DCAE Microservice Onboarding and Design (MOD) with Helm Support (Jakarta Release)

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Agenda

- Specification Schema Change
- Deployment Configuration for MOD
- Pre-requisite
- Demo
- Summary

Component Spec Schema Changes

V3 version of component spec schema introduced - https://github.com/onap/dcaegen2-platform/blob/master/mod/component-json-schemas/component-specification/dcae-cli-v3/component-spec-schema.json

- Added new "helm" object under "auxilary_docker" properties
  - Includes "applicationEnv"
  - Includes "service" definition
- Readiness Configuration support
  - docker_healthcheck_http
    - Added HTTP/HTTPS for supported protocol enum list
    - Added "port"
    - Added "initialDelaySeconds"
  - docker_healthcheck_script
    - Added "initialDelaySeconds"

References:

- Mapping Requirements : https://wiki.onap.org/display/DW/Helm+Generator+for+DCAE+MS
- V2 spec
- TCA with Policy

MOD Deployment Configuration Changes

RuntimeAPI Chart updates
https://github.com/onap/oom/blob/master/kubernetes/dcaemod/components/dcaemod-runtime-api/values.yaml

```
43    artifactType: "HELM"
44    registryBaseurl: http://chart-museum:80
45    basehelmchartlocation: /helm-gen/
```

Supported artifactType: **BLUEPRINT** or **HELM**

- Blueprint – Distribution to Inventory/Dashboard
- Helm – Distribution to ChartMuseum

Dependency on **dcaegen2-services-common** template - https://github.com/onap/oom/tree/master/kubernetes/dcaemod/components/dcaemod-runtime-api

Includes helmchartgenerator-core (new) lib for helm chart generation - https://github.com/onap/dcaegen2-platform/blob/master/mod/runtimeapi/runtime-core/pom.xml

```
51        <dependency>
52            <groupId>org.onap.dcaegen2.platform</groupId>
53            <artifactId>helmchartgenerator-core</artifactId>
54            <version>1.0.2</version>
55        </dependency>
```

Default artifact generation is Cloudify currently on Helm-gen tool for Jakarta Release; will be switched to Helm later

MOD Deployment Pre-Requisites

Accessible ChartMuseum registry (internal or external)

Provided registry is used to pull required dependencies and push new generated charts

ONAP deployments (gating) includes Chartmuseum installation within ONAP cluster
https://github.com/onap/oom/tree/master/kubernetes/platform/components/chartmuseum

Registry initialization

- https://github.com/onap/oom/blob/master/kubernetes/contrib/tools/registry-initialize.sh
- https://github.com/onap/oom/blob/master/kubernetes/robot/demo-k8s.sh

Demo Steps

1. Chartmuseum Installation
2. Chartmuseum initialization (pre-load required dependencies)
3. Deploy MOD and define registry/target
4. Load v3 specs via OnboardingAPI
5. Create flow on MOD Designer tool using VES and TCAgen2
6. Distribution to Runtime
7. Chart validation and Deployment

DEMO

Summary

DCAE MOD adaptation for Helm support is transparent to End-user/designers

Helm/Cloudify distribution supported via Helm configuration with dependency on v2/v3 compatible spec

Future enhancement/Bug fixes

- Switching default to Helm in Helm-Gen tool
- Need to update Helm-gen core to support new adaptation on OOM charts
  - DCAEGEN2-3087 - Runtime/helm-gen lint error
  - MongoDB support in templates

Team Members

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Thank You!