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i n v e n t

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Captain Duncan:

This letter states that HP **ProLiant DL380 servers**, as part of the ProLiant server family identified below, are, to the best of our knowledge, compliant in the data path as implemented by the operating system to the RFC list required by DoD IPv6 Standards Profiles For IPv6 Capable Products, Version 2.0, 01 August 2007, section 1.6, for an "Advanced Server".

The ProLiant DL380 servers are representatives of the following family of general purpose x86 server products designed with hardware consistency and commonality in mind; sharing identical networking stacks, including operating systems, hereinafter referred to as "HP ProLiant server family":

ProLiant ML110, ML115, ML150, ML310, ML350, & ML370
ProLiant DL120, DL145, DL 160, DL165, DL180, DL185, DL320, DL320s, DL360, DL365, DL380, DL385, DL580, DL585 & DL785
ProLiant BL260c, BL2x220c, BL460c, BL465c, BL480c, BL680c, & BL685c

"HP ProLiant server family" with Microsoft Corporation Windows Server 2008 supports the following RFCs and complies with DoD's IPv6 Standard Profiles for IPv6 Capable Products Version 2.0, except that Windows Server 2008 does not implement the requirement for IKEv2 outlined in Section 2.2.2 of the aforementioned document.

Core Requirements in Appendix F of the IPv6 Generic Test Plan:
- RFC 2460 - Internet Protocol v6 (IPv6) Specification
- RFC 2461 - Neighbor Discovery for IPv6
- RFC 2462 - IPv6 Stateless Address Auto-configuration
- RFC 4193 - Unique Local IPv6 Unicast Addresses
- RFC 4007 - IPv6 Scoped Address Architecture
- RFC 4291 - IP Version 6 Addressing Architecture
- RFC 4443 - Internet Control Message Protocol (ICMPv6)

- RFC 4301 - Security Architecture for the Internet Protocol
- RFC 2710 - Multicast Listener Discovery (MLD) for IPv6
- RFC 2464 - IPv6 over Ethernet
- RFC 2467 - Transmission of IPv6 Packets over FDDI Networks
- RFC 2472 - IP Version 6 over PPP

Advanced Server in Appendix F of the 1Pv6 Generic Test Plan:
- RFC 1981 - Path MTU Discovery for IPv6
- RFC 3810 - Multicast Listener Discovery (MLDv2) for IPv6
- RFC 4213 - Transition Mechanisms for IPv6 Host and Routers
- RFC 3986 - Uniform Resource Identifier (URI): Generic Syntax
- RFC 3484 - Default Address Selection for IPv6
- RFC 3596 - DNS Extensions to Support IPv6 (Hosts must be capable of using IPv6 DNS)
- RFC 3315 - Dynamic Host Configuration Protocol for IPv6 (DHCPv6)
- RFC 3041 - Privacy Extensions for Stateless Address Auto configuration in IPv6

IPsec in Appendix F of the IPv6 Generic Test Plan:
- RFC 2407 - The Internet IP Security Domain of Interpretation for ISAKMP
- RFC 2408 - Internet Security Association and Key Management Protocol (ISAKMP)
- RFC 2409 - The Internet Key Exchange (IKE)
- RFC 2464 - IPv6 over Ethernet
- RFC 2467 - Transmission of IPv6 Packets over FDDI Networks
- RFC 4109 - Algorithms for Internet Key Exchange version 1 (IKEv1)
- RFC 4301 - Security Architecture for the Internet Protocol
- RFC 4302 - IP Authentication Header (AH)
- RFC 4303 - IP Encapsulating Security Payload (ESP)
- RFC 4305 - (ESP and AH) Cryptographic Algorithm Implementation
- RFC 4308 - Cryptographic Suites for IPsec

For further details please refer to Microsoft Corporation's Windows Server 2008 IPv6 letter of Compliance.

"HP ProLiant server family" with SUSE Linux Enterprise Server 10 SP2 supports the following RFCs and complies with DoD's IPv6 Standard Profiles for IPv6 Capable Products Version 2.0.

Section 2.1 "Base Requirements":
- RFC 2460 - Internet Protocol Version 6 Specification - including the default minimum Path MTU size of 1280 octets and a minimum PMTU of 1500 to allow for encapsulation
- RFC 4443 - Internet Control Message Protocol (ICMPv6)
- RFC 2461 - Neighbor Discovery for IPv6
- RFC 1981 - Path MTU Discovery for IPv6
- RFC 2462 - IPv6 Stateless Address Auto-configuration (SLAAC)
- RFC 2710 - Multicast Listener Discovery for IPv6

- RFC 3810 - Multicast Listener Discovery Version 2 (MLDv2) for IPv6
- SUSE Linux Enterprise Server 10 SP2 and later provides manual or static configuration of its IPv6 interface addressees)
- RFC 2462 - IPv6 Stateless Address Auto-configuration and the client side of RFC 3315 - DHCPv6

Supports the IPv6 Addressing Architecture as defined in:
- RFC 4291 - IPv6 Addressing Architecture
- RFC 4007 - Scoped Address Architecture
- RFC 4193 - Unique Local IPv6 Unicast Addresses

Supports the following link layer technology:
- RFC 2464- Transmission of IPv6 Packets over Ethernet Networks

Section 2.2 "IP Layer Security (IPsec) Functional Requirements":
- RFC 4301 - IPsec Architecture
- RFC 4303 - Encapsulating Security Payload
- RFC 4302 - IP Authentication Header
- RFC 4305 - Cryptographic Algorithm Implementation Requirements for Encapsulating Security Payload and Authentication Header
- RFC 4306 - Internet Key Exchange (IKEv2) Protocol
- RFC 4307 - Cryptographic Algorithms for Use in the Internet Key Exchange Version 2 (IKEv2)
- RFC 4308 - Cryptographic Suites for IPsec
- RFC 3041 - Privacy Extensions
- RFC 3041 - Privacy Extensions when using SLAAC

Section 2.3 "Transition Mechanism (TM) Requirements":
- RFC 4213 - Transition Mechanisms for IPv6 Hosts and Routers

Supports Standard
- STD 66/RFC 3986 - Uniform Resource Identifier (URI): Generic Syntax
- RFC 3596 - DNS Extensions to Support IPv6
- RFC 3484 - Default Address Selection for IPv6

Supports IPv6 equivalents to the following network application services:
- RFC 4330 - Simple Network Time Protocol (SNTP) Version 4 for IPv4, IPv6 and OSI
- RFC 2616 - Hypertext Transfer Protocol - HTTP/1.1
- RFC 3596 - DNS Extensions to Support IPv6
- RFC 3315 - Dynamic Host Configuration Protocol for IPv6 (DHCPv6)
- RFC 2821 - Simple Mail Transfer Protocol
- RFC 2428 - FTP Extensions for IPv6 and NATs (Server must be capable of transferring files with IPv6 support and Extended Data Port (EPRT) and Extended Passive (EPSV) commands

- RFC 959 - File Transfer Protocol (FTP)

For further details please refer to SUSE Linux Enterprise Server 10 SP2 IPv6 letter of Compliance.

"HP ProLiant server family" with Red Hat Enterprise Linux RHEL5.2 supports the following RFCs and complies with DoD's IPv6 Standard Profiles for IPv6 Capable Products Version 2.0.

"Base Requirements" section 2.1
- RFC 2460 Internet protocol v6 (IPv6)
  o Operate with the default minimum Path MTU size of 1280 octets
  o Support a minimum Path MTU of 1500 to allow for encapsulation
- RFC 4443 Internet control message protocol (ICMPv6)
- RFC 2461 Neighbor discovery for IPv6
- RFC 1981 Path MTU Discovery for IPv6
- Provide manual or static configuration of IPv6 Interface addresses
- RFC 2462 IPv6 Stateless address auto-configuration (SLAAC)
  o ability to disable section 5.5 in RFC 2462
  o Link-local address configuration and duplicate address detection (DAD) MUST NOT be disabled
- RFC 3315 DHCPv6
  o One relay level supported
  o Single IA_NA in response packet
- RFC 4291 IPv6 addressing architecture
- RFC 4007 Scoped address architecture
- RFC 4193 Unique Local IPv6 Unicast addresses
- RFC 2710 Multicast Listener Discovery for IPv6
- RFC 3810 MLDv2, Multicast Listener Discovery Version 2

"Connection Technology Requirements" in section 2.1
- RFC 2464 Transmission of IPv6 packets over Ethernet networks
- RFC 2472 IPv6 over PPP

"IPSec Requirements" in section 2.2
- RFC 4301 Security Architecture for the Internet Protocol
- RFC 4303 Encapsulating Security Payload (ESP)
- RFC 4305 Cryptographic Algorithm Implementation Requirements for ESP and AH
- RFC 4309 Using Advanced Encryption Standard (AES) CCM mode with IPSec ESP
- RFC 3041 Privacy Extensions for Stateless Address Auto configuration in IPv6

"IKEv2 Support" in section 2.2.2
- RFC 4306 Internet key exchange (IKEv2) Protocol
- RFC 4307 Cryptographic Algorithms for Use in IKEv2

"Transition Mechanism" in section 2.3
- RFC 4213 Transition Mechanisms for IPv6 Hosts and Routers [Dual Stack]

"Network Management" in section 2.7
- RFC 4022 Management Information Base for TCP
- RFC 4113 Management Information Base for UDP
- RFC 4293 Management Information Base for IP

"Host/Workstation Profile" in section 3
- RFC 3986 Uniform Resource Identifier (URI): Generic Syntax
- RFC 3596 DNS Extensions to support IPv6
- RFC 3484 Default Address Selection for IPv6 - Default Policy Table

"Advanced Server Profile", "Network Application Services" in section 3
- RFC 2616 HTTP
- RFC 4330 Simple Network Time Protocol (SNTP) version 4 for IPv4, IPv6, and OSI
- RFC 3315, Dynamic Host Configuration Protocol for IPv6 (DHCPv6)
- RFC 2821 Simple Mail Transfer Protocol (SMTP)
- RFC 2428 FTP Extensions for IPv6 and NATs; Server must be capable of transferring files with IPv6 and support Extended Data Port(EPRT) and Extended Passive (EPSV) commands
- RFC 959, File Transfer Protocol (FTP)

"Application Programming Interface"
- RFC 3493 Basic Socket Interface Extension for IPv6
- RFC 3542 Advanced Sockets Application Program Interface (API) for IPv6

For further details please refer to Red Hat Enterprise Linux RHEL5.2 IPv6 letter of Compliance dated 23 May 2008.

This letter addresses solely the IPv6 capabilities for HP ProLiant server family related to the data path as implemented by the operating system as stated above, and does not address nor represent IPv6 capability for out of band management in the HP ProLiant server family.

Regards,

Mike Gill, Vice President, Industry Standard Server Platforms, Storage, & Networking

cc: Mr. Frank Troy, ManTech Telecommunications & Information Systems