Vicc Final Project

homemade VM schedulers

Fabien Hermenier

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schedulers to implement

CloudSim

to simulate IaaS Cloud

to evaluate your Vm schedulers
SLA compliance, cloud energy consumption, revenue, ...

CloudSim 101

simulation framework

artificial model of IaaS components

allows to simulate days of usage in seconds

appropriate for reproducibility purpose and large scale prototyping

CloudSim 101

event loop over a simulated clock

SimEntities send events to others by their id

each SimEntity processes its current events,
generates new events

the clock ticks when there is no
more current events to process

The datacentre
(see Helper.java)

400 HP Proliant Ml110G4

2 pes* x 1860 MIPS, 4GB RAM

400 HP Proliant Ml110G5

2 pes x 2660 MIPS, 4GB RAM

linear power models

VMM scheduler

oversubscribable, time-shared

non-blocking network

* aka. cores

The workload (see Helper.java)

10 random days on Planetlab

1052 VMs

4 templates   1 x 500 MIPS, 613MB RAM
...
                ï x 2500 MIPS, 870MB RAM

varying MIPS requirements

all Vms launched at startup

project workflow

clone the skeleton
https://github.com/fhermeni/vicc-project

host your work on a **private** repository

github education, bitbucket, ...

grant me the pull access

@deadline, I clone and evaluate master

Evaluation criteria

Effectiveness of the schedulers/observers
code quality
documentation/justification (file notes.md)

17th February 23h59

3 persons per team

don't touch my code

VmAllocationPolicyFactory.java

notes.md

Class header

scheduler purpose

Design choice

worst-case temporal complexity

notes.md

what did you do ?

Swhat failed, what succeeded ?

scheduler outputs

Interesting project & lecture or not ?