VLAN Trunking with OVN

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Figure 1: Network function virtualization - VM acting as a router for two different VLANs.
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Figure 2: Nested hypervisor scenario.
● Provide same **Layer 2** semantics like that of a physical switch.
● On a given VNIC accept untagged packets and process the packet on that VLAN.
  ○ This notion already exists today when we create a logical port in a logical switch.
● With trunking configured, a given (VNIC, VLAN) should map to a unique logical switch (broadcast domain) and should process the packet in that logical switch.
  ○ This notion can be achieved using child ports which exist today to support **Life-Cycle of Container Interface Inside a VM**
• Life-cycle of container interface inside a VM.
  ○ Multiple container interfaces map to same VIF.
  ○ Use VLAN tag to differentiate traffic from different containers.

Figure 3: Containers (C1, C2, C3, C4) inside a VM.
- Life-cycle of container interface inside a VM.
- Each logical switch is associated with a unique VLAN ID (broadcast domain).
- In order to trunk a VNIC on VLAN X, create a child port in logical switch for VLAN X with parent as VNIC and tag X.
- Life-cycle of container interface inside a VM.
- Each logical switch is associated with a unique VLAN ID (broadcast domain).
- In order to trunk a VNIC on VLAN X, create a child port in logical switch for VLAN X with parent as VNIC and tag X.

Flow rule hit for ingress packet
cookie=0x0, ..., table=0, ..., priority=150, in_port=11, dl_vlan=30
actions = ..., strip_vlan, load:0x2713->OXM_OF_METADATA[], ..., resubmit(,8)

Flow rule hit for egress packet
cookie=0x0, ..., table=65, ..., priority=100, metadata=0x2713
actions=mod_vlan_vid:30, output:11
- Life-cycle of container interface inside a VM.
- Each logical switch is associated with a unique VLAN ID (broadcast domain).
- In order to trunk a VNIC on VLAN X, create a child port in logical switch for VLAN X with parent as VNIC and tag X.
- Disable port security on trunked interface.

Figure 4: VLAN Trunking with child ports.
Thank you