OmniVista 3600
Air Manager 8.2.3

Alcatel·Lucent
Enterprise

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OmniVista 3600 Air Manager 8.2.3 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 *OmniVista 3600 Air Manager 8.2.3 User Guide*, *Alcatel-Lucent 8.2.3 Supported Infrastructure Devices* document, and *Alcatel-Lucent Instant in OV3600 8.2 Deployment Guide*.

Release Overview

- "New Features" on page 4 describes the new features and enhancements introduced this release.
- "Supported Infrastructure Devices" on page 16 lists new devices supported by OV3600 8.2.3.
- "Resolved Issues" on page 18 describes issues resolved in OV3600 8.2.3 and previous releases.
- "Known Issues" on page 28 lists and describes the known issues identified in OV3600 8.2.3 and previous releases.
- "Upgrade Instructions" on page 40 describes how to upgrade to OV3600 8.2.3 from an earlier version.

Contacting Support

Contact Center Online	
Main Site	http://www.enterprise.alcatel-lucent.com
Support Site	https://support.esd.alcatel-lucent.com/
Email	ebg_global_supportcenter@al-enterprise.com
Service & Support Contact Center Telephone	
North America	1-800-995-2696
Latin America	1-877-919-9526
EMEA	+800 00200100 (Toll Free) or +1 (650) 385-2193
Asia Pacific	+65 6240 8484
Worldwide	1-818-878-4507

OV3600 8.2.3 introduces the following features and enhancements:

Support for Instant 4.3.0

OV3600 8.2.3 supports Instant GUI Config (IGC) and template configuration for Alcatel-Lucent Instant Access Points (W-IAPs) running Instant software 6.5.5.0-4.3.0

New Supported Infrastructure Devices

OV3600 8.2.3 supports new Alcatel-Lucent and HPE Aruba devices. For details, see "Supported Infrastructure Devices" on page 16.

Radius Authentication Enhancements

The **RADIUS Configuration** section of the **OV3600 Setup > Authentication tab** now includes the option to configure the PEAP-MSCHAPv2 RADIUS authentication method, in addition to the default PAP method available in previous versions of OV3600.

If you use the PEAP-MSCHAPv2 authentication method with the default "read-only Monitoring and Auditing" user role, note that the name of this role has been slightly modified in OV3600 8.2.3 to allow support the PEAP-MSCHAPv2 authentication method: the ampersand **(&)** symbol has been changed to the word **and**.

- Role Name in OV3600 8.2.2.x and earlier releases: *Read-Only Monitoring **&** Auditing*
- Role Name in OV3600 8.2.3: *Read-Only Monitoring **and** Auditing*

NOTE

If you used the **Read-Only Monitoring & Auditing** user role prior to upgrading to OV3600 8.2.3, you must modify the user role name on the RADIUS server to ensure that the user role name on the RADIUS server exactly matches the n user role name in OV3600.

Radius Accounting Enhancements

OmniVista 3600 Air Manager 8.2.3 introduces support for new alerts, system triggers and reports that display information about RADIUS accounting issues.

RADIUS Accounting Alerts

OV3600 8.2.3 displays information about RADIUS accounting events in the **Alert Summary** table that appears at the bottom of the following pages.

- APs/Devices > List
- APs/Devices > Monitor
- Groups > Monitor
- Home > Overview
- Clients > Connected or Client Detail

Figure 1: *RADIUS Accounting Link on the Alert Summary*

TYPE ▲	LAST 2 HOURS	LAST DAY	TOTAL	LAST EVENT
AMP Alerts	0	0	0	-
IDS Events	39	560	1428	10/13/2016 5:32 AM CST
RADIUS Accounting Issues	0	2	8	10/12/2016 11:12 AM CST
RADIUS Authentication Issues	0	0	40	10/11/2016 4:42 PM CST

Alert Summary updated at 10/13/2016 5:36 AM CST

The information in this table appears as a link. Clicking the link opens a detailed summary of any recorded RADIUS accounting issues.

Figure 2: *RADIUS Accounting issues*

RADIUS Accounting Issues for devices in group US14677 | Return to Group Monitor page

Summary

EVENT TYPE ▲	LAST 2 HOURS	LAST 24 HOURS	TOTAL
Accounting server request timed out for fake.key	0	2	4
Accounting server request timed out for fake.port	0	0	1
Accounting server request timed out for fakeip	0	0	3
3 Radius Accounting Issue Event Types	0	2	8

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	EVENT	USERNAME	CLIENT MAC ADDRESS	CLIENT IP	AP/DEVICE	BSSID	RADIO	CONTROLLER ▼	RADIUS SERVER	RADIUS IP	TIME ▼
☐	Accounting server request timed out for fake.key	5c:f9:38:94:3d:62	5C:F9:38:94:3D:62	172.31.99.9	f0:5c:19:cb:3f:64	F0:5C:19:33:F6:52	802.11ac	instant-CB:3F:64	fake.key	0.0.0.0	10/12/2016 11:12 AM CST
☐	Accounting server request timed out for fake.key	5c:f9:38:94:3d:62	5C:F9:38:94:3D:62	172.31.99.9	f0:5c:19:cb:3f:64	F0:5C:19:33:F6:52	802.11ac	instant-CB:3F:64	fake.key	0.0.0.0	10/12/2016 11:11 AM CST
☐	Accounting server request timed out for fake.key	5c:f9:38:94:3d:62	5C:F9:38:94:3D:62	172.31.99.9	f0:5c:19:cb:3f:64	F0:5C:19:33:F6:52	802.11ac	instant-CB:3F:64	fake.key	0.0.0.0	10/11/2016 5:25 PM CST
☐	Accounting server request timed out for fake.key	5c:f9:38:94:3d:62	5C:F9:38:94:3D:62	172.31.99.9	f0:5c:19:cb:3f:64	F0:5C:19:33:F6:52	802.11ac	instant-CB:3F:64	fake.key	0.0.0.0	10/11/2016 5:24 PM CST

1-4 ▼ of 8 RADIUS Accounting Issues Page 1 ▼ of 2 > >| Reset filters
Select All - Unselect All

Delete

RADIUS Accounting System Triggers

OV3600 8.2.3 supports system triggers for the following RADIUS accounting issues.

To set a trigger for RADIUS authentication issues, click the **Type** drop-down list on the **System > Triggers > Add** page and select one of the trigger types described in Table 1.

Table 1: *RADIUS Authentication Trigger Types and Condition Settings*

Trigger Options	Description
Client RADIUS Authentication Issues	This trigger type sets the threshold for the maximum number of failures before an alert is issued for a user. The **Option**, **Condition**, and **Value** fields allow you to define the number of authentication issues per client that will trigger an issue.
Device RADIUS Authentication Issues	This trigger type sets the threshold for the maximum number of failures before an alert is issued for a device. The **Option**, **Condition**, and **Value** fields allow you to define the number of authentication issues per device that will trigger an issue.
Total RADIUS Authentication Issues	This trigger sets the threshold for the maximum number of failures before an alert is issued for both users and devices.

RADIUS Accounting Reports

OV3600 8.2.3 allows you to configure reports that include the following RADIUS accounting issues:

- RADIUS Accounting Issues
- Top 10 RADIUS Accounting Issues by Device
- Top 10 RADIUS Accounting Issues by Controller
- Top 10 RADIUS Accounting Issues by RADIUS Server
- Top 10 RADIUS Accounting Issues by Client

To create a report that includes RADIUS accounting information, navigate to **Reports>Definitions**, and click **Add** to open the new report template. The **Custom Options** list now includes options for RADIUS Accounting as well as RADIUS Authentication.

To view a generated RADIUS accounting report, navigate to **Reports>Generated** and select the name of a report that includes RADIUS accounting details. Figure 3 displays an example of a report that includes this information.

Figure 3: *RADIUS Accounting Issues Report Data*

Integration with HPE Intelligent Management Center

OV3600 8.2.3 supports integration with the HPE Intelligent Management Center (IMC) Enterprise Software Platform. When a managed device is monitored by both OV3600 and IMC, the **APs/Devices > Monitor** page for that device includes a link to the IMC server. Clicking the link redirects the user to the IMC server, allowing you to view the status of that device on the IMC platform.

Figure 4: *IMC Link on the APs/Devices > Monitor page*

To associate an Intelligent Management Center (IMC) server with OV3600:

1. Log in to OV3600.

2. Navigate to **OV3600 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 user name 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**.

Support for Multi-Zone SSIDs in ArubaOS 8.0.1

The MultiZone feature in ArubaOS 8.0.1 allows APs to terminate to multiple managed devices that reside in different zones, where a "zone" is a defined collection of managed devices under a single administration domain.

In previous releases of ArubaOS, each AP is managed by a single zone where the configuration is generated on a master controller and synchronized across all other local controllers. Starting from ArubaOS 8.0, 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.

OV3600 8.2.3 introduces the following enhancements to monitor APs using MultiZone SSIDs.

Device Info Enhancements

The **Device Info** section on the **APs/Devices > Monitor** page of the OV3600 WebUI shows client and usage data for clients associated to the selected AP, including clients associated to the MultiZone SSIDs. The **Device Info** table also lists all SSIDs used by the device, and the managed node to which the traffic is forwarded. The **Radios** table on this page can display all SSIDs configured on the AP radio, including the MultiZone SSIDs.

Connected Clients Enhancements

The **Connected Clients** table on the **APs/Devices > Monitor** page can display the associated clients for each controller used by a MultiZone AP.

Support for Controller Clusters in ArubaOS 8.0.1

A switch cluster is a group of up to 12 switches connected via layer-2 or layer-3, and working together to provide high availability to all their clients and ensure service continuity when a failover occurs. All switches that are part of the cluster are managed by the same ArubaOS Mobility Master.

Although both the active and the standby controllers in the cluster send AMON messages about the APs and Clients connected to cluster devices, OV3600 is able to differentiate between these AMON messages and accurately populate active and standby controller information for APs and Clients managed by cluster members.

Cluster Dashboard

OV3600 8.2.3 includes a **Home > APs/Devices> Controller Clusters** page in the OV3600 WebUI which displays information about ArubaOS clusters associated to OV3600, and the total number of controllers, APs and clients associated to those clusters.

Figure 5: *Home > Controller Clusters Page*
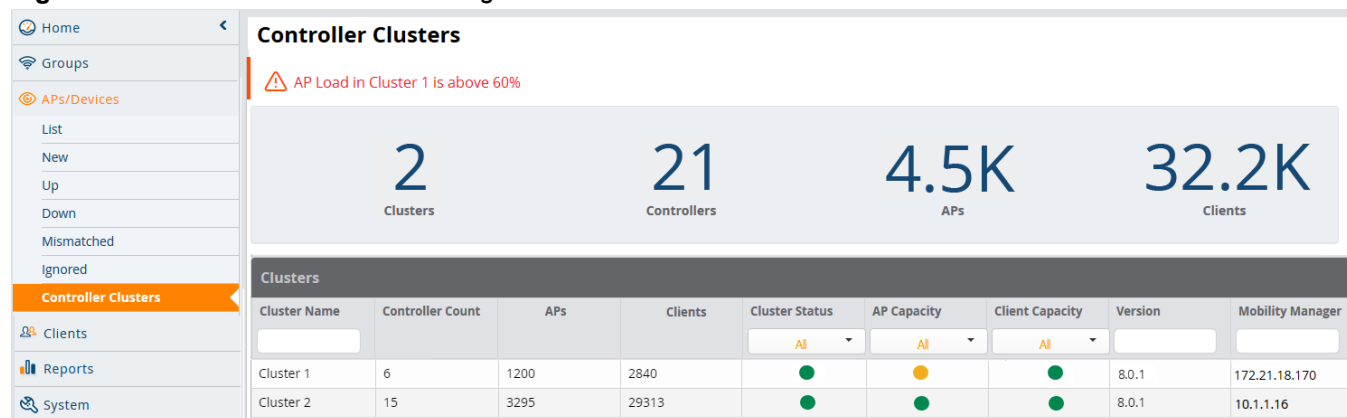
The **Home > APs/Devices >Controller Clusters** page also includes a **Clusters** table that displays statistics for each cluster group. You can click any table heading to sort the table by that column criteria, or enter a text string into the entry field at the top of any column to filter the table by that value.

Table 2: *Clusters Table*

Column	Description
Name	Name of the controller cluster. Click any cluster name to display the **APs/Devices > Monitor** page for that cluster.
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 AOS-W 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. The following sections of this topic describe the information on this page.

- "Viewing AP Capacity Graphs" on page 10
- "Viewing Client Capacity Graphs" on page 10

Figure 6: *Home >APs/Devices > Controller Clusters > Cluster Detail page*

Clusters > Cluster 2

Controllers								
Name	**IP**	**Version**	**Status**	**AP Capacity**	**User Capacity**	**Model**	**Role**	**Folder**
Controller 1	10.22.152.121	8.0.1	Up	373	18940	9	Leader	Folder 1
Controller 2	10.22.152.109	8.0.1	Down	77	2879	9	Member	Folder 2

Events			
Source	**Name**	**Description**	**Time**
Controller 1	New leader elected	New leader is Controller 1 (10.22.152.119)	26/05/2016, 14:44:29
Controller 2	Neighbor down	Neighbor controller 10.22.152.122 is down.	26/05/2016, 14:33:58

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.

Viewing the Controllers Table

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.
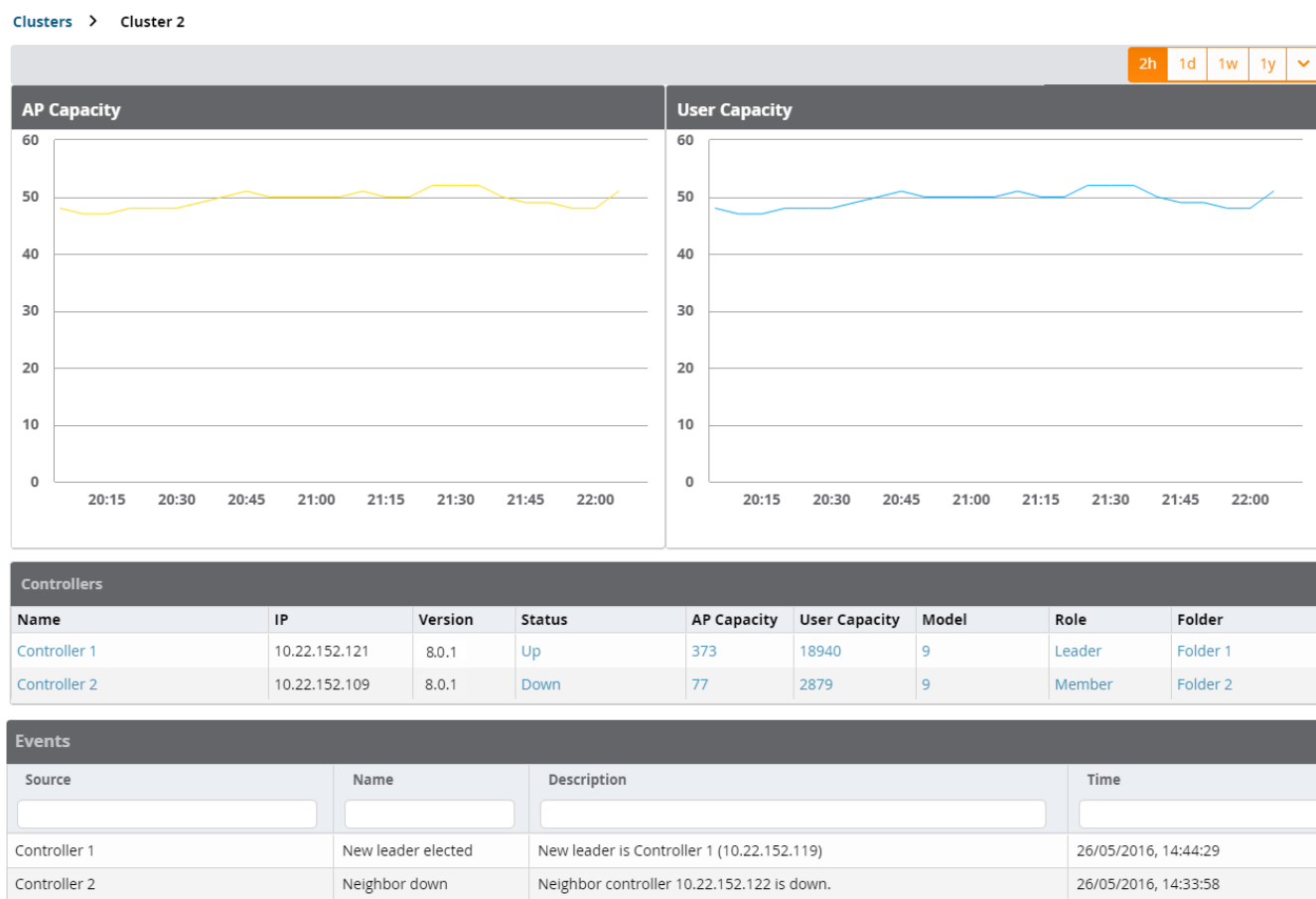
Table 3: *Controllers Table*

Column	Description
Name	Name of the controller in the cluster.
IP	IP address of the controller in the cluster.
Status	This column displays one of the following status icons: ● 🔴 = The controller is down ● 🟢 = The controller is active
AP Capacity	This column displays 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 displays 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
Version	Version of AOS-W currently running the controllers.
Role	Controller role within the cluster, either **leader** or **member**.
Type	Controller model type.
Version	Version of ArubaOS currently running on the controller.

Monitoring Cluster Events

The **Events** table displays a description of each cluster event (such as a cluster member becoming inactive, crossing a capacity threshold, or changing its role within the cluster) and provides a timestamp showing when that event occurred. You can filter this table by entering a text string into the **Time** or **Description** fields at the top of each column.

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 7 shows the **APs/Devices > Monitor** page for an AP associated to a cluster member.

Figure 7: *APs/Devices > Monitor page for an AP in a Controller Cluster*
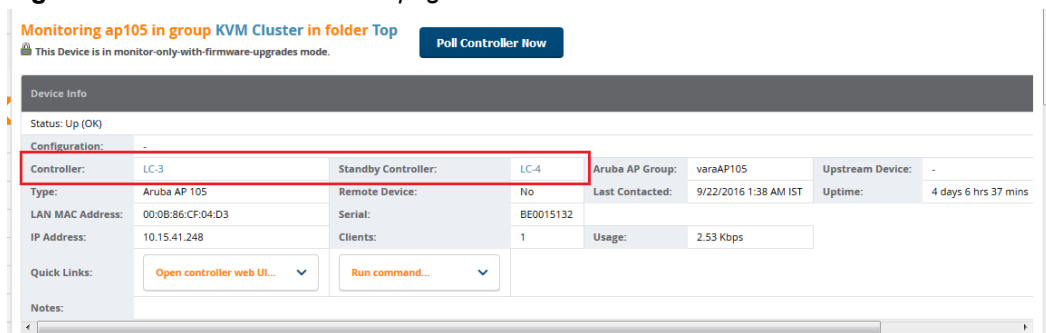
Greater RF Visibility for Device Managers

OV3600 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 visiblity 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.

Increased Password Security for Instant Devices

OV3600 8.2.3 stores passwords for Instant devices as a one-way hash. In previous releases of OV3600, all passwords in an Instant AP configuration file were stored using reversible encryption. Although the encryption key used to encrypt passwords in the config file was obfuscated in the object code, the encryption key was common across all OAW-IAP deployments.

Clarity Synthetic Beta

OV3600 8.2.3 adds on-demand synthetic testing, including integration with VisualRF so you can pick APs from a floor plan. Now you can test remotely, choosing an SSID, giving Clarity credentials to access the network, and telling Clarity which tests to run. From the results, you can see how long it takes to connect to the network, ping, get DHCP, and page load for any cloud application your clients use regularly.

For information on installing the Clarity Engine and using Clarity Synthetic, refer to the *OV3600 8.2.3 and Clarity Beta User Guide*.

Switch and Router Monitoring

OV3600 8.2.3 includes the following improvements to monitoring your wired devices:

- Wired neighbors are now reported in the **Neighbors** table on the switch monitoring page.
- When you search for a wired client, the popup window provides results that let you focus on what you want to monitor and click hyperlinks that let you further diagnose client issues.
- **Client Diagnostics** page now show port interface and switch for diagnosing network status and connectivity. Double-clicking a port in the topology view opens the **Monitoring Interface** page.
- Adds UI tools to hide table columns, group features based on capabilities, show filters, and reset groups to clear customizations.
- Adds editables fields to the **Connected Clients** table (previously called **Wired Clients**) for authenticating rogue devices.
- Wired clients are now the default view in the **Client Details** page for a switch or router.

- The **Default View** table is now removed from the **Interface Monitoring** page for a switch or router; it is relevant only to wireless clients.
- Clicking the interface number from the list of physical interfaces on the **Switch Monitoring** page will open the **Interface Monitoring** page.

For information about monitoring the wired devices in your network, see the latest version of the *OV3600 8.2.3 User Guide*.

Simplified FIPS 140-2 Approved Mode

By default, FIPS-1402 approved mode is set to disabled. In OV3600 8.2.3, you can run a new script file to configure the OV3600 server for high security and government environments and then reboot the AirWave server automatically.

For information about enabling FIPS 140S 140-2 approved mode, see the latest version of the *OV3600 8.2. User Guide*.

Aruba 2930F Switch Stacking for VSF

OV3600 provides simplified deployment of the Aruba 2930F switches. If you have already formed a VSF stack of 2, 3, or 4 switches, you can leverage the link information between the switches to use as a template from which you create a golden configuration. The golden configuration must have the exact VSF configuration of the desired end-user setup in order to correctly configure the commander, the standby switch in the stack, and the remaining members.

> **NOTE**
>
> All the switches in the stack must be running the same firmware.

Enabling VSF Stacking

1. Create a golden configuration in OV3600, mirroring the desired VSF configuration on the switch.
2. Add the ZTP factory default device into OV3600 to the group with the VSF golden configuration.
3. Put the device into **Manage Read/Write** mode.
4. Push the complete configuration file from OV3600. The device will reboot after the full configuration push.
5. Once the device is **UP** with the VSF configuration, it will update its existing IP address on the OV3600 server without any manual intervention.
6. Put the device into **Monitor only** mode. Audit the device and fetch the configuration from the device, using the template page, then click Import Settings on the switch management page to make the configuration **Good** in OV3600.

Example

The following example shows an extract of "member 3" VSF information under the **Stacking/VSF Commands** section of the switch management page:

```
member 3
   type "JL255A" mac-address 941882-42e380
   priority 128
   link 1 3/4
   link 1 name "I-Link3_1"
   link 2 name "I-Link3_2"
   exit
```

Adding a Switch to the VSF Stack

Whenever you connect a new switch to an existing VSF stack, you need to add the VSF link of the last switch to the new switch in the **Stacking/VSF Commands** section of the switch management page. This is done by passing the last member VSF link to the new member switch, and then saving and confirming the configuration to push from OV3600. After the new switch reboots and is in the **UP** state, its VSF information automatically updates in the switch running configuration.

Example

The following example shows an extract of "member 3" VSF information that you need to edit by adding a VSF link 2 for port 3/6 to the new switch under the **Stacking/VSF Commands** section of the switch management page:

```
member 3
  type "JL255A" mac-address 941882-42e380
  priority 128
  link 1 3/4
  link 1 name "I-Link3_1"
  link 2 3/6
  link 2 name "I-Link3_2"
  exit
```

OV3600 8.2.3 provides a range of features to manage network infrastructure devices from Alcatel-Lucent and other vendors. For a complete list of supported products from other vendors, see the *OmniVista 3600 Air Manager 8.2.3 Supported Infrastructure Devices* document. You can find this document at https://service.esd.alcatel-lucent.com.

Support for New Devices in OV3600 8.2.3

OV3600 8.2.3 introduces support for several Alcatel-Lucent and HPE devices.

Alcatel-Lucent Devices

OV3600 8.2.3 introduces support for the following access points:

- AP-207
- AP-304, AP-305
- AP-314, AP-315
- AP-334, AP-335

OV3600 8.2.3 introduces support for the following Instant access points:

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

Aruba Devices

OV3600 8.2.3 introduces support for the following Aruba switches and their functions:

- 2540 Full and partial configuration
- 2930F Virtual switch (VSF) stacking
- 5406zl Monitoring
- 5412zl Monitoring

HPE Devices

OV3600 8.2.3 introduces monitoring support for the following HPE switches running Comware 7, including monitoring, full template configuration (without requiring a reboot) and partial template configuration:

- HPE 1950 Switch
- HPE 3100 Switch Series
- HPE 3600 Switch Series
- HPE 5120 Switch
- HPE 5130 Switch
- HPE 5500 Switch Series
- HPE 7500 Switch Series
- HPE 10500 Switch Series

Support for Instant in OV3600 8.2.3

OV3600 8.2.3 supports Alcatel-Lucent OAW-IAPs running Instant 6.5.5.0-4.3.0 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 OV3600.

Table 4: *OmniVista 3600 Air Manager Support for Instant*

Instant Version	Support for Template Configuration	Support for IGC configuration
Instant 4.3	OV3600 8.2.3	OV3600 8.2.3
Instant 4.2.4	OmniVista 3600 Air Manager 8.2.1	OV3600 8.2.1
Instant 4.2.3	OmniVista 3600 Air Manager 8.2	OmniVista 3600 Air Manager 8.2, with the Instant 4.2.1 UI
Instant 4.2.2	OmniVista 3600 Air Manager 8.2	OmniVista 3600 Air Manager 8.2, with the Instant 4.2.1 UI
Instant 4.2.1	OmniVista 3600 Air Manager 8.0.10.0	OmniVista 3600 Air Manager 8.0.10.0
Instant 4.2	OmniVista 3600 Air Manager 8.0.9	OmniVista 3600 Air Manager 8.0.9
Instant 4.1.3.1	OmniVista 3600 Air Manager 8.2.1, 8.2.0.3, and 8.0.11.2	OmniVista 3600 Air Manager 8.2.1, 8.2.0.3, and 8.0.11.2
Instant 4.1.3	OmniVista 3600 Air Manager 8.2.1, 8.2.0.3, and 8.0.11.2	OmniVista 3600 Air Manager 8.2.1, 8.2.0.3, and 8.0.11.2
Instant 4.1.2	OmniVista 3600 Air Manager 8.0.9	OmniVista 3600 Air Manager 8.0.9
Instant 4.1.1	OmniVista 3600 Air Manager 8.0.4	OmniVista 3600 Air Manager 8.0.4
Instant 4.1	OmniVista 3600 Air Manager 8.0	OmniVista 3600 Air Manager 8.0.4
Instant 4.0	OmniVista 3600 Air Manager 8.0 and OmniVista 3600 Air Manager 7.7.10	OmniVista 3600 Air Manager 7.7.8

The following tables describe issues resolved in OV3600 8.2.3 and previous releases.

Table 5: *Issues Resolved in OV3600 8.2.3*

ID	Description
US14762	**Symptom:** After upgrading the Instant software version on a virtual switch, OV3600 lost the IGC-based configuration overrides, resulting in configuration mismatches. **Scenario**: OV3600 8.2.3 resolves an issue in OV3600 8.0.x that caused the virtual controller to lose configuration overrides after an Instant upgrade.
US15871	**Symptom:** Upgrading OV3600 to 8.0.10, 8.0.11 and 8.2.0.1 failed during database migration if there were missing tables, indexes, or foreign keys, causing the server to crash. **Scenario:** OV3600 checks the database schema before it starts an upgrade, then it logs an error if the database schema is incomplete.
DE27379	**Symptom:** In previous versions of OV3600, there were only libX11 and libX11-common RPMs in the software package, which caused security scans to report vulnerabilities. **Scenario:** OV3600 8.2.3 has been updated with the libX11-1.6.3-2 replacement to avoid this issue.
DE27281	**Symptom:** Zero touch provisioning (ZTP) device registration failed after a fresh installation or an upgrade to OV3600 8.2.3. **Scenario:** In OV3600 8.2.3, there is a new setting under **AMP Setup > Additional AMP Services**, called **Disable TLS 1.0 and 1.1**. This option is set to **Yes** by default. In order for Alcatel-Lucent switches to automatically check-in to OV3600 by ZTP, you must change this option to **No**.
DE27123	**Symptom:** Upgrading OV3600 8.0.9 to 8.2.2 or 8.2.2.1 on Red Hat Enterprise Linux (RHEL) 6.3 failed. **Scenario:** We addressed an issue with processing internal messages that prevented successful upgrades on systems running RHEL 6.3.
DE26934	**Symptom:** VisualRF didn't update the 5 GHz radio information for Cisco 3600i APs. **Scenario:** We fixed an issue that occurs when you use an 802.11a/b/g/n device that supports 802.11ac but don't upgrade it to 802.11ac.
DE26905	**Symptom:** OV3600 displays the last authenticated username for a client if it's connected without a username. **Scenario:** This issue no longer occurs for authenticated clients, connecting with LMAC and captive portal, or for unauthenticated clients.
DE26651	**Symptom:** OV3600 failed to push new certificate and captive portal settings to Alcatel-Lucent MAS switches. **Scenario:** If you enabled overrides for new certificate and captive portal settings, OV3600 no longer marks the switches as being mismatched

Table 5: *Issues Resolved in OV3600 8.2.3 (Continued)*

ID	Description
DE26058	**Symptom:** OV3600 didn't provide a **Media Classify** option for access list profiles. **Scenario:** You can configure this option from the **Groups > Controller Config** page or the **AP/Devices > Manage > Overrrides** page.
DE25533	**Symptom:** Earlier versions of OV3600 used SHA-1certificates, which were set to expire in 2017. **Scenario:** OV3600 8.2.1 and later use the replacement SHA-2 certificates.
DE25122	**Symptom:** The Interface Monitoring page displayed incorrect interface and port statistics for x86 switches. **Scenario:** AOS-W 8.0.1 fixes issues related to x86 controller interface statistics that caused the **Usage** and **Interface Frame Counter** graphs and the in and out values in the **Interface** table to appear as "zero".

Table 6: *Issues Resolved in OV3600 8.2.2*

ID	Description
DE26397	**Symptom:** In earlier OV3600 releases, users with regular, non-administrator accounts couldn't see AppRF and UCC data in the dashboards. **Scenario:** Starting with OV3600 8.2.2, you can create an AppRF or UCC role that gives non-administrator users read-only privilege. For information about configuring user roles, see the *OV3600 8.2.3 User Guide*.
DE26139 DE26138	**Symptom:** The Clarity Live data on the **Home > Clarity** page of the OV3600 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 appeared incorrectly in the VisualRF floor plan after an upgrade to OV3600 8.2.x. **Scenario:** An issue is resolved that affects how files are backed up and restored in OV3600 8.2.2.
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 OV3600 WebUI. **Scenario:** In previous releases, credentials for newly discovered devices were visible by default.
DE25884	**Symptom:** The **Group > Monitor** page displayed the wrong bandwidth usage for a switch. For example, OV3600 reports the device usage as 163 Gbps on the **Group** page and 260 Mbps on the **Monitoring** page for the same device. **Scenario:** OV3600 properly displays information about your device bandwidth usage.
DE25821	**Symptom:** OV3600 reported 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 OAW-IAP acted as a gateway for wired networks, has been addressed.

Table 6: *Issues Resolved in OV3600 8.2.2 (Continued)*

ID	Description
DE25645	**Symptom:** If you restored one Instant cluster with an backup of another Instant cluster, OV3600 rebooted the OAW-IAPs because they used the same virtual controller key. **Scenario:** When the OAW-IAPs are in monitor-mode, OV3600 now warns you if the OAW-IAPs are using the same virtual controller key.
DE25211	**Symptom:** AirWave reported 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 OAW-IAP acted as a gateway for wired networks, has been addressed.
DE24958	**Symptom:** Connecting to the OV3600 server with SSH was possible using the Diffie-Hellman Group 1 key exchange. **Scenario:** OmniVista 3600 Air Manager 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 OV3600 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 showed 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 switches running OV3600 8.0.6.3 and Firmware 6.2.1.0 or 6.4.2.0.

Table 7: *Issues Resolved in OV3600 8.2.1.1*

ID	Description
DE26015 DE25582	**Symptom:** OV3600 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 OV3600 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 switch 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 OmniVista 3600 Air Manager 8.2.0.2, OmniVista 3600 Air Manager tried to restart every few seconds when running out of memory. **Scenario:** We fixed an issue that prevented OmniVista 3600 Air Manager from loading AppRF data.

Table 8: *Issues Resolved in OV3600 8.2.1*

ID	Description
DE25427	**Symptom:** A switch does not automatically reboot if a firmware download operation fails. **Scenario:** If the OV3600 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:** OV3600 is now able to restore a backup file after anOV3600 server upgrades from OV3600 8.0.x to OV3600 8.2.1. **Scenario:** Improvements to how the internal server_watcher_limits file is handled resolve this issue in OV3600 8.2.1.
DE25599	**Symptom:** Planned APs correctly appear on an OV3600 8.2.1 VisualRF floorplan. **Scenario:** An issue was identified in OV3600 8.2 that prevented planned APs from appearing on a floorplan. This issue is resolved in OV3600 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 OV3600 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 OV3600 8.2.1.
DE25623	**Symptom:** An Instant AP image can not be uploaded via an external file server if an image with the same name is already uploaded to the OV3600 server. **Scenario:** The **Device Setup >Upload Firmware & Files** page of the OV3600 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:** OV3600 failed to import Cisco IOS templates from standalone APs. **Scenario:** This issue has been fixed in OV3600 8.2.1.
DE25539	**Symptom:** OV3600 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. OV3600 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 OV3600 Instant GUI Config (IGC) feature handles Instant releases with double digits resolves this issue in OV3600 8.2.1.

Table 8: *Issues Resolved in OV3600 8.2.1 (Continued)*

ID	Description
DE25472 DE24975	**Symptom:** OV3600 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. OV3600 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:** An OV3600 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 OV3600 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 OV3600, filters applied to limit the display of rogue devices could not be removed all filters at once, but had to be removed individually. **Scenario:** OV3600 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 OV3600 8.2.1. In previous versions of OV3600 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 OV3600 server to Aruba's support server. A support connection on a server running OV3600 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, OV3600 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.
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:** An OV3600 server running OV3600 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.

Table 8: *Issues Resolved in OV3600 8.2.1 (Continued)*

ID	Description
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 OV3600 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 OV3600 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 > switch Config > Local Config > Network > Port/Interfaces > Gigabit Ethernet** page now correctly lists the Alcatel-Lucent switch. **Scenario:** In previous releases of OV3600, the switch was incorrectly omitted as a supported platform for Ethernet interfaces that were supported by that device.

Table 9: *Issues Resolved in OV3600 8.2.0.3*

ID	Description
DE25624	**Symptom:** OV3600 did not generate matching event reports for an AP on the **Reports > Detail** page although it had connected clients. **Scenario:** This issue occurred when OV3600 skipped AMON messages that didn't contain AP identification information. The method in which OV3600 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 AOS-W issue, where the DNS samples field populated when it shouldn't. The mechanism for querying the DNS samples measured has been corrected.
DE25419	**Symptom:** Old JRE files remained after an upgrade. **Scenario:** When upgrading from an earlier version of OV3600, 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 OV3600 8.0.11.1 to 8.2.x, the Network view in VisualRF displayed incorrect results on the campus map. **Scenario:** OV3600 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.

Table 9: *Issues Resolved in OV3600 8.2.0.3 (Continued)*

ID	Description
DE25408	**Symptom:** You could not modify the primary, secondary, or tertiary switches from the **Cisco Thin AP Settings** or the **Manage Configuration** page. **Scenario:** After upgrading from an earlier version of OV3600 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 OV3600 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 at the top of the OV3600 WebUI (Top Header Stats), displayed incorrectly. **Scenario:** OV3600 8.2.0.3 corrects this screen output issue.
DE25312	**Symptom:** Security flaws in the OV3600 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:** OV3600 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 Alcatel-Lucent AOS-Wswitches contain timestamps in various formats. **Scenario:** OV3600 8.2.0.3 resolves this issue by reporting all messages in the **Clarity** dashboard in milliseconds. In order to view complete Clarity data, upgrade OV3600 to 8.2.0.3 and ensure that the controller is running AOS-W 6.4.3.9, 6.4.4.8, or later.
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 OV3600 and a device using Telnet or SSH and might include passwords and secret data. **Scenario:** Security enhancements in OV3600 8.2.0.3 prevent these files from being viewed using the WebUI and prevent them from being included in an OV3600 backup file.

Table 10: *Issues Resolved in OV3600 8.2.0.2*

ID	Description
DE25409 DE25378	**Symptom:** Clients associated to an Instant AP correctly appear in VisualRF. **Scenario:** In previous releases of OV3600 8.2.x, OAW-IAP clients did not appear correctly in VisualRF floor plans.
DE25333	**Symptom:** OV3600 8.2.x processed incoming rogue data and didn't update the AP database. correctly. **Scenario:** OV3600 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 switch to which that AP is associated. **Scenario:** OV3600 displays the correct AP name sent by the switchin the Clarity monitoring tables and graphs.
DE25260	**Symptom:** An issue prevented OV3600 7.7.14 from upgrading to earlier releases of OV3600 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:** Alcatel-Lucent switches running Alcatel-Lucent AOS-W 6.4.4.6 sent continuous server timeout errors. As a result, the DNS failure graphs displayed inaccurate data. This issue has been resolved.
US14749	**Symptom:** The accuracy of Clarity data is improved with a change that allows OV3600 to use VLAN IP addresses to validate the source of the AMON messages sent to the OV3600 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 switch deployment with VRRP and LMS IP set on the switch, AMON AP messages were being sent with the LMS IP, preventing OV3600 from processing them. • If messages were sent from the AP use a different VLAN IP than the switch, OV3600 would not process them correctly. • If the IP address used by a single switch VLAN is defined as the IP address by which OV3600 communicates with the switch, AP station AMON messages sent from any other VLAN IP defined on the switch would not be processed correctly by OV3600.

Table 11: *Issues Resolved in OV3600 8.2.0.1*

ID	Description
DE25275 DE25251	**Symptom:** An issue is resolved where an OV3600 server upgrading to OV3600 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 OV3600 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:** OV3600 8.2.0.1 resolves an issue that prevented VisualRF section of the OV3600 UI from saving modifications to the floor plan grid size property.

Table 12: *Issues Resolved in OV3600 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. OV3600 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 OV3600 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 OV3600 8.2, and now VisualRF updates the grid size with new dimensions and displays the heat map.

The following tables list known issues identified in OV3600 8.2.3 and previous OV3600 8.2.x releases. There are no known issues in OV3600 8.2.0.1 and 8.2.1.1

Table 13: *Known Issues in OV3600 8.2.3*

ID	Description
DE27474	**Symptom:** Upgrading from OV3600 7.7 to 8.2.3 fails. **Scenario:** When you try to upgrade from OV3600 7.7 to 8.2.3, the process stops and prompts you to contact Alcatel-Lucent Technical Support. **Workaround:** Upgrading directly from OV3600 7.7 to 8.2.3 is not supported. Complete the interim upgrade to OV3600 8.0 before upgrading to 8.2.3.
DE27378	**Symptom:** The bandwidth usage is not reported at the group-level for wired clients. **Scenario:** The **Groups > List** page should report bandwidth usage for wired clients. **Workaround:** There is no workaround.
DE27278	**Symptom:** Alcatel-Lucent-managed nodes display as generic Alcatel-Lucent devices instead of Alcatel-Lucent Virtual Mobility switches because of a software change introduced in AOS-W 8.0.1. **Scenario:** OV3600 can't poll these devices and reports them incorrectly as generic Alcatel-Lucent devices. This issue will be fixed in AOS-W 8.1.0.0. **Workaround:** There is no workaround.
DE27214	**Symptom:** Firmware upgrade for Dell MD series is not available from the **APs/Devices > Manage** page. **Scenario:** This issue occurs only on the Alcatel-Lucent Virtual Mobility switches that are not deployed in physical switches. **Workaround:** There is no workaround.
DE27121	**Symptom:** The monitoring page for a switch doesn't load updates to the client and usage graphs, and updates to the **Home > Overview** page might be delayed by 45 minutes to an hour. **Scenario:** This issue occurs after an upgrade from OV3600 8.2.1 to 8.2.2.1. **Workaround:** There is no workaround.
DE27058	**Symptom:** In VisualRF, changing the language to Italian, German, Spanish, and Turkish for building properties results in an error. **Scenario:** In OV3600 8.2.2.1, when you modify building properties, such as building names, floor plans, longitude and latitude, and ceiling height and attenuation, or change the language settings, VisualRF generates the following error: Enter a decimal number between 1 and 100. **Workaround:** In order to save these changes, select English as the language.
DE26975	**Symptom:** After an upgrade from OV3600 8.0.1 to 8.2.2, not all services restart completely. **Scenario:** This issue occurs when services reach their memory limits. **Workaround:**There is no workaround.

ID	Description
DE26680	**Symptom:** Updates to the client and usage graphs on the **Home > Overview** page might take from 45 to 60 minutes. **Scenario:** This issue occurs in AirWave 8.2.0.2 and later. **Workaround:**There is no workaround.
DE26784	**Symptom:** The stack member interface list has duplicate entries. **Scenario:** This issue occurs when the stacked switch is dismantled and converted into separate switches. **Workaround:** Delete the switches and add the switches again.
DE26772	**Symptom:** When you try to import a certificate from the **Device Setup > Certificates** menu, OV3600 fails to parse the certificate and cannot import it. **Scenario:** This issue occurs for the following types of certificates: PEM, CER, Trusted CA, and Intermediate CA. **Workaround:** There is no workaround.
DE26680	**Symptom:** Updates to the client and usage graphs on the **Home > Overview** menu, might take from 45 minutes to 60 minutes to load. **Scenario:** This issue occurs in OV3600 8.2.0.2 and later. **Workaround:** There is no workaround.
DE26556	**Symptom:** OV3600 shows an incorrect client count. **Scenario:** This issue occurs on switches running AOS-W 6.5.1.0. **Workaround:** There is no workaround.
DE26513	**Symptom:** It takes time to populate IP changes in the switch ARP table. **Scenario:** If a gateway switch is not added in OV3600, then the IP change will not be updated. **Workaround:** There is no workaround.
DE26499	**Symptom:** The interface information is missing for the stack member client diagnostic page for Alcatel-Lucent MAS switches. **Scenario:** The stack member client diagnostic page interface is missing in the topology view. **Workaround:** There is no workaround.
DE26477	**Symptom:** The Monitoring page for a Cisco Integrated Services Router (ISR) displays the wireless interface incorrectly as a neighbor in the CDP Neighbor table. **Scenario:** This wireless interface would more reliably display as a wireless module or a switch property for the ISR. **Workaround:** There is no workaround.

Table 13: *Known Issues in OV3600 8.2.3 (Continued)*

ID	Description
DE26383	**Symptom:** In VisualRF, importing maps fails with an internal server error. **Scenario:** This issue occurs when the backup.zip file exceeds 300 Mb. **Workaround:** Use the command line to import maps.
DE26322	**Symptom:** OV3600 deletes configuration jobs scheduled on a device if you delete the device. **Scenario:** This issue occurs when you delete devices from multiple folders in OV3600 8.0.11.1. **Workaround:** There is no workaround.
DE26282	**Symptom:** The device configuration table grows up to 30 GB, resulting in slow processing and monitoring. **Scenario:** This issue occurs in networks with more than 100 switches and 10 or more archived configurations. **Workaround:** Reduce the amount of archives to 1.
DE26277	**Symptom:** OV3600 doesn't import the routed VLAN interface configuration when you add a primary switch. **Scenario:** In OV3600 8.2.1, when you try to add a primary switch (with 1 secondary and line card present) from the **Audit** page or as a switch override from the **Manage** page, all configurations import successfully except for the routed VLAN interface. **Workaround:** There is no workaround.
DE26040	**Symptom:** AirWave stops running when you try to import a configuration from the **APs/Devices > Audit** page. **Scenario:** After you click Import Settings, OV3600 stops running and prompts you to contact customer support. **Workaround:** There is no workaround.
DE26389	**Symptom:** When upgrading a 2-core processor to OV3600 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**.

Table 13: *Known Issues in OV3600 8.2.3 (Continued)*

ID	Description
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:** Use the command line to import maps.
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:** OV3600 does not display licensing report data for switches that are not active on the network. **Scenario:** If a switch is not active on the network, OV3600 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.
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:** OV3600 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 OV3600 7.7.x to 8.2.x.

ID	Description
DE25530	**Symptom:** OV3600 can create a nightly backup that is unusable. **Scenario:** During a scheduled backup, OV3600 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 OV3600 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:** OV3600 8.2.2 does not discover rogue devices for switches running AOS-W 8.0.
	
	Scenario: OV3600 should support RAPIDS for switches running AOS-W 8.0.
	
	Workaround: Follow these steps to work around this issue:
	1. Using OV3600, add all SCs and LCs manually, or discover them through a network scan (see the *OV3600 8.2.3 User Guide* for help with manually adding devices or adding networks for SNMP/HTTP scanning).
	2. Update the local switch to services switch 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 switch shows the services switch name and a link to its monitoring page.

DE25439	**Symptom:** OV3600 could not complete nightly maintenance tasks. **Scenario:** OV3600 maintenance tasks could fail due to corrupt client history round-robin database (RRD) files, triggering the following 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 OV3600 server to the **/usr/local/airwave/bin/** and **/root/svn/mercury/scripts/** directories, then run the script.
DE25347	**Symptom:** OV3600 retains client history round-robin database (RRD) files after the data retention period has passed, causing the OV3600 server to run out of disk space. **Scenario:** In OV3600 8.0.11, the error log indicates that OV3600 runs the job to delete old RRD files, but OV3600 doesn't delete the files. **Workaround:** There is no workaround.
DE25063	**Symptom:** OV3600 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 switches, OV3600 fails to configure the IP addresses and marks the switches' configuration as mismatched. This issue occurs on Cisco devices running 8.0.121.0 managed by OV3600 8.x.
DE23425	**Symptom:** OV3600 may report incorrect client counts on local switches. **Scenario:** This issue might occur during peak usage when OV3600 falls behind in processing AMON data.

Table 14: *Known Issues in OV3600 8.2.1*

ID	Description
DE25926	**Symptom:** HPE Aruba 2530YA, 2530YB and 2620 switches fail to register with OV3600 through zero-touch provisioning (ZTP) or configuration pushes from OV3600 to the switch command-line interface. **Scenario:** OpenSSL updates in OV3600 cause compatibility issues with these devices.
DE25875	**Symptom:** OV3600 displays incorrect transmission power for APs running Alcatel-Lucent AOS-W 6.4.4.0 to 6.4.4.6. **Scenario:** For APs running the impacted versions of AOS-W, 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 OV3600 by the devices running these versions of Alcatel-Lucent AOS-W.
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 OV3600 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 Alcatel-Lucent 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 OV3600. **Scenario:** If clients with invalid certificates attempt to associate to OV3600, OV3600 drops EAP_FAILURE Dot1x messages, preventing the tracking of clients which are facing EAP-FAILURE.
DE25400	**Symptom:** The OV3600 RAPIDs feature might calculate incorrect signal strengths from the RSSI value for rogue devices. **Scenario:** The cause of this issue is under investigation.
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, OV3600 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, OV3600 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 15: *Known Issues in OV3600 8.2.0.3*

ID	Description
DE25598 DE25522 DE25500	**Symptom:** After updating the IP address of the switch, you see syslog error messages listed under device events in the **Clients > Detail** page and not in the **Clarity** dashboard. **Scenario:** Underlying issues with Alcatel-Lucent AOS-W caused OV3600 to report only DNS information in the **Clarity** dashboard. **Workaround:** Upgrade OV3600 to 8.2.0.3 or later, and ensure that the switch is running Alcatel-Lucent AOS-W 6.4.3.9, 6.4.4.8, or later.
DE25434	**Symptom:** OV3600 sends hundreds of alerts for high CPU or memory usage. **Scenario:** You might encounter this issue if you configured OV3600 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 OV3600 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 OV3600 server. **Workaround:** None.
DE25226	**Symptom:** OV3600 takes longer to process station statistics AMON messages than it did in OV3600 8.0.x. **Scenario:** This issue has been associated with the Internet Explorer web browser. **Workaround:** None.

Table 16: *Known Issues in OV3600 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 17: *Known Issues in OV3600 8.2*

ID	Description
DE25324	**Symptom:** VisualRF Beamwidth, Orientation and Gain values on deployed APs automatically reset when you upgrade OV3600 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 OV3600 server.

Table 17: *Known Issues in OV3600 8.2 (Continued)*

ID	Description
DE25220	**Symptom:** VisualRF indicated an incorrect number of APs associated with the OV3600 server. **Scenario:** In a deployment where over 4,000 APs were associated to an OV3600 server, and the active APs status icon at the top of the WebUI page showed the correct number of APs, VisualRF incorrectly indicated that OV3600 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 OV3600 8.2 IGC feature differs from the list of available rules in Instant 4.2.3. The following applications are unsupported by IGC in OV3600 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 OV3600. **Scenario:** This issue is triggered because OV3600 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.
DE24785 DE24834 DE24836 DE24872	**Symptom:** When the **Groups > Instant Config** pages of the OV3600 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.

Table 17: *Known Issues in OV3600 8.2 (Continued)*

ID	Description
DE24424	**Symptom:** A non-default **Failure Timeout** value configured via **OV3600 Setup > General > Firmware upgrade/Reboot Options** is not correctly applied. **Scenario:** By default, if a firmware upgrade on a switch fails, the switch state becomes locked, and a failure timeout of 60 minutes must elapse before the switch attempt s another upgrade. In OV3600 8.2, if you configure a non-default value for this failure timeout, the switch state might lock for 60 minutes *plus* the new failure timeout period. For example, if you configure a custom failure timeout period of 15 minutes, that setting might keep a switch locked for 75 minutes.
DE24417	**Symptom:** Firmware updates on Alcatel-Lucent 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 OV3600 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 OV3600 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 a different web browser 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.
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 OV3600 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 OV3600 WebUI, changes to the floor plans settings (like the floor name or number) are not correctly saved. **Workaround:** Measure the floor plan again to your save modifications.

Table 17: *Known Issues in OV3600 8.2 (Continued)*

ID	Description
DE23289	**Symptom:** VisualRF floor plans do not open correctly for clients accessing the OV3600 WebUI via the Microsoft Edge browser. **Scenario:** When viewing the **VisualRF** section of the OV3600 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 that run individually on the switch appear grouped on the device running the configuration. OV3600 supports a 1:1 comparison of commands from the template and the device running the configuration. As a result, the grouped commands might incorrectly cause a mismatch.
	
	For example, the template might show two separate commands:
	`loop-protect transmit-interval 10`
	`loop-protect disable-timer 3000`
	While the running configuration groups them into a single command:
	`loop-protect transmit-interval 10 disable-timer 3000`
	Workaround: Use the grouped commands directly in the template to avoid a mismatch.

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. OV3600 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`

Table 17: *Known Issues in OV3600 8.2 (Continued)*

ID	Description

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**. OV3600 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	**Sympto:** 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. OV3600 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. OV3600 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.

Table 17: *Known Issues in OV3600 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 OV3600 pushes a partial configuration that does not require a reboot, OV3600 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, OV3600 only pushes a delta configuration, which does not result in a switch reboot. If a user adds settings via OV3600 that are not supported by OV3600 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 OV3600 always executes the **include-credentials** command when pushing a configuration to a switch.
N/A	**Symptom**: Unrecognized PVOS command syntax. **Scenario:** OV3600 may not recognize some syntax for some ArubaOS-Switch Operating System commands, and therefore will not allow to users to configure these commands via OV3600.

N/A	**Symptom**: Unrecognized PVOS defaults and values.
	
	Scenario: OV3600 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 OV3600.
	
	For example, if a template has the command **ipv6 hop-limit 100**, OV3600 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 OV3600, 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>`

This chapter provides instructions for upgrading to OV3600 8.2.3 using the CLI.

Upgrading to OV3600 8.2.3

You might want to use the screen command so that the upgrade persists to run the upgrade in the background in case the admin's system disconnects from the SSH session.

To install the OV3600 software image:

1. Log in to the OV3600 server as the root user.

2. Run the upgrade utility with the desired version:
   ```
   # screen
   # start_ov3600_upgrade -v 8.2.3
   ```

If your OV3600 server cannot access the Internet, perform the following steps:

1. Download the OV3600 8.2.3 upgrade package.

2. Copy the file to the OV3600 server's **/root** directory using an SCP, FTP, or SFTP capable file transfer application.

3. On the OV3600 server, run the upgrade utility with the desired software version:
   ```
   # screen
   # start_ov3600_upgrade -v 8.2.3
   ```