Third-Party Server Specification Guide

Version 8.0

Acme Packet
100 Crosby Drive
Bedford, MA 01730
USA
t 781-328-4400
f 781-425-5077
http://www.acmepacket.com

Last Updated: November 01, 2012
Document Number: 400-0194-00

Notices

DISCLAIMER

This document is intended for use as a sales aid for Acme Packet employees and authorized partners and is subject to change without notice. The capacities contained herein are general dimensioning guidelines intended to enable sales representatives and sales engineers to respond to requests for quotes. They are not intended as and should not be construed as performance commitments. The actual capacity of a system running Acme Packet software is a complex function of the hardware and software configuration, the offered load and the desired quality of service. The information in this document is valid for software release versions as noted within. For detailed network design and sizing support, contact an Acme Packet representative.

About This Guide

Audience

This document is intended for use as a sales aid for Acme Packet employees and authorized partners and is subject to change without notice. The capacities contained herein are general dimensioning guidelines intended to enable sales representatives and sales engineers to respond to requests for quotes. They are not intended as and should not be construed as performance commitments. The actual capacity of a system running Acme Packet software is a complex function of the hardware and software configuration, the offered load and the desired quality of service. The information in this document is valid for software release versions as noted within. For detailed network design and sizing support, contact an Acme Packet representative.Third Party Server Specification Guide

Who is Acme Packet?

Acme Packet enables service providers to deliver trusted, first class interactive communications-voice, video and multimedia sessions-across IP network borders. Our Net-Net family of session border controllers satisfy critical security, service assurance and regulatory requirements in wireline, cable and wireless networks. Our deployments support multiple applications-from VoIP trunking to hosted enterprise and residential services; multiple protocols-SIP, H.323, MGCP/NCS and H.248; and multiple border points-interconnect, access network and data center.

Established in August 2000 by networking industry veterans, Acme Packet is a public company that is traded on NASDAQ, headquartered in Bedford, MA.

Technical Assistance

If you need technical assistance with Acme Packet products, you can obtain it on-line by going to support.acmepacket.com. With your customer identification number and password, you can access Acme Packet's on-line resources 24 hours a day. If you do not have the information required to access the site, send an email to tac@acmepacket.com requesting a login.

In the event that you are experiencing a critical service outage and require live assistance, contact the Acme Packet Technical Assistance Center emergency hotline:

- From the United States, Canada, and Mexico call: 1 866 226 3758
- From all other locations, call: +1 781 756 6920

Please note that a valid support/service contract with Acme Packet is required to obtain technical assistance.

Customer Questions, Comments, or Suggestions

Acme Packet is committed to providing our customers with reliable documentation. If you have any questions, comments, or suggestions regarding our documentation, please contact your Acme Packet customer support representative directly or email support@acmepacket.com.

Contact Us

Acme Packet
100 Crosby Drive
Bedford, MA 01730
USA
t 781 328 4400
f 781 425 5077
http://www.acmepacket.com

Revision History

This section contains a revision history for this document.

Date	Revision Number	Description
August 05, 2011	Revision 1.0	• First version of guide published
August 12, 2011	Revision 2.0	• Added second quad-core Intel Xeon Processor E5620 as a seperate line item for HP DL360 G7 servers • Modified power supply kit part number for HPDL360 G7 (NNISR-RSS)
October 03, 20011	Revision 3.0	• Updated disk drive specifications for HP DL360 G7 (NNOS-E and ASC) from 160GB to 500GB due to EOL announcement for 160GB disk drives from HP • Added external USB-based DVD/RW drive for HP DL360 G7 (NNISR-CIS) • Modified 300GB disk drive's rpmfor HP DL360 G7 (NNISR-RSS and NNISR-CIS)
March 01, 2012	Revision 4.0	• Updated naming of Enterprise-class software-based SBC from NNOS-SD to NNESD SE C-series and NNOS-E SD to NNESD SE-E series
May 01, 2012	Revision 5.0	• Update memory SKU of HP DL120 G7 for Net-Net ESD-SE C-series to highlight memory change from 2GB for upcoming feature enhancements
June 01, 2012	Revision 6.0	• Added Net-Net ESD-VME C-series (for Enterprises) and associated HW requirments • Added Net-Net SD-VME (for Service
November 01, 2012	Revision 7.0	• Added Net-Net ESD-VME E-series HW requirements • Added new certified servers HP DL320e G8 and Dell R210 II for Net-Net ESD-SE C-series • First Draft from Technical Publications • Minor updates to the memory section
January 15, 2013	Revision 8.0	• Remover E-Sries from the document

Table of Contents

Third-Party Server Specifications Guide

Introduction

The Acme Packet Third-Party Server Specification Guide has been prepared to assist partners and customers with determining the optimal server configuration to match their Acme Packet application and capacity requirements. Acme Packet Net-Net OS software is used to power the following Acme Packet products that can run on third-party hardware and/or virtual machine (VM) environments:

Net-Net Enterprise Session Director - Server Edition (ESD-SE)

- C-series software

Net-Net Enterprise Session Director - Virtual Machine Edition (ESD-VME)

- C-series software

Net-Net Session Director - Virtual Machine Edition (SD-VME)

Net-Net Application Session Controller (ASC)

Net-Net Interactive Session Recorder (ISR)

Net-Net OS software applications are designed to run on Intel x86-class server platforms. This does not mean that Net-Net OS applications will run on all Intel x86 platforms. There are minimum processor, disk, and memory requirements that apply. As part of the quality assurance process, Acme Packet certifies Net-Net OS software to run on server platforms that meet a minimum set of hardware requirements (which are described in this document). Acme Packet does this testing as a means of assuring that if a minimum set of hardware requirements are met, the Acme Packet application will properly perform up to a maximum number of sessions.

Another aspect of the Acme Packet certification process for Server Edition platforms is the testing of the platform with the Acme Packet software distribution and installation utilities. These utilities are designed to install the base operating system as well as the Acme Packet application. Due to device driver differences between various server platforms, Acme Packet sometimes has to update these utilities to ensure that the installation program will properly execute on a specified hardware platform.

Due to the potential that the installation utilities may not properly complete or the fact that a particular hardware platform may not have been otherwise certified for use by Acme Packet, you should not attempt to install Acme Packet software on a server platform that has not been certified by Acme Packet.

This guide will be updated periodically to reflect the certification of additional servers and changes associated with technology updates by server manufacturers.

References to C-series software in this document apply to Acme Packet Linux-compatible software releases including Cz6.3.9 and ECz6.4.0 (the enterprise-variant of the C-series software release stream). C-series software is the application software used for the Net-Net 3820 and Net-Net 4500 platforms.

Please contact your Acme Packet representative with any questions concerning the information in this guide.

Net-Net Enterprise Session Director - Server Edition (C-series)

The following server configurations have been certified for use with Net-Net Enterprise Session Director-Server Edition (ESD-SE) (C-series).

Note that the specified processor choices and disk sizes represent the minimal options. As server technology evolves, manufacturers often increase processor speed and disk size in their server configurations. If 1:1 high availability or redundancy mode is required, please order the necessary server in a quantity of two.

In addition, the server configurations below only include the administration and monitoring capabilities available in the base system e.g. iLo4 Basic on HP DL320e G8 server. If advanced administration and monitoring capabilities are required, please request your supplier to provide the servers with these capabilities.

HP DL320e G8 Server Configuration (for ESD-SE C-series)

- Suitable for ESD-SE C-series applications up to 250 sessions
- Single quad-core Intel processor, 4 GB of RAM, 500 GB disk drive
- Four 10/100/1000 Ethernet ports (Two ports on motherboard and two on the adapter)
- Single AC power supply (the specified power cords are North American variants; order the appropriate power cord for your region)

MFG part number	Description	Qty
675596-B21	HP DL320e Gen8 NHP 4LFF CTO Server	1
682785-L21	HP DL320e Gen8 E3-1230v2 FIO Kit (Intel Xeon 3.30GHz/4-core/8MB/69W,HT,Turbo2)	1
669322-B21	HP 4GB 2Rx8 PC3-12800E-11 Kit	1
659341-B21	HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1 yr Warranty Hard Drive	1
662961-B21	HP Internal USB Gen8 FIO Kit	1
615732-B21	HP Ethernet 1 Gb 2-port 332T Adapter	1
663202-B21	HP 350W 1U Power Supply Kit	1

Dell R210 II Server Configuration (for ESD-SE C-series)

- Suitable for ESD-SE C-series applications up to 250 sessions
- Single quad-core Intel processor, 4 GB of RAM, 500 GB disk drive
- Four 10/100/1000 Ethernet ports (Two ports on motherboard and two on the adapter)

MFG part number	Description	Qty
225-0896	PowerEdge R210II Chassis with 3.5 Cabled HDs and Quad-Pack LED Diagnostics	1
317-6868	4GB Memory (2x2GB), 1333 MHz, Single Ranked UDIMM	1
319-0197	Intel Xeon E3-1220 3.10 GHz, 8M Cache, Turbo, Quad Core/4T (69W)	1
317-2311	PowerEdge R210II Heatsink	1
341-9247	500GB 7.2 RPM Serial ATA 3Gbps 3.5-in Cabled Hard Drive	1
340-3933	Embedded SATA	1
430-0643	Intel Gigabit ET Dual Port NICPCIe-4	1
313-7919	Baseboard Management Controller	1
331-2371	Onboard SATA, 1-2 Hard Drives connected to onboard SATA Controller- No RAID	1
331-2509	2-Post/4-Post 1U Static Rails, Short	1
310-8509	Power Cord, NEMA 5-15 to C13, 15 amp,wall plug, 10 feet /3 meter	1

HP DL120 G7 Server Configuration (for ESD-SE C-series)

- Suitable for ESD-SE C-series applications up to 250 sessions
- Single quad-core Intel processor, 4 GB of RAM, 500 GB disk drive
- Four 10/100/1000 Ethernet ports (Two ports on motherboard and two on the adapter)
- Single AC power supply (the specified power cords are North American variants; order the appropriate power cord for your region)

MFG part number	Description	Qty
647339-B21	HP ProLiant DL120 G7 Server	1
641912-L21	Quad-Core Intel Xeon Processor E3-1220 (3.10GHz, 8MB,80W)	1
500672-B21	HP 4GB PC3-10600E Memory	1
458928-B21	HP 500GB 3G SATA 7.2K 3.5in MDL HDD	1
412648-B21	HP NC360T PCI Express Dual Port Gigabit Server Adapter-Low	1
515739-B21	HP 400W NHP Power Supply	1
AF556A	HP 1.83m 10A C13-UL US Power Cord	1

Net-Net Enterprise Session Director - VM Edition (C-series)

The Net-Net Enterprise Session Director - Virtual Machine Edition (Net-Net ESD-VME) is Acme Packet's software delivered as a virtualized application for enterprises. Net-Net ESD-VME can be used with popular virtual machine hypervisors such as VMware vSphere ESXi 5 and Microsoft Hyper-V. VMware vSphere is the preferred hypervisor for the ESD-VME application. The Net-Net ESD-VME software can be installed on any third-party hardware as long as the hardware is certified or compatible with the hypervisors referenced below and the hardware meets the minimum requirements stated below for installing the ESD-VME software application.

VMware vSphere hypervisor

- Suitable for ESD-VME C-series applications up to 250 sessions
- VMware vSphere ESXi 5 hypervisor
- Processor type – Intel x86 only
- Number of CPU cores – 2
- Processor speed – 2.4 GHz or higher (each core)
- Memory – 3 GB (2 GB for Net-Net ESD VME, 1 GB for the VMWare ESXi)
- Disk space – 40 GB
- Network interfaces – 3 (Standalone), 4 (High Availability)
- Empty USB slot

Note that VMware ESXi is a "bare-metal" hypervisor, meaning it installs directly on top of the physical server. The hardware should already have VMware vSphere ESXi 5

installed and ready before you can install the ESD-VME software. The VMware vSphere ESXi 5 software can be downloaded for free from VMware's website.

Microsoft Hyper-V hypervisor

- Suitable for ESD-VME C-series applications up to 50 sessions
- Hyper-V hypervisor (installable component) on Windows Server 2008 R2
- Processor type – Intel x86 only
- Number of CPU cores – 2
- Processor speed – 2.4 GHz or higher (each core)
- Memory – 4 GB (2 GB for Net-Net ESD VME, 2 GB for the Windows 2008 Server R2 + HyperV)
- Disk space – 40 GB
- Network interfaces – 3 (Standalone), 4 (High Availability)
- Empty USB slot

Hyper-V is Microsoft's hypervisor that exists in two variants: as a stand-alone product called Microsoft Hyper-V Server 2008 R2, and as an installable role in Windows Server 2008 R2. Hyper-V that installs as a component of a Windows Server 2008 R2 installation has been verified for the ESD-VME C-series application. Note that the hardware should already have Hyper-V installed on Windows Server 2008 R2 and ready before you can install the ESD-VME software.

Net-Net Session Director - VM Edition

The Net-Net Session Director - Virtual Machine Edition (Net-Net SD-VME) is Acme Packet's SBC software delivered as a virtualized application for service providers. Net-Net SD-VME can be used with VMware vSphere ESXi 5 hypervisor only. The Net-Net SD-VME software can be installed on any third-party hardware as long as the hardware is certified or compatible with the hypervisor referenced below and the hardware meets the minimum requirements stated below for installing the ESD-VME software application.

VMware vSphere hypervisor

- Suitable for SD-VME service provider applications up to 250 sessions
- VMware vSphere ESXi 5 hypervisor
- Processor type – Intel x86 only
- Number of CPU cores – 2
- Processor speed – 2.4 GHz or higher (each core)
- Memory – 2 GB
- Disk space – 40 GB
- Network interfaces – 3 (Standalone), 4 (High Availability)
- Empty USB slot

Note that VMware ESXi is a "bare-metal" hypervisor, meaning it installs directly on top of the physical server. Note that the hardware should already have VMware vSphere ESXi 5 installed and ready before you can install the SD-VME software. The VMware vSphere ESXi 5 software can be downloaded for free from VMware's website.

The following server configurations have been certified for use with Net-Net ASC.

Note that the specified processor choices and disk sizes represent the minimal options. As server technology evolves, manufacturers often increase processor speed and disk size in their server configurations. If 1:1 high availability or redundancy mode is required, please order the necessary server in a quantity of two.

In addition, the server configurations below only include the administration and monitoring capabilities available in the base system. If advanced administration and monitoring capabilities are required, please request your supplier to provide the servers with these capabilities.

HP DL120 G7 Server Configuration (ASC)

- Suitable for ASC applications up to 250 sessions
- Single quad-core Intel processor, 4 GB of RAM, 500 GB disk drive
- Four 10/100/1000 Ethernet ports (Two ports on motherboard and two on the adapter)
- Single AC power supply (the specified power cords are North American variants; order the appropriate power cord for your region)

MFG part number	Description	Qty
647339-B21	HP ProLiant DL120 G7 Server	1
641912-L21	Quad-Core Intel Xeon Processor E3-1220 (3.10GHz,8MB,80W)	1
500672-B21	HP 4GB PC3-10600E 1x4GB 2 Rank Memory	1
458928-B21	HP 500GB 3G SATA 7.2K 3.5in MDL HDD	1
412648-B21	HP NC360T PCI Express Dual Port Gigabit Server Adapter-Low	1
515739-B21	HP 400W NHP Power Supply	1
AF556A	HP 1.83m 10A C13-UL US Power Cord	1

HP DL360 G7 Server Configuration (ASC)

- Suitable for ASC applications up to 4,000 sessions
- Dual quad-core Intel processors, 8 GB of RAM, two 500 GB disk drives1
- Six 10/100/1000 Ethernet ports (Two ports on motherboard and four ports on adapter)
- Two AC power supplies (the specified power cords are North American variants; order the appropriate power cord for your region)

MFG SKU	Description	Qty
579237-B21	HP ProLiant DL360 G7 Server	1
588072-L21	Quad-Core Intel Xeon Processor E5620 (2.40GHz, 12M L3 Cache, 80Watts, DDR3-1066MHz, HT Turbo 1/1/2/2) Configured Option	1
500668-4GB	HP 4GB PC3-10600E 4x1GB 1 Rank Memory	2 (Note 1)
507750-B21	HP 500GB 3G SATA 7,200 rpm SFF (2.5-inch) MDL Hard Drive	2 (Note 1)
462967-B21	HP 512MB P-Series BBWC (Battery Backed Write Cache)	1 (Note 1)
435508-B21	HP NC364T PCI Express Quad Port Multifunctional Gigabit Server Adapter	1
512327-2PS	2 HP 750W CS HE Power Supplies	1
AF556A-XX2	HP 1.83m 10A C13-UL US Power Cords	1
588072-B21	Quad-Core Intel Xeon Processor E5620 Additional Option	1

Note 1: See Appendix 1 for further guidelines concerning disk quantities and redundancy options

Cisco Server Configuration (ASC)

- Suitable for ASC applications up to 4,000 sessions
- Dual quad-core Intel processors, 8 GB of RAM, two 500 GB disk drives1
- Six 10/100/1000 Ethernet ports
- Single AC power supply

MFG SKU	Description	Qty
R200-1120402	UCS C200 M2 Rack Server (1U)	1
A01-X0111	E5620 Quad-Core, 2.4GHz Processor	2
N01-M304GB1	4GB DDR3-1333 MHz RDIMM	2
R200-PL004	LSI 6G MegaRAID 9260-4i PCIe Card	1
N2XX-AIPCI02	Intel Quad-Port Gbe Controller	1
R200-D500GCSATA03	500 GB SATA 7.2K RPM 3.5in. HDD/hot plug/C200 drive sled	2 (Note 1)
R2X0-PSU2-650W	650W power supply unit for UCS C200	1
R250-SLDRAIL	Rail Kit for the UCS C-Series Rack	1

Note 1: See Appendix 1 for further guidelines concerning disk quantities and redundancy options

Net-Net Interactive Session Recorder (ISR)

The following server configurations have been certified for use with Net-Net Interactive Session Recorder (ISR) which is composed of two modular elements.

- Control and Index Server (CIS) - The CIS selects, starts and stops recordings using Web services APIs; maintains metadata and indices; and provides browser-based administration.
- Recording and Storage Server (RSS) – The RSS, under the control of the CIS, records ses-sions and manages their storage and archival.

Note that the specified processor choices and disk sizes represent the minimal options. As server technology evolves, manufacturers often increase processor speed and disk size in their server configurations. If redundancy is required, please order the necessary server in a quantity of two.

In addition, the server configurations below only include the administration and monitoring capabilities available in the base system. If advanced administration and monitoring capabilities are required, please request your supplier to provide the servers with these capabilities.

HP DL360 G7 Server Configuration (for NNISR – RSS)

- Suitable for Net-Net ISR applications up to 500 sessions
- Form factor: 8 SFF (Small Form Factor) drive bays total
- Dual quad-core Intel Xeon processors, 8 GB RAM (2x4GB memory)
- Two AC power supplies (the specified power cords are North American variants; order the appropriate power cord for your region)

MFG part number	Description	Qty
579237-B21	HP ProLiant DL360 G7 Server	1
588072-L21	Quad-Core Intel Xeon E5620 (2.4GHz/4-core/12MB/80W	1
593339-B21	HP 4GB memory (1x4GB @ 1333MHz)	2
512545-B21	HP 72GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise (RAID1)	2
507127-B21	HP 300 GB 6G SAS 10K rpm SFF (2.5-inch)Dual Port Enterprise (RAID 1)	2
572532-B21	HP Smart Array P410i/1G FBWC Controller-Low profile PCIe	1
538696-B21	HP NC375T PCI Express Quad Port Gigabit Server Adapter	1
512327-2PS	HP 750W Common Slot Gold Hot Plug Power Supply Kit (AC)	1
AF556A-XX2	HP 1.83m 10A C13-UL US Power Cords	1
588072-B21	Quad-Core Intel Xeon Processor E5620 Additional Option	1

HP DL360 G7 Server Configuration (for NNISR – CIS)

- Suitable for Net-Net ISR applications up to 5000 sessions
- Form factor: 8 SFF (Small Form Factor) drive bays total
- Dual Six-Core Intel Xeon processors, 24 GB RAM (6x4GB memory)
- Two AC power supplies (the specified power cords are North American variants; order the appropriate power cord for your region)
- External DVD/RW drive to install virtualization software

MFG part number	Description	Qty
579237-B21	HP ProLiant DL360 G7 Server	1
588064-L21	HP DL360 G7 Intel Xeon X5660 (2.80GHz/6-core/12MB/95W	1
593339-B21	HP 4GB memory (1x4GB @ 1333HHz)	6
512545-B21	HP 72GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise (RAID 1)	2
507127-B21	HP 330 GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise (RAID 6 or 1+0)	4
572532-B21	HP Smart Array P410i/1G FBWC Controller-Low profile PCIe	1
538696-B21	HP NC375T PCI Express Quad Port Gigabit Server Adapter	1
512327-2PS	2 HP 750W CS HE Power Supplies	1
AF556A-XX2	HP 1.83m 10A C13-UL US Power Cords	1
588064-B21	HP DL360 G7 Intel Xeon X5660 Additional Option	1
BU516AA#ABA	HP Mobile USB DVD/RW Drive (uses USB connection)	1

Appendix 1 – Disk Drive Quantity & Redundancy Guidelines

The specific Net-Net OS application can affect your server disk drive quantity and redundancy configurations. Below are some general guidelines:

- All Net-Net OS applications require a minimum of 1 disk drive.
- If the Net-Net OS application requires you to store large amount of session recordings or CDRs on the server, then additional disk drives may be desirable.
- If RAID is desired for disk drive redundancy, then this capability should be ordered.