New Features in
ibaHD-Server v1.6.0

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1   Create Backups of HD Stores

ibaHD-Server is writing data continuously to one or more HD Stores. With ibaHD-Server v1.6.0 it is possible to create backups for the HD Stores. The created backups can be used for archiving purposes and prevention against data loss caused by hardware defects, file corruptions or other erroneous states.
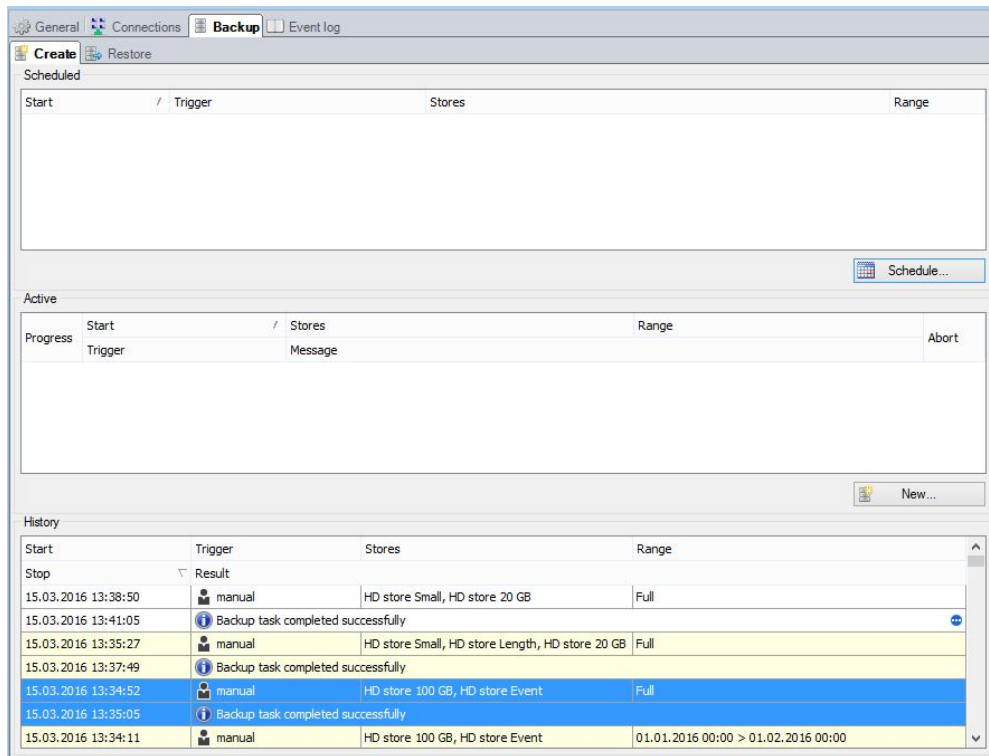
ibaHD-Server provides the option to create a manually triggered backup or setup a schedule for automatic running backup processes. In both cases the user can select one or more HD Stores for the backup process.

The manually triggered backup will start to create a backup right after the user confirms the settings. The created backup is a snapshot of the selected HD Stores. It will contain data of the full available time range of the source HD Store (Full Backup) or of a custom defined time range selected by the user.

Backup Schedule will provide the option to periodically create a Full Backup or a Differential Backup.
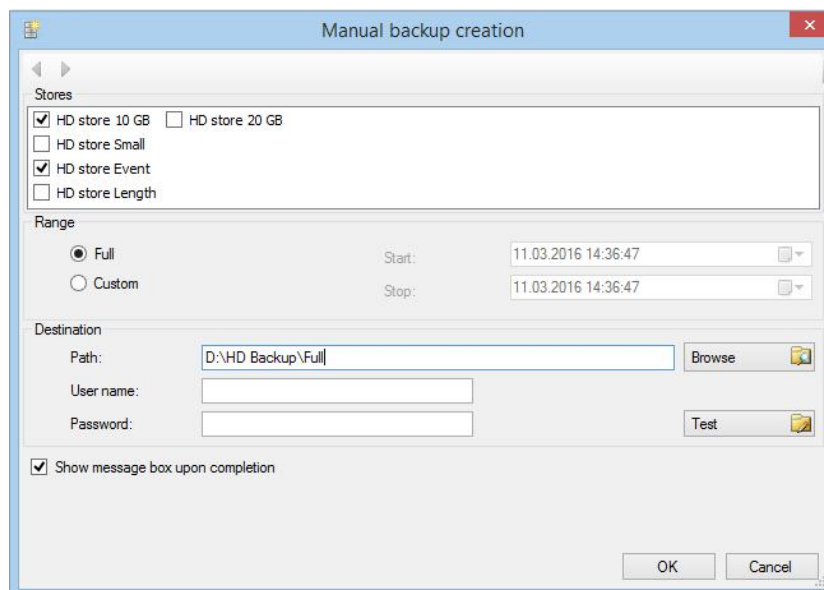
The Differential Backup contains data of the selected HD Stores up to the previously taken backup.

The size of a created backup has the same size as the same data in ibaHD-Server. There is no compressing of the backup.

1.1 Manual backup creation
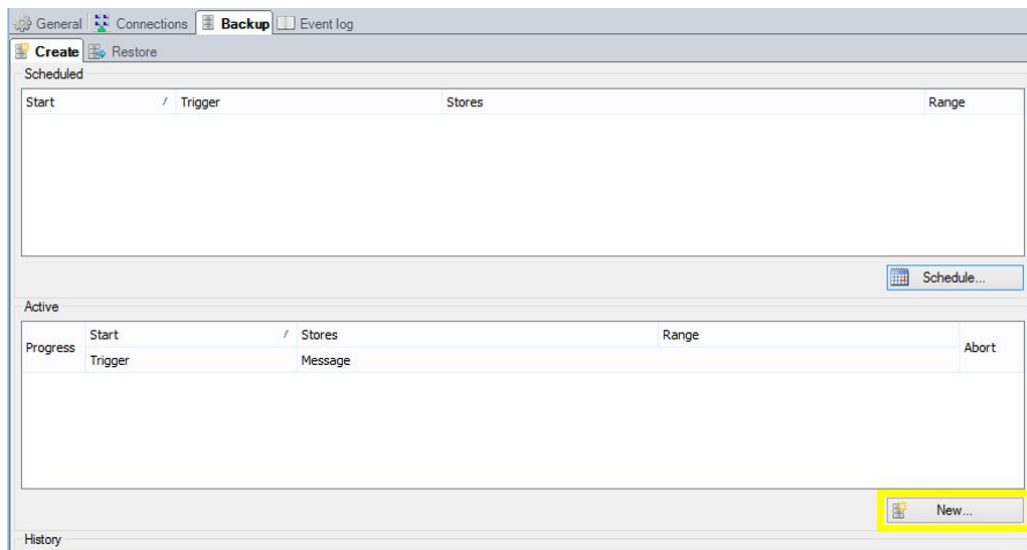
The configuration of the *Manual backup creation* starts by clicking on **<New..>**.

The configuration options of the dialog in details:

◀ ▶

    Recall the settings of already executed backup processes

Stores

    Select one ore more HD Stores

Range

- Full → include the full time range covered by the HD Store into the backup
- Custom → select a specific time range for the data stored at the backup

Destination

Destination folder of the created backup could be a local folder or a shared folder on a network drive

Show message box upon completion

Show message box after the backup operation is completed (checked) or silent end of the backup operation (unchecked)

The backup operation will start directly after the settings are confirmed by pressing **<OK>**.
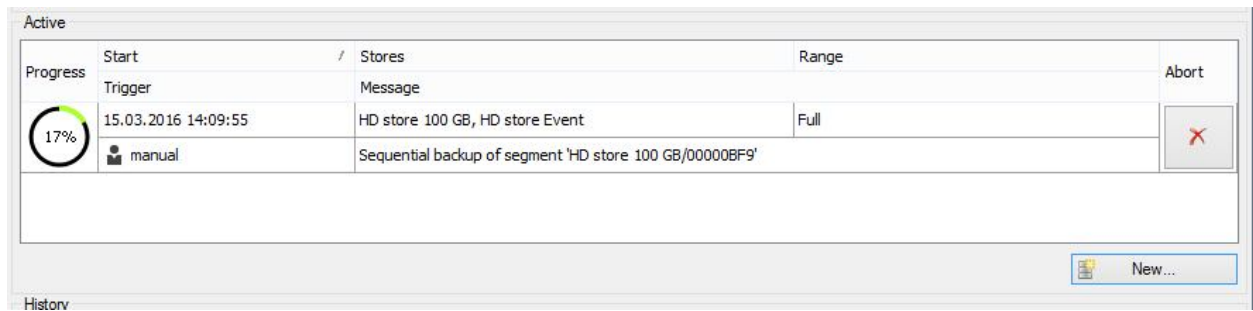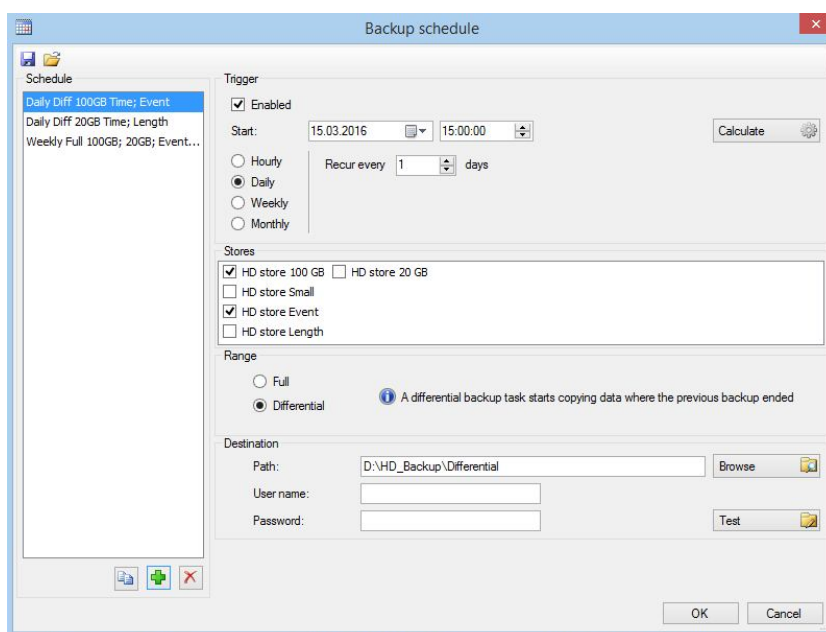

The progress of the backup operation is shown at the area *Active.* The possibility to abort the backup process manually is available at the progress display as well. In case the user aborts the backup process, all data of the running backup process is removed from the system.

1.2   Backup schedule
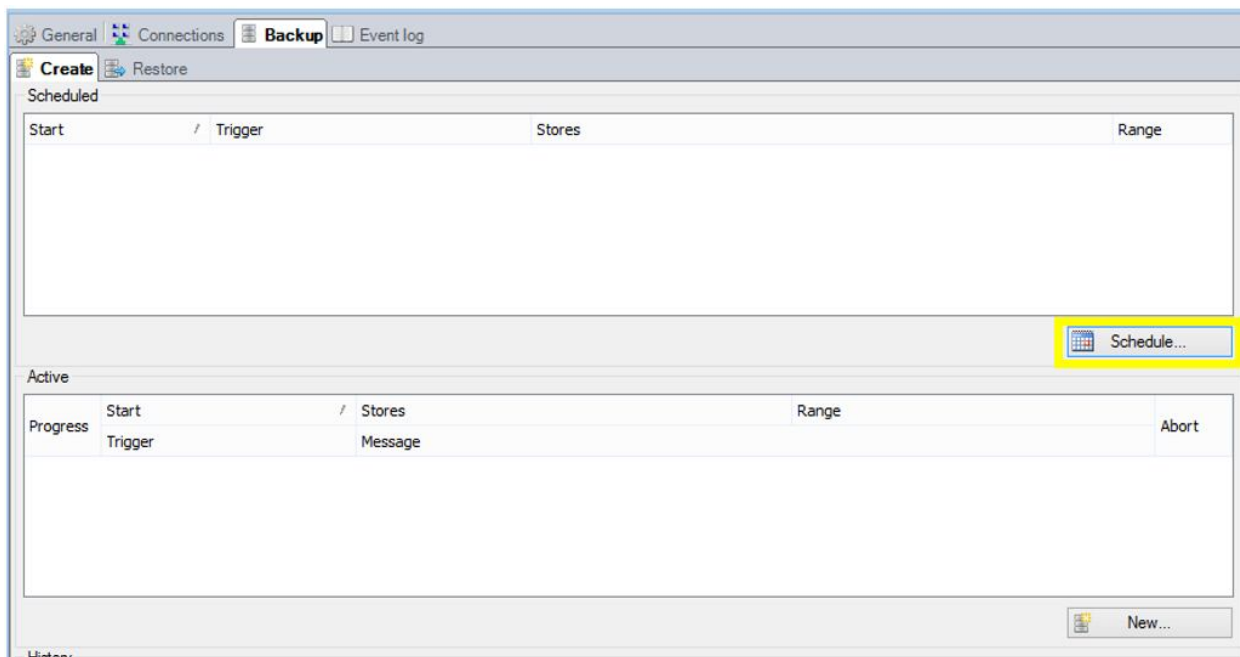
The configuration of the *Backup schedule* starts by clicking on **<Schedule...>**.

The configuration options of the dialog in details:

Schedule

    The content of schedule lists all configured backup tasks. Use the symbols to add , copy   or remove   backup tasks.

Enable

    Backup schedule is active when checked

Trigger

Start time and frequency to repeat the backup process

Calculate

Shows the actual configured backup execution plan
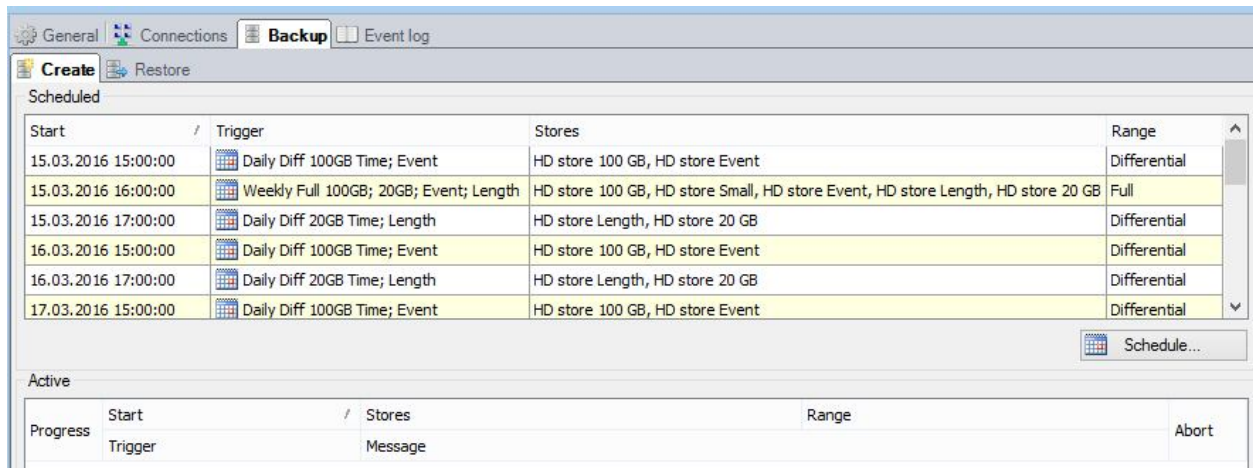
Stores

Select one ore more HD Stores

Range

- Full → includes the full time range covered by the HD Store
- Differential → contains the data of the HD Store since the last Full Backup or previous Differential Backup

Destination

Destination folder of the created backup could be a local folder or a shared folder on a network drive


The next coming active configured scheduled backups are displayed at *Scheduled*. When any of the backup operation is in process the actual progress is shown in the same way as the progress of manual backups at the area *Active*.

1.3   History

The history of all processed backups is displayed as table at the lower part of the dialog. Details for each executed backup process are provided. Use the cursor at the table to select a backup history and click into the row to get more information about the executed process steps.
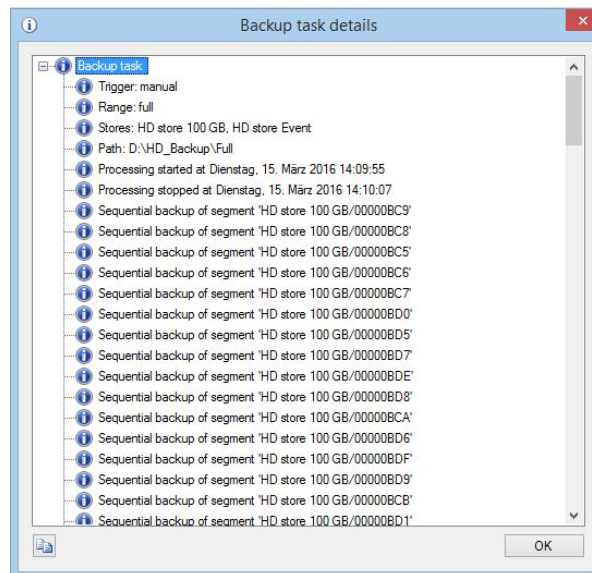
Example of the details dialog

2 Backup strategy

The data size of stored ibaHD-Server Data is a big challenge. The handling of ibaHD-Server Data in backup or restore operations can consume a lot of time and stress the system hardware or infrastructure exceptional.

> During a backup or restore operation there will be a lot of data traffic at the system components which can cause side effects to other processes. There is going to be a lot of IO traffic at the hard disks. If data is transferred over TCP/IP the reserved bandwith will increase and can cause bottlenecks for other bandwidth consuming processes.

The Full Backup of a 100GB HD Store will require 100GB. There is no compressing of the backup data.

Data of ibaHD-Server is arranged as ring buffer. Stored data is not changed any more. It is suggested to start up with one Full Backup and continue on by running a backup scheduled for Differential Backups.

Suggestion for the first backup

The backup of HD Stores which cover a huge time range or contain more than 100 GB should be splitted into a number of small custom backups. Creating only one huge Full Backup for the HD Store can become critical because of the data size and finally the duration of a restore operation.

Configuration example for one custom backup for January.

3   Restore Backups for the HD Stores

Restore a backup means to overwrite the existing HD Store data by the backup data. While the restore operation is in process no other data can be written to the related HD Store. During the restore operation the data acquisition on ibaPDA side is stopped for the related HD Store.
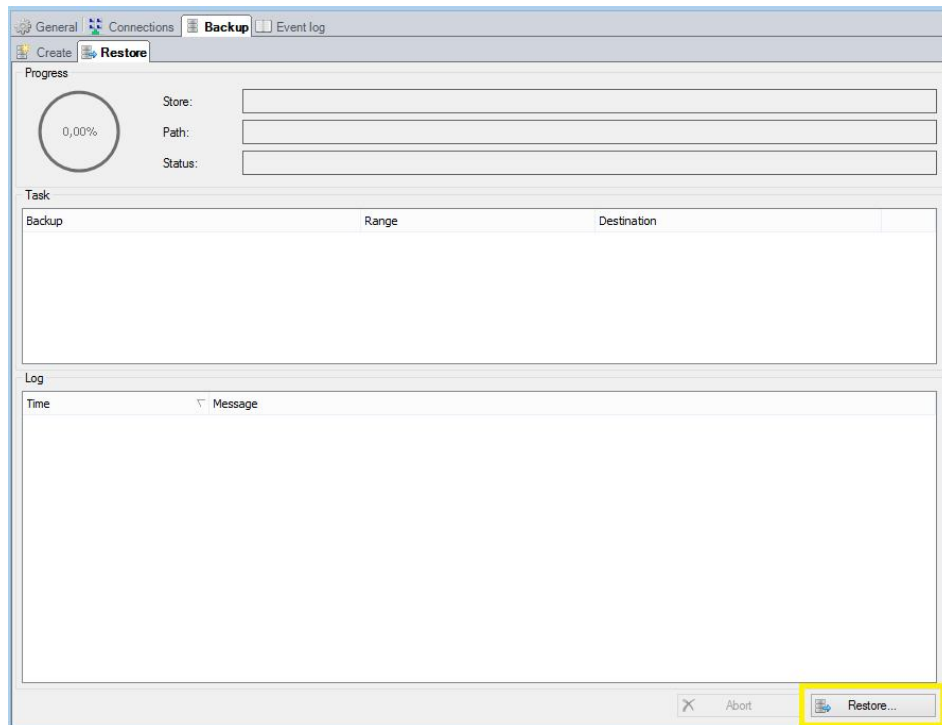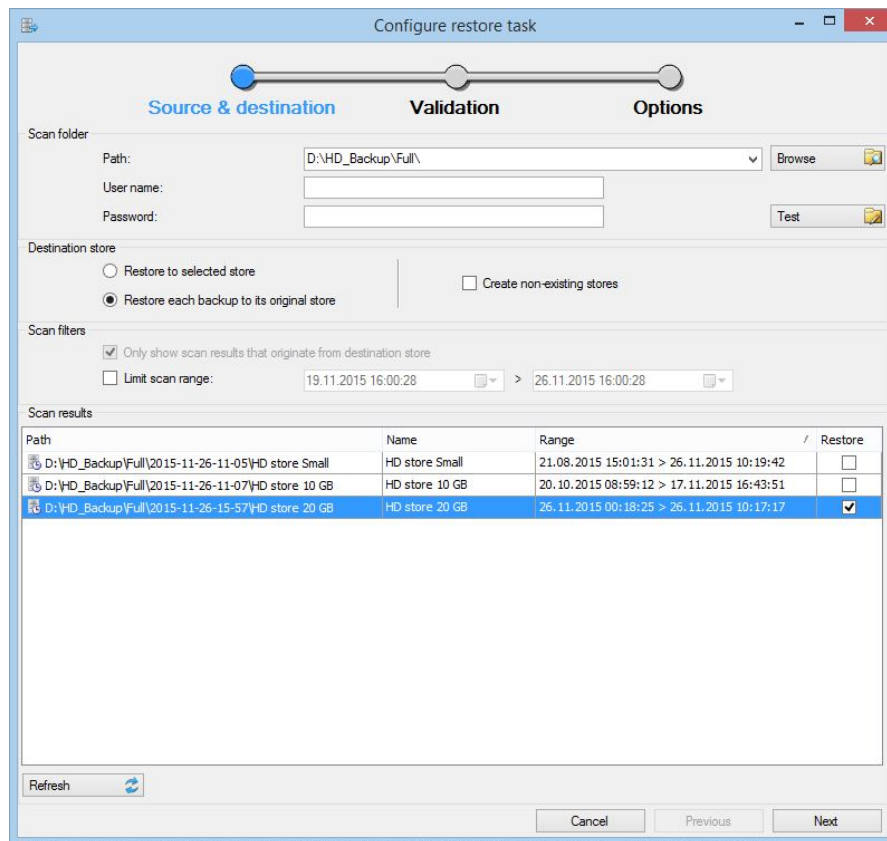

The configuration of the restore operation will start by clicking on **<Restore…>**

The configuration of the restore operation is split into three parts: Setup of *Source and destination*, *Validation* and *Options*.

3.1   Source and destination

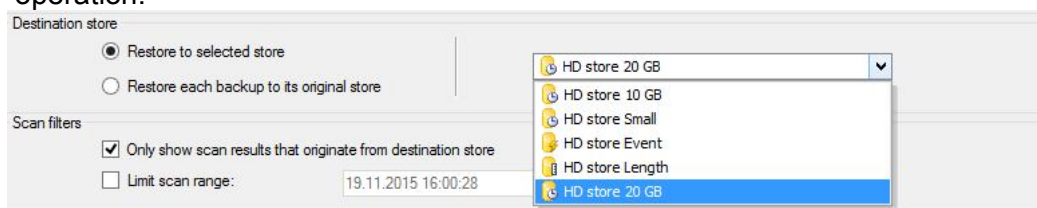The configuration options of the dialog in details:

Scan folder

Next to the usual folder selection to locate the backup, the last folders of created backups are proposed.

Destination store

- *Restore to selected store*
  One of the existing HD Stores must be selected as destination for the restore operation.


- *Restore each backup to its original store*
  Each backup contains information about its origin like the HD Store name and directory. This information is used to direct the data for the backup process. The data at the original HD Store is going to be overwritten by the backup data.
- *Create non-existing stores*
  If the original HD Store does not exist it is going to be created.
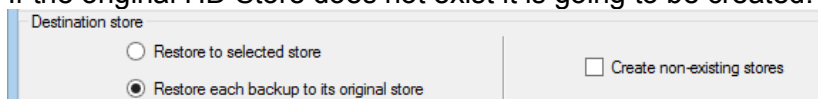
Scan results and **Scan filters**

The table at the *Scan results* shows all backups which are detected at the *Scan folder* according to the used *Scan filters*.

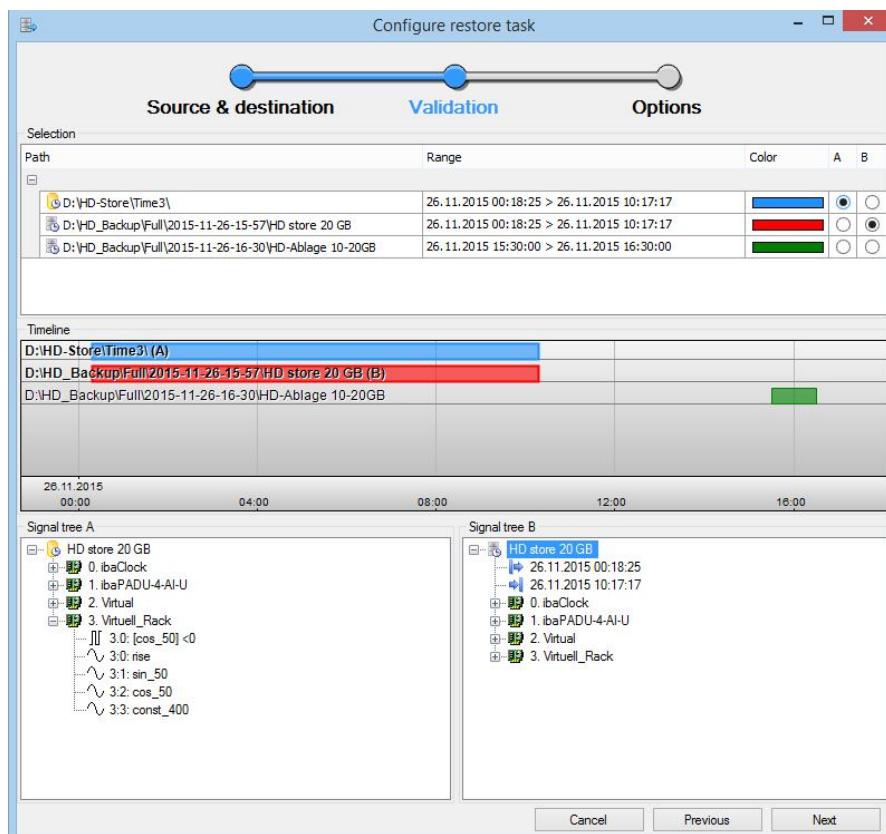The *Scan results* are updated each time one of the previous setting is changed.

Only the selected backups at column *Restore* will be used for the restore operation.

Refresh

Force a rescan for backups at the actual *Scan Folder*.

3.2   Validation

The data of the HD Store and the data of the selected backups for the restore operation are displayed together. The covered timespan and signals are visualized next to each other. Differences at the signal tree and overlapping time ranges can be detected manually.

3.3   Options

The configuration options of the dialog in details:

Input

Options to handle warnings or erros which might occure during the restore operation.

Working copy

The restore opration is a merge process of the existing HD store and the backup data. If the *Restore to working copy* option is selected the merge process is don first into a working copy. The working copy is replacing the original HD store after the successful merging process.

Using a working copy for the restore operation will increase the security of the restore operation but also the time for the restore process. The directory for the working copy can be configured explicitly if there is not enough space for the working copy at the default destination.
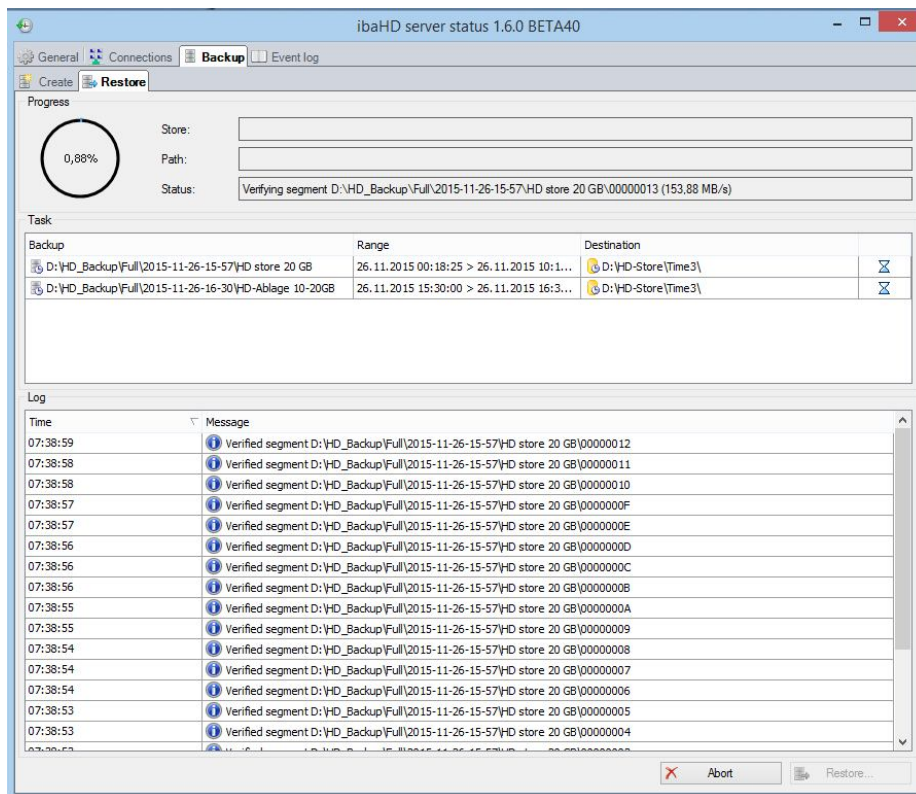
If the *Restore to working copy* option is not selected the merge process is one directly at the original HD Store.

3.4   Restore operation and documentation

After clicking **<OK>** a final message box provides some important information before the restore operation starts.
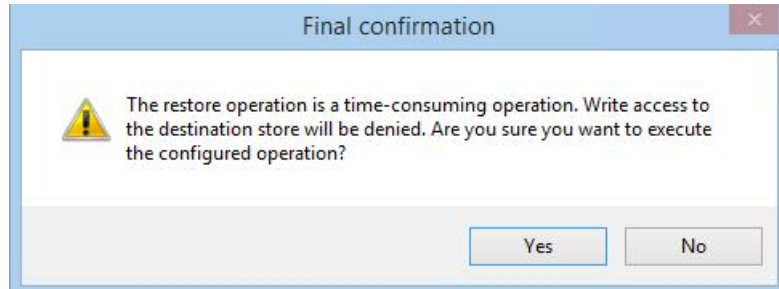
Final confirmation

All processed steps of the restore operation are logged and displayed immediately.