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GVP HSG Pages

Data Throughput

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These two formulas estimate data throughputs:

Formula 1 (for MP3 only):

MP3 bitrate * Ports / 8 = KB/sec
Or 32kbps * Ports / 8 =KB/sec if MP3 is 32kbps

Formula 2 (for MP3 + wav):

(MP3 bitrate + WAV bitrate) * Ports / 8 = KB/sec
Or (32 kbps + 128 kbps) * Ports / 8 = 160 kbps / 8 = KB/sec if 32kbps MP3 + wav

Six VM configurations, with SSD as the cache folder for MCP recording, produced the following measurements from testing for test [SW Profile 1](#) (MP3 32 kbps only):

Table: Data Throughputs for MP3 32 kbps only

Ports Total	Overall Disk (kbps)			SSD Drive Disk (kbps)		
	Reads	Writes	Total	Reads	Writes	
120	554.10	0.12	553.98	536.98	0.00	536.98
240	1075.70	0.50	1075.19	1053.19	0.00	1053.19
300	1332.61	0.06	1332.55	1308.69	0.00	1308.69
360	1601.09	0.00	1601.09	1575.02	0.00	1575.02
420	1847.91	0.00	1847.91	1822.30	0.00	1822.30
480	2109.57	0.00	2109.57	2082.49	0.00	2082.49
540	2461.25	0.00	2461.25	2434.04	0.00	2434.04
600	2728.83	0.00	2728.83	2702.57	0.00	2702.57
660	3010.07	0.00	3010.07	2982.84	0.00	2982.84
720	3310.64	0.00	3310.64	3280.45	0.00	3280.45

Apply [Formula 1](#) to the 120-port and 600-port samples from the table above to achieve these results:

32 kbps * 120 / 8 = 480 kb close to 534 in the table (in SSD)
32 kbps * 600 / 8 = 2400 kb close to 2703 in the table (in SSD)

The measurements from real testing are slightly higher than calculations. Because other files such as metadata and JSON files are saved in the same cache folder, the formula might need adjusting.

Below is the table from testing measurement for [SW Profile 2 \(MP3 + wav\)](#) on the same 6 VM configuration with SSD as cache folder of MCP recording:

Table: Data Throughputs for MP3 32 kbps + wav

Ports	Overall Disk (kbps)			SSD Drive Disk (kbps)		
Total	Reads	Writes	Total	Reads	Writes	
120	2444.255	0.25	2444.01	2427.025	0.000	2427.025
240	4881.163	0.01	4881.15	4859.951	0.000	4859.951
300	6083.649	0.00	6083.64	6058.294	0.000	6058.294
360	7380.491	0.00	7380.49	7354.970	0.000	7354.970
420	8547.663	0.00	8547.66	8522.034	0.000	8522.034
480	9828.785	0.00	9828.79	9802.991	0.000	9802.991
540	11093.931	0.00	11093.93	11067.838	0.000	11067.838
600	12335.993	0.01	12335.99	12309.182	0.000	12309.182

Apply **Formula 2** to the 120-port and 600-port samples in the table above to achieve these results:

$(32 \text{ kbps} + 128 \text{ kbps}) * 120 / 8 = 2400 \text{ kb}$ close to 2427 in the table
 $(32 \text{ kbps} + 128 \text{ kbps}) * 600 / 8 = 12000 \text{ kb}$ close to 12309 in the table