

## Sample Process for Controlling the Simple Shared Shaper Algorithm

The simple shared shaper in this example contains two constituents, best-effort and video. The shared-shaping rate is 15 Mbps, and the video rate is 4 Mbps.

The example contains two parts: when the video flow is turned on, and then turned off.



**NOTE:** The rates in this example are approximate and for illustrative purposes only. Your configuration might yield different results based on network variables.

### Starting Video Flow

Table 1 on page 1 lists the dynamic rate when the video flow is turned on for the five classes of simple shared shaper variables. Results vary because the amount of video measured in the first rising period is random, in the range 0–4 Mbps non-inclusive.

**Table 1: Rising Edge Sample When Video Flow Starts**

| Period of Dynamic Rate, in Kbps |       |       |       |       |       |       |       |       |       |       |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Control                         | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| Most liberal                    | 15000 | 13080 | 11000 | 11000 | 11000 | 11000 | 11000 | 11000 | 11000 | 11000 |
| Liberal                         | 15000 | 9542  | 8880  | 10470 | 10867 | 10972 | 10979 | 10994 | 10998 | 10994 |
| Moderate                        | 15000 | 6510  | 5606  | 8303  | 9651  | 10329 | 10628 | 10814 | 10967 | 10953 |
| Conservative                    | 15000 | 6022  | 1604  | 3953  | 5714  | 7038  | 7978  | 8733  | 9300  | 9735  |
| Most conservative               | –     | –     | –     | –     | –     | –     | –     | –     | –     | –     |

In this example, a liberal maximum VOQL value is ineffective because the 15 Mbps shared-shaping rate is much higher than the 4 Mbps video rate. The video rate divided by the shared shaping rate is 26.6 percent, so any value higher than this has no effect.

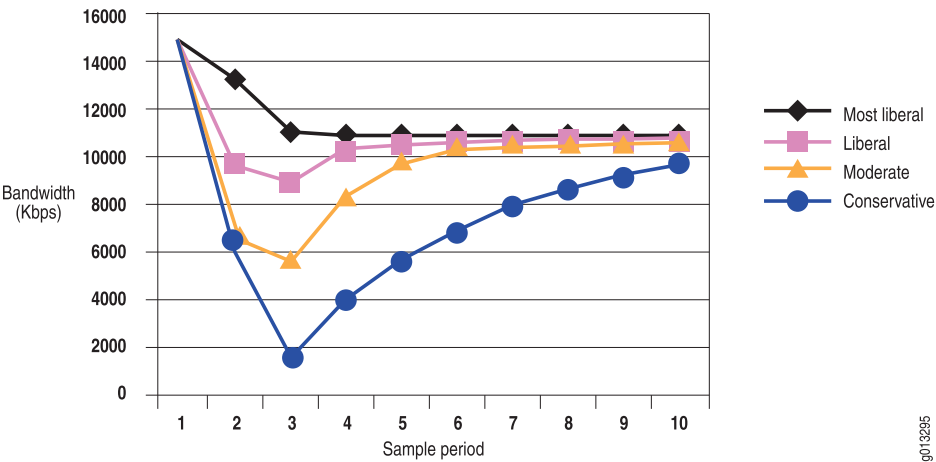


**NOTE:** The rates in this example represent approximate egress-queue enqueue rates on an Ethernet line module; therefore, there is no ATM SAR or downstream devices are not used. More liberal configurations can be inappropriate when there might be queuing between the scheduler and the destination. VLAN queuing is used, and saturation rates are offered.

The most liberal case heavily reduces VOQL and changes of rate, leading to a shared shaper that quickly converges. The conservative configuration overreacts to VOQL and the change of rate, and converges very slowly.

Figure 1 on page 2 shows a graph of the dynamic rate when the video flow starts.

Figure 1: Dynamic Rate When Video Flow Starts



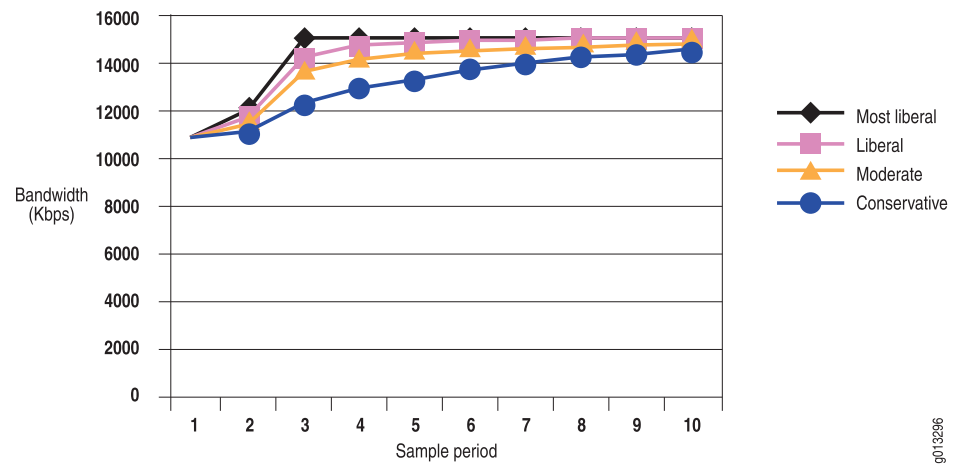
**Stopping Video Flow** Table 2 on page 2 lists the dynamic rate as the video flow stops for the five classes of simple shared shaper controls. Results might vary because the amount of video measured in the first falling period is random, in the range 0–4 Mbps non-inclusive.

Table 2: Data When Video Flow Stops

| Period of Dynamic Rate, in Kbps |       |       |       |       |       |       |       |       |       |       |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Control                         | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| Most liberal                    | 11000 | 12132 | 15000 | 15000 | 15000 | 15000 | 15000 | 15000 | 15000 | 15000 |
| Liberal                         | 11000 | 11584 | 14146 | 14786 | 14946 | 14986 | 14996 | 14999 | 14999 | 15000 |
| Moderate                        | 11000 | 11728 | 13364 | 14182 | 14591 | 14795 | 14897 | 14948 | 14974 | 14987 |
| Conservative                    | 10955 | 11278 | 12208 | 12906 | 13429 | 13822 | 14116 | 14337 | 14503 | 14701 |
| Most conservative               | –     | –     | –     | –     | –     | –     | –     | –     | –     | –     |

Figure 2 on page 3 shows a graph of the dynamic rate when the video flow stops.

**Figure 2: Dynamic Rate When Video Flow Stops**



- Related Topics**
- Simple Shared Shaping Algorithm Overview
  - Variables of the Simple Shared Shaper Algorithm
  - Configuring Simple Shared Shaper Algorithm Variables

