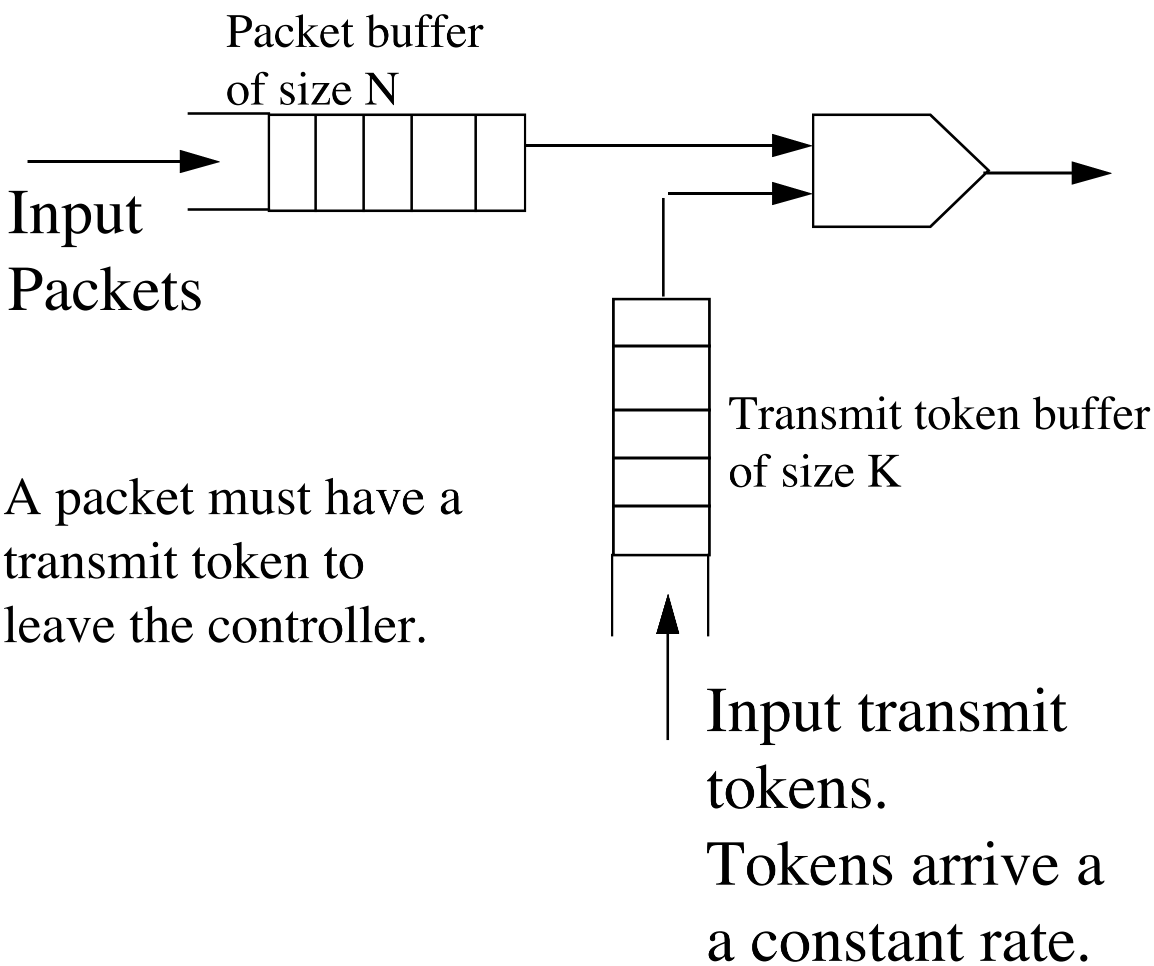
Rate Control

Leaky Bucket

- Open loop modification of the flow into the network.



A packet must have a transmit token to leave the controller.

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- Modes of operation
  - Packets arriving to an empty token buffer are discarded,
    i.e, N=0.
  - Packets arriving to an empty token buffer are marked
- Scheme controls
  - Average rate into the system
  - Maximum burst size into the system

Rate Control

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- Example:
  - Suppose the system had no arrivals for a *long* time, then the packet buffer would be empty and the token buffer would be full, i.e. have K tokens.
  - A large burst of packets arrive.
  - K consecutive packets would be transmitted and then packets would be *leaked* into the systems at the token arrival rate.
- K controls the maximum burst size
- The token arrival rate controls the average transmission rate