

Global Standards

A Driving Force For Commerce

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Unifying Force

- Unprecedented relationships being forged
- Standards organizations, governments, corporations and technology innovators globally called to unite



Collaboration = Standards, Products, Reality

100 Networking Standards!



Management
DNS (client)
Inet management

Protocols
Q-in-Q
2008 Link Aggregation
MAC Bridges
Priority
LANs
Multiple Spanning Trees
N classification by Protocol and
id Reconfiguration of Spanning

IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3af Power over Ethernet
IEEE 802.3x Flow Control
RFC 768 UDP
RFC 783 TFTP Protocol (revision 2)
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 854 TELNET
RFC 868 Time Protocol
RFC 951 BOOTP
RFC 1058 RIPv1
RFC 1350 TFTP Protocol (revision 2)
RFC 1519 CIDR
RFC 1542 BOOTP Extensions
RFC 2030 Simple Network Time Protocol (SNTP) v4
RFC 2131 DHCP
RFC 2453 RIPv2
RFC 2548 (MS-RAS-Vendor only)
RFC 3046 DHCP Relay Agent Information Option
RFC 3576 Ext to RADIUS (CoA only)
RFC 3768 VRRP
RFC 4675 RADIUS VLAN & Priority
UDLD (Uni-directional Link Detection)

IP multicast
RFC 3376 IGMPv3 (host joins only)
RFC 3973 Draft 2 PIM Dense Mode
RFC 4601 Draft 10 PIM Sparse Mode

IPv6
RFC 1981 IPv6 Path MTU Discovery
RFC 2375 IPv6 Multicast Address Assignments
RFC 2460 IPv6 Specification
RFC 2464 Transmission of IPv6 over Ethernet Networks
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)
RFC 3019 MLDv1 MIB
RFC 3315 DHCPv6 (client and relay)
RFC 3484 Default Address Selection for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extension for IPv6
RFC 3810 MLDv2 (host joins only)
RFC 4022 MIB for TCP
RFC 4113 MIB for UDP
RFC 4251 SSHv6 Architecture
RFC 4252 SSHv6 Authentication
RFC 4253 SSHv6 Transport Layer
RFC 4254 SSHv6 Connection
RFC 4291 IP Version 6 Addressing Architecture
RFC 4293 MIB for IP
RFC 4294 IPv6 Node Requirements
RFC 4419 Key Exchange for SSH
RFC 4443 ICMPv6
RFC 4541 IGMP & MLD Snooping Switch
RFC 4861 IPv6 Neighbor Discovery
RFC 4862 IPv6 Stateless Address Auto-configuration
RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
RFC 5340 OSPFv3 for IPv6
RFC 5453 Reserved IPv6 Interface Identifiers
RFC 5722 Handling of Overlapping IPv6 Fragments

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 1724 RIPv2 MIB

RFC 1650 OSPFv2 MIB
RFC 2021 RMONv2 MIB
RFC 2096 IP Forwarding Table MIB
RFC 2613 SMON MIB
RFC 2618 RADIUS Client MIB
RFC 2620 RADIUS Accounting MIB
RFC 2665 Ethernet-Like-MIB
RFC 2668 802.3 MAU MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2737 Entity MIB (Version 2)
RFC 2787 VRRP MIB
RFC 2863 The Interfaces Group MIB
RFC 2925 Ping MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
RFC 3176 sFlow
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3
XRMON

OSPF
RFC 2328 OSPFv2
RFC 3101 OSPF NSSA
RFC 5340 OSPFv3 for IPv6

QoS/CoS
RFC 2474 DiffServ Precedence, including 8 queues/port
RFC 2597 DiffServ Assured Forwarding (AF)
RFC 2598 DiffServ Expedited Forwarding (EF)

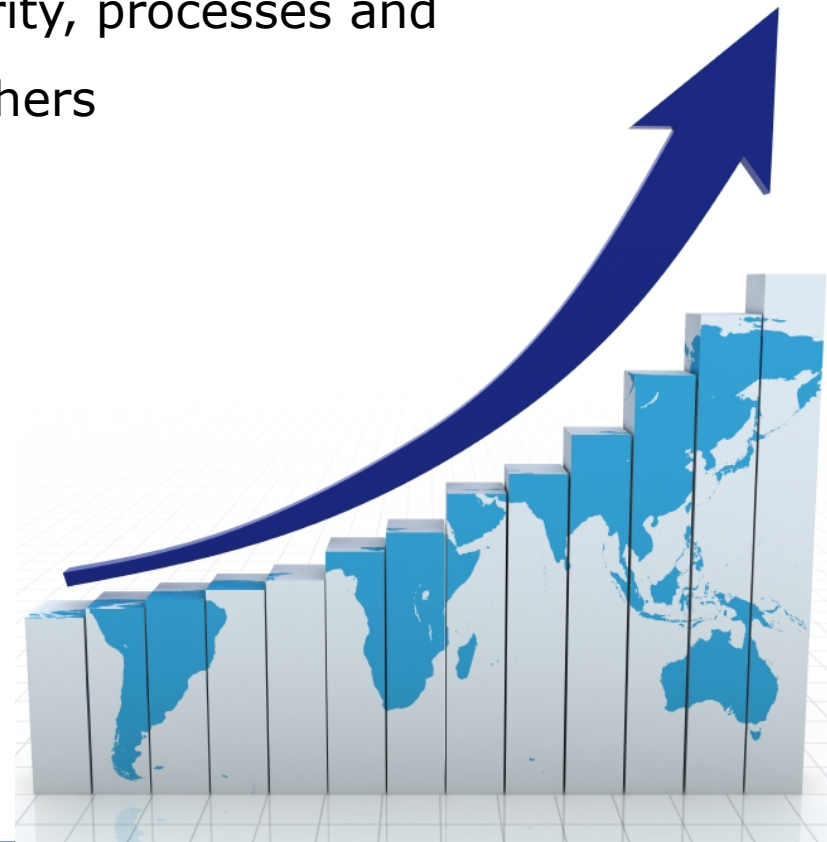
Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
RFC 2865 RADIUS (client only)
RFC 2866 RADIUS Accounting
Secure Sockets Layer (SSL)
SSHv1/SSH2 Secure Shell

HP E5400 zl Switch Series

See: <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA2-6511ENW.pdf>

Nurturing New Opportunities

- OpenStand principles demand respectful cooperation among standards organizations, whereby each respects the autonomy, integrity, processes and intellectual property rules of the others



Reducing Overhead of Standards Development

- Cycles of technology innovation and market growth accelerate
- Humanity more quickly benefits from global standards



Benefits of Open Standards

- Consumer choice
- Market growth
- Interoperability (consumer confidence)
- Technology evolution
- A shrinking world – global markets



**Collectively advancing technology
for the benefit of humanity**

Delivering Global Value

- OpenStand represents an established approach for the world to think about, access and deploy technology worldwide
- With this transformation, whole new business models are established
- Billions of lives touched



Collaborating to Develop Global Standards for Global Markets

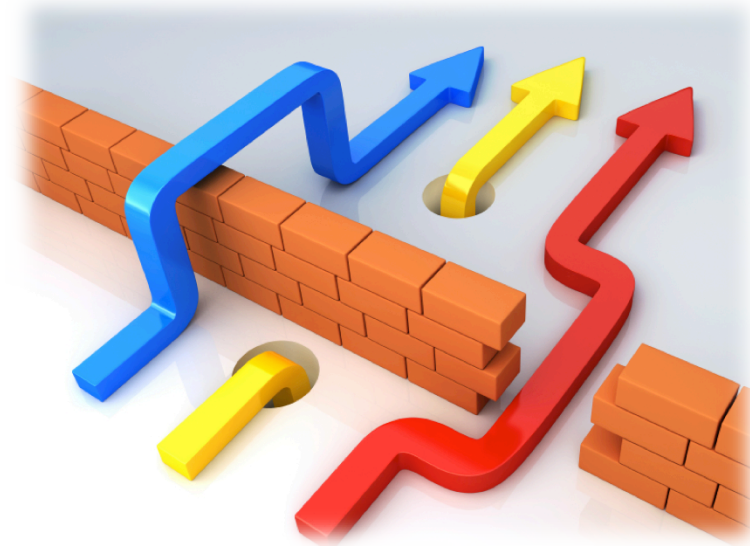
- Globally deployed Internet standards:
 - IEEE – Networking
 - IETF – Routing Protocols
 - W3C – Browsers



Redefining the information paradigm

Complementary Standards Models

- Multiple standards models play complementary role in standards development and widespread global adoption
- Fosters borderless, market driven models



Strong International Collaboration Required

Asia



Africa



Americas



Europe



Australia

Standards Grow Markets

- Create global markets
- Drive innovation
- Protect health and public safety
- For centuries



Thank You!

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