

FEATURES



K8SUPPORT

INGRESS CONTROLLER (nginx)

- Install wiki for aggregated knowledge
- Flexibility in web server configuration for each domain (like timeout, max cache size)
- Auto provisioning domains/subdomains protected with verified SSL certificate (letsencrypt issuer)
- Possibility Reverse proxy for each microservice

HIGH AVAILABILITY

- We use auto-scaling for microservices based on resource consuming.
- Integrate pod resource limits
- Each microservice has multiple replicas with balancer behind it
- Multi-node clusters allows to split microservices and decrease risk of losing whole application

DEVELOPERS INDEPENDENCE

- After local development is done, developers can push their changes to git and immediately see results on remote k8s clusters.
- Cluster can be managed through Rancher (unified multi k8s cluster management.)

MONITORING

Prometheus/Grafana based monitoring of cluster

GITOPS

Multi-branch (git) and multi-cluster deployment enables autodeploy in specific clusters.

CI-CD

- Multi-cluster separate dev (dev + stage) and production load and avoid consuming production resources by testing env (optional each env on separate cluster)
- Allows to perform unit tests on dev cluster (every push to develop branch deploy new microservice on dev cluster) and end-to-end application testing on staging
- Granular control on production and staging versions - application (combination of microservices) is combined only from verified microservices and install as a single package. Deployment for stage and prod environment is manual to prevent auto-deploy for non-approved version
- Upgrade/downgrade for stage and prod environment is possible from Rancher and Gitlab (if exists).
- We use rollout update in our CI-CD which allows fast microservice version bumping with no-downtime.

K8S VISUALIZATION

- Every application version (application is a composition of microservices) is pushed to a container registry and harbor (helm chart registry).
- From git you can see all application tags that was done, bump or downgrade the version
- With Harbor you can connect it to another cluster and easily deploy applications on another cluster. Harbor also contains all versions available and approved for deploying.
- With Rancher, you can easily check your Kubernetes cluster information (health, deployments, configmaps etc), application version (helm) with no-downtime

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