DISTRIBUTED SYSTEMS PA4 REPORT

Shriprajwal K, Daksha S

A	B	C	D
	1	10	100
No failures	0.091	1.24	1.467
Interface failure	0.094	1.26	1.441
Replica failure	0.091	1.27	2.51
Leader failure	0.093	1.23	2.77
Throughput(No failure)	6	21	43

For 1 and 10 clients, we don't observe much variation in numbers as the number of servers is more than enough to comfortably handle incoming requests.

For 100 clients, though, the failures start making a difference. When a replica fails, the remaining nodes have to face more traffic, as the traffic that was supposed to be handled by the failed node gets redirected to the rest of the cluster. When the leader fails, additional time is needed to detect that the leader has failed, reorganize the cluster and re-run/restart the cluster and its operations.

We do not see a large increase in throughput despite having 5 nodes in the cluster as the operations get distributed throughout the cluster. All 5 nodes have to finish executing the operations for us to return a value.