

AOS-CX 10.13.1010 Release Notes

9300 Switch Series



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Products Supported

This release applies to the 9300 Switch Series. The following table lists any applicable minimum software versions required for that model of switch.



If your product is not listed in the below table, no minimum software version is required.

Product number	Product name	Minimum software version
R9A29A	Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Front-to-Back 6 Fans 2 AC PSU Bundle	10.10.1000
R9A30A	Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Back-to-Front 6 Fans 2 AC PSU Bundle	10.10.1000
R8Z96A	Aruba 9300-32D 32-port 100/200/400G QSFP-DD 2-port 10G Switch	10.10.1000

Important information for 9300 Switches



Aruba switches covered by this release note use eMMC or SSD storage. This is non-volatile memory for persistent storage of config, files, databases, scripts, and so forth. Aruba recommends updating to version 10.06.0100 or later (including this release) to implement significant improvements to memory usage and prolong the life of the switch.

To avoid damage to your equipment, do not interrupt power to the switch during a software update.



If using the WebUI, you should clear the browser cache after upgrading to this version of software before logging in to the switch using a WebUI session. This will ensure the WebUI session downloads the latest changes. Do not upgrade to 10.13 using REST API or WebUI unless your switch is running 10.09.1060, 10.10.1020 or later versions of these releases

To restore a previous configuration when downgrading to a previous version of software, follow these steps:

1. Use the `show checkpoint` command to see the saved checkpoints and ensure that you have a checkpoint that is an exact match of the target software version (see the `Image Version` column in the output of the command, for example `CL.10.0x.yyyy`).

This checkpoint can be the startup-config-backup automatically created during the initial upgrade or any other manually created checkpoint for the target software version.

2. Copy the backup checkpoint into the startup-config.
 3. Boot the switch to the target version (lower version), making sure to select `no` when prompted to save the current configuration.
-



AOS-CX 10.13 is a Long Supported Release (LSR).

- LSRs are long lived releases where Aruba will introduce new features and new hardware, and park hardware (that is, this may be the last major release supported) as needed.
- LSRs are maintained and supported for 5 years (i.e., Initial Release + 5 years)
- Initial Release to End of Maintenance (EOM*): Bug and vulnerability patching with releases reducing in frequency over time.
- EOM to End of Support (EOST): Vulnerability patching on an as needed basis for High or Critical CVSS issues.

For information about Short Supported Releases (SSRs) and Long Supported Releases (LSRs), see <https://www.arubanetworks.com/support-services/end-of-life/arubaos-software-release/>.

To upgrade to:	Your switch must be running this version or later:
AOS-CX 10.13.xxxx	AOS-CX 10.10.0002
AOS-CX 10.12.xxxx	AOS-CX 10.09.0002
AOS-CX 10.11.xxxx Note: 10.11 is an SSR, recommended release is 10.11.0001	AOS-CX 10.08.0001

Refer to the Approved Product Lists sites for the Common Criteria, FIPS 140-2 and DoDIN APL to obtain the product certification details. Products should be used as evaluated and defined in the respective configuration guides.

- Common Criteria: <https://www.niap-ccevs.org/Product/>
- FIPS 140-2: <https://csrc.nist.gov/Projects/Cryptographic-Module-Validation-Program/Validated-Modules/Search>
- DoDIN APL: <https://aplits.disa.mil/processAPList.action>

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Attn: General Counsel
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San Jose, CA 95002
U.S.A.

Please specify the product and version for which you are requesting source code. You may also request a copy of this source code free of charge at: <https://hpe.com/software/opensource>

Version history

All released versions are fully supported by Aruba, unless noted in the table.

Version number	Release date	Remarks
10.13.1010	09/04/2024	Released, fully supported, and posted on the Web.
10.13.1000	31/01/2024	Released, fully supported, and posted on the Web.
10.13.0005	14/11/2023	Released, fully supported, and posted on the Web.

Compatibility/interoperability

The switch web agent supports the following web browsers:

Browser	Minimum supported versions
Edge (Windows)	41
Chrome (Ubuntu)	76 (desktop)
Firefox (Ubuntu)	113
Safari (MacOS)	12
Safari (iOS)	10 (Version 12 is not supported)



Internet Explorer is not supported.

Recommended versions of network management software for switches found in this release note:

Management software	Recommended version(s)
NetEdit	2.10.0

Management software	Recommended version(s)
Aruba Central	2.5.7
AirWave	8.3.0.2
Central On-Premises	2.5.7.3
Aruba Fabric Composer	7.0.1
Aruba CX Mobile App	Support coming in future release.



For more information, see the respective software manuals.



To upgrade software using NetEdit, make sure to upgrade to the above version of NetEdit first and then execute the switch software upgrade on devices discovered by this version of NetEdit.

Enhancements

There are no new enhancements introduced in this release.

Resolved Issues

This section describes the issues resolved in this release.

Category	Bug ID	Description
Classifier	246512	<p>Symptom: Some users see "unknown" listed for the sequence number or the list type in the ACL logging context.</p> <p>Scenario: This issue is observed when the user has an ACL configured with the keyword "log" and when QoS or VSX is configured.</p>
SNMP	285540	<p>Symptom: If both IPv4 and IPv6 neighbors are used while configuring BGP, the SNMP walk displays incorrect information about the IPv4 peer sessions.</p> <p>Scenario: This issue occurs when the user configures both IPv4 and IPv6 neighbors. As a result, the SNMP walk displays information about non-existent IPv4 peers.</p>
VSX	289568	<p>Symptom: The root switch initiates STP re-convergence and causes causing MAC flush and traffic loss.</p> <p>Scenario: This issue occurs during an upgrade process in VSX pair (which acts as non-root switch in RPVST topology). When</p>

Category	Bug ID	Description
		<p>the primary switch is down, this issue is encountered in a non-root access switch connected to this VSX-pair.</p> <p>Workaround: Install BPDU filter on the root-port of access switch during the software upgrade and remove the filter after the upgrade.</p>
DHCP Relay	291742	<p>Symptom: DHCP relay does not change the source IP address of the DHCP discover frame if the DHCP client does not use 0.0.0.0 as the source IP address.</p> <p>Scenario: This issue occurs when the DHCP packet is generated by the client with a valid private IP address as the source IP address.</p> <p>Workaround: Use source interface configuration.</p>
Mirroring	291874	<p>Symptom: The mirroring feature crashes when the administrative state of the mirror has been changed.</p> <p>Scenario: This issue only occurs after an HA event.</p> <p>Workaround: Rebuild the mirrors manually after any HA event or checkpoint restoration to avoid any crash.</p>
IGMP/MLD	292078	<p>Symptom: The event message, Event ID 2628: "IGMP/MLD internal queue limit exceeded. Needs admin intervention" is logged multiple times.</p> <p>Scenario: This issue is observed in VXLAN overlay networks that do not have any multicast configuration.</p> <p>Workaround: Enable IGMP snooping on each VLAN carried in the overlay on all switches acting as VTEPs. Alternatively, use the logging filter command to deny log messages with the Event ID 2628.</p>
DHCP Relay	292116	<p>Symptom: Some DHCP clients did not accept the DHCP offer via IP helper.</p> <p>Scenario: This issue occurs when the source IP field in L3 header of the OFFER packet does not match with the Relay Agent IP address, but with option 54 DHCP Server IP address.</p>
Central	293314	<p>Symptom: The client list is not populated in the Central client view page.</p> <p>Scenario: In very rare instances, after maintenance is performed on Aruba Central infrastructure, the client list in the Central client view page may fail to list the connected clients for some switches. This issue is uncommon enough that an upgrade to this release may not be</p>

Category	Bug ID	Description
		warranted if the only reason for the upgrade is to avoid this potential issue. Workaround: From the switch console, enter bash via the start-shell command, and execute the command systemctl restart yang-resolverd .
VRF	295703	Symptom: The vtysh session logs out when the show bgp vrf info command is issued. Scenario: This issue occurs after a reboot of the switch. Workaround: Issue the show running-config vrf command instead of the show bgp vrf info command.
VSX Sync	299838	Symptom: The interface VLAN configuration did not synchronize on the secondary switch. Scenario: This issue is observed in a pair of switches where the user configures an interface VLAN with vsx-sync configuration on the primary VSX and then creates the same interface VLAN on the secondary switch. Workaround: When vsx-sync is enabled on the interface VLAN of the primary VSX member, it is recommended to wait for at least 15 seconds before configuring the same on the secondary switch. Alternatively, configure the interface VLAN on the secondary switch and then enable vsx-sync on the primary switch.
VSX	299851	Symptom: VSX software upgrade failed to upgrade the primary VSX member. Scenario: This issue is observed while upgrading the software image in a VSX cluster using vsx update-software mechanism. The upload will fail if the image name is modified. Workaround: Manually load the image in the boot bank or rename the image to standard format: XX_10_XX_XXXX.swi.
SNMP	300381	Symptom: SNMP daemon crashes. Scenario: In some scenarios, the hpe-snmpd process might crash while performing multiple SNMP polling actions in conjunction with configuration push from Aruba Central.
License	TMA-4234	Symptom: The switch advanced license is incorrectly flagged as expired. Scenario: This issue is observed when the switch is configured with non-UTC time. After installing a license to enable advanced features on the switch, the licenses expiration date is incorrectly flagged as expired.

Category	Bug ID	Description
		Workaround: Set the switch to UTC time to activate the license.

Feature Caveats

The following are feature caveats that should be taken into consideration when using this version of the software.

Feature	Description
Central	When a switch is able to connect to Aruba Central but is not registered in the Aruba Central inventory or does not have a proper license, the switch will get disconnected. If the Aruba Central feature is enabled using this command, the switch will then reconnect back to Aruba Central and will get disconnected again. This connect/disconnect process will continue until the switch is properly registered in Aruba Central. To avoid this unnecessary reconnection cycle, best practices is to disable Aruba Central until the switch is registered in Aruba Central, or a license is obtained for that device.
Hot Patch	When a hot-patch file download is triggered using the switch WebUI, log messages can incorrectly state that the file is added to the database with a missing status. This is a temporary state, and will correctly change to Not applied once the download is completed.
PIM-SM	Pim Active-Active is not supported on overlay VXLAN SVIs.
SNMP	When SNMP is enabled via the switch CLI, it can take between 1-2 minutes for the SNMP daemon to be ready to respond to requests. If a local or external SNMP MIB walk is performed in the interval between when SNMP is first enabled and the SNMP daemon is ready, the MIB walk action will return an error.
Certificates	When a switch uses a certificate with a legacy certificate name that is not supported in 10.12 because it contains disallowed characters, the information will migrate properly in the upgrade, but that certificate can no longer be edited. For new certificate names, only alphanumeric characters, dots, dashes, and underscores are allowed.
Classifiers	For Classifier policy modifications to be secure, Aruba strongly encourages modifications be done as a three-step process: Bring down the port, modify, and bring the port back up.
Classifiers	Policies containing both MAC and IPv6 classes are not allowed.
CMF	No other checkpoint besides "startup-configuration" gets migrated during the upgrade process.
DHCP Server, DHCP Relay, and DHCP Snooping	DHCP Relay and DHCP Snooping can co-exist on the same switch. DHCP Snooping and DHCP Server cannot co-exist on the same switch. DHCP Snooping, DHCP Relay, and DHCP Server together cannot co-exist on the same switch.
IP-SLA	Reserved ports or ports used by other applications/services with in the system are not recommended to be used for other services. When two services use the same port there is chance of unexpected behaviors from these services. Best practices is to use unique port for each service across

Feature	Description
	system.
IGMP/PIM on 6-in-6, Loopback and GRE interfaces	IGMP cannot be enabled on either Loopback or GRE interfaces. IGMP and PIM is not supported on a 6-in-6 Tunnel.
Multicast and VXLAN	<ul style="list-style-type: none"> ▪ VXLAN must be configured prior to configuring VSX. ▪ IPv6 multicast is not supported for VXLAN overlay. ▪ Multicast support for static VXLAN in the overlay has limited support. Contact Aruba Support for details.
PFC	Priority-based flow control (PFC) is not supported on a split port.
REST	REST supports the 'admin' and 'operator' roles but does not work with TACACS+ command authorization.
Traceroute	Issuing the traceroute command with the ip-option loosesourceroute parameter fails in an overlay EVPN-VxLAN deployment.
Traceroute	Traceroute v4/v6 over VXLAN fails to find intermediate next-hop IP information from a source VTEP in Virtual Active Gateway environment (the SVI is the same as the Active Gateway IP).

Known Issues

The following are known open issues with this branch of the software. The **Symptom** statement describes what a user might experience if this is seen on the network. The **Scenario** statement provides additional environment details and trigger summaries. When available, the **Workaround** statement provides a workaround to the issue.

Category	Bug ID	Description
Central	294122	<p>Symptom: Some hpe-restd core dumps may be generated after the switch reboots. This will not interrupt the normal switch operation.</p> <p>Scenario: This can occur every time the switch reboots.</p> <p>Workaround: The hpe-restd core dumps generated after the switch is rebooted have no impact to switch operation, and can be ignored..</p>
GRE Tunnels	279874	<p>Symptom: BGP sessions go down.</p> <p>Scenario: This issue occurs after traffic is sent over two tunnels. However, BGP session does not go down if there's no traffic.</p>

Upgrade information

AOS-CX 10.13.1010 uses ServiceOS CL.01.12.0002.



CAUTION

Each VSX switch in a pair must run the same version of AOS-CX. If a primary VSX switch is upgraded to 10.10.xxxx, the secondary VSX switch must be immediately upgraded to that same version. If the ISL link is disabled and enabled on VSX switches that are running different versions of AOS-CX, a VSX secondary switch running an older version of AOS-CX may be unable to synch information from the VSX primary, which can cause the port state to become blocked and lead to traffic loss.



NOTE

Do not interrupt power to the switch during this important update.

Manual configuration restore for software downgrade

To restore a previous configuration when downgrading to a previous version of software, follow these steps:

1. Use the **show checkpoint** command to see the saved checkpoints and ensure that you have a checkpoint that is an exact match of the target software version (see the **Image Version** column in the output of the command, for example, CL.10.xx.yyyy).

This checkpoint can be the startup-config-backup automatically created during the initial upgrade or any other manually created checkpoint for the target software version.

2. Copy the backup checkpoint into the startup-config.
3. Boot the switch to the target version (lower version), making sure to select `no` when prompted to save the current configuration.

Performing the software upgrade

For additional upgrade and downgrade scenarios, including limitations of automatic upgrade and downgrade scenarios provided by the Configuration Migration Framework (CMF), refer to the [AOS-CX 10.13 Fundamentals Guide](#).



CAUTION

This version may contain a change of BootROM from the current running version. A BootROM update is a non-failsafe update. Do not interrupt power to the switch during the update process or the update could permanently damage the device.

1. Copy the new image into the non-current boot bank on the switch using your preferred method.
2. Depending on the version being updated, there may be device component updates needed. Preview any devices updates needed using the `boot system <BOOT-BANK>` command and entering `n` when asked to continue.

For example, if you copied the new image to the secondary boot bank and no device component updates are needed, you will see this:

```
switch# boot system secondary
Default boot image set to secondary.
Checking if the configuration needs to be saved...

Checking for updates needed to programmable devices...
```

```
Done checking for updates.
```

```
This will reboot the entire switch and render it unavailable  
until the process is complete.  
Continue (y/n)? n
```

In this example, three device updates will be made upon reboot, one of which is a non-failsafe device:

```
switch# boot system secondary  
Default boot image set to secondary.  
Checking if the configuration needs to be saved...  
  
Checking for updates needed to programmable devices...  
Done checking for updates.  
  
2 device(s) need to be updated during the boot process.  
The estimated update time is between 2 and 3 minute(s).  
There may be multiple reboots during the update process.  
  
1 non-failsafe device(s) also need to be updated.  
Please run the 'allow-unsafe-updates' command to enable these updates.  
  
This will reboot the entire switch and render it unavailable  
until the process is complete.  
Continue (y/n)? n
```

3. When ready to update the system, if a non-failsafe device update is needed, make sure the system will not have any power interruption during the process. Invoke the `allow unsafe updates` command to allow updates to proceed after a switch reboot. Proceed to step 4 within the configured time.

```
switch# config  
switch(config)# allow-unsafe-updates 30  
  
This command will enable non-failsafe updates of programmable devices for  
the next 30 minutes. You will first need to wait for all line and fabric  
modules to reach the ready state, and then reboot the switch to begin  
applying any needed updates. Ensure that the switch will not lose power,  
be rebooted again, or have any modules removed until all updates have  
finished and all line and fabric modules have returned to the ready state.  
  
WARNING: Interrupting these updates may make the product unusable!  
  
Continue (y/n)? y  
  
Unsafe updates      : allowed (less than 30 minute(s) remaining)
```

4. Use the `boot system <BOOT-BANK>` command to initiate the upgrade. On the switch console port an output similar to the following will be displayed as various components are being updated:

```
switch# boot system secondary  
Default boot image set to secondary.  
Checking if the configuration needs to be saved...
```

Checking for updates needed to programmable devices...
Done checking for updates.

3 device(s) need to be updated during the boot process.
The estimated update time is between 2 and 3 minute(s).
There may be multiple reboots during the update process.

This will reboot the entire switch and render it unavailable
until the process is complete.

Continue (y/n)? **y**

The system is going down for reboot.

Looking for SVOS.

Primary SVOS: Checking...Loading...Finding...Verifying...Booting...

ServiceOS Information:

Version: <serviceOS_number>
Build Date: yyyy-mm-dd hh:mm:ss PDT
Build ID: ServiceOS:<serviceOS_number>:6303a2a501ba:202006171659
SHA: 6303a2a501bad91100d9e71780813c59f19c12fe

Boot Profiles:

- 0. Service OS Console
- 1. Primary Software Image [xx.10.12.1000]
- 2. Secondary Software Image [xx.10.13.0001]

Select profile(secondary):

ISP configuration:

Auto updates : enabled
Version comparisons : match (upgrade or downgrade)
Unsafe updates : allowed (less than 29 minute(s) remaining)

Advanced:

Config path : /fs/nos/isp/config [DEFAULT]
Log-file path : /fs/logs/isp [DEFAULT]
Write-protection : disabled [DEFAULT]
Package selection : 0 [DEFAULT]

3 device(s) need to be updated by the ServiceOS during the boot process.
The estimated update time by the ServiceOS is 2 minute(s).
There may be multiple reboots during the update process.

MODULE 'mc' DEVICE 'svos_primary' :

Current version : '<serviceOS_number>'
Write-protected : NO
Packaged version : '<version>'
Package name : '<svos_package_name>'
Image filename : '<filename>.svos'
Image timestamp : 'Day Mon dd hh:mm:ss yyyy'
Image size : 22248723
Version upgrade needed

Starting update...

```
Writing... Done.
Erasing... Done.
Reading... Done.
Verifying... Done.
Reading... Done.
Verifying... Done.

Update successful (0.5 seconds).

reboot: Restarting system
```

Multiple components may be updated and several reboots will be triggered during these updates. When all component updates are completed, the switch console port will arrive at the login prompt with a display similar to following:

```
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12.211 and 12.212, Commercial Computer Software, Computer Software
Documentation, and Technical Data for Commercial Items are licensed to the
U.S. Government under vendor's standard commercial license.

We'd like to keep you up to date about:
* Software feature updates
* New product announcements
* Special events
Please register your products now at: https://asp.arubanetworks.com

switch login:
```



Aruba recommends waiting until all upgrades have completed before making any configuration changes.

Aruba is committed to ensuring you have the resources you need to be successful. Check out these learning and documentation resources:

- AOS-CX switch software documentation portal: https://www.arubanetworks.com/techdocs/AOS-CX/help_portal/Content/home.htm
- AOS-CX technical training videos on YouTube: https://www.youtube.com/playlist?list=PLsYGHuNuBZcbWPEjjHuVMqP-Q_UL3CskS

A Security Bulletin is the first published notification of security vulnerabilities and is the only communication vehicle for security vulnerabilities.

- Fixes for security vulnerabilities are not documented in manuals, release notes, or other forms of product documentation.
- A Security Bulletin is released when all vulnerable products still in support life have publicly available images that contain the fix for the security vulnerability.

The Aruba security policy can be found at <https://www.arubanetworks.com/en-au/support-services/sirt/>. Security bulletins can be found at <https://www.arubanetworks.com/en-au/support-services/security-bulletins/>. You can sign up at https://sirt.arubanetworks.com/mailman/listinfo/security-alerts_sirt.arubanetworks.com to initiate a subscription to receive future Aruba Security Bulletin alerts via email.