



# SUPA value proposition

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# SUPA Proposition I-D

## Motivation

- Combine all existing research work which was done in previous I-Ds
- Prepare one concise document which clear shows existing SUPA framework and value
- Show basic examples of the Generic Policy applicability

## Status of the I-D

- I-D was not updated since it was the point by itself for SUPA charter definition and discussion
- Updates needed to be done:
  - a) Intent-based policy part should be removed
  - b) Policy framework should be addressed to single domain management
  - c) Update SUPA framework and related pictures in the I-D

# Problem Statement

**Services**

**Network**

**Multiple Vendors**

**Multiple Technologies**

**Multiple Paradigms**

**Programmatic Control Tools**

**Syntax**

**Data Models**

**SDN, NFV, Legacy**

**CLI, TL1, scripts**

**Semantics**

**Management and Orchestration**

## **Challenges**

- **Complicated network infrastructure operation and management**
- **Hard to deploy new and manage existing network services**
- **Difficult to adapt new technologies to existing network operation and management ecosystem**

# Problem Statement

Services

Network

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Paradigms

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Semantics

Policy

Management and Orchestration

## **SUPA GPIM – Generic Policy Information Model**

Unified technology independent operation and management framework based on CA and/or ECA policies will help to solve the challenges and improve existing SP network infrastructure management

# SUPA Framework

**SUPA GPIM**  
**Defines Policy**  
**(CA or ECA)**  
**for the set of Network Objects**

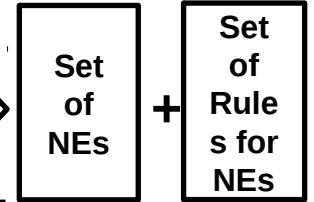
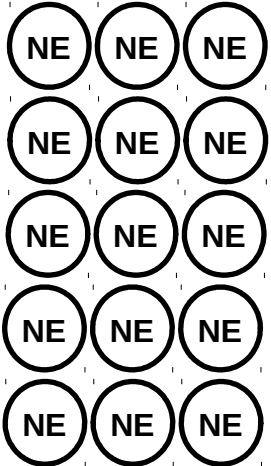
**POLICY REPRESENTATION**

```

INSERT NetworkObjects_DATABASE
L4_ACL = "permit snmp 10.10.0.0/16 any" /*rule we need to apply*/
where NetworkObject_TYPE = router /* set of NetObj*/
    
```

**OSS Network Objects Database**  
**represents**  
**SP Network**

**Filtering NE and**  
**Defining Rules**



**SUPA Policy**

- Selecting the set of NEs based on specific policy
- Defining rules how to handle configuration for selected set of NEs
- Feeding selection result and rules to internally implemented translation system

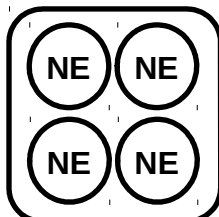
**SUPA Framework**  
**defines how to build requests**  
**for selecting NEs and applying rules**  
**to this NEs based on specific**  
**conditions in terms of a specific IETF**  
**YANG Data Models**

**Feeding results**  
**to**  
**Translation**  
**System**

**In terms of**  
**specific**  
**IETF YANG DM**  
**Each SP can use own**  
**internal**  
**implementation how to**  
**translate SUPA**  
**Policies to**  
**configuration snippets**

**OSS Orchestration or**  
**Translation System under**  
**the OSS**  
**(Selecting appropriate IETF**  
**YANG DM and building**  
**configuration snippets**  
**based on selected NEs and**  
**Rules**

**Applying**  
**Configuration**  
**to NEs**



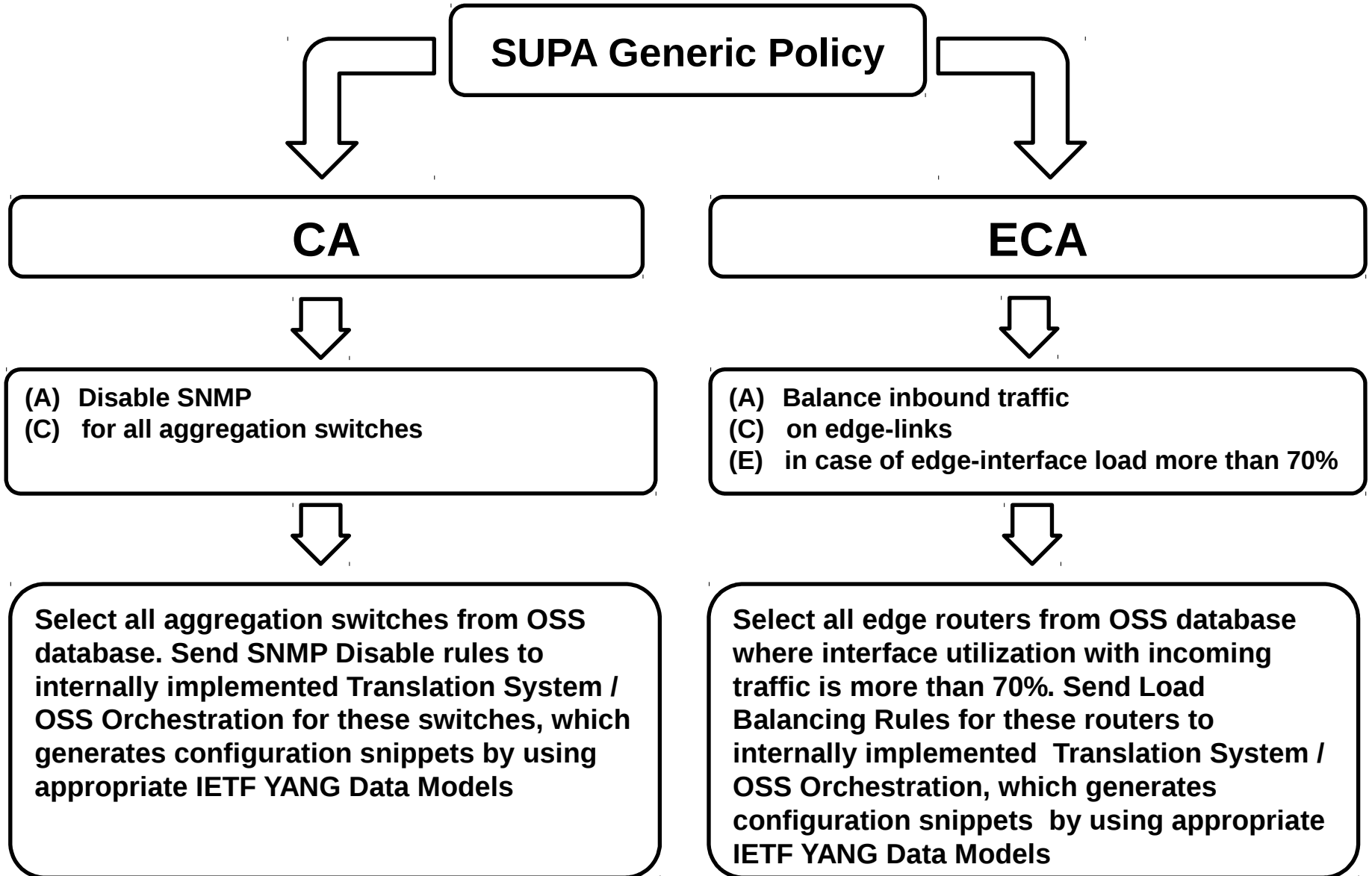
# Generic Policy Application Examples

**SUPA Generic Policy**



- **Rule-based**
- **Event, Condition, and Action clauses**
- **Vendor Independent**
- **Technology-agnostic**
- **Real-time network management**

# Generic Policy Application Examples



# Value and Benefits of SUPA

## Vendor and Technology Independent Policy Framework

Network Policy independence reduces complexity and vendor lockin. Helps unify network management.  
Simplifies deployment of new Network Function and Services.

## Unified Network Infrastructure Policy Management

Increased abstraction enables simpler and effective network infrastructure management for operators

## Real-time and event-based Network Management

Network infrastructure can automatically changes based on context monitored by policy  
at the current moment of time

## New Independent Network Management Layer

Policy can help to build intermediate layer between SP and Subscribers for unified and shared management.  
Policy-holders can provide an instruments to Policy-users for their network resource management.



# Deliverables and goals

- **Generic Policy Informational Model**
  - **SUPA framework defines a generic structure for imperative policies CA and ECA. This is converted to generic YANG data models. The IETF produces the models, and IANA is used to register the model and changes.**
  
- **Generic Policy Framework**
  - **Define how to construct Generic Policies for Network Infrastructure (Functions, Services and Intermediate layer)**
  - **Define a set of YANG data models that express the concepts defined in the generic policy information model in concrete data models. These models will be designed to be generic and extensible.**

**The SUPA is a way to make the alignment for the Network Infrastructure Management based on Unified Policy approach**