

Google Cloud Status Dashboard

This page provides status information on the services that are part of Google Cloud Platform. Check back here to view the current status of the services listed below. If you are experiencing an issue not listed here, please [contact Support](#). Learn more about what's posted on the dashboard in [this FAQ](#). For additional information on these services, please visit [cloud.google.com](#).

Google Cloud Networking Incident #20001

Google’s production network experienced a temporary reduction in capacity, due to multiple fiber cuts in optical links interconnecting Sofia, Bulgaria

Incident began at **2019-12-18 23:43** and ended at **2019-12-19 00:44** (all times are **US/Pacific**).

DATE	TIME	DESCRIPTION
✓ Jan 09, 2020	14:14	<div><h4>ISSUE SUMMARY</h4><p>On Wednesday, 18 December, 2019, a part of Google’s production network experienced a temporary reduction in capacity, due to multiple fiber cuts in optical links interconnecting Sofia, Bulgaria with other points-of-presence. This resulted in severe congestion on remaining links to Sofia for a duration of 1 hour and 1 minute.</p><p>Access to Google Cloud products and services through Internet Service Providers (ISPs) in Bulgaria, Turkey, Northern Macedonia, Azerbaijan, Greece, Cyprus, Kosovo, Serbia and Iraq, which rely heavily on the Google point-of-presence in Sofia, Bulgaria was degraded. Users outside the affected countries were not impacted by this issue.</p><h4>DETAILED DESCRIPTION OF IMPACT</h4><p>On Wednesday, 18 December, 2019, from 23:43 to Thursday, 19 December, 2019 at 00:44 US/Pacific, access to Google products and services (including Google Cloud Platform) through ISPs in Bulgaria, Turkey, Northern Macedonia, Azerbaijan, Greece, Cyprus, Bosnia, Kosovo, Serbia and Iraq, which rely heavily on the Google point-of-presence in Sofia, Bulgaria, experienced severe congestion for a duration of 1 hour and 1 minute.</p><p>End users, who use ISPs which rely heavily on the Google peering links in Sofia to access Google Cloud services, were affected by the severe congestion between the Sofia point-of-presence and Cloud Regions across the globe. Cloud traffic to/from the region dropped by 60% during the one hour window with degraded connectivity. End-users in Turkey, who generated the bulk of the Cloud traffic to/from the region, experienced up to a 77% drop in traffic during the incident window.</p><h4>ROOT CAUSE</h4><p>Google maintains a network point-of-presence (PoP) with caching and peering infrastructure in Sofia, Bulgaria. The Sofia PoP provides network peering to many providers in Eastern Europe. These network providers in turn enable access to Google services to users in Bulgaria, Turkey, Northern Macedonia, Azerbaijan, Greece, Cyprus, Bosnia, Kosovo, Serbia and Iraq. Sofia is connected to the rest of Google’s production network through multiple independent optical pathways located throughout Europe.</p><p>This incident was triggered by dual, unrelated (yet overlapping), faults on high-capacity optical network links in both Bucharest, Romania and Munich, Germany that significantly reduced the network capacity of the interconnect between Sofia and the Google production network.</p><p>Prior to the outage there was a fiber cut in Bucharest/Romania severing the connectivity between Frankfurt/Germany and Sofia/Bulgaria.</p><p>A second fiber cut in Munich/Germany impacted two separate optical paths:</p><ul style="list-style-type: none">-- Circuits between Frankfurt/Germany and Sofia/Bulgaria were rendered inoperable.-- Circuits between Munich/Germany and Sofia/Bulgaria were left with less than 10% of its normal capacity.<p>Once these links were disrupted, the small amount of remaining capacity between the Sofia and Munich metros continued to attract traffic while unable to fully support it. This brief period of reduced capacity resulted in severe congestion for customers of ISPs heavily reliant on the peering links in Sofia, Bulgaria for accessing Google products and services. Once all traffic that was being sent through peering links in Sofia was redirected through alternative, operational points of presence, the incident was fully mitigated.</p><h4>REMEDIATION AND PREVENTION</h4><p>Google Engineers were automatically alerted to packet loss between the Munich and Sofia metros on 2019-12-18 at 23:47 US/Pacific and immediately began investigating. On 2019-12-19 at 00:24 Google Engineers identified the root cause of the packet loss and took decisive mitigation action to redirect traffic away from the peering links in Sofia, Bulgaria. By 00:44 all impacted traffic was successfully redirected to adjacent functional network links, fully mitigating the impact to Google Cloud customers.</p><p>In addition to addressing the root cause of the network link disruption, we will be improving the processes for detecting network PoPs with severely constrained connectivity, and implementing a new feature in our existing networking administration tooling to effectively redirect traffic away from these PoPs without delay. This will reduce the total time to resolution for similar classes of issues in the future. To ensure this feature is properly utilized during emergency situations, training will be delivered to Google Engineers.</p><p>Google is committed to quickly and continually improving our technology and operations to prevent service disruptions. We appreciate your patience and apologize again for the impact on your organization. We thank you for your business.</p></div>

