

## **View and Manage Events**

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### **Events Dashboard Overview**

The **Events** dashboard provides a contextual view of events for devices (routers, switches, wireless controllers, APs) and endpoints (wired and wireless). Instead of having to search for events triggered by devices that are connected to other devices involved in an event, Assurance provides these details for you.

By default, the **Events** dashboard displays a timeline chart and a list view.

The timeline chart provides a color representation of the number of events by device type that occurred over a period of time.

The list view displays a table of events. Up to 10,000 events can be displayed, even if more events have been logged. You can export up to 5000 events to a CSV file. However, if there are more than 5000 events, the export capability is disabled.

From the list view, you can click an event to view its details, including events triggered by connected devices. You can configure the event time period in 15-minute increments, up to one hour (+/- 15 minutes, +/- 30 minutes, +/- 45 minutes, +/- 1 hour).

When you select more than one event, you can view multiple cards with event details. When you have multiple event cards displayed, you can minimize, maximize, and close cards. For example, to view the connected device events table for an event, maximize the event card. To return to the multiple card view, minimize the card.

## **View Device Events**

Use this procedure to view events generated by routers, switches, wireless controllers, and APs.

**Step 1** From the top-left corner, click the menu icon and choose **Assurance** > **Dashboards** > **Issues and Events**.

The **Events** dashboard opens with **Device** selected as the **Category Type** by default.

### Figure 1: Device Events Dashboard

| R                                       | 4:30p<br>outer  |   |                       |   |   |                         |  |  | 4:30p          |
|---|---|---|-----------------------|---|---|-------------------------|--|--|----------------|
| eless Contr<br>Nired Endp<br>eless Endp | AP<br>opints  |   |                       |   |   |                         | -  |  |                |
|   | 6p  | 1<br>8p                                   | 10p                   | 7/19                                      | 1 1<br>2a 4a  | 6a                      | r i<br>8a 10a  | 12p 2p   | 4p             |
| Even<br>Catego                          | uts (2741) (i)<br>Dry Type Devices                                  | Endpoints                                 | Route                 | er: 4 Swit                                | tch: 2736 Wireless Cont   | roller: 1               | AP: 0  | 企 E  | xport 🔅        |
| 0                                       | Filter Table  |   |                       |   |   |                         |  |  | $\nabla$       |
| Q<br>0 Sele                             | Filter Table  |   | Status                | Severity                                  | Timestamo 💌   |                         | Device Name  | Event Type   | Device IP      |
| Q<br>0 Sele                             | Filter Table  | Y:REACHABLE                               | Status                | Severity<br>Warning                       | Timestamp -<br>Jul 19, 2022 10:04:13.97   | 77 AM                   | Device Name  | Event Type<br>Device Event                                 | Device IP      |
| Q<br>0 Sele                             | Filter Table acted Event Name DEVICE_AVAILABILIT DEVICE_AVAILABILIT | Y:REACHABLE<br>Y:REACHABLE                | Status<br>•           | Severity<br>Warning<br>Warning            | Timestamp -<br>Jul 19, 2022 10:04:13.97<br>Jul 19, 2022 10:04:00.47                             | 77 AM<br>77 AM          | Device Name<br>+ HUB-MPLS<br>+ Branch-3-Gateway                      | Event Type<br>Device Event<br>Device Event                 | V<br>Device IP |
| Q<br>0 Sele<br>0                        | Filter Table Ceted Event Name DEVICE_AVAILABILIT DEVICE_AVAILABILIT | Y:REACHABLE<br>Y:REACHABLE<br>Y:REACHABLE | Status<br>•<br>•<br>• | Severity<br>Warning<br>Warning<br>Warning | Timestamp -<br>Jul 19, 2022 10:04:13.97<br>Jul 19, 2022 10:04:00.47<br>Jul 19, 2022 10:03:59.72 | 77 AM<br>77 AM<br>21 AM | Device Name  + HUB-MPLS  + Branch-3-Gateway  Branch-1-MPLS.clsco.com | Event Type<br>Device Event<br>Device Event<br>Device Event | Device IP      |

| Device Events Dashboard |   |  |  |  |  |  |
|-------------------------|---|--|--|--|--|--|
| ltem                    | Description   |  |  |  |  |  |
| Global                  | • Click Global i in the top menu bar to choose the site, building, or floor from the Site hierarchy.                                      |  |  |  |  |  |
|                         | • Click next to the location icon and choose <b>Site Details</b> to view the event counts for each site.                                  |  |  |  |  |  |
|                         | • Choose <b>Hierarchical Site View</b> or <b>Building View</b> from the drop-down list. Based on what you choose, the table is refreshed. |  |  |  |  |  |
|                         | • From the <b>Go to sites</b> column, click for a site or building to display events for only that location.                              |  |  |  |  |  |
| 0                       | Allows you to display information on the window based on the time range you select. The default is <b>24 Hours</b> . Do the following:    |  |  |  |  |  |
| Time Range setting      | a. From the 24 Hours drop-down list, choose a time range: 3 hours, 24 hours, or 7 days.   |  |  |  |  |  |
|                         | b. Specify the Start Date and time, and the End Date and time.  |  |  |  |  |  |
|                         | c. Click Apply.   |  |  |  |  |  |
|                         | This sets the range of the timeline.  |  |  |  |  |  |

| Device Events Dashboard |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|
| ltem                    | Description  |  |  |  |  |  |
| Timeline Slider         | Allows you to specify a more granular time range. Click and drag the timeline boundary lines to specify the time range.  |  |  |  |  |  |
|                         | The colors represent the device type:  |  |  |  |  |  |
|                         | : Router   |  |  |  |  |  |
|                         | : Switch   |  |  |  |  |  |
|                         | : Wireless controller  |  |  |  |  |  |
|                         | : AP   |  |  |  |  |  |
|                         | The intensity of the color indicates its significance, whether more or fewer events have occurred for that device. For example, a lighter shade of blue indicates fewer router events than a deeper shade of blue. |  |  |  |  |  |
| Total Events            | The total number of events for all device types for a specific time range.   |  |  |  |  |  |

# **Step 2** Under **Events**, for the **Category Type**, click the **Router**, **Switch**, **Wireless Controller**, or **AP** tab to display a list of events for that device type in the table.

| Events Table |   |  |  |  |  |  |
|--------------|---|--|--|--|--|--|
| ltem         | Description   |  |  |  |  |  |
| Event Name   | Name of the event.  |  |  |  |  |  |
|              | Click the event name to open a slide-in pane with details about the event.  |  |  |  |  |  |
| Status       | Status of the device.   |  |  |  |  |  |
|              | The color represents the severity of the event.   |  |  |  |  |  |
|              | •: Error.   |  |  |  |  |  |
|              | •: Warning.   |  |  |  |  |  |
|              | •: Info.  |  |  |  |  |  |
|              | •: No data available.   |  |  |  |  |  |
| Severity     | Severity of the event: Critical and above (Emergency and Alert) and less severe than Critical level (Error, Warning, Notice, and Info). |  |  |  |  |  |
| Timestamp    | Date and time when the event occurred.  |  |  |  |  |  |
| Device Name  | Name of the device that was impacted by the event.  |  |  |  |  |  |
|              | Click the device name to open the <b>Device 360</b> window.   |  |  |  |  |  |
| Event Type   | Category of the event: Syslog, Trap, Event, or AP Event.  |  |  |  |  |  |
| Device IP    | IP address of the device.   |  |  |  |  |  |

Step 3To view multiple events, check the check box next to each event you want to view and click Show Selected Events.The Multiple Events slide-in pane opens with each event displayed in a separate card.

From inside a card, you can do the following:

- Minimize, maximize, and close a card.
- Display more details by clicking the down arrow.
- Click hyperlinks to launch the respective device 360 window.

When a card is maximized, any connected device events are displayed.

Step 4 From the Multiple Events slide-in pane, click the list view icon  $\equiv$  to display a compilation of all the subevents sequentially in a list.

To return to the card view, click the card view icon III.

# **View Endpoint Events**

Use this procedure to view events generated by wired and wireless endpoints.

- **Step 1** From the top-left corner, click the menu icon and choose **Assurance** > **Dashboards** > **Issues and Events**.
- **Step 2** Click the **Events** tab.

The Events dashboard opens.

**Step 3** For the **Category Type**, click the **Endpoints** tab.

### Figure 2: Endpoint Events Dashboard



### **Device Events Dashboard**

| ltem               | Description   |
|--------------------|---|
| Global             | • Click in the top menu bar to choose the site, building, or floor from the Site hierarchy.   |
|                    | • Click inext to the location icon and choose <b>Site Details</b> to view the event counts for each site.                                 |
|                    | • Choose <b>Hierarchical Site View</b> or <b>Building View</b> from the drop-down list. Based on what you choose, the table is refreshed. |
|                    | • From the <b>Go to sites</b> column, click for a site or building to display events for only that location.                              |
| 0                  | Allows you to display information on the window based on the time range you select. The default is <b>24 Hours</b> . Do the following:    |
| Time Range setting | a. From the 24 Hours drop-down list, choose a time range: 3 hours, 24 hours, or 7 days.   |
|                    | <b>b.</b> Specify the <b>Start Date</b> and time, and the <b>End Date</b> and time.   |
|                    | c. Click Apply.   |
|                    | This sets the range of the timeline.  |

I

| Device Events Dashboard |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|
| ltem                    | Description  |  |  |  |  |  |
| Timeline Slider         | Allows you to specify a more granular time range. Click and drag the timeline boundary lines to specify the time range.  |  |  |  |  |  |
|                         | The colors represent the endpoint type:  |  |  |  |  |  |
|                         | : Wired<br>: Wireless  |  |  |  |  |  |
|                         | The intensity of the color indicates its significance, whether more or fewer events have occurred for that device. For example, a lighter shade of purple indicates fewer endpoint events than a deeper shade of purple. |  |  |  |  |  |
| Total Events            | The total number of events for all endpoint types for a specific time range.   |  |  |  |  |  |

| Step 4 | Click the Wired or Wireless | tab to display a list of events | for that endpoint type in the table. |
|--------|-----------------------------|---------------------------------|--------------------------------------|
|--------|-----------------------------|---------------------------------|--------------------------------------|

| Events Table                       |  |  |  |  |  |  |
|------------------------------------|--|--|--|--|--|--|
| Item                               | Description  |  |  |  |  |  |
| Event Name                         | Name of the event.   |  |  |  |  |  |
|                                    | Click the event name to open a slide-in pane with more details.  |  |  |  |  |  |
| Status (Wired Endpoints Only)      | The color represents the severity of the event.  |  |  |  |  |  |
|                                    | •: Error.  |  |  |  |  |  |
|                                    | •: Warning.  |  |  |  |  |  |
|                                    | •: Info.   |  |  |  |  |  |
|                                    | •: No data available.  |  |  |  |  |  |
| Severity (Wired Endpoints<br>Only) | Severity of the event. Severity can be critical and above (Emergency and Alert) and less severe (Error, Warning, Notice, and Info).      |  |  |  |  |  |
| Timestamp                          | Date and time when the event occurred.   |  |  |  |  |  |
| Identifier                         | Identifier of the endpoint. It can be either user ID, hostname, IP Address, or MAC address, depending on the availability in that order. |  |  |  |  |  |
|                                    | Click the identifier to open a slide-in pane with more details.  |  |  |  |  |  |
| Event Type                         | Category of the event: Syslog, Trap, Event, or AP Event.   |  |  |  |  |  |
| IPv4 Address                       | IPv4 address of the device that is connected to the endpoint.  |  |  |  |  |  |
| AP Name (Wireless Endpoints        | Name of the AP that is connected to the wireless endpoint.   |  |  |  |  |  |
| Only)                              | Click the AP name to open the AP <b>Device 360</b> window.   |  |  |  |  |  |
| Switch (Wired Endpoints Only)      | Name of the switch that is connected to the wired endpoint.  |  |  |  |  |  |
|                                    | Click the switch name to open the <b>Device 360</b> window.  |  |  |  |  |  |

| Events Table  |   |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|
| Item  | Description   |  |  |  |  |  |  |
| MAC Address   | MAC address of the device that is connected to the endpoint.                |  |  |  |  |  |  |
| Port (Wired Endpoints Only)                           | Switch port that is connected to the wired endpoint.                        |  |  |  |  |  |  |
| VLAN ID (Wired Endpoints<br>Only)                     | VLAN ID of the switch port that is connected to the wired endpoint.         |  |  |  |  |  |  |
| Switch IP Address (Wired<br>Endpoints Only)           | IP address of the switch connected to the wired endpoint.                   |  |  |  |  |  |  |
| AP MAC (Wireless Endpoints<br>Only)                   | MAC address of the AP that is connected to the wireless endpoint.           |  |  |  |  |  |  |
| SSID (Wireless Endpoints<br>Only)                     | SSID that the wireless endpoint is using.                                   |  |  |  |  |  |  |
| UserID (Wireless Endpoints<br>Only)                   | User ID of the wireless endpoint.   |  |  |  |  |  |  |
| Wireless Controller Name<br>(Wireless Endpoints Only) | Name of the wireless controller that is connected to the wireless endpoint. |  |  |  |  |  |  |
| Band (Wireless Endpoints Only)                        | Radio band that the wireless endpoint is using.                             |  |  |  |  |  |  |
| <b>DHCP Server</b> (Wireless<br>Endpoints Only)       | DHCP server that the wireless endpoint is using.                            |  |  |  |  |  |  |

**Step 5** To view multiple events, check the check box next to each event you want to view and click **Show Selected Events**.

The Multiple Events slide-in pane opens with each event displayed in a separate card.

From inside a card, you can do the following:

- Minimize, maximize, and close a card.
- Display more details by clicking the down arrow.
- Click any hyperlinked data.

When a card is maximized, any connected device events are displayed.

Step 6 From the Multiple Events slide-in pane, click the list view icon  $\equiv$  to display a compilation of all the subevents sequentially in a list.

To return to the card view, click the card view icon III.

### **View Event Analytics - Preview Dashboard**

The **Events Analytics - Preview** dashboard provides a visualization of syslogs messages, different type of network events that allows the user to identify the trends and correlate the events across the different data sources.

Use this procedure to view analytics and insights represented as heatmaps displaying the count of syslog messages and reachability transitions of Wired and Wireless network events.

- **Step 1** From the top-left corner, click the menu icon and choose **Assurance > Dashboards > Issues and Events**.
- **Step 2** Click **Event Analytics Preview** tab, the event analytics dashboard opens with the wired events.

### Figure 3: Event Analytics - Preview Dashboard

| E Cisco DNA Center                    |               |                 |                     | Assuran      | Assurance / Dashboards / Issues and Events |          |        |          |         |             |                    | ☆           | Q        | 0       | <b>(6)</b> Q |
|---------------------------------------|---------------|-----------------|---------------------|--------------|--|----------|--------|----------|---------|-------------|--------------------|-------------|----------|---------|--------------|
| Issues 🗸 Ever                         | ts Event      | Analytics - Pre | view                |              |  |          |        |          |         |             |                    |             |          |         |              |
| ⊙ Global ∨ () 2                       | 24 hours∨     |                 |                     |              |  |          |        |          |         |             | () Are ti          | nese Insig  | ahts hel | pful?   | ₽ ₽          |
| Wired Events Wi                       | reless Events |                 |                     |              |  |          |        |          |         |             |                    |             |          |         |              |
| Syslog Messages                       |               |                 |                     |              |  |          |        |          |         | Se          | elected time range | : 6/11 6:00 | 0 PM - 6 | /12 6:0 | 00 PM        |
| 6/11 6:00 PN<br>18,000                |               |                 |                     |              |  |          |        |          |         |             |                    |             |          | •       | /12 6:00 PM  |
| 6/11<br>6 PM                          | 7 PM 8 PM     | 9 PM 10 P       | 6/12<br>11 PM 12 AM | 1 AM 2 AM    | 3 AM 4 AM                                  | 5 AM 6 A | M 7 AM | 8 AM 9 A | M 10 AM | 11 AM 12 PM | 1 PM 2 PM          | 3 PM        | 4 PM     | S PM    | 6 PI         |
| HIGH (SEV. 0, 1, 2)                   |               |                 |                     |              |  |          |        |          |         |             |                    |             |          |         |              |
| MEDIUM (SEV. 3, 4)<br>LOW (SEV. 5, 6) |               |                 |                     |              |  |          |        |          |         |             |                    |             |          |         |              |
|                                       | TOTAL EVENTS  | . HIGH SEVERITY | MEDIUM SEVERITY     | . LOW SEVEDI | TV.  |          |        |          |         | # WGL       | 11 MI              | DUIM        |          | ~~      |              |
| > Show Analytics                      | 935K          | 3K events       | 367K events         | 564K ever    | nts  |          |        |          |         | 0 81        | s74 0 a            | s11,9       | 06 0 2   | 1       | \$7,617      |

| Event Analytics - Preview Dashboard |  |  |  |  |  |  |  |
|-------------------------------------|--|--|--|--|--|--|--|
| ltem                                | Description  |  |  |  |  |  |  |
| 🖓 Global                            | Click this icon in the top menu bar to choose the site, building, or floor in the Site hierarchy from the <b>Select a location</b> slide-in pane.  |  |  |  |  |  |  |
| S Time Range setting                | <ul> <li>Allows you to display information on the window based on the time range you select. The default is 24 Hours. Do the following:</li> <li>a. From the 24 Hours drop-down list, choose a time range: 24 hours, 7 days, 14 days, 30 days, or 60 days.</li> <li>b. Specify the Start Date and time, and the End Date and time.</li> <li>c. Click Apply.</li> <li>This sets the range of the timeline.</li> </ul> |  |  |  |  |  |  |

Step 3 Click Wired Events to view the heatmaps that displays the count of syslog messages and reachability transitions from the wired devices including a breakdown of message severity data with a granularity of 15 minutes for up to 24 hour time period. At 7 days, the granularity is 4 hours, for 14 and 30 days the granularity is 12 hours, and at 60 days it is 24 hours

### **Syslog Messages:**

- You can use the timeslider on the top of heatmap to set the specific time period in the syslog messages heatmaps to view total number of events, count of message severities classified as High, Medium and Low.
- To view insights and analytics data syslog messages, click **Show Analytics**. A series of cards with different visualizations displaying the counts of syslog messages or devices, with an order that is based on different analytics criteria. The currently supported analytics for syslog messages are:
  - · Highest severity events Highest severity events that occurred in the selected period sorted by severity
  - Rare Events Least frequent events that occurred in the selected period sorted by occurrence.
  - High Volume events Most frequent events that occurred in the selected period sorted by occurrence.
  - Message Volume Increase Events with the highest increase in volume within the selected period sorted by variation.
  - Message Volume Decrease Events with the highest decease in volume within the selected period sorted by variation.
  - New events Events that started occurring at the end of the selected period sorted by occurrence.
  - Most Active Devices Devices that generated the highest volume of events in the selected period sorted by volume.

### Figure 4: Analytics for Sylog Messages

| HIGHEST SEVERITY EVENTS<br>Highest severity events that occurred in the selected period<br>sorted by severity. | RARE EVENTS<br>Least frequent events that occurred in the selected period<br>sorted by occurrence. | HIGH VOLUME EVENTS<br>Most frequent events that occurred in the selected period<br>sorted by occurrence. |  |  |  |
|--|--|--|--|--|--|
| SEV EVENT TYPE   | SEV EVENT TYPE   | SEV EVENT TYPE   |  |  |  |
| 1 APF-1-CONFLICT_IN_ASS_REQ 5  | 6 IOSXE_REDUNDANCY-6-PEER 1  | 5 DOT1X-5-FAIL 54K   |  |  |  |
| 1 STACKMGR-1CTIVE_CFG_MSG 2  | 6 IOSXE_PEM-6-PEMOK 2  | 5 CAPWAPAC_SMJOIN_DISJOIN 25K  |  |  |  |
| 5 DOT1X-5-FAIL 54K   | 6 IOSXE_PEM-6-REMPEM_FM 2  | 5 SYS-5-CONFIG_I 22K   |  |  |  |
| 5 CAPWAPAC_SMJOIN_DISJOIN 25K  | 5 REDUNDANCYMONITOR_EVENT 2  | 6 SISF-6-ENTRY_CREATED 11K   |  |  |  |
| 5 SYS-5-CONFIG_I 22K   | 1 STACKMGR-1CTIVE_CFG_MSG 2  | 1 APF-1-CONFLICT_IN_ASS_REQ 5  |  |  |  |
| View Details   | View Details   | View Details   |  |  |  |

• Click **View Details** to open a slide-in pane to view the detailed heatmap with a time series of event counts for each event types. You can select up to 5 syslog message types in the heatmap to filter the Sankey chart to show the distribution of the selected event type and to learn about the specific sites and device generated events.

#### Figure 5: Syslog Events Heatmaps with Sankey Chart

Highest Severity Events between 7/4/2023 12:00 AM - 8/3/2023 7:00 PM



• You can select the message type, site or device in the sankey chart to filter the events table below the chart to show the data accordingly. Up to 10,000 events can be displayed in the events table. To create a user defined issue, click messages in the events table and click **Confirm**.

#### **Reachability Transitions:**

- You can use timeslider on the top of heatmap to set the specific time period in the heatmaps to view total number of events, unreachable, reachable, and ping reachable events.
- To view insights and analytics data for each reachability transitions (top status transitions, top devices by events) from wired devices displayed in a separate card, click **Show Analytics**.
- Click **View Details** to open a slide-in pane to view the detailed heatmap with a time-series of event counts for each event types. You can select up to 5 events in the heatmap to filter the Sankey chart to show the distribution of the selected event type and to learn about the specific sites and device generated events.
- You can the select the From event, To event, site or device in the sankey chart to filter the events table to show the reachability transitions for each events. Up to 10,000 events can be displayed in the events table.
- **Step 4** Click **Wireless Events** to view the heatmaps that displays the count of syslog messages and reachability transitions from the wireless devices including a breakdown of message severity data with a granularity of 15 minutes time-period.

### **Syslog Messages:**

- You can use timeslider on the top of heatmap to set the specific time period in the syslog messages heatmaps to view total number of events, count of message severities classified as High, Medium and Low.
- To view insights and analytics data for each syslog messages displayed in a separate card, click **Show Analytics**. The analytics cards are displayed for the available syslog messages with the severity and event type.
- Click **View Details** to open a slide-in pane to view the detailed heatmap with a time-series of event counts for each event types. You can select up to 5 syslog message types in the heatmap to filter the Sankey chart to show the distribution of the selected event type and to learn about the specific sites and device generated events.

• You can the select the message type, site or device in the sankey chart to filter the events table to show the syslog messages. Up to 10,000 events can be displayed in the events table.

### **Reachability Transitions:**

- You can use timeslider on the top of heatmap to set the specific time period in the heatmaps to view total number of events, unreachable, reachable, and ping reachable events.
- To view insights and analytics data for each reachability transitions (top status transitions, top devices by events) from wireless devices displayed in a separate card, click **Show Analytics**.
- Click **View Details** to open a slide-in pane to view the detailed heatmap with a time-series of event counts for each event types. You can select up to 5 events in the heatmap to filter the Sankey chart to show the distribution of the selected event type and to learn about the specific sites and device generated events.
- You can the select the From event, To event, site or device in the sankey chart to filter the events table to show the reachability transitions for each events. Up to 10,000 events can be displayed in the events table.

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