The PowerSwitch S5200-ON 25/100GbE fixed switches comprise Dell Technologies’ latest disaggregated hardware and software data center networking solutions, providing state-of-the-art, high-density 25/100GbE ports and a broad range of functionality to meet the growing demands of today’s data center environment. These innovative, next-generation open networking switches offer optimum flexibility and cost-effectiveness for web 2.0, enterprise, mid-market and cloud service provider with demanding compute and storage traffic environments.

The S5200-ON is a complete family of switches: 12-port, 24-port, and 48-port 25GbE/100GbE ToR switches, 96-port 25GbE/100GbE Middle of Row (MoR)/End of Row (EoR) switch, and a 32-port 100GbE Multi-Rate Spine/Leaf switch. From the compact half-rack width S5212F-ON providing an ideal form factor for hyper-converged deployments, to the high density S5296F-ON for Middle of Row deployments, the S5200-ON series offers performance and flexibility for a variety of network designs.

In addition to 100GbE Spine/Leaf deployments, the S5232F-ON can also be used in high density deployments using breakout cables to achieve up to 128 10GbE or 128 25GbE ports.

Using industry-leading hardware and a choice of Dell EMC SmartFabric OS10 or select 3rd party network operating systems and tools, the S5200-ON switches incorporate multiple architectural features that optimize data center network flexibility, efficiency and availability, including IO panel to PSU or PSU to IO panel airflow for hot/cold aisle environments, redundant, hot-swappable power supplies and fans and deliver non-blocking performance for workloads sensitive to packet loss.

Priority-based flow control (PFC), data center bridge exchange (DCBX) and enhanced transmission selection (ETS) make the S5200-ON family ideally suited for DCB environments.

Dell EMC PowerSwitch S5200-ON switches support the open source Open Network Install Environment (ONIE) for zero touch installation of Dell EMC SmartFabric OS10 networking operating system, as well as alternative network operating systems.

Key applications
- Organizations looking to enter the software-defined data center era with a choice of networking technologies designed to maximize flexibility
- High-density 10/25GbE ToR server aggregation in high-performance data center environments at the desired fabric speed with the S5248F-ON or S5296F-ON
- Low-density 10/25GbE server and storage aggregation with the S5212F-ON and S5224F-ON
- Small-scale Fabric implementation via the S5232F-ON switch in leaf and spine along with S5248F-ON 1/10/25GbE ToR switches enabling cost-effective aggregation of 10/25/40/50/100 uplinks
- Multi-functional 10/25/40/50/100GbE switching in High Performance Computing Clusters or other business-sensitive deployments requiring the highest bandwidth.
- iSCSI deployments, including DCB converged lossless transactions
- Single-pass VXLAN routing

Key features
- 1 or 2RU high-density ToR switches with up to 48 or 96 ports of 25GbE or 32 ports of 100GbE
- Multi-rate 100GbE ports support 10/25/40/50/100GbE
- Scalable L2 and L3 Ethernet switching with QoS and a full complement of standards-based IPv4 and IPv6 features, including OSPF and BGP routing support
- Line-rate performance via non-blocking switch fabrics: 3.2Tbps (6.4Tbps full-duplex) on S5296F-ON and S5232F-ON, 2.0Tbps (4.0Tbps full-duplex) on S5248F-ON, and 1.08Tbps (2.16Tbps full-duplex) on S5224F-ON and S5212F-ON
- L2 multipath support via Virtual Link Trunking (VLT) and Routed VLT support
• VXLAN gateway functionality support for bridging and routing the non-virtualized and the virtualized overlay networks with line rate performance
• Support for Dell EMC SmartFabric OS10
• Converged network support for DCB, with priority flow control (802.1Qbb), ETS (802.1Qaz), DCBx and iSCSI TLV support
• Routable RoCE to enable convergence of compute and storage on Leaf/Spine Fabric
• IO panel to PSU airflow or PSU to IO panel airflow
• Redundant, hot-swappable power supplies and fans on most models
• Supports the open source Open Network Install Environment (ONIE) for zero touch installation of alternate network operating systems
• L2 VXLAN (Static VXLAN with VLT, BGP EVPN)
• Tool-less enterprise ReadyRails™ mounting kits for most models reducing time and resources for switch rack installation (S5212F-ON will utilize a tandem tray for mounting)
• Power-efficient operation and Dell Fresh Air 2.0 compliant up to 45ºC helps reduce cooling costs in temperature constrained deployments

Key features with Dell EMC SmartFabric OS10

• Consistent DevOps framework across compute, storage and networking elements
• Standard networking features, interfaces and scripting functions for legacy network operations integration

<table>
<thead>
<tr>
<th>Features</th>
<th>S5212F-ON</th>
<th>S5224F-ON</th>
<th>S5248F-ON</th>
<th>S5296F-ON</th>
<th>S5232F-ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>12xSFP28</td>
<td>24xSFP28</td>
<td>48xSFP28</td>
<td>96xSFP28</td>
<td>32xQSFP28</td>
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<tr>
<td></td>
<td>3xQSFP28</td>
<td>4xQSFP28</td>
<td>2xQSFP28-DD</td>
<td>8xQSFP28</td>
<td>2xSFP+</td>
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<tr>
<td>Max 10GbE density</td>
<td>24</td>
<td>40</td>
<td>80</td>
<td>128</td>
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<tr>
<td>Max 25GbE density</td>
<td>24</td>
<td>40</td>
<td>80</td>
<td>128</td>
<td>124</td>
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<tr>
<td>Max 40GbE density</td>
<td>3</td>
<td>4</td>
<td>8</td>
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<td>32</td>
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<tr>
<td>Max 50GbE density</td>
<td>6</td>
<td>8</td>
<td>16</td>
<td>16</td>
<td>64</td>
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<tr>
<td>Max 100GbE density</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>8</td>
<td>32</td>
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<tr>
<td>Switching capacity</td>
<td>1.08 Tbps (2.16 Tbps full duplex)</td>
<td>1.08 Tbps (2.16 Tbps full duplex)</td>
<td>2.0 Tbps (4.0 Tbps full duplex)</td>
<td>3.2 Tbps (6.4 Tbps full duplex)</td>
<td>3.2 Tbps (6.4 Tbps full duplex)</td>
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<tr>
<td>Throughput</td>
<td>892 Mpps</td>
<td>954 Mpps</td>
<td>1.9 Bpps</td>
<td>1.5 Bpps</td>
<td>1.5 Bpps</td>
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<tr>
<td>Features</td>
<td>S5212F-ON</td>
<td>S5224F-ON</td>
<td>S5248F-ON</td>
<td>S5296F-ON</td>
<td>S5232F-ON</td>
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<tr>
<td>Latency (nano sec)</td>
<td>906</td>
<td>881</td>
<td>847</td>
<td>850</td>
<td>877</td>
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<tr>
<td>1588v2 PTP timing (hardware)</td>
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<tr>
<td>CPU Memory</td>
<td>8GB</td>
<td>16GB</td>
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<td>SSD</td>
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<tr>
<td>Packet Buffer</td>
<td>32MB</td>
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<tr>
<td>Maximum power</td>
<td>304W</td>
<td>455W</td>
<td>647W</td>
<td>893W</td>
<td>635W</td>
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<tr>
<td>Typical power</td>
<td>140W</td>
<td>200W</td>
<td>310W</td>
<td>457W</td>
<td>360W</td>
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<tr>
<td>Maximum current</td>
<td>2.8A@110VAC / 1.4A@220VAC</td>
<td>4.2A@110VAC / 2.1A@220VAC</td>
<td>5.8A@110VAC / 2.9A@220VAC</td>
<td>8.2A@110VAC / 4.1A@220VAC</td>
<td>5.8A@110VAC / 2.9A@220VAC</td>
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<tr>
<td>Fan modules</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Form Factor</td>
<td>1RU (half-width)</td>
<td>1RU</td>
<td>1RU</td>
<td>2RU</td>
<td>1RU</td>
</tr>
<tr>
<td>Dimensions</td>
<td>8.2&quot;Wx19.3&quot;D x1.6&quot;H x4.1H(cm)</td>
<td>17.1&quot;Wx18.1&quot;D x1.7&quot;H x4.4H(cm)</td>
<td>17.1&quot;Wx18.1&quot;D x1.7&quot;H x4.4H(cm)</td>
<td>17.4&quot;Wx20.1&quot;D x3.4&quot;H x4.4H(cm)</td>
<td>17.1&quot;Wx18.1&quot;D x1.7&quot;H x4.4H(cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>4.5kg (10.05lbs)</td>
<td>9.7kg (21.4lbs)</td>
<td>9.7kg (21.4lbs)</td>
<td>15.1kg (33.2lbs)</td>
<td>9.8kg (21.6lbs)</td>
</tr>
<tr>
<td>Max thermal output</td>
<td>1037 BTU/h</td>
<td>1552 BTU/h</td>
<td>2208 BTU/h</td>
<td>3047 BTU/h</td>
<td>2167 BTU/h</td>
</tr>
</tbody>
</table>

### Product Description

**S5200-ON**

- S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10
- S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10
- S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x DC PSU, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10
- S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x DC PSU, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10
- S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10, TAA
- S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10, TAA
- S5212F, 12x 25GbE SFP28 + 3x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10
- S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10
- S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10
- S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, PSU to I/O Panel Airflow, NO-OS
- S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, NO-OS
- S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10, TAA
- S5224F, 24x 25GbE SFP28 + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10, TAA
- S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10
- S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10
- S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, NO-OS
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- S5248F, 48x 25GbE SFP28 + 2x 200GbE QSFP28-DD + 4x 100GbE QSFP28, 2x AC PSU, Fan modules, PSU to I/O Panel Airflow, Dell EMC SmartFabric OS10, TAA

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<table>
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<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S5200-ON</td>
<td>S5200-ON, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel to PSU Airflow, Dell EMC SmartFabric OS10</td>
</tr>
<tr>
<td>S5296F, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel Airflow, Dell EMC SmartFabric OS10</td>
<td></td>
</tr>
<tr>
<td>S5296F, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, NO-OS Airflow, Dell EMC SmartFabric OS10 TAA</td>
<td></td>
</tr>
<tr>
<td>S5296F, 96x 25GbE SFP28 + 8x 100GbE QSFP28, 2x AC PSU, Fan modules, I/O Panel Airflow, Dell EMC SmartFabric OS10</td>
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</tr>
<tr>
<td>S5232F, 32x QSFP28 + 2x 10GbE SFP+, 2x AC PSU, Fan modules, NO-OS Airflow, Dell EMC SmartFabric OS10 TAA</td>
<td></td>
</tr>
<tr>
<td>S5232F, 32x QSFP28 + 2x 10GbE SFP+, 2x AC PSU, Fan modules, NO-OS Airflow, Dell EMC SmartFabric OS10</td>
<td></td>
</tr>
<tr>
<td>S5232F, 32x QSFP28 + 2x 10GbE SFP+, 2x AC PSU, Fan modules, NO-OS Airflow, Dell EMC SmartFabric OS10 TAA</td>
<td></td>
</tr>
</tbody>
</table>

**Redundant power supplies**
- AC Power Supply, I/O Panel to PSU Airflow, DC Power Supply, I/O Panel to PSU Airflow (available as customized kit), DC Power Supply, I/O Panel Airflow

**Fans**
- Fan module, I/O Panel to PSU Airflow
- Fan module, PSU to IO Panel Airflow

**Optics**
- Transceiver, 2x100GbE, 2xSR4, QSFP28-DD
- Transceiver, 2x100GbE, 2xSR4-IR, QSFP28-DD
- Transceiver, 2x100GbE, 2xCWDM4, QSFP28-DD
- Transceiver, 100GbE, SR4 QSFP28
- Transceiver, 100GbE, PSM4 (500m) QSFP28
- Transceiver, 100GbE, CWDM4 (2Km) QSFP28
- Transceiver, 100GbE, LR4 QSFP28
- Transceiver, 40GbE, SR4 optic QSFP+
- Transceiver, 40GbE, BIDI optic QSFP+ (Duplex)
- Transceiver, 40GbE, LR4 optic QSFP+
- Transceiver, 40GbE, ER4 optics QSFP+
- Transceiver, 25GbE, SR, NOF SFP28
- Transceiver, 25GbE, LR, SFP28
- Transceiver, 10GbE, SR SFP+, short reach
- Transceiver, 10GbE, LR SFP+, long reach
- Transceiver, 10GbE, ER SFP+, extended reach
- Transceiver, 10GbE, ZR SFP+, extended reach
- Transceiver, 10GbE, 10GbE BASE-T with QSA in QSFP+ port, 30m reach on CAT6a7
- Transceiver, 1GbE, SX SFP
- Transceiver, 1GbE, LX SFP
- Transceiver, 1GbE, ZO SFP
- Transceiver, 1GbE, 10km, BIDI SFP
- Transceiver, 1GbE, 10km, BIDI SFP
- Transceiver, 1GbE, 40km, BIDI SFP
- Transceiver, 1GbE, 80km, BIDI SFP
- Transceiver, 10GBASE-T, Gen2, SFP

**Cables**
- 100GbE, 4x25GbE, QSFP28 to 4xSFP28, passive DAC 100GbE, QSFP28 to QSFP28, active optical 100GbE, QSFP28 to QSFP28, passive DAC 100GbE, 2x50GbE, 2xQSFP to 2xQSFP28, passive DAC, breakout 40GbE, QSFP+ to QSFP+, active optical 40GbE, QSFP+ to QSFP+, passive DAC 40GbE, MTP to 4xLC optical breakout 40GbE, 4x100GbE, QSFP+ to 4xSFP+, passive DAC

**Cable management**
- Z9100 Cable Breakout Kit, MTP to LC (1RU 64-port LC over MMF) Z9100 Cable Breakout Kit, MTP to LC (1RU 64-port LC over SMF)
Technical specifications

**Physical**
1 RJ45 console/management port with RS232 signaling
SS212F-ON: 12x25GbE SFP28 + 3x 100GbE QSFP28
SS224F-ON: 24x25GbE SFP28 + 4x 100GbE QSFP28
SS248F-ON: 48x25GbE SFP28 + 4x 100GbE QSFP28 + 2x 2x100GbE QSFP28-DD
SS296F-ON: 96x25GbE SFP28 + 8x 100GbE QSFP28
SS232F-ON: 32x100GbE QSFP28 ports + 2xSFP+ 10GbE

**Environmental**
Power supply: 100–240 VAC 50/60 Hz
Max Operating specifications:
- AC Max. Operating specifications:
  - Operating temperature: 32° to 113°F (0° to 45°C)
- Operating humidity: 5 to 90% (RH), non-condensing
- Max. Non-operating specifications:
  - Storage temperature: -40° to 158°F (-40° to 70°C)
  - Storage humidity: 5 to 90% (RH), non-condensing
- Fresh air Compliant to 45°C

**Redundancy**
Hot swappable redundant power
Hot swappable redundant fans (fixed power supply and fans on SS212F-ON)

**Performance**
Packet buffer memory: 32MB
CPU memory: 16GB
MAC addresses: 294k (in Scaled L2 switch mode)
ARP table: 278k (in Scaled L3 hosts mode)
IPv4 routes: 389k (in Scaled L3 routes mode)
IPv6 routes: 194k (in Scaled L3 routes mode)
Multicast hosts: 32K
Link aggregation: 16 links per group, 128 groups
Layer 2 VLANs: 4K
MSTP: 64 instances
LAG load balancing: Based on layer 2, IPv4 or IPv6 headers

**IEEE Compliance**
802.1AB  LLDP
TIA-1057  LLDP-MED
802.3ad  Link Aggregation
802.1Q  VLAN Tagging
802.1Qa  RSTP
802.1t  RPVST+
VLT (Virtual Link Trunking)
VRRP Active/Active
RSTP & RPVST+
Port Mirroring on VLT ports

**Quality of Service**
Prefix List
Route-Map
Rate Shaping (Egress)
Rate Policing (Ingress)
Scheduling Algorithms
Round Robin
Weighted Round Robin
Deficit Round Robin
Strict Priority
Weighted Random Early Detect

**Multicast**
1451  IGMPv1/2/3 and MLDv1/2 Snooping

**Security**
1588  BGPM-4
2054  MultiPath Extensions for IPv6 Inter-Domain Routing
2858  MultiPath Extensions
4360  Extended Communities
4893  4-byte AS Number
5396  4-byte ASN Representation
5492  Capabilities Advertisement
5634  draft-ietf-idr-add-paths-04.txt ADD PATH

**Network Management and Monitoring**
SNMPv1/2c
IPv4/IPv6 Management support (Telnet, FTP, TACACS, RADIUS, SSH, NTP)
Systolog
Post Mirroring
RPM/ERPM
3176  SFlow
Support Assist (Phone Home)
RestConf APIs (Layer 2 features)
XML Schema
CLI Commit (Scratchpad)
Uplink Failure Detection
Object Tracking
Bidirectional Forwarding Detection (BFD)
Automation
Control Plane Services APIs
Linux Utilities and Scripting Tools
CLI Automation (Multiline Alias)
Zero Touch Deployment (ZTD)
Ansible, Puppet, Chef, SaltStack
8040  RESTCONF APIs (L3)

**OSPF**
1745  OSPF/BGP interaction
1765  OSPF Database overflow
2154  OSPF with DigitalSignatures
2328  OSPFv2
5340  OSPF for IPv6 (OSPFv3)

**RFC Compliance**
768  UDP
792  ICMP
826  ARP
1027  Proxy ARP
1035  DNS (client)
1042  Ethernet Transmission
1191  Path MTU Discovery
1305  NTPv4
1519  CIDR
1588v2  PTP support
1812  Routers, Static Routes
1858  IP Fragment Filtering
2131  DHCPv6 (server and relay)
5798  VRRPv3
3021  31-bit Prefixes
1812  Requirements for IPv4 Routers
1918  Address Allocation for Private Internets
2474  DiffServ Field in IPv4 and IPv6 Headers
2597  Assured Forwarding PHB Group
3195  Reliable Delivery for Systolog
3246  Expedited Forwarded PHB Group
VRF (BGIPv4/v6)

**General IPv6 Protocols**
1981  Path MTU for IPv6
2372  IPv6 Addressing
2450  IPv6 Protocol Specification
2481  Neighbor Discovery
2462  Stateless Address AutoConfig
2711  IPv6 Router alert
2463  ICMPv6
2464  Ethernet Transmission
2675  IPv6 Jumbograms
3484  Default Address Selection
3493  Basic Socket Interface
4291  Addressing Architecture
3542  Advanced SOCKets API
3587  Global Unicast Address Format
4291  IPv6 Addressing
2464  Transmission of IPv6 Packets over Ethernet Networks
2711  IPv6 Router Alert Option
4007  IPv6 Scoped Address Architecture
4213  Transition Mechanisms for IPv6 Hosts and Routers
3315  DHCPv6 Server & Relay
IPv6 Static Routes

**Multicast**
4541  IGMPv1/2/3 and MLDv1/2 Snooping

**Security**
2865  RADIUS
3162  Radius and IPv6
3579  Radius support for EAP
3580  802.1x with RADIUS
3826  AES Cipher in SNMP
1492  TACACS (Authentication, Accounting, Control Plane, VTY & SNMP ACLs)

**IP Access Control Lists**
1997  Communities
2385  MD5
2439  Route Flap Damping
2796  Route Reflection
2918  Route Refresh
3065  Confederations
4271  BGP-4
2545  BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
2858  MultiPath Extensions
4360  Extended Communities
4893  4-byte AS Number
5396  4-byte ASN Representation
5492  Capabilities Advertisement
draft-ietf-idr-add-paths-04.txt ADD PATH

**Linux Distribution**
Debian Linux version 9
Linux Kernel 4.9

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Data center bridging
802.1Qbb  Priority-Based Flow Control
802.1Qaz  Enhanced Transmission Selection (ETS)
Explicit Congestion Notification
Data Center Bridging eXchange (DCBx)
DCBx Application TLV (iSCSI, FCoE)
RoCEv2
Software Defined Networking
OpenFlow 1.3 (Native)

MIBS
IP MIB
IP Forward MIB
Host Resources MIB
IF MIB
LLDP EXT1/3 MIB
Entity MIB
LAG MIB
Dell-Vendor MIB
TCP MIB
UDP MIB
SNMPv2 MIB
ETHERLIKE-MIB
SFLOW-MIB
PFC-MIB

Regulatory compliance
Safety
UL/CSA 60950-1, Second Edition
EN 60950-1, Second Edition
IEC 60950-1, Second Edition Including All National Deviations and Group Differences
EN 60825-1 Safety of Laser Products Part 1: Equipment Classification Requirements and User’s Guide
FDA Regulation 21 CFR 1040.10 and 1040.11

Emissions
Australia/New Zealand: AS/NZS CISPR 22: 2006, Class A
Canada: ICES-003, Issue-4, Class A
Japan: VCCI V3/2009 Class A
USA: FCC CFR 47 Part 15, Subpart B:2011, Class A

Immunity
EN 300 386 V1.4.1:2008 EMC for Network Equipment
EN 61000-3-2: Harmonic Current Emissions
EN 61000-3-3: Voltage Fluctuations and Flicker
EN 61000-4-2: ESD
EN 61000-4-3: Radiated Immunity
EN 61000-4-4: EFT
EN 61000-4-5: Surge
EN 61000-4-6: Low Frequency Conducted Immunity

RoHS
All S Series components are EU RoHS compliant.

Certifications
Available with US Trade Agreements Act (TAA) compliance
USGv6 Host and Router Certified on Dell Networking OS 9.5 and greater
IPv6 Ready for both Host and Router
UCR DoD APL (core and distribution switch

Warranty
1 year return to depot

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