

# Monitor your Google Cloud Architecture with Datadog

Increase IT uptime and reduce costs with Datadog's Network Performance Monitoring and Network Device Monitoring (NPM & NDM) solutions

Google Cloud environments are inherently ephemeral, with the IPs of hosts and service endpoints rapidly changing as infrastructure scales to meet demand. While cloud resources can reduce overhead, capturing and contextualizing monitoring data from services you don't always own can be difficult.

For example, ephemeral containers may include a vast web of distributed endpoints that rely on complex network communication involving nodes, links, and paths, with virtual and physical instances alike.

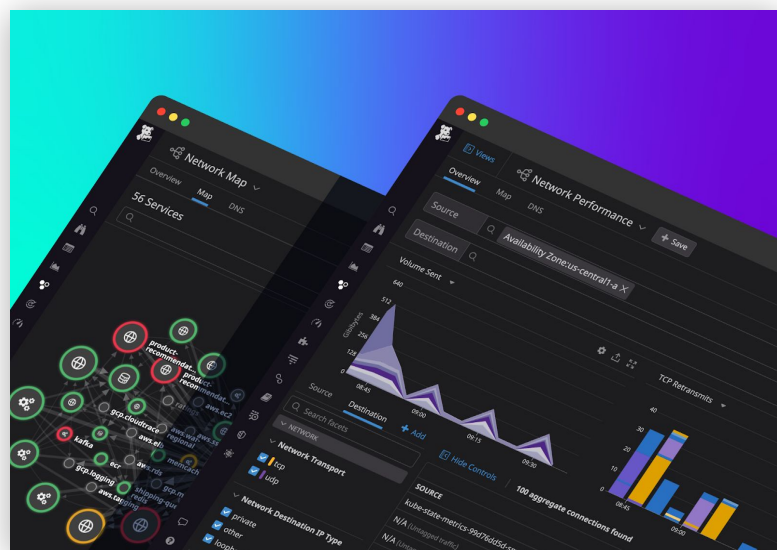
This makes it challenging to track the availability and performance of the cloud services your applications rely on and limits your visibility into the physical and virtual infrastructure levels (hosts, pods, containers etc.), and even more so at the application level.

## Full network visibility for your entire Google Cloud environment

By combining Google Cloud's infrastructure capabilities with Datadog's Network Performance Monitoring (NPM) and Network Device Monitoring (NDM) capabilities, users can achieve the best network performance for cloud and on-prem environments.

Google Cloud offers a broad portfolio of networking services that leverages automation and advanced AI, enabling enterprises to scale and secure their infrastructure. Together with Datadog for visibility into many of these managed networking services, you can track network communications across your entire Google Cloud environment.

This includes visibility into hosts, processes, containers, and traffic flows alongside key telemetry from your underlying infrastructure to help you identify and diagnose potential issues or anomalies. It also includes the collection of security signals to enable preemptive remediation with the ability to detect suspicious activity at the network level before any workload or service is compromised.



## 650+

Vendor supported integrations, including 35+ Google Cloud-specific integrations

Once you've set up NPM or NDM, Datadog will automatically collect key flow, transport-layer (TCP/UDP) and DNS traffic data between each endpoint in your environment, including VMs, containers, services, cloud regions and data-centers, and will also give you key insights cross-layer and cross-object dependencies, so you can connect the dots faster across your cloud and on-prem assets.

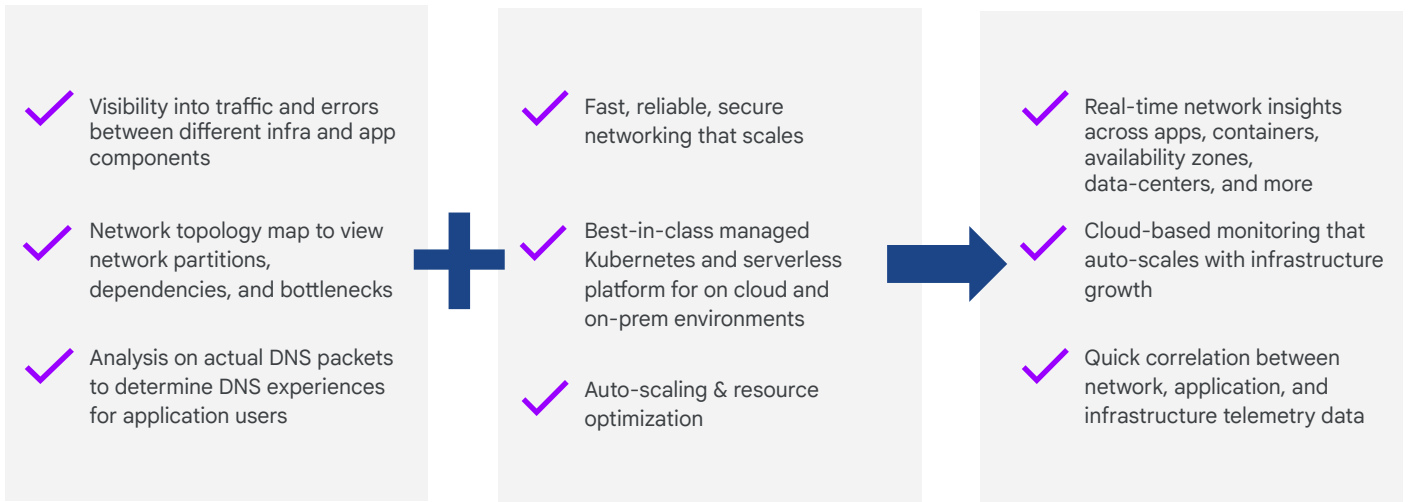
Overall, this partnership offers a holistic approach to network management and truly enables users to maintain the highest levels of performance, reliability, and security.

Whether fully on the Google Cloud or leveraging a hybrid environment, Datadog consolidates all the monitoring tools needed to alert on, visualize, and troubleshoot your Google Cloud environments and on-prem environments with one solution.



DATADOG

Google Cloud



## Observability into network performance

Datadog's auto-tagging allows customers to visualize connections, traffic, and TCP statistics via many combinations of tags and metrics, including availability zone, cloud provider, cluster, container, datacenter, environment, host, pod name, region, service, team, zone, and more.

This makes it easier than ever to quickly monitor critical dependencies and pinpoint root causes with correlated network, application, and infrastructure telemetry data.

In addition, NPM analyzes actual DNS packets to determine what the DNS experience is for applications, if the load on a DNS server is changing, the number of timeouts or errors it experienced, and more.

## Flexible infrastructure and cloud resources

Google Cloud's extensive infrastructure and services are known for their scalability and flexibility.

Users can mix and match these services into combinations that provide the best infrastructure for their needs, and then add their code to enable the scenarios they want to build.

With options like GKE Standard and Autopilot for managed Kubernetes, or Cloud Run and Cloud Function for those interested in serverless technologies, Google Cloud provides the best-in-class managed services that reduce overhead and increase IT uptime.

## Enhanced network solutions that scale

Google Cloud and Datadog together provide the best network performance through a combination of Google Cloud's robust infrastructure and Datadog's comprehensive network monitoring and optimization capabilities.

Through the Datadog and Google Cloud integration, users can ingest all Google Cloud metrics and logs and can leverage Datadog's out-of-the-box dashboards for most services in minutes.

While Google Cloud's infrastructure ensures the performance of applications and services, Datadog scales with your infrastructure's growth. Its reliability and availability ensure that network monitoring is consistently operational and doesn't become a bottleneck in your operations.

With more than 650 vendor-supported integrations and accompanying out-of-the-box preset dashboards, including for nearly all Google Cloud services, Datadog provides complete visibility across your organization's systems, infrastructure, network, applications, services, and more.



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