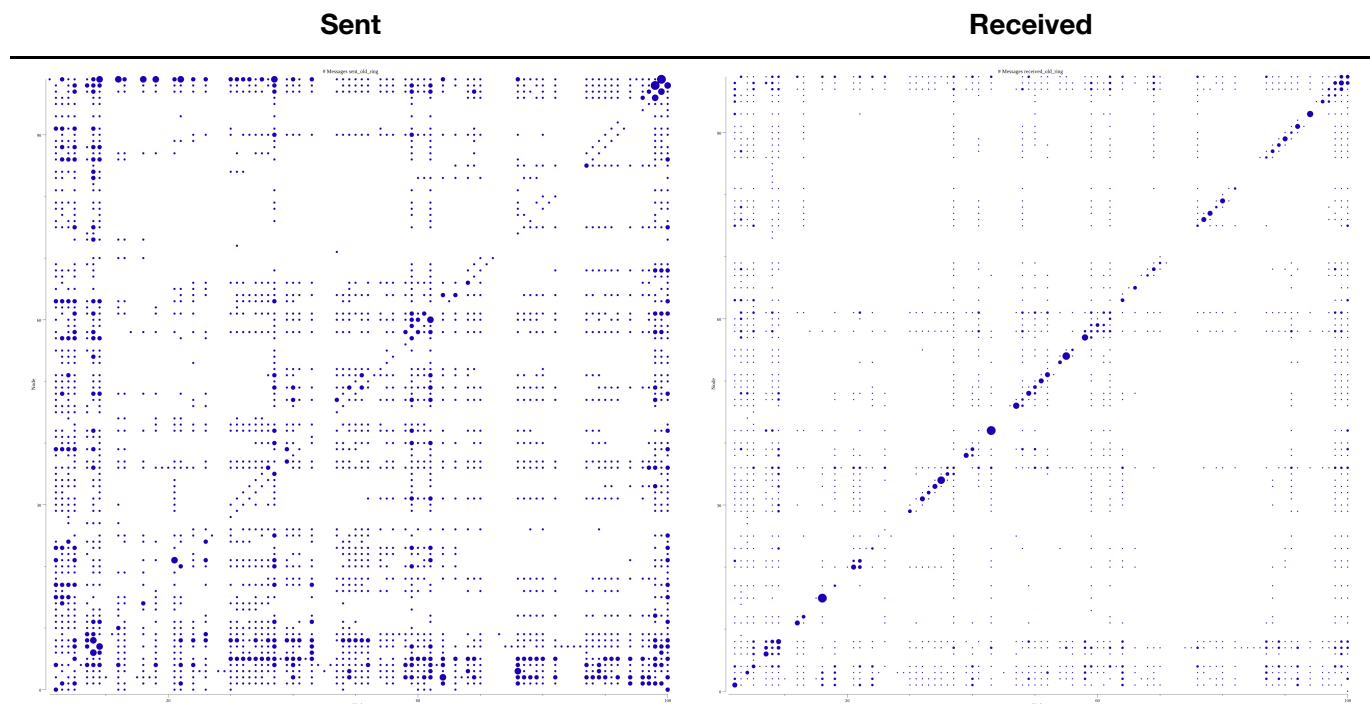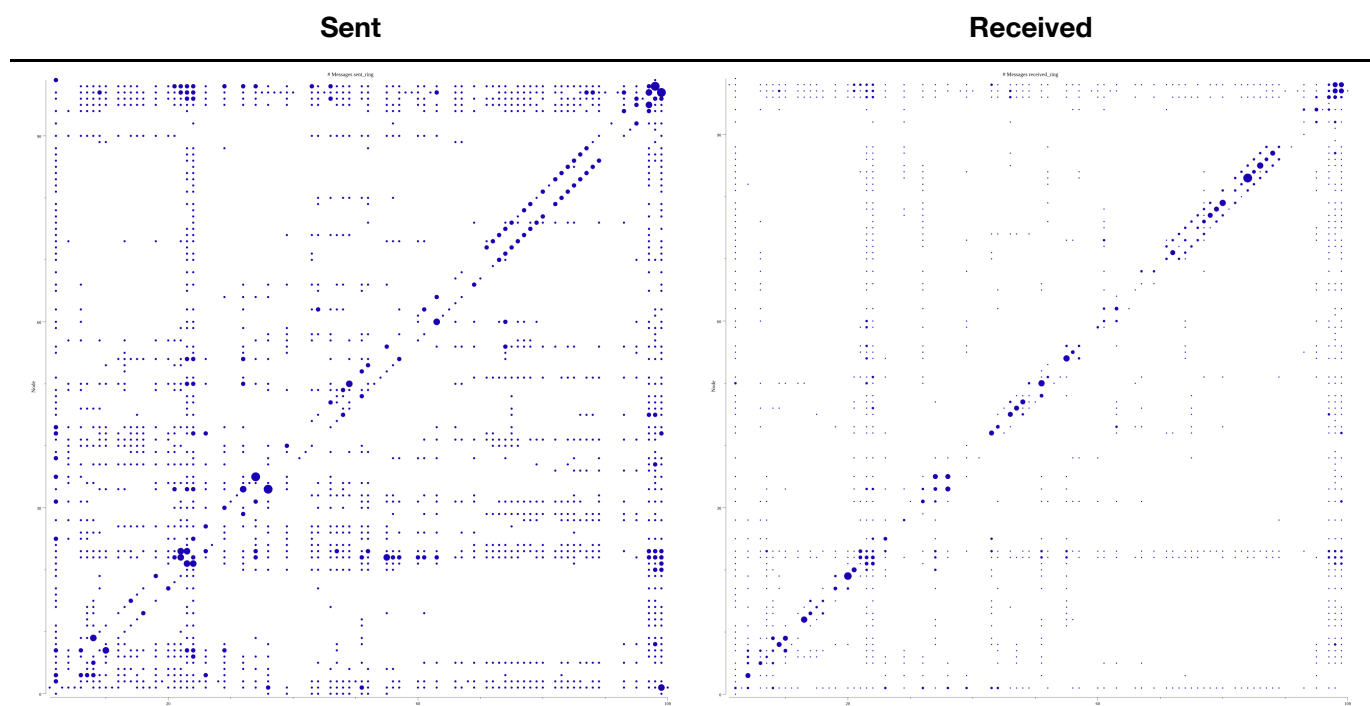# Results about ring mutations

In order to have an overview and to be able to analyze all the results, a set of graphs was built. Each of these graphs represents a specific environment.

Messages exchange

Old Ring

Sent	Received

New Ring

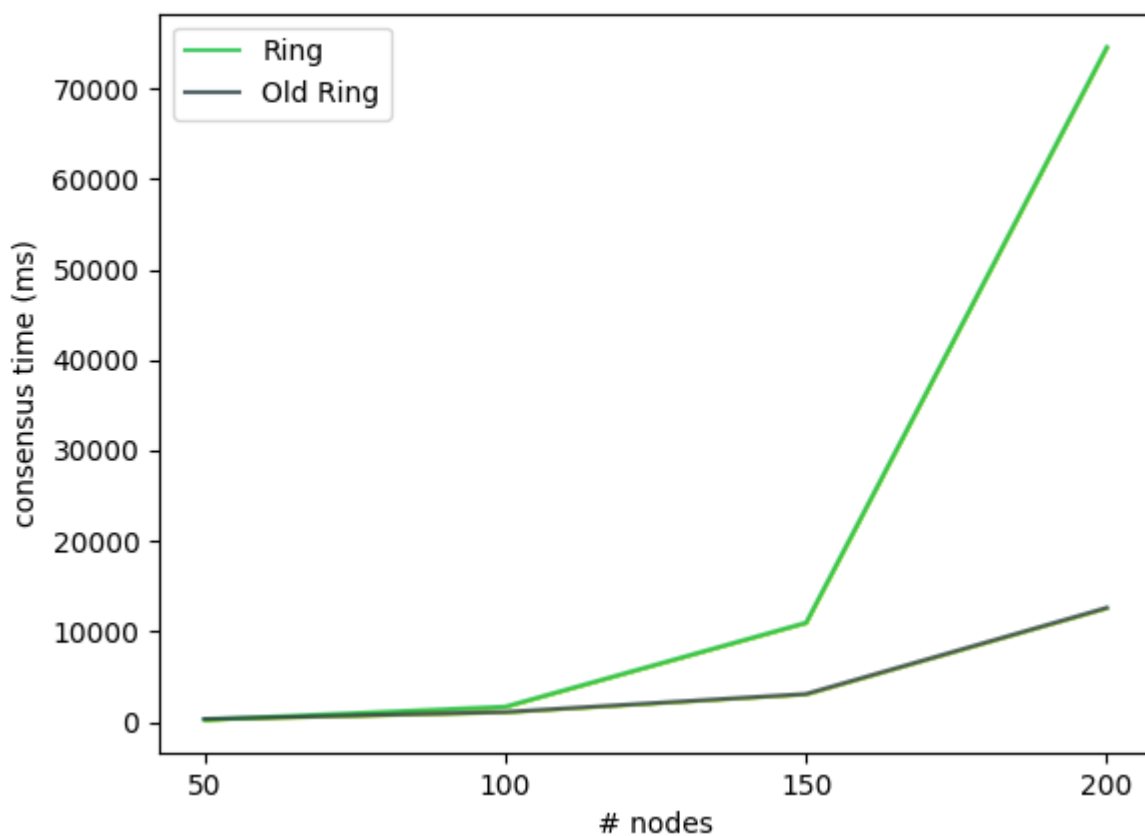| Sent	Received

Environment without faults

Low default delta

```
default_delta       = 1 s
max_tries           = 3 tries
percentage_miss     = 0.0 %
percentage_faults   = 0.0 %
probability_to_fail = 0.0 %
bandwidth           = 200 msgs/s
latency             = 125.0 ms
```

Graph

Normal Case

```
default_delta       = 3 s
max_tries           = 3 tries
percentage_miss     = 0.0 %
percentage_faults   = 0.0 %
probability_to_fail = 0.0 %
bandwidth           = 100 msgs/s
latency             = 125.0 ms
```
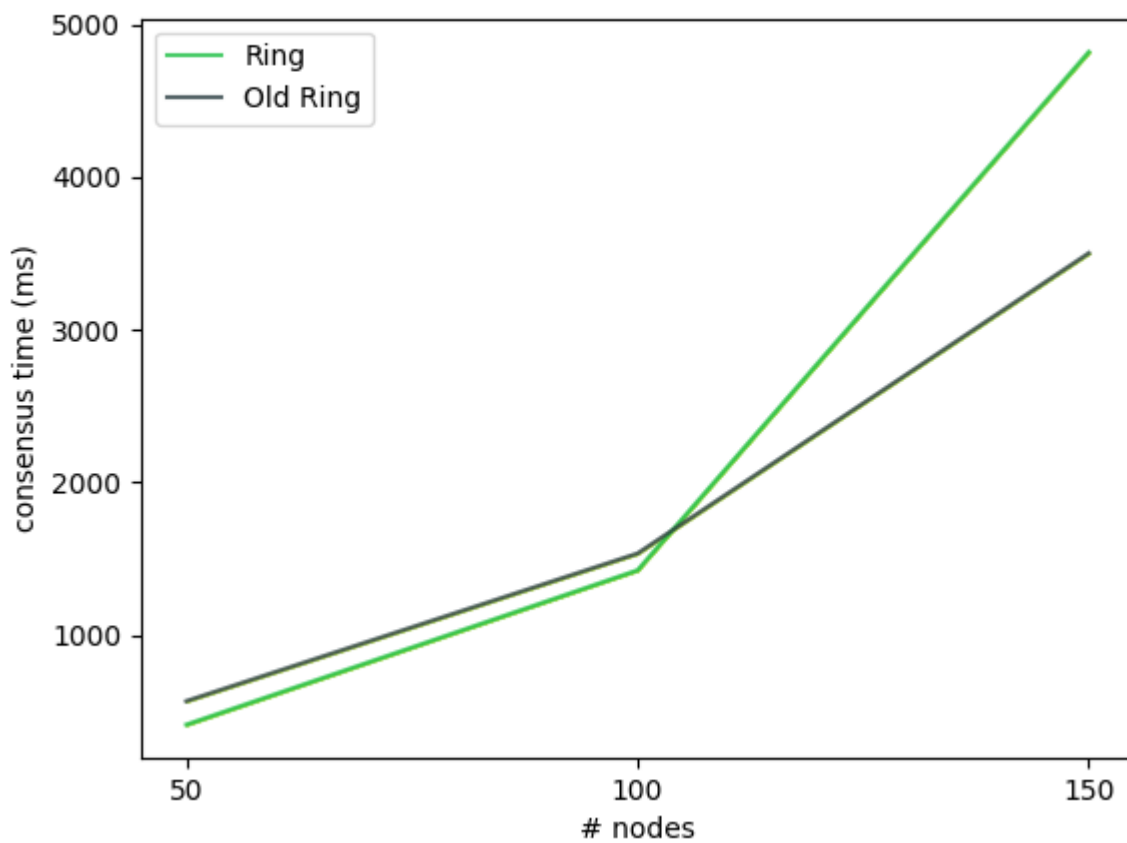
Graph

Large bandwidth

```
default_delta       = 3 s
max_tries           = 3 tries
percentage_miss     = 0.0 %
percentage_faults   = 0.0 %
probability_to_fail = 0.0 %
bandwidth           = 300 msgs/s
latency             = 125.0 ms
```
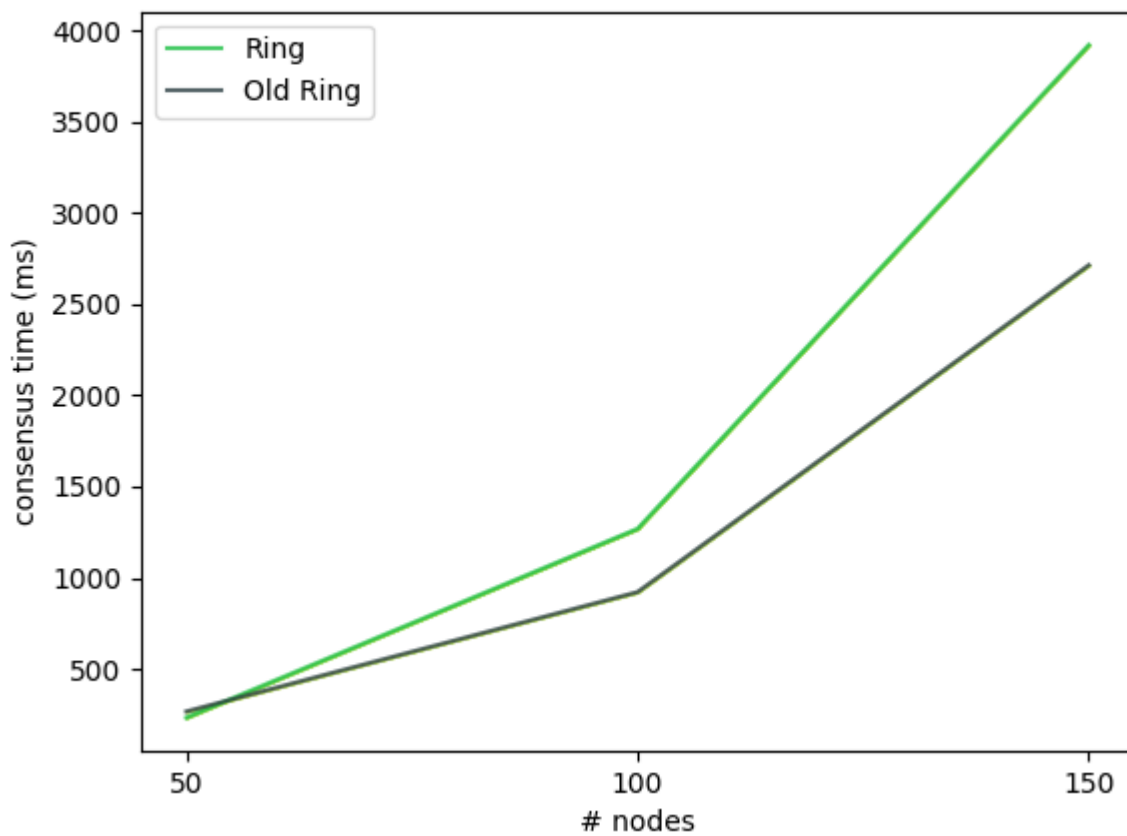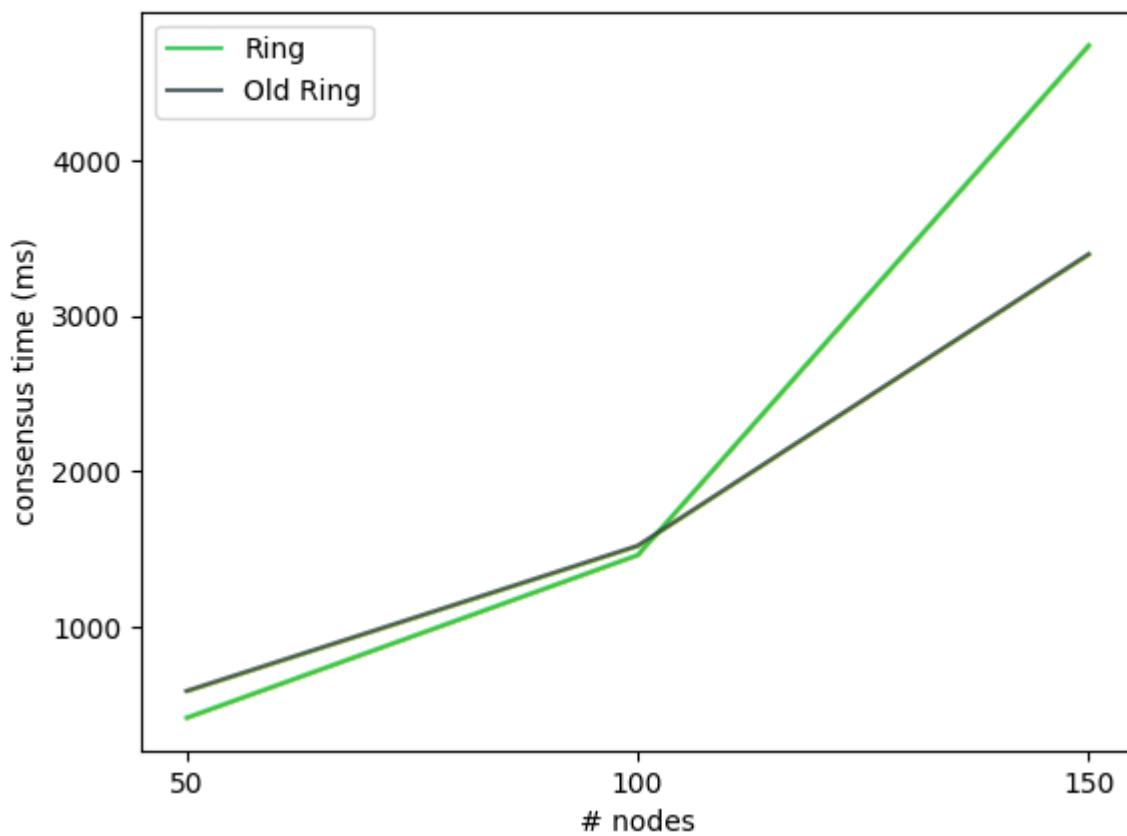
Graph

High latency

```
default_delta        = 3 s
max_tries            = 3 tries
percentage_miss      = 0.0 %
percentage_faults    = 0.0 %
probability_to_fail  = 0.0 %
bandwidth            = 100 msgs/s
latency              = 375.0 ms
```

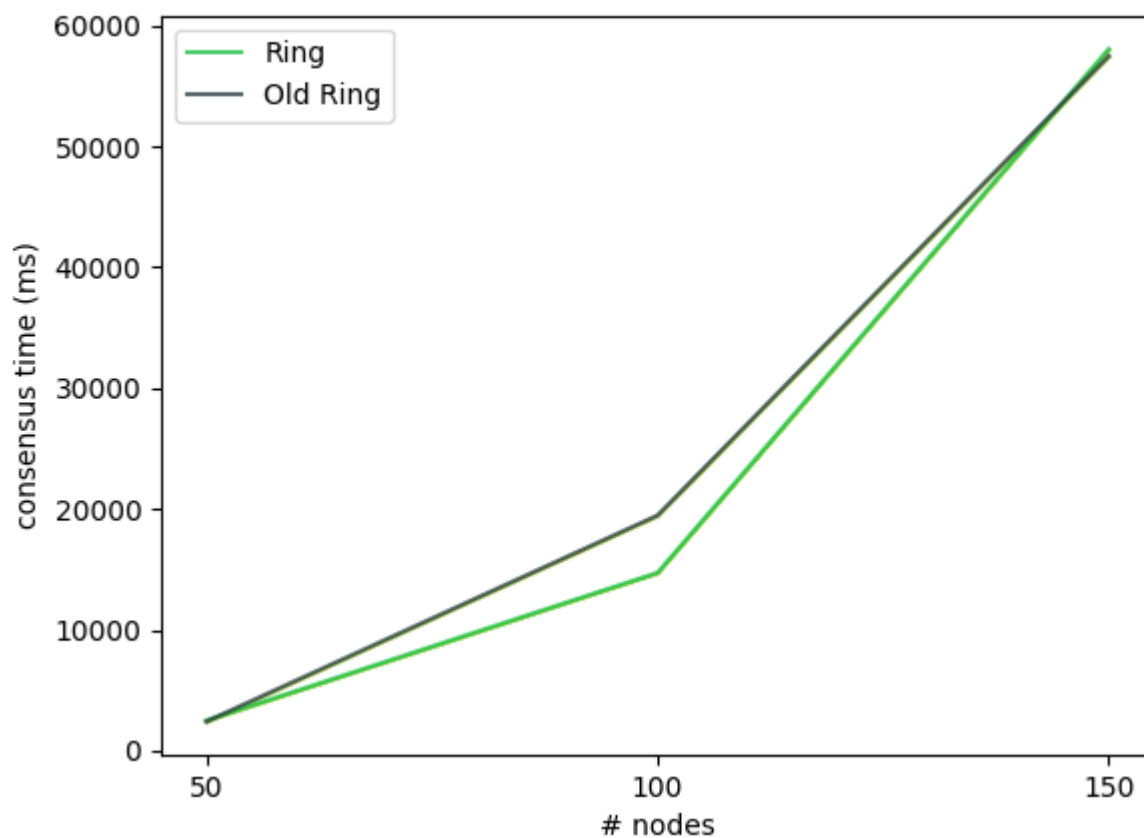**Graph**

Environment with faults

Low default delta

```
default_delta       = 1 s
max_tries           = 3 tries
percentage_miss     = 8.0 %
percentage_faults   = 15.0 %
probability_to_fail = 15.0 %
bandwidth           = 200 msgs/s
latency             = 125.0 ms
```

Graph

Normal Case

```
default_delta       = 3 s
max_tries           = 3 tries
percentage_miss     = 8.0 %
percentage_faults   = 15.0 %
probability_to_fail = 15.0 %
bandwidth           = 100 msgs/s
latency             = 125.0 ms
```
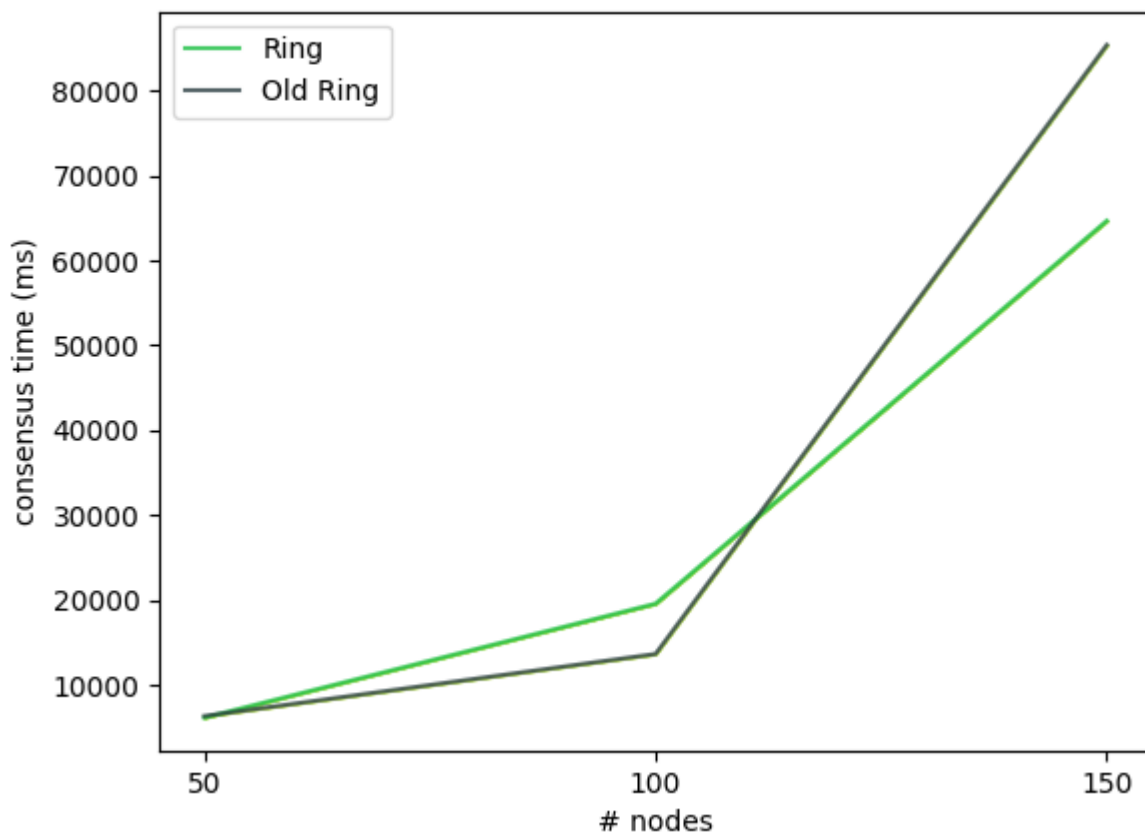
Graph

Large bandwidth

```
default_delta        = 3 s
max_tries            = 3 tries
percentage_miss      = 8.0 %
percentage_faults    = 15.0 %
probability_to_fail  = 15.0 %
bandwidth            = 300 msgs/s
latency              = 125.0 ms
```
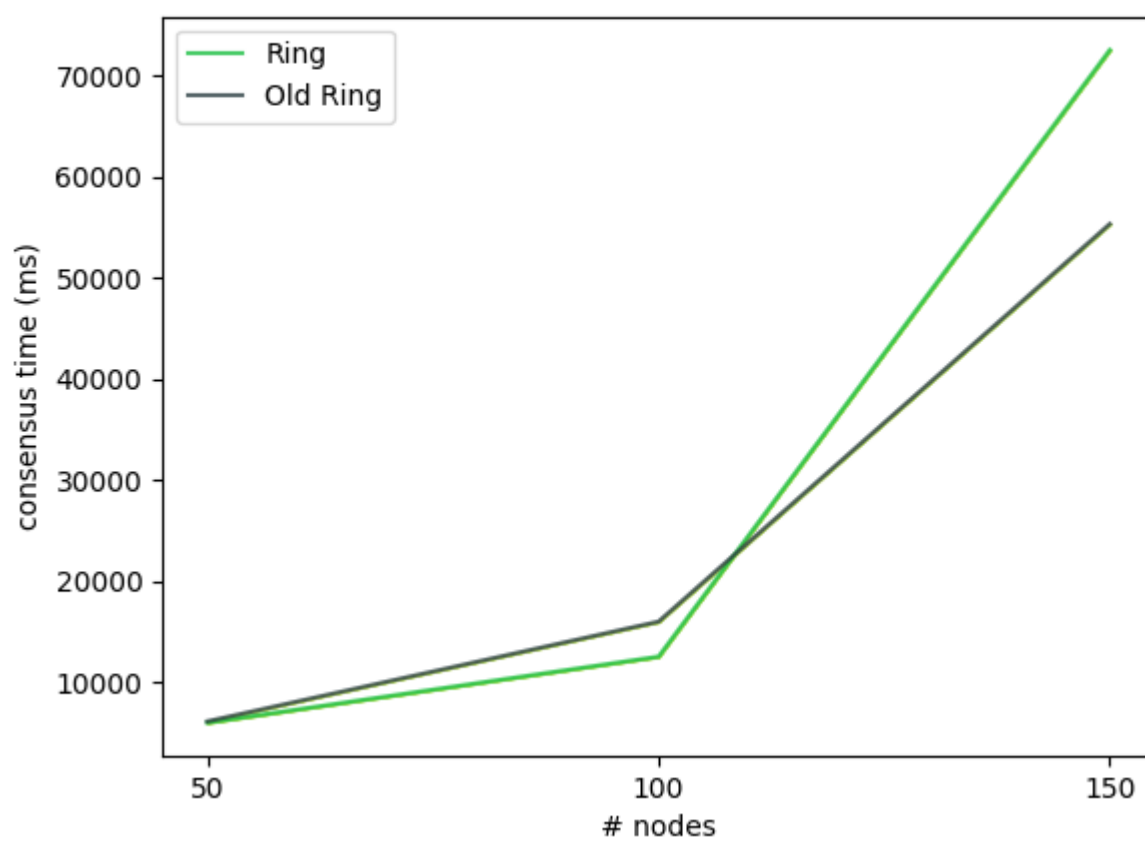
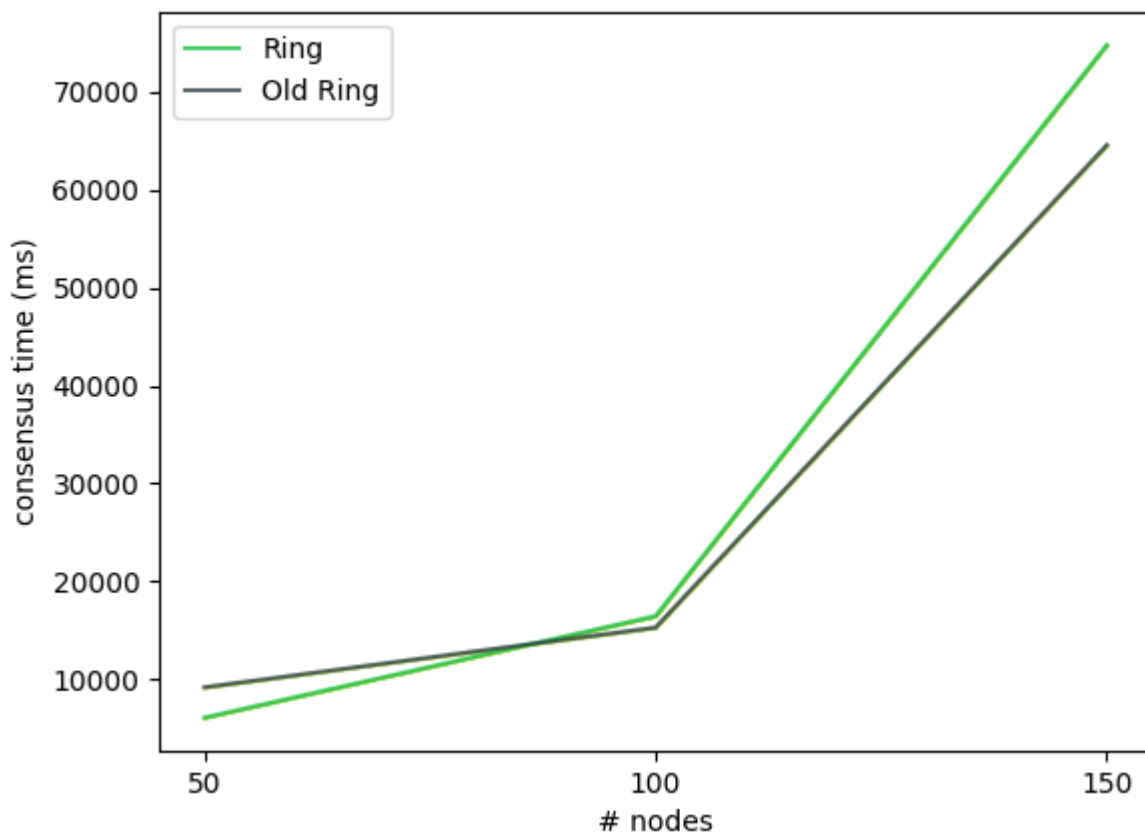**Graph**

High latency

```
default_delta        = 3 s
max_tries            = 3 tries
percentage_miss      = 8.0 %
percentage_faults    = 15.0 %
probability_to_fail = 15.0 %
bandwidth            = 100 msgs/s
latency              = 375.0 ms
```

Graph

A lot of faults

```
default_delta        = 3 s
max_tries            = 3 tries
percentage_miss      = 16.0 %
percentage_faults    = 30.0 %
probability_to_fail = 30.0 %
bandwidth            = 200 msgs/s
latency              = 125.0 ms
```

Graph