OpsLab	Infrastructure Audit Report	SAMPLE REPORT

Generated: 2026-07-24 08:36 UTC | Banking / Payment Processing | Confidential — for authorised recipients only

6.5% of incidents caused 80% of downtime — Pareto concentration, Gini=0.896

This is a real run on anonymized bank incident data — not a mockup. Get a free audit: t.me/OpsLaboratory_bot

HIGH RISK

802	199 min	2664.8 h
Incidents	Avg. Resolution	Downtime

Your Network at a Glance

Infrastructure type	Banking / Payment Processing
Analysis period	344 days (8245 h)
Not matched in data	atm network, internet banking, payment gate, processing center

Next Expected Window

Expected incidents	7d: ~23 (14–33), 30d: ~99 (80–119)

Summary

Over 343.5 days, 802 incidents accumulated 2664.8 hours of downtime, dominated by a few extremely long planned events (Pareto Gini=0.896). Just 6.5% of incidents caused 80% of total downtime, including a 12-day processing center outage. The incident rate is forecast to continue at ~3.3/day, demanding proactive capacity management to protect customer-facing services.

Key Issues

R1. Long-duration planned incidents dominate downtime — HIGH

R2. Incident rate forecast indicates sustained operational load — MEDIUM

R3. High average MTTR driven by a few very long recoveries — MEDIUM

Recommended Actions

1) Cap planned maintenance duration and investigate prolonged outages [Immediate]

2) Right-size incident management capacity based on forecast [Short-term]

3) Develop runbooks for common long-resolution incident categories [Short-term]

Full technical analysis on the next page.

TECHNICAL REPORT

Risk Analysis

#	Issue	Severity	Downtime
R1	**R1 — Long-duration planned incidents dominate downtime** Excessive downtime on critical infrastructure like the processing center directly disrupts payment transactions and erodes customer trust. (2022-03-30 00:50:42) (2022-07-01 14:43:18) (2022-08-13 20:25:52) services: Процессинговый центр, События мониторинга, ККС 015 Переводы Pareto analysis reveals strong downtime concentration (Gini=0.896, concentration=strong): the top 3 incidents account for 26.7% of the total 2664.8 hours of downtime. Incident #1 (2022-03-30) lasted 17522 minutes and contributed 11.0% of downtime, followed by #2 (14927 min, 9.3%) and #3 (10235 min, 6.4%). These are classified as 'ПЛАНОВЫЙ', likely representing extended maintenance windows.	HIGH	—
R2	**R2 — Incident rate forecast indicates sustained operational load** Prompt resolution is essential to prevent a backlog of incidents that could compound and impact availability of internet banking and ATMs. A Poisson forecast based on the current incident rate (λ=3.29/day) predicts approximately 23.0 incidents (95% PI [14, 33]) in the next 7 days and 98.7 incidents (PI [80, 119]) in the next 30 days. This volume, while moderate, may strain response teams.	MEDIUM	—
R3	**R3 — High average MTTR driven by a few very long recoveries** Slow recovery for even a fraction of incidents can cause extended service disruptions for customer-facing channels like internet banking and ATMs. The mean time to resolve (MTTR) across 802 incidents is 199 minutes, but the median is only 14 minutes, with P95=552 minutes. Only 62% of incidents are resolved within 30 minutes, indicating a heavy tail of prolonged outages.	MEDIUM	—

Recommendations

1) Cap planned maintenance duration and investigate prolonged outages [Immediate · High]

Set a maximum duration of 8 hours for any planned maintenance window; for the 12-day processing center outage (incident 2022-03-30), conduct a post-incident review to identify process failures and implement automatic rollback triggers.

2) Right-size incident management capacity based on forecast [Short-term · Low]

Use the forecast of 23 incidents/week to ensure sufficient staff during peak periods (Wed 10:00, Mon 10:00); pre-schedule maintenance windows only in low-density time slots to avoid coincident failures.

3) Develop runbooks for common long-resolution incident categories [Short-term · Medium]

Analyze the top-5 categories with highest MTTR (e.g., Процессинговый центр, ККС 015 Переводы) and create automated diagnostic scripts to reduce median resolution time below 10 minutes; monitor MTTR via dashboard alerts.

Top Problematic Time Windows

Time Window	Incidents	% of Total	Avg. Duration
Wed 10:00	17	2.1%	108 min
Mon 10:00	17	2.1%	71 min
Tue 00:00	17	2.1%	43 min
Thu 14:00	14	1.7%	50 min
Tue 22:00	12	1.5%	754 min

Data Quality Grade: B	Analysis is reliable with minor caveats — see observations above.

Data Quality Note

The dataset had 802 valid records, but 311 time gaps >5 min may affect continuity. Several key columns (Actual Resolution Time, Fault Reasons, Affected Sys, etc.) are mostly empty, limiting root-cause depth. User-specified critical services (payment gate, ATM network, internet banking, processing center) were not found in the data; similar services like 'Процессинговый центр' and 'Банкоматы' exist but cannot be conclusively mapped. Advanced modules returned no significant patterns: periodicity (no significant peaks), incident clusters (silhouette 0.169), event associations (no associations), change-related descriptions (no matches).

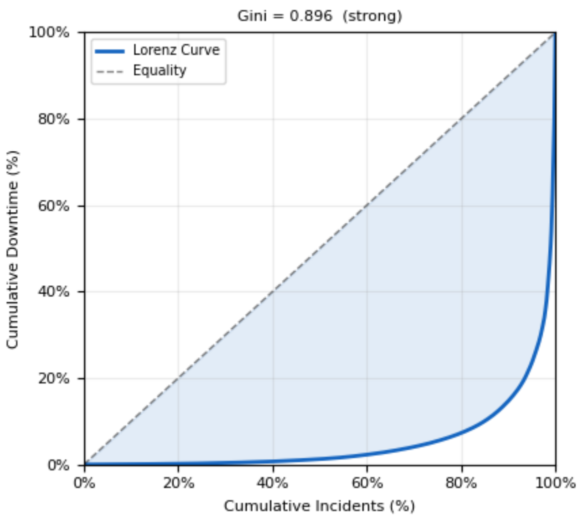
METHODOLOGY

Statistical Methods Applied

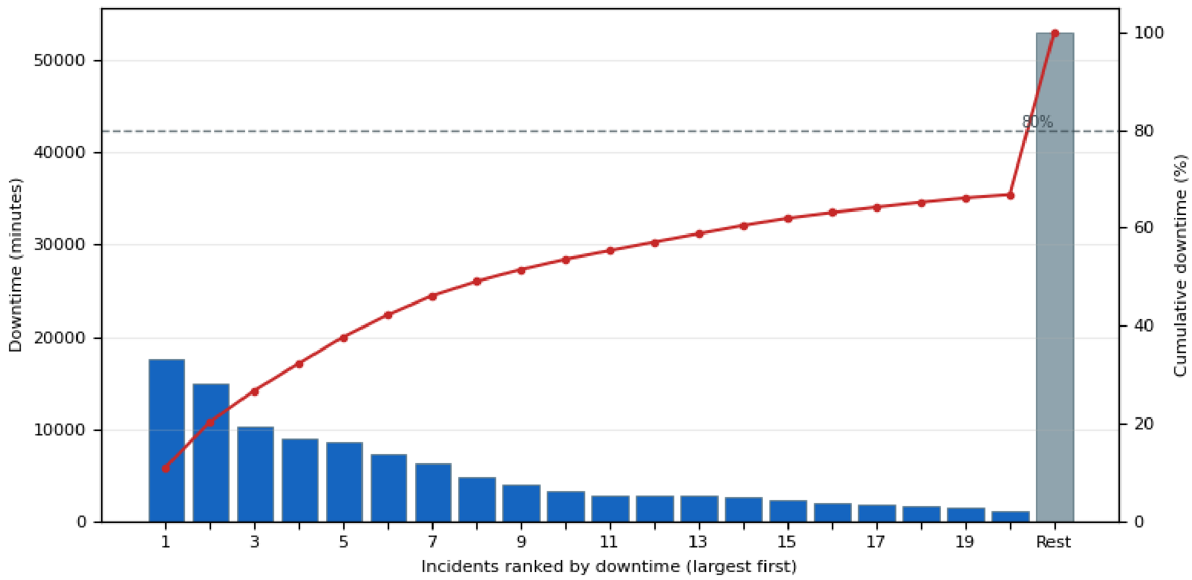
Method	Purpose	α / Threshold
Lomb-Scargle	Detect recurring failure cycles in time-series data	FAP ≤ 0.10
Mann-Whitney U (two-sided)	Compare incident rates / metrics before and after a change date	α = 0.05
Cliff's δ + Bootstrap CI	Quantify the magnitude and uncertainty of the before/after change	95% CI, 1 000 resamples
K-Means + Silhouette	Group incidents by behaviour (duration, time of day, weekday)	k □ [2..6], S ≥ 0.25
Gini coefficient + Lorenz	Measure concentration of downtime among incidents	—

Significance level α = 0.05 for all hypothesis tests. Tests run only when minimum data requirements are met (see Limitations section).

Lorenz Curve — Downtime Concentration



Pareto Chart — Downtime by Incident



Brief Glossary of Methods Used

p-value	Probability of observing results at least as extreme as measured, assuming no real effect. $p < 0.05$ is statistically significant (< 5 % chance it is random).
95% CI	95 % Confidence Interval — the range that contains the true value in 95 out of 100 repeated experiments. Wider CI = more uncertainty.
Cluster	A group of incidents with similar behaviour (duration, time of day, day of week). Incidents in the same cluster likely share a root cause.
Gini coefficient	Measures how unevenly downtime is distributed. 0 = all incidents equal; 1 = one incident caused all downtime. Gini > 0.6 = strong concentration.
FAP	False Alarm Probability — how likely a detected cycle is random noise. FAP < 0.01 = strong evidence of a real recurring pattern.