



Bachelor Thesis

Black-Box Virtual Machine Monitoring for Application Specific Metrics

2015-05-04

Context

Virtual Machines (VMs) with KVM are an important component of modern cloud computing with e.g. OpenStack. Yet, these VMs are black-boxes to the cloud provider from the physical server's point of view. While many resource utilisation metrics like CPU usage, memory usage or network I/Os can be collected from the "outside" on the physical server, application specific monitoring metrics like webserver requests per second are only accessible inside the VM.

Scope of the Thesis

This thesis defines a way to send application specific metrics from the virtual machine through the hypervisor to the a collector on the physical server. The focus is to have software only outside the VM on the physical server, and use a minimum set of configuration inside the VM to send the metrics to the outside.

Requirements and Comments

Experiences with Linux and a basic understanding of virtualization are beneficial for this bachelor thesis.

If you are interested in this or similar theses, please contact Christopher Hauser either by mail or directly in his office.

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