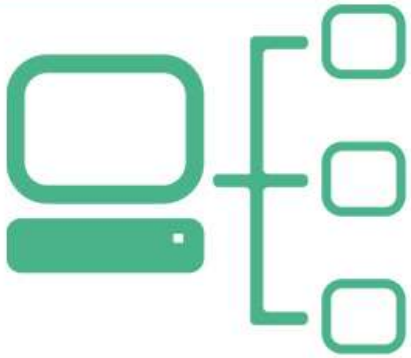
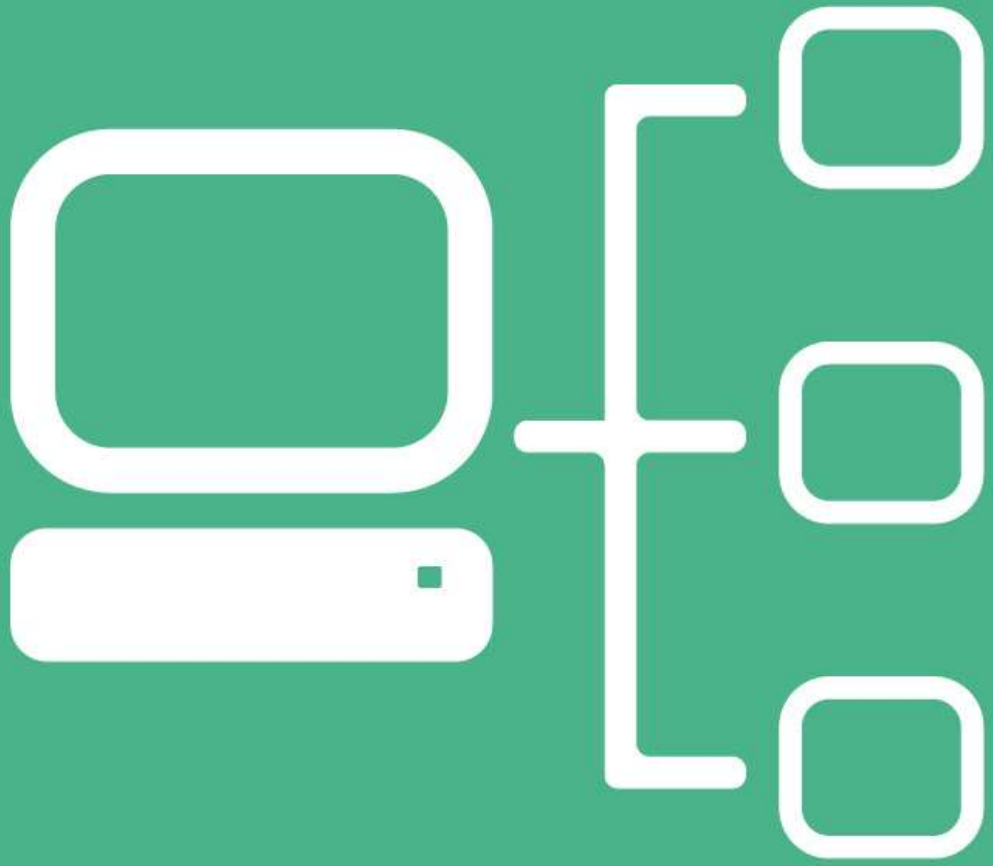


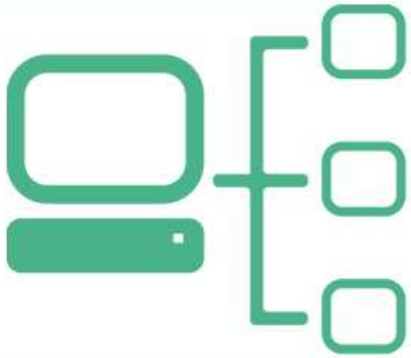
Welcome
To
Our Presentation

Quality of Service



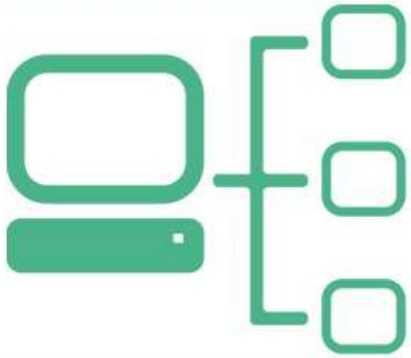
Data Communication

Context



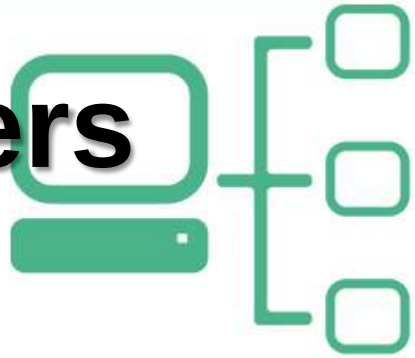
- Definition.
- Parameters.
- Flow Characteristics.
- Techniques to improve.
- Resource Reservation.
- Application.

Quality Of Service (QoS)



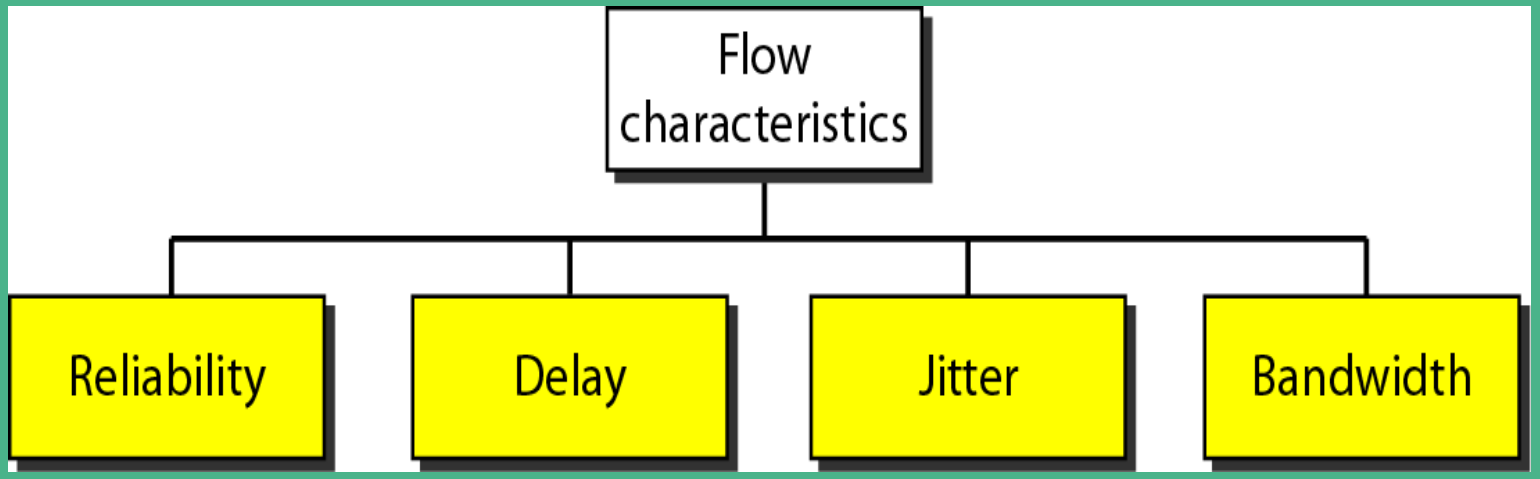
“The ability of the network to provide better or "special" service to a set of dataflow to the detriment of other dataflow”

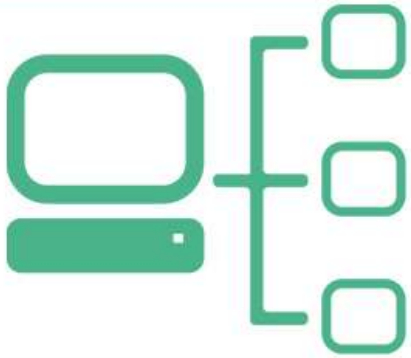
QoS parameters



- Flow data transfer.
- Transit time when transferring data.
- Residual error rate.
- Transfer Probability incident.
- Probability of failure of the network connection.
- Release time the network connection.

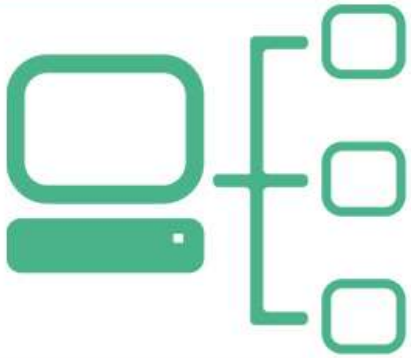
Flow Characteristics





- **Reliability**: Lack of Reliability means losing a packet or ack.
- **Delay**: Different applications can tolerate delay in different degrees.
- **Jitter**: Jitter is the variation in packets belonging to same flow.
- **Bandwidth**: Different application need different bandwidths.

Techniques to improve the Quality Of Service(QoS)



→**Scheduling**

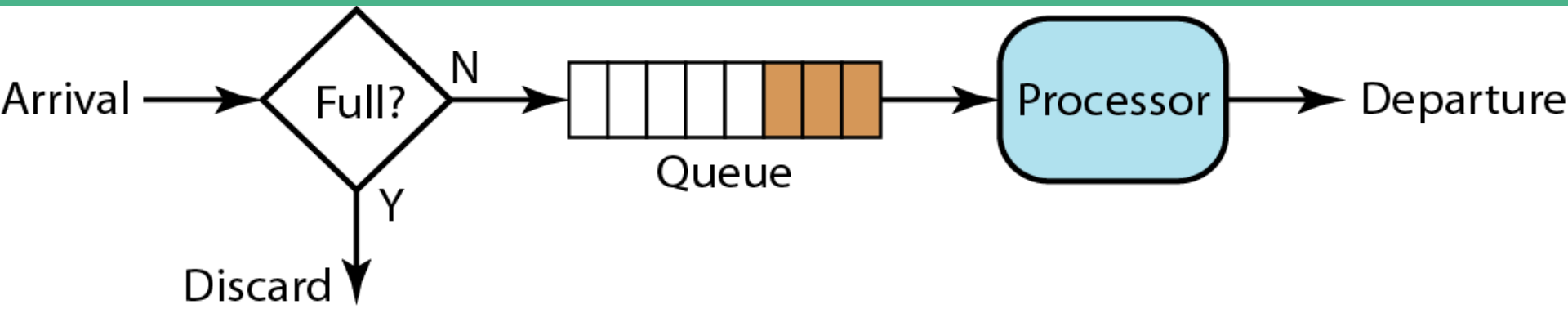
- FIFO QUEUING
- PRIORITY QUEUING
- WEIGHTED FAIR QUEUING

→**Traffic Shaping**

- LEAKY BUCKET
- TOKEN BUCKET

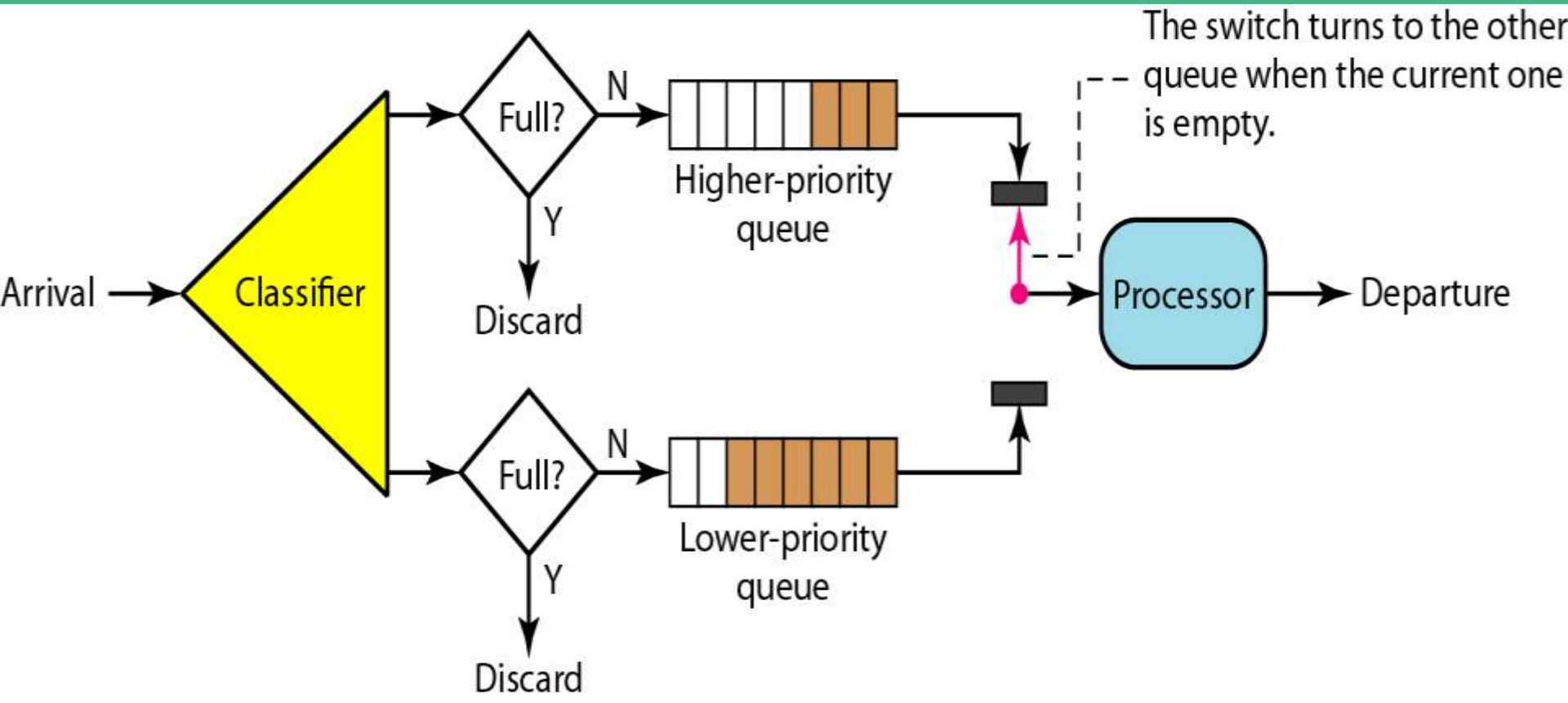
Scheduling

- FIFO QUEUING

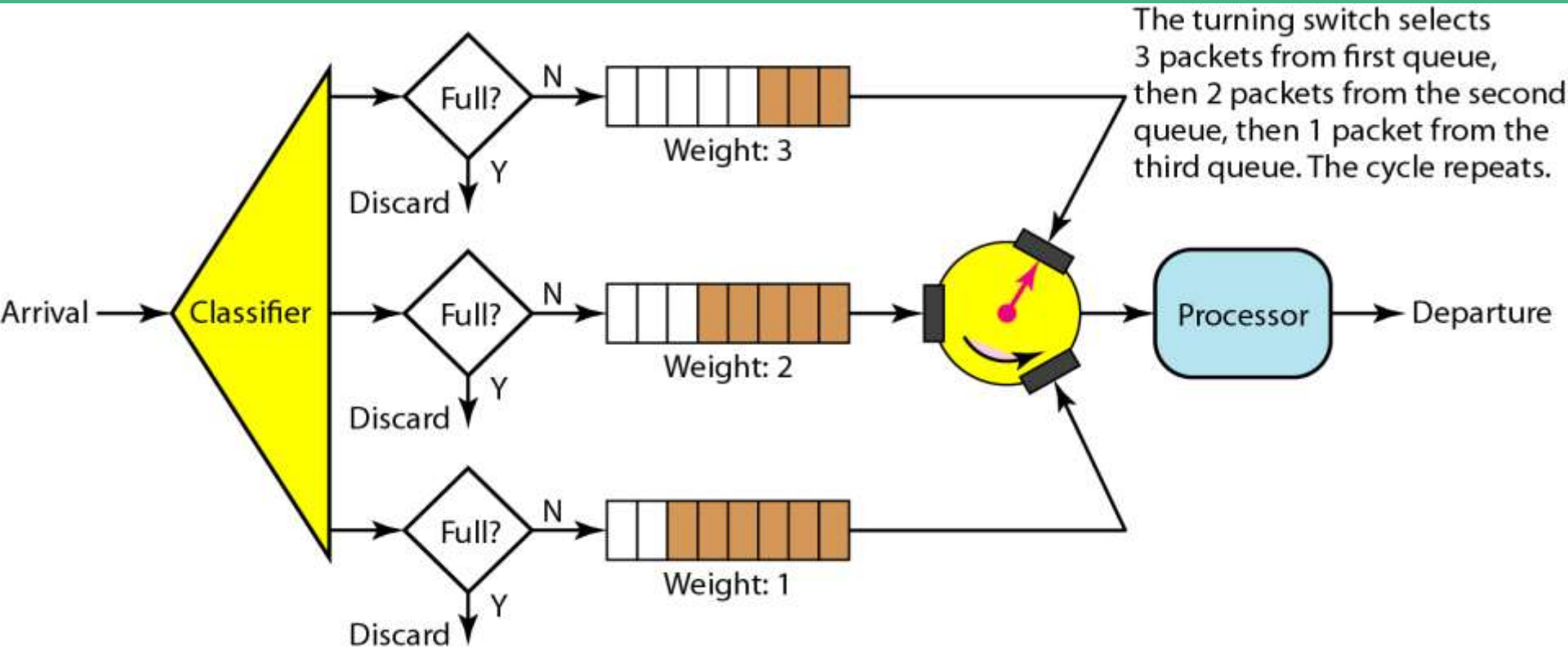


- Packets wait in a buffer (queue) until the node is ready to process them.

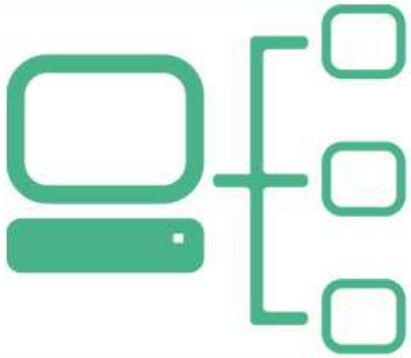
Priority Queuing



Weighted Fair Queuing



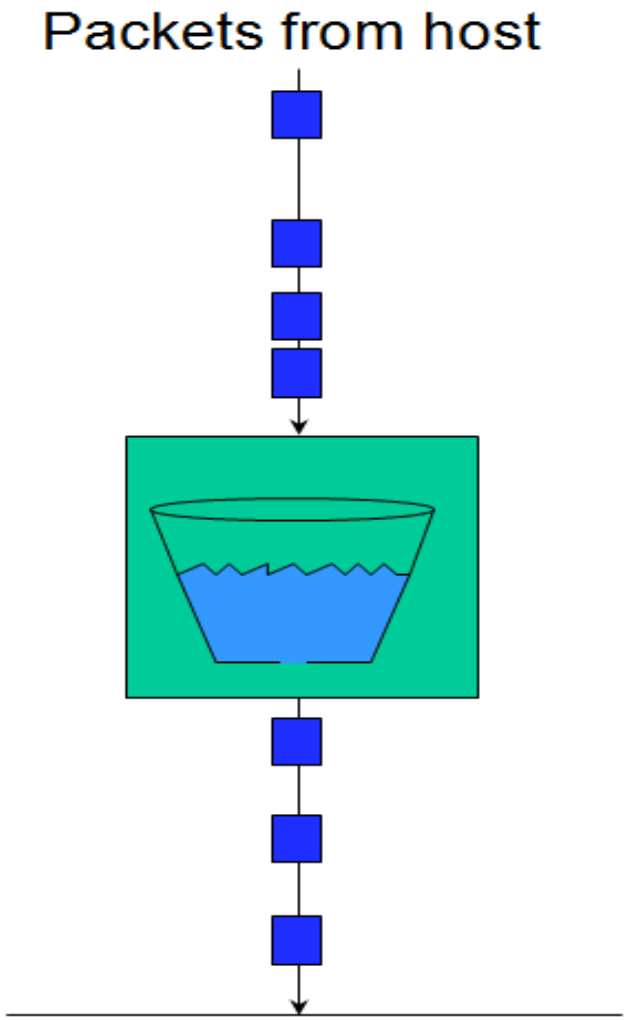
Traffic Shaping



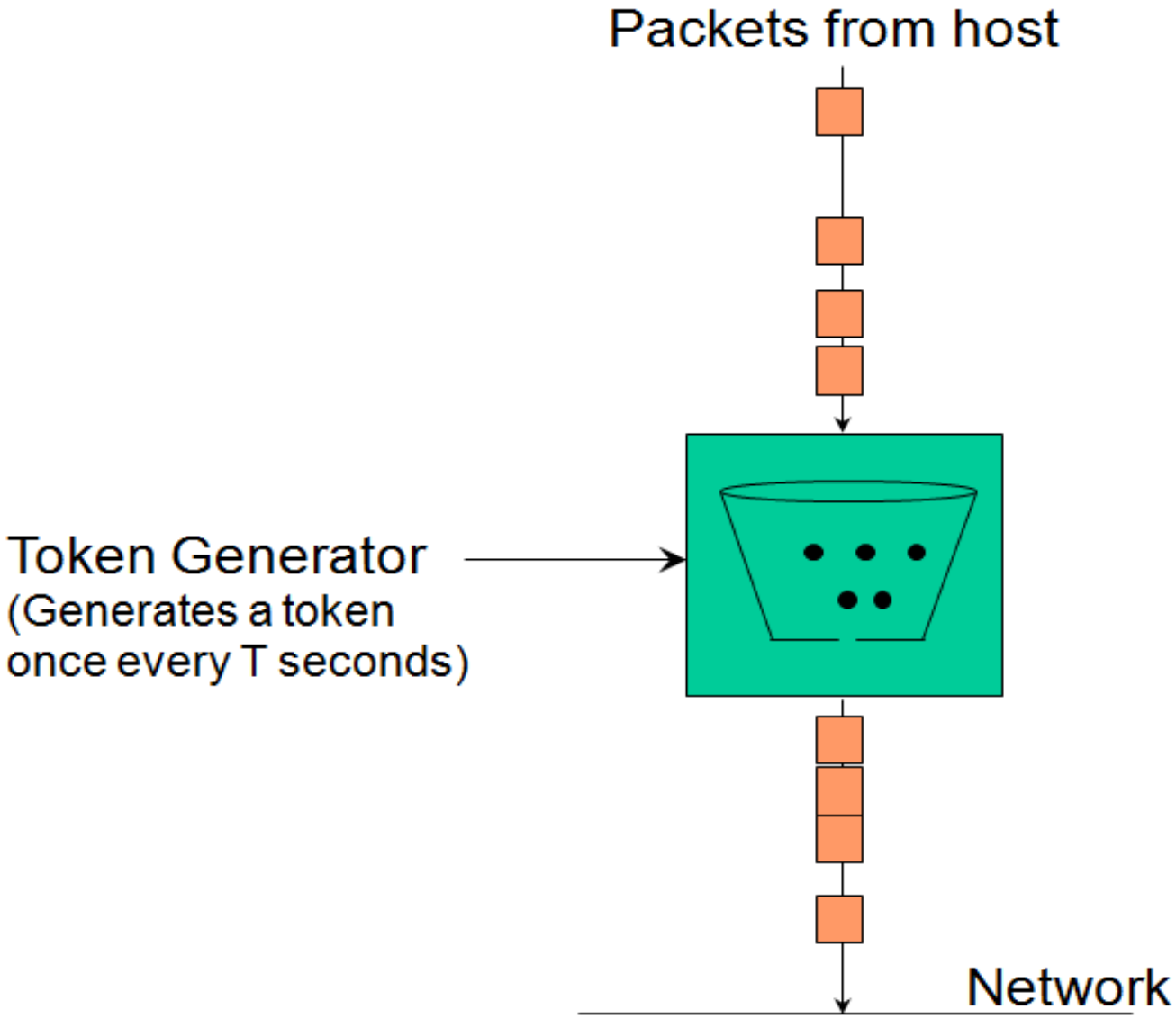
Is the mechanism to control the amount and the rate of the traffic sent to the network

Leaky Bucket

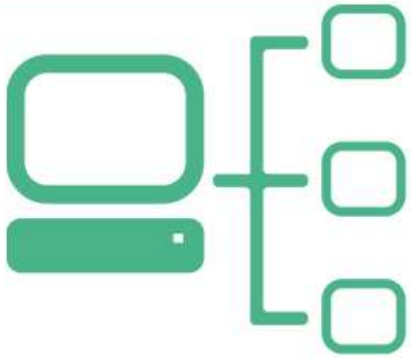
Leaky
Bucket



Token Bucket

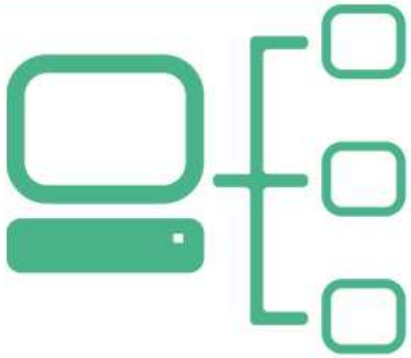


Resource Reservation



- A flow of data needs resources such as buffer, bandwidth, CPU time, and so on .
- QoS can be improved if these resources are reserved beforehand.

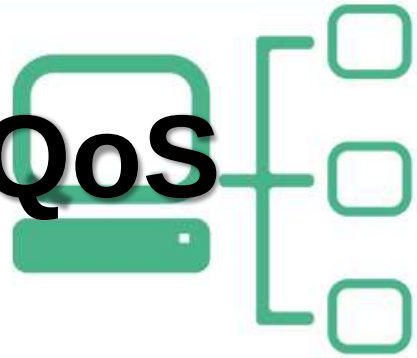
Admission Control



- Routers or switches puts restrictions on the admission of packets from host.

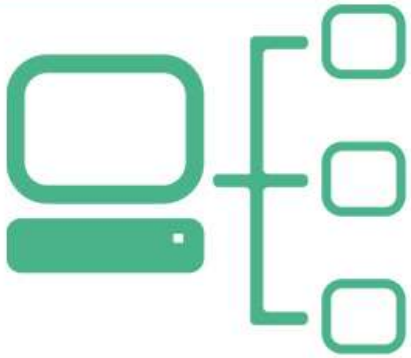
- Before a router accepts the flow , it checks the flow for specifications in terms of bandwidth , buffer size ,cpu speed etc.

Importance of QoS



- Growth of real-time network application is fast.
- Growth of bandwidth cannot catch up the needs.
- Simply expanding bandwidth is not effective.
- Solution: Good management of bandwidth.

Application Of QoS



- Mobile communication
- Real-time video and sound transmission
- Interactive applications on network
- Routing for traffic with performance guarantees
- QoS-aware ATM application

Any Question


THANK
YOU
return