

Scenario One A: Edge Node

This is one of the key systems used in a garden or on a farm. It allows devices to connect and can create or extend a network connection to a device while allowing data collection locally and potentially data virtualization and transport northbound. In turn, the Edge Node connects to an Edge Gateway. The Edge Node is defined by its capability of running a container engine like Docker or podman that allow execution of containerized workloads and related machine learning.

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|-----------------|-------------|
| Target release | |
| Epic | |
| Document status | DRAFT |
| Document owner | Joe Pearson |
| Designer | |
| Developers | |
| QA | |

Goals

1. Run a container engine
2. Run the Open Horizon Agent
3. Provide a northbound target for Edge Device onboarding
4. Extend a network connection to Edge Devices
5. Optionally enable data collection, data virtualization (distributed querying), data transport northbound
6. Provide a simple mechanism to on-board devices, specify their purpose, and begin functioning (collecting data and/or enabling actuation)

Background and strategic fit

This is the main connection point between deployed sensors and a local, centralized gateway. This optionally provides data storage beyond what is contained on the device itself, and functions as the most local system for actionable insights.

Assumptions

- The system runs Linux, has 2GB+ RAM, 10GB+ storage, runs a container engine, likely Docker or podman
- The system will run at least one Open Horizon Agent
- The system can run a workload to extend a network to local devices, e.g. LoRa, WiFi, Bluetooth, wired protocols
- The system can run a workload to connect to local devices, e.g. [Fledge](#), [EdgeX Foundry](#), [Home Assistant](#), Kura, Node-RED

Requirements

| # | Title | User Story | Importance | Notes |
|---|---------------------------------|----------------------------------|------------|-------|
| 1 | Milestone One | Table Garden | | |
| 2 | Milestone Two | Outdoor Single Sensor | | |
| 3 | Milestone Three | Containerized IoT Edge Ecosystem | | |
| 4 | | | | |

User interaction and design

[Jeff Lu](#)Please insert your high-level architecture diagram here.

Questions

Below is a list of questions to be addressed as a result of this requirements document:

| Question | Outcome |
|----------|---------|
| | |

Not Doing