

Engineering Note: EN0116 Using Postman to retrieve sensor live data

Summary: An explanation of the process to find a sensor and retrieve live sensor data using Postman application

Products affected: Hydro-View (HV05) and Hydro-Hub (HH01)

Revision Date: 01/10/2024 Author: S.Cook

1 Introduction

Hydro-View (HV05) and Hydro-Hub (HH01) units both implement the Hydro-Net API. The Hydro-Net API is a REST API that can be used to send data to and retrieve data from the units. The Hydro-Net API Developers guide (hd0801) describes each function call in detail.

Postman (<https://www.postman.com>) API is a useful tool to test and develop API calls to the Hydro-Net API.

Following is an example and explanation of the steps required to retrieve live data from a sensor.

2 Identifying the address of the unit

On a Hydro-View the I.P address is displayed in the I.P address settings on the systems page.

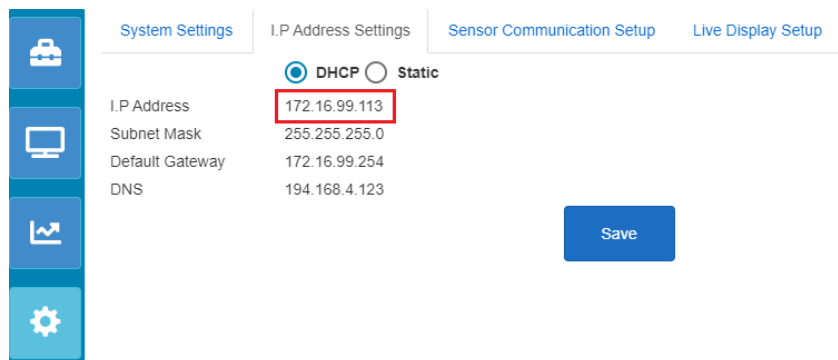
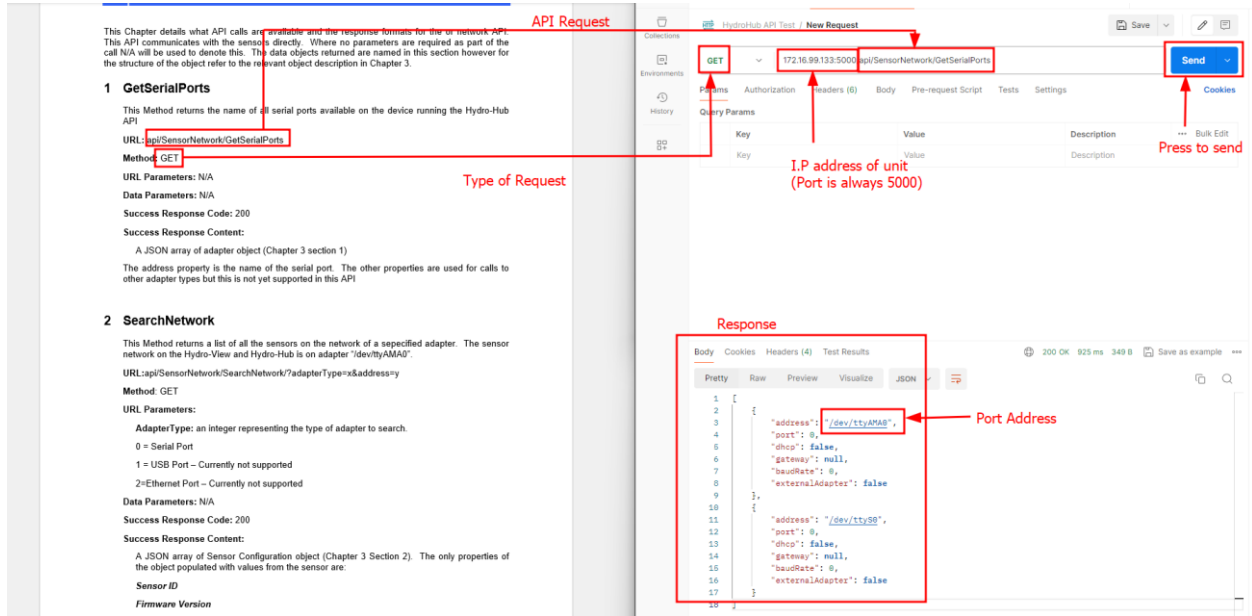


Figure 1 - I.P Address setting

If there is only one device on a mdns enabled network then the device can be reached by typing “hydrohub.local:5000”. Another option is to use I.P scanner software to find devices named HydroHub.

3 Using the API guide

The API guide states the calls, the type of calls, parameters for the calls and the format of the response. On a Hydro-Hub and Hydro-View the sensor network port is "/dev/ttyAMA0" however a list of serial ports can be obtained using the "GetSerialPorts" request.

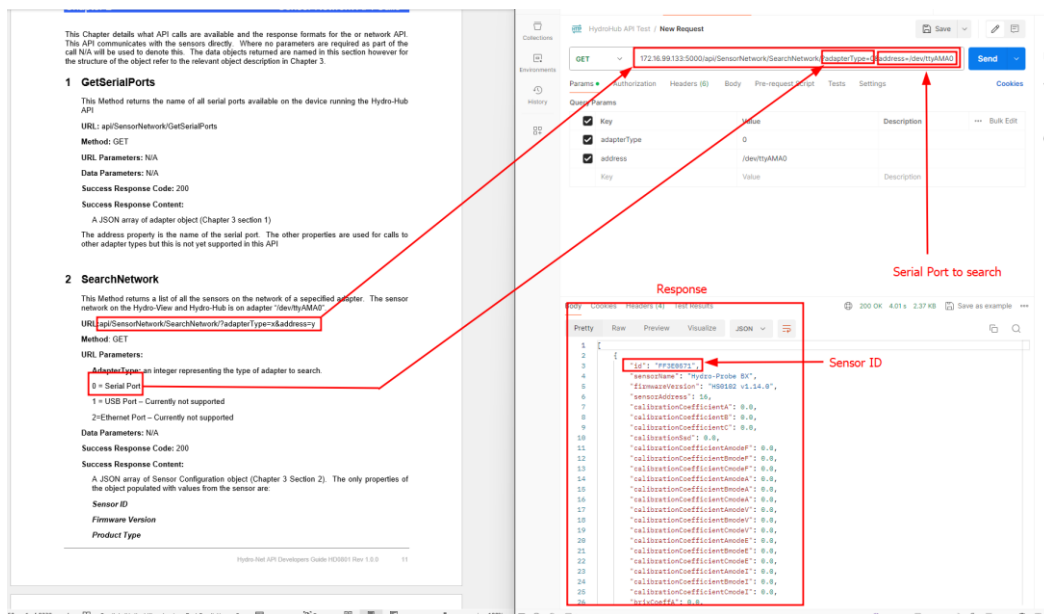


The image shows a side-by-side comparison of API documentation and an API client interface. On the left, the documentation for the **1 GetSerialPorts** method is shown. It specifies the URL as `api/SensorNetwork/GetSerialPorts`, the method as `GET`, and the success response code as `200`. On the right, the API client interface shows a `GET` request to `172.16.99.133:5000/api/SensorNetwork/GetSerialPorts`. The response is displayed in JSON format, showing an array of objects with properties like `address` and `port`. Red annotations highlight the `GET` method, the IP address and port, the `Send` button, and the `"/dev/ttyAMA0"` value in the response.

Figure 2 - GetSerialPorts Request

4 Search the network

The adapter type is a serial type, 0, and the address is the serial port of the sensor network port ,ttyAMA0. Send the search network request with these parameters to return a list of sensors connected to the unit. The ID field of each sensor can be used in subsequent requests to communicate with specific sensors



The image shows a side-by-side comparison of API documentation and an API client interface. On the left, the documentation for the **2 SearchNetwork** method is shown. It specifies the URL as `api/SensorNetwork/SearchNetwork?adapterType=x&address=y`, the method as `GET`, and the success response code as `200`. On the right, the API client interface shows a `GET` request to `172.16.99.133:5000/api/SensorNetwork/SearchNetwork?adapterType=0&address=/dev/ttyAMA0`. The response is displayed in JSON format, showing an array of objects with properties like `id`, `sensortype`, and `firmwareversion`. Red annotations highlight the `adapterType=0` and `address=/dev/ttyAMA0` parameters, the `Send` button, and the `"id": "FP288011"` value in the response.

Figure 3 - Search the network

