Policy Architecture and Framework for NFV Infrastructures

NFVRG WG
(IETF 94, Yokohama, Nov 4th)

draft-irtf-nfvrg-nfv-policy-arch-02
(replaces draft-norival-nfvrg-nfv-policy-arch)

Co-authors
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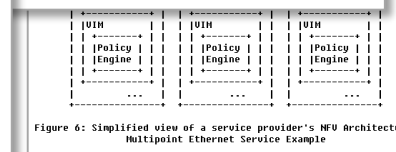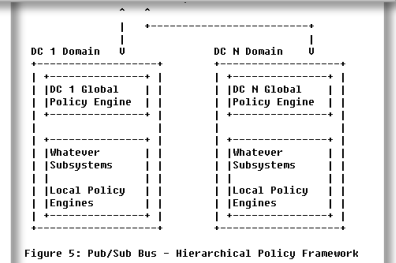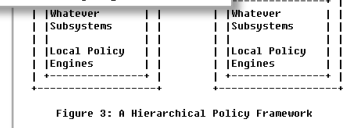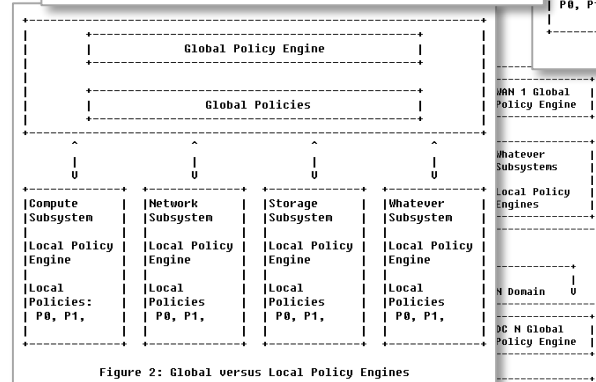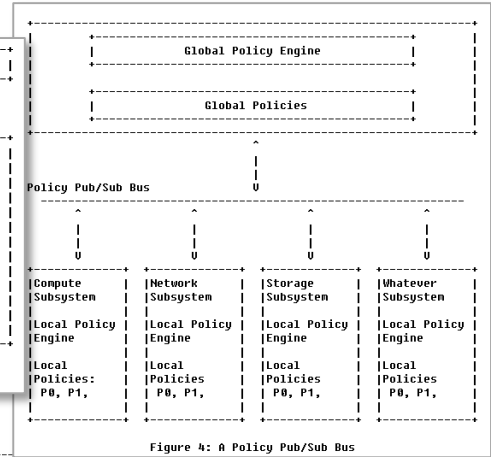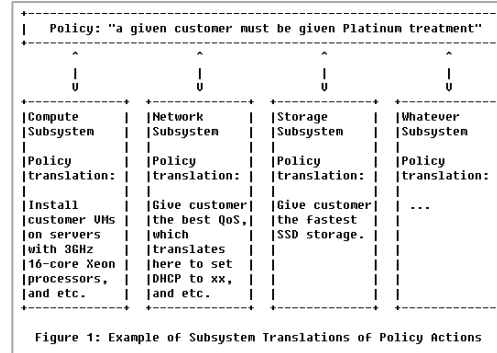Ram (Ramki) Krishnan – Dell
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Main Topics

- Policy Intent Statement vs. Subsystem Actions and Configurations

- Global vs. Local Policies

- Static vs. Dynamic vs. Autonomic Policies

- Hierarchical Policy Framework

- Policy Conflicts and Resolution
  - Soft vs. Hard Policy Constraints

- Policy Pub/Sub Bus
  - Pub/Sub Bus Name Space

- Examples
  - Establishment of a Multipoint Ethernet Service
  - Policy-Based NFV Placement

Figure 1: Example of Subsystem Translations of Policy Actions

Figure 2: Global versus Local Policy Engines

Figure 3: A Hierarchical Policy Framework

Figure 4: A Policy Pub/Sub Bus

Figure 5: Pub/Sub Bus – Hierarchical Policy Framework

Figure 6: Simplified view of a service provider's NFV Architecture: Multipoint Ethernet Service Example

IETF 93 Recap

- New with *draft-norival-nfvrg-nfv-policy-arch-04*
  - "Commit Group" added to Section 5 ("Policy Conflicts and Resolution")
    - Commit Group = a set of policies in which the whole set must be committed for a desired result to be obtained
    - Discussed Commit Group conflict detection mechanism and avoidance of potential multiple writers issues

- Draft adopted as NFVRG document
  - draft-irtf-nfvrg-nfv-policy-arch

New with Current Draft

Added after IETF 93

- Updated Section 8.1 "Establishment of a Multipoint Ethernet Service"
  - Thanks to Bruno Chatras (Orange) for pointing out some inconsistencies in this section!
  - Added that the OSS/BSS would translate the requested service to an appropriate policy using the *name space* defined between the OSS/BSS and NFVO
    - "The OSS/BSS subsystem would communicate the service request and requirements as a policy to a global NFV Orchestrator (NFVO) subsystem <u>using the name space of the pub/sub bus between these two subsystems</u> (see Section 7.1). For example, the <u>OSS/BSS could translate "Silver" service level into a policy defined using a Network Service (NS) Flavor ID, as defined by the name space of pub/sub bus between the OSS/BSS and the NFVO</u>."

New with Current Draft

Added after IETF 93

- Updated Section 8.1 "Establishment of a Multipoint Ethernet Service" (cont.)
  - Added a Local NFVO to each vPoP in the example

- Added Section 7.1 "Pub/Sub Bus Name Space"
  - *Name Space* discussion was part of Section 8.1 above
  - Moved it to a separate subsection (7.1)
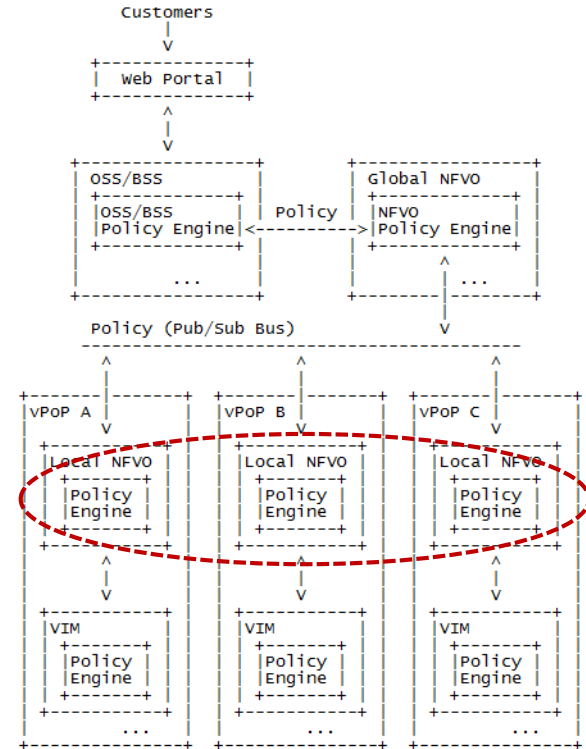
- New Co-Author
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Figure 6: Simplified view of a service provider's NFV Architecture: Multipoint Ethernet Service Example

Next Steps

- Alignment with ETSI NFV on policy?

  - There seems to be no specific activity at ETSI NFV on policy-based components at this time

  - Opportunity for this RG to transfer points of view to ETSI NFV?

- Other?