GleSYS

Stockholm 2024-08-14

INCIDENT REPORT REGARDING POWER OUTAGE IN VBDC, STOCKHOLM

GleSYS has released the following Reason for Outage (RFO) report. This document outlines the background and remediation actions in response to the power outage in Stockholm on August 12th, 2024.

GleSYS AB
Box 134, 311 22 Falkenberg
Sweden

Phone. +46 (0) 346 738800
Mail: info@glesys.se
Web https://glesys.com

Org.nr. 556647-9241
VAT No. SE556647924101
BIC NDEASESS
IBAN 300000003052170377

BACKGROUND

The VBDC data center was launched in 2013 and has been expanded in stages over the years. Its design philosophy is based on N+1 redundancy where we should be able to handle at least one failure of a vital component in the data center's supply systems.

For a year now, we have been planning an expansion of the capacity that comes as a result of increased density in the data center - customers use more and more electricity in their racks, combined with maintenance - the data center's oldest parts are now 12 years old and are due for replacement according to our maintenance plan. The work has been planned and carried out together with one of the most experienced vendors and subcontractors in the datacenter industry.

On Monday the 12th of August we carried out one of the most important steps, installing one of two new UPSs, together with associated new switchgear and at the same time the previous UPS system was retired.

The work has taken three months to plan, and we have made huge efforts to make sure we could maintain normal operations without having to cut power to any customer equipment. Unfortunately, the work did not go as planned, with disastrous consequences.

SEQUENCE OF EVENTS (CEST)

2024-08-12

08:00 The planned maintenance window begins with removal of the old UPS, and putting the new UPS system online.

08:20 Backup generators are started to provide continuous power throughout the maintenance window. This is a precautionary measure to make sure we have backup power available immediately, if we would lose grid power while the UPS is offline.

17.00 Our planned maintenance window was automatically set as done by statuspage.

17:20 All replacement works are completed and work to bring the first new UPS online starts.

20:42 UPS technicians operate switches to move load from the old system to the new UPS with associated new switchgear. At first, everything is normal, but within 10 seconds the main power circuit from the UPS trips in the new switchgear, leading to loss of the critical load in Zone 2 and Zone 3 in the data center.

20:43 The issue is immediately identified by on-site personnel, and work and associated checks to restore power to the system begin.

20:44 Power is restored.

20:44 Emergency mode is declared, and all available staff is called in to aid in handling the aftermath of the power outage.

21:00 All racks have been verified to have restored power. Three racks were reported to only have partial power related to PDU fuses tripped, and were corrected. One rack still had a power issue and needed customer attention.

21:01 Issue with incorrect settings of the new switchgear found and corrected. The values of the maximum Amperes for the outgoing breakers was set too low.

21:03 On-site personnel from subcontractor and GleSYS agree that the incorrect settings were the root cause of the incident and that a permanent fix has been implemented.

21:18 New switchboard and UPS switched on according to plan.

21:22 New UPS and switchboard verified to be operating correctly.

22:25 Backup generator returns to normal standby as UPS systems are working correctly.

CONCLUSIONS

The reason for the outage was a disastrous error at our weakest moment, where we were running on a single UPS at lost load. The circuit breaker in the new switchgear was configured to its minimum value instead of its maximum value.

Despite the multiple levels of checks that should have been conducted, our subcontractors and vendors have yet to explain how this was possible. We will follow this closely, and report the findings and corrective actions in a follow-up report.

Due to the fact that we reported that our maintenance windows were closed led to misleading information to our customers. We need to improve this process and have a doublecheck in place.

We will continue to take action to identify and investigate these misconfigurations to minimize the risk of this happening again.

Sincerely,

Glenn Johansson
CEO
GleSYS

GleSYS AB
Box 134, 311 22 Falkenberg
Sweden

Phone. +46 (0) 346 738800
Mail: info@glesys.se
Web https://glesys.com

Org.nr. 556647-9241
VAT No. SE556647924101
BIC NDEASESS
IBAN 3000000030521703777