Cloudsim Tasks

VmSchedulerTimeShared is a VMM allocation policy that allocates one or more Pe to a VM, and allows sharing of PEs by multiple VMs. This class also implements 10% performance degration due to VM migration. This scheduler does not support over-subscription.

CloudletSchedulerTimeShared implements a policy of scheduling performed by a virtual machine. Cloudlets execute time-shared in VM.

VmSchedulerSpaceShared is a VMM allocation policy that allocates one or more Pe to a VM, and doesn't allow sharing of PEs. If there is no free PEs to the VM, allocation fails. Free PEs are not allocated to VMs.

CloudletSchedulerSpaceShared implements a policy of scheduling performed by a virtual machine. It consider that there will be only one cloudlet per VM. Other cloudlets will be in a waiting list. We consider that file transfer from cloudlets waiting happens before cloudlet execution. I.e., even though cloudlets must wait for CPU, data transfer happens as soon as cloudlets are submitted.

VmSchedulerTimeSharedOverSubscription which allows over-subscription. In other words, the scheduler still allows the allocation of VMs that require more CPU capacity that is available. Oversubscription results in performance degradation.

CloudletSchedulerDynamicWorkload implements a policy of scheduling performed by a virtual machine assuming that there is just one cloudlet which is working as an online service.

Task 1 : Change simulation of Example 2 so that it using space-shared allocation policy for PEs to VMs instead of allowing sharing of PEs by multiple VMs.

Task 2 : Change simulation of Example 3 so that it has a datacenter with four hosts and run four cloudlets on it. The cloudlets run in VMs with different MIPS requirements..

Task 3 : Change simulation of Example 5 so that it has two datacenters with one host each and run cloudlets of three users on them.

Task 4 : Change simulation of Example 6 so that it has one datacenter with three octa-core hosts and 30 VMs with 50 different tasks.

Task 5 : Change simulation of Example 6 so that it output the results into a CSV file rather than printing it to the user.