

Policy-Based Filtering of Control Loops

Overview

The problem being addressed is to define and provide a general filtering solution for control loops so that a member of Dev Ops can quickly and easily modify the behavior of a Control Loop during the lifecycle of a Control Loop. The filtering mechanism would support multiple levels of granularity for any target entity specified in a service or a physical network function.

Goals

The goal is for a member of Dev Ops to be able to easily apply filters to control loops dynamically at runtime using policy filters.

The following types of control are desirable:

- Fine-grained ability to Enable/Disable control loop for a specified resource
- Fine-grained ability to Apply different Actor/Operations for a specified resource

The following levels of granularity are desirable:

- VNF Type
 - Confirm if existing VNF Type is being used??
 - nf-type: nf-role, nf-function, nf-naming-code
- VNF Instance
- VNFC Instance
- PNF ?

In addition, to the above target entities, additional attributes are desirable to further broaden or narrow the granularity of the control loop actions:

- Geography
 - cloud region or zone
- Physical Server
- etc.

Long Term Roadmap

- 1) Depending on how the solution is implemented, may require some conflict resolution capability to be built into the Policy API.
- 2) May be desirable in the future for DCAE collectors/analytics to support policies that specify filters in the policies that must be enforced.
- 3) An alternative to #2 can be strategic placement of a scalable/resilient group of PDP-D at different points within a complex flow of control loop to apply filtering rules to VES events. This gives the ability to flexibly throttle VES events being generated by analytics anywhere in the control loop, without requiring analytics to understand and enforce filtering policies.
- 4) Usage of "safe mode" (not yet implemented in Policy to provide another safety mechanism.

Business Requirements

As designated in [Control_Loop_Filtering_Requirements_for_ONAP_v5_5-8-2020_AC.pdf](#)

Participating Companies

AT&T

Contributions

[Policy Filtering Solution Scoping - FINAL 8/19/2020](#)

[Control_Loop_Filtering_Requirements_for_ONAP_v5_5-8-2020_AC.pdf](#)

Impacts

| Project | Impact | Notes |
|---------|-----------|---|
| POLICY | Low | <p>Policy Type Design</p> <p>Application to translate Policy Type</p> <p>Documentation for DevOps teams to understand how to build the policy</p> <p>Potential modification of Guard actor to add necessary properties to guard Decision call</p> |
| CLAMP | Test Only | |

Project Commitment

| Project | Commitment | Notes |
|---------|------------|-------|
| POLICY | Yes | |
| CLAMP | Yes | |