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The AI Insights Dashboard

In an environment of rapidly changing business and user expectations driven by an explosion of connectivity requirements from the edge to the cloud, a new approach to network management is required. Aruba AIOps (Artificial Intelligence for IT operations) is the next generation of AI-powered solutions that integrates proven Artificial Intelligence solutions with recommended and automated action to provide both fast response to identified problems, along with proactive prediction and prevention.

With data collected from over 750,000 access points, switches, and gateways, Aruba Central and built-in AI Insights proactively identifies and solves issues, and provides pinpoint configuration recommendations. As the data is stored in the cloud, it is easy to view the network performance across all locations from a single pane of glass. Utilizing the cloud also provides the ability to anonymously compare a network with a peer network or the baselines for a broader perspective and optimization. All of this comes from Aruba's advantage in accessing an enormous volume and variety of data that is factored into insights. Aruba does not collect or process personal data.

In this release the insights are classified under three categories:

- **Connectivity**—Issues related to the wireless connectivity in the network.
- **Wireless Quality**—Issues related to the [RF Info](#) or **RF Health** in the network.
- **Availability**—Issues related to the health of your network infrastructure and the devices in the network such as, APs, switches, and gateways.

The **AI Insights** dashboard displays a report of network events that could possibly affect the quality of the overall network performance. These are anomalies observed at the access point, connectivity, and client level for the selected time range. Each insight provides specific details on the occurrences of these events for easy debugging.

To launch the **AI Insights** dashboard, complete the following steps:


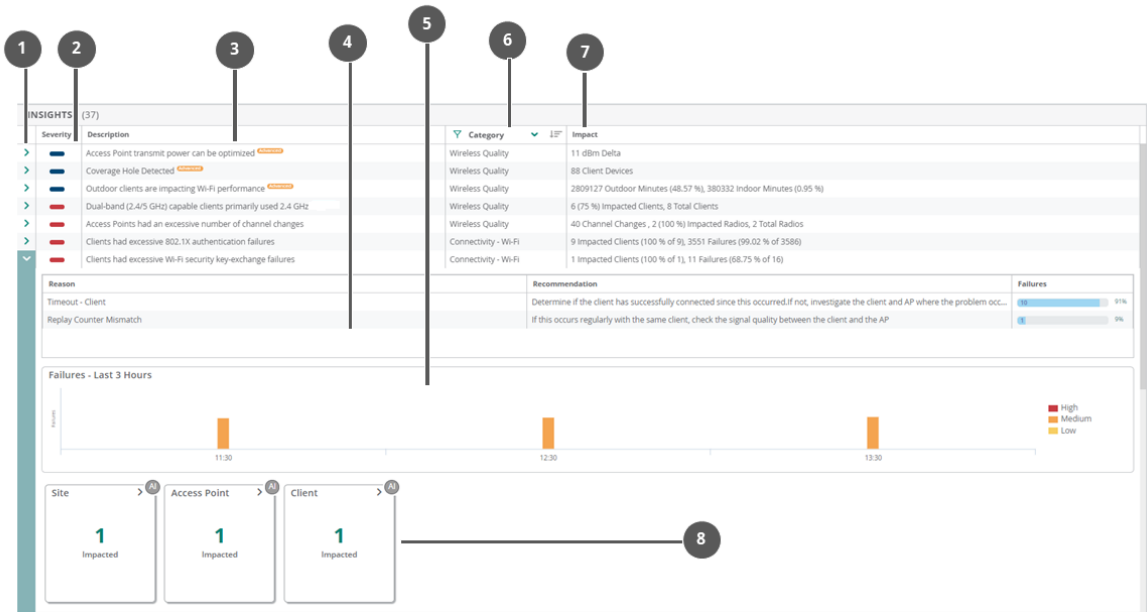
1. In the **Network Operations** app, set the filter to **Global**. The dashboard context for the selected filter is displayed.
2. Under **Manage**, click **Overview > AI Insights**. The **Insights** table is displayed. AI Insights listed in the dashboard are sorted from high priority to low priority.
3. Click the arrow  against each insight to view the further details.



Figure 1 Insight Details



Callout Number	Description
1	Click this arrow to expand any specific insight to view further details.
2	Displays the insight severity, using the following colors: ■ Red—High priority ■ Orange—Medium priority ■ Yellow—Low priority NOTE: The following three configuration recommendation insights are marked in blue color (■) in the severity column: <ul style="list-style-type: none"> ○ Access Point Transmit Power can be Optimized ○ Coverage Holes Identified ○ Outdoor Clients Impacting Wi-Fi Performance
3	Short description of the insight.
4	Insight Summary displays the reason why the insight was generated along with recommendation. It also shows the number and percentage of failures that occurred against each failure reason. The reasons are classified into: <ul style="list-style-type: none"> ■ Static—These reasons rely on Aruba's domain expertise. ■ Dynamic—These reasons are generated based on error codes that is received from infrastructure devices.
5	Time Series graph is a graphical representation of the failure percentage or failure events that occurred for the selected time range. The entries in each time series bar can be customized to highlight a specific entry by clicking on it. Only one specific entry can be highlighted at a time.
6	Category of the insight. Insight category can be filtered by clicking the filter icon.
7	Short description of the impact.
8	Cards display additional information specific to each insight. Cards might vary for each insight based on the context the insight is accessed from. For more information, see Cards .

All AI Insights generated are listed in the **Global > AI Insights** dashboard. Alternatively, AI Insights for a specific site, device, or client can be viewed by selecting the respective context. For more information on available insights and the context, see [Insights Context](#).

AI Insights are displayed for a selected time period based on the time selected in the **Time Range Filter** (🕒). You can select one of the following: **3 Hours**, **1 Week**, **1 Day**, or **1 Month**.

Figure 2 AI Insights Dashboard

Severity	Description	Category	Impact
🔴	Access Point transmit power can be optimized	Wireless Quality	11 dBm Delta
🔴	Coverage Hole Detected	Wireless Quality	88 Client Devices
🔴	Outdoor clients are impacting Wi-Fi performance	Wireless Quality	2809127 Outdoor Minutes (48.57%), 380332 Indoor Minutes (0.95%)
🔴	Dual-band (2.4/5 GHz) capable clients primarily used 2.4 GHz	Wireless Quality	6 (75%) Impacted Clients, 8 Total Clients
🔴	Access Points had an excessive number of channel changes	Wireless Quality	40 Channel Changes, 2 (100%) Impacted Radios, 2 Total Radios
🔴	Clients had excessive 802.1X authentication failures	Connectivity - Wi-Fi	9 Impacted Clients (100% of 9), 3551 Failures (99.02% of 3586)
🔴	Clients had excessive Wi-Fi security key-exchange failures	Connectivity - Wi-Fi	1 Impacted Clients (100% of 1), 11 Failures (68.75% of 16)
🔴	Clients had problems authenticating with the Captive Portal	Connectivity - Wi-Fi	1 Impacted Clients (100% of 1), 6 Failures (100% of 6)
🔴	Access Points had a high number of reboots	Availability - Access Point	5 (62.5%) Impacted Access Points, 8 Total Access Points, 5 Reboots.
🔴	DNS server(s) rejected a high number of queries	Connectivity - Wi-Fi	606 (88.08%) Failed Requests, 688 Total Requests
🔴	DNS request/responses were significantly delayed	Connectivity - Wi-Fi	14956 Average Delay (ms)
🔴	PVOS Switches had unusually high CPU utilization	Availability - Switch	4 (40%) Impacted Switches, 10 Total Switches
🔴	PVOS Switches had unusually high memory usage	Availability - Switch	4 (40%) Impacted Switches, 10 Total Switches
🔴	Gateways had unusually high CPU utilization	Availability - Gateway	13 Gateways
🔴	Gateways had high memory usage	Availability - Gateway	1 Gateways
🔴	Gateway tunnels failed to get established	Availability - Gateway	5 Tunnels Down
🟡	Clients had a significant number of Low SNR minutes	Wireless Quality	10 (40%) Impacted Clients, 25 Total Clients
🟡	Clients had DHCP server connection problems	Connectivity - Wi-Fi	3 Impacted Clients (33.33% of 9), 1851 Failures (95.27% of 1943)
🟡	Clients had a high number of Wi-Fi Association failures	Connectivity - Wi-Fi	3 Impacted Clients (37.5% of 8), 9 Failures (9.57% of 94)
🟡	Clients had an unusual number of MAC authentication failures	Connectivity - Wi-Fi	4 Impacted Clients (36.36% of 11), 21 Failures (29.17% of 72)
🟡	Access Points had unusually high CPU utilization	Availability - Access Point	3 (30%) Impacted Access Points, 10 Total Access Points
🟡	Access Points were impacted by high 2.4 GHz usage	Wireless Quality	8 (40%) Impacted Access Point Radios, 20 Total Access Point Radios
🟡	Access Point radios were impacted by high 5 GHz usage	Wireless Quality	8 (40%) Impacted Access Point Radios, 20 Total Access Point Radios
🟡	Access Point radios changed their transmit power frequently	Wireless Quality	357 Power Changes, 2 (50%) Impacted Radios, 4 Total Radios
🟡	DNS queries failed to reach or return from the server	Connectivity - Wi-Fi	1146 (6.78%) Lost Requests, 16900 Total Requests
🟡	PVOS Switches had an unusual number of port errors	Availability - Switch	1 (20%) Impacted Switches, 5 Total Switches
🟡	Access Points with unusually high memory usage were found	Availability - Access Point	10 (10.1%) Impacted Access Points, 99 Total Access Points
🟡	Information (telemetry) was not received from APs/Radios	Availability - Access Point	21 (1.87%) Impacted Access Point Radios, 1124 Total Access Point Radios