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CernVM WebAPI - Controling Virtual Machines from the Web

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Lately there is a trend in scientific projects to look for computing resources in the volunteering community. In addition, to reduce the development effort required to port the scientific software stack to all the known platforms, the use of Virtual Machines (VMs) as end-projects is becoming increasingly popular. Unfortunately, the installation and the interfacing with the existing volunteering computing infrastructure (such as BOINC) is left to the end-user, therefore restricting even more the audience to only sufficiently software-capable people.

CernVM WebAPI is a software solution addressing this specific case in a way that opens wide new application opportunities. It offers a very simple API for setting-up, controlling and interfacing with a VM instance in the user's computer, while in the same time offloading the
user from all the burden of downloading, installing and configuring the hypervisor. WebAPI comes with a lightweight javascript library that guides the user through the application installation process. Malicious usage is prohibited by offering a per-domain PKI validation mechanism.

In this contribution we will overview this new technology, discuss its security features and examine some test cases where it is already in use.

Primary author: CHARALAMPIDIS, Ioannis (CERN)

Co-authors: GANIS, Gerardo (CERN); BLOMER, Jakob (CERN); SKANDS, Peter (CERN); BUNCIC, Predrag (CERN); MEUSEL, Rene (CERN)

Presenter: CHARALAMPIDIS, Ioannis (CERN)

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