Kubernetes + Magnolia

Date

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- Time and lack of expertise is keeping people to run Magnolia in Docker and / or Kubernetes.
- No documentation on dockerizing Magnolia
- Request for a how-to / Magnolia-Dockerfiles

- Restoring MySQL-Data whilst starting Magnolia-Docker-Images locally
    - Storing everything in the database (including assets) might be easier for spinning up new database instances (in terms of scaling)
- S3-Adapter / connector for assets

- Autoscaling for Magnolia Public instances
    - Complex because of license issues
    - Most devs starting new public instances by hand
    - There is a need for unlimited license if you do autoscaling
    - Configuration (for example add subscribes) for new started Magnolia instances could be done via Magnolia REST-API

- Google Cloud Disks (https://cloud.google.com/persistent-disk/) for Snapshots to create feature based Kubernetes clusters
- Spinnaker (https://www.spinnaker.io/reference/providers/kubernetes/) for transferring data to new clusters

- Every new version built by developers generates a new Docker image
- Base image for Magnolia based sites

- Azure SQL / Google Cloud SQL
    - Rate Limiting leads to queueing
    - Vertical scaling for databases

- Demand for showing / deleting version history

- Managing data and scaling in modern cloud environments is still complicated

Technologies & popularity:

- **Docker**, used by many ⭐⭐⭐
- Packer (https://www.packer.io/)
- **Kubernetes**, more for orchestration than for scalability ⭐⭐
- **Docker Compose**, for local development ⭐
    - Some went back to starting Magnolia locally because of the poor Docker performance on Apple hardware
- Docker Swarm
- Ansible ⭐
- SaltStack
- GitLab CI
- Terraform
- ZooKeeper

Session-Management for multiple Public-Instances:

- Sticky Sessions managed in the Loadbalancer
- Redis to store session data (only works in the same region)
- Try to avoid having state in the Backend (requires decoupling frontend from the backend)

Neoskop-Docker-Images:

- https://hub.docker.com/r/neoskop/mgnl-runtime-env/
- https://hub.docker.com/r/neoskop/mgnl-deps/

Magnolia SRE's base docker image:

- https://github.com/magnolia-sre/magnolia-docker
- related previous blog-posts by Nicolas Barbé
    - Magnolia DevOps series, part 1: a Docker image for Magnolia
    - Magnolia DevOps series, part 2: orchestration with Docker Compose