

## 1 Plotting all figures

### 1.1

Listing 1. Cluster and Node Placement Times

```
Cluster and Node Placement Times (s)
replications cluster-placement-time node-placement-time
replica-1 0,00 0,20
replicas-5 0,00 3,10
replicas-10 0,10 6,40
replicas-20 0,60 13,00
replicas-30 0,90 19,50
```

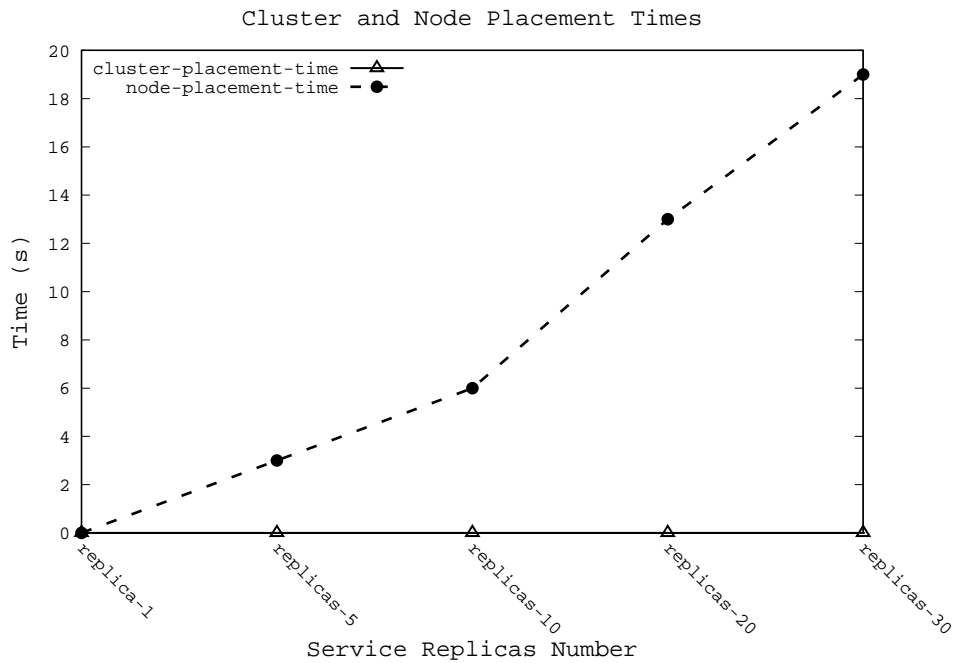


Fig. 1. Cluster and Node Placement Times

### 1.2

Listing 2. Cluster CPU Utilization

```
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 99,40 0,00 56,40
replicas-30 99,60 34,70 99,00

```

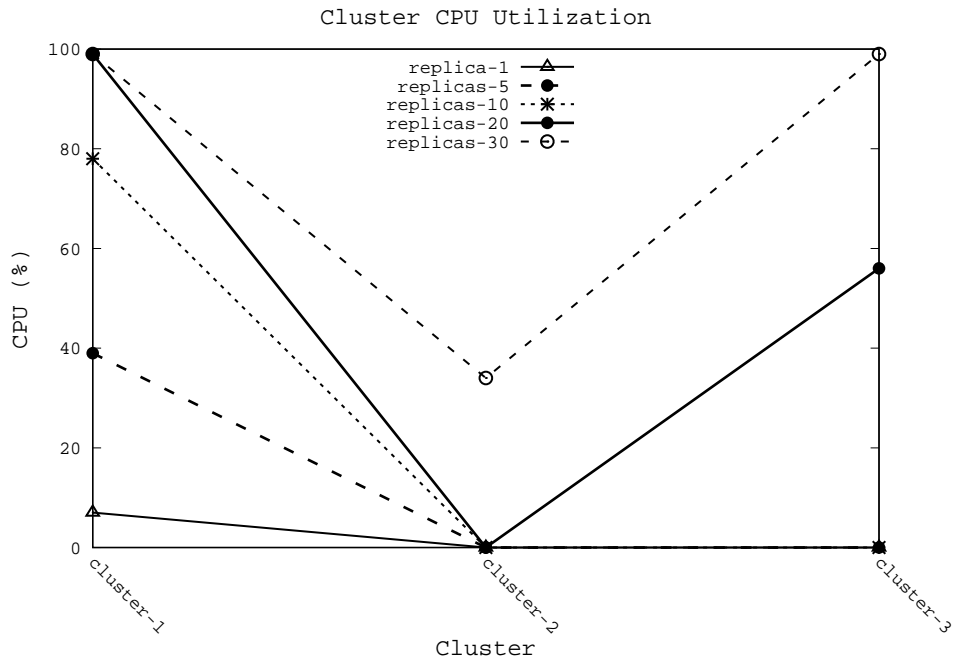


Fig. 2. Cluster CPU Utilization

1.3

Listing 3. Cluster Memory Utilization

```

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 49,60 0,00 28,00
replicas-30 50,00 17,00 49,30

```

1.4

Listing 4. Cluster Node Utilization

```

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

```

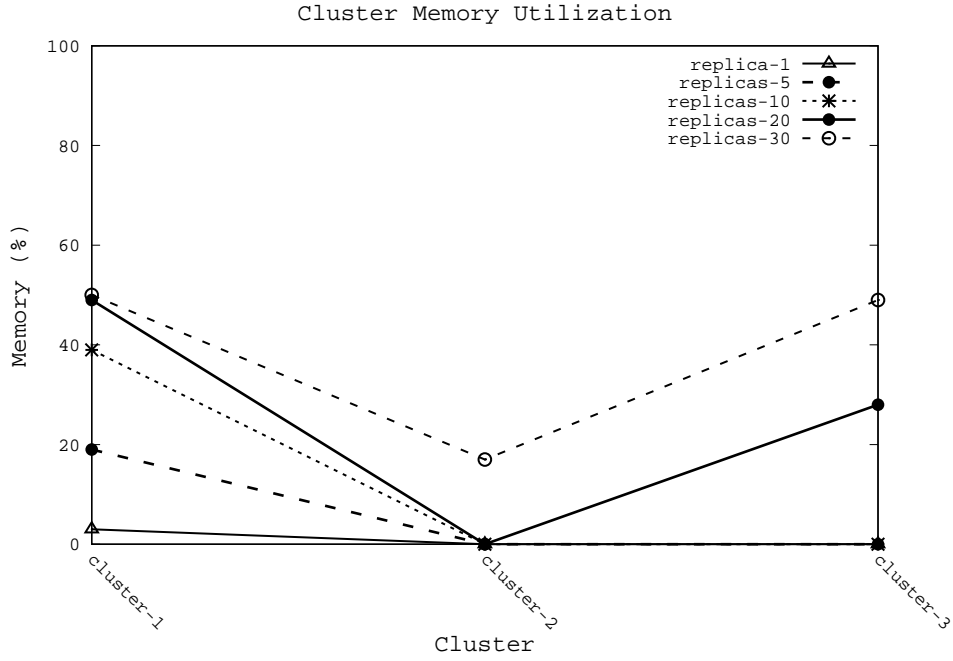


Fig. 3. Cluster Memory Utilization

```

replicas -10 100,00 0,00 0,00
replicas -20 100,00 0,00 100,00
replicas -30 100,00 100,00 100,00

```

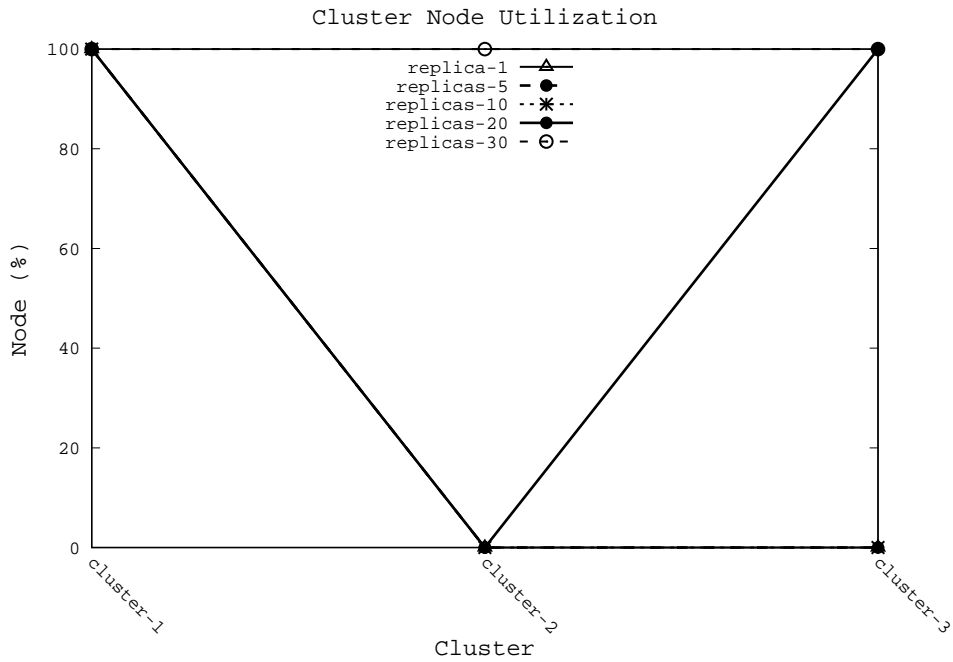


Fig. 4. Cluster Node Utilization

## 1.5

Listing 5. Node CPU Utilization

Node CPU Utilization (%)

nodes	cluster-1-node1	cluster-1-node2	cluster-2-node1	cluster-2-node2	cluster-3-node1	cluster-3-node2
replica-1	7,00	7,00	0,00	0,00	0,00	0,00
replicas-5	39,00	39,00	0,00	0,00	0,00	0,00
replicas-10	78,00	78,00	0,00	0,00	0,00	0,00
replicas-20	99,60	99,00	0,00	0,00	99,20	12,80
replicas-30	99,50	99,70	69,40	0,00	98,40	99,50

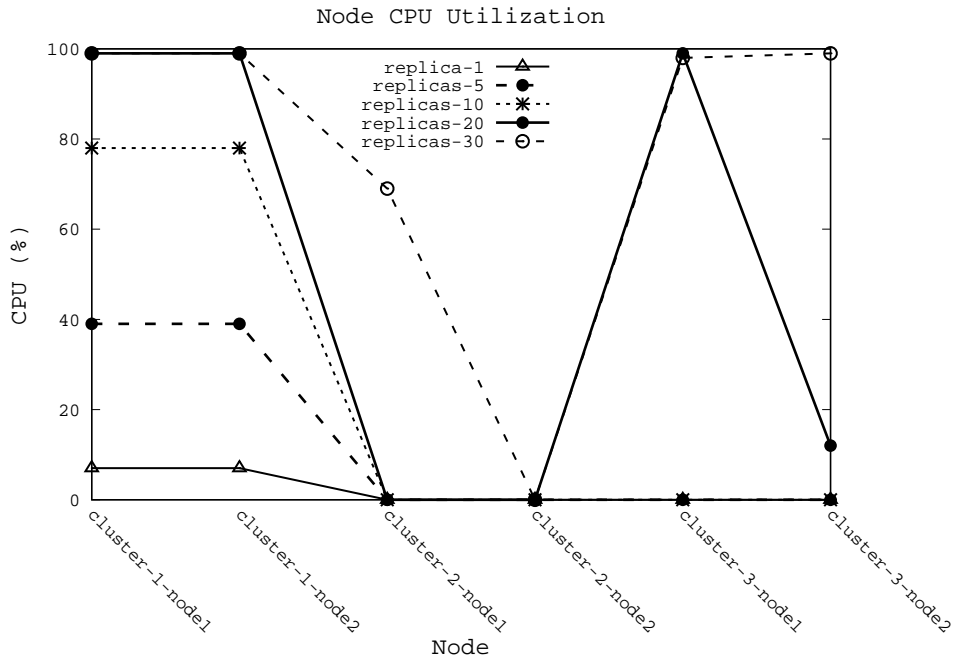


Fig. 5. Node CPU Utilization

## 1.6

Listing 6. Node Memory Utilization

Node Memory Utilization (%)

nodes	cluster-1-node1	cluster-1-node2	cluster-2-node1	cluster-2-node2	cluster-3-node1	cluster-3-node2
replica-1	3,00	3,00	0,00	0,00	0,00	0,00
replicas-5	19,00	19,00	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	49,60	0,00	0,00	50,00	6,40

replicas -30 50,00 50,00 34,70 0,00 49,30 50,00

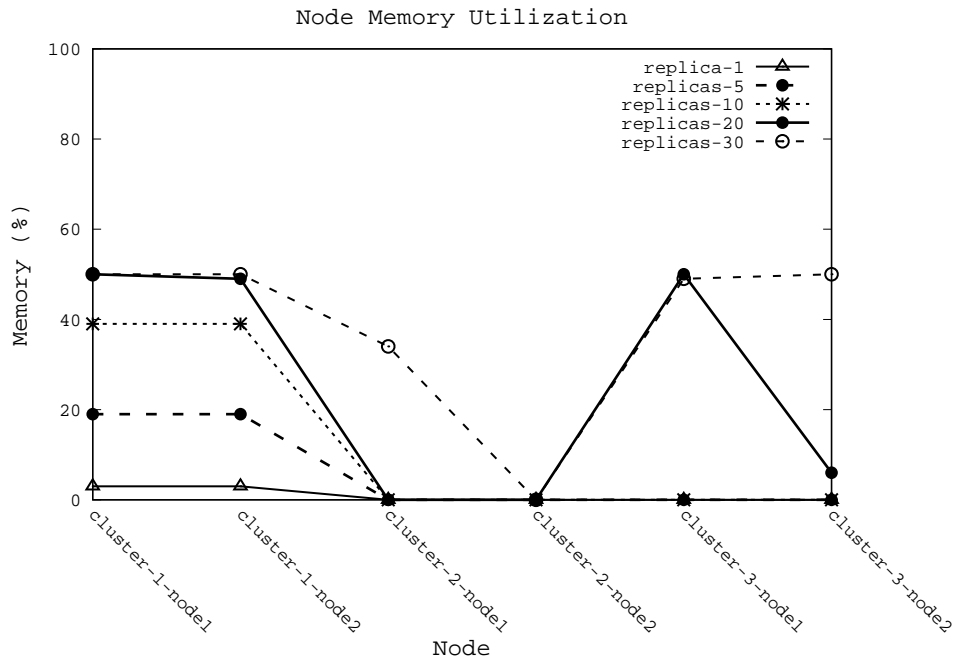


Fig. 6. Node Memory Utilization