OSG Software Containers

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OSG Software

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Coming Soon: Containers

- Service deployments via containers are increasingly popular for a tighter DevOps cycle
- Container images will be based off of newly built RPM packages
- Two different streams to distinguish between levels of production-readiness (names pending)
  - A 'fast' stream for container images that pass automated testing
  - A 'slow' stream for container images that pass acceptance testing
- First candidates: StashCache/XCache, Frontier Squid, Hosted CE
- Written policy open to feedback!
  https://github.com/opensciencegrid/technology/blob/master/docs/policy/container-release.md

OSG Worker Node Client

Useful as a base to build VO images or to test workflows in an OSG worker node environment (https://opensciencegrid.org/docs/worker-node/using-wn-containers/):

- Use `docker build` with the following at the top of your `Dockerfile`:
  `FROM opensciencegrid/osg-wn`
- Run tests from within the worker node:
  `# docker run -ti --rm opensciencegrid/osg-wn:latest \`
  `/bin/bash`

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Frontier Squid

https://github.com/opensciencegrid/docker-frontier-squid#frontier-squid-container-image-

- Run with the defaults:
```
docker run --rm --name frontier-squid -p 3128:3128 \
   opensciencegrid/osg-frontier-squid:development
```
- Customize SQUID_IP_RANGE, SQUID_CACHE_DISK, and/or SQUID_CACHE_MEM environment variables. For example, add this to your `docker run` command:
```
--env "SQUID_CACHE_MEM=256 MB"
```
- Mount a host dir for a persistent cache or logs. For example, add this to your `docker run` command:
```
-v /tmp/squid:/var/cache/squid
```

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Stash Cache

https://github.com/opensciencegrid/docker-xcache/tree/master/stash-cache#stash-cache-docker-image-

- Run the container:
  ```
  docker run --rm --publish <HOST PORT>:8000 \
    opensciencegrid/stash-cache:development
  ```
- From outside of the container, pull a file from the Stash Cache data federation:
  ```
  curl http://localhost:<HOST PORT>/user/dweitzel/public/blast/queries/query1
  ```
  You should get the following output:
  ```
  >Derek's first query!
  MPVSDSGFDNSSKTMKDDTIPTEDYEEITKESEMGDATKITSKIDANVIEKKDTDSENNITIAQ
  DDEKVSWLQRVVEFFE
  ```

Questions?