

Simulation 1:

1 Datacenter, 4 Hosts, 4 VMs, 40 Cloudlets

Using Spaceshared VM scheduler, Timeshared Cloudlet scheduler, Simple VM Allocation and Stochastic Utilization model for the cloudlets

Cloudlet ID	Status	DC ID	Host ID	Host PEs	CP	VM ID	VM PEs	CP	CloudletLen	N	CloudletPEs	C	StartTime	S	FinishTime	ExecTime	S	Actual CPU T	CloudletCost	C	CloudletCost	B	CloudletCost	T	Utilization	%	Utilization	%	Utilization	%	Utilization	%	BW
3	SUCCESS	1	2	4	2	4	2	4	1000	2	2	0	0	8	8	7.73		\$ 0.08	\$ 0.25	\$ 0.58	4.00%	4.00%	4.00%	4.00%									
1	SUCCESS	1	0	4	0	4	4	1000	2	0	8	8	7.85		\$ 0.08	\$ 0.25	\$ 0.58	33.83%	33.83%	33.83%	33.83%												
6	SUCCESS	1	1	4	1	4	1	4	1000	2	0	11	11	10.63		\$ 0.11	\$ 0.25	\$ 0.61	78.18%	78.18%	78.18%	78.18%											
4	SUCCESS	1	3	4	3	4	4	1000	2	0	11	11	10.81		\$ 0.11	\$ 0.25	\$ 0.61	1.04%	1.04%	1.04%	1.04%												
2	SUCCESS	1	1	4	1	4	1	4	1000	2	0	11	11	11.21		\$ 0.11	\$ 0.25	\$ 0.61	39.27%	39.27%	39.27%	39.27%											
5	SUCCESS	1	0	4	0	4	4	1000	2	0	19	19	19.11		\$ 0.19	\$ 0.25	\$ 0.69	24.20%	24.20%	24.20%	24.20%												
7	SUCCESS	1	2	4	2	4	2	4	1000	2	0	19	19	19.11		\$ 0.19	\$ 0.25	\$ 0.69	56.48%	56.48%	56.48%	56.48%											
11	SUCCESS	1	2	4	2	4	2	4	1000	2	0	19	19	19.11		\$ 0.19	\$ 0.25	\$ 0.69	41.47%	41.47%	41.47%	41.47%											
12	SUCCESS	1	3	4	3	4	1	4	1000	2	0	19	19	19.11		\$ 0.19	\$ 0.25	\$ 0.69	1.27%	1.27%	1.27%	1.27%											
9	SUCCESS	1	0	4	0	4	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	14.48%	14.48%	14.48%	14.48%												
17	SUCCESS	1	0	4	0	4	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	89.76%	89.76%	89.76%	89.76%												
21	SUCCESS	1	0	4	0	4	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	9.57%	9.57%	9.57%	9.57%												
10	SUCCESS	1	1	4	1	4	1	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	33.09%	33.09%	33.09%	33.09%											
14	SUCCESS	1	1	4	1	4	1	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	25.28%	25.28%	25.28%	25.28%											
15	SUCCESS	1	2	4	2	4	2	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	93.30%	93.30%	93.30%	93.30%											
19	SUCCESS	1	2	4	2	4	2	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	10.94%	10.94%	10.94%	10.94%											
8	SUCCESS	1	3	4	3	4	1	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	20.78%	20.78%	20.78%	20.78%											
16	SUCCESS	1	3	4	3	4	3	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	52.85%	52.85%	52.85%	52.85%											
20	SUCCESS	1	3	4	3	4	3	4	1000	2	0	60	60	60.17		\$ 0.60	\$ 0.25	\$ 1.10	39.94%	39.94%	39.94%	39.94%											
13	SUCCESS	1	0	4	0	4	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	95.26%	95.26%	95.26%	95.26%												
25	SUCCESS	1	0	4	0	4	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	85.42%	85.42%	85.42%	85.42%												
29	SUCCESS	1	0	4	0	4	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	86.23%	86.23%	86.23%	86.23%												
18	SUCCESS	1	1	4	1	4	1	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	1.25%	1.25%	1.25%	1.25%											
22	SUCCESS	1	1	4	1	4	1	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	10.91%	10.91%	10.91%	10.91%											
23	SUCCESS	1	2	4	2	4	2	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	42.39%	42.39%	42.39%	42.39%											
27	SUCCESS	1	2	4	2	4	2	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	70.91%	70.91%	70.91%	70.91%											
31	SUCCESS	1	2	4	2	4	2	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	75.73%	75.73%	75.73%	75.73%											
24	SUCCESS	1	3	4	3	4	1	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	97.36%	97.36%	97.36%	97.36%											
28	SUCCESS	1	3	4	3	4	1	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	70.39%	70.39%	70.39%	70.39%											
32	SUCCESS	1	3	4	3	4	1	4	1000	2	0	120	120	120.17		\$ 1.20	\$ 0.25	\$ 1.70	76.93%	76.93%	76.93%	76.93%											
33	SUCCESS	1	0	4	0	4	4	1000	2	0	180	180	180.17		\$ 1.80	\$ 0.25	\$ 2.30	13.75%	13.75%	13.75%	13.75%												
37	SUCCESS	1	0	4	0	4	4	1000	2	0	180	180	180.17		\$ 1.80	\$ 0.25	\$ 2.30	87.15%	87.15%	87.15%	87.15%												
26	SUCCESS	1	1	4	1	4	1	4	1000	2	0	180	180	180.17		\$ 1.80	\$ 0.25	\$ 2.30	96.72%	96.72%	96.72%	96.72%											
30	SUCCESS	1	1	4	1	4	1	4	1000	2	0	180	180	180.17		\$ 1.80	\$ 0.25	\$ 2.30	38.37%	38.37%	38.37%	38.37%											
34	SUCCESS	1	1	4	1	4	1	4	1000	2	0	180	180	180.17		\$ 1.80	\$ 0.25	\$ 2.30	50.85%	50.85%	50.85%	50.85%											
35	SUCCESS	1	2	4	2	4	2	4	1000	2	0	180	180	180.17		\$ 1.80	\$ 0.25	\$ 2.30	97.93%	97.93%	97.93%	97.93%											
39	SUCCESS	1	2	4	2	4	2	4	1000	2	0	180	180	180.17		\$ 1.80	\$ 0.25	\$ 2.30	19.69%	19.69%	19.69%	19.69%											
36	SUCCESS	1	3	4	3	4	2	4	1000	2	0	180	180	180.17		\$ 1.80	\$ 0.25	\$ 2.30	14.46%	14.46%	14.46%	14.46%											
38	SUCCESS	1	1	4	1	4	1	4	1000	2	0	240	240	240.17		\$ 2.40	\$ 0.25	\$ 2.90	91.05%	91.05%	91.05%	91.05%											
40	SUCCESS	1	3	4	3	4	3	4	1000	2	0	240	240	240.17		\$ 2.40	\$ 0.25	\$ 2.90	45.75%	45.75%	45.75%	45.75%											

22:16:33.402 [run-main-1] INFO java.lang.Class - Total Cloudlet Cost: \$59.70

22:16:33.402 [run-main-1] INFO java.lang.Class - Avg. Cost per Cloudlet: \$1.49

22:16:33.403 [run-main-1] INFO java.lang.Class - Processing Cost of VM0: \$2.40

22:16:33.403 [run-main-1] INFO java.lang.Class - Processing Cost of VM1: \$2.40

22:16:33.403 [run-main-1] INFO java.lang.Class - Processing Cost of VM2: \$2.40

22:16:33.403 [run-main-1] INFO java.lang.Class - Processing Cost of VM3: \$2.40

22:16:33.403 [run-main-1] INFO java.lang.Class - Memory Cost of VM0: \$4.10

22:16:33.403 [run-main-1] INFO java.lang.Class - Memory Cost of VM1: \$4.10

22:16:33.403 [run-main-1] INFO java.lang.Class - Memory Cost of VM2: \$4.10

22:16:33.403 [run-main-1] INFO java.lang.Class - Memory Cost of VM3: \$4.10

22:16:33.403 [run-main-1] INFO java.lang.Class - Bandwidth Cost of VM0: \$50.00

22:16:33.403 [run-main-1] INFO java.lang.Class - Bandwidth Cost of VM1: \$50.00

22:16:33.403 [run-main-1] INFO java.lang.Class - Bandwidth Cost of VM2: \$50.00

22:16:33.403 [run-main-1] INFO java.lang.Class - Bandwidth Cost of VM3: \$50.00

22:16:33.403 [run-main-1] INFO java.lang.Class - Bandwidth Cost of Storage0: \$1.00

22:16:33.404 [run-main-1] INFO java.lang.Class - Bandwidth Cost of Storage1: \$1.00

22:16:33.404 [run-main-1] INFO java.lang.Class - Bandwidth Cost of Storage2: \$1.00

22:16:33.404 [run-main-1] INFO java.lang.Class - Bandwidth Cost of Storage3: \$1.00

22:16:33.404 [run-main-1] INFO java.lang.Class - Cost of VM0: \$57.50

22:16:33.404 [run-main-1] INFO java.lang.Class - Cost of VM1: \$57.50

22:16:33.404 [run-main-1] INFO java.lang.Class - Cost of VM2: \$57.50

22:16:33.404 [run-main-1] INFO java.lang.Class - Cost of VM3: \$57.50

22:16:33.404 [run-main-1] INFO java.lang.Class - Overall time taken for the execution of the cloudlets is: 300.22 secs

Simulation 2:

1 Datacenter, 4 Hosts, 4 VMs, 40 Cloudlets

Using Spaceshared VM scheduler, Spaceshared Cloudlet scheduler, Simple VM Allocation and Stochastic Utilization model for the cloudlets

Cloudlet ID	Status	DC ID	Host ID	Host PEs	CP	VM ID	VM PEs	CP	CloudletLen	N	CloudletPEs	C	StartTime	S	FinishTime	ExecTime	S	Actual CPU T	CloudletCost	C	CloudletCost	B	CloudletCost	T	Utilization	%	Utilization	%	Utilization	%	Utilization	%	BW
4	SUCCESS	1	3	4	3	4	3	4	1000	2	2	0	2	2	2	1.60		\$ 0.02	\$ 0.25	\$ 0.52	4.97%	4.97%	4.97%	4.97%									
6	SUCCESS	1	1	4	1	4	4	4	1000	2	0	2	2	2	2	1.88		\$ 0.02	\$ 0.25	\$ 0.52	45.76%	45.76%	45.76%	45.76%									
1	SUCCESS	1	0	4	0	4	4	4	1000	2	0	2	2	2	2	2.32		\$ 0.02	\$ 0.25	\$ 0.52	55.41%	55.41%	55.41%	55.41%									
2	SUCCESS	1	1	4	1	4	1	4	1000	2	0	3	3	3	3	2.84		\$ 0.03	\$ 0.25	\$ 0.53	48.64%	48.64%	48.64%	48.64%									
8	SUCCESS	1	3	4	3	4	3	4	1000	2	0	3	3	3	3	2.96		\$ 0.03	\$ 0.25	\$ 0.53	16.53%	16.53%	16.53%	16.53%									
5	SUCCESS	1	0	4	0	4	0	4	1000	2	0	5	5	5	5	4.94		\$ 0.05	\$ 0.25	\$ 0.55	99.15%	99.15%	99.15%	99.15%									
14	SUCCESS	1	1	4	1	4	1	4	1000	2	3	4	2	4	2	2.03		\$ 0.02	\$ 0.25	\$ 0.52	5.86%	5.86%	5.86%	5.86%									
3	SUCCESS	1	2	4	2	4	2	4	1000	2	0	5	5	5	5	4.94		\$ 0.05	\$ 0.25	\$ 0.55	80.26%	80.26%	80.26%	80.26%									
7	SUCCESS	1	2	4	2	4	1	4	1000	2	0	5	5	5	5	4.94		\$ 0.05	\$ 0.25	\$ 0.55	92.15%	92.15%	92.15%	92.15%									
12	SUCCESS	1	3	4	3	4	3	4	1000	2	2	4	3	3	3	3.27		\$ 0.03	\$ 0.25	\$ 0.53	27.80%	27.80%	27.80%	27.80%									
9	SUCCESS	1	0	4	0	4	1	4	1000	2	2	6	3	3	3	3.64		\$ 0.04	\$ 0.25	\$ 0.54	96.79%	96.79%	96.79%	96.79%									
10	SUCCESS	1	1	4	1	4	1	4	1000	2	2	6	3	3	3	3.70		\$ 0.04	\$ 0.25	\$ 0.54	88.36%	88.36%	88.36%	88.36%									
13	SUCCESS	1	0	4	0	4	1	4	1000	2	5	6	1	1	1	1.37		\$ 0.01	\$ 0.25	\$ 0.51	76.50%	76.50%	76.50%	76.50%									
16	SUCCESS	1	3	4	3	4	3	4	1000	2	5	6	2	2	2	2.17		\$ 0.02	\$ 0.25	\$ 0.52	94.37%	94.37%	94.37%	94.37%									
17	SUCCESS	1	0	4	0	4	0	4	1000	2	6	8	2	2	2	2.41		\$ 0.02	\$ 0.25	\$ 0.52	21.09%	21.09%	21.09%	21.09%									
18	SUCCESS	1	1	4	1	4	1	4	1000	2	5	9	4	4	4	3.54		\$ 0.04	\$ 0.25	\$ 0.54	27.77%	27.77%	27.77%	27.77%									
11	SUCCESS	1	2	4	2	4	2	4	1000	2	5	9	4	4	4	3.54		\$ 0.04	\$ 0.25	\$ 0.54	34.84%	34.84%	34.84%	34.84%									
20	SUCCESS	1	3	4	3	4	3	4	1000	2	5	9	4	4	4	3.54		\$ 0.04	\$ 0.25	\$ 0.54	39.09%	39.09%	39.09%	39.09%									
24	SUCCESS	1	3	4	3	4	3	4	1000	2	7	8	1	1	1	1.37		\$ 0.01	\$ 0.25	\$ 0.51	79.88%	79.88%	79.88%	79.88%									
22	SUCCESS	1	1	4	1	4	1	4	1000	2	6	9	3	3	3	3.48		\$ 0.03	\$ 0.25	\$ 0.53	60.57%	60.57%	60.57%	60.57%									
15	SUCCESS	1	2	4	2	4	2	4	1000	2	5	10	5	5	5	4.61		\$ 0.05	\$ 0.25	\$ 0.55	56.36%	56.36%	56.36%	56.36%									
21	SUCCESS	1	0	4	0	4	1	4	1000	2	6	10	4	4	4	4.22		\$ 0.04	\$ 0.25	\$ 0.54	39.50%	39.50%	39.50%	39.50%									
26	SUCCESS	1	1	4	1	4	1	4	1000	2	9	11	3	3	3	2.60		\$ 0.03	\$ 0.25	\$ 0.53	37.21%	37.21%	37.21%	37.21%									
28	SUCCESS	1	3	4	3	4	3	4	1000	2	9	11	3	3	3	2.60		\$ 0.03	\$ 0.25	\$ 0.53	41.21%	41.21%	41.21%	41.21%									
25	SUCCESS	1	0	4	0	4	1	4	1000	2	9	12	4	4	4	3.62		\$ 0.04	\$ 0.25	\$ 0.54	97.08%	97.08%	97.08%	97.08%									
30	SUCCESS	1	1	4	1	4	1	4	1000	2	10	12	3	3	3	2.55		\$ 0.03	\$ 0.25	\$ 0.53	82.07%	82.07%	82.07%	82.07%									
19	SUCCESS	1	2	4	2	4	2	4	1000	2	9	12	4	4	4	3.62		\$ 0.04	\$ 0.25	\$ 0.54	66.15%	66.15%	66.15%	66.15%									
32	SUCCESS	1	3	4	3	4	3	4	1000	2	9	12	4	4	4	3.62		\$ 0.04	\$ 0.25	\$ 0.54	79.17%	79.17%	79.17%	79.17%									
34	SUCCESS	1	1	4	1	4	1	4	1000	2	11	13	2	2	2	2.32		\$ 0.02	\$ 0.25	\$ 0.52	90.47%	90.47%	90.47%	90.47%									
29	SUCCESS	1	0	4	0	4	1	4	1000	2	11	14	3	3	3	2.66		\$ 0.03	\$ 0.25	\$ 0.53	47.53%	47.53%	47.53%	47.53%									
23	SUCCESS	1	2	4	2	4	2	4	1000	2	10	13	4	4	4	4.44		\$ 0.04	\$ 0.25	\$ 0.54	77.19%	77.19%	77.19%	77.19%									
38	SUCCESS	1	1	4	1	4	1	4	1000	2	13	15	3	3	3	3.28		\$ 0.03	\$ 0.25	\$ 0.53	89.76%	89.76%	89.76%	89.76%									
27	SUCCESS	1	2	4	2	4	2	4	1000	2	13	15	3	3	3	3.28		\$ 0.03	\$ 0.25	\$ 0.53	78.40%	78.40%	78.40%	78.40%									
40	SUCCESS	1	3	4	3	4	3	4	1000	2	13	15	3	3	3	3.28		\$ 0.03	\$ 0.25	\$ 0.53	37.89%	37.89%	37.89%	37.89%									
33	SUCCESS	1	0	4	0	4	1	4	1000	2	13	17	5	5	5	5.18		\$ 0.05	\$ 0.25	\$ 0.55	96.31%	96.31%	96.31%	96.31%									
37	SUCCESS	1	0	4	0	4	1	4	1000	2	14	18	4	4	4	3.59		\$ 0.04	\$ 0.25	\$ 0.54	84.13%	84.13%	84.13%	84.13%									
31	SUCCESS	1	2	4	2	4	2	4	1000	2	15	17	3	3	3	3.02		\$ 0.03	\$ 0.25	\$ 0.53	70.02%	70.02%	70.02%	70.02%									
36	SUCCESS	1	3	4	3	4	3	4	1000	2	11	17	6	6	6	6.45		\$ 0.06	\$ 0.25	\$ 0.56	52.42%	52.42%	52.42%	52.42%									
35	SUCCESS	1	2	4	2	4	2	4	1000	2	16	17	2	2	2	2.30		\$ 0.02	\$ 0.25	\$ 0.52	76.50%	76.50%	76.50%	76.50%									
39	SUCCESS	1	2	4	2	4	2	4	1000	2	18	21	4	4	4	3.51		\$ 0.04	\$ 0.25	\$ 0.54	33.14%	33.14%	33.14%	33.14%									

22:17:32.892 [run-main-2] INFO java.lang.Class - Processing Cost of VM1: \$0.17
22:17:32.892 [run-main-2] INFO java.lang.Class - Processing Cost of VM2: \$0.17
22:17:32.893 [run-main-2] INFO java.lang.Class - Processing Cost of VM3: \$0.17
22:17:32.893 [run-main-2] INFO java.lang.Class - Memory Cost of VM0: \$4.10
22:17:32.893 [run-main-2] INFO java.lang.Class - Memory Cost of VM1: \$4.10
22:17:32.893 [run-main-2] INFO java.lang.Class - Memory Cost of VM2: \$4.10
22:17:32.893 [run-main-2] INFO java.lang.Class - Memory Cost of VM3: \$4.10
22:17:32.893 [run-main-2] INFO java.lang.Class - Bandwidth Cost of VM0: \$50.00
22:17:32.893 [run-main-2] INFO java.lang.Class - Bandwidth Cost of VM1: \$50.00
22:17:32.893 [run-main-2] INFO java.lang.Class - Bandwidth Cost of VM2: \$50.00
22:17:32.893 [run-main-2] INFO java.lang.Class - Bandwidth Cost of VM3: \$50.00
22:17:32.893 [run-main-2] INFO java.lang.Class - Bandwidth Cost of Storage0: \$1.00
22:17:32.893 [run-main-2] INFO java.lang.Class - Bandwidth Cost of Storage1: \$1.00
22:17:32.893 [run-main-2] INFO java.lang.Class - Bandwidth Cost of Storage2: \$1.00
22:17:32.894 [run-main-2] INFO java.lang.Class - Bandwidth Cost of Storage3: \$1.00
22:17:32.894 [run-main-2] INFO java.lang.Class - Cost of VM0: \$55.27
22:17:32.894 [run-main-2] INFO java.lang.Class - Cost of VM1: \$55.27
22:17:32.894 [run-main-2] INFO java.lang.Class - Cost of VM2: \$55.27
22:17:32.894 [run-main-2] INFO java.lang.Class - Cost of VM3: \$55.27
22:17:32.894 [run-main-2] INFO java.lang.Class - Overall time taken for the execution of the cloudlets is: 21.47 secs

As we can see, the Spaceshared scheduler performed much better than the Timeshared scheduler in this case

Simulation 3:

3 Datacenter, 4 Hosts, 4 VMs, 40 Cloudlets, with different characteristics

Using Spaceshared VM scheduler, Spaceshared Cloudlet scheduler, Simple VM Allocation and Stochastic Utilization model for the cloudlets

Cloudlet ID	Status	DC ID	Host ID	Host PEs	CP	VM ID	VM PEs	CP	CloudletLen	N	CloudletPEs	C	StartTime	S	FinishTime	S	ExecTime	S	Actual CPU T	CloudletCost	C	CloudletCost	B	CloudletCost	T	Utilization	%	Utilization	%	Utilization	%	Utilization	%
1	SUCCESS		2	0	4	0	4	4	1000		2	0	0	2	2	1.55		2	1.55	\$ 0.02		\$ 0.25		\$ 0.52		40.01%		40.01%		40.01%		40.01%	
2	SUCCESS		2	1	4	1	4	4	1000		2	0	2	2	2	1.86		2	1.86	\$ 0.02		\$ 0.25		\$ 0.52		76.15%		76.15%		76.15%		76.15%	
3	SUCCESS		2	2	4	2	4	4	1000		2	0	2	2	2	2.01		2	2.01	\$ 0.02		\$ 0.25		\$ 0.52		7.10%		7.10%		7.10%		7.10%	
5	SUCCESS		2	0	4	0	4	4	1000		2	0	3	3	3	3.33		3	3.33	\$ 0.03		\$ 0.25		\$ 0.53		0.35%		0.35%		0.35%		0.35%	
7	SUCCESS		2	2	4	2	4	4	1000		2	0	3	3	3	3.33		3	3.33	\$ 0.03		\$ 0.25		\$ 0.53		57.43%		57.43%		57.43%		57.43%	
8	SUCCESS		2	3	4	3	4	4	1000		2	0	3	3	3	3.33		3	3.33	\$ 0.03		\$ 0.25		\$ 0.53		44.46%		44.46%		44.46%		44.46%	
6	SUCCESS		2	1	4	1	4	4	1000		2	0	4	4	4	3.65		4	3.65	\$ 0.04		\$ 0.25		\$ 0.54		90.69%		90.69%		90.69%		90.69%	
4	SUCCESS		2	3	4	3	4	4	1000		2	0	4	4	4	3.71		4	3.71	\$ 0.04		\$ 0.25		\$ 0.54		95.24%		95.24%		95.24%		95.24%	
10	SUCCESS		2	1	4	1	4	4	1000		2	2	3	2	2	2.35		2	2.35	\$ 0.02		\$ 0.25		\$ 0.52		74.24%		74.24%		74.24%		74.24%	
11	SUCCESS		2	2	4	2	4	4	1000		2	2	5	3	3	2.59		3	2.59	\$ 0.03		\$ 0.25		\$ 0.53		51.62%		51.62%		51.62%		51.62%	
9	SUCCESS		2	0	4	0	4	4	1000		2	2	5	3	3	4.08		3	4.08	\$ 0.04		\$ 0.25		\$ 0.54		27.74%		27.74%		27.74%		27.74%	
12	SUCCESS		2	3	4	3	4	4	1000		2	4	5	2	2	2.05		2	2.05	\$ 0.02		\$ 0.25		\$ 0.52		20.13%		20.13%		20.13%		20.13%	
14	SUCCESS		2	1	4	1	4	4	1000		2	4	6	3	3	2.59		3	2.59	\$ 0.03		\$ 0.25		\$ 0.53		66.49%		66.49%		66.49%		66.49%	
16	SUCCESS		2	3	4	3	4	4	1000		2	4	6	3	3	2.53		3	2.53	\$ 0.03		\$ 0.25		\$ 0.53		70.06%		70.06%		70.06%		70.06%	
17	SUCCESS		2	0	4	0	4	4	1000		2	6	7	2	2	2.34		2	2.34	\$ 0.02		\$ 0.25		\$ 0.52		1.01%		1.01%		1.01%		1.01%	
18	SUCCESS		2	1	4	1	4	4	1000		2	5	8	4	4	3.63		4	3.63	\$ 0.04		\$ 0.25		\$ 0.54		69.78%		69.78%		69.78%		69.78%	
15	SUCCESS		2	2	4	2	4	4	1000		2	4	8	5	5	4.51		5	4.51	\$ 0.05		\$ 0.25		\$ 0.55		97.04%		97.04%		97.04%		97.04%	
19	SUCCESS		2	2	4	2	4	4	1000		2	5	7	3	3	3.45		3	3.45	\$ 0.03		\$ 0.25		\$ 0.53		18.13%		18.13%		18.13%		18.13%	
20	SUCCESS		2	3	4	3	4	4	1000		2	6	7	2	2	2.34		2	2.34	\$ 0.02		\$ 0.25		\$ 0.52		95.10%		95.10%		95.10%		95.10%	
22	SUCCESS		2	1	4	1	4	4	1000		2	6	9	3	3	2.65		3	2.65	\$ 0.03		\$ 0.25		\$ 0.53		45.78%		45.78%		45.78%		45.78%	
13	SUCCESS		2	0	4	0	4	4	1000		2	4	9	5	5	6.10		5	6.10	\$ 0.06		\$ 0.25		\$ 0.56		62.19%		62.19%		62.19%		62.19%	
24	SUCCESS		2	3	4	3	4	4	1000		2	6	10	4	4	3.69		4	3.69	\$ 0.04		\$ 0.25		\$ 0.54		19.35%		19.35%		19.35%		19.35%	
23	SUCCESS		2	2	4	2	4	4	1000		2	8	10	2	2	2.16		2	2.16	\$ 0.02		\$ 0.25		\$ 0.52		12.48%		12.48%		12.48%		12.48%	
26	SUCCESS		2	1	4	1	4	4	1000		2	8	11	3	3	2.83		3	2.83	\$ 0.03		\$ 0.25		\$ 0.53		29.85%		29.85%		29.85%		29.85%	
28	SUCCESS		2	3	4	3	4	4	1000		2	8	11	3	3	3.04		3	3.04	\$ 0.03		\$ 0.25		\$ 0.53		65.99%		65.99%		65.99%		65.99%	
21	SUCCESS		2	0	4	0	4	4	1000		2	8	11	3	3	3.10		3	3.10	\$ 0.03		\$ 0.25		\$ 0.53		93.51%		93.51%		93.51%		93.51%	
27	SUCCESS		2	2	4	2	4	4	1000		2	8	11	3	3	3.10		3	3.10	\$ 0.03		\$ 0.25		\$ 0.53		71.07%		71.07%		71.07%		71.07%	
30	SUCCESS		2	1	4	1	4	4	1000		2	9	12	3	3	3.31		3	3.31	\$ 0.03		\$ 0.25		\$ 0.53		42.57%		42.57%		42.57%		42.57%	
25	SUCCESS		2	0	4	0	4	4	1000		2	10	14	4	4	3.97		4	3.97	\$ 0.04		\$ 0.25		\$ 0.54		44.78%		44.78%		44.78%		44.78%	
31	SUCCESS		2	2	4	2	4	4	1000		2	10	14	4	4	3.61		4	3.61	\$ 0.04		\$ 0.25		\$ 0.54		83.86%		83.86%		83.86%		83.86%	
35	SUCCESS		2	2	4	2	4	4	1000		2	11	14	3	3	2.68		3	2.68	\$ 0.03		\$ 0.25		\$ 0.53		62.61%		62.61%		62.61%		62.61%	
32	SUCCESS		2	3	4	3	4	4	1000		2	10	14	4	4	3.89		4	3.89	\$ 0.04		\$ 0.25		\$ 0.54		54.44%		54.44%		54.44%		54.44%	
36	SUCCESS		2	3	4	3	4	4	1000		2	11	14	3	3	2.74		3	2.74	\$ 0.03		\$ 0.25		\$ 0.53		50.61%		50.61%		50.61%		50.61%	
34	SUCCESS		2	1	4	1	4	4	1000		2	11	15	4	4	4.40		4	4.40	\$ 0.04		\$ 0.25		\$ 0.54		51.53%		51.53%		51.53%		51.53%	
39	SUCCESS		2	2	4	2	4	4	1000		2	14	15	1	1	1.40		1	1.40	\$ 0.01		\$ 0.25		\$ 0.51		36.53%		36.53%		36.53%		36.53%	
40	SUCCESS		2	3	4	3	4	4	1000		2	14	15	1	1	1.46		1	1.46	\$ 0.01		\$ 0.25		\$ 0.51		13.66%		13.66%		13.66%		13.66%	
29	SUCCESS		2	0	4	0	4	4	1000		2	11	16	5	5	4.81		5	4.81	\$ 0.05		\$ 0.25		\$ 0.55		86.73%		86.73%		86.73%		86.73%	
38	SUCCESS		2	1	4	1	4	4	1000		2	14	18	4	4	3.76		4	3.76	\$ 0.04		\$ 0.25		\$ 0.54		0.97%		0.97%		0.97%		0.97%	
33	SUCCESS		2	0	4	0	4	4	1000		2	14	19	5	5	5.10		5	5.10	\$ 0.05		\$ 0.25		\$ 0.55		33.19%		33.19%		33.19%		33.19%	
37	SUCCESS		2	0	4	0	4	4	1000		2	17	19	3	3	2.51		3	2.51	\$ 0.03		\$ 0.25		\$ 0.53		66.88%		66.88%		66.88%		66.88%	

22:28:01.844 [run-main-8] INFO java.lang.Class - Total Cloudlet Cost: \$21.26

22:28:01.844 [run-main-8] INFO java.lang.Class - Avg. Cost per Cloudlet: \$0.53
22:28:01.844 [run-main-8] INFO java.lang.Class - Processing Cost of VM0: \$0.16
22:28:01.844 [run-main-8] INFO java.lang.Class - Processing Cost of VM1: \$0.16
22:28:01.844 [run-main-8] INFO java.lang.Class - Processing Cost of VM2: \$0.16
22:28:01.844 [run-main-8] INFO java.lang.Class - Processing Cost of VM3: \$0.16
22:28:01.844 [run-main-8] INFO java.lang.Class - Memory Cost of VM0: \$8.19
22:28:01.844 [run-main-8] INFO java.lang.Class - Memory Cost of VM1: \$8.19
22:28:01.844 [run-main-8] INFO java.lang.Class - Memory Cost of VM2: \$8.19
22:28:01.844 [run-main-8] INFO java.lang.Class - Memory Cost of VM3: \$8.19
22:28:01.844 [run-main-8] INFO java.lang.Class - Bandwidth Cost of VM0: \$50.00
22:28:01.844 [run-main-8] INFO java.lang.Class - Bandwidth Cost of VM1: \$50.00
22:28:01.844 [run-main-8] INFO java.lang.Class - Bandwidth Cost of VM2: \$50.00
22:28:01.845 [run-main-8] INFO java.lang.Class - Bandwidth Cost of VM3: \$50.00
22:28:01.845 [run-main-8] INFO java.lang.Class - Bandwidth Cost of Storage0: \$1.00
22:28:01.845 [run-main-8] INFO java.lang.Class - Bandwidth Cost of Storage1: \$1.00
22:28:01.845 [run-main-8] INFO java.lang.Class - Bandwidth Cost of Storage2: \$1.00
22:28:01.845 [run-main-8] INFO java.lang.Class - Bandwidth Cost of Storage3: \$1.00
22:28:01.845 [run-main-8] INFO java.lang.Class - Cost of VM0: \$59.35
22:28:01.845 [run-main-8] INFO java.lang.Class - Cost of VM1: \$59.35
22:28:01.845 [run-main-8] INFO java.lang.Class - Cost of VM2: \$59.35
22:28:01.845 [run-main-8] INFO java.lang.Class - Cost of VM3: \$59.35

22:28:01.845 [run-main-8] INFO java.lang.Class - Overall time taken for the execution of the cloudlets is: 19.59 secs

The cost here is not much different than the second simulation, but the cloudlets get executed slightly faster than in simulation 2