

1 Plotting all figures

1.1

Listing 1. Cluster and Node Placement Times
Cluster and Node Placement Times (ms)
replications cluster-placement-time node-placement-time
replica-1 0,00 0,60
replicas-5 0,20 3,20
replicas-10 0,00 6,20
replicas-20 0,80 12,70
replicas-30 1,00 20,10

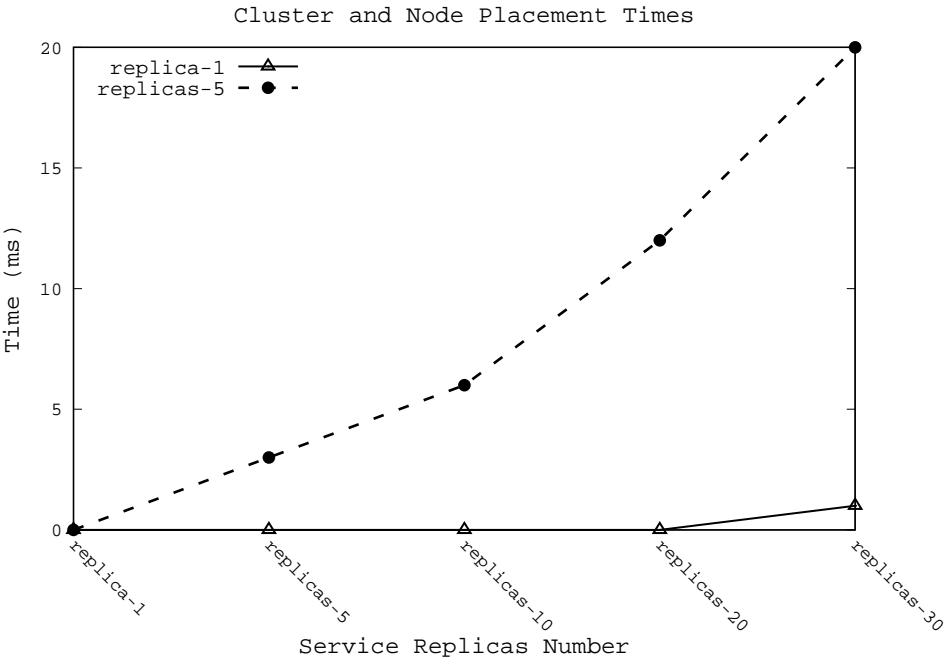


Fig. 1. Cluster and Node Placement Times

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 99,20 0,00 56,40
replicas-30 99,60 34,60 99,30

```

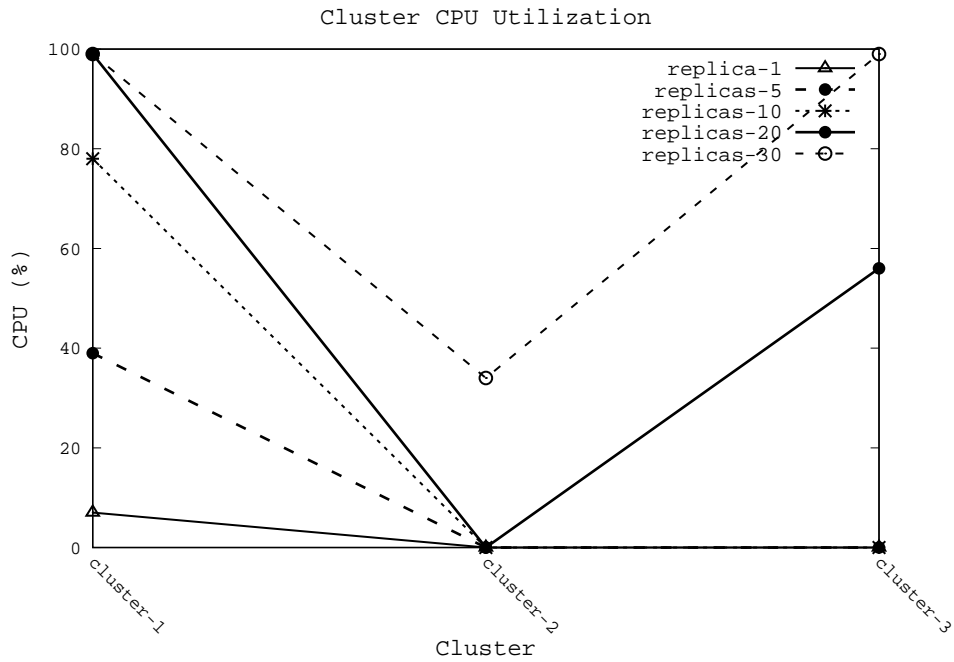


Fig. 2. Cluster CPU Utilization

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 49,40 0,00 28,00
replicas-30 50,00 17,00 49,40

```

1.4

Listing 4. Cluster Node Utilization

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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

```

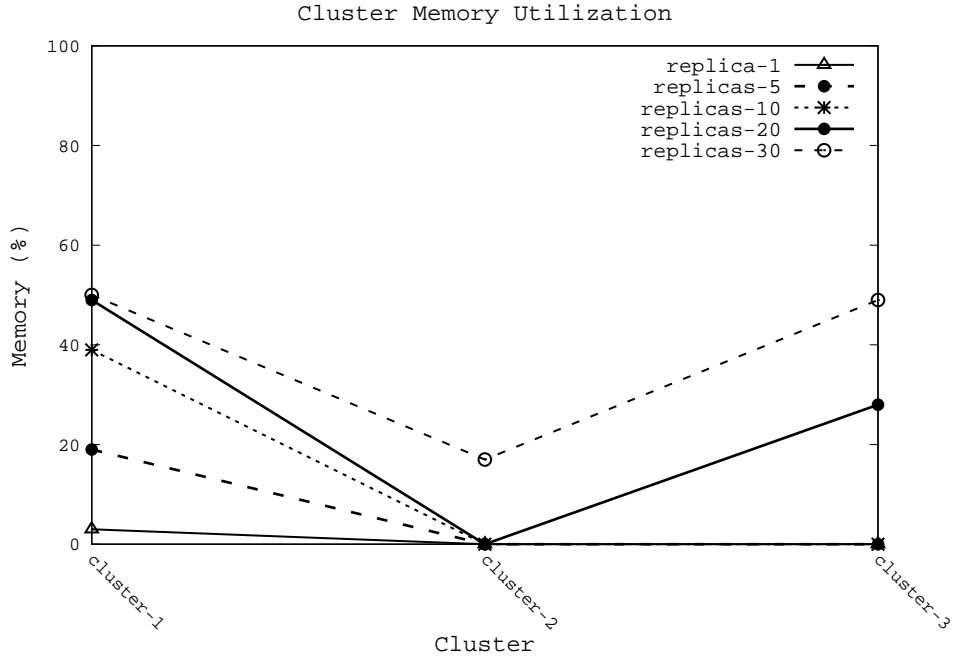


Fig. 3. Cluster Memory Utilization

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

```

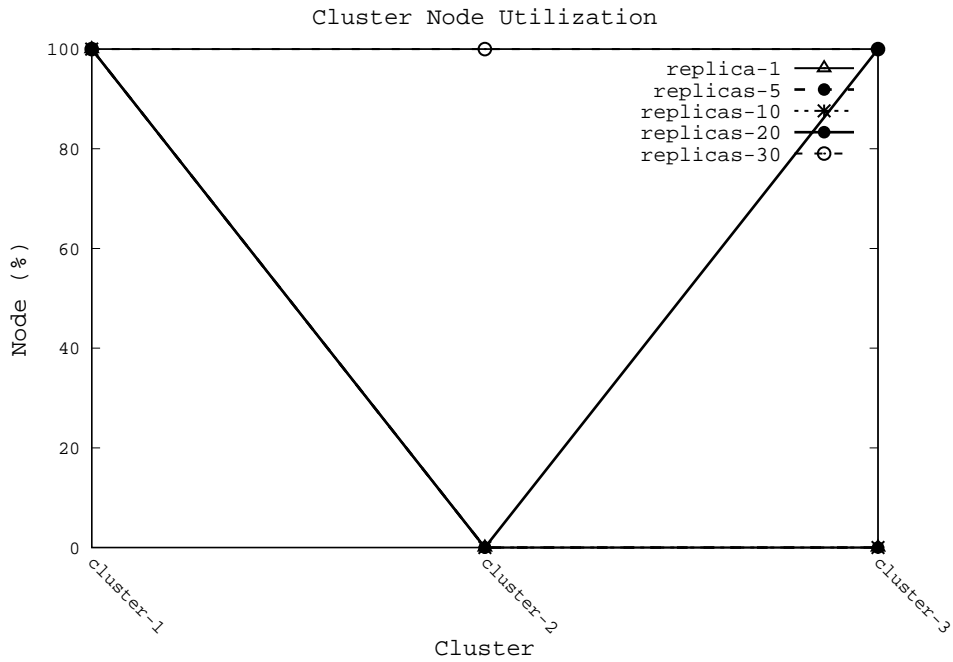


Fig. 4. Cluster Node Utilization

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	99,30	98,60	0,00	0,00	99,40	12,80
replicas-30	99,40	99,60	69,20	0,00	98,70	99,50

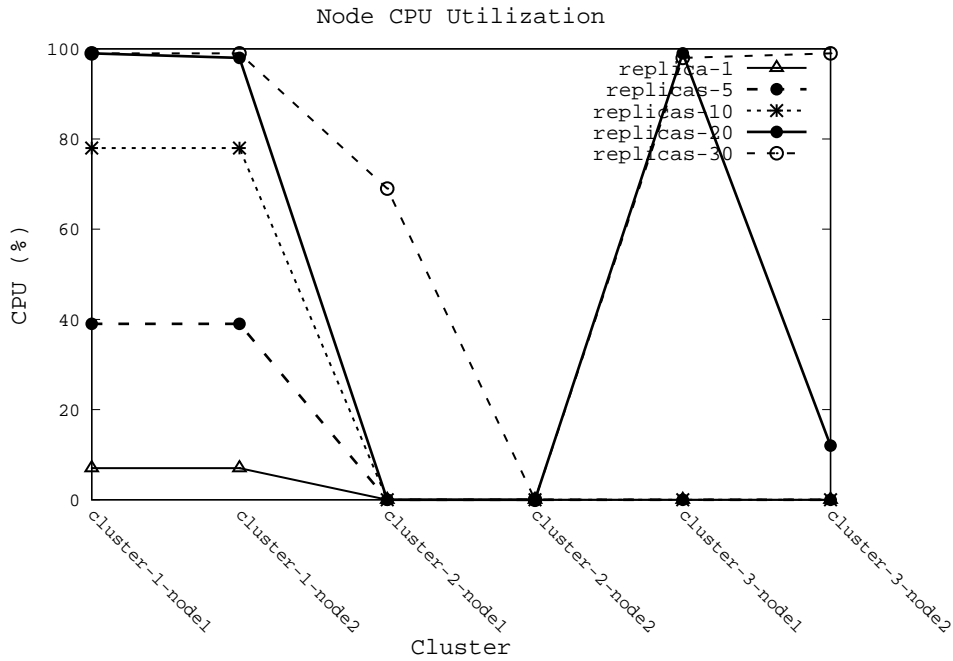


Fig. 5. Node CPU Utilization

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	49,40	0,00	0,00	50,00	6,40

replicas -30 50,00 50,00 34,60 0,00 49,40 50,00

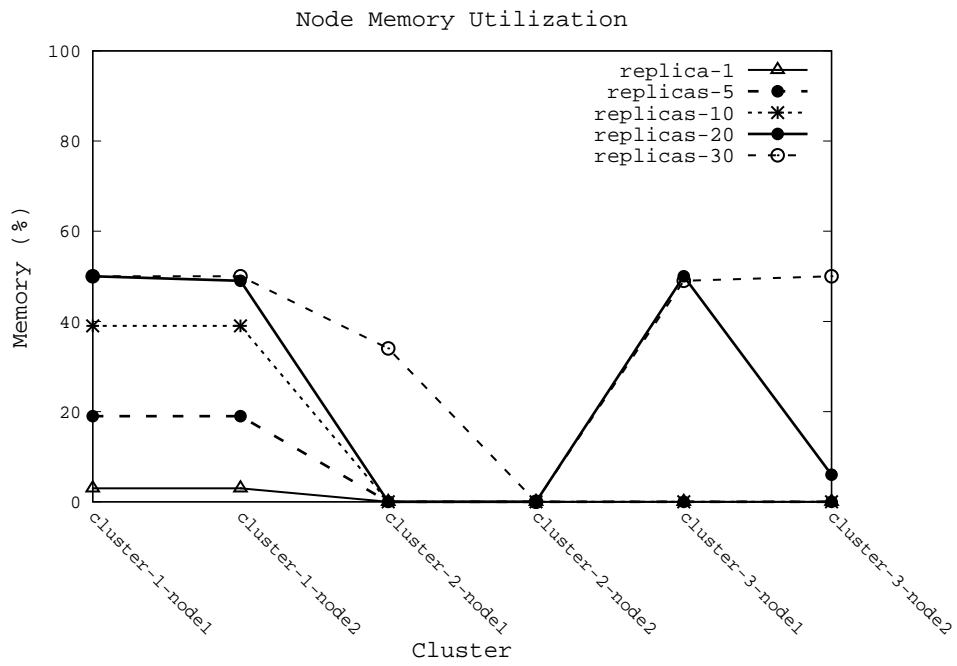


Fig. 6. Node Memory Utilization