

# CernVM for CMS Open Data

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- Easy-to-use, standard VM image, contextualised to CMS computing environment to run CMSSW.4.2.8 release on CMS Open Data
  - ▶ downloadable record
  - ▶ tutorial-type instructions
  - ▶ test report and known problems
- Data read from the CERN Open data portal, through xrootd
- Development:
  - ▶ CMS contextualization and done by A. Huffman (Imperial) with the CernVM team.
  - ▶ Testing with the examples running on CMS open dataUniv. of Cantabria group
  - ▶ VM and usability testing done in collaboration with Lapland University of Applied Sciences
  - ▶ Many thanks to CernVM team for having provided the old SLC5 environment!

## CMS VM Image

Collection [CMS Tools](#) [Accelerator](#) [CERN-LHC](#) [Experiment](#) [CMS](#)

### Description

The virtual machine image is based on CernVM (cernvm.cern.ch), with Scientific Linux CERN 5 (slc5), which is the environment needed for the [CMSSW](#) release to be used with the 2010 CMS open data. Access to the data is through XRootD.

### How can you use this?

Please follow the tutorial on how to use the CMS Virtual Machine

[CMS Virtual Machines: How to install](#)

### Files

CMS-OpenData-1.0.0-rc6.ova

Size: 15.2 MB

[Download](#)

CMS-OpenData-1.0.0-rc7.ova

Size: 15.2 MB

[Download](#)

# Feedback

- The CERN open data portal was launched in Nov 2014, useful feedback before the launch of the portal, during usability testing:
  - ▶ the information about the common issues or needed additional settings when installing and starting a VM where brought more in evidence
- Overwhelmingly positive:
  - ▶ *"...If you're looking for some amusement after your American Thanksgiving dinner, I can recommend CERN's OpenData project: <http://opendata.cern.ch/> I have particularly enjoyed the CMS Virtual machine: <http://opendata.cern.ch/getting-started/CMS> in which you can poke around the CMS computing environment and data..."*
- One problem reported:
  - ▶ *"...This image is running a cron job that is faulting with this error..."*

# Plans

- A new CMS Open data CernVM, compatible with the CMS SW used to process the released data, will be needed for each release
  - ▶ appr. 1/year - once released, the environment is stable, apart from bug fixes
- We need to guarantee not only the ease-of-use for end-users but also the ease of setting up a new VM for the CMS Open data team
  - ▶ now preparing a separate record in the open data portal, with detailed instructions and contextualization files
  - ▶ this new entry fits to a new general schema on the portal where:
    - ★ CernVM will be a record of its own (with the possibility of giving general information of the product)
    - ★ downloadable experiment-specific VMs with "how to use"
    - ★ contextualization files with "how to build CMS Open data CernVM".