

Policy Framework WG

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Policy Overview

- Intro to work in Policy Framework WG
- Framework/Architecture
- Policy Approach
- QOS Policy and other Policy Work
- Status

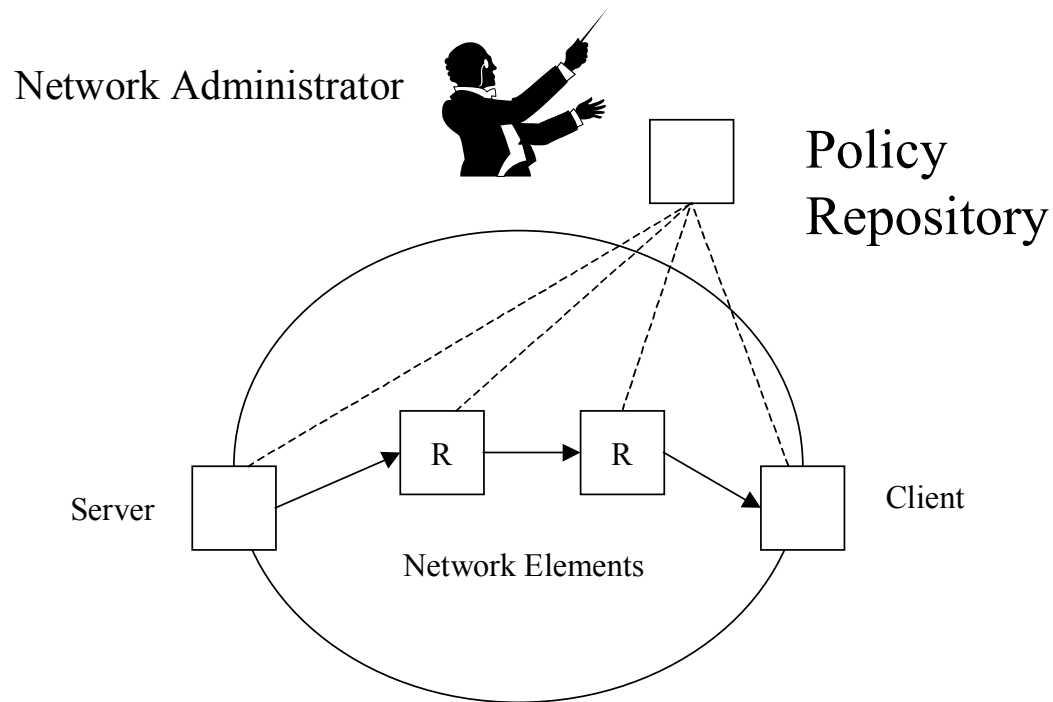
Policy WG Objectives

- Deliverables:
 - Use cases
 - Framework
 - Generic Info Model (Approved for Prop. Standard)
 - Mapping to directory schema
 - Application to QOS Management (proof of concept)
 - Work with other working groups when they apply policy
- Constraints:
 - Single Domain
 - Protocol independent
 - No vendor-specific schema
 - Extensible by vendors

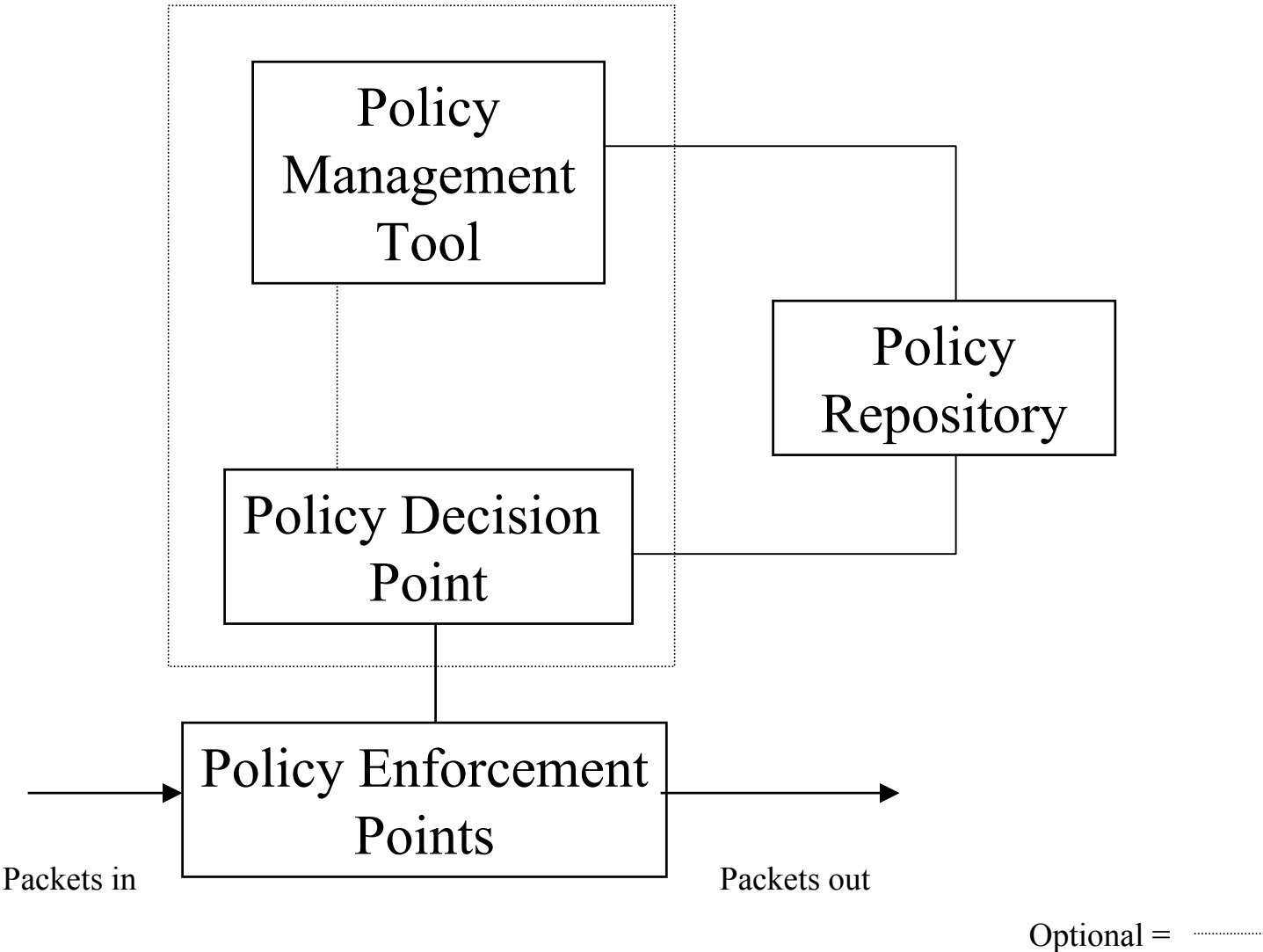
Why “Policy”?

- To Drive policy-based configuration of collections of systems/devices
 - Must map to lower level configuration models
 - Must scale to thousands of managed entities
- To Produce the effect of cooperation
 - among multiple heterogeneous managed entities
 - manageable aggregated behavior with desired end-to-end characteristics
- To Support service level agreements
 - Implies mapping to higher level business model
 - Must facilitate logically central administration by humans for a given policy domain

Single Domain End-to-End QOS (Simplified View)



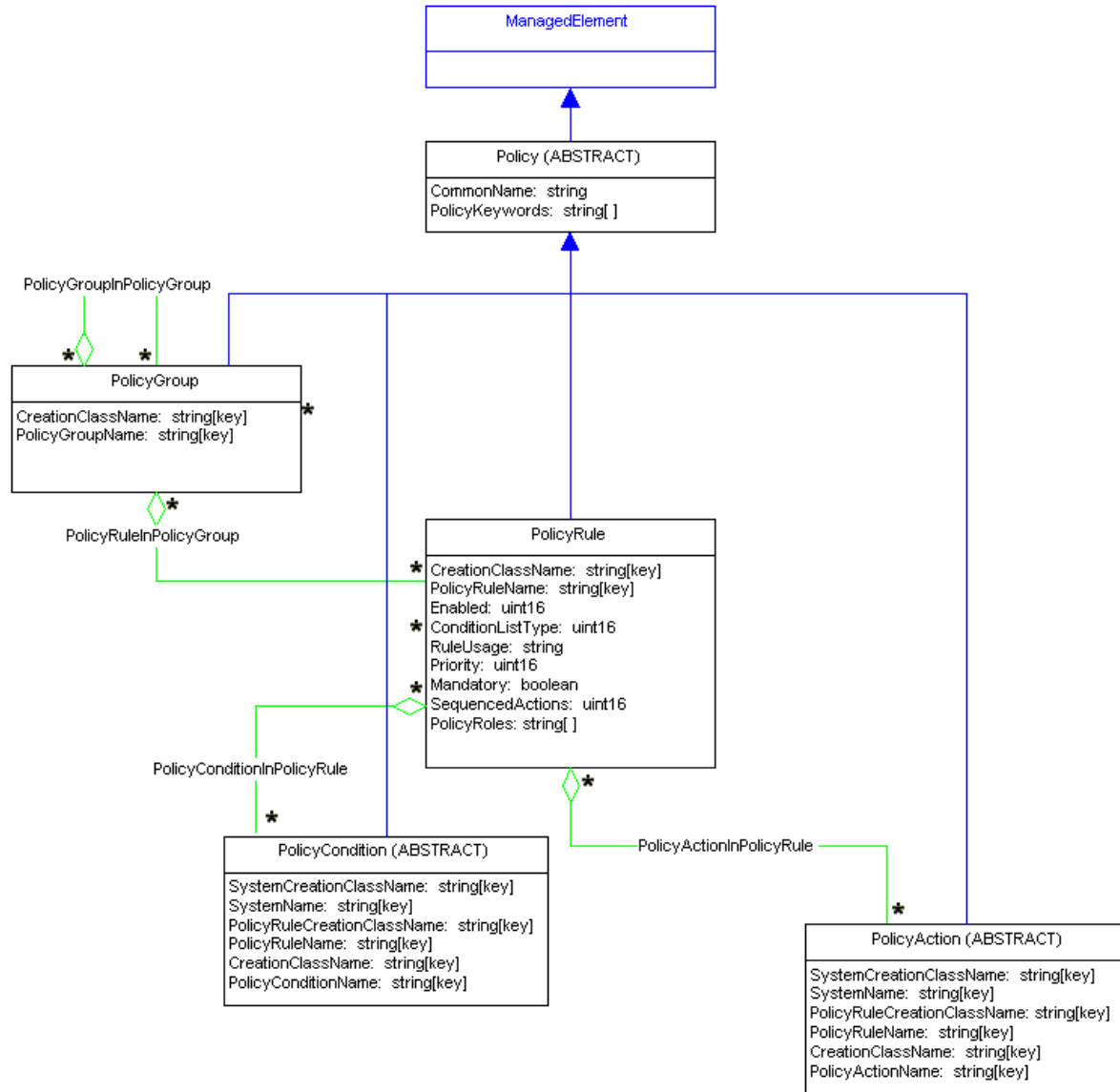
Scalable Policy Architecture, Within a Domain



Terminology (see polterm for most current)

- Policy Rule: An aggregation of a set of policy conditions and a corresponding set of policy actions associated with either meeting or not meeting the set of conditions).
 - Policy Rule Semantics:
 - IF <condition(s)>, THEN <action(s)>
- Condition: Criteria, under which the associated action is to be taken (Boolean expression evaluates to “true”)
- Action: That which is to be executed when the condition is met (execution can be performed outside the CIM model)

Basic Policy Classes/Assoc's



Policy Extensions for QOS

- Example condition variables:
 - source/dest'n ip addr's, ports, IP prot #, TOS/DSCP marking, s/d MAC addr's, VLAN ID's, Ethertype, etc.
- Example actions:
 - Marking, shaping, dropping, prioritization, etc.
- QOS Device Level Model Policy
 - drives provisioning via QOS Device Information Model, also being standardized in Policy Framework WG

Current Standards Work Status

- Policy Framework Working Group
 - Policy Information Model, has been approved by IESG for advancement to Proposed Standard RFC
 - Next: Mapping to ldap accessible directory, and extending to QOS. (Multiple revisions of Internet Drafts already in place on these.)
 - IETF working groups using/influencing this work: DiffServ, IPSP, IntServ, RAP (COPS), RSVP, IPSP, LDAPext, others
- Issues: packet classification, scheduler/queue relationships being finalized, drafts in progress, framework and use cases need updating, cross-wg terminology almost done

Policy Documents

- PCIM: draft-ietf-policy-core-info-model-08.txt
- QDDIM: draft-ietf-policy-qos-device-info-model-02.txt
- QPIM: draft-ietf-policy-qos-info-model-02.txt
- IPSP: (owned by ipsp) draft-ietf-ipsp-config-policy-model-01.txt
- PCLS: draft-ietf-policy-core-schema-08.txt
- Policy Terminology: (“polterm”) draft-ietf-policy-terminology-01.txt
- Req: draft-ietf-policy-req-02.txt