**Hitachi Configuration Manager REST API**

**Troubleshooting Guide**

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**Preface**

The Hitachi Configuration Manager REST API Troubleshooting Guide describes instructions for field and support engineers to check failure status and to isolate the failure cause. We expect that this guide will lighten the burden on field and support engineers, and will assist them in taking swift troubleshooting action.

**When reading the HP OEM version, refer to "Appendix C-1 For the HP OEM version, substitute the following terms as indicated" for the "Hitachi Command Suite Software Troubleshooting Guide".**

**Revision Level**

|  |  |  |  |
| --- | --- | --- | --- |
| No | Version | Description | Date |
| 1 | 8.4.0-00 | Hitachi Command Suite REST API Troubleshooting Guide | January 12, 2016 |
| 2 | 8.4.1-00 | Hitachi Command Suite REST API Troubleshooting Guide | April 15, 2016 |
| 3 | 8.5.0-00 | Hitachi Command Suite REST API Troubleshooting Guide | September 14,2016 |
| 4 | 8.5.1-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | January 11,2017 |
| 5 | 8.5.3-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | September 8,2017 |
| 6 | 8.5.4-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | November 10,2017 |
| 7 | 8.6.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | March 19,2018 |
| 8 | 8.6.1-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | May 22,2018 |
| 9 | 8.6.2-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | September 22,2018 |
| 10 | 8.6.3-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | December 18,2018 |
| 11 | 8.6.4-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | March 20,2019 |
| 12 | 8.6.5-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | June 25, 2019 |
| 13 | 10.0.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | September 17,2019 |
| 14 | 10.1.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | February 12,2020 |
| 15 | 10.2.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | April 17,2020 |
| 16 | 10.3.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | June 17,2020 |
| 17 | 10.3.1-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | July 17,2020 |
| 18 | 10.5.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | September 4,2020 |
| 19 | 10.5.1-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | November 30,2020 |
| 20 | 10.6.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | December 22,2020 |
| 21 | 10.6.1-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | APRIL 21,2021 |
| 22 | 10.7.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | June 4,2021 |
| 23 | 10.8.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | September 1, 2021 |
| 23 | 10.8.1-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | January 31, 2022 |
| 24 | 10.8.2-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | April 5, 2022 |
| 25 | 10.8.3-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | July 1, 2022 |
| 26 | 10.9.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | August 9, 2022 |
| 27 | 10.9.1-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | January 16, 2023 |
| 28 | 10.9.2-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | April 17, 2023 |
| 29 | 10.9.2-01 | Hitachi Configuration Manager REST API Troubleshooting Guide | April 24, 2023 |
| 30 | 10.9.2-02 | Hitachi Configuration Manager REST API Troubleshooting Guide | June 22, 2023 |
| 31 | 10.9.3-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | August 22, 2023 |
| 32 | 11.0.0-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | December 01, 2023 |
| 33 | 11.0.1-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | February 19, 2024 |
| 34 | 11.0.2-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | May 9, 2024 |
| 35 | 11.0.2-01 | Hitachi Configuration Manager REST API Troubleshooting Guide | July 30, 2024 |
| 36 | 11.0.3-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | October 08, 2024 |
| 37 | 11.0.4-00 | Hitachi Configuration Manager REST API Troubleshooting Guide | March 6, 2025 |

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# Overview

The Hitachi Configuration Manager REST API Troubleshooting Guide describes instructions for field and support engineers to check failure status and to isolate the failure cause. We expect that this manual will lighten the burden on field and support engineers, and will assist them in taking swift troubleshooting action.

## Scope of this manual

Digital Engineering Business Division

(HSSC)

(CTSC/ESC/APSC)

(HV)

Hewlett-Packard Enterprise Company

## Glossary

For details on terms, refer to the Hitachi Command Suite User Guide and Hitachi Command Suite Configuration Manager REST API Reference Guide.

Acronyms and abbreviations used in this manual are shown below.

|  |  |
| --- | --- |
| Acronyms and Abbreviations | Formal Nomenclature |
| API | Application Program Interface |
| Device Manager | Hitachi Device Manager Software |
| DUMP | FD Dump Tool |
| JDK | Java Development Kit |
| OS | Operating System |
| RAID | Redundant Arrays of Inexpensive Disks |
| REST | Representational State Transfer |
| SSL | Secure Socket Layer |
| SVP | Service Processor |
| TLS | Transport Layer Security |
| <System-drive> | OS install drive |
| <Install-dir> | Hitachi Ops Center install directory |
| <REST Install-dir> | REST API Server install directory \*1 |

\*1: <Install-dir>/ConfManager

## Prerequisite knowledge

* Knowledge of the OS (Windows, Linux)
* Knowledge of storage
* Knowledge of REST API

## Related documentation

Related manuals (latest version) necessary for REST API server are shown below.

When analyzing failures, please make sure you are using the latest version of the manual.

For details about the subsystem, refer to the corresponding maintenance manual for that subsystem.

Table 1‑1 Hitachi Command Suite Related Manuals

|  |  |
| --- | --- |
| Manual | Note |
| Hitachi Command Suite Installation and Configuration Guide |  |
| Hitachi Command Suite Administrator Guide |  |
| Hitachi Command Suite User Guide |  |
| Hitachi Command Suite Messages |  |
| Hitachi Command Suite Configuration Manager REST API Reference Guide |  |

Table 1‑2 Hitachi Command Suite Related Manuals (HP OEM version)

|  |  |
| --- | --- |
| Manual | Note |
| HPE XP Command View Advanced Edition Installation and Configuration Guide |  |
| HPE XP Command View Advanced Edition Administrator Guide |  |
| HPE XP Command View Advanced Edition User Guide |  |
| HPE XP8 Storage REST API Reference Guide |  |

Table 1‑3 Hitachi Ops Center Related Manuals

|  |  |
| --- | --- |
| Manual | Note |
| Hitachi Ops Center Installation and Configuration Guide |  |
| Hitachi Ops Center Administrator User Guide |  |
| Hitachi Ops Center API Configuration Manager REST API Reference Guide |  |

Table 1‑4 Other Related Manuals

|  |  |
| --- | --- |
| Manual | Note |
| Hitachi Configuration Manager REST API Log Analysis Guide\*1 |  |
| Engineer Change Notice\*1 |  |
| Hitachi Command Suite Software Troubleshooting Guide\*1 |  |
| Hitachi Device Manager Software Troubleshooting Guide\*1 |  |
| Hitachi Device Manager Software Log Analysis Guide\*1 |  |

\*1: Please use the manual corresponding to the version of REST API server you are using.

# Troubleshooting Procedures

## Types of Troubleshooting

* Is the storage system power on?
* Are the LAN and power cables connected correctly?
* Does the Server (service, task) operate normally?

Failure occurs

Is the ALARM LED on the Storage System on?

Check basic items

Failure occurs during installation?

Refer to 2.2.1 Installation Failure

No

Yes

Failure occurs during uninstallation?

Refer to 2.2.3Uninstallation Failure

No

Yes

Refer to 2.2.2Upgrade Installation Failure

Yes

Failure occurs during upgrade installation?

No

Refer to 2.2.4 Operation Failure

No

Yes

Failure occurs during operation?

Necessary data

* Report data mentioned in 3.1.1 “Failure Report”
* The information mentioned in 3.1.3 “RAID Configuration Definition Data” and related to the system actually in operation
* Collect information by executing the procedures mentioned in 3.1.4 “Information collection from Storage system”
* Collect information by executing the procedures in 3.1.5 “Collecting Data About the Installation Environment“
* Collect information by executing the procedures mentioned in 3.1.6 “Collecting Data About the REST API“

Collect all data if the failed parts cannot be specified.

Analyze logs

(Refer to “Log Analysis Guide”)

No

Is the problem solved?

Contact support department to investigate.

Yes

Fig. 2‑1 Troubleshooting Flowchart

\* Directory Configuration Description in this Chapter

If the OS is not specified, the directory configuration is the same for Windows and Linux. For example:

<install-dir>/ConfManager

## Troubleshooting Procedure

### Installation Failure

#### Troubleshooting Flowchart for When the REST API Server Does Not Work in V8.4.0

In v8.4.0, the REST API server is installed during the processing to install Device Manager.

Sometimes the installation of Device Manager is successful but the internal installation of REST API server fails and REST API server is unusable. In this case, REST API server cannot be used. The following flowchart shows the confirmation procedure when the REST API server functionality cannot be used.

Has the Device Manager service started normally?

Install the prerequisite products. \*1

No

Yes

No

No

Check whether the prerequisite products are installed and their versions. \*1

Yes

Start the Device Manager service.

\*1 For details on prerequisite products and their versions, refer to the Appendix B-3.

Did installation of REST API complete normally? (refer to the Appendix B-1)

Stop the Device Manager service.

If the REST API service is registered, stop it. (refer to the Appendix B-2)

Re-install Device Manager.

Is the problem solved?

Contact support department to investigate.

Did installation of REST API complete normally? (refer to the Appendix B-1)

Yes

Yes

No

No

Yes

Fig. 2‑2 Troubleshooting Flowchart for When the REST API Server Does Not Work

#### Installation Failures in V8.4.1 or Later

No

Check the management server requirements and

prerequisite programs, and then reinstall the REST API

Contact support department to investigate

#1: For details about the management server requirements and

prerequisite programs, refer to the REST API Reference Guide and Appendix B-3.

No

Yes

Collect logs

Yes

Did the installation failure occur again?

Is the problem solved?

Yes

No

Installation failure occurs

Necessary data

* Report data mentioned in 3.1.1 “Failure Report”
* Collect information by executing the procedures mentioned in 3.1.6 “Collecting Data About the REST API“

Analyze the logs.

Analyze the install.log file (refer to the "Log Analysis Guide" and Appendix B-4).

Check whether the management server requirements and prerequisite programs are satisfied#1

Fig. 2‑3 REST API Server Installation Troubleshooting Flowchart

### Upgrade Installation Failure

Follow the procedure in 2.2.1 Installation Failure.

### Uninstallation Failure

#### REST API Server Uninstallation Failure

REST API server is uninstalled in the processing to install Device Manager.

If a problem occurs during uninstallation of Device Manager, use the following procedure to obtain the REST API Server log.

Necessary data

* Report data mentioned in 3.1.1 “Failure Report”
* InV8.4.0, Collect information by executing the procedures in 3.1.5 “Collecting Data About the Installation Environment“
* Collect information by executing the procedures mentioned in 3.1.6 “Collecting Data About the REST API“

Start Uninstallation.

No

No

Contact support department to investigate.

Collect logs

Analyze the logs.

Analyze the file install.log file (refer to the "Log Analysis Guide")

Uninstallation error occurs.

Is the problem solved?

Yes

Yes

Fig. 2‑4 REST API Server Uninstallation Troubleshooting Flowchart

#### Forced Uninstallation Procedure

If the support department judges that forced uninstallation is necessary, delete the REST API server by using the following procedure.

Note: To do this operation, expert knowledge of the OS is necessary. Caution must be taken in the following procedures to prevent negative effects on other systems and applications.

Is the service stopped?

Yes

Stop the REST API service.

Make sure that Hitachi Ops Center products other than REST API will not be affected, and then re-boot the server.

No

Stop the REST API service.

If the <REST Inst-dir>/base/uCPSB folder exists, uninstall uCPSB. (2.2.3.2.1)

In V8.4.1 or later, delete the bundled RAID Manager (2.2.3.2.2)

In V8.4.1 or later, delete the automatic start settings of the REST API (2.2.3.2.3)

Is the OS of REST API server Windows?

No

Yes

Delete the Windows service. (2.2.3.2.4)

Delete the entries from the registry. (2.2.3.2.5)

Delete REST API folder/files. (2.2.3.2.6)

Make sure that Hitachi Ops Center products other than REST API will not be affected, and then re-boot the server.

Fig. 2‑5 Force Uninstallation Procedures

#### Uninstall uCPSB (If the <REST Inst-dir>/base/uCPSB folder exists)

Execute the following command, and then uninstall uCPSB. If the return value is 0, the command has terminated normally.

***Windows***

<REST Inst-dir>\base\uninstall\_uCPSB.bat

***Linux***

/etc/hitachi\_x64setup -f -e -u -t <REST Inst-dir>/base/uCPSB/etc/PSB\_INST.INF

#### Delete the Bundled RAID Manager (CCI) (Hitachi Configuration Manager v8.4.1 or later)

If the bundled RAID Manager (or CCI) (hereafter called bundled RM) is used, delete the settings of the bundled RM.

Yes

No

Is the bundled RM used?#1

Is the RM used only in REST API?

Delete the RM link#2

Yes

No

Stop any products that are using the RM

Deleting the settings of the bundled RM, and install RM#3

Is there a link for RM?#1

Yes

No

Delete the RM link#2

Fig. 2‑6 Delete the Bundled RAID Manager Procedures

#1: Checking whether the bundled RM is used

The bundled RM is used if all of the following conditions are met.

***Windows***

* “<*REST-API-installation-drive*>\HORCM” is a symbolic link file.
* The symbolic link of HORCM links to “<REST Install-dir>\HORCM”.

Check the link from the file properties.

***Linux***

* “/HORCM” is a symbolic link file.
* The symbolic link of HORCM links to “<REST Install-dir>/HORCM”.

Execute the following to check the link:

ls –l /

#2: Deleting the RM link

***Windows***

1. Delete the following symbolic link file.  
   <*REST-API-installation-drive*>\HORCM

***Linux***

1. Execute the following command.

/HORCM/horcmuninstall.sh

1. Delete the following symbolic link file

/HORCM

#3: Deleting the settings of the bundled RM, and installing RM

***Windows***

1. Perform the procedure in #2.
2. Install the version of RM required for other products in the installation drive where the REST API server is installed.

***Linux***

1. Delete the following symbolic link file.

/HORCM

1. Execute the following command.

mv <*REST-API-installation-drive*>/HORCM /.

#### Delete of the Automatic Start Settings of the REST API server (Hitachi Configuration Manager v8.4.1 or later)

Execute the following command to delete the settings so that the REST API service does not automatically start when the OS starts.

***Windows***

<REST Install-dir>\bin\deltask.bat

***Linux***

<REST Install-dir>/bin/deltask.sh

#### Delete the Windows Services.

Delete the Windows services by executing the following windows commands.

sc delete “ConfManagerAPIServer”

sc delete “ConfManagerWebServer”

sc delete “ ConfmanagerMessageQueueServer”

#### Delete the Entries from the Registry

Delete the following entry from the registry when the entry exists (the entry which has a "D" specified in the Delete column in the following table).

Table 2‑1 The list of the registries that forced uninstall

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Registry name | | | | | | | | | | | | Delete | Target Ver |
| \HKEY\_LOCAL\_MACHINE | | | | | | | | | | | |  |  |
|  | \Software | | | | | | | | | | |  |  |
|  |  | \Hitachi | | | | | | | | | |  |  |
|  |  |  | | \Configuration Manager REST API | | | | | | | | ○ | V8.4.1~ |
|  |  | \Microsoft | | | | | | | | | |  |  |
|  |  |  | | \Windows | | | | | | | |  |  |
|  |  |  | |  | \CurrentVersion | | | | | | |  |  |
|  |  |  | |  |  | | | \Uninstall | | | |  |  |
|  |  |  | |  |  | | |  | | {348B2838-3292-4741-9AB0-5B774D5D115E} | | ○ | V8.4.1~ |
|  |  | \Ericsson | | | | | | | | | |  |  |
|  |  |  | \Erlang | | | | | | | | |  |  |
|  |  |  |  | | | \ErlSrv | | | | | |  |  |
|  |  |  |  | | |  | | | \1.1 | | |  |  |
|  |  |  |  | | |  | | |  | | \ConfManagerMessageQueueServer | ○ | V8.5.0~ |
|  | \SYSTEM | | | | | | | | | | |  |  |
|  |  | \CurrentControlSet | | | | | | | | | |  |  |
|  |  |  | | \Service | | | | | | | |  |  |
|  |  |  | |  | | | \ConfManagerAPIServer | | | | | ○ | V8.4.0~ |
|  |  |  | |  | | | \ConfManagerWebServer | | | | | ○ | V8.4.0~ |
|  |  |  | |  | | | \ ConfManagerMessageQueueServer | | | | | ○ | V8.5.0~ |

#### Delete REST API server Folder/Files

Delete the following files and directories if the files and directories exist.

***Windows***

Table 2‑2 The list of the files and directories that forced uninstall(Windows)

|  |  |  |  |
| --- | --- | --- | --- |
| # | Path | Remarks | Target Ver |
| 1 | <REST Install-dir>\ | Delete the directory. | V8.4.0~ |
| 2 | %ProgramFiles(x86)%\InstallShield Installation Information\{348B2838-3292-4741-9AB0-5B774D5D115E} | Management folder of InstallShield | V8.4.1~ |
| 3 | <COMMON\_PROGRAMS>\Hitachi Command Suite\Configuration Manager  or  <COMMON\_PROGRAMS>\Hitachi Ops Center\Configuration Manager | Start Menu | V8.4.1~ |

<COMMON\_PROGRAMS>: %ProgramData%\Microsoft\Windows\Start Menu\Programs

***Linux***

Table 2‑3 The list of the files and directories that forced uninstall(Linux)

|  |  |  |  |
| --- | --- | --- | --- |
| # | Path | Remarks | Target Ver |
| 1 | <REST Install-dir>/ | Delete the directory. | V8.4.0~ |
| 2 | /etc/init.d/ConfManagerWebServer | Delete the file. | V8.4.0~ |
| 3 | /etc/init.d/ConfManagerAPIServer | Delete the file. | V8.4.0~ |
| 4 | /etc/init.d/ConfManagerMessageQueueServer | Delete the file. | V8.5.0~ |
| 5 | /etc/init.d/sc\_confmanagerctrl | Delete the file.  (Only cluster environment) | V8.4.1~ |
| 6 | /etc/default/ConfManagerAPIServer | Delete the file. | V8.4.0~ |
| 7 | /etc/.hitachi/CONFIG\_MGR/ | Installation information management directory | V8.4.1~ |
| 8 | /etc/systemd/system/ConfManagerCtrl.service | Delete the file. | V10.9.2~ |
| 9 | /etc/systemd/system/ConfManagerWebServer.service | Delete the file. | V10.9.2~ |
| 10 | /etc/systemd/system/ConfManagerAPIServer.service | Delete the file. | V10.9.2~ |
| 11 | /etc/systemd/system/ConfManagerMessageQueueServer.service | Delete the file. | V10.9.2~ |

### Operation Failure

#### REST API Server Errors Troubleshooting Flowchart

The following flowchart shows the REST API server failure troubleshooting procedure.

If the failure was not corrected,  
 return to “Check symptom”.

Failure occurs

Identify failure location by using   
error code and messages.

Check symptom.

Take troubleshooting actions by using additional information and recommended actions mentioned in the REST API Reference Guide.

Yes

Able to correct failure?

No

Investigate previous cases and check the items listed in Appendix D “Items to check”.

Able to correct failure by previous cases?

Yes

Necessary data

* Report data mentioned in 3.1.1 “Failure Report”
* The information mentioned in 3.1.3 “RAID Configuration Definition Data” and related to the system actually in operation
* Collect information by executing the procedures mentioned in 3.1.4 “Information collection from Storage system”
* In V8.4.0, Collect information by executing the procedures in 3.1.5 “Collecting Data About the Installation Environment“
* Collect information by executing the procedures mentioned in 3.1.6 “Collecting Data About the REST API“

No

Collect data.

Analyze the logs.

- refer to the "Log Analysis Guide"

-Determine whether the problem is the same( refer to Appendix B-4, G-1).

Inspection by supporting dept.

Failure Recovery/Case Registration.

Troubleshooting in accordance with the support department’s instructions.

Fig. 2‑7 REST API Server Errors Troubleshooting Flowchart

#### Troubleshooting Flowchart for When Access to a Storage System Fails

Yes

No

\*1 For details on port numbers used by REST API, refer to the Appendix B-3.

Is the problem solved?

Contact support department to investigate.

Confirm the status and settings of the REST API receiving port. \*1

Resolve the contention at the port.

For details on how to change the REST API port, refer to the REST API Reference Guide.

No

Confirm the network configuration (status of the communication route, firewall settings, etc.) between the REST API server machine and the Storage system.

Correct the network configuration between the REST API Server machine and the Storage system.

Yes

Yes

No

Confirm that the key type (RSA/ECDSA) of the certificate uploaded to SVP and the cipher suite specified in Storage Navigator are compatible

if the Storage Navigator uses TLS1.2.

Correct the key type and the cipher suite in Storage Navigator SSL communication settings (see Storage Navigator User Guide).

No

Yes

Fig. 2‑8 Flowchart for When Access to a Storage System Fails

# Necessary Data for Troubleshooting

## Information required for investigation

The following data must be collected when a failure occurs. Refer to the "Log Analysis Guide" for detailed information on each log file.

\*: Directory Configuration Described in this Chapter:

If the kind of OS is not specified, the directory configuration is the same for Windows and Linux.

### Failure Report

Refer to the " Hitachi Command Suite Software Troubleshooting Guide"

### Image Data

Refer to the " Hitachi Command Suite Software Troubleshooting Guide"

### RAID Configuration Definition Data

Refer to the " Hitachi Command Suite Software Troubleshooting Guide"

### Information collection from Storage system

Refer to the " Hitachi Command Suite Software Troubleshooting Guide"

### Collecting Data About the Installation Environment

* Hitachi Configuration Manager v8.4.0

Collect data about the installation environment by executing the Device Manager Server log file collection command. For details about this command, refer to the "Hitachi Device Manager Troubleshooting Guide".

* Hitachi Configuration Manager v8.4.1 or later

Collect data about the installation environment by executing the REST API server log file collection command.

### Collecting Data About the REST API Server

There are three types of REST API logs. Refer to Table 3‑1, and collect the necessary logs according to your operating conditions.

Table 3‑1 The logs of REST API Server

|  |  |  |  |
| --- | --- | --- | --- |
| # | Log type | Conditions under which logs are necessary | How to collect logs |
| 1 | Configuration Manager REST API logs | Always necessary | See 3.2.1. |
| 2 | REST API logs located on the storage system | Necessary when one of the following conditions is met: - The version Hitachi Configuration Manager is 8.5.1 or later, and the Hitachi Configuration Manager is used to manage VSP G1000, VSP G1500, or VSP F1500 whose microcode version is 80-05-2X-XX/XX or later and for which SSL communication is enabled - The version Hitachi Configuration Manager is 8.5.2-03 or later, and the Hitachi Configuration Manager is used to manage VSP Gx00 models or VSP Fx00 models whose microcode version is 83-04-43-XX/XX or later and for which SSL communication is enabled  In this case, you will need to collect a dump file only when if you are using the DTLS SVP encrypted communication mode or the SSL TLS encrypted communication mode.  - The version of Hitachi Configuration Manager is 8.5.3 or later, and the Hitachi Configuration Manager was installed in a Linux environment by a non-root user | See 3.2.2. |
| 3 | Microsoft Server Failover Clustering (MSFC) logs | Necessary when both of the following conditions are met:  - You use the Hitachi Configuration Manager version 8.4.1 or a later version. - You use a cluster environment configured in Windows. | See 3.2.3. |

## Information collection method

### How to Use the REST API Server Log File Collection Command

#### Outline

* Hitachi Configuration Manager v8.4.0

To collect the log files of REST API Server, you need to execute two commands. The first is the Device Manager Server log file collection command, which collects environment information. The second is the REST API server log file collection command, which collects information specific to REST API server.

For details about the Device Manager Server log file collection command, refer to the "Hitachi Device Manager Troubleshooting Guide".

* Hitachi Configuration Manager v8.4.1 or later

Execute the REST API server log file collection command, which collects environment information and information specific to the REST API server.

This chapter describes the REST API server log file collection command.

#### Purpose of Use

Automation collection of the log files, properties files, databases, etc. required by the support department.

#### Prerequisites

* + The user who logs on to the operating system must be a member of the Administrators group, superuser, or the equivalent.
  + This tool must be used on a machine where REST API server are installed.
  + Java must be usable in the environment.

#### How to Use the Tool

* + Hitachi Configuration Manager v8.4.0

Execute the Device Manager Server log file collection command (refer to "Hitachi Device Manager Troubleshooting Guide"), and then execute the command below.

* + Hitachi Configuration Manager v8.4.1 or later

Execute the command below.

Examples:

***Windows***

<REST Install-dir>SupportTools\CollectTool\RestTI.bat -dir “C:\Logs”

***Linux***

<REST Install-dir>/SupportTools/CollectTool/RestTI.sh -dir /export/Logs

Note: The data acquired by this command is in the archive file named ConfManager\_log.jar.

#### Log collection time

It takes the following time to collect the log files:

***Windows***

Up to approximately five minutes.

***Linux***

Up to approximately one minute.

#### Notice

If the installation fails, executinng RestIT command may fail. In this case, collect the information from the following folders or files.

-Windows

%SystemDrive%\confmanager\_inst\_\*.log

%SystemDrive%\confmanager\_uninst.log

<REST Install-dir>\cnf

<REST Install-dir>\data

<REST Install-dir>\logs

<REST Install-dir>\build.json

<REST Install-dir>\version.json

<REST Install-dir>\installinfo

<REST Install-dir>\oss\apache\logs

<REST Install-dir>\oss\apache\conf

<REST Install-dir>\

%APPDATA%\hcsrest\*.log

%SYSTEMDRIVE%\hcsrest\*.log

-Linux

/tmp/confmanager\_inst\_\*.log

/tmp/confmanager\_uninst.log

<REST Install-dir>/cnf

<REST Install-dir>/data

<REST Install-dir>/logs

<REST Install-dir>/build.json

<REST Install-dir>/version.json

<REST Install-dir>/installinfo

<REST Install-dir>/oss/apache/logs

<REST Install-dir>/oss/apache/conf

/tmp/hcsrest\*.log

\* is wild card.

### How to collect the logs of the REST API interface in the storage system

Refer to the Storage Navigator User Guide and download the dump files.

### How to Collect the Log File of MSFC (Hitachi Configuration Manager v8.4.1 or later)

Perform the following to collect the log file (Cluster.log) of Microsoft Failover Cluster (MSFC).

1. Open a Windows PowerShell window in the active node or standby node.
2. Execute the commands below in the Windows PowerShell window. The log file is output in both the active node and standby node.

|  |
| --- |
| > import-module failoverclusters  > Get-ClusterLog  Mode LastWriteTime Length Name  ---- ------------- ------ ----  -a--- 4/1/2016 5:38 AM 1763126 Cluster.log  -a--- 4/1/2016 5:38 AM 1117129 Cluster.log  > |

“>” is prompt.

|  |  |
| --- | --- |
| Log output location | C:\Windows\Cluster\Reports\Cluster.log |

# Appendix

* 1. About REST API server processes

The processes run by REST API server are shown below.

When you monitor processing, monitor only the processes specified in the following tables. However, in Windows, monitor the services.

* Hitachi Configuration Manager v8.4.0

Executing the command to start or stop Device Manager starts or stops the REST API service. When starting or stopping a REST API service , always use the command to start or stop Device Manager.

* Hitachi Configuration Manager v8.4.1 or later

When starting or stopping a REST API service, always use the command to start or stop the REST API server.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Component | Service name | Target ver | Process name  (Windows) | Process name  (Linux) | Target to monitor  (Y:yes, N:no) | | Remarks |
| Service | Process |
| REST API | ConfManagerAPIServer | V8.4.0~ | Java.exe | Java | Y | Y |  |
| JettyService.exe | Java | Y |  |
| ConfManagerWebServer | V8.4.0~ | httpd.exe | httpd | Y | Y | Multiple processes are executed. |
| rotatelogs.exe | rotatelogs | N | Multiple processes are executed. |
| ConfmanagerMessageQueueServer | V8.5.0~ | erl.exe | beam.smp | Y | Y |  |
| epmd.exe | epmd | Y |  |
| erlsrv.exe | - | Y |  |

Caution: rotatelogs.exe and rotatelogs are child processes of httpsd.exe and httpsd. Therefore, rotatelogs.exe and rotatelogs do not need to be monitored.

Caution: If a program that monitors processes starts or stops the above services or processes during installation or uninstallation of REST API server, installation or uninstallation might fail. Therefore, stop the program that monitors processes, or change its settings before installation or uninstallation so that the program does not monitor the services or processes of the REST API server.

* 1. Confirming Installation of REST API server

Use the flowchart below to confirm the state of the REST API server installation.

Yes

Yes

No

Check (2)

Is the Rest API server installation log stored in the path shown in (2)?

No

Check (1)

Is the Rest API server installation log stored in the path shown in (1)?

Installation failed.

A failure occurred before the processing to install the REST API server. Refer to the “Hitachi Device Manager Troubleshooting Guide”, and check whether a problem occurred during installation of Device Manager.

Installation failed.

The installation of REST API server failed. Refer to the “Log Analysis Guide”, and investigate the cause of the error.

Installation was successful.

Yes

Check(3)

Refer to the installation log for REST API server, and check whether installation succeeded.

Installation failure.

Fail in installation of REST API. In reference to Log analysis procedure manual, please investigate an error cause.

No

Yes

Fig. B‑1-1 Flowchart for Confirming Installation of REST API server

1. Check for the installation log that is output when installation of REST API server fails.

When installation of REST API server fails, the installation log of REST API server is stored in the following directory. If the installation log is in the following directory, installation of REST API server failed. Check the “Log Analysis Guide”, and investigate the cause of the error.

***Windows***

Stored Location : <system-drive>

File Name : confmanager\_inst\_1.log

***Linux***

Stored Location : /tmp

File Name : confmanager\_inst\_1.log

1. Check whether the REST API server installation log exists in the installation directory.

If installation processing completed normally, the installation log is moved to the directory below. If there is no installation file in the directory below or in the temporary directory checked in (1), processing to install the REST API server is not carried out. Check whether a problem occurred during installation of Device Manager.

***Windows***

Stored Location : <REST Install-dir>/logs

File Name : confmanager\_inst\_1.log

***Linux***

Stored Location : <REST Install-dir>/logs

File Name : confmanager\_inst\_1.log

1. Refer to the installation log of REST API server, and check whether installation succeeded.

Confirm whether a message indicating that installation was successful was output to the following installation log file.

***Windows***

Stored Location : <REST Install-dir>/logs

File Name : confmanager\_inst\_1.log

Message to confirm : The Configuration Manager is installed successfully.

***Linux***

Stored Location : <REST Install-dir>/logs

File Name : confmanager\_inst\_1.log

Message to confirm : The Configuration Manager is installed successfully.

**Example**

INFO Tue 01/05/2016 17:49:16.41 install ConfManagerAPIServer (STOP.PORT=23453)

INFO Tue 01/05/2016 17:49:16.43 exit code = 0

INFO Tue 01/05/2016 17:49:16.43 sc failure "ConfManagerAPIServer" reset= 0 actions= restart/5000/restart/5000/restart/5000

[SC] ChangeServiceConfig2 SUCCESS

INFO Tue 01/05/2016 17:49:16.44 exit code = 0

INFO Tue 01/05/2016 17:49:16.44 The Configuration Manager is installed successfully.

INFO Tue 01/05/2016 17:49:16.44 -------- Ending install.bat log information. ----------

* 1. Procedure To Forcibly Stop the REST API Service

Stop the REST API Service by executing the following (1),(2) steps.

1. Manually stop the following services:

* ConfManagerWebServer (v8.4.0 or later)
* ConfManagerAPIServer (v8.4.0 or later)
* ConfmanagerMessageQueueServer(v8.5.0 or later)

1. Manually stop the following process:

***Windows***

epmd.exe (v8.5.0 or later)

***Linux***

epmd (v8.5.0 or later)

* 1. Operation environment of the REST API server

1. Prerequisite programs

* Hitachi Configuration Manager v8.4.0
* OS libraries

In the case of Linux, install the following libraries beforehand.

***Red Hat Enterprise Linux***

- glibc-2.5-118 or later

- libgcc-4.1.2-54 or later

- libstdc++-4.1.2-54 or later

***SUSE Linux***

- glibc-2.11.3-17.54.1 or later

- libgcc\_s1-4.7.2\_20130108-0.15.45 or later

- libstdc++6-4.7.2\_20130108-0.15.45 or later

- zlib-1.2.7-0.10.128 or later

* Hitachi Configuration Manager v8.4.1 or later

Refer to the REST API Reference Guide for the necessary OS libraries.

* RAID Manager(CCI)
* Hitachi Configuration Manager v8.4.0

If the installed RAID Manager (CCI) version is not the following version or later, install RAID Manager (CCI). For details on how to install RAID Manager, refer to the "RAID Manager Installation and Setup Guide".

|  |  |
| --- | --- |
| Product | Required version |
| CCI | 01-35-03/05 or later |
| RAID Manager | 01.35.05 or later |

* Hitachi Configuration Manager v8.4.1 or later

Refer to the REST API Reference Guide for the necessary Raid Manager version.

1. Port numbers used by REST API server

The port numbers that REST API server utilizes are shown below.

* Hitachi Configuration Manager v8.4.0

|  |  |
| --- | --- |
| Port number | Remarks |
|
| 23450 | Used for HTTP communications from a REST client to the REST server. |
| 23451 | Used for HTTPS communications from a REST client to the REST server. |
| 23452 | Used for internal communications within the REST server. |
| 23453 | Used for internal communications within the REST server. |
| 31001 | Used for communication between RAID Manager and storage systems. |
| 31002 | Used for communication between RAID Manager and storage systems. |
| 37001 to 38000 | Used for HTTP communications of RAID Manager with the REST server. One port is used for each instance of RAID Manager. |

* Hitachi Configuration Manager v8.4.1 or later

Refer to the REST API Reference Guide for the port numbers used by the REST API server.

If the following conditions are met, RAID Manager on the server that REST API server installed communicates with storage system.

-For VSP G100, 200, 400, G600, G800, VSP F400, F600, F800, storage system is registered with is Secure=false, or is Secure=true and lanConnectionProtocol=DTLS

-For VSP G1000, G1500 or VSP F1500, storage system is registered with is Secure=false

If any of above condition is met, communication status between RAID Manager and storage system needs to be confirmed. Destination of communication of RAID Manager is different. Confirm if RAID Manager communicates with the destination of the storage system.

-GUM for VSP G100, G200, G400, G600, G800, VSP F400, F600, F800

-SVP for VSP G1000, G1500 or VSP F1500

Example of confirmation of the communication:

Confirm the status of 31001/udp port from SVP(192.0.2.100) port on the REST API server in Linux environment

# nc -u -z 192.0.2.100 31001

Connection to 192.0.2.100 31001 port [udp/\*] succeeded!

* 1. Procedure for Waiting on a Problem to Reoccur When the Automatic Start of the REST API Service Fails When the OS Starts (Windows)

In REST API server v8.4.1, the task scheduler of Windows is used to automatically start services of the REST API server when the OS starts. The log of the task scheduler is not output by default. When an error occurs for a task scheduler, perform the following procedure to output the event log from the task scheduler, and then wait for the problem to reoccur.

1. Open the Event Viewer  
   Open the Event Viewer by selecting [Control Panel] - [System and Security] - [Administrative Tools] - [Event Viewer] from the Start Menu. Alternatively, open a Run window by pressing **Windows logo key+R**, and then enter "eventvwr" in the [Open] field.
2. Select [Applications and Services Logs] - [Microsoft] - [Windows] - [TaskScheduler] from the window on the left in Event Viewer.
3. Right-click [Operational], and then select [Properties].
4. The [Log Properties] window is displayed.
5. Select the [Enable logging] check box, set the log size as required, and then click the [OK] button.
6. After the settings are changed, the task scheduler outputs the history log of the executed task.

If the problem occurs again, collect the event logs.

1. 1. Using the REST API for storage systems with an earlier microcode version

If the REST API is used for storage systems with an earlier microcode version, the following problems occur:

* The KART30074-E message appears when changing a pool name.
* The **poolId** parameter is ignored when specifying both **ldevOption** and **poolId** to the query parameter to obtain volume information.

To resolve the problems, upgrade the microcode to one of the following versions:

* VSP Gx00 83-01-21-20/00 or later
* VSP G1000 80-04-00-00/04 or later
* HUS VM 73-03-44-00/00 or later
* VSP 70-06-34-00/00 or later

[Management Information]

Document Number: Restrictions0000000598-11

RN version: 8.4.1-00

Affected version: 8.4.0-00 or later

1. Items to check
2. When an attempt to register a storage system fails and the KART40106-E error occurs

If the KART40106-E error occurs, but there is no problem with the serial number or model, there might be a problem with the specified IP address or the status of the network. Revise the specified IP address or the status of the network.

1. When response time is slow

There might be a problem with the specified IP address or the status of the network. Revise the specified IP address or the status of the network.

1. When the REST API server is running, but the execution of an API request fails, and “503 Service Unavailable” is returned

Stop the REST API server and check whether the file <REST-installation-directory>/cnf/ConfManagerAPIServer.pid exists. If the file <REST-installation-directory>/cnf/ConfManagerAPIServer.pid exists, this indicates that the REST API server is running incorrectly as a result of an interruption in the power supply while the REST API server was running.

Detete the file ConfManagerAPIServer.pid, and then start the REST API server.

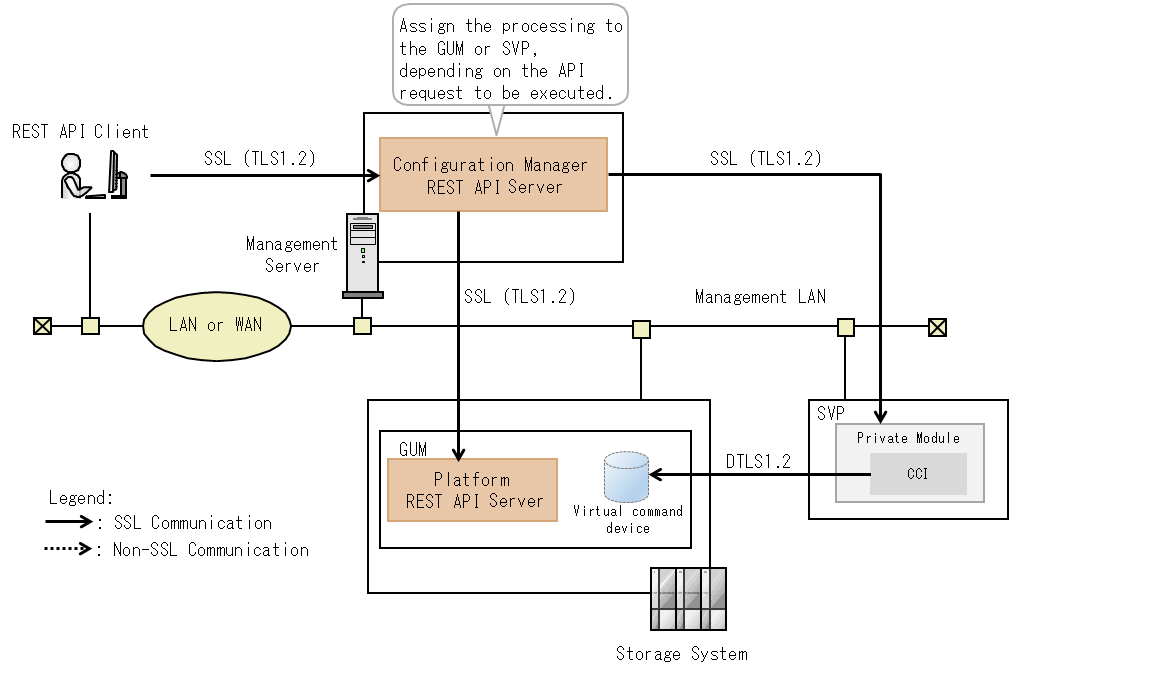
1. Message list



1. SSL communication routes between the Configuration Manager RESTAPI server and the storage system (VSP E series, VSP G350, G370,G700, G900, VSP F350, F370, F700, F900)

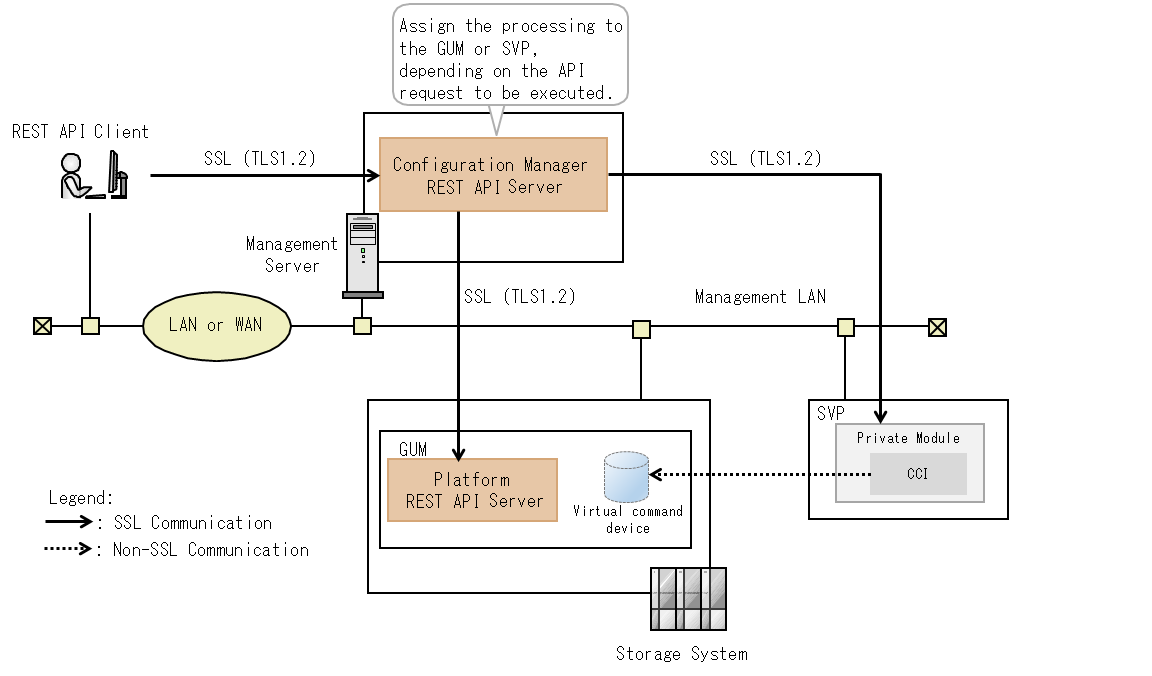
The following figure describes the communication routes from the ConfigurationManager REST API server to the storage system (VSP E series, VSP G350, G370,G700, G900, VSP F350, F370, F700, F900) when a linkage to the SVP is established. In this case, the Private Module on SVP is used, but be careful not to disclose information to users about this private module.

1. lanConnectionProtocol:DTLS SVP



Depending on the API requests to be executed, the Configuration Manager REST API server communicates to the Private Module on SVP with SSL. Then, you can use SSL communication between a CCI instance on the Private Module and a virtual command device on the storage system.

1. lanConnectionProtocol: SSL TLS



Depending on the API requests to be executed, the Configuration Manager REST API server communicates to the Private Module on SVP with SSL. Then, you can use Non-SSL communication between a CCI instance on the Private Module and a virtual command device on the storage system.

1. 1. How to determine if the private module on SVP in VSP E series, VSP G350, G370,G700, G900, VSP F350, F370, F700, F900 is being used directly

There were multiple inquiries that customers used the private module on SVP in VSP E series, VSP G350, G370,G700, G900, VSP F350, F370, F700, F900 directly. It is not supported to use the Private Module directly, so please induce the use of Hitachi Configuration Manager or GUM PF REST that have been published. Then, how to determine if the customers used the private module directly is shown.

When all of the following conditions are met, you can determine that the customer has used the private module directly.

1. There are receive logs of the REST API for customer declarations in the following file. refer to the "Log Analysis Guide 3.1 (4)"

Log File: dkc200\tmp\fdcopy\wk\supervisor\restapi\logs\rest\Restapi\_XXXXX.log

1. There is no X-Agent-Type header in the request header of the receive logs in (1), or ‘CM REST’ string is not included in the X-Agent-Type header(\*).

(\*) The private module is used by Hitachi Configuration Manager in the configuration which a linkage to the SVP is established as described in Appendix F. When Hitachi Configuration Manager executes REST API to the private module internally, ‘CM REST’ string is included in the X-Agent-Type header. Note that the X-Agent-Type header is also disclose information.