GVP HSG Pages

VoIP Capacity Test Summary Tables

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VoIP Capacity Test Summary Tables

Some capacity test summaries in this section were performed on systems with hardware specifications other than those in Hardware and Operating Systems Tested. Major differences in test results can occur, depending on the CPU model and the number of CPUs that are used.

Certain tests may not be conducted with the hardware specified in Hardware and Operating Systems Tested; the major difference is the CPU model and the number of CPUs being used. The Hardware column in the tables below describes the CPU setup that was used in each test and the observed capacity. The results are based on Next Generation Interpreter (NGi) configured in Media Control Platform (MCP), unless it is stated as GVPi.

VoiceXML_App3 was used for both single server testing and PSTNC testing. See Table: Single Server All-In-One Capacity Testing and Table: PSTN Connector and SSG Capacity Testing.

Click a link in the list below for specific details about intent and use above each table:

GVP VOIP VXML/CCXML Capacity Testing

This table shows the fundamental performance of a single physical server process in terms of peak throughput and peak port capacity; either VoiceXML applications for MCP or CCXML for CCP. You can use this table as the first basis of your assessment.

Table 2: GVP VOIP VXML/CCXML Capacity Testing

Application Type	Hardware	Peak CAPS	Peak Ports	Comments
Windows				
VoiceXML_App1	2x Core 2 Quad Xeon x5355 2.66 GHz	17 (preferred)	1300 (preferred)	*Preferred* means the highest capacity that the system can sustain while maintaining optimal user experience.
VoiceXML_App1	2x Core 2 Quad Xeon x5355 2.66 GHz	17	1300	Using TCP and TLS.

Application Type	Hardware	Peak CAPS	Peak Ports	Comments
VoiceXML_App1	2x Core 2 Quad Xeon x5355 2.66 GHz	23.6 (peak)	1800 (peak)	Ignore call setup latency threshold on Window 2003 and 2008 R2, x64. *Peak* means the highest capacity that the system can sustain regardless of the user experience.
VoiceXML_App1	1x HexCore Xeon x5770 2.66GHz	26 (peak)	2000 (peak)	Ignore call setup latency threshold, Windows 2008 R2 x64 SP1
VoiceXML_App1	2x Core 2 Quad Xeon x5355 2.66 GHz	10 (preferred)	800 (preferred)	Using GVPi.
VoiceXML_App2	1x HexCore Xeon X5670 2.93GHz	7.2	400	MCP on a physical server. Tested with offboard NSS engine MRCP v1.
VoiceXML_App2	1x HexCore Xeon X5670 2.93GHz	7.2	400	MCP on a physical server. Tested with offboard NSS engine MRCP v2 (NSS 6.2.x + NR 10.2.x + NV 5.7.x) with session XML enabled. GVP 8.1.7 or later.
VoiceXML_App2	1x HexCore Xeon X5670 2.93GHz	8	450	MCP on a physical server. Tested with offboard NSS engine MRCP v2 (NSS 6.2.x + NR 10.2.x + NV 5.7.x) with session XML disabled. GVP 8.1.7 or later.
VoiceXML_App2	2x Core 2 Dual Xeon x5160 3.00 GHz	4.5	250	MCP on a physical server. Tested with simulated speech server.
VoiceXML_App2	2x Core 2 Quad Xeon x5355 2.66 GHz	1	60 (GVPi)	MCP on a physical server. Tested with Nuance Speech Server.
VoiceXML_App4	2x Core 2	9.4	800	

Application Type	Hardware	Peak CAPS	Peak Ports	Comments
	Quad Xeon x5355 2.66 GHz			
CCXML_App1	2x Core 2 Quad Xeon x5355 2.66 GHz	30	N/A	
CCXML_App2	2x Core 2 Quad Xeon x5355 2.66 GHz	20	420	
Linux				
VoiceXML_App1	2x Core 2 Quad Xeon x5355 2.66 GHz	17 (preferred)	1300 (preferred)	
VoiceXML_App1	2x Core 2 Quad Xeon x5355 2.66 GHz	23.6 (peak)	1800 (peak)	Peak, ignoring call setup and tear-down latency threshold.
VoiceXML_App1	2x Core 2 Quad Xeon x5355 2.66 GHz	23.6	1800	Using TCP and TLS.
VoiceXML_App1	2x Core 2 Quad Xeon x5355 2.66 GHz	14.5	1100	Inband DTMF.
VoiceXML_App2	2x Core 2 Quad Xeon x5355 2.66 GHz	7.2	400	MCP on a physical server. Tested with simulated speech server.

Multiple VMs vs. Multiple MCP Capacity Testing

This table provides a comparison of capacity testing results when multiple virtual machines (VMs) are used versus multiple Media Control Platform instances.

The table below shows the effect of stacking server processes on the same hardware server where there is one MCP associated with a VM instance on the same hardware server. The effect is the increased total port capacity that you can achieve using stacked processes provides a comparison of capacity testing results when multiple virtual machines (VMs) are used versus multiple Media Control Platform instances.

Table 3: Multiple VMs vs. Multiple MCP Capacity Testing

Application Type	Hardware	Peak CAPS	Peak Ports	Comments
Using VMWare				
VoiceXML_App1 1 VM	2x Core 2 Quad Xeon x5355 2.66 GHz 12GB RAM	17	1300	One VM image is configured and enabled with only one MCP installed in the image. Guest OS is Windows 2008 Server SP2 x86.
VoiceXML_App1 2 VMs	2x Core 2 Quad Xeon x5355 2.66 GHz 12GB RAM	21	1600	Two VM images are configured and enabled with only one MCP installed in each image. Guest OS is Windows 2008 Server SP2 x86.
VoiceXML_App1 2 VMs	2x Core 2 Quad Xeon x5355 2.66 GHz 12GB RAM	21	1600	VM images (using VMWare ESXi 5.0) are configured and enabled with 4 Media Control Platform instances—2 installed in each image.Guest OS is Windows 2008 Server SP2 x86.
VoiceXML_App1 4 VMs	2x Core 2 Quad Xeon x5355 2.66 GHz 12GB RAM	29	2200	VM images (using VMWare ESXi 5.0) are configured and enabled with 1 Media Control Platform instance only installed in each image.Guest OS is Windows 2008 Server SP2 x86.
VoiceXML_App1 4 VMs	2x Core 2 Quad Xeon x5355 2.66 GHz 12GB RAM	26	2000	VM images (using VMWare ESXi 5.0) are configured and enabled with 8 Media Control Platform instances—2 installed in each image.Guest OS is Windows 2008 Server SP2 x86.
VoiceXML_App1	2x Core 2	34	2600	VM images (using VMWare ESXi 5.0) are

Application Type	Hardware	Peak CAPS	Peak Ports	Comments
8 VMs	Quad Xeon x5355 2.66 GHz 12GB RAM			configured and enabled with 1 Media Control Platform instance only installed in each image.Guest OS is Windows 2008 Server SP2 x86.
VoiceXML_App1 1 VM	2x Core 2 Quad Xeon x5355 2.66 GHz 4GB RAM	8 (tested)	600 (tested)	VM image (using VMWare ESXi) is configured and enabled with all GVP components (except Reporting Server) together with SIP server.Guest OS is Windows 2003 Server.
VoiceXML_App1 (4 VMs, 4 MCPs, 1 MCP per VM)	2x Quad-Core Xeon E5620 2.40GHz 16GB RAM	39	3000	4 VMs under EXSi 5.0 are configured and enabled with only one MCP installed in each VM. Guest OS on each VM is Windows 2008 Server R2 x64 SP1.
VoiceXML_App2 (4 VMs, 4 MCPs, 1 MCP per VM)	2x Quad-Core Xeon E5620 2.40GHz 16GB RAM	8.6	600	4 VMs under EXSi 5.0 are configured and enabled with only one MCP installed in each VM. Guest OS on each VM is Windows 2008 Server R2 x64 SP1. Tested with Nuance Speech Servers which run on another 4VMs of same hardware spec as MCP.
VoiceXML_App4 (4 VMs, 4 MCPs, 1 MCP per VM)	2x Quad Core Xeon E5620 2.40GHz 16GB RAM	21	1800	4 VMs under EXSi 5.0 are configured and enabled with only one MCP installed in each VM. Guest OS on each VM is Windows 2008 Server R2 x64 SP1.
VXML_App1 (6 VMs, 6 MCPs, 1 MCP per VM)	2x Hex-Core Xeon X5675 3.06GHz 32GB RAM	52	4000	6 VMs under EXSi 5.0 are configured and enabled with only one MCP installed in each VM. Guest OS on each VM is RHEL 5.8 x64.
VXML_App1 (6 VMs, 6 MCPs, 1 MCP per VM)	2x Hex-Core Xeon X5675 3.06GHz 32GB RAM	3.9	300	6 VMs under EXSi 5.0 are configured and enabled with only one MCP installed in each VM. Guest OS on each VM is RHEL 6.4 x64. GVP 8.1.7 or later.
VXML_App2 (6 VMs, 6 MCPs, 1 MCP per VM)	2x Hex-Core Xeon X5675 3.06GHz 32GB RAM	8.6	600	6 VMs under EXSi 5.0 are configured and enabled with only one MCP installed in each VM. Guest OS on each VM is RHEL 5.8 x64. Tested with Nuance Speech Servers which run on another 4VMs of a host of 2x Quad Core Xeon E5620.
Not Using VMWare				

Application Type	Hardware	Peak CAPS	Peak Ports	Comments
VoiceXML_App1 1 Media Control Platform instance	2x Core 2 Quad Xeon x5355 2.66 GHz 12GB RAM	17	1300	All Media Control Platform instances are configured on one server. Windows 2008 Server, SP2, x86.
VoiceXML_App1 2 Media Control Platform instances	2x Core 2 Quad Xeon x5355 2.66 GHz 12GB RAM	27.5	2100	
VoiceXML_App1 4 Media Control Platform instances	2x Core 2 Quad Xeon x5355 2.66 GHz 12GB RAM	30	2300	
VoiceXML_App1 8 Media Control Platform instances	2x Core 2 Quad Xeon x5355 2.66 GHz 12GB RAM	27.5	2100	
VoiceXML_App1 2 Media Control Platform instances	2x Core 2 Quad Xeon x5355 2.66 GHz 4GB RAM	39.4 (peak)	3000 (peak)	All Media Control Platform instances are configured on one server. Squid is bypassed and call setup latency threshold is ignored. Windows 2003 Server only.

Single Server All-In-One Capacity Testing

This table describes the capacity testing for a single server with multiple components installed (see Comments column). Tests were performed using a single instance of the Media Control Platform on Windows and Linux systems with 1 Core 2 Dual Xeon x5160, 3.0 GHz CPUs with 8GB RAM. This table shows the effect of having many GVP processes, including Nuance speech components, on just one physical server, which Genesys calls "the single server solution."

Table 4: Single Server All-In-One Capacity Testing

Application Type	Hardware	Peak CAPS	Peak Ports	Comments
Windows 2008, SP2, x86 and Windows 2008 R2				

Application Type	Hardware	Peak CAPS	Peak Ports	Comments
VoiceXML_App1	1x Core 2 Dual Xeon x5160 3.0 GHz 8GB RAM	7.9	600	A single server hosting Management Framework, Media Control Platform, Resource Manager, Reporting Server, Web Application Server (WAS), and SIP Server.
VoiceXML_App2 MRCP v1	1x Core 2 Dual Xeon x5160 3.0 GHz 8GB RAM	1.2	100	
VoiceXML_App3 MRCP v1	1x Core 2 Dual Xeon x5160 3.0 GHz 8GB RAM	2.5	160	
VoiceXML_App3 MRCP v2	1x Core 2 Dual Xeon x5160 3.0 GHz 8GB RAM	1.9	120	
Red Hat Enterprise Linux 4				
VoiceXML_App1	1x Core 2 Dual Xeon x5160 3.0 GHz 8GB RAM	4 (maximum CAPS tested)	300 (ports tested)	A single server hosting an Oracle DB Server, Management Framework, Reporting Server, Media Control Platform, Resource Manager, SIP Server, Web Application Server, and Linux.

Standalone VM with Single MCP Instance Capacity Testing Table

This table describes the capacity testing results performed on a standalone VM with single MCP instance (see Comments column). Tests were performed using a single instance of the MCP on VMs running Windows and Linux systems with 2 Virtual Cores, Xeon E5-2683 V4, 2.099 GHz CPUs.

Table 5: Standalone VM with Single MCP Instance Capacity Testing

Application Type	Hardware	Peak CAPS	Peak Ports	Comments
VMWare				
VoiceXML_App5	2 Virtual Cores, Xeon E5-2683 V4 2.099 GHz	6.6	500	VM images (using VMWare ESXi 6.0) are configured and enabled with one MCP instance installed in Guest OS RHEL 7.0, x64.
VoiceXML_App6	2 Virtual Cores, Xeon E5-2683 V4 2.099 GHz	5.2	350	VM images (using VMWare ESXi 6.0) are configured and enabled with one MCP instance installed in Guest OS RHEL 7.0, x64
VoiceXML_App5	2 Virtual Cores, Xeon E5-2683 V4 2.099 GHz	6.6	500	VM images (using VMWare ESXi 6.0) are configured and enabled with one MCP instance installed in Guest OS Windows 2012, x64
VoiceXML_App6	2 Virtual Cores, Xeon E5-2683 V4 2.099 GHz	5.2	350	VM images (using VMWare ESXi 6.0) are configured and enabled with one MCP instance installed in Guest OS Windows 2012, x64