

FUJITSU Software

Infrastructure Manager Plug-in for VMware

vCenter Server Appliance 1.2



Setup Guide

For vCenter Server Appliance 6.5/6.7

CA92344-2594-01

August 2018

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Preface

Purpose

This Setup Guide describes the installation procedure, precautions on usage and information for FUJITSU Software Infrastructure Manager Plug-in for VMware vCenter Server Appliance 1.2 (hereafter referred to as “ISM Plug-in”).

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Intended Readers

This guide is designed for readers who have sufficient knowledge on hardware and software, such as system administrators, network administrators, facility administrators and related service providers.

Notation in this guide

Notation

Keyboard

Keystrokes with no printed characters are displayed by key icons, such as [Enter] or [F1]. For example, [Enter] means press key labeled [Enter].

Multiple lines

Thick multiple lines are ruled before the important information for each procedure as follows:

Point

Describes important information for each subject.

Note

Describes subjects where attention is necessary.

Variables: <xxx>

Represents variables that can be replaced by numerical values or text strings in accordance with the environment.

Example: <IP address>

Abbreviations

In this guide, the following abbreviations may be used.

Product Name	Abbreviation
FUJITSU Software Infrastructure Manager	ISM
FUJITSU Software Infrastructure Manager Plug-in for VMware vCenter Server Appliance	ISM Plug-in
VMware vCenter Server Appliance	vCSA

Terms

For the major terms and abbreviations used in this manual, see "Infrastructure Manager V2.3 Glossary."

High Risk Activity

The Customer acknowledges and agrees that the Product is designed, developed and manufactured as contemplated for general use, including without limitation, general office use, personal use, household use, and ordinary industrial use, but is not designed, developed and manufactured as contemplated for use accompanying fatal risks or dangers that, unless extremely high safety is secured, could lead directly to death, personal injury, severe physical damage or other loss (hereinafter "High Safety Required Use"), including without limitation, nuclear reaction control in nuclear facility, aircraft flight control, air traffic control, mass transport control, medical life support system, missile launch control in weapon system. The Customer shall not use the Product without securing the sufficient safety required for the High Safety Required Use. In addition, Fujitsu (or other affiliate's name) shall not be liable against the Customer and/or any third party for any claims or damages arising in connection with the High Safety Required Use of the Product.

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1. Product Summary

This plug-in software is designed to extend the user interface of VMware vCenter Server Appliance (hereafter referred to as "vCSA") to enable the use of the functions of FUJITSU Software Infrastructure Manager (hereafter referred to as "ISM") from vCSA console to integrate the infrastructure management. This plug-in software enables you to operate ISM directly from the vSphere Web Client.

2. Contents

This plug-in software is composed of the following five (5) files:

- ISMvCSA_INSTALL.zip
- Readme.txt
- Readme_en.txt
- Setup Guide (Japanese)
- Setup Guide (*this document)

3. Software Requirements

Applications that must be installed:

- FUJITSU Software Infrastructure Manager V2.0 or later
- VMware vCenter Server Appliance V6.5/6.7

Note

Because this plug-in does not support the HTML5 version, make sure to select the Flash version of vCSA6.5/6.7.

Applications that may help installation (recommended):

- SSH Terminal Software (ex. Tera Term)
- File Transfer Application (ex. WinSCP)

Minimum Browser Version Requirements:

- Microsoft Internet Explorer 11 or later
- * For the 3D view functions of ISM, you must install the latest version; 11.0.19 or later
- Mozilla Firefox 38 or later
 - Google Chrome 48 or later

Please refer to the User's Manual of ISM for more information.

4. Installation Procedures

This section explains installation procedures of ISM Plug-in into vCSA.

Please proceed the four (8) steps as follows:

- 4.1 [Before installation](#)
- 4.2 [Connect to vCSA with SSH](#)
- 4.3 [Allocate the install file into WinSCP](#)
- 4.4 [Unzip and execute the installation file](#)
- 4.5 [Register the necessary information in ISM Plug-in](#)
- 4.6 [Terminate the SSH connection to vCSA](#)
- 4.7 [Import the SSL Server Certificates](#)
- 4.8 [How to use ISM Plug-in](#)

Note

The following items and set ups must be completed before installation:

- Download the ISMvCSA_INSTALL.zip file
The file can be downloaded from the designated folder.
 - Activate SSH login on vCSA
Check the login status via the vCSA web console: [Administration] - [Deployment] - [System Configuration] and select the designated node, [Manage] - [Settings] - [Access] Then check whether SSH login is enabled or not.
 - Install a terminal emulator which can connect to SSH
In this guide, Tera Term is used. Change the commands accordingly if using another software.
 - Install a software which can run SCP commands
In this guide, WinSCP is used. Change the commands accordingly if using another software.
-
-

Note

The commands and the messages in Tera Term are written in rectangle form.

- The commands are written in capitals and bold type.
 - The wording of commands may vary depending on the version of Tera Term.
 - Using the TAB function makes it possible shorten long keyboard commands.
-
-

4.1 Before installation

Point

Uninstall the ISM Plug-in (version 1.0) in advance if it is already applied in ISM.

4.2 Connect vCSA with SSH

Point

Connecting vCSA to WinSCP while the shell is appliancesh(default shell) creates an error. Change the shell to bash shell before you start.

4.2.1 Connect to vCSA with SSH

1. Open Tera Term and enter the host information. Then click [OK] .



“Host” must be an IP address or a name registered in the DNS.

Point

If you receive a security warning message, kindly disregard and continue.

2. The SSH Authentication dialog is displayed. Enter [User name] / [Passphrase] and click [OK].



User name: root [Account name for vCSA]
Passphrase : Password for vCSA

3. The vCSA console is displayed as below:

```
Connected to service

* List APIs: "help api list"
* List Plug-ins: "help pi list"
* Enable BASH access: "shell.set --enabled True"
* Launch BASH: "shell"

Command>
```

4.2.2 Change the shell to bash shell.

```
Command> shell.set --enabled True
Command> shell
----- !!!! WARNING WARNING WARNING !!!! -----

Your use of "pi shell" has been logged!

The "pi shell" is intended for advanced troubleshooting operations and while supported in this release, is a deprecated interface, and may be removed in a future version of the product. For alternative commands, exit the "pi shell" and run the "help" command.

The "pi shell" command launches a root bash shell. Commands within the shell are not audited, and improper use of this command can severely harm the system.

Help us improve the product! If your scenario requires "pi shell," please submit a Service Request, or post your scenario to the communities.VMware.com/community/vmtn/server/vcenter/cloudvm forum.

localhost:~ #
```

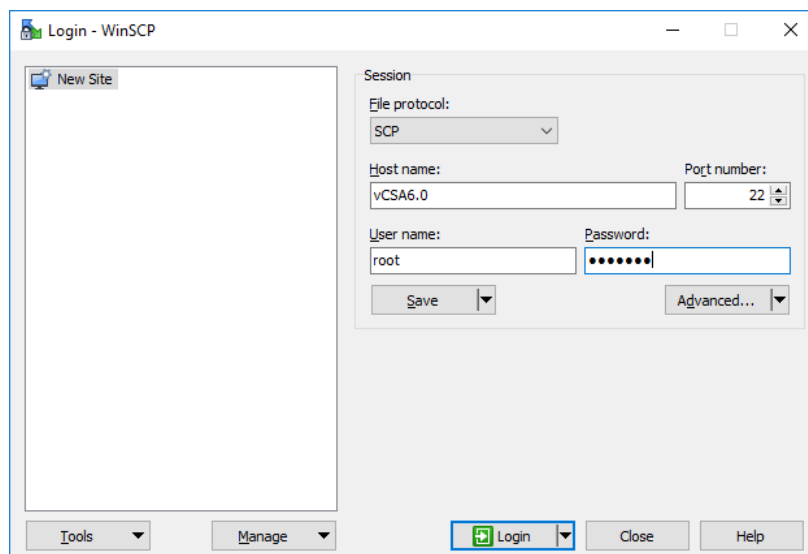
4.2.3 Change the default shell to bash shell while using commands for the procedures.

```
# chsh -s /bin/bash root
Changing login shell for root.
Shell changed.
```

4.3 Allocate the install file into WinSCP

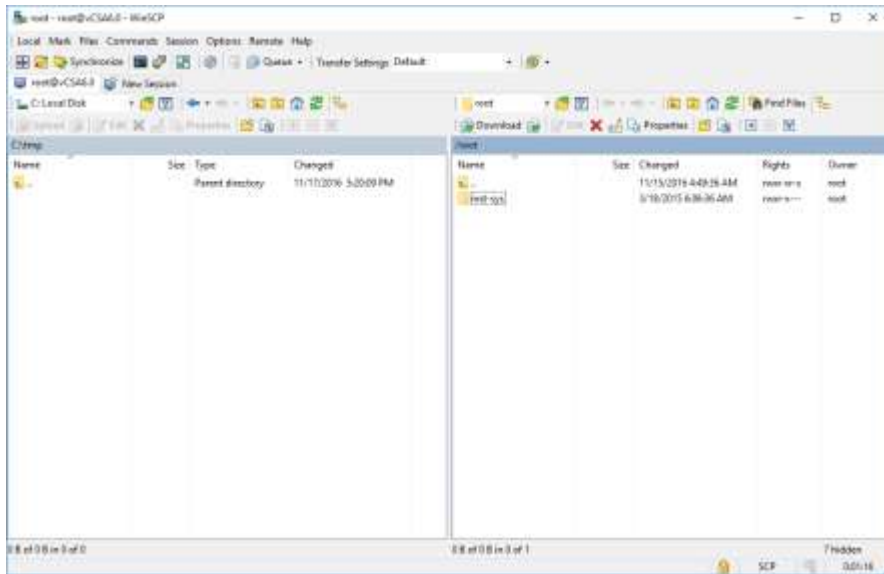
4.3.1 Connect WinSCP to vCSA and allocate ISMvCSA_INSTALL.zip file into the designated folder in vCSA.

1. Open WinSCP, enter the necessary information and click Login.

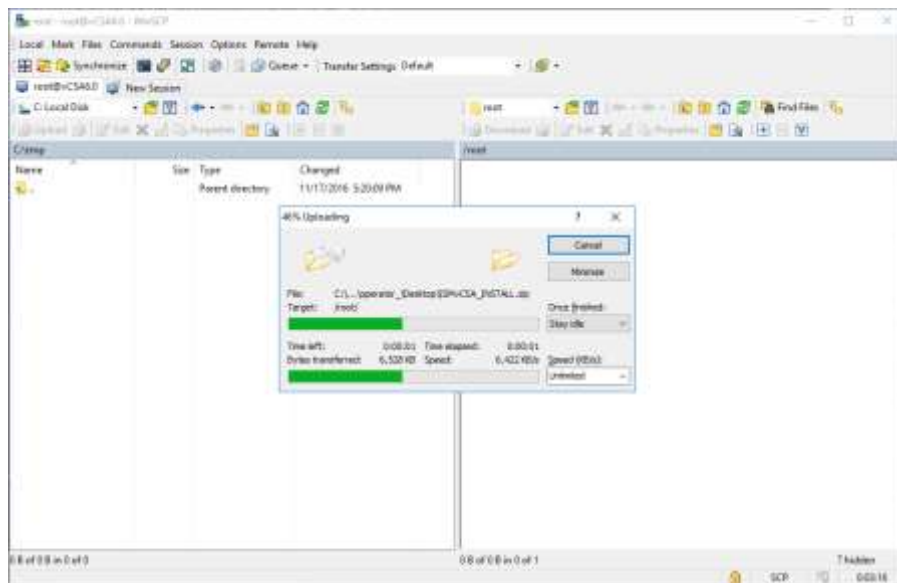


2. Another dialog demanding to the user to enter a password is displayed.
Enter the password again.

3. The WinSCP is now connected to vCSA.



4. Drag and drop the ISMvCSA_INSTALL.zip file into the designated folder in the vCSA side in WinSCP.



Point

Transfer mode is changed to binary mode.

5. Close WinSCP.

4.4 Unzip and execute the installation file

4.4.1 Unzip the ISMvCSA_INSTALL.zip file.

1. Unzip the ISMvCSA_INSTALL.zip file using a command on Tera Term.

```
# unzip ISMvCSA_INSTALL.zip
Archive:  ISMvCSA_INSTALL.zip
  creating: ISMvCSA_INSTALL/
  inflating: ISMvCSA_INSTALL/ISMvCSA_INSTALL.sh
  extracting: ISMvCSA_INSTALL/ISMvCSA.zip
```

2. Confirm that the file is unzipped.

```
# ls -lR ISMvCSA_INSTALL
ISMvCSA_INSTALL:
total 3520
-rw----- 1 root root 3592765 Oct 25 08:01 ISMvCSA.zip
-rwx----- 1 root root   3265 Oct 25 11:07 ISMvCSA_INSTALL.sh
```

Note

Please note:

ls -lR ⇒ **“L in a small letter”s** – **“L in a small letter”R**

***NOT “i” in capital letters.**

4.4.2 Install the ISM Plug-in into vCSA.

Execute the ISMvCSA_INSTALL.zip file.

Note

When you run ISMvCSA_INSTALL.sh, the message "Is it OK to continue? [Yes / no]" is displayed. Input yes to proceed or "no" to cancel. After the installation is completed, vCSA restarts automatically.

```
# cd ISMvCSA_INSTALL
# ./ISMvCSA_INSTALL.sh
Start installing "FUJITSU Software Infrastructure Manager Plug-in".
After Plug-in installation is completed, this "VMware vCenter Server Appliance" will be
rebooted automatically.
Is it OK to continue? [yes/no]
yes
Archive: /usr/lib/vmware-vmtoolsd/plugin-packages/ISMvCSA.zip
  inflating: /usr/lib/vmware-vmtoolsd/plugin-packages/ism/plugin-package.xml
  creating: /usr/lib/vmware-vmtoolsd/plugin-packages/ism/plugins/
~ (中略) ~
-----
Start reboot!
-----
```

Point

Wait for a while before reconnecting vCSA with SSH.

For procedures to connect with SSH, see the 4.2 "[Connect vCSA with SSH](#)" section in this guide.

4.5 Register the necessary information in ISM Plug-in

4.5.1 Register the necessary information in ISM Plug-in.

1. Add the environment variables in Tera Term.

```
# export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/lib/vmware-vpx/vimtop
```

2. Move to the ISM Plug-in directory.

```
# cd /usr/lib/vmware-vmware-vmware-client/plugin-packages/ism/plugins/
```

3. Follow the directions and register the vCenter Server information in ISM Plug-in.

```
# ./ismvCenterConfig -a
Welcome to the setup wizard for vCenter registration. Please enter the following
information to register.
Please enter a IP address or FQDN of vCenter Server : <IP address or FQDN for vCSA>
Please enter a valid user name of vCenter Server : <user name of vCSA>
Please enter a password for the user name : <password of vCSA>
Picked up JAVA_TOOL_OPTIONS: -Xms32M -Xmx128M

Registration completed successfully.
```

Point

- Execute the following command to check the registered information.

```
# ./ismvCenterConfig -l
Picked up JAVA_TOOL_OPTIONS: -Xms32M -Xmx128M
vCenter IP address or FQDN=<IP Address or FQDN for vCSA> Account=<
```

- To correct or replace the server information, delete the information using the following command. Then register the information again.

```
# ./ismvCenterConfig -d <administrator@vsphere.local>
Picked up JAVA_TOOL_OPTIONS: -Xms32M -Xmx128M

Unregistration completed successfully.
```

- If ISM Plug-in is used among multiple vCSA users, register all the vCSA users planning to use ISM Plug-in by repeating procedure 3. If multiple users are registered, the information of vCenter Server is as follows.

```
# ./ismvCenterConfig -l
Picked up JAVA_TOOL_OPTIONS: -Xms32M -Xmx128M
vCenter IP address or FQDN=<IP Address or FQDN for vCSA> Account=<
administrator@vsphere.local>
vCenter IP address or FQDN=<IP Address or FQDN for vCSA> Account=<user1@vsphere.local>
vCenter IP address or FQDN=<IP Address or FQDN for vCSA> Account=<user2@vsphere.local>
```

- When vCSA users without administrator privilege use ISM Plug-in, assign "Extension" permission to the users in vCSA. Refer to the product guides of VMware for more details.

4. Register the ISM server information in ISM Plug-in.

```
# ./ismServerConfig -a
Welcome to the setup wizard for ISM(Infrastructure Manager) Please enter the following
information to register.
Please enter a IP address or FQDN of ISM Server : <IP address or FQDN of ISM Server>
Please enter a Port Number of ISM Server : <Port Number of ISM Server>
Please enter a valid user name of ISM Server : <user name of ISM Server>
Please enter a password for the user name : <password of ISM Server>
Please enter a valid user name of vCenter that correspond to user name of ISM Server: <
user name of vCSA>
Picked up JAVA_TOOL_OPTIONS: -Xms32M -Xmx128M

Registration completed successfully.
```


Point

- Execute the following command to check the registered information.

```
# ./ismServerConfig -l
Picked up JAVA_TOOL_OPTIONS: -Xms32M -Xmx128M
ISM IP address or FQDN=<192.168.1.100> ISM Port=<25566> ISM Account=<administrator>
vCenter Account=<administrator@vsphere.local>
```

- To correct or replace the server information, delete the information using the following command. Then register the information again.

```
# ./ismServerConfig -d <ISM user name>
Picked up JAVA_TOOL_OPTIONS: -Xms32M -Xmx128M

Unregistration completed successfully.
```

- If ISM Plug-in is used among multiple vCSA users, register all the vCSA users planning to use ISM Plug-in by repeating procedure 4. Create ISM users for each vCSA user you are planning register, because an ISM user cannot be shared among multiple vCSA users. If multiple users are registered, the information of ISM Server is as follows.

```
# ./ismServerConfig -l
Picked up JAVA_TOOL_OPTIONS: -Xms32M -Xmx128M
ISM IP address or FQDN=<192.168.1.100> ISM Port=<25566> ISM Account=<administrator>
vCenter Account=<administrator@vsphere.local>
ISM IP address or FQDN=<192.168.1.100> ISM Port=<25566> ISM Account=<ISMuser1>
vCenter Account=<user1@vsphere.local>
ISM IP address or FQDN=<192.168.1.100> ISM Port=<25566> ISM Account=<ISMuser2>
vCenter Account=<user2@vsphere.local>
```

-
5. Change the permission to “read only.”

```
# chmod 644 /usr/lib/vmware-vsphere-client/plugin-packages/ism/plugins/conf/*.xml
```

4.6 Terminate the SSH connection to vCSA

4.6.1 Change the login shell to appliancesh.

```
# chsh -s /bin/appliancesh root
```

4.6.2 Enter the “exit” command twice and close Tera Term.

Note

When there is no action for a set period of time, it automatically logs out.

```
timed out waiting for input: auto-logout
```

Enter the “shell” command and call the shell back.

4.7 Import the SSL Server Certificate

4.7.1 Import the SSL Server Certificate

Note

It is necessary to import the SSL Server Certificate in advance into the devices which should be connected to vCSA. **Without Certificate, an error message appears.

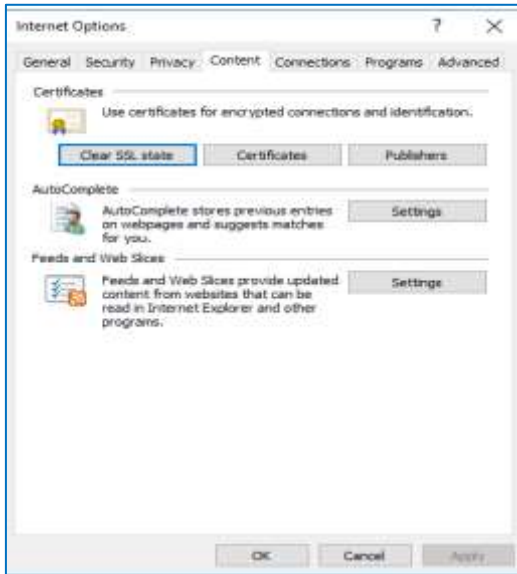
1. Prepare the SSL Server Certificate.

Point

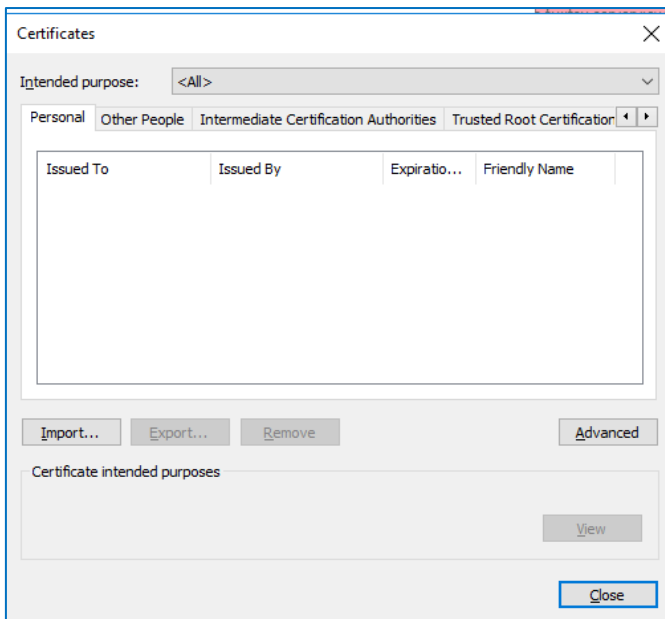
- Prepare the SSL Server Certificate referring to Chapter 4.7.1 “Deployment of SSL Server Certificates” in the ISM User’s Manual. Make sure to complete the certificate import on the intended devices.
 - If using Firefox, refer to Chapter 2.1.1 “GUI” in the ISM User's Manual to complete the certificate import.
-
-

2. From the browser on the intended devices, select [Internet options] under [Settings].

3. Select [Contents] and click [Certificates].



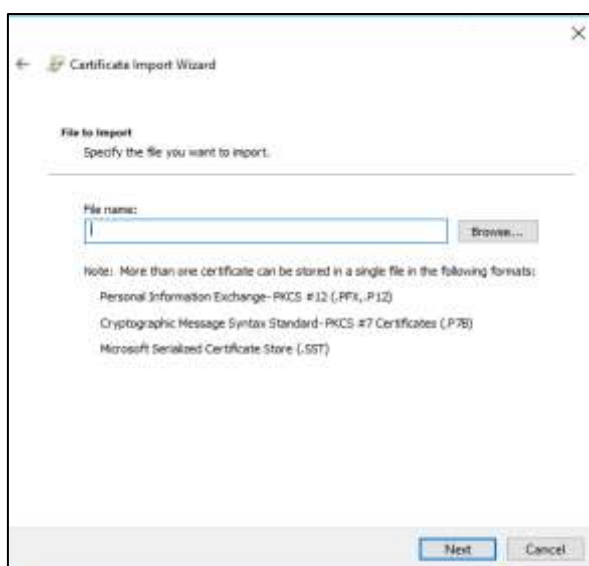
4. Click [Import] and launch the import wizard.



5. The import wizard appears. Click [Next].

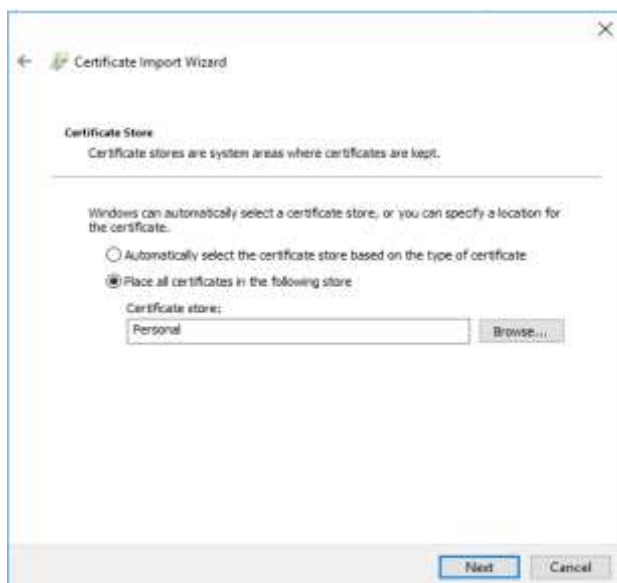


6. Select the downloaded file.

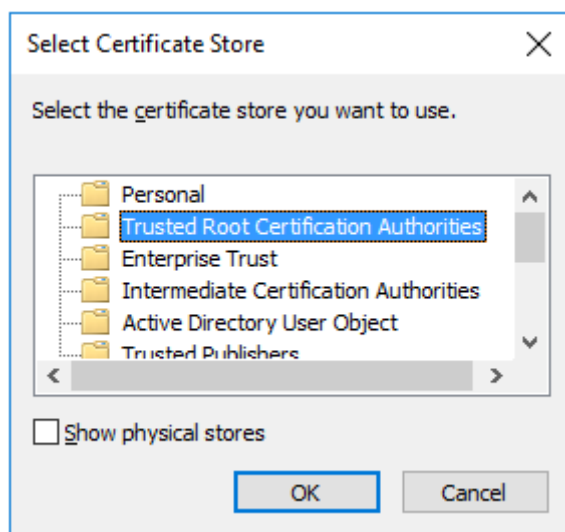


7. Click [Next].

8. Check the [Place all certificates in the following store] box and click [Browse].

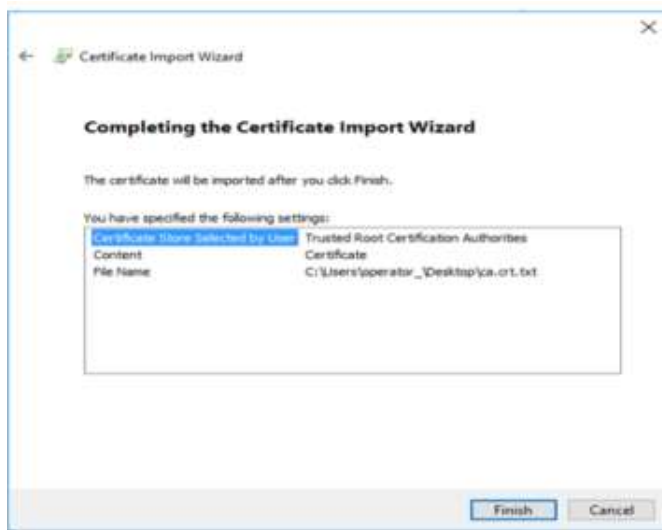


9. Select [Trusted Root Certification Authorities] and click [OK].

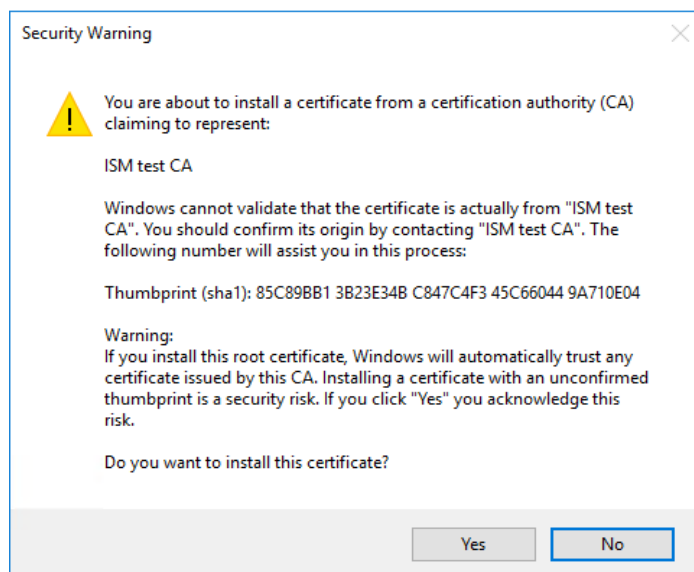


10. Click [Next].

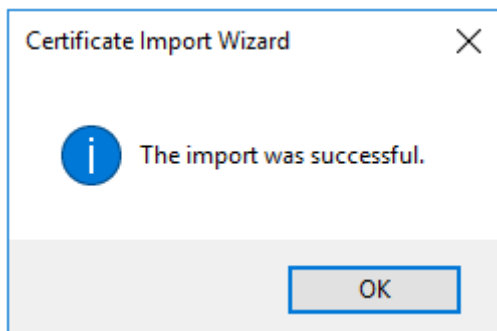
11. Click [Finish].



12. Click [Yes] on the security alert dialog.



13. The message [The import was successful] appears. Click [OK] to close the dialog box.



14. Login to ISM and confirm that there are no errors.

4.8 How to use ISM Plug-in

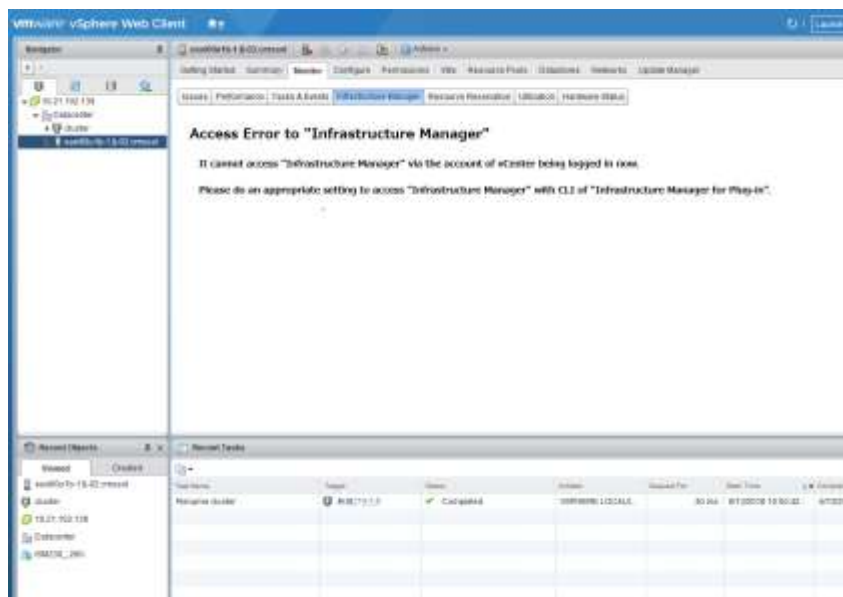
4.8.1 How to use ISM Plug-in

1. Start vSphere Web Client from your device.
2. Click [Hosts and Clusters], or select <designated node> under [Datacenter].



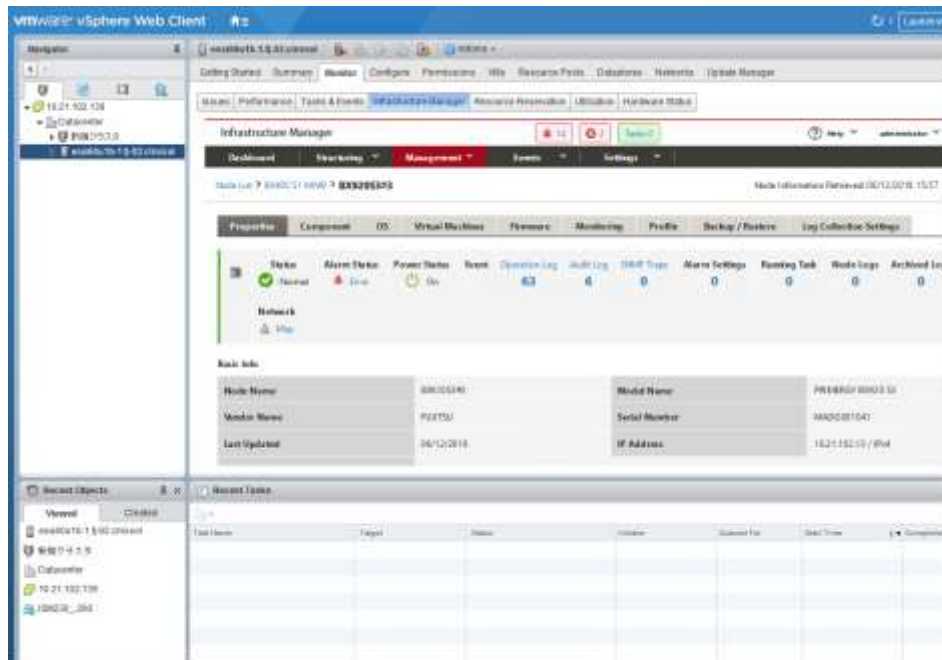
Note

- If the SSL server certificate is not set on the browser correctly, an error screen is displayed. Set the SSL server certificate correctly beforehand referring to [4.7 Import the SSL Server Certificate](#).
- Depending on your using internet browser, the ISM login page may not be displayed correctly due to security settings. Please try the following procedures and logging in to ISM again:
(Example: Microsoft Internet Explorer)
[Internet Options] – [Security] – [Local intranet] – [Sites] – [Advanced] -
Add the ISM's URL
- If the message below is displayed on “Infrastructure Manager” tab or nothing is displayed on the "Monitor" tab, the setting of ISM Plug-in may be wrong. Reconfigure referring to [4.5 Register the necessary information in ISM Plug-in](#).

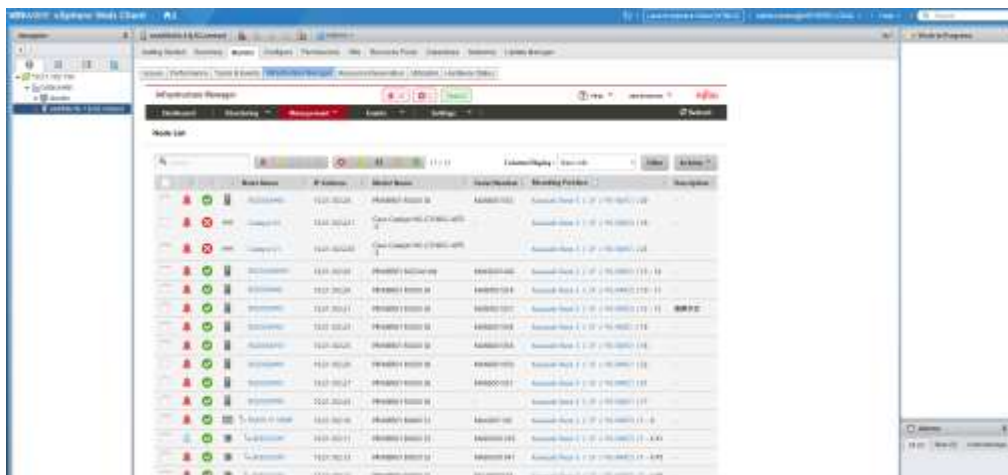


4. After logging in, the following information is displayed according to the object:

- For the registered node in ISM: Node Information

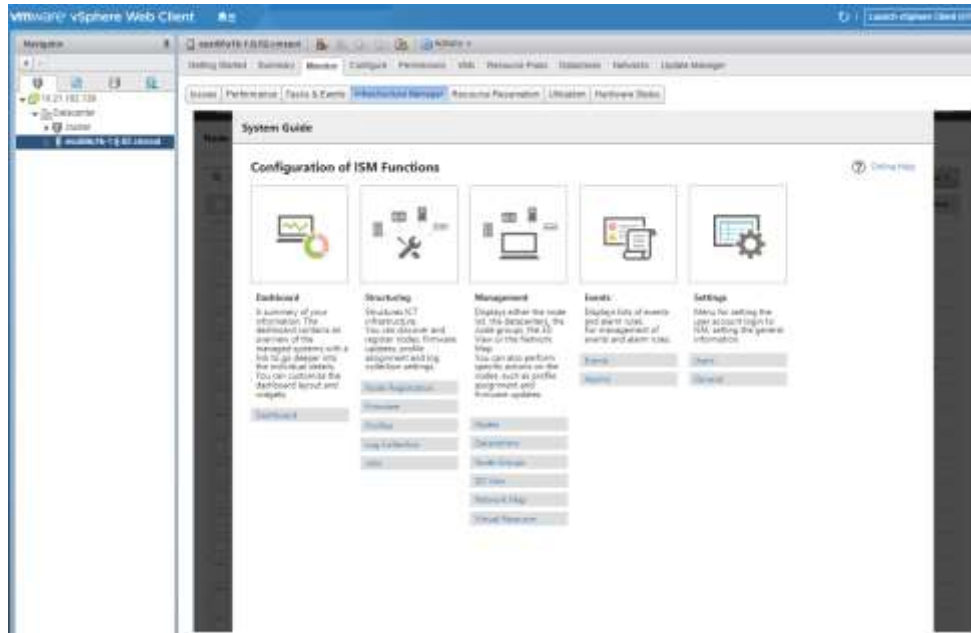


- For the unregistered node in ISM/ the datacenter or cluster: Node List



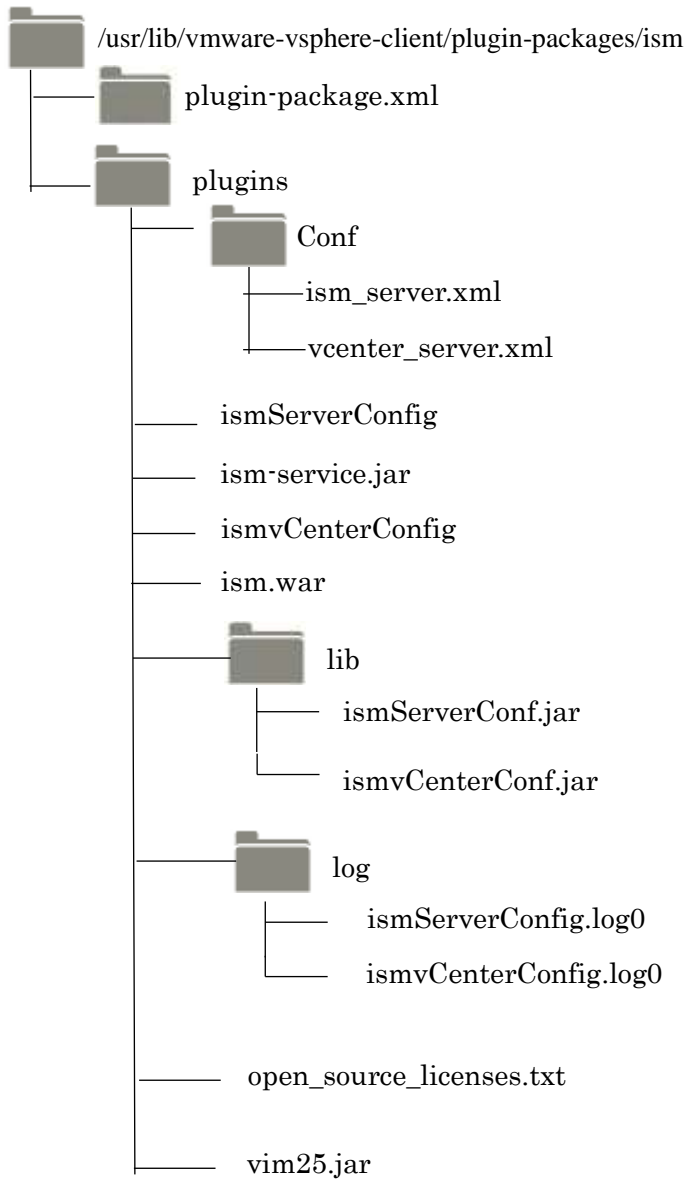
Point

If the ISM system guide dialog appears, scroll down to the bottom right and click [Close].
Change the settings from [Help]-[System Guide] in ISM.



5. Folder Structure after Installation

The following is the folder structure after installation.



6. How to utilize ISM

Please refer to the User's Manual of ISM for how to utilize each function of ISM.

7. Uninstallation Procedure

For uninstallation, delete the designated directory by using the command below and restart vCSA manually.

```
# rm -rf /usr/lib/vmware-vmware-client/plugin-packages/ism
# reboot
```

Point

It is necessary to change the shell to bash shell.

For procedures to connect with SSH, see the 4.2 "[Connect vCSA with SSH](#)" section in this guide.

8. Precautions

- 8.1 NOTE: To use ISM Plug-in, purchase and installation of ISM is required. Without installing ISM, this plug-in does not work properly. Refer to the ISM User's Manual for more details.
- 8.2 NOTE: To use ISM Plug-in, purchase and installation of vCSA is required. Without installing vCSA, this plug-in does not work properly. Refer to the product guides of VMware for more details.

9. Latest Information

For the latest information about ISM and ISM Plug-in, please contact your local support.

<http://www.fujitsu.com/jp/products/software/infrastructure-software/infrastructure-software/ism/>