



vAnalytics

- [vAnalytics Dashboard, on page 1](#)
- [Monitor Network Performance, on page 2](#)
- [Monitor Application Performance, on page 4](#)

vAnalytics Dashboard

The vAnalytics dashboard offers a quick summary of network and application performance.

The top left corner of the dashboard displays a menu icon for expanding and collapsing the vAnalytics menu options, and the vAnalytics product name. The top right corner displays the number of icons and the user profile drop-down.

Network Pane

The Network pane displays performance of various network elements.

- **Network Availability**—The Network Availability pane displays network-wide availability of all devices and circuits in the last 24 hours. Each box displays uptime as a percentage and total downtime in minutes.

Click in the **Device** box or the **Circuit** box to navigate to the Display Network Availability screen.

- **Tunnel Performance**—The Tunnel Performance box displays the performance of the top ten worst performing tunnels for the last 24 hours.

Click on the individual tunnel bar to navigate to the Display Latency, Loss, or Jitter screen.

- **Carrier Performance**—The Carrier Performance box displays loss, latency, or jitter performance of all the tunnels terminating on that location on a geographical map.

Navigate to the Display Performance By Carrier screen for more information.

Applications Pane

The Applications pane displays the top ten applications by bandwidth consumption, and by best or worst performing QoE score. It also lists top anomalies in application behavior.

- **Best or Least Performing Applications**—vAnalytics computes a Quality of Experience (QoE) score to assess end-user experiences with various applications. This score ranges from zero to ten, with zero being the worst performance, and ten being the best. The QoE score combines scores for latency, loss, and jitter, customizing the calculation for the needs of each application.

- **Top Ten Applications By Bandwidth**—The Applications Consuming Most Bandwidth box displays the top ten applications consuming the most bandwidth in the network.

Hover over a data bar in the graph to open a hover box with details about that application.

Click on the data bar to navigate to the Display Bandwidth Utilization screen.

- **Top Anomalous Sites**—The Anomalous Sites box displays application families using more bandwidth than their baseline.

Hover over a bar in the graph to display a hover box with details about that application family.

Click to navigate to the Anomaly screen.

Monitor Network Performance

Use the Network screens to monitor the health of data tunnels and the availability of network devices and circuits.

Screen Elements

- **Title bar**—Includes the title of the screen.
- **Health**—Displays latency, loss, and jitter performance.
- **Availability**—Displays downtime information for the Cisco SD-WAN edge devices and circuits.

Display Network Availability

To display downtime for Cisco SD-WAN edge devices and circuit at each site:

1. Select an edge device or circuit view to see the respective downtime.
2. Adjust length of time: Day, Week, Month, or Custom Period.
3. Select **Aggregated Downtime by Sites**.
4. Click on individual data elements to see downtime information for a specific site.
5. Click a Cisco SD-WAN edge device or circuit to display details about that downtime event.

Display Network Health

Use the Network Health screen to monitor the performance of tunnels over time in your overlay network over time.

The tunnel statistics may be displayed in one of three views: by edge device, by tunnel, or by carrier.

To display performance through Cisco SD-WAN edge device view:

1. Click **vEdge**.
2. Select an individual color to filter the view.
3. Select a Cisco vEdge device to display latency, loss, and jitter on all the tunnels on that device.

To display graphs for latency, loss, and jitter on each tunnel in your overlay network:

1. Click **Tunnel**. Select an individual carrier, color, or both to filter the view.
2. Hover over a point on a line to open a hover box with details for that point in time.
3. Click a local Cisco SD-WAN device to display average latency, loss, or jitter on all the tunnels on that device.
4. Click a remote Cisco SD-WAN device to display latency, loss, or jitter on the tunnels between two Cisco SD-WAN devices.

To display performance by carrier on a geographical map of the overlay network:

1. Click **Carrier**. Circles on the map represent each carrier. The legend to the right indicates the color of each carrier.
2. Select **Latency**, **Loss**, or **Jitter** to change the data displayed.
3. Click on individual data elements to select specific carriers to view.
4. Hover over a carrier's circle to display a hover box with details for that location.
5. Click a circle on the map to display loss, latency, or jitter of all the tunnels terminating on that location.
6. Click a carrier on the graph to see performance by individual edge devices on that carrier.

Monitor Application Performance

Use the Applications screen to monitor application families and individual applications in your network.

Screen Elements

- Title bar—Includes the title of the screen and the time period. Select a desired time interval.
- Bandwidth—Displays bandwidth utilization by application families and individual applications.
- Performance—Displays Quality of Experience (QoE) values for application families and applications.
- Anomaly—Displays anomalies in application bandwidth consumption over baselines.

Display Bandwidth Utilization

To display bandwidth utilization for application families:

1. Click **Bandwidth**.
2. Click on individual data elements to select a specific application family to view.
3. Hover over an item in any chart to open a hover box with details about that item.
4. Select a view: By Summary, By Time, or By Sites:
 - By Summary displays a summary by application family. Click an application family to display applications in that family. Click an application to see that application's bandwidth utilization over time.
 - By Time displays a timeline of application family bandwidth utilization. Click an application family to display utilization for the applications in that family. Click an application to display utilization at each site running the application.
 - By Sites displays bandwidth utilization on each Cisco SD-WAN edge device. Click a site to display a timeline of application family bandwidth utilization at that site. Click an application family to display utilization for applications in that family at that time.

Display QoE Values

To display QoE values for each application family:

1. Click **Performance**.
2. Click on individual data elements to select a specific application family to view.
3. Hover over an application family in the chart to open a hover box with details for that application family.
4. Click an application family to display QoE, average latency, loss, and jitter for each application in that family:
 - a. Click an application to display that application's performance on each device in the tunnel.
 - b. Click a tunnel to display an hourly summary of that application on that tunnel.

Display Anomaly from Baseline Utilization

The vAnalytics platform computes daily averages and standard deviations for application families at every site in a rolling window of seven days. An anomaly occurs if an application family's bandwidth utilization exceeds the average plus two times the standard deviation.

To display deviations from baseline values of bandwidth utilization for application families:

1. Click **Anomaly**.
2. Click on individual data elements to select a specific application family to view.
3. Hover over an application family in the chart to open a hover box with details for that application family.
4. Click a site to see a timeline of anomalies for that site.
5. Click an hour on the timeline to see anomalous behavior of individual applications in that hour.

