Techroutes

NETWORK

TR-S3900SeriesSwitch

10GLayer3Switches

ProductOverview:

Techroutes S3900 Series is a new generation of aggregation 10G switches introduced by TechroutesNetwork Pvt Ltd. It is targeted at the IP MAN (metropolitan area network), campus networks and enterprise networks. It is developed on the basis of high performance hardware and TRROS – software platform with Techroutes own independent intellectual property rights. It supports multiple services like IPv6, MPLS, VPN and network security based on L2/L3/L4 wire-speed switching service. It also supports nonstop upgrade, continuous forwarding, graceful restarting and redundancy protection. Techroutes S3900 Series has 4 models:TR-S3930,TR-S3938F, TR-S3954 andTR-S3954M. It supports up to48 gigabit portsand 610GE ports.

ProductCharacteristics:

Carrier-LevelQoSPolicies

Supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priorityto better streamlinecarrier's services. Supportsflexible bandwidth control policies and supports port-/flow based flow limit, and ensuring the line speed forwarding of each port to make sure the high quality of video, audio and data services. Supports 8 priority queues by each port. Supports multiple queue schedule algorithms such as SP, WRR, or "P plus WRR"

YourRouteto The Destination

Techroutes

InnovativeVirtualClusterSwitchingTechnique TVSS (Techroutes Virtual Switch System):

Virtualizemultiplephysicaldevicesintoone.Theperformance,reliabilityandmanagementofthevirtual system are superior to the physical ones;

Improved Performance:TRVSS makes full use of each link in the physical devices, which avoids STP blocking the link and protects the original link to the maximum extent;

High Reliability: Based on the advanced distributionmechanism and efficient cross-physical link aggregation link function, the logic control plane, service control plane and service data plane are separated. Thus, the device can support continuous layer3 routing forwarding, avoiding service interruption as a result of a single point of failure; Easy Management: TRVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

Easy Management: TRVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

VersatileIPv6Solution

TR-S5800 Series supports the IPv6 protocol suite, IPv6 neighbour discovery, ICMPv6, path MTU discovery, DHCPv6, etc.; TR-S5800 Series supports Ping, Traceroute, Telnet, SSH, ACL based on IPv6; TR-S5800 Series supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc.; Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4 tunnel, ISATAP; TR-S5800 Series supports IPv4 transiting to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

VariedServiceCharacteristics

Supports layer-2 and layer-3 multicast routing protocol, which enable the device can access to IPTV, HD video surveillance and HD video conference. Supports layer-3 routing protocol and super-large routing table capacity, which enables the device is available in large campus networks, enterprise networks and industry networks. Supports MPLS multi-VRF and layer-2 VPN.

IndustrialEthernetRingwithZeroDelayandZeroPacketLoss.

Supports industry-level EAPS and ERPS, and their protection recovery time is less than 50ms. Their high reliability is represented by the null packet loss, which has been proved by many years of application in the Grid, rail transportation and defense systems.

CompleteSecurityMechanism

Equipment-Level Security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions. Security Authentication Mechanism: IEEE 802.1x, Radius and TRTacacs+ Enhanced Service Security Mechanism: supports the plaintext or MD5 authentication of relevant routing protocol, URPF, deep inspection of hardware packet, control packet and data packet and filteringtechnology.

InnovativeEnergy-SavingDesign

Intelligent power management: The power system of TR-S3900 series supports real-time monitoring the device and the slow-start. It is also power-saving. Intelligent fan management system: The fan systems of S3900 Series supports automatic speed regulation, which efficiently slow the fan speed and mitigate the noise. OAM Complies to 802.3ah and 802.1ag

FlexibleandConvenientManagementandMaintenance

Supports management modes such as the console ort, Telnet, SSH, etc. Supports the WEB management mode, which is easy and efficient so that it makes installation and debugging convenient. Supports TFTP-patterned file upload/download management. Supports ISSU (In-Service Software Upgrade).

Techroutes

NETWORK

TechnicalSpecification

Item		TR-S3930	TR-S3938F	TR-S3954	TR-S3954M
Interface		24xGETX ports,6x10GE/GE SFP+ ports	24xGESFPports, 8xGE TX 6x10GE/GESFP+ ports	48xGETX ports,6x10GE/GE SFP+ ports	24xGE TX ports, 24xGE SFPports 6x10GE/GESFP+ ports
Console		1RJ45 console	1RJ45 console	1RJ45 console	1RJ45 console
Backplane		216Gbps	216Gbps	216Gbps	216Gbps
Forwardingrate		126Mpps	138Mpps	162Mpps	162Mpps
Chassis	Dimensions(WxDxH)(mm)	440x350x44	440x350x44	440x350x44	440x350x44
Package	Dimensions(WxDxH)(mm)	576x448x94	576x448x94	576x448x94	576x448x94
Power consumption	FullLoad	75W	75W	75W	150W
Power supply (hot-swap)	AC: 100V-240V,50Hz±10%	Support	Support	Support	Support
Power supply (hot-swap)	DC:-36V-72V	Support	Support	Support	Support
TotaloutputBTU (1000BTU/H=293W)		255.97	255.97	255.97	255.97
Noise@25℃（dBA)		45	45	45	45
MTBF(H)		>100,000	>100,000	>100,000	>100,000
Forwardingmode		Store-forward	Store-forward	Store-forward	Store-forward
Flash(MB)		32	32	32	64
DRAM(MB)		256	256	256	256
MAC		32K	32K	32K	32K
BufferSize(MB)		2	2	2	2
Jumboframe		9K	9K	9K	9K
Routing table	IPv4	12K	12K	12K	12K
	IPv6	8K	8K	8K	16K
ARP table	IPv4	12K	12K	12K	12K
	IPv6	2K	2K	2K	2K
TotalSVI		1K	1K	1K	1K
VLAN		4KVLAN,MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN,802.1Q			

SpanningTree	802.1D(STP),802.1W(RSTP)and802.1S(MSTP)
	BPDUguard,rootguardandloopbackguard
Multicast	IGMPv1/v2/v3,IGMPSnooping,IGMPFastLeave,
Routing protocols	Static Routing, RIPv1/v2, OSPFv2, OSPFv3, BGP4, BGP4+, PBR, LPM Routing,
	ECMP, VRRP, Multicast routing, PIM-SM, PIM-DM.
IPv6	ICMPv6,DNSv6,ACLv6and IPv6 PBR, IPv6 VRRPv3
	IPv6 Multicast VLAN, PIM-SM/DM for IPv6, IPv6 QOS DHCP Server/Client
	MLDV1/V2,MLDsnooping
	IPv6StaticRouting,RIPng,OSPFv3, BGP4+.IPv6 Management Features
	Manualtunnel,ISATAPtunnel,6to4tunnel,
MPLS	LDPprotocol,Multi-VRF,
	MPLSL2VPN
QoS	CAR,HQoS,MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOSbasedQoS, 802.1P/DSCP
	priorityre-labeling,SP,WRR,WDRRTail-Drop,WRED, flow monitoring and Traffic shaping
	Qos - 8 Queues Per Port for unicast & 4 Queues Per Port for multicast
Security	Portisolation,Portsecurity,and"IP+MAC+port"binding,DHCP Client,
	DHCP Relay, DHCP Server, DHCP Snoopingandoption82,,
	IEEE802.1x,RadiusandTacacs+, ARP Binding, AAA,
	IP ACL, MAC ACL, MAC-IP ACL,User-Defined ACL, Time range ACL, VLAN ACL
	Flood,UDPFlood,etc.Broadcast/multicast/unknownunicaststorm-control
	MD5,SHA-256,RSA-1024,AES256,etc.
Reliability	Static/LACPlinkaggregation,Interfacebackup
	TRVSS, virtual-stacking
	EAPSandERPS
	URPF,LLDP,ISSU
	VRRP
	1+1powerbackup,DyingGasp
Management	Console,Telnet,SSHv1/2,HTTP, HTTPS,Web, CLI
	SNMPv1/v2c/v3, RMON 1,2,3,9.
	TFTP,FTP,SFTP,Radius Authentication Syslog (Int&Ext)
	SNTP/NTP,SPAN, RSPAN,SFlow, Dual Firmware Images and Configuration Files
Environment	Operatingtemperature/humidity:0℃-50℃,10%-90%non-condensing
	Storagetemperature/humidity:-20℃-70℃,5%-95%non-condensing

NETWORK

ProductOrderInformation:

Item	Description
TR-S3900Series	
TR-S3930	Ethernetroutingswitchwith24GEand610GEports(1RJ45consoleport,24 GE TX ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V powersupply;thecoolingfan,1U,standard19-inchrack-mountedinstallation
TR-S3938F	Ethernetroutingswitchwith32GEand610GEports(1RJ45consoleport,24 100M/1000M SFP ports, 8 GE TX ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V power supply; the cooling fan, 1U, standard 19-inch rack-mountedinstallation)
TR-S3954	Ethernetroutingswitchwith48GEand610GEports(1RJ45consoleport,48 GE TX ports, 6 10GE/GE SFP+ ports; 2 power slots with 1 hot-swap AC220V powersupply;thecoolingfan,1U,standard19-inchrack-mountedinstallation)
TR-S3954M	Ethernetroutingswitchwith48GEand610GEports(1RJ45consoleport,24 GETXports,24100M/1000MSFPports,610GE/GESFP+ports;2powerslots with 1 hot-swap AC220V power supply; thecooling fan, 1U,standard 19-inch rack-mountedinstallation)

Item	Description
TR-S3900SeriesPowerModule	
PWR-75-AC	Hot-swapACPowerforTR-S3930/TR-S3938F/TR-S3954(MaxPower 75W,AC100~240Vinput)
PWR-75-DC	Hot-swapDCPowerforTR-S3930/TR-S3938F/TR-S3954(MaxPower75W,DC-36V~ -72Vinput)
PWR-150-AC	Hot-swapACPowerforTR-S3954M(MaxPower150W,AC100~240Vinput,th isolatedcooling fan)
PWR-150-DC	Hot-swapDCPowerforTR-S3954M(MaxPower150W,DC-36V~-72Vinput, theisolatedcooling fan)

ForMoredetails:
visit**:**www.techroutes.com
Or contact
sales@techroutes.cominfo
@techroutes.com