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GVP HSG Pages

Performance Comparison of MP3 only and MP3 + WAV

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The graph below compares two test profiles (**Profile 1 of MP3 only** and **Profile 2 of MP3 + WAV as dest2**) on the same hardware spec with same 6 VM configurations of 2 vCPU per VM. Below is the CPU usage:

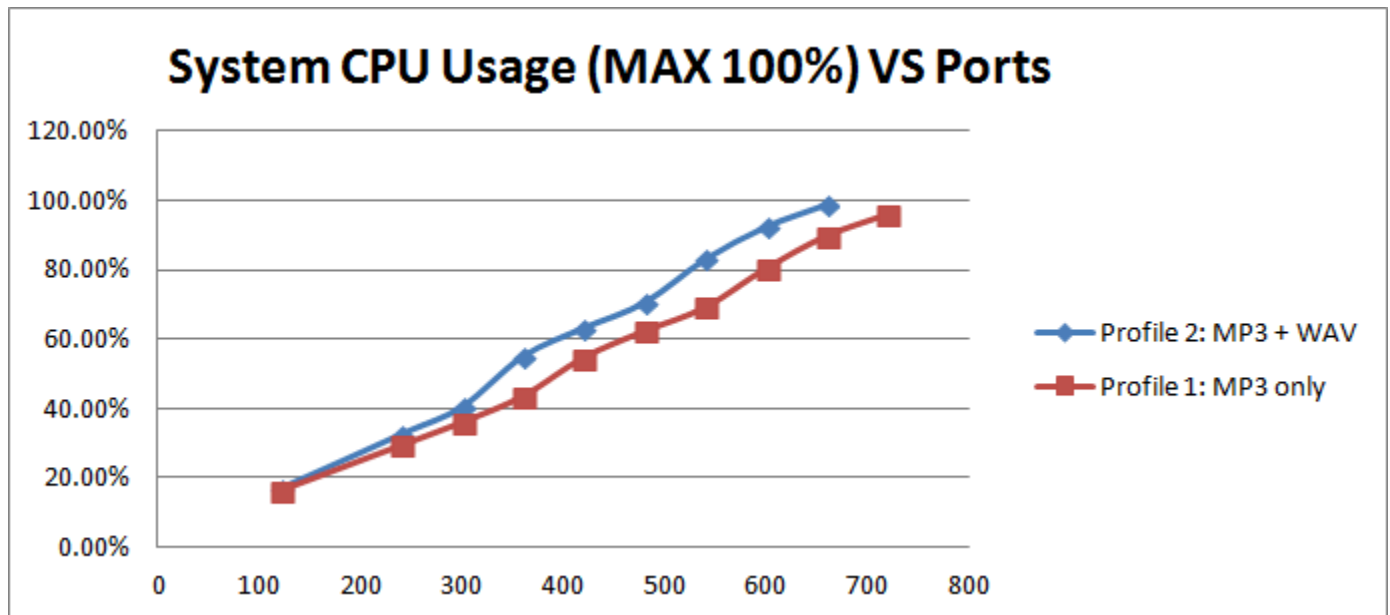


Figure 22: Comparison of System Usage for different test profiles

Overall CPU usage for **Software Profile 2 (MP3 + WAV)** is slightly higher than for **Software Profile 1 (MP3 only)**.

The two graphs below compare audio quality criteria:

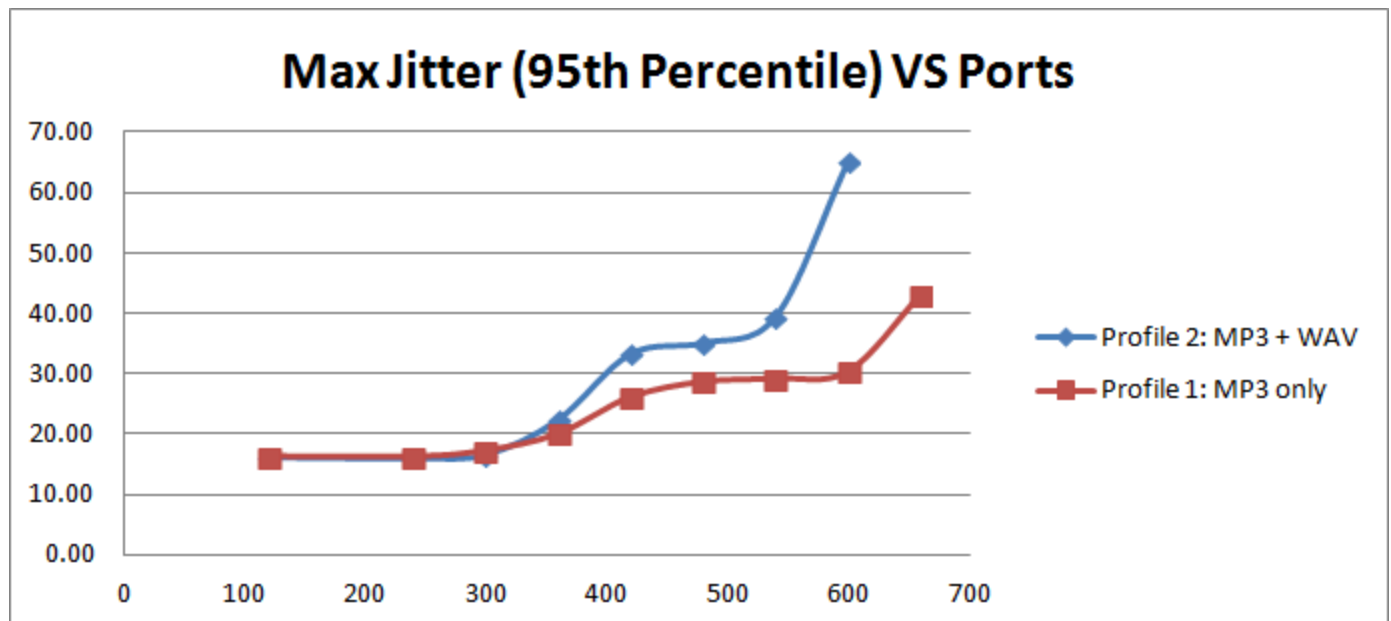


Figure 24: Comparison of Max Jitter among different test profiles

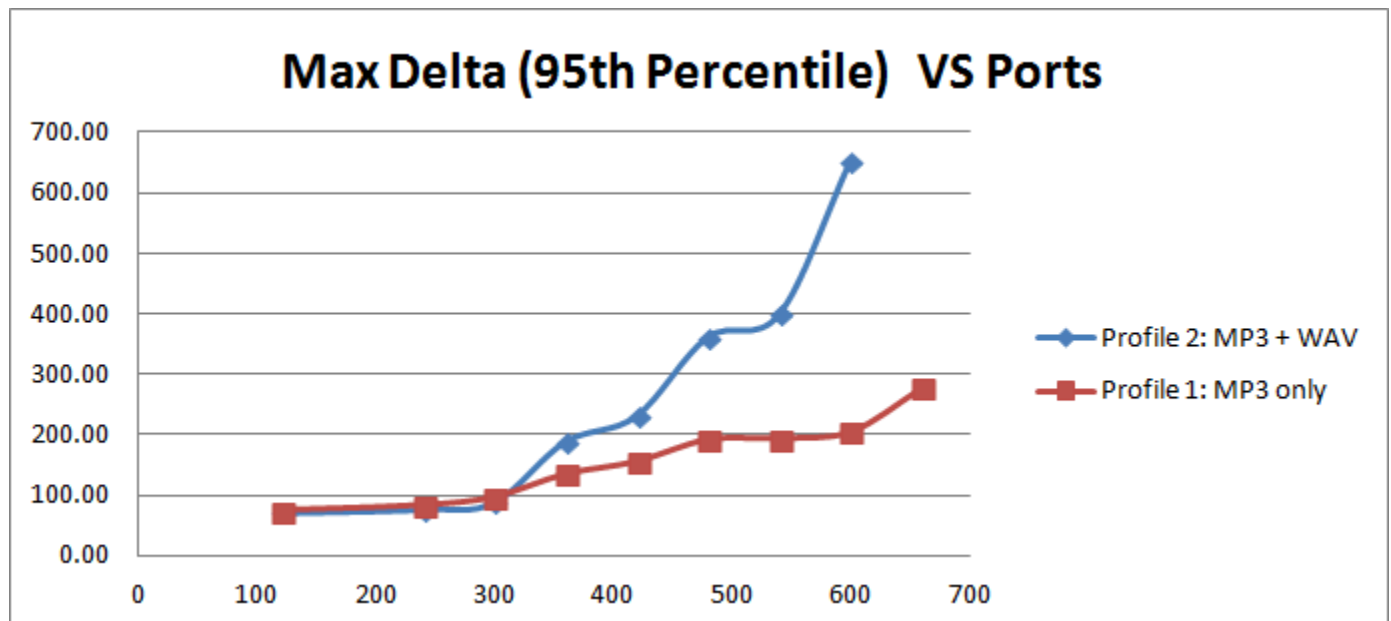


Figure 25: Comparison of Max Delta among different test profiles

- For this test, applying **Profile 2** to a 6 VMs configuration: Preferred/Recommended = 360 ports; Peak Port Capacity = 530 ports, if you can ignore some potential impact to audio quality.

The table below shows the IOPS of the sum of all 6 VMs for a test profile of MP3 + wav:

Table: IOPS of sum of all 6 VMs of dual hex cores, MP3 + wav

Ports Total	Overall Disk IOPS (kbps)		
	Reads	Writes	
120	42.64	0.01	42.63
240	77.69	0.00	77.69
300	95.99	0.00	95.99
360	114.28	0.00	114.28
420	130.45	0.00	130.45
480	149.58	0.00	149.58
540	172.49	0.00	172.49
600	194.55	0.00	194.55
660	177.80	0.00	177.80

The graph below compares Table: IOPS of sum of all 6 VMs of dual hex cores, MP3 + wav with Table: Disk IOPS of sum of all 6 VMs of dual hex cores, MP3 only:

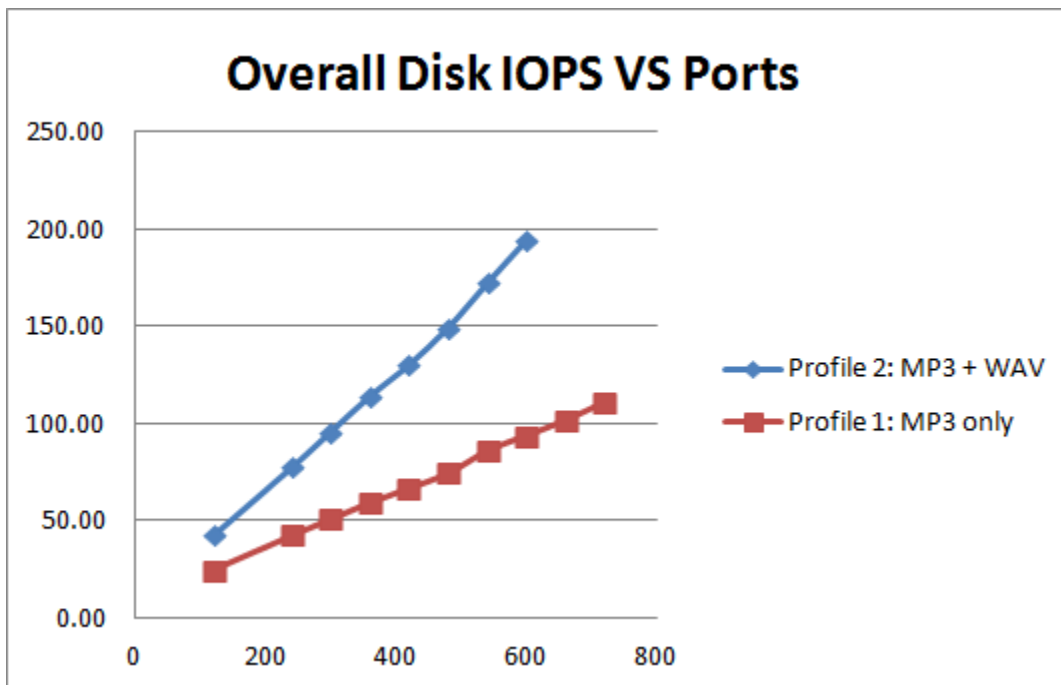


Figure 26: Comparison of System Disk IOPS for different test profiles on VMs

As we have cache folder on a different SSD drive, we can break down disk IOPS for each drive as below:

Table: Disk IOPS Break Down per Drive, Test Profile 1, MP3 only

Ports	Overall Disk IOPS (kbps)			SSD Drive E Disk IOPS (kbps)			HDD Drive C Disk IOPS (kbps)		
	Total	Reads	Writes	Total	Reads	Writes	Total	Reads	Writes
120	25.18	0.03	25.15	20.88	0.00	20.88	4.30	0.03	4.28
240	42.75	0.05	42.70	36.96	0.00	36.96	5.79	0.05	5.74
300	51.16	0.00	51.15	44.63	0.00	44.63	6.53	0.00	6.53
360	59.61	0.00	59.61	52.80	0.00	52.80	6.81	0.00	6.81
420	67.04	0.00	67.04	60.31	0.00	60.31	6.74	0.00	6.74
480	74.82	0.00	74.82	67.85	0.00	67.85	6.97	0.00	6.97
540	86.30	0.00	86.30	79.31	0.00	79.31	6.99	0.00	6.99
600	94.11	0.00	94.11	87.31	0.00	87.31	6.80	0.00	6.80
660	102.05	0.00	102.04	95.12	0.00	95.12	6.92	0.00	6.92
720	111.30	0.00	111.29	104.30	0.00	104.30	6.99	0.00	6.99

Table: Disk IOPS Break Down per Drive, Test Profile 2, MP3 + wav

Ports	Overall Disk IOPS (kbps)			SSD Drive E Disk IOPS (kbps)			HDD Drive C Disk IOPS (kbps)		
	Total	Reads	Writes	Total	Reads	Writes	Total	Reads	Writes
120	42.64	0.01	42.63	38.38	0.00	38.38	4.26	0.01	4.26
240	77.69	0.00	77.69	72.07	0.00	72.07	5.62	0.00	5.62
300	95.99	0.00	95.99	89.04	0.00	89.04	6.95	0.00	6.95
360	114.28	0.00	114.28	107.50	0.00	107.50	6.78	0.00	6.78
420	130.45	0.00	130.45	123.56	0.00	123.56	6.89	0.00	6.89
480	149.58	0.00	149.58	142.65	0.00	142.65	6.92	0.00	6.92
540	172.49	0.00	172.49	165.61	0.00	165.61	6.88	0.00	6.88
600	194.55	0.00	194.55	187.53	0.00	187.53	7.02	0.00	7.02

The two graphs below compare corresponding drives:

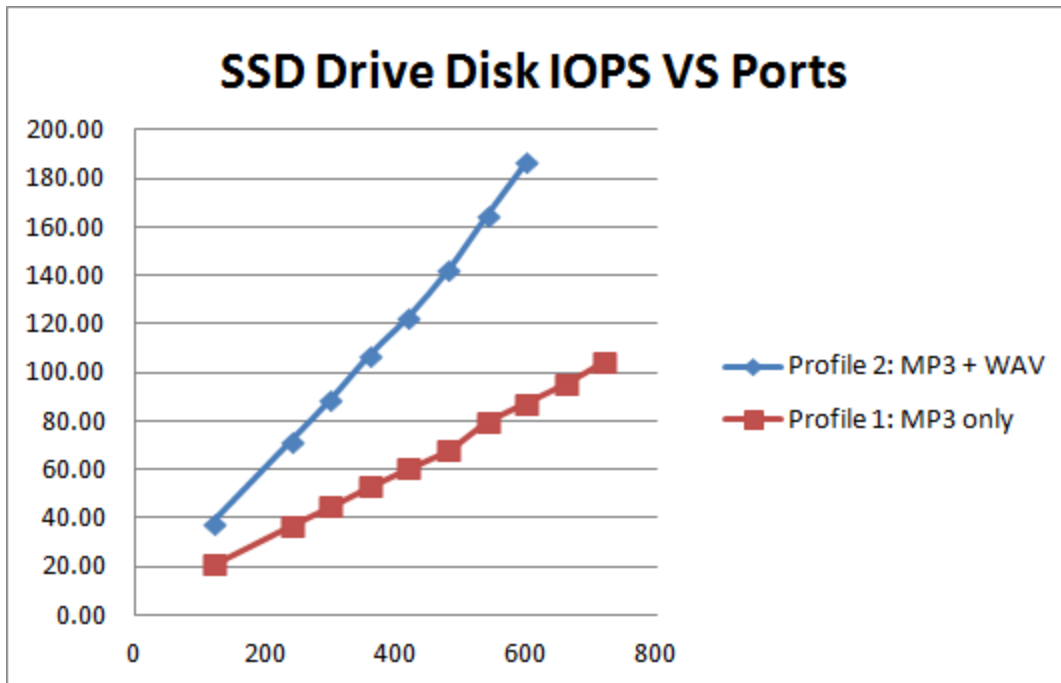


Figure 29: Comparison of cache folder of SSD Drive IOPS for different profiles

This SSD drive is used exclusively as the cache folder for MCP recording. The IOPS for **Profile 2 (two dest2, MP3 + wav)** is as double as **Profile 1 (one dest. MP3 only)**.

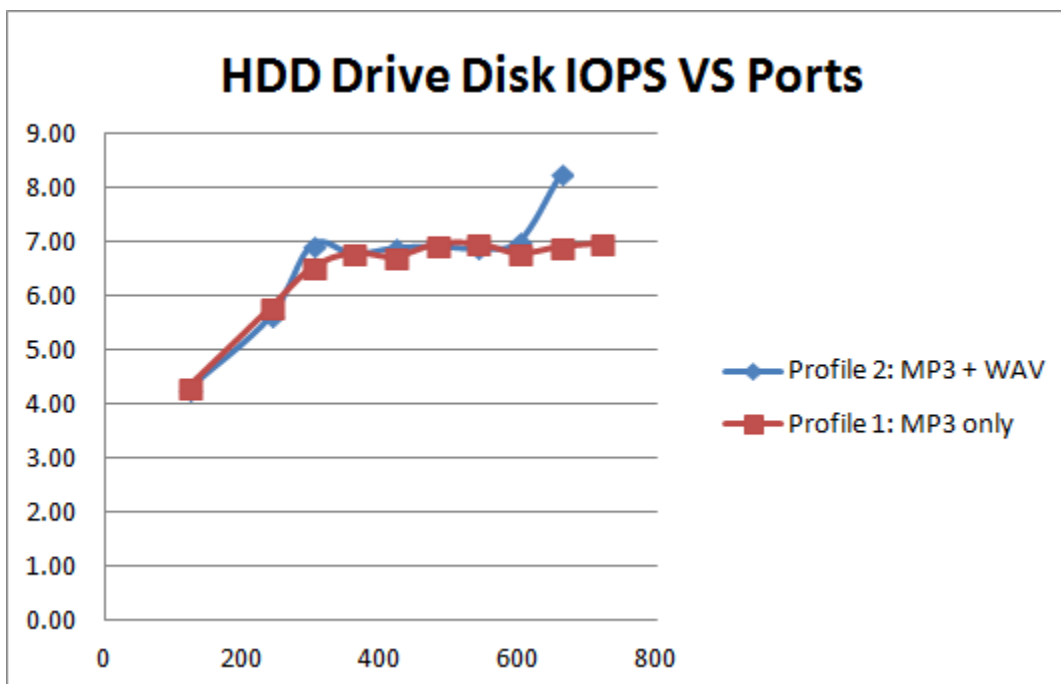


Figure 30: Comparison of HDD Drive IOPS for different profiles

This HDD drive is used for all operations except the cache folder for MCP recording. IOPS is nearly constant at a regular load and below peak. Thus, the IOPS estimating formula can be:

$$\text{IOPS1} = C + k * P \text{ (dest only)}$$

$$\text{IOPS2} = C + 2k * P \text{ (both dest + dest2)}$$

Where P = ports, $C = 7$, $k = 0.15$