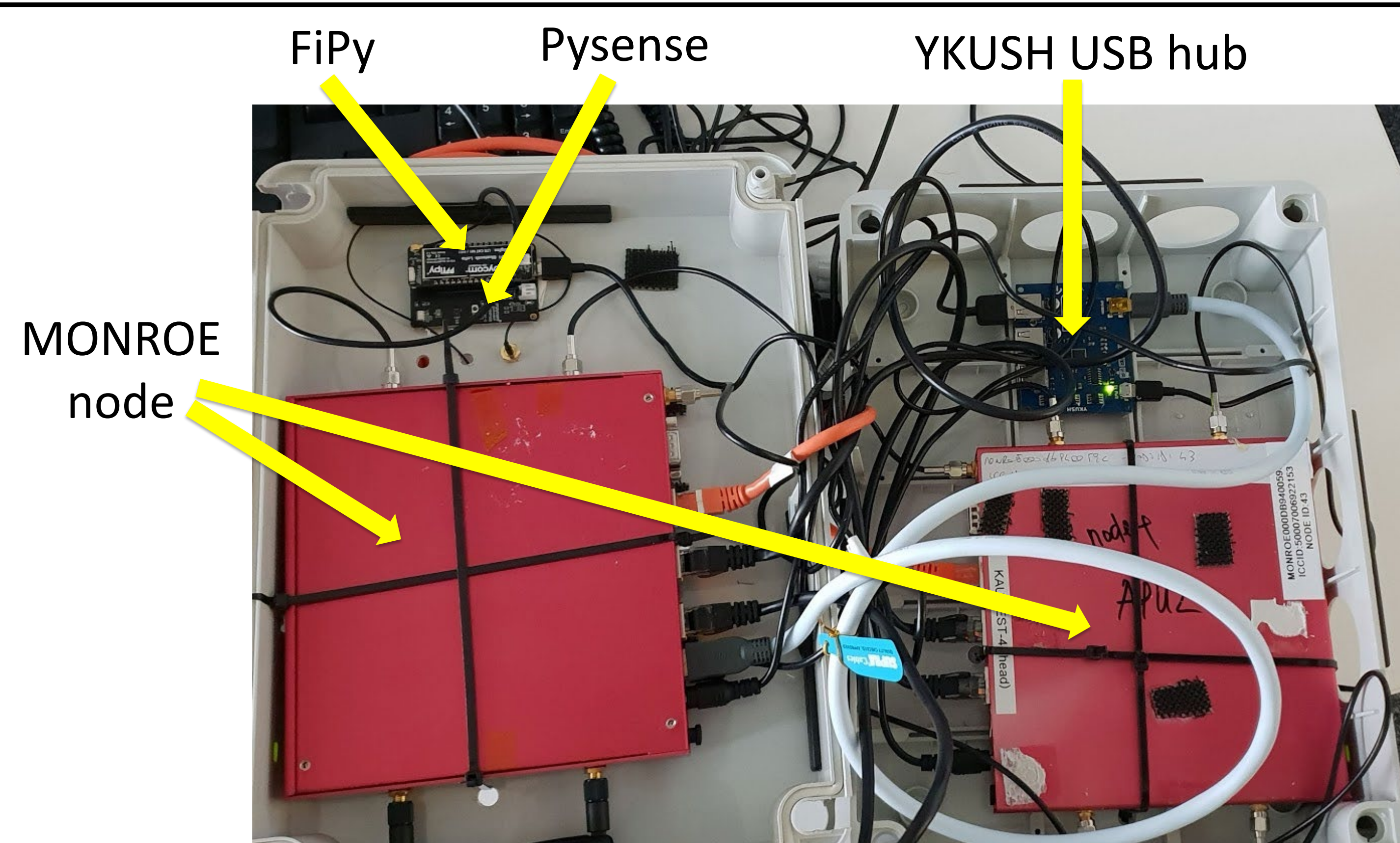


MONROE is the first European trans-national **open platform** for independent, multi-homed, large-scale monitoring and performance assessment of 3G/4G mobile broadband networks in heterogeneous environments. Now being extended towards 5G.

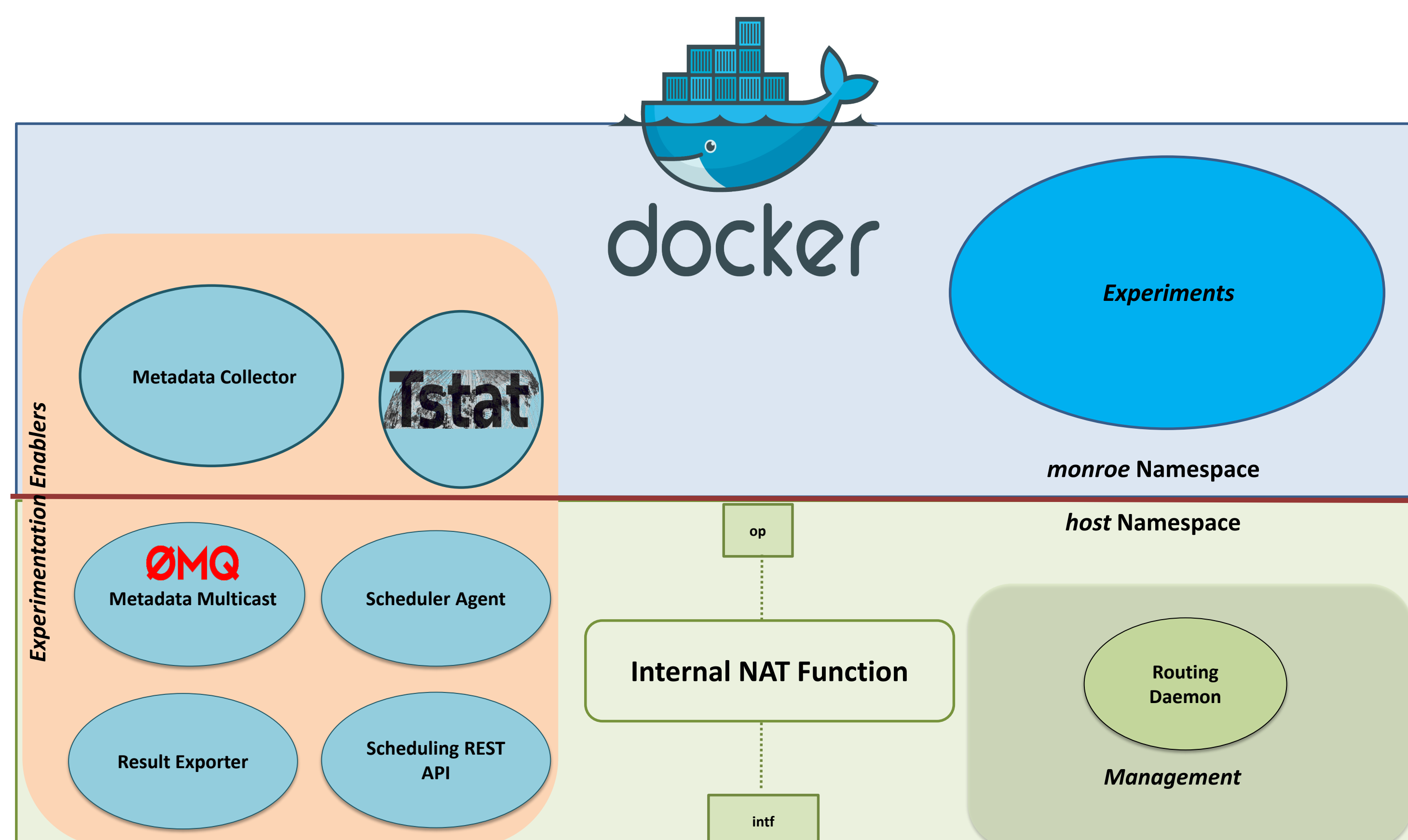


MONROE IoT Extension

- IoT capabilities added to some MONROE nodes
- Use FiPy development board and sensor shield (Pysense) as the IoT device
- Supports WiFi, Bluetooth, LoRa, Sigfox and dual LTE-M (Cat-M1) and NB-IoT (Cat-NB1)
- Runs micropython (a stripped-down implementation of Python 3)
- Has sensors to measure temperature, humidity, ambient light, barometric pressure and acceleration

MONROE Virtual Node (VN)

- Can be deployed as VNF
- Can work both autonomously or under the control of the MONROE management system
- Offers a REST API for push-based scheduling
- Have been integrated within a 5G SDN/NFV experimental testbed, with OpenStack based deployment
- Measurements can be orchestrated through the Keysight Test Automation Platform (TAP)
- Allows use of previously developed and new MONROE measurement probes for 5G KPI evaluation



Components of the MONROE VN

