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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.

https://archive.org/download/BigBuckBunny/big_buck_bunny_720p_h264.mov

Test Server

Server

- **Azure instance size:** Azure Standard NV6
- **vCPU:** 6 Intel(R) Xeon(R) CPU E5-2690 v3 @ 2.60GHz
- **Cores/Threads:** 6 / 6
- **Memory:** 56 GB
- **OS:** Ubuntu 18.04 LTS
- **Java:** OpenJDK9
- **GPU/Acceleration:** 1 x NVIDIA Tesla M60; driver version 440.118.02
- **Wowza Streaming Engine Version:** 4.8.10

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

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Results

Transrate 720p

Decoder: CUDA
Scaler: CUDA
Encoder: NVENC

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	2.02	1.31	4.00	5.19
5 x 720p @ 5.6 Mbps	5 x (same as above)	6.69	5.91	20.93	27.38
10 x 720p @ 5.6 Mbps	10 x (same as above)	12.31	9.15	25.53	33.55
15 x 720p @ 5.6 Mbps	15 x (same as above)	18.42	12.58	32.20	42.79
20 x 720p @ 5.6 Mbps	20 x (same as above)	25.71	16.92	43.52	57.35
25 x 720p @ 5.6 Mbps	25 x (same as above)	32.01	21.36	53.45	71.17
30 x 720p @ 5.6 Mbps	30 x (same as above)	37.39	25.51	65.66	86.72
34 x 720p @ 5.6 Mbps	34 x (same as above)	47.03	29.36	75.15	96.82

At 35 concurrent inputs, the server started dropping frames

NB! Packaging was disabled during the benchmark test