

Policy Implementation Model in ONAP

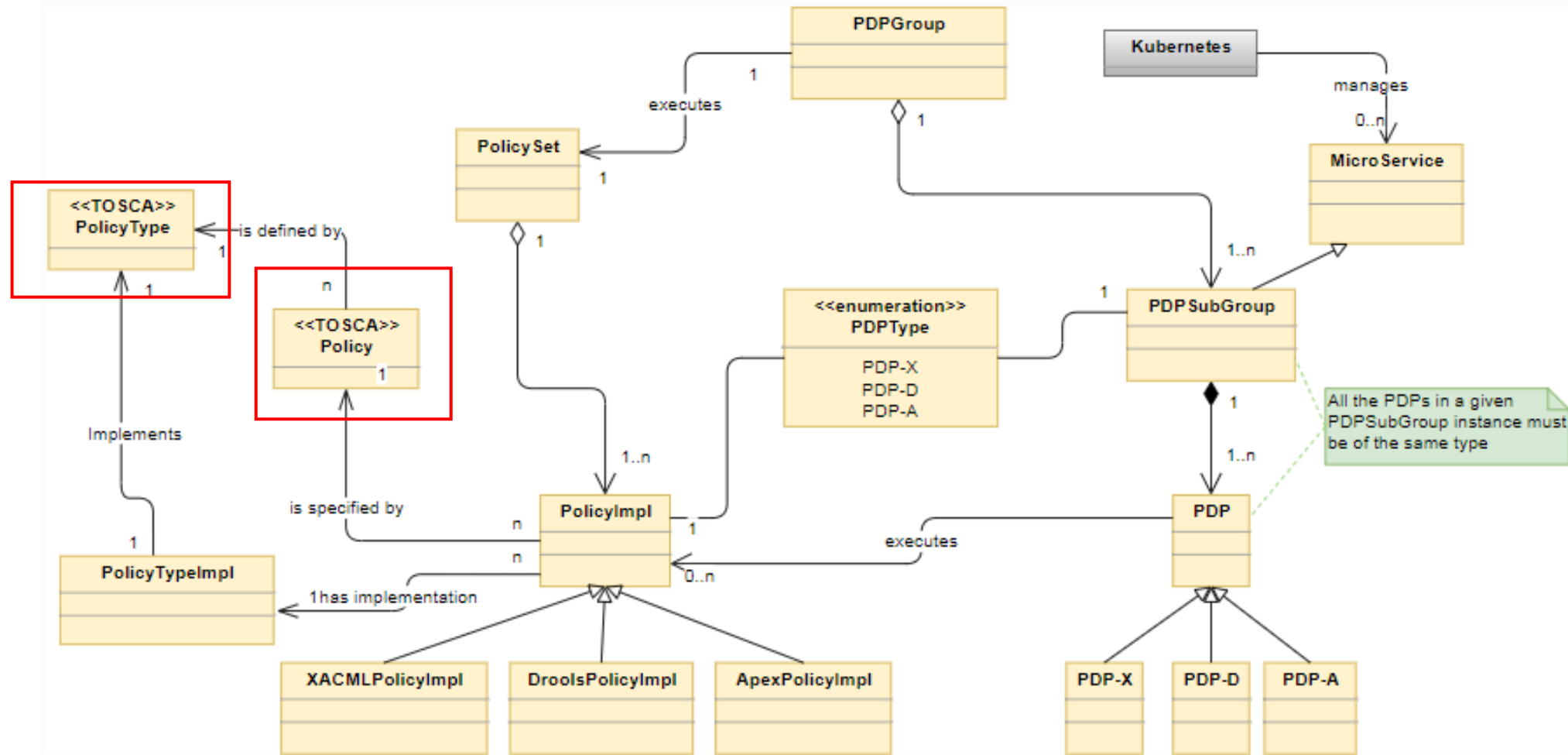
Chuyi Guo

2020.6.22

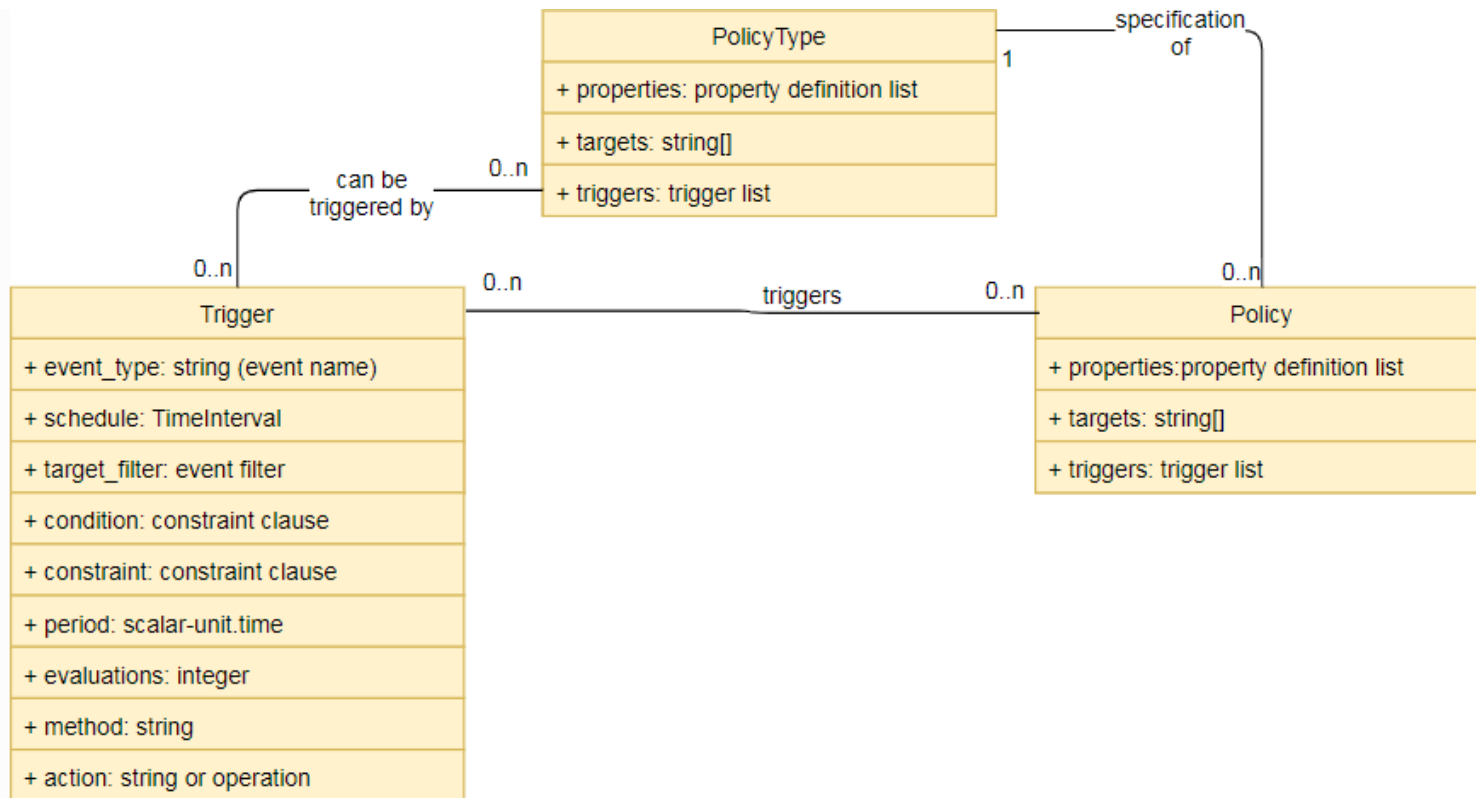
Reference

- <https://onap-doc.readthedocs.io/projects/onap-policy-parent/en/latest/architecture/architecture.html#policy-type-design>
- <https://onap-doc.readthedocs.io/projects/onap-policy-parent/en/latest/design/design.html#design-label>
- <https://onap-doc.readthedocs.io/projects/onap-policy-parent/en/latest/architecture/tosca-policy-primer.html#tosca-label>

Policy Implementation framework – Modeling View

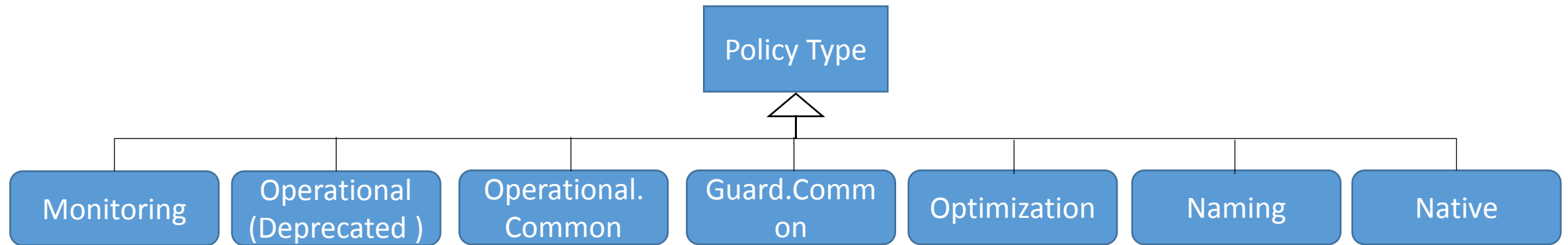


TOSCA Policy Concepts



- Policy Type
 - A Policy Type definition in TOSCA includes properties, targets, triggers.
- Policy
 - Instances of Policy types with specified values and entities.
- Trigger
 - A Trigger defines an event, condition, and action that is used to initiate execution of a policy associated with it.

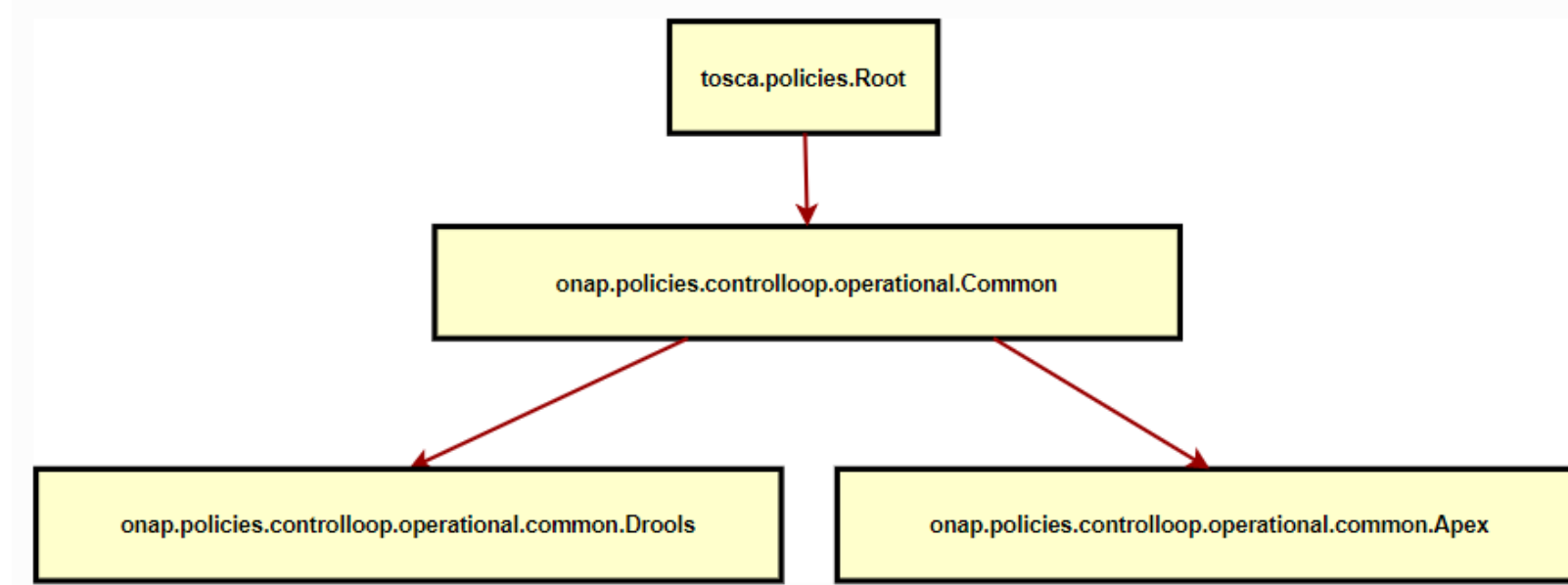
Policy type



- Monitoring - This is a base Policy Type that supports Policy driven DCAE microservice components used in a Control Loops. The implementation of this Policy Type is done in the XACML PDP.
- Operational(Deprecated) - This policy type is used to support legacy YAML definitions for actor/action operational policies for control loops.
- Naming - Naming policies are used in SDNC to enforce which naming policy should be used during instantiation.
- Native - This is the Base Policy Type used by PDP engines to support their native language policies. PDP engines inherit from this base policy type to implement support for their own custom policy type.

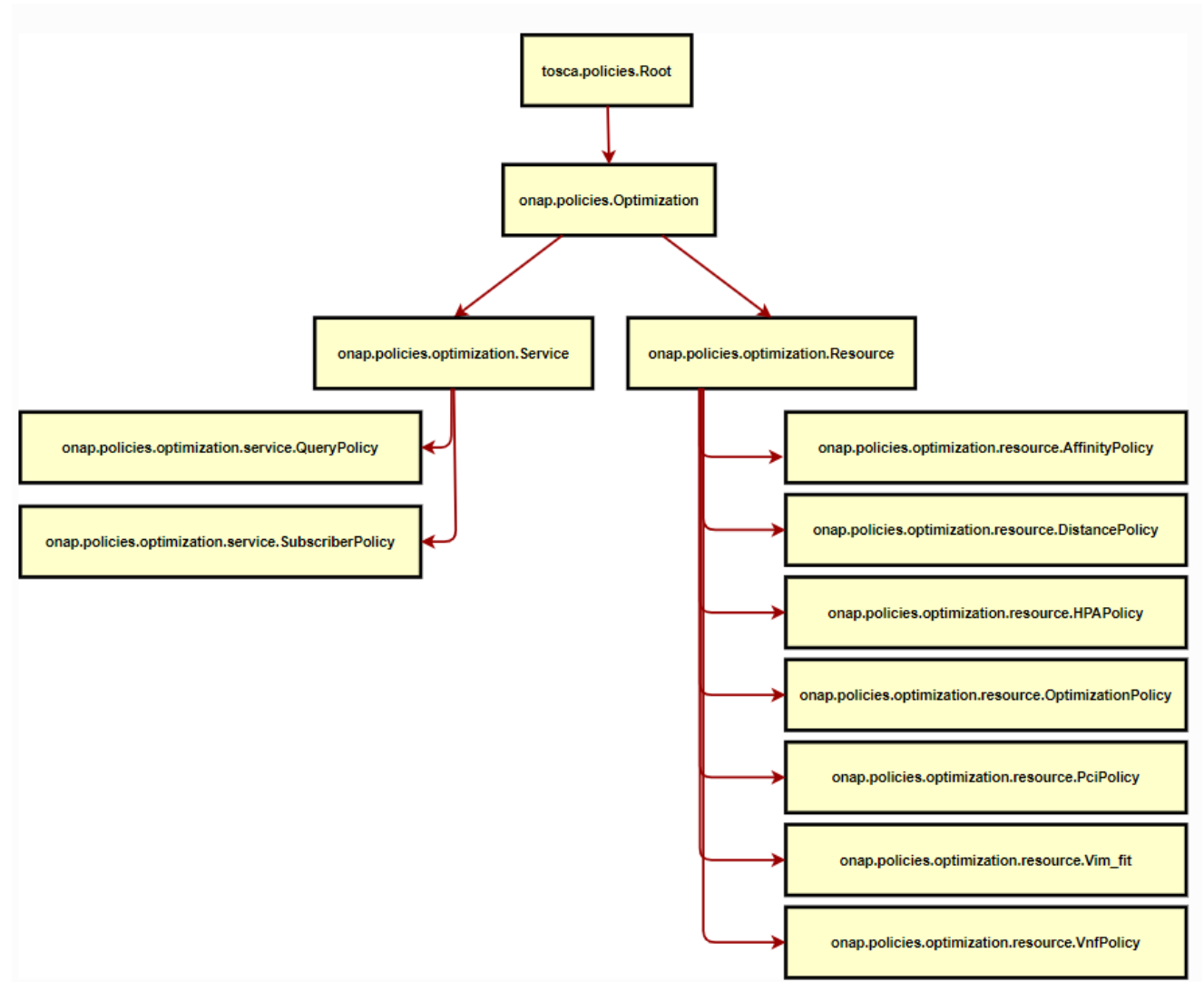
Policy type

- Guard(common) - This base policy type is the the type definition for Control Loop guard policies for frequency limiting, blacklisting and min/max guards to help protect runtime Control Loop Actions from doing harm to the network.
- Operational(common) - This is the new Operational Policy Type introduced in Frankfurt release to fully support TOSCA Policy Type.



Policy type - Optimization

- The Optimization Base Policy Type supports the OOF optimization policies.



R7 Policy requirements for E2E slicing and Model Work

- Identified requirements from E2E Network Slicing case:
 - Scenario 1 - Templates or instances selections
 - Suggested policy: HPA Policy
 - Scenario 2 - Control-loop and configuration changes
 - Suggested policy: Operational Policy
- Model Work for R7
 - Document Policy type and Policy information model in Modeling Subcommittee.

Policy Example - vFirewall.policy.operational.input.tosca.yaml

```
1  tosca_definitions_version: tosca_simple_yaml_1_1_0
2  topology_template:
3    policies:
4      - operational.modifyconfig:
5          type: onap.policies.controlloop.operational.common.Drools
6          type_version: 1.0.0
7          version: 1.0.0
8          name: operational.modifyconfig
9          metadata:
10             policy-id: operational.modifyconfig
11          properties:
12             id: ControlLoop-vFirewall-d0a1dfc6-94f5-4fd4-a5b5-4630b438850a
13             timeout: 1200
14             abatement: false
15             trigger: unique-policy-id-1-modifyConfig
16             operations:
17               - id: unique-policy-id-1-modifyConfig
18                 description: Modify the packet generator
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Thank You!