

Hitachi Replication Manager 8.1.2-03 Release Notes

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About this document

This document (RN-00HS280-49, March 2015) provides late-breaking information about the Hitachi Replication Manager 8.1.2-03. It includes information that was not available at the time the technical documentation for this product was published, as well as a list of known problems and solutions.

Intended audience

This document is intended for customers and Hitachi Data Systems partners who license and use the Hitachi Replication Manager.

Getting help

The Hitachi Data Systems Support Center staff is available 24 hours a day, seven days a week. To reach us, please visit the support website at <https://portal.hds.com> for current telephone numbers and other contact

information. If you purchased this product from an authorized HDS reseller, contact that reseller for support.

About this release

This release is a major release that adds new features and resolves multiple known problems.

Product package contents

Medium	Components	Revision	Release Type	Prerequisite version of Service Pack
Software	Hitachi Replication Manager	8.1.2-03	Service pack	8.1.2-00
Documents	Release Notes (this document)	-		
	Hitachi Command Suite Installation and Configuration Guide	MK-90HC173-18		
	Hitachi Command Suite Messages	MK-90HC178-18		
	Hitachi Command Suite Replication Manager Configuration Guide	MK-98HC151-22		
	Hitachi Command Suite Replication Manager User Guide	MK-99HC166-22		
	Hitachi Command Suite Replication Manager Application Agent CLI Reference Guide	MK-90HC181-14		
	Hitachi Command Suite Replication Manager Application Agent CLI User Guide	MK-90HC189-15		

New features and important enhancements

For 8.1.2-03

#	New Features and Enhancements	Applied products	Applied OS
1	<p>When using the Pair Configuration Wizard, you can now create a configuration definition file in which the pair management server is specified by its IP address by selecting the IP address from a list of candidate pair management servers.</p> <p>By using this function, pair management servers that have multiple IP addresses and whose host names cannot be correctly resolved can now be specified in the configuration definition file.</p>	Replication Manager	All

For 8.1.2-00

#	New Features and Enhancements	Applied products	Applied OS
1	The number of resources that you can manage for Thin Image copy pairs in Hitachi Virtual Storage Platform G1000 is increased to match the specifications of the storage system. <ul style="list-style-type: none"> Maximum capacity of the primary or secondary volumes: 60 TB Maximum number of snapshots per storage system: 2,048 Maximum number of consistency groups per storage system: 2,048 	Replication Manager	All
2	The efficiency of synchronizing the configuration information between Replication Manager and remote instances of Device Manager is improved. The improvement affects configurations in which two or more remote instances of Device Manager are registered as information sources.	Replication Manager	All
3	Replication Manager server now supports commands to easily and quickly perform the following steps in a cluster environment: <p>(1) hcnds64clustersrvupdate</p> Register Hitachi Command Suite services into a resource group, or remove them from a resource group in a cluster environment.	Replication Manager server	Windows
4	Replication Manager now supports the following OSs on a management server: <ul style="list-style-type: none"> Red Hat Enterprise Linux 6.6(x64) 	Replication Manager	Linux
5	Replication Manager now supports Firefox ESR 31 on the following OSs: <ul style="list-style-type: none"> Red Hat Enterprise Linux 6.6 	Replication Manager	Linux
6	Replication Manager now supports cluster configuration of the following OSs on a management server: <ul style="list-style-type: none"> Red Hat Enterprise Linux 6.5(x64) 	Replication Manager	Linux

System requirements

Refer to "System Requirements" in the *Hitachi Command Suite Replication Manager Configuration Guide*.

Red Hat Enterprise Linux (RHEL) 7.0 prerequisite packages

If you use RHEL7.0, apply the RPM packages below after a default installation of the OS.

- glibc-2.17-55.el7.i686.rpm or later
- tcsh-6.18.01-7.el7.x86_64.rpm or later

- net-tools-2.0-0.17.20131004git.el7.x86_64.rpm or later
- perl-5.16.3-283.el7.x86_64.rpm or later
- net-snmp-5.7.2-18.el7.x86_64.rpm or later
- net-snmp-agent-libs-5.7.2-18.el7.x86_64.rpm or later
- net-snmp-devel-5.7.2-18.el7.x86_64.rpm or later
- net-snmp-libs-5.7.2-18.el7.x86_64.rpm or later
- net-snmp-utils-5.7.2-18.el7.x86_64.rpm or later

Red Hat Enterprise Linux (RHEL) 6.5 prerequisite libraries

The following library was added as a prerequisite library for RHEL6.5. Apply this patch if you use RHEL6.5.

- upstart-0.6.5-13.el6_5.3.x86_64 or later

Upgrading Hitachi Command Suite products from version 7.6.1 or earlier

If following products are installed, upgrade them to 8.0.0 or later.

- Device Manager
- Tiered Storage Manager
- Replication Manager
- Tuning Manager
- Compute Systems Manager
- Global Link Manager

Prerequisite programs

Refer to "System Requirements for the Management Server" in the *Hitachi Command Suite Replication Manager Configuration Guide*.

Memory and disk space requirements

Management server

Refer to "System Requirements for the management server" in the *Hitachi Command Suite Replication Manager Configuration Guide*.

Management client

Refer to "System requirements for the management client" in the *Hitachi Command Suite Replication Manager Configuration Guide*.

In addition: note the minimum memory requirements for the management client are now at least 512 MB for both Windows and Linux.

Resolved problems

From 8.1.2-00 to 8.1.2-03

	Description	Details	
1	When a saved workflow exists, even if you upgrade Replication Manager and then attempt to edit the saved workflow in the Workflows subwindow, the unexpected error (KAVN00590-E) no longer occurs and the attempt succeeds.	Replication Manager	All
2	<p>During execution of the hcmdssrv /start command to start Hitachi Command Suite services, even if OS resources are temporarily exhausted, Hitachi Command Suite services no longer remain in an incomplete startup state, and the symptom whereby Hitachi Command Suite products do not behave correctly because of an Internal Server Error or other reasons no longer occurs. In addition, execution of the hcmdssrv /stop command to stop Hitachi Command Suite services no longer ends with the error message KAPM06445-E.</p> <p>Note: The commands indicated are for Windows and versions of Replication Manager earlier than 8.0.0. If the OS of the host is UNIX or the version of Replication Manager is 8.0.0 or later, substitute the start or stop command for Hitachi Command Suite with the command corresponding to the OS and version of Replication Manager that you are using.</p> <p>Attempting to start or stop Hitachi Command Suite services from the Windows Start menu results in the same problem as when using the commands above.</p>	Replication Manager	All

From 8.1.1-00 to 8.1.2-00

	Description	Details	
1	When a user who does not belong to the All Resources group can refer to more than 1,000 alert histories, if the user clicks Alerts in the Explorer menu, the progress bar no longer continues to be displayed and the alert list now appears.	Replication Manager	All
2	In the Navigation Area of the Report Area of the Pair Configurations view, if you expand the pull-down list of configuration definition files when the list contains a copy pair in a cascade configuration, the KAVN00209-E message is no longer displayed.	Replication Manager	All
3	The primary volume of a Copy-on-Write Snapshot pair is no longer incorrectly displayed as a volume not in the copy pair.	Replication Manager	All
4	The online Help no longer has cross-site scripting vulnerabilities.	Replication Manager	All

5	Even if a copy group is part of a 3DC configuration, the copy group name link on the My Copy Groups page no longer directs the user to an incorrect copy group information page.	Replication Manager	All
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Known problems

Deleting a copy pair associated with remote paths

Execution of the **Delete Related Pairs** function to delete a copy pair associated with remote paths might end with the message KAVN00590-E or KAVN00558-E (RPM-00822).

Conditions

- If an operation ends with the message KAVN00590-E

This problem occurs when all of the following conditions are met:

- (1) A copy group that contains a remote copy pair exists.
- (2) The pair management server managing a copy group in (1) is in a redundant configuration.
- (3) From the **Remote Paths** tab in the Storage System view, you select the remote path that the copy pair in (1) is using, and then click **Delete Related Pairs**.
- (4) In the Delete Related Pairs dialog box, you click **Confirm** without selecting the **Do not delete the configuration definitions** option.

- If an operation ends with the message KAVN00558-E (RPM-00822)

This problem occurs when all of the following conditions are met:

- (1) A copy group that contains a remote copy pair exists.
- (2) In a copy topology that contains a copy group in (1), a copy group exists for which the number of copy pairs is different.
- (3) From the **Remote Paths** tab in the Storage System view, you select the remote path that the copy pair in (1) is using, and then click **Delete Related Pairs**.
- (4) In the Delete Related Pairs dialog box, you click **Confirm** without selecting the **Do not delete the configuration definitions** option.

Recovery

Delete the copy groups that meet the conditions of occurrence above by using the Pair Configuration Wizard.

After that, execute **Delete Related Pairs** again.

Temporary Solution

Perform the above recovery action.

Performing operations on copy pairs if a pair management server is equipped with two or more network interface cards (NIC)

If a pair management server is equipped with two or more network interface cards, execution of a task that performs operations on copy pairs may end with the error RPM-03327, RPM-03328, or RPM-03329.

Conditions

This problem occurs when all of the following conditions are met:

- (1) The pair management server managing the primary volumes is different from the pair management server managing the secondary volumes.
- (2) Either pair management server in (1) has two or more NICs (network interface cards) installed.
- (3) The OS of the pair management server in (2) is Windows Server 2012 or Windows Server 2012 R2.
- (4) In the configuration definition file in the pair management server in (1), in `ip_address` of the `HORCM_MON` parameter or the `HORCM_INST` parameter, the pair management server in (3) is specified by its host name.

Note: When you perform the operation below from Replication Manager, the configuration definition file described in (4) is created. In the **Create Group** dialog box or **Add Node** dialog box of the Pair Configuration Wizard, you set the host name to **Host name/IP address used in communications between server instances of *primary volume server and *secondary volume server.**

- (5) Any of the tasks below, which perform operations on copy pairs, is executed.
 - modify file + create
 - create

In addition, if you change the configuration on the pair management server so that the result of name resolution performed by the OS changes, similar symptoms may occur with respect to the execution of all tasks that perform operations on copy pairs.

Recovery

In `ip_address` of the `HORCM_MON` parameter and the `HORCM_INST` parameter in the configuration definition file generated by Replication Manager, change manually the host name into the IP address of the subnet you are using. (The host name of the local host is specified for the `ip_address` part of the `HORCM_MON` parameter, and the host name of the

remote host is specified for the ip_address part of the HORCM_INST parameter.)

Configuration definition files that need to be edited:

- The configuration definition file generated on the pair management server that manages the primary volumes
- The configuration definition file generated on the pair management server that manages the secondary volumes

Configuration definition file storage location:

The configuration definition file is stored in the folder or the directory specified in the `server.agent.rm.horcmSource` property of the `server.properties` file of the Device Manager agent.

The default location of the configuration definition file is as follows.

In Windows:

The system folder indicated by the `%WINDIR%` environment variable

In UNIX:

The `/etc` directory

Configuration definition file name: `horcmXX.conf`

Where **XX** is the value specified in **instance** of ***primary volume server** and ***secondary volume server**, in the **Create Group** or **Add Node** dialog box of the Pair Configuration wizard.

Example of editing the configuration definition file

```
# Edited by dvmraidinit on Mon Nov 17 11:37:58 2014
# Created by dvmraidinit on Wed Oct 15 14:32:39 2014

HORCM_MON
#ip_address      service      poll(10ms)
timeout(10ms)
HostA          10100          1000          3000

(...)

HORCM_INST
#dev_group      ip_address      service
TestGroup      HostB          10200
```


For **HostA**, edit the host name to change it to the IP address of the local host.

For **HostB**, edit the host name to change it to the IP address of the remote host.

Precautions

After making the manual edits described above, if you perform operations that meet both of the conditions below, the configuration definition file is regenerated, and the manually edited IP address is reset to the host name.

- (1) Only one copy group is defined in the configuration definition file.
- (2) In the configuration definition wizard, you attempt to change all copy pairs included in the copy group in (1) at one time.

In such a case, set the IP address manually again after the operation. In addition, even if the configuration definition file meets the condition in (1), you can avoid regeneration of the configuration definition file by not changing all of the copy pairs at one time but dividing the operation into multiple operations.

Creating a copy pair for a global-active device

If you use Replication Manager to create a copy pair for a global-active device, the following windows might not display the most recent information for a volume used for the copy pair:

- Replication Manager GUI: The attributes displayed in the volume attribute column in the list of volumes
- Device Manager CLI: The vEmulation, vSSID, vLUSE, and vCVS attribute of a VLDEV instance, and the guardMode attribute of an LDEV instance
- Device Manager GUI: The attributes displayed in the volume attribute column in the list of volumes
- Tiered Storage Manager CLI: The guardMode attribute of an LDEV instance.

Conditions

This problem occurs when both of the following conditions are met:

- (1) Different Device Manager instances manage the primary storage system and the secondary storage system that make up a copy pair of a global-active device.
- (2) Replication Manager registers both Device Manager instances in (1) as information sources.

Recovery

Refresh the storage system that does not have the most recent information.

Thin Image Snapshot Group names

When creating a Thin Image snapshot group, you can use the following characters in the name:

0-9 A-Z a-z : - . @ _ , and a space character

If a snapshot group name contains a character that is not specified in the list above, pair operations cannot be performed for that snapshot group. In addition, the name of that snapshot group cannot be displayed.

Note: A snapshot group name cannot contain spaces before or after the name.

Copy pair operation options

In an environment where CCI manages mainframe volumes, for a copy group that does not support "quick" mode (the **Quick Split**, **Quick Resync**, and **Quick Restore** options for the copy pair operation), if you execute a task for the copy pair operation when "quick" mode is not specified in Replication Manager, the executed task might fail, and the KAVN00455-E message or the KAVN00456-E message might be output.

Should this problem occur, choose the appropriate solution and execute the task again:

- When the CCI environment variable (see table below) for the given operation is set to **QUICK**, change it to **NORMAL**.
- When the CCI environment variable for the given operation is not set and "quick" mode is specified in the storage system settings, disable the "quick" mode.

The table below shows copy pair operations and the associated CCI environment variable. For more details, see the CCI documentation. For details about the storage system settings, see the manual for the corresponding storage system.

The copy pair operation in Replication Manager		CCI environment variable
Operation	Option	
create	Quick Split	HORCC_SPLT
split	Quick Split	HORCC_SPLT
resync	Quick Resync	HORCC_RSYN

restore	Quick Restore	HORCC_REST
---------	---------------	------------

Replacing secondary volumes of TrueCopy Synchronous or Universal Replicator in a 3DC multi-target configuration (open systems)

To replace all secondary volumes included in a TrueCopy Synchronous or Universal Replicator copy pair, launch the Pair Configuration Wizard more than once to replace the secondary volumes according to the following procedure:

1. Generate and execute tasks to partly replace the secondary volumes of the TrueCopy Synchronous or Universal Replicator copy pair.
2. Generate and execute tasks for the secondary volumes not replaced in step (1).

If you use the Pair Configuration Wizard only once to generate and execute the replacement tasks for all of the secondary volumes in the TrueCopy Synchronous or Universal Replicator copy pair, task execution might fail.

Site filter conditions in Pair Configuration Wizard

This applies to the Select Volume box in the Candidate List on the Pair Association page. Under the following conditions, the Site and Storage System drop-down lists become empty, and you cannot select candidate volumes:

- (1) In Shared Views, you create a site, and then register a storage system in the site.
- (2) In the 2. Pair Association page of Pair Configuration Wizard, you perform the following operations in the following order:
 - i. You create a remote copy pair group.
 - ii. In Volume Type drop-down list, you select a secondary volume.
 - iii. In Site drop-down list, you select a site for which is registered only a storage system that cannot be selected as a secondary volume candidate for the combination of the specified primary volume and copy type. (For example, the license for the selected copy type is not registered.)

To recover from this condition, perform the following on the **Criteria** tab of the Candidate List pane:

- (1) Click **Clear** to clear the filter condition.
- (2) Specify the filter conditions for the desired candidate volume.

Adding command devices

When using the Add Command Devices Wizard, even though you cannot specify a pair volume as a command device, the Candidate Devices might show primary volumes of Copy-on-Write Snapshot copy pairs that are configured of V-VOLs without LUNs.

If you select such a volume and attempt to add a command device, an error occurs and the operation fails.

Execution of multiple tasks for the same copy pair

If execution of multiple tasks for the same copy pair overlaps, some tasks may either remain in the executing status, or fail with an RPM-00506, KAVN00454-E, or KAVN00456-E message. The symptom depends on the types and combinations of the overlapping tasks.

Note: Even if the GUI shows that the tasks are in executing status, the processes defined in the tasks do not freeze. The processes end successfully or unsuccessfully depending on the execution order.

Conditions

This can occur when both of the following conditions are met:

- (1) Execution of multiple tasks on the same copy pair.
- (2) A copy pair status-changing task is included in the tasks described in (1). (This behavior does not occur among copy pair-setting tasks because the copy pair is reserved in one of the tasks.)

Recovery

- When a task freeze in execution status:
Restart the Hitachi Command Suite Common Component service. The task in execution status will unconditionally shift to failure status. If you need to execute the task, make sure the execution does not overlap with other tasks.
- When a task fails:
If you need to execute the task, edit the failed task so that execution does not overlap with other tasks, and then re-execute it.

Pair relationships displayed for mainframe volumes in the Storage System view

Under the following conditions, *n/a* might be displayed in the LDEV and Storage System columns of the Pair Relationship display in the Storage System view:

- (1) Business Continuity Manager is registered in Replication Manager as an information source.
- (2) The Business Continuity Manager in (1) manages a volume of a storage system that is managed by a local Device Manager.

- (3) In the Storage System view, you select a volume in a copy pair that is not managed by the Business Continuity Manager in (1) and then display pair relationships.

Removing and re-registering a Device Manager server as an information source

Do not re-register a Device Manager server as information source for at least 24 hours if the Device Manager server manages a pair management server.

Performing a takeover-recovery (resync) operation

If you execute a takeover-recovery (resync) operation per copy pair, the task might generate the KAVN02841-E (RPM-03351) error. If this error occurs, update the storage system information.

Note: Even if this error is displayed, the operation on the copy pair or copy group completes correctly.

Performing advanced operations

If you perform either of the following operations, a copy group might not appear in the Replication Manager GUI when the operation is complete:

- An advanced operation on a copy group while updating a storage system containing an associated volume using a Device Manager server
- The Refresh Configuration is being executed for a remote Device Manager

If this occurs, update the information for the associated storage system.

Expanding the capacity of a DMLU

Expanding the capacity of a DMLU fails with the KAIC07346 error when both of the following conditions are met:

- (1) The volume you specify for the DMLU meets the following conditions:
 - (a) The volume is a normal volume.
 - (b) The volume was created from a parity group made up of nearline SAS drives in HUS100 series storage.
- (2) From Parity Groups in Add DMLU Capacity Wizard, you select a parity group that is not the one in (1b).

Managing application replicas

n/a is displayed in Execution Type column of Tasks-Task List for tasks that create or restore a replica.

Task execution problems

After editing a task that adds a copy pair to an existing copy group, the execution might fail with the KAVN00469-E (RPM-03327) message.

Conditions under which this can occur

If you are adding the copy pair to a TrueCopy Sync copy group, this behavior occurs when all of the following conditions are met:

- (1) A copy group exists that meets both of the following conditions:
 - The copy type of the copy pair is TrueCopy Sync, and Assign CTG is not set.
 - The copy group contains a non-Simplex copy pair.
- (2) You select the copy group in (1) and start the Pair Configuration Wizard, and then add the copy pair.
- (3) The task created in operation (2) meets either of the following conditions:
 - The task was created by specifying the execution time.
 - Execution of the created task fails.
- (4) From the Task List, you select multiple tasks that include both of the following tasks, and then open the Edit Task dialog box:
 - The task in (3)
 - A task whose operation target is a copy group for which **Assign CTG** is set
- (5) In the Edit Task dialog box opened in (4), while both of the following conditions are met, you click **OK**:
 - You do not select **Modify Pair Configuration File Only (Do not create Pair)**.
 - You do not access the **Pair Setting** tab.
- (6) You execute the task in (3).

If you are adding the copy pair to a ShadowImage, Copy-on-Write Snapshot, or Thin Image copy group, this behavior occurs when all of the following conditions are met:

- (1) A copy group exists that meets both of the following conditions:
 - The copy type is one of following, and **Assign CTG for At-Time Split** is not set:
ShadowImage, Copy-on-Write Snapshot, Thin Image
 - The copy group contains a non-Simplex copy pair.

- (2) You select the copy group in (1) and start the Pair Configuration Wizard, and then add the copy pair.
- (3) The task created in operation (2) meets either of the following conditions:
 - The task was created by specifying the execution time.
 - Execution of the created task fails.
- (4) You perform any of the following operations from Task List:
 - You select the task in (3) and open the Edit Task dialog box, and then click **OK** without selecting **Modify Pair Configuration File Only (Do not create Pair)** and without accessing the **Pair Setting** tab.
 - You select multiple tasks that include the task in (3) and open the Edit Task dialog box, and then click **OK** without selecting **Modify Pair Configuration File Only (Do not create Pair)** and without accessing the **Pair Setting** tab.
 - You select multiple tasks that include the task in (3) and a task whose operation target is a copy group for which **Assign CTG for At-Time Split** is set, and open the Edit Task dialog box, and then click **OK** without selecting **Modify Pair Configuration File Only (Do not create Pair)** and without accessing the **Pair Setting** tab.
- (5) You execute the task in (3).

Recovery

If the Pair Configurations View does not display the target copy pair to be added, execute **Refresh Configuration**. If the local Device Manager manages the operation-target resource, refresh the storage system in Device Manager. Next, refresh the storage system to apply the latest configuration information to Replication Manager.

If the copy pair to be added has the Simplex status, execute the create operation for the copy pair by using Change Pair Status Wizard.

Temporary Solutions

When adding a copy pair to a TrueCopy Sync copy group, do not simultaneously edit multiple tasks that include both the following tasks:

- A task for which **Assign CTG** is not set in Pair Operation options
- A task for which **Assign CTG** is set in Pair Operation options

When adding a copy pair to a ShadowImage, Copy-on-Write Snapshot, or Thin Image copy group, do not simultaneously edit multiple tasks that include both the following tasks:

- A task for which **Assign CTG for At-Time Split** is not set in the Pair Operation options
- A task for which **Assign CTG for At-Time Split** is set in Pair Operation options

Also, if you select a task for which **Assign CTG for At-Time Split** is not set and then open the Edit Task dialog box, be sure to access the **Pair Setting** tab before you click **OK** in the Edit Task dialog box.

Changing WWN or iSCSI Name for a pair management server

If you change WWN or iSCSI Name for a pair management server, the server name might not be displayed in the Server Name drop-down list displayed while creating a group.

Conditions

This problem occurs when all of the following conditions are met:

- (1) From the Explorer menu in Shared Views - Sites, for Pair Configurations for one of the sites, you register a pair management server.
- (2) You change the WWN or iSCSI Name for the pair management server registered in (1).
- (3) You select a pair management server as follows:
 - a) In the Pair Configuration Wizard, you display the **3. Group Management** page.
 - b) You open the Create Group dialog box and select a pair management server.
 - c) You select a site from the Server Name drop-down list for which the pair management server in (1) is registered.

Recovery

Delete the pair management server for which you changed the value of WWN or iSCSI Name, and then register the pair management server on the same site again.

If the pair management server is being managed by a remote instance of Device Manager, execute a Refresh Configuration operation for the remote instance of Device Manager that is managing the pair management server. Then register the pair management server again.

Temporary Solution

None

Installation precautions

None

Upgrade precautions

Upgrade Precautions	Applied products	Applied OS																				
<p>Upgrade installation of the Application Agent</p> <p><u>Note the following when you do an upgrade installation from Application Agent 8.1.0:</u></p> <p><u>In Application Agent 8.1.1 and later, you can now specify the upper limit (response time-out time), in units of minutes, for the interval from when Protection Manager service receives a request until a response is sent. The purpose is to stop processing if the Protection Manager service fails to respond unexpectedly, and to report the status to the server that made the request. For details, see the <i>Hitachi Command Suite Replication Manager Application Agent CLI User Guide</i>.</u></p> <p><u>To enable the requesting server to detect the time-out on the destination server, specify the parameters to meet the following condition:</u></p> <ul style="list-style-type: none"> <u>The value of the SERVICE_TIMEOUT parameter on the source server must be greater than the value of the SERVICE_TIMEOUT parameter on the destination server.</u> <p><u>We recommend that you set the RESPONSE_TIMEOUT parameter on the destination server after the upgrade installation. We further recommend that the value of RESPONSE_TIMEOUT be approximately 90% of the value of the SERVICE_TIMEOUT parameter.</u></p>	<p><u>Application Agent</u></p>	<p>Windows</p>																				
<p>About the time required for an upgrade installation</p> <p>When upgrading from v7.6.1 or earlier to v8.0.0 or later, the process may take a long time to move the database from 32-bit to 64-bit depending on database size. The following shows a configuration that can take longer than three hours.</p> <p>Installation environment:</p> <p>CPU: vCPU * 2 (4 GHz)</p> <p>HDD: SATA drive 7200rpm 1 TB</p> <p>The estimated time for installation (upgrade from v7.6.1 to v8.0.0):</p> <p>(1) The estimated time for the first installation of products.</p> <p>The estimate is the total of the Backup-time of each Hitachi Command Suite product already installed shown in Table 1 or Table 2, plus the Import-time of the installing product and etc. in the tables. (The first upgrade installation takes longer because every installed Hitachi Command Suite products is backed up.)</p> <p>(2) The estimated time for products installed after (1).</p> <p>The estimate for the installation is the total of the Import-time of the products shown in Table1 and Table2, and etc. in the tables.</p> <p>Table1: Estimated installation time in minutes (Windows)</p> <table border="1" data-bbox="293 1549 1036 1799"> <thead> <tr> <th>Product name</th> <th>Composition</th> <th>Backup</th> <th>Import</th> <th>etc.</th> </tr> </thead> <tbody> <tr> <td>Device Manager</td> <td>Volumes: 128,000</td> <td>11</td> <td>35</td> <td>49</td> </tr> <tr> <td>Tiered Storage Manager</td> <td>Paths: 512,000</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Replication Manager</td> <td>Hosts: 1,000</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Product name	Composition	Backup	Import	etc.	Device Manager	Volumes: 128,000	11	35	49	Tiered Storage Manager	Paths: 512,000				Replication Manager	Hosts: 1,000				<p>Replication Manager server</p>	<p>All</p>
Product name	Composition	Backup	Import	etc.																		
Device Manager	Volumes: 128,000	11	35	49																		
Tiered Storage Manager	Paths: 512,000																					
Replication Manager	Hosts: 1,000																					

Tuning Manager		14	9	48			
Global Link Manager	Paths/hosts: 1,000 Hosts: 60 Pathstatuslog: 4GB (total capacity)	2	7	43			
Compute Systems Manager	Chassis: 200 Blades: 1,000 Hosts: 1,000	2	2	21			

Table2: Estimated installation time in minutes (Linux)

Product name	Composition	Backup	Import	etc.
Device Manager	Volumes: 128,000	4	36	35
Tiered Storage Manager	Paths: 512,000			
Replication Manager	Hosts: 1,000			
Tuning Manager		3	7	17

Usage precautions

Creating COW pools for VSP

To register pool volumes of different drive types when you are adding pools or editing existing pools, the micro version of the Hitachi Virtual Storage Platform storage system must be 70-01-62-XX/XX or later.

If you attempt to register pool volumes of different drive types when the micro version is earlier than 70-01-62-XX/XX, the attempt to add or edit pools fails with the message below.

(1) Adding pools

```
KAVN00491-E An attempt to add a pool has failed.
```

```
03005 058473(W) An error occurred when setting the Pool.
```

```
Check the error message of the logical volume(s) in the Pool.
```

03005 078015(W) The operation cannot be executed, because RAID levels of the specified logical volumes do not match. Check the specified logical volumes, then retry the operation.

(2) Editing pools

KAVN00492-E An attempt to edit a pool has failed.

03005 058473(W) An error occurred when setting the Pool. Check the error message of the logical volume(s) in the Pool.

03005 078015(W) The operation cannot be executed, because RAID levels of the specified logical volumes do not match. Check the specified logical volumes, then retry the operation.

Creating COW pools USP V/VM

To register 513 or more pool volumes to a pool when you are adding pools or editing existing pools, the micro version of the Hitachi Universal Storage Platform V/VM storage system must be 60-03-XX-XX/XX or later.

If you attempt to register 513 or more pool volumes when the micro version is earlier than 60-03-XX-XX/XX, the attempt to add or edit pools fails with the message below.

(1) Adding pools

KAVN00491-E An attempt to add a pool has failed.

3005 6036 (E2) An error occurred during SVP processing. If this problem persists, please call the HSSC.

(2) Editing pools

KAVN00492-E An attempt to edit a pool has failed.

3005 6036 (E2) An error occurred during SVP processing. If this problem persists, please call the HSSC.

User authentication when using CCI 01-32-03/xx or later

When both of the following conditions are met, user authentication for the storage system is required in addition to user authentication for the virtual storage machine:

- (1) CCI 01-32-03/xx or later is used.
- (2) SSL/TLS is not used between the Device Manager server and the Device Manager agent.

If both of the above conditions are met and if user authentication for the storage system is not performed, an operation to add a pair that uses virtual IDs might fail.

Creating a copy pair for a global-active device

This is a cautionary note on usage related to the secondary volume used when creating a copy pair for a global-active device.

If a virtual storage machine uses a virtual serial number that is the same as the physical serial number of a physical storage system, and you use that virtual storage machine as the virtual storage machine of the secondary site, all of the following conditions must be met:

- (1) The virtual LDEV IDs of all volumes in the virtual storage machine that contains the secondary volume must not include the same LDEV ID as the virtual LDEV ID of the primary volume. If you use a command such as the **raidcom** command to deprive the volume, which uses the same virtual LDEV ID as the primary volume, of its virtual ID, you can create the configuration.
- (2) If the physical LDEV ID of the secondary volume is the same as the virtual LDEV ID of the primary volume, both of the following conditions must be met:
 - (a) The physical SSID of the secondary volume must correspond to the virtual SSID of the primary volume.
 - (b) The physical CVS information of the secondary volume must correspond to the virtual CVS information of the primary volume.

If the above conditions are not met, executing a task fails with the following error:

```
An error occurred during command execution in the Device  
Manager agent. [RPM-03327]
```

Remote copy between DKC of VSP G1000 and DKC of other storage system using virtual ID

The following task types are not available for remote copy between DKC of VSP G1000 and DKC of other storage system.

- If the P-VOL is a VSP G1000 DKC
takeover-recovery(recreate)
- If the S-VOL is a VSP G1000 DKC
create
modify file(create) (If you add a pair to an existing copy group)

We recommend that you do not delete a copy pair whose relationship between P-VOL and S-VOL were reversed by swap operation. If you delete such copy pair and re-create the copy pair, data stored in the volume cannot be kept.

Execution modes for copy pair operation tasks

If you execute a copy pair operation task without specifying quick mode, the execution mode that is used for the task might be different in versions 8 and earlier.

Applicable copy pair operation tasks

- Tasks that execute paircreate and pairsplit simultaneously
- Tasks that split, resync, or restore a copy pair

In version 8:

A copy pair operation task is executed in normal mode.

In versions earlier than 8:

The copy pair operation mode for RAID Manager is set.

If the copy pair operation mode for RAID Manager is not set, the copy pair operation mode for the storage system is set.

User scripts specified when executing backup commands for Application Agent or when creating a database replica

In a configuration that contains multiple database servers and one backup server, if you simultaneously execute backup operations or replication creation operations and the operations specify execution of a user script from multiple database servers, the user scripts are not executed in parallel. The user scripts are executed in order when the backup server receives a request.

Using Internet Explorer 11.0

When you click a button or anchor on the screen to open a new tab or new window, an extra blank window or transitional window might be displayed at the same time. In such a case, please close the unnecessary window.

If such problems occur repeatedly, create a new Windows user account, and then use the new user account to operate the browser.

Creating a 4x4 Universal Replicator copy group for a mainframe system

When creating a 4x4 Universal Replicator copy group for a mainframe system, certain configurations have conditions for specifying the EXCTG ID. If Replication Manager is used to create such a configuration, the specified EXCTG ID is not checked.

For details about EXCTG ID specifications, see the Business Continuity Manager release notes.

Maintaining copy group consistency

For copy groups with consistency maintained between open systems and mainframe systems, you cannot perform the following copy pair status change operations:

Open

- takeover
- swap
- takeover-recovery (resync)
- takeover-recovery (recreate)

Mainframe

- restore

In addition: if you use a tool other than Replication Manager to perform a swap operation or takeover (Reverse Resync) operation for either only the copy group on the open system or only the copy group on the mainframe system, you cannot use Replication Manager to manage the relevant copy group.

InPrivate Browsing of Internet Explorer 9.0

During InPrivate Browsing Mode, the browsing history might remain in the browser.

VMware ESXi 5.x

The following configuration is not supported: Using a software FCoE adapter and FCoE to connect primary or secondary volumes to a database server, backup server, and pair management server on a guest OS running in VMware ESXi 5.x.

Setting up resource groups

Before using the Change Pair Status Wizard, add the user to both of the resource groups listed below.

Also, before using Pair Configuration Wizard, add the user to both of the following resource groups for all the copy groups included in the copy topology that is the target of the operation:

- (1) Resource groups set up for all the storage systems configured with the copy groups that are the target of the operation.
- (2) Resource groups set up for all the pair management servers managing the copy groups that are the target of the operation.

CCI installation path for database servers and backup servers

If CCI is installed on a non-system drive, you must change the `INSTALL_PATH` parameter in the CCI linkage definition file (`DEFAULT.dat`) or change the CCI Installation Path setting in the Application Agent Settings window.

In addition, if you execute a VSS backup or manage a replica of an Exchange Server, you must set the system environment variable `VSHTCRMENVF` on the backup server. For details, see the explanation about the settings necessary for using VSS in the *Hitachi Command Suite Replication Manager Application Agent CLI User Guide*.

Editing the journal option setting

If the version of remote Device Manager is 7.2.0 to 7.3.0, when an attempt is made to edit the journal option setting of a Virtual Storage Platform journal group, it fails with the following error messages:

```
An attempt to perform journal pool processing has failed.  
[KAVN00589-E]
```

```
An attempt to call the Device Manager server function has  
failed. (Device Manager server's error code: KAIC05000, Device  
Manager server's error message: An unidentified error has  
occurred.) [RPM-01004]
```

To edit the journal option setting, upgrade remote Device Manager to 7.3.1 or later.

GetTasks command

When the **GetTasks** command displays the task information on copy groups defined by device groups, a hyphen (-) is displayed for the Host (Primary).

Shortcuts after installation and removal (in Windows)

After an installation or removal, shortcut folder named "programs" might be incorrectly created under the Windows Start menu. This symptom is temporary, and this shortcut folder will no longer appear after you log off and log on to Windows.

Upgrade of Hitachi Command Suite from 7.4.1 or earlier (in Windows)

In an environment where Host Data Collector (for Windows) v7.4.1 or earlier is installed, a Fatal Application Error dialog box might appear during an upgrade installation of Hitachi Command Suite. If this dialog box appears, click **OK** to ignore it and continue the upgrade installation. Even if this dialog box appears, there will be no problem in further Hitachi Command Suite operations.

Documentation

Available documents

Document name	Document number	Issue date
Hitachi Command Suite Installation and Configuration Guide	MK-90HC173-18	February 2015
Hitachi Command Suite Messages	MK-90HC178-18	February 2015
Hitachi Command Suite Replication Manager Configuration Guide	MK-98HC151-22	February 2015
Hitachi Command Suite Replication Manager User Guide	MK-99HC166-22	February 2015
Hitachi Command Suite Replication Manager Application Agent CLI Reference Guide	MK-90HC181-14	February 2015
Hitachi Command Suite Replication Manager Application Agent CLI User Guide	MK-90HC189-15	February 2015

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