Introduction

- Policy Framework Project Logistics
    - https://wiki.onap.org/display/DW/Policy+Framework+Project
- Policy Framework Project is intended to address the following (from ONAP whitepaper):
    - Model Driven Service Design that captures Policies during Design Time
    - Policy Driven Automation during Orchestration and control Framework execution
    - Policy Driven Operational Management during the execution of control loops during runtime
    - Support ONAP goals for a metadata-driven (eg. Model-driven) platform to ensure flexibility for different users of ONAP Platform
    - Common capabilities developed once and used many times
    - Core capabilities supporting many diverse services

3 Principles:

Model driven
Micro service based
Modular architecture

Terminology

- PEP – Policy Enforcement Point
  - ONAP components that enforce policy decisions
  - Ex. DCAE Micro Services are policy-enabled and enforce control loop configuration policies for thresholds
  - Ex. OOF are policy-enabled and enforce placement policies based on hardware capabilities
- PDP – Policy Decision Point
  - Where policies are deployed
  - Where policy decisions are made
  - Can be overlap between PEP/PDP (eg. current Drools PDP is both PEP and PDP)
- PAP – Policy Administration Point
  - Where policies are defined, modified (eg. CRUD)
  - Where PDP's are organized and policies are distributed to
- Policy Template
  - A pre-built and tested suite of policy rules and code that support implementation of a policy domain

Policy Framework – Casablanca Architecture

- Move to a more robust distributed PDP Micro Service Architecture
- Support multiple types of PDP based on technical needs
- Enable community to deploy Policy PDP micro services as they desire
- Allow PDP micro services to be configured during runtime via PAP enhancements

Policy Framework – Casablanca Architecture Proposals

- Enhance the PAP to support distributed PDP micro services to support the following:
  - Model-driven: Goal is to build the platform such that new models can be on-boarded and developed rapidly
  - Supports an enhanced Policy Template Development environment
  - Add the ability to deploy policies into different modes
    - Inactive
    - Active – Safe Mode
    - Active – Live Mode
  - Add in the support to scheduling retirement of policies
  - Add in the ability to group PDP micro services and change configuration during runtime

Policy Framework – Casablanca Architecture

- Policy Conflict Detection and Resolution Roadmap
    - Design time detection tools
        - Tools to identify and detect policy conflicts when service designers are initially defining policy. Dependent on integration of Policy into SDC environment.
    - Policy Template Developer environments
        - Infrastructure in place for Policy developers to be able to build and test policies templates and support code associated with policies.
        - Allow for developers/research teams to test new functionality side-by-side with a running production platform.
    - Runtime functionality
        - Policy Framework Platform must provide the ability for an operations team to deploy, un-deploy policies, change policy state (eg Safe Mode), change PDP configuration, etc. quickly and efficiently in order to ensure that services keep running, networks don't go down, problems don't escalate, etc.
        - Interactively allow an ops team to build a closed loop from an open loop

Policy Framework – Casablanca Architecture

- Draft Policy Casablanca Architecture:
- https://wiki.onap.org/display/DW/Draft+Policy+Framework+Architecture+Roadmap
- Call for help

Bio

- Pamela Dragosh has 27 years experience in designing and building software platforms in AT&T Research. Her projects have ranged from speech recognition, text-to-speech, digital rights management, music encryption, big data, location-based services, software defined networking, and policy platform. Pam has open sourced several projects including XACML 3.0 Policy Engine, OpenAZ Apache, and is currently the Project Technical Lead in ONAP for the Policy Framework Project and Chair of Control Loop Sub Committee.