AsterNOS for Campus

Release Note

Version V6.1R006P001

Asterfusion Data Technologies Co., Ltd.

Contents

1. Preface

The purpose of this document is to provide important information about the released software version, including but not limited to the following information: running platform, important components, main features, key updates.

Target Audience

This manual is primarily intended for following engineers.

- Software Developers
- Software Testers
- Customer Site Implementers

2. Modification of Records

Date	Versions	Modify Remarks
2026-07-13	V1.0	AsterNOS version-V6.1R006P001 released

3. Description

AsterNOS is a SONiC-based network operating system. The specific information are as following:

- AsterNOS-Campus-V6.1R006P001-arm64.bin
  - Md5sum: 5e5d4035b5c109886a357b6142a5c0ac
  - Supported models: All device models of CX102S, CX104S, CX204Y, CX206Y, CX202P, CX204P, CX206P series
- AsterNOS-Campus-V6.1R006P001-amd64.bin
  - Md5sum: 690c517deb28ee41bee64ed84cf86acd
  - Supported models: CX306P, CX308P, CX532P series
- Supporting user manual

  Command Line Reference: https://docs.asternos.com/enterprise/v6/configuration-guide/preface/

  Configuration Guide: https://docs.asternos.com/enterprise/v6/configuration-guide/preface/

4. Dependent Components

Components	Versions
Linux kernel	6.1.123
SAI	1.16.1
FRR	10.3.1
lldpd	1.0.16
libteam	1.31
snmpd	5.9.3
redis	5.0.3
isc-dhcp	4.4.3
radvd	2.19
mstp	0.0.9
parpd	1.0.0
ndppd	1.0.0
docker-engine	24.0.2

5. Update Records

5.1 New Feature

- Support for IS-IS Max-areas
- Support for IS-IS IGP-LDP synchronization
- Support for HA Route
- Support for VxLAN
- Support for BGP-EVPN
- Support for MPLS Static LSP
- Support for MPLS Dynamic LDP
- Support for MPLS VPWS/VPLS
- Support for MPLS L3VPN
- Support for configuration rollback triggered by interface state changes
- Support for history.log and klish.log types
- Support for token-based RestAPI authorization management

5.2 Optimizations & Enhancements

- Enhanced complexity for local user passwords
- PTP performance optimization
- Support for dynamic addition and deletion of PTP interfaces
- Support for mapping a single GNSS source to multiple PTP domains

5.3 Major Bug Fix

- Fixed an issue where modifying the ptp mode and priority1 parameters of a PTP instance would cause an automatic device reboot when the management IP was configured in vrf mgmt.
- Fixed an issue where modifying the MTU of a LAG interface caused SWSS to restart.
- Fixed an issue where STP prevented hosts connected to a VLANif interface from learning the gateway's MAC address.
- Fixed an issue where MAC address modifications did not take effect on VLANif interfaces assigned to non-default VRFs.

- Fixed an issue where changing interface-related configurations caused the interface state to toggle between Up and Down.
- Fixed an issue where PTP time synchronization failed after an interface joined a VLAN.
- Fixed an issue where PTP time synchronization failed after switching the PTP profile.
- Fixed an issue where a G.8275.2 Master device failed to respond upon receiving PTP Signalling Messages.
- Fixed an issue where the passed-policy function did not take effect after configuration.

5.4 Document Changes

5.4.1 User Guide

- Added configuration instructions for new features

6. List of Feature

Level1	Level2	Level3
Interface	Speed	RJ45
		SFP/SFP+/SFP28
		QSFP+/QSFP28
	Shutdown	no shutdown
		shutdown
	Interface Statistics	Packet & Byte Counters
		Error Counters
		IPv4/IPv6 Counters
		Rate Statistics
		Interface bandwidth utilization alert
	Startup delay	
	Optical module information	
	Port Group	
	PoE	PoE/PoE+/PoE++
		PD alive check
		PoE power scheduling
	Interface flapping	
Layer 2	MAC	Static MAC
		Dynamic MAC learning
		MAC Aging
		MAC limit per port

		MAC Blacklist
		MAC Flapping
		MAC learning priority
	VLAN	VLAN mode access/trunk
		VLAN Group
	QinQ	Basic QinQ
		Flexible QinQ
	VLAN mapping	
	VoiceVLAN	
	LAG	Static LAG
		LACP
	MSTP	MSTP/RSTP/STP
		BPDU Filter
		BPDU Guard
	LLDP	
	Loopback detection	
	Port isolation	
	L2PT	
Layer 3	IP Interface	IPv4 interface
		IPv6 interface
	ARP	
	NDP	
	ARP Proxy	
	IPv6	SLACC
	DHCP	DHCP server v4/v6
		DHCP relay v4/v6
	VRF	
	ARPtohost	
	NDPtohost	
	MAC trigger	
	HA Route	
IP Multicast	IGMP	IGMP snooping
		Static IGMP snooping entry
		IGMP v1/v2/v3
		IGMP snooping querier
		IGMP snooping proxy
	Multicast VLAN	
	MLD	MLD snooping
		Static MLD snooping entry
		MLD v1/v2
		MLD snooping querier
		MLD snooping proxy
IP Unicast Routing	Static Route	IPv4 route
		IPv6 route
		Blackhole route

	VRF	
	Policy-based Routing	Route traffic based on source/destination IP, port, or protocol
		Setting nexthop
	OSPF v2	Enable OSPF
		Multi-Area architecture:Backbone/Standard/Stub/NSSA
		Area Routing & Filtering Control
		Global Network Parameters
		Route Redistribution
		Security & Authentication: Interface based simple / MD5 Authentication
		Routing Policy
		OSPF & BFD
		Gracefule restart
		OSPFv2 Multi-instance
	ISIS	Enable ISIS on physical/LAG/VLANif interface
		level-1/level-2/level-1-2
		Broadcast and point-to-point (p2p) network modes
		interface passive mode
		Route Redistribution
		IGP-LDP synchronization
		ISIS support for SRv6
	BGP/MP-BGP	IBGP/EBGP
		BGP unnumbered
		BGP neighbor
		Peer group
		BGP listen
		Route Redistribution
		Global & Distance Settings
		Routing aggregation
		Path Selection & Attribute Control
		BGP Route Reflector
		Graceful restart
		BGP & BFD
		Graceful Restart
		UCMP
		BGP supoort for SRv6
	Routing policy	route map match and filter
		route map match and set
		IP Prefix List
MPLS	Enable Global MPLS	
	Enable MPLS based on the interface	

	Static LSP	Ingress
		Transit
		Egress
	MPLS LDP	LDP Session
		Configure the LSR transmission address
		Timers
		Label Advertisement Mode
		Label Distribution Control Modes
		Label Retention Modes
		PHP
		TTL process mode
	LDP security mechanisms	LDP MD5
		LDP GTSm
	MPLS QoS	Uniform
	VPN	VPWS
		VPLS
		MPLS L3VPN
	Display mpls information	
VxLAN	VxLAN tunnel	Static VxLAN
		Dynamic VxLAN
		L2VNI
		L3VNI
	BGP EVPN	Type2/3/5
	VxLAN GW	Distributed gateway
		Centralized gateway
SRv6	SID Type	End/End.X/End.Dt4/End.DT6/End.DT46
	H.Encap.Red	
	USD	
	SRv6 BE	
	Static SRv6 TE policy	
Security	Broadcast Suppression	Unknown unicast control
		Broadcast control
		Multicase control
	Storm Control	Unknown unicast control
		Broadcast control
		Multicase control
	Port security	
	MACsec	
	uRPF	
	CoPP	
	ACL	Standard ACL
		Extended ACL
		VLAN-based ACL
		ACL-based access restrictions for network device remote management services

	DHCP Snooping	v4/v6
	ND snooping	
	ND Detection	RA guard
		SAVI
	Dynamic ARP inspection	
	IPSG	v4/v6
Management Security	Local User	
	AAA	Authentication
		Accounting
		Authorization
		Fail through
		Fail back
		Tacacs+/Radius/Local
Reliability	BFD	BFD for OSPF
		BFD for ISIS
		BFD for BGP
		BFD for Static Route
		HW BFD
	Monitor Link	
	DHCP failover	
	Event applet	
QoS	Priority	Trust dscp
		Trust CoS
	QosMap	dscp2tc/dot1p2tc/tc2queue/tc2dscp/tc2dot1p
	Classification	L2–L4 classification
		CoS/DSCP remarking
	Policing&Shaping	Port-based rate limiting
		ACL-based rate limiting
		remoark/fwd/drop
	Scheduling	DWRR
		SP
Management & Monitoring	Mirror	SPAN
		RSPAN
		ERSPAN
	SNMP	Version
		MIBs
	NTP	
	PTP	Profile 1588v2/smpte-2059-2/aes67/G8275.1/G8275.2
		Clock Type: BC/OC/TC/T-GM/T-BC/T-BC-P/T-TSC/T-TSC-P
		PTP multi-instance
		One-step/Two-step
		BMCA
		Protocol message interval modification

		Unicast/multicast transmission modes
	SyncE	
	Syslog	Syslog
		Rsyslog
	CLI	Console
		Telnet
		SSHv2
	sFlow	
	ZTP	
	TFTP/FTP	
	Management Methods	Klish cli
		RestAPI
		Netconf/YANG
		gNMI