Building EOS

A CentOS 8 case study

Mihai Patrascoiu
CERN / IT- ST- PDS

CentOS 8 is out…

~~CentOS 8~~ JIRA-3895 is out…

> CentOS8 is available at CERN as a beta since last Thu (12 Dec) [..] ItWouldBeNice™ to have an EOS (FUSEX) client for that as well.

~~CentOS 8~~ JIRA-3895 is out…

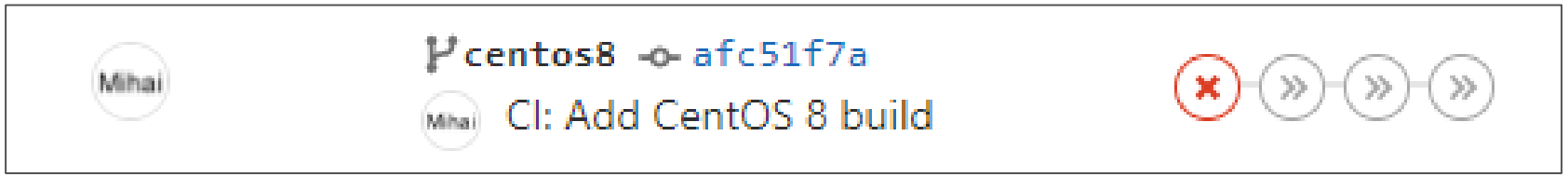
> CentOS8 is available at CERN as a beta since last Thu (12 Dec) [..] ItWouldBeNice™ to have an EOS (FUSEX) client for that as well.

```
$ cd eos/
$ git checkout centos8
$ git push –u origin centos8
```

~~CentOS 8~~ JIRA-3895 is out…

> CentOS8 is available at CERN as a beta since last Thu (12 Dec) [..] ItWouldBeNice™ to have an EOS (FUSEX) client for that as well.

```
$ cd eos/
$ git checkout centos8
$ git push –u origin centos8
```



Dependencies

custom built

- grpc
- eos-xrootd
- eos-protobuf
- eos-folly
- eos-rocksdb

yum managed

- libevent
- ncurses-static
- openssl-static
- librichacl-devel

Dependencies

custom built

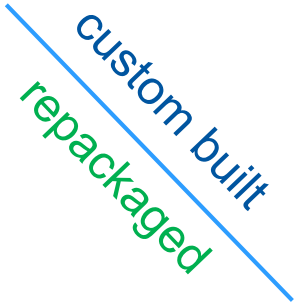
- grpc
- eos-xrootd
- eos-protobuf
- eos-folly
- eos-rocksdb

yum managed

- libevent
- ncurses-static
- openssl-static
- librichacl-devel

Missing

Dependencies (solved)



- grpc
- eos-xrootd
- eos-protobuf
- eos-folly
- eos-rocksdb
- libevent

- libevent → Bugzilla #1756994
- ~~ncurses-static~~ (dropped)
- ~~openssl-static~~ (dropped)
- librichacl-devel [optional]

Rebuilding

```
$ git push
```

Rebuilding

```
$ git push
```

```
> /usr/bin/python not found
```

Note: CentOS 8 does not choose a default python binary !

Use *alternatives* or *#!/usr/bin/python(2|3)*

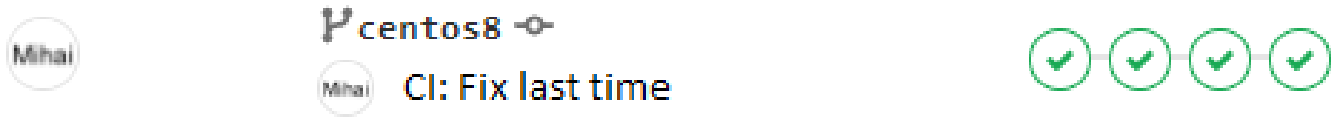
… Rebuilding

- Docker image file adaptations
- LD_PRELOAD for jemalloc
- Other small changes

… Rebuilding

- Docker image file adaptations
- LD_PRELOAD libjemalloc
- Other small changes

```
$ git push
```



Conclusions

- Many dependencies as system is complex
- Careful with python2/python3 on CentOS 8 (test scripts to be updated)
- Preload libjemalloc
- RPMs provided already: storage-ci/eos/citrine/commit/el-8/
- CI testing infrastructure in-place
- C8 build soon to be included in nightly builds

Thank you for your time!

Icons: Computer Network Icons collection - openclipart.org

CERN