

# CMS Docker

Ijaz Ahmad

# Configuration Management

- Puppet host group for Docker host
  - Docker version , current 1.10.3
  - Storage configuration for Docker process , 50 GB [ default is 10GB]
    - For one release , at least 15 gb is needed per Arch, more is needed if we package multiple releases in one build
  - Users and group configuration , local user
  - Currently a single Docker host [cms-docker001.cern.ch]
  - Puppet code:
    - <https://gitlab.cern.ch/ai/it-puppet-hostgroup-vocmssdt/blob/devel/code/manifests/sdt/cmsdocker.pp>

# Issue with Docker hub

- Multiple CMSSW releases in one container
  - Size limits on Docker-hub
    - Communicated by Docker support team to be 5 GB
  - For larger files we have started pushing to CERN gitlab
    - In testing

# Docker files

- Base Environment ( to reuse it in custom builds)
  - <https://github.com/iahmad-khan/cms-docker/blob/master/slc6-base/Dockerfile>
  - Docker-hub tag: cmssw/slc6-base:latest
- With full release installed ( builds through Jenkins)
  - <https://github.com/iahmad-khan/cms-docker/blob/master/cmssw/templates/Dockerfile.tpl>
  - Docker-hub tag: cmssw/cmssw:<version>
- With cvmfs installed and mounted ( to be run as privileged container)
  - <https://github.com/iahmad-khan/cms-docker/blob/master/cmsenv-slc6/Dockerfile-cvmfs>
- With cvmfs as external volume
  - <https://github.com/iahmad-khan/cms-docker/blob/master/cmsenv-slc6/Dockerfile-cvmfs>

# Privileged container usage

PUBLIC REPOSITORY

cmssw/cmsenv-slc6 

Last pushed: a month ago

Repo Info

Tags

Tag Name	Compressed Size	Last Updated
cvmfs	274 MB	a month ago
latest	158 MB	a month ago

- run the privileged container using image from Docker-hub
  - `# docker run --privileged -i -t cmssw/cmsenv-slc6:cvmfs /bin/bash`
- check cvmfs mounts inside container
  - `# ls /cvmfs/`

# Jenkins Builds

- A Jenkins job for automated container builds
- Parameterized with Arch and CMSSW Version
- Defaults to production Arch
  - <https://cmsstdt.cern.ch/jenkins/job/cms-dockerhub/>