- Prior art for Nomad job reuse
  - levant
    - what
      - open source templating and deployment tool for HashiCorp Nomad jobs that provides real time feedback and detailed failure messages upon deployment issues
      - thinking:
        - How to define which information is necessary for successful building?
        - how to define or analyze Failure?
        - Why only Canary Auto Promotion? How about other Deployment Patterns?
    - Workflow
      -
  - Backpack
    - packaging system (like Helm on Kubernetes)
    - what it does
      - Help define and install complex jobs configuration
      - Helps building reproducible jobs across multiple Nomad clusters
      - Simplifies updates to new version of jobs
      - Allows publish and share packages of applications
    - Detailed tool description: https://blog.setale.me/2020/11/12/backpack-helm-charts-but-for-hashicorp-nomad/
      - a great template for us to learn if we need to recommend our product to others
        - why need this
        - how to use it
        - future plan
    - Workflow
      -
- Reference APP
  - wordpress
    - what - demonstrates several useful patterns for creating Nomad jobs:
      - Nomad Host Volumes for persistent storage
      - Using a pre start task to wait until a dependency is available
      - Template driven configuration to minimize static port references
    - prerequisite - Consul
      - locate the supporting MySQL instance
    - workflow
      - Establish nomad client and consul client
      - Create a folder on one of the Nomad clients to host the registry files

- ● Add the host_volume information to the client stanza in the Nomad configuration
- ● Restart Nomad to read the new configuration
  - ○ minio
    - ■ what - uses Nomad Host Volumes to provide an internal s3 compatible storage environment which can be used to host private artifacts for a Nomad clusters.
    - ■ prerequisite - Consul
      - ● use to locate the MinIO instance
    - ■ workflow
      - ● Establish nomad client and consul client
      - ● Create a folder on one of the Nomad clients to host the registry files
      - ● Add the host_volume information to the client stanza in the Nomad configuration
      - ● Restart Nomad to read the new configuration
- ● Tools from Nomad
  - ○ Consul
    - ■ a service networking solution to automate network configurations, discover services, and enable secure connectivity across any cloud or runtime
  - ○ Terraform
    - ■ a tool for building, changing, and versioning infrastructure safely and efficiently

- ● Related tool
  - ○ **terraform registry**
    - ■ gives **Terraform** users easy access to templates for setting up and running their infrastructure with verified and community **modules**
    - ■ workflow
      - ● search required module from Terraform registry official website https://registry.terraform.io/
      - ● locates the module; Copy and paste into Terraform configuration, insert the variables, and run `terraform init`
  - ○ **Helm Chart**
    - ■ package management tool for Kubernetes.
    - ■ Helm charts provide templating syntax for Kubernetes YAML manifest documents. Configurab
    - ■ le deployments instead of static files.
    - ■ chart: packaging format for Helm. A collection of files that describe a related set of Kubernetes resources.

  - ○ **Advanced Package Tool (Ubuntu)**
    - ■ a software user interface for managing software on Unix-like computer systems.
    - ■ automates the retrieval, configuration and installation of software packages, either from precompiled files or by compiling source code.

- - - apt: provides a high-level command line interface for the package management system. Intends as an end user interface and enables some options better suited for interactive usage by default.
  - **NPM**
    - JavaScript Package Registry

Questions