2021-02-03 - ONAP: Multicloud-k8s plugin enhancement for CNF deployment

Topic Leader(s)

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Topic Overview

Helm hook is becoming more and more important in CNF deployment which can give fine-grained control in CNF life cycle management. For complex CNFs using this feature, a support of helm hook in multicloud-k8s plugin will not only simplify the onboarding process but also maintain the same behavior /workflow in deployment/deletion process on these CNFs. Another improvement is the instantiation status report of CNF deployment, e.g., k8s resource monitoring, which is not the case in the current implementation.

Slides & Recording

ONAP Multicloud-k8s plugin enhancement for CNF deployment.pdf

ONAP Multicloud-k8s plugin enhancement for CNF deployment.mp4

Agenda

Helm hook support motivation: Helm provides a hook mechanism to allow chart developers to intervene at certain points in a release's life cycle.

Hook types

- The relevant ones for our implementation: pre-install, post-install, pre-delete, post-delete
- Additional: pre-ugrade, post-ugrade, pre-rollback, post-rollback

Helm hook to perform CNF-scope configurations. Some CNFs cannot be "up and ready" without these hooks.

Some Helm hooks can be converted to CDS workflow node but not all.

Some enhancements for CNF handling from Frankfurt to Guilin, but no support for helm hook mechanism

Proposed enhancements

Demo

Minutes

Chat log of the session

Srini Addepalli (Intel)
Hi, this is very good problem statement. Can we continue the discussion offline? My email is : Srinivasa.r.addepalli@intel.com. In EMCO v2, we have a module called 'rsync'. Depedencies among K8s resources is a problem statement. Some times, we can't install a resource without other instance is UP and running. We have dependency graph definition on per NS basis. RSYNC module honors this dependency graph.

Lukasz RAJEWSKI (Orange)
The problem is if for some cases CDS does not come to the picture to perform custom operation defined in the CBA package

Sylvain Desbureaux (Orange)
In OOM, we try to remove all these helm hooks as they have to be carefully written in order to finish in a weird state. That's why I'm not super fan of helm hooks ;)

SaiSeshu MUDIGANTI (Huawei)
post instantaion is critical flow

Lukasz RAJEWSKI (Orange)
yes

Nakjung Choi (Nokia)
I see. But for some telco CNFs, they are using helm hooks extensively

SaiSeshu MUDIGANTI (Huawei)
@Sylvain, Im sure Istio will com handy at some places here ;)

Victor Morales
@Srini, are those resource dependencies in different k8s clusters?

Nakjung Choi (Nokia)
Also if any dummy VNF pairs have some dependency (for integration), {pre-, post-} deletion is also important for stable operation

Srini Addepalli (Intel)
@Victor, it could be. Some times, dependencies can be within a CNF among its micro-services. Some times, the dependency could be across CNFs (Can be in the same cluster or across cluster) within a Network Service.

Sylvain Desbureaux (Orange)
I'm not saying I'm always against, I'm just saying that it must be used with care :)

SaiSeshu MUDIGANTI (Huawei)
Yes Nakjung, but if we could find the clear path of create delete wouldn't be that big issue

Avi Chapnick
Does it support opt in/out for the hook execution?

Nakjung Choi (Nokia)
Got it but in that case, all vendors should prepare w/o hooks? :-)

SaiSeshu MUDIGANTI (Huawei)
@Sylvain... Absolutely

Victor Morales
@Srini, ideally the CNF internal dependencies has to be solved by CNF developer but it's not always the case

Action Items

- [x] Presenters to engage with ONAP CNF TF to further discuss, enhance and contribute their ideas as presented.