Can SUPA Aid ECA Policy Development in I2RS Yang?

draft-hares-i2rs-bnp-eca-data-model-02.txt

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Why?

SUPA Expertise may help I2RS see further and make fewer mistakes.

"If I have seen further, it is by standing upon the shoulders of giants.
Sir Isaac Newton"
Focus of Presentation

• Context of the ECA In I2RS Filter-Based RIBs
• Comparison
• Questions to consider:
  - Can SUPA guide Yang modules being created in the other WGs?
  - How does SUPA Work downward?
Context of ECA
I2RS Filter-Based RIB

I2RS Agent
FB-FIB

Interface 1
Interface 2
Interface 3
Interface 4

Default RIB
Order List

1: ECA group
2: ECA group
3: ECA group
fb-rib-types module
+-rw fb-ribs
+-rw type identityref  //Replace with ephemeral

+-rw fb-rib* [rib-name]
  +-rw rib-name-name string
  +-rw rib-afi rt:address-family
  +-rw fb-rib-intf* [name]
  |   +-rw name string
  |   +-rw intf if:interface-ref;
  |   +-rw default-fb-rib
  |   ...
  |   |   +-rw instance-using*
  |   |   +-rw fb-rib-group [name]
  |   |   ...


```mermaid
diagram velocity

|--rw fb-rib-group* [group-name]
  |--rw group-name string
  |--rw order-number uint64
  |--rw filter-type identityref // acl, eca

|--rw eca-group* bnp-eca:rule-group:name
```
SUPA ECA vs Hares proposal

SUPA
- SUPA policy
- atomic
- SUPA ECA Policy
- Rule
  - SUPA ECA Policy Component
  - SUPA ECA Policy Events
  - SUPA ECA Policy Conditions
  - SUPA ECA Policy Actions

Group Policy
- Ordered Rule
  - Name
  - Rule Number
  - Rule Match Conditions
  - QOS Actions
  - Forwarding Actions
  - Status

Status: 7
Is this Yang Module library info?
ECA Policy Statement

...
module: bnp-eca-policy
  +-- bnp-eca-policy
    +-- rw rule-group* [group-name]
    | +-- rw group-name
    | +-- rw rule* [rule-name]
    | | +-- rw rule-name string
          +-- rw order unit16
          +-- rw installer
            +-- rw rule-match-act
            | +-- rw bnp-matches
            | | +-- case: interface-match
            | | +-- case: L1-header-match
            | | +-- case: L2-header-match
            | | +-- case: L3-header-match
            | | +-- case: L4-header-match
            | | +-- case: Service-header-match
            | | +-- case: packet-size
            | | +-- case: time-of-day

---rw supa-policy-atomic
  | +--rw supa-ECA-policy-rule
  | | +--rw policy-rule-deploy-status? enumeration
  | | +--rw policy-rule-exec-status? enumeration
  | +--rw supa-ECA-component
  |   +--rw supa-policy-events
  |   | +--rw has-policy-events? boolean
  |   +--rw supa-policy-conditions
  |   | +--rw has-policy-conditions? boolean
  |   | +--rw conjunctive-type? enumeration
  |   +--rw supa-policy-actions
  |     +--rw action-execution? enumeration

---rw supa-policy-statement
  +--rw event-list
  | +--rw event-name
  | | +--rw (eventType)?
  | | +--:(entity)
  | | | +--rw entity? empty
  | | +--:(script)
  | | +--rw supa-script-type? scriptType
  | +--rw supa-script-content

---rw condition-list

---rw action-list
module:bnp-eca-policy
+--bnp-eca-policy
    +--rw rule-group* [group-name]
        +--rw group-name
        +--rw rule* [rule-name]
            |   ....
            |   +--rw bnp-action
            |       +--rw number-actions
            |       |   +--case interface-actions
            |       |       +--case L1-action
            |       |       +--case L2-action
            |       |       +--case L3-action
            |       |       +--case L4-action
            |       |       +--case service-action
            |       |       +--rw bnp-forward
            |       |       |   +--rw interface interface-ref
            |       |       |   +--rw next-hop rib-nexthop-ref
            |       |       |   +--rw route-attributes
            |       |       |   +--rw rib-route-attributes-ref
            |       |       |   +--rw fb-std-drop
Thank you for your help!