GleSYS

*Stockholm 2023-12-18*

# INCIDENT REPORT REGARDING CONNECTIVITY ISSUES IN STOCKHOLM – UPDATED

This document contains the background and remediation actions regarding network outage in Stockholm

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## BACKGROUND

Our data center networks consist of a multitude of network elements at varying stages of their effective lifetime. We are currently undergoing a major platform upgrade where legacy network equipment will be retired to ensure the continued availability and performance of our hosting services. As we are currently in the midst of this process, we still rely on a few legacy elements. One of these legacy network elements failed.

## RFO

A network element control plane in our legacy infrastructure malfunctioned creating a network loop between bundle member interfaces. After a reboot of the affected device, services returned to normal. The following day the problem re-occurred and the decision was made to migrate all circuits away from this device.

## SEQUENCE OF EVENTS (CET)

### 2023-12-14

21:24: Alarms indicating a major issue begin to appear.

21:25: The fault is identified to affect some services in the Stockholm data center.

21:26: The Network on-call is alerted.

21:28: The CTO is made aware of the incident and starts coordinating with the involved parties.

21:29: Network on-call begins troubleshooting.

21:30: Network on-call confirms that the issue doesn't affect the entire network stack in Stockholm; network engineer identifies the likely source of the issue.

21:38: A network loop is confirmed.

21:45: The loop is handled, and services start coming back.

21:50: Some equipment remains unreachable; a control plane failure is suspected as the cause of the loop.

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21:51: A technician is dispatched to the data center.

22:14: The technician arrives on site.

22:18: Control plane failure is confirmed with no console output. The decision is made to reboot.

22:19: Equipment is power cycled.

22:23: Equipment becomes available.

22:24: No major customer impact remains; some issues persist with managing services from the cloud.

22:33: The suspected cause of remaining issues is found, and the security team is contacted.

22:45: The final fix is implemented.

22:52: All services are confirmed back to normal.

**2023-12-15**

15:32: Alarms appear once again, on-call engineer escalates to network department

15:45: On-call network engineer has concluded that the issue has reappeared and heads to the site.

15:50: On-call network engineer and Head of Network formalize a plan to decommission the affected device.

16:12: Engineer arrives on site and reboots the affected device

16:17: Reboot completed, alarms are cleared

16:20: Decommission plan is set in motion and circuits are migrated away from the affected device to a stable device in the legacy network.

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16:50: The problematic device is powered off and scheduled for recycling.

## CONCLUSIONS SO FAR

As the root cause of this incident was a device scheduled for retirement, we will prioritize our efforts to migrate services away from the legacy environment allowing complete retirement of our legacy infrastructure.

Sincerely,

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Head of Network
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