

CLINICAL ANALYTICS & DATA PLATFORMS

From Two Hours to Five Minutes: Restoring Epic Reporting for a Regional Health System

How APSIS eliminated a crippling SQL Server bottleneck that was delaying clinical decisions and grinding operations to a halt

Service Area	Organization Type	Engagement Length	Outcome
Epic Data Layer — Clarity / SQL Server	Regional Health System	Six Weeks	96% reduction in report runtime

THE SITUATION

The VP of Health Informatics at a regional health system had a problem she could not explain to her board. Every morning, the clinical teams waiting on overnight Epic reports were getting the same answer: “Still running.” Discharge planners couldn’t pull patient lists. Revenue cycle analysts couldn’t start their day. Quality teams couldn’t generate the metrics their accreditation reviewers expected.

What should have been routine Clarity reports — built on a well-established Epic environment with adequate hardware — were taking two hours or more to return results. On some mornings, they simply timed out.

The health system had already escalated to their internal DBA team. The DBAs confirmed the queries were slow. They had no clear path to fix them. A major EHR vendor advisory was consulted. The recommendation came back: hardware upgrade, six-month timeline, significant capital expenditure. The organization needed a second opinion from someone who actually lived inside Epic’s data layer.

“Our clinical teams were losing the first two hours of every day waiting on reports that should have taken minutes. It wasn’t a hardware problem — it was a precision problem. We needed someone who understood both the Epic architecture and the SQL layer underneath it.”

— VP of Health Informatics, Regional Health System

CHALLENGE & APSIS APPROACH

The Challenge

- Clarity report jobs averaging 120+ minutes per run, causing daily downstream delays
- SQL Server execution plans rebuilding inefficiently on every report run due to missing and stale indexes
- TempDB contention during peak morning usage creating system-wide slowdowns affecting all users
- Query optimizer making suboptimal choices due to outdated statistics on high-volume Clarity tables
- No baseline performance monitoring — the team had no visibility into what was consuming resources or when

The APSIS Approach

- Deployed an APSIS Epic Clarity specialist with SQL Server DBA expertise — a combination the health system’s internal team didn’t have
- Conducted full execution plan analysis across the 15 highest-impact report jobs, identifying the exact queries causing cascade delays
- Rebuilt index strategy across critical Clarity tables: added covering indexes, removed redundant indexes inflating write overhead
- Rebuilt outdated statistics on 40+ high-volume tables to restore query optimizer accuracy

- Reconfigured TempDB — split into eight equal data files per SQL Server best practice, eliminating contention
- Implemented workload balancing to separate heavy analytical jobs from transactional query traffic

WHY THIS WAS HARDER THAN IT LOOKED

Epic's Clarity database is not a standard SQL Server environment. Epic controls the schema, which means most standard DBA optimization techniques — restructuring tables, modifying the data model, adding columns — are off-limits. Every change has to work within what Epic permits, which is a narrow lane.

The health system's internal team had the right instincts but not the Epic-specific knowledge. They'd applied some general SQL Server tuning that actually made things worse in places, because general tuning and Epic-aware tuning are different disciplines.

The APSIS consultant brought something the team didn't have: **ten years of direct Clarity performance work** across multiple health systems, which meant pattern recognition rather than trial and error. When the execution plans came up, the root cause was identifiable in hours, not weeks.

RESULTS

<5 min

Report runtime

Down from 120+ minutes

96%

Runtime reduction

Achieved without hardware spend

Day 1

Clinical team impact

Planners had data before 7 AM

The operational change was immediate. On the day the optimization went live, discharge planners had their patient lists before 7:00 AM. Revenue cycle staff started work at the start of their shift instead of two hours in. The accreditation quality reports that had been failing due to timeout were running cleanly within the scheduled window.

The hardware upgrade the health system had been quoted — a six-month capital project — was no longer necessary. The problem was never hardware. It was precision: knowing exactly which indexes were missing, which statistics were stale, and how TempDB needed to be structured for a Clarity workload of this scale.

Total engagement time: six weeks from initial assessment to post-optimization validation. The health system continues to use the monitoring framework APSIS put in place as a standard operating procedure.

APSYS CAPABILITIES DEMONSTRATED

Analytics & Data Platforms

- Epic Clarity performance engineering
- SQL Server index strategy and query optimization
- Execution plan analysis and root cause diagnosis
- TempDB configuration and workload balancing

Differentiators Proven

- Epic data layer mastery — Clarity-specific optimization
- Outcome delivered without capital expenditure
- Six-week engagement vs. six-month vendor alternative
- Pattern recognition from multi-system Clarity experience

- Ongoing monitoring framework implementation
- No business disruption during optimization work

ABOUT APSIS SOLUTIONS INC.

Apsis Solutions Inc. is a Tampa-based healthcare IT consulting and technology operations firm delivering enterprise-grade results at independent firm value. We serve health systems, academic medical centers, federal agencies, and prime contractors as a capable prime vendor, strategic subcontractor, and managed services partner. With deep specialization across Epic/Oracle Health/MEDITECH/Cerner EHR ecosystems, HL7 FHIR R4 interoperability, HIPAA compliance, and cloud-enabled data platforms, APSIS provides the clinical domain expertise and certified professional bench that major health IT engagements demand.

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