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Interacting with the MicroPnP network via CoAP

1. Interacting with a MicroPnP device via CoAP

The **Constrained Application Protocol (CoAP)** is an Application Layer Protocol for interacting with constrained devices in a HTTP-like fashion. The CoAP protocol in the MicroPnP product line is built on top of IPv6 (6LoWPAN).

Your Network Manager is pre-configured to automatically enable IPv6 forwarding to the MicroPnP network for clients connected over WiFi and Ethernet.

- No additional configuration is required for clients that are connected over WiFi
- A useful tool to experiment with CoAP is the Copper plugin extension for the Firefox web browser.
 - <https://addons.mozilla.org/nl/firefox/addon/copper-270430/>

Your MicroPnP devices are available via the coap URI (Uniform Resource Identifier) keyword, followed by their IPv6 address. For example, **coap://[fd34::XY:XY]/** is a valid CoAP URI with XY the IPv6 address of the device. Please note that all IPv6 addresses put into Copper should be enclosed by square “[” brackets.

You can connect to the Network Manager to retrieve the IPv6 address of all MicroPnP devices (information available on the network overview page -- see the Getting Started Guide for more details).

Configuration tip in Copper: configuring behaviour > late block negotiation, will result in a more optimal and energy-efficient operation.

2. CoAP methods available

- **DISCOVER:** discovers all peripherals present on a MicroPnP device
- **GET:** retrieve the latest sensor reading produced by a peripheral resource
- **OBSERVE:** subscribe to receive periodic updates from a peripheral
- **PUT:** send a command to a peripheral resource
 - **ACTUATION command**
 - **SAMPLING RATE command**