

# Confidently monitor your Google Cloud network in real-time

Protect service reliability, speed up cloud network troubleshooting and optimize cloud network costs

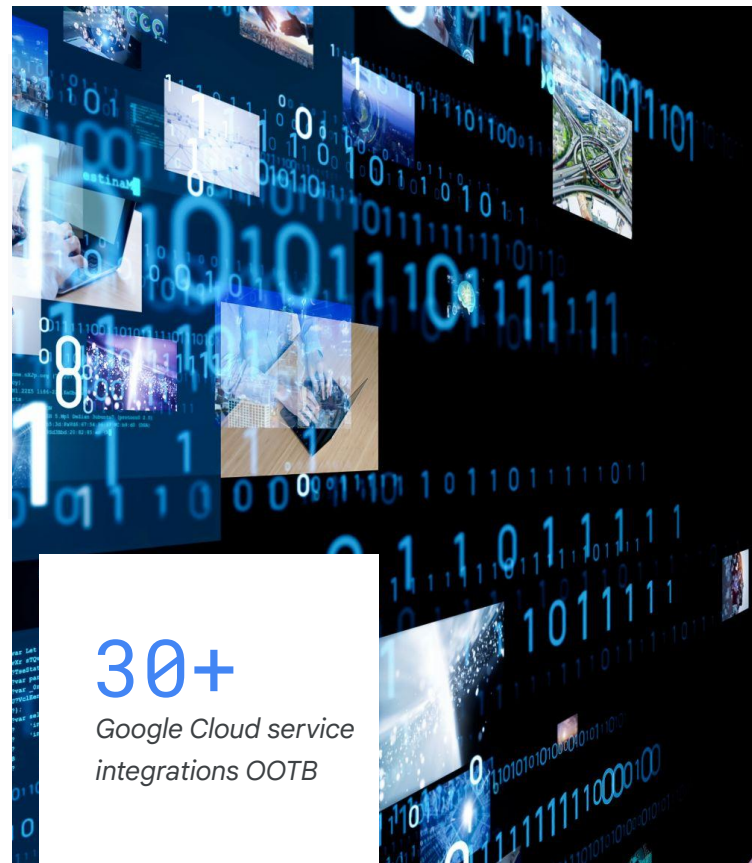
Cloud migration speeds up innovation and increases scale, but it can also drastically increase complexity for network monitoring. Traditional network monitoring with tools built to capture device configuration, hardware health, connectivity and capacity metrics is an established space, but this approach does not readily extend to the cloud.

Cloud infrastructure requires new monitoring tools and technology that can provide accurate and comprehensive picture of a distributed system in real time with no context switching or needless toil. With this new approach, teams can get the detailed insights they need to accelerate troubleshooting and reduce mean time to detect (MTTD).

## Real-time, full-context visibility for your Google Cloud network

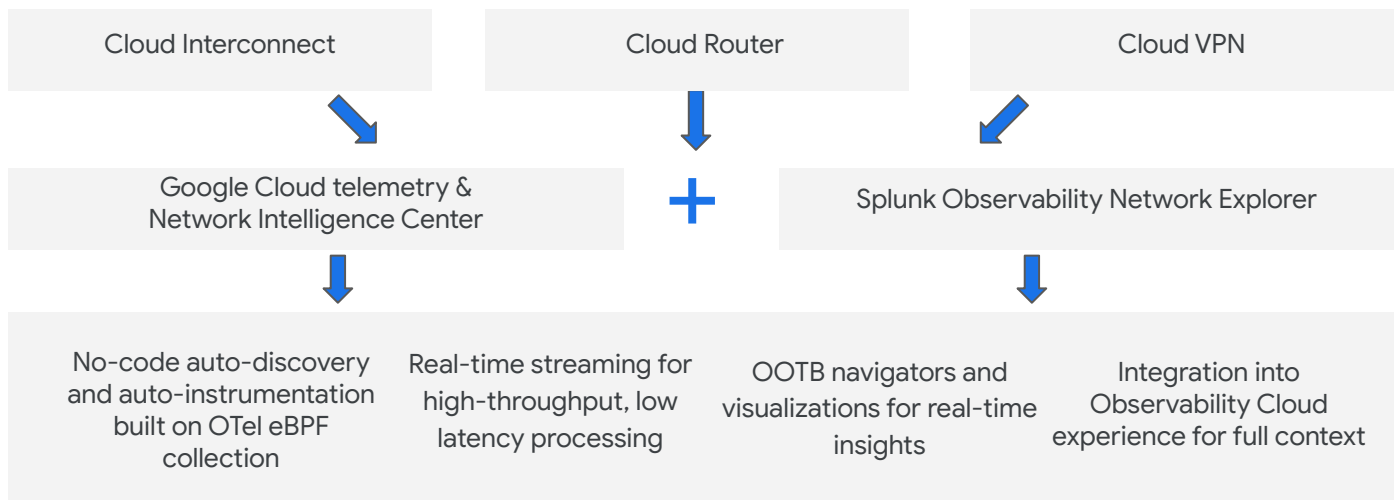
Cloud migration can result in visibility gaps between cloud network and application performance hindering service reliability and efficient troubleshooting. Splunk's Network Explorer, within Splunk Infrastructure Monitoring, is designed to bring robust network-level visibility to cloud-native environments.

Observability Cloud integrates directly with Google Cloud and analyzes metrics for multiple networking services including Cloud Interconnect, Cloud Router, and Cloud VPN. Using eBPF, Splunk's Network Explorer captures detailed source and network telemetry and provides an accurate view of service-to-service interactions over the network. With these detailed insights, users can: identify and troubleshoot Kubernetes network issues affecting services, assess the impact of cloud network performance on both infrastructure and applications, and visualize and track cross-zone network traffic to find communication cost efficiencies.



Network Explorer is built on OpenTelemetry, which optimizes data instrumentation and enables auto-discovery to automatically collect container network telemetry without having to change application code or container images. With the OpenTelemetry eBPF reducer, Network Explorer processes and aggregates network telemetry from the Google Cloud environment to generate actionable metrics and highlight network anomalies impacting services in real time. Additionally, customizable dashboards can be used to track and alert on network health alongside other custom metrics.

## BETTER TOGETHER



### Identify service dependencies

Network Explorer automatically creates a map of network behavior, organized by service and labeled with metadata, providing a complete picture of service behavior. With this service map, users can identify unknown, unexpected, or non-compliant application patterns previously unseen by service owners.

By correlating traffic data with network errors, you can visualize how network issues impact the service architecture. Additionally, with network telemetry data aggregated and correlated with logs, traces and metrics in Splunk Observability Cloud, users get a more holistic view of the health and performance of distributed services across their Google Cloud environment.

### Investigate reliability and performance

Teams resolving a critical service issue need to understand whether it is caused by a network error or an application error. Network Explorer provides a service-oriented view of network anomalies, such as packet loss, network latency, connection errors, and DNS failures, so users can see how network conditions impact parts of an application.

The service-centric view provided by Network Explorer complements Google's Network Intelligence Center infrastructure-centric network metrics which provide visibility into round-trip time and packet loss within the cloud network layer. Splunk Observability Cloud enables customers to integrate telemetry from all of their services, projects and regions to allow holistic observability.

### Eliminate costly network patterns

Inefficiencies from unnecessary and unoptimized network transfers can result in unpredictable costs and expensive overages for businesses. Teams need to surface emergent or unintended network traffic patterns that aren't reflected in the design of the application to understand communication patterns and trace runaway network costs.

Network Explorer assists in the optimization of costly communication patterns by identifying large traffic flows that cross zones, regions, or egress a datacenter to specific services. It can also proactively monitor and alert on changes in these traffic flows to identify workload inefficiencies and maintain predictable network transfer costs.

Splunk Observability Cloud takes the complexity out of monitoring your entire Google Cloud environment. With Network Explorer, Google Cloud customers get modern cloud network monitoring technology that keeps pace with the cloud.



Ready to start exploring?  
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