

Claims:

1. A method for congestion management in a network comprising:
 - provisioning a deactivation level and a first activation level, wherein the deactivation level is less than the first activation level;
 - monitoring, by a first data-processing system, an ingress interface for utilization by incoming packets;
 - only if the utilization rises above the first activation level, transmitting a first message to a second data-processing system, wherein the second data-processing system is a source of at least some of the incoming packets, and wherein the first message indicates that traffic shaping is to occur in accordance with the first activation level; and
 - only if the utilization falls below the deactivation level, transmitting a second message to the second data-processing system, wherein the second message indicates that traffic shaping is to cease.
2. The method of claim 1 further comprising:
 - provisioning a second activation level wherein the second activation level is greater than the first activation level; and
 - only if the utilization rises above the second activation level, transmitting a third message to the second data-processing system, wherein the third message indicates that traffic shaping is to occur in accordance with the second activation level.
3. The method of claim 2 wherein at least one of the first activation level, and the second activation level is based on the speed (e.g., PIR) of the ingress interface.
4. The method of claim 3 wherein the monitoring of the ingress interface occurs at a first sampling rate for the purpose of determining whether to signal to the second data-processing system to activate traffic shaping, and at a second sampling rate for the purpose of determining whether to signal to the second data-processing system to deactivate traffic shaping.

5. The method of claim 4 wherein the second sampling rate is less frequent than the first sampling rate.
6. The method of claim 5 wherein if the utilization falls below the second activation level, the first data-processing system transmits the second message only if the utilization has also fallen below the deactivation level.
7. The method of claim 6 further comprising resetting a counter for monitoring for deactivation of traffic shaping if utilization rises above the deactivation level after the counter has been started by the utilization falling below a predetermined level.
8. The method of claim 7 wherein the predetermined level is the deactivation level.
9. The method of claim 7 wherein the predetermined level is one of the first activation level and the second activation level.
10. The method of claim 8 wherein the first data processing system is a spoke device.
11. An apparatus for congestion management in a network comprising:
 - a processor configured to:
 - provision a deactivation level and a first activation level, wherein the deactivation level is less than the first activation level, and
 - monitor an ingress interface for utilization by incoming packets;
 - a transmitter configured to:
 - only if utilization rises above the first activation level, transmit a first message to a second data-processing system, wherein the second data-processing system is a source of at least some of the incoming packets, and wherein the first message indicates that traffic shaping is to occur in accordance with the first activation level, and
 - only if the utilization falls below the deactivation level, transmit a second message to the second data-processing system, wherein the second message indicates that traffic shaping is to cease.

12. The apparatus of claim 11 further comprising:

wherein the processor is further configured to provision a second activation level wherein the second activation level is greater than the first activation level; and

wherein the transmitter is further configured to only if the utilization rises above the second activation level, transmit a third message to the second data-processing system, wherein the third message indicates that traffic shaping is to occur in accordance with the second activation level.

13. The apparatus of claim 12 wherein at least one of the first activation level, and the second activation level is based on the speed (e.g., PIR) of the ingress interface.

14. The apparatus of claim 13 wherein the monitoring of the ingress interface occurs at a first sampling rate for the purpose of determining whether to signal to the second data-processing system to activate traffic shaping, and at a second sampling rate for the purpose of determining whether to signal to the second data-processing system to deactivate traffic shaping.

15. The apparatus of claim 14 wherein the second sampling rate is less frequent than the first sampling rate.

16. The apparatus of claim 15 wherein if the utilization falls below the second activation level, the first data-processing system transmits the second message only if the utilization has also fallen below the deactivation level.

17. The apparatus of claim 16 wherein the processor is further configured to reset a counter for monitoring for deactivation of traffic shaping if utilization rises above the deactivation level after the counter has been started by the utilization falling below a predetermined level.

18. The apparatus of claim 17 wherein the predetermined level is the deactivation level.

19. The apparatus of claim 17 wherein the predetermined level is one of the first activation level and the second activation level.

20. The apparatus of claim 18 wherein the first data processing system is a spoke device.