MT198T Switch

A powerful legacy/SDN hybrid switch

Product Overview

The EstiNet MT198T is an innovative legacy/SDN hybrid switch, installed with open-architecture powerful EstiNOS and supporting many legacy L2/L3 protocols and state-of-the-art OpenFlow features. MT198T is equipped with 48 ports 10GbE SFP+ and 6 40GbE QSFP ports and specifically designed for the use of Top-of-Rack (ToR) switches and enterprise Layer-3 switches, which need high performance, L2/L3 protocol support, advanced QoS, powerful Access Control List function. In addition, MT198T provides next-generation SDN functions, such as switch configuration auto-provisioning, dynamic flow-level monitoring, dynamic flow-level QoS guarantee, and abnormal traffic detection, which are new features that cannot be easily supported in legacy switches.

Key Features and Benefits

Performance and Extensibility

MT198T is an innovative legacy/SDN hybrid switch, installed with open-architecture powerful EstiNOS and supporting many legacy L2/L3 protocols and SDN OpenFlow features. It is a high-performance 10-Gbps data center switch with 720Gbps switching capacity, which can deliver line-rate forwarding performance on all ports. The OpenFlow agent on EstiNOS can connect with an SDN controller to enable a variety of flow-based SDN applications with great extensibility.

Useful L2 Protocol Support

MT198T supports useful L2 features, including Flow Control, STP/RSTP, 802.1Q tag VLAN, dynamic/static Link Aggregation, LLDP and MC-LAG support. The MC-LAG is a type of LAG with the constituent ports that terminate on separate chassis/switch, primary for the purpose of providing redundancy in the event one of the chassis/switch fails.

Open-architecture L3 Protocol Support

MT198T is installed with EstiNOS, which is an open-architecture switch operating system. It provides Linux-like pseudo-interfaces for the operation of network system software, such as the well-know open-source Quagga package. It hence supports commonly-used L3 unicast routing protocols, including OSPF(Open Shortest Path First) and IS-IS. MT198Tprovides PBR (Policy Based Routing) to direct traffic based on a set of defined policies.

Advanced QoS

By using MT198T's advanced QoS functions, the network administrators can designate the priority of streaming services based on different QoS requirements. MT198T prioritizes delay-sensitive services such as voice and video streamings. It provides different classes of services, including port-based, flow-based, 802.1P, IP DSCP, TCP/UDP port-based.

Powerful Access Control List

With the powerful ACL utility, administrator can restrict sensitive portions of the network from unauthorized users and guard against network attacks. MT198T supports MAC-based ACL, IPV4-based ACL.

SDN

MT198T enables the state-of-the-art SDN functions for network administrators. With the help of the installed EstiNOS and collaborating with EstiNet's SDNCore controller applications, MT198T can perform fine-grained, flow-based network management functions, such as switch configuration auto-provisioning, dynamic flow-based network traffic monitoring, and abnormal traffic detection/rejection.

EstiNet

Product Specifications

Physical Information

- 48*10G SFP+ ports and 6*40G QSFP port
- 1U height, 19” rack mountable metal enclosure
- RJ45 Console
- Mini USB
- 1+1 Load Sharing Power Supplies
- Intel Atom C2538 processor: 4-core 2.4GHz CPU

Performance

- MAC Address Table: 192K
- Switching Capability: 720Gbps
- Jumbo Frame: 9 K Bytes

Layer 2

- Flow Control
  - 802.3x for full-duplex mode
- Spanning Tree Protocol
  - 802.1D Spanning Tree Protocol (STP)
  - 802.1w Rapid Spanning Tree Protocol (RSTP)
- VLAN
  - Port-based
  - 4K VLAN ID
- Link Aggregation
  - 802.3ad Link Aggregation Control Protocol (LACP)
  - Number of Ports per Trunk Group:16
- LLDP

Layer 3

- Open Shortest Path First (OSPF) v2/v3
- IS-IS v4

QoS

- Class of Service
  - 802.1p-based COS
  - IP DSCP-based COS
  - TCP/UDP Port-based COS
  - IPV4/IPV6-based COS
  - DiffServ
- Priority Queue Scheduling
  - WRR priority scheduling
  - Strict priority scheduling
  - Hybrid (WRR + Strict)

OpenFlow

- OpenFlow Specification: v1.3.4
- OpenFlow table size:
  - Max. 192K exact match (114bit key length)/48K exact match (432bit key length)
  - Max. 24k wildcard match (80bit key length)/12k wildcard match (160bit key length)/6k wildcard match (320bit key length)
  - Max. 8k entries OF1.3 full match mode，Max. 24k entries through Controller software programming
- Multiple Flow Table Support: Max. 6 stage pipelines, 4 tables per stage
- 11.5k meters
- 11.5k counters
- Action: output to normal, output to controller, multiple output
- Match Field: L2 Ethernet Header \L3 IP Header \L4 TCP/UDP port。
- Set Destination MAC address & VLAN ID
- Push/Pop VLAN Tag
- Group Table
- Open vSwitch: v2.3.1
- OVSDB
- Hard-timeout/idle-timeout
- OF Config

MC-LAG

- Multi-Chassis LAG

Security

- Access Control List
  - MAC-based
  - IPv4-based

Management

- Firmware Download/Upgrade
  - TFTP (over ONIE)
- SNMP
  - v1/v2/v3
- SYSLOG

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