

CloudSim is used for modelling and simulating a cloud computing environment as a means for evaluating a hypothesis prior to software development in order to reproduce tests and results.

Result which we are getting is the output of scheduler.

Datacenters are created.

```
Starting Round Robin Scheduler...
Reading the Matrices...
Initialising...
Starting CloudSim version 3.0
Datacenter_0 is starting...
Datacenter_1 is starting...
Datacenter_2 is starting...
Datacenter_3 is starting...
Datacenter_4 is starting...
Broker_0 is starting...
Entities started.
```

Brokers are assigning particular VMs to the tasks assign in CloudSim.

There are multiple processes in the virtual network created by cloudsims framework. Now each processes will required some vm which will be done by brokers.

```
Broker_0 is starting...
Entities started.
0.0: Broker_0: Cloud Resource List received with 5 resource(s)
0.0: Broker_0: Trying to Create VM #2 in Datacenter_0
0.0: Broker_0: Trying to Create VM #3 in Datacenter_1
0.0: Broker_0: Trying to Create VM #4 in Datacenter_2
0.0: Broker_0: Trying to Create VM #5 in Datacenter_3
0.0: Broker_0: Trying to Create VM #6 in Datacenter_4
0.1: Broker_0: VM #2 has been created in Datacenter #2, Host #0
0.1: Broker_0: VM #3 has been created in Datacenter #3, Host #0
0.1: Broker_0: VM #4 has been created in Datacenter #4, Host #0
0.1: Broker_0: VM #5 has been created in Datacenter #5, Host #0
0.1: Broker_0: VM #6 has been created in Datacenter #6, Host #0
```

Brokers will sends the task

```
0.1: Broker_0: Sending cloudlet 0 to VM #5
0.1: Broker_0: Sending cloudlet 1 to VM #5
0.1: Broker_0: Sending cloudlet 2 to VM #4
0.1: Broker_0: Sending cloudlet 3 to VM #4
0.1: Broker_0: Sending cloudlet 4 to VM #6
0.1: Broker_0: Sending cloudlet 5 to VM #5
0.1: Broker_0: Sending cloudlet 6 to VM #2
0.1: Broker_0: Sending cloudlet 7 to VM #6
0.1: Broker_0: Sending cloudlet 8 to VM #4
0.1: Broker_0: Sending cloudlet 9 to VM #5
0.1: Broker_0: Sending cloudlet 10 to VM #4
0.1: Broker_0: Sending cloudlet 11 to VM #2
0.1: Broker_0: Sending cloudlet 12 to VM #6
0.1: Broker_0: Sending cloudlet 13 to VM #6
0.1: Broker_0: Sending cloudlet 14 to VM #3
0.1: Broker_0: Sending cloudlet 15 to VM #5
0.1: Broker_0: Sending cloudlet 16 to VM #4
0.1: Broker_0: Sending cloudlet 17 to VM #5
0.1: Broker_0: Sending cloudlet 18 to VM #3
0.1: Broker_0: Sending cloudlet 19 to VM #3
0.1: Broker_0: Sending cloudlet 20 to VM #3
```

0.1: Broker_0: Sending cloudlet 21 to VM #2
0.1: Broker_0: Sending cloudlet 22 to VM #5
0.1: Broker_0: Sending cloudlet 23 to VM #4
0.1: Broker_0: Sending cloudlet 24 to VM #4
0.1: Broker_0: Sending cloudlet 25 to VM #2
0.1: Broker_0: Sending cloudlet 26 to VM #3
0.1: Broker_0: Sending cloudlet 27 to VM #3
0.1: Broker_0: Sending cloudlet 28 to VM #4
0.1: Broker_0: Sending cloudlet 29 to VM #6

Brokers will receive the task

426.172: Broker_0: Cloudlet 4 received
1137.048: Broker_0: Cloudlet 6 received
2193.912: Broker_0: Cloudlet 2 received
2716.604: Broker_0: Cloudlet 7 received
2736.571999999997: Broker_0: Cloudlet 3 received
2803.116: Broker_0: Cloudlet 14 received
2932.256000000003: Broker_0: Cloudlet 11 received
3098.756: Broker_0: Cloudlet 0 received
4728.896: Broker_0: Cloudlet 18 received
4812.316000000001: Broker_0: Cloudlet 21 received
4889.528: Broker_0: Cloudlet 8 received
5017.448: Broker_0: Cloudlet 1 received
5673.492: Broker_0: Cloudlet 12 received
5763.932000000001: Broker_0: Cloudlet 10 received
6242.768: Broker_0: Cloudlet 5 received
7340.892: Broker_0: Cloudlet 13 received
7516.748: Broker_0: Cloudlet 19 received
8442.752: Broker_0: Cloudlet 9 received
8463.956: Broker_0: Cloudlet 25 received
9306.96: Broker_0: Cloudlet 29 received
9988.628: Broker_0: Cloudlet 16 received
10486.24: Broker_0: Cloudlet 20 received
11712.740000000002: Broker_0: Cloudlet 23 received
11722.832: Broker_0: Cloudlet 26 received
11933.776: Broker_0: Cloudlet 15 received
12799.276000000002: Broker_0: Cloudlet 24 received
13998.86: Broker_0: Cloudlet 17 received
14979.900000000001: Broker_0: Cloudlet 27 received
15977.152000000002: Broker_0: Cloudlet 28 received
17471.696: Broker_0: Cloudlet 22 received
17471.696: Broker_0: All Cloudlets executed. Finishing...
17471.696: Broker_0: Destroying VM #2
17471.696: Broker_0: Destroying VM #3
17471.696: Broker_0: Destroying VM #4
17471.696: Broker_0: Destroying VM #5
17471.696: Broker_0: Destroying VM #6

Broker_0 is shutting down...

Simulation: No more future events

CloudInformationService: Notify all CloudSim entities for shutting down.

Datacenter_0 is shutting down...

Datacenter_1 is shutting down...

Datacenter_2 is shutting down...

Datacenter_3 is shutting down...

Datacenter_4 is shutting down...

Broker_0 is shutting down...

Simulation completed.

Simulation completed.

Now broker will assign the received task to different VMs

===== OUTPUT =====

Cloudlet ID	STATUS	Data center ID	VM ID	Time	Start Time	Finish Time
04	SUCCESS	06	06	426.07	00.1	426.17
06	SUCCESS	02	02	1136.95	00.1	1137.05
02	SUCCESS	04	04	2193.81	00.1	2193.91
07	SUCCESS	06	06	2290.43	426.17	2716.6

03	SUCCESS	04	04	542.66	2193.91	2736.57
14	SUCCESS	03	03	2803.02	00.1	2803.12
11	SUCCESS	02	02	1795.21	1137.05	2932.26
00	SUCCESS	05	05	3098.66	00.1	3098.76
18	SUCCESS	03	03	1925.78	2803.12	4728.9
21	SUCCESS	02	02	1880.06	2932.26	4812.32
08	SUCCESS	04	04	2152.96	2736.57	4889.53
01	SUCCESS	05	05	1918.69	3098.76	5017.45
12	SUCCESS	06	06	2956.89	2716.6	5673.49
10	SUCCESS	04	04	874.4	4889.53	5763.93
05	SUCCESS	05	05	1225.32	5017.45	6242.77
13	SUCCESS	06	06	1667.4	5673.49	7340.89
19	SUCCESS	03	03	2787.85	4728.9	7516.75
09	SUCCESS	05	05	2199.98	6242.77	8442.75
25	SUCCESS	02	02	3651.64	4812.32	8463.96
29	SUCCESS	06	06	1966.07	7340.89	9306.96
16	SUCCESS	04	04	4224.7	5763.93	9988.63
20	SUCCESS	03	03	2969.49	7516.75	10486.24
23	SUCCESS	04	04	1724.11	9988.63	11712.74
26	SUCCESS	03	03	1236.59	10486.24	
11722.83						
15	SUCCESS	05	05	3491.02	8442.75	11933.78
24	SUCCESS	04	04	1086.54	11712.74	
12799.28						
17	SUCCESS	05	05	2065.08	11933.78	
13998.86						
27	SUCCESS	03	03	3257.07	11722.83	14979.9
28	SUCCESS	04	04	3177.88	12799.28	
15977.15						
22	SUCCESS	05	05	3472.84	13998.86	17471.7

Makespan using RR: 3869.6203191836094
RoundRobin.RoundRobinScheduler finished!