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Hitachi Data Ingestor

6.4.2

Backup Restore Features Supplement for Hitachi Data Protection Suite

The purpose of this document is to supplement the documentation for Hitachi Data Protection Suite (powered by CommVault(R)), by explaining how to set up the environment needed to use Data Protection Suite with Backup Restore and by summarizing the troubleshooting procedures.

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Preface

The purpose of this document is to supplement the documentation for Hitachi Data Protection Suite (powered by CommVault(R)[#]), by explaining how to set up the environment needed to use Data Protection Suite with Backup Restore and by summarizing the troubleshooting procedures. In this document, Hitachi Data Protection Suite (powered by CommVault(R)) is abbreviated as *Data Protection Suite*. The names used for windows, menus, buttons, and other objects might differ depending on the OS, or on the version and language of Hitachi Data Protection Suite (powered by CommVault(R)).

For details on the Data Protection Suite functions, see the Data Protection Suite documentation.

#:

This Suite -V6.1 (SP3)- incorporates rebranded CommVault products:

- Hitachi Backup and Recovery (CommVault Galaxy)
- Hitachi Quick Recovery (CommVault QuickRecovery)
- Hitachi Data Migrator (CommVault DataMigrator)
- Hitachi Data Archiver (CommVault DataArchiver)
- Hitachi Data Protection Monitor (CommVault QNET)

- ☐ Product version
- ☐ Release notes
- ☐ Abbreviation conventions
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- Comments

Product version

This document revision applies to Hitachi Data Ingestor version 4.2.1 or later.

Release notes

Read the release notes before installing and using this product. They may contain requirements or restrictions that are not fully described in this document or updates or corrections to this document. Release notes are available on Hitachi Vantara Support Connect: https://knowledge.hitachivantara.com/Documents.

Abbreviation conventions

This document uses the following abbreviations for product names:

Abbreviation	Full name or meaning
Data Protection Suite	A generic name for the following: • Hitachi Data Protection Suite, powered by CommVault(R)
File Services Manager	A generic name for the following: • Configuration Manager • Hitachi File Services Manager

Document conventions

This document uses the following typographic conventions:

Convention	Description
Bold	Indicates text on a window, other than the window title, including menus, menu options, buttons, fields, and labels. Example: Click **OK**.
Italic	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: `copy` *source-file target-file* *Note:* Angled brackets (< >) are also used to indicate variables.
`screen/code`	Indicates text that is displayed on screen or entered by the user. Example: `# pairdisplay -g oradb`
`...`	In code examples, ellipses (`...`) indicate that some code has been removed for the sake of clarity.

Accessing product documentation

Product user documentation is available on Hitachi Vantara Support Connect: https://knowledge.hitachivantara.com/Documents. Check this site for the most current documentation, including important updates that may have been made after the release of the product.

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Thank you!

1

Setting Up the Operating Environment

This chapter provides an overview of the tasks required on the backup servers and media servers in order to use Data Protection Suite to perform backup and restore operations.

- ☐ Tasks necessary for linking with Data Protection Suite
- ☐ Installing Data Protection Suite
- ☐ Setting up the Data Protection Suite environment
- ☐ Setting up NAS Client
- ☐ Setting up the robot and tape drives
- ☐ Creating a storage policy
- ☐ Adding a subclient

Tasks necessary for linking with Data Protection Suite

To use Data Protection Suite to perform backup and restore operations, you must perform the following tasks on the backup servers and media servers:

- Install Data Protection Suite
- Set up the Data Protection Suite environment
- Set up NAS Client
- Set up the robot and tape drives
- Create a storage policy
- Add a subclient

Installing Data Protection Suite

Install Data Protection Suite on backup servers and media servers and enable iDataAgent for Hitachi NAS, which is an optional product.

In addition, to use Data Protection Suite, you must also specify several license settings. To share tape drives with multiple nodes , you need to set the Shared Storage License.

Setting up the Data Protection Suite environment

Adjust the log file size and the number of log file generations according to the disk capacity of the backup servers.

Setting up NAS Client

This section describes how to set up NAS Client.

First-time setup

This subsection describes how to set up NAS Client for the first time.

Note:

If the password for the NDMP server is changed, the password set in NAS Client must also be changed.

1. In CommCell Browser, choose **Client Computers**, **New Client**, **File System**, and then **NAS**. In the Add New Client window, choose **NAS Client**, and in the Add NDMP Server window, set up NAS Client.

   The following table describes the items to be specified in the Add NDMP Server window.

Table 1-1 Items to be specified in the Add NDMP Server window of Data Protection Suite

Item	Description
NDMP Server Hostname	Specify the host name or virtual IP address of a node . Do not specify a fixed IP address. If you do so, a backup or restore operation terminates with an error when the system is operating in the degenerate mode.
NDMP Login	Specify the user name for the NDMP server.
NDMP Password	Specify the password for the NDMP server.
Listen Port	Specify `10000`.

Changing the NAS Client settings

To change the NAS Client settings:

1. In CommCell Browser, choose **Client Computers,** *NDMP-server-host-name*, and then **NAS**, in the NAS Properties window, choose **NDMP Properties**. In the NDMP Server Properties window, change the NAS Client settings.

   The following table describes the items that can be specified in the NDMP Server Properties window.

Table 1-2 Items to be specified in the NDMP Server Properties window of Data Protection Suite

Item	Description
Change Password	Select this check box if the password for the NDMP server has been changed.
NDMP Login	Specify the user name for the NDMP server.
NDMP Password	Specify the password for the NDMP server.
Listen Port	Specify `10000`.

Setting up the robot and tape drives

Set up the devices for storing backed-up data.

To use a tape device connected to a node via a SAN

Display the Control Panel window from CommCell Console, and set up the robot and tape drives in the Library and Drive Configuration window.

To set up the robot and tape drives:

1. Choose **Start** and then **Detect/Config Devices...**. In the Detect Library window, add a robot.
2. Choose **Start**, **NDMP**, and then **Add Drive...**. In the Add NDMP Drive window, add tape drives.

   To use tape drives for each node :

   Register the tape drive on each node under the robot (registered in step 1).

   To share tape drives among multiple nodes :

   Register the tape drive on each node as a different drive. For the tape drive registered on a node , register it under the robot (registered in step 1). For the tape drive registered on the other node , register it as Stand Alone.

   The following table describes the items to be specified in the Add NDMP Drive window.

Table 1-3 Items to be specified in the Add NDMP Drive window of Data Protection Suite

Item	Description
NDMP Server Host Name	Specify the host name or virtual IP address of the NDMP server.
NDMP Server Drive Path	Specify the path of the device file for a tape drive. You can use the `tapelist` command to check the paths of device files.
Drive Serial Number	Specified automatically by clicking the **Populate Serial Number and Model** button.
Drive Vendor/ Model	Specified automatically by clicking the **Populate Serial Number and Model** button.

   Note:

   Specify the other items according to operational requirements.

3. If a tape drive is to be shared by multiple nodes , execute **Create DDS DrivePool...** on the Stand Alone tape drive registered in step 2 to create a DDS Drive Pool under the Master Pool of the robot.
4. Execute **Configure** to configure the robot and tape drives.

To use a tape device connected to the media server

Display the Control Panel window from CommCell Console, and set up the robot and tape drives in the Library and Drive Configuration window.

To set up the robot and tape drives:

1. Choose **Start**, **Detect/Config Devices...**, and then **Detect Library** to add a robot and tape drives.
2. Execute **Configure** to configure the tape device.

Creating a storage policy

To create a storage policy:

1. In CommCell Browser, choose **Policies**, **Storage Policies**, and then choose **New Storage Policy**, the **Create Storage Policy Wizard** window is displayed.
2. Following the Create Storage Policy wizard instructions, specify the necessary information.

   The following table describes the information required by the Create Storage Policy wizard.

Table 1-4 Information required by the Create Storage Policy wizard of Data Protection Suite

Item	Description
Media Agent	Specify the host name or virtual IP address of a node .

Note:

Specify the other items according to operational requirements.

Adding a subclient

To back up and restore data, you (the system administrator) need to configure a subclient.

Specify each of the files and directories to be backed up in **Backup Content Path** of a subclient in the following format:

`/mnt/`*`path-name-of-a-file-or-directory-to-be-backed-up/`*

Note the following when you specify **Backup Content Path**:

- In **Backup Content Path**, you can specify one or more directory paths.

  If a specified directory path is incorrect, only directories that have valid paths are backed up.
- A path specified in **Backup Content Path** cannot exceed 254 bytes, including `/mnt/`.

  The forward slash (`/`) at the end of a path can be omitted.
- Wildcard characters cannot be used.
- The paths specified in **Backup Content Path** cannot include a backslash (`\`), comma (`,`), semicolon (`;`), question mark (`?`), double quotation mark (`"`), vertical bar (`|`), left angle bracket (`<`), and right angle bracket (`>`). A backslash (`\`) cannot be used as an escape character.
- If the name of a directory to be backed up includes space characters, specify an upper-level directory whose name does not include space characters.

- Note that `.history` cannot be specified for a directory name. Also, `.arc`, `.system_gi`, and `.system_reorganize` cannot be specified for the name of a directory immediately under the file system.

You can specify options for each subclient as necessary. You specify options in the **NAS Options** tab of the Advanced Backup Option window.

2

Troubleshooting

This chapter describes how to troubleshoot problems that occur when Data Protection Suite is used to back up or restore data in the Hitachi Data Ingestor.

- ☐ When a backup or restore operation has terminated with an error
- ☐ When a problem has occurred on the connection between the backup server or media server and the NDMP server
- ☐ When a tape drive is in the Offline status

When a backup or restore operation has terminated with an error

The result of a backup operation is displayed in the **Backup Job History of Client: *NDMP-server-host-name* NAS Backupset:*Backupset-name*** tab, the **Job Controller** tab, or the **Event Viewer** tab of CommCell Browser. The result of a restore operation is displayed in the **Job Controller** tab or the **Event Viewer** tab of CommCell Browser.

For details on the Data Protection Suite error messages displayed in the Event Details window of CommCell Console, see the Data Protection Suite documentation.

Note that Data Protection Suite log information is output to the following directory:

Data Protection Suite-installation-directory/Log Files/

Notes:

- In Backup Restore, KAQB14208-W is a Warning level message. In Data Protection Suite, however, the **Severity** level of this message is an error (that is, the **Severity** level is not `Information`).
- If a message without a message ID is output, look for the message in the NDMP server log (`/enas/log/ndmpserver.log`) on the **List of RAS Information** page (for `List of other log files`) of File Services Manager, and then investigate and take appropriate action.

When a problem has occurred on the connection between the backup server or media server and the NDMP server

Use the following procedure to check whether the user name and password registered on the backup server are identical to those registered on the NDMP server and media server.

To check the user name and password:

1. In CommCell Browser, choose **Client Computers**, *NDMP-server-host-name*, and then **NAS**.
2. From the right-click menu, choose **Properties**.
   The NAS Properties window appears.
3. On the **General** tab, click the **NDMP Properties** button.
   The NDMP Server Properties window appears.
4. Click the **Detect** button to check whether the settings are correct.

When a tape drive is in the Offline status

Reset the tape drive to place it in the `Ready` status. For details on resetting the tape drive, see the Data Protection Suite documentation.

A

Notes on Using Data Protection Suite

Note the following when you use Data Protection Suite.

- Notes of Hitachi Data Ingestor
- Notes of Data Protection Suite

Notes of Hitachi Data Ingestor

Note the following of Hitachi Data Ingestor when you use Data Protection Suite:

- Backup Restore manages history information of incremental backups by using the .backupdates file for each file system. Note the following when performing an incremental backup.
  - Make sure that you do not delete, rename, or change the .backupdates file.
  - The .backupdates file must be updated when an incremental backup is performed. Therefore you must mount the file system with the read and write permissions enabled.
  - If space is insufficient on the file system, the history of incremental backups might not be correctly written to the .backupdates file. After the history is not correctly written, an incremental backup might not be performed correctly.

Notes of Data Protection Suite

Note the following when you use Data Protection Suite to perform backup and restore operations:

- The length of a path for data to be backed up must be no more than 1,027 bytes.
- Do not attempt to perform a restore operation for a file system while another restore operation or a backup operation is being performed for the file system, because the file system data will become inconsistent. You can perform multiple backup operations at the same time.
- If the KAQB14208-W message is output while a backup or restore operation is being performed, the Data Protection Suite processing might end with an error. If this message is output again even after retrying the operation, take action according to the information in the message to remove the cause of the error, and then retry the operation.
- When using a SCSI Reservation function, use SCSI3. When SCSI2 is used and if a backup or restore operation is terminated due to an error such as a failover, the tape device might be in a status that prevents it from being used. If this happens, restart the tape device.
- When performing a restore operation by specifying the base point of the target backup data, even if you have disabled **Recursive Restore** in the **NAS options** tab, the data will be restored recursively.
- If the backup fails with the message "Failed to mount media with barcode [*bar-code-number*]" while SCSI Reservation is enabled, Please contact with CommVault Customer Service.

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