. Add the license key.
    - d. Click **OK**.

## Viewing license inventory

Obtain an inventory of PowerPath/VE licenses added or present in the virtual appliance.

### Procedure

1. Log in to PowerPath Virtual Appliance web console and navigate to **Licenses** > **License Inventory**.





A list of all PowerPath/VE licenses added or present in the EMC PowerPath Virtual Appliance is displayed with the following details:

- License Type - Indicates whether the license is Served, Unserved, Master license, or Trial license
- License Description - Indicates the type of license present in the virtual appliance. For example, an EXS host with PowerPath/VE. It provides information about the types of licenses:

License type	License description
Temporary Served	Any five ESX hosts
Temporary Unserved	Single ESX host with the UUID in the format UUID = 520e80fc-b4a1-***
Master License	Any ESX host
Trial license	Any ESX host with PowerPath/VE 5.9 and later

- Issue Date - Indicates the date when the license was issued
- Expiration Date - Indicates the expiry date of the license
- Days Remaining - Indicate the number of days remaining before the license expires

- Status - Indicates status of the licenses.  
The following table provides a list of status indicators and descriptions as seen in the **License Inventory** page.

Indicator	Description
	License that is due to expire or the license is valid but is unused
	Valid license
	Expired license
	Invalid license

## Viewing PowerPath/VE license usage

Obtain an inventory of all the ESX hosts, unmanaged hosts, or VMware vCenters in the EMC PowerPath Virtual Appliance.




### Procedure

1. Log in to PowerPath Virtual Appliance web console.
2. Navigate to **License Usage** page.
3. Select the host for which you want the details.

This displays a list of PowerPath/VE licenses and licenses on the other ESX hosts. The inventory contains the following details:

- Hostname - The name of the host. You can filter by ESX, unmanaged host, or the vCenter servers
- ESX CLI UUID - Universal Unique Identifier of an ESX host
- Issue Date - The date when the license was issued
- PowerPath/VE Version - The version of PowerPath/VE
- License Type - The type of license - Server, Unserved, Master, or Trial license
- Expiration Date - The expiry date of the license
- Days Remaining - The number of days remaining before the license expires
- Status - The status of the licenses

The following table provides a list of status indicators and descriptions as seen in the **License Usage** page.

Indicator	Description
	License is due to expire
	Valid license
	Expired license

## Viewing hosts without PowerPath/VE license

Obtain a record of all unlicensed ESX hosts and VMware vCenter servers.

When you add a license, it is initially not associated to any individual ESX host or VMware vCenter server. Carry out this procedure to get a list of unlicensed hosts.

**Procedure**


1. Log in to PowerPath Virtual Appliance web console.
2. Navigate to **Licenses > Unlicensed Hosts**.
3. Select the host for which you want the details.

This displays a list of ESX hosts and vCenter servers present in the EMC PowerPath Virtual Appliance. It provides the following details:

- Hostname - The name of the host
- ESX CLI UUID - Unique Identifier of the ESX host
- PowerPath/VE Version - The version of PowerPath/VE
- Host Type - The type of ESX host

## Exporting license usage data

**Procedure**

1. Log in to PowerPath Virtual Appliance web console and navigate to **Licenses > License Usage**.
2. Click the export () icon.

It exports the following data into a .csv (Comma Separated Value) file format.


- Hostname - The name of the host - ESX host, or the VMware vCenter server. You can filter for ESX, unmanaged host, or the vCenter server
- ESX CLI UUID - Unique Identifier of an ESX host
- Issue Date - The date when the license was issued
- PowerPath/VE Version - The version of PowerPath/VE
- License Type - The type of license - trial, served, unserved, or master key license
- Expiration Date - The expiry date of the license
- Days Remaining - The number of days remaining before the license expires
- Status - The status of the licenses

**Note**

The status of the licenses is not exported to the CSV file.

## Exporting unlicensed host data

**Procedure**

1. Log in to PowerPath Virtual Appliance web console.
2. Navigate to **Licenses > Unlicensed Hosts**.
3. Click the export () icon.

It exports the following data into a .csv (Comma Separated Value) file.

- Hostname - The name of the host - ESX host, or the VMware vCenter server
- ESX CLI UUID - Unique Identifier of an ESX host
- PowerPath/VE Version - The version of PowerPath/VE
- Host Type - The type of license - ESX or VMware vCenter server

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**Note**

The status of the licenses is not be exported to the CSV file.

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