

Continuous FTP Streams for Class of Service Testing

By Sascha Chwalek



The JDSU SmartClass TPS tester is the ideal tool for technicians who install, troubleshoot, and maintain Triple-Play services.

Test Challenge

The development of new Internet Protocol (IP)-packet-based Triple-Play services delivered over the Access network places new demands on network designs. Each service has its own specific quality of service (QoS) requirements, all with varying bandwidth demands that are dynamic in nature and, as a result, require prioritized treatment of the services. The interaction between competing application bandwidth demands may affect each individual QoS. Testing individual applications in a sterile environment will not reveal problems that manifest in the presence of mixed application traffic flows, thus requiring a new approach for analyzing these interactions—a Class of Service (CoS) approach.

Addressing the Challenge with SmartClass TPS

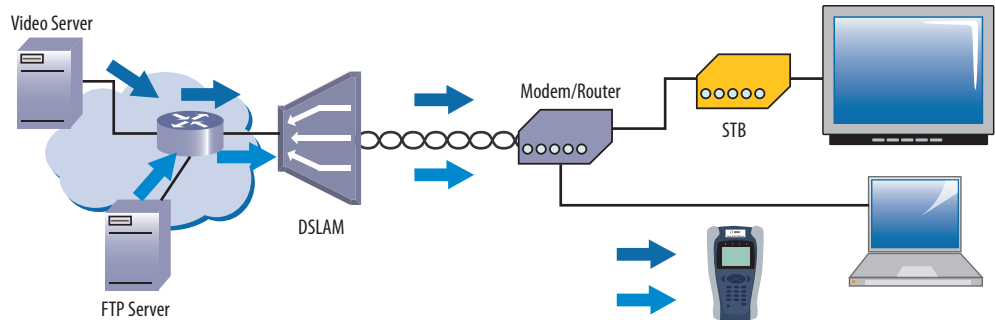
SmartClass TPS users can request a continuous File Transfer Protocol (FTP) upload or download stream, establish a video stream and, subsequently, a second video stream. These streams enable verification of the CoS design parameters such as prioritization between data and IP video services. Below are the results screens for one and two video streams under test and the resulting impact on the QoS.

1 Packet Loss		Packet Jitter Stats
Current Loss QoS	Good	
History Loss QoS	Good	
Continuity Errors	0	
Current Cont Error	0 %	
Maximum Cont Error	0 %	
RTP Packets Lost	0	
Current RTP Lost	0 %	
Maximum RTP Lost	0 %	

Test with only one video stream shows good QoS.

1 Packet Loss		Packet Jitter Stats
Current Loss QoS	Poor	
History Loss QoS	Poor	
Continuity Errors	2529	
Current Cont Error	9 %	
Maximum Cont Error	9 %	
RTP Packets Lost	1138	
Current RTP Lost	21 %	
Maximum RTP Lost	21 %	

Test with a parallel FTP download that dramatically decreases the IP Video QoS. Data and IP video are competing for bandwidth resources. The prioritization mechanisms for an error-free IP video experience work incorrectly resulting in large packet losses for video services.



SmartClass TPS requests a repeat FTP download stream that verifies the CoS prioritization mechanisms work when testing IP video services.

Conclusion

The SmartClass TPS continuous FTP stream and video service test features can verify realistic customer service. While processing a continuous FTP download stream, IP video will compete for bandwidth resources. By using the SmartClass TPS continuous FTP stream feature, technicians easily verify that the FTP stream is running in the background while simultaneously operating the video service test feature. With a traditional tester, either FTP or video run as single applications on the tester or, if the tester supports FTP and video, the technician does not know if the FTP download is still in progress or already downloaded while operating in video. Using the SmartClass TPS, operators and service providers can now verify that the CoS prioritization mechanisms work correctly.

Test & Measurement Regional Sales

NORTH AMERICA TEL: 1 866 228 3762 FAX: +1 301 353 9216	LATIN AMERICA TEL: +1 954 688 5660 FAX: +1 954 345 4668	ASIA PACIFIC TEL: +852 2892 0990 FAX: +852 2892 0770	EMEA TEL: +49 7121 86 2222 FAX: +49 7121 86 1222	WEBSITE: www.jdsu.com/test
---	--	---	---	--