

# Policy-Based Resource Management

draft-irtf-nfvrg-policy-based-resource-management-00

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# Why?

- Area document as identified by the NFVRG chairs
- Consolidate contributions

# How?

- YOU ARE THE AUTHORS!
- Editorial
  - Summarize and harmonize standalone contributions into the document
- Scope
  - ver-00: RG adopted drafts
    - I-D.irtf-nfvrg-nfv-policy-arch
    - I-D.irtf-nfvrg-resource-management-service-chain
    - I-D.unify-nfvrg-recursive-programming

# What?

- Content structure
- Terms and definitions
- Content from:
  - I-D.irtf-nfvrg-nfv-policy-arch
  - I-D.unify-nfvrg-recursive-programming
- Content placeholder for:
  - I-D.irtf-nfvrg-resource-management-service-chain

# Scope

- Bottom Up:
  - Based on the 3 adopted drafts
- Top Down:
  - Charter: “NFV Point of Presence (PoP) will be likely constrained in **compute** and **storage capacity**. Since practically all NFV PoPs are foreseen to be distributed, inter-datacenter **network capacity** is also a constraint. Additionally, **energy** is also a constraint, (...). This work item will focus on **optimized resource management and workload distribution based on policy.**”
    - Policies related to optimization of compute, storage, networking and energy resources

# Scope (cont'd)

- In:
  - Single domain, multi domain, multi administration
  - Service assurance policies that can be delegated to resource management (e.g., if CPU utilization is above threshold create event to VNFM)
    - Local or in compound context (e.g., load of any of the three VNFs)
- Out:
  - VNF (service specific) configurations

# Target Audience

- Content like a whitepaper
  - Reporting results, alternative approaches, architecture / system considerations
- Targets:
  - NFV, SFC, SDN communities and open source activities
  - Input to some IETF WGs (to be identified)

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**Bold items  
have first  
content**



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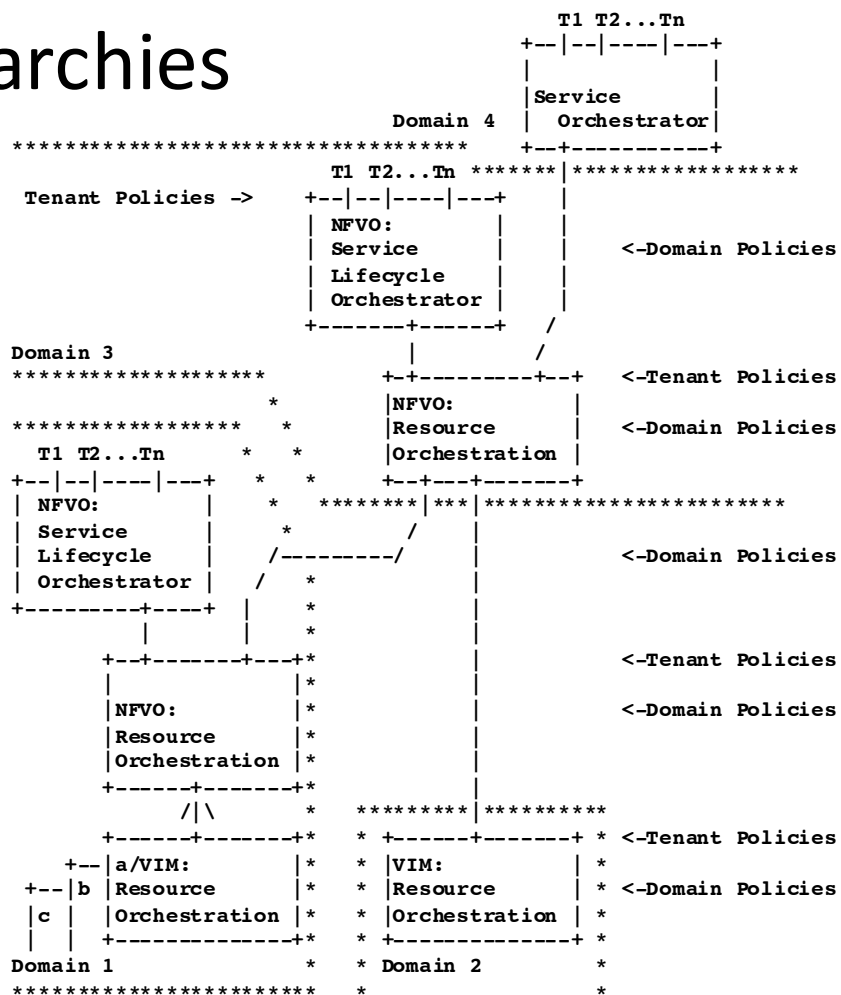
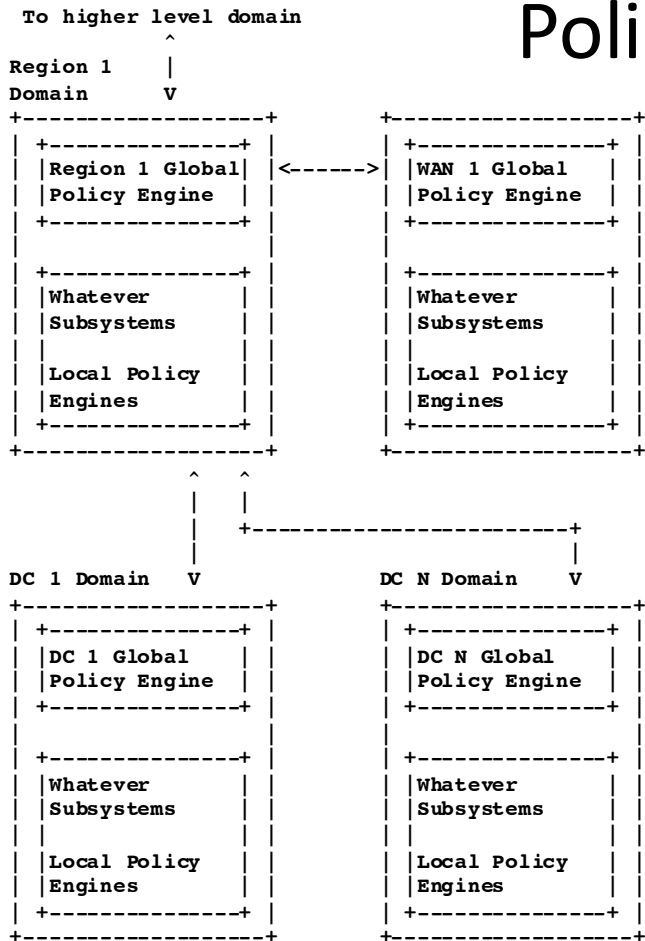
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**Bold items  
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# Highlight 1

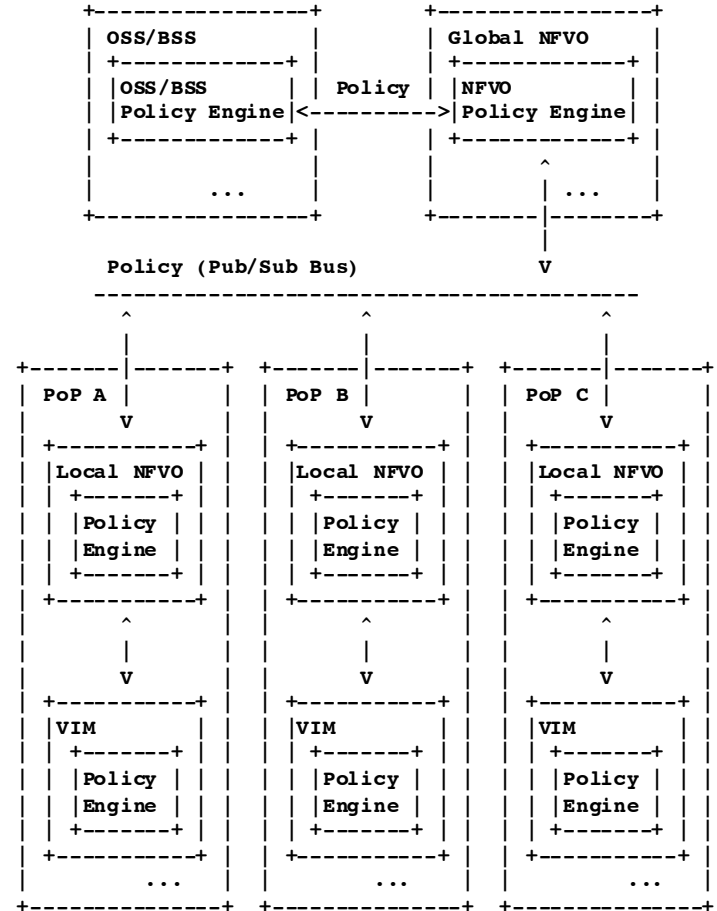
- Hierarchical resource management structure
  - Corresponding policy hierarchy
    - global – local
    - “...the policy framework is hierarchical in nature, where the policy engine of a subsystem may be viewed as a higher level policy engine by lower level subsystems”

# Policy Hierarchies



# Highlight 2

- Pub-sub bus in the hierarchical policy framework
  - Between the upper and lower layers



# Next Steps: Architecture Section

Contents identified for merging:

- Policy Intent vs. Subsystem Actions and Configurations
- Static vs Dynamic vs Autonomic Policies
- Soft vs Hard Policy Constraints
- Service Function Chaining Architectural Considerations

# Next Steps (cont'd)

- Sec on “Resource Management in Service Chaining”
  - No architecture considerations in the draft
- Sec on “Policy-Based Resource Management Examples”
- Sec on “Implementation Examples”

# Next Steps: Ways of Working

- Working draft will be migrated to github
- Submit I-Ds to NFVRG
- Make a proposal of changes to the area draft (based on submitted I-Ds)
- Send pull requests to editors
- NFVRG community to prioritize, review & approve changes

# Summary

- YOU are the AUTHORS
- We seek your feedback → next revision (v-01)
  - Content structure, content, etc.
- Contributions are welcome
  - Let's discuss how to do this → revision v02+



# Acknowledgements

Authors of the original drafts:

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