Avaya Virtual Services Platform 7200 Series

A new line of high-performance Top-of-Rack Ethernet Switches developed by Avaya to leverage the very latest generation of highly advanced chipsets. Combining with the Avaya’s operating system software to deliver the ‘Avaya advantage’: a networking solution that is cost-effective, fully featured, flexible, and simple to operate.

The Avaya Virtual Services Platform 7200 Series continues the unique and innovative ‘Distributed Top-of-Rack’ capability pioneered by the original VSP 7000 Series: minimizing server-to-server latency to maximize application performance. Distributed Top-of-Rack delivers multi-hop low-latency, supporting advanced Fabric-based services, and enabling a one-touch, Edge-only provisioning model. Leveraging this application performance advantage, businesses can help reduce time-to-decision, and streamline deployment and operational costs.

Most enterprises are looking at ways to reduce cost and improve time-to-service, and most are looking for ways to improve the operational efficiency of the Data Center. Wouldn’t it be nice if you could deploy a new application across multiple Data Centers in an instant? Wouldn’t it be nice if you could give IT the ability to simply say “yes” when there is a new application or service that needs to be deployed?

Server virtualization within the Data Center is now taken for granted, with some industry observers declaring that ‘Cloud Computing’ will become a reality for most enterprises. Applications and compute resources are set to become simple commodities. Experience has proved one thing; the Data Center of the future cannot be built on the technology of the past. Generalist products, outmoded techniques, and legacy designs cannot be re-packaged as ‘Data Center-ready’. The industry will take the best and leave the rest. Ethernet is readily available, cost-effective, extensible, and – as the 40 and 100 Gigabit developments prove – scalable. However many existing deployment methodologies and techniques are no longer an option.

Avaya Networking provides an over-arching strategy designed to improve network uptime, delivering the infrastructure that creates the seamless private cloud and virtually eliminates user-error network outages. We are reducing time-to-service by enabling with simple one-touch provisioning, and we are improving Data Center efficiency by tightly integrating applications and network virtualization. Independent research commissioned by Avaya

The Avaya VSP 7200 Series is introduced with the following capability and feature highlights:

• High-density 10 Gigabit Server connections
• Flexible Uplink or Distributed Top-of-Rack 40 Gigabit ports
• Non-blocking, wire-speed switching architecture
• Optimized for minimal latency
• Flexible L2/L3 table entry architecture
• Fast-path support for Avaya’s innovative Distributed Top-of-Rack, Fabric Connect, and Switch Cluster technologies
• IPv4/IPv6 Routing including support for Static, RIP, OSPF, ECMP, VRRP, PIM-SM, and VRF
• Distributed Top-of-Rack technology that scales up to 512 nodes: supporting up to 24,576 ports of 10 Gigabit and up to 3,076 ports of 40 Gigabit, and a virtual backbone of up to 122.88Tbps capacity
confirms that our solutions enable businesses to dramatically improve the key networking metrics, enabling users to be more reliably connected to their content*.

**Introducing the VSP 7200 Series**

The Avaya Virtual Services Platform 7200 Series is a space-efficient platform built around a next-generation chipset, delivering the wire-speed 10 and 40 Gigabit Ethernet connectivity necessary to satisfy today’s requirements.

The VSP 7200 Series features seamless integration between the Industry’s leading hardware and Avaya’s proven VSP Operating System, delivering an enhanced level of functionality and robustness. Leveraging Avaya’s unique virtualization technologies, businesses can benefit from real-time service agility, avoiding the delays associated with conventional design, and the outages introduced in trying to maintain them. The highly efficient design revolutionizes the cost/benefit proposition for the Data Center Top-of-Rack Switch role; delivering high port density, better price/port, a lower entry price point, better power efficiency, it features reduced maintenance, a smaller physical footprint, and it scales easily.

**Innovative Capabilities matched to Class-leading Hardware**

The Virtual Services Platform 7200 Series (VSP 7200) is ideally suited to deliver today’s critical need for flexible, high-speed Ethernet connectivity in the high-performance Data Center Top-of-Rack (ToR) role. Additionally, it provides a cost-effective 10 Gigabit Ethernet fan-out capability for existing Core Switch deployments, saving valuable ports and slots. Featuring a hardened physical architecture of dual, hot-swappable AC or DC power supplies and fans, the VSP 7200 is an important addition to a network manager’s toolkit for creating always-on high-performance solutions.

The VSP 7200 Series includes two variants. The 7254XSQ features forty-eight 10 Gigabit SFP+ sockets that support a wide variety of 1Gbps and 10Gbps Ethernet pluggable transceivers, plus six 40 Gigabit QSFP+ ports for high-speed network connectivity. The 7254XTQ model features forty-eight ports of fixed 10Gbase-T support, presented as RJ45 connectors, in addition to six 40 Gigabit network connections.

The design of the VSP 7200 is sympathetic to the evolving requirements for precisely planned environmental implementations. It offers both front-to-back and back-to-front airflow options for the field-replaceable fans modules and power supplies; this gives the flexibility to conform to a variety of hot-aisle/cold-aisle design requirements.

**Avaya Distributed Top-of-Rack**

The experience gained developing successive generations of our Stackable Chassis product lines has enabled Avaya to deliver the ‘Distributed Top-of-Rack’ technology with its dedicated Data Center Spine/Leaf Switches. This creates a virtual backplane that optimizes local traffic flows, using dedicated high-speed interconnections to forward packets on the shortest path between source and destination. This sort of efficiency is particularly important in a Data Center environment, creating a flatter, latency-optimized network that encompasses multiple racks of highly virtualized servers.

The VSP 7200 is an integral component of our Fabric Connect strategy for end-to-end Shortest Path Bridging-based virtualized network. We are able to leverage the Fabric Connect technology to flexibly mesh multiple VSP 7200s to deliver multi-hop, low-latency for deployment scenarios that call for massive scale-out.

Avaya has architected the Distributed ToR solution to scale up to many hundreds of Switches within a single domain, with the current implementation supporting up to 512 Switches networked as a single logic Fabric. This capability delivers scale of up to 24,576 wire-speed 10 Gigabit Ethernet ports, and up to 3,072 ports of 40 Gigabit, equating to a virtual backplane capacity of 122.88Tbps. An agile building-block approach delivers extreme flexibility, with no hard-and-fast topology constraints; blocks can be small or large, and individual Switches easily interconnected with extended-reach copper or fiber cabling.

**Avaya Fabric Connect**

The Avaya Fabric Connect technology, based on an extended implementation of the Shortest Path Bridging (SPB) standard, offers the ability to create a simplified network that can dynamically virtualize elements to empower efficient provisioning and utilization of resources. This can reduce the strain on the network and personnel. Fabric Connect can combine with Avaya and third party orchestration solutions to fully synchronize the provisioning of the networking requirements of workload mobility within and between Data Centers. Dynamically moving or extending virtualized computing resources, without adding complexity, is a key value point of

Fabric Connect. Based on SPB, the IEEE 802.1aq and IETF RFC 6329 standards augmented with Avaya enhancements that deliver specific enterprise optimization, Fabric Connect offers a robust and resilient alternative to today’s existing offerings. It delivers innovative services and solutions while maintaining Ethernet’s key value propositions of simplicity and cost-effectiveness. Fabric Connect delivers new capabilities in the crucial areas of simplicity, scalability, performance, reliability, and service orchestration and abstraction.

Creating a fault-tolerant, powerful, and self-aware end-to-end Fabric, this technology creates a solution where service provisioning occurs only at the perimeter. The advantage is immediate and pronounced; administrative effort is reduced, errors can be avoided, and time-to-service is vastly enhanced. The beauty of the underlying technology is that it masks devices, links, and protocols and delivers what is logically an extended Ethernet LAN that provides connectivity for multiple end-points. That’s the simple concept, and it is achieved in an interesting and quite unique way. Fabric Connect leverages a dynamic link-state routing protocol called Intermediate System-to-Intermediate System (IS-IS) and uses standardized extensions to share topology, reachability, and device information between every node in the domain. With nodes holding their own self-determined view of the network, including the optimal path to any destination, a fully distributed and dynamically maintained solution is created.

Avaya Switch Cluster
The Avaya Switch Cluster technology is built using the Split Multi-Link Trunking technology that is unique to our products, yet is fully interoperable with third party Switches, Servers, Appliances, and Routers. What this delivers is a series of benefits that provide real value; while it may be possible to simulate certain individual elements, no competitive offering can rival the combined capabilities, particularly in terms of simplicity and efficiency.

Switch Cluster delivers an interoperable solution that extends beyond simply Switches. This means that high-availability is not limited to only the switching network (the Switches themselves and their direct links), but to the total network; importantly also extended to attached Servers, Appliances, and WAN Routers, etc. Competing offers are based on interactions purely within the Switch domain, and crucially do not extend to the application hosts themselves. Most rival offerings are based on variations of the Spanning Tree Protocol (STP); however, support for this is limited to Switches alone and is not commonly supported by other devices. By excluding Servers from the active resiliency technology, these solutions cannot extend high-availability to the applications. The Switch Cluster technology is independent of STP and extends to support any device that utilizes Link Aggregation, a technology that is both basic and ubiquitous. Devices that attach to the Switch Cluster create a virtual connection using multiple physical links, this provides resiliency together with additional capacity.

‘Distributed Top-of-Rack’ technology creates a flatter, latency-optimized network that encompasses multiple racks of highly virtualized servers.

Delivering availability and facilitating in-service maintenance and optimized performance are well-known features of Switch Cluster technology. Enabling sub-second failover and recovery remains extremely important, perhaps never more important, however it is not necessarily a feature that remains unique. Enhancements to STP – namely rapid reconfiguration – can be aggressively configured to deliver similar levels of failover performance. However, all flavors of STP remain tied to the concept of detecting and acting upon changes to the network topology. This makes a network extremely sensitive to the reliability and availability of particular devices (Root Bridges, etc.). Avaya’s Switch Cluster technology is built around the concept of mirrored devices and virtualized capabilities. Switch Cluster technology is so effective that the loss of an entire Switch – for planned maintenance or through failure – can be accommodated without any loss of overall application availability.

Avaya delivers a level of network resiliency that also facilitates in-service maintenance. The
deterministic nature of Switch Cluster technology empowers network operators to compartmentalize the network, making essential services even more resilient, and allowing for individual failures to be repaired in real-time, without service restoration work impacting on collateral components or applications.

SDN that redefines Networking
Software-Defined Networking is certainly topical, however much of the talk is still about finding the real-world business need for what is essentially a technology side step. Avaya takes a pragmatic view and delivers solutions aimed fairly and squarely at simplifying and automating tasks that are currently complex and manual; worrying less what the technology is labeled, and more about what it delivers.

A case in point is a new innovation that Avaya has introduced called ‘Fabric Attach’. This is an adjunct to the Avaya Fabric Connect technology and allows us to extend network virtualization directly into the conventional Wiring Closet (on existing, non-Fabric products) and fully automate the provisioning of devices to the appropriate virtual network. This is particularly relevant for the mass of unattended network end-points that are permeating businesses, such as IP Phones, Wireless Access Points, and IP Cameras.

This is a perfect example of how networking is being redefined through the seamless integration of a pervasive services-orientated virtual network and policy-based access management techniques. The VSP 7200 Series is designed to deliver the Fabric Attach Client and/or Server Switch functionality, interfacing end-point devices or conventional Switches with the Fabric Connect cloud.

Lifetime warranty
Avaya includes Industry-leading warranty services for the VSP 7200 Series products. We provide complimentary next-business-day shipment of failed units for the full life of the product; next-business-day shipping to replace failed hardware worldwide. Avaya also offers complimentary basic technical support: Level 1 the supported lifecycle of the product and up to Level 3 for the first 90 days after purchase; this includes support for the shipped software version, with an optional Software Release Service available to provide access to new feature releases. As per industry norm for hardware, ‘Lifetime’ is defined as the production lifecycle phase, plus 5 years post-discontinuation.

Summary
The Avaya Virtual Services Platform 7200 Series is purpose-built to support the dynamic Data Center and high-density 10 Gigabit Ethernet Top-of-Rack deployments of today. It helps alleviates infrastructure complexity and can reduce power consumption with a truly scalable and strategic architecture; it is designed to be the high-performance Top-of-Rack platform for the future.

Supporting mission-critical applications requires 24/365 always-on infrastructure, and the VSP 7200 delivers against this challenge. It is a highly strategic product that is fit-for-purpose for today’s connectivity requirements and future-ready for the evolving and emerging application-driven needs of tomorrow.

Avaya brings unique differentiation to the ToR role: with a flexible, non-blocking architecture, including wire-speed Server access connections and high-speed Distributed Top-of-Rack connections. The VSP 7200 is purpose-built to support today’s dynamic Data Center operations and high-density, low-latency 10 Gigabit Ethernet Top-of-Rack deployments. It can alleviate infrastructure complexity and reduce power consumption with a truly scalable and strategic architecture; it is designed to deliver a high-performance Distributed Top-of-Rack solution that fully optimizes next-generation application virtualization investments.

Additional Information
VSP 7254XSQ

The new Avaya Virtual Services Platform 7254XSQ Ethernet Switch provides a total of 54 ports, configured as 48 ports of 10 Gigabit Ethernet, presented as SFP+ sockets, and 6 ports of 40 Gigabit Ethernet, presented as QSFP+ sockets.

The innovative design leverages the most advanced chipset from the Industry’s leading supplier, featuring 2.56Tbps of switching and 1,428Mpps of frame forwarding performance. The chipset is designed to deliver Terabit-scale, wire-speed capabilities, with a fully integrated 10/40/100 Gigabit ASIC architecture that facilitates multiple design opportunities. Latency has been optimized, with a 40% advance over current best examples. New intelligent buffer technology self-tunes thresholds for excellent burst absorption, offering a 5x efficiency gain over existing static designs. A flexible, Unified Forwarding Table allows for future in-field optimization, with up to four mission profiles supported. This chipset also includes embedded support for a range of enabling technologies such as DCB, SPB, VXLAN, PIM, FCoE, and NAT/PAT.

It should be noted that the 40 Gigabit Ethernet QSFP+ ports support Channelization and can therefore be individual sub-divided into four 10 Gigabit Ethernet channels. Additionally, the 10 Gigabit Ethernet SFP+ ports also support a wide range of 1 Gigabit Ethernet SFP Transceivers.

Benefits

The VSP 7254XSQ adds significant flexibility to the Avaya Networking portfolio, and is compatible, with and complementary to, with existing products and technologies. A new product, leveraging the Compact Form-Factor design concept, the VSP 7254XSQ, when deployed with other Avaya or third party Ethernet Switches devices, provides very high-capacity, high-performance connectivity solution for Data Center networks. The VSP 7254XSQ ‘s focus is primarily as the Leaf/Top-of-Rack Switch in Data Center Spine/Leaf deployments.

The VSP 7254XSQ natively supports the Avaya Fabric Connect technology; key benefits that this technology delivers include:

- Makes the need to configure network-wide VLANs obsolete
- Replaces multiple sequential legacy protocols with this one single unified technology
- Totally removes the risk of network loops
- Delivers the Edge-only provisioning model which seamlessly integrates with orchestration and automation
- Fully optimizes all links and all devices enabling businesses to get the most out of infrastructure investments

Features & Capabilities

- Non-blocking, wire-speed switching architecture
- Integrated design that is optimized for low latency
- Flexible table architecture delivers MAC, ARP, and IP Routing scalability
- Feature-rich support for conventional VLAN, Multi-Link Trunking, Spanning Tree technologies
- IPv4 and IPv6 Routing includes support for Static, RIP, OSPF, ECMP, VRRP, and VRF
- Avaya Distributed Top-of-Rack technology scales up to 512 nodes: supporting up to 24,576 ports of 10 Gigabit and up to 3,076 ports of 40 Gigabit, and a virtual backbone of up to 122.88Tbps capacity
- Avaya Fabric Connect technology supports Layer 2 Virtual Service Networks, Layer 3 Virtual Service Networks, Inter-VSN Routing, and IP Shortcut Routing
- Avaya Switch Cluster technology supports Triangle & Square configurations, with both Layer 2 and Layer 3 functionality

High Availability Power & Cooling

- Up to 2 field-replaceable, hot-swappable AC or DC internal Power Supplies
- 3 field-replaceable Fan Modules, with both Front-to-Back and Back-to-Front airflow options supported

Warranty

- Lifetime Next Business Day shipment of replacement hardware
- Lifetime Basic Technical Support
- 90-Day Advanced Technical Support

Software Licensing

- Base Software License, included with hardware purchase, enables most features with the exception of those specifically noted an enabled by the Premier Software License.
- Premier Software License, an optional accessory, enables the following features: Layer 3 Virtual Service Networks.

Country of Origin

- China (PRC)
VSP 7254XTQ

The new Avaya Virtual Services Platform 7254XTQ Ethernet Switch provides a total of 54 ports, configured as 48 ports of 10 Gigabit Ethernet, presented as RJ45 ports, and 6 ports of 40 Gigabit Ethernet, presented as QSFP+ sockets.

The innovative design leverages the most advanced chipset from the Industry’s leading supplier, featuring 2.56Tbps of switching and 1,428Mpps of frame forwarding performance. The chipset is designed to deliver Terabit-scale, wire-speed capabilities, with a fully integrated 10/40/100 Gigabit ASIC architecture that facilitates multiple design opportunities. Latency has been optimized, with a 40% advance over current best examples. New intelligent buffer technology self-tunes thresholds for excellent burst absorption, offering a 5x efficiency gain over existing static designs. A flexible, Unified Forwarding Table allows for future in-field optimization, with up to four mission profiles supported. This chipset also includes embedded support for a range of enabling technologies such as DCB, SPB, VXLAN, PIM, FCoE, and NAT/PAT.

It should be noted that the 40 Gigabit Ethernet QSFP+ ports support Channelization and can therefore be individual sub-divided into four 10 Gigabit Ethernet channels. Additionally, the 10 Gigabit RJ45 ports also support 100/1000Mbps connectivity.

Benefits

The VSP 7254XTQ adds significant flexibility to the Avaya Networking portfolio, and is compatible, with and complementary to, with existing products and technologies. A new product, leveraging the Compact Form-Factor design concept, the VSP 7254XTQ, when deployed with other Avaya or third party Ethernet Switches devices, provides very high-capacity, high-performance connectivity solution for Data Center networks. The VSP 7254XTQ’s focus is primarily as the Leaf/Top-of-Rack Switch in Data Center Spine/Leaf deployments.

The VSP 7254XTQ natively supports the Avaya Fabric Connect technology; key benefits that this technology delivers include:

- Makes the need to configure network-wide VLANs obsolete
- Replaces multiple sequential legacy protocols with this one single unified technology
- Totally removes the risk of network loops
- Delivers the Edge-only provisioning model which seamlessly integrates with orchestration and automation
- Fully optimizes all links and all devices enabling businesses to get the most out of infrastructure investments

Supporting mission-critical applications requires 24/365 always-on infrastructure: the VSP 7200 delivers against this challenge.
Features & Capabilities

- Non-blocking, wire-speed switching architecture
- Integrated design that is optimized for low latency
- Flexible table architecture delivers MAC, ARP, and IP Routing scalability
- Feature-rich support for conventional VLAN, Multi-Link Trunking, Spanning Tree technologies
- IPv4 and IPv6 Routing includes support for Static, RIP, OSPF, ECMP, VRRP, and VRF
- Avaya Distributed Top-of-Rack technology scales up to 512 nodes: supporting up to 24,576 ports of 10 Gigabit and up to 3,076 ports of 40 Gigabit, and a virtual backbone of up to 122.88Tbps capacity
- Avaya Fabric Connect technology supports Layer 2 Virtual Service Networks, Layer 3 Virtual Service Networks, Inter-VSN Routing, and IP Shortcut Routing
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High Availability Power & Cooling

- Up to 2 field-replaceable, hot-swappable AC or DC internal Power Supplies
- 3 field-replaceable Fan Modules, with both Front-to-Back and Back-to-Front airflow options supported

Warranty

- Lifetime Next Business Day shipment of replacement hardware
- Lifetime Basic Technical Support
- 90-Day Advanced Technical Support

Software Licensing

- Base Software License, included with hardware purchase, enables most features with the exception of those specifically noted an enabled by the Premier Software License.
- Premier Software License, an optional accessory, enables the following features: Layer 3 Virtual Service Networks and - where local regulations permit - MACsec

Country of Origin

- China (PRC)

The VSP 7200 is purpose-built to support today’s dynamic Data Center operations and high-density, low-latency 10 Gigabit Ethernet Top-of-Rack deployments.

1MACsec is currently supported on the VSP 7254XTQ 10Gb/s SFP+ ports only, not on 40Gb/s QSFP+ ports. MACsec is currently not supported the VSP 7254XSQ.
### IEEE

**802.1 Bridging (Networking) and Network Management**
- 802.1D MAC Bridges (a.k.a. Spanning Tree Protocol)
- 802.1p Traffic Class Expediting and Dynamic Multicast Filtering
- 802.1t 802.1D Maintenance
- 802.1w Rapid Reconfiguration of Spanning Tree (RSTP)
- 802.1Qv Virtual Local Area Networking (VLAN)
- 802.1s Multiple Spanning Trees (MSTP)
- 802.1v VLAN Classification by Protocol and Port
- 802.1ag Connectivity Fault Management
- 802.1ah Provider Backbone Bridges
- 802.1aq Shortest Path Bridging (SPB)
- MAC-in-MAC

**802.3 Ethernet**
- 802.3 CSMA/CD Ethernet (ISO/IEC 8802-3)
- 802.3u 100BASE-TX Fast Ethernet 100Mbit/s with Auto-Negotiation
- 802.3x Full Duplex and Flow Control
- 802.3z 100BASE-X Gigabit Ethernet over Fiber
- 802.3ab 1000BASE-T Gigabit Ethernet over Twisted Pair
- 802.3ae 10 Gigabit Ethernet over Twisted Pair
- 802.3ba 40 Gigabit and 100 Gigabit Ethernet over Copper and Fiber: 40 Gigabit, implemented as 40GBASE-4SFP+

### IETF

#### Generic RFCs
- 768 UDP
- 783 TFTP
- 791 IP
- 792 ICMP
- 793 TCP
- 826 ARP
- 854 Telnet
- 894 Transmission of IP Datagrams over Ethernet Networks
- 896 Congestion Control in IP/TCP internetworks
- 950 Internet Standard Subnetting Procedure
- 951 BOOTP: Relay Agent-only
- 1027 Using ARP to Implement Transparent Subnet Gateways
- 1058 RIP
- 112 Host Extensions for IP Multicasting
- 1122 Requirements for Internet Hosts - Communication Layers
- 1256 ICMP Router Discovery
- 1305 NTPv3
- 1340 Assigned Numbers
- 1519 CIDR
- 1541 DHCP
- 1542 Clarifications & Extensions for BOOTP
- 1587 OSPF NSSA Option
- 1591 DNS Client

#### OA&M RFCs
- 906 Bootstrap Loading using TFTP
- 959 FTP
- 1157 SNMP
- 1215 Convention for Defining Traps for use with the SNMP
- 1258 BSD Rlogin
- 1305 NTP – Client / Unicast mode only
- 1350 TFTPv2
- 1866 HTMLV2
- 2068 HTTP
- 2428 FTP Extensions for IPv6 and NAT
- 2541 DNS Security Operational Considerations

#### QoS RFCs
- 2474 Differentiated Services Field Definitions in IPv4 & IPv6 Headers
- 2475 Architecture for Differentiated Service

#### MIB RFCs
- 1555 Structure and Identification of Management Information for TCP/IP-based Internets
- 1156 MIB for Network Management of TCP/IP
- 1212 Concise MIB Definitions
- 1213 MIB for Network Management of TCP/IP-based Internets
- 1398 Ethernet MIB
- 1442 SMIPv2 of SNMPv2
- 1450 SNMPv2 MIB
- 1573 Evolution of the Interfaces Group of MIB-II
- 1650 Definitions of Managed Objects for the Ethernet-like Interface Types
- 1657 Definitions of Managed Objects for BGP-4 using SMIPv2

#### IPv6 RFCs
- 1723 RFCv2 Carrying Additional Information
- 1812 Router Requirements
- 1981 Path MTU Discovery for IPv6
- 2131 DHCP
- 2138 RADIUS Authentication
- 2139 RADIUS Accounting
- 2236 IGMPv2 Snooping
- 2328 OSPFV2
- 2362 PM-SP
- 2404 HMAC-SHA-1-96 within ESP and AH1
- 2407 Internet IP Security Domain of Interpretation for ISAKMP1
- 2408 Internet Security Association and Key Management Protocol1
- 2453 RFCv2
- 2460 IPv6 Basic Specification
- 2463 ICMIPv6
- 2464 Transmission of IPv6 Packets over Ethernet Networks
- 2740 OSPF for IPv6
- 2874 DNS Extensions for IPv6
- 2929 ECMP Algorithm
- 3045 DHCPV6
- 3162 RADIUS and IPv6
- 3315 DHCPV6
- 3376 IGMPv3

#### Security RFCs
- 3484 Default Address Selection for IPv6
- 3513 IPv6 Addressing Architecture
- 3569 Overview of SSM
- 3587 IPv6 Global Unicast Address Format
- 3768 VRPP- plus draft VRPP for IPv6
- 3810 Multicast Listener Discovery Version 2 for IPv6: Host Mode-only
- 4007 IPv6 Scoped Address Architecture
- 4123 Basic Transition Mechanisms for IPv6 Hosts and Routers
- 4291 IPv6 Addressing Architecture
- 4301 Security Architecture for IP
- 4302 IP Authentication Header1
- 4303 IP Encapsulating Security Payload1
- 4304 Authentication/Confidentiality for OSPFv31
- 4835 Cryptographic Algorithm Implementation Requirements for ESP & AH1
- 4861 Neighbor Discovery for IPv6
- 4862 IPv6 Stateless Address Auto-Configuration
- 5096 Deprecation of Type 0 Routing Headers in IPv6
- 5308 Routing IPv6 with IS-IS
- 5340 OSPF for IPv6
- 5798 VRPPv3 for IPv4 & IPv62
- 6329 IS-IS Extensions supporting Shortest Path Bridging

#### Link Layer RFCs
- 791 IP
- 792 TFTP
- 795 Ethernet
- 802.3z 1000BASE-X Gigabit Ethernet
- 802.3x Full Duplex and Flow Control
- 802.3u 100BASE-TX Fast Ethernet 100Mbit/s
- 802.3v 10GBASE-SW, 10GBASE-LW, 10GBASE-EW
- 802.3ab 1000BASE-T Gigabit Ethernet over Fiber
- 802.3z 100BASE-X Gigabit Ethernet over Fiber
- 802.3g 100BASE-TX Fast Ethernet 100Mbit/s with Auto-Negotiation
- 802.3j 1000BASE-TX Gigabit Ethernet
- 802.3k 1000BASE-LX Gigabit Ethernet over Fiber
- 802.3l 1000BASE-LH Gigabit Ethernet over Copper
- 802.3p 1000BASE-LX/DX Gigabit Ethernet over Copper
- 802.3q 10GBASE-LR Gigabit Ethernet over Fiber
- 802.3r 10GBASE-ER Gigabit Ethernet over Fiber
- 802.3s 10GBASE-SR Gigabit Ethernet over Fiber

### Planned future support.

1. Implemented to deliver IPsec capability for Control Plane traffic only.
2. Planned future support.
Additional Information