

# Edge cloud requirements Optimizing cloud for the edge and open hardware

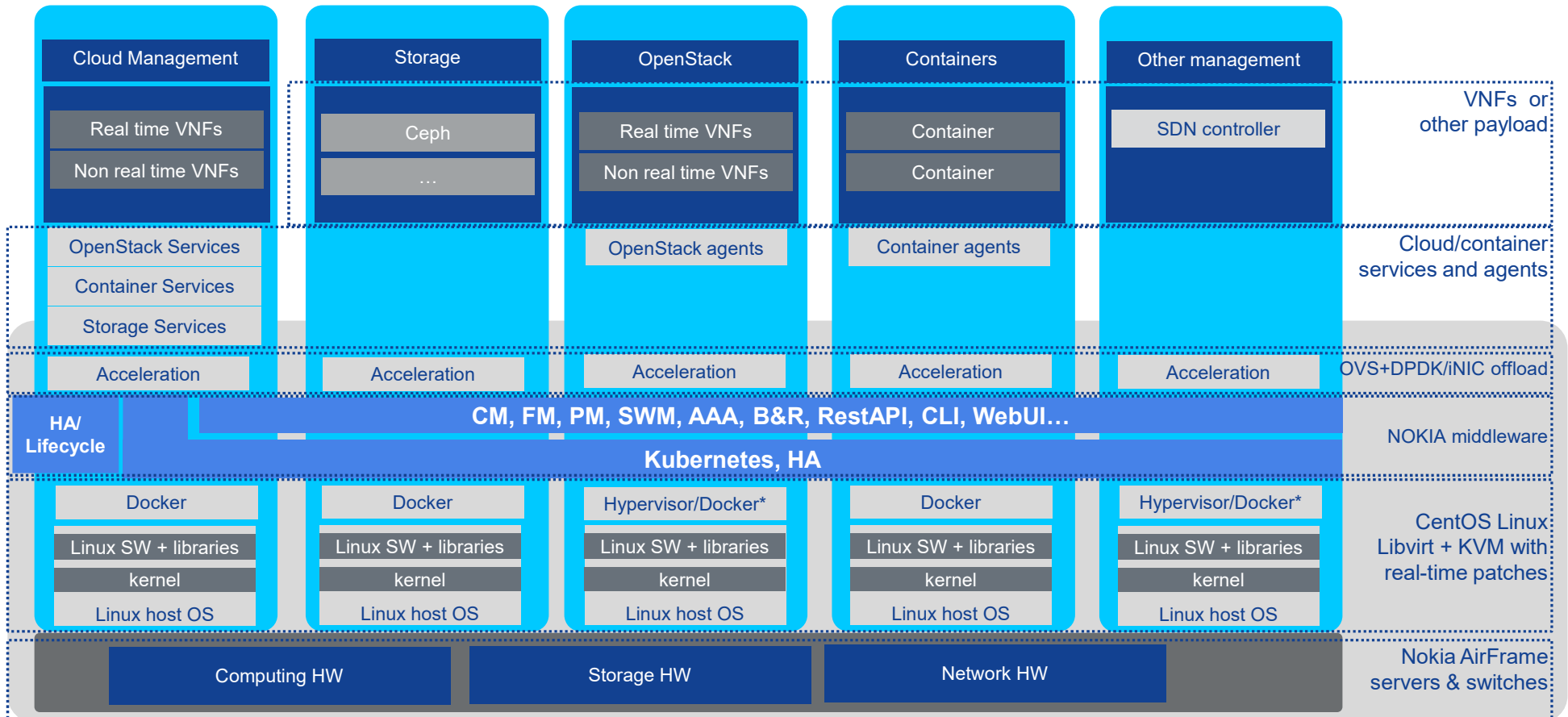
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# Requirements for edge

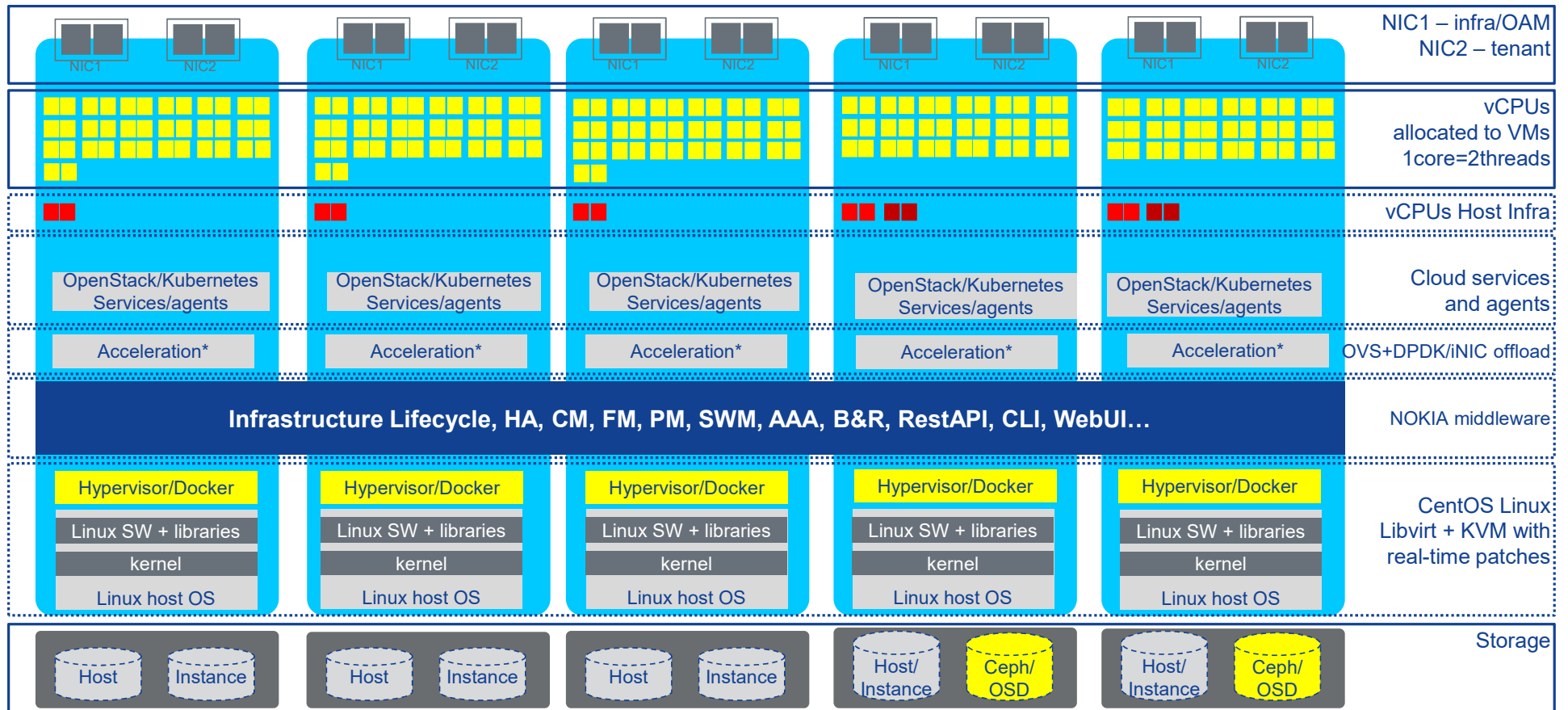
Performance	High Availability	Scalability	Operability	Design for Excellence
<ul style="list-style-type: none"><li>• Real-time Cloud</li><li>• Accelerated Virtual switch OVS-DPDK</li><li>• Enhanced platform awareness and support for hardware accelerators</li></ul> <p>1</p>	<ul style="list-style-type: none"><li>• Carrier and telco grade (X.731 compliant) HA</li><li>• Extreme fast reaction time in the case of failures</li><li>• recovery action (auto-evacuation)</li><li>• Single view for the healthiness of whole system</li></ul> <p>2</p>	<ul style="list-style-type: none"><li>• Single Server Cloud (distributed edge clouds)</li><li>• Multirack DataCenter scalability with SDN (or with native L3 fabric)</li></ul> <p>3</p>	<ul style="list-style-type: none"><li>• Unified user interfaces with WebUI, REST APIs and CLIs.</li><li>• HW agnostic, capable to deploy on any type of HW based on plugin architecture</li><li>• Full run-time configurability with easy life-cycle management operations</li></ul> <p>4</p>	<ul style="list-style-type: none"><li>• Design for Security</li><li>• Design for Serviceability</li></ul> <p>5</p>

# High level architecture (target)



# Open Edge – Openstack (with iNIC offload)

\*GPU/FPGA



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2 disks/server, in storage nodes second disk is Ceph OSD  
2 NICs/server (25GB), in each server second NIC is using OVS offload  
1 CPU (20 cores=40threads)/server, Host requires 1 Core, OSD requires 1 Core  
1 Core = 2 Threads

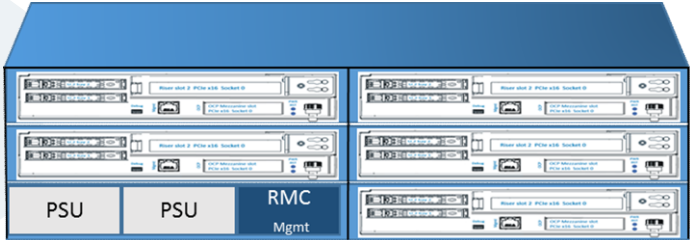
■ Host  
■ OSD  
■ VNF

**NOKIA**

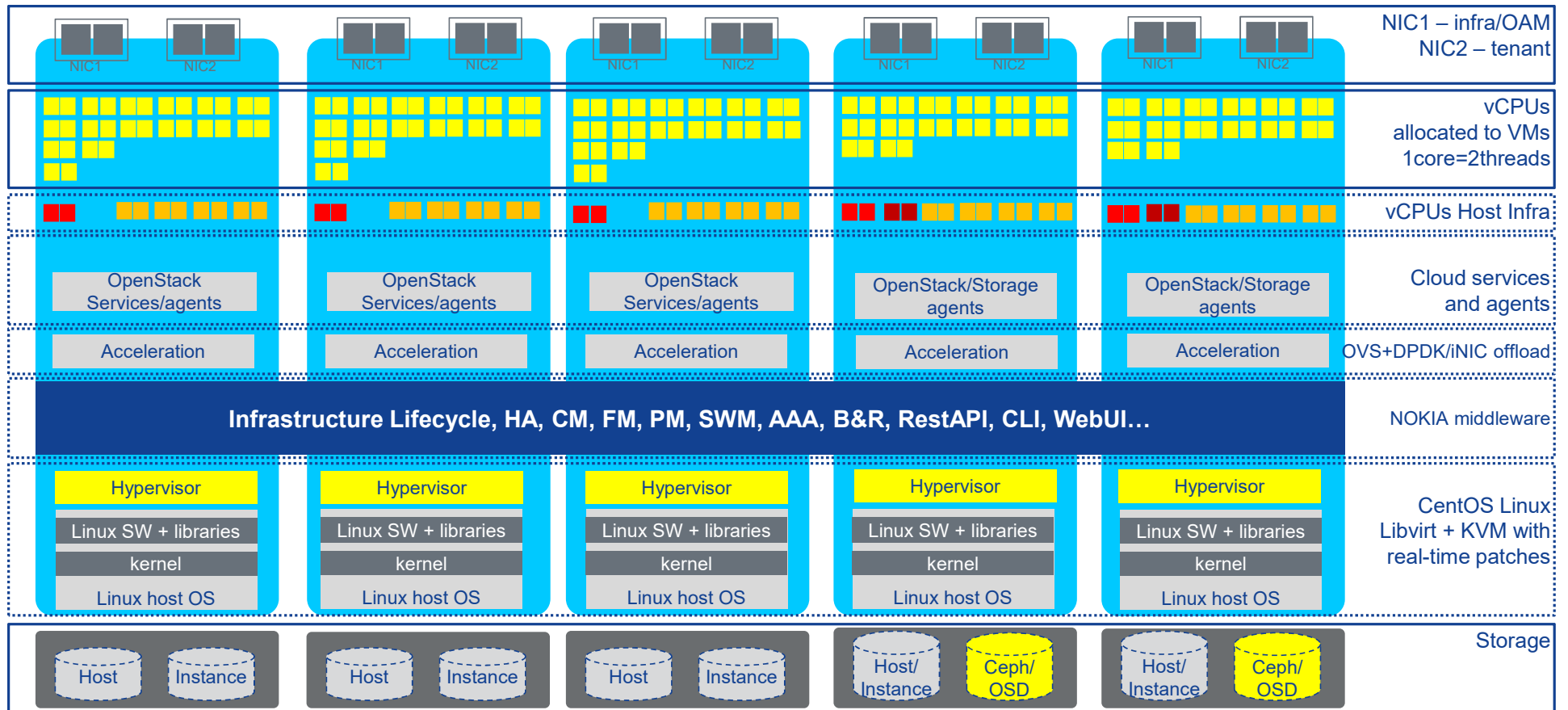
# Taking OCP design to the Far Edge

We are planning to make OCP/OE hardware available to the Akraio community for testing and integration

- Open
- Modular
- Ecosystem
- Energy efficient
- Vanity free
- Toolless
- Dense



# Open Edge – Openstack (with OVS+DPDK)



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■ Host  
 ■ OSD  
 ■ OVS+DPDK  
 ■ VNF

**NOKIA**

Thank you