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GVP HSG Pages

GIR-GVP Port Capacity Test Results Summary

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Criteria

System Port Capacity is the maximum number of ports (Port Density or PD) or rate (Call Arrivals Per Second or CAPS) that a GIR-GVP system can handle; this number must maximize the usage of hardware resources, while maintaining all criteria within the predefined threshold.

Because CPU usage is the usual deciding factor for peak port capacity, this section presents results that correlate to CPU usage (and other criteria such jitter buffer and max delta from sample recordings) to track the quality of recording.

The following criteria are required for an installation to reach the 95th percentile of quality analysis, from a sample RTP stream:

- Packet Loss <= 1%
- Max Jitter Buffer <= 30ms
- Max Delta <= 200ms

Summary of Performance Testing Results

Table 3: GIR-GVP Port Capacity on Physical Servers

Test Profiles	HW profile	OS	Peak Ports	Comment
SW Profile 1 (32 Kbps bit rate)	HW Profile 1	Windows 2008 R2 x64	200 (preferred)	
SW Profile 1 (32 Kbps bit rate)	HW Profile 1	Windows 2008 R2 x64	220 (peak)	If some of audio criteria can be waived.
SW Profile 1a (16 Kbps bit rate)	HW Profile 1	Windows 2008 R2 x64	240 (preferred)	
SW Profile 1a (16 Kbps bit rate)	HW Profile 1	Windows 2008 R2 x64	270 (peak)	If some of audio criteria can be waived.
SW Profile 1a (16 Kbps bit rate)	HW Profile 6	Windows 2008 R2 x64	350 (preferred)	8 Dispatchers (cores)

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SW Profile 1a (16 Kbps bit rate)	HW Profile 6	Windows 2008 R2 x64	450 (peak)	If some of audio criteria can be waived. 8 Dispatchers (# of cores)
SW Profile 1b (8 Kbps bit rate Mono)	HW Profile 6	Windows 2008 R2 x64	450 (preferred)	8 Dispatchers (# of cores)
SW Profile 1b Profile 1b (8 Kbps bit rate Mono)	HW Profile 6	Windows 2008 R2 x64	600 (peak)	If some of audio criteria can be waived. 8 Dispatchers (# of cores)
SW Profile 3a (16 Kbps bit rate)	HW Profile 1	Windows 2008 R2 x64	210 (preferred)	
SW Profile 3 (16 Kbps bit rate)	HW Profile 1	Windows 2008 R2 x64	270 (peak)	If some of audio criteria can be waived.
SW Profile 1 (32 Kbps bit rate)	HW Profile 3	Windows 2008 R2 x64	240 (preferred)	
SW Profile 1 (32 Kbps bit rate)	HW Profile 3	Windows 2008 R2 x64	360 (peak)	If some of audio criteria can be waived.
SW Profile 1a (16 Kbps bit rate)	HW Profile 1	RedHat EL 6.5 x64	150 (preferred)	
SW Profile 1a (16 Kbps bit rate)	HW Profile 1	RedHat EL 6.5 x64	210 (peak)	If some of audio criteria can be waived.
SW Profile 1a (16 Kbps bit rate)	HW Profile 6	RedHat EL 6.6 x64	220 (preferred)	
SW Profile 1a (16 Kbps bit rate)	HW Profile 6	RedHat EL 6.6 x64	240 (peak)	If some of audio criteria can be waived.
SW Profile 1a (16 Kbps bit rate)	HW Profile 6	RedHat EL 6.6 x64	300 (preferred)	8 Dispatchers (# of cores)
SW Profile 1a (16 Kbps bit rate)	HW Profile 6	RedHat EL 6.6 x64	360 (peak)	If some of audio criteria can be waived. 8 Dispatchers (# of cores)
SW Profile 1b (8 Kbps bit rate)	HW Profile 6	RedHat EL 6.6 x64	600 (preferred)	8 Dispatchers (# of cores)
SW Profile 1a (8 Kbps bit rate)	HW Profile 6	RedHat EL 6.6 x64	650 (peak)	If some of audio criteria can be waived. 8 Dispatchers (# of cores)
SW Profile 2a (16 Kbps bit rate)	HW Profile 1	RedHat EL 6.5 x64	90 (preferred)	
SW Profile 2a (16 Kbps bit rate)	HW Profile 1	RedHat EL 6.5 x64	150 (peak)	If some of audio criteria can be waived.

SW Profile 3a (16 Kbps bit rate)	HW Profile 1	RedHat EL 6.5 x64	150 (preferred)	
SW Profile 3a (16 Kbps bit rate)	HW Profile 1	RedHat EL 6.5 x64	210 (peak)	If some of audio criteria can be waived.

Table 4: GIR-GVP Port Capacity on Virtual Machines (VMs)

SW Profile	HW profile	OS	Port Capacity	Comment
SW Profile 1 (32 Kbps bit rate)	VM Profile 1	VM vSphere 5.1 Windows 2008 R2 x64	300 (preferred)	3 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 1 (32 Kbps bit rate)	VM Profile 1	VM vSphere 5.1 Windows 2008 R2 x64	360 (peak)	3 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 1 (32 Kbps bit rate)	VM Profile 2	VM vSphere 5.1 Windows 2008 R2 x64	360 (preferred)	3 VMs: each VM uses 4 vCPU & 1 MCP installed per VM.
SW Profile 1 (32 Kbps bit rate)	VM Profile 2	VM vSphere 5.1 Windows 2008 R2 x64	390 (peak)	3 VMs: each VM uses 4 vCPU & 1 MCP installed per VM.
SW Profile 1 (32 Kbps bit rate)	VM Profile 3	VM vSphere 5.1 Windows 2008 R2 x64	520 (preferred)	4 VMs: each VM uses 3 vCPU & 1 MCP installed per VM.
SW Profile 1 (32 Kbps bit rate)	VM Profile 3	VM vSphere 5.1 Windows 2008 R2 x64	600 (peak)	4 VMs: each VM uses 3 vCPU & 1 MCP installed per VM.
SW Profile 1 (32 Kbps bit rate)	VM Profile 4	VM vSphere 5.1 Windows 2008 R2 x64	600 (preferred)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 1 (32 Kbps bit rate)	VM Profile 4	VM vSphere 5.1 Windows 2008 R2 x64	660 (peak)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 1 (32 Kbps bit rate)	VM Profile 6	Windows 2016 x64	130 (preferred)	1 VM: each uses 2vCPU and 1 MCP.
SW Profile 1 (32 Kbps bit rate)	VM Profile 6	Windows 2016 x64	165 (peak)	1 VM: each uses 2vCPU and 1 MCP.
SW Profile 1 (32 Kbps bit rate)	VM Profile 6	RH EL 7.0	100 (preferred)	1 VM: each uses 2vCPU and 1 MCP.
SW Profile 1 (32 Kbps bit rate)	VM Profile 6	RH EL 7.0	160 (peak)	1 VM: each uses 2vCPU and 1 MCP.
SW Profile 1a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5 Windows 2008 R2 x64	720 (peak)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 1a (32 Kbps bit rate)	VM Profile 4	VM vSphere 5.5 Windows 2008 R2 x64	840 (peak)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.

SW Profile 2 (32 Kbps bit rate MP3 + WAV)	VM Profile 4	VM vSphere 5.1 Windows 2008 R2 x64	360 (preferred)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 2 (32 Kbps bit rate MP3 + WAV)	VM Profile 4	VM vSphere 5.1 Windows 2008 R2 x64	540 (peak)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 3a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ Windows 2008 R2 x64	480 (preferred)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 3a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ Windows 2008 R2 x64	840 (peak)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 1a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ RH EL 6.5 x64	540 (preferred)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 1a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ RH EL 6.5 x64	660 (peak)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 2a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ RH EL 6.5 x64	480 (preferred)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 2a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ RH EL 6.5 x64	600 (peak)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 3a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ RH EL 6.5 x64	540 (preferred)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 3a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ RH EL 6.5 x64	660 (peak)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 4a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ RH EL 6.5 x64	480 (preferred)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.
SW Profile 4a (16 Kbps bit rate)	VM Profile 4	VM vSphere 5.5/ RH EL 6.5 x64	600 (peak)	6 VMs: each VM uses 2 vCPU & 1 MCP installed per VM.

Parameter Adjustments

These adjustments achieve higher port capacity:

Parameter Value Adjustments Yielding Higher Port Capacity

Parameter	Default Value	Adjusted Value
mpc.recordnumparallelpost	30	300
mpc.recordpostretrybackoff	120000	15000
mpc.recordpostretrycount	3	1
mpc.mediamgr.recordwritetimeinterval	10000	10000
fm.http_proxy	<not empty>	<empty> (squid bypassed)