



DEFENSE INFORMATION SYSTEMS AGENCY

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Joint Interoperability Test Command (JTE)

11 Mar 09

IN REPLY
REFER TO:

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Special Interoperability Test Certification of the IBM Power 520 Express, Machine Type 8203-E4A, Family of Flexible Service Processors (FSP) Running the IBM Mini-Control Program Kernel Version 2.6.16.27-0 and FSP Firmware eFW 3.4 (GA7) for Internet Protocol Version 6 Capability

References: (a) DoDD 4630.5, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004
(b) CJCSI 6212.01E, "Interoperability and Supportability of Information Technology and National Security Systems," 15 December 2008
(c) through (h) see Enclosure 1

1. References (a) and (b) establish the Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification.
2. The IBM Power 520 Express, machine type 8203-E4A, Flexible Service Processor (FSP) running the IBM Mini-Control Program (MCP) Kernel Version 2.6.16.27-0 and FSP Firmware eFW 3.4 (GA7), met the Internet Protocol Version 6 (IPv6) Capable interoperability requirements for a Network Appliance as described in the Department of Defense (DoD) Information Technology Standards Registry, "DoD IPv6 Standard Profiles for IPv6 Capable Products Version 3.0," July 2008, reference (c). The IBM Power 520 Express, machine type 8203-E4A, FSP running the IBM MCP Kernel Version 2.6.16.27-0 and FSP firmware eFW 3.4 (GA7), has successfully completed the related IPv6 Interoperability portions of the "DoD IPv6 Generic Test Plan (GTP) Version 3," August 2007, reference (d), and is certified for listing on the Unified Capabilities (UC) Approved Products List (APL) as IPv6 Capable. The IBM Power 520 Express, machine type 8203-E4A, FSP is part of the IBM Power 6 family of FSPs, including the IBM Power 520 Express, machine types 9407-M15 and 9408-M25, the IBM Power 550 Express, machine types 8204-E8A and 9409-M50, the IBM Power 560 Express, machine type 8234-EMA, the IBM Power 570, machine types 9117-MMA and 9406-MMA, the IBM Power 575, machine type 9125-F2A, and the IBM Power 595, machine type 9119-FHA, that were not tested. JITC analysis determined that the IBM Power 6 family of FSPs running the IBM MCP Kernel Version 2.6.16.27-0 and FSP firmware eFW 3.4 (GA7) are functionally identical for certification purposes. Therefore, the IBM Power 520 Express, machine types 9407-M15 and 9408-M25, the IBM Power 550 Express, machine types 8204-E8A and 9409-M50, the IBM Power 560 Express, machine type 8234-EMA, the IBM Power 570, machine types 9117-MMA and 9406-MMA, the IBM Power 575, machine type 9125-F2A, and the IBM Power 595, machine type 9119-FHA, FSPs running the IBM MCP Kernel Version 2.6.16.27-0 and FSP firmware eFW 3.4 (GA7) are also certified as IPv6 capable. This certification expires upon changes that could affect interoperability, but no later than 4 years from the date of this memorandum.

JITC Memo, JTE, Special Interoperability Test Certification of the IBM Power 520 Express, Machine Type 8203-E4A, Family of Flexible Service Processors (FSP) Running the IBM Mini-Control Program Kernel Version 2.6.16.27-0 and FSP Firmware eFW 3.4 (GA7) for Internet Protocol Version 6 Capability.

3. This special certification is based on IPv6 Capable Interoperability testing conducted by JITC at Fort Huachuca, Arizona, and the vendor's Letter of Conformance (LoC) dated 13 January 2009. Interoperability testing was conducted from 5 through 9 January 2009, at JITC's Advanced IP Technology Capability. Conformance testing was confirmed by IBM and was verified in the LoC provided. Enclosure 2 documents the summary test results and describes the devices. Users should verify interoperability before deploying the devices in an environment that varies significantly from that described.

4. The device's interoperability status summary is in Table 1, and Table 2 contains the equipment listing.

Table 1. Interoperability Status Summary

| IBM Flexible Service Processor | | |
|---|-----------------------------|--------------------------------|
| Functional Category | Requirement | Verified |
| IPv6 Base | M | Yes |
| IPSec | S+ | No |
| Transition Mechanisms | S | No |
| Quality of Service | O | No |
| Mobility | CS | No |
| RoHC | O | No |
| Automatic Configuration | M | Yes |
| Server | O | No |
| Host | S | No |
| LEGEND: | | |
| CS | Conditional Should | O Optional |
| IPSec | Internet Protocol Security | RoHC Robust Header Compression |
| IPv6 | Internet Protocol Version 6 | S Should |
| M | Must | S+ Should+ |
| NOTE: The terms Must, Conditional Should, Should, Should+, and Optional are used to reference specific required Request for Comments from the Internet Engineering Task Force, the Department of Defense Information Technology Standards Registry, and the Department of Defense Internet Protocol Version 6 Generic Test Plan. | | |

Table 2. Equipment Listing

| IBM Flexible Service Processor | | |
|--|---|--------------------------|
| Component | Firmware/Software | Interface |
| IBM Power 520 Express FSP, Machine Type 8203-E4A | FSP eFW 3.4 (GA7)/MCP Kernel Version 2.6.1.27-0 | Gigabit Ethernet (Gbs) |
| LEGEND: | | |
| Gbs | Gigabits per second | MCP Mini-Control Program |
| FSP | Flexible Service Processor | |

JITC Memo, JTE, Special Interoperability Test Certification of the IBM Power 520 Express, Machine Type 8203-E4A, Family of Flexible Service Processors (FSP) Running the IBM Mini-Control Program Kernel Version 2.6.16.27-0 and FSP Firmware eFW 3.4 (GA7) for Internet Protocol Version 6 Capability.

5. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at <https://stp.fhu.disa.mil>. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at <http://jit.fhu.disa.mil> (NIPRNet), or <http://199.208.204.125> (SIPRNet). Information related to IPv6 Capable testing is on the UC APL at http://jitc.fhu.disa.mil/adv_ip/register/register.html.

6. The JITC point of contact is Donald L. Hann, DSN 879-5130, commercial (520) 538-5130, or e-mail don.hann@disa.mil.

FOR THE COMMANDER:



for RICHARD A. MEADOR
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ADDITIONAL REFERENCES

- (c) Department of Defense (DoD) Information Technology Standards Registry (DISR), "DoD Internet Protocol Version 6 (IPv6) Standard Profiles for IPv6 Capable Products Version 3.0," July 2008
- (d) Defense Information Systems Agency, Joint Interoperability Test Command, "DoD IPv6 Generic Test Plan Version 3," August 2007
- (e) DoD Chief Information Officer (CIO) Memorandum, "IPv6," 9 June 2003
- (f) DoD CIO Memorandum, "IPv6 Interim Transition Guidance," 29 September 2003
- (g) DoD IPv6 Transition Office, "DoD IPv6 Master Test Plan, Version 2," September 2006
- (h) DoD, "DISR Global Information Grid (GIG) Convergence Master Plan (GCMP), Version 5.25," 29 March 2006

INTERNET PROTOCOL VERSION 6 CAPABLE TESTING SUMMARY

- 1. SYSTEM TITLE.** IBM Power 520 Express, machine type 8203-E4A, Flexible Service Processor (FSP) running the IBM Mini-Control Program (MCP) Kernel Version 2.6.16.27-0 and FSP Firmware eFW 3.4 (GA7), hereafter referred to as the device under test (DUT).
- 2. PROPONENT.** Department of Defense (DoD) Internet Protocol (IP) Version 6 (IPv6) Transition Office (DITO).
- 3. PROGRAM MANAGER/USER POC.** DITO, Defense Information Systems Agency (DISA), Attn: GE36 Sam Assi, P.O. Box 4502, Arlington, VA 22204-4502, (703) 882-0241, e-mail: sam.assi@disa.mil.
- 4. TESTER.** Donald L. Hann, Joint Interoperability Test Command (JITC), P.O. Box 12798, Fort Huachuca, AZ 85670-2798, DSN: 879-5130, commercial: (520) 538-5130, e-mail: don.hann@disa.mil.
- 5. DEVICE UNDER TEST DESCRIPTION.** The DUT is used for system control and platform management of IBM Power Systems.
- 6. OPERATIONAL ARCHITECTURE.** The operational architecture was the JITC simulated Defense Information Systems Network (DISN) IP Core Network as depicted in Figure 2-1.
- 7. REQUIRED DEVICE INTERFACES.** All IPv6-capable products to be included on the Unified Capabilities Approved Product List must meet the requirements of the DoD Information Technology Standards Registry (DISR), "DoD IPv6 Standard Profiles for IPv6 Capable Products Version 3.0," July 2008. Product testing conducted against these requirements is in accordance with the "DoD IPv6 Generic Test Plan (GTP) Version 3," August 2007. The IPv6 Network Appliance profile requirements for conformance and interoperability are in Table 2-1.

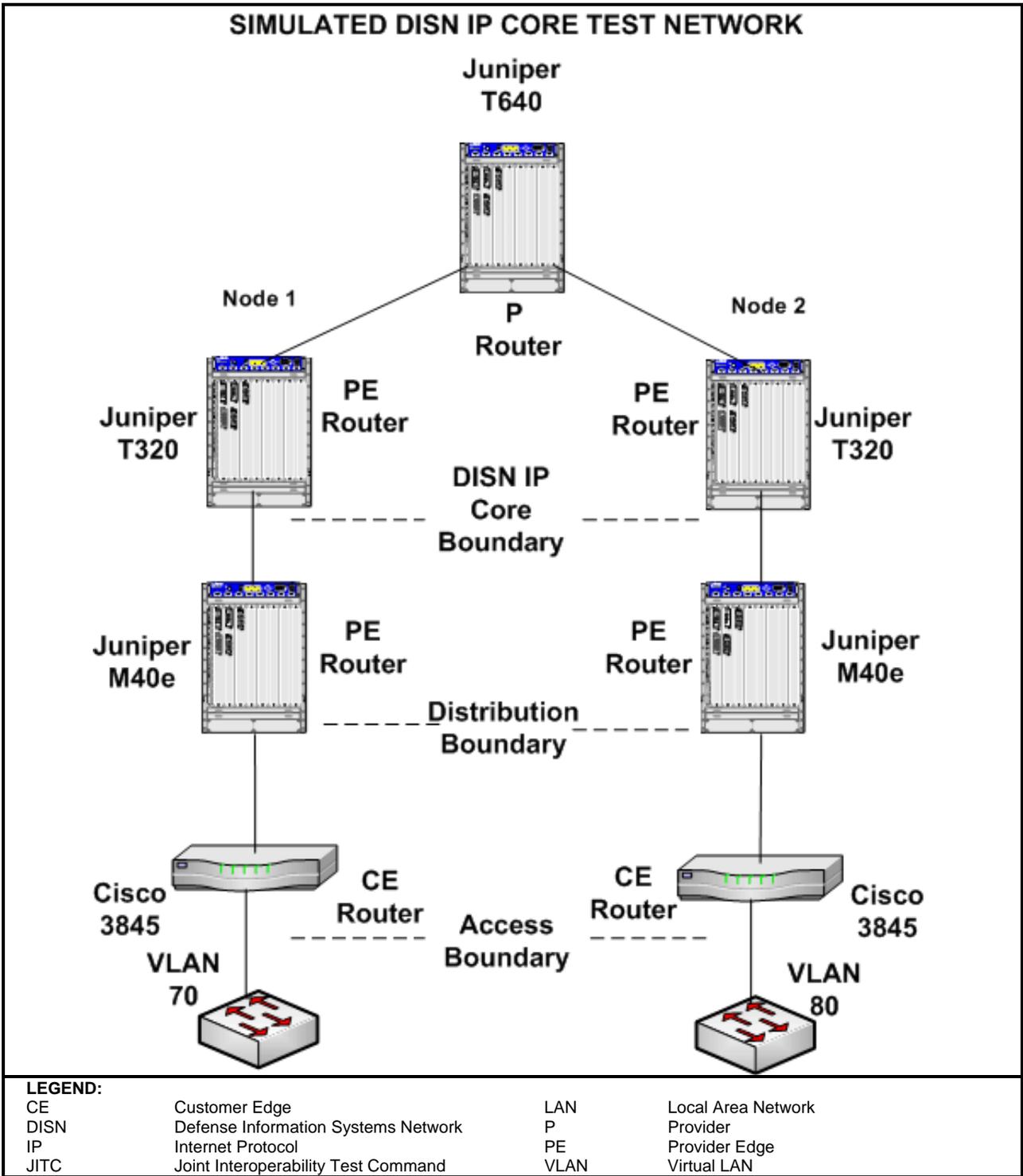


Figure 2-1. JITC Simulated DISN IP Core Network

Table 2-1. IPv6 Capability Requirements and Status

| IBM FSP | | | | | | | |
|------------------|---|-------------------|------------------|-------------------|-------------|-------------|----------|
| RFC | RFC Title | Testing Completed | | Network Appliance | | Implemented | Comments |
| | | Conformance | Interoperability | Requirement | Met/Not Met | | |
| IPv6 Base | | | | | | | |
| 2460 | Internet Protocol version 6 (IPv6) Specification | Stated in LoC | Yes | M | Met | Yes | |
| 5095 | Deprecation of Type 0 Routing Headers in IPv6 | Stated in LoC | Yes | M | Met | Yes | |
| 4443 | Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification | Stated in LoC | Yes | M | Met | Yes | |
| 4861 | Neighbor Discovery for IP version 6 (IPv6) | Stated in LoC | Yes | M | Met | Yes | |
| 4862 | IPv6 Stateless Address Auto configuration | Stated in LoC | Yes | M | Met | Yes | |
| 1981 | Path Maximum Transmission Unit Discovery for IPv6 | Stated in LoC | Yes | S | Met | Yes | |
| 4291 | IPv6 Addressing Architecture | Stated in LoC | Yes | M | Met | Yes | |
| 4007 | IPv6 Scoped Address Architecture | Stated in LoC | Yes | M | Met | Yes | |
| 4193 | Unique Local IPv6 Unicast Addresses | Not Stated | Not Tested | O | Not Tested | No | |
| 2710 | Multicast Listener Discovery (MLD) | Stated in LoC | Yes | M | Met | Yes | |
| 3810 | Multicast Listener Discovery Version 2 (MLDv2) for IPv6 | Stated in LoC | Yes | S+ | Met | Yes | |
| 2464 | Transmission of IPv6 Packets over Ethernet Networks | Stated in LoC | Yes | CM | Met | Yes | Note 1 |
| IPSec | | | | | | | |
| 4301 | Security Architecture for the Internet Protocol | Not Stated | Not Tested | S+ | Not Tested | No | |
| 4302 | IP Authentication Header | Not Stated | Not Tested | S | Not Tested | No | |
| 4303 | IP Encapsulating Security Payload (ESP) | Not Stated | Not Tested | S+ | Not Tested | No | |
| 4308 | Cryptographic Suites for IPSec | Not Stated | Not Tested | S+ | Not Tested | No | |
| 4305 | Cryptographic Algorithm Implementation Requirements for Encapsulating Security Payload (ESP) and Authentication Header (AH) | Not Stated | Not Tested | S+ | Not Tested | No | |
| 4869 | Suite B Cryptographic Suites for IPsec | Not Stated | Not Tested | S+ | Not Tested | No | |
| 3971 | Secure Neighbor Discovery | Not Stated | Not Tested | S | Not Tested | No | |
| 3972 | Cryptographically Generated Addresses | Not Stated | Not Tested | S | Not Tested | No | |
| 3041 | Privacy Extensions for Stateless Address Auto configuration in IPv6 | Not Stated | Not Tested | S | Not Tested | No | |

Table 2-1. IPv6 Capability Requirements and Status (continued)

| IBM FSP | | | | | | | |
|------------------------------|---|-------------------|------------------|-------------------|-------------|-------------|----------|
| RFC | RFC Title | Testing Completed | | Network Appliance | | Implemented | Comments |
| | | Conformance | Interoperability | Requirement | Met/Not Met | | |
| Transition Mechanisms | | | | | | | |
| 4306 | Internet Key Exchange (IKEv2) Protocol | Not Stated | Not Tested | S+ | Not Tested | No | |
| 4307 | Cryptographic Algorithms for Internet Key Exchange Version 2 (IKEv2) | Not Stated | Not Tested | S+ | Not Tested | No | |
| 4213 | Transition Mechanisms for IPv6 Host and Routers | Not Stated | Not Tested | SN | Not Tested | No | |
| 2766 | Network Address Translation – Protocol Translation (NAT-PT) | Not Stated | Not Tested | SN | Not Tested | No | |
| 3053 | IPv6 Tunnel Broker | Not Stated | Not Tested | CS | Not Tested | No | |
| QoS | | | | | | | |
| 2474 | Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers | Not Stated | Not Tested | O | Not Tested | No | |
| 3168 | The Addition of Explicit Congestion Notification (ECN) to IP | Not Stated | Not Tested | O | Not Tested | No | |
| 2205 | Resource ReSerVation Protocol (RSVP) – Version 1 Functional Specification | Not Stated | Not Tested | O | Not Tested | No | |
| 2207 | RSVP Extensions for IPSEC Data Flows | Not Stated | Not Tested | O | Not Tested | No | |
| 2210 | The Use of RSVP with IETF Integrated Services | Not Stated | Not Tested | O | Not Tested | No | |
| 2750 | RSVP Extensions for Policy Control | Not Stated | Not Tested | O | Not Tested | No | |
| 3175 | Aggregation of RSVP for IPv4 and IPv6 Reservations | Not Stated | Not Tested | O | Not Tested | No | |
| 3181 | Signaled Preemption Priority Policy Object | Not Stated | Not Tested | O | Not Tested | No | |
| 2961 | RSVP Refresh Overhead Reduction Extension | Not Stated | Not Tested | O | Not Tested | No | |
| 4495 | A Resource Reservation Protocol (RSVP) Extension for the Reduction of Bandwidth of a Reservation Flow | Not Stated | Not Tested | O | Not Tested | No | |
| 2998 | A Framework for Integrated Services Operation over DiffServ Networks | Not Stated | Not Tested | O | Not Tested | No | |
| 2996 | Format of the RSVP DCLASS Object | Not Stated | Not Tested | O | Not Tested | No | |
| 2746 | RSVP Operation Over IP Tunnels | Not Stated | Not Tested | O | Not Tested | No | |
| 3182 | Identity Representation for RSVP | Not Stated | Not Tested | O | Not Tested | No | |
| 2872 | Application and Sub Application Identity Policy Element for Use with RSVP | Not Stated | Not Tested | O | Not Tested | No | |
| 2747 | RSVP Cryptographic Authentication | Not Stated | Not Tested | O | Not Tested | No | |
| Mobility | | | | | | | |
| 3775 | Mobility Support in IPv6 | Not Stated | Not Tested | CS | Not Tested | No | |

Table 2-1. IPv6 Capability Requirements and Status (continued)

| IBM FSP | | | | | | | |
|-------------------------|---|-------------------|------------------|-------------------|-------------|-------------|----------|
| RFC | RFC Title | Testing Completed | | Network Appliance | | Implemented | Comments |
| | | Conformance | Interoperability | Requirement | Met/Not Met | | |
| 3776 | Using IPsec to Protect Mobile IPv6 Signaling Between Mobile Nodes and Home Agents | Not Stated | Not Tested | CS | Not Tested | No | |
| 4877 | Mobile IPv6 Operation with IKEv2 and the Revised IPsec Architecture | Not Stated | Not Tested | CS | Not Tested | No | |
| 4282 | The Network Address Identifier | Not Stated | Not Tested | CS | Not Tested | No | |
| 4283 | Mobile Node Identifier for Option for IPv6 | Not Stated | Not Tested | CS | Not Tested | No | |
| RoHC | | | | | | | |
| 3095 | Robust Header Compression (RoHC) | Not Stated | Not Tested | O | Not Tested | No | |
| 4815 | Corrections and Clarification to RFC 3095 | Not Stated | Not Tested | O | Not Tested | No | |
| 4995 | RoHC Framework | Not Stated | Not Tested | O | Not Tested | No | |
| 4996 | RoHC: A profile for TCP/IP | Not Stated | Not Tested | O | Not Tested | No | |
| 3241 | RoHC over PPP | Not Stated | Not Tested | O | Not Tested | No | |
| 3843 | RoHC: A Compression Profile for IP | Not Stated | Not Tested | O | Not Tested | No | |
| 4362 | RoHC: A Link-Layer Assisted Profile for IP/UDP/RTP | Not Stated | Not Tested | O | Not Tested | No | |
| 2507 | IP Header Compression | Not Stated | Not Tested | O | Not Tested | No | |
| 2508 | Compressing IP/UDP/RTP Headers for Low-Speed Serial Links | Not Stated | Not Tested | O | Not Tested | No | |
| 3173 | IP Payload Compression | Not Stated | Not Tested | O | Not Tested | No | |
| Automatic Configuration | | | | | | | |
| 3315 | DHCPv6 | Stated in LoC | Yes | CM | Met | Yes | |
| 3769 | IPv6 Prefix Delegation | Not Stated | Not Tested | CM | Not Tested | No | |
| 3633 | IPv6 Prefix Options for DHCPv6 | Not Stated | Not Tested | CM | Not Tested | No | |
| 5175 | Extensions to Router Advertisement Flags | Not Stated | Not Tested | CS+ | Not Tested | No | |
| Server | | | | | | | |
| 959 | File Transfer Protocol | Not Stated | Not Tested | O | Not Tested | No | |
| 2428 | FTP Extensions for IPv6 and NAT | Not Stated | Not Tested | O | Not Tested | No | |
| 2821 | Simple Mail Transfer Protocol (SMTP) | Not Stated | Not Tested | O | Not Tested | No | |
| 2911 | Internet Printing Protocol | Not Stated | Not Tested | O | Not Tested | No | |
| 3162 | RADIUS (Remote Authentication dial-In User Service) and IPv6 | Not Stated | Not Tested | O | Not Tested | No | |
| 4330 | Simple Network Time Protocol (SNTP) | Not Stated | Not Tested | O | Not Tested | No | |
| 3226 | DNS Security and IPv6 A6 Aware Server/Resolver Message Size Requirements | Not Stated | Not Tested | O | Not Tested | No | |
| 3261 | Session Initiation Protocol (SIP) | Not Stated | Not Tested | O | Not Tested | No | |
| 3596 | DNS Extensions to Support IPv6 | Not Stated | Not Tested | O | Not Tested | No | |
| 3053 | IPv6 Tunnel Broker | Not Stated | Not Tested | O | Not Tested | No | |

Table 2-1. IPv6 Capability Requirements and Status (continued)

| IBM FSP | | | | | | | |
|---|---|-------------------|------------------|-------------------|--------------------------------------|-------------|----------|
| RFC | RFC Title | Testing Completed | | Network Appliance | | Implemented | Comments |
| | | Conformance | Interoperability | Requirement | Met/Not Met | | |
| Host | | | | | | | |
| 3484 | Default Address Selection for IPv6 | Not Stated | Not Tested | S | Not Tested | No | |
| 3596 | DNS Extensions to Support IPv6 | Not Stated | Not Tested | S | Not Tested | No | |
| 3986 | Uniform Resource Identifier (URI): Generic Syntax | Not Stated | Not Tested | S | Not Tested | No | |
| LEGEND: | | | | | | | |
| CBC | Cipher Block Chaining | | M | | Must | | |
| CCM | CBC MAC Mode | | MAC | | Message Authentication Code | | |
| CM | Conditional Must | | MIB | | Management Information Base | | |
| CS | Conditional Should | | NAT | | Network Address Translation | | |
| CS+ | Conditional Should+ | | O | | Optional (May) | | |
| DHCPv6 | Dynamic Host Configuration Protocol Version 6 | | OSPF | | Open Shortest Path First | | |
| DNS | Domain Name Service | | PPP | | Point-to-Point Protocol | | |
| DoD | Department of Defense | | QoS | | Quality of Service | | |
| FTP | File Transfer Protocol | | RFC | | Request for Comment | | |
| FSP | Flexible Service Processor | | RoHC | | Robust Header Compression | | |
| IETF | Internet Engineering Task Force | | RSVP | | Resource ReSerVation Protocol | | |
| IKEv2 | Internet Key Exchange Version 2 | | RTP | | Real-Time Transport Protocol | | |
| IP | Internet Protocol | | S | | Should | | |
| IPSec | Internet Protocol Security | | SLAAC | | Stateless Address Auto-configuration | | |
| IPv4 | Internet Protocol Version 4 | | SN | | Should Not | | |
| IPv6 | Internet Protocol Version 6 | | S+ | | Should+ | | |
| LoC | Letter of Conformance | | UDP | | User Datagram Protocol | | |
| NOTES: | | | | | | | |
| 1. The device must be conformant to at least one of the Connection Technologies protocols | | | | | | | |
| 2. The terms Must, Conditional Must, Should, Should+, Conditional Should, Conditional Should +, Should Not, and Optional are used to reference specific required RFCs from the IETF, the DoD Information Technology Standards Registry, and the DoD IPv6 Generic Test Plan. | | | | | | | |

8. TEST NETWORK DESCRIPTION. The DUT was tested as part of the JITC simulated DISN IP Core Network managed by the Advanced IP Technology Capability, and configured as shown in Figure 2-2.

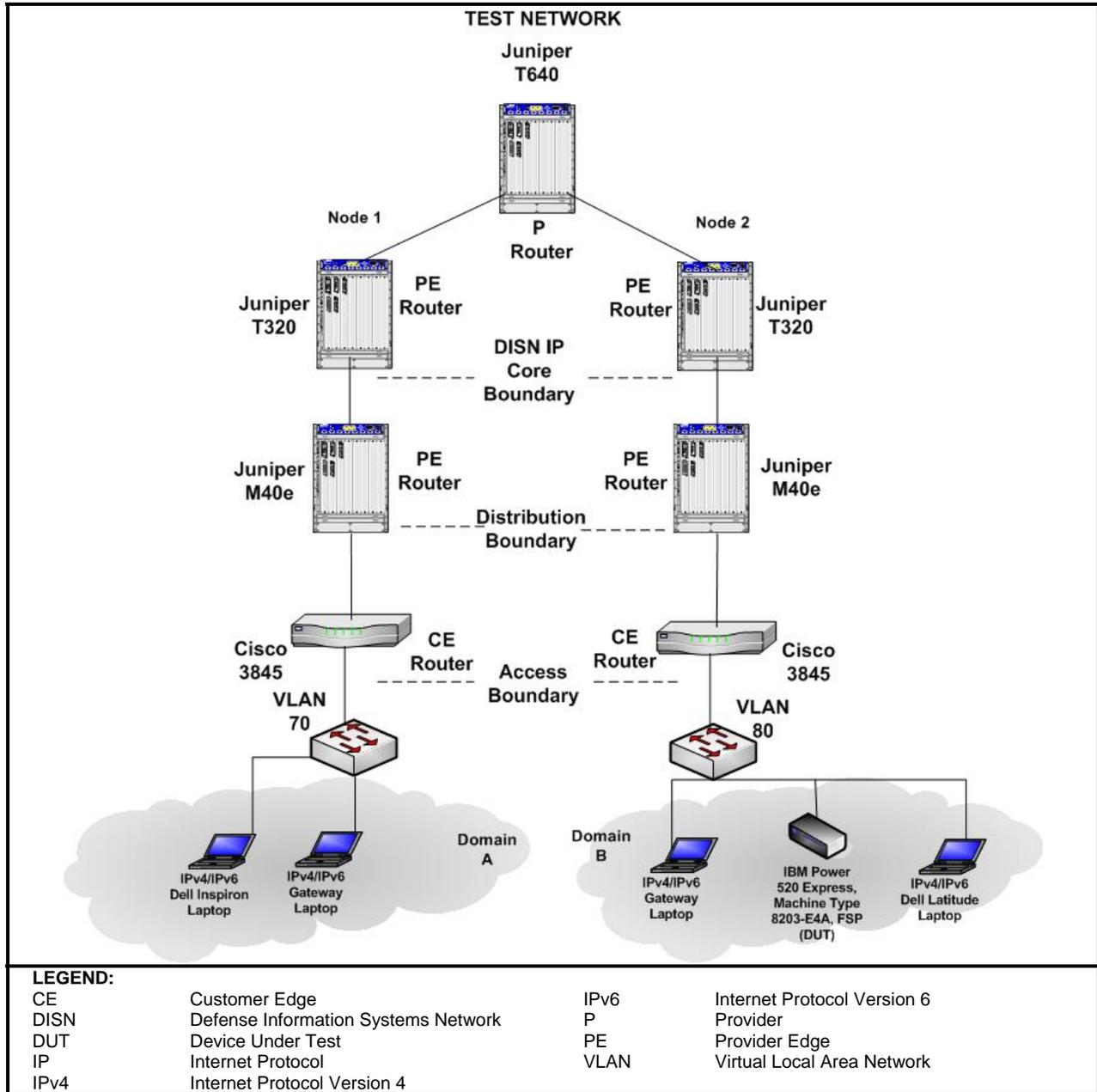


Figure 2-2. Test Network

9. DEVICE CONFIGURATIONS. Table 2-2 provides hardware and software components used in the test network.

Table 2-2. Test Configuration Hardware and Software

| Equipment Name | Model Number | IOS/OS/Version(s) | |
|----------------------------|---|--|-------------------------|
| Hardware | | | |
| IBM FSP - DUT | IBM Power 520 Express, Machine Type 8203-E4A | IBM MCP Kernel Version 2.6.16.27-0/ IBM FSP Firmware Version eFW 3.4 (GA7) | |
| 2 Cisco Routers | Cisco 3845 | 12.4(11)T | |
| 2 Juniper Routers | Juniper M40e | V 7.6R3.6 | |
| 2 Juniper Routers | Juniper T320 | V 7.5R4.4 | |
| Juniper Router | Juniper T640 | V 7.5R4.4 | |
| 2 Gateway Notebooks | 450ROG | Windows XP Professional SP1 | |
| Dell Notebook | Inspiron | Windows XP Professional SP3 | |
| Dell Notebook | Latitude | Windows XP Professional SP3 | |
| Software | | | |
| MS Windows XP Professional | N/A | Version 5.1.2600, SP1 Build 2600 | |
| MS Windows XP Professional | N/A | Version 5.1.2600, SP3 Build 2600 | |
| Wireshark | N/A | V 1.0.3 (SVN Rev 26134) | |
| LEGEND: | | | |
| DUT | Device Under Test | N/A | Not Applicable |
| eFW | Electronically-sourced Firmware | OS | Operating System |
| FSP | Flexible Service Processor | Rev | Revision |
| GA7 | Generally Available (7 th Edition) | SP | Service Pack |
| IBM | International Business Machines | SVN | Software Version Number |
| MCP | Mini-Control Program | T | New Technology |
| MS | Microsoft | V | Version |

10. TEST LIMITATIONS. None.

11. TEST RESULTS.

a. IPv6 Base.

Test Case C.1.2. The Request for Comments (RFC) 2460 IPv6 Specification is the base specification of the IPv6 protocol. It specifies a number of parameters that enable successful completion of IPv6 traffic addressing and control. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case Not Applicable . The RFC 5095, Deprecation of Type 0 Routing Headers, specifies that all IPv6 nodes MUST NOT initiate or propagate IPv6 packets containing Type 0 Routing Headers. Any IPv6 node that receives a packet with a destination address assigned to it that contains an RH0 extension header MUST NOT execute traffic-forwarding algorithms. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case C.1.14. The RFC 4443 identifies Internet Control Message Protocol messages for the IPv6 protocol. It includes message format and identifies two types of messages: error and informational. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case C.1.3. The RFC 4861 Neighbor Discovery for IPv6 specifies the neighbor discovery function that is similar to address resolution protocol in IP Version 4 (IPv4). It is necessary for implementing neighbor solicitations and neighbor advertisements within IPv6. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case C.1.4. The RFC 4862 IPv6 Stateless Address Auto-configuration specifies how a host auto-configures its interfaces in IPv6. These steps include determining whether the source addressing should be stateless or stateful, whether the information obtained should be solely the address or include other information, and Duplicate Address Detection. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case C.1.1. The RFC 1981 Path Maximum Transmission Unit Discovery for IPv6 is necessary for proper IPv6 implementations. It acts as a mechanism to determine the maximum size of packets to traverse the network without fragmentation. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case C.1.13. The RFC 4291 IPv6 Addressing Architecture defines the specifications for the addressing architecture of the IPv6 protocol. The definitions cover unicast addresses, anycast addresses, and multicast addresses. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case C.1.11. The RFC 4007 IPv6 Scoped Address Architecture defines the nature and characteristics for the usage of IPv6 addresses of different scopes. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case C.1.8. The RFC 2710 Multicast Listener Discovery (MLD) for IPv6 specifies the protocol used by an IPv6 router to discover the presence of multicast listeners (i.e., nodes wishing to receive multicast packets) on its directly attached links, and to discover specifically which multicast addresses are of interest to those neighboring nodes. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case C.1.10. The RFC 3810 MLD Version 2 (MLDv2) for IPv6, when compared to MLD Version (MLDv1), adds support for "source filtering", i.e., the ability for a node to report interest in listening to packets only from specific source addresses (as required to support Source-Specific Multicast RFC 3569), or from all but specific source addresses, sent to a particular multicast address. The MLDv2 is designed to be interoperable with MLDv1. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

Test Case C.1.5. The RFC 2464 Transmission of IPv6 Packets over Ethernet Networks specifies the frame format for transmission of IPv6 link-local addresses and statelessly auto-configured addresses on Ethernet networks. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

b. Automatic Configuration.

Test Case C.3.8. The RFC 3315 enables Dynamic Host Configuration Protocol servers to pass configuration parameters such as IPv6 network addresses to IPv6 nodes. It offers the capability of automatic allocation of reusable network addresses and additional configuration flexibility. This protocol is a stateful counterpart to RFC 2462/4862, IPv6 Stateless Address Auto-configuration, and can be used separately or concurrently with the latter to obtain configuration parameters. The IBM Power 520 Express FSP, machine type 8203-E4A, met the requirement.

c. Conclusion. The IBM Power 520 Express FSP, machine type 8203-E4A, met all the required RFCs.

12. TEST AND ANALYSIS REPORT. No detailed test report was written in accordance with guidance from the Assistant Secretary of Defense (Networks & Information Integration). All test data is maintained in the Advanced IP Technology Capability and is available upon request. This certification is available on the Joint Interoperability Tool (JIT). The JIT homepage is <http://jit.fhu.disa.mil> (NIPRNet), or <http://199.208.204.125/> (SIPRNet). The JIT has links to JITC interoperability documents to provide the DoD community, including the warfighter in the field, easy access to the latest interoperability information. System interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/.gov users on the NIPRNet at: <https://stp.fhu.disa.mil/>.