

The CernVM Project

Wednesday, May 27, 2009 4:00 PM (30 minutes)

The CERNVM project addresses two aspects of software distribution, namely platform compatibility and general usability. It proposes a new approach based on extensive use of virtualization and distribution of contents over the network. Thus, two main components are envisioned in this new paradigm: the CERNVM virtual machine and the CERNVM File System (CVMFS). The former, based on rPath Linux, leverages the position of virtualization as a new technology enabler letting the user choose his own preferred hardware platform. The latter builds an efficient and highly distributable Content Delivery Network on top of the well-known HTTP protocol. Using the CVMFS implements aggressive caching policies to enable disconnected mode of operation. This talk will be focused on the current implementation aspects of the underlying infrastructure and the choices for its essential building blocks. That is, computing virtualization (VMWare vs. XEN), storage virtualization (hardware based vs. software based), provisioning interfaces (Virtual Infrastructure) and content switching (switching L4 vs. L7). In addition, a brief comparison of performance between this approach and the existing ones under common scenarios will be outlined with some benchmarks.

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