



ONE
SUMMIT

Nephio Developer Workshop

Nephio Developers

Hosted By  THE **LINUX** FOUNDATION |  **OLF** NETWORKING |  **OLF** EDGE

#onesummit @twitter

First, a huge thank you!



Putting together and testing the proof-of-concept code and the workshop environments and VMs was a tremendous amount of work, done in a very short time by our community! Thank you to the team!

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Bala Varadaraju	Kurt Taylor	Tal Liron
Chris Fry	Morten Torkildsen	Victor Morales
Dimitrios Markou	Natasha Sarkar	Vish Jayaraman
Eric Debeau	Ravi Ravindran	Wim Henderickx
Joao Parracho	Sandeep Sharma	

Logistics



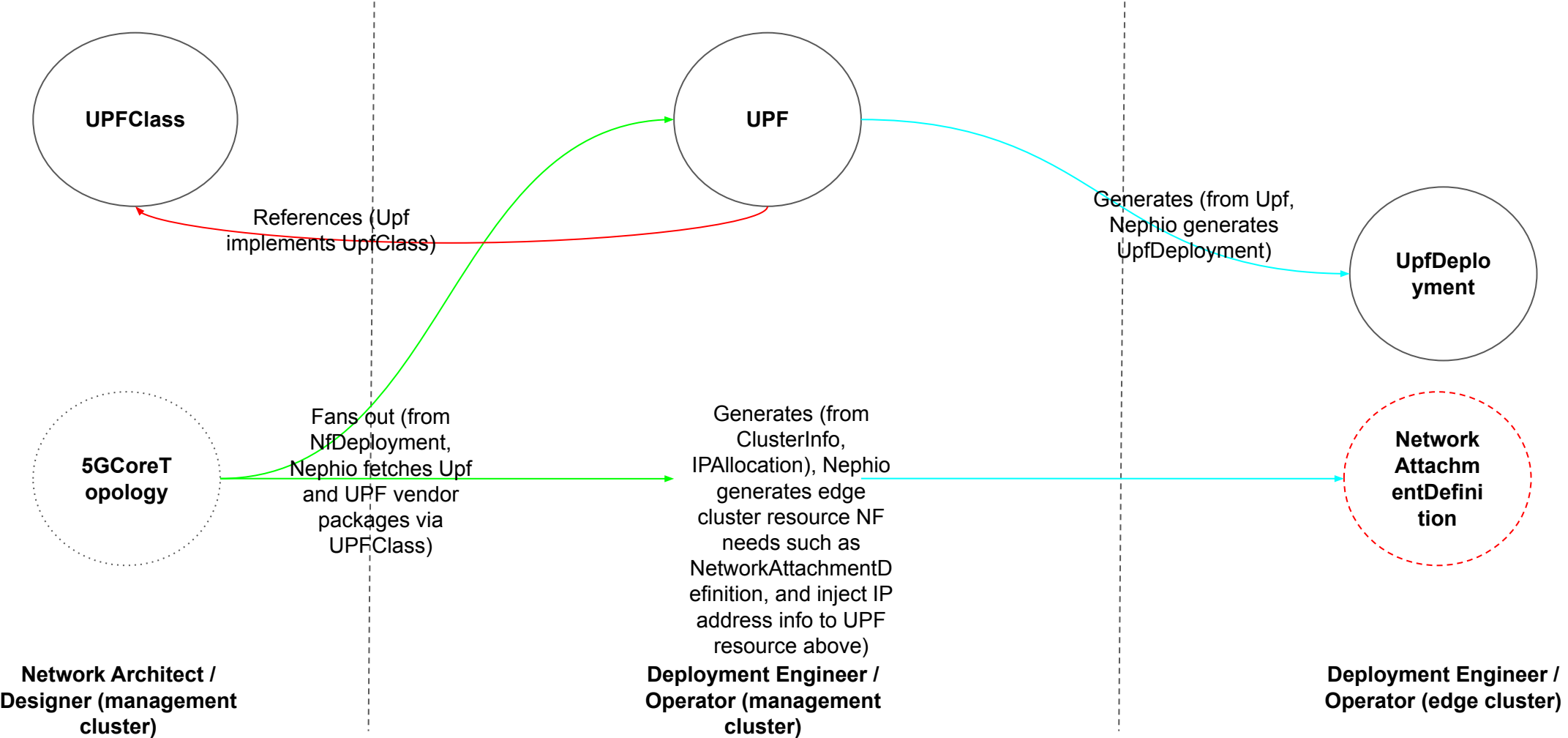
Access details

- <https://wiki.nephio.org/display/HOME/Workshop+Logistics>

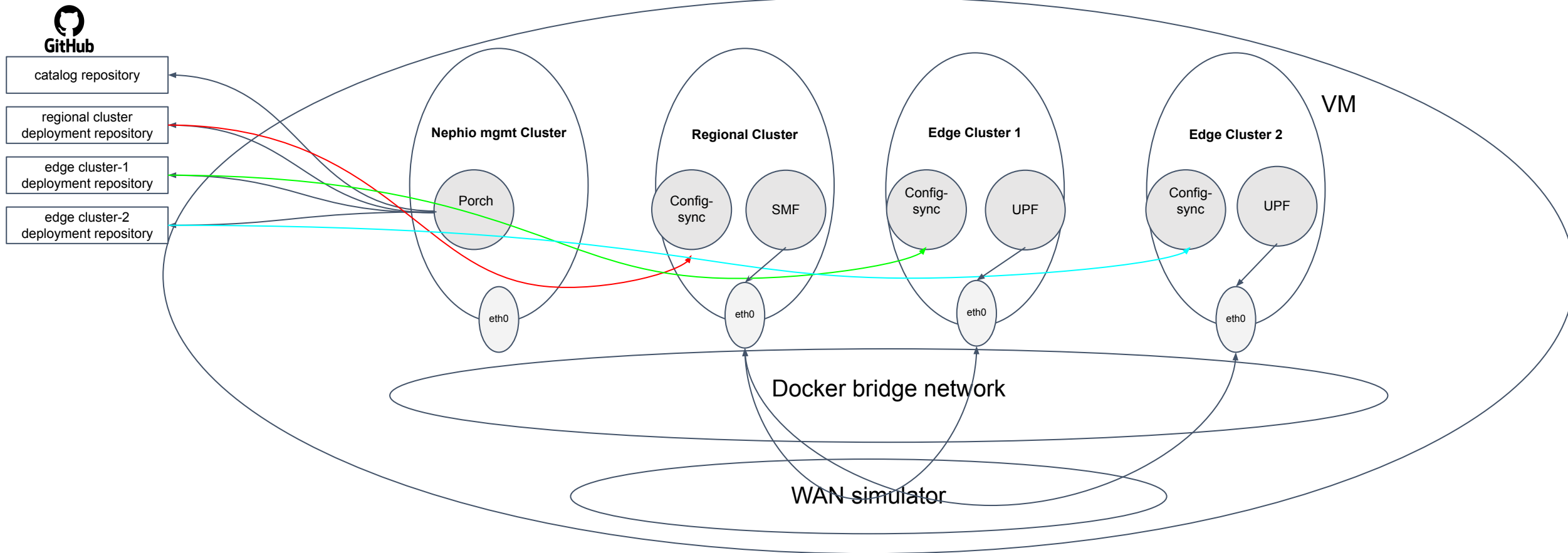
Workshop details

- <https://github.com/nephio-project/one-summit-22-workshop/blob/main/README.md#one-summit-2022-nephio-workshop>

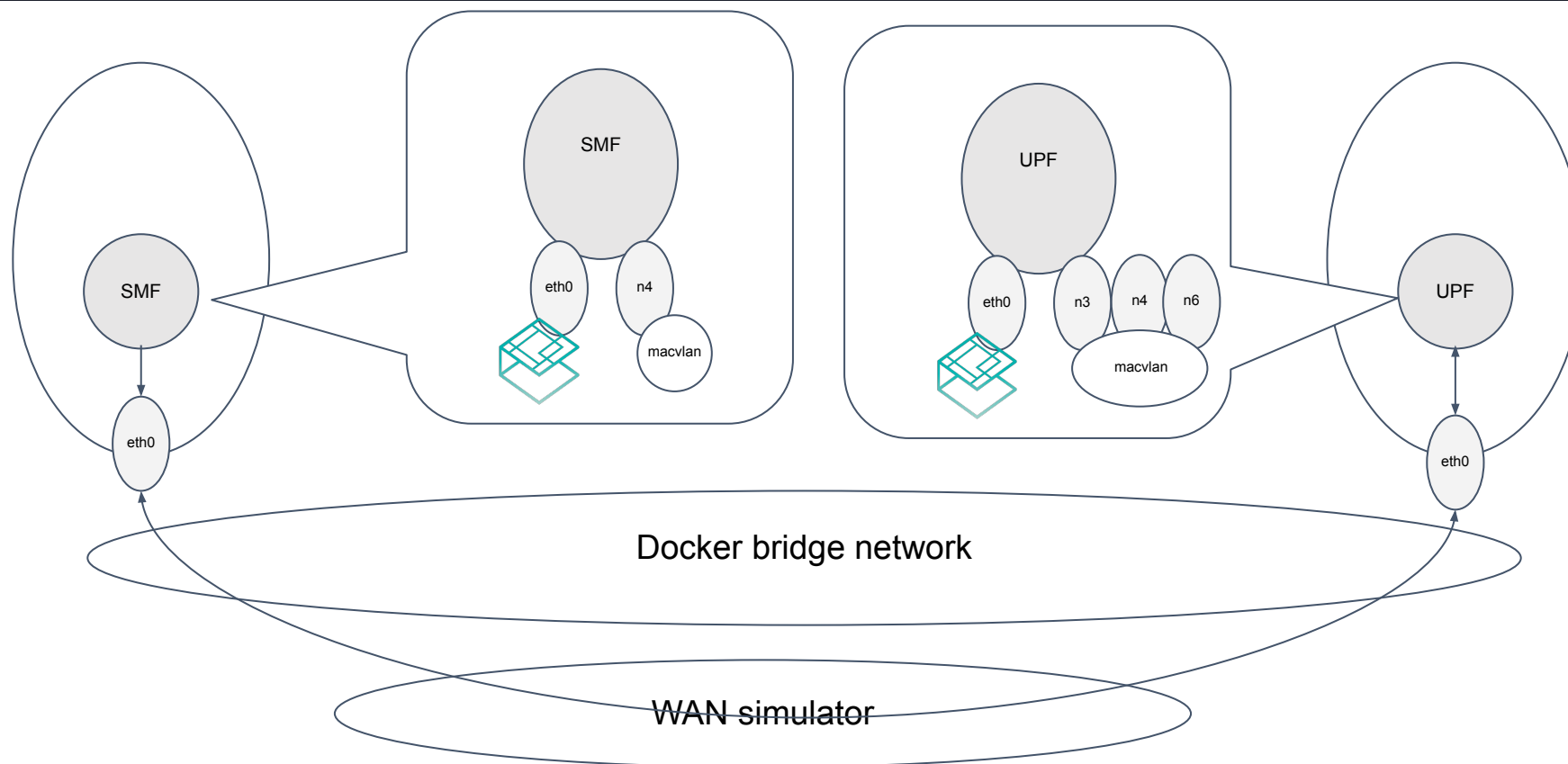
UPF Related CRDs



Topology of the Test Setup



Test Setup Network Plumbing



The secondary interfaces on SMF/UPF pods are created by multus via network attachment definitions



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Thank You



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Goal of Nephio Developer Workshop



- To test drive current Nephio code
 - Code can be found under:
 - <https://github.com/nephio-project/nephio-pocs>
 - <https://github.com/nephio-project/one-summit-22-workshop>
 - What does it do:
 - Experience deploying 5G Core components (SMF and UPF) to edge Kubernetes clusters via experimental Nephio code
 - What's given:
 - A virtual machine (VM) per participant
 - Credentials to ssh to VM
 - VM with four KIND clusters: mgmt cluster, regional cluster (for SMF), and 2 x edge clusters (one UPF for each)
 - Repositories (catalog, 3 x deployment)
 - kubectl and kpt installed on VM
 - Porch webui installed on VM

User Journey



1. Each participant has access to webui, and can see a list of packages available on their catalog repo
2. Participants can edit the 5GCoreTopology custom resource to reflect the desired deployment
 - a. the sample intent contains deployment of one SMF on the regional cluster, and one UPF on each of the edge clusters
 - b. a default custom resource is loaded for both SMFClass and UPFClass; these resources reflect on the UPF type (I-UPF, PSA...etc) or SMF capacity requirements
 - c. likewise, a list of IP address blocks are defined via the <XXX> for different types of interfaces (N3,4,6,9) for different clusters
3. Upon pushing (approving) the 5GCoreTopology intent, participants should see that there are a list of new packages created via the webui
 - a. participants will see that the UPF and SMF packages have conditions of IP address allocation yet to be resolved