**Project 1 Documentation**

**First simulation vs Second simulation:**

Example used: First simulation involves 3 cloudlets running on 2 vm’s

Policies for VM experimented:

1. Simulation 1: - Time shared policy for the vms: In the time shared policy one cloudlet runs on one of the vm first and then the two cloudlets share the time in the second run.

Profit earned by broker based on time sharing = 80

(Profit is calculated based on finish time of the cloudlets)

1. Simulation 2: - Space shared policy for the vms: In the time shared policy the 2 vms share the space initially by running two cloudlets on them and then the 3rd cloudlet is run after both the vms become free.

Profit earned by broker based on space shared = 48

(Profit is calculated based on finish time of the cloudlets)

|  |  |  |  |
| --- | --- | --- | --- |
| Time | Shared | Space | Shared |
| Start time | End time | Start time | End time |
| 0.1 | 1600.1 | 0.1 | 1600.1 |
| 0.1 | 3200.1 | 0.1 | 1600.1 |
| 0.1 | 3200.1 | 1600.1 | 3200.1 |

Outcome: Clearly more profit is earned in the 1st simulation when I make use of time shared policy because all the cloudlets share time and two cloudlets end at 3200.1 which makes the profit higher based on the finish time.

Issues faced: MIPS value of the PE had to be assigned higher than the VMs in order for the VMs to get assigned to the host. In case of a lower value of PE the VM allocation fails