[.]oduct or feature is in a pre-release state and might change or have limited support. For more information, see the <u>pr</u> <u>. stages</u> (/products/#product-launch-stages).

Packet Mirroring exports monitoring data about mirrored traffic to <u>Stackdriver Monitoring</u> (/monitoring/docs/). You can use monitoring metrics to check whether traffic from a VM instance is being mirrored as intended. For example, you can view the mirrored packet or byte count for a particular instance.

You can view the monitoring metrics of mirrored VM instances or instances that are part of the collector destination (internal load balancer). For mirrored VM instances, Packet Mirroring provides metrics specific to mirrored packets, such as /mirroring/mirrored_packets_count, /mirroring/mirrored_bytes_count, and /mirroring/dropped_packets_count. For more information, see the metrics list (/monitoring/api/metrics_gcp#gcp-compute) for Compute Engine in the Monitoring documentation.

The metrics for the collector destination provides an aggregate view of all mirrored traffic that it collects. However, for the individual mirrored instances, you can view the number of mirrored packets that were dropped. Metrics for the collector destination don't include dropped packets. For more information about monitoring the collector destination, see <u>Internal TCP/UDP Load Balancing</u> <u>monitoring</u> (/load-balancing/docs/internal/internal-logging-monitoring).

1. Go to the VM instances page.

Go to the VM instances page (https://console.cloud.google.com/compute/instances)

- 2. Select the project that contains the mirrored instance.
- 3. Click the name of the mirrored instance to view its details.
- 4. Click the **Monitoring** tab.
- 5. View the **Mirrored Network Bytes** and **Mirrored Network Packets** charts to see the mirrored bytes and mirrored packets. The Mirrored Network Packets chart shows the number of successful and dropped mirrored packets.

1. Go to **Monitoring** in the Google Cloud Console.

<u>Go to Monitoring</u> (https://console.cloud.google.com/monitoring)

- 2. Select **Resources > Instances**.
- 3. Click the name of a mirrored instance.

When you access the dashboard, Stackdriver Monitoring shows time series charts, such as the number of packets mirrored.

You can define <u>alerts</u> (/monitoring/alerts/) over the packet mirroring metrics:

- 1. Go to **Monitoring** in the Google Cloud Console. <u>Go to Monitoring</u> (https://console.cloud.google.com/monitoring)
- 2. Select Alerting > Create a Policy.
- 3. Click Add Condition and select condition type.
- 4. In the **Metric** tab, select a target.
 - a. For the resource type, GCE VM Instance.
 - b. Select a packet mirroring metric (/monitoring/api/metrics_gcp#gcp-compute).
- 5. Click Save Condition.
- 6. Enter a policy name in the Name this policy field and click Save Policy.

In addition to the predefined dashboards in Stackdriver Monitoring, you can create custom dashboards, set up alert policies, and query the metrics through the <u>Stackdriver Monitoring API</u> (/monitoring/api/).

On the Stackdriver Monitoring dashboard, **Open Incidents** are driven by the alerting policies that you configure. Alerts appear as *incidents* on the dashboard when the alert is triggered. These are general

functions of Stackdriver Monitoring.

You can create custom Stackdriver Monitoring dashboards over packet mirroring metrics:

1. Go to **Monitoring** in the Google Cloud Console.

<u>Go to Monitoring</u> (https://console.cloud.google.com/monitoring)

- 2. Select Dashboards > Create Dashboard.
- 3. Click Add Chart.
- 4. Give the chart a title.
- 5. In the Metric tab, select a target.
 - a. For the resource type, GCE VM Instance.
 - b. Select a packet mirroring metric (/monitoring/api/metrics_gcp#gcp-compute).

6. Click Save.

Metrics for the VPC security policies are exported to Stackdriver Monitoring in 1-minute granularity batches. Monitoring data is retained for six weeks. The dashboard provides data analysis in the following default intervals:

- 1H (one hour)
- 6H (six hours)
- 1D (one day)
- 1W (one week)
- 6W (six weeks)

Using the controls in the upper-right hand corner of the Stackdriver Monitoring page, you can manually request analysis in any interval from 6W to 1 minute.

For more information about Stackdriver Monitoring, see <u>Stackdriver Monitoring documentation</u> (/monitoring/docs/).