Title of the Project : SECURE CLOUD HYPERVISORS

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ABSTRACT

Cloud Computing is increasingly becoming popular as many enterprise applications and data are moving into cloud platforms. However, a major barrier for cloud adoption is real and perceived lack of security. In order to better define these threats to which a cloud hypervisor is exposed, we conducted an in-depth analysis and highlighted the security concerns of the cloud. We basically focused on the two particular issues, i.e., (a) data breaches and (b) weak authentication. For in-depth analysis, we have successfully demonstrated a fully functional private cloud infrastructure running on Cloud Stack for the software management and orchestrated a valid hack. We analysed the popular open-source hypervisors, followed by an extensive study of the vulnerability reports associated with them. Based on our findings, we propose the characterization and countermeasures of hypervisor’s vulnerabilities.