Network Virtualization Hypervisor-to-NVE Control Protocol Requirements

draft-kreeger-nvo3-hypervisor-nve-cp-01
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Terminology

• Need a better term for “oracle”. We are using IMA for “Information Mapping Authority”

• VNIC: A Virtual NIC that connects a Tenant System to a Virtual Network Instance (VNI).

• Rename VNIC to Tenant System Interface (TSI)?
VNIC / Address Association

• VNIC connects to a Virtual Network with a MAC and (optionally) an IP address

\[
\text{VNIC}--\text{VN}--\text{MAC}--\text{IP}
\]

• VNICs migrate along with the VMs they are part of
VNIC / Address - complex case

- VNIC connects to multiple Virtual Networks with multiple MACs and IP addresses

\[
\text{VNIC} \rightarrow \text{VN} \rightarrow \text{MAC} \rightarrow \text{IP}
\]

\[
\downarrow \quad \downarrow \quad \downarrow
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\[
\text{MAC} \rightarrow \text{IP}
\]

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\downarrow \quad \downarrow
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\[
\text{ VN} \rightarrow \text{MAC} \rightarrow \text{IP}
\]

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\downarrow \quad \downarrow \quad \downarrow
\]

\[
\text{MAC} \rightarrow \text{IP}
\]

- Signaling of VNIC migration (versus shutdown/startup) can help the NVE when a VNIC with a complex containment structure exists
Next Steps

• draft-kreeger-nvo3-hypervisor-nve-cp-01
  • Authors met with some authors of related drafts draft-gu-nvo3-tes-nve-mechanism and draft-kompella-nvo3-server2nve-01
  • Plan: Include VM lifecycle events to motivate detailed requirements
  • Will ask that resulting draft be adopted as WG draft
• Adopt as Working Group draft the NVE to oracle (IMA) control plane requirements draft-kreeger-nvo3-overlay-cp-req-02