

NEC Storage Software
VMware vSphere Web Client Plug-in
Installation Guide

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Preface

This guidebook describes how to install NEC Storage VMware vSphere Web Client Plug-in.

This plug-in cooperates with VMware vCenter Server and VMware vSphere Web Client Server, and it has to be installed on a Windows server.

This plug-in supports VMware vCenter Server for Windows and VMware vCenter Server Appliance.

Remarks

1. This guide describes how to install the following program product:
 - NEC Storage VMware vSphere Web Client Plug-in
2. This guide describes how to install the following version of the above program product:
 - V3.1 and later
3. Unless otherwise indicated, the following terms refer to the corresponding product names below:

Term	Product Name
VMware vSphere Web Client Plug-in	NEC Storage VMware vSphere Web Client Plug-in
vCenter Server	VMware vCenter Server
vSphere Web Client	VMware vSphere Web Client
vSphere Web Client Server	VMware vSphere Web Client Server

4. Trademarks and registered trademarks
 - Microsoft, Windows and Windows Server are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.
 - VMware is a trademark or registered trademark of VMware, Inc. in the United States and other areas.
 - All other product or company names included in this document are trademarks or registered trademarks of their respective companies.
5. This plug-in includes the following open source software. Refer to “NEC Storage Software VMware vSphere Web Client Plug-in User’s Manual” (IS066) for license details.
 - Apache HTTP Server (<http://httpd.apache.org/>)
 - Apache log4j (<http://logging.apache.org/>)
 - Apache Tomcat (<http://tomcat.apache.org/>)
 - Spring Framework (<http://www.springsource.org/spring-framework>)
 - Ganymed SSH-2 for Java (<http://www.cleondris.ch/opensource/ssh2/>)
 - Jersey (<http://jersey.java.net/>)
 - The MIT License (MIT)(<https://opensource.org/licenses/mit-license.php>)

6. In this document, matters to which careful attention needs to be paid are indicated as shown below.

Be sure to observe the directions these indications mean.

If these indications are ignored and the system is operated improperly, settings that have already been configured might be affected.

Type of Indication	
Type	Description
	Describes contents to which the user must pay special attention when operating the product.

1st Edition in March 2013

5th Edition in October 2016

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Chapter 1 NEC Storage VMware vSphere Web Client Plug-in

1.1 Operating Environment

Platform OS	<p>Microsoft Windows Server 2008 Standard (no SP or SP2)</p> <p>Microsoft Windows Server 2008 R2 Standard (no SP or SP1)</p> <p>Microsoft Windows Server 2008 Enterprise (no SP or SP2)</p> <p>Microsoft Windows Server 2008 R2 Enterprise (no SP or SP1)</p> <p>Microsoft Windows Server 2012 Standard Edition (no SP)</p> <p>Microsoft Windows Server 2012 Datacenter Edition (no SP)</p> <p>Microsoft Windows Server 2012 Standard Edition R2 (no SP)</p> <p>Microsoft Windows Server 2012 Datacenter Edition R2 (no SP)</p>
VMware	<p>The following versions are supported:</p> <ul style="list-style-type: none"> • VMware vCenter Server 5.5 Update 1 or later • VMware vCenter Server 6.0
JRE	<p>32-bit JRE (Java Runtime Environment) of one of the following versions is required.</p> <ul style="list-style-type: none"> • Version 8 update25 or later [Update 101] • Version 7 update15 or later [Update 79] <p>* The version described in [] is the latest JRE version with which NEC has verified operations. However, NEC does not guarantee normal operation in your environment. NEC has not verified whether runs normally with JRE versions later than the above. Therefore, if you use in a JRE environment that is later than the verified version, may not run normally.</p>
Memory	OS required memory + 1 GB or more
Disk	445 MB or more

* The above is the operating environment supported by this version of the product at the first shipment, and it is subject to update without notice. For the latest information, refer to the product's download site.

1.2 Installation

To install VMware vSphere Web Client Plug-in, follow the procedure below.



1. VMware vSphere Web Client Plug-in requires 32-bit JRE (Java Runtime Environment). Be sure to install 32-bit JRE beforehand if not installed.
2. When applying quota control* or file screening** to the installation destination disk or folder, be sure to do it properly. If quota control or file screening are applied incorrectly, it might affect installation or other operations.

* Used to specify a capacity limit per user and prevent users from exceeding the limit.

** Used to prevent files being saved as certain file names (extensions).

- (1) The bin folder under the JRE installation folder must be made recognizable by setting a path to the bin folder. Open a command prompt and run "java" in a folder other than the bin folder under the JRE installation folder.

When the command reports a message similar to the following, the bin folder under the JRE installation folder is not recognized.

```
C:\>java
'java' is not recognized as an internal or external command, operable program
or batch file.
```

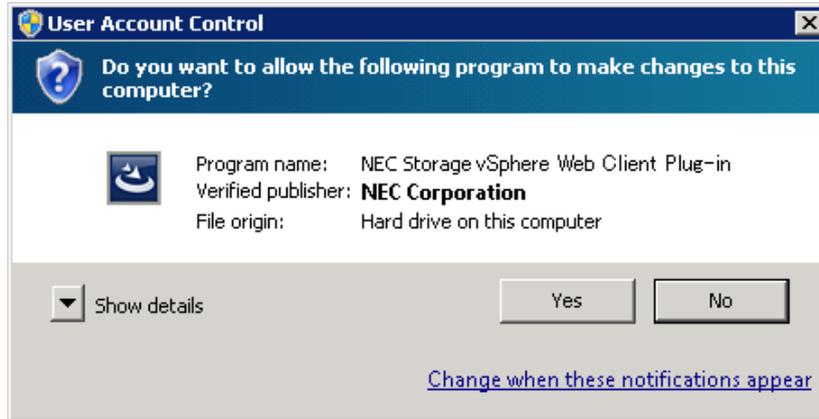
If the folder is not recognized, follow the steps below to set the path and make the folder recognized.

From the Start menu of Windows, select [Control Panel], [System], and [Advanced system settings] to open the System Properties window.

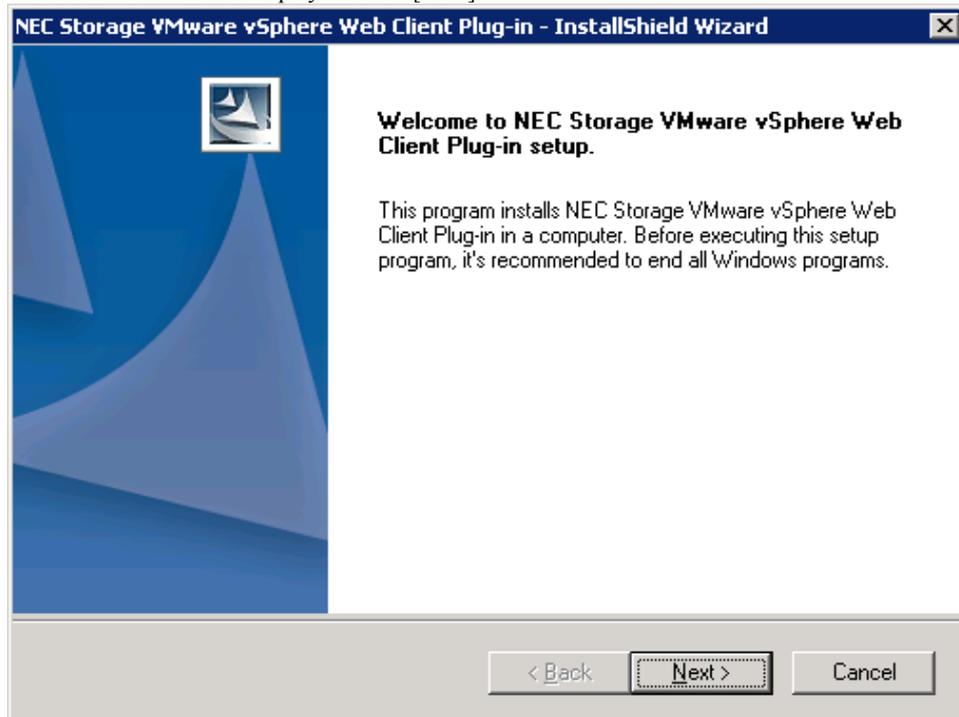
Click the [Environment Variables] button on the [Advanced] tab to open the Edit environment variable settings window. Select Path or PATH in the section System variables and click the [Edit] button. On the Edit System Variable window, check to see the variable name is either Path or PATH, and add a semicolon (;) to the end of the existing value of the variable and then enter *<JRE installation folder>\bin*. For example, when the JRE installation folder is C:\Program Files (x86)\Java\jre8, add C:\Program Files (x86)\Java\jre8\bin to the existing value of the variable. Enter the value of the variable carefully and make sure not to change the existing value of the variable. Click [OK] to accept the change.

- (2) Log onto Windows as a user with administrator authority, and launch SETUP.exe from Explorer or by using some other method.

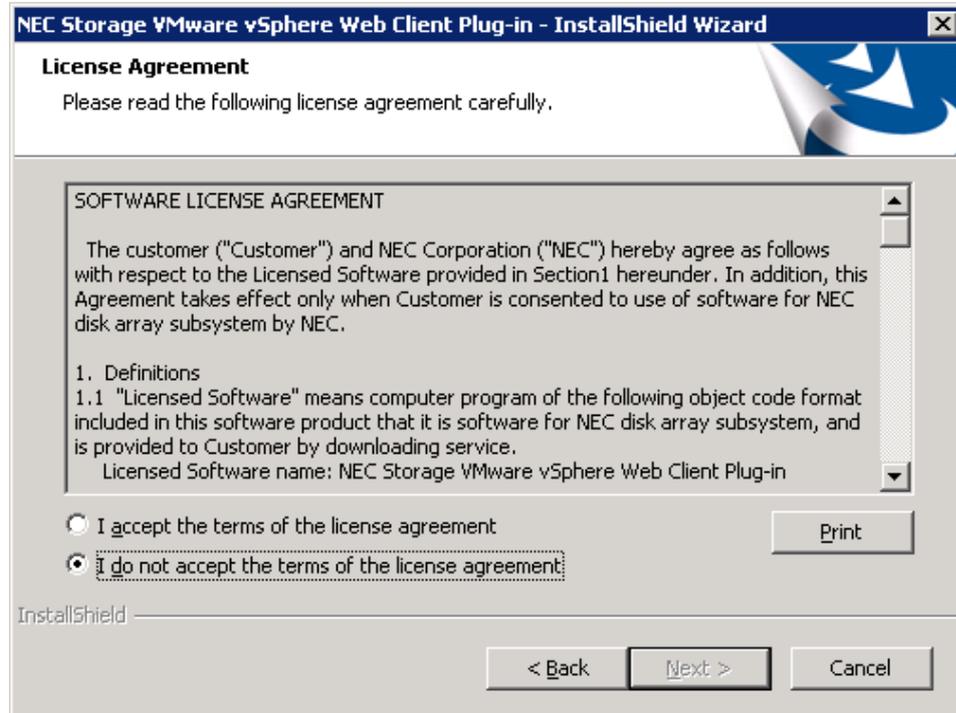
If the [User Account Control] dialog box is displayed, start setup by clicking [Yes].



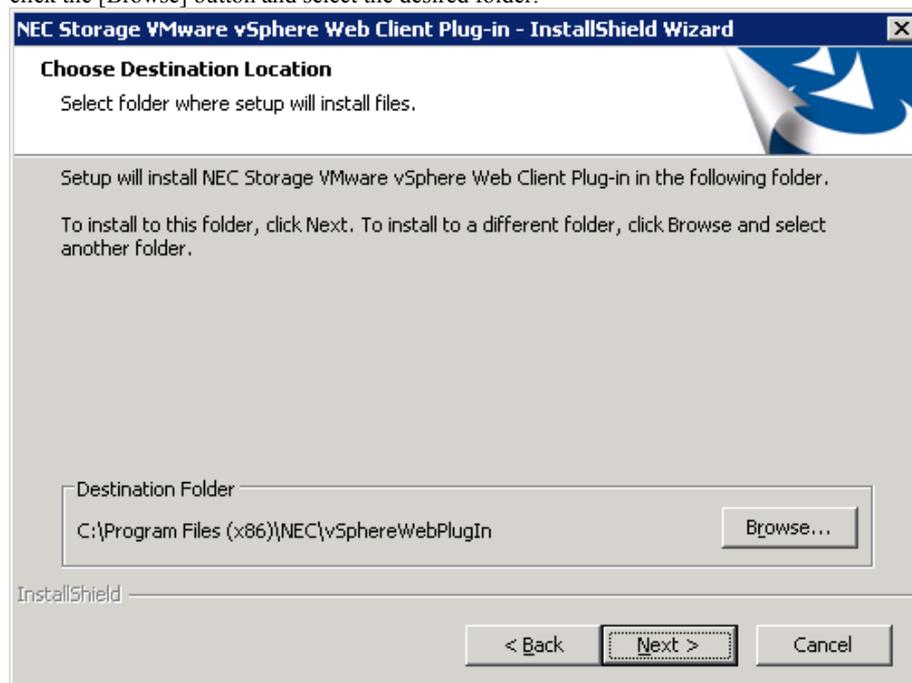
- (3) The welcome window is displayed. Click [Next].



- (4) The License Agreement window is displayed. Be sure to read the entire license agreement. If you accept the terms of the agreement, select [I accept the terms of license agreement] and click [Next]. If you do not accept the terms, this software cannot be used.



- (5) The Choose Destination Location window is displayed. If there is no problem with the displayed installation folder, simply click [Next]. If you want to install the product in a different folder, click the [Browse] button and select the desired folder.



(6) The Web service settings of NEC Storage VMware vSphere Web Client Plug-in window is displayed.

Specify the IP address and port numbers of the local host which VMware vSphere Web Client Plug-in uses, configure Windows Firewall exception setting, and click [Next].

When you install VMware vSphere Web Client Plug-in on the server where vSphere Web Client Server exists, type *localhost* in the [IP Address] box.

When you install VMware vSphere Web Client Plug-in a host other than the server where vSphere Web Client Server exists, select the IP address of the local host in the [IP Address] list and select the [allows] check box. You may also directly type the IP address of the local host.

NEC Storage VMware vSphere Web Client Plug-in - InstallShield Wizard

**Web service setting of
NEC Storage VMware vSphere Web Client Plug-in**

Set an IP address and port number of the local host which NEC Storage VMware vSphere Web Client Plug-in uses.
For each port number make sure to specify no other application's one.

IP Address:

Port Number 1: Port Number 2:

Port Number 3: Port Number 4:

Windows Firewall exception setting

When installing NEC Storage VMware vSphere Web Client Plug-in in a host different from VMware vSphere Web Client Server, select "allows" check box.

allows

InstallShield

< Back Next > Cancel

- (7) The IP Address Setting of VMware vCenter Server window is displayed. Specify the IP address and HTTPS port number of vCenter Server, and click [Next].

The screenshot shows a dialog box titled "NEC Storage VMware vSphere Web Client Plug-in - InstallShield Wizard" with the subtitle "IP Address Setting of VMware vCenter Server". The main text reads: "Please specify VMware vCenter Server's IP address and HTTPS port number." There are two input fields: "IP Address:" followed by a wide text box, and "HTTPS Port number:" followed by a narrower text box. At the bottom, there are three buttons: "< Back", "Next >", and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

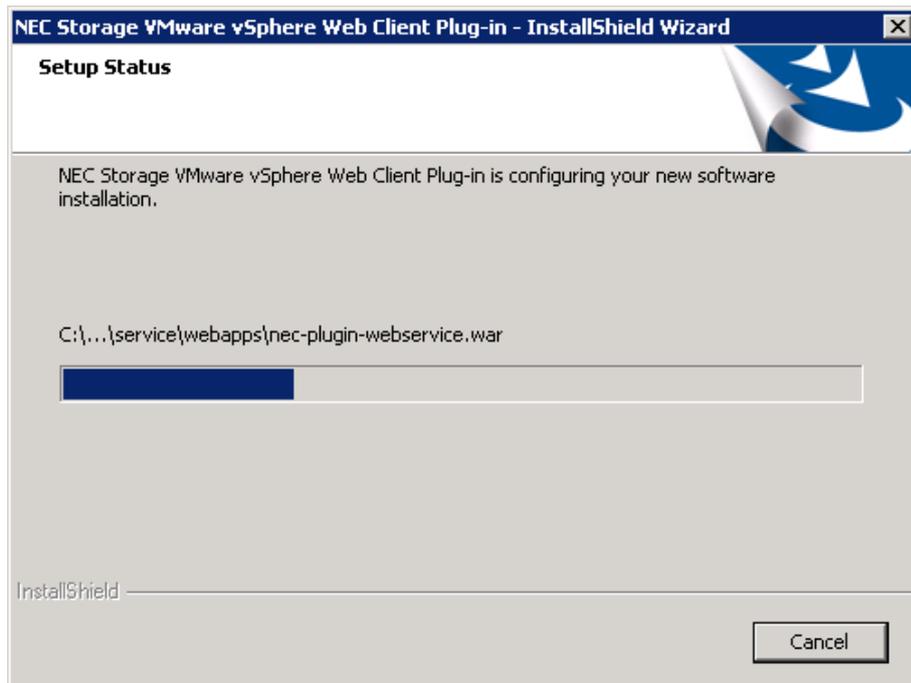
- (8) The Settings of Account for Connection to VMware vCenter Server window is displayed. Specify your user name and password to connect to vCenter Server. After entering your password once more for confirmation, click [Next].

The screenshot shows a dialog box titled "NEC Storage VMware vSphere Web Client Plug-in - InstallShield Wizard" with the subtitle "Settings of Account for Connection to VMware vCenter Server". The main text reads: "Please specify user name and password to connect to VMware vCenter Server." There are three input fields: "User name:" followed by a wide text box, "Password:" followed by a wide text box, and "Password confirmation:" followed by a wide text box. At the bottom, there are three buttons: "< Back", "Next >", and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

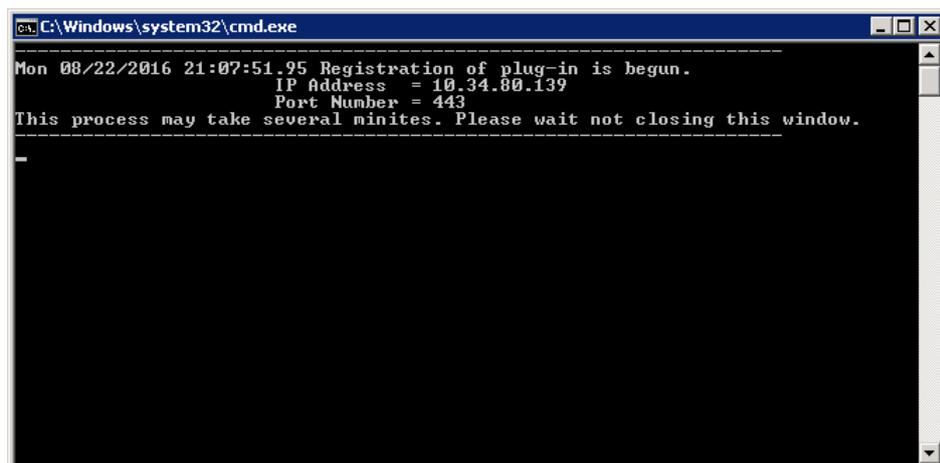


In this setting window, specify one of administrator users who are registered to vCenter Single Sign On.

- (9) The Setup Status window is displayed, and installation starts.



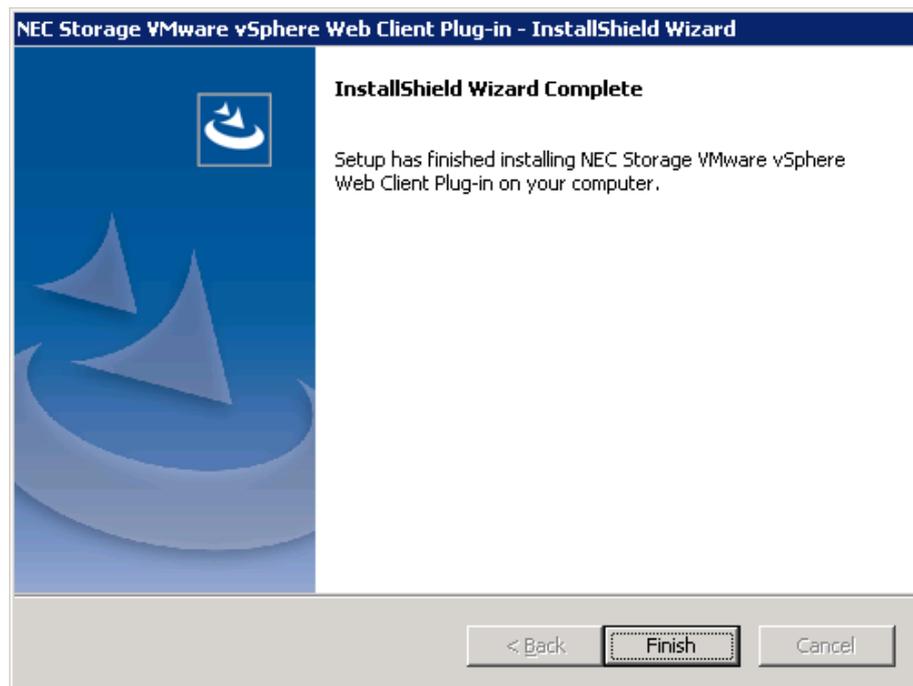
- (10) The command prompt is displayed, and registration of the plug-in to vCenter Server starts. This process may take several minutes. Wait without closing the window.





Even if registration of plug-in to vCenter Server failed on account of communication failure and so on, plug-in installation goes on and looks like normally ends. Even after the failure of the plug-in registration using the installer, you can still register the plug-in through the plug-in registration command. For information on how to register the plug-in using the registration command, see “1.4 Plug-in Registration/Unregistration Command.”

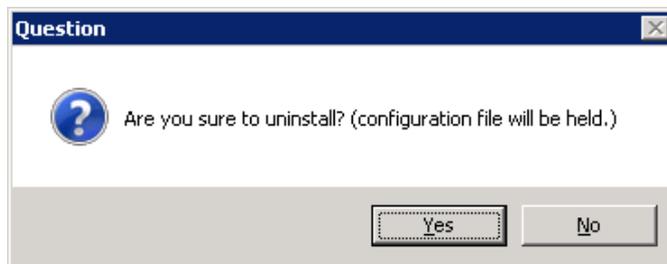
- (11) This is the end of installation. Click [Finish].



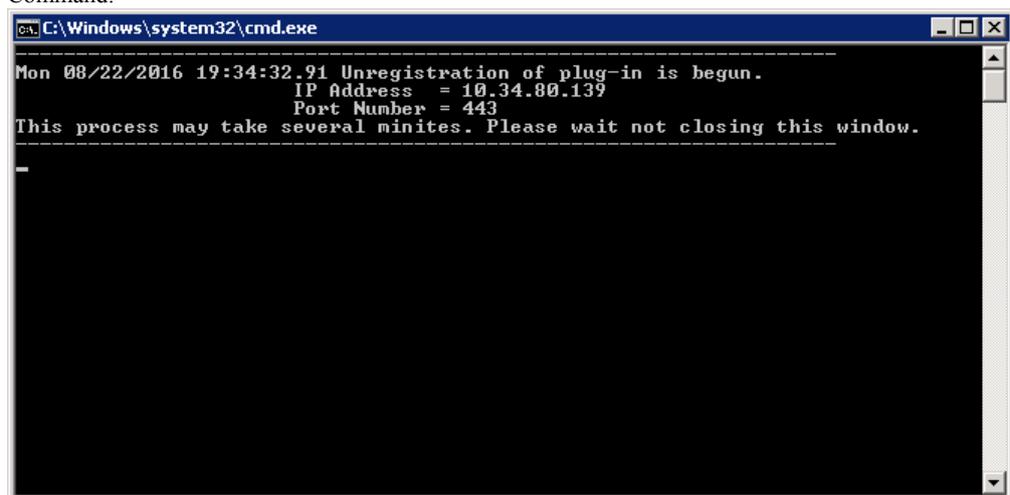
1.3 Uninstallation

To uninstall VMware vSphere Web Client Plug-in, follow the procedure below.

- (1) Log onto Windows as a user with administrator authority.
- (2) “NEC Storage VMware vSphere Web Client Plug-in” can be uninstalled by using [Programs and Features] on [Control Panel]. If the [User Account Control] dialog box is displayed, start uninstallation by clicking [Yes].
- (3) The [Question] dialog box is displayed. If you wish to uninstall VMware vSphere Web Client Plug-in, click [Yes].



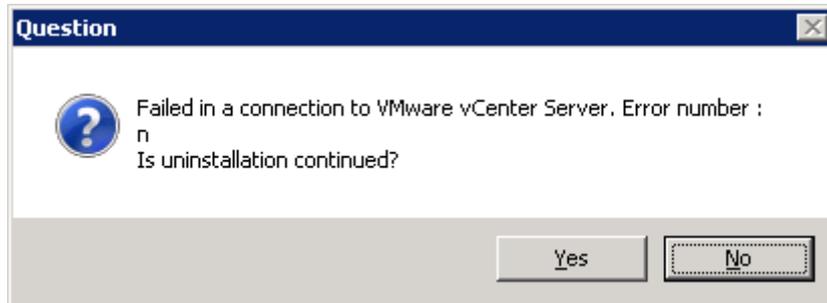
- (4) The command prompt is displayed, and Unregistration of the plug-in from vCenter Server starts. This process may take several minutes. Wait without closing the window.
If the plug-in is registered with multiple vCenter Servers using the plug-in registration command, uninstalling the plug-in will unregister the plug-in from all these servers.
For information on the plug-in registration command, see “1.4 Plug-in Registration/Unregistration Command.”



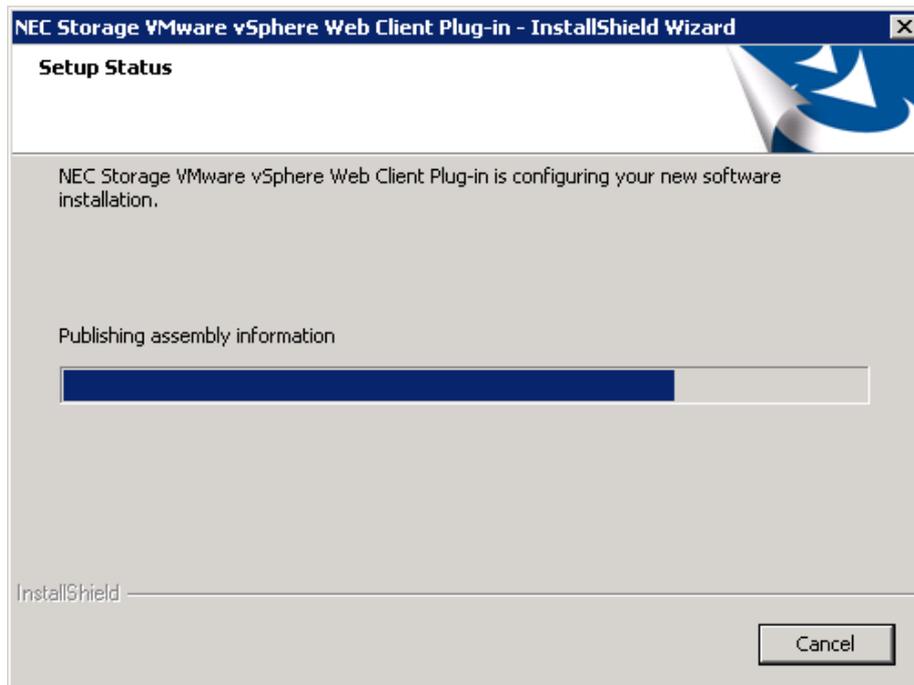
```
C:\Windows\system32\cmd.exe
Mon 08/22/2016 19:34:32.91 Unregistration of plug-in is begun.
IP Address = 10.34.80.139
Port Number = 443
This process may take several minites. Please wait not closing this window.
```



If Unregistration of plug-in failed and dialog box below is displayed, refer “Appendix B” and deal with it.



- (5) The Setup Status window is displayed, and uninstallation starts.



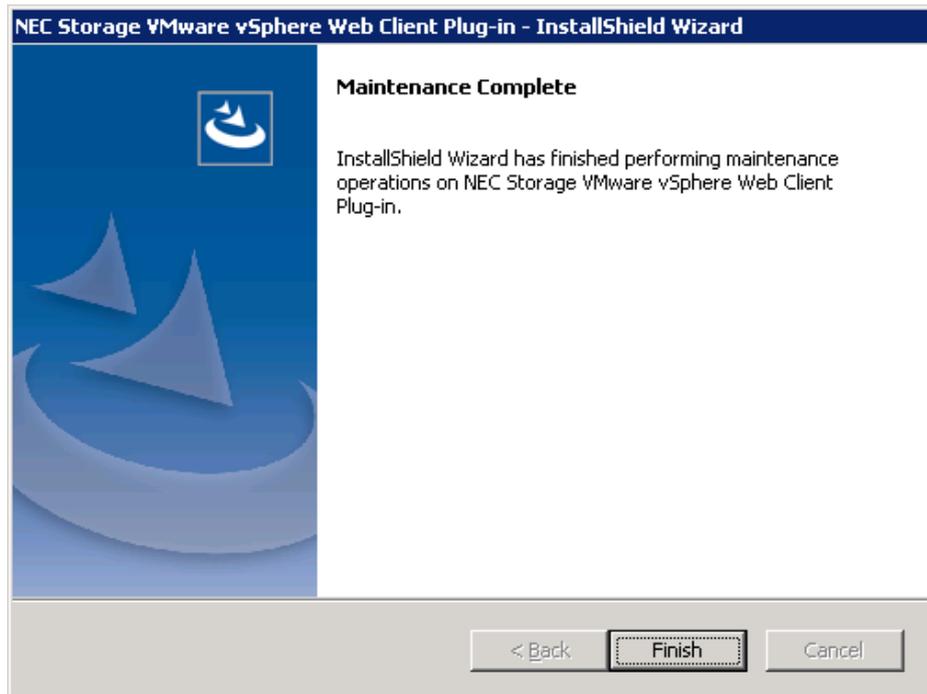
- (6) When the plug-in is successfully unregistered, you need to restart the vSphere Web Client service.





For the procedure to restart the vSphere Web Client service, see “Appendix C Restarting vSphere Web Client Service.”

- (7) This is the end of uninstallation. Click [Finish].



Even after uninstallation, some configuration files will remain in the installation folder. When reinstalling the plug-in product, these configuration files can be used. If all the files in the installation folder are not required, you can delete them.

1.4 Plug-in Registration/Unregistration command

You may use VMware vSphere Web Client Plug-in by registering it with multiple vCenter Servers. The plug-in is registered with the first vCenter Server when the plug-in is installed. Use the command to register the plug-in with a second and subsequent vCenter Servers. A single set of VMware vSphere Web Client Plug-in product can be registered with up to 10 vCenter Servers.

[Syntax]

```
WebPlugInReg <mode> <IP address> <port number> <user name> <password>
```

Mode: Specify one of the following modes.

- a to register the plug-in
- d to unregister the plug-in
- l to list plug-in registration

IP address*: Specify the IP address of vCenter Server.

Port number*: Specify the HTTPS port number of vCenter Server.

User name*: Specify a user name used to connect to vCenter Server.

Password*: Specify a password used to connect to vCenter Server.

* You can't omit these parameters when -a or -d is specified.

[Description]

Open a command prompt on Windows by selecting [Run as Administrator].

Moving to <installation folder>\bin and running the WebPlugInReg command can register the plug-in with or unregister the plug-in from vCenter Server of the specified IP address/port number according to the mode.

For the user name/password to connect to vCenter Server, use a vCenter Server administrator's user name/password registered with vCenter Single Sign On.



Enclose a user name and a password in quotation marks ("").

If a user name or a password contains a quotation mark ("), type "". If \" is contained, type \\\".

If a user name or a password ends with \, type \\. If the user name or password ends with consecutive backslashes (\\), add backslashes as many as the number of consecutive backslashes to the end.

[Example of usage]

```
C:\>cd \Program Files (x86)\NEC\vsphereWebPlugIn\bin
C:\Program Files (x86)\NEC\vsphereWebPlugIn\bin>WebPlugInReg -a 192.168.0.1 443 "administrator@vsphere.local" "Passwd!23"
Registration of plug-in succeeded.
ReturnCode: 0
```

Appendix A Precautions

(1) Upgrade

VMware vSphere Web Client Plug-in cannot be installed by overriding the previous one. To upgrade VMware vSphere Web Client Plug-in, uninstall the old version and install the new version. If the new version is installed in the folder where the old version was installed, all the information, including configuration information, is inherited. However, only the first registration of the plug-in with vCenter Server at the time of plug-in installation is inherited. Use the command to reregister the plug-in with other vCenter Servers.

For information on how to register the plug-in using the command, see “1.4 Plug-in Registration/Unregistration Command.”

After completing the upgrade, delete the browsing history of Internet Explorer (by clicking [Delete Browsing History] and selecting the [Temporary Internet files and website files] check box) before using vSphere Web Client.

(2) Downgrade

To downgrade VMware vSphere Web Client Plug-in to an older version, uninstall the one currently used and then delete all the files in the installation folder before installing the older version.

After completing the downgrade, delete the browsing history of Internet Explorer (by clicking [Delete Browsing History] and selecting the [Temporary Internet files and website files] check box) before using vSphere Web Client.

The files of the plug-in before the downgrade remain in the directory of vSphere Web Client after the downgrade. Delete them as necessary.

For information on deleting files, see “Appendix C Restarting vSphere Web Client Service.”

(3) Reinstallation of vCenter Server

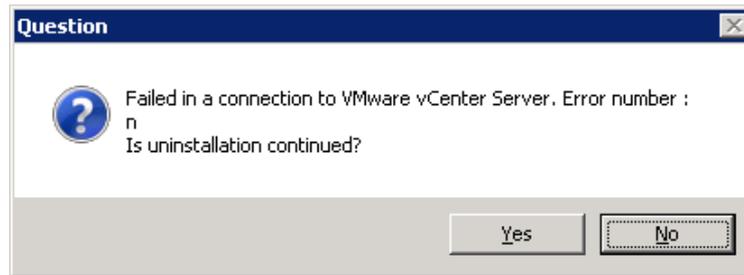
When vCenter Server is reinstalled, the plug-in registered with the vCenter Server is deleted. Run the command to reregister the plug-in.

For information on how to register the plug-in using the command, see “1.4 Plug-in Registration/Unregistration Command.”

Appendix B Handling of Failure in Plug-in Unregistration

(1) Case of Plug-in Unregistration Failure

When VMware vSphere Web Client Plug-in uninstaller failed in Plug-in unregistration from vCenter Server and the following question dialog is displayed, do as follows in accordance with plug-in registration state:



- Case that plug-in is unregistered or already unregistered:
For the case the plug-in is no longer registered such as vCenter Server already being uninstalled, click [Yes] to complete uninstallation.
- Case that plug-in has been registered but unregistration is unsuccessful:
When unregistration of the plug-in failed due to a communication problem with vCenter Server, click [No] to suspend uninstallation. Remove the cause of failure, and then uninstall the plug-in by referring to “1.3 Uninstallation” to complete unregistration of the plug-in.

Appendix C Restarting vSphere Web Client Service

After VMware vSphere Web Client Plug-in is uninstalled or the plug-in is unregistered by running the command, you need to restart the vSphere Web Client service. The plug-in files remain in the directory of vSphere Web Client. Delete them as necessary.

How to restart the vSphere Web Client service and to delete the files depend on the vCenter Server configuration and version. The following sections describe the procedures.

(1) Restarting the service

- For vCenter Server 5.5

Restart the OS or the following service on the server where **vSphere Web Client** is installed.

Service name: vspherewebclientsvc
Service display name: VMware vSphere Web Client

- For vCenter Server 6.0

Restart the OS or the following service on the server where **vCenter Server** is installed.

Service name: vspherewebclientsvc
Service display name: VMware vSphere Web Client

- For vCenter Server Appliance 5.5 or 6.0

Restart vCenter Server Appliance.

(2) Deleting files

- For vCenter Server 5.5

On the server where **vSphere Web Client** is installed, delete the following directory and all of its files.

```
<system drive>\ProgramData\VMware\vSphere Web Client\vc-packages\vsphere-client-serenity\  
istorage.webclient.plugin-x.x.xxx\  
* x.x.xxx varies depending on the version of VMware vSphere Web Client Plug-in.
```

- For vCenter Server 6.0

On the server where **vCenter Server** is installed, delete the following directory and all of its files.

```
<system drive>\ProgramData\VMware\vCenterServer\cfg\vsphere-client\vc-packages\  
vsphere-client-serenity\istorage.webclient.plugin-x.x.xxx\  
* x.x.xxx varies depending on the version of VMware vSphere Web Client Plug-in.
```

- For vCenter Server Appliance 5.5

Delete the following directory and all of its files.

```
/var/lib/vmware/vsphere-client/vc-packages/vsphere-client-serenity/  
istorage.webclient.plugin-x.x.xxx/
```

* **x.x.xxx** varies depending on the version of VMware vSphere Web Client Plug-in.

- For vCenter Server Appliance 6.0

Delete the following directory and all of its files.

```
/etc/vmware/vsphere-client/vc-packages/vsphere-client-serenity/  
istorage.webclient.plugin-x.x.xxx/
```

* **x.x.xxx** varies depending on the version of VMware vSphere Web Client Plug-in.