Wowza Transcoder performance benchmark

All tests were conducted in compliance with the guidelines for capturing transcoder performance benchmark numbers as described in the article as available on the date that this document was published.

https://www.wowza.com/docs/how-to-capture-wowza-transcoder-benchmark-statistics

A separate server was set up within the same AWS VPC with the LoopUntilLive module that played Big Buck Bunny 720p @ 5.6 Mbps. Stream Targets pushed gradually more streams to the test server over the VPC internal network.

http://download.blender.org/peach/bigbuckbunny_movies/big_buck_bunny_720p_h264.mov

Test Servers

Server 1

- **EC2 instance:** g3.4xlarge
- **Cores/Threads:** 16 virtual cores with 2 EC2 Compute Units each
- **Memory:** 122 GB
- **vCPU:** 16 (Intel(R) Xeon(R) CPU E5-2686 v4 @ 2.30GHz)
- **OS:** Amazon Linux
- **Java:** 1.8.0_77
- **GPU/Acceleration:** 1 x NVIDIA Tesla M60 (8GB)
- **Wowza Streaming Engine Version:** 4.7.7 (build 20181108145350)

Input

Transrate 720p

- **Video Codec:** H.264
- **Video Frame Size:** 1280x720
- **Video Frame Rate:** 24 fps
- **Video Bitrate:** 5.588 Mbps
- **Audio Codec:** AAC
- **Audio Sample Rate:** 48 kHz
- **Audio Channels:** Stereo
- **Audio Bitrate:** 97 kbps

Results

Transrate 720p

Input	Output	CPU %	GPU %	Enc %	Dec %
1 x 720p @ 5.6 Mbps	1 x 720p @ 1.3 Mbps 1 x 360p @ 850Kbps 1 x 240p @ 350Kbps 1 x 160p @ 200Kpbs	0.31	1.63	4.00	6.00
5 x 720p @ 5.6 Mbps	5 x (same as above)	0.62	8.80	20.84	27.40
10 x 720p @ 5.6 Mbps	10 x (same as above)	1.11	11.64	25.36	34.18
15 x 720p @ 5.6 Mbps	15 x (same as above)	1.86	16.02	32.46	42.61
20 x 720p @ 5.6 Mbps	20 x (same as above)	2.72	21.18	42.51	75.44
25 x 720p @ 5.6 Mbps	25 x (same as above)	4.86	27.05	54.74	57.44
30 x 720p @ 5.6 Mbps	30 x (same as above)	7.90	32.26	66.30	86.00
31 x 720p @ 5.6 Mbps	31 x (same as above)	7.55	34.09	68.20	89.93
32 x 720p @ 5.6 Mbps	32 x (same as above)	7.99	33.80	69.66	91.00
33 x 720p @ 5.6 Mbps	33 x (same as above)	7.60	34.41	70.05	94.98

At 34 concurrent inputs, the server started dropping frames