HOHUNET

HOS (HOHUNET 操作系统软件平台)
统一交换软件特性列表

版本: V2.4（HOS固件版本：V3.0.22）
发行日期: 2025/12/12

概览

HOS是HOHUNET推出的交换机操作系统，也是HOHUNET所有交换机使用的统一软件平台。HOS经历了十多年的商业应用考验。其先进的模块化灵活架构提供了良好的硬件解耦能力。HOHUENT不断迭代和发布更新版本，以修复缺陷或更新功能，确保更好地适应不断变化的网络环境。

关键字

- 经过10多年的商用考验
- 归一化软件平台
- 适用于不同的网络应用环境
- 模块化程度高，可移植，可裁剪
- 功能完整性程度高

特性列表

阅读小贴士:

EB-基础许可证　MS-高级许可证　MA-城域网许可证　ST-堆叠许可证
◯-支持　X-不支持

类	子类	特性	描述	EB	MS	MA	说明
Ethernet basic features	Ethernet	Interface	Ethernet interface operating modes(full duplex, half duplex, and auto-negotiation)	◯	◯	◯	
			Ethernet interface operating rates	◯	◯	◯	
			Jumbo Frame	◯	◯	◯	
			port-xconnect	◯	◯	◯	
		Flow-control	Flow-control tx/rx	◯	◯	◯	

类	子类	特性	描述	EB	MS	MA	说明
Ethernet basic features	Ethernet	Storm-control	Port based storm-control	○	○	○	
			VLAN based storm-control	○	○	○	
		Port-block	Port-block(know/unknown unicast; know/unknown multicast/broadcast)	○	○	○	
		Port-isolate	L2/L3/All Port-isolate	○	○	○	
			Uni-direction isolate	○	○	○	
		L2 Protocol Tunnel	L2 Protocol Tunnel(support CFM/DOT1X/SLOW-PROTO/STP	○	○	○	
		Forward mode	Store-and-forward	○	○	○	
			Cut-through	○	○	○	
	VLAN	VLAN Access mode	Access/Trunk	○	○	○	
			Default VLAN	○	○	○	
		VLAN Classification	VLAN Classification(port based/mac based/IP based/protocol based)	○	○	○	
		QinQ	Basic QinQ	○	○	○	
			Selective QinQ	○	○	○	
			VLAN Mapping(1:1 VLAN Translation)	○	○	○	
		VLAN Statistics	VLAN Statistics	○	○	○	
		Private VLAN	Private VLAN	○	○	○	
		Voice VLAN	Voice VLAN	○	○	○	
		Guest VLAN	Guest VLAN	○	○	○	
	MAC	MAC Address Table	Automatic learning and aging of MAC addresses	○	○	○	
			Hardware Learning	○	○	○	
			Static and dynamic MAC address entries	○	○	○	
			Blackhole MAC	○	○	○	

类	子类	特性	描述	EB	MS	MA	说明
Ethernet basic features	MAC	MAC Flapping detect	MAC Flapping detect	○	○	○	
		Port Bridge	Port Bridge	○	○	○	
	LAG	Link aggregation	Static-LAG & LACP	○	○	○	
			LAG load balance(SLB)	○	○	○	
			LAG load balance(DLB)	○	○	○	
			LAG load balance(RR)	○	○	○	
			LAG Self-healing	○	○	○	
			Link aggregation weighting	○	○	○	
Ethernet Ring protection features	xSTP	STP	Spanning-Tree Protocol	○	○	○	
		RSTP	Rapid Spanning-Tree Protocol	○	○	○	
		MSTP	Multi-instance Spanning-Tree Protocol	○	○	○	
		Spanning-Tree Protocol Protection	BPDU Filter/Guard	○	○	○	
			Root Guard	○	○	○	
			Loop Guard	○	○	○	
			Anti TC-BPDU attack	○	○	○	
	ERPS	ERPS	Single ERPS ring	○	○	○	
			tangent ERPS rings	○	○	○	
			intersecting ERPS rings	○	○	○	
			compatible with RRPP	○	○	○	
	Loop back Detect	Loop back Detect	Loop back detection	○	○	○	
Layer2 Multicast	Layer2 Multicast	IGMP Snooping	IGMPv1/v2/v3 Snooping	○	○	○	
			Fast leave	○	○	○	
			Static IGMP snooping group	○	○	○	
		MVR	MVR(Multicast VLAN Registration)	○	○	○	

类	子类	特性	描述	EB	MS	MA	说明
IPv4 Forwarding	ARP	ARP	Static and dynamic ARP entries	○	○	○	
			Aging of ARP entries	○	○	○	
			Gratuitous ARP	○	○	○	
		ARP proxy	basic ARP-Proxy	○	○	○	
			local ARP-Proxy	○	○	○	
	IPv4 Unicast Routing	IPv4 Static Routes	IPv4 Static Routes	○	○	○	
			Black hole Routes	○	○	○	
			co-work with IP SLA	○	○	○	
			VRF(Virtual Routing and Forwarding)	○	○	○	
			uRPF check	○	○	○	
		RIP	RIPv1/v2	○	○	○	
		OSPFv2	OSPFv2	X	○	○	
		IS-IS	IS-IS	X	○	○	
		BGP	IBGP	X	○	○	
			EBGP	X	○	○	
		Route policy	Route-map	○	○	○	
			IPv4 prefix-list	○	○	○	
		PBR	PBR(Policy-based Routing)	○	○	○	
		ICMP	ICMP redirect	○	○	○	
			ICMP unreachable	○	○	○	
		ECMP	ECMP(SLB)	○	○	○	
			ECMP(DLB)	○	○	○	
			ECMP(RR)	○	○	○	
			ECMP Self-healing	○	○	○	
	IPv4 Multicast Routing	IGMP	IGMPv1/v2/v3	○	○	○	
			IGMP-Proxy	○	○	○	
			IGMP SSM Mapping	○	○	○	
		PIM	PIM-SM	X	○	○	
			PIM-DM	X	○	○	

类	子类	特性	描述	EB	MS	MA	说明
IPv6 Forwarding	IPv6 Basic Protocol	ICMPv6	ICMPv6	X	○	○	
		NDP	NDP	X	○	○	
	IPv6 Unicast Routing	IPv6 Static Routes	IPv6 Static Routes	X	○	○	
		RIPng	RIPng	X	○	○	
		OSPFv3	OSPFv3	X	○	○	
		IS-IS	IS-IS	X	○	○	
		BGP4+	BGP4+	X	○	○	
	IPv6 Multicast Routing	MLD v1/v2	MLD v1/v2	X	○	○	
		MLD v1/v2 Snooping	MLD v1/v2 Snooping	X	○	○	
		MVR6	MVR6	X	○	○	
		PIM-SM v6	PIM-SM v6	X	○	○	
	IP Tunnel	IPv6 over IPv4 Tunnel	IPv6 over IPv4 Tunnel	X	○	○	
		6to4 Tunnel	6to4 Tunnel	X	○	○	
		ISATAP Tunnel	ISATAP Tunnel	X	○	○	
	IPv6 Service	DHCPv6	DHCPv6 Relay	X	○	○	
			DHCPv6 Snooping	X	○	○	
		IPv6 Prefix List	IPv6 Prefix-list	X	○	○	
Device reliability features	BFD	BFD	BFD for Static route	X	○	○	
			BFD for OSPFv2	X	○	○	
			BFD for VRRP/Track	X	○	○	
			BFD for PBR	X	○	○	
	VRRP	VRRP	VRRP	○	○	○	
			Track for VRRP	○	○	○	
	Smart Link	Smart Link	multi-instance	○	○	○	
			load balance	○	○	○	
			Multi-Link	○	○	○	
			Monitor-link	○	○	○	

类	子类	特性	描述	EB	MS	MA	说明
Device reliability features	MLAG	MLAG	MLAG basic	○	○	○	
			MLAG orphan Port	○	○	○	
	Stacking	Stacking	Maximum number of stacked devices: 8 Stack port: Any port or AGG	○	○	○	*1
Ethernet OAM	EFM	EFM (802.3ah)	Auto detection	X	○	○	
			Network fault detection	X	○	○	
			Network fault handle	X	○	○	
			remote loop back	X	○	○	
	CFM	CFM (802.1ag)	Hardware CCM detect	X	○	○	
			MAC Ping	X	○	○	
			MAC Trace	X	○	○	
	Y.1731	Y.1731	Loss measure(LM)	X	○	○	*2
			Latency and Jitter measure	X	○	○	
PoE features	PoE	System Power management	Power supply on-spot detection	○	○	○	
			Power supply capability detection	○	○	○	
			Power capability auto configuration (PSE)	○	○	○	
		Power Supply Management	Legacy PD detection	○	○	○	
			PD max power management	○	○	○	
			PD priority management	○	○	○	
			Power Supply Task Plan management(Not ready)	○	○	○	
			PD Mandatory power supply	○	○	○	
		operations management	PSE log	○	○	○	
			PSE Chipset temperature inquire	○	○	○	
			PSE firmware update	○	○	○	

类	子类	特性	描述	EB	MS	MA	说明
QoS features	QoS	Traffic classification	Traffic classification based on COS/DSCP (simple classification)	○	○	○	
			Traffic classification based on ACL (complex classification)	○	○	○	
			Traffic classification based on inner header of the tunnel packets	○	○	○	
		Traffic behaviors	Queue scheduling	○	○	○	
			Remark the priority fields(COS/DSCP) of the packet based on ACL	○	○	○	
			Remark the priority fields(COS/DSCP) of the packet based on Table Map	○	○	○	
			Flow redirection	○	○	○	
			Flow mirror	○	○	○	
		Traffic policing	Traffic policing based on direction(in/out) of Port	○	○	○	
			Traffic policing based on direction(in/out) of VLAN	○	○	○	
			Traffic policing based on direction(in/out) of flow	○	○	○	
			Traffic policing based on direction(in/out) of aggregated flow	○	○	○	
		Traffic shaping	Queue based traffic shaping	○	○	○	
			Port based traffic shaping	○	○	○	
		Congestion management	SP(Strict Priority)scheduling	○	○	○	
			WDRR(Weighted Deficit Round Robin)scheduling	○	○	○	*3
			SP + WDRR mixed scheduling	○	○	○	*4

类	子类	特性	描述	EB	MS	MA	说明
QoS features	QoS	Congestion avoidance	TD(Tail Drop)	○	○	○	
			WRED(Weighted Random Early Detection)	○	○	○	
		Traffic statistics	Packet counts and bytes statistics based on traffic classification	○	○	○	
			Packet counts and bytes statistics based on the color after traffic policing	○	○	○	
			Forwarded and discarded packet counts and bytes statistics	○	○	○	
		ECN (Explicit congestion notification)	ECN tags based on Tail Drop	○	○	○	*5
			ECN tags based on WRED	○	○	○	
Data Center	VARP	Virtual gateway	VARP(Virtual-ARP)	○	○	○	
			VARP subnet	○	○	○	
	Tunnel	VxLAN	Manual configure VxLAN tunnel	○	○	○	
			VxLAN distributed gateway	○	○	○	
			VxLAN active-active access	○	○	○	
			Interconnect across Data Centers based on VxLAN	○	○	○	
			Edit DSCP in VxLan outer header	○	○	○	
			BGP EVPN	X	○	○	
			Support to enable/disable overlay split horizon per-VNI	○	○	○	
		GRE Tunnel	GRE Tunnel	○	○	○	
		NVGRE Tunnel	NVGRE Tunnel	○	○	○	
		GENEVE Tunnel	GENEVE Tunnel	○	○	○	

类	子类	特性	描述	EB	MS	MA	说明
Data Center	DCB	DCBX	LLDP support DCBX TLV	◯	◯	◯	
		PFC	PFC	◯	◯	◯	
Metro Feature	MPLS	LDP	LDP	X	X	◯	
		MPLS Forwarding	MPLS Forwarding	X	X	◯	
		VPWS	VPWS (L2VPN)	X	X	◯	
		VPLS	VPLS (L2VPN)	X	X	◯	
		L3VPN	L3VPN	X	X	◯	
		MPLS OAM	MPLS OAM	X	X	◯	
		MPLS Stats	MPLS Stats	X	X	◯	
		ACL	ACL	X	X	◯	
		Qos	Qos	X	X	◯	
Security and management	System Security	SSH	SSHv1/v2	◯	◯	◯	
			RSA Key generation	◯	◯	◯	
		RADIUS	RADIUS	◯	◯	◯	
		TACAS+	TACAS+	◯	◯	◯	
		AAA	Authentication	◯	◯	◯	
			Authorization	◯	◯	◯	
			Accounting	◯	◯	◯	
		Dot1x	Port based dot1x	◯	◯	◯	
			MAC based dot1x	◯	◯	◯	
			Guest VLAN	◯	◯	◯	
		ACL	MAC/IP ACL	◯	◯	◯	
			Basic Mode ACL	◯	◯	◯	
			Port-group ACL	◯	◯	◯	
			VLAN-group ACL	◯	◯	◯	
			IPv6 ACL	◯	◯	◯	
			ACL UDF	◯	◯	◯	
			Time Range	◯	◯	◯	
		ARP Inspection	ARP Inspection	◯	◯	◯	

类	子类	特性	描述	EB	MS	MA	说明
Security and management	System Security	IP Source Guard	IP Source Guard	○	○	○	
		Port Security	Limitation on MAC address learning on interface	○	○	○	
		VLAN Security	Limitation on MAC address learning on VLAN	○	○	○	
		Control Plane Policy (COPP)	Black list/wihte list	○	○	○	
			Rate limit	○	○	○	
		CPU Traffic Limit	CPU Traffic Limit	○	○	○	
		Prevent DDOS attack	Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/LAN D/SYN Flood)	○	○	○	
		Login filter	Telnet/SSH ACL filtering	○	○	○	
			Telnet/SSH IPv6 ACL filtering	○	○	○	
		MAC Security	MacSec(802.1AE)	○	○	○	*6
		Link-Flapping detection	Link-Flapping detection	○	○	○	
	Network Management	DHCP	DHCP Server	○	○	○	
			DHCP Relay	○	○	○	
			DHCP Snooping	○	○	○	
			DHCP Client	○	○	○	
			DHCP Option82	○	○	○	
			DHCP Option252	○	○	○	
		RMON	RMON	○	○	○	
		sFlow	sFlow v4/v5	○	○	○	
		IP SLA	IP SLA	○	○	○	
		IPFIX	IPFIX	○	○	○	
		EFD	Elephant Flow Detection	○	○	○	*7
		NTP	NTP(Network Time Protocol)	○	○	○	

类	子类	特性	描述	EB	MS	MA	说明
Security and management	Network Management	PTP（IEEE 1588）	TC（Support P2P/E2E、Ethernet/Udp Transport）	○	○	○	
			BC/OC(Support OneStep/TwoStep、Request-response/Peer-delay Ethernet/Udp Transport)	○	○	○	
		Err-disable	Err-disable detection and recovery	○	○	○	
		DNS	Static DNS Client	○	○	○	
		LLDP	LLDP	○	○	○	
	Terminal Services	Command Line Interface	Configurations through CLI (Command Line Interface)	○	○	○	
		Help information	Banner configuration	○	○	○	
			Help information in English	○	○	○	
		Terminal service	Vty Terminal service	○	○	○	
			Console Terminal service	○	○	○	
		Management interface	In-band management interface and configuration	○	○	○	
			Out-band management interface and configuration	○	○	○	
Configuration and maintenance	Configuration Management	SNMP	Network management based on SNMPv1/v2c/v3	○	○	○	
			Public and private MIB	○	○	○	
			Public and private Trap	○	○	○	
		WEB	Configuration and management based on WEB UI	○	○	○	
		Cloud Management	Automatic device connection management	○	○	○	*8
			Zero-configuration deployment	○	○	○	

类	子类	特性	描述	EB	MS	MA	说明
Configuration and maintenance	Configuration Management	Cloud Management	Automatic network topology	○	○	○	
			Network monitoring and alarm notification	○	○	○	
			Configuration and one-click rollback	○	○	○	*8
			Cross-network tunneling connection to network device(web/ssh/telnet)	○	○	○	
			Scheduled tasks deployment	○	○	○	
		RPC-API	Configuration and management based on RPC-API	○	○	○	
		Smart Config	Smart Config(Automatically configuration when system start)	○	○	○	
		system profile configuration	change the system specifications by choose different STM Profiles	○	○	○	
		Restore factory default configuration	Restore factory default configuration	○	○	○	
	File System	File system	File system(support directory and file management)	○	○	○	
		Upload and download	Upload and download files through FTP or TFTP	○	○	○	
			Upload and download files through Xmodem	○	○	○	
	Debugging And Maintenance	Debug	per-module Debug features	○	○	○	
			ICMP Debug	○	○	○	
		BHM	Software process monitor: BHM(Beat Heart Monitor)	○	○	○	
			Hardware Watch Dog	○	○	○	

类	子类	特性	描述	EB	MS	MA	说明
Configuration and maintenance	Debugging And Maintenance	Log & alarm	CPU usage display and alarm	○	○	○	
			Memory usage display and alarm	○	○	○	
			Device temperature, PSU, FAN, status display and alarm	○	○	○	
			User operation logs	○	○	○	
			Management of logs, alarms, and debugging information	○	○	○	
		VCT	VCT(Virtual Cable Test)	○	○	○	
		system diagnostics	Detailed Diagnostic-information collection	○	○	○	
		Reboot	Manual reboot	○	○	○	
			Schedule Reboot	○	○	○	
			Reboot Information logging	○	○	○	
		network diagnostics	Ping	○	○	○	
			IPv6 Ping	○	○	○	
			Trace route	○	○	○	
		mirror	Port mirror	○	○	○	
			Flow mirror	○	○	○	
			Remote mirror	○	○	○	
			Multi-destination mirror(m:n)	○	○	○	
			Use CPU as mirror source	○	○	○	
			Use CPU as mirror destination and analyze packet	○	○	○	
			ERSPAN	○	○	○	
		CPU statistics	To CPU/From CPU packets statistics	○	○	○	

类	子类	特性	描述	EB	MS	MA	说明
Configuration and maintenance	Debugging And Maintenance	L2 Ping	layer2 network connectivity detection - L2Ping (MAC Ping/Trace)	○	○	○	
		UDLD	UDLD(Unidirectional Link Detection)	○	○	○	
		unidirectional	unidirectional forwarding of the fiber	○	○	○	
		Loop back	port loop back	○	○	○	
			hardware loop back(internal/external)	○	○	○	
		System time	Time configuration	○	○	○	
			Timezone	○	○	○	
	Software	System software upgrate	Update via TFTP	○	○	○	
	upgrate	Uboot upgrate	Uboot upgrate	○	○	○	

说明
*1. 需要ST license支持。
*2. Loss measure(LM) 在BigFlow和SerdesX平台不支持。
*3. WDRR(Weighted Deficit Round Robin)scheduling在SerdesX平台不支持。
*4. SP + WDRR mixed scheduling在SerdesX平台不支持。
*5. ECN tags based on Tail Drop在SerdesX平台不支持。
*6. MacSec(802.1AE)在BigFlow平台不支持。
*7. Elephant Flow Detection在BigFlow平台不支持。
*8. Cloud Management需要与 DHCS 云管理系统配合使用；DHCS 可以部署在公共云上或私有环境中。

已支持的MIB
• RFC 1155 SMI
• RFC 1157 SNMPv1
• RFC 1212, RFC 1213, RFC 1215 MIB-II, Ethernet-Like MIB and TRAPs
• RFC 1493 Bridge MIB
• RFC 1643 Ethernet MIB
• RFC 1657 BGP-4 MIB
• RFC 1724 RIPv2 MIB
• RFC 1850 OSPFv2 MIB
• RFC 1905 RFC 1907 SNMP v2c, SMIv2 and Revised MIB-II
• RFC 2011 SNMPv2 for Internet Protocol using SMIv2
• RFC 2012 SNMPv2 for transmission control protocol using SMIv2
• RFC 2013 SNMPv2 for user datagram protocol suing SMIv2
• RFC 2096 IPv4 Forwarding Table MIB
• RFC 2287 System Application Packages MIB
• RFC 2570–2575 SNMPv3, user based security, encryption and authentication
• RFC 2576 Coexistence between SNMP Version 1, Version 2 and and Version 3
• RFC 2578 SNMP Structure of Management Information MIB
• RFC 2579 SNMP Textual Conventions for SMIv2
• RFC 2665 Ethernet-like interface MIB
• RFC 2819 RMON MIB
• RFC 2863 Interface Group MIB
• RFC 2863 Interface MIB
• RFC 3413 SNMP Application MIB
• RFC 3414 User-based Security model for SNMPv3
• RFC 3415 View-based Access Control Model for SNMP
• RFC 4188 STP and Extensions MIB
• RFC 4363 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and VLAN extensions
• Draft – blumenthal – aes – usm - 08
• Draft – reeder - snmpv3 – usm - 3desede -00
• Draft-ietf-idmr-igmp-mib-13

支持的 RFC 标准
• RFC 826 ARP
• RFC 854 Telnet client and server
• RFC 894 IP over Ethernet
• RFC 906 TFTP Bootstrap
• RFC 1027 Proxy ARP
• RFC 1058 RIP v1
• RFC 1112 IGMP v1
• RFC 1122 Host Requirements
• RFC 1195 Use of OSI IS-IS for Routing in TCP/IP and Dual Environments (TCP/IP transport only)
• RFC 1492 TACACS+RFC 1519 CIDR
• RFC 1587 OSPF NSSA Option
• RFC 1591 DNS
• RFC 1812 Requirements for IP Version 4 Routers
• RFC 2030 SNTP, Simple Network Time Protocol
• RFC 2068 HTTP server
• RFC 2080 RIPng for IPv6
• RFC 2131 BOOTP/DHCP relay agent and DHCP server
• RFC 2138 RADIUS Authentication
• RFC 2139 RADIUS Accounting
• RFC 2154 OSPF w/Digital Signatures (password, MD-5)
• RFC 2236 IGMP v2
• RFC 2267 Network Ingress Filtering
• RFC 2328 OSPF v2 (edge-mode)
• RFC 2338 VRRP
• RFC 2362 PIM-SM (edge-mode)
• RFC 2370 OSPF Opaque LSA Option
• RFC 2453 RIP v2
• RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
• RFC 2461 Neighbor Discovery for IP Version 6 (IPv6)

支持的 RFC 标准（续）
• RFC 2463 Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
• RFC 2464 Transmission of IPv6 Packets over Ethernet Networks
• RFC 2474 DiffServ Precedence, including 12 queues/port
• RFC 2475 DiffServ Core and Edge Router Functions
• RFC 2526 Reserved IPv6 Subnet Anycast Addresses
• RFC 2597 DiffServ Assured Forwarding (AF)
• RFC 2598 DiffServ Expedited Forwarding (EF)
• RFC 2740 OSPF for IPv6
• RFC 3176 sFlow
• RFC 3376 IGMP v3

关于HOHUNET:

HOHUNET成立于2015年，是一家专业从事开发交换机产品的技术型公司，全系列交换机均基于国产交换芯片。随着芯片技术的不断发展，HOHUNET推出了一系列基于该芯片平台的差异化产品。目前，公司产品线覆盖1G到800G，可用于企业网、运营商网、数据中心、AI计算等场景。目前公司主要合作模式为OEM/ODM，致力于为客户提供灵活的端到端定制产品和技术咨询服务。成为客户最值得信赖的商业伙伴一直是公司的使命和原则。

联系我们:

深圳市浩湖网络技术有限公司

总部地址：中国广东省深圳市南山区深南大道9996号李宁中心11楼
商务合作：business@hohunet.com
官方电话：0086-755-26418565
官方网址：www.hohunet.cn