Hyper Historian – New Features in 10.96

Application Note November 2019

Description: This document specifies the new features introduced in version 10.96 for Hyper Historian.

General Requirement: Installations of Hyper Historian v10.96 and SQL Server.

Introduction

This document describes new features found within the 10.96 Hyper Historian installation. The features will be explained in detail and will list their purpose, functions, and a brief explanation for set up.

Data Exporters

The Hyper Historian Data Exporter is designed to obtain the data that has been collected by the Hyper Historian collector, and export this to a specified data storage location. The data lakes that the data can be exported to currently includes SQL databases, HDInsight, Azure SQL databases, Azure Storage, Azure tables, Files, and Blob. More storage locations may be included in the future.

To begin using the Data Exporter, you may need to first install the application. To do so, open the Workbench. Click on the 'Project' tab in the top left-hand side of the screen and then select Configure Database. You will need to set up the connection to your configuration database. Scroll down the list until you find the application "Hyper Historian Data Exporter". Click on the check box 'Install/overwrite' for the data exporter and then select 'Install'. It should look similar to Figure 1.

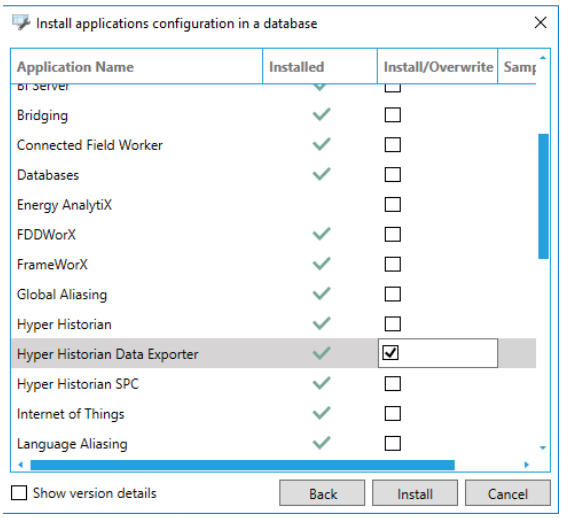

Figure 1 – Installing the Data Exporter

Once installed, you can now begin to set up the Data Exporter. The Data Exporter is designed with three main components: Datasets, Storage, and Tasks. The Datasets are used to select which data you want to store. Storage is used to specify where you want the data to be stored. Tasks are used to set up the synchronization tasks. This specifies which data set gets stored to the specified storage location, and when it will be stored.

Datasets

In basic terms, the Dataset is basically set up like a SELECT and WHERE statement from SQL. In a Dataset, you can choose which columns of data you want to store and choose which data you want to store. This is done through the use of filters.

Dataset Definition

The dataset definition is where you can make the choice to either store Raw data or Aggregated data. You have a simple radio button under general settings to log either Raw or Aggregated Data. When storing Aggregated data, you need to configure the following:

- Resampling start (start time for Aggregated calculations)
- Calculation Period (how often the calculation needs to run)
- Percent Good (percentage of Aggregated data samples to be considered good)
- Percent Bad (percentage of Aggregated data samples to be considered bad)

You can also choose to treat Uncertain values as bad or if you want to use Sloped Extrapolation using the check boxes. See Figure 2 for an example of the setup.

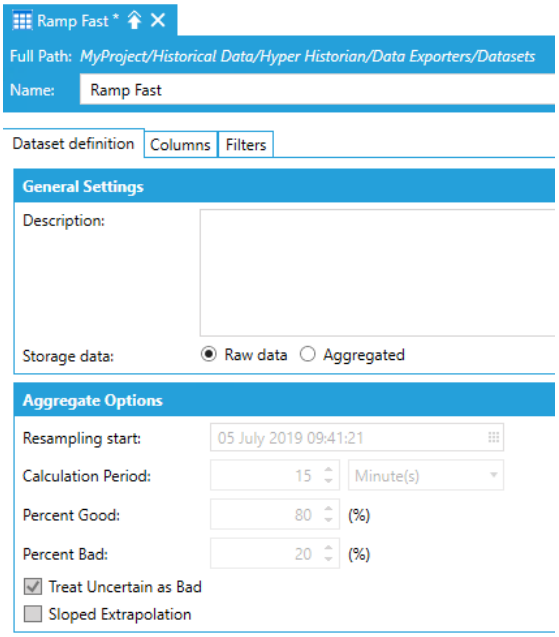

Figure 2 – Dataset definition set up

Columns

In this tab, you can specify which columns you want to use when storing data. You can remove or add new columns. You can name the columns, specify the value types and the data types. For example, you can set up a column that records the point name of a value which records as a string value with a maximum length of 50 characters. Please see Figure 3 as an example.

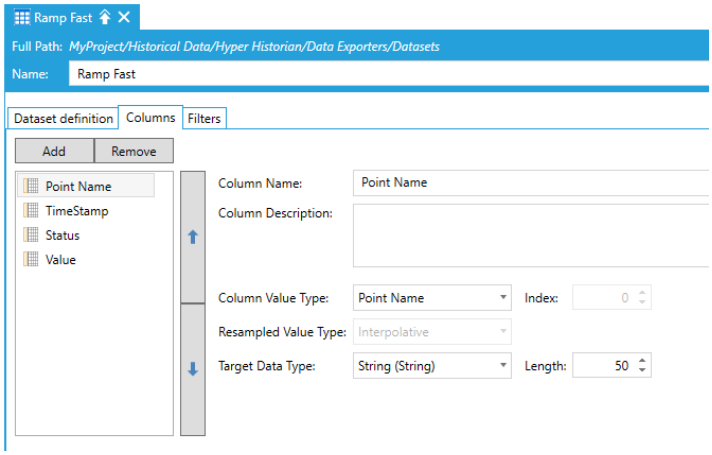

Figure 3 - Column example configuration

Filters

In this tab, you can choose specific filters so that only certain data tags are stored. Please see Figure 4 for an example of a filter for tags to be logged. Figure 4 shows that only the RampFast tag will be logged.

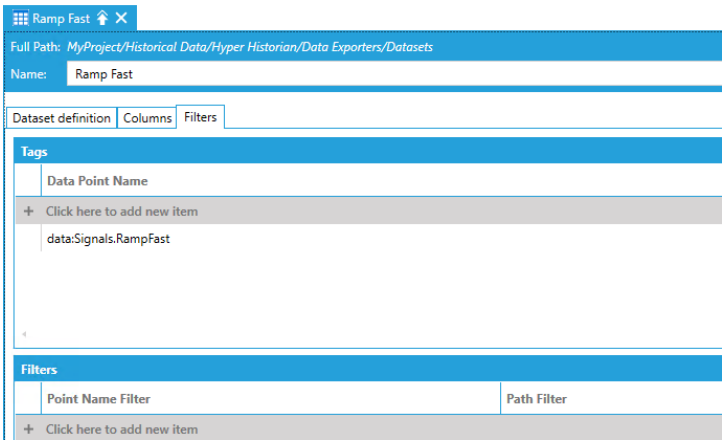

Figure 4 – Data Set filters

Storage

For data exporters, you need to specify the location in which you want to store the historical data. Currently, data exporters have the following Connection Types: Apache Kafka, Azure Data Lake, Hadoop, local CSV files, and SQL/Azure SQL.

You must specify a connection type and configure the connection string to the storage location. In the advanced section, you may configure the size of the batch (how many values get stored), how many times to retry, how long to wait before each retry, and how long the timeout should be when copying files. Please see Figure 5 for an example of storage being set up for local CSV files.

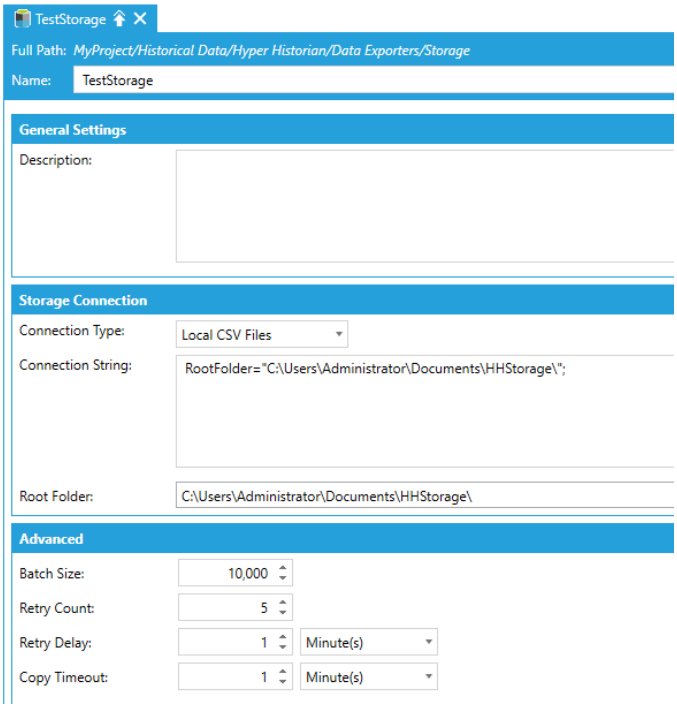

Figure 5 – Storage set up

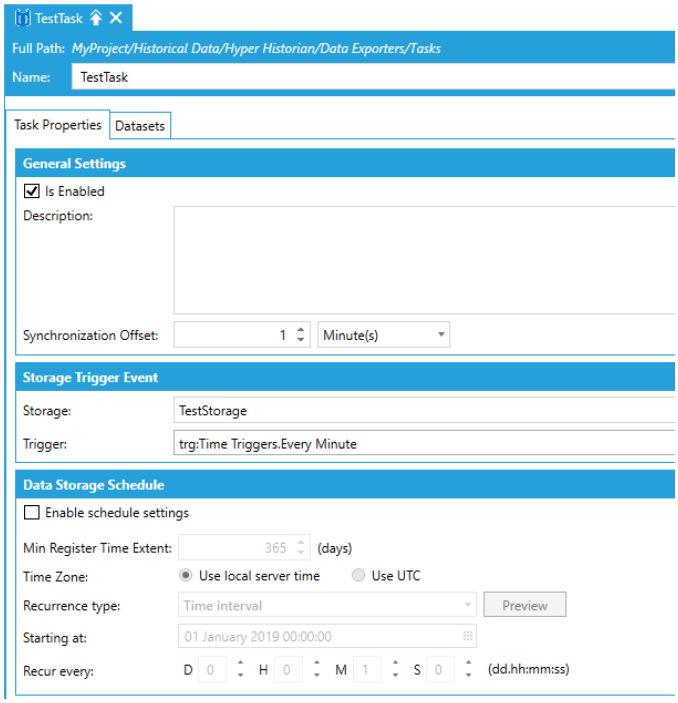

Figure 6 - Tasks Setup

Tasks

The purpose of Tasks is to configure which Datasets get exported, which storage type is the data set exported to, and when the data gets exported. In the configuration, you must specify one of the pre-configured Storage locations, a trigger to fire the export, and which data sets you want to store. Please see Figure 6 for an example of a pre-configured Task.