Hyper Historian
Archiving Options

APPLICATION NOTE

October 2015

Description: Guide to using Hyper Historian Archiving.
General Requirement: Basic knowledge of Hyper Historian configuration. (See application note, *Hyper Historian – Quick Start* for more information.)

Introduction

Using Hyper Historian's Archive Settings, you can enable Hyper Historian to automatically detach older data from the system and move them to a specified location (folder). Once archiving is enabled and Hyper Historian is creating archive files, you can back up the archive files to CD, DVD, tape, or some other "permanent" storage media for long-term storage.

In addition to enabling archiving in the Archive Settings, you can also specify whether Hyper Historian will generate "Metadata" for the archive files. An archive metadata file contains detailed information about the archive file including a list of the tags whose data is stored in the archive file. Metadata information, when available, is displayed on the Archive Management screen, which is also the screen you can use to re-attach archived data files to the Hyper Historian system.

Configuring Hyper Historian Archiving

1. Open Workbench and select the Hyper Historian provider.

2. Expand Loggers and select a logger with a Storage Mode type of "Disk Logger".

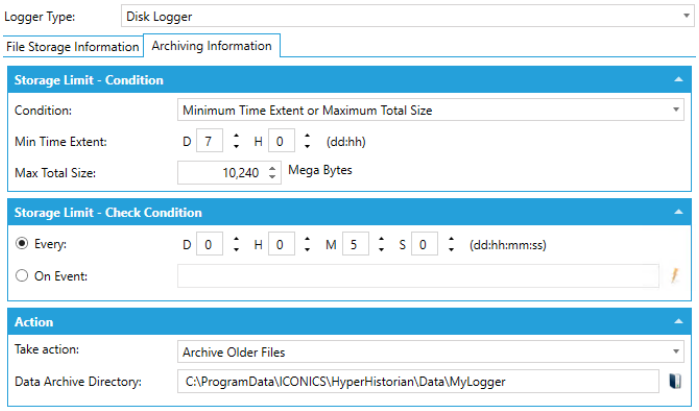

Figure 1 - Archiving section for disk loggers

3. Under the Archiving Information section, define the Storage Limit settings, which is the amount of data that will be kept attached to the running system. When the storage limit is exceeded, the archive will occur. You can set the limit based on time, on total size, or both. (When limiting on both, either one limit or the other needs to be exceeded – they do not need to both be met at the same time.)

4. Define the Check condition, which is how often the system will check the storage conditions to see if an archive is needed.

5. Under Action, select Archive older files, and specify a data archive directory, if needed. You can choose the folder of your choice by first configuring it using File Configuration under ProjectWorX tab. If no data archive directory is specified, this default location is used:

C:\ProgramData\ICONICS\HyperHistorian\Data\<LoggerName>

Only entire logging files will be archived. The entire file must fall outside of the minimum time extent or the maximum total size for it to be archived. This means that the exact archiving schedule is partially dependent on the settings in the File Storage Information section.

Example: File Storage Information is set to create a new file every 1 day at midnight. Archiving Information is configured with the Minimum Time Extent setting, and the Min Time Extent is set to 7 days. The system is started on the morning of January 1st. Hyper Historian will create one log file per day, and for the first seven days no archiving will be done. As soon as all of the data in the oldest log file becomes older than 7 days (which will be morning on January 9th) the next archiving check will cause that oldest file to be archived.

Note that for best results the logger should be creating new log files at a smaller interval than the storage limit. If, for example, the File Storage Information section was configured to create a new file only once every 30 days and the archiving was set to archive with a minimum time extent of 7 days, the archive would not actually happen until 37 days later – 30 days to fill up the file, then 7 days for all of it to become old enough to archive.

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Reattaching Archived Files

Once the Hyper Historian's logged data is archived, the data is no longer immediately available for playback on a trend display or available through the SQL Query Engine. However, previously archived data can easily be reattached to the system so that it is once again made viewable on trend displays and accessible via the SQL Query Engine. This is done using the Hyper Historian Archiving Management screen.

In the Hyper Historian provider, go to System Administraiton → Archiving Management.

You can reattach previously archived files by clicking on the "Attach New…" button and browsing to the folder containing the archive files to be reattached. (You can select more than one file using the Shift or Control keys.) The reattached archive files will be listed in the Attached Archive Files window. If "Generate Metadata for Archiving Files" was selected in the System Settings, the metadata will appear in the window to the right.

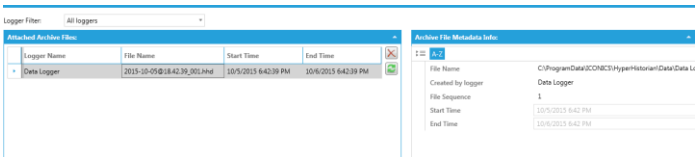

Figure 2 - Attaching Archive Files

As soon as a file has been attached it should be available for viewing or reporting as if it had never been archived.

Once you are done reviewing the data, detach it from the system by selecting the attached data and clicking the Detach Selected button. The archive file will stay in the Archive folder even after detaching so that you can reattach the file whenever necessary to view data again.

It is not recommended to leave archived data attached for extended periods of time, as this will slow down the performance of your system – this is why the data was archived in the first place!