

LF Edge Catalog

Objectives

1. Reduce friction to deployment of LF Edge Templates
2. Provide a centralized location for all deployable Templates

Definition

- Template = software + configuration

Concept

- Provide (potential hierarchy of) recipes for deployment of templates
 - For Kubernetes based projects (like Akraino) this could be a set of Helm charts or k8s manifests
 - For other container based projects (which don't necessarily have K8S) this could be docker-compose
 - For bare-metal deployments, we are open to suggestions on potential solutions
- Have a web-page (per template) which consolidates these along with simple instructions and potential parameters

Examples

- Proposal is described here: <https://github.com/ericvh/lfedge-catalog-proposal>
- An end-to-end example with cloud and edge components is shown here: https://github.com/ericvh/lfedge-catalog-proposal/blob/update/SMARTER_example.md
- artifacthub.io : maintains a catalog of public helm charts and has a concept of organizations (so we could host under an LFEde organization there)
 - Organizational View Example: <https://artifacthub.io/packages/search?org=smarter&sort=relevance&page=1>
 - Project View Example: <https://artifacthub.io/packages/helm/smarter/smarter-edge>
 - We could potentially augment descriptions with badges (Cassini Ready, etc.)
- hub.balena.io: has a similar structure to the above, but actually couples a container recipe with a platform to provide a burnable sdcard
- rancher provides a git repository of recipes: <https://github.com/rancher/community-catalog> which are used by their platform to provide catalog based installation
- portal.sagecontinuum.org maintains a catalog of edge deployable applications for their smarter-cities project
- portainer.io maintains git repositories of templates which are then deployable using their portainer.io tool (including the community edition)

Requirements

- For helm appropriate projects (those that use kubernetes as a base layer)
 - helm-ifying (as necessary) template components
 - umbrella helm which deploys those components
 - role-designation methodology for multi-node blueprints (or even to specify cloud-side versus edge-side)
 - host on a catalog platform
- For other projects
 - TBD - options include using things like portainer.io or just docker-compose, but unaware of a artifacthub.io equivalent for those so maybe just github/gitlab?

Current Status

- A example is presented at https://github.com/ericvh/lfedge-catalog-proposal/blob/update/SMARTER_example.md.