



New Features in ibaHD-Server v2.4.0

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1 Important Information

This document describes the new features of the ibaHD-Server v2.4.0.

The new feature *offline-events* of the ibaHD-Server v2.4.0 requires a reorganization of the ibaHD-Event-Stores. Based on this fact, it is mandatory to make a complete backup of the existing stores and also of the ibaHD-Server project. These two parts of the backup enables the user to switch back to a previous version of the ibaHD-Server if necessary.

The procedure of creating a manual backup and save the ibaHD-Server project is described in the ibaHD-Server manual.

For users, who doesn't use the new feature of the *offline-events*, the ibaHD-Server v2.4.0 is 100% compatible to previous versions.

For using the complete functionality of the features *offline-events*, it is mandatory to install the correct version of the other iba software tools.

Table 1 shows the minimum software version of the other iba tool to get full support of the *offline-events* in the ibaHD-Server:

Software component	Minimum Software Version
ibaHD-Manager	v2.4.0 or higher
ibaPDA Client	v7.2.0 or higher
ibaDatCoordinator	v2.3.0 or higher
ibaAnalyzer	v7.1.7 or higher

Table 1 Software Versions

A mixture of software components with version lower the recommended versions in table 1 and using the feature offline-events can create unexpected situations and resulting in the loss of data!

During the installation of ibaHD-Server v2.4.0 existing ibaHD-Event-Stores are going to be converted automatically into the new structure, existing configurations are going to be adapted.

2 Generation of offline-events

2.1 General

With the new feature *offline-events* it is possible to add calculated values to HD events in a post process task. The calculated values can be product key performance indicators (KPI) or other information. The further difference to the existing function of event generation is that the data for the calculation can be taken from signals in HD stores and not only from dat files.

The two tools to create offline-events are the ibaPDA and ibaDatCoordinator. For handling two or more event-creators, the internal structure of the HD Stores has been changed. The event base configuration (including message text) will be stored in the ibaHD-Server and no longer in the ibaPDA system. For this reason, it's strongly recommended to create a backup of your HD event stores before the update to ibaHD-Server v2.4.0.

It is possible to write the same event from different event-creators, so each of the event-creator store the detail information of the event like signal numbers for trigger and numeric/text fields, and so on in its own configuration. With the 'Active' checkbox in the event configuration of an event-creator, the user enables the writing of these event with the creator.

Events which are related to the current creator will be marked with a yellow event symbol (flash). The grey version of the event symbol is only an indicator that this creator doesn't use the event, but not if any other use or not.

Name	Channel	Format
New field	Unassigned	1.00
sinus	Unassigned	1.00

Only the first event-creator, which opens the configuration dialog, can do modifications on its own events. A second creator, which starts the configuration later can only read the configuration, without any chances (read-only mode).

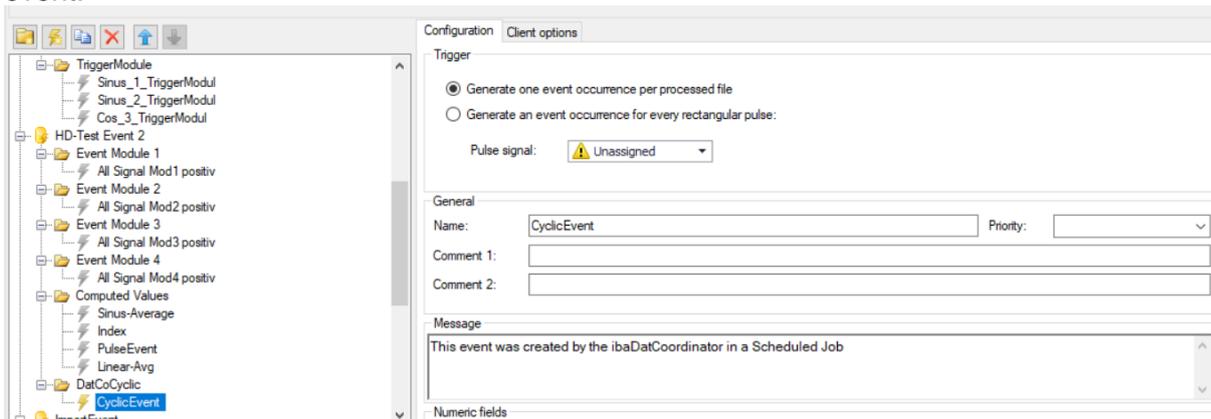
2.2 Event generation with the ibaDatCoordinator

With ibaDatCoordinator v2.3.0 it is possible to create new offline-events and store this in HD event stores. There are different sceneries available to create these offline-events.

2.2.1 Events connected to a job

It is possible to connect an event to any ibaDatCoordinator job. This is possible for all different job types. For the event generation is no dat file connection needed.

An easy example is a cyclic event, generated by a 'Schedule Job' which creates every hour one event.



2.2.2 Offline-events with computed fields

It is possible to create an offline event with attributes in the ibaDatCoordinator. The offline-events based on the data of one dat file or an HD data extract. For the HD data extract the ibaDatCoordinator creates a kind of pseudo dat files in the background. The dat file based on the given analyse description in the pdo file (part of the required configuration in the event generation job window). The start and end time of the pseudo dat file can be configured in the general task configuration of the ibaDatCoordinator job.

After the selection of the ibaHD-Server and input the login data for store access (if necessary), the user can add an event. It is possible to organize the events by creating a sub folder structure.

In the **Connection** tab of the event, all parameters for an *Offline Event* can to be configured:

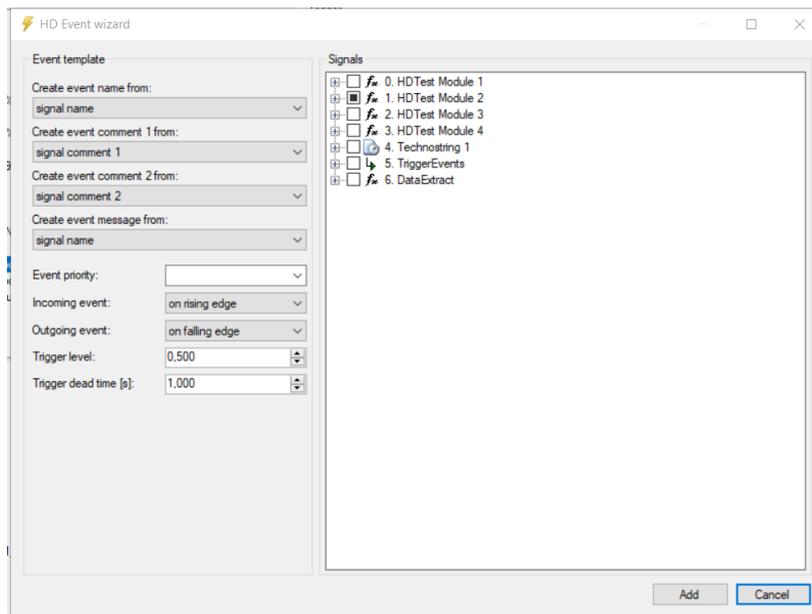
- **Generate one event occurrence one per processed file:** the ibaDatCoordinator creates only one event per dat file or HD data extract
- **Generate an event occurrence for every rectangular pulse:** the ibaDatCoordinator searches in the defined signal of the dat file or HD data extract for rectangle patterns and creates an event for each found pattern.
- **Pulse signal:** the signal where the ibaDatCoordinator search for the rectangle pattern in option 'Generate an event occurrence for every rectangular pulse'
- **Name:** the name of the event. This name is displayed in the event tree and also in the event column of the HD event table in the ibaPDA
- **Priority:** definition of the priority of the new event; the priority can be: High, Normal, Low
- **Comment 1:** the first command field of the event
- **Comment 2:** the second command field of the event
- **Message:** the message text, combined with the numeric and/or text fields by adding placeholder with square brackets and the field name
- **Numeric Fields:** dynamic signal value which can be added to the event message
 - Name:** the name of the numeric field; with the button in the right area it is possible to add the placeholder for this field into the message
 - Channel:** the signal or logical expression which is used for the calculation. depending on the type of the selected signal, the value is the average value of the signal in the time frame of the dat file / HD data extract or it is the computed value of the logical expression.
The signal or logical expression can be selected by the drop-down menu or with drag and drop from the signal tree of the dat file.
 - Format:** define the number of digits before and after the decimal point for the value which will be added to the message text.
- **Text Fields:** dynamic text signal value or file name which can be added to the event message,
 - Name:** the name of the text field, with the button in the right area it is possible to add the placeholder for this field into the message
 - Channel:** the text signal or processed file name which is used in the event message. The signal for the channel can be also logical expression, defined in the analyse description. In this case the value of this expression will be stored.,.
The signal or logical expression can be selected by the drop-down menu or with drag and drop from the signal tree of the dat file.

The screenshot displays the configuration window for an event in the ibaHD-Server. The interface is divided into several sections:

- Tree View (Left):** Shows a hierarchical structure of events and modules. The 'Sinus-Average' event is selected under the 'Computed Values' folder.
- Configuration - Client options (Right):**
 - Trigger:** Two radio buttons are present: 'Generate one event occurrence per processed file' (selected) and 'Generate an event occurrence for every rectangular pulse:'. Below is a 'Pulse signal' dropdown menu set to 'Unassigned'.
 - General:** Includes fields for 'Name' (Sinus-Average), 'Priority' (dropdown), 'Comment 1', and 'Comment 2'.
 - Message:** A text area containing the message: 'The Sinus Average is: [New field] -- Product: [Product Code] -- File:[FileName]'.
 - Numeric fields:** A table with columns 'Name', 'Channel', and 'Format'. It contains one entry: 'New field' with channel '^ \ 0:0: Sinus_1' and format '1.00'.
 - Text fields:** A table with columns 'Name' and 'Channel'. It contains two entries: 'Product Code' with channel 'Aa 4:0: Product Code' and 'FileName' with channel 'Processed filename'.

2.3 Event configuration in ibaPDA Client

With the ibaPDA Client it is possible to create events. The events have to be configured in the ibaHD event data store in the ibaPDA Data storage. The ibaPDA client need one data store for each HD Event store. For the configuration the user has to select the ibaHD-Server and input the login data. After this the current configuration of the HD event store is displayed in the Event window. All events which own the ibaPDA are marked with a yellow flash. For better organization of the different events, the user can create subfolders in the event store. To add new events the HD-event-wizard can be used. To activate the wizard, the signal or module from the signal tree has to drag and drop in the correct HD event subfolder. The wizard define some suggested values for the different parameters. These values can be changed by the user.



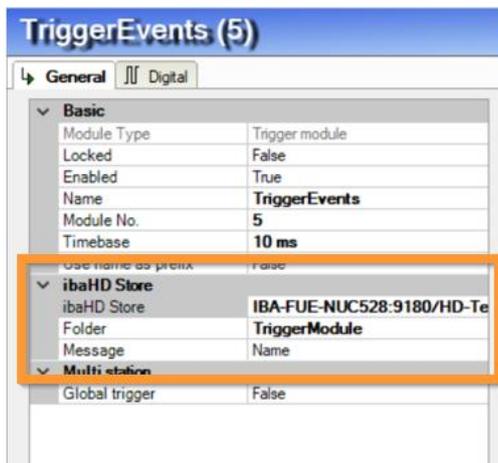
2.4 Generation of HD events in the trigger module

ibaPDA v7.2.0 together with ibaHD-Server v2.4.0 supports the creation of events directly in the trigger module. Each triggers of the module is going to take over as events into the ibaHD-Server.

In the **General** tab of the trigger module under the paragraph ibaHD-Store, all parameters for the ibaHD-Server can to be configured:

The user has to open the ibaPDA Client I/O Manager. Each configured trigger module provides under the tab **General** the settings for the HD event store configuration.

- **ibaHD Store:** drop-down list with all know ibaHD-Server to select one, or to create a new link to another ibaHD-Server in the network.
- **Folder:** optional definition of the subfolder in the HD Store where the event is going to be stored. With the button  a new window appears to select exiting folders or to create new ones.
- **Message:** selection of the event message. Default value is the signal name, but comment 1 or comment 2 is also selectable

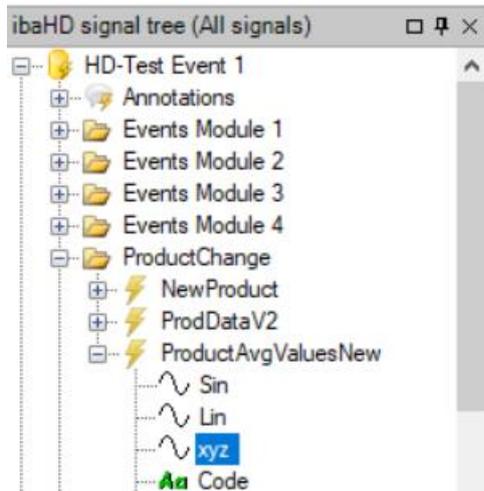


It is also possible to modify the events from a Trigger-Modul in the Data Store dialog.

2.5 Event related numerical and text fields displayed in HD trend graph

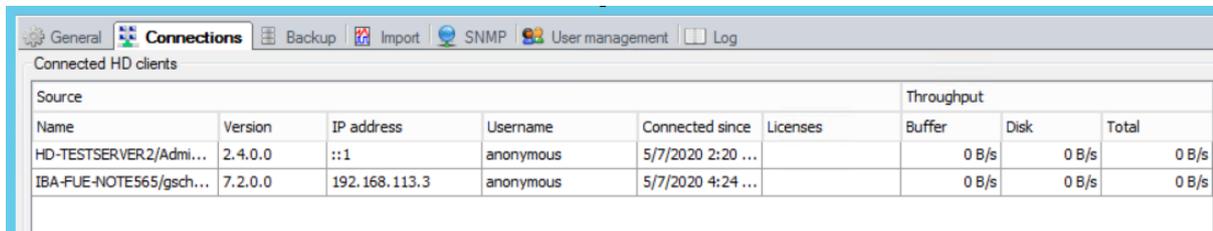
The ibaPDA supports the visualization of the numerical and text fields as trends in ibaPDA HD trend view.

The numeric and text fields are listed in the signal tree of the ibaHD-Server as signal in the event and can easily add to a HD trend graph by drag and drop.



3 Version information about connected clients

The connected clients are listed at the connections tab in the ibaHD-Manager GUI. The displayed information of the connected client includes now the user name, and Client version next to the already provided information about the connected client tool and IP address as well as the current data throughput.



Source						Throughput		
Name	Version	IP address	Username	Connected since	Licenses	Buffer	Disk	Total
HD-TESTSERVER2/Admi...	2.4.0.0	:::1	anonymous	5/7/2020 2:20 ...		0 B/s	0 B/s	0 B/s
IBA-FUE-NOTE565/gsch...	7.2.0.0	192.168.113.3	anonymous	5/7/2020 4:24 ...		0 B/s	0 B/s	0 B/s

4 Clean-up of backups

In ibaHD-Server the backups of HD stores can be created based on a time schedule. To avoid the problem of running out of disk space the backup schedule provides a cleanup for the HD backups.

The user can activate one of the three given backup clean-up strategies:

- Limit disk quota - limit the size of the backup on the hard disk / network drive – the oldest HD backup is deleted if the given limit is reached
- Keep minimal xx GB free disk space by deleting the oldest backup
- Delete backups older than the entered give time range in years, months and days



Cleanup

Enable automatic cleanup

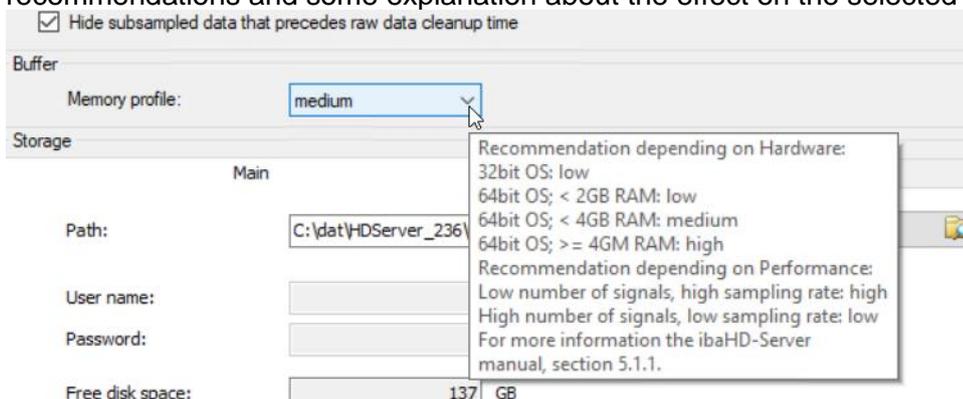
Limit diskquota to GB by deleting the oldest backups

Keep minimal GB free disk space by deleting the oldest backups

Delete backups older than Years Months Days

5 Extension of the tooltip for buffer memory profile

The displayed tooltip when hovering the selection for the buffer memory profile gives recommendations and some explanation about the effect on the selected memory profile.



Hide subsampled data that precedes raw data cleanup time

Buffer

Memory profile:

Storage

Main

Path:

User name:

Password:

Free disk space: GB

Recommendation depending on Hardware:
 32bit OS: low
 64bit OS; < 2GB RAM: low
 64bit OS; < 4GB RAM: medium
 64bit OS; >= 4GM RAM: high
 Recommendation depending on Performance:
 Low number of signals, high sampling rate: high
 High number of signals, low sampling rate: low
 For more information the ibaHD-Server manual, section 5.1.1.

6 Additional User-Rights

With ibaHD-Server V2.4.0 an additional user right is available: 'Delete ibaHD data'. A logged in user needs this right for deleting any signal or events from the stores with the ibaHD Manager tool or during the configuration in the ibaPDA Client. Now the rights of each individual user can be fine-tuned.

