



# HPE Aruba Networking EdgeConnect Operating System (ECOS) Release Notes

Version 9.6.1.0\_106887

Revision F: February 24, 2026

This document provides important information about HPE Aruba Networking EdgeConnect Operating System (ECOS) 9.6.1.0, including top items for the release, release limitations, new features, issues fixed, upgrade considerations, and known issues.

## Revision history

Date	Document Version	Revisions Made
February 24, 2026	Rev F	Added ID: 84563 to <a href="#">Known issues</a> .
February 13, 2026	Rev E	<ul style="list-style-type: none"><li>Added a note about the “BGP AS_Path” attribute to <a href="#">Additional considerations</a>.</li><li>Added a note about EC-XS appliances to <a href="#">Upgrade considerations</a>.</li><li>Added ID: 81493 to <a href="#">Known issues</a>.</li></ul>
February 5, 2026	Rev D	Added ID: 86712 to <a href="#">Known issues</a> .
February 2, 2026	Rev C	Added VRRP convergence improvement to <a href="#">New features and enhancements from past releases</a> .
January 16, 2026	Rev B	Added ID: 81700 to <a href="#">Issues fixed</a> .
January 6, 2026	Rev A	Initial document revision.

## Top items for this release

### Critical items

- If your SD-WAN Orchestrator has the Verify System Files Integrity check box enabled (Configuration > Overlays & Security > Security > Advanced Security Settings) and the EdgeConnect appliance is running ECOS 9.4.0.x, 9.4.1.x, 9.4.2.x, 9.5.0.0, or 9.5.1.0, then the EdgeConnect is susceptible to a critical software defect (ID: 76032) that can cause the appliance to enter a continuous reboot loop. To avoid this defect, upgrade to ECOS 9.4.2.5, ECOS 9.5.1.1, or a later release as soon as possible. All releases affected by this defect have been removed from the portal and are unavailable as an upgrade option. For more information, see [Upgrade considerations](#).
- Before upgrading to ECOS 9.6.1.0 (except if you are upgrading from 8.3.3.0+), you need to disable the “Verify Image Signature” option under SD-WAN Orchestrator’s Advanced Security Settings. You can enable this option again after the upgrade.
- There is a risk of tunnels being down due to the incompatibility described in the ECOS IPSec UDP ESN anti-replay compatibility matrix below. If all EdgeConnects are not being upgraded simultaneously to compatible releases, then before starting the upgrade, an admin should disable either the IPSec key rotation or anti-replay settings on all labels. These settings can be re-enabled after all EdgeConnects in the environment are upgraded. For important details, see [Upgrade considerations](#).

## Top items for this release (continued)

ECOS Version	9.4.1.0+	9.3.2.0+	9.2.8.0+	9.1.10.0+	9.2.2.x–9.2.7.x	9.1.2.x–9.1.9x
9.4.1.0+	Yes	Yes	Yes	Yes	No	No
9.3.2.0+	Yes	Yes	Yes	Yes	No	No
9.2.8.0+	Yes	Yes	Yes	Yes	No	No
9.1.10.0+	Yes	Yes	Yes	Yes	No	No

- After an appliance is upgraded to ECOS 9.6.1.0 and if image signature verification is enabled, the appliance can only be upgraded to newer releases that are signed using the HPE Aruba Networking certificate.

### Other items

- ECOS 9.6.1.0 requires SD-WAN Orchestrator version 9.6.1 or later. Before upgrading any appliances to this version of ECOS, you must upgrade SD-WAN Orchestrator to at least 9.6.1.
- ECOS 9.6.1.0 interoperates fully with most prior versions, though it may interoperate in Reduced Functionality mode with some older prior versions.
- EdgeConnect Virtual (EC-V) appliances deployed in Amazon Web Services (AWS) do not support Instance Metadata Service Version 2 (IMDSv2). Customers deploying EC-Vs in AWS environments should ensure that IMDSv1 remains enabled to allow SSH access and proper appliance initialization on EC-V.

## Before you begin

Carefully review the following items and any linked sections before starting the upgrade.

- Review all items under [Release limitations](#), [Known issues](#), and [Upgrade considerations](#) before starting the upgrade.
- If you have customized the system limits on an EC-V (Maintenance > Software & System Management > System Limits), or if the EC-V has 4 GB memory, it is recommended that you test the upgrade in a lab environment on an identical system before upgrading the production EC-V. If the upgrade fails (e.g., the EC-V is in a continuous reboot), lower some of the system limits or increase the memory on the EC-V, then test the upgrade again.

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### Note

If the EC-V currently has 4 GB of system memory, increase to 8 GB

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## Release limitations

This section lists feature limitations and other considerations for customers who are planning to use the ECOS and SD-WAN Orchestrator 9.5.x releases. As these limitations are addressed in subsequent builds of this release, this list will be updated in future revisions of the release notes.

### Feature limitations

The following features have these specified limitations:

- When multiple senders and multiple receivers use the same multicast group over SD-WAN fabric, the multicast feature may experience delays or not function properly.
- EdgeConnect appliances do not support the implementation of different max advertise intervals for different routers in the same IPv4/IPv6 VRRP group. You must configure this interval to be the same on all routers in the same VRRP group, whether they are considered master or backup.
- For all ECOS versions, flow redirection applies to WAN Optimized (Boosted) TCP traffic only. Flow Redirection only applies to the TCP protocol; UDP traffic is not flow redirected.

In ECOS 9.4.1.0 and later, the following limitations apply when you enable Flow Redirection:

- When segmentation is enabled, Flow Redirection works for intra-segment traffic only. It does not work for inter-segment traffic.
- Flow Redirection does not work for IPv6 traffic.
- When a Zone-Based Firewall is enabled, Flow Redirection only works if the interface participating in Flow Redirection is in the Default zone.
- The following limitations apply to the Unified Fabric feature in 9.5.x.x releases:
  - The feature works with EdgeConnect hardware models only.
  - No route filtering is available on EdgeConnect. All routes are sent to ORO (Overlay Route Orchestrator).
  - For deployment in an existing EdgeConnect fabric, WAN uplink labels on EdgeConnect must be set as “\_inet” or “\_mpls”.
  - OTO tunnels map to the VRF\_Zone pair associated with the WAN interface used for tunnel establishment.
  - Roles are not transported between fabrics.
  - EdgeConnect integration with Microbranch supports only L3 Routed/NAT mode. Centralized L2 (CL2) mode is not supported.
  - The feature is only supported in Classic Central (and is not supported in Central Next).
- The total number of DNS Proxy configurations supported on an EdgeConnect appliance is 3.
- Auto-MAC is no longer supported on EC-Vs that use DPDK, as the number of ports on an EC-V increased from 6 to 32.

### Feature limitations when segmentation is enabled

The following features are not supported when segmentation is enabled:

- Bridge Mode and Server Mode. Inline Router Mode is the only mode supported.
- VRRP works as expected, but you cannot configure two groups with the same IP address. Overlapping subnets are supported, but the same IP address cannot be configured on two interfaces on the same appliance.
- When segmentation is enabled, flow redirection works for intra-segment traffic only. Flow redirection does not work for IPv6 traffic. VTI interfaces are not supported in clusters.



## Release limitations (continued)

### Features supported in the default or same segment

The following features work as expected when the feature is contained to the default segment or the same segment:

- Radius snooping features work only on the default segment.
- The IPSLA HTTP monitor is supported only in the default segment.
- Multicast is supported in the default segment.
- HTTP(S), Cloud Portal, SD-WAN Orchestrator are only supported in the default segment.
- LAN-side IPsec passthrough tunnels must use the default segment.
- AWS, Azure, and Check Point work in the default segment. You will need to create inter-segment policies to access these integrations from non-default segments.
- DHCP server is only supported in the default segment, but IP address pools cannot overlap. If IP address pools do not overlap, DHCP server should work in multiple segments at the same site.

### IPv6 feature limitations

The following feature limitations apply to IPv6 traffic:

- NAT64 is not supported. IPv4 internet breakout traffic will not work on an appliance with an IPv6 WAN interfaces only, and IPv6 internet breakout traffic will not work on an appliance with an IPv4 WAN interfaces only.
- Address groups cannot include IPv6 addresses.
- Firewall Protection Profiles does not support whitelisting of IPv6 addresses and address groups containing IPv6 addresses.
- You cannot currently export Netflow/IPFIX records and firewall logs for IPv6 flows.
- Ping trace and traceroute are currently only supported for IPv4.
- Branch NAT does not support IPv6 addresses.
- Inter-segment SNAT/DNAT is not supported for IPv6 traffic. Route leaking between segments is needed to allow inter-segment connectivity.
- Some management services (RADIUS/TACACS+, Netflow, etc.) do not support IPv6 addresses.
- DNS Proxy and AppExpress groups do not support IPv6 addresses.
- IPv6 addresses are supported for VXLAN tunnel endpoints, but only IPv4 addresses are supported for the packets encapsulated in the tunnel.
- IPv6 multicast is not supported.
- Flow redirection does not support IPv6 flows.
- OSPF version 3 (OSPF for IPv6) is not supported.
- DHCPv6 and IPv6 DHCP relay are not supported.
- Network Access Control (NAC) authentication (RADIUS) does not support IPv6.
- RADIUS snooping supports IPv4 traffic only.

### Additional considerations

Note the following additional considerations regarding the v9 release:



## Release limitations (continued)

- All appliances in your SD-WAN network must be running ECOS 9.0.x.x before the advanced segmentation feature can be enabled.
- Peer priority and admin distance settings will be applied globally across all segments.
- If you are using end-to-end Zone Based Firewall, it is recommended that you review the Zone Based Firewall document linked on the SD-WAN Orchestrator/ECOS v9 [documentation resources page](#).
- In ECOS 9.2.0.0, a behavioral change was introduced that affects how the generic app group name is derived. In prior releases, if the application was not part of any app group, the app group name would be “none” and the software did not attempt to derive the app group name using the generic app (https/http). Post-9.2.0.0, if the application is not part of any app group, the app group name is blank and the software attempts to derive the app group name using the generic app.
- When creating an HPE Aruba Networking Central Account in SD-WAN Orchestrator from the Aruba Central Site Mapping tab: Because of how Aruba Central processes account information, if you click Test or Save during configuration, you must wait 30 minutes before you click Test or Save again. If you click Test or Save a second time before 30 minutes have passed, you will receive an error that the connection failed even if you successfully connected to Aruba Central. To resolve this issue, wait 30 minutes before clicking Test or Save again. For more information, see [Aruba Central Site Mapping](#) on the HPE Aruba Networking EdgeConnect SD-WAN Documentation site.
- On the HPE Aruba Networking Cloud Services tab of the ECOS Appliance Manager (Administration > Basic Settings > HPE Aruba Networking Cloud Services), if you select the SSL Certificate Check check box, you must enter a FQDN in the SD-WAN Orchestrator field. Selecting this option prevents you from using an IPv6 address.
- In order to support RADIUS Dynamic Authorization (DA) between HPE Aruba Networking and ClearPass Policy Manager (CPPM), an EdgeConnect-specific template must be created manually and imported to CPPM dictionaries.
- In versions prior to ECOS 9.5.2.0, for eBGP routes with no MED attribute, the BGP route metric was being set to the local preference value configured in the inbound route map, resulting in inconsistent values for routes coming from the same peer. In ECOS 9.5.2.0, a behavioral change was introduced so that when eBGP or iBGP metric values are not specified for a route received from the BGP peer, the metric is set as follows:
  - Med value, if present and greater than zero OR
  - Admin distance plus 50
- The “BGP AS\_Path” attribute is now used in subnet sharing route selection. This is a behavioral change for ECOS 9.6.x.x. Previously, each Route table used lookup criteria in the following order: Longest prefix match, route table admin distance of the source protocol, metric, and use peer priority as a tiebreaker. Now, the criteria are in the following order: Longest prefix match, admin distance of source protocol (lower is better), metric (lower is better), peer Priority (lower is better, 1024 default value), BGP AS\_Path (if present, shorter is better), and flow-based ECMP.



## New features and enhancements

The following new features or enhancements are included in ECOS 9.6.1.0.

Feature Name	Description
Image signing verification improvements	The image signing verification process was updated to support more secure algorithms and address padding scheme issues. SHA-384 with PSS padding is now available for image signing, with SHA-256 PKCS1 available as a fallback option.



## Security issues fixed

The following table contains security-related issues fixed in ECOS 9.5.x.x and 9.6.x.x releases, organized by the software version that first resolved them.

Issue ID	CVE	CVSS Score	CVSS Vector	Description	First Release to Resolve
ID: 81699	CVE-2025-32728	3.8	N/A	This release was updated to address CVE-2025-32728.	9.6.0.0
ID: 77129	CVE-2025-37128	6.2	AV:N/AC:L/PR:H/UI:R/S:C/C:N/I:N/A:H	This release was updated to address CVE-2025-37128.	9.6.0.0
ID: 77127	CVE-2025-37130	8.1	AV:N/AC:L/PR:H/UI:R/S:C/C:H/I:N/A:H	This release was updated to address CVE-2025-37130.	9.6.0.0
ID: 76818	CVE-2025-37129	9.0	AV:N/AC:L/PR:L/UI:R/S:C/C:H/I:H/A:H	This release was updated to address CVE-2025-37129.	9.6.0.0
ID: 76658	CVE-2025-37131	7.6	AV:N/AC:L/PR:L/UI:R/S:C/C:H/I:N/A:L	This release was updated to address CVE-2025-37131.	9.6.0.0
ID: 76352	CVE-2025-37127	8.0	AV:N/AC:H/PR:L/UI:R/S:C/C:H/I:H/A:H	This release was updated to address CVE-2025-37127.	9.6.0.0
ID: 75729	N/A	N/A	N/A	Addresses a security vulnerability. Customers are urged to upgrade to this version. Details of this vulnerability will be published at a later time.	9.6.0.0
ID: 72670	CVE-2024-3596	9.0	CVSS:3.1/AV:N/AC:H/PR:N/UI:N/S:C/C:H/I:H/A:H	This release was updated to address CVE-2024-3596.	9.5.4.0
ID: 79292	CVE-2025-37124	8.6	CVSS:3.0/AV:N/AC:L/PR:N/UI:N/S:U/C:L/I:L/A:H	This release was updated to address CVE-2025-37124.	9.5.3.3
ID: 79259	CVE-2025-37125	8.6	CVSS:3.0/AV:N/AC:L/PR:N/UI:N/S:U/C:L/I:L/A:H	This release was updated to address CVE-2025-37125.	9.5.3.3
ID: 79204	CVE-2025-37123	8.4	CVSS:3.0/AV:N/AC:L/PR:H/UI:R/S:C/C:H/I:H/A:H	This release was updated to address CVE-2025-37123.	9.5.3.3
ID: 75364	N/A	N/A	N/A	Enabling FIPS or CC mode on the appliance was not automated and required a "y/n" response from the user.	9.5.2.0
ID: 76032	N/A	N/A	N/A	Incorrect placement of the syslog configuration file caused the system to fail files integrity check during bootup, resulting in the potential for a continuous reboot loop.	9.5.1.1



Issue ID	CVE	CVSS Score	CVSS Vector	Description	First Release to Resolve
ID: 73257	CVE-2022-36946	7.5	CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:H	This release was patched to address CVE-2022-36946 (Linux kernel vulnerability).	9.5.0.0
ID: 73159	CVE-2022-1012 CVE-2021-4203 CVE-2021-20322	8.2	CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:L/I:N/A:H	This release was patched to address CVE-2022-1012 (memory leak vulnerability), CVE-2021-4203 (use-after-free read vulnerability), and CVE-2021-20322 (ICMP vulnerability).	9.5.0.0
ID: 72696	CVE-2023-48795	5.9	CVSS:3.1/AV:N/AC:H/PR:N/UI:N/S:U/C:N/I:H/A:N	This release was patched to address CVE-2023-48795 (OpenSSH vulnerability).	9.5.0.0
ID: 72695	CVE-2020-14145	5.9	CVSS:3.1/AV:N/AC:H/PR:N/UI:N/S:U/C:H/I:N/A:N	This release was patched to address CVE-2020-14145 (OpenSSH vulnerability).	9.5.0.0
ID: 72026	CVE-2023-51385	6.5	CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:L/I:L/A:N	This release was patched to address CVE-2023-51385 (OpenSSH).	9.5.0.0
ID: 71462	N/A	N/A	N/A	Default SSH and TLS ciphers in EdgeConnect were being flagged as insecure.	9.5.0.0
ID: 71389	N/A	7.2	CVSS:3.1/AV:N/AC:L/PR:H/UI:N/S:U/C:H/I:H/A:H	A validation error created the potential for an unauthenticated user to execute arbitrary code on the host.	9.5.0.0
ID: 71380	N/A	7.2	CVSS:3.0/AV:N/AC:L/PR:H/UI:N/S:U/C:H/I:H/A:H	An issue with port forwarding created the potential for an unauthenticated user to obtain a root shell on the appliance.	9.5.0.0
ID: 71370	CVE-2023-48795	5.9	CVSS:3.1/AV:N/AC:H/PR:N/UI:N/S:U/C:N/I:H/A:N	This release was patched to address CVE-2023-48795 (OpenSSH Terrapin vulnerability).	9.5.0.0
ID: 71361	N/A	N/A	N/A	A code sanitization issue created the potential for an unauthenticated user to execute arbitrary code on the appliance.	9.5.0.0
ID: 69192	N/A	3.9	CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:N	This release was patched to address an HTTP verb tunneling (method override) vulnerability.	9.5.0.0
ID: 68872	CVE-2023-38802	7.5	CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:H	This release was patched to address CVE-2023-38802 (error handling vulnerability).	9.5.0.0
ID: 68775	N/A	7.2	CVSS:3.1/AV:N/AC:L/PR:H/UI:N/S:U/C:H/I:H/A:H	An issue with the tunbug configuration file created a potential command injection vulnerability in the command line interface.	9.5.0.0



Issue ID	CVE	CVSS Score	CVSS Vector	Description	First Release to Resolve
ID: 68343	CVE-2023-2650	6.5	CVSS:3.1/AV:N/AC:L/PR:N/UI:R/S:U/C:N/I:N/A:H	This release was patched to address CVE-2023-2650 (OpenSSL vulnerability).	9.5.0.0
ID: 68197	N/A	7.2	CVSS:3.0/AV:N/AC:L/PR:H/UI:N/S:U/C:H/I:H/A:H	A validation error created the possibility for a malicious user to modify the prototype of a JavaScript object.	9.5.0.0



## Issues fixed

The following known issues have been fixed in ECOS 9.6.1.0. Issues fixed in past releases can be found [here](#).

Issue ID	Description
ID: 86208	The API fetching source interface details did not account for interfaces that were functionally configured as WAN-side but did not include "wan" in the name.
ID: 85037	Excessive spammed log entries related to missing interface indices in overlay ACL match strings caused a high volume of log entries.
ID: 84742	An issue with the way alias interfaces were processed prevented the EC-10104 appliance from resolving the correct IP to reach the portal.
ID: 84654	The WebSocket module became stuck in a connecting state, causing the connection status to appear in the web UI as "Not connected" even when it was.
ID: 84509	Multiple reinitializations of child Security Associations (SAs) occurred when they were in an active ready state, leading to disordered netlink messages and causing specific tunnels to go between up and down states.
ID: 84471	An overlap between jitter times being processed between the two end points of IKE-based IPsec tunnels created IPsec tunnel rekey collisions, causing tunnels to flap.
ID: 84469	The appliance software contained alarm inconsistencies such as mismatched alarm IDs, missing alarm definitions, and outdated alarm keywords.
ID: 84451	The DNS string store overwrote domain strings, invalidating the string reference stored in the IP hash map and causing an application classification failure.
ID: 84448	An issue with how specific routes were advertised in VRRP tracking caused asymmetric loopback traffic on the appliance.
ID: 84430	Excessive stack usage during multicast route processing caused a stack overflow in the tunneld process, resulting in the appliances rebooting unexpectedly.
ID: 84428	Unexpected network node behavior caused issues with flow hashes that created duplicate fragments and affected flow processing, in turn causing Firewall Protection Profiles to drop packets.
ID: 84334	The node.js DNS module was sending an empty <code>if_ip</code> value when the existing hostname was an IP address, causing backend validation to fail and sending continuous error messages.
ID: 84259	Stale data in the DNS module cache caused the appliance to build the WebSocket to the incorrect Orchestrator IP address, preventing successful connection to the Orchestrator.
ID: 84174	A defect in CLI thread scheduling policy and max priority starves a critical tunnel process of CPU cycles when the "Show running-config" command is executed manually, through script, as part of sysdump generation or through Orchestrator-initiated backup job. This could result in unexpected appliance reboot when CPU 0 utilization is maxed out.
ID: 84170	When a source interface other than "any" was specified in the management service for HTTPS traffic, the node checked reachability to all the resolved IPs periodically instead of first checking if the last resolved IP was still reachable, causing the websocket to be torn down and rebuilt again.
ID: 84099	When a burst of packets arrived from a boosted flow on the LAN side, the packets accumulated and drained the buffer, causing tunnel to reboot unexpectedly.



Issue ID	Description
ID: 83792	Communication loss with the PoE controller created recurring PoE fault alarms on the appliance.
ID: 83539	A mishandling of how the USB LTE modem registered to a roaming network prevented the cell0 interface from initializing properly when connected to a global SIM.
ID: 83532	The interface between the flow manager and network memory was inefficient in handling large flows per second rates, causing creation/deletion messages to queue up and the appliance to reboot unexpectedly.
ID: 83506	Flow attributes and route tag mismatches caused LAN-to-LAN traffic to be routed incorrectly, generating DNS resolution failures for internet-bound traffic.
ID: 83487	The alarm warning that SSL certificates will expire soon was not properly cleared when the old cert was deleted, leaving the alarm active even if the cert was current or no cert had been uploaded.
ID: 83329	A code misconfiguration in the function that reads interface statuses created an infinite loop in mgmtd that caused the appliance to reboot unexpectedly.
ID: 81700	The ENA driver provided by the Linux kernel did not reliably support IPv6, preventing EdgeConnect from functioning as expected in AWS C5N deployments.
ID: 81682	An issue with how TLS cipher suite is processed in IP SLA HTTPS monitors caused monitor packet loss, and occasionally IP SLA down events.
ID: 81675	In ECOS 9.4.1.0, we introduced QoS DRC as an experimental feature. QoS DRC was designed to solve bandwidth sharing issues in large networks. It uses an inbound congestion detection algorithm to calculate bandwidth distributions for each active traffic class, and advertises this to all remote-side appliances, assigning bandwidth preference to higher priority traffic over lower priority traffic. The feature has a highly specific use case, and can cause latency across appliances if not properly monitored. To avoid traffic issues, it is recommended to turn off QoS DRC. If the feature is necessary, it should only be enabled in close consultation with your HPE Aruba Networking Sales Engineer.
ID: 81448	Upon upgrade to ECOS 9.4.3.5 or later from version 9.2.2.0 or earlier, route maps are incomplete. In the later versions of ECOS, a route map's prefix match string is limited to 479 characters. Users upgrading from an older release may see their prefix match criteria truncated as a result. As a workaround, match strings in ECOS 9.2.2.0 and earlier releases should be limited to 479 characters (around 20-25 prefixes). In ECOS 9.4.3.5 or later, if the prefix match criteria is truncated, delete the field and add the route rule again.
ID: 80946	An issue existed with the configuration of fault detect time when BFD was enabled between a switch and an appliance with BGP established, where BGP could not reestablish after power-cycling the switch.
ID: 80923	A misconfiguration of the DPD/IKE retransmit values resulted in timeout, causing the appliance to reboot unexpectedly.
ID: 80175	Rules with empty or invalid address/service groups were ignored until the groups were created and pushed to the appliance, causing ECOS to match empty or nonexistent groups with other criteria and leading to unexpected behavior on the appliance.
ID: 79524	A mapping issue occurred when appliance IDs and IP addresses were assigned, removed, and then reassigned, causing multiple Cluster Peer Down alerts on the appliance that persisted even when the issue was resolved.



## Upgrade considerations

The following list summarizes considerations that must be addressed when upgrading from any previous version of appliance software to ECOS 9.6.1.0.

Summary	Description
EC-XS appliances not supported	EC-XS SD-WAN Gateways (EC-XS) with hardware part numbers 200889-001, 200889-002, 200900-001 and 200900-002 are not supported by ECOS 9.5 and later releases.
ECOS 9.6.1.0 is a lily-pad release	ECOS 9.6.1.0 should be viewed as a “lily-pad” release between ECOS versions that use older authentication methods (SHA-256) and future versions that will use the new, more secure method (SHA-384). Users should upgrade to the lily-pad release before moving to later versions that use SHA-384 PSS signing.
Ensure that RADIUS server supports message authenticator	Before upgrading to this ECOS release, customers who use RADIUS must ensure that their server supports the use of the message authenticator attribute. If it does not, then RADIUS communications could be dropped on the appliance.
IPv6 segmentation upgrades	<p>If segmentation has never been turned on, all appliances managed by the same Orchestrator should be upgraded to version 9.6.0 or later before turning on segmentation. If segmentation has been enabled already (for IPv4 traffic), upgrade appliances to ECOS 9.6.0.0 or later before starting to send IPv6 traffic.</p> <p><b>Note</b></p> <p>Starting in ECOS 9.6.0.0, when segmentation is enabled for the first time, traffic will no longer be disrupted. This is because version 9.6.0.0 introduced a behavioral change where tunnels are modified instead of being deleted and recreated.</p>
Upgrade path to ECOS 9.6.0.0	When upgrading to ECOS 9.6.0.0+ from an older release, it is mandatory to upgrade first to at least 9.3.6.0, 9.4.4.0, or 9.5.2.0 (depending on your release stream) before proceeding with the upgrade.
Upgrade EdgeConnect devices prior to 9.5.x.x for flow redirection	The flow redirection ID is added to a cluster message to help debug flows over multiple EdgeConnect devices. Due to this change, for flow redirection to work, all EdgeConnect devices on a cluster must be upgraded from 9.5.x.x and earlier releases together.
CDP disabled after upgrade	ECOS 9.3.x.x enhanced the device discovery framework by introducing LLDP support alongside the existing CDP protocol. This change introduced new bindings and updated CLI commands for better control and visibility. By default, this new framework (discoveryd) is disabled, so CDP or LLDP is only active on specific interfaces when discoveryd is explicitly enabled. When upgrading from a version of ECOS prior to 9.3.x.x, previous CDP configurations will be removed as part of the migration to the new discoveryd architecture. CDP and LLDP settings must be reconfigured on the Orchestrator after the upgrade.
VLAN requirement when enabling EdgeHA through a switch	When upgrading your appliance from an older version to ECOS 9.1.0.0 and later, and if your EdgeHA link runs through a switch, you must configure at least one extra VLAN between EdgeHA components on your switch device.
Change in behavior of passthrough tunnel traffic handling in ECOS 9.3.0.0+	ECOS 9.3.0.0 changed how interface passthrough tunnel traffic is handled. Prior to 9.3.0.0, the direction of a LAN-to-LAN flow (a flow that originates and terminates on LAN-side interfaces) was set to W2L (WAN to LAN). In ECOS 9.3.0.0 and later releases, such a flow is treated as L2W (LAN to WAN). Therefore, the configured routes and the associated route tags must be adjusted for matching L2W traffic, as this is the direction of the flow. For LAN-to-LAN traffic to work, the flag for the intended configured routes must be set to “FROM LAN” or “ANY”.



Summary	Description										
<p>System files integrity check: FAILED appliance in boot loop (defect ID: 76032)</p>	<p>A critical defect in the releases mentioned below can cause the EdgeConnect appliance to enter a reboot loop upon upgrade to or reboot of the affected release. The only way to recover from the issue is to connect through a serial console cable and boot into an alternate partition from the GRUB menu. HPE Engineering has removed all affected releases from the portal to protect against encountering this critical issue.</p> <p>Affected releases: ECOS 9.4.0.x, ECOS 9.4.1.x, ECOS 9.4.2.x, ECOS 9.5.0.0, ECOS 9.5.1.0</p> <p>If your EdgeConnect appliance is running one of the affected releases above, perform the following steps as soon as possible:</p> <ol style="list-style-type: none"> <li>1. Navigate to <b>Configuration &gt; Overlays &amp; Security &gt; Security &gt; Advanced Security Settings</b>, clear the <b>Verify System Files Integrity</b> check box, and then click <b>Save</b>.</li> </ol> <hr/> <p><b>Note</b></p> <p>Operating in FIPS or CC mode will trigger the file integrity check. Disable FIPS or CC mode when running one of the affected versions. Re-enable FIPS or CC mode after upgrade to a fixed version.</p> <hr/> <ol style="list-style-type: none"> <li>2. Navigate to <b>Configuration &gt; Templates &amp; Policies &gt; Templates</b>, select the <b>Logging</b> template, and set the <b>Log Facilities Configuration</b> values to their defaults: <table border="1" data-bbox="527 840 1518 1155"> <thead> <tr> <th>Value</th> <th>Setting</th> </tr> </thead> <tbody> <tr> <td>System</td> <td>local1</td> </tr> <tr> <td>Audit</td> <td>local0</td> </tr> <tr> <td>Firewall</td> <td>local2</td> </tr> <tr> <td>IDS/IPS Events</td> <td>local3</td> </tr> </tbody> </table> </li> <li>3. Upgrade to a fixed version (ECOS 9.4.2.5/9.5.1.1 or later).</li> <li>4. After all EdgeConnect appliances have been upgraded to a fixed version, you can re-enable the <b>Verify System Files Integrity</b> check box in the Advanced Security Settings of SD-WAN Orchestrator.</li> </ol>	Value	Setting	System	local1	Audit	local0	Firewall	local2	IDS/IPS Events	local3
Value	Setting										
System	local1										
Audit	local0										
Firewall	local2										
IDS/IPS Events	local3										
<p>Routes not shared if route-map is not selected</p>	<p>Prior to ECOS 9.3.0.x, for route redistribution in segments other than the default segment, if you did not select a route-map from the Redistribute Routes To/SD-WAN Fabric drop-down list, the software defaulted to mirroring what was applied in the default segment. Post-9.3.0.x, if a route-map is not selected, then no routes are shared.</p> <p>As a workaround, you can specify subnet sharing route-maps using Route templates. To do this, create a route redistribute map, and then update the Routes template with the map name.</p>										
<p>Change in default settings for src-ip-based DNS cache</p>	<p>When source IP address-based DNS caching is enabled, the EdgeConnect appliances can experience performance issues during high volumes of DNS traffic. Typical symptoms include unexpected packet loss and bouncing BGP peer session establishment. This has been observed mostly on datacenter appliances where DNS traffic to and from remote branches is concentrated.</p> <p>Source-based DNS caching is disabled by default in ECOS 9.2.9.0+, ECOS 9.3.3.0+, and ECOS 9.4.2.0+. For older releases, the source IP address-based DNS caching mechanism can be administratively disabled using the following CLI command. Source IP-based DNS caching is an extension of the DNS caching feature that stores the source IP of the DNS client in the cache. This has limited use in some circumstances. This recommendation disables only the source IP-based DNS cache; the DNS caching feature continues to work even when source IP-based DNS caching is disabled.</p>										



Summary	Description
	<p><b>Note</b></p> <p>This command is available only in software releases ECOS 9.1.4.4+ and ECOS 9.2.3.0+. Older releases must first upgrade to a fixed version to mitigate this issue.</p> <hr/> <pre>silverpeak &gt; enable silverpeak # configure terminal silverpeak [config] # dns cache src-ip disable silverpeak [config] # exit silverpeak # write memory silverpeak #</pre>
	<p>If all EdgeConnects in the environment are not being upgraded to a compatible release simultaneously, as per the <a href="#">compatibility matrix</a>, then additional upgrade planning is required.</p> <p>Three workarounds are available when upgrading. Use whichever of the following options works best for your environment:</p> <ol style="list-style-type: none"><li>1. Disable key rotation before starting upgrades and re-enable after all appliances are upgraded.</li></ol> <hr/> <p><b>Note</b></p> <p>Upon disabling key rotation, the SD-WAN Orchestrator generates and distributes the new key to all appliances one final time. Before you begin upgrades, make sure that the new key is distributed and activated.</p> <ol style="list-style-type: none"><li>a. Before disabling the key rotation, navigate to <b>Support &gt; Reporting &gt; IPSec UDP Status</b> in Sd-WAN Orchestrator, and then verify that all appliances in the Active Key column have a status of Yes.</li><li>b. Navigate to <b>Configuration &gt; Overlays &amp; Security &gt; Security &gt; IPSec Key Rotation</b>, and then clear the <b>Enable Key Rotation</b> check box. This triggers a new key generation, distribution, and activation.</li><li>c. Repeat step a to verify that all appliances have the current and active key material.</li><li>d. Proceed with appliance upgrades per your upgrade schedule.</li><li>e. Navigate to <b>Configuration &gt; Overlays &amp; Security &gt; Security &gt; IPSec Key Rotation</b>, and then select the <b>Enable Key Rotation</b> check box.</li></ol>
Upgrade all appliances to avoid tunnels dropping from IPSec anti-replay incompatibility	<ol style="list-style-type: none"><li>2. Disable IPSec anti-replay on all network WAN labels, and then re-enable after all appliances in the network are upgraded.</li></ol> <hr/> <p><b>Note</b></p> <p>Disabling and enabling anti-replay causes the existing tunnel state to bounce once. Plan a maintenance window to make these changes.</p> <ol style="list-style-type: none"><li>a. In SD-WAN Orchestrator, navigate to <b>Orchestrator &gt; Orchestrator Server &gt; Tools &gt; Tunnel Settings</b>.</li><li>b. Click <b>IPSec</b>.</li><li>c. In the IPSec anti-replay window dropdown menu, select <b>Disable</b>.</li><li>d. Click <b>Save</b>.</li></ol> <ol style="list-style-type: none"><li>3. Upgrade all appliances in the network at the same time. To mitigate the risk of a tunnel being down due to the incompatibility described in the compatibility matrix, all appliances should be upgraded together to ECOS 9.1.10.0+, ECOS 9.2.8.0+, ECOS 9.3.2.0+, or ECOS 9.4.1.0+, as appropriate.</li></ol>



Summary	Description									
57K Dynamic Route Limit Within 60K Total Limit	IPv4 routes can hold up to 60k of total routes, including 57k of BGP/OSPF learned routes (dynamic routes). This threshold exists to keep a BGP/OSPF peer from tying up all available routing entries. The remaining 3k are local or learned routes. Alarms are thrown when IPv4 crosses the 57K boundary for dynamic routing.									
C5 Instance Types Now Recommended	In previous releases, using M4 instance types was recommended for WAN bandwidth up to 500 Mbps. It is now recommended to use C5. If you are still using M4 instance types, it is strongly recommended to use c5.xlarge instead.									
CIFS Functionality Removed	Starting with ECOS 9.3.0.0, support for the CIFS protocol as an optimization policy has been removed from all EdgeConnect and virtual EdgeConnect (EC-V) appliances. After upgrading to this release, CIFS connections will no longer be CIFS optimized, but CIFS traffic can still be L4 TCP-optimized with Boost.									
Change in Enforce Return Tunnel Behavior	Starting with ECOS 9.0.4.0, return traffic is placed in the same tunnel from which forward traffic is received only when no better route is found. When a better route (either with lower metric or higher peer priority) is available, return traffic may be placed in a different tunnel.									
Minor Alarm Upon Upgrading from Older ECOS Images	<p>An alarm may trigger on SD-WAN Orchestrator version 9.1 or newer under the following conditions:</p> <ul style="list-style-type: none"> <li>A pair of appliances deployed in EdgeHA configuration are upgraded from ECOS version 9.0 or older to ECOS version 9.1 or newer, OR</li> <li>A pair of appliances deployed in EdgeHA configuration running ECOS version 9.1 or newer are added and the number of EdgeHA subnets is less than 32.</li> </ul> <p>To clear this alarm, perform the following steps for each EdgeHA pair (or for each EdgeHA pair identified in the alarm, if the alarm contains this information):</p> <ul style="list-style-type: none"> <li>If the number of EdgeHA subnets is less than 32, modify the EdgeHA configuration so that the number of subnets is 32 or more.</li> <li>If the number of EdgeHA subnets is already 32 or more, open the Deployment page for each appliance, open HA link, click <b>OK</b>, do not make any changes, and then click <b>Save</b>.</li> </ul>									
New Configuration Requirement for IKE-based IPsec Tunnels	<p>Under the presence of NAT devices, IKE_ID must be configured correctly for the tunnel to come up; there is no more wildcard lookup for pre-shared keys (PSK).</p> <p>Previously, for IKEv1 and IKEv2, PSK lookup was based on (ANY, remote IKE_ID). This caused unreliable PSK lookup when there were two different local IKE_IDs with different PSKs going to the same remote IKE_ID. Now, for IKEv1 and IKEv2, PSK lookup is based on (local IKE_ID, remote IKE_ID), which returns PSK reliably.</p> <p><b>Note</b></p> <p>When IKE_IDs are not configured (left blank), EdgeConnect assumes tunnel endpoint IP addresses as IKE_IDs (local IP as local IKE_ID, remote IP as remote IKE_ID).</p> <p>When upgrading to ECOS <b>Error! Unknown document property name.</b>:</p> <ul style="list-style-type: none"> <li>In SD-WAN Orchestrator 9.1.3 or later, all Orchestrated third-party IPsec tunnels and SDWAN fabric IKE IPsec tunnels (with or without NAT devices in between) should come up as expected, as SD-WAN Orchestrator sets IKE_IDs explicitly.</li> <li>All manually created third-party IPsec tunnels and SDWAN fabric IKE tunnels:</li> </ul> <table border="1"> <thead> <tr> <th>NAT status</th> <th>IKE status</th> <th>Tunnel status</th> </tr> </thead> <tbody> <tr> <td>With NAT devices in between</td> <td>With IKE_IDs configured</td> <td>Tunnel UP</td> </tr> <tr> <td>With NAT devices in between</td> <td>Without IKE_IDs configured</td> <td>Tunnel DOWN</td> </tr> </tbody> </table>	NAT status	IKE status	Tunnel status	With NAT devices in between	With IKE_IDs configured	Tunnel UP	With NAT devices in between	Without IKE_IDs configured	Tunnel DOWN
NAT status	IKE status	Tunnel status								
With NAT devices in between	With IKE_IDs configured	Tunnel UP								
With NAT devices in between	Without IKE_IDs configured	Tunnel DOWN								



Summary	Description
	Without NAT devices in between      With IKE_IDs configured      Tunnel UP
	Without NAT devices in between      Without IKE_IDs configured      Tunnel UP



## Known issues

The following list contains known issues in ECOS 9.6.1.0.

Issue ID	Description
ID: 86712	Traffic from specified geographic locations does not match ACL deny rules within zone-based firewall policy, but instead applies a "Match Everything" permit rule. This is caused by a truncation of geo-location strings. As a workaround, geo-location strings can be set to 32 characters or fewer to match the deny policy.
ID: 84563	Users may experience WAN port link failures on EC-10150 devices when switching between different transceiver media types, specifically from RJ45 to fiber. The issue is caused by a driver failing to set the PHY configuration correctly during media swaps, leading to persistent link down states that only power cycling can recover; a simple reboot will not resolve the issue. This is a hardware issue and not fixable via software updates in ECOS.
ID: 83810	IPv6 IP reputation lookups are currently not working in WebCC, causing IPv6 IPs not to be classified as bad IPs. WebCC URL reputation lookups and IPv4 lookups function as expected. This issue will be addressed in a future release.
ID: 83444	Changing the VLAN interface ID, adding or deleting a VLAN interface, or changing segments on an EdgeHA appliance can cause IPv6 HA underlay tunnels to drop intermittently.
ID: 81572	On the SSH (ECOS) subtab of the Cipher Settings tab, when the ssh-rsa check box is cleared under the Host Key Algorithms and Public Key Algorithms columns, the two check boxes above the ssh-rsa check box should also clear. Currently, however, they remain selected in the UI despite being rendered non-functional when the ssh-rsa check box is cleared. This could prevent successful login to EC-Vs. This issue will be addressed in a future release. As a workaround, use ssh-ed25519 key pairs during setup.
ID: 81493	Because the ECOS label table only supports labels up to 15 characters and the backend process stores only label IDs (instead of names), AppExpress can experience performance issues when an interface label exceeds 15 characters and is assigned to the Orch Loopback interface.
ID: 81239	Upon upgrade to ECOS 9.6.0.0, c4.4xlarge E2C instances in AWS are not reachable. It is recommended to use C5 instances for EdgeConnect deployments, as these remain reachable after upgrade.
ID: 80393	Changes to IP SLA metric settings on one segment take effect on all segments. This behavior will be addressed in a future release.
ID: 80278	When the EC-10106 or EC-10108 appliance is connected to a switch on a 10G interface that goes down and comes back up on the switch side, the interface must be admin down and up on the appliance side to regain the link.
ID: 79976	Beginning with ECOS 9.5.0.0, all SILVERPEAK-MGMT-MIBs are invalidated because, in the event that a proxy becomes unreachable, a corresponding proxy reachability alarm in EdgeConnect does not appear as expected. This issue will be addressed in a future release.
ID: 78261	In ECOS 9.5.x and later releases, WCCP is no longer supported. While the option still appears in the Orchestrator and Appliance UI, the functionality is disabled and will be removed in an upcoming release.
ID: 77779	On interfaces that use ICE driver, the speed and duplex settings are not determined automatically. The user must manually select the speed/duplex setting based on the SFP and the connected equipment in use.
ID: 77210	When the sub-VLAN interface of an IPv6 address is changed, a binding issue changes the interface ID to an IPv4 address. Because BGP does not work with mixed IP types, this action causes an error between the BGP peer and the VLAN interface.



Issue ID	Description
ID: 74750	If a bridged interface is connected but not deployed, interface switching will still occur. This happens because the bridging code in the kernel is active. If you do not want traffic to be switched via specific ports, you can set those ports to an admin down state.
ID: 72317	On an AWS instance with Elastic Network Adapter (ENA) enabled, ECOS does not support IPv6. On C5 and C6, ENA cannot be disabled, which means they cannot be used if IPv6 traffic is present. The only instance that allows ENA to be disabled is C4.
ID 71143	When roles-based security policies are set on the peer appliance and the destination zone is set to "Unknown," TCP traffic does not work correctly. The branch does not recognize the destination zone. The deny policy is then evaluated on the destination appliance only for TCP traffic. As a result, the first packet is denied as per policy, but a new flow is created to permit subsequent packets.
ID: 68602	A latency issue causes tunnels to drop unexpectedly. Debugging code was added to identify the root cause of this issue.
ID: 67561	NAT rules created from the CLI are not properly rendered in the web UI without a reboot. As a workaround, reboot the appliance to apply new NAT rules.
ID: 65980	When the hub appliance is set to "Do Not Re-Advertise Routes," the spoke does not learn the hub's locally connected IPv6 route.
ID: 61398	An interface with VRRP configured on it loses its IP address when it is moved from one routing segment to another. To avoid this, VRRP configuration needs to be removed before the segment change and re-added afterwards.
ID: 60120	IPv6 IPsec UDP tunnels are flapping at random intervals on AWS EC-V instances.
ID: 59585	The EC-XL-P, or any platform that uses Intel i40 NICs, does not turn off the optical signal when the interface is in the admin down state. Due to this, a device connected on the other side will see the link as up and continue to use it. It is recommended that customers using these ports perform an "admin down" on both sides of the link.
ID: 54195	When upgrading from 8.1.7.x, users must ensure that peer priority values are not zero. Peer priority values must be set to appropriate positive integer values before performing the upgrade.
ID: 23470	PPPoE is only supported in ILRM. PPPoE interfaces cannot be used for flow redirection.
ID: 16799	Jumbo frames are not supported on Virtual Appliances installed on the XenServer hypervisor. Only one VLAN is supported on Virtual Appliances installed on the XenServer hypervisor. The XenServer hypervisor can be configured with one and only one VLAN; the hypervisor will strip the VLAN tag and send untagged packets to the Virtual Appliance.
ID: 16106	The EdgeConnect-US, EdgeConnect-XS, NX-700 and NX-1700 appliances do not support jumbo frames.
ID: 14168	Hot-swapping an SSD (or an SSD failure) may result in TCP connection resets or IP packet drops.
ID: 13155	If the https server and client negotiate an SSL compression method that is other than "NONE" (which can happen if a compression method is configured on the https server), the connection will not receive SSL-specific optimization (deduplication). If this occurs the error message reported in Current Flows will be "unsupported SSL compression method". To work around this, configure the compression method on the https server as "NONE".
ID: 12818	Using VMware Snapshots severely degrades the performance of Virtual Machines. Do not take snapshots of Silver Peak Virtual Appliances.



Issue ID	Description
ID: 10929	On the VX, VRX, and EC-V Virtual Appliances, configuration of Ethernet MTU, speed and/or duplex settings requires host configuration in addition to Virtual Appliance configuration in the Appliance Manager.
ID: 9316	Application classification of http on non-standard ports relies on heuristics that are determined after flow creation. Therefore, the application classification is valid for reporting and monitoring but cannot be used for route, QoS, or optimization match lookups because these lookups occur simultaneously with flow creation. Such flows will be annotated "Heuristically Classified" in Monitoring > Current Flows.
ID: 6508	mgmt1 cannot be in the same subnet as mgmt0. Always use separate subnets for mgmt0 and mgmt1.
ID: 6370	Bonding interfaces may fail to negotiate correctly with a Cisco switch after an appliance reboot. To avoid this, enable auto-recovery on the Cisco switch to which the appliance is connected.
ID: 6333	If WCCP custom redirection is used with a 7-bit mask, add a route map entry that directs all WCCP control traffic (protocol UDP, port 2048) from Appliance IP addresses to pass-through unshaped.
ID: 6332	Auto-optimization is not effective in a network where there is a NAT implementation or a firewall that does TCP sequence offsetting. In such networks, connections will fail to optimize.
ID: 6330	While configuring tunnels, software checks are not present to disallow the VRRP virtual IP address from being the tunnel endpoint. Configuring the virtual IP address to be the tunnel endpoint can disrupt traffic when a VRRP master switch happens and is not recommended.



## Additional information

This section contains additional information about ECOS software, as well as past features and fixes that are included in this release.

### System requirements

#### Hardware compatibilities and dependencies

ECOS supports Unity EdgeConnect US, Unity EdgeConnect XS, Unity EdgeConnect S, Unity EdgeConnect M, Unity EdgeConnect L, Unity EdgeConnect XL, NX-700, NX-1700, NX-2500, NX-2600, NX-2610, NX-2700, NX-3500, NX-3600, NX-3700, NX-5500, NX-5504, NX-5600, NX-5700, NX-6700, NX-7500, NX-7504, NX-7600, NX-7700, NX-8504, NX-8600, NX-8700, NX-9610, NX-9700, NX-10700, and NX-11700 Silver Peak Appliance hardware, and Unity EdgeConnect V, VX-500, VX-1000, VX-2000, VX-3000, VX-5000, VX-6000, VX-7000, VX-8000 and VX-9000 Silver Peak Virtual Appliance software, and VRX-2, VRX-4, VRX-6, and VRX-8 Velocity Replication Acceleration software.

#### Software compatibilities and dependencies

- In the latest ECOS release, both HTTP and HTTPS connections to the Appliance Manager GUI are supported; HTTPS is the recommended method of connection. The default method supports both.
- The EdgeConnect appliance's Command Line Interface (CLI) can be accessed through a remote connection to the device's management interface using Secure Shell (ssh), or via the serial console port. For security reasons, telnet connections are not supported.
- The EdgeConnect software upgrade process supports transferring the software image from a server to the appliance via HTTP, HTTPS, FTP, and SCP (Secure Copy), via the SD-WAN Orchestrator (GMS), or transferring the image directly from a host running the Appliance Manager GUI.
- It is highly recommended that interconnected appliances run the same image version. It is also highly recommended that all appliances run the latest software version, 9.6.1.0. To ensure compatibility of your hardware platform(s) with ECOS 9.6.1.0, consult the [ECOS and Orchestrator Release Compatibility](#) matrix.
- For product and feature descriptions, detailed instructions on how to configure and monitor the EdgeConnect appliances, and detailed instructions on how to install or upgrade appliance software, refer to the EdgeConnect Appliance Manager (in SD-WAN Orchestrator, right-click an appliance from the left-side appliance tree, and then click **Appliance Manager**).
- HPE Aruba Networking does not recommend or support WCCP deployments with WCCP running on the Catalyst 6500 or 7600 running Hybrid CATOS.



## New features and enhancements from past releases

The following table describes new features and enhancements that have been made in ECOS since the version 9 release.

Feature	Description	Baseline Release
VRRP convergence improvement	VRRP now allows specification of a “tracked VRRP instance”. Tracking a VRRP instance causes special fabric handling that leads to improved flow failover and convergence. An indication of the VRRP state displays in the appliance tree and the Routes tab. In the VRRP Settings, enabling the Site/Cluster Tracking option optimizes traffic by enabling convergence to happen quickly.	9.6.0.0
Dedicated QCOW2 images for Equinix, Megaport, and Alibaba Cloud platforms	Previously, the QCOW2 ECOS image used to deploy virtual EdgeConnects (EC-Vs) on Equinix, Megaport, and Alibaba Cloud had the PLATFORM field set to GENERIC. This blocked the ability to display platform-specific icons on the Orchestrator and prevented the accurate tracking of deployments on Cloud Portal. Additionally, the Equinix and Megaport marketplaces used ECOS 8.3.x as the base image for deployments. This release upgrades the base image and has a 60 GB OS disk, which enables you to run a Connector on Equinix, Megaport, and Alibaba Cloud EC-V deployments. This approach improves image testing and reduces image storage requirements.	9.6.0.0
Third-Party tunnel source/destination IP affinity	Previously, when third-party tunnel sources implemented a “multi-cluster” deployment in their larger datacenters, flows transiting their service could arrive with different unique source public IPs. When different source public IPs were observed, some websites allowed the user session to expire, causing various issues with older ecommerce and .gov websites. Now, the implementation of third-party tunnel source/destination IP affinity resolves these issues when load-balancing flows across multiple tunnels using services such as Zscaler and Netskope. All flows between a given internal source and external destination IP are bound to the same third-party IPsec or GRE tunnel, allowing you to use load balancing when configuring third-party labels. This improvement supports non-HPE SSE solutions whose infrastructure can result in different public IPs being used when flows are sent down different IPsec or GRE tunnels.	9.6.0.0
Route labels	Route labels can be applied to static or announce-only routes and linked to IP SLA rules, which monitor destinations to dynamically control route status and enhance network reliability by avoiding unreachable destinations. The Route Label Status tab provides an at-a-glance view of the status of all route labels.	9.6.0.0
BGP AS_Path attribute used in route selection	The “BGP AS_Path” attribute is now used in subnet sharing route selection. This is a behavioral change for Orchestrator 9.6.0. Previously, each Route table used lookup criteria in the following order: Longest prefix match, route table admin distance of the source protocol, metric, and use peer priority as a tiebreaker. Now, the criteria are in the following order: Longest prefix match, admin distance of source protocol (lower is better), metric (lower is better), peer Priority (lower is better, 1024 default value), BGP AS_Path (if present, shorter is better), and flow-based ECMP	9.6.0.0
Appliance web proxy support	When large environments did not allow EdgeConnect appliances to directly connect to Cloud Portal, the appliances proxied to the portal via Orchestrator, which could inadvertently cause scaling issues due to the number of appliance requests. Now, EdgeConnect can direct its portal and other HTTP/HTTPS requests to an explicit web proxy, minimizing performance issues.	9.6.0.0
Route debug logging enhancements	There is now a CLI to enable subnet lookup logging on a per-IP basis. Previously, logging for subnet lookups could only be enabled via tunbug, which logged all lookups.	9.6.0.0
Appliance IP Allow List	The Appliance IP Allow List restricts which IP addresses can establish SSH, SNMP and HTTPS connections to an appliance. This blocks access from unknown or potentially malicious IP addresses by ensuring that only specified IP addresses are permitted to initiate sessions.	9.6.0.0



Feature	Description	Baseline Release
Cipher settings	Cipher Profile settings allow you to restrict the use of certain ciphers for the ECOS services that use cryptography, including TLS, Tunnels, SSH, Certificates, SNMP, NTP, and Clusters.	9.6.0.0
Password enforcement and management	You can now select whether to enforce enhanced password security for all locally configured Orchestrator and appliance users and set criteria to ensure your enterprise security standards are met.	9.6.0.0
Aruba USB LTE modem enhancements	Several enhancements have been made to USB LTE modem functionality. Access Point Name (APN) auto-configuration allows ECOS to read the SIM where APN information is stored for a given mobile network, set the default APN, and pre-configure the APN across all connected devices when the mobile network operator needs to differentiate the traffic. ECOS now also supports SIM/APN authentication for cases when a mobile network operator requires additional authentication before the modem can connect to the network.	9.6.0.0
Overlay Flow Affinity (sticky flows)	On the Overlay Configuration page, under the Optimization options, a new load balancing option called Flow Affinity has been added that allows you to select Waterfall or Balanced modes without concern for the utilization or performance of a given link. When enabled, Flow Affinity loads packets onto the best-performing path until the path is full, and then begins load-balancing packets onto the next-best underlay.	9.6.0.0
Stats Collector update (On-Prem Orchestrator)	In previous releases, if you were collecting statistics for more than 100 appliances, you were required to create and configure remote Stats Collectors for every additional 150 appliances. Statistics are now collected on a single virtual instance and do not require configuration. In addition to simplified management and administration, this update also improves the performance and reliability of statistics collection.	9.6.0.0
Interface as tunnel source	This update ensures that whenever the source interface address (for example, DHCP) is updated on an appliance, the appliance can modify any affected tunnels instead of having Orchestrator delete and recreate the tunnel. Orchestrator now sends modify messages whenever a tunnel interface IP changes on an appliance, instead of the previous behavior of deleting and recreating tunnels. This approach persists the tunnel and tunnel ID and avoids negative impact on other features such as route policies and tunnel stats.	9.6.0.0
Secure Web Services	With the new Secure Web Services feature, EdgeConnect appliances integrate with cloud-based OpenText™ Threat Intelligence (BrightCloud), a cybersecurity solution that provides real-time classification and blocking of web-based threats and policy violations. EdgeConnect administrators can now filter traffic by using three new filter criteria: URL Reputation, URL Category, and IP Reputation. Additionally, the Secure Web Services Top Talkers tab provides historical statistics related to Secure Web Services for selected appliances.	9.6.0.0
Expanded IPv6 support	Expanded IPv6 support includes segmentation support for IPv6, local breakout support, IPv6 to IPv6 NAT, IPv6 zero touch provisioning, IPv6 loopback orchestration, and inbound port forwarding for IPv6 flows.	9.6.0.0
RMA Wizard enhancements	The RMA Wizard was updated with several improvements, including support for interface mapping on ECOS appliances. This mapping allows an appliance to be replaced with another appliance of a different but equivalent model, configured with different interface count, interface names, and port types.	9.6.0.0
PKI Phase II	With this release, end entity certificate support has expanded to include globally orchestrated appliance end entity profiles, which allow for automated enrollment of EdgeConnect certificates using an EST server. These profiles can be used to create certificate-based, orchestrated tunnels that are used by Business Intent Overlays.	9.5.2.0



Feature	Description	Baseline Release
Assign different subnet to VRRP instance and its hosted physical interface	Orchestrator now supports configuring a VRRP IP address that is not in the same subnet as the LAN interface. This VRRP IP and subnet are advertised, which is derived from the interface's private IP address mask to subnet sharing, so the remote sites can reach this site.	9.5.2.0
IPv6 ZTP support	SD-WAN Orchestrator now supports IPv6. This feature allows you to deploy EdgeConnect appliances that support both IPv4 and IPv6 for a dual-stack solution. When upgrading to 9.5.2, you have the choice to migrate to the new portal URL ( <a href="https://portal2.silverpeak.cloud">portal2.silverpeak.cloud</a> ). If you do so, Orchestrator and all appliances (except EC-Vs; EC-Vs do not support IPv6) will be migrated to the new portal. After upgrading to <a href="https://portal2.silverpeak.cloud">portal2.silverpeak.cloud</a> , you cannot return to <a href="https://portal.silverpeak.cloud">portal.silverpeak.cloud</a> .	9.5.2.0
Inbound passthrough shaping per interface	Appliances can now enforce inbound passthrough shaping per interface, on physical or sub-interfaces/VLAN interfaces. Previously, the inbound bandwidth set in the interface deployment page was enforced on outbound traffic only. Now, you can shape to the inbound speed setting in cases where the circuit provider is providing a metered service that includes burstable rate increases.	9.5.2.0
Stateful SNAT Exceptions	Further API enhancements have been made to support the stateful SNAT functionality added in ECOS 9.5.0.0.	9.5.1.0
SNMP Support and Encryption	There is now SNMP support for standard Linux Server MIBs, such as CPU, memory, disk, and other metrics. In addition, SNMPv3 encryption has been upgraded to AES256/SHA256.	9.5.1.0
IPv6 Router Advertisement (RA) Support	The Deployment Profiles tab now includes support for Router Advertisement settings for IPv6 LAN interfaces.	9.5.1.0
Role Cache Available in ECOS and Orchestrator UIs	Role-to-IP mapping cache can now be viewed in the ECOS and Orchestrator user interfaces. Previously, this information was only available through a tunbug command. The resultant table shows all known MAC addresses and allows for deleting ARP entries.	9.5.1.0
Flexible LAN-Side Bridge Groups	This feature allows for creation of a bridged (switched) interface while in inline router mode on the LAN side of an EdgeConnect OS. The BVI (Bridged Virtual Interface) allows devices in a bridge group to use the IP address of the BVI as a default gateway to other IP networks.	9.5.1.0
Support for Discrete Sub-Options of Option-82 in DHCP Relay	When you configure DHCP, you can now select specific sub-options when you enable Option-82 and select Distinct DHCP server per segment.	9.5.1.0
Stateful SNAT Exceptions	To increase flexibility in how NAT traffic is handled, users can now easily configure a list of prefixes that will not be translated by the WAN-side interface firewall and will be exempted from the Stateful-SNAT process. Users can import a global list of public IP ranges into the EdgeConnect Orchestrator, and these ranges will be applied automatically to all EdgeConnects.	9.5.0.0
VXLAN Reporting	Through CLI commands, users can now see statistics such as bytes and packet counts per tunnel when EdgeConnect receives packets for various VXLAN tunnels negotiated using MP-BGP protocol. These commands are useful for debugging VXLAN-related issues.	9.5.0.0
Tunnel-in-Tunnel	The tunnel-in-tunnel feature can establish IPsec UDP SD-WAN tunnels nested within third-party IPsec tunnels.	9.5.0.0
Route Debug Logging Enhancements	There is now a CLI to enable subnet lookup logging on a per-IP basis. Previously, logging for subnet lookups could only be enabled via tunbug, which logged all lookups.	9.5.0.0



Feature	Description	Baseline Release				
DDoS Statistics	This feature provides stats and reporting functionality for the Firewall Protection Profile (FPP) feature in EdgeConnect Orchestrator. Users can now monitor their network behavior based on the DoS Threshold setting, providing visibility into FPP actions and establishing a baseline traffic profile for tuning thresholds, identifying violating sources, and enabling response actions.	9.5.0.0				
IPv6 SLAAC + Stateless DHCPv6	This feature implements Stateless Address Auto-Config SLAAC IPv6 addressing of ECOS Gateway WAN interfaces, along with Stateless DHCPv6 for learning DNS server IPs. IPv6 SLAAC + Stateless DHCPv6 is the preferred address assignment method globally, offering superior performance vs. IPv4 transport networks.	9.5.0.0				
802.1x and MAC Authentication	Network Access Control (NAC) functionality has been added to the ECOS platform for devices and users, with focus on Layer 2 authentication types—802.1x and MAC—for physical and VLAN interfaces that may benefit from enhanced physical port security.	9.5.0.0				
Hardware Sensor Monitoring	This release includes the ability to record and report hardware sensor readings, including temperature, voltage, and current. If any sensor reading is beyond standard operating conditions for the platform, it is flagged as either an alarm or an alert, depending on the severity. In extreme conditions, damaged hardware can be powered off to prevent further damage.	9.5.0.0				
User Session Cache Synchronization	User session cache is now synced between EdgeHA devices to ensure that both devices are up to date with user information. As a result, ACLs can be applied correctly even though the user session is snooped on the partner appliance.	9.5.0.0				
Unified Fabric	Aruba Central now orchestrates SD-WAN connectivity between ECOS and AOS devices, with ECOS devices acting as VPNCs (hubs). Users with an existing EdgeConnect SD-WAN deployment with sites that would benefit from the integrated LAN/WAN feature set of SD-Branch and Micro-branch can leverage this feature to deploy, manage, and connect all solutions.	9.5.0.0				
Availability Stats (KPI)	The Availability KPI feature helps distinguish and segregate underlay traffic by service provider, helps determine whether your service providers are meeting their contracted Service Level Agreements (SLAs), and provides insight into your SD-WAN traffic.	9.4.2.0				
Support for New Appliance Model	This release adds support for the following part number: <table border="1" data-bbox="386 1373 1386 1482"> <thead> <tr> <th>Appliance model</th> <th>Part number</th> </tr> </thead> <tbody> <tr> <td>EC-10106</td> <td>3510325</td> </tr> </tbody> </table>	Appliance model	Part number	EC-10106	3510325	9.4.2.0
Appliance model	Part number					
EC-10106	3510325					
OCSP Check During Validation	EdgeConnect now performs OCSP checking for each certificate in the chain during TLS handshakes, excluding the trust anchor.	9.4.1.0				
QoS DRC	QoS DRC now controls traffic by limiting the flow rate of each traffic class sent from the appliance and reduces the total traffic in the network. This helps ease system congestions caused by the large amount of data sent from remote sites and prioritizes incoming traffic at the sender.	9.4.1.0				
VXLAN and BGP EVPN Routing Support	You can now specify VXLAN settings for routing segments configured on EdgeConnect appliances. When a VNI is configured for a segment or in a template, EdgeConnect appliances automatically create an NVE as a VTEP, bind the NVE to the VXLAN segment, and specify the source interface for the VXLAN tunnel. With BGP EVPN Peer enabled, the selected loopback interface is automatically configured in the local interface field of the BGP EVPN.	9.4.1.0				



Feature	Description	Baseline Release				
Secure NTP	EdgeConnect now includes a secure NTP connection via pre-shared keys.	9.4.1.0				
Enhanced Role Mapping	You can now define and map roles that are used throughout the EdgeConnect SD-WAN Fabric. For example, you can map a role to Group Policy Identifiers (GPIDs) from EdgeConnect appliances to facilitate identity awareness between Orchestrator and EdgeConnect appliances.	9.4.1.0				
IPv4 Route Table Size	IPv4 subnet route table size has been increased to 60k total routes.	9.4.1.0				
Doman Name Prioritization	Users can now configure a preferred domain when multiple domains are mapped to the same IP address. This results in predictable ACL matches for IP addresses even when the real domain name differs from the preferred domain name.	9.4.1.0				
IDS/IPS on EC-10104	IDS/IPS functionality is now supported on the EC-10104 appliance (8 GB/4-core model).	9.3.0.0				
VRRPv3	VRRP version 3 has been added to support IPv6, including the ability to set the advertisement timer in centi-seconds. There is now also the ability to include a free-form description of the VRRP instance.	9.3.0.0				
LLDP	LLDP commands now exist in the CLI and API for enabling/disabling LLDP, showing neighbors and statistics, and configuration control, among other functions.	9.3.0.0				
Improved BGP Functionality	Numerous improvements were made to BGP capabilities in Orchestrator, including the ability to use IPv6 addresses in BGP peer dialogs and to append multiple communities in the route-map rule for a BGP peer.	9.3.0.0				
Availability and Availability Time Settings	You can now view Aruba SD-WAN infrastructure availability data measured as a percentage where uptime (total time minus downtime) is divided by total time. Orchestrator collects availability data based on the availability time setting for each appliance.	9.3.0.0				
Internet Breakout Trends	You can now see trends for certain data about internet breakout links, such as latency, loss, and jitter.	9.3.0.0				
Identity-Based Traffic Management	EdgeConnect now supports Aruba identity-based traffic management (IBTM). IBTM enables dynamically assigning SD-WAN traffic management policies based on identity match criteria such as Role Based Access Control (RBAC) username, user role, user group, user MAC address, device type, and identity context awareness from other sources.	9.3.0.0				
LTE Over USB	EdgeConnect now supports Aruba USB LTE Modems (500731-001).	9.2.3.0				
Branch NAT No-Translate Rules	The restriction of overlapping a translated source/destination subnet with a source/destination subnet has been removed.	9.2.3.0				
Support for New Appliance Model	This release adds support for the following part number: <table border="1" data-bbox="386 1654 1386 1766"> <thead> <tr> <th>Appliance model</th> <th>Part number</th> </tr> </thead> <tbody> <tr> <td>EC-10104</td> <td>201857-001</td> </tr> </tbody> </table>	Appliance model	Part number	EC-10104	201857-001	9.2.3.0
Appliance model	Part number					
EC-10104	201857-001					
Enable Logging for WAN-side Stateful Interface Drops	Users can configure Log Settings to include WAN-side stateful drops.	9.2.1.0				



Feature	Description	Baseline Release
Proxy ARP Support	EdgeConnect now responds to any ARP received with the appliance's own local MAC address. In combination with Private/Community VLANs on the downstream switch, all traffic flows through the EdgeConnect, forming a Layer-2 hub and spoke topology within an Ethernet segment. Proxy ARP can be turned on and off per interface/label.	9.2.0.0
MAC Address Assignment for GCP Appliances	CloudInit now fetches MAC and subnet information from the metadata server and automatically assigns MAC addresses for GCP appliances.	9.2.0.0
Link Aggregation Control Protocol (LACP)	LACP provides a negotiation mechanism to control link aggregation. Link aggregation combines data from multiple interfaces into a channel group that provides a single high-speed link. Configuring link aggregation also adds failover redundancy to the interfaces in the group.	9.2.0.0
Multicast Group Filtering	Users can now allowlist multicast groups, so that EdgeOS processes only the groups matching the defined list.	9.2.0.0
Secure Logging	Orchestrator now allows you to configure the port number and protocol of remote log receivers and upload client certificates for remote log receivers.	9.2.0.0
OSPF and BGP Route Map Enhancements	Several enhancements to OSPF and BGP route maps now enable community filtering for OSPF routes, AS override in BGP neighbor configuration, and LE/GE prefix matching.	9.2.0.0
Large Scale Nexthop Adjacencies	The number of adjacencies (nexthops) supported over each interface has been increased from 16 to 127.	9.2.0.0
Increase in Scaling for OSPF and BGP Neighbor	This feature increases the scale of the number of OSPF neighbors supported on a single appliance, thereby increasing the maximum limit to at least 64 neighbors over two or more interfaces.	9.2.0.0
BiDirectional Forwarding Detection (BFD)	BFD is a networking protocol that detects faults between devices. In addition to supporting single- and multi-hop configurations and asynchronous mode, BFD can be configured for up to 20 segments with a maximum of 100 simultaneous sessions across all segments. The EdgeConnect appliance supports BFD for both BGP and OSPF.	9.2.0.0
AVC Attributes	There are now additional static attributes under the Address Map parameter that can be used as match criteria. These attributes are secondary parameters to the address map, and are evaluated for a policy match only when the configured address map parameter matches with the flow. This release includes support for MS Instance, MS Category, and Proxy attributes.	9.2.0.0
Firewall Protection Profiles	Users can now add firewall protection profiles in the Configuration menu. Protection profiles allow users to define firewall thresholds around specific threats and security objectives of an environment where the firewall will be used, map the profile to a segment or zone of the firewall, and quickly add/edit the profile as a template.	9.2.0.0
5K Tunnels for EC-XS	There is now support for up to 5,000 tunnels on EC-XS platforms with 16GB RAM and four cores.	9.2.0.0
IPSec Suite B	<p>There is now a more robust set of secure algorithms for IPSec tunnel establishment and data exchange.</p> <p><b>Note</b></p> <p>This feature is not fully supported in ECOS 9.2.0.0. Full support will be provided in a future version.</p>	9.2.0.0



Feature	Description	Baseline Release				
Intrusion Prevention System (IPS)	In addition to the existing Intrusion Detection System (IDS), which designates traffic for inspection using matching rules, IPS protects traffic by matching a signature and then performing a configured action (alert, block, or allow).	9.2.0.0				
Radius Snooping	EdgeConnect now provides identity and context-aware micro segmentation based on user and device information collected during radius authentication. Users can write policies based on user-based match criteria for traffic steering, selecting firewall zones, and other policies.	9.2.0.0				
Support for New Appliance Models	This release adds support for the following part numbers:	9.2.0.0				
	<table border="1"> <thead> <tr> <th>Appliance model</th> <th>Part number</th> </tr> </thead> <tbody> <tr> <td>EC-XL-H-10G</td> <td>201915</td> </tr> </tbody> </table>		Appliance model	Part number	EC-XL-H-10G	201915
Appliance model	Part number					
EC-XL-H-10G	201915					
Support for New Appliance Models	This release adds support for the following part numbers:	9.1.1.0				
	<table border="1"> <thead> <tr> <th>Appliance model</th> <th>Part number</th> </tr> </thead> <tbody> <tr> <td>EC-L-H</td> <td>201754</td> </tr> </tbody> </table>		Appliance model	Part number	EC-L-H	201754
	Appliance model		Part number			
	EC-L-H		201754			
<table border="1"> <tbody> <tr> <td>EC-XL-H</td> <td>201756</td> </tr> </tbody> </table>	EC-XL-H	201756				
EC-XL-H	201756					
<table border="1"> <tbody> <tr> <td>EC-XS</td> <td>201694</td> </tr> </tbody> </table>	EC-XS	201694				
EC-XS	201694					
Support for New Appliance Models	This release adds support for the following part numbers:	9.1.0.0				
	<table border="1"> <thead> <tr> <th>Appliance model</th> <th>Part number</th> </tr> </thead> <tbody> <tr> <td>EC-M-H AC</td> <td>201762</td> </tr> </tbody> </table>		Appliance model	Part number	EC-M-H AC	201762
Appliance model	Part number					
EC-M-H AC	201762					
Performance Enhancements	This release introduces a software-centric approach to enhancing performance for the EdgeConnect appliances, whether hardware-based, virtual, or cloud-hosted. These enhancements include improvements to total flows/sec capacity, as well as overall improvements to total throughput (packets-per-second), without requiring any upgrades to existing hardware. Performance optimizations in this release are based on new techniques to maximize parallel processing and are focused primarily on the higher-end appliances, where the most processing power is available.	9.1.0.0				
Intrusion Detection System (IDS)	This release includes an Intrusion Detection System (IDS) that can monitor traffic for potential threats and malicious activity and generate threat events based on preconfigured rules. Packets are copied and inspected against signatures downloaded to Orchestrator from Cloud Portal. Traffic is designated for inspection using matching rules enabled in the zone-based firewall.	9.1.0.0				
Support for ACL Group Objects	This release includes two new features related to ACLs: Address Groups and Service Groups. An address group is a logical collection of IP hosts or subnets, and a service group is a logical collection of protocols and ports. Both can be referenced in source or destination matching criteria in the zone-based firewall and security policies.	9.1.0.0				
Zone Based Firewall Overrides for Control Traffic	Two new built-in policies, 65508 and 65509, will exempt Cloud Portal HTTPS and HTTP traffic to ensure that essential management services are not blocked by firewall misconfigurations.	9.1.0.0				
Support for Non-routing Hub (Stub Hub)	This release adds support for designating a non-routing hub or stub hub by configuring it to not re-advertise spoke-learned routes to other hubs in the region.	9.1.0.0				



Feature	Description	Baseline Release
Shaper Max Bandwidth for EdgeHA	This release includes an enhancement that will change the shaper max bandwidth setting when the primary circuit goes down.	9.1.0.0
Feature Licensing	In addition to traditional bandwidth and Boost licensing, this release adds support for specific feature licensing on a per appliance basis. Feature licensing allows administrators to enable specific features only on the appliances that require it.	9.1.0.0
Improved Failover between Primary and Backup Labels	This release adds support for enabling faster (more aggressive) failover between primary and backup labels. This change can be enabled or disabled via CLI using: <code>system aggressive-path-fail [enable   disable]</code> This setting is disabled by default.	9.0.5.0
Support for Link Aggregation	This release adds support for link aggregation, which allows users to combine two, three, or four interfaces into a channel group that provides a single high-speed link. Configuring link aggregation also adds failover redundancy to the interfaces in the group. You can configure link aggregation under Configuration > System & Networking > Link Aggregation.	9.0.3.0
Show BGP Routes via CLI	Routes received from and advertised to a BGP neighbor can be displayed via the CLI.	9.0.3.0
Import Management Routes to Routing Table	In this release, any non-default route added to the management table (e.g., 1.1.1.0/24-->10.1.1.1, lan0) with a datapath outgoing interface will be automatically added to routing table. This feature can be enabled and disabled and is enabled by default during an upgrade. Turning this feature on or off will add or delete any pre-configured management routes to the routing table.	9.0.3.0
NSSA Support in OSPF	This release allows the configuration of an OSPF area, and its type can be set to standard or NSSA (Not-So-Stubby Area).	9.0.3.0
DSCP Marking per Interface	This feature allows the user to configure DSCP marking on tunnel packets, normally determined by QoS policy, to be overridden on a per WAN interface basis.	9.0.3.0
Source Interface Configuration for DNS	When configuring DNS, users can now configure the source interface associated with each DNS server IP address. Source interface determines the routing segment in which the DNS server can be used and the IP address to use.	9.0.3.0
TCP Application Delay Stats for IPFIX	In this release, application delay is calculated for TCP connections and included in the NetFlow/IPFIX exports.	9.0.3.0
Advanced Segmentation Supported in OSPF	This release supports OSPF routing in multiple segments.	9.0.3.0
DHCP Support in Advanced Segmentation	This release adds support for advanced segmentation in DHCP relay. A single DHCP relay instance running on the appliance works with a remote, segmentation-aware DHCP server to serve all interfaces that may belong to different routing segments.	9.0.3.0
Custom CA Certificate Trust Store	Orchestrator's trust store can be customized by adding and deleting CA certificates under Configuration > System & Networking > Custom CA Certificate Trust Store.	9.0.3.0
Enable or Disable Portal WebSocket Connection	In the Appliance UI, under Administration > Silver Peak Cloud Portal & Orchestrator, administrators now have an option to enable or disable WebSockets as a redundant connection option.	9.0.2.0



Feature	Description	Baseline Release
Configure Encryption and Hash Algorithms	Using the ssh server encryption-algos and ssh server mac-algos CLI commands, administrators can select one or more provided algorithms for encryption and hashing. Selected algorithms can be reset with the no modifier.	9.0.2.0
Subnet Sharing Metric Enhancements	Subnet sharing metric values can be configured on a per-peer basis, allowing hubs in an MRSS (multi-region subnet sharing) region to redistribute a given route with different metrics.	9.0.2.0
ECMP Support for BGP	This release adds support for ECMP (Equal Cost Multi Path) routing to up to 20 BGP peers.	9.0.2.0
Dynamic Subnet Sharing Hold-down Timer	Subnet sharing automatically throttles updates to a given peer to limit update traffic.	9.0.2.0
Route Map Enhancements	This update enables the use of an OSPF tag as a matching criterion in route redistribution to subnet sharing.	9.0.2.0
Added Appliance CPU Stats	In this release, appliance CPU usage stats have been added to appliance historical stats.	9.0.2.0
Multicast Enhancements	This release adds stability to multicast when advanced segmentation is enabled.	9.0.2.0
New HTTP Ping Metrics	Loss and latency metrics for HTTP ping monitor are now supported.	9.0.2.0
Enhancements for Cleared and Acknowledged Alarms	The following details are now captured for alarms: Cleared By, Acked By, Acked Time, Comments	9.0.2.0
Secure WebSocket Connection to Orchestrator	To establish a secure connection to Orchestrator, appliances will now generate an auth token and encrypt it using the account key.	9.0.0.0
Advanced Segmentation (VRF)	<p>This release includes support for Advanced Segmentation (VRF), enabling multiple routing tables on a single appliance. Segments do not share data routes – data packets are only forwarded between interfaces within the same segment. Because routing segments are independent, overlapping IP address spaces can be used by multiple segments.</p> <p><b>Note</b></p> <p>It is recommended that you review the release notes for the Orchestrator version 9 release, as well as the Orchestrator/ECOS v9 documentation resources, available <a href="#">here</a>.</p>	9.0.0.0
Secure Shell Access	This release includes support for varying levels of security for shell access: open shell access, secure shell access, or disabled shell access. In the case of upgrades, the default mode of operation will continue to be open shell access. For new installations, the default mode of operation will be secure shell access. In this mode, shell access requires a challenge-response from Silver Peak technical support.	9.0.0.0
Certificate Verification with Orchestrator and Cloud Portal	Users can now enforce certificate verification with Orchestrator and Cloud Portal under Orchestrator's Advanced Security Settings. If this feature is enabled, the FQDN for Cloud Portal or Orchestrator must be used instead of global IPs.	9.0.0.0
Enhanced Multicast Support	This release provides additional support for multicast over the SD-WAN fabric.	9.0.0.0



Feature	Description	Baseline Release
Improved Software Upgrade Stability	This release increases the stability of appliance software upgrades by adding image signature and binary checksum verifications.	9.0.0.0
Security Enhancements	This release patches several low and medium severity security vulnerabilities identified in ECOS software.	9.0.0.0
Enhancements to Disabled Subnet Sharing via IP SLA	Disabling subnet sharing via IP SLA rules has been enhanced to ignore updates from appliance peers, allowing for greater control of traffic flow. Additionally, those routes will not be shared to BGP/OSPF peers.	9.0.0.0
Custom Tags in YAML Preconfig	YAML preconfig now supports the use of up to eight custom tags to be set on appliances.	9.0.0.0
IPSec Anti-Replay Improvements	IPSec anti-replay window protection has been enhanced to support a window size of up to 64K.	9.0.0.0
Multiple Domain Matches in DNS Cache	This release adds support for multiple domain matches in the DNS cache.	9.0.0.0
Port Flexibility for Bonding	This feature enables customers to bond only LAN side interfaces. Previously, when enabling bonding, both LAN and WAN side interfaces were bonded (blan0 and bwlan0).	9.0.0.0



## Issues fixed from past releases

The following table contains issues fixed in past releases that are also included in ECOS 9.6.1.0, organized by the software version that first resolved them.

Issue	First Release to Resolve
ID: 83706. A buffer leak arose in the LBMQ when undelivered packets were not properly resent, causing tunneld to reboot unexpectedly.	9.6.0.0
ID: 83650. A misconfiguration allowed the spsshell to be accessible even after enabling Common Criteria mode on the appliance.	9.6.0.0
ID: 83509. Upon upgrade to Orchestrator 9.5.4, an issue with the way the RMA wizard reparented and bounded interfaces caused the EC-10150 appliance to continuously reboot.	9.6.0.0
ID: 83456. DNS resolution failed intermittently on interfaces, causing websockets to disconnect periodically and graying out GMS websockets from appliances in the web UI.	9.6.0.0
ID: 83443. A missing validation check in the IPv4 header length caused tunneld to reboot unexpectedly.	9.6.0.0
ID: 83437. When there were ECMP routes, the debug log was being printed multiple times, causing excessive route advertisement updates on the appliance.	9.6.0.0
ID: 83340. When a host was deleted from RTM, the memory allocated for the host was not freed, leading to a memory leak that caused the appliance to reboot unexpectedly.	9.6.0.0
ID: 83321. An issue with rekey functionality caused SA deletions, which led to third-party IPsec tunnels rebooting unexpectedly.	9.6.0.0
ID: 83285. An issue with the workflow between the REST API and the mrtrd process prevented the Multicast tab of the Orchestrator UI from loading properly.	9.6.0.0
ID: 82751. When using the BGP CLI to modify the router-id parameter, the legacy OSPF router-id binding was being updated instead of the VRF-specific binding, preventing the OSPF router ID from updating successfully.	9.6.0.0
ID: 81699. This release was updated to address CVE-2025-32728.	9.6.0.0
ID: 81679. When an inbound flow was mistakenly marked as an underlay flow and routed back through an underlay tunnel, it was routed instead to an underlay zone and then dropped the traffic as a zone/routing change.	9.6.0.0
ID: 81640. If the dpid of a NAT entry and flow did not match, tunneld did not clear the entry as expected, resulting in packets being dropped.	9.6.0.0
ID: 81580. A parsing error related to how dates were entered in generalized versus UTC time resulted in erroneous notification of SSL certificate expiration.	9.6.0.0
ID: 81481. Pcap files were being stored in a memory-based temporary file system, causing the appliance to reboot unexpectedly while processing the pcap.	9.6.0.0
ID: 81479. Packets with bad checksums were not being handled properly, resulting in a buffer leak that caused the appliance to reboot unexpectedly.	9.6.0.0
ID: 81357. BGP and OSPF session status alarms were not being generated when the session transitioned between UP and DOWN states within 15 seconds.	9.6.0.0



Issue	First Release to Resolve
ID: 81349. A misconfiguration related to how the appliance handles a security check on traffic between its source and destination zones can result in the hub erroneously dropping packets due to "zone change". This issue will be addressed in a future release.	9.6.0.0
ID: 81346. An Orchestrator configuration issue created a configuration handling leak that continuously reapplied templates, causing the appliance to reboot unexpectedly.	9.6.0.0
ID: 81210. An issue with how IPSLA flows run through the policy engine caused those flows to appear as optimized in the web UI even after Boost had been removed.	9.6.0.0
ID: 81181. A buffer leak arose in the LBMQ when undelivered packets were not properly resent, causing tunnel to reboot unexpectedly.	9.6.0.0
ID: 81173. A REST API related to BGP contained a discrepancy in the definitions between CLI and UI handling functions, producing different outputs concerning the state of BGP on the appliance.	9.6.0.0
ID: 81090. When Rx or Tx tunnels were deleted, inbound flows became stuck in a deleted state and SNMP connections were dropped across the SD-WAN fabric.	9.6.0.0
ID: 81004. A database file was not being updated correctly, causing a misconfiguration of deployed bandwidth while mapping SNMP ifSpeed for VLAN interfaces.	9.6.0.0
ID: 80878. The process manager terminated BFD erroneously because it incorrectly assessed that packet processing had stopped.	9.6.0.0
ID: 80725. When buffering, the shaper reclaimed/released buffers that created empty flows in shaper queues. Ensuing shaper checks processed those flows, resulting in empty tunnels that caused tunnel to reboot unexpectedly.	9.6.0.0
ID: 80662. The appliance was sending non-binary bindings, resulting in inconsistent admin interface statuses across networks.	9.6.0.0
ID: 80660. Some invalid flows were being accumulated in stats accounting, resulting in a negative value in the Application Bandwidth table in the Orchestrator web UI.	9.6.0.0
ID: 80651. Incorrect subinterface indexing when assigning the same VLAN ID to different routers prevented successful creation of VRRP groups on VLAN interfaces with the same VLAN tag.	9.6.0.0
ID: 80576. When a LAN interface had a DHCP server or relay configured and more than one non-DHCP interface was deleted via the Deployment tab in the UI or the REST API, a memory leak occurred that caused the appliance to reboot unexpectedly.	9.6.0.0
ID: 80575. An issue with binding values being populated without masking resulted in the OSPF authentication key and MD5 password being unencrypted in the running configuration.	9.6.0.0
ID: 80500. An error with the order in which ICMP packets moved through the identification pipeline resulted in incorrect timestamp information in the packet.	9.6.0.0
ID: 80425. During IPsec key rotation, key information was pushed as part of a cluster configuration update instead of just a nonce update, which triggered and then cleared erroneous cluster peer down alarms.	9.6.0.0
ID: 80417. After upgrade, PIM packets were being duplicated through tunnel traffic, causing tunnel to reboot unexpectedly.	9.6.0.0



Issue	First Release to Resolve
ID: 80323. The appSystemStateInfo API was using the gmsMeta information to get the nepk before it had been initialized, causing it to return a null value.	9.6.0.0
ID: 80280. Stale tunnel entries on the Tunnels tab of the Orchestrator UI were not being removed as expected.	9.6.0.0
ID: 79856. An issue with processing OSPF type 5 LSA updates flooding from third-party routers resulted in failure to process OSPF route tags.	9.6.0.0
ID: 79803. Tunneld rebooted unexpectedly when a nexthop entry was removed while doing a route lookup in the datapath.	9.6.0.0
ID: 79754. When duplicate subnet sharing routes were present, the primary route was deleted, causing a delay in propagating route changes to BGP peers.	9.6.0.0
ID: 79737. Read-only users could not access the cpustats REST API, leading to a 403 error when a non-admin user tried to fetch system/CPU stats.	9.6.0.0
ID: 79702. In 9.5.x.x deployments, payload compression was enforced and in some cases overrode manually created optimization policy settings, resulting in failed link integrity tests, incorrect real-time graphs, and other optimization performance issues.	9.6.0.0
ID: 79663. A memory leak issue in a hardware driver caused the EC-XS appliance to consume unnecessary memory, which consumed system resources and led to the appliance rebooting unexpectedly.	9.6.0.0
ID: 79655. The memcap tuning for P and B variants of E-C-L and EX-C-L appliances was missing, preventing IPS/IDS from being enabled on the appliance successfully.	9.6.0.0
ID: 79492. A missing authentication check caused OTO tunnels to use weaker SHA1 encryption instead of SHA2.	9.6.0.0
ID: 79338. The network order and host order conversion function was called multiple times when deciding whether a new subnet was overlapping with existing subnets, causing the wrong IP address to be used for inter-segment DNAT policy calculations.	9.6.0.0
ID: 79302. An error in the loop logic of the garbage collection functionality resulted in the collector freeing up the last entry in the table twice, throwing an error, and consuming system resources until the service rebooted unexpectedly.	9.6.0.0
ID: 79273. The IPSLA interface monitor was not decreasing the priority of a specific VRRP group interface when multiple group IDs were configured.	9.6.0.0
ID: 79257. An issue with VRF manager prevented it from processing VRFs properly, resulting in a condition where creating more than 2,000 segments in a fabric caused the appliance to reboot unexpectedly.	9.6.0.0
ID: 79230. When a VRRP node transitioned from backup to master, the VIP VMAC neighbor entry persisted, preventing ping of management IP addresses on the appliance.	9.6.0.0
ID: 79195. A UI error caused timestamps around HPE Aruba Networking Central connectivity to appear as "None".	9.6.0.0
ID: 79087. An issue with the order of operations when associating a switch interface with VRF at startup caused the slan0 interface to become unreachable from remote sites.	9.6.0.0
ID: 79086. When the IP Allow List feature was enabled without configuring any IP addressed, access to the SSH shell from the Orchestrator became unavailable.	9.6.0.0



Issue	First Release to Resolve
ID: 79076. An error in how TCP flows were reset when multiple SYN packets were present caused some TCP SYN packets to be allowed even when they should have been denied.	9.6.0.0
ID: 79061. By default, if BFD was enabled on an appliance with a static route configuration with a valid gateway IP address, then the session persisted even after disassociating with BGP.	9.6.0.0
ID: 78998. The UI warning message related to “unresolved hostname” errors lacked sufficient detail to troubleshoot the issue.	9.6.0.0
ID: 78990. Manually configured Route Map rules caused EdgeHA tunnels to go down unexpectedly.	9.6.0.0
ID: 78986. The USB LTE modem was sending its status information with the response for the IMSI number read query, corrupting the message and making parsing difficult.	9.6.0.0
ID: 78971. Existing flows were not reclassified to drop when source segments were de-authenticated.	9.6.0.0
ID: 78964. A licensing issue prevented IPS/IDS functionality from being enabled successfully on certain EC-XS appliances.	9.6.0.0
ID: 78910. Router VRF logged an error when adding more than 64 segments on an Orchestrator.	9.6.0.0
ID: 78863. Gratuitous ARP was not sent when the VRRP session was removed on the master node, preventing successful ping of its physical IP address.	9.6.0.0
ID: 78800. Error code was not properly reset upon connecting to the appliance, resulting in the Orchestrator showing that connectivity was down while the appliance UI confirmed connectivity.	9.6.0.0
ID: 78775. An issue with the sequential registration of CDP and LLDP callbacks for link state events resulted in CDP not receiving interface state events and a lack of visibility on the switch.	9.6.0.0
ID: 78756. An exception encountered by fclose() caused mgmtD to reboot unexpectedly.	9.6.0.0
ID: 78654. An error in the proxy manager caused the flow limit to be exceeded, preventing CIFS optimization from completing successfully.	9.6.0.0
ID: 78649. When an interface was deleted via the CLI using the no system router <router-name> command, the dhcpd bindings for that interface remained, causing the DHCP relay process to falter.	9.6.0.0
ID: 78601. A process change created separate embryonic timeouts for TCP and non-TCP protocols, causing SNMP traffic to be incorrectly blocked.	9.6.0.0
ID: 78487. The “always send passthrough traffic to original sender” option in the web UI and CLI created unforeseen complexities in packet forwarding.	9.6.0.0
ID: 77674. Missing bindings in the ECOS upgrade schema prevented upgrade from completing successfully.	9.6.0.0
ID: 77518. A logic issue related to how ACL definition files were programmed prevented traffic from reaching the expected default BIOS.	9.6.0.0
ID: 77502. The garbage collector in the DNS cache was running but was not removing entries, giving the false impression that the cache was full.	9.6.0.0



Issue	First Release to Resolve
ID: 77490. Invalid peer node IDs caused a buffer leak in the RCMP message, preventing routes from redistributing to subnet sharing.	9.6.0.0
ID: 77466. The slogin command was limited to only "port" and "username@host" options, preventing use in VRF environments or with additional options such as source IP address or interface.	9.6.0.0
ID: 77456. The appliance matched inbound port forwarding rules and performed NAT for the destination IP, rather than sending traffic directly to the destination, causing an interruption in the flow.	9.6.0.0
ID: 77455. A missing check caused a connection timeout if a requested PPPoE interface was already allocated.	9.6.0.0
ID: 77453. A misconfiguration caused the flow and SNAT entry's source zones to be identical values, preventing the appliance from matching the flow's return traffic to the correct SNAT entry.	9.6.0.0
ID: 77301. An error in how NAT flows were handled when changing IP interfaces resulted in intermittent Zscaler performance issues.	9.6.0.0
ID: 77299. The nexthop queue was out of sync with the hash and source tables, preventing the multicast route from being properly programmed on the appliance.	9.6.0.0
ID: 77262. The Azure NVA appliance was rebooted erroneously in server mode after a MAC address was assigned to the wan0 and land0 interfaces.	9.6.0.0
ID: 77231. A computational error caused threshold crossing alerts (TCAs) on the number of flows to be triggered erroneously.	9.6.0.0
ID: 77204. Leaked SNAT entries were taking an assigned local IPSec UDP tunnel's port and were not properly mitigated, putting the local IPSec UDP tunnel in a down state.	9.6.0.0
ID: 77129. This release was updated to address CVE-2025-37128.	9.6.0.0
ID: 77127. This release was updated to address CVE-2025-37130.	9.6.0.0
ID: 77111. The MAC address was missing on EC-V appliances after reboot.	9.6.0.0
ID: 77107. Because of an issue with how packets are handled in Harden mode, MPLS underlay tunnels between the HA peer appliance and another non-HA appliance were not coming up.	9.6.0.0
ID: 77088. Issues in the denylist tasklet consumed too much CPU, causing tunnel to reboot unexpectedly.	9.6.0.0
ID: 76981. An issue with how packets were handled in quiescent mode check caused the appliance to continue sharing default routes to LAN eBGP even after the WAN interface was disabled.	9.6.0.0
ID: 76837. An issue with rekey functionality led to multiple IKE underlay tunnels flapping unexpectedly.	9.6.0.0
ID: 76818. This release was updated to address CVE-2025-37129.	9.6.0.0
ID: 76770. The inbound shaper's performance was utilizing too much CPU, resulting in packets being dropped.	9.6.0.0
ID: 76732. Repeated addition and deletion of a CA certificate caused a small memory leak while loading the PFX certificate.	9.6.0.0



Issue	First Release to Resolve
ID: 76671. The hub appliance was intermittently dropping PIM messages from the branch appliance, temporarily pruning the branch from the multicast route and interrupting the multicast stream.	9.6.0.0
ID: 76658. This release was updated to address CVE-2025-37131.	9.6.0.0
ID: 76502. A validation restriction in the Branch-NAT configuration settings that previously accepted "wan0" as a LAN interface name now only accepts "lan*" strings, preventing successful validation of the database upon upgrade.	9.6.0.0
ID: 76352. This release was updated to address CVE-2025-37127.	9.6.0.0
ID: 76301. Excessive dev-logging in routed and an incorrect path for the nbase.ini file caused the OSPF neighbor state to flap when aggressive timers were set.	9.6.0.0
ID: 76082. SNMPv3 password validation requirements were not being enforced.	9.6.0.0
ID: 76041. There was no internal process to register that sysd had restarted, so IP SLA requests sent before sysd initialized were lost, causing the process to reboot unexpectedly.	9.6.0.0
ID: 75994. SIP INVITE packets were being split across two TCP segments, causing the firewall to drop calls in accordance with the appliance's SIP handling rules.	9.6.0.0
ID: 75889. Executing the show running-config command in the CLI spiked CPU usage to 100%, causing the appliance to enter a hanging state.	9.6.0.0
ID: 75729. Addresses a security vulnerability. Customers are urged to upgrade to this version. Details of this vulnerability will be published at a later time.	9.6.0.0
ID: 75678. An issue with how packets were split in the high-priority and low-priority queues caused some flows to bypass security protocols and be accepted as legitimate when they should have been dropped by the OS.	9.6.0.0
ID: 75427. Internal subnets were not complying with segment/VRF settings, leading to misconfigurations of the appliance.	9.6.0.0
ID: 75399. A parsing issue within Suricata while IDS was running caused oversubscription within Suricata, leading to an unexpected reboot of the appliance.	9.6.0.0
ID: 74787. The way inbound and outbound bandwidths were displayed differed between the Orchestrator and appliance UIs, resulting in incorrect bandwidth stats for flows.	9.6.0.0
ID: 74745. Dropped firewall zones for zone IDs greater than 72 were not displaying on the monitoring charts of the appliance UI.	9.6.0.0
ID: 74729. Flow reclassification was being performed on a timer and was not being triggered when a peer went down.	9.6.0.0
ID: 74397. A configuration issue in the shaper algorithm caused traffic to queue unexpectedly slowly, resulting in high CPU usage and diminished performance.	9.6.0.0
ID: 73736. A configuration error prevented expired SSL certificates from being deleted from appliances as expected.	9.6.0.0
ID: 73126. CLI commands for the default route on the PPPOE configuration were missing.	9.6.0.0



Issue	First Release to Resolve
ID: 72966. Using ssh-rsa keys instead of ssh-ed25519 key pairs during setup could prevent successful login to EC-Vs.	9.6.0.0
ID: 72912. If the admin status of a LAN interface on the DHCP relay or server changed from down to up, the relay or server processes did not respawn.	9.6.0.0
ID: 72670. This release was updated to address CVE-2024-3596.	9.6.0.0
ID: 72595. Flow redirection using a single UDP tunnel created a throughput bottleneck that led to performance and latency issues on the appliance.	9.6.0.0
ID: 72453. The error return code of policy_nat_apply_forward_natting was not handled properly for the outbound port, which created a misconfiguration in Policy NAT that caused flows to drop unexpectedly.	9.6.0.0
ID: 71063. DHCP failover was not syncing between primary and secondary nodes due to different failover relationship names in their dhcpd.conf files.	9.6.0.0
ID: 63153. The local I3 port was not being scanned for tunnel MTU, which prevented MTU from accepting the interface.	9.6.0.0
ID: 81181. A buffer leak arose in the LBMQ when undelivered packets were not properly resent, causing tunnel to reboot unexpectedly.	9.5.3.6
ID: 81090. When Rx or Tx tunnels were deleted, inbound flows became stuck in a deleted state and SNMP connections were dropped across the SD-WAN fabric.	9.5.3.5
ID: 79856. An issue with processing OSPF type 5 LSA updates flooding from third-party routers resulted in failure to process OSPF route tags.	9.5.3.5
ID: 76301. Excessive dev-logging in routerd and an incorrect path for the nbase.ini file caused the OSPF neighbor state to flap when aggressive timers were set.	9.5.3.5
ID: 80640. When one of an Orchestrator's resolved IPs was revoked and assigned to another device in AWS, the appliance did not update the reachability IP until appliance restart, preventing a successful connection.	9.5.3.4
ID: 79292. This release was updated to address CVE-2025-37124.	9.5.3.3
ID: 79259. This release was updated to address CVE-2025-37125.	9.5.3.3
ID: 79204. This release was updated to address CVE-2025-37123.	9.5.3.3
ID: 79128. The file pointers used to access certain json parameters became invalid after a flush operation, blocking access to the record and causing jsond to reboot unexpectedly.	9.5.3.3
ID: 78955. When an empty SA was filed in the callback function and an appliance received the update, OTO tunnels dropped and the node rebooted unexpectedly.	9.5.3.3
ID: 78954. The tunnel gzip process consumed too much CPU, causing performance issues on the appliance.	9.5.3.3
ID: 78864. If packets were dropped before the NAT flow lookup flag was set, subsequent packets triggered a new NAT lookup, causing the NAT ID in the flow to be overwritten and potentially leading to a NAT flow leak.	9.5.3.3



Issue	First Release to Resolve
ID: 78826. VLAN interface configurations were only being updated if there was a deployment change, causing HPE Aruba Networking Central to receive empty config files after appliance reboot if no configs were cached.	9.5.3.3
ID: 77331. When integration with HPE Aruba Networking Central was disabled and then re-enabled, gRPC connections did not come back up because the certificate check to initialize Central and enable the ORO/OTO modules did not trigger.	9.5.3.3
ID: 78967. A caching issue caused the kernel on the EC-10150 appliance to hang when adding or removing interfaces/VRFs.	9.5.3.2
ID: 77808. When a string was added to the string store along with a trailing null character, an invalid string index reference for the subsequent string was created and an assert() was triggered, causing the appliance to reboot unexpectedly.	9.5.3.1
ID: 77022. An error in the way EC-V memory size is calculated upon upgrade results in insufficient memory available, leading to continuous reboot of the appliance.	9.5.3.1
ID: 77411. The mgmt0 interface was not selectable from the menu on the Packet Capture tab.	9.5.3.0
ID: 77006. An issue with the Additional Authentication Data parameter in the OpenSSL library prevented tunnels from successfully building between appliances in FIPS mode and non-FIPS mode.	9.5.3.0
ID: 76774. Frequent calls of certain networkInterfaces API commands led to a memory leak, which triggered an increase in swap usage alerts on the appliance.	9.5.3.0
ID: 76631. The IPSLA HTTP monitor was not accepting 302s and other redirect response codes as successful responses, thereby restricting the number of targets that could be configured to send HTTP-based probes.	9.5.3.0
ID: 77255. When a WAN interface was not assigned a label, EdgeConnect could not connect to Aruba Central successfully.	9.5.2.1
ID: 76053. Packets were being freed before their flows were properly checked, resulting in those flows staying active and raising false alarms that the total number of flows on the appliance was approaching capacity.	9.5.2.1
ID: 72265. Errors in flow counting led to a dissonance between the number of asymmetric flows reported in the Appliance Trend Flows tab and the Flows tab.	9.5.2.1
ID: 77225. A packet handling issue erroneously assigned UDP packets to a "default" case, causing tunnel to reboot unexpectedly.	9.5.2.0
ID: 76941. A missing index check in the RADIUS-to-MAC address mapping function caused tunnel to reboot unexpectedly.	9.5.2.0
ID: 76767. Existing IPv4 virtual IP checks were not updated after adding functionality to support IPv6, causing IPv6 pings to VRRP to be denied intermittently.	9.5.2.0
ID: 76708. An error in the configuration of retransmission count settings caused tunnels to fluctuate between up and down states periodically.	9.5.2.0
ID: 76345. For eBGP routes with no MED attribute, the BGP route metric was being set to the local preference value configured in the inbound route map, resulting in inconsistent values for routes coming from the same peer.	9.5.2.0



Issue	First Release to Resolve
ID: 76335. An issue with how the multiprotocol capability for BGP sessions processes EVPN parameters led to BGP peers throwing errors unexpectedly.	9.5.2.0
ID: 76297. External hairpin flows were not deleted properly, causing traffic disruption due to the maximum number of flows being exceeded.	9.5.2.0
ID: 76266. Starting the packet capture page with circular storage and setting the number of files to 1 caused the pcap file to be created without a numeric suffix, creating an issue in the .zip file that prevented saving the pcap successfully.	9.5.2.0
ID: 76126. A change in how ICMP IDs were saved prevented translation in packets, causing the original ICMP ID traffic to return without finding the new flow.	9.5.2.0
ID: 76117. When the VLAN debug file failed to open, a coding loop error caused tunneld to reboot unexpectedly.	9.5.2.0
ID: 76063. Mishandling of packets that arrived for a redirected flow on the cluster appliance caused the appliance to reboot unexpectedly.	9.5.2.0
ID: 76057. OVF disk space was increased from 30GB to 60GB to provide EdgeConnect virtual appliances (EC-V) with enough space.	9.5.2.0
ID: 76039. DNS DPI check for security policy failed when a DNS proxy was configured.	9.5.2.0
ID: 76024. Multi-hop routes were not checking to see if better nexthops were available, causing an asymmetric routing scenario that had to be resolved by rebooting the appliance.	9.5.2.0
ID: 75986. Private ASNs were removed from the AS path in routes advertised to eBGP peers, preventing AS path propagation from working properly.	9.5.2.0
ID: 75955. There was no handling mechanism to re-add static ARP entries deleted by the kernel when IP addresses were removed and then re-added, causing static ARP to become unresponsive.	9.5.2.0
ID: 75954. Enabling the DHCP server on multiple interfaces of the same EdgeConnect appliance with failover configuration caused the DHCP server process to go into the defunct state.	9.5.2.0
ID: 75936. When building and sending tunnel packets, the packet orig_len is saved in one of the fragments, causing the overhead delta calculation to be negative. As a result, running a link integrity test across a tunnel-in-tunnel underlay produces a "LAN Rx buffer shortage" error.	9.5.2.0
ID: 75917. WAN interfaces configured as stateful firewall or stateful+SNAT firewall were dropping IKE packets during IPSec IKE security association re-key events, causing IPSec IKE tunnels to drop and then re-establish.	9.5.2.0
ID: 75503. Due to a configuration change regarding broadcast entries in the ARP table, the LAN interface was sending out traffic with the broadcast MAC address.	9.5.2.0
ID: 75502. The mechanism that manages the DNS cache based on domain confidence value contained a validation error that could not process the ":" and "/" characters correctly, causing tunneld to reboot unexpectedly.	9.5.2.0
ID: 75446. A corrupted SSL record caused a decryption error during SSL acceleration.	9.5.2.0
ID: 75394. A logic error in the Firewall Protection Profiles feature prevented RSSP DPI from properly identifying valid FTP flows, resulting in some flows being blocked by security policy.	9.5.2.0



Issue	First Release to Resolve
ID: 75364. Enabling FIPS or CC mode on the appliance was not automated and required a “y/n” response from the user.	9.5.2.0
ID: 75358. An issue with how parallel datapath CPUs handle message queues going to network memory created a datapath conflict that caused the appliance to reboot unexpectedly.	9.5.2.0
ID: 75321. On platforms where the core is shared between datapath and IDS/IPS, a tasklet that receives events from the IDS/IPS was creating extra UDS sockets, causing a decrease in datapath performance.	9.5.2.0
ID: 75314. An issue with GRE/ESP packet handling caused unsolicited ESP packets to appear in the Flows table, even with WAN Stateful or Hardened mode applied.	9.5.2.0
ID: 75285. A validation issue with string store data in the DNS revmap API caused tunneld to reboot unexpectedly.	9.5.2.0
ID: 75145. When a w12 tunnel packet that matches a redirect flow is received, the appliance does not drop the packet and delete the flow as expected. As a result, Flow Redirection does not function properly in ECOS 9.4.x.x and 9.5.x.x releases.	9.5.2.0
ID: 75118. On the Flows tab, available flows in the Source/Destination fields were not limited only to Source/Destination IPs.	9.5.2.0
ID: 75019. A corrupted SSL handshake packet created an “invalid handshake” error that caused tunneld to reboot unexpectedly.	9.5.2.0
ID: 75009. Because of an issue with how node.js was handling the replace function, users were logged out of the appliance UI after opening the DHCP Leases tab in Orchestrator.	9.5.2.0
ID: 74819. FPOC was erroneously reusing old entries, resulting in packets being dropped as duplicates or late.	9.5.2.0
ID: 74814. During firewall switchover with BFD enabled, BGP switched into an idle state, causing an unexpected delay in re-establishing BGP with the secondary firewall.	9.5.2.0
ID: 74796. The RX tunnel was not being assigned by interface, creating contradictory values between the RX action and ingress value.	9.5.2.0
ID: 74795. Virtual EdgeConnect running on KVM dropped packets on non-native VLAN interfaces due to improper handling of different MAC addresses assigned to different VLAN interfaces.	9.5.2.0
ID: 74790. An issue with how multihop changes were processed resulted in static routes entering a down state when BGP preferences were changed.	9.5.2.0
ID: 74625. A memory leak in ICMP error state processing of Firewall Protection Profiles caused tunneld to reboot unexpectedly.	9.5.2.0
ID: 74445. An issue with transit packets containing a link local destination IP address caused traffic to be sent between SD-WAN appliances in a loop.	9.5.2.0
ID: 73752. An issue with converting non-ASCII characters prevented Orchestrator from rotating IPSec UDP key material, and prevented successful upgrade of the appliance.	9.5.2.0
ID: 73731. In scaled VLAN configurations, packets are being dropped between the appliance VLAN and the VLAN interface.	9.5.2.0



Issue	First Release to Resolve
ID: 73274. Self destined/generated traffic on LAN interfaces was not generating any netflow packets on the appliance, and no netflow packets were received on the collecting IP address.	9.5.2.0
ID: 73030. An issue with DNS cache purging caused internet access to become unavailable when Proxy DNS was enabled.	9.5.2.0
ID: 72882. Virtual EdgeConnect appliance deployed on KVM processed packets that were not destined for a local MAC address.	9.5.2.0
ID: 72669. When the Stats Collector restarted after being stopped for an extended period, it checked all files from the stop date to the current date, causing performance and file issues.	9.5.2.0
ID: 71484. Binding iperf3 to an IP in a non-default segment failed to assign an IP address.	9.5.2.0
ID: 70496. Domain name compression resulted in IP phones being disconnected unexpectedly.	9.5.2.0
ID: 76032. Incorrect placement of the syslog configuration file caused the system to fail files integrity check during bootup, resulting in the potential for a continuous reboot loop.	9.5.1.1
ID: 67953. On the EC-M-P appliance, the mtrtd process went into a pending state upon enabling multicast, rendering multicast nonfunctional.	9.5.1.1
ID: 74483. The subnet associated with a bridge group was not advertised across the fabric.	9.5.1.0
ID: 74310. An issue with lookup logic prevented the USB-LTE modem from connecting to certain ISPs.	9.5.1.0
ID: 74167. The appliance code was unable to build a web socket using the first-resolved IP when the address was IPv6 rather than IPv4.	9.5.1.0
ID: 73768. Adding DPI for RSSP apps created an issue in the parsing logic of DNS queries, resulting in reading bytes beyond packet boundary and causing tunnelled to reboot unexpectedly.	9.5.1.0
ID: 73697. When the EC-XS appliance was onboarded from factory settings and rebooted before activation, new seeds sent to the appliance were not properly stored on disk.	9.5.1.0
ID: 73639. On the EC-XL-P appliance, a malformed payload sent over UDP port 53 should have been rejected by the DNS deep packet parser, but instead caused tunnelled to reboot unexpectedly.	9.5.1.0
ID: 73628. An issue in nat map, security map, and ACL policy evaluation caused increased latency on the LAN/WAN-side nexthops.	9.5.1.0
ID: 73626. Sanity check of the packet length parameter failed in certain scenarios, causing tunnelled to reboot unexpectedly.	9.5.1.0
ID: 73522. VRF information in packets was not set properly for traffic leaving and re-entering the LAN interface, causing packets to drop before creating hairpin flows and preventing routing from MPLS to SD-WAN.	9.5.1.0
ID: 73466. A truncation issue in the internal timer module that occurred when the appliance's uptime exceeded approximately 994 days caused a major slowdown in packet processing.	9.5.1.0
ID: 73180. An error involving unsupported JavaScript syntax prevented interface counters from appearing in the appliance's web UI, even though they appeared in the CLI and the Orchestrator.	9.5.1.0



Issue	First Release to Resolve
ID: 73097. An issue in the MGMT interface caused the mgmtd feature to sleep, triggering a restart in the ntpd service and an unexpected system reboot.	9.5.1.0
ID: 72886. The TFTP application was improperly classified in certain ECOS versions, causing a denial of the flow via security policy.	9.5.1.0
ID: 72800. The MGMT interface IP address was not filtered properly when performing an interface lookup, causing the IP to appear in the results erroneously.	9.5.1.0
ID: 71402. Spawning CLI shells from the node did not leave a login record on the system, generating continuous logins for an unknown user in the audit logs.	9.5.1.0
ID: 71210. A validation issue allowed log facilities details to overlap each other.	9.5.1.0
ID: 73257. This release was patched to address CVE-2022-36946 (Linux kernel vulnerability).	9.5.0.0
ID: 73159. This release was patched to address CVE-2022-1012 (memory leak vulnerability), CVE-2021-4203 (use-after-free read vulnerability), and CVE-2021-20322 (ICMP vulnerability).	9.5.0.0
ID: 72026. This release was patched to address CVE-2023-51385 (OpenSSH).	9.5.0.0
ID: 71389. A validation error created the potential for an unauthenticated user to execute arbitrary code on the host.	9.5.0.0
ID: 71380. An issue with port forwarding created the potential for an unauthenticated user to obtain a root shell on the appliance.	9.5.0.0
ID: 71361. A code sanitization issue created the potential for an unauthenticated user to execute arbitrary code on the appliance.	9.5.0.0
ID: 69984. When initiated from the CLI, pings continued to run in the background until stopped manually.	9.5.0.0
ID: 68872. This release was patched to address CVE-2023-38802 (error handling vulnerability).	9.5.0.0
ID: 68379. Issues with loop detection caused BGP to flap upon upgrade.	9.5.0.0
ID: 66562. The upper limit validation for the "max bw:absolutely" shaper setting was set too low.	9.5.0.0
ID: 73218. Peer logging was not disabled by default.	9.4.2.0
ID: 73156. Using ephemeral source port numbers caused packets from DHCP relay to the DHCP server to be dropped by a firewall.	9.4.2.0
ID: 73141. Routerd was leaking memory when a large number of subnet sharing/static routes were sent to RTM.	9.4.2.0
ID: 72994. An issue with the size of the port description for Type-Length-Value (TLV) prevented LLDP details from appearing on the appliance.	9.4.2.0
ID: 72969. An issue with the payload for SSDP multicast packets in VRF caused tunneld to reboot unexpectedly.	9.4.2.0
ID: 72932. A logging issue prevented BGP peer from coming up for the default segment over a VTI tunnel.	9.4.2.0



Issue	First Release to Resolve
ID: 72930. Timestamp values were stored in an incorrect location, causing nexthop to use incorrect definitions and resulting in iBGP routes dropping unexpectedly.	9.4.2.0
ID: 72834. For certain platforms, the maximum interface limit was set to 127, preventing the addition of interfaces beyond that number.	9.4.2.0
ID: 72696. This release was patched to address CVE-2023-48795 (OpenSSH vulnerability).	9.5.0.0
ID: 72695. This release was patched to address CVE-2020-14145 (OpenSSH vulnerability).	9.4.2.0
ID: 72623. The transmit amplitude was set too high by default on ports and was over-driving the CPU NIC ports, creating link stability issues.	9.4.2.0
ID: 72608. Some ISPs were unable to connect to the appliance because they were unable to use hardcoded APNs.	9.4.2.0
ID: 72596. The SNMP OID in the MID.txt file was incorrect for certain hardware models.	9.4.2.0
ID: 72533. An issue with integer values in flow statistics resulted in flow count being reported as erroneously high.	9.4.2.0
ID: 72501. EdgeConnect-to-EdgeConnect BGP IPv6 sessions were not connecting because BGP socket support and wildcard sockets for IPv6 NBRs were not created.	9.4.2.0
ID: 72454. When duplicating packets, the IP header compression preamble was not accounted for when calculating worst-case packet size.	9.4.2.0
ID: 72431. EdgeConnect's BFD implementation erroneously detected faults when the BFD session did not transition into UP state and when the peer sent an "AdminDown" message.	9.4.2.0
ID: 72318. An error in the node callback chain resulted in the incorrect username appearing in audit logs for certain operations.	9.4.2.0
ID: 72255. Upon upgrade, mishandling of a template file prevented RADIUS snooping from loading properly.	9.4.2.0
ID: 72144. OSPF interface properties were being updated erroneously in tunneld's OSPF interface list during boot-up.	9.4.2.0
ID: 72023. The ntpdate query was not properly completed on some NTP servers, resulting in false alarms in the Orchestrator UI.	9.4.2.0
ID: 71908. A mishandling of race condition in the route table manager (RTM) caused the multicast routing daemon to restart unexpectedly.	9.4.2.0
ID: 71878. The MIB file was missing the EC-M-H appliance.	9.4.2.0
ID: 71506. There was insufficient tunbug in tunneld to gauge whether SSLPD queues were reaching their limit.	9.4.2.0
ID: 71495. An application classification issue caused inbound flows to be directed to a default security policy instead of another specified policy.	9.4.2.0
ID: 71484. Binding iperf3 to an IP in a non-default segment failed to assign an IP address.	9.4.2.0
ID: 71462. Default SSH and TLS ciphers in EdgeConnect were being flagged as insecure.	9.4.2.0



Issue	First Release to Resolve
ID: 71458. When adding routes received from the subnet table to RTM in routerd, a miscalculation resulted in a segmentation fault, causing routerd to reboot unexpectedly.	9.4.2.0
ID: 71370. This release was patched to address CVE-2023-48795 (OpenSSH Terrapin vulnerability).	9.4.2.0
ID: 71354. A routing configuration issue prevented BGP peer routes using nexthop from being installed in RTM.	9.4.2.0
ID: 71351. A UI issue prevented the System Limits dialog box from closing as expected, blocking users from interacting with the UI.	9.4.2.0
ID: 71313. An authentication issue with the admin user created the potential for a monitor user to gain admin CLI access through a web UI shell.	9.4.2.0
ID: 71298. A buffer leak in the enqueue packet chain caused the appliance to reboot unexpectedly.	9.4.2.0
ID: 71223. If the number of long-lived flows was a sizeable fraction of the EdgeConnect packet buffer count, the EdgeConnect rebooted unexpectedly.	9.4.2.0
ID: 71083. An issue with the interface event handler caused the management layer of the appliance to become unresponsive when the USB LTE interface was put in admin down or unplugged.	9.4.2.0
ID: 70892. A data path issue caused the appliance to reboot unexpectedly.	9.4.2.0
ID: 70837. An issue with the location of PID files prevented the PPPoE interface of the appliance from getting an IP address upon reboot.	9.4.2.0
ID: 70830. Passive FTP was incorrectly identified in the Flows table.	9.4.2.0
ID: 70672. BGP was not redistributing routes to OSPF when the prefix was also advertised via the SD-WAN fabric.	9.4.2.0
ID: 70649. An issue with the default set action code prevented route maps created from the CLI from appearing in the UI.	9.4.2.0
ID: 70647. Session-Affinity was overriding overlay policy and choosing the incorrect internet passthrough for flows with the same IP pair.	9.4.2.0
ID: 70641. Additional LAN interfaces for each EdgeHA WAN interface and HA Sync connection that did not contain user traffic flows were not being excluded by default in NetFlow exports for EdgeHA sites.	9.4.2.0
ID: 70570. Devices acting as the VRRP master were handling ARP incorrectly, causing nexthop to become unreachable.	9.4.2.0
ID: 70157. The link between the BGP route entries and nexthop entries became corrupted, causing an internal check to fail and tunnel to drop unexpectedly.	9.4.2.0
ID: 69623. When a primary interface was down, some underlay tunnels remained up through HA tunnels.. Bug.	9.4.2.0
ID: 69544. An issue with string storage capacity caused some traffic to map to the incorrect overlay.	9.4.2.0
ID: 69303. Alarms were being raised to the UI when any NTP servers were unreachable, instead of when all servers were unreachable.	9.4.2.0



Issue	First Release to Resolve
ID: 69192. This release was patched to address an HTTP verb tunneling (method override) vulnerability.	9.4.2.0
ID: 68798. An error in CPU affinity assignment caused a bottleneck and drops in IPSec encryption and decryption.	9.4.2.0
ID: 68611. When modifying the VLAN interface mask, the entire router (rtr) was removed instead of the specific interface, resulting in IP tunnels rebooting unexpectedly.	9.4.2.0
ID: 66977. Moving a BGP peer with same local IP from one segment to another created an issue with BGP socket support and prevented BGP from initializing between appliances.	9.4.2.0
ID: 66644. The multicast engine was not recognizing or forwarding SSDP packets.	9.4.2.0
ID: 61853. An error in adding multihop routes to RTM prevented routes from being advertised.	9.4.2.0
ID: 73160. This release was patched to address a security vulnerability related to Suricata Intrusion Detection Engine version 4.1.5.	9.4.1.0
ID: 70918. A failure to defer logging messages caused the appliance to reboot unexpectedly.	9.4.1.0
ID: 70640. An issue with how nexthop is recognized produced some incorrect IP addresses in the nexthop table.	9.4.1.0
ID: 70580. An issue around RADIUS snooping packet handling caused the appliance to reboot unexpectedly.	9.4.1.0
ID: 70555. Cloudinit YAML configuration files were not read properly from the USB drive on bootup.	9.4.1.0
ID: 70497. In the deployment UI, the DHCP lease timer could only be configured in hours instead of seconds.	9.4.1.0
ID: 70486. The "Subnet Error Code" column in the BGP Information table in EdgeConnect Appliance Manager was renamed to avoid confusion.	9.4.1.0
ID: 70120. The formatting of the AS path list in CLI output created a display error in log message and debug message output.	9.4.1.0
ID: 69896. The BGP local preference set via an inbound route map was not displayed in the "accepted routes" data from the CLI.	9.4.1.0
ID: 69866. A configuration issue caused domain-based policy lookup to take longer than expected, stalling the data path and generating lag for users.	9.4.1.0
ID: 69865. An error in deleting routes from the main table resulted in spurious default management routes.	9.4.1.0
ID: 69595. An error in processing multicast IP fragments caused the appliance to reboot unexpectedly.	9.4.1.0
ID: 69593. Firewall configuration changes made from the CLI did not always reflect in the Deployment UI due to how these changes were stored internally.	9.4.1.0
ID: 69531. A validation error in radius snooping caused the appliance to reboot unexpectedly.	9.4.1.0
ID: 69177. A race condition in the handling of a hairpin flow on multiple CPUs caused the appliance to reboot unexpectedly.	9.4.1.0



Issue	First Release to Resolve
ID: 69163. An uninitialized handshake buffer used to process the SSLv2 handshake caused the appliance to reboot unexpectedly.	9.4.1.0
ID: 69160. Underlay tunnel flows from the EdgeHA peer were being classified as inbound and marked as DNAT, resulting in the flow ignoring policy and being routed back over the HA link.	9.4.1.0
ID: 69127. When duplicate routes were present, static routes were not being advertised to the BGP neighbor.	9.4.1.0
ID: 69088. A logic issue caused unexpected usage on LTE tunnels that were supposed to be idle.	9.4.1.0
ID: 68996. Conflicting multicast packets were not correctly dropped, causing the appliance to reboot unexpectedly.	9.4.1.0
ID: 68818. The branch and hub appliances did not properly prioritize existing routes when ECMP was enabled.	9.4.1.0
ID: 68775. An issue with the tunbug configuration file created a potential command injection vulnerability in the command line interface.	9.4.1.0
ID: 68693. Upon upgrade, an ESN synchronization issue caused tunnels to go down.	9.4.1.0
ID: 68654. When a peer priority was changed, the incorrect AS path was advertised to the LAN side of the appliance.	9.4.1.0
ID: 68641. ZTC and YAML file templates incorrectly placed the WAN interface onto a non-default segment.	9.4.1.0
ID: 68640. An issue in IPsec anti-replay handling caused keepalive packet drops, causing tunnels to go down unexpectedly.	9.4.1.0
ID: 68519. Management interface info was not being sent to routed after routed restart when OSPF and/or BGP was enabled.	9.4.1.0
ID: 68130. The peer list did not strictly guarantee peer ID-to-peer index matches with appliances. This could cause traffic to be routed to an incorrect peer.	9.4.1.0
ID: 67232. Suricata logs were not able to be viewed via the CLI.	9.4.1.0
ID: 67177. A set of existing ciphers conflicted with a set of ciphers produced for a later release.	9.4.1.0
ID: 66533. An issue with the way DF flags were stored and propagated in IPv6 flow labels caused performance issues on the appliance.	9.4.1.0
ID: 69598. Flows not resetting automatically after hardware failover.	9.3.1.0
ID: 68847. Boost stats were not reset after the configuration was changed, resulting in insufficient Boost.	9.3.1.0
ID: 68816. The appliance rebooted unexpectedly when the number of labels in internet policy exceeded 16.	9.3.1.0
ID: 68783. An issue with the maximum number of interfaces allowed on a single Nexthop caused tracked entries to point to nonexistent interface indexes.	9.3.1.0
ID: 68760. Alarms erroneously reported that the NTP server was unreachable.	9.3.1.0



Issue	First Release to Resolve
ID: 68731. If an EdgeHA peer was unreachable, an issue with checking the socket status resulted in unnecessary CPU usage.	9.3.1.0
ID: 68596. An issue with ICMP stateful verification caused tunneld to reboot unexpectedly.	9.3.1.0
ID: 68543. A queuing issue caused the LAN Rx queue to become full, leading to performance issues across the appliance.	9.3.1.0
ID: 68464. An API issue caused a mismatch between the SNMP IfIndex on the appliance and SNMP browser inquiries.	9.3.1.0
ID: 68459. When BGP ECMP was enabled, both peers dropped unexpectedly, with only one recovering before reboot.	9.3.1.0
ID: 68356. While inferring internet link quality, the metrics from idle tunnels were ignored, causing gaps in Internet Breakout.	9.3.1.0
ID: 68236. A configuration check required creation of non-default zones to export zone-based firewall stats.	9.3.1.0
ID: 68215. On a segment without any configured route filtering map, the default subnet sharing map was not populated.	9.3.1.0
ID: 68197. A validation error created the possibility for a malicious user to modify the prototype of a JavaScript object.	9.3.1.0
ID: 68195. A configuration change created an issue where the license limit value was no longer updated when the appliance license was updated.	9.3.1.0
ID: 68146. On the Internal Subnets dialog box, the "Consider Non-default routes as internal subnets" check box was not considered before taking an ACL action.	9.3.1.0
ID: 68043. Multiple sysdumps created at the same time created a drain on system memory, causing the appliance to reboot unexpectedly.	9.3.1.0
ID: 67768. A string in any custom IE exceeding 255 characters in length caused an encoding error.	9.3.1.0
ID: 67577. The EC-10104 appliance does not currently support bridge mode.	9.3.1.0
ID: 67355. Upon upgrade, the DNS proxy configuration was not accepted.	9.3.1.0
ID: 67215. If a security policy was added via Appliance Manager and previous Orchestrator rules existed, then the appliance repeatedly tried to apply the firewall zone policy.	9.3.1.0
ID: 66743. Peer priority hostnames had to be updated manually after changing appliance hostnames.	9.3.1.0
ID: 66445. After eBGP was disabled and the appliance rebooted, eBGP ECMP could not be started.	9.3.1.0
ID: 64787. Certain packets continually bounced between LAN ports of appliances in a VRRP pair.	9.3.1.0
ID: 58535. A DNS issue caused issues viewing the interface state for the appliance on a KVM hypervisor.	9.3.1.0
ID: 00542. When using a DNS proxy, the appliance does not modify the TC bit sent from the DNS server from 1 to 0.	9.3.1.0



Issue	First Release to Resolve
ID: 00512. On the EC-10104 appliance, a port initialization issue caused the admin status to appear incorrectly in the web UI.	9.3.1.0
ID: 00498. The EC-10104 appliance does not currently support bridge mode.	9.3.1.0
ID: 72334. This release was patched to address CVE-2022-31676 (local privilege escalation vulnerability).	9.3.0.0
ID: 72333. This release was patched to address CVE-2021-41617 (OpenSSH vulnerability).	9.3.0.0
ID: 67725. Traceroute through the appliance was incorrect because the ICMP "TTL Expired" message was generated with the IP address of a down interface.	9.3.0.0
ID: 67151. A validation error in upgrade image integrity verification could expose a security vulnerability.	9.3.0.0
ID: 67010. This release was patched to address CVE-2023-0215 (OpenSSL vulnerability).	9.3.0.0
ID: 67009. This release was patched to address CVE-2022-4450 (OpenSSL vulnerability).	9.3.0.0
ID: 67008. This release was patched to address CVE-2023-0286 (OpenSSL vulnerability).	9.3.0.0
ID: 67006. This release was patched to address CVE-2022-4304 (OpenSSL vulnerability).	9.3.0.0
ID: 66962. This release was updated to address CVE-2025-37131.	9.3.0.0
ID: 66725. Addresses CVE-2021-41182, CVE-2021-41183, and CVE-2021-41184.	9.3.0.0
ID: 66592. A filename issue prevented the deletion of tcpdump files from the web UI.	9.3.0.0
ID: 66351. An error in the loss calculation formula led to the Overlay/Underlay loss presenting as much higher in the web UI than it actually was.	9.3.0.0
ID: 66232. Under certain conditions, both the software and hardware watchdogs failed to reboot the appliance when the appliance entered a hung state.	9.3.0.0
ID: 66112. This release was patched to address CVE-2023-3053 (command execution vulnerability).	9.3.0.0
ID: 64781. This release was patched to address CVE-2022-44533 (RCE vulnerability).	9.3.0.0
ID: 63821. An issue with authentication tokens resulted in appliances with the same security policy configuration displaying different behavior.	9.3.0.0
ID: 63579. Due to missing bindings in certain scenarios, the appliance cannot synchronize with the Orchestrator upon upgrade from ECOS 8.1.x to ECOS 8.3.x or later.	9.3.0.0
ID: 63509. Some devices became unreachable after accessing management services (HTTP/S, Cloud Portal, Orchestrator).	9.3.0.0
ID: 63472. When there are ECMP routes on the LAN side, IP spoof check dropped flows coming on LAN interfaces that had ECMP. Note: If there are no ECMP routes on the LAN side, there is no issue.	9.3.0.0
ID: 63095. REST response was not handled correctly for empty redist maps pushed from templates.	9.3.0.0



Issue	First Release to Resolve
ID: 63049. When a protection profile is enabled, traceroute via SD-WAN tunnel receives no response from the remote appliance.	9.3.0.0
ID: 62964. Fragmented multicast packets from the source may not be delivered correctly.	9.3.0.0
ID: 62929. This release was patched to address CVE-2023-30507 (read/write vulnerability).	9.3.0.0
ID: 62880. The appliance was unable to ping from the CLI with segment routing enabled.	9.3.0.0
ID: 62877. This release was patched to address CVE-2022-43542 (command injection vulnerability).	9.3.0.0
ID: 62864. Route status indicates Up when peer interface is Down.	9.3.0.0
ID: 62736. This release was patched to address CVE-2023-30510 (server-side request forgery vulnerability).	9.3.0.0
ID: 62722. The denylist was not functioning as expected for SD-WAN flows.	9.3.0.0
ID: 62707. This release was patched to address CVE-2022-37926 (cross-site scripting vulnerability).	9.3.0.0
ID: 62670. This release was patched to address CVE-2022-37923 (command injection vulnerability).	9.3.0.0
ID: 62668. This release was patched to address CVE-2022-37922 (command injection vulnerability).	9.3.0.0
ID: 62666. This release was patched to address CVE-2022-37921 (command injection vulnerability).	9.3.0.0
ID: 62593. On the Interface Summary tab, inbound firewall log drops appear blank even if there have been drops.	9.3.0.0
ID: 60805. A JavaScript heap issue could lead to potential denial of service via an authenticated HTTP request.	9.3.0.0
ID: 60804. An authentication error in the REST API could lead to arbitrary file execution on the system.	9.3.0.0
ID: 68655. BGP-learned routes were not being redistributed into OSPF and SD-WAN fabric.	9.2.6.0
ID: 68598. After ECMP is enabled for LAN-side BGP, the connection to the web UI rebooted intermittently.	9.2.6.0
ID: 67845. The Cluster Peer Down alarm was being raised too often, resulting in asymmetric flow redirection.	9.2.4.0
ID: 67473. A configuration issue stored incorrect Admin distance values in a helper data structure, resulting in BGP route loop prevention not functioning as expected.	9.2.4.0
ID: 67397. A misconfiguration in the cifs_proxy_monitor's select timer resulted in the proxy service rebooting unexpectedly.	9.2.4.0
ID: 67361. When segmentation was enabled, an IPv6 configuration error led to tunnel traffic erroneously appearing in application reports for EdgeHA appliances.	9.2.4.0
ID: 67296. When trying to establish BGP peering from a newly created VRF segment, the Peer State value appeared empty in the web UI.	9.2.4.0
ID: 67027. On the EC-10104 appliance, a routing error erroneously classified standard ports such as lan0 and wan0 as VLAN sub-interfaces, resulting in a configuration error that caused routerd to reboot unexpectedly.	9.2.4.0



Issue	First Release to Resolve
ID: 66760. A command issue created a potential vulnerability where admin users could execute arbitrary code as the root user.	9.2.4.0
ID: 66644. The multicast engine was not recognizing or forwarding SSDP packets.	9.2.4.0
ID: 66641. The BGP peer was not establishing to the ISP neighbor on wan0.	9.2.4.0
ID: 66590. If no subnets were specified in VRF, then the "force-internal" flag was not set, causing a classification issue where traffic was improperly identified as internal.	9.2.4.0
ID: 66545. Subnet API documentation contained some missing fields, resulting in dropped API calls.	9.2.4.0
ID: 66433. A stale flow entry in the hash table caused IPsec tunnels to drop unexpectedly.	9.2.4.0
ID: 66398. A duplicate or overlay ID was causing a bonded tunnel to enter a misconfigured state.	9.2.4.0
ID: 66252. The jsond process stopped unexpectedly, causing the web UI to reboot.	9.2.4.0
ID: 66144. A configuration vulnerability allowed the potential upload of malicious files through the web UI.	9.2.4.0
ID: 66024. If the appliance rebooted during the period between when active and passive seed-ids were pushed, the active seed-id was lost and tunnels dropped unexpectedly.	9.2.4.0
ID: 65904. A validation issue created a potential command injection vulnerability in the command line interface.	9.2.4.0
ID: 65888. ECOS interface changes caused the NTPD service to restart, in turn causing NTP to reboot unexpectedly.	9.2.4.0
ID: 65842. A validation issue prevented IPv6 addresses from being used in passthrough tunnel configuration.	9.2.4.0
ID: 63884. An invalid tunnel flow entry caused packets to be dropped.	9.2.4.0
ID: 63835. Default SSH options on the appliance were erroneously presenting as security issues during vulnerability scans.	9.2.4.0
ID: 62644. A file authentication issue created a potential vulnerability where admin users had read access to sensitive files.	9.2.4.0
ID: 62643. A command issue created a potential vulnerability where admin users had read access to sensitive files.	9.2.4.0
ID: 62609. A command issue created a potential vulnerability where admin users could execute shell commands as the root user.	9.2.4.0
ID: 59961. A network monitoring vulnerability allowed the potential execution of arbitrary shell scripts.	9.2.4.0
ID: 00447. Addresses CVE-2022-4304, CVE-2022-4450, CVE-2023-0215, and CVE-2023-0286.	9.2.4.0
ID: 66614. An authorization issue caused the EC-XS appliance to reboot unexpectedly.	9.2.3.0
ID: 66520. Errors in memory deletion and ruleset functionality caused incorrect IPS action to be performed.	9.2.3.0



Issue	First Release to Resolve
ID: 65648. A change in the Linux kernel version used in ECOS 8.3 prevented LACP packets from being bridged properly, causing the neighboring switch to declare some interfaces as down.	9.2.3.0
ID: 57761. A packet handling issue in tunneld caused checksum verification errors.	9.2.3.0
ID: 66174. A configuration database validation issue prevented successful upgrade of the appliance.	9.2.2.0
ID: 65828. A pre-configuration issue caused an unexpected loss of connectivity between the appliance and the Orchestrator.	9.2.2.0
ID: 65736. A subnet sharing issue caused OSPF routes to drop unexpectedly if there were no routes in the default segment.	9.2.2.0
ID: 64342. An internal flow timer issue led to SYN packets being dropped unexpectedly.	9.2.2.0
ID: 63809. LAN RX and LAN TX bytes were present in some Netflow reports even when they were not configured to be.	9.2.2.0
ID: 63774. TCP traffic was moving slowly between the remote server on AWS and the on-premise appliance.	9.2.2.0
ID: 63651. An issue with how packet loss is calculated led to "Inbound WAN lost" and "Inbound WAN jitter counter" values that seemed excessive.	9.2.2.0
ID: 63598. ACL matching failed when an address group containing 1.1.1.1/32 was used.	9.2.2.0
ID: 63575. Packets were being dropped in FPOC for reaching the maximum buffer limit.	9.2.2.0
ID: 63574. The Overlay-Interface-Transport report was not generating when the Transport option was selected.	9.2.2.0
ID: 63289. Upon upgrade to newer versions, OSPF routes were experiencing unexpected interruptions due to the way the appliance was improperly deleting and then adding routes (instead of upgrading them).	9.2.2.0
ID: 63253. Changed passwords in BGP peer connections were not taking effect until the connections were restarted.	9.2.2.0
ID: 63243. After a spoke appliance was upgraded to 8.3.6.1, it routed traffic to unexpected hub peers. Rebooting it resolved the issue.	9.2.2.0
ID: 63114. TCA alerts remained active after tunnels were deleted.	9.2.2.0
ID: 63071. Accessing the precursor table from multiple datapath threads concurrently resulted in IP SLA tunnels going down unexpectedly.	9.2.2.0
ID: 63062. A configuration issue caused the appliance to not recognize SaaS Optimization settings if certain RTTs were set.	9.2.2.0
ID: 62883. After the appliance was upgraded to an ECOS 8.3.6.x version, fiber interfaces on some hardware models failed to come up.	9.2.2.0
ID: 62759. An assertion failure while processing a multicast packet caused the appliance to restart unexpectedly.	9.2.2.0
ID: 62658. IKE IPsec tunnel traffic loss was observed during the rekey process.	9.2.2.0



Issue	First Release to Resolve
ID: 62654. An issue in the IPsec anti-replay setting while changing a tunnel configuration caused the appliance to reboot unexpectedly.	9.2.2.0
ID: 62620. This release was patched to address CVE-2022-44532 (arbitrary file read vulnerability).	9.2.2.0
ID: 62607. This release was patched to address CVE-2022-43541 (command injection vulnerability).	9.2.2.0
ID: 62884. Flow-redirection flows were not deleted fast enough, causing the number of redirection entries to grow too large and eventually resulting in flow redirection failure.	9.2.1.0
ID: 62783. Adding 0.0.0.0/0 to the list of internal subnets did not account for non-default segments.	9.2.1.0
ID: 62486. The main packet handling process became unresponsive and caused the appliance to reboot unexpectedly.	9.2.1.0
ID: 62481. When a label was used for an action interface, VRRP priority was not decreased for all VRRP instances.	9.2.1.0
ID: 62472. A control message buffer depletion prevented routes from being distributed properly in subnet sharing.	9.2.1.0
ID: 62323. Upon upgrade, a UI issue prevented real-time stats from rendering correctly in the Orchestrator Live View.	9.2.1.0
ID: 62304. After upgrading the appliance, pings were not being successfully relayed between HA interfaces.	9.2.1.0
ID: 60916. In some cases, the appliance was unexpectedly reverting to previous bandwidth license limits.	9.2.1.0
ID: 62573. This release was patched to address CVE-2022-43518 (arbitrary file read vulnerability).	9.2.0.0
ID: 62480. An error in sequence number handling caused the packet daemon to become unresponsive, resulting in an unexpected appliance reboot.	9.2.0.0
ID: 61905. A race condition during Orchestrator update was causing conflicts in API calls, resulting in SaaS optimization running for sites that did not have it enabled.	9.2.0.0
ID: 61876. A UI issue was incorrectly validating invalid distance values in Orchestrator.	9.2.0.0
ID: 61612. A logic issue in the processing of static routes erroneously created multiple route entries but did not mark them as duplicates, causing a conflict and unexpected reboot of the appliance.	9.2.0.0
ID: 61142. Some sub-interfaces were using the same interface name, creating issues in public IP discovery.	9.2.0.0
ID: 60920. AWS URLs were not successfully being added on the Application Definition page.	9.2.0.0
ID: 60894. A validation issue was allowing invalid admin distance values for OSPF routes.	9.2.0.0
ID: 60702. Zscaler GRE tunnels were unexpectedly going offline.	9.2.0.0
ID: 60192. Yocto mii-tool output was displaying advertising and link partner fields backwards.	9.2.0.0
ID: 60125. Some appliances were unexpectedly switching to System Bypass mode and then recovering within a short time.	9.2.0.0



Issue	First Release to Resolve
ID: 59496. On the flow details page, Configured Tx Action was not being updated in all conditions, and the Subnet field was not being displayed when there was no route available.	9.2.0.0
ID: 59166. iperf3 running in UDP mode on LAN was being capped by the WAN inbound shaper.	9.2.0.0
ID: 58892. If IP fragments were received with DF bit set, they would be dropped by the far-end appliance across the SD-WAN fabric.	9.2.0.0
ID: 69293. In a rare case, interface measurements were incorrectly discarded, resulting in a suboptimal interface being chosen for internet breakout traffic.	9.1.9.0
ID: 69047. The appliance web server was restarted repeatedly after upgrading from 8.1.9.18 to 9.1.6.2, causing unstable connectivity to the Orchestrator.	9.1.8.0
ID: 68679. After the appliance was upgraded to 9.1.6.2_92636, the appliance restarted unexpectedly.	9.1.8.0
ID: 68465. HTTP-based IPSLA probes were not sent to the intended Zscaler tunnel on the appliances where segmentation was disabled and an overlay was configured to match traffic to the Zscaler VPN service.	9.1.8.0
ID: 68369. An issue with NAT allocation caused local internet breakout to improperly route NAT traffic.	9.1.8.0
ID: 68364. Flows from wireless access points were disconnected after a tunnel flap, requiring the customer to reset the flows.	9.1.8.0
ID: 68343. This release was patched to address CVE-2023-2650 (OpenSSL vulnerability).	9.1.8.0
ID: 68226. After appliances were upgraded to 9.1.4.2_92345 from 8.3.6.1_86378, idle tunnels on hub appliances began sending more data to spoke appliances.	9.1.8.0
ID: 68019. An anti-replay window de-synchronization issue in IPsec UDP tunnels caused underlay fabric tunnels to drop unexpectedly.	9.1.7.0
ID: 67995. Under certain conditions, the peer index tracking a particular peer ID was reused with a different peer ID, resulting in the new peer erroneously showing it owned a different bonded tunnel.	9.1.7.0
ID: 67484. The Inbound WAN lost count on some appliances was incorrect.	9.1.7.0
ID: 67422. An error during the packet sane check process created a packet double-free in the FPOC/REO engine, causing tunnel to reboot unexpectedly.	9.1.7.0
ID: 67997. A DNS cache issue caused some appliances to lose connectivity to Orchestrator.	9.1.6.1
ID: 67175. An invalid redirect flow caused tunnel to reboot unexpectedly.	9.1.5.0
ID: 65931. A static route with unreachable NextHop was still advertised by the appliance.	9.1.5.0
ID: 66312. A socket leak in the RADIUS module caused a connectivity error when logging in to the appliance from the web UI.	9.1.5.0
ID: 66251. When an IPSEC DPD timeout originated from transient WAN packet loss, third-party IPSEC tunnels would erroneously stay up on the appliance, requiring manual recovery of the tunnel.	9.1.5.0



Issue	First Release to Resolve
ID: 66678. A validation error caused the HASync peer to go down, forcing tunneld to reboot unexpectedly.	9.1.4.4
ID: 66294. A data corruption error led to the appliance rebooting unexpectedly when receiving a flow redirection bulk delete request.	9.1.4.4
ID: 65945. During IPsec rekey, active SAs were being deleted erroneously, causing packet drops.	9.1.4.4
ID: 62479. The EC-XL-H appliance rebooted unexpectedly while testing flow redirection.	9.1.4.4
ID: 66824. An issue with a high rate of concurrent flows caused the current number of flows to be incorrect.	9.1.4.3
ID: 66744. The EC-10104 appliance had no IP configured by default for lan0.	9.1.4.3
ID: 66634. A proxy manager deadlock condition in the appliance caused the appliance to restart.	9.1.4.3
ID: 66613. When the flow redirection feature was enabled, the counter for internal packet drops with the "LAN Rx q full" drop code continued incrementing.	9.1.4.3
ID: 66478. If there are multiple hosts on the WAN-side of the router, the appliance may have issues accessing some external URLs.	9.1.4.3
ID: 66458. A memory issue created a tunneld error and caused the appliance to reboot unexpectedly. This issue was given a temporary fix in a previous release. This update provides a permanent fix.	9.1.4.3
ID: 66451. A configuration issue incorrectly allowed read/write permissions on SNMPv3.	9.1.4.3
ID: 66444. A counting issue caused packet order correction buffer limit to max out, causing unexpected packet drops.	9.1.4.3
ID: 66416. An issue with the curl library in OpenSSL caused the system daemon to restart unexpectedly.	9.1.4.3
ID: 66378. An issue with flow deletion caused the appliance to reboot unexpectedly. The root cause is still unknown. In this release, additional debugging code was added to capture additional information when this issue happened.	9.1.4.3
ID: 66143. A race condition stemming from a flow issue in the inbound shaper caused the appliance to reboot unexpectedly.	9.1.4.3
ID: 66333. The Link Integrity test was not properly executing after upgrade.	9.1.4.2
ID: 63692. An issue with CIFS acceleration disrupted tunneld function, causing the appliance to reboot unexpectedly.	9.1.4.2
ID: 62651. This release was patched to address CVE-2022-37925 (cross-site scripting vulnerability).	9.1.2.0
ID: 62608. This release was patched to address CVE-2023-30501 (command injection vulnerability).	9.1.2.0
ID: 62110. During EC-V deployment, Cloud-init failed to configure Account Name if it contained a comma.	9.1.2.0
ID: 62081. After a subnet configuration change, mgmt0 interface became unstable.	9.1.2.0
ID: 61789. An internal error in TCP flow management caused the appliance to reboot unexpectedly.	9.1.2.0



Issue	First Release to Resolve
ID: 61781. Scans running against EdgeConnect were causing appliances to be intermittently grayed out in Orchestrator.	9.1.2.0
ID: 61778. The appliance was incorrectly reporting model information on SNMP discovery.	9.1.2.0
ID: 61715. The appliance was patched to address CVE-2022-25236 (expat advisory).	9.1.2.0
ID: 61695. A routing issue involving multiple ECMP paths was causing unexpected interruptions to multicast traffic.	9.1.2.0
ID: 61264. The appliance was patched to address CVE-2022-0778 (OpenSSL advisory).	9.1.2.0
ID: 61254. The appliance was unable to configure an IPV6 address due to an error in subnet validation.	9.1.2.0
ID: 60968. Upon upgrade, a provisioning issue prevented Azure waagent from starting as expected.	9.1.2.0
ID: 60955. The appliance was not able to renew the license from the Cloud Portal.	9.1.2.0
ID: 60935. Excessive OSPF logging was causing performance issues on the appliance.	9.1.2.0
ID: 60891. DHCP relay was sometimes not working due to mishandling of interface labels.	9.1.2.0
ID: 60875. When the user clicked the Soft Reset button, a BGP route refresh message was not sent to the BGP peer as expected.	9.1.2.0
ID: 60694. The DHCP client was incorrectly handling the timeout state.	9.1.2.0
ID: 60156. The appliance failed to route some user traffic terminating on a VRRP interface with segmentation enabled due to a default route that was not properly installed.	9.1.2.0
ID: 59552. Tunnels were incorrectly reporting latency measurements when the tunnels were in an idle state.	9.1.2.0
ID: 59162. An issue in how tunnel bandwidth usage was calculated prevented HT link bonding policy from working as expected.	9.1.2.0
ID: 59068. Appliance CLI access was not working from Orchestrator.	9.1.2.0
ID: 62544. A configuration change for the tunnel retry timer caused underlay tunnels to go down unexpectedly.	9.1.1.3
ID: 62289. An error in hair-pinned packet processing caused the appliance to reboot unexpectedly.	9.1.1.3
ID: 62201. When a port-based application definition includes TCP/UDP port 65535, it causes an internal variable overflow that results in perpetual reboot of the appliance.	9.1.1.3
ID: 61728. When an "OR" operator was used in a firewall rule's matching criteria, the rule was not matched and, as a result, packets were incorrectly denied.	9.1.1.3
ID: 61240. Certain flow state variables caused an issue where flow reclassification was not triggered as expected.	9.1.1.3
ID: 60927. The appliance was throwing the error "appliance could not get license lease" even though it could reach the Cloud Portal.	9.1.1.3



Issue	First Release to Resolve
ID: 66092. An issue with the DNS snooping cache caused high CPU utilization, causing user traffic slowdown.	9.1.1.2
ID: 61193. When an ACL rule contained more than one group name, it incorrectly matched some flows, resulting in the flows being dropped.	9.1.1.2
ID: 60892. DHCP relay was sometimes not working due to mishandling of PPP interfaces.	9.1.1.2
ID: 60786. LAN to LAN traffic did not work without configuring a static route on the outgoing LAN interface.	9.1.1.2
ID: 60745. After upgrading ECOS, some packets related to Microsoft Office were being dropped internally.	9.1.1.2
ID: 61069. The appliance failed to forward Radius response messages due to a race condition in an internal queue.	9.1.1.1
ID: 60638. In some use cases, tunnel's quiescent state was misconfigured, prompting tunnels to send too many keepalive packets and causing excessive LTE data usage.	9.1.1.1
ID: 60668. BGP multihop peers were configured from 169.254.0.0/16, resulting in unexpected NLRI prefix import failure.	9.1.1.0
ID: 60649. During route redistribution, prefixes of larger prefix length were being incorrectly matched with routes of smaller prefix length.	9.1.1.0
ID: 60637. A race condition in an internal queue caused the appliance to stop sending PIMv2 Hello messages.	9.1.1.0
ID: 60623. Some vrf-names were not properly updated in DHCP failover settings when tagged interfaces were not part of the default vrf.	9.1.1.0
ID: 60529. A WAN routing policy was not marking LAN SNAT flows as internet traffic, resulting in the flows being dropped.	9.1.1.0
ID: 60445. When IPsec pre-shared keys were changed, EdgeConnect was causing unexpected reboots due to a race condition in the encryption code.	9.1.1.0
ID: 60409. Improperly set ack_by,clear_by parameters caused an unexpected reboot when the appliance raised an alarm.	9.1.1.0
ID: 60361. An issue with incorrectly setting an interface index resulted in ARP not getting resolved on HA control link VLAN interfaces.	9.1.1.0
ID: 60280. Some SNMP traps were still being received for alarms that were no longer active and had been cleared on the appliance.	9.1.1.0
ID: 60236. When specific appliance models were configured for traditional HA, an issue with packet validation for ICMP/traceroute traffic was causing the appliances to reboot unexpectedly.	9.1.1.0
ID: 60204. An issue with BGP continuous route updates was triggered by default route received.	9.1.1.0
ID: 60166. For certain appliance models, using the Configuration History to compare configuration records was generating an error.	9.1.1.0
ID: 60141. EdgeConnect was rebooting due to memory corruption resulting from incorrect handling of redirected flows.	9.1.1.0



Issue	First Release to Resolve
ID: 60083. A recommendation for setting the HTTP IPSLA "Request Timeout" value smaller than the "Inactive Flow Aging Interval" was missing from the help text.	9.1.1.0
ID: 60078. Security policy caused SaaS return traffic for hair-pinned flows to drop unexpectedly.	9.1.1.0
ID: 60076. Trying to process an FTP payload caused an unexpected reboot in certain EdgeConnect devices.	9.1.1.0
ID: 60071. The reply to external traffic that was allowed to pass using a port forwarding rule was being sent to the incorrect WAN interface and dropped.	9.1.1.0
ID: 59945. An unexpectedly high sequence number packet was causing a problem with the FPOC engine, causing the appliance to reboot unexpectedly with no snapshot generated.	9.1.1.0
ID: 59944. On appliances with two PPPoE interfaces, the appliance stopped sending IPSLA traffic to the correct interface after one of the interfaces went down.	9.1.1.0
ID: 59927. After upgrading to 8.3.0.x, the bonding configuration on the EC-M-H appliance was changing from copper (wan0/wan1, lan0/lan1) to fiber (twan0/twan1, tlan0/tlan1).	9.1.1.0
ID: 59910. SHA256 and SHA512 were not supported on the EdgeConnect SSH client.	9.1.1.0
ID: 59883. Moving an interface from one segment to another segment caused the DHCP failover configuration to become invalid.	9.1.1.0
ID: 59806. When using branch NAT, a rule was setting the SNAT IP to the source IP, causing the appliance to reboot unexpectedly.	9.1.1.0
ID: 59794. If advanced segmentation was not enabled in CGNAT deployments, IPsec UDP tunnels and some PAT tunnels could enter a down state.	9.1.1.0
ID: 59744. Appliance generated spurious Disk SMART alarms.	9.1.1.0
ID: 59694. NTP alarms were reporting the NTP server as unreachable from the appliance even though the server was reachable.	9.1.1.0
ID: 59657. Traffic was being backhauled due to brownout limits, but appliance jitter, loss, and latency reports indicated no cause for brownout.	9.1.1.0
ID: 59629. TACACS+ authorization requests were not binding to the right source IP, causing them to go via mgmt0.	9.1.1.0
ID: 59582. A packet that should have been dropped due to a length mismatch was allowed to pass, causing the appliance to reboot unexpectedly.	9.1.1.0
ID: 59505. The GCM cipher configuration was blocking SSH to the appliance.	9.1.1.0
ID: 59412. When regional routing was enabled on a hub appliance, adding a local static route caused some prefixes received from spoke appliances to stop being advertised.	9.1.1.0
ID: 59347. Some appliances were unable to establish multiple IPsec tunnels toward Cisco Umbrella.	9.1.1.0
ID: 59147. Child SA ESP packets were sometimes dropped during phase2/IPsec rekeying in IKEv1 and IKEv2.	9.1.1.0



Issue	First Release to Resolve
ID: 59131. Routes were being shared with BGP peers even though the outbound BGP route map did not permit it.	9.1.1.0
ID: 58267. When a tunnel went down and ICMP flows failed over to passthrough, they were not being reclassified even if the tunnel came back within the reclassification window.	9.1.1.0
ID: 58181. An issue with shared memory resources on an EC-V caused the appliance to reboot unexpectedly, resulting in VRRP failures.	9.1.1.0
ID: 56994. A match string validation error caused an issue syncing ACL/policy maps.	9.1.1.0
ID: 55397. Flows were not getting reclassified to a new peer when a better route having the same metric and different peer priority was found.	9.1.1.0
ID: 60105. Following the upgrade to 9.1, some locations experienced performance issues.	9.1.0.3
ID: 60451. Following the upgrade to 9.1, some locations experienced performance problems due to packet drops on the inbound shaper	9.1.0.2
ID: 59848. An issue with select system calls was causing CPU0 to be stuck at 100% on EdgeHA appliances.	9.1.0.2
ID: 59794. If advanced segmentation was not enabled in CGNAT deployments, IPSec UDP tunnels and some PAT tunnels were ending up in a down state.	9.1.0.1
ID: 59716. The default admin credentials on a new KVM EC-V were not working in some earlier versions of ECOS.	9.1.0.1
ID: 59397. OSPF peering was not working on the lan0 interface, and various troubleshooting steps failed to fix the issue.	9.1.0.0
ID: 59257. When adding a new security policy rule from the table view, an additional "deny everything" rule was being added. The new rule could be deleted from the matrix view but not from the table view.	9.1.0.0
ID: 59254. A BGP neighbor configured with a leftover interface from a previous configuration was causing memory issues that eventually caused the appliance to reboot unexpectedly.	9.1.0.0
ID: 59235. When using preconfig to deploy new sites with lan0 set as the DHCP server, DHCP settings were being removed from some appliances.	9.1.0.0
ID: 59112. File transfer throughput, via FTP or Windows file sharing, was getting throttled when both Advanced Segmentation and DNAT were configured.	9.1.0.0
ID: 59037. Following the upgrade to ECOS 9.0.2.6, two separate EC-Vs deployed in Azure were rebooting unexpectedly on a frequent basis.	9.1.0.0
ID: 58946. UDP DNS packets were being dropped at the firewall due to a bad checksum after SNAT had been performed.	9.1.0.0
ID: 58875. If a native interface was admin down and a VLAN interface was deployed on it, the appliance would fail to send ARP requests on that interface after it was brought up.	9.1.0.0
ID: 57683. The ip mgmt-ip command was allowing any IP as input without validating that the IP address was configured on the appliance.	9.1.0.0



Issue	First Release to Resolve
ID: 57670. The total length of ACL rule entries was not being validated, resulting in issues when pushing new security policies.	9.1.0.0
ID: 57459. An appliance that had mgmt0 disconnected was generating a large amount of alarm emails because DHCP was continuously trying to gen an IP address for it.	9.1.0.0
ID: 57296. Cloud Orchestrator showed a top talker IP for a specific appliance with a lot of flows that was not showing up in flow details or TCP dumps.	9.1.0.0
ID: 57252. All EC-Vs with 8 GB or 12 GB of RAM and default system limits will continue to support 5000 and 10000 tunnels, respectively, but network memory allocation is reduced by 800 MB.	9.1.0.0
ID: 57116. During a file transfer between two sites, live view showed the backup link in red but the circuit had been up and available.	9.1.0.0
ID: 56968. Options to enable or disable validation of the Cloud Portal SSL certificate are now available in the Appliance Manager UI.	9.1.0.0
ID: 56943. DNS proxy self flows were not matching ACL rules with interface label match criteria.	9.1.0.0
ID: 56772. This release includes some code changes intended to block attackers from executing unauthorized shell commands.	9.1.0.0
ID: 56453. The monitor account had lost access to traceroute, ping, slogin, and other diagnostic commands.	9.1.0.0
ID: 56194. On an appliance with three OSPF peers, one of the peers was expectedly remaining in 2-way state, but the appliance was erroneously generating an alarm for it.	9.1.0.0
ID: 62320. The grub boot command line option for resetting to factory defaults failed to clear application definition-related files.	9.0.9.0
ID: 60307. With DNS proxy enabled on the EdgeConnect, certain systems did not register on the AD server with their domain name.	9.0.6.0
ID: 59132. After bringing up a new site, switches at multiple datacenters stopped receiving SD-WAN routes via OSPF, causing all sites to lose access to critical applications.	9.0.3.2
ID: 58947. After making changes to an overlay configuration, appliances were deleting and recreating the overlay and ending up with an incorrect configuration.	9.0.3.2
ID: 57799. After changing the IP of the internet interface with NAT turned on, the interface's public IP was not getting discovered.	9.0.3.0
ID: 57688. With advanced segmentation enabled, a route was not being removed from the routing table after the BGP peer stopped advertising the prefix.	9.0.3.0
ID: 57585. Orchestrator was failing to apply the TACACS+ configuration in the Management template on certain appliances.	9.0.3.0
ID: 57330. For appliances with uptime greater than one year, the calculation to number of days was being converted incorrectly for display in the appliance WebUI banner.	9.0.3.0
ID: 56999. A default route added to the route table via the GUI was not showing up in the CLI.	9.0.3.0



Issue	First Release to Resolve
ID: 56955. A software issue encountered during the upgrade from ECOS 8.1.9.12 to 8.3.2.1 caused the appliance to become unresponsive.	9.0.3.0
ID: 56842. Following the migration from NX appliances, traffic in the Flows table was not displaying correctly.	9.0.3.0
ID: 56724. After upgrading to ECOS 8.3.0.x, a tunnel that had a space in its name would not come up.	9.0.3.0
ID: 56619. Enabling advanced segmentation and moving lan0 from the default segment caused the appliance to reboot unexpectedly.	9.0.3.0
ID: 56156. Routes were flapping on one appliance of an EdgeHA pair due to ARP failures for some neighbors.	9.0.3.0
ID: 55853. Sending an appliance bandwidth increase at the same time as a shaper bandwidth increase that exceeded the current maximum bandwidth was resulting in a 50 Gbps max auto bandwidth on a 1 Gbps circuit. In addition, the maximum license bandwidth was not enforced in the inbound shaper.	9.0.3.0
ID: 58261. When disabling BGP, a flag that indicated a route had been advertised was not being reset, so routes were not being advertised when BGP was enabled again.	9.0.2.5
ID: 57259. Packets chained together by the Shaper had been inbound from passthrough and bonded tunnels and only passthrough was expected, causing the appliance to reboot unexpectedly.	9.0.2.5
ID: 57491. An issue when handling multicast join/prune messages caused the appliance to reboot unexpectedly.	9.0.2.2
ID: 57123. DNS snooping did not properly handle domain names that might be mapped to distinct IP addresses based on the client IP address.	9.0.2.2
ID: 57000. In some cases, during an upgrade, multiple calls were being made to management processes for database query operations. This was creating a race condition, the result being that OSPF route map rules were not getting configured correctly.	9.0.2.2
ID: 56967. When a loopback interface was selected as the source interface for management services such as NetFlow/IPFIX, traffic associated with these services was getting routed incorrectly as passthrough.	9.0.2.2
ID: 56910. ECOS 9.0.2.0 had a memory leak in the multicast routing process.	9.0.2.1
ID: 56881. The default route in the advanced segmentation route table was missing, causing connectivity issues with an appliance in a specific segment.	9.0.2.1
ID: 56877. Following a route change from a remote appliance, a tunnel mismatch on an inbound packet caused the appliance to reboot unexpectedly.	9.0.2.1
ID: 56791. In a case where two firewalls were sending packets to one another at the same time, the advanced segmentation code was dropping inbound packets.	9.0.2.1
ID: 56707. The interfaces page was displaying incorrect segment information when VLANs were in use.	9.0.2.0
ID: 56580. A default route learned from an eBGP peer was not always advertised to the SD-WAN fabric.	9.0.2.0
ID: 56164. Appliance rebooted due to a mishandling of sequence number wraparound in the packet order correction function.	9.0.2.0



Issue	First Release to Resolve
ID: 56150. Previous ECOS versions failed to populate RTM and subnet route table with AWS TGW eBGP prefix updates.	9.0.2.0
ID: 56141. BGP sessions were not coming up with VTI in a non-default segment.	9.0.2.0
ID: 55993. An RTCP (RTP Control Protocol) connection was not properly classified when it was established using SIP.	9.0.2.0
ID: 55933. Compound applications were not matching correctly when using a hyphen to indicate an IP range.	9.0.2.0
ID: 55806. When advanced segmentation was enabled, enabling Boost with IP Header Compression disabled was causing udp flows to fail with invalid checksums.	9.0.2.0
ID: 55798. A path characterization packet was mishandled when it was received after the corresponding tunnel had been deleted, causing the appliance to reboot.	9.0.2.0
ID: 55739. Hub site tunnels were stuck in "MTU discovery," which caused a network outage.	9.0.2.0
ID: 55692. There were memory leaks associated with certain tunnel configuration steps, causing system memory depletion and eventually appliance reboot.	9.0.2.0
ID: 55663. ECOS stats from the Orchestrator Rest API were returning interface stats and details but the label but the label wasn't showing up.	9.0.2.0
ID: 55586. At times, when MySQL traffic was being sent over the Default BIO, WAN latency was spiking and causing application issues.	9.0.2.0
ID: 55500. After adding back an interface that had been deleted more than 100 days earlier, packets were getting held up in a shaper queue, resulting in a LAN Rx buffer shortage.	9.0.2.0
ID: 55352. Updated the SSH library to address a number of CVEs.	9.0.2.0
ID: 55181. The WebSocket connection to Orchestrator was being closed incorrectly after receiving a delayed close event from the kernel TCP stack.	9.0.2.0
ID: 55073. After deployment with ECOS 8.3.1.x, the lan3 and wan3 interfaces on an EC-V were down and required manual intervention to make operational.	9.0.2.0
ID: 54959. RADIUS/TACACS+ were not available under Management Services.	9.0.2.0
ID: 54593. Appliance rebooted when it hit an ACL configuration error in the configuration database during initialization.	9.0.2.0
ID: 55830. If advanced segmentation was enabled, errors were being generated when trying to add more than 10 BGP peers from the routing segmentation page.	9.0.1.1
ID: 55728. Following the upgrade to ECOS 9.0.1.0, BGP sessions to AWS Transit Gateway stopped working.	9.0.1.1
ID: 55555. When deleting many BGP/OSPF routes learned from a peer subnet update, some routes were left undeleted but marked as pending deletes. This was causing affected appliances to show as DOWN for remote SD-WAN routes.	9.0.1.0



Issue	First Release to Resolve
ID: 55203. ssh was listening on all interfaces even though it was enabled only on loopback.	9.0.1.0
ID: 54980. Internet flows were performing poorly and there was an increase in packet decode errors when Boost was enabled.	9.0.1.0
ID: 54956. BGP routes were flapping at multiple sites in different locations at the same time.	9.0.1.0
ID: 54928. With advanced segmentation enabled, OSPF peers were not coming up unless BGP was enabled in the default segment.	9.0.1.0
ID: 54926. Multicast pimX interface IP addresses were being advertised to OSPF/BGP peers, requiring users to add route-filtering rules to OSPF and BGP outbound maps to prevent advertisement of internal subnets used for multicast.	9.0.1.0
ID: 54373. DNS proxy was not supported with advanced segmentation enabled.	9.0.1.0
ID: 53623. This release includes support for varying levels of security for shell access: open shell access, secure shell access, or disabled shell access.	9.0.0.0
ID: 53538. Under heavy logging demand, some log messages were overwritten resulting in corrupted messages.	9.0.0.0
ID: 53252. This release patches several low and medium severity security vulnerabilities identified in ECOS software.	9.0.0.0
ID: 53237. Appliances can now be configured to reject self-signed certificates. This feature addresses CVE-2020-12143 and CVE-2020-12143.	9.0.0.0
ID: 53216. A new IKE-less seed distribution mechanism is now supported in ECOS. This feature addresses CVE-2020-12142.	9.0.0.0
ID: 51178. Added more logging around tunnel stats to help in troubleshooting tunnel down/flapping issues.	9.0.0.0
ID: 48844. HA traffic (inbound flow) was being sent to LAN0 when the secondary appliance (LAN1) was powered down.	9.0.0.0



## Resources

If you have any questions, contact your HPE Aruba Networking sales representative.

For product and technical support, contact HPE Aruba Networking using any of the methods below:

### Contract Support

If you are an existing HPE Aruba Networking customer, contact Support at 1.800.633.3600 (toll-free in the USA).

### Support Portal

The HPE Networking Support Portal provides one-click entry to case management, digital RMA, asset management, custom notification settings, and software and document downloads. Process an RMA online or enjoy the convenience of live chat in multiple languages.

- <https://networkingsupport.hpe.com/home>

### Global TAC

HPE Aruba Networking's technical assistance centers provide AI-driven 24x7x365 support with world-class customer satisfaction and net promoter scores. It is not just break/fix information, but includes advice on configuration, administration, interoperability, and other best practices.

- <https://www.hpe.com/us/en/networking/hpe-aruba-networking-support-services.html>

### Airheads Community

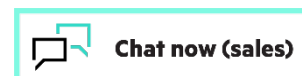
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