Collecting Real-Time Data from Vaisala Ceilometer

This document describes how to use File Hiker /Direct Polling to collect data from the Vaisala Ceilometer PC and import the BL_HEIGHT and CLOUD data from the .HIS file.

Vaisala Instrument Configuration

The CL51 profile message should be using message type 'msg1_10x1540'. The default message interval is set to 16, but must be set to 36 seconds.

File Hiker-

You will obtain the File Hiker installation package and install on the ceilometer PC, and define a communication route (with port forwarding if using a cellular modem/router) for File Hiker per Appendix A. The required File Hiker configuration (custom.json) file for the Vaisala should be as follows (you can cut/paste into a Notepad document and save as custom.json).

```
{
  "ConfigOptions": {
    "ContentFolder": "C:/BLView/History",
    "ArchiveFolder": "C:/BLView/History/archive",
     "ArchiveFilenameSuffixFormat": ".yyyy-MM-dd-HH-mm",
    "RecurseSubdirectories": true,
    "AutoDeleteProcessedFiles":  false,
    "AutoArchiveProcessedFiles":  false,
    "AllowDeleteRequestToDeleteFiles":  false,
    "AllowDeleteRequestToArchiveFiles":  true
  } ,
  "urls": "http://*:9898"
}
```

AirVision Configuration

Apply the "Add_Vaisala51.sql" script. You can then configure an instrument with instrument type "Vaisala CL51", and create a HTTP route to the IP and port that connects with the File Hiker program on the ceilometer PC.

Once this is set up, you can use Task Scheduler to set up regular polling of the minute data, and a Data Average Rollup Task to create hourly averages from the minute data, if desired.
(see https://agilaire.com/wp-content/uploads/2018/09/UsingDataAverageRollup.mp4)

Appendix A - File Hiker

File Hiker is used to host files from external sources, so they can be polled via AirVision's Instrument Polling engine. File Hiker is a small utility service which is installed on the remote Windows PC housing the files. The setup installs a Windows Service which starts at system boot time and hosts the configured files via a built-in file hosting implementation.

Requirements

Windows 7 SP1 or later.

File Hiker is implemented in the new .NET CORE architecture. It is bundled as a self-contained deployment ("SCD") application which does not require any existing .NET framework version be installed on the target machine.

Installation

Run the *FileHIker.msi* file to install. The simple setup just takes all defaults and installs to the default program files location: *C:\Program Files (x86)\Agilaire LLC\File Hiker*

Configuration

The application settings can be configured in the file *custom.json*, which is placed in the application data root folder (*C:\ProgramData\Agilaire\FileHiker*). This is a JSON-formatted file. The settings in the file override the programmatic settings in the *appsettings.json* file (found in install folder). Please do NOT modify *appsettings.json*, as it will be overwritten upon each upgrade of the software, whereas *custom.json* is not. All custom settings should be put in *custom.json* if possible.

Polling from AirVision

AirVision uses the Instrument Polling engine to poll file content from the File Hiker. The File Hiker internal file host uses a HTTP request transport layer. This means that within AirVision, it should be configured with an **HTTP Route (not a TCP route)** in the Server Configuration.

Logging

The logs are written to: *C:\ProgramData\Agilaire\FileHiker\Logs*

The current log messages are always in *log.txt*, and a rolling set of log files are archived under the archives folder. These will be named *log.0.txt* through *log.9.txt*.
The logs generally include all incoming requests for files and additional diagnostics.