A MITEL
PRODUCT
GUIDE

HiPath CAP V3.0/ ComAssistant S

Backup and Restore

Help
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HiPath CAP V3.0/ComAssistant S - Content

1 HiPath Backup and Restore (HBR) - Overview 1-1
1.1 The User Interface of Backup and Restore 1-2
1.1.1 Starting HBR via the Start Page of CAP Management 1-3
1.1.2 The Toolbar of HBR 1-4
1.2 Functionality Overview. 1-5

2 Functionality 2-1
2.1 Home Page 2-2
2.2 Backup 2-4
2.2.1 Archive 2-6
2.2.2 Archive Type: Hard Disk 2-7
2.2.3 Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only 2-8
2.2.4 Archive Type: Backup Server 2-9
2.2.5 Archive Type: Buffer 2-10
2.2.6 Backup Type 2-11
2.2.7 Backup Set of the Type "Data" 2-12
2.2.8 Backup Set of the Type "Logical" 2-13
2.2.9 Functionality in HBR 2-14
2.2.10 Manual Backup 2-15
2.3 Restore 2-16
2.3.1 Restore List 2-18
2.4 Content 2-20
2.4.1 Content List 2-22
2.5 Status 2-24
2.6 History 2-27
2.7 Schedule 2-28
2.8 Administration TAPE (CAP V3.0 Only) 2-32
2.9 Administration Hard Disk 2-34
2.10 Administration Backup Server 2-37
2.11 Log Files 2-41
2.11.1 HBR System Backup Log Files 2-42

3 Step by Step Instructions. 3-1
3.1 Preparing the Backup Process 3-2
3.2 Starting the Backup Process 3-3
3.2.1 Starting Backup Immediately (Manual Backup) 3-4
3.2.2 Starting the Backup Process Automatically via Schedule 3-5
3.3 Preparing the Restore Process 3-6
3.4 Starting the Restore Process. 3-8
3.5 Displaying the Content. 3-9
3.6 Status. 3-10

3.7 History 3-12
3.8 Schedule 3-13
3.9 Guidelines for Using the I/O Buffer 3-14
3.10 Administration - Backup Server. 3-15
3.11 Log Files 3-17

4 Using the Help 4-1
4.1 Layout 4-1
4.2 Overview of Key Functions 4-4
4.3 How to Use the Help 4-5
4.3.1 Open the Help Window 4-5
4.3.2 Searching Within the Help 4-6
4.3.3 Printing Help Topics 4-7
4.3.4 Key Combinations in the Help 4-7

Index Z-1

1 HiPath Backup and Restore (HBR) - Overview

HiPath Backup & Restore (**HBR**) as a component of **HiPath CAP Management** saves configuration data to a backup copy file and restores the data upon request. HiPath Backup & Restore thus ensures that an accurate backup copy of the configuration data will be available in the event of a system fault.

The following topics are covered in this section:

The User Interface of Backup and Restore

Functionality Overview

Related Topics

Functionality

Step by Step Instructions

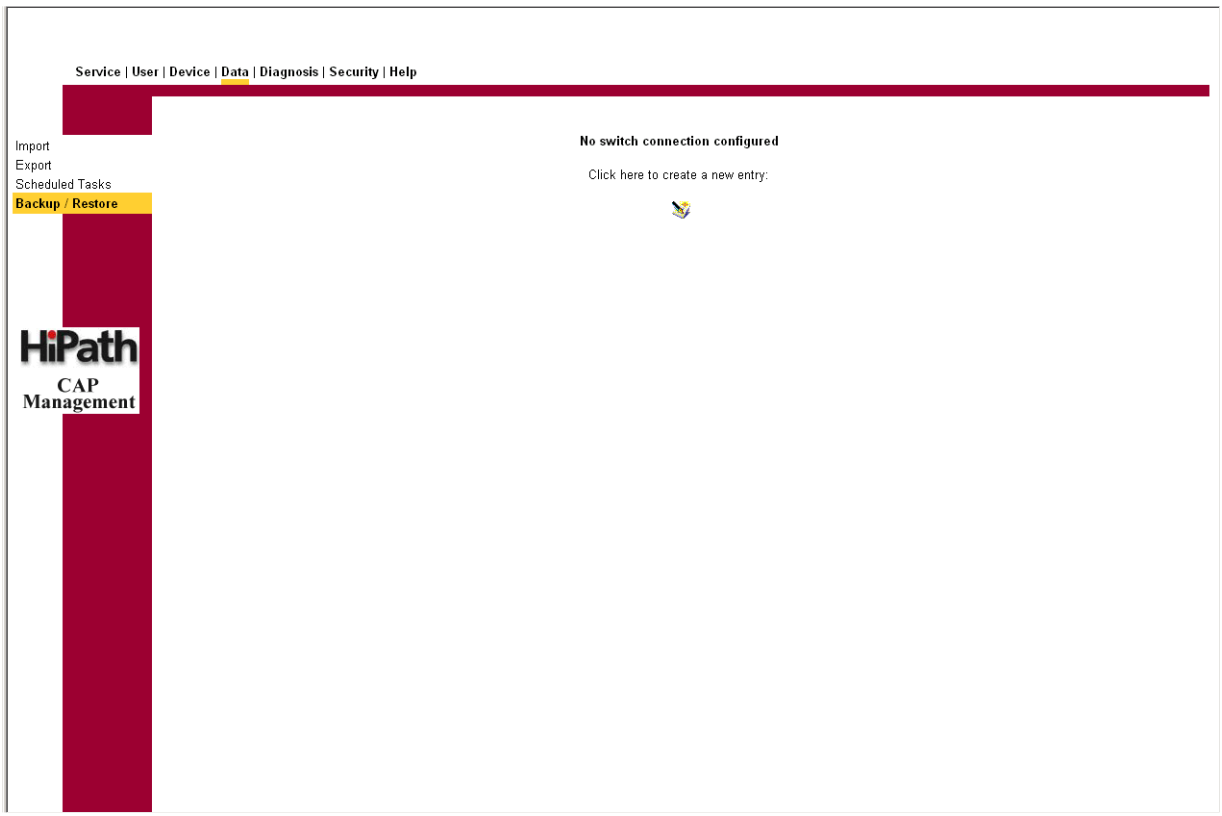
1.1 The User Interface of Backup and Restore

After logging on to the web server the **Start Page** of **HiPath CAP Management** will be displayed.

To start the **Backup & Restore** application, proceed as follows:

1. Click on **Data** in the **Menu Bar** on the **Start Page** of **HiPath CAP Management**.
2. Click on **Backup / Restore** In the **Navigation Area** on the left hand side of the screen.

   The Home Page of **Backup & Restore** will be displayed.



Starting HBR via the Start Page of CAP Management

The Toolbar of HBR

1.1.1 Starting HBR via the Start Page of CAP Management

- **Home Page of Backup & Restore (HBR)**

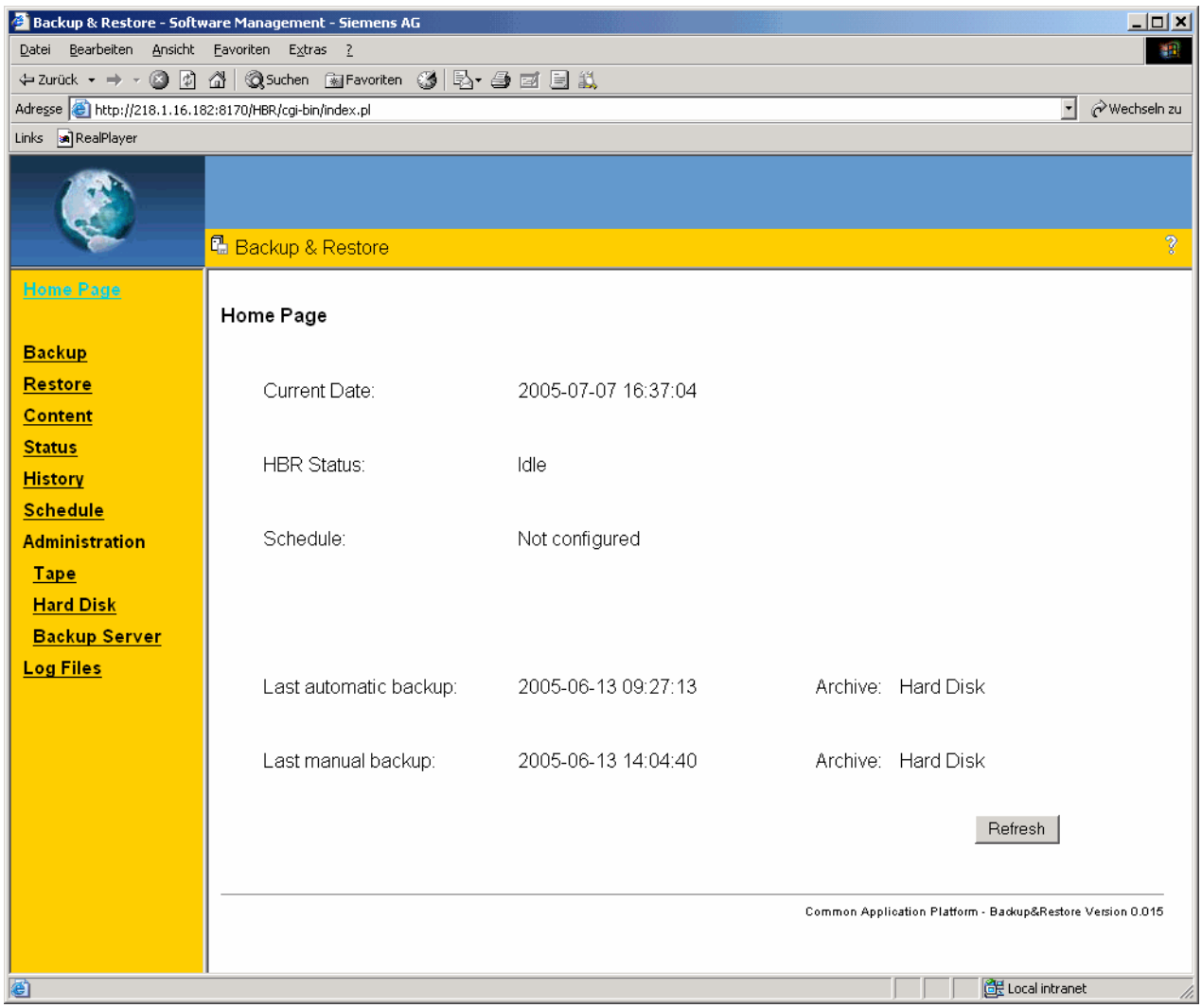
  The Home Page of **Backup & Restore** is the entry-level page for HBR. The home page comprises the the **Navigation Area** on the left hand side, and the **Content Area** on the right hand side.

- **Navigation Area**

  In the **Navigation Area** on the left hand side of the home page you can call up all of the basic **functions** (see Functionality Overview page 1-5) of HBR.

- **Content Area**

  The **Content Area** on the right hand side of the HBR home page displays information on the current **system status** (see Status page 2-24).



1.1.2 The Toolbar of HBR

The toolbar is displayed in all HBR dialogs.

The HBR toolbar contains the following symbols:

Help	Opens the online help and displays the help content topics.

1.2 Functionality Overview

The new browser-oriented user interface will enable you to execute the following **functions**:

- **Backup** (see Backup page 2-4)

  Backs up specifically selected backup units or the entire system and/or configuration data to a local medium (HD or tape) or to a backup server,

- **Restore** (see Restore page 2-16)

  Restores a backup set (consisting of several backup units) from a local medium (HD or tape) or from a backup server,

- **Content** (see Content page 2-20)

  Displays the contents of an archive or of all archives

- **Status display** (see Status page 2-24 and History page 2-27)

- **History**

  Displays the status list of the last 25 backup/restore operations

- **Schedule**

  Defines when and how often an automated backup cycle is executed

- **Administration of external devices**
  - DAT (see Administration TAPE (CAP V3.0 Only) page 2-32),
  - Hard Disk (see Administration Hard Disk page 2-34),
  - Backup Server (see Administration Backup Server page 2-37),

- **Display HBR log files** (see Log Files page 2-41).

HBR Functional Chart

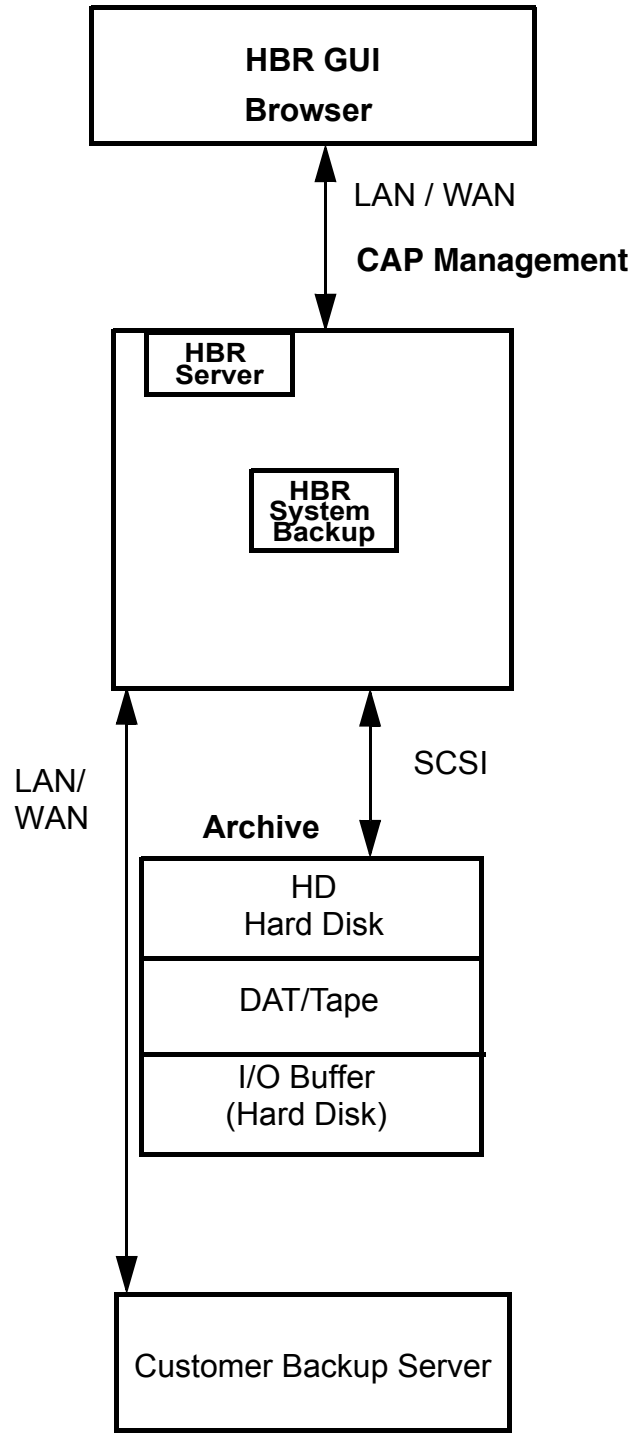


Figure 1-1 HBR Functional Chart: Overview

Definition of Terms*:*

Archive	A logical device, i.e. a mounted directory in a UNIX file system either on the hard disk (HD) or what is referred to as the I/O buffer - a reserved area on the hard disk used for data transfer; or a device that is not mounted such as a DAT/TAPE device, for example, or a remote customer backup server (remote server).
Backup Set	A directory structure that contains software packages (one archive can contain several backup sets). Each backup set in an archive is identified by a three-digit number (within the range 000 to 999).
Package	A group of related files (generally definition files, configuration files and/or important data files which define the configuration of installed software.) This term is mainly used internally within HBR.
Backup Unit	See “package” above. This term is used in place of the term "package" on the user interface and within the interface for the registration service. **It is possible to define which backup unit each application belongs to.**

Table 1-1 Definition of Terms

Individual backup sets can be saved to different storage media called "archives" (see Archive page 2-6) (e.g. hard disk) and are mainly used for restoring a system after a system error has occurred.

The data that is saved in binary format can also be used on an identical hardware platform for updating the software within the same software version (e.g. HiPath). If for instance the contents of the Informix database are saved in binary files and no DBEXPORT is performed, then the data can only be used on an identical hardware platform and within the same software version.

Related Topics

The User Interface of Backup and Restore

Functionality

Step by Step Instructions

2 Functionality

The new browser-oriented HBR user interface consists of the following components and functional areas:

Home Page

Backup

Restore

Content

Status

History

Schedule

Administration TAPE (CAP V3.0 Only)

Administration Hard Disk

Administration Backup Server

Log Files

Related Topics

HiPath Backup and Restore (HBR) - Overview

The User Interface of Backup and Restore

Step by Step Instructions

2.1 Home Page

The **Home Page** of **HiPath Backup & Restore** (HBR) in **HiPath CAP Management** (subsequently referred to as Home Page in this publication) is the entry-level page for HBR. In the navigation area on the left hand side of the home page you can call up all of the basic **functions** (see Functionality Overview page 1-5) of HBR. The content area on the right hand side of the HBR home page displays information on the current **system status** (see Status page 2-24).

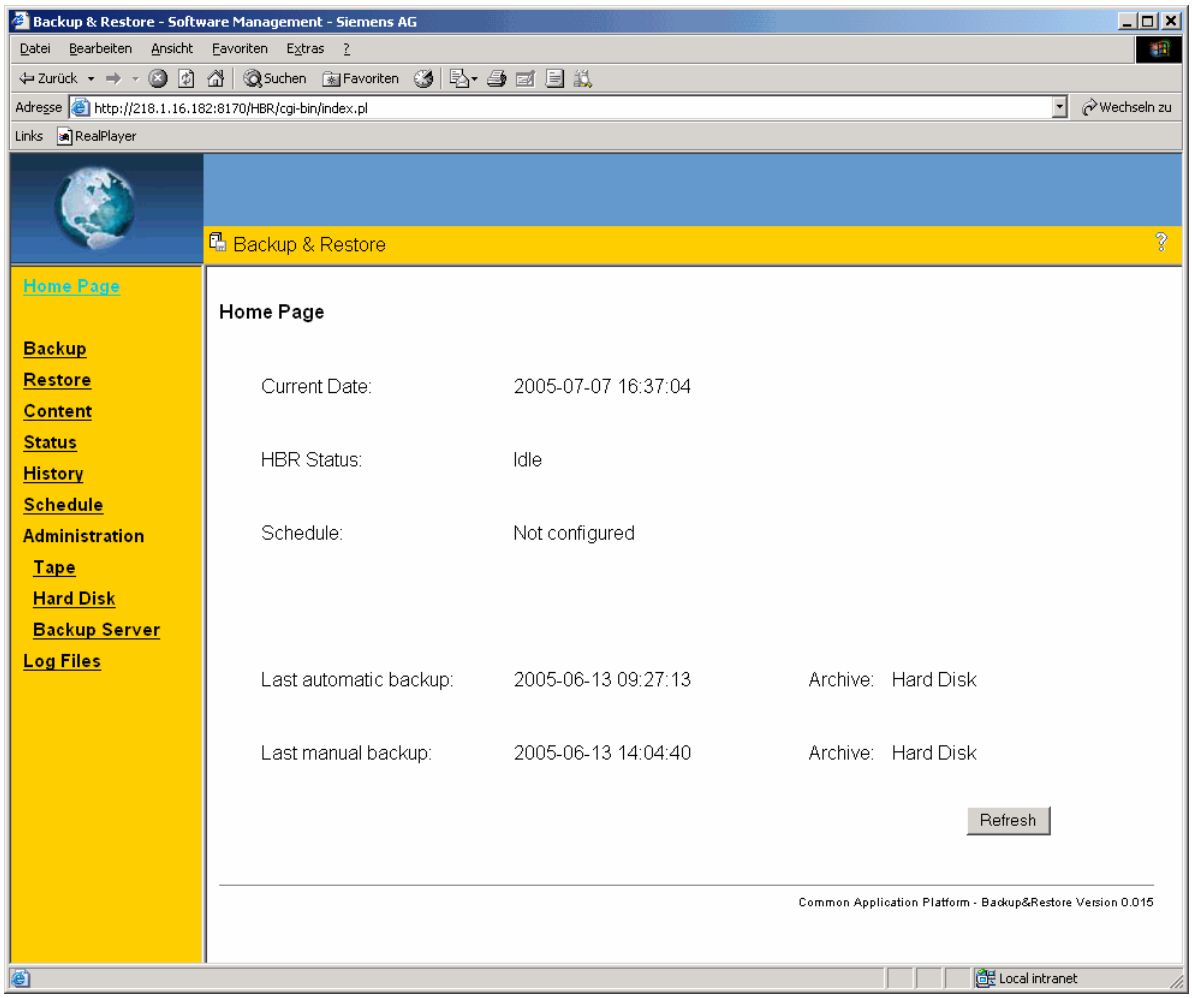


Figure 2-1 **Home Page** dialog, HiPath Backup & Restore

The following information is displayed in the content area on the HBR **home page**:

- **Current Date**

  The current date (format YYYY-MM-DD) and the current time (format hh:mm:ss) of the system are displayed here.

- **HBR Status** (see Status page 2-24)

  Displays the current status of the HBR application.

- **Schedule** (see Schedule page 2-28)

  Lists the schedule data (time, date, and archive) for automatic backups configured under "Schedule".

- **Last Automatic Backup**

  Displays the date and archive of the last automatic backup procedure.

- **Last Manual Backup**

  Displays the date and archive of the last manual backup procedure.

- **Last System Backup**

  Displays the date and archive of the last system backup.

Related Topics

The User Interface of Backup and Restore

HiPath Backup and Restore (HBR) - Overview

Step by Step Instructions

2.2 Backup

To start the **Backup** process, please proceed as follows:

1. Click on **Backup** on the **Home Page** of **HiPath Backup & Restore** (HBR).
   The **Backup** dialog is displayed.

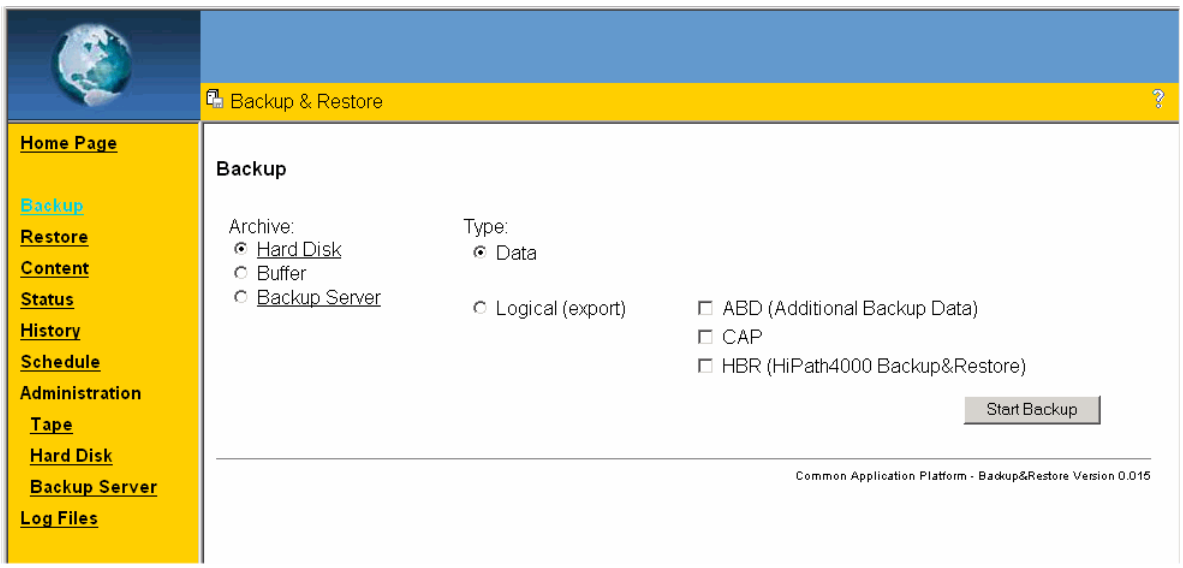


Figure 2-2 **Backup** dialog, Backup & Restore

2. Select the **Archive** type (see section Archive page 2-6) that you want to specify as backup target by checking the corresponding radio button. You can choose between the following archive types:

   - **Hard Disk** (see Archive Type: Hard Disk) that you want
   - **Tape** (see Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only)
     The archive types, e.g. **Tape**, are only displayed if the drives physically exist.
   - **Buffer** (see Archive Type: Buffer)
   - **Backup Server** (see Archive Type: Backup Server)

     Backup Server is only displayed if it is mounted (see Administration Backup Server page 2-37).

   Underlined archives indicate that these archives have already run through the backup process (only on the **Home Page**).

3. Select a **Backup Type** (see Backup Type on page 2-11) by checking the corresponding radio button displayed in the **Type** area. You can choose between the following archive types:
   - **Data** (see Backup Set of the Type "Data"),
   - **Logical** (see Backup Set of the Type "Logical"),

Related Topics

Manual Backup

Preparing the Backup Process

Starting the Backup Process

Step by Step Instructions

Archive

Archive Type: Hard Disk

Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only

Archive Type: Backup Server

Archive Type: Buffer

Backup Type

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

2.2.1 Archive

"Archive" is the term used to refer to the storage medium for backup copies (backups) under HBR (see also Definition of Terms: page 1-7).

HBR supports the following archive types (storage media):

- **Hard Disk** (HD) - see Archive Type: Hard Disk.
- **TAPE** (DAT tape drive). The **TAPE** archive type is only available on the version of HBR installed on the HiPath Manager and is optional. See Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only.
- **Buffer** (a logical area on the hard disk). For further information on this topic, please refer to Archive Type: Buffer on page 2-10.

> **Note**
> In this context especially regard the Guidelines for Using the I/O Buffer on page 3-14.

- **Backup Server** (also referred to as remote server) - if set up. For further information on this topic, please refer to Archive Type: Backup Server on page 2-9 and Backup Set of the Type "Logical" on page 2-13.

Maximum values for the number of backup sets per type have been defined in the software for each storage medium.

Related Topics

Archive Type: Hard Disk

Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only

Archive Type: Backup Server

Archive Type: Buffer

Backup Type

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

Manual Backup

Step by Step Instructions

2.2.2 Archive Type: Hard Disk

The archive on the hard disk can accommodate the following types of data:

- Manually stored data (1), type: "data"
- Manually stored data (1), type: "logical"
- Manually stored system data (1), type: "system"
- Automatically stored data (10), type: "data"

  Can contain up to 10 “automatic” backup sets (generated on the basis of a specific algorithm).
- First automatically stored data (generated with the first automatic backup; cannot be overwritten)

Related Topics

Archive

Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only

Archive Type: Backup Server

Archive Type: Buffer

Backup Type

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

Manual Backup

Step by Step Instructions

2.2.3 Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only

Not more than 1 backup set is permitted. A new backup set overwrites a possibly existing back-up set, even if the new backup set belongs to a different type.

The archive on the tape can accommodate the following types of data:

- Manually stored data (1), type: "data"
- Manually stored data (1), type: "logical"
- Manually stored system data (1), type: "system"
- Automatically stored data (1), type: "data"

Related Topics

Archive

Archive Type: Hard Disk

Archive Type: Backup Server

Archive Type: Buffer

Backup Type

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

Manual Backup

Step by Step Instructions

2.2.4 Archive Type: Backup Server

A maximum of 4 backup sets is permitted.

The archive on the backup server can accommodate the following types of data:

- Manually stored data (1), type: "data"
- Manually stored data (1), type: "logical"
- Manually stored system data (1), type: "system"
- Automatically stored data (1), type: "data"

Related Topics

Archive

Archive Type: Hard Disk

Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only

Archive Type: Buffer

Backup Type

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

Manual Backup

Step by Step Instructions

2.2.5 Archive Type: Buffer

Not more than 1 backup set is permitted. A new backup set overwrites a possibly existing back-up set, even if the new back up set belongs to a different type.

The archive on the buffer area can accommodate the following types of data:

- Manually stored data (1), type: "data"
- Manually stored data (1), type: "logical"
- Manually stored system data (1), type: "system"
- Automatically stored data (1), type: "data"

Note
For further information on the I/O buffer please refer to Guidelines for Using the I/O Buffer page 3-14.

Related Topics

Archive

Archive Type: Hard Disk

Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only

Archive Type: Backup Server

Backup Type

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

Manual Backup

Step by Step Instructions

2.2.6 Backup Type

When you have selected the required **archive type** (storage medium) you must then define the backup **type** to enable you to start the backup procedure.

HBR supports the following backup types:

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

Overview - Functionality of Backup Types

The following overview shows the varying functionality and modes of action of the individual backup types.

	Automatic	**Manual**		
Type	Data	System	Data	Logical
Archive	HD, Buffer, Server	HD, Buffer, Server	HD, Buffer, Server	HD, Buffer, Server
Number of different Backups	10x for HD, 1x for others	1x each	1x each	1x each

2.2.7 Backup Set of the Type "Data"

A backup set of the type **data** contains the data specified by an application for being saved. This data is stored together with the backup information which describes the backup set in the archive you selected.

All data not associated with the operating system is contained in the "Data" backup unit. During the Backup process the application data is always processed together; during Restore, however, the units can be handled and processed separately when being restored.

Related Topics

Preparing the Backup Process

Starting the Backup Process

Manual Backup

Step by Step Instructions

Archive

Archive Type: Hard Disk

Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only

Archive Type: Backup Server

Archive Type: Buffer

Backup Type

Backup Set of the Type "Logical"

2.2.8 Backup Set of the Type "Logical"

A backup set of the type **logical** is used to import/export data of your choice (e.g. CDB or the contents of the database). Backup units that are registered under HBR are displayed under this backup type (multiple selection is possible).

Logical backup/restoration of data is executed in units. A unit consists of a group of interconnected applications. The term application is used here to refer to an installed software package or parts of such a package, or several parts of various packages that have been installed.

A new backup overwrites an already archived backup set of the same type in an archive. Backup sets of different types can be stored together in the same archive except for tape and I/O buffer.

A new backup set will overwrite an existing one in the archive if the software release and the archive type are identical.

Related Topics

Preparing the Backup Process

Starting the Backup Process

Manual Backup

Step by Step Instructions

Archive

Archive Type: Hard Disk

Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only

Archive Type: Backup Server

Archive Type: Buffer

Backup Type

Backup Set of the Type "Data"

2.2.9 Functionality in HBR

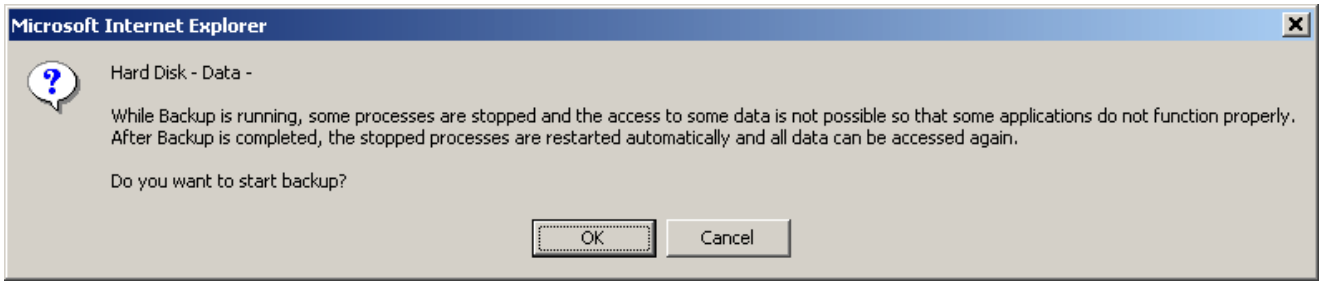
- Displaying the content of the archive
- Saving data to an archive (a backup set is created or updated during this process)
- Canceling a backup procedure that is running
- Displaying the status of the last backup executed or the one that is currently running
- Adding a backup set to an archive or updates an existing backup set in an archive
- Deleting a specific backup set
- Restoring a backup set from an archive
- Entering schedule date for automatic backup procedures

Administration Functions

- Initializes (formats) and tests the external devices (TAPE/DAT drive)
- Configures the customer backup server

2.2.10 Manual Backup

A **Manual Backup** is started using the **Start Backup** button in the **Backup** dialog. An **Archive** (HD, I/O buffer, Backup Server) and the **Backup Type** (Data, Logical) must be selected.



The backup function is executed in background mode, i.e. the browser window is enabled. You can display the backup status of the backup that is currently running or of the backup last executed by clicking the **Status** button (see Status page 2-24).

Related Topics

Preparing the Backup Process

Starting the Backup Process

Step by Step Instructions

Archive

Archive Type: Hard Disk

Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only

Archive Type: Backup Server

Archive Type: Buffer

Backup Type

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

2.3 Restore

To display the **Restore List** containing the backup units you must specify one or more **archives** as a source and select one or more **backup types** for the **Restore** process.

Figure 2-3 **Restore** dialog

Archive Types

The following **Archive** types are available for Restore operations. Multiple choice is possible.

- Archive Type: Hard Disk
- Archive Type: Buffer
- Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only
- Archive Type: Backup Server

Backup Types

The following **Backup Types** are available for Restore operations. Multiple choice is possible.

- Backup Set of the Type "Data"
- Backup Set of the Type "Logical"

Click the **List** button to display the Restore List from which you can select individual backup sets or units to be restored.

Related Topics

Preparing the Restore Process

Starting the Restore Process

Step by Step Instructions

Restore List

HiPath Backup and Restore (HBR) - Overview

2.3.1 Restore List

The **Restore List** contains the individual backup units that can be selected for being restored.

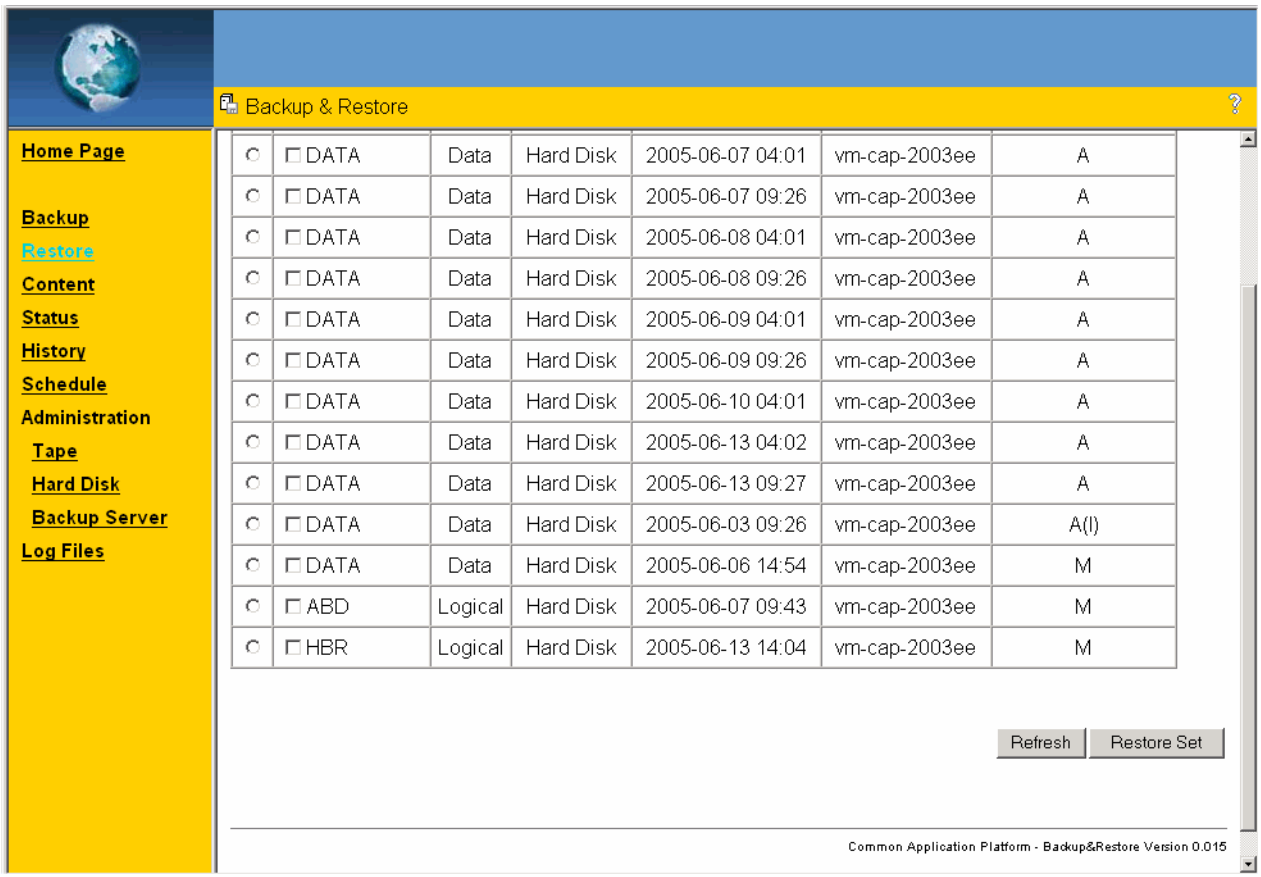


Figure 2-4 **Restore List** dialog

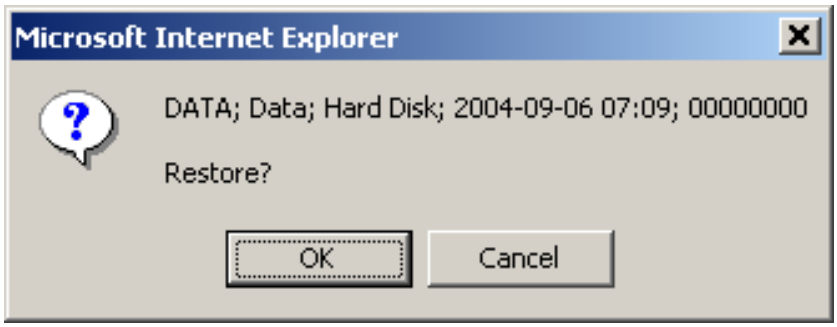
To start the restore operation, click the **Restore Set** button.

Once it has been confirmed by the user, the restore procedure runs in the foreground and is monitored by the user. When the restore operation has been concluded, a message indicating either the success or failure of the operation is displayed. If, during the restore process, the connection to the system should fail, restore will continue to run; the status can be displayed afterwards by clicking on the **Status** button.

A backup set is uniquely identifiable on the basis of the following parameters (this applies to all types):

Date/Time:	e.g. 2004-01-11 09:32
Backup Type:	System, Data, Logical

Restore Confirmation



On completing the restore operation, an appropriate message concerning success or failure is displayed. If, during the restore process, the connection to the system should fail, the procedure will continue to run; the status can be displayed afterwards by clicking the **Status** button.

Note
A "Total Restore" process will only be successful if the version of each individual application matches the currently installed version. If this requirement is not met, the restore process will not be executed. In a "Total Restore" process the data will only be taken over if the versions match.
In case of a "Selective Restore" (on the basis of a logical backup) the administering person is responsible for the consistency of the resulting data.

If the restore process concludes with an error, the function will have to be repeated. You can check the status of the restore process by clicking the **Status** button (see Status page 2-24).

Related Topics

Preparing the Restore Process

Starting the Restore Process

Step by Step Instructions

Restore

HiPath Backup and Restore (HBR) - Overview

2.4 Content

In the **Content** screen you can select one or more **archives** (storage media) as well as the **type** of the **backup** set whose content you would like to display. More than one archive and more than one backup set can be selected at the same time. When you click the **List** button, the content of the selected archive and backup set is displayed in a table - see Content List.

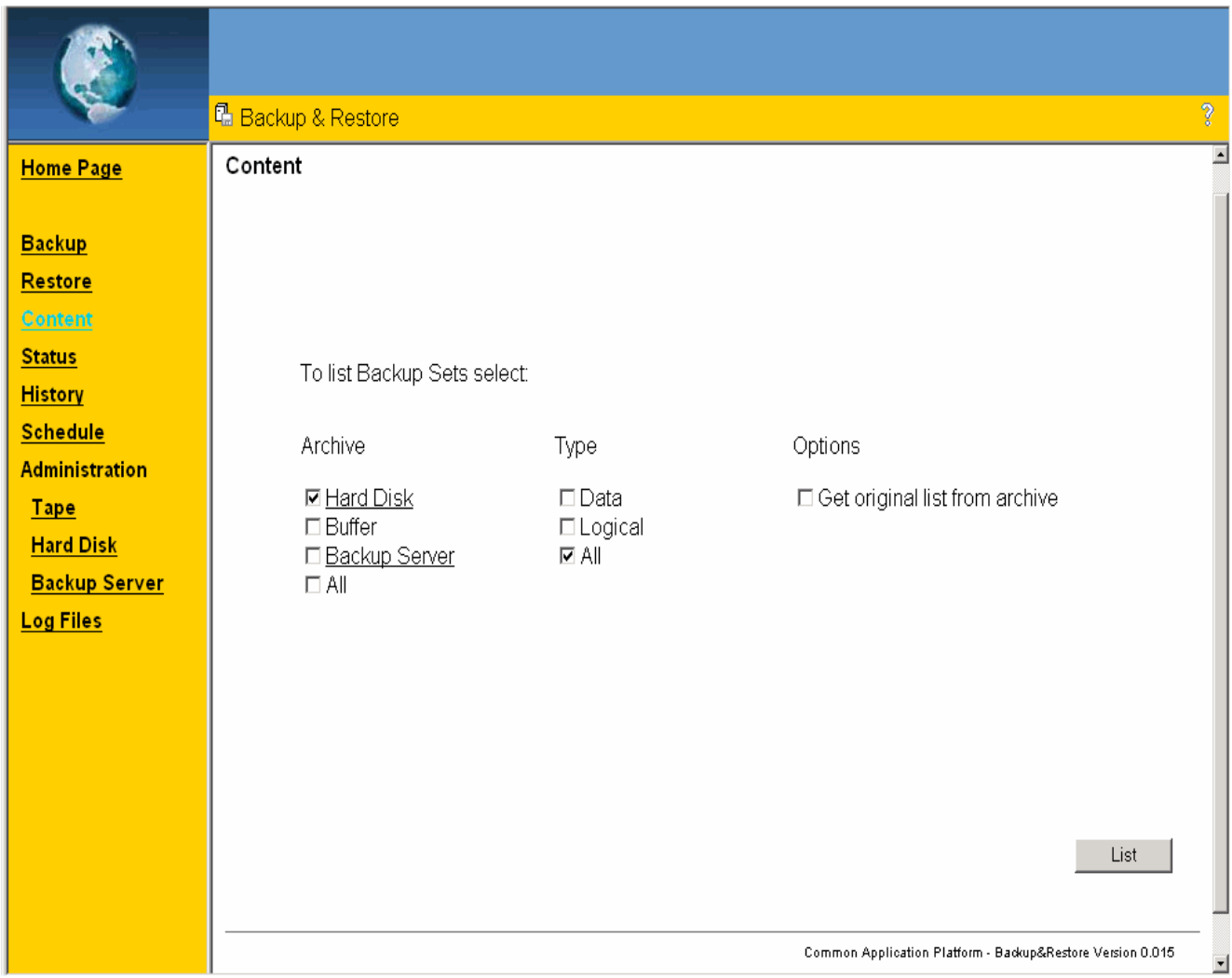


Figure 2-5 **Content** dialog

As an option, you can activate the **Get original list from archive** check box under the **Options** entry. By activating this check box you specify that the original lists of the selected archive and backup types be displayed. The local cache is overwritten and/or cleared, respectively; this process may take a bit longer.

Archive Types

The following **Archive** types are available. Multiple choice is possible.

- Archive Type: Hard Disk
- Archive Type: Buffer
- Archive Type: TAPE (DAT Tape Drive) - CAP V3.0 Only
- Archive Type: Backup Server

Backup Types

The following **Backup** types are available. Multiple choice is possible.

- Backup Set of the Type "Data"
- Backup Set of the Type "Logical"

Related Topics

Displaying the Content

Step by Step Instructions

Content List

HiPath Backup and Restore (HBR) - Overview

2.4.1 Content List

When you click the **List** button in the **Content** screen, the backup sets stored in the selected archives are displayed in the **Content List**. If you want to edit a backup set, select it again.

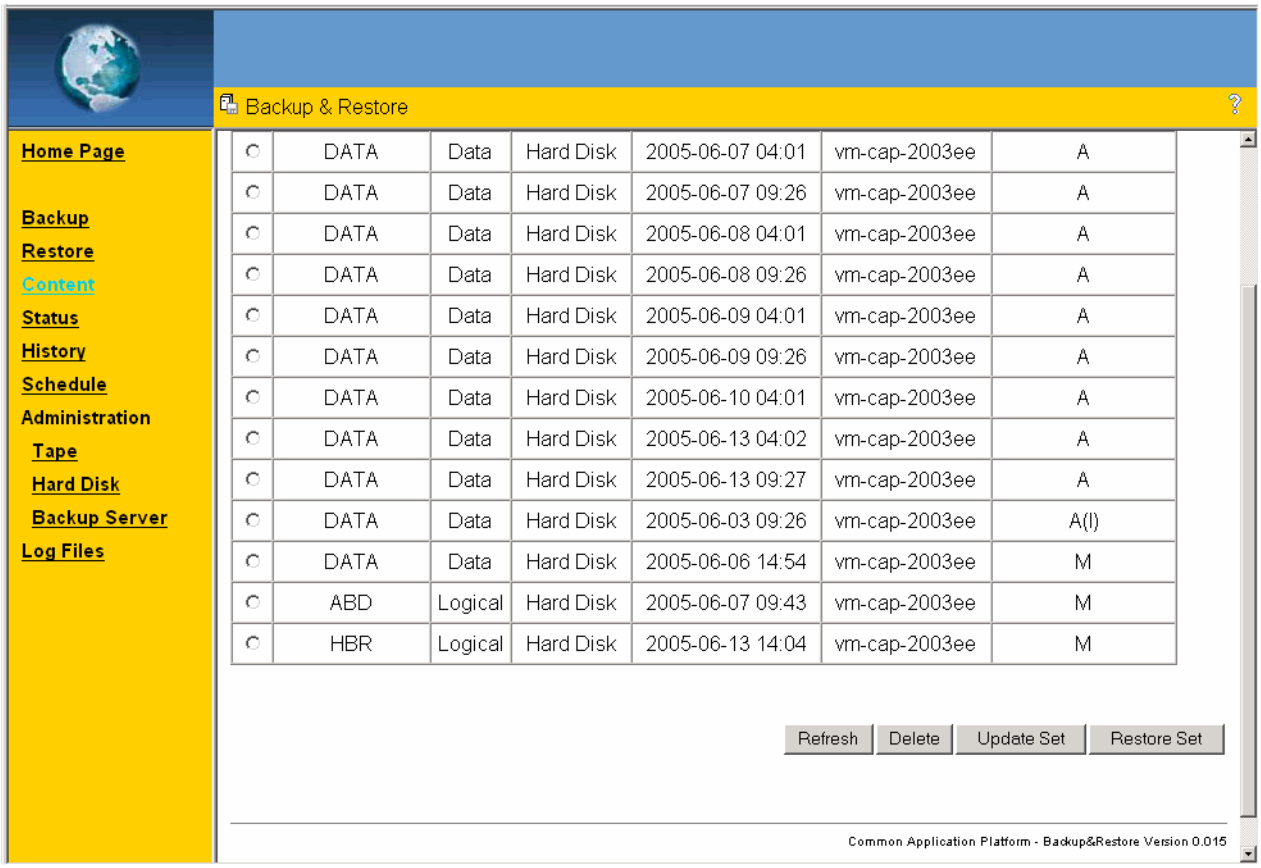


Figure 2-6 **Content List** dialog

Function of the Buttons

Refresh

Updates the screen contents. The backup status in the window is not automatically updated. When you select the **Refresh** function, the contents of the screen display are updated.

Delete

Deletes the marked backup set on the archive.

Update Set

Updates the marked backup set on the archive. The backup process is activated.

Restore Set

Restores the data from the marked backup set.

Related Topics

Displaying the Content

Step by Step Instructions

Content

HiPath Backup and Restore (HBR) - Overview

2.5 Status

The status of the backup/restore cycle currently running or of the last one to be executed is displayed in the **Status** screen. The information displayed includes the overall status of HBR, the status of backup/restore operations currently running and previous backup/restore operations.

The display is automatically updated every 20 seconds.

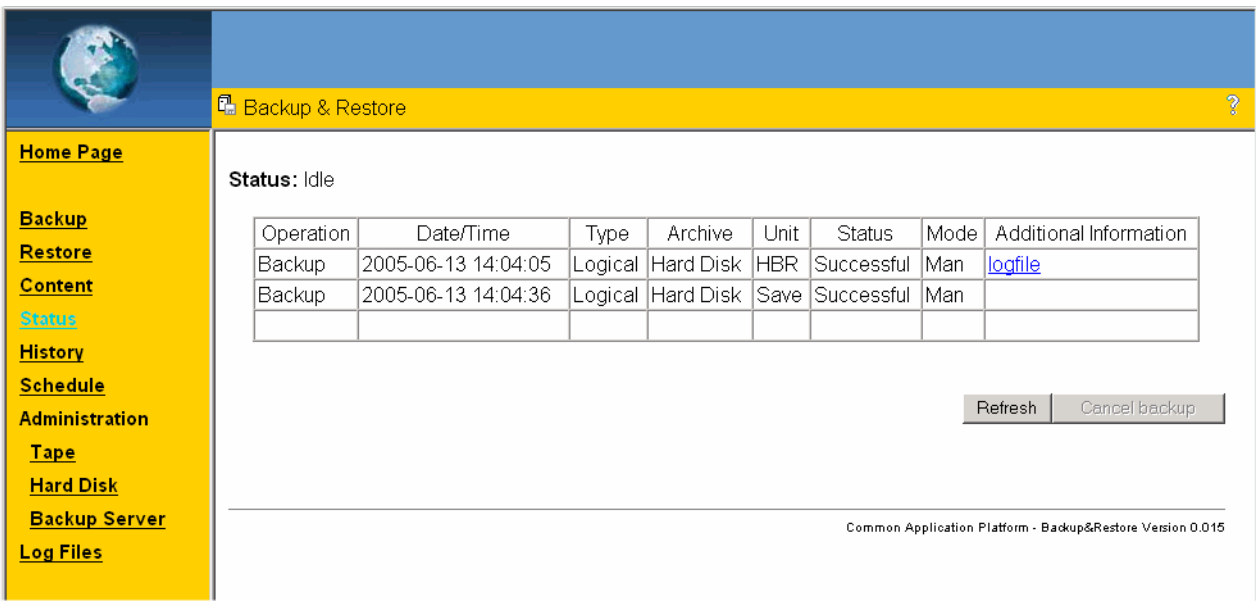


Figure 2-7 **Status** dialog

Status Display Messages:

Idle

Indicates that there are no backup/restore processes running at the moment.

Backup running

Indicates that a backup process is currently being executed.

Restore running

Indicates that a restore process is currently being executed.

Backup cancelled

Indicates that a backup process has been cancelled. In this process, the backup process that is running is not cancelled immediately but only in the next backup step.

Locked by Application

Indicates that a backup process has been locked by another application.

Saving to archive

Indicates that the data is currently being saved to an archive.

The status display **Success** indicates that the saving process has concluded successfully. The status of a saved backup set is only set to **Success** when the full backup set has been completely saved on the selected archive. This is particularly important with TAPE/DAT drives because in the case of these drives the backup set is first saved to a temporary directory on the hard disk before it is transferred to the final destination drive. If you want to check whether this transfer has already finished, click the **Refresh** button to refresh the screen.

One line is added to the backup status for each backup step.

Each line contains the following parameters:

Operation:	Backup
Date / Time:	e.g. 2004-01-04 14:23
Type:	Data, Logical
Archive:	HD, Backup Server, Buffer, Tape
Unit:	Backup Unit (UNIX) or **Save** (last step in the backup procedure)
Status:	Running, Success, Error, Cancelled, Backup Error
Mode:	Automatic, Manual
Additional Information	Link to log file containing information on the last Backup/Restore operation executed.

Note
Save indicates that data is being saved to the specified archive. The backup procedure has concluded without an error only when **Save** has executed successfully (status: **Success**).

You must always verify the restore status because a system boot that is running sporadically could terminate the operation with errors.

One line is added to the restore status for each restore step.

Each line contains the following parameters:

Operation:	Restore
Date / Time:	e.g. 2004-01-04 14:23
Type:	Data
Archive:	HD, Tape, Backup Server, Buffer
Unit:	Backup Unit
Status:	Success, Error
Mode:	Man

Function of the Buttons

Refresh

Refreshes the screen. The status display is not refreshed automatically. This can be done by using the **Refresh** button.

Cancel backup

Cancels the current operation.

Note
Only **backup** operations can be cancelled. **Restore** operations cannot be cancelled or interrupted.

Related Topics

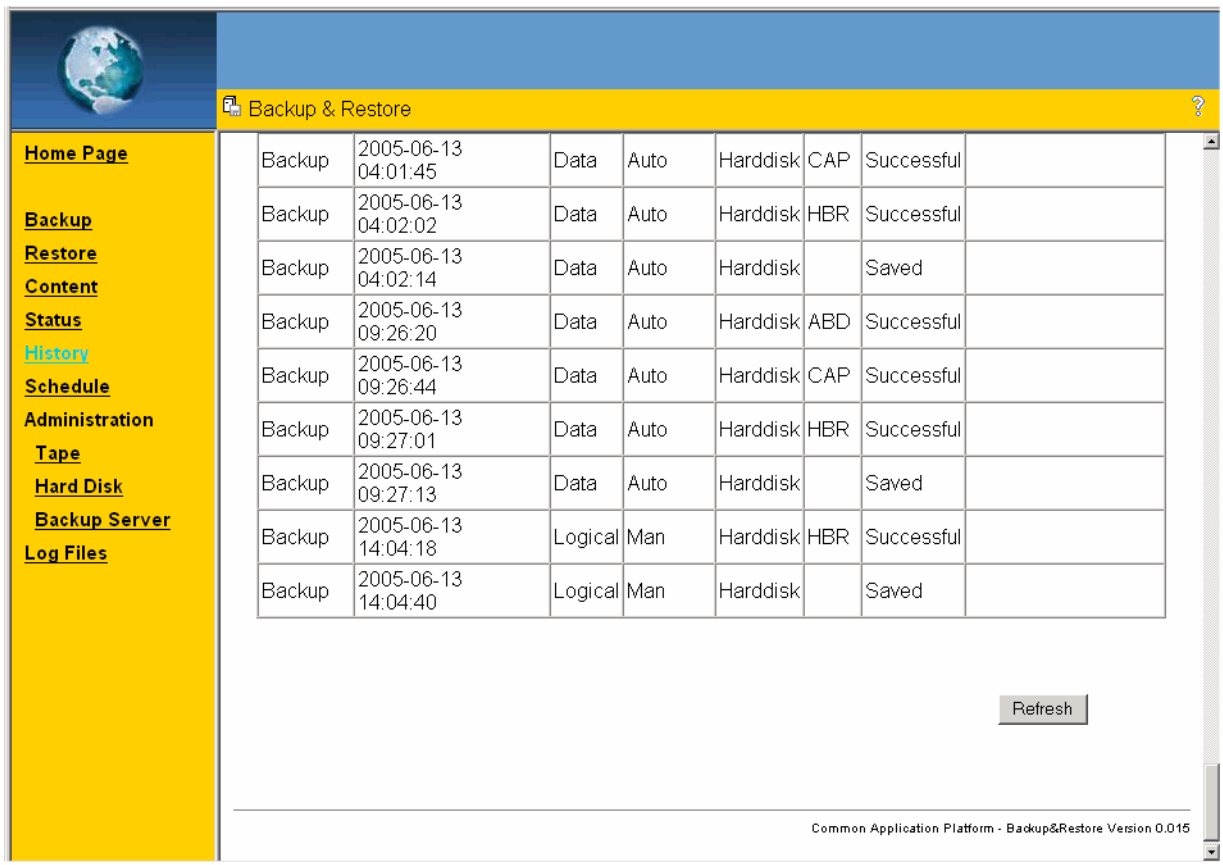
Status

Step by Step Instructions

HiPath Backup and Restore (HBR) - Overview

2.6 History

A status list of the last backup/restore operations to be carried out is displayed on the **History** screen. Up to 25 backup/restore cycles can be displayed.



Backup	2005-06-13 04:01:45	Data	Auto	Harddisk	CAP	Successful	
Backup	2005-06-13 04:02:02	Data	Auto	Harddisk	HBR	Successful	
Backup	2005-06-13 04:02:14	Data	Auto	Harddisk		Saved	
Backup	2005-06-13 09:26:20	Data	Auto	Harddisk	ABD	Successful	
Backup	2005-06-13 09:26:44	Data	Auto	Harddisk	CAP	Successful	
Backup	2005-06-13 09:27:01	Data	Auto	Harddisk	HBR	Successful	
Backup	2005-06-13 09:27:13	Data	Auto	Harddisk		Saved	
Backup	2005-06-13 14:04:18	Logical	Man	Harddisk	HBR	Successful	
Backup	2005-06-13 14:04:40	Logical	Man	Harddisk		Saved	

Figure 2-8 **History** dialog

Related Topics

History

Step by Step Instructions

HiPath Backup and Restore (HBR) - Overview

2.7 Schedule

You can enter the data for several automated backup cycles in the **Schedule** dialog. You can define when and how often an automated backup cycle should be executed. For this purpose, new functions have been provided for adding, changing and deleting entries.

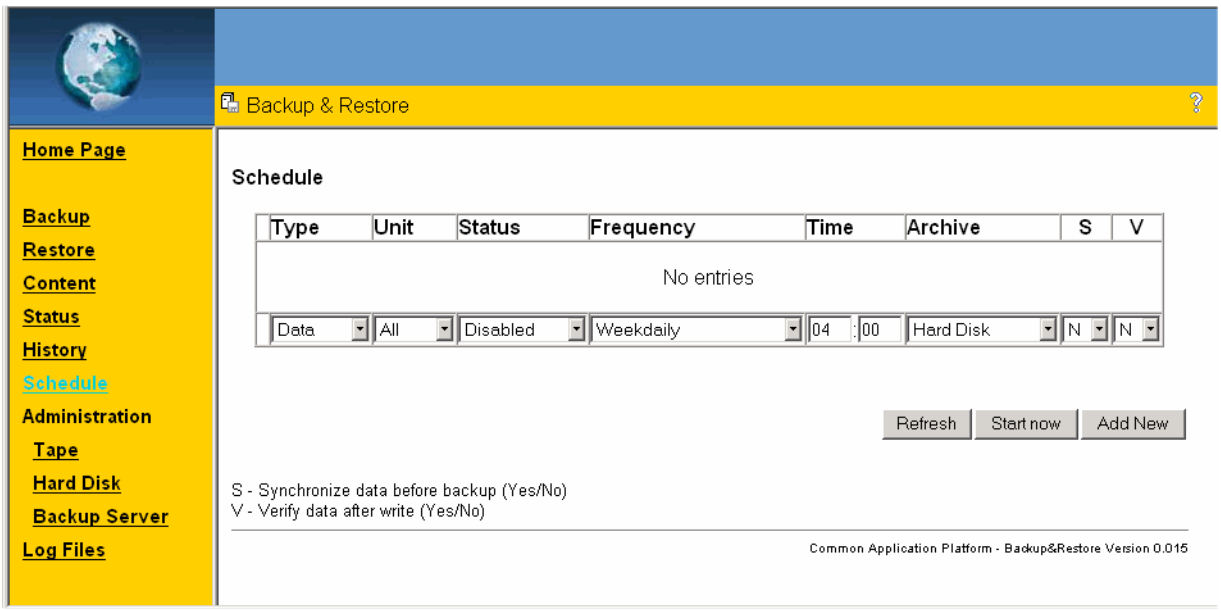


Figure 2-9 **Schedule** dialog

The following parameters are configured:

Type	Data, Logical
Unit	All software components (applications) installed on the system and relevant for Backup&Restore are listed here.
Status:	Enabled, Disabled, Once
Frequency:	Daily, Weekdays, Monday, ... Sunday
Time:	hh:mm
Archive:	HD, Buffer, Backup Server, Tape. Tape and Backup Server are only displayed if they are configured and if they physically exist.
S Synchronize:	Yes / No If **Synchronize** has been enabled, the data is saved from the memory to the hard disk first, and then the backup is executed.
V (Verify transferred data)	Yes / No If **Yes** has been set here, the transferred data will be verified (FTP server and Tape only).

Type

- Data
- Logical

Unit

The installed software units are listed depending on the Backup Type. The list displays the installed software components for which a Backup&Restore process **per type** can be executed . For the Backup Type **Logical**, for instance, the **HBR** software unit is displayed.

If you select the **ALL** entry, all software components of the selected Backup Type will be included in the Backup&Restore process.

Status

- Disabled
- Enabled
- Once

Note
If the status has been set to **Once**, the backup is only executed once at the specified time, and then the status is reset to **Disabled**.

Frequency

- Daily
- Weekdays
- Sundays... Saturdays

Time (Select time)

Format: HH:MM.

Archive

- HD
- Backup Server - item is only displayed if a Backup Server is configured and if it physically exists
- Buffer
- Tape (DAT) - item is only displayed if it physically exists

In the case of automatic backup cycles, the default setting for the **type** of backup set to be created should be **Data**.

Note
The edit line at the bottom of the table is not an entry in the schedule. The options that you have selected in the edit line are not accepted as an entry in the schedule until you click the **Add New** button.

S - Synchronize

- Y = Yes
- N = No

V - Verify transferred data

- Y = Yes
- N = No

Function of the Buttons in the Schedule dialog

Refresh (update)

Click this button to update the contents of the screen.
If you change existing entries, the contents of the screen are automatically refreshed.

Start now

Click this button to start the backup process immediately.

Delete

Click this button to delete the selected entry.

Change

Click this button to change existing values in the selected entry.

Add New

Click this button to add a new entry to the schedule.

Related Topics

Schedule

Step by Step Instructions

HiPath Backup and Restore (HBR) - Overview

2.8 Administration TAPE (CAP V3.0 Only)

Administration TAPE is used for administering external TAPE/DAT devices. The functions enable the user to initialize and test the external TAPE/DAT devices.

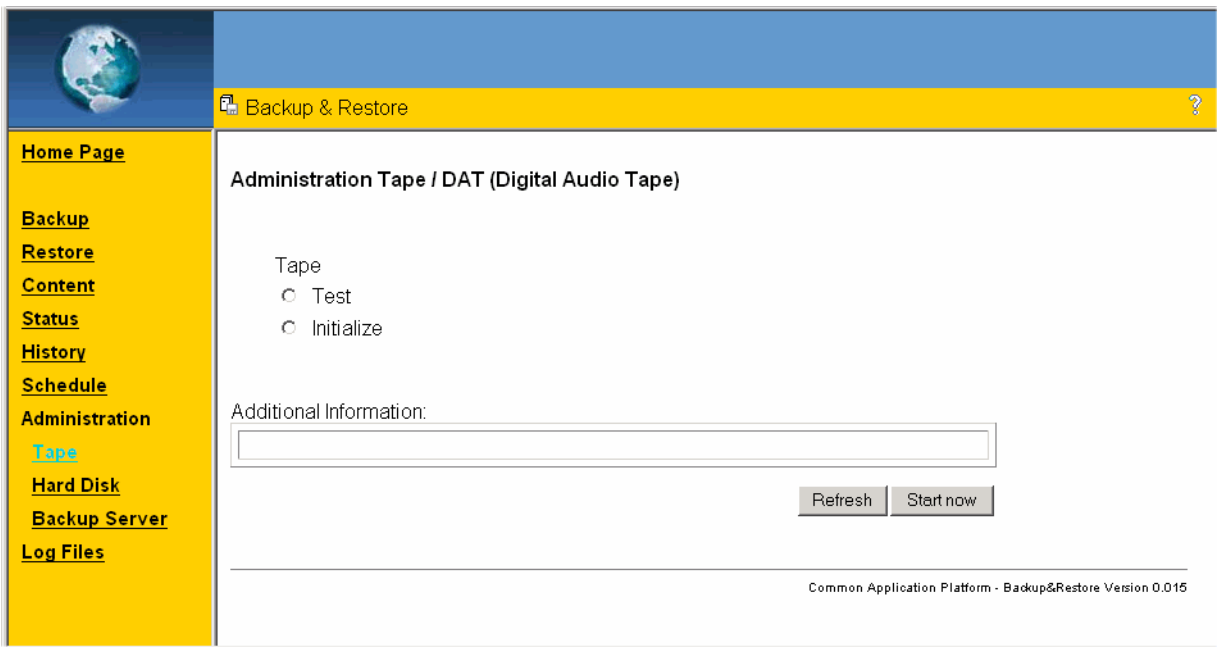


Figure 2-10 **Administration Tape / DAT (Digital Audio Tape)** dialog

TAPE

- **Test**

  This function is used to check the status of the TAPE/DAT device and of the TAPE/DAT tape. The messages output in the **Additional Information** field indicate the status, e.g. "TAPE not found.", “Not present“, “Empty“ or “Not writable“. If the test was passed successfully, the message "Operation was successful" is displayed.

- **Initialize**

  This function is used to initialize the TAPE/DAT tape.

> **Caution**
> The **Initialize** feature deletes the content of the tape.

Function of the Buttons

Refresh

Updates screen display.

Start Now

The selected procedure (test, initialize or update) is started.

Related Topics

Step by Step Instructions

HiPath Backup and Restore (HBR) - Overview

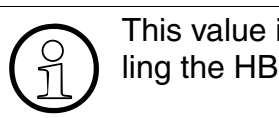
2.9 Administration Hard Disk

The **Administration Hard Disk** dialog is used to administer the backup area (backup slice) of the local hard disk.

The backup area (slice) of the local hard disk is set to the following default path:

`c:\HBR_SLICE\BACKUP`.

To change the path for the backup area, select the **Change the Backup Slice (Windows Registry Value)** radio button and enter a path of your choice for the local backup area.



This value is entered into the Windows Registry and is NOT deleted when uninstalling the HBR software package.

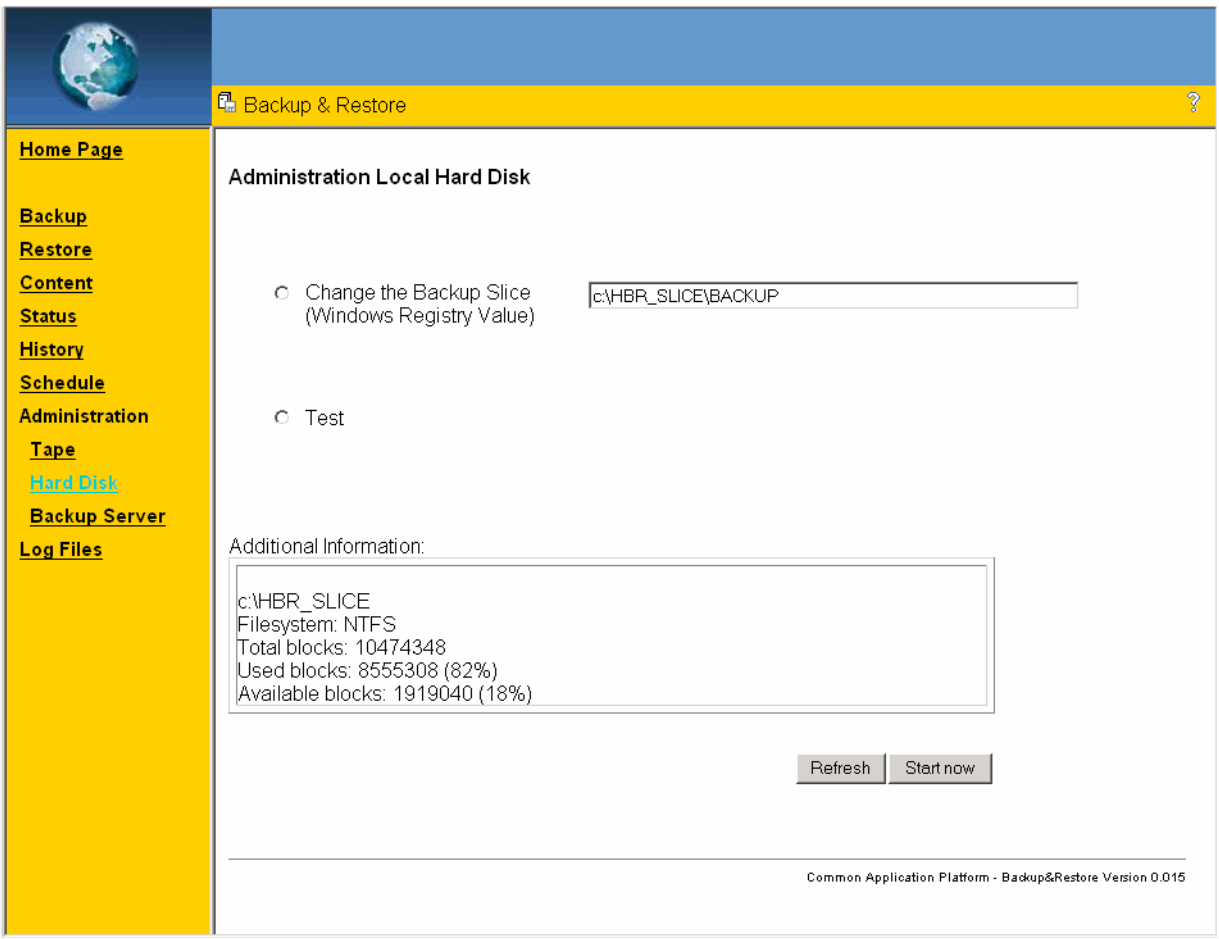


Figure 2-11 **Administration Hard Disk** dialog

Entry Fields

- **Change the Backup Slice (Windows Registry Value)** (Entry field next to the radio button)

The backup area (slice) of the local hard disk is set to the following default path:

`c:\HBR_SLICE\BACKUP`.

To change the path for the backup area, select the **Change the Backup Slice (Windows Registry Value)** radio button and enter a path of your choice for the local backup area.

This value is entered into the Windows Registry and is NOT deleted when uninstalling the HBR software package.

- **Additional Information** (entry field)

  Displays additional information about the local hard disk area (slice) currently configured as backup area. The following data is displayed:

  - File System Type, e.g. NTFS,
  - Total capacity of the partition, displayed as total number of blocks,
  - Used storage area, displayed as number of used blocks, and as a percentage value (Used blocks xxxxxxx (xx%),
  - Free storage area, displayed as number of available blocks, and as a percentage value (Available blocks xxxxxxx (xx%).

  Example:

  c:\HBR_SLICE
  Filesystem: NTFS
  Total blocks: 10474348
  Used blocks: 8555308 (82%)
  Available blocks: 1919040 (18%)

Controls Functionality

- **Change the Backup Slice (Windows Registry Value)** (radio button)

To change the path for the backup area, select the **Change the Backup Slice (Windows Registry Value)** radio button and enter a path of your choice for the local backup area.

This value is entered into the Windows Registry and is NOT deleted when uninstalling the HBR software package.

- **Test**

  After having changed the path for the backup slice of the local hard disk, select this radio button in order to verify the following:

  – Does the indicated directory actually exist?

  – How much storage capacity is available on the new backup slice?

- **Refresh**

  Refreshed the screen contents displayed.

- **Start now**

  A test of the settings is performed and saved on successful completion.

2.10 Administration Backup Server

The customer backup server is administered via the **Administration Backup Server** dialog. The following configuration data has to be defined:

- Transfer Protocol,
- IP Address,
- Host Name,
- Directory on the Remote Server (remote directory),
- Login.

Depending on the protocol used not all of this information is required.

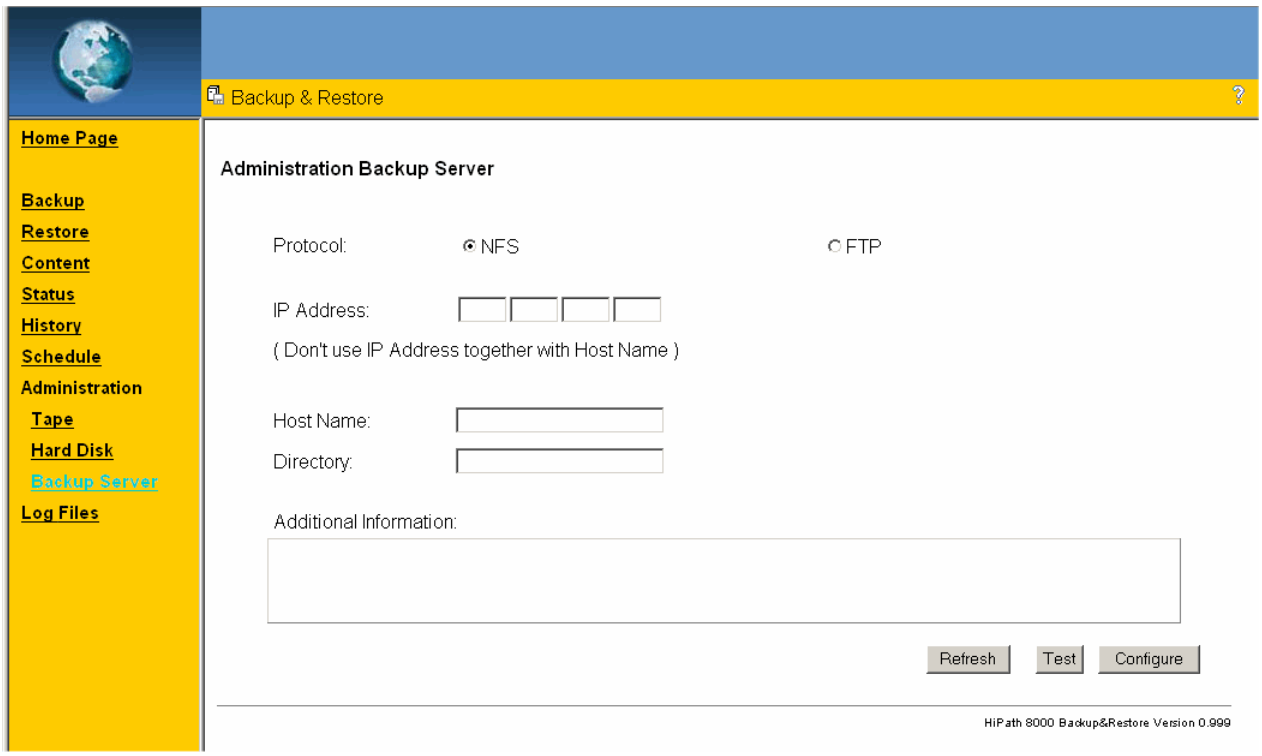


Figure 2-12 **Administration Backup Server** dialog, **NFS** transfer protocol

Note: NFS is not supported under CygWin.

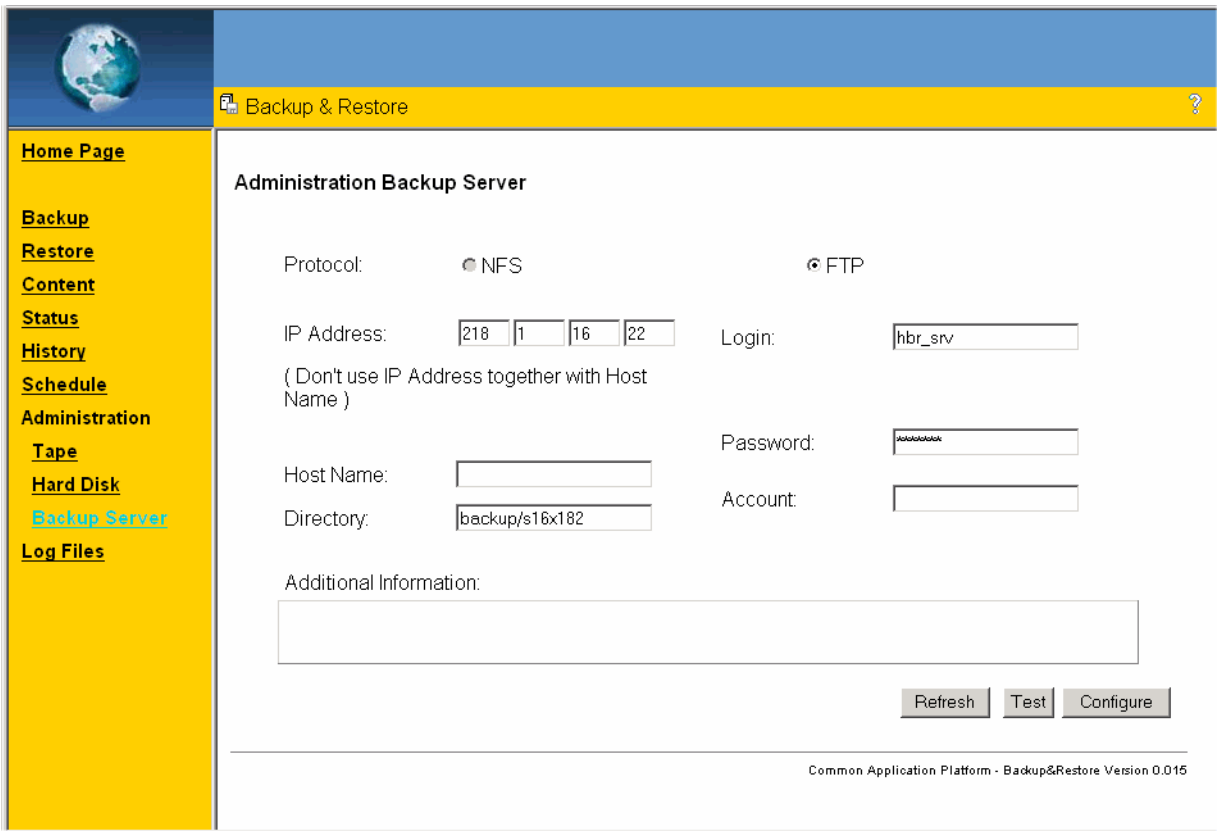


Figure 2-13 **Administration Backup Server** dialog, **FTP** transfer protocol

Transfer Protocols

HBR supports the following transfer protocols:

- **NFS (NFS is not supported under CygWin)**

  When you select the **NFS Transfer Protocol**, only the input fields **IP Address, Host Name** and **Destination Directory** are displayed, i.e. only these fields need to be filled in.

Important:
In order to use the **NFS connection** type, the UNIX operating system needs to be running on the backup server.

Note: NFS is not supported under CygWin.

- **FTP**

  When you select the **FTP Transfer Protocol**, the input fields **IP Address, Host Name, Destination Directory**, **Login**, **Password** and **Account** are displayed, i.e. additional information is required for login, password and account.

Input Fields

- **IP Address**

  Enter the IP address of the remote server here. The input fields **IP Address** and **Host Name** are both used to identify the system. If you have entered the IP address, you must not enter the host name, and vice versa.

- **Host Name**

  Enter the host name of the remote server here. The input fields **IP Address** and **Host Name** are both used to identify the system. If you have entered the IP address, you must not enter the host name, and vice versa.

- **Destination Directory**

  Enter the destination directory on the remote server here.

  Caution
  The subdirectory specified in this field is NOT created automatically; it has to be created manually on the FTP server.
  - Don't specifiy the letter of the drive, e.g. `C:`
  - Take into account that the FTP server on the Customer Backup Server may change the relative and absolute paths.

  Examples:

server1	Relative path: `server1` is a directory in the indicated user's home directory.
/backup/server	Absolute path of the `server` directory

- **Login** (only needed for FTP)

  Enter the user name here that is to be used for logging onto the remote server.

- **Password** (only needed for FTP)

  Enter the password associated with the user name here that is to be used for logging onto the remote server.

- **Account** (only needed for FTP)

Enter another account password here. This information needs not to be entered for some operating systems such as UNIX.

- **Additional Information**

  Shows status messages such as "Customer Backup Server not configured" if the server is not configured.

Function of the Buttons

Refresh

Updates the screen display.

Test

Tests the settings and saves if the test was successful.

Configure

The backup server is configured on the basis of the data entered.

Settings on the Remote Server

Regarding the server configuration settings please take into account the guidelines of the manufacturer.

Related Topics

Administration - Backup Server

Step by Step Instructions

HiPath Backup and Restore (HBR) - Overview

2.11 Log Files

Error Logs

The debug and error log files for the system backup cycles of HBR are listed in the **Log Files** dialog under the following links:

- HBR System Backup Log Files

  Contains the debug and error log files for the system backup cycles (UNIX) of HBR.

Related Topics

Log Files

Step by Step Instructions

HiPath Backup and Restore (HBR) - Overview

2.11.1 HBR System Backup Log Files

The debug and error log files for the system backup cycles (UNIX) and of HBR are listed in the **HBR System Backup Log Files** screen. This list includes the log files for every application registered under HBR.

Note
All files only serve for diagnostics purposes.

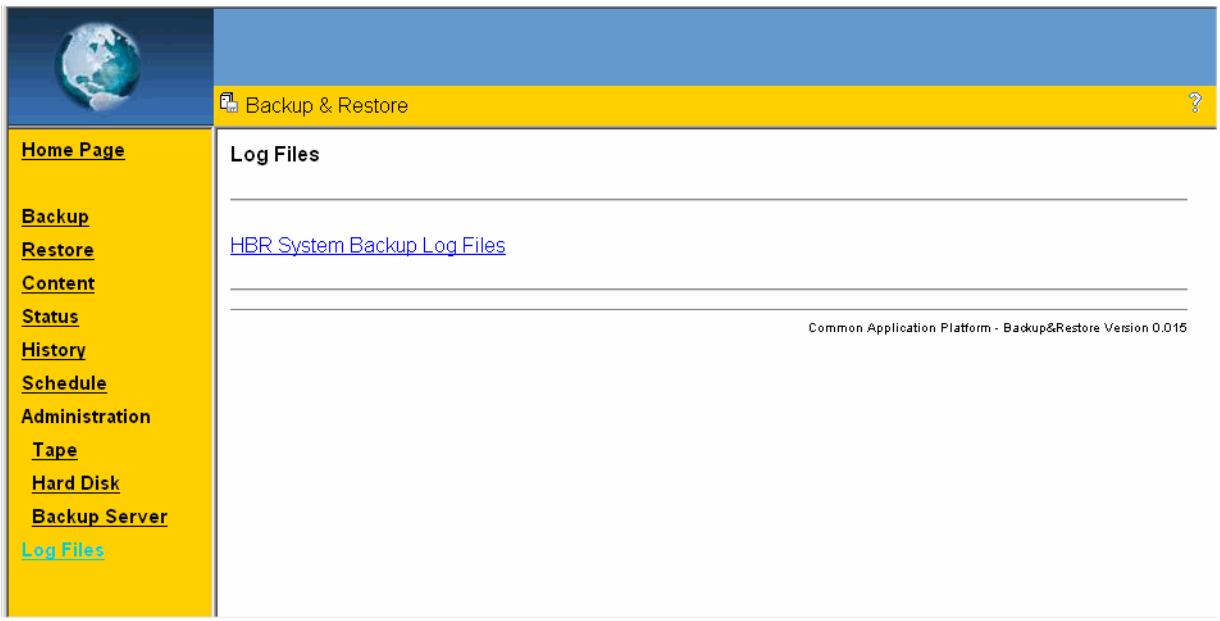


Figure 2-14 HBR System Backup Log Files

Related Topics

HiPath Backup and Restore (HBR) - Overview

Step by Step Instructions

3 Step by Step Instructions

This chapter contains practical hints on the use of HBR and on the execution of the HBR functions.

The following topics are dealt with:

Preparing the Backup Process

Starting the Backup Process

Preparing the Restore Process

Starting the Restore Process

Displaying the Content

Status

History

Schedule

Guidelines for Using the I/O Buffer

Administration - Backup Server

Log Files

Related Topics

The User Interface of Backup and Restore

HiPath Backup and Restore (HBR) - Overview

Functionality

3.1 Preparing the Backup Process

Initially install a backup server or insert an appropriate media. Before you can start the backup process you must specify an **archive** (hard disk, DAT tape drive, backup server or buffer) (see Archive page 2-6) as a target for the backup copy, and select a backup **type** (or several backup types) (see Backup Type page 2-11).

You can prepare a backup process with HBR by following the steps described below:

Define an Archive Type

1. Click on the **Backup** option in the navigation section of the HBR home page.

The **Backup** screen is displayed.

2. Select the archive type that you want for the backup process by clicking the appropriate check box in the **Backup** screen:

HBR supports the following archive types (storage media):

- **Hard disk** (HD)
- **TAPE** (DAT tape drive).
- **Backup Server** (also referred to as a remote server).
- **Buffer** (a logical area on the hard disk).

The maximum values for the number of backup sets per type have been defined for each storage medium.

Define a Backup Type

When you have selected the required **archive** (storage medium) you must then define the backup **type** to enable you to start the backup procedure.

1. Select the archive type that you want for the backup process by clicking the appropriate check box in the **Backup** screen:

HBR supports the following backup types:

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

You may only select the types that are permitted for the selected archive type.

Related Topics

Starting the Backup Process

HiPath Backup and Restore (HBR) - Overview

Functionality

3.2 Starting the Backup Process

Once you have selected the archive and backup type that you want you can start the backup process.

Starting Backup Immediately (Manual Backup)

Starting the Backup Process Automatically via Schedule

Related Topics

Preparing the Backup Process

HiPath Backup and Restore (HBR) - Overview

Functionality

3.2.1 Starting Backup Immediately (Manual Backup)

1. Once you have selected the archive and backup type click the **Start Backup** button on the **Backup** screen.

The backup process is started immediately.

Related Topics

Starting the Backup Process Automatically via Schedule

HiPath Backup and Restore (HBR) - Overview

Functionality

Manual Backup

3.2.2 Starting the Backup Process Automatically via Schedule

1. In the **Schedule** screen define the parameters required for time, date, frequency and synchronization as well as the archive type for the backup process to be executed.

   Example for "Data" Archive Type:
   Open the Schedule dialog. Choose the **Status "Enabled"**, the **Frequency**, e.g. **Daily**, the **Time**, e.g. **10:00**, set **Synchronize** to **Yes** (for exec update before backup) or to **No**, choose the **"Data" Archive** type and click on **Add New** to activate this schedule entry.

The backup process is executed automatically on the specified date.

For further information on this topic, please refer to Schedule on page 3-13.

Related Topics

Starting Backup Immediately (Manual Backup)

HiPath Backup and Restore (HBR) - Overview

Functionality

Schedule

3.3 Preparing the Restore Process

Initially install a backup server or insert a tape.

Before you can start the restore process you must specify an **archive** (hard disk, DAT tape drive or buffer) (see Archive page 2-6) as a source and select a backup **type** (or several backup types) (see Backup Type page 2-11).

You can prepare a restore process with HBR by following the steps described below:

Define an Archive Type

1. Click the **Restore** option in the navigation section of the HBR home page.

The **Restore** dialog is displayed.

2. Select the archive type that you want for the restore process by clicking the appropriate check box in the **Restore** screen:

HBR supports the following archive types (storage media):

- **Hard disk** (HD).
- **TAPE** (DAT tape drive). The**TAPE** archive type is only available on the version of HBR installed on the HiPath 4000 Manager.
- **Backup Server** (remote system).
- **Buffer** (a logical area on the hard disk).

Define a Backup Type

When you have selected the required **archive** (storage medium) you must then define the **backup type**.

1. Select the backup type that you want for the restore process by clicking the appropriate check box in the **Restore** screen:

HBR supports the following backup types:

Backup Set of the Type "Data"

Backup Set of the Type "Logical"

Backup Set of the Type "All"

Select a backup set

Having selected the backup type you have to select a backup set to enable you to start the restore process.

1. Click the **List** button in the **Restore** screen.
   The list of all backup sets you can select is displayed.
2. Mark the backup set in the list.

Related Topics

Starting the Restore Process

Preparing the Backup Process

Starting the Backup Process

HiPath Backup and Restore (HBR) - Overview

Functionality

Restore

3.4 Starting the Restore Process

1. To start the restore operation, click the **Restore Set** button.

Once it has been confirmed by the user, the restore procedure runs in the foreground and is monitored by the user.

Restore Confirmation

On completing the restore operation, an appropriate message concerning success or failure is displayed. If, during the restore process, the connection to the system should fail, the procedure will continue to run. The status can be displayed afterwards by clicking the **Status** button.

If the restore process concludes with an error, the function will have to be repeated. You can check the status of the restore process by clicking the **Status** button (see Status page 2-24).

Related Topics

Preparing the Backup Process

Starting the Backup Process

Preparing the Restore Process

HiPath Backup and Restore (HBR) - Overview

Functionality

Restore

3.5 Displaying the Content

In the **Content** screen you can select one or more **archives** (storage media) as well as the **type** of the backup set whose content you would like to display. More than one archive and more than one backup set can be selected at the same time. When you click the **List** button, the content of the selected archive and backup set is displayed.

1. Click the **List** button in the **Content** screen.

The backup sets stored in the selected archives are then displayed in the **Content List** screen.

Related Topics

HiPath Backup and Restore (HBR) - Overview

Functionality

Content

3.6 Status

You can display the status of the HBR backup/restore processes as follows:

1. Click on the **Status** option in the navigation section of the HBR home page.

The **Status** screen is displayed.

The status display **Success** indicates that the saving process has concluded successfully. The status of a saved backup set is only set to **Success** when the full backup set has been completely saved on the selected archive. This is particularly important with DAT drives because in the case of these drives the backup set is first saved to a temporary directory on the hard disk before it is transferred to the final destination drive. If you want to check whether this transfer has already finished, click the **Refresh** button to refresh the screen.

One line is added to the backup status for each backup step.

Each line contains the following parameters:

Operation:	Backup
Date / Time:	e.g. 2004-01-04 14:23
Type:	Data, Logical
Archive:	HD, Buffer, Backup Server, Tape
Unit:	Backup Unit or **Save** (last step in the backup procedure)
Status:	Running, Success, Error, Cancelled, Backup Error
Mode:	Manual, Automatic
Additional Information	Link to log file containing information on the last Backup/Restore operation executed.

Note
Save indicates that data is being saved to the specified archive. The backup procedure has concluded without an error only when **Save** has executed successfully (status: **Success**).

You must always verify the restore status because a system boot that is running sporadically could terminate the operation with errors.

One line is added to the restore status for each restore step.

Each line contains the following parameters:

Operation:	Restore
Date / Time:	e.g. 2004-01-04 14:23
Type:	Data, Logical
Archive:	HD, Tape, Buffer, Backup Server
Unit:	Backup Unit
Status:	Success, Error
Modus	Man (Manual)

Related Topics

HiPath Backup and Restore (HBR) - Overview

Functionality

Status

3.7 History

A status list of the last backup/restore operations to be carried out is displayed on the **History** screen. Up to 25 processes can be displayed.

Related Topics

HiPath Backup and Restore (HBR) - Overview

Functionality

History

3.8 Schedule

You can define when and how often an automated backup cycle should be executed in the **Schedule** screen.

The following parameters are configured:

Type	Data, Logical
Unit	All software components (applications) installed on the system and relevant for Backup&Restore are listed here.
Status:	Enabled, Disabled, Once
Frequency:	Daily, Weekdays, Monday, ... Sunday
Time:	hh:mm
Archive:	HD, Buffer, Backup Server, Tape You can only select Tape and Backup Server if they are configured and if they physically exist.
S Synchronize:	Yes / No If **Synchronize** has been enabled, the data is saved from the memory to the hard disk first and then the backup is executed.
V (Verify transferred data)	Yes / No If **Yes** has been set here, the transferred data will be verified (FTP server and Tape only).

Note
If the status has been set to **Once**, the backup is only executed once at the configured time, and then the status is reset to **Disabled**.

In the case of automatic backup cycles the backup set **Type** is always **Data**.

Starting the Backup Process Automatically via Schedule

Related Topics

HiPath Backup and Restore (HBR) - Overview

Functionality

Schedule

3.9 Guidelines for Using the I/O Buffer

The buffer is a special area on the hard disk of the system. It is used for transferring backup sets from the system to a "remote" server or from a remote server to the system.

Following a backup operation to the "buffer" archive, the directory "/IO_BUF/OUTPUT" will contain a backup set called "backup_set*" (* consists of the date, time and possibly other extensions). The backup set generated in this way can then be transferred to a remote server using FTP.

In reverse, i.e. to restore a backup set from a remote server to a HiPath system, the backup set is transferred from the remote server using HFM or FTP to the "/IO_BUF/INPUT" directory and stored under the name "backup_set*" (* can be any character string). The procedure can then be checked with "Archive Content List" or activated with "Restore". The new backup set is automatically copied to the "/IO_BUF/OUTPUT" directory and deleted from the "/IO_BUF/INPUT" directory.

Related Topics

HiPath Backup and Restore (HBR) - Overview

Functionality

Archive Type: Buffer

3.10 Administration - Backup Server

The customer backup server is configured and administered in the **Administration Backup Server** screen.

When the HBR application data is being backed up, the configuration data of the FTP or NFS connection to the customer backup server should also be backed up.

Note: NFS is not supported under CygWin.

Important:
In order to use the **NFS connection** type, the UNIX operating system needs to be running on the backup server.

The automatic backup jobs entered under **Schedule** should also be backed up if a backup is being created by HBR itself. When HBR is being installed, preset default jobs are generated for executing automatic backup jobs.

Transfer protocols

HBR supports the following transfer protocols:

- **NFS (NFS is not supported under CygWin)**

  When you select the **NFS Transfer Protocol**, only the input fields **IP Address, Host Name** and **Destination Directory** are displayed, i.e. only these fields need to be filled in.

- **FTP**

  When you select the **FTP Transfer Protocol**, the input fields **IP Address, Host Name, Destination Directory**, **Login**, **Password** and **Account** are displayed, i.e. additional information is required for login, password and account.

Input Fields

- **IP Address**

  Enter the IP address of the remote server here. The input fields **IP Address** and **Host Name** are both used to identify the system. If you have entered the IP address, you must not enter the host name, and vice versa.

- **Host Name**

  Enter the host name of the remote server here. The input fields **IP Address** and **Host Name** are both used to identify the system. If you have entered the IP address, you must not enter the host name, and vice versa.

- **Destination Directory**

  Enter the destination directory on the remote server here.

- **Login** (only needed for FTP)

  Enter the user name here that is to be used for logging onto the remote server.

- **Password** (only needed for FTP)

  Enter the password associated with the user name here that is to be used for logging onto the remote server.

- **Account** (only needed for FTP)

  Enter another account password here. This information is required for BS 2000 and need not be entered for other operating systems such as UNIX, for example.

- **Additional Information**

  Shows status messages such as "Customer Backup Server not configured" if the server is not configured, for example.

Related Topics

HiPath Backup and Restore (HBR) - Overview

Functionality

3.11 Log Files

The debug and error log files for the HBR backup cycles are listed in the **HBR System Backup Log Files** screen. This list includes the log files for every application registered under HBR.

Related Topics

HiPath Backup and Restore (HBR) - Overview

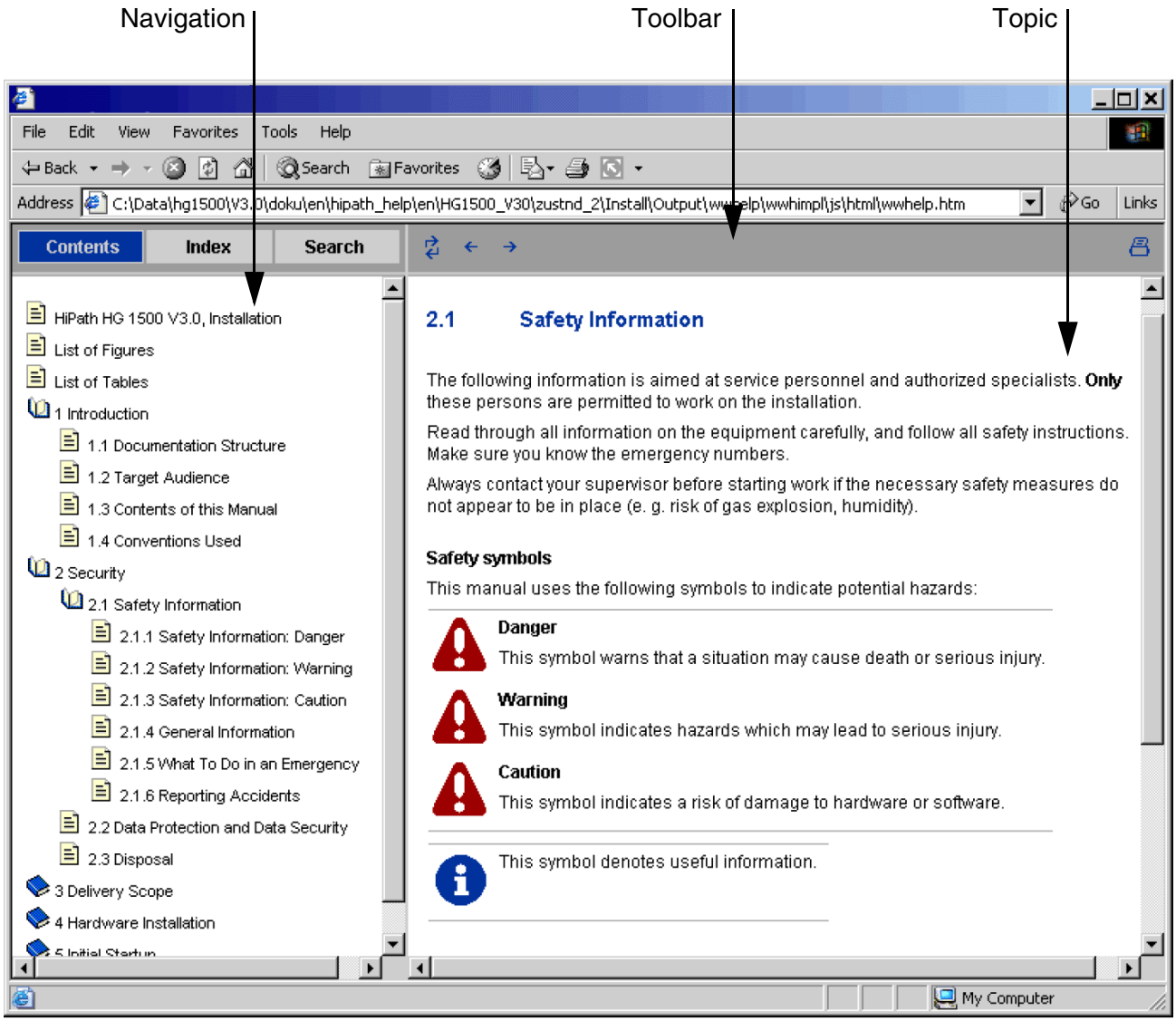
Functionality

Log Files

4 Using the Help

4.1 Layout

The Help is displayed in a Web browser and is split into the three areas shown below:



Navigation

The navigation area is displayed at the left of the browser window and contains the following tabs:

- **Contents** tab
  The **Contents** tab displays all topics relevant to the Help. Click the “**+**” or “**-**” icon, respectively, to expand or collapse the subtopics. Click any entry to display the relevant topic in the Topic area.
- **Index** tab
  Click the **Index** tab to view all index entries. An alphabetical list of keywords for each topic is displayed. Click any index entry to display the relevant topic.
- **Search** tab
  Click the **Search** tab to search for a word or phrase. Enter the search term and click **Go**. If you do not know the exact word or phrase, you can enter a star "*" before or after the term. Click any search result entry to display the relevant topic. (For details see "Searching Within the Help").

Contents

The Contents include entries from the FrameMaker TOC (English) or IVZ (German) file. The individual topics can be expanded or collapsed. If no H2 title follows, a page icon appears instead of the “**+**” or “**-**” icon.

Index

The Index contains entries from the FrameMaker IX (English) or SIX (German) file. The index entries are either shown collectively or appear under individual letters of the alphabet in cases where there are several index entries associated with an alphabet.

Search

One or more search terms can be specified. The section titles of the corresponding search results are displayed. Clicking / double-clicking on a topic opens that topic and shows the search results with the search terms highlighted. The ranking entries for the individual search results reflect the frequency of hits as a percentage. When searching a multi-volume, the book title appears in addition to the section titles.

Favorites (only with Java)

The user can add links to frequently visited pages to his or her Favorites (only possible with Java)

Toolbar

The toolbar is displayed at the top of the browser window and contains the following buttons:

- Display in Contents
  Click this button to synchronize the contents currently displayed in the Topic area with the list of contents. If you navigate through the Topic area with the "Previous Topic" or "Next Topic" buttons, you can use the "Display in Contents" button to display the relevant topic entry in the list of contents.
- Previous Topic
  Click this button to revert to the previous related topic. By contrast, click the "Back" button of the browser to revert to the last topic viewed.
- Next Topic
  Click this button to jump to the next related topic.
- Print
  Click this button to print the topic currently displayed in the Topic area. (For details see "Printing Help Topics").

Topic

The Topic area is at the right of the browser window and displays the information on the selected topics.

The browser's caption displays the title of the current Help page.

4.2 Overview of Key Functions

- Key combination Alt + ⇆
  You can use this key combination to switch between the Help and the application.
- Text highlighted in blue (links)
  Within a Help topic, you can click a link (text highlighted in blue) to obtain further information about the topic. This information is displayed in the Topic area as well.
- Popup windows
  Within a Help topic, you can click a link (text highlighted in **blue - bold**) to obtain further or more detailed information in an additional window (popup). These popup windows are displayed in the lower left corner by default.

  If you click another popup link while a popup window is open, the contents of the popup window will be changed accordingly.

  A popup remains displayed until it is closed or the entire Help is closed.
- Drop down text
  If you click on text identified with the ⊞ icon within a Help topic, a drop down text box containing additional information will open under the text. Click the icon again to collapse this text box.
  To collapse all drop down text boxes in a Help topic, click the browser's **Refresh** button.
- Start page
  Click the first entry in the table of contents to open the start page for the Help. The start page may contain the following information about the open Help:
  - Title of the Help
  - Help ID number
  - Link to **HTML download**
  - Link to **PDF download**
  - Link to **Feedback**
  - Version number and release date of the Help

4.3 How to Use the Help

You can use the following functions to navigate the Help system:

- Open the Help Window
- Searching Within the Help
- Printing Help Topics
- Key Combinations in the Help

4.3.1 Open the Help Window

There are different ways of opening the Help depending on the application.

Display the Help topics

- Open the contents of the integrated Help by using the **Help** menu in the application.

  Or

- Left-click the Help icon in the application toolbar to open the content of the Help.

  Or (if implemented)

- Left-click the Help icon or the Help button in the application window.

Context-sensitive help for a window (if implemented)

- Press key F1 if you require information about a window.

Context-sensitive help for an element (if implemented)

- Select an element (field, button, tab, etc.) in the user interface and press the ⇧ + F1 keys to open the context-sensitive help.

  Or

- Open the context-sensitive help by using the **Help** menu in the application.

  Or

- Left-click the Help icon in the application toolbar.
  The cursor will become a question mark .
  Now click an element (field, button, tab, etc.) in the user interface to view the relevant Help text.

4.3.2 Searching Within the Help

The Help has an integrated full-text search function which makes it easy for you to find the information you need.

1. To search for a word or phrase, click the **Search** tab in the Navigation area on the left.
2. Enter the search term in the input field. To optimize the search, you can search for several words at the same time. If you do not know the exact word or phrase, you can insert an asterisk "`*`" before or after the term.
   Spaces between words are interpreted as AND operators (see examples).
   The search is not case-sensitive.

   Examples

   `Te*`
   This will display all topics containing a phrase beginning with the letters *Te...* or *te...*, such as *text, teleworking, telephone, telephone connection, Telephone Connection,* etc.

   `Find text`
   This will display all topics containing the word *find* or *text* or both.
3. If the Help consists of several books, you can optionally select a specific book.
   In this case a drop down list showing the names of all books will be displayed. The preselected option in this drop down list is **All available books**. If you select this entry, the search is run in all available books. The search result displayed indicates the source (book).
4. Click the **Start** button to initiate the search.
5. Click an entry in the list of search results (in the **Title** column) to display the required topic.

   The more often the search term occurs on the page, the higher its **priority** will be. Results also have priority if the search term occurs in the heading.

   The **title** shows the heading of the chapter in which the term occurs.

   The **book** in which the term occurs is displayed last.

You can also use your browser's (CTRL + F) search function to run a search within a Help topic.

4.3.3 Printing Help Topics

- Right-click the topic you want to print and click the **Print** button.

  Or

- Click the **Print** icon in the toolbar.

  Or

- Press the CTRL + P keys.

- Popup windows:
  To print the contents of a popup Help topic, right-click anywhere in the popup window and click Print topic.
- Drop down list:
  If you wish to print the information displayed in dropdown text, it must be visible. Be sure to open the desired drop down text boxes prior to printing the topic.

4.3.4 Key Combinations in the Help

Key combinations	**Action**
ALT+TAB	Switch between the Help and other open windows.
TAB	Jump to the next link within a Help topic.
SHIFT+TAB	Revert to the previous link within a Help topic.
F5	Refresh the display.
CTRL+POS1	Go to the top of the page.
CTRL+END	Go to the end of the page.
CTRL+A	Select all the text in a window.
CTRL+F	Search within a Help topic.
CTRL+P	Print a topic.
ALT+left arrow	Revert to the previously displayed topic.
ALT+right arrow	Go to the next (previously displayed) topic.
ALT+F4	Close the Help.

Index

A

Account
  Administration Backup Server 2-39
Additional Information
  Administration Backup Server 2-40, 3-16
Administration Backup Server 2-37
  Additional Information 2-40, 3-16
  Button Functions 2-40
    Configure 2-40
    Refresh 2-40
    Test 2-40
  Input Fields 2-39, 3-15
    Account 2-39, 3-16
    Destination Directory 2-39, 3-16
    Host Name 2-39, 3-16
    IP Address 2-39, 3-15
    Login 2-39, 3-16
    Password 2-39, 3-16
  Transfer Protocols 2-38, 3-15
    FTP 2-39, 3-15
    NFS 2-38, 3-15
Administration Hard Disk 2-34
Administration TAPE 2-32
  Administer DAT Devices 2-32
  Button Functions 2-32
  Refresh 2-32
  Start Now 2-33
  TAPE 2-32
Administration Tape
  External TAPE/DAT devices 2-32
Archive 1-7, 2-6
  Types 3-2
    Hard Disk 2-6
Archive Content
  Display 2-20
  Display Backup Sets 2-22
Automated Backup Cycle
  Schedule 1-5, 2-28, 3-13

B

Backup
  Type 2-5, 3-2
Backup area
  Changing 2-34
Backup Copies 2-6
Backup Server 2-6, 2-9, 3-2
Backup Set 1-7, 2-12
  Types
    Logical 2-13
Backup Sets
  Displaying the Content of Archives 2-22, 3-9
Backup sets
  Types 2-11
Backup slice
  Changing 2-34
Backup Status
  Displaying Progress 2-25, 3-10
Backup Type
  Define 3-2
Backup Type, Define 2-11
Backup Unit 1-7
Backup/Restore Process
  Status 2-24
Backups 2-6
Browser-Oriented HBR User Interface 1-5
Buffer 2-10, 3-2
  Use 3-14

C

Change the Backup Slice (Windows Registry Value) 2-35
Configuration Data
  Backup and Restore 1-1
  Save and Restore 1-1
Content 2-20
  Button Functions 2-22
    Delete 2-22
    Refresh 2-22

Restore Set 2-23
Update Set 2-22
Display Content of Archives 2-20, 2-22, 3-9
List 2-20
Content List
Display Backup Sets 2-22
Content of Archives
Display Backup Sets 2-22, 3-9
contents 4-3
Customer Backup Server
Administer 2-37
Configuration Data 2-37
Customer Backup Server (Remote Server) 1-7

D

DAT Tape Deck 2-6
DAT Tape Drive 3-2
DAT/Tape Device 1-7
Data
Backup Set Type 2-12
Data type 2-12
Debug and Error Logs 3-17
Definition of Terms 1-7
Destination Directory
Administration Backup Server 2-39
Display
Archive Content 2-20
drop down text 4-4

E

External TAPE/DAT devices
Administering 2-32

F

feedback 4-4
FTP Transfer Protocol 3-15
Functional Chart 1-6
Functionality 2-14
Functions
HBR User Interface 1-1

H

Hard Disk 2-6, 3-2
Storage space 2-10
HBR
Backup and Restore 1-1
Functions 1-1
Backup 1-1
Restore 1-1
General Information 1-1
Starting 1-3
User Interface 1-2
HBR Log Files 1-5
HBR System Backup Log Files 2-42
HBR User Interface
Functions 1-5
Administration of External Devices 1-5
Backup 1-5
Content 1-5
Display HBR Log Files 1-5
History 1-5
Restore 1-5
Schedule 1-5
Status Display 1-5
HD 2-6, 3-2
HDD 2-6, 3-2
HiPath Backup and Restore
General Information 1-1
HiPath Hard Disk (HDD) 1-7
History
Backup/Restore Operations 2-27
Status List of Last Backup/Restore Processes 2-27
Home Page 2-2
Functions 1-3, 2-2
Host Name
Administration Backup Server 2-39
how to use help 4-5
HTML download 4-4

I

I/O Buffer 2-6, 2-10
Import/Export Data 2-13
Initializing
External Tape/DAT devices 2-32
I-O buffer 1-7
IP Address

Administration Backup Server 2-39

K

key combinations 4-7
key functions 4-4

L

Last Automatic Backup 2-3
Last Manual Backup 2-3
Last System Backup 2-3
layout 4-1
links 4-4
Log Files
Debug and Error Logs 2-41
Logical
Backup Type 2-13
Logical Device 1-7
Login
Administration Backup Server 2-39

M

Mounted Directory 1-7

N

navigation 4-2
NFS Transfer Protocol 3-15
Non-Mounted Device 1-7

O

open 4-5

P

Package 1-7
Password
Administration Backup Server 2-39
PDF download 4-4
popup windows 4-4, 4-7
printing 4-7

R

Remote Server 3-14
Restore
List 2-17
Required Specifications 2-16
required specifications 2-16
select units for restoration 2-17
Start 2-18
start 3-8
Status 2-19, 3-8
Message 2-19
status 2-18, 2-19
Underlined Archives 2-4
Restore List 2-18
Select Backup Units for Restoration 2-18
Restore Process
Error 2-18
Restore Status
Displaying Progress 2-25, 3-10
Message 3-8
Verify 2-25, 3-10
Restore status
underlined archives 2-4

S

Save and Restore 1-1
Schedule 2-3
Add New 2-30
Archive 2-29
Automated Backup Cycle 1-5, 3-13
Button Functions 2-30
Change 2-30
Delete 2-30
Enter Data for Automated Backup Cycles 2-28
Parameters 2-28, 3-13
Frequency 2-28, 2-29, 3-13
Status 2-29
Synchronize 2-28, 2-30, 3-13
Time 2-28, 2-29, 3-13
Refresh (update) 2-30
Start Now 2-30
search 4-6
Software
Configuration Data 1-1
Software Packages 1-7
Software Update 1-7
Software version 2-19
Start Page 1-3
start page 4-4

Starting HBR 1-3
Status 2-2, 2-24
    Backup Cancelled 2-24
    Backup Running 2-24
    Button Function
        Refresh 2-25
    Cancel backup 2-26
    Display Backup/Restore Cycle 2-24
    Idle 2-24
    Locked by Other Application 2-25
    Refresh 2-26, 3-10
    Restore Running 2-24
    Saving to Archive 2-25
    Success 3-10
Status Display
    Success 2-25
Storage Media 1-7
Storage Medium 2-6
System Error 1-7
System Status 1-3, 2-2

T

tab
    contents 4-2
    index 4-2
    search 4-2
TAPE 2-6, 2-8, 3-2
TAPE/DAT 2-6
Toolbar 1-4
toolbar 4-3
topic 4-3
Transfer Protocols
    Administration Backup Server 2-38
Type 2-11
Types of Backup sets 2-11

U

Underlined Archives
    Restore Status 2-4
Unix File System 1-7
User Interface 1-2
    Browser-Oriented 1-5