draft-ietf-i2nsf-terminology-03

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Main Changes

- **Further alignment with SACM**
  - E.g., added definition of attestation, added definitions of Data Confidentiality, Data Integrity, Data Provenance

- **Refined Existing Terms**

- **Added New Terms**

- **Removed excess terms**
  - E.g., Action, I2NSF Action are combined into one term

- **Miscellaneous changes**
  - Removed lines with just acronyms, and expanded and defined all acronyms (e.g., B2B, B2C, DC)
Directly vs. Indirectly Consumable Policies

- **Purpose**
  - These concepts will be necessary when we discuss various abstractions of I2NSF Policy Rules, but especially, for Intent Definitions at the end of this talk

- **I2NSF Directly Consumable Policy Rule**
  - An I2NSF Policy Rule is said to be directly consumable if a network device can execute it without translating its content or structure.

- **I2NSF Indirectly Consumable Policy Rule**
  - An I2NSF Policy Rule is said to be indirectly consumable if a network device can NOT execute it without first translating its content or structure.
Next Steps

- Need to explore Attestation more
  - There are at least two very different approaches in the IETF

- Need to explore Metadata more
  - Its use in netmod is not aligned with that of other SDOs

- Need to explore Events
  - Should we differentiate between “special” events, like alarms, and others?
  - How robust a definition of events is needed?

- Need to explore the mismatch between info models and data models
  - Can terminology help?

- THEN we should be ready for last call 😊
Questions?

“Create like a god. Command like a king. Work like a slave”
- Constantin Brancusi
Types of Policy Rules (1)

Imperative: Event-Condition-Action (ECA)

- IF the clause of Events evaluates to TRUE
- IF the clause of Conditions evaluates to TRUE
  - THEN execute the clause of Actions

- Explicit programming of state *(rationality is compiled into the policy!)*

Advantages:
- Can be simple; system knows exactly what to do

Disadvantages:
- Explosion of policies
- Conflict detection and resolution can be very difficult
Types of Policy Rules (2)

Declarative (or Goal-based)

- Express what should be done, not how to do it
- Specifies criteria for choosing a set of states, any of which is acceptable
- Each state has a binary value
- Rationality is generated by optimizer/planner

Advantages:
- More abstract, and potentially more flexible, than ECA policies

Disadvantages:
- Requires sophisticated translation and optimization modules
The Reinvention of Intent

Policy Management is HARD
- People want simpler solutions

Many Different Constituencies Want Intent
- End Users who aren’t technical want to define policies to control behavior
- Application Developers want to build Network Services, but existing network interfaces don’t help them do this
- Operators want more abstract and powerful ways to define Network Services

Intent offers the ability to define consumer abstractions that invoke Network Services

Intent is a Declarative Policy, but not necessarily logic-based

Intent requires a Mapping