



Containerization of CVMFS Publishing Processes

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Motivation

Need for a temporary, editable repository copy for a single publish operation

Using gateway + ephemeral shell:

```
cvmfs_server enter <repository name> [-- <command>]
```

But, benefits of containerization:

- Support subset of features inside containers
- Also enables running a subset of tests in the CI

Challenges

Problems of running `cvmfs_server` inside a container:

- `systemd`
- `overlayfs`

The ephemeral shell (`cvmfs_server enter`) uses `fuse-overlayfs` for working around this

Proposed Solution

How to use the CVMFS publisher inside of a container:

- Named volume for `/var/spool/cvmfs`
- Start the container using `init`
 - Bind mount `/sys/fs/cgroup`
 - Set privileged mode to true (in docker)

Example: [Dockerfile](#), [docker-compose.yml](#)

Conclusion

- Faster developer iterations versus provisioning/destroying VMs
- GitHub Actions for running a subset of tests
- Easier resource control
- Allows running CVMFS contained as a user pod inside a cluster