Halo 3C Dashboard via InfluxDB, Grafana & Powershell

InfluxDB Setup

1. Visit: https://influxdata.com/downloads/ to download and install the latest InfluxDB.
2. Once Influx is installed, open a web-browser to port 8888 of your Influx server. This should take you to Chronograf.
3. Click on the "Crown" icon (InfluxDB Admin) in the left nav. bar
4. Create a new Database and give it a name. VapeDetectors is "default" in the powershell listener script.
5. The "autogen" retention policy will keep data indefinitely. You cannot edit the autogen policy.

   You can have multiple retention policies on a database. For my purposes I create one named "DYNAMIC", meaning for now I'll retain data for 365 days, but I might change my mind and edit it to 90 days or whatever.

   Hover over your new database and click on the Add Retention policy button. Give it a name and specify the duration. DYNAMIC is "default" in the powershell listener script. You can use hours, minutes, days etc. for the duration.

Grafana Setup

1. Visit: https://grafana.com/grafana/download to download and install the latest Grafana.
2. Once Grafana is installed, open a web-browser to your Grafana server.
3. After logging in, hover on the Configuration button (Gear icon, bottom left nav. bar) and click the "Data sources" button.
4. Add an InfluxDB datasource.
    a. **Name**: Something that makes sense. I used "InfluxDB (VapeDetectors)"
    b. **Query Language:** Should default to InfluxQL
    c. **URL:** If it's on localhost, you still must type out the URL, it won't fill it in.
    d. Scroll to the bottom.
    e. **Database:** Use the database name you created in Influx.
    f. Everything else can stay default.
    g. Click the Save & test button
5. Hove over the Dashboards icon (four little squares) and select "Import"
6. Click the "Upload JSON" file and select the "HALO3C-Dashboard.json" file included with this document.
    a. Name: Leave as default or change … up to you.
    b. Data Source: Select the InfluxDB datasource you previously created.
    c. Click Import

Powershell Listener Setup

1. Copy the "**HALO-Listener-v2**" powershell script to the server you intend to run it on.
2. Update the global variables found under "**Update these variables**" accordingly
3. Start the script.

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HALO 3C Configuration

1. Log into one of your Halo units.
2. Click on the “Integrations” tab
3. Scroll down to “Heartbeat”. There should already be some default data there. Just update what server it’s pointed to. Make sure it matches what you used for the ListenerURL in the powershell script.

Here’s a working example. Just update the highlighted part accordingly:

http://<IP TO MY LISTENER>:8081/heartbeat
?location=%NAME%,Temp=%SENSOR:F%,RH=%SENSOR:RH%,Lux=%SENSOR:Lux%,TVOC=%SENSOR:TVOC%,CO2eq=%SENSOR:CO2eq%,PM2.5=%SENSOR:PM2.5%,PM10=%SENSOR:PM10%,NH3=%SENSOR:NH3%,NO2=%SENSOR:NO2%,CO=%SENSOR:CO%,Noise=%SENSOR:Noise%,Move=%SENSOR:Move%,AQI=%SENSOR:AQI%,Triggered=%ACTIVE%

4. Adjust the interval to your taste. 15 seconds is the lowest setting and what I am using.
5. Authentication Type can stay on Basic/Digest
6. Save your settings.

Confirm Setup

If you wait for your interval, you should eventually get “**OK @ <timestamp>**” in your status on the Halo unit if it was able to connect to the listener. If you watch the listener script, you will also see a red asterisk blink whenever it receives a heartbeat. If you’re getting all that, then check your Grafana Halo dashboard. You should start seeing data points in the graphs.

1. Web-Browse to your Grafana server
2. Go: Dashboards > Browse
3. Select HALO 3C (or whatever you named your dashboard

If all of that is good, you can use the “Halo Device Manager” to download the working config. and deploy the heartbeat settings out to the rest of your units.

~fin~