1 Plotting all figures

1.1

Listing 1. Cluster and Node Placement Times

```
Cluster and Node Placement Times (ms)
clusters cluster-placement-time node-placement-time
clusters-3 0.00 8.00
clusters-5 1.00 9.00
clusters-10 7.00 22.00
```
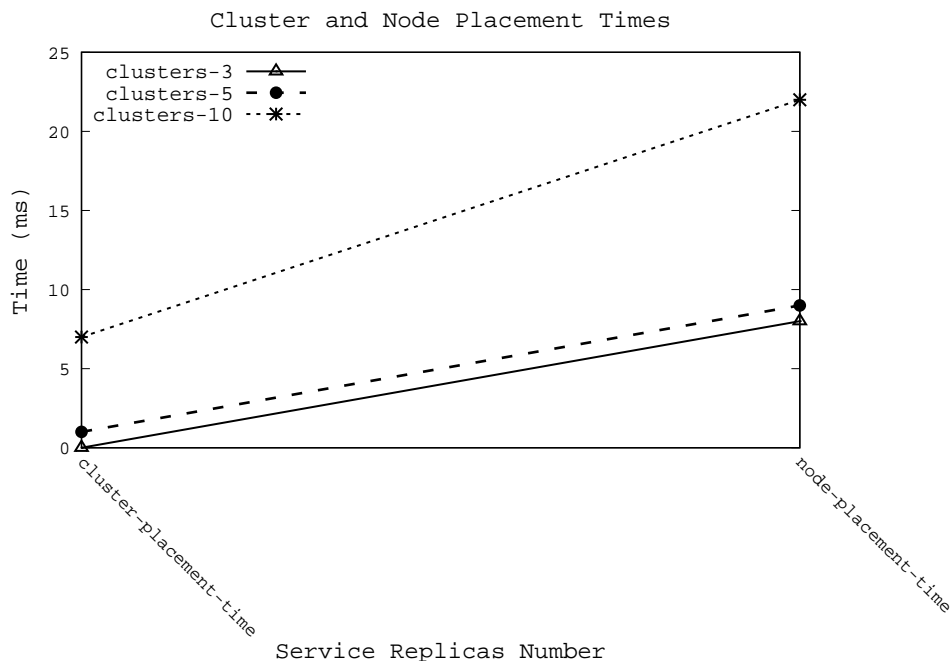

Fig. 1. Cluster and Node Placement Times

1.2

Listing 2. Cluster CPU Utilization

```
Cluster CPU Utilization (%)
clusters cluster-1 cluster-2 cluster-3 cluster-4
    cluster-5 cluster-6 cluster-7 cluster-8 cluster-9
    cluster-10
clusters-3 93.00 24.00 100.00 0.00 0.00 0.00 0.00 0.00
    0.00 0.00
clusters-5 100.00 25.00 0.00 0.00 93.00 0.00 0.00 0.00
```

```
    0.00  0.00
clusters −10 93.00  24.00  0.00  0.00  0.00  0.00  0.00  0.00
    0.00  99.00
```
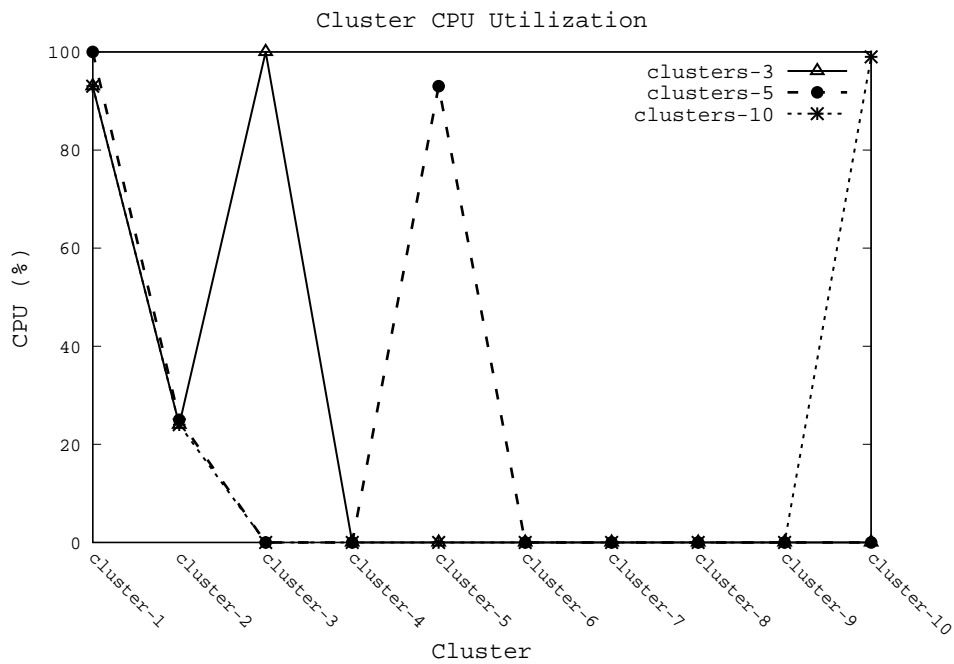

Fig. 2. Cluster CPU Utilization

1.3

Listing 3. Cluster Memory Utilization
```
Cluster  Memory  Utilization  (%)
clusters  cluster −1  cluster −2  cluster −3  cluster −4
    cluster −5  cluster −6  cluster −7  cluster −8  cluster −9
    cluster −10
clusters −3  34.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00
    0.00  0.00
clusters −5  34.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00
    0.00  0.00
clusters −10  34.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00
    0.00  0.00
```

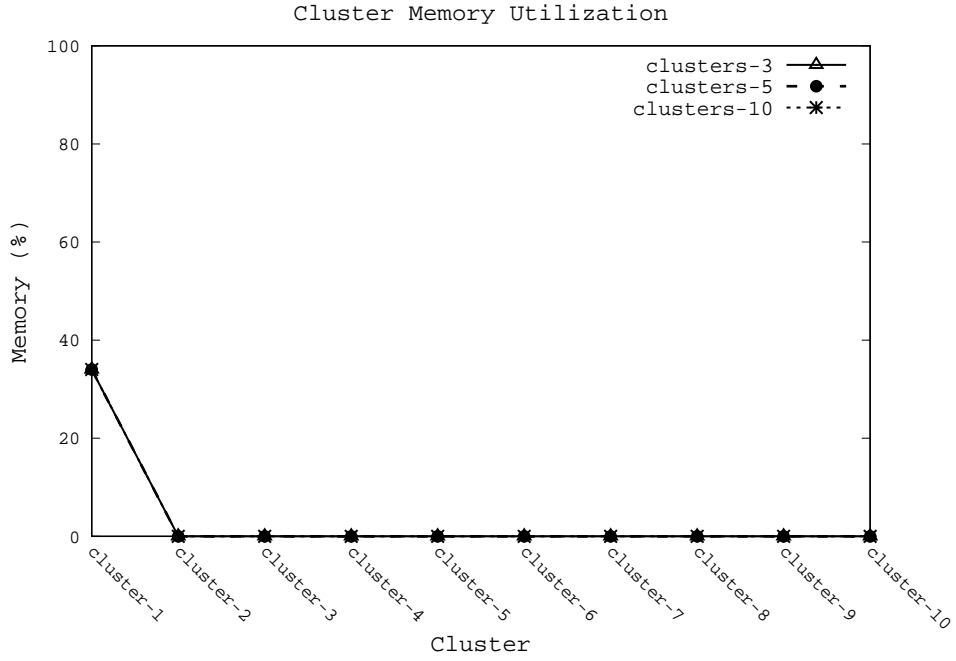*1.4*

Listing 4. Cluster Node Utilization

Fig. 3. Cluster Memory Utilization

Cluster Node Utilization (%)

clusters cluster−1 cluster−2 cluster−3 cluster−4
    cluster−5 cluster−6 cluster−7 cluster−8 cluster−9
    cluster−10

clusters−3 100.00 50.00 100.00 0.00 0.00 0.00 0.00 0.00
    0.00 0.00

clusters−5 100.00 100.00 0.00 0.00 100.00 0.00 0.00
    0.00 0.00 0.00
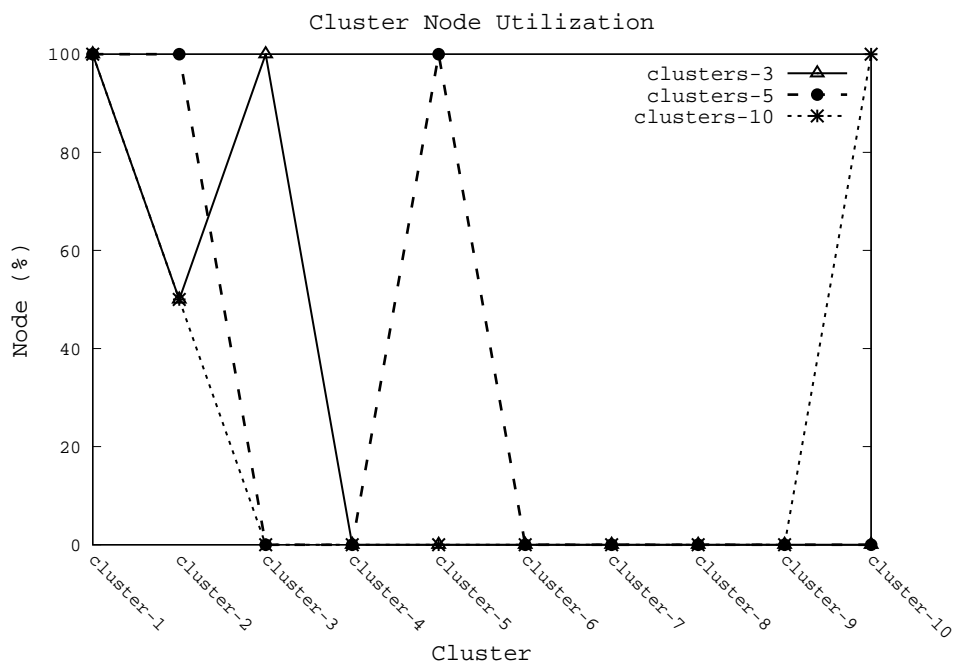
clusters−10 100.00 50.00 0.00 0.00 0.00 0.00 0.00 0.00
    0.00 100.00

Fig. 4. Cluster Node Utilization