ONAP
OPEN NETWORK AUTOMATION PLATFORM

ONAP DCAE Transformation – OOM Impacts

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DCAE Honolulu release Plan

Cloudify remains primary orchestration for dynamic deployments (MOD/CLAMP flows)

- Migrate bootstrap service components to Helm (continue Consul/CBS)
  - Build generic common helm template (to be used by VESCollector, TCAgen2, HV-VES, PRH, Holmes*)
  - Create separate DCAE/Helm Repo or current OOM tree (under discussion with OOM Team). Separate repo under DCAE requires
    - ONAP/Jenkins integration for helm chart build and push into ONAP/nexus
    - Dependency on oom/common to be available under ONAP/nexus

- Design configuration management for service component outside of Consul/CBS (Design)

- Building current DCAE platform function as sidecar/init container functionality
  - Dynamic Topic/feed (DMAAP) provisioning through helm & K8s operator (stretch-goal)
  - Policy Handling

- DCAE MODv2 Enhancement for Helm support *(Design)*

DCAE Charts contribution (Option1)

Add service components chart under **DCAE repo**

- Create *dcaegen2/helm**(new repo)***
  - dcae-common, ves, prh, hv-ves, tcagen2,~~Holmes~~

  (Can build be tied to specific sub-directory/component - ?) order of build, oom/common versioning TBD with OOM team
- Dcae service charts structure (template/)
  - Deployment yaml (will use dcae-common template)
  - Service (will use oom/common template)
  - Secrets (will use oom/common template)
- Jenkins jobs for pushing chart packages to nexus (oom-helm-snapshot/oom-helm-staging/oom-helm-release)
- Setup gating check dcaegen2/helm to validate healthcheck and run e2e testsuite (similar to OOM/gating) part of Verify job
- Update reference under OOM *(oom/kubernetes/dcaegen2/components/helm-services-bootstrap or /oom/kubernetes/dcaegen2-services)* requirement to include MS needed under bootstrap
  - Minimal chart holding requirement file to point to required DCAE MS for bootstrap
- For new container version released
  1. Update DCAE helm chart and release
  2. Update OOM to point to latest chart package (instead of actual container version change)

Complexity

- Order of build, version change in DCAE and OOM (esp. when common changes are involved)
- Requirement file not current overridable; chart packages built/released need update if any dependency version changes
- Infrastructure/resources to support DCAE gating? DCAE dependency can be limited to subset of components (AAF, Consul, DMAAP)
  - Charts generated from Helm verify (oom-helm-snapshot) + latest OOM + requirement override of current version
- Process/versioning for Helm merge vs Helm release to push chart package to nexus (oom-helm-snapshot/oom-helm-staging) TBD

Long-term benefits

- Provide mechanism for loading external repo and distribute nexus charts directly for ONAP than building locally
- Reduces oom repo size
- Charts can be eventually moved to component repo and maintained together with rest of code

DCAE Charts contribution (Option 2)

Add service component charts under **OOM repo**

1. Contribute dcae-deployment common template under oom/common

2a. Under *oom/kubernetes/dcaegen2/components/**helm-services-bootstrap*** tree and treat similar to DCAE platform components

- Each component (DCAE Microservice) will be added as sub-component (example below)
  - *kubernetes/dcaegen2/components/helm-services-bootstrap/components/ves-collector*
  - *kubernetes/dcaegen2/components/helm-services-bootstrap/components/hv-ves-collector*
- Components can be enable/disabled using override

OR

2b. Add new top-level component for helm based dcae service component */oom/kubernetes/**dcaegen2-services***

- Each component (DCAE Microservice) will be added as sub-component (example below)
  - *kubernetes/dcaegen2-services/components/ves-collector*
  - *kubernetes/dcaegen2-services/components/hv-ves-collector*
- Components can be enable/disabled using override

3. Holmes will be independent top-level project (under oom/kubernetes)

Pros

Use existing OOM CI/gating process hence less process/overhead

Dev contribution can start right away for H release

Cons

More dcae service charts under OOM tree

**Chart Versioning and release nexus for enforcing external repo can be worked in-parallel and DCAE chart hosting can be revisited for next release

OOM Impact/dependencies for dynamic deployment

- OOM/Helm service for supporting dynamic deployment (from external registry after main ONAP)

- ONAP deployed helm registry (for pushing dynamically onboarded component through MOD)

- K8s operator for DMaap topic/feed provisioning with option for integration with external Native/Kafka (OOM/DMAAP – TBD)

- Plugin or adapter for ONAP/OOM complaint helm generation (MOD support)