

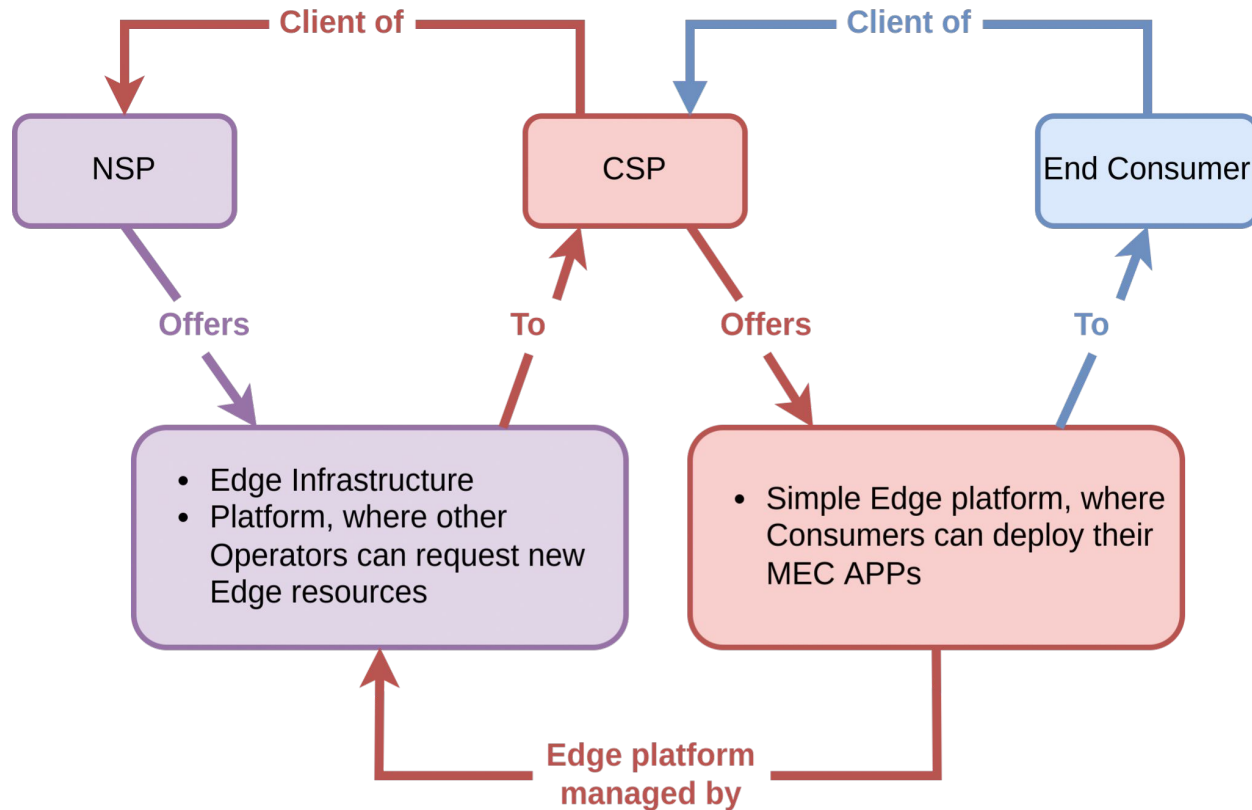
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MEC Practical Realization using OSM

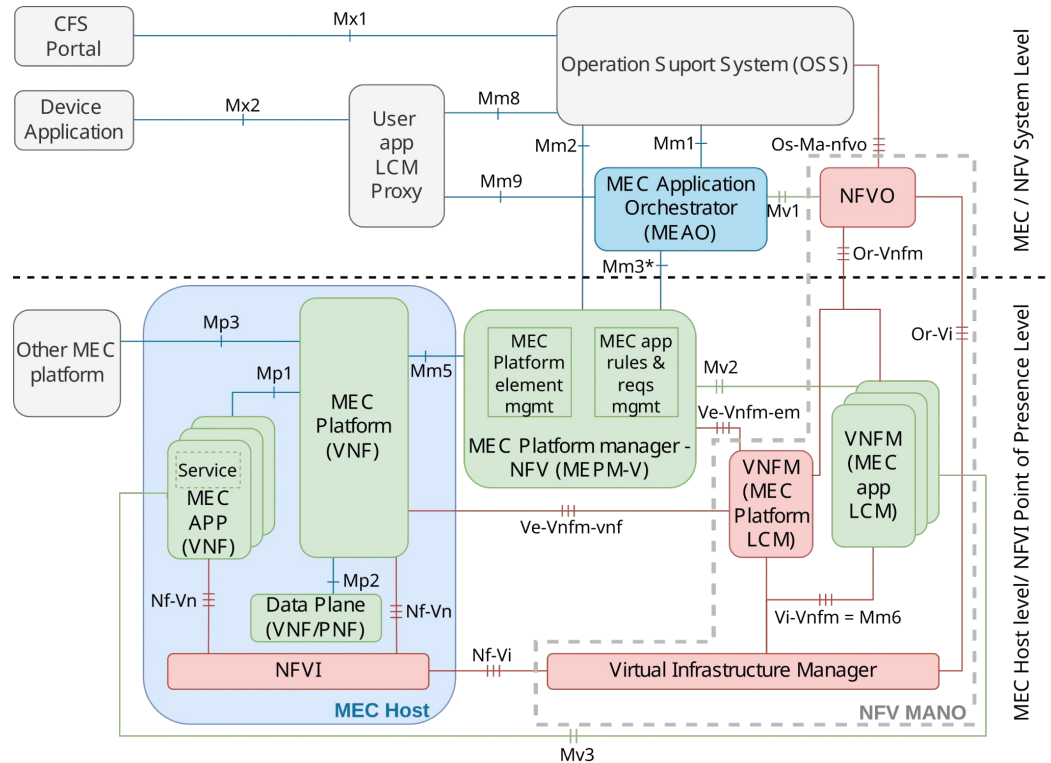
Pedro Escaleira (IT Aveiro)
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A Quick Recap

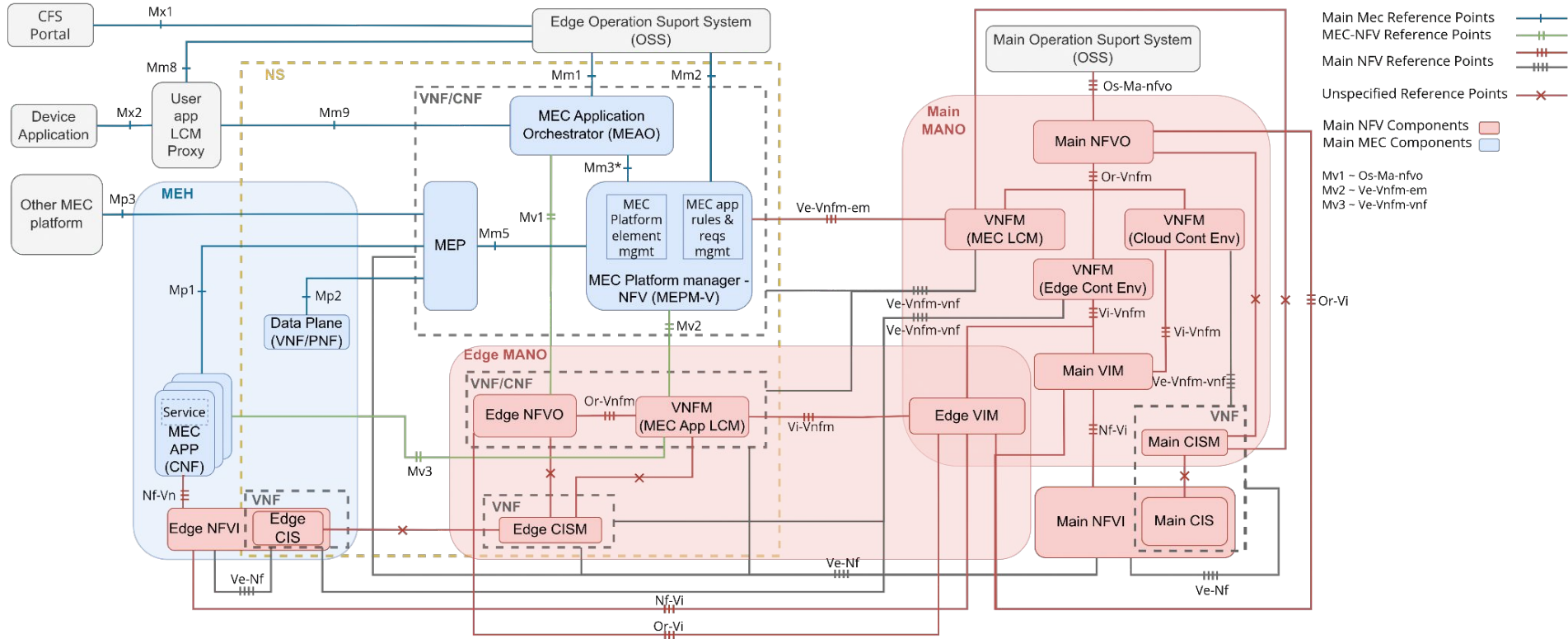
B2B2C Model



ETSI NFV-MEC Reference Architecture



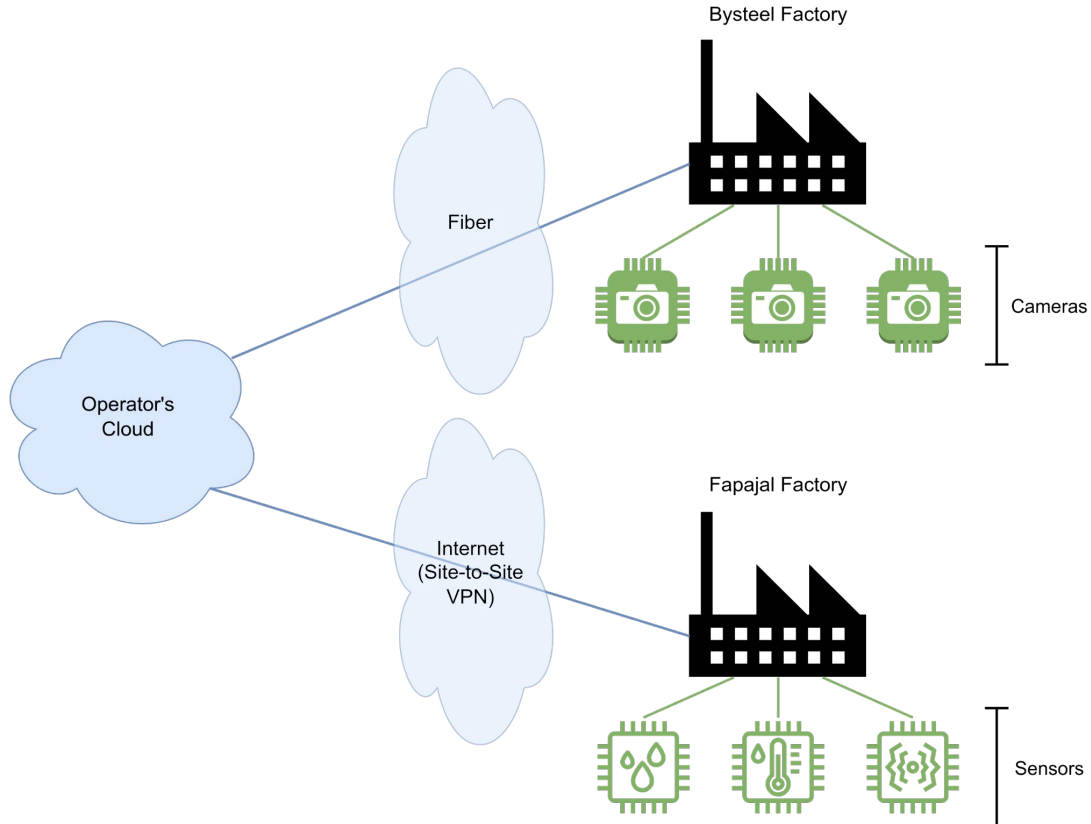
ETSI NFV-MEC Adapted Architecture for B2B2C



A Year of Progress

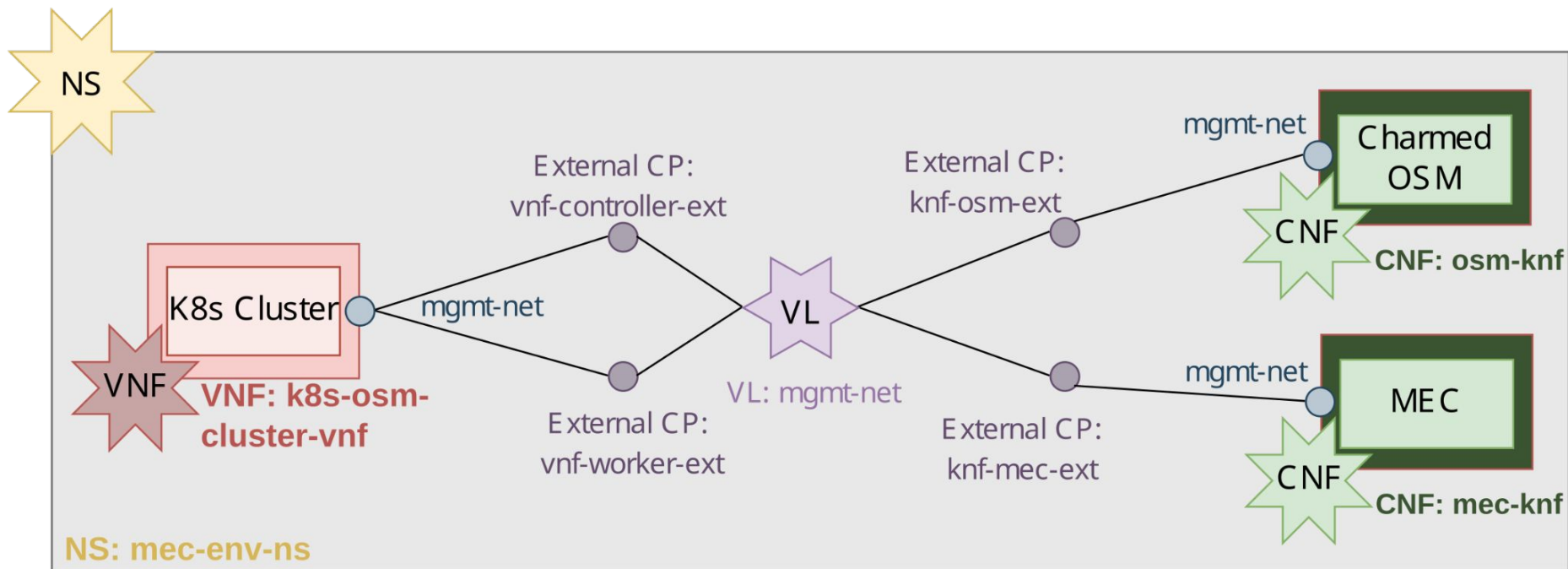
1. Now, we have a *Real* Edge Environment

Real Edge Environment Scenario

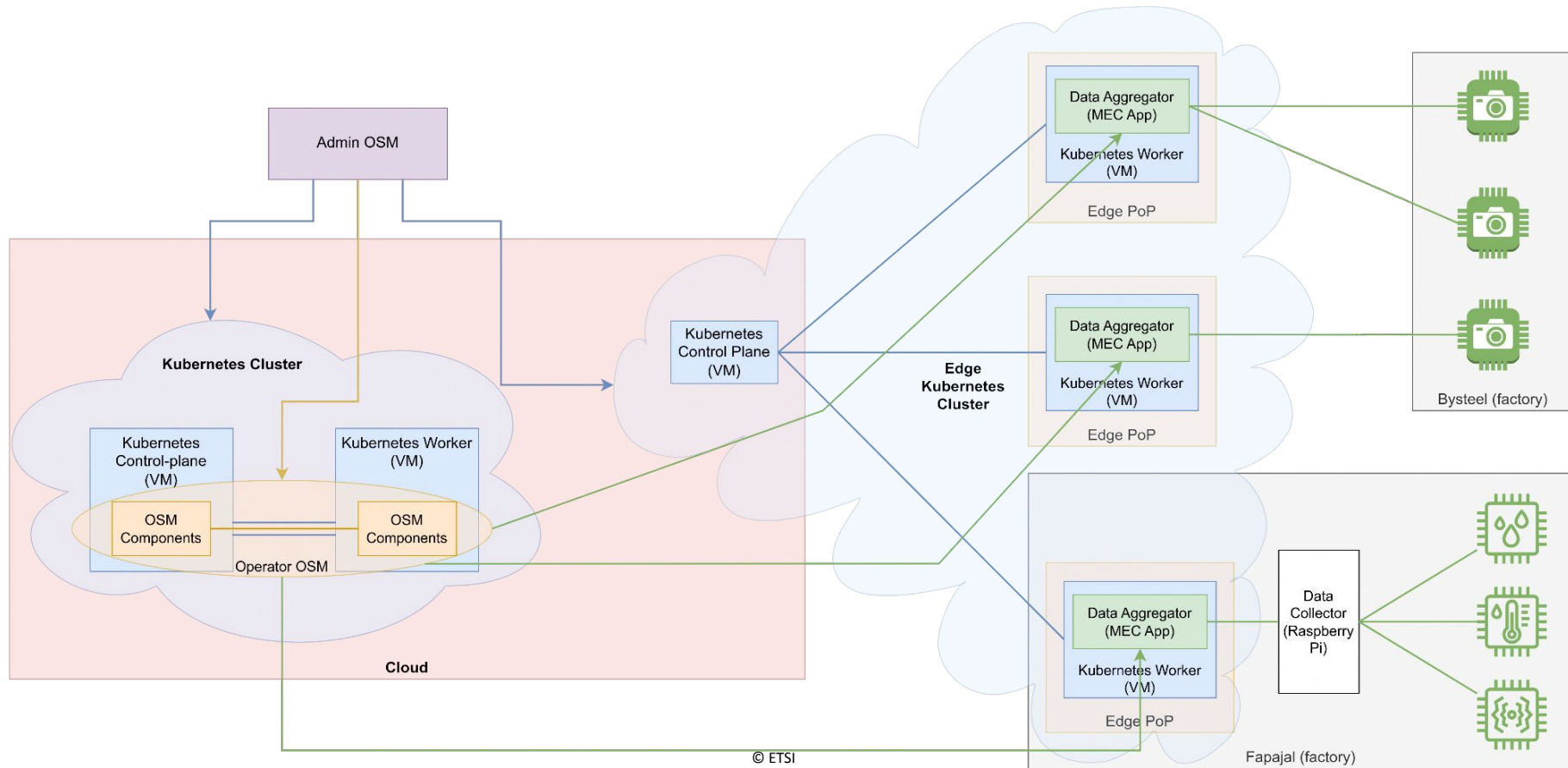


However, to achieve the requirements of an Edge Scenario, we needed to modify our previous Edge NS and VNFs/CNFs

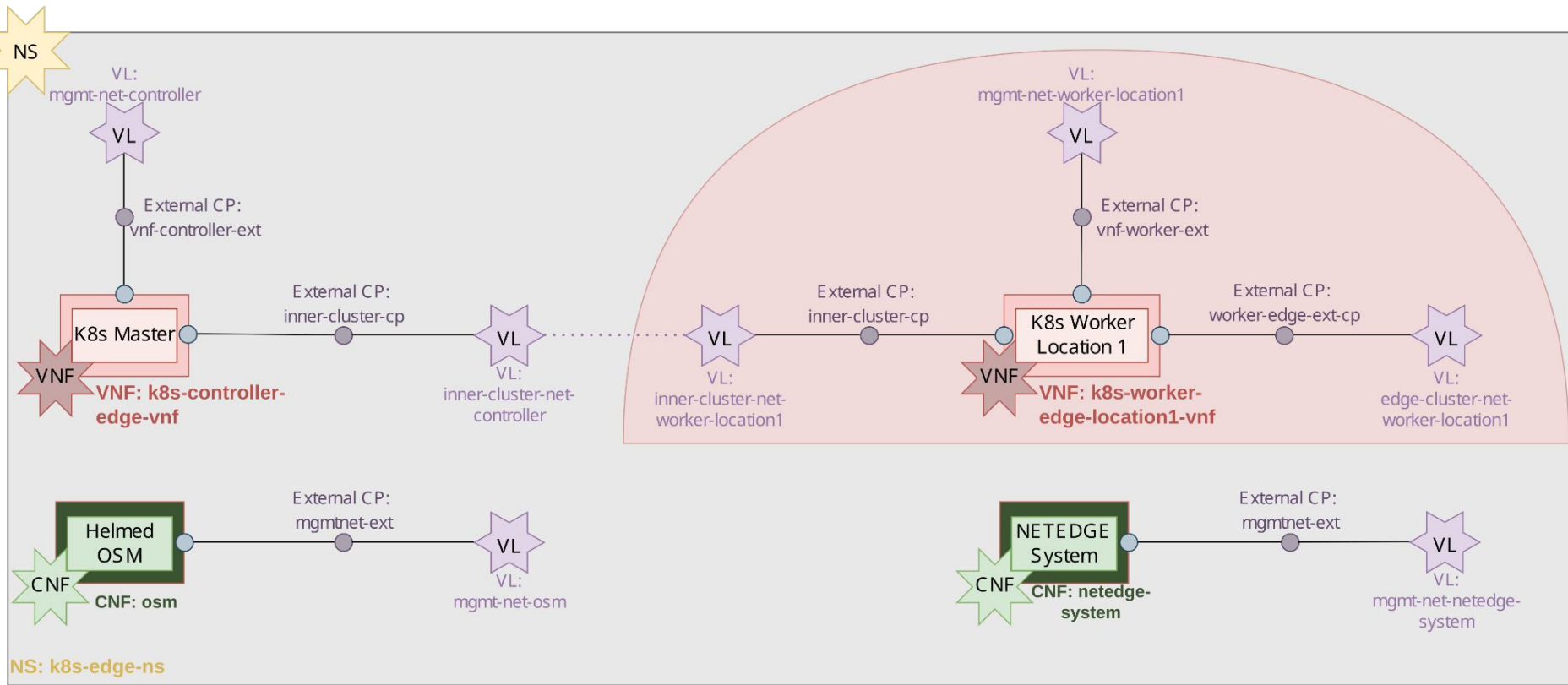
Last Year Edge Environment NS and VNFs/CNFs



Edge Scenario Requirement



New Edge Environment NS and VNFs/CNFs



2. We made changes to the Day 1 and 2 Scripts

Execution Environments

Juju-based EEs



- Poorly documented
- Language-dependant (Python)
- On OSM, it requires the usage of *weird* software libraries (e.g., *chams.osm*)
- Performance issues

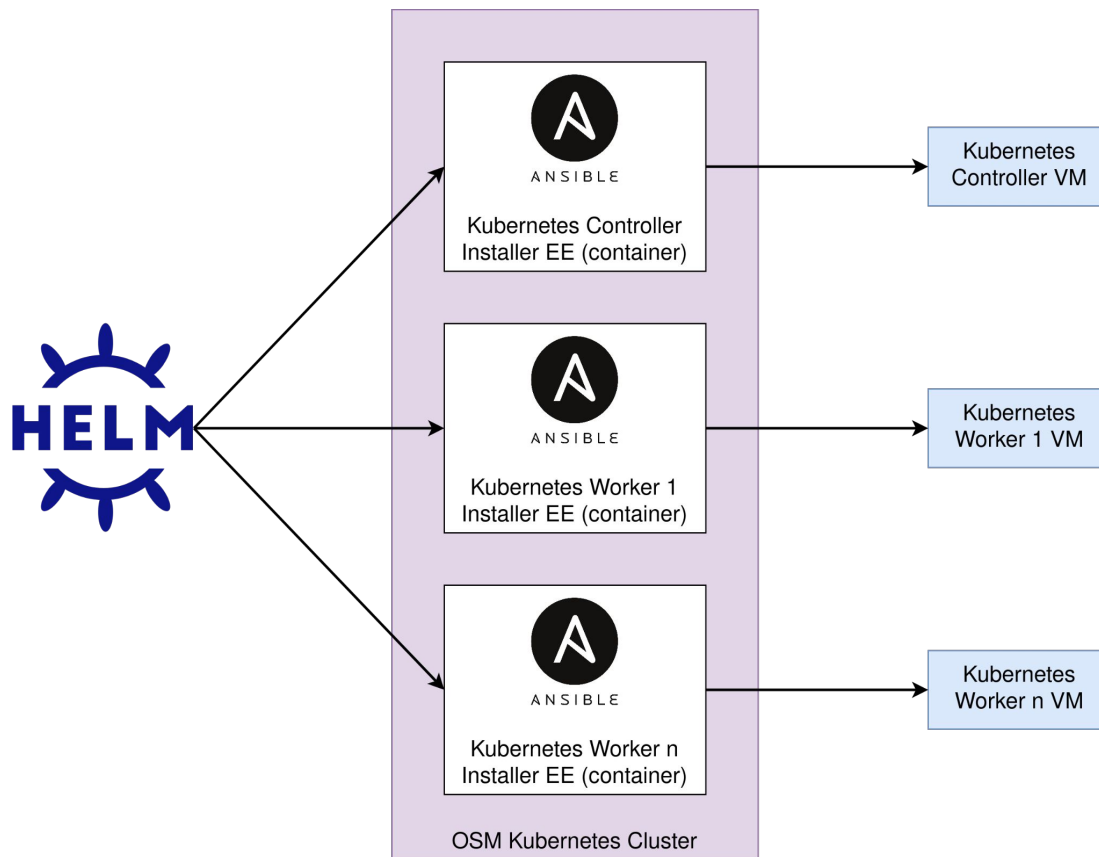
Helm-based EEs



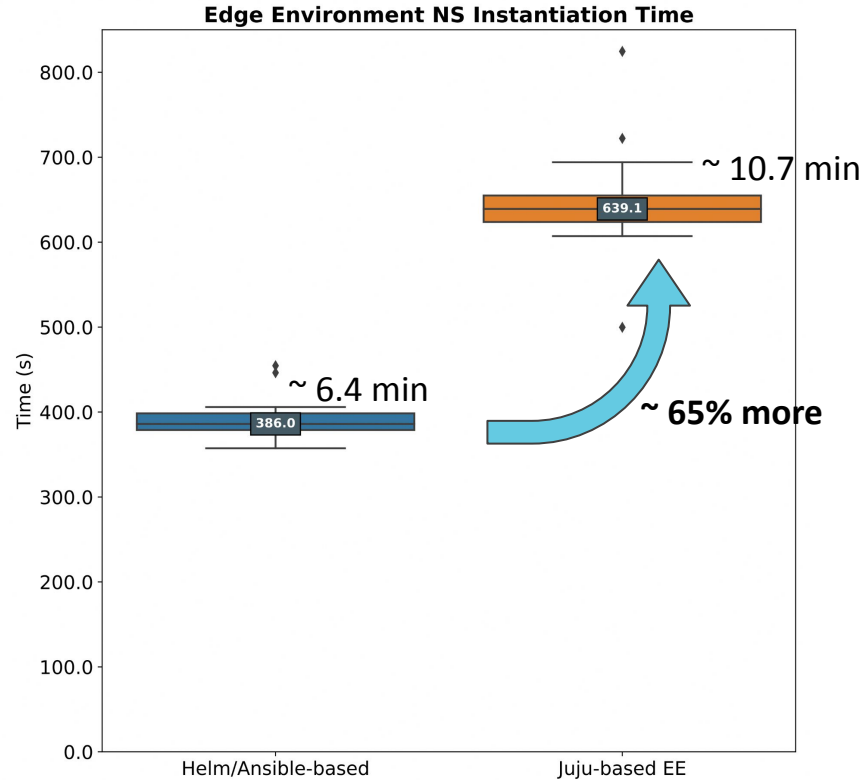
- Very well documented
- Not language-dependant
- On OSM, it only requires an RPC API
- It is probably faster (?)

With these differences in mind, we decided to give it a try
to Helm-based EEs

Helm/Ansible EEs Setup

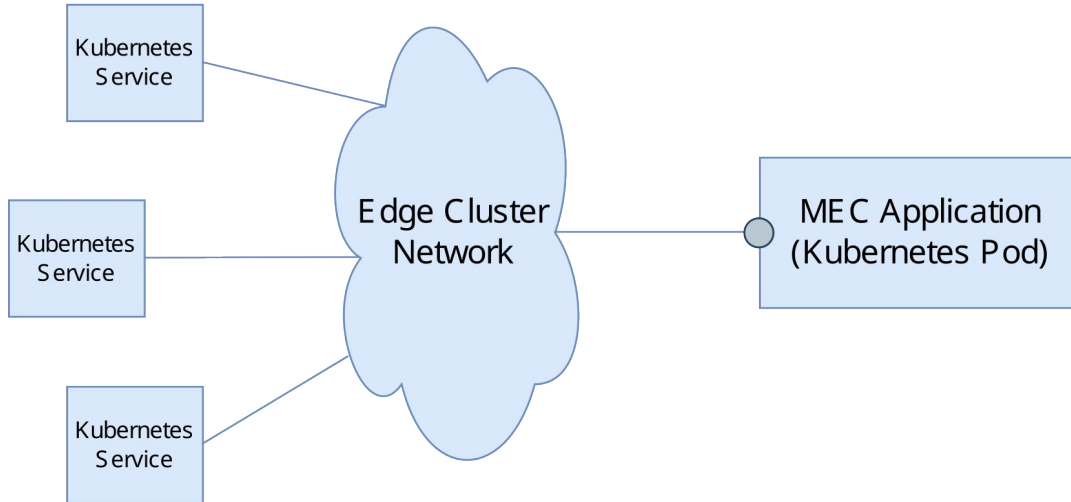


Edge NS Instantiation Time

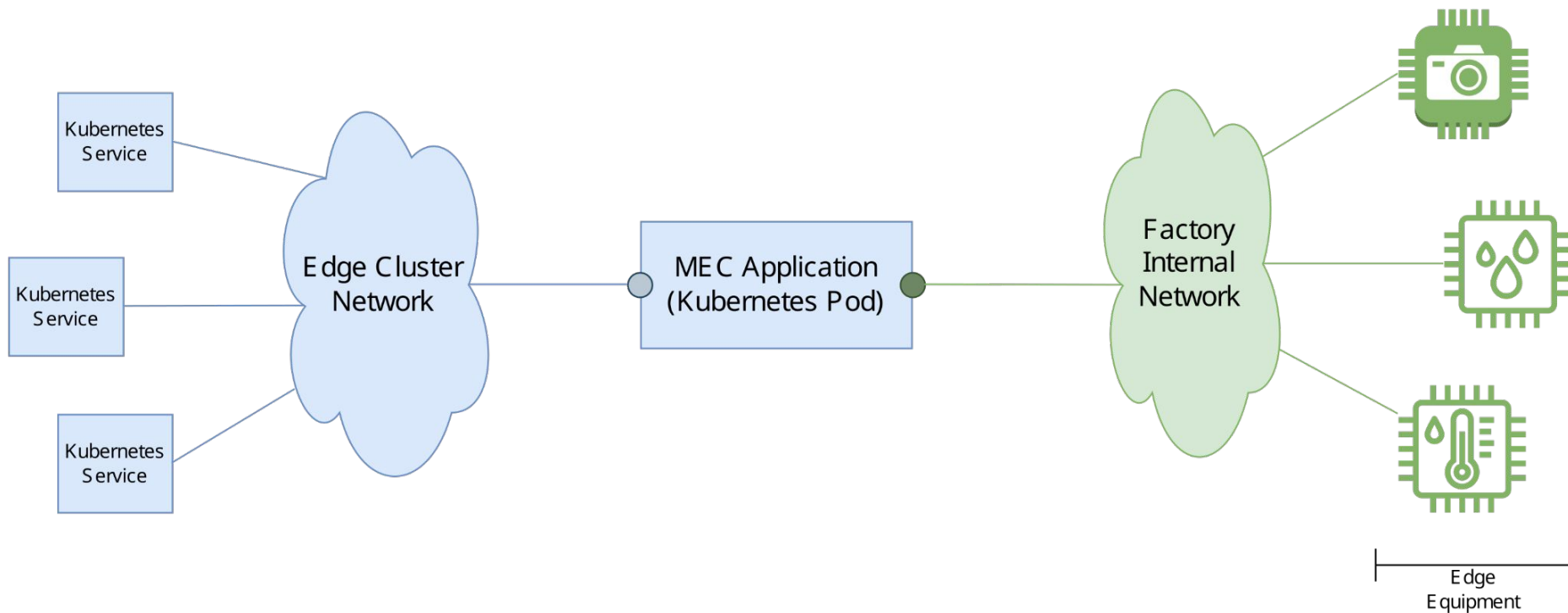


3. Our MEC Applications need to communicate in more than one network

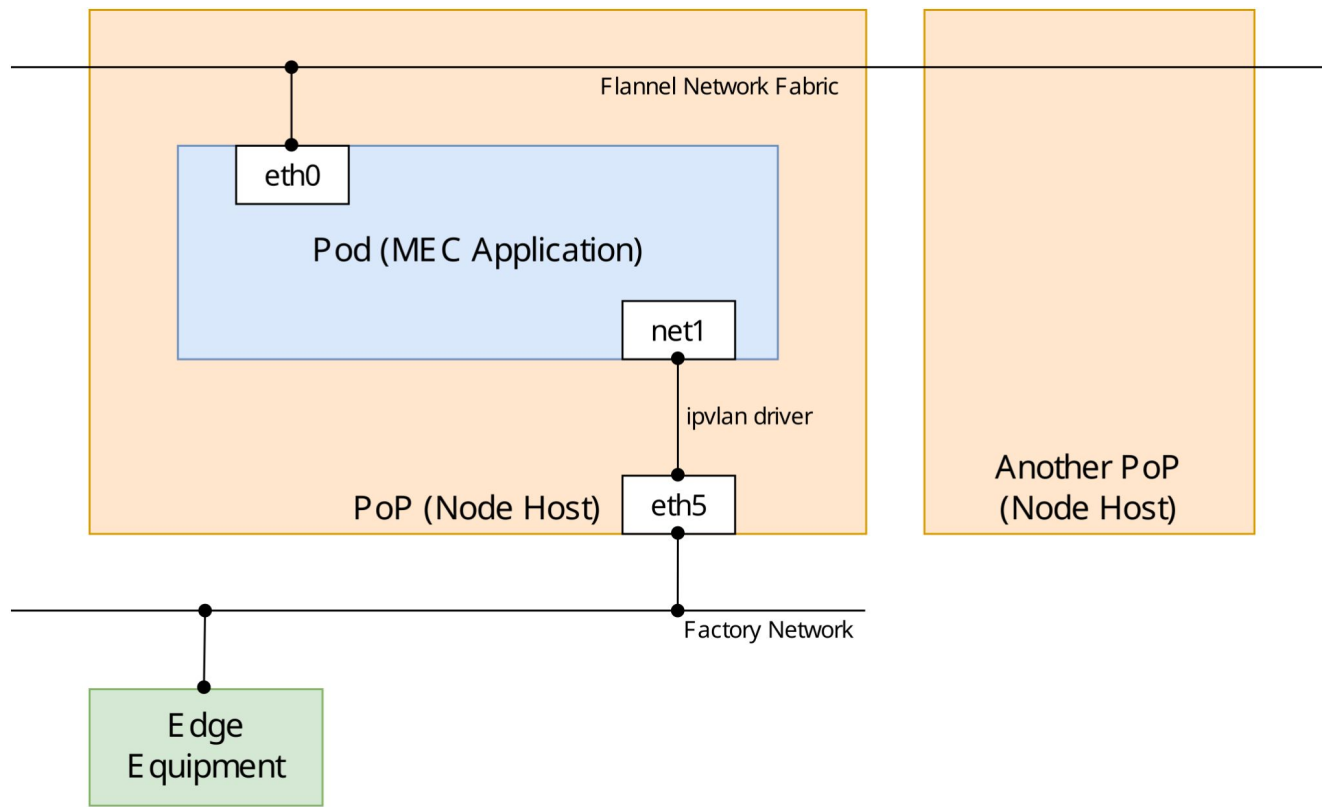
Kubernetes' Usual Scenario



What we required



Multus Configuration



4. The PoPs of the factory with cameras had a GPU

GPU Passthrough with OSM

Old OSM feature now implemented: <https://osm.etsi.org/gitlab/osm/features/issues/7095>

vnfd:

virtual-compute-desc:

- id: worker-compute

extra-specs:

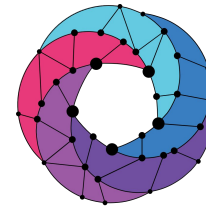
- spec: pci_passthrough:alias

value: gpu:1



Existing Metadata		Filter	Q
pci_passthrough:alias	gpu:1		-

Injects extra steps as a Flavor Metadata



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Thank You!

Cofinanciado por:

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**COMPETE
2020**

**PORTUGAL
2020**



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