

# Kubernetes + Magnolia

## Date

05 Dec 2018

- 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](#)