Packet Flow in Shadow

Sending hosts

Applications

Socket buffers
--socket-send-buffer

Interface

Applications call `sendto` to place packet in socket buffer

If socket buffer is full (-1 returned and errno set to EAGAIN)

Interface takes packet from socket buffer and places it in discrete event queue

At rate controlled by `bandwidthup`

Discrete event queue

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Packets routed to receiving host

At a rate controlled by `packetloss`

Packets taken from discrete event queue and placed in interface receive buffer

If interface receive buffer is full

Receiving hosts

Interface receive buffer
--interface-buffer

Socket buffers
--socket-recv-buffer

Applications

Packet taken off interface receive buffer and placed on socket buffer

If socket buffer is full

At rate controlled by `bandwidthdown`

Application calls `readfrom` to receive packet

Rate limiting

Packet dropping