Report

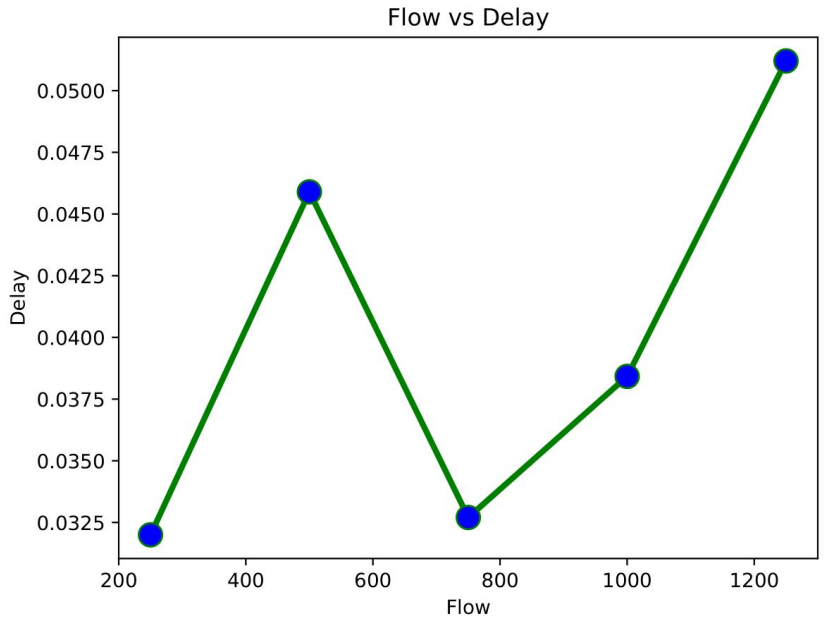
MAC Type : 802.15.4
IEEE standard 802.15.4 intends to offer the fundamental lower network layers of a type of wireless personal area network (WPAN) which focuses on low-cost, low-speed ubiquitous communication between devices. It can be contrasted with other approaches, such as Wi-Fi, which offer more bandwidth and requires more power. The emphasis is on very low cost communication of nearby devices with little to no underlying infrastructure, intending to exploit this to lower power consumption even more.

ROUTING PROTOCOL: DSDV - Destination-Sequenced Distance Vector routing
Destination-Sequenced Distance-Vector Routing (DSDV) is a table-driven routing scheme for ad hoc mobile networks based on the Bellman–Ford algorithm.If a router receives new information, then it uses the latest sequence number. If the sequence number is the same as the one already in the table, the route with the better metric is used. Stale entries are those entries that have not been updated for a while. Such entries as well as the routes using those nodes as next hops are deleted.

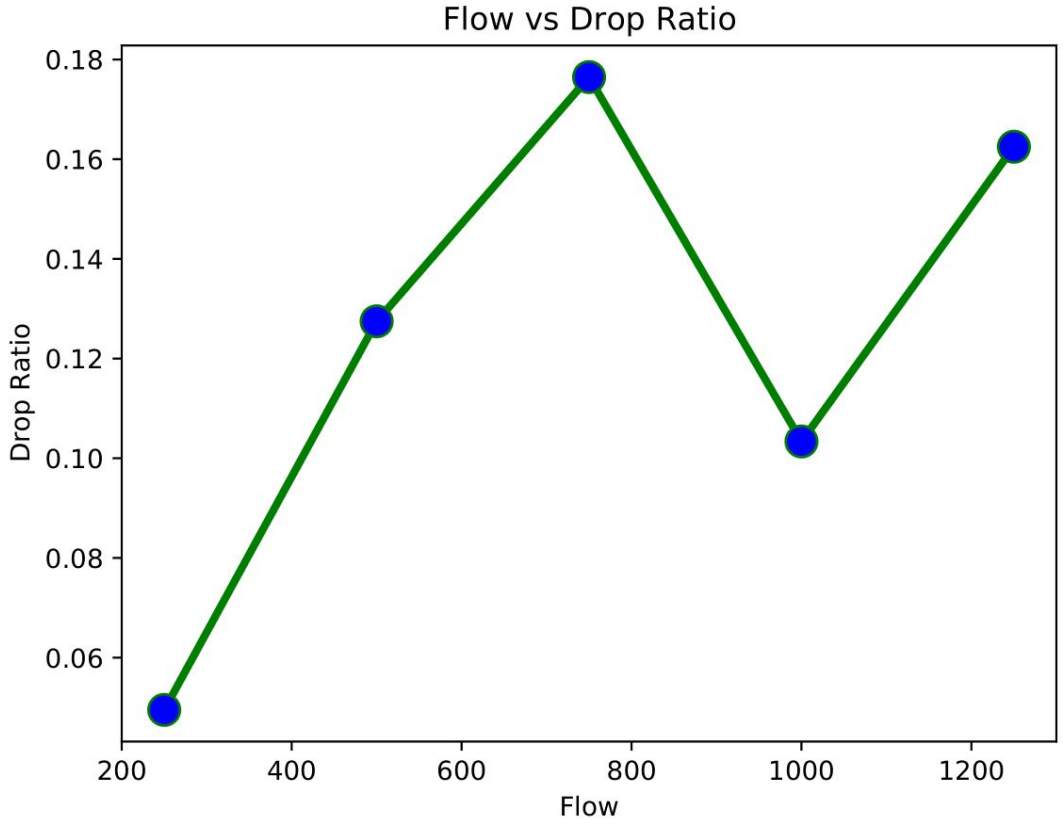
AGENT TYPE: TCP Reno
•The Reno TCP agent is very similar to the Tahoe TCP agent, except it also includes *fast recovery*, where the current congestion window is inflated. by the number of duplicate ACKs the TCP sender has received before receiving a new ACK.
•The Reno TCP agent does not return to slow-start during a fast retransmit. Rather, it sets the congestion window to half the current window and resets ssthresh_ to match this value.

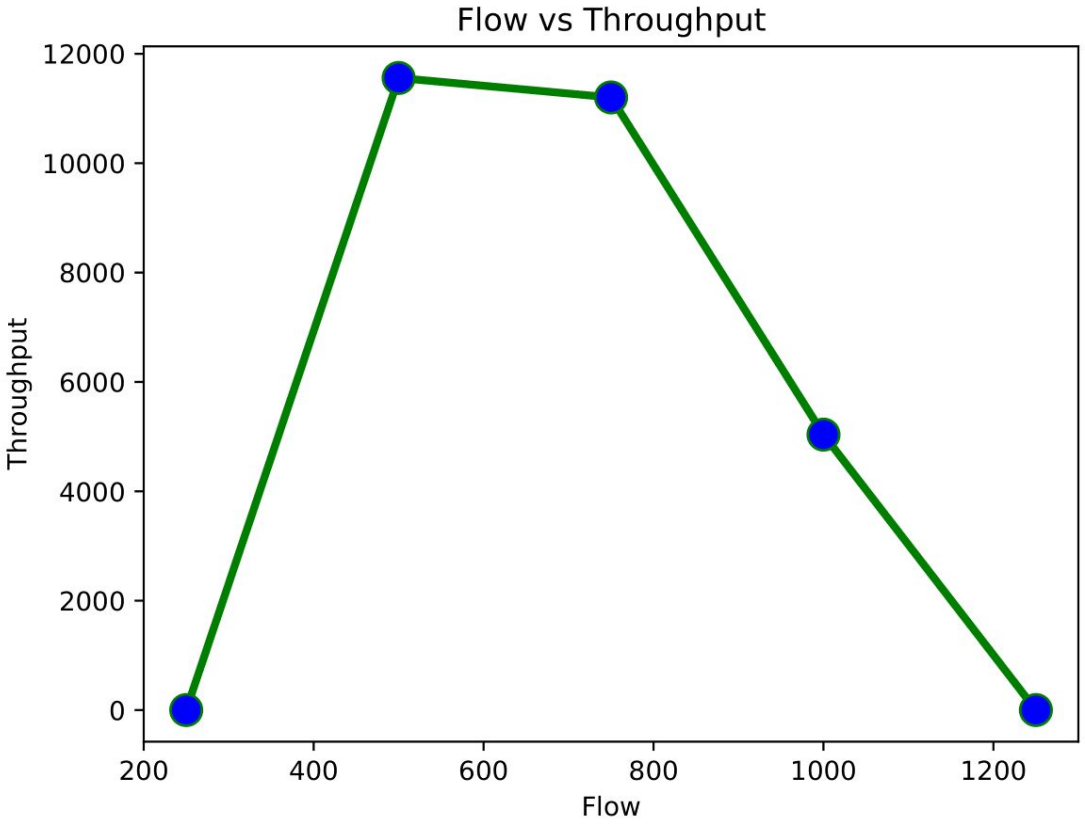
FTP APPLICATION: FTP
File Transfer Protocol(FTP) is an application layer protocol which moves files between local and remote file systems. It runs on the top of TCP, like HTTP. To transfer a file, 2 TCP connections are used by FTP in parallel: control connection and data connection.

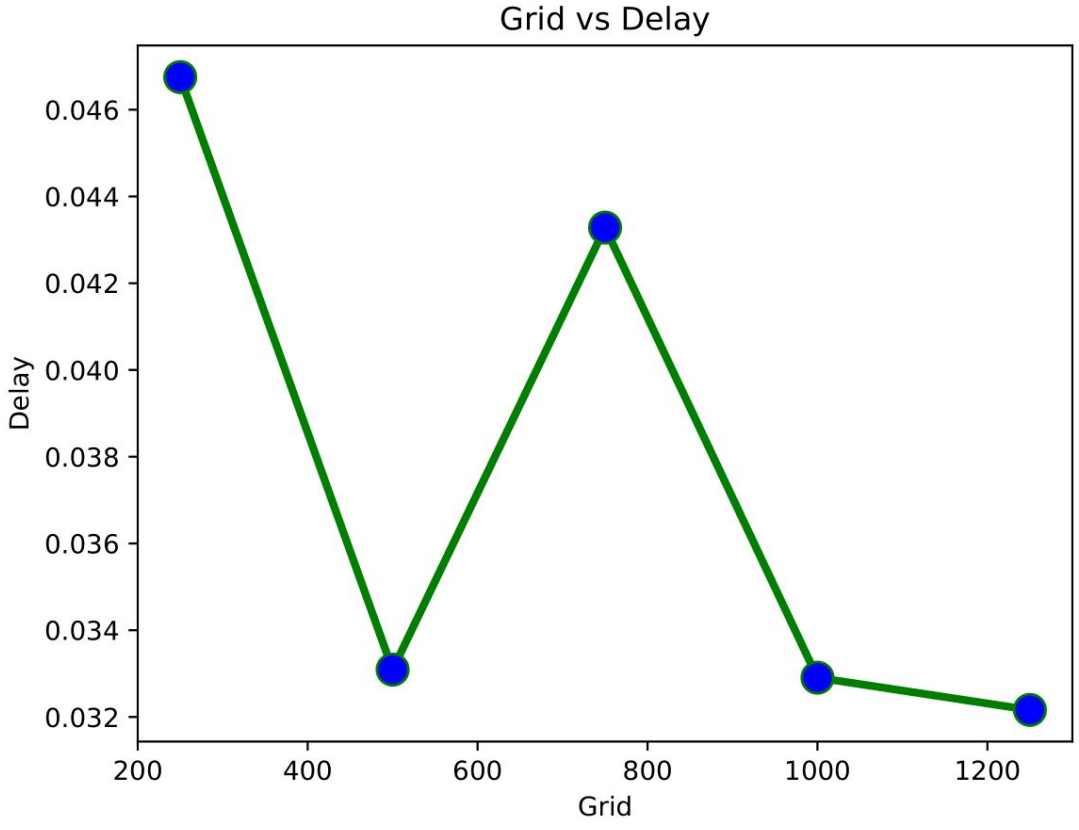
GRPHS:

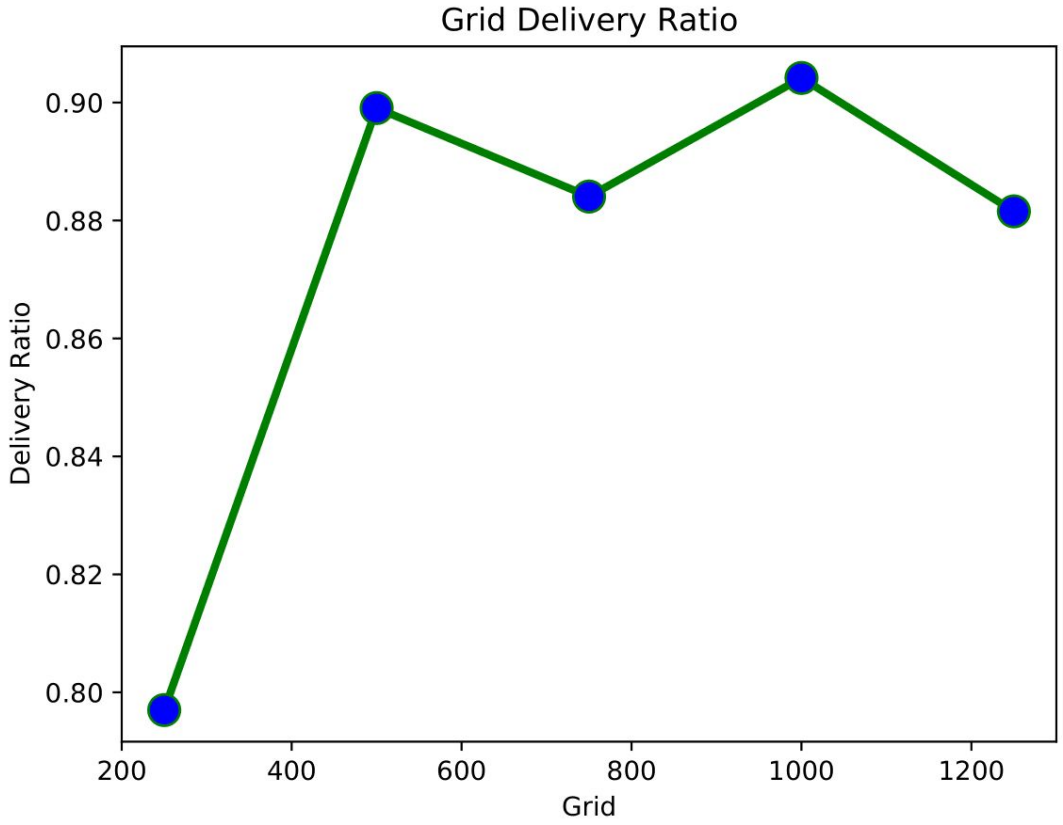


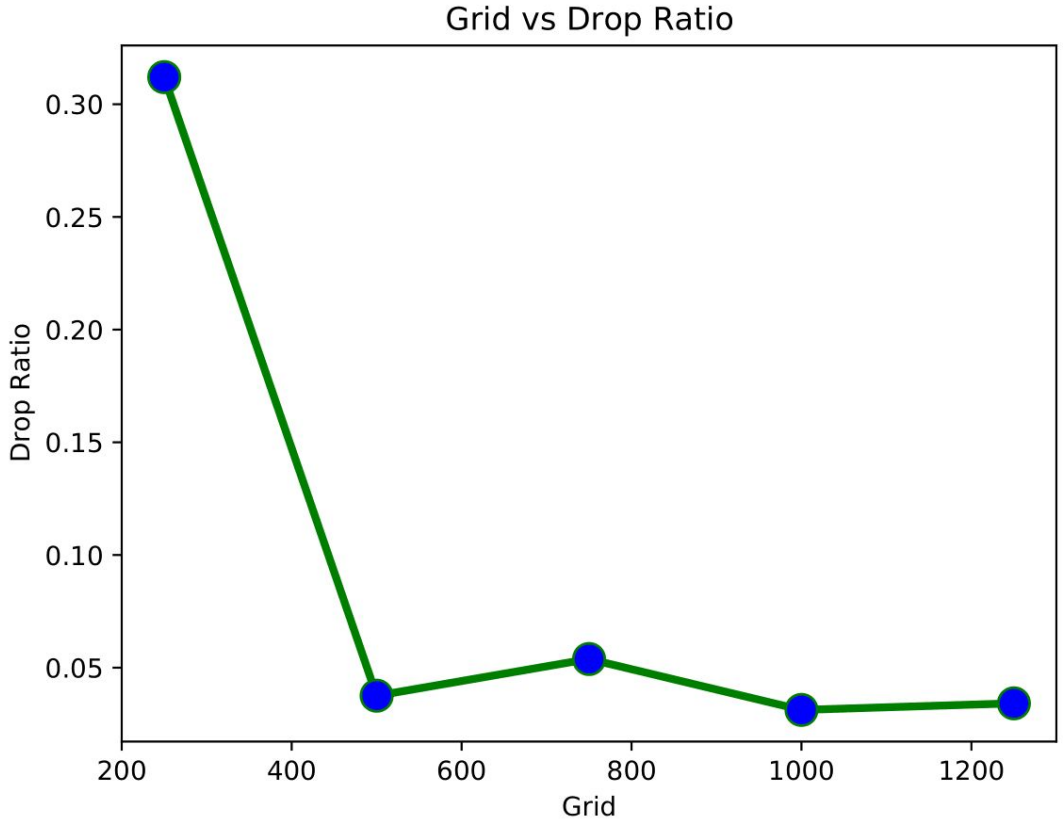

Flow Delivery Ratio
Delivery Ratio
0.96
0.94
0.92
0.90
0.88
0.86
0.84
0.82
0.80
200
400
600
800
1000
1200
Flow

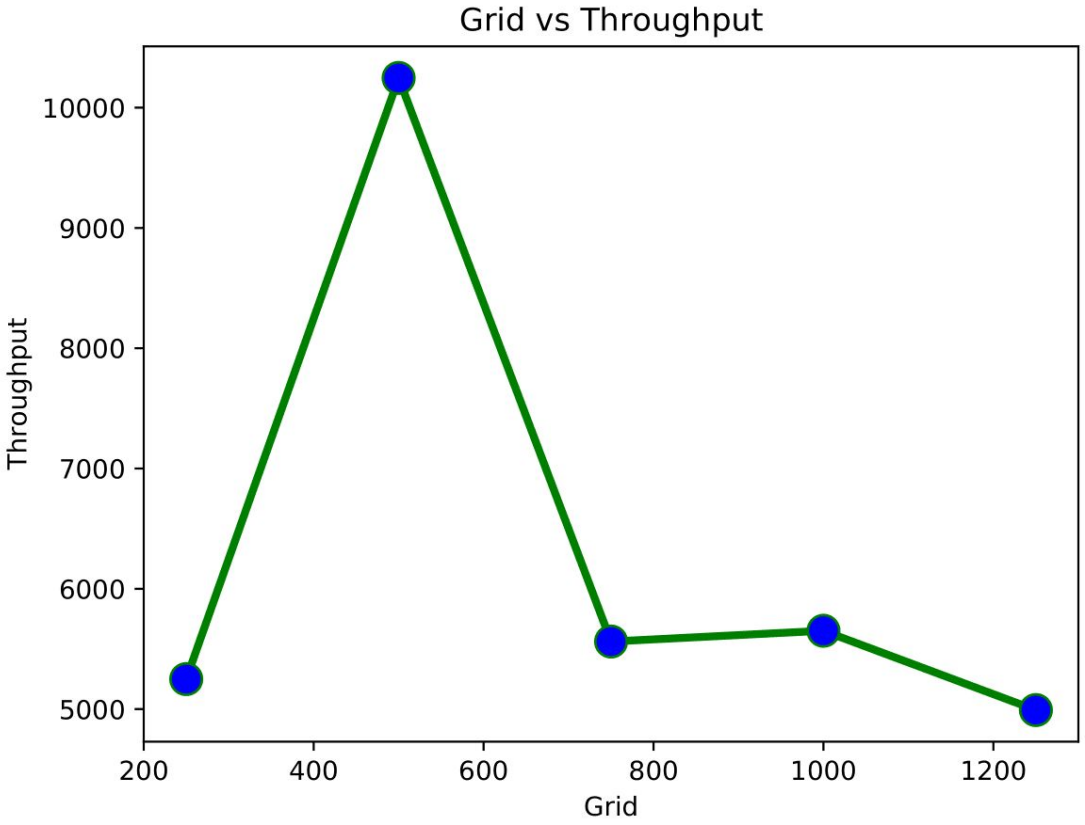

Flow vs Drop Ratio
Drop Ratio
0.18
0.16
0.14
0.12
0.10
0.08
0.06
200
400
600
800
1000
1200
Flow

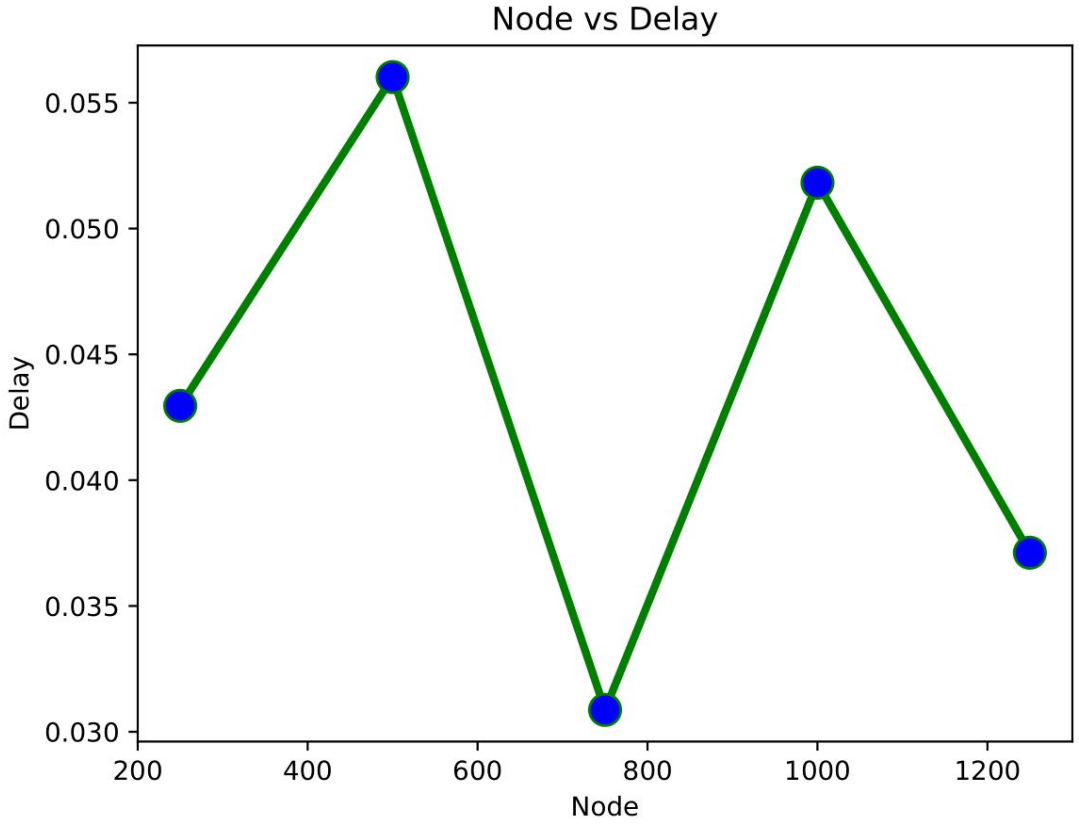

Flow vs Throughput
Throughput
Flow
12000
10000
8000
6000
4000
2000
0
200
400
600
800
1000
1200

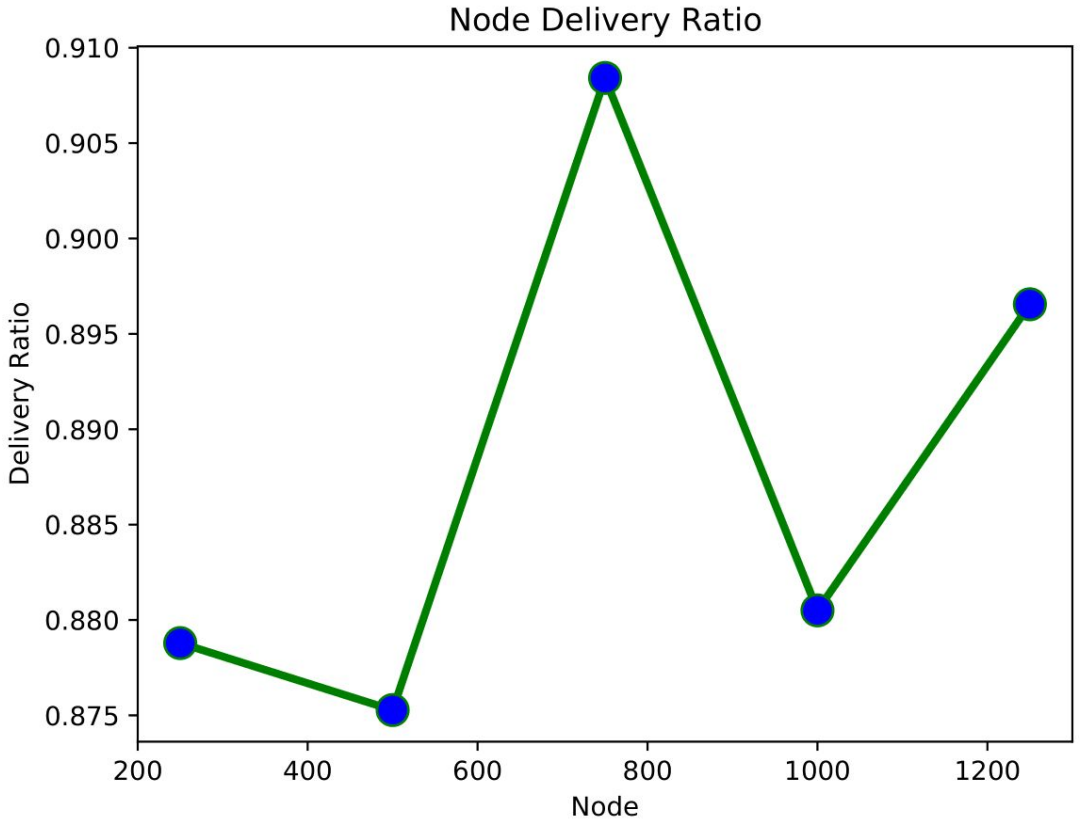

Grid vs Delay
Delay
Grid
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
200
400
600
800
1000
1200

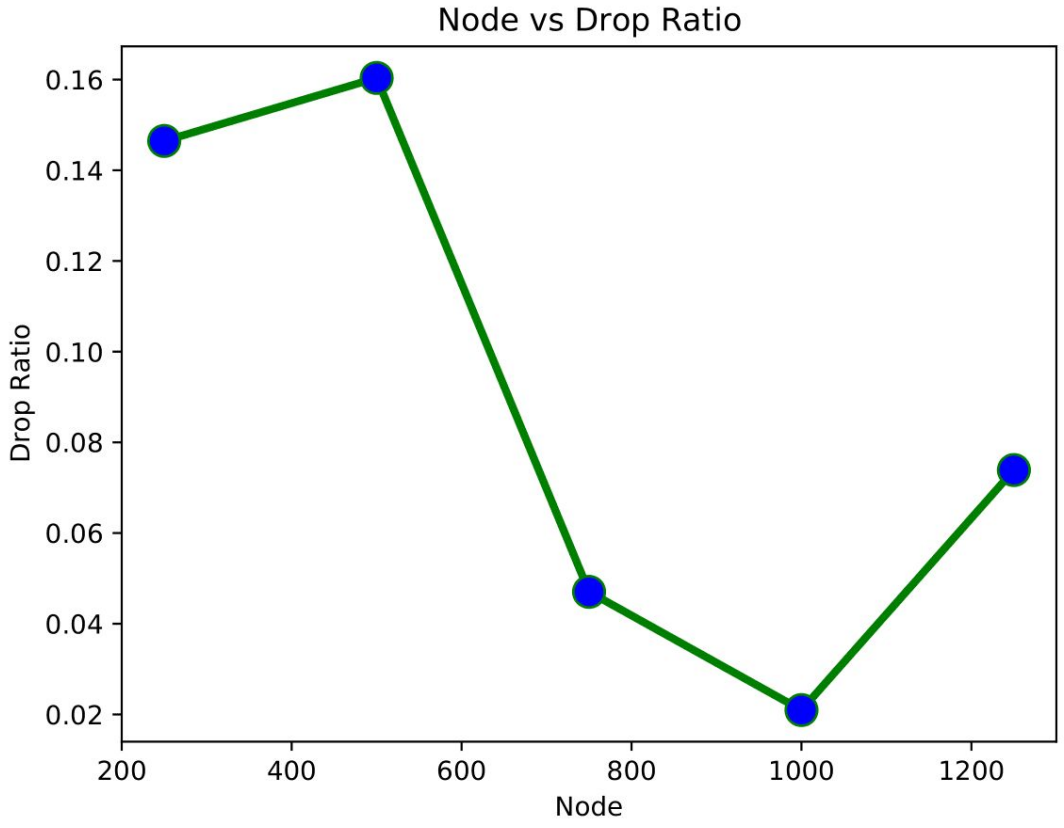

Grid Delivery Ratio
Delivery Ratio
0.90
0.88
0.86
0.84
0.82
0.80
200
400
600
800
1000
1200
Grid

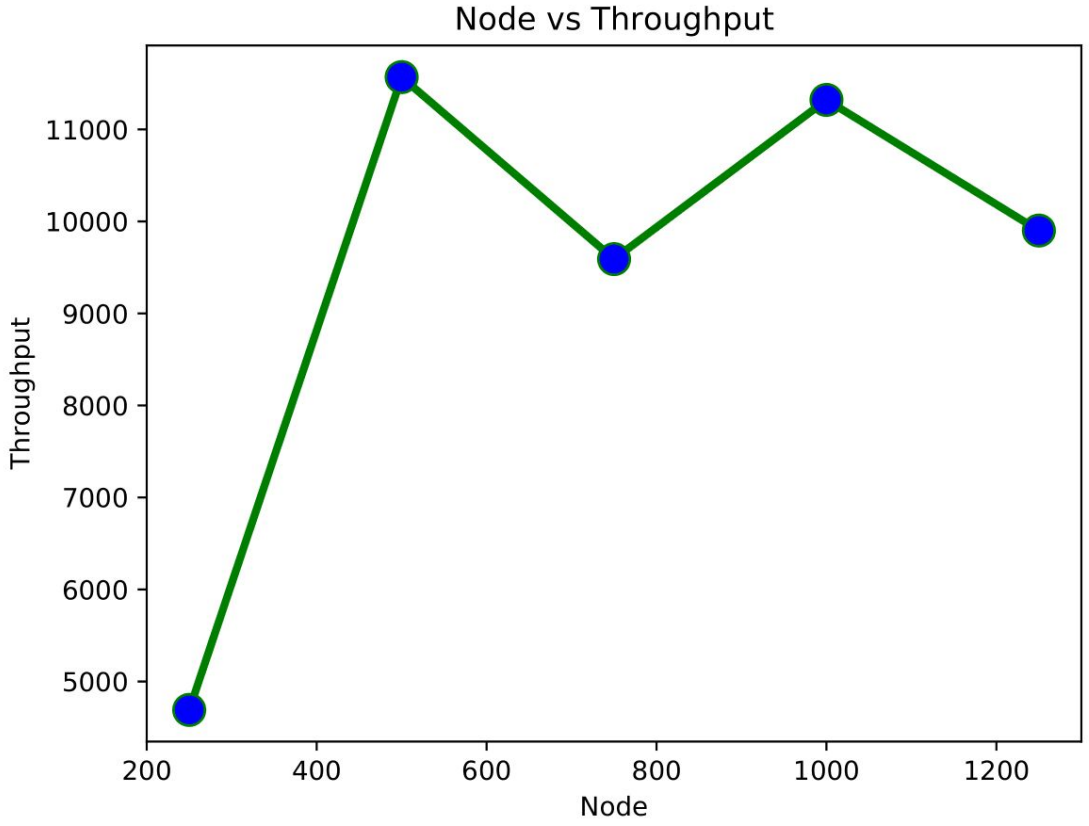

Grid vs Drop Ratio
Drop Ratio
0.30
0.25
0.20
0.15
0.10
0.05
200
400
600
800
1000
1200
Grid


Grid vs Throughput
Throughput
10000
9000
8000
7000
6000
5000
200
400
600
800
1000
1200
Grid


Node vs Delay
Delay
0.055
0.050
0.045
0.040
0.035
0.030
200
400
600
800
1000
1200
Node


Node Delivery Ratio
Delivery Ratio
0.910
0.905
0.900
0.895
0.890
0.885
0.880
0.875
200
400
600
800
1000
1200
Node


Node vs Drop Ratio
Drop Ratio
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
200
400
600
800
1000
1200
Node


Node vs Throughput
Throughput
11000
10000
9000
8000
7000
6000
5000
200
400
600
800
1000
1200
Node

Observations:

Throughput:
The ThroughPut increases according to the increase of the number of NODES, decreases according to the increasing number of Size of Graphs, and in case of FLOW, at first it decreases but after some time it decreases according to the increasing number of FLOW

DROP RATIO:
In case of increasing number of nodes, the drop decreases slowly then it increases.
In case of increasing number of size of graphs, the drop ratio decreases gradually
In case of an increasing number of FLOW, at first it increases then it decreases and again it increases.

DELIVERY RATIO:
The DROP RATIO increases according to the increase of the number of NODES, decreases and again decreases according to the increasing number of Size of Graphs, and in case of FLOW, at first it decreases but after some time it decreases according to the increasing number of FLOW

DELAY:
In case of nodes, it decreaes according to the increasing number of nodes, decreases according to the increasing number of grid , and increases according to the increasing number of flow.