AirWave 8.2.2.1

aruba

a Hewlett Packard
Enterprise company

Copyright Information

© Copyright 2016 Hewlett Packard Enterprise Development LP

Open Source Code

This product includes code licensed under the GNU General Public License, the GNU Lesser General Public License, and/or certain other open source licenses. A complete machine-readable copy of the source code corresponding to such code is available upon request. This offer is valid to anyone in receipt of this information and shall expire three years following the date of the final distribution of this product version by Hewlett-Packard Enterprise Company. To obtain such source code, send a check or money order in the amount of US $10.00 to:

Hewlett-Packard Enterprise Company
Attn: General Counsel
3000 Hanover Street
Palo Alto, CA 94304
USA

Please specify the product and version for which you are requesting source code.

AirWave 8.2.2.1 is a software patch release that introduces new features and fixes to issues detected in previous releases. For more information about the features described in the following sections, see the *AirWave 8.2 User Guide*, *Aruba 8.2 Supported Infrastructure Devices* document, and *Aruba Instant in AirWave 8.2 Deployment Guide*.

Release Overview

- "New Features" on page 4 describes the new features and enhancements introduced in this release.
- "Supported Infrastructure Devices" on page 10 lists new devices supported by AirWave 8.2.x.
- "Resolved Issues" on page 12 describes issues resolved in AirWave 8.2.2.1 and previous releases.
- "Known Issues" on page 24 lists and describes the known issues identified in AirWave 8.2.2.1 and previous releases.

Contacting Support

Table 1: *Contact Information*

Main Site	arubanetworks.com
Support Site	support.arubanetworks.com
Airheads Social Forums and Knowledge Base	community.arubanetworks.com
North American Telephone	1-800-943-4526 (Toll Free) 1-408-754-1200
International Telephone	arubanetworks.com/support-services/contact-support/
Software Licensing Site	licensing.arubanetworks.com
End-of-life Information	arubanetworks.com/support-services/end-of-life/
Security Incident Response Team (SIRT)	Site: arubanetworks.com/support-services/security-bulletins/ Email: sirt@arubanetworks.com

AirWave 8.2.2.1 introduces the following features and enhancements:

- "Support for Controller Clusters" on page 4
- "Support for MultiZone Deployment" on page 7
- "AirWave WebUI Links to HPE Intelligent Management Center" on page 8
- "Greater RF Visibility for Device Managers" on page 9

Support for Controller Clusters

AirWave introduces support for controller clusters when ArubaOS 8.0.1 becomes available. A controller cluster is a group of up to 12 controllers, connected via layer-2 or layer-3, that work together to provide high availability to all their clients and ensure service continuity when a failover occurs. All controllers that are part of the cluster are managed by the same Mobility Master.
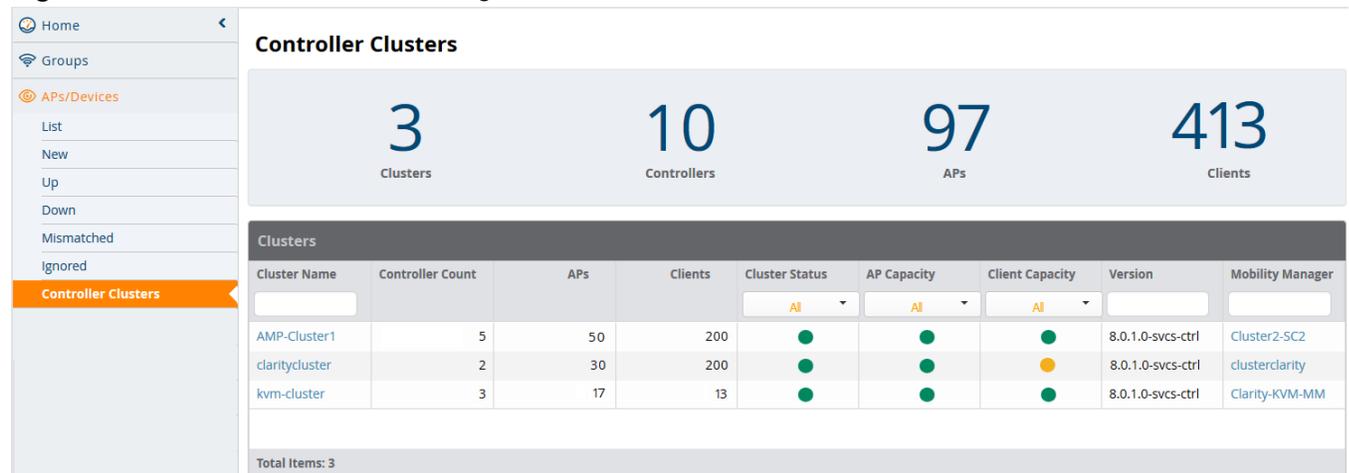
> **NOTE**
>
> In Controller Cluster deployments, Mobility Master and all the controllers should be managed from the same AirWave server.

Cluster Dashboard

AirWave 8.2.2.1 includes a **Home > APs/Devices> Controller Clusters** page in the AirWave WebUI which displays information about ArubaOS clusters associated to AirWave.

Figure 1: *Home > Controller Clusters Page*

The **Home > APs/Devices >Controller Clusters** page also includes a **Clusters** table that displays statistics for each cluster group. You can click any table heading to sort the table by that column criteria, or enter a text string into the entry field at the top of any column to filter the table by that value.

Table 2: *Clusters Table*

Column	Description
Name	Name of the controller cluster.

Table 2: *Clusters Table (Continued)*

Column	Description
Controller Count	Number of controllers in the cluster.
APs	Number of APs associated to controllers in the cluster.
Clients	Number of Clients connected to controllers in the cluster.
Cluster Status	This column can display one of the following status icons: ● 🔴 = One or more cluster controller is down ● 🟢 = All cluster controllers are active
AP Capacity	This column can display one of the following capacity icons: ● 🟢 = Cluster is below 60% AP capacity ● 🟡 = Cluster is between 60% and 80% AP capacity ● 🔴 = Cluster is at greater than 80% AP capacity
Client Capacity	This column can display one of the following capacity icons: ● 🟢 = Cluster is below 60% client capacity ● 🟡 = Cluster is between 60% and 80% client capacity ● 🔴 = Cluster is at greater than 80% client capacity
Version	Version of ArubaOS currently running on controllers in the cluster.
Mobility Manager	IP address of the Mobility Master managing the cluster.

Select any cluster in the **Cluster** table to display a **Cluster Detail** page that includes the following sections:

- AP Capacity Graph
- User Capacity Graph
- Controllers table
- Events Table

Figure 2: *Home >APs/Devices > Controller Clusters > Cluster Detail page*

Controller Clusters > **Cluster Monitoring (kvm-cluster)**
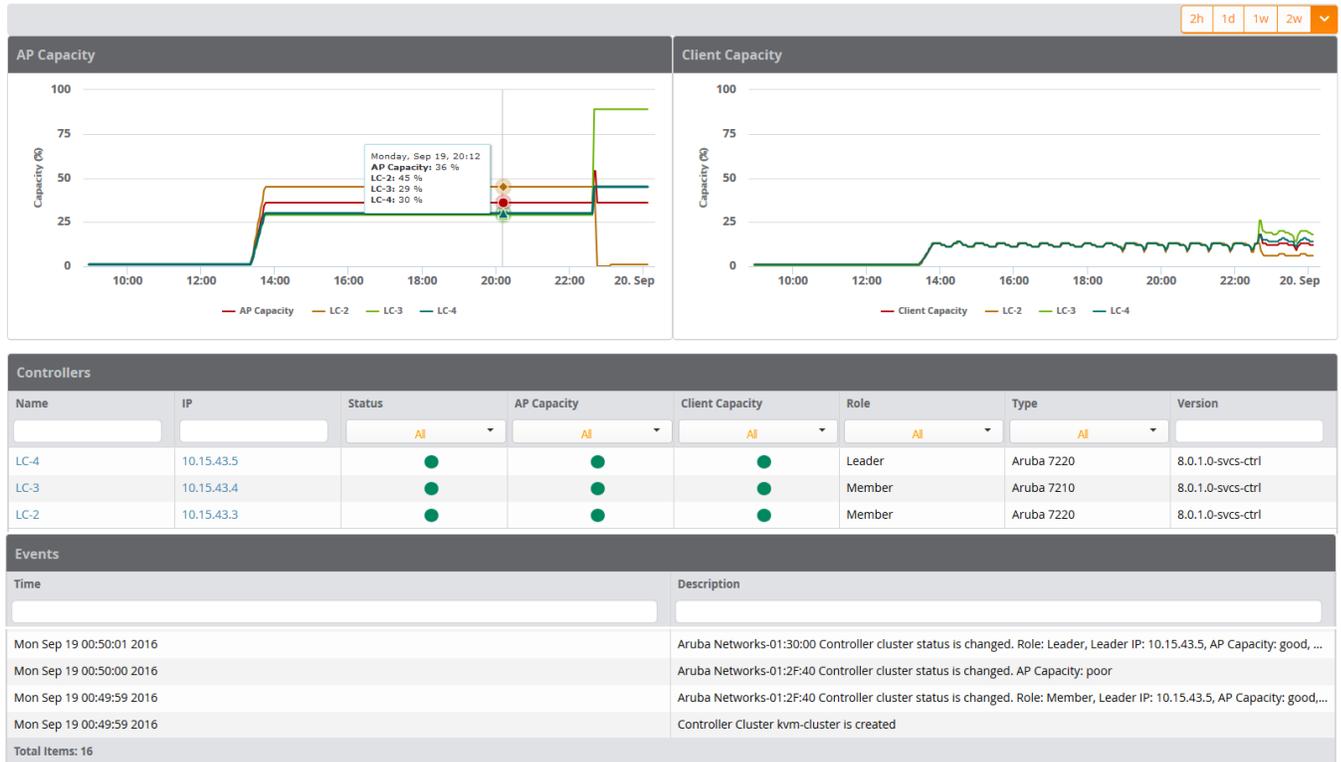
Viewing AP Capacity Graphs

The **AP Capacity** graph shows the percentage of a cluster's total AP capacity currently in use, as well as the percentage of AP capacity currently in use on each individual controller in the cluster. Hover your mouse over any section of the graph to view detailed statistics for that point in the graph. To change the time interval displayed in this graphic, click the schedule toolbar above the **Client Capacity** graph.

Viewing Client Capacity Graphs

The **User Capacity** graph shows the percentage of a cluster's total client capacity currently in use, as well as the percentage of client capacity currently in use on each individual controller in the cluster. Hover your mouse over any section of the graph to view detailed statistics for that point in the graph. To change the time interval displayed in this graphic, click the schedule toolbar above the **Client Capacity** graph.

Controllers

The **Home > APs/Devices >Controller Clusters** > **Cluster Detail** page also includes a **Controllers** table that displays statistics for the controllers in that cluster group. You can click any table heading to sort the table by that column criteria, or enter a text string into the entry field at the top of any column to filter the table by that value.

Table 3: *Controllers Table*

Column	Description
Name	Name of the controller in the cluster.
IP	IP address of the controller in the cluster.

Table 3: *Controllers Table (Continued)*

| Column	Description
Status	This column can display one of the following status icons: ● 🔴 = The controller is down ● 🟢 = The controller is active
AP Capacity	This column can display one of the following capacity icons: ● 🟢 = Controller is below 60% AP capacity ● 🟡 = Controller is between 60% and 80% AP capacity ● 🔴 = Controller is at greater than 80% AP capacity
Client Capacity	This column can display one of the following capacity icons: ● 🟢 = Controller is below 60% client capacity ● 🟡 = Controller is between 60% and 80% client capacity ● 🔴 = Controller is at greater than 80% client capacity
Role	Controller role within the cluster, either **leader** or **member**.
Type	Controller model type.
Version	Version of ArubaOS currently running on the controller.

Additional Cluster WebUI Enhancements

The **APs/Devices > Monitor** page has been enhanced to display cluster information for controllers and APs associated to a cluster.

- The **Device Info** section of the **APs/Devices > Monitor** page for a cluster controller includes the name of the cluster to which that controller belongs.
- The **Device Info** section of the **APs/Devices > Monitor** page for an AP associated to a cluster controller displays information about its active controller and its standby controller. Figure 3 shows the **APs/Devices > Monitor** page for an AP associated to a cluster member.

Figure 3: *APs/Devices > Monitor page for an AP in a Controller Cluster*
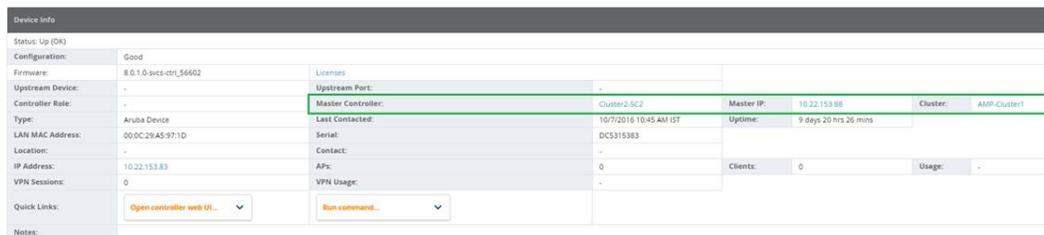
Support for MultiZone Deployment

The MultiZone feature introduced in ArubaOS 8.0 allows APs to terminate to multiple managed devices residing in different zones. A zone is a collection of managed devices under a single administration domain.

In previous releases of ArubaOS, each AP was managed by a single zone where the configuration was generated on a master controller and synchronized across all other local controllers.

The MultiZone AP feature allows an AP to be managed by multiple zones. Different zones can have different configurations, and the managed nodes in different zones do not need to communicate with one another.

NOTE In MultiZone deployments, Mobility Master and all the controllers should be managed from the same AirWave server.

When ArubaOS 8.0.1 becomes available, AirWave 8.2.2.1 introduces the following enhancements to monitor APs in a multizone deployment:

- The **Device Info** section on the **APs/Devices > Monitor** page shows client and usage data for clients associated to the selected AP, including clients associated to the MultiZone SSIDs.
- The **Radios** table on on the **APs/Devices > Monitor** page can display all SSIDs configured on the AP radio, including the DataZone SSIDs.
- The **Connected Clients** table on the **APs/Devices > Monitor** page has been enhanced to display the controller to which the client's data is tunneled.
- The **Active BSSIDs** table on the **Radio Statistics** page has been enhanced to provide a link to the monitoring page for the controller, as shown in Figure 4. Table 4 describes the columns in the table.

Figure 4: *Active BSSIDs*

Table 4: *Active BSSIDs Table*

Column	Description
BSSID	The AP's Basic Service Set Identifier (BSSID) is usually the AP's MAC address.
SSID	The Service Set Identifier (SSID) is the network or WLAN that any client sees.
Controller	The name of the controller is a link to the controller's monitoring page.
Controller Web UI	The navigation path is a link to the management interface for the controller.

AirWave WebUI Links to HPE Intelligent Management Center

If a device is monitored by both AirWave 8.2.2.1 and an external server running HPE Intelligent Management Center (IMC) Enterprise Software Platform, the AirWave **APs/Devices > Monitor** page for that device can include a link to the IMC server. If you open a browser window and authenticate to the IMC server, you can click the link on the **APs/Devices > Monitor** page to view the status of that device on the IMC platform.

NOTE Best practices is to authenticate to the IMC server *before* you select the IMC server link in the AirWave WebUI. If you are not logged in to the IMC server, clicking the link in the AirWave WebUI will close the AirWave WebUI and open the IMC server login page.

Figure 5: *IMC Link on the APs/Devices > Monitor page*

To associate an Intelligent Management Center (IMC) server with AirWave:

1. Log in to AirWave.

2. Navigate to **AMP Setup > External server**.

3. In the **Intelligent Management Center** section, enter the IP Address or Hostname of the IMC server.

4. (Optional) Click the **IMC Protocol** drop down list and select the **HTTPS** or **HTTP** protocol. The default setting is **HTTPS**.

5. (Optional) Enter a port number in the **IMC Port** field. The default port number is **8443**.

6. Enter an IMC username used to access the IMC server.

7. Enter and then confirm the IMC password for the user name entered in step 6.

8. Click **Save**.

Greater RF Visibility for Device Managers

AirWave 8.2.3 allows non-admin users that are an AP or device manager to access the **Home > AppRF and Home > UCC** pages and view information for the devices to which they have access. If that user has visibility into the top-level folder, then that user can view RF information for all devices. If that user has visibility into a subset of folders only, then the device manager's view of the **Home > AppRF and Home > UCC** pages will be restricted to devices to which that user has access.

AirWave provides a range of features to manage network infrastructure devices from Aruba Networks and other vendors.

For a complete list of supported products from other vendors, see the *AirWave 8.2 Supported Infrastructure Devices* document. You can find this document at support.arubanetworks.com.

Support for New Devices in AirWave 8.2.2.1

AirWave 8.2.2.1 introduces support for the following Aruba access points:

- IAP-314
- IAP-315
- IAP-334
- IAP-335

Support for Instant in AirWave 8.2.2.1

AirWave 8.2.2.1 supports Aruba IAPs running Instant 6.5.0.0-4.3.0.0 and prior versions, including the management of configuration settings and software upgrades.

The following table shows when each new version of Instant was initially supported in AirWave.

Table 5: *AirWave Support for Instant*

| Instant Version	Support for Template Configuration	Support for IGC configuration
Instant 4.3.0	AirWave 8.2.2.1	AirWave 8.2.2.1, with the Instant 4.3.0 UI**
Instant 4.2.4	AirWave 8.2.1 and 8.2.0.3*	AirWave 8.2.2, with the Instant 4.2.1 UI
Instant 4.2.3	AirWave 8.2	AirWave 8.2, with the Instant 4.2.1 UI
Instant 4.2.2	AirWave 8.2	AirWave 8.2, with the Instant 4.2.1 UI
Instant 4.2.1	AirWave 8.0.10.0	AirWave 8.0.10.0
Instant 4.2	AirWave 8.0.9	AirWave 8.0.9
Instant 4.1.3.1	AirWave 8.2.1, 8.2.0.3, and 8.0.11.2	AirWave 8.2.1, 8.2.0.3, and 8.0.11.2
Instant 4.1.3	AirWave 8.2.1, 8.2.0.3, and 8.0.11.2	AirWave 8.2.1, 8.2.0.3, and 8.0.11.2
Instant 4.1.2	AirWave 8.0.9	AirWave 8.0.9
Instant 4.1.1	AirWave 8.0.4	AirWave 8.0.4
Instant 4.1	AirWave 8.0	AirWave 8.0.4
Instant 4.0	AirWave 8.0 and AirWave 7.7.10	AirWave 7.7.8
Instant 3.4	AirWave 7.7.3	AirWave 7.7.8

Table 5: *AirWave Support for Instant (Continued)*

Instant Version	Support for Template Configuration	Support for IGC configuration
Instant 3.3	AirWave 7.6.4	AirWave 7.7.8
Instant 3.2	AirWave 7.6.1	AirWave 7.7.5
Instant 3.1	AirWave 7.5.6	N/A
Instant 3.0	AirWave 7.5	N/A

*AirWave 8.2.0.3 supports template configuration for Instant 6.4.4.4-4.2.4.0, with the exception of the **wired-port-profile <profile > [no] trusted** command, which must be manually configured using the IAP command-line interface.

In Instant 4.3.0, the **RF > ARM menu provides several options to configure wide channel bands. However, if you use the AirWave Instant GUI Config (IGC) feature to enable 80 MHz support, select only **All** or **5 GHz**. Selecting **None** or **2.4 GHz** results in a configuration mismatch.

Figure 6: *ARM Configuration in the Instant 4.3.0 WebUI*
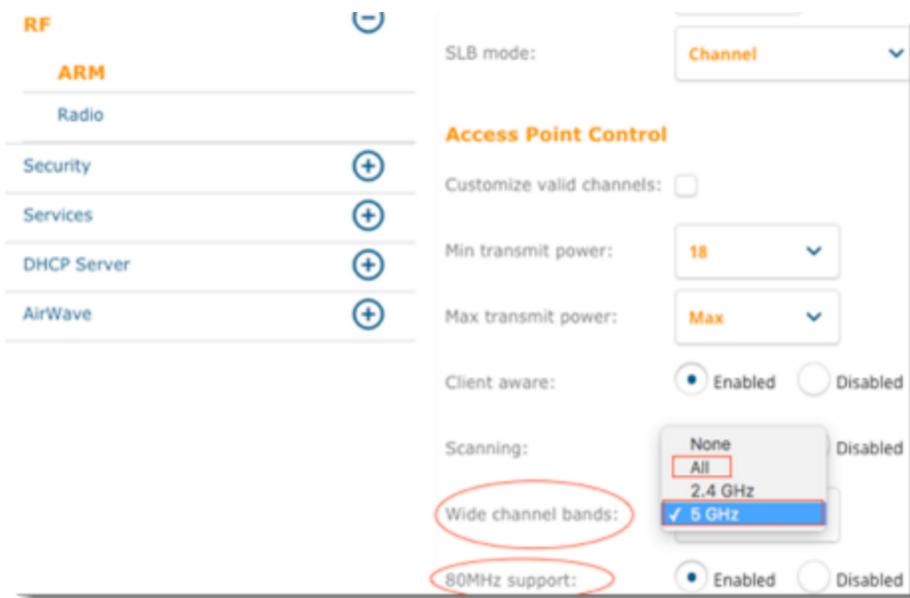
The following tables describe issues resolved in AirWave 8.2.2.1 and previous 8.2.x releases.

Table 6: *Issues Resolved in AirWave 8.2.2.1*

ID	Description
DE22391	**Symptom**: Improvements in AirWave 8.2.2.1 resolve an issue where wired client data received through AMON did not display in the **APs/Devices > Monitor** page of the AirWave WebUI. **Scenario**: AirWave 8.0.x did not correctly display information for wired clients connected to an AP-205H remote AP.
DE23645	**Symptom**: VisualRF improvements in AirWave 8.2.2.1 prevent planned devices from incorrectly duplicating on a floorplan region. **Scenario**: In previous releases of AirWave, when editing a floorplan region to add additional planned devices, planned APs currently in that region may be duplicated, and appear in the region twice.
DE25122	**Symptom**: AirWave correctly displays interface and port statistics for a virtual controller running ArubaOS 8.0.1. **Scenario**: Improvements in ArubaOS 8.0.1 resolve an issue that prevented AirWave from correctly displaying controller interface and port statistics, and inbound and outbound interface traffic on a controller running ArubaOS 8.0.0 on a server VM.
DE25774	**Symptom**: Manual overrides to the VisualRF HTTP Timeout system setting are retained after the VisualRF engine restarts. Scenario: AirWave 8.0.x did not retain an override to the internal VisualRF HTTP timeout system setting when the VisualRF engine stopped and restarted. This issue is resolved in AirWave 8.2.2.1.
DE25918	**Symptom**: VisualRF improvements in AirWave 8.2.2.1 allow VisualRF floorplans to accurately display channel utilization heatmap data for APs on that floorplan. **Scenario**: This resolves an issue previous releases of AirWave 8.2.x, where VisualRF could display channel utilization data that was inconsistent with the channel utilization tables for the controller.
DE25932	**Symptom**: VLAN port configuration changes using templates and the **Import settings from selected devices** option did not work properly. **Scenario**: Changing the VLAN port using a config template on the **Groups > Templates** page and the Manage Device section on any **APs/Devices** page no longer causes loss of switch connectivity or the incorrect importing of "no untagged vlan 1" ports into the "vlan 1 untagged" field.
DE26024	**Symptom**: A client connected to a multizone controller running ArubaOS 8.0.1 sends virtual AP and client statistics to the correct controller. Scenario: Improvements in ArubaOS 8.0.1 resolve an issue that prevented a multizone controller running ArubaOS 8.0.0 from sending correct virtual AP and client statistics to AirWave.

Table 6: *Issues Resolved in AirWave 8.2.2.1 (Continued)*

ID	Description
DE26302	**Symptom**: VisualRF improvements in AirWave 8.2.2.1 prevent the VisualRF engine from unexpectedly timing out. This error could create large java_hpref files that consumed high levels of disk resources. **Scenario**: These changes resolve an issue in earlier releases of AirWave 8.2.x, when the VisualRF engine could occasionally time out, requiring a manual restart.
DE26384	**Symptom**: AirWave 8.2.2.1 includes improvements that allow you to configure default Power over Ethernet (PoE) and speed-duplex settings on an HPE ProCurve switch without triggering a configuration mismatch. **Scenario**: In previous releases of AirWave, sending default PoE values to an HPE ProCurve switch could trigger an incorrect configuration mismatch, as the PVOS operating system used by the switch does not include default configuration values in the output of the **show running-config** command used by AirWave to audit the Switch configuration.
DE26387	**Symptom**: An issue is resolved where AirWave applied an incorrect ACL to an HPE ProCurve switch. **Scenario**: This issue occurred when AirWave pushed an impartial configuration was pushed because the connection to the switch was lost. When a second configuration push was attempted, the permit/deny settings in the ACL were not properly set because an incomplete ACL of the same name already existed on the device.
DE26627	**Symptom**: AirWave 8.2.2 ran an earlier version of JRE that did not have the current Java 8 security fixes and new features. **Scenario**: AirWave 8.2.2.1 updates the version of JRE from 1.8.72 to 1.8.102. Changes include: ● IANA timezone data version 2016d ● Updated security baselines for JRE 6, 7, and 8 ● JRE expiration date mechanism ● Security enhancements and fixes
US15500	**Symptom**: APs were missing from the floor plan in VisualRF. **Scenario**: This issue occured if the ap_list.xml file failed to load due to a race condition. We fixed a timeout issue that caused the ap_list.xml file to crash, and the APs now display correctly on the floor plan.

Table 7: *Issues Resolved in AirWave 8.2.2*

ID	Description
DE26397	**Symptom**: In earlier AirWave releases, users with regular, non-administrator accounts couldn't see AppRF and UCC data in the dashboards. **Scenario**: Starting with AirWave 8.2.2, you can create an AppRF or UCC role that gives non-administrator users read-only privilege. See "New User Roles for AppRF and UCC" on page 1 for more information.

Table 7: *Issues Resolved in AirWave 8.2.2 (Continued)*

ID	Description
DE26139 DE26138	**Symptom**: The Clarity Live data on the **Home > Clarity** page of the AirWave WebUI shows accurate data for MAC authentication failures. **Scenario**: This resolves an issue where the MAC authentication failure counters on the top of the Clarity dashboard page were not incrementing correctly.
DE26038	**Symptom:** Walls appear correctly in the VisualRF floor plan after an upgrade to AirWave 8.2.x. **Scenario:** An issue is resolved that affects how files are backed up and restored in AirWave 8.2.x.
DE25921	**Symptom**: Device communication credentials for new devices are no longer visible via the **View Device Credentials** link in the **Device Communications** section of **APs/Devices > Manage** page, or the **Default Credentials** section of the **Device Setup > Communication** page of the AirWave WebUI. **Symptom**: In previous releases, credentials for newly discovered devices were visible by default.
DE25884	**Symptom:** The **Group > Monitor** page displays the wrong bandwidth usage for a controller. For example, AirWave reports the device usage as 163 Gbps on the **Group** page and 260 Mbps on the **Monitoring** page for the same device. **Scenario:** AirWave properly displays information about your device bandwidth usage.
DE25821	**Symptom:**AirWave no longer reports inconsistent numbers of clients on the **APs/Devices > Monitor** page. **Scenario:** The wired client count under the **Monitor Info** section was double the count found in **Radio and Wired Interfaces** combined. This issue, which occurred when the IAP acted as a gateway for wired networks, has been addressed.
DE25645	**Symptom:** If you restored one Instant cluster with an backup of another Instant cluster, AirWave no longer reboots the IAPs because they use the same virtual controller key. **Scenario:** This resolves an issue that occurred when the IAPs were in monitor-mode. AirWave now warns you if the IAPs are using the same virtual controller key.
DE25211	**Symptom**: AirWave no longer reports inconsistent numbers of clients on the **APs/Devices> Monitor** page. **Scenario**: The wired client count under the Monitor Info section of the **APs/Devices> Monitor** page was double the count found in Radio and Wired Interfaces combined. This issue, which occurred when the IAP acted as a gateway for wired networks, has been addressed.
DE24958	**Symptom:** Connecting to the AirWave server with SSH was possible using the Diffie-Hellman Group 1 key exchange. **Scenario:** AirWave no longer supports SSH client to server connections using the Diffie-Hellman Group 1 option and instead uses Group 14, for greater security.

Table 7: *Issues Resolved in AirWave 8.2.2 (Continued)*

ID	Description
DE24406	**Symptom:** Backup configurations downloaded from the AirWave WebUI couldn't be restored from because the files weren't compressed properly. **Scenario:** This issue occurred when using the Chrome browser to download the backups.
DE22421	**Symptom:** The usage field and usage graph that show bandwidth used for incoming and outgoing traffic on a radio did not display on the **APs/Device Monitor** page. **Scenario:** This issue affected HP ProCurve MSM controllers running AirWave 8.0.6.3 and Firmware 6.2.1.0 or 6.4.2.0.
DE26397	**Symptom**: In earlier AirWave releases, users with regular, non-administrator accounts couldn't see AppRF and UCC data in the dashboards. **Scenario**: Starting with AirWave 8.2.2, you can create an AppRF or UCC role that gives non-administrator users read-only privilege. See "New User Roles for AppRF and UCC" on page 1 for more information.
DE26139 DE26138	**Symptom**: The Clarity Live data on the **Home > Clarity** page of the AirWave WebUI shows accurate data for MAC authentication failures. **Scenario**: This resolves an issue where the MAC authentication failure counters on the top of the Clarity dashboard page were not incrementing correctly.
DE26038	**Symptom:** Walls appear correctly in the VisualRF floor plan after an upgrade to AirWave 8.2.x. **Scenario:** An issue is resolved that affects how files are backed up and restored in AirWave 8.2.x.
DE25921	**Symptom**: Device communication credentials for new devices are no longer visible via the **View Device Credentials** link in the **Device Communications** section of **APs/Devices > Manage** page, or the **Default Credentials** section of the **Device Setup > Communication** page of the AirWave WebUI. **Symptom**: In previous releases, credentials for newly discovered devices were visible by default.
DE25884	**Symptom:** The **Group > Monitor** page displays the wrong bandwidth usage for a controller. For example, AirWave reports the device usage as 163 Gbps on the **Group** page and 260 Mbps on the **Monitoring** page for the same device. **Scenario:** AirWave properly displays information about your device bandwidth usage.
DE25821	**Symptom:** AirWave no longer reports inconsistent numbers of clients on the **APs/Devices > Monitor** page. **Scenario:** The wired client count under the **Monitor Info** section was double the count found in **Radio and Wired Interfaces** combined. This issue, which occurred when the IAP acted as a gateway for wired networks, has been addressed.

Table 7: *Issues Resolved in AirWave 8.2.2 (Continued)*

ID	Description
DE25645	**Symptom:** If you restored one Instant cluster with an backup of another Instant cluster, AirWave no longer reboots the IAPs because they use the same virtual controller key. **Scenario:** This resolves an issue that occurred when the IAPs were in monitor-mode. AirWave now warns you if the IAPs are using the same virtual controller key.
DE25211	**Symptom**: AirWave no longer reports inconsistent numbers of clients on the **APs/Devices> Monitor** page. **Scenario**: The wired client count under the Monitor Info section of the **APs/Devices> Monitor** page was double the count found in Radio and Wired Interfaces combined. This issue, which occurred when the IAP acted as a gateway for wired networks, has been addressed.
DE24958	**Symptom:** Connecting to the AirWave server with SSH was possible using the Diffie-Hellman Group 1 key exchange. **Scenario:** AirWave no longer supports SSH client to server connections using the Diffie-Hellman Group 1 option and instead uses Group 14, for greater security.
DE24406	**Symptom:** Backup configurations downloaded from the AirWave WebUI couldn't be restored from because the files weren't compressed properly. **Scenario:** This issue occurred when using the Chrome browser to download the backups.
DE22421	**Symptom:** The usage field and usage graph that show bandwidth used for incoming and outgoing traffic on a radio did not display on the **APs/Device Monitor** page. **Scenario:** This issue affected HP ProCurve MSM controllers running AirWave 8.0.6.3 and Firmware 6.2.1.0 or 6.4.2.0.

Table 8: *Issues Resolved in AirWave 8.2.1.1*

ID	Description
DE26015 DE25582	**Symptom**: AirWave 8.2.1 did not support ZTP on the HPE Aruba Switch Models 2530 YB and 2620. **Scenario**: We addressed this issue by supporting CBC ciphers in order to accept TLS 1.0 calls.
DE25988	**Symptom**: Client graphs were inconsistent with corresponding AMON data after upgrading to AirWave 8.2.1 from 8.2.0.3. **Scenario**: This issue occurred when the new AMON receiver crashed while trying to calculate AMON message loss. Message loss monitoring has been fixed.
DE25869	**Symptom**: If you upgraded the firmware on a controller and then rebooted it, the device might appear to be down although its status is up when polled. **Scenario**: This issue has been fixed. You no longer see a `Device Down` error in the event log.
DE25577	**Symptom**: After an upgrade to AirWave 8.2.0.2, AirWave tried to restart every few seconds when running out of memory. **Scenario**: We fixed an issue that prevented AirWave from loading AppRF data.

Table 9: *Issues Resolved in AirWave 8.2.1*

ID	Description
DE25427	**Symptom**: A controller does not automatically reboot if a firmware download operation fails. **Scenario**: If the AirWave system boot process detects file copy failures during a firmware upgrade, the reboot process will not initialize, and the switch will not reboot.
DE25735	**Symptom**: AirWave is now able to restore a backup file after anAirWave server upgrades from AirWave 8.0.x to AirWave 8.2.1. **Scenario**: Improvements to how the internal server_watcher_limits file is handled resolve this issue in AirWave 8.2.1.
DE25704	**Symptom**: AirWave 8.2.1 does not create duplicate entries for devices added via Activate if those devices are moved to another group. **Scenario**: When an Mobility Access Switch is added to AirWave 8.2.1 via Activate Zero-Touch Provisioning and then moved into a group other than the group defined via Activate, a duplicate entry for that device no longer reappears in the original AirWave folder specified by Activate.
DE25599	**Symptom**: Planned APs correctly appear on anAirWave 8.2.1 VisualRF floorplan. **Scenario**: An issue was identified in AirWave 8.2 that prevented planned APs from appearing on a floorplan. This issue is resolved in AirWave 8.2.1 by improvements to the parsing of the internal catalog repository that maintains all of the values used by VisualRF.
DE25580 DE25544	**Symptom**: An issue is resolved where Instant APs configured via the Instant GUI Config (IGC) feature could lose a configured PPPOE-password parameter and incorrectly add an additional ACL entry. **Scenario**: This issue occurred when IGC incorrectly identified a mismatch on the device, and attempted to modify the device configuration to resolve that mismatch. Internal changes in AirWave 8.2.1 prevent a mismatch from being incorrectly identified, resolving this issue.
DE25691	**Symptom**: APs placed in a VisualRF floorplan no longer shift location slightly when the page is refreshed. **Scenario**: When APs were placed on a small VisualRF floor plan configured with metric units and a small grid size, rounding errors in internal calculations made the AP change positions slightly when the position was saved to the flooplan. This issue is resolved in AirWave 8.2.1.
DE25623	**Symptom**: AnInstant AP image can not be uploaded via an external file server if an image with the same name is already uploaded to the AirWave server. **Scenario**: The **Device Setup >Upload Firmware & Files** page of the AirWave WebUI now supports uploading files via an external file server, even if a file with the same name already exists in the firmware list on the **Groups > Firmware** page.
DE25540	**Symptom**: AirWave failed to import Cisco IOS templates from standalone APs. **Scenario**: This issue has been fixed in AirWave 8.2.1.

Table 9: *Issues Resolved in AirWave 8.2.1 (Continued)*

ID	Description
DE25539	**Symptom**: AirWave 8.2.1 contains OpenSSL security updates for RHSA-2016:0996-2. **Scenario**: Security flaws in OpenSSL could allow an application that is compiled against it to crash, or execute arbitrary code, using the permissions of the user running the application. AirWave 8.2.1 includes enhancement for RHSA-2016:0996-2, which resolves vulnerabilities CVE-2016-2842, CVE-2016-2100, CVE-2016-2108, CVE-2016-2107, CVE-2016-2106, CVE-2016-2105, and CVE-2016-0799.
DE25509	**Symptom**: An issue is resolved where an Instant AP cluster appeared in an error state after upgrading from Instant 4.1.1.13 to Instant 4.1.3. **Scenario**: Changes to how the AirWave Instant GUI Config (IGC) feature handles Instant releases with double digits resolves this issue in AirWave 8.2.1.
DE25472 DE24975	**Symptom** :AirWave 8.2.1 contains OpenSSL security updates for RHSA-2016:0301-1. **Scenario**: Security flaws in OpenSSL allowed side-channel attacks, application crashes, decryption of RSA-encrypted cipher text, or allowed malicious SSLv2 clients to negotiate SSLv2 ciphers that were disabled on the server. AirWave 8.2.1 includes enhancement for RHSA-2016:0301-1, which resolves vulnerabilities CVE-2015-3197, CVE-2016-0702, CVE-2016-0705, CVE-2016-0797 and CVE-2016-0800.
DE25434	**Symptom**: An issue is resolved where a large number of alerts for high CPU or memory usage were incorrectly triggered. **Scenario**: AnAirWave trigger configured as "*Device Type is Access Point, Percent CPU Utilization >= 80% or Percent Memory Utilization >= 30% for 1 minutes*" triggered many alerts where the alert type appeared as "deleted" in the **System > Alerts** page. Improvements to CPU utilization processes resolve this issue in AirWave 8.2.1.
DE25421	**Symptom**: Some .dwg files were not correctly uploaded into VisualRF as floorplan images. **Scenario**: Improvements to an internal image converter process resolves an issue where some .dwg images were not getting correctly converted to .svg images in VisualRF.
DE25385	**Symptom**: In previous releases of AirWave, filters applied to limit the display of rogue devices could not be removed all filters at once, but had to be removed individually. **Scenario**: AirWave 8.2.1 resolves this issue with the addition of a new **Reset filters** link on the **RAPIDS > List** page.
DE25382	**Symptom**: The default duration for a support connection is fourteen days in AirWave 8.2.1. In previous versions of AirWave 8.2.x, the default connection period was one day. **Scenario**: A support connection is a point-to-point IP tunnel that is initiated from a customer AirWave server to Aruba's support server. A support connection on a server running AirWave 8.2.1 remains open for seven days, unless it is manually closed using the command **# service support_connection stop**.
DE25373	**Symptom**: When running a custom report with the **Uptime by Device** option selected, AirWave reported incorrect uptimes or reported devices as being down although they were running. **Scenario**: This issue has been fixed by improvements to the order in which device uptime records are set.

Table 9: *Issues Resolved in AirWave 8.2.1 (Continued)*

ID	Description
DE25317	**Symptom**: The **Clients > Diagnostics** page inaccurately reported the channel width when it displayed 120 MHz for very high throughput (VHT) mode. **Scenario**: The channels displayed are now correct for high throughput (HT) and VHT networks. Channels a device can use are: 20, 40, 80, or 160.
DE25282	**Symptom:** AnAirWave server running AirWave 8.2.0.x sent random authentication requests to the RADIUS server. **Scenario:** This issue occurred only for RADIUS authentication, where unexpected RADIUS requests were repeatedly sent to the RADIUS server, and continually failed.
DE24713	**Symptom**: Cisco 2700e LWAPP APs did not correctly display heat maps for 802.11ac radios, although heatmaps did correctly display for radios in 'ng' or 'na' modes. **Scenario**: Updates to the internal catalog allows VisualRF to recognize Cisco 2700e LWAPP AP radios in 802.11ac mode.
DE24567	**Symptom**: Previous releases of AirWave 8.x generated two NMS events for the same rogue ID classification if If a trigger is configured to forward an alert to another network management system. **Scenario**: Improvements in AirWave 8.2.1 sends a single detailed alert for an NMS trap, rather than sending one NMS trap with details, and another NMS trap without details.
DE22575	**Symptom**: The **Supported Platforms** column in the interfaces table on the **Groups > Controller Config > Local Config > Network > Port/Interfaces > Gigabit Ethernet** page now correctly lists the Aruba7205 controller. **Scenario**: In previous releases of AirWave, the 7205controller was incorrectly omitted as a supported platform for Ethernet interfaces that were supported by that device.

Table 10: *Issues Resolved in AirWave 8.2.0.3*

ID	Description
DE25624	**Symptom**: AirWave did not generate matching event reports for an AP on the **Reports > Detail** page although it had connected clients. **Scenario**: This issue occurred when AirWave skipped AMON messages that didn't contain AP identification information. The method in which AirWave obtains the identification information for an AP has been changed to resolve this issue.
DE25570	**Symptom**: When VisualRF ran calculations to build the campus grid, it generated large amounts of data which resulted in extremely large backups. **Scenario**: As a result of this issue, VisualRF ran out of memory and crashed. Visual RF now runs calculations in smaller intervals.
DE25448	**Symptom**: Sometimes the Domain Name System (DNS) Resolution graph in the Clarity dashboard wouldn't display. **Scenario**: This graph wouldn't load because of an underlying ArubaOS issue, where the DNS samples field populated when it shouldn't. The mechanism for querying the DNS samples measured has been corrected.

Table 10: *Issues Resolved in AirWave 8.2.0.3 (Continued)*

ID	Description
DE25419	**Symptom**: Old JRE files remained after an upgrade. **Scenario**: When upgrading from an earlier version of AirWave, a new JRE installs over itself, leaving JREs from previous installations. You can run a script and select which JRE files to delete. The script is in the /src/x86_64/rpms/Makefile directory.
DE25416	**Symptom**: After upgrading from AirWave 8.0.11.1 to 8.2.x, the Network view in VisualRF displayed incorrect results on the campus map. **Scenario**: AirWave 8.2.0.3 fixes an issue where the data migration of pixel width and height didn't work during an upgrade from 8.0.11.x. Campuses no longer overlay each other on the map, and you can drag and drop, or auto arrange items again.
DE25408	**Symptom**: You could not modify the primary, secondary, or tertiary controllers from the **Cisco Thin AP Settings** or the **Manage Configuration** page. **Scenario**: After upgrading from an earlier version of AirWave to 8.2.0.1, you couldn't make a selection from the drop down menu, or access the drop down menu. These issues are resolved for all web browsers.
DE25352	**Symptom**: In the Usage graph for connected clients, accessed from the **Client > Connection** page, the labels and color codings were incorrect. **Scenario**: The information in these graphs, such as color coding, axis direction, and client traffic direction, were changed to match other Usage graphs in the WebUI.
DE25346	**Symptom**: During an upgrade to AirWave 8.2.x, the system attempted to upgrade the firmware after exceeding the maximum retries limit. **Scenario**: The system now stops the upgrade when it reaches the maximum retries limit.
DE25320	**Symptom:** The row of statistics hyperlinks, called Top Header Stats, displayed incorrectly. **Scenario:** AirWave 8.2.0.3 corrects this screen output issue.
DE25312	**Symptom**: Security flaws in the AirWave 8.0.x release could have caused an application that is compiled against the NSS library to crash, or execute arbitrary code, using the permissions of the user running the application (CVE-2016-1978 and CVE-2016-1979). **Scenario**: AirWave 8.2.0.3 contains the following Linux security updates, which correct these issues: ● nss-util security update RHSA-2016:0370-1 ● glibc security and bug fix update RHSA-2016:0175-1 ● kernel security and bug fix update RHSA-2015:2636-1 ● nss, nss-util, and NSPR security update RHSA-2016:0591-1
DE25310	**Symptom**: AMON messages sent from ArubaOScontrollers contain timestamps in various formats. **Scenario**: AirWave 8.2.2.1 resolves this issue by reporting all messages in the **Clarity** dashboard in milliseconds. In order to view complete Clarity data, upgrade AirWave to 8.2.0.3 and ensure that the controller is running ArubaOS 6.4.3.9, 6.4.4.8, or later.

Table 10: *Issues Resolved in AirWave 8.2.0.3 (Continued)*

ID	Description
DE25067	**Symptom**: When you deploy an AP in a floor plan, VisualRF doesn't display a heatmap for the AP unless you restart VisualRF. **Scenario**: VisualRF automatically refreshes and displays a heatmap for APs added to a floor plan.
DE24962	**Symptom**: The **telnet_cmds** log file tracks commands sent between AirWave and a device using Telnet or SSH and might include passwords and secret data. **Scenario**: Security enhancements in AirWave 8.2.2.1 prevent these files from being viewed using the WebUI and prevent them from being included in an AirWave backup file.

Table 11: *Issues Resolved in AirWave 8.2.0.2*

ID	Description
DE25409 DE25378	**Symptom:** Clients associated to an Instant AP correctly appear in VisualRF. **Scenario:** In previous releases of AirWave 8.2.x, IAP clients did not appear correctly in VisualRF floor plans.
DE25333	**Symptom**: AirWave 8.2.x processed incoming rogue data and didn't update the AP database. correctly. **Scenario**: AirWave stores this rogue AP data and shows rogue devices accurately in the RAPIDs overview pages.
DE25314	**Symptom**: In the **Home > Clarity** Monitoring pages of the WebUI, the **AP Name** column in the **AP Summary table** and APs column **of the AP Association** table display the AP name defined by the controller to which that AP is associated. **Scenario**: AirWave displays the correct AP name sent by the controllerin the Clarity monitoring tables and graphs.
DE25260	**Symptom** An issue prevented AirWave 7.7.14 from upgrading to earlier releases of AirWave 8.2.x. **Scenario**: This issue is resolved by changes to the internal installation process that modified the order in which some modules were installed.
DE25429	**Symptom**: The DNS failure graph on the **Home > Clarity** pages of the WebUI displayed inaccurate DNS data. **Scenario**: Arubacontrollers running ArubaOS 6.4.4.6 sent continuous server timeout errors. As a result, the DNS failure graphs displayed inaccurate data. This issue has been resolved.

Table 11: *Issues Resolved in AirWave 8.2.0.2 (Continued)*

ID	Description
US14749	**Symptom**: The accuracy of Clarity data is improved with a change that allows AirWave to use VLAN IP addresses to validate the source of the AMON messages sent to the AirWave server. **Scenario**: This change resolves an issue that allowed the **Home > Clarity** Monitoring pages to display inaccurate information for the following deployments: ● In a Master+Master-Standby controller deployment with VRRP and LMS IP set on the controller, AMON AP messages were being sent with the LMS IP, preventing AirWave from processing them. ● If messages were sent from the AP use a different VLAN IP than the controller, AirWave would not process them correctly. ● If the IP address used by a single controller VLAN is defined as the IP address by which AirWave communicates with the controller, AP station AMON messages sent from any other VLAN IP defined on the controller would not be processed correctly by AirWave.

Table 12: *Issues Resolved in AirWave 8.2.0.1*

ID	Description
DE25275 DE25251	**Symptom**: An issue is resolved where an AirWave server upgrading to AirWave 8.2.0 might have insufficient disk space issue to allow the upgrade to completing successfully. **Scenario**: This issue is resolved by changes to the internal upgrade procedures in AirWave 8.2.0.1 that reduced the required disk space for the upgrade.
DE23592	**Symptom:** VisualRF correctly saves grid size modifications to floor plans. **Scenario:**AirWave 8.2.0.1 resolves an issue that prevented VisualRF section of the AirWave UI from saving modifications to the floor plan grid size property.

Table 13: *Issues Resolved in AirWave 8.2*

ID	Description
DE23305	**Symptom:** VisualRF floor plans could display floor plan dimensions in feet, even if VisualRF was configured to display metric units. AirWave 8.2 resolves this issue, and floor plan dimensions are correctly converted from imperial to metric measurements. **Scenario:** This issue was observed when VisualRF settings were changed to display dimensions in metric units.
DE22577	**Symptom:** In AirWave 8.0, VisualRF did not update the grid size after you resized a floorplan which in turn prevented heatmaps from displaying correctly. **Scenario:** We fixed this issue in AirWave 8.2, and now VisualRF updates the grid size with new dimensions and displays the heat map.

The tables below list known issues identified in AirWave 8.2.2.1 and previous AirWave 8.2.x releases. There are no known issues in AirWave 8.2.0.1 and 8.2.1.1

Table 14: *Known Issues in AirWave 8.2.2.1*

ID	Description
DE26913	**Symptom**: AirWave does not correctly discover clients if the **Prefer AMON vs SNMP** setting is modified and then reverted to its original setting. **Scenario**: This issue occurs if the **Prefer AMON vs SNMP** setting on the **AMP Setup > General > Additional AMP Services** page is set to **No**, the AirWave server is upgraded to AirWave 8.2.2.1, then the **Prefer AMON vs SNMP** setting is changed back to **Yes**. **Workaround:** To resolve this issue, restart the AirWave service by navigating to **System > Status** and selecting the **Restart AMP** button below the **Services** table.
DE26895	**Symptom**: VisualRF does not correctly save antenna gain values for an AP when the VisualRF engine is restarted, but will revert the AP to its previous gain setting. **Scenario**: This issue occurs if you modify the antenna gain values for an AP on a VisualRF floor plan, and then disable and re-enable the VisualRF engine on the **VisualRF > Setup > Server Settings** page.
DE26476	**Symptom**: The wide channel band parameter for an Instant AP does not support the **2.4 GHz** and **Enabled**, or **None** and **Enabled** parameters. **Scenario**: If you have an IAP running Instant 4.3.0, you cannot select these options using the AirWave Instant GUI Config (IGC) feature. **Workaround:** Select the **All** or **5 GHz** option for wide channel bands if 80MHz support is enabled.

N/A	**Symptom**: A warning message is displayed in the AirWave terminal after the AirWave server has upgraded to AirWave 8.2.2.x.
	
	Scenario: After the upgrade, the AirWave terminal displays the following text:
	`svn: E155007: '/root/svn/mercury' is not a working copy`
	`-bash: [: !=: unary operator expected`
	This warning is triggered by an internal change in AirWave 8.2.2, and can be ignored.
	
	Workaround: If you log out and then log back in to the AirWave server, this error will no longer appear.

Table 15: *Known issues in AirWave 8.2.2*

ID	Description
DE26389	**Symptom**: When upgrading a 2-core processor to AirWave 8.2.2, you might see a discrepancy in the number of monitoring processes reported on the AMP Setup page. **Scenario**: This issue occurs on a 2-core processor because the maximum processes allowed by the database is 3 but the UI allows only 2. **Workaround:** Navigate to **AMP Setup > Performance**, change the number of monitoring processes to 2, and click Save.
DE26383	**Symptom**: In VisualRF, importing a map fails with an internal server error when the backup.zip file is larger than 300 MB. **Scenario**: There are no errors in the VisualRF log, but you might see an error similar to the following in the httpd error log: `Handler/Mocha/InlineStats/Base.pm line 189.` `Use of uninitialized value $avg_time in numeric gt (>) at /usr/local/airwave/lib/perl/Mercury/Handler/Mocha/InlineStats/Base.pm line 189.` `/bin/df: `/var/lib/pgsql/pg_stats_temp': Permission denied`  `/bin/df: `/var/lib/pgsql/pg_stats_temp': Permission denied` `/bin/df: `/var/lib/pgsql/pg_stats_temp': Permission denied`  `Out of memory! Callback called exit at /opt/airwave/local/lib/perl5/site_perl/5.10.0/HTTP/Headers.pm line 84.` **Workaround:** Navigate to **AMP Setup > Performance**, change the number of monitoring processes to 2, and click **Save**.
DE26367	**Symptom** In VisualRF, the floor plan size does not display in list view. **Scenario**: This can happen even though you restart VisualRF. **Workaround:** Navigate to **VisualRF** > **Floor Plans** and click **Map** to view floor plan sizes.
DE26182	**Symptom**: There's a discrepancy between the statistics in the Clarity Dashboard widgets and the statistics that display in related reports. **Scenario**: When you double-click the Summary widget, the same statistics might display incorrectly in the window that opens. For example, the Association column in the Summary widget displays a 53% failure rate and a 15/28 session count, but the window that opens when you double-click the Summary widget shows a failure rate of 78% and a session count of 15/19. **Workaround:** There is no workaround.
DE26109	**Symptom**: AirWave does not display licensing report data for controllers that are not active on the network. **Scenario**: If a controller is not active on the network, AirWave is not able to return licensing data from that device. As a result, the **Reports > Detail** page does not correctly display the licensing portion of that report, which appears to be stuck in a loading state.

Table 15: *Known issues in AirWave 8.2.2 (Continued)*

ID	Description
DE25948	**Symptom**: Cisco switches do not support partial template configuration. **Scenario**: If a group of devices contains HPE Aruba switches, do not add switches from other vendors (that support template config) into that group. Switches from other vendors do not support the partial configuration option, and the current workflow would not be applicable to those vendor models.
DE25908	**Symptom:**AirWave 8.2.0.1 reports an incorrect number of clients in the **SNR** graph on the **Home >RF Performance** page. **Scenario:** This issue occurs for clients connected to Cisco devices after an upgrade from AirWave 7.7.x to 8.2.x.
DE25530	**Symptom:** AirWave can create a nightly backup that is unusable. **Scenario:** During a scheduled backup, AirWave may a backup file that is incomplete and unusuable if the process to clean the database fails due to insufficient disk space. **Workaround:** Restore the AirWave server from an earlier backup. If you can't restore from a backup created before the issue occurred, contact technical support for help.

DE25520
DE25148
	Symptom: AirWave 8.2.2 does not discover rogue devices for controllers running ArubaOS 8.0.
	
	Scenario: AirWave should support RAPIDS for controllers running ArubaOS 8.0.
	
	Workaround: Follow these steps to work around this issue:
	1. Using AirWave, add all SCs and LCs manually, or discover them through a network scan (see the *AirWave 8.2 User Guide* for help with manually adding devices or adding networks for SNMP/HTTP scanning).
	2. Update the local controller to services controller relation by using the SQL update command. The syntax is:
	`update ap`
	`set master_controller_id=ap2.id from ap as ap2`
	`where ap2.apparent_ip=ap.aruba_master_ip` and `ap.aruba_switch_role=2` and `ap2.aruba_switch_role=1;`
	3. Ensure that the monitoring page for the local controller shows the services controller name and a link to its monitoring page.

DE25439	**Symptom:**AirWave could not complete nightly maintenance tasks. **Scenario:**AirWave maintenance tasks could fail due to corrupt client history round-robin database (RRD) files, triggering the alert **Nightly Maintenance failed due to unsuccessful jobs: corrupted _ rrds, chron_ssid_cleanup, rf_capacity_scatter**. **Workaround:** Copy the **identify_broken_rrds** script from another AirWave server to the to the **/usr/local/airwave/bin/** and **/root/svn/mercury/scripts/** directories and then run the script to fix the issue.
DE25347	**Symptom:**AirWave retains client history round-robin database (RRD) files after the data retention period has passed, causing the AirWave server to run out of disk space. **Scenario:** The error log shows that AirWave runs the job to delete old RRD files, but the files do not get deleted. This issue was identified in AirWave 8.0.11. **Workaround:** There is no workaround.

Table 15: *Known issues in AirWave 8.2.2 (Continued)*

ID	Description
DE25406	**Symptom:**AirWave could not correctly upgrade to AirWave 8.0.10, AirWave 8.0.11 or AirWave 8.2.x. **Scenario:**AirWave does not check for possible schema failures due to missing tables, indexes, or foreign keys before performing the upgrade. These schema failures may cause the AirWave server to crash during database migration.
DE25063	**Symptom:**AirWave failed to push IP address settings to a Cisco wireless LAN controller. **Scenario:** If you update the IP addresses of the primary, secondary, or tertiary controllers, AirWave fails to configure the IP addresses and marks the controllers' configuration as mismatched. This issue occurs on Cisco devices running 8.0.121.0 managed by AirWave 8.x.
DE23425	**Symptom:**AirWave may report incorrect client counts on local controllers. **Scenario:** This issue is likely to occur during peak usage when AirWave falls behind in processing AMON data.

Table 16: *Known Issues in AirWave 8.2.1*

ID	Description
DE25926	**Symptom**: 2530YA, 2530YB and 2620 HPE Aruba switches fail to register with AirWave when provisioned via Zero-Touch Provisioning (ZTP) or configuration settings pushed from AirWave to the switch command-line interface. **Scenario**: This issue is triggered by OpenSSL updates in AirWave tbhat caused a compatibility issue with this device.
DE25875	**Symptom**: AirWave displays incorrect transmission power for APs running ArubaOS 6.4.4.0 to 6.4.4.6. **Scenario**: For APs running the impacted versions of ArubaOS, transmission power levels on the **APs/Devices > Monitor** page are displayed as twice the actual level on the AP, and VisualRF heatmaps may display incorrect information. This issue is caused by changes in the information sent to AirWave by the devices running these versions of ArubaOS.
DE25845	**Symptom**: The configuration snippet push to a ZTP device gets stuck in the "In Progress" state. **Scenario**: After you start a partial configuration job for a group of factory-default devices added to AirWave via ZTP, you might see "In Progress" for the ZTP device in the **Job Details** table on the **Groups > Templates > Partial Config** page. This partial configuration option was designed for only Aruba switches, and factory-default devices should not be available for selection from the partial configuration option.
DE25501	**Symptom**: EAP failures in 802.1X AMON messages are not monitored by AirWave. **Scenario**: If clients with invalid certificates attempt to associate to AirWave, AirWave drops EAP_FAILURE Dot1x messages, preventing the tracking of clients which are facing EAP-FAILURE.
DE25400	**Symptom::** The AirWave RAPIDs feature may incorrectly calculate signal strengths from the RSSI value for rogue devices. **Scenario**: The cause of this issue is under investigation.

Table 16: *Known Issues in AirWave 8.2.1 (Continued)*

ID	Description
DE25399	**Symptom**: RAPIDS drops the event that corresponds to the strongest RSSI signal heard from a rogue AP. **Scenario**: RAPIDS records the strongest signal heard for a rogue as the rogue entry's signal value and doesn't overwrite that value until a stronger signal is heard, but RAPIDS may fail to retain the discovery event for that entry.
DE25350	**Symptom**: There is no support for pushing a full configuration for an Aruba switch running the ArubaOS-switch Operating System using the secure file transfer protocols, SCP and SFTP. **Scenario**: If you use the (unsupported) **no tftp** client CLI command, the switch is unable to accept TFTP requests. As a result, AirWave cannot push full configurations to the switch.
DE25268	**Symptom**: Database schema failures do not cause the upgrade process to halt. **Scenario**: When a database schema change fails during a software upgrade, the upgrade process continues running.
DE24019	**Symptom**: When monitoring a stack of Aruba switches, or a standalone switch that has stacking-enabled, AirWave shows a junk record for a switch with a status of Unknown. **Scenario**: This issue occurs when you remove the switch designated as commander from a stack and move it to another part of the network. When SNMP discovery finds the switch in a new stack, the junk record disappears.

Table 17: *Known Issues in AirWave 8.2.0.3*

ID	Description
DE25598 DE25522 DE25500	**Symptom:** After updating the IP address of the controller, you see syslog error messages listed under device events in the **Clients > Detail** page and not in the **Clarity** dashboard. **Scenario:** Underlying issues with ArubaOS caused AirWave to report only DNS information in the **Clarity** dashboard. **Workaround**: In order to view complete Clarity data, upgrade AirWave to 8.2.0.3 or later, and ensure that the controller is running ArubaOS 6.4.3.9, 6.4.4.8, or later.
DE25434	**Symptom:**AirWave sends hundreds of alerts for high CPU or memory usage. **Scenario:** You might encounter this issue if you configured AirWave to send alert notification until it is acknowledged. **Workaround**: When adding a trigger on the **System > Triggers** page, set the Suppress until acknowledge option to Yes.
DE25324	**Symptom:** Upgrading from AirWave 8.0.x caused VisualRF beamwidth, orientation and gain values to reset to their default values. **Scenario:** The beamwidth, orientation and gain values are not retained after flushing the bootstrap file or upgrading the AirWave server. **Workaround**: None.
DE25226	**Symptom**: AirWave takes longer to process station statistics AMON messages than it did in AirWave 8.0.x. **Scenario**: This issue has been associated with the Internet Explorer web browser. **Workaround**: None.

Table 18: *Known Issues in AirWave 8.2.0.2*

ID	Description
DE25398	**Symptom**: When you hover your mouse over the configuration (🔧) icon on the **Groups > List** page, the popup window of available actions might not appear in the correct spot, be hidden out of view, or display at the very bottom of the page. **Scenario**: This issue has been associated with the Internet Explorer web browser. **Workaround**: Use another web browser to access the WebUI, or select a group from the **Groups > List** page and use the navigation bar.

Table 19: *Known Issues in AirWave 8.2*

ID	Description
DE25324	**Symptom**: VisualRF Beamwidth, Orientation and Gain values on deployed APs automatically reset when you upgrade AirWave to any version, or when you remove the bootstrap file. **Scenario**: The beamwidth, orientation and gain values are not retained after flushing the bootstrap file or upgrading the AirWave server.
DE25220	**Symptom**: VisualRF indicated an incorrect number of APs associated with the AirWave server. **Scenario**: In a deployment where over 4,000 APs were associated to an AirWave server, and the active APs status icon at the top of the WebUI page showed the correct number of APs, VisualRF incorrectly indicated that AirWave had over 10,000 associated APs.
DE25154	**Symptom**: If an AP upgrades to Instant 4.2.3 and uses Lync applications in its access control rules, Instant GUI Config (IGC) may show a configuration mismatch for that device. **Scenario**: This issue occurs because the list of Lync applications that can be included in an access control rule in the AirWave 8.2 IGC feature differs from the list of available rules in Instant 4.2.3. The following applications are unsupported by IGC in AirWave 8.2. - SOS ALG SVP - SOS ALG Vocera - SOS ALG FTP - SOS ALG RTSP - SOS ALG SIP - SOS ALG NOE - SOS ALG SIPS - SOS ALG H323 - SOS ALG Facetime - SOS ALG Skype4B Voice - SOS ALG Skype4B Video - SOS ALG Skype4B File-Transfer - SOS ALG Skype4B - SOS ALG SIP-Audio - SOS ALG SIP-Video - SOS ALG Skype4B Desktop-Sharing - SOS ALG Jabber - SOS ALG Jabber-MC - square application - pearsonvue web - squirrelsystems web - learninganalytics web - youtubeeducation web
DE25110	**Symptom**: If a switch IP address is changed from a static IP address to an IP address dynamically assigned via DHCP, the device may appear as down in AirWave. **Scenario**: This issue is triggered because AirWave has no way to determine the IP address that will be assigned to the switch after the change to a DHCP-assigned IP address. **Workaround**: Manually change the IP address when the IP provisioning option is changed from static to DHCP.

Table 19: *Known Issues in AirWave 8.2 (Continued)*

ID	Description
DE24785 DE24834 DE24836 DE24872	**Symptom**: When the **Groups > Instant Config** pages of the AirWave WebUI are accessed using the Internet Explorer web browser, these pages may not properly display Instant Config (IGC) configuration settings or browser elements, and may not correctly save or update configuration changes. **Scenario**: This issue occurs when you attempt to use Internet Explorer to create or modify a configuration for Instant devices via **Groups > Instant Config**. This issue does not occur with other supported web browsers. Possible IGC behaviors in Internet Explorer include the following: ● Drop-down lists may not display properly ● Configured settings may not save or update properly ● Scrolling down a page in the IGC WebUI may cause the browser to unexpectedly return to the top of the page. ● Clicking the **Save** or **Apply** button may not save any configuration changes, may cause the browser to unexpectedly return to the top of the page. **Workaround**: Use an alternate web browser, such as Mozilla, to configure Instant devices.
DE24424	**Symptom**: A non-default **Failure Timeout** value configured via **AMP Setup > General > Firmware upgrade/Reboot Options** is not correctly applied. **Scenario**: By default, if a firmware upgrade on a switch fails, that switch state is locked, and the switch cannot attempt another upgrade until the default failure timeout period of 60 minutes has elapsed. In AirWave 8.2, if you configure a non-default value for this failure timeout, the switch state may be locked for a time period equal to the default value of 60 minutes *plus* the new failure timeout period. For example, if you configure a custom failure timeout period of 15 minutes, that setting may keep a switch locked in a pending state for 75 minutes, instead of the expected 15.
DE24417	**Symptom**: Firmware updates on Aruba switches may fail when firmware changes are simultaneously sent to switches in a multi-level switch topology, where an upstream switch is located between a downstream switch and the AirWave server. **Scenario**: This issue occurs when an upstream switch downloads the firmware image and reboots, temporarily disrupting the firmware download on the second, downstream switch. This disruption may cause the firmware upgrade on the second switch to fail. **Workaround**: Perform separate firmware upgrades on switches at different levels. (For example, upgrade the first-level (upstream) switches before you upgrade any second level (downstream) switches.
DE24406	**Symptom**: Backup configurations downloaded from the AirWave WebUI are not compressed properly, cannot be restored. **Scenario**: This issue occurs when a nightly backup file is downloaded using the Chrome web browser. **Workaround**: Use an alternate web browser, such as Mozilla, to download the backup file.
DE24163	**Symptom:** The **Current Secondary Version** column in the **System > Firmware Upgrade Job Detail > Devices Being Upgraded** table displays incorrect image information for an Aruba switch. **Scenario:** The **Devices Being Upgraded** table should display the version number for the software stored in the secondary flash in the **Current Secondary Version** column. This column may instead display the boot ROM software version. **Workaround**: Access the switch command-line interface and issue the command **show flash** to view the primary and secondary image versions.

Table 19: *Known Issues in AirWave 8.2 (Continued)*

ID	Description
DE24019	**Symptom:** The **Member Switches** table on the **APs/Devices > Monitor** page for an Aruba switch may display incorrect stack member information. **Scenario:** If a HPE 3810 stack is discovered via SNMP discovery on the network, and the stack member with commander status is moved to another stack, an invalid stack record may appear in the **Member Switch** table for members of the original stack. **Workaround**: Adding another stack to the AirWave server may clear these invalid entries.
DE23592	**Symptom:** VisualRF does not correctly save modifications to floor plans. **Scenario:** When modifying floor plans using the **VisualRF** section of the AirWave WebUI, changes to the floor plans settings (like the floor name or number) are not correctly saved. **Workaround**: Re-measure the floor plan to save modifications to the floor plan settings.
DE23289	**Symptom:** VisualRF floor plans do not open correctly for clients accessing the AirWave WebUI via the Microsoft Edge browser. **Scenario:** When viewing the **VisualRF** section of the AirWave WebUI using the Microsoft Edge browser on a Windows 10 client, double clicking on a building or floor does not open the page for that building or floor.
DE23281	**Symptom**: If the **APs/Devices > Monitor** page for a device displays a VPN IP address, hovering your mouse over that VPN IP address displays a HTTPS and SSH tooltip that contains invalid links. **Scenario**: This issue occurs because the VPN IP address displayed on that page is an internal IP address. Clicking the HTTP link in the tooltip displays a blank page, and on the SSH link does not log a user into any device.
DE19402	**Symptom**: Reports exported via FTP are not sent if the report is modified, as the modified report fails to authenticate to the FTP server. **Scenario**: This issue occurs when you modify an existing FTP report and do not re-enter the FTP server passwords in the **Export Options** section of the **Reports > Definition > Export Options** page. **Workaround**: Redefine the FTP server password when you modify a report to be exported via FTP.

US14365	**Symptom**: PVOS commands values are unnecessarily grouped in the device running-config
	
	Scenario: Some ArubaOS-Switch Operation System commands which are executed individually on the switch appear in a group in the device running-config. AirWave supports a 1:1 comparison of commands from the template and the device running-config, so this grouping may incorrectly cause the device to show a mismatch.
	
	For example, the template may show two separate commands:
	`loop-protect transmit-interval 10`
	`loop-protect disable-timer 3000`
	While the running-config groups these into a single line:
	`loop-protect transmit-interval 10 disable-timer 3000`
	Workaround: Use the grouped command directly in the template to avoid a mismatch.

Table 19: *Known Issues in AirWave 8.2 (Continued)*

ID	Description

US14468	**Symptom**: PVOS commands values may vary between the template and device running-config
	
	Scenario: When using template configuration to configure Power over Ethernet settings, the template command **power-over-ethernet pre-std-detect** is modified in the running configuration to add port values. AirWave supports a 1:1 comparison of commands from the template and the device running-config, so this modification of the value may incorrectly cause the device to show a mismatch.
	
	For example, the template may show the command:
	`power-over-ethernet pre-std-detect`
	While the running-config adds port number values
	`power-over-ethernet pre-std-detect ports 1-48`

US14468	**Symptom**: PVOS commands values may vary between the template and device running-config
	
	Scenario: When using template configuration for 5400R, 3810, and 3800 Aruba switches, if the template command **ip aspath list** does not include a sequence number, the running configuration applies a sequence value of **5**. AirWave supports a 1:1 comparison of commands from the template and the device running-config, so this modification of the value may incorrectly cause the device to show a mismatch.
	
	For example, the template may show the commands:
	`ip aspath-list listname deny abcd`
	While the running-config adds a sequence number to the running configuration:
	`ip aspath-list "listname" seq 5 deny "abcd"`

US14471	**Symptom**: PVOS commands values may vary between the template and device running-config
	
	Scenario: On 2530 and 2620 Aruba switches, some ArubaOS-Switch Operation System commands which are executed individually on the switch appear in a modified format in the device running-config, where leading zeros in a configuration value are added or deleted, and hexadecimal values in a template configuration may appear in a decimal value in the running configuration. AirWave supports a 1:1 comparison of commands from the template and the device running-config, so this modification of the value format may incorrectly cause the device to show a mismatch.
	
	For example, the template may show the command:
	`qos rate-limit dscp 0 1 kbps 0`
	While the running-config adds one or more leading zeros to the value:
	`qos rate-limit dscp 000000 1 kbps 0`
	Workaround: Use the expanded command set in the template to avoid a mismatch.

Table 19: *Known Issues in AirWave 8.2 (Continued)*

ID	Description

US14471	**Symptom**: PVOS commands values may vary between the template and device running-config
	
	Scenario: On 2530 and 2620 Aruba switches, some ArubaOS-Switch Operation System commands which are executed individually on the switch appear in a modified format in the device running-config, where leading zeros in a configuration value are added or deleted, and hexadecimal values in a template configuration may appear in a decimal value in the running configuration. AirWave supports a 1:1 comparison of commands from the template and the device running-config, so this modification of the value format may incorrectly cause the device to show a mismatch.
	
	For example, the template may show the command:
	`qos rate-limit dscp 0 1 kbps 0`
	While the running-config adds one or more leading zeros to the value:
	`qos rate-limit dscp 000000 1 kbps 0`
	Workaround: Use the expanded command set in the template to avoid a mismatch.

US14471	**Symptom**: Individual PVOS commands values are unnecessarily divided in the device running-config
	
	Scenario: Some ArubaOS-Switch Operation System commands which are executed individually on the switch appear in multiple lines in the device running-config. AirWave supports a 1:1 comparison of commands from the template and the device running-config, so this grouping may incorrectly cause the device to show a configuration mismatch.
	
	For example, the template may show one individual command:
	`ip source-interface all vlan 1`
	While the running-config divides the values from this command into multiple lines:
	
	`ip source-interface tacacs vlan 1`
	`ip source-interface radius vlan 1`
	`ip source-interface syslog vlan 1`
	`ip source-interface telnet vlan 1`
	`ip source-interface tftp vlan 1`
	`ip source-interface sntp vlan 1`
	`ip source-interface sflow vlan 1`
	
	Workaround: Use the expanded command set in the template to avoid a mismatch.

138330	**Symptom**: AirWave may not correctly display port statistics or interface information for managed nodes or Services Controllers running ArubaOS 8.0 beta **Scenario**: This issue occurs when AirWave attempts to display information for managed nodes or a Services Controller running ArubaOS 8.0 beta in a topology where the Services Controller is installed on a server VM.
137778	**Symptom**: AirWave may not correctly display the serial number for managed nodes or Services Controllers running ArubaOS 8.0 beta. **Scenario**: This issue occurs because AirWave 8.2 reads the serial number information from the legacy MIB OID **wlsxSwitchLicenseSerialNumber**, which does not return the correct serial number value. **Workaround**: Access the command-line interface of the device and issue the command **show inventory** to view the correct device serial number.

Table 19: *Known Issues in AirWave 8.2 (Continued)*

ID	Description
N/A	**Symptom**: Due to a known issue on an Aruba switch (CR191863), the switch state does not change from **Factory** to **Non-Factory** unless the switch reboots. If AirWave pushes a partial configuration that does not require a reboot, AirWave continues to see the switch in the **Factory** state. **Scenario**: The switch UI page that allows you to fetch a template includes a **Push complete configuration file: Device is rebooted after config push** option. If a user selects **No** for this option on a factory-default switch provisioned via a DHCP server, AirWave only pushes a delta configuration, which does not result in a switch reboot. If a user adds settings via AirWave that are not supported by AirWave 8.2, the full configuration is not pushed and hence the unsupported commands are not applied on the switch.
N/A	**Symptom**: If a user decides to reset the switch to a factory default state from the switch command-line interface, all stored passwords, security credentials and system settings will reboot in a factory default state. **Scenario**: This issue occurs because AirWave always executes the **include-credentials** command when pushing a configuration to a switch.
N/A	**Symptom**: Unrecognized PVOS command syntax. **Scenario:** AirWave may not recognize some syntax for some ArubaOS-Switch Operating System commands, and therefore will not allow to users to configure these commands via AirWave.

N/A	**Symptom**: Unrecognized PVOS defaults and values.
	
	Scenario: AirWave may not recognize some default values or the "no" syntax for some ArubaOS-SwitchOperating System commands, and therefore will not recognize these values when these commands are configured via AirWave.
	
	For example, if a template has the command **ipv6 hop-limit 100**, AirWave would be expected to push the default value for this command (64 hops) if that line is removed from the template. If the default value is missing from the command and not recognized by AirWave, the device could not return to its default value, and a configuration mismatch could occur.
	
	Workaround: Issue the default value for the command within **<push_to_exclude>** tags in the template, as shown below.
	
	`<push_to_exclude>`
	`    ipv6 hop-limit 64`
	`</push_to_exclude>`

N/A	**Symptom**: Commands are hidden in the running-config.
	
	Scenario: Some commands may be hidden by the switch in the running-config and CLI help. Additional steps may be required to add these command settings via template configuration.
	
	Workaround: Add a hidden command to a device running config by including within **<push_to_exclude>** tags. For example, to ad the commands **crypto key zeroize autorun rsa** and **crypto key zeroize ssh-client-key**, to the template, use the following format:
	
	`<push_to_exclude>`
	`crypto key zeroize autorun rsa`
	`crypto key zeroize ssh-client-key`
	`</push_to_exclude>`