1 Plotting all figures

1.1

```
Cluster and Node Placement Times (s) replications cluster—placement—time node—placement—time replica—10,000,40 replicas—50,2003,30 replicas—100,1006,30 replicas—100,1006,30 replicas—100,4000 replicas—100,40000 replicas—100,400000 replicas—100,400000 replicas—100,4000000 replicas—100000
```

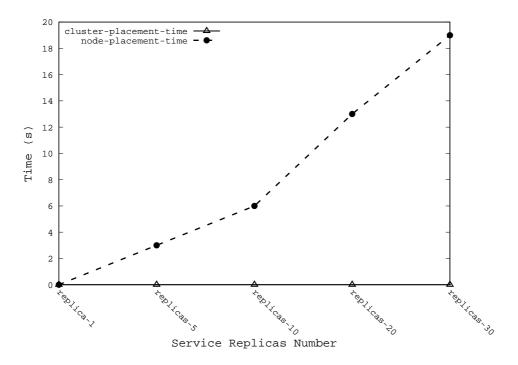


Fig. 1.

1.2

```
Cluster CPU Utilization (%) replications cluster -1 cluster -2 cluster -3 replica -1 7,00 0,00 0,00 replicas -5 39,00 0,00 0,00 replicas -10 78,00 0,00 0,00 replicas -20 99,30 0,00 56,30 replicas -30 99,40 34,00 99,80
```

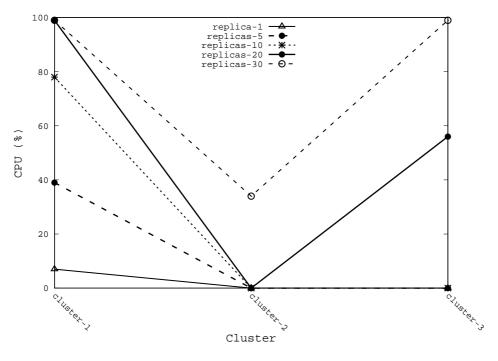


Fig. 2.

1.3

```
Cluster Memory Utilization (%) replications cluster -1 cluster -2 cluster -3 replica -1 3,00 0,00 0,00 replicas -5 19,00 0,00 0,00 replicas -10 39,00 0,00 0,00 replicas -20 49,70 0,00 28,00 replicas -30 50,00 17,00 50,00
```

1.4

```
Cluster Node Utilization (%) replications cluster -1 cluster -2 cluster -3 replica -1 100,00 0,00 0,00 replicas -5 100,00 0,00 0,00 replicas -10 100,00 0,00 0,00 replicas -20 100,00 0,00 100,00 replicas -30 100,00 50,00 100,00
```

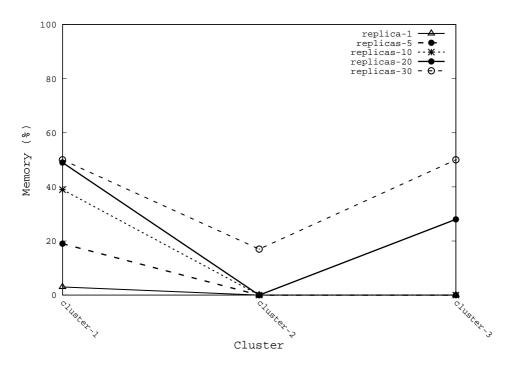


Fig. 3.

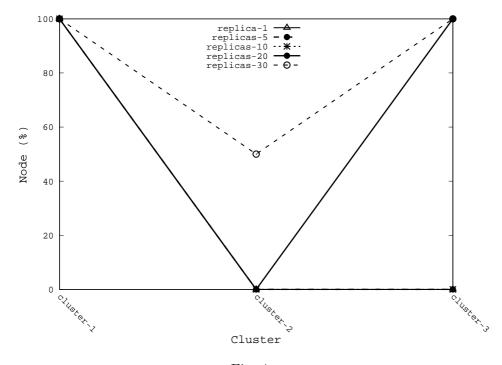


Fig. 4.

1.5

Node CPU Utilization (%) nodes cluster -1-node1 cluster -1-node2 cluster -2-node1 cluster -3-node2

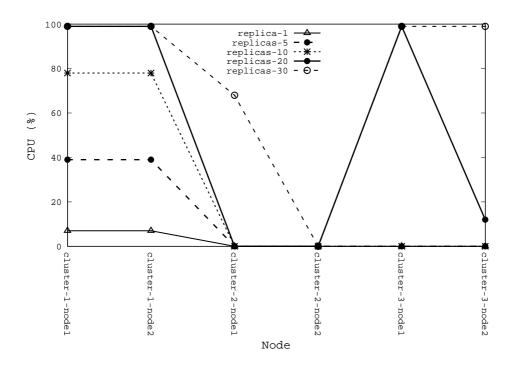


Fig. 5.

1.6

Node Memory Utilization (%) nodes cluster—1—node1 cluster—1—node2 cluster—2—node1 cluster—2—node1 cluster—3—node2 replica—1 3,00 3,00 0,00 0,00 0,00 0,00 0,00 replicas—5 19,00 19,00 0,00 0,00 0,00 0,00 0,00 replicas—10 39,00 39,00 0,00 0,00 0,00 0,00 replicas—20 50,00 49,70 0,00 0,00 50,00 6,30 replicas—30 50,00 50,00 34,00 0,00 50,00 50,00

