CI processing diagram:

A close up of a device

Description automatically generated

1. Github will be considered for source version control tool or any source version control tool if have no specific requirement.
2. It’s so simple to use Jenkins for quickly setting up a CI/CD pipeline. Jenkins will responsible for build/test/push the docker images into registry (public/private) and trigger Helm chart for rolling update the images on the K8S cluster.
3. Container Registry: Harbor can be used as a private registry, it’s will helpful for managing the registry and scanning the vulnerable of the images.
4. Helm chart truly helpful for manage the revision of the images and deployment strategy (it helps deployment process faster and more reliable)
5. Verify service behavior:

* Simple ways:
  + Check the status code
  + Using ‘curl’ command to check the response of the service
* More advance:
  + Using liveness probe and readiness probe for making service more reliable
  + Using Prometheus for monitoring all of services and embedded more custom metric if necessary

1. Using rolling-update strategy to mitigate the downtime of Kubernetes service.