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Applicability of SUPA
draft-cheng-supa-applicability-01

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Introduction

- **Applicability of SUPA** explores some typical use cases and demonstrates the applicability of SUPA policy models.
- Latest version : version 01
- https://datatracker.ietf.org/doc/html/draft-cheng-supa-applicability/

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Summary of Progress

V00, as of August 5, 2016

- Present all the use cases collected since SUPA working group creation with the corresponding ECA description, including SES (Switched Ethernet Service), VPC, traffic manipulation cross DCs, virtual SP, instant VPN, traffic optimization and QoS assurance on ISP

V01, as of March 13, 2017

- Trim the existing use cases based on the agreement during IETF#97 in order to reflect the representative requirements of operators. The remaining use cases include VPC and instant VPN.
- Add the use case of SNMP blocking provided by John Strassner via Email.

SNMP blocking

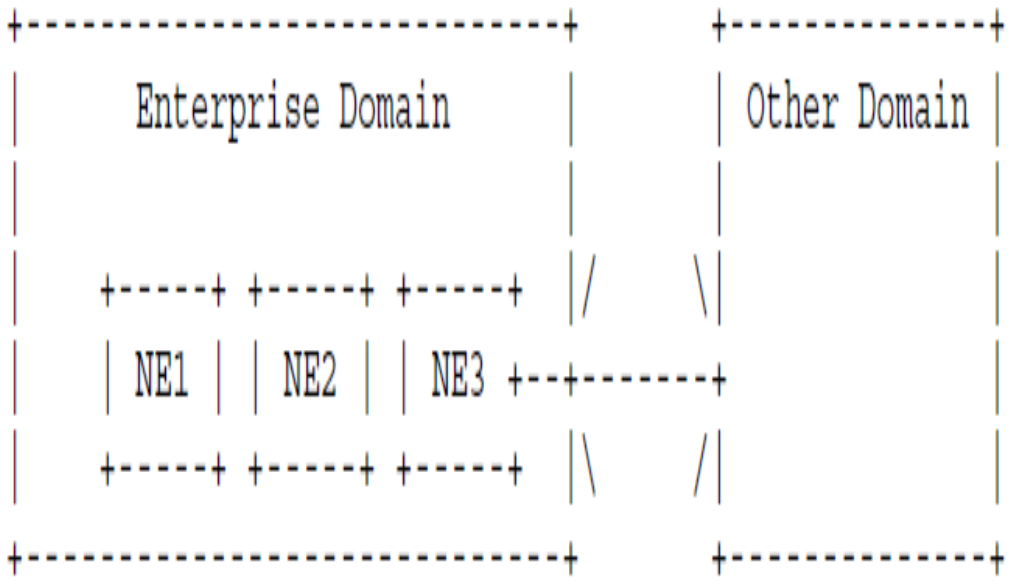

Figure 3: Blocking inbound and outbound SNMP traffic

- **Target:** block inbound and outbound SNMP traffic.
- **Case #1**

IF any network element has a port that meets the criterion of the role "edge interface", AND it is inside the EnterpriseDomain, then block SNMP traffic

ECA Policy:

- Event: SNMP traffic is sent or received
- Condition: IF this port implements the "edgeInterface" role
  AND IF this port is IN the EnterpriseDomain
- Action: Block SNMP traffic

- **Case #2**

IF a network element is added within the EnterpriseDomain
IF any of its ports take on the role "edge interface"
Add a filter to block SNMP traffic for that port

ECA Policy:

- Event: A new port is going to be enabled
- Condition: IF this interface implements the "edgeInterface" role
  AND IF this port is IN the EnterpriseDomain
- Action: InstallFilter("SNMP traffic filter", "block")

VPC (Virtualized Private Cloud)

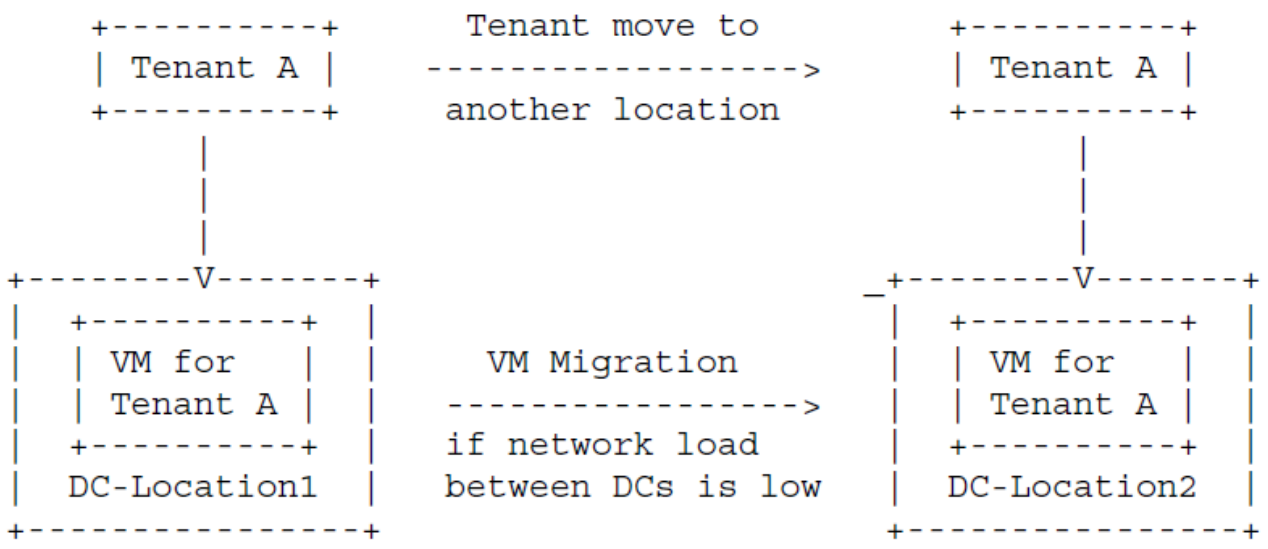

Figure 5: VM Migration if Tenant Move

- A public cloud operator can virtualize the cloud resources into multiple isolated VPCs and provide them to different tenants. After the VM is moved to the new DC, the network related to the VM must be updated accordingly.
- **Target:** Perform VM migration when user location changed and the network load between the DCs is low.
- **ECA Policy:**
  - Event: a VPC user's location is changed (near to another DC).
  - Condition: network_load(DC_old, DC_new) < threshold.
  - Action:
    - 1. Migrate the VM to the new data center (DC_new).
    - 2. Update the VPNs connecting the user's services.

Instant creation VPN

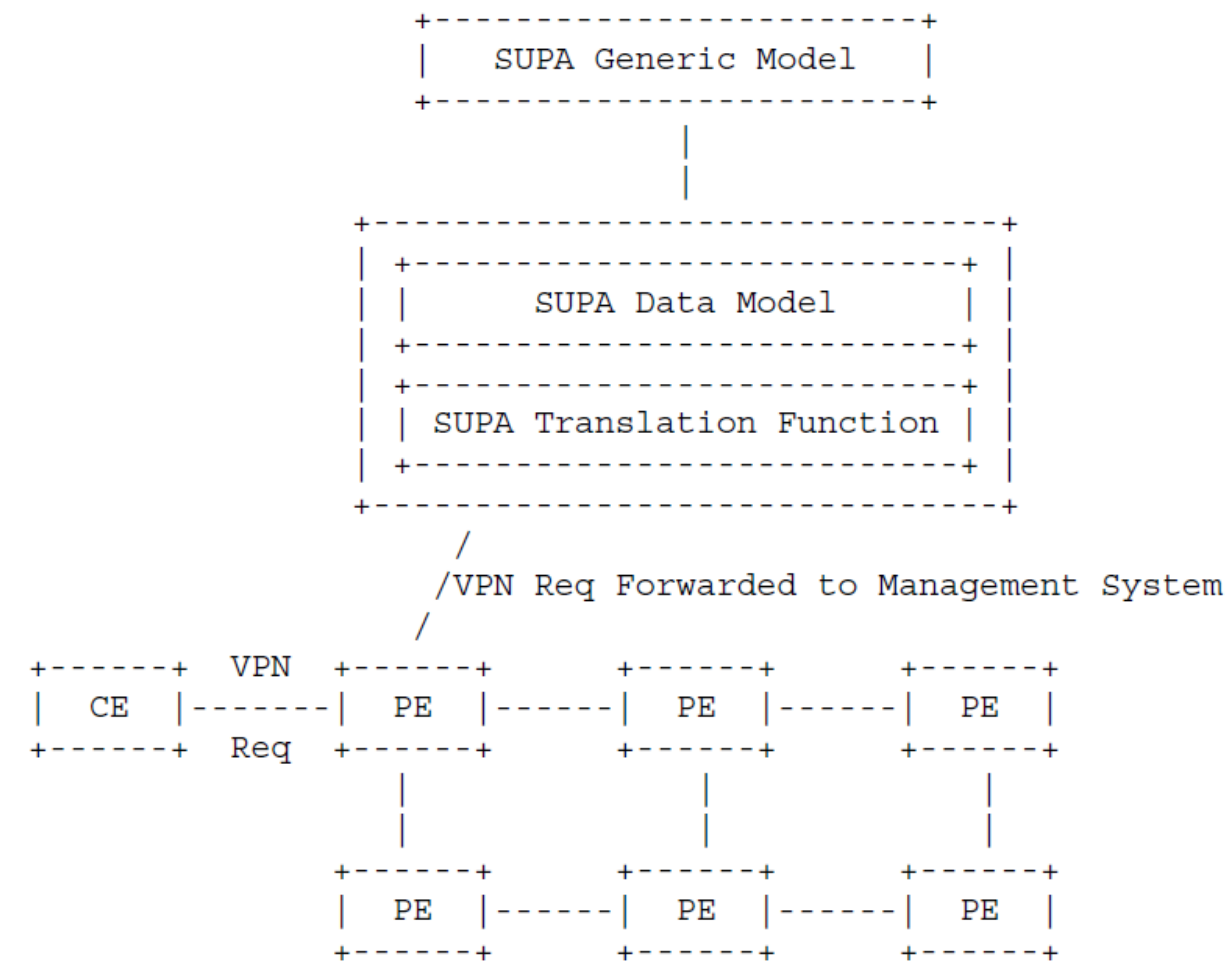

Figure 8: Instant VPN

- CE should send authentication (with credentials) request to the PE, and PE should forward the request to the management system together with port/frame/slot on which the request is received.
- **Target:** Configure VPN for an enterprise customer to connect its enterprise network with VPC.
- **ECA Policy:**
  - Event: service management system receives a CE request for VPN creation (forwarded by PE).
  - Condition: Authentication and Authorization results are OK.
  - Action: Configure VPN based on received request, including the user's grade and physical info (port/slot/frame/route id, etc, from which the request is received).

Next Steps

- Alignment with the mature information model and data model developed in other I-Ds of SUPA (I-D.ietf-supa-generic-policy-data-model, I-D.ietf-supa-generic-policy-info-model).

- Can it be adopted as WG draft?