GOLIATH TECHNOLOGIES®
HEALTH IT OBSERVABILITY

CASE STUDY

# Oracle Health EHR Speed & Reliability Score Increased 17%

**A large health system in the Western United States, managing over 28 hospitals and 300 clinics, faced persistent concerns regarding the speed and reliability of Oracle Health EHR, leading to a data-driven initiative to improve clinician experience and corresponding patient care.**

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# Background

A large non-profit health system in the Western United States manages an expansive network, encompassing more than 28 hospitals and 300 clinics across a broad geographic region. The principal EHR utilized, Oracle Health EHR (formerly Cerner Millennium), is integral to the routine operations of both hospitals and clinics, supporting activities ranging from patient admissions to medication administration.

Despite sustained investment and ongoing optimization efforts, clinicians throughout the system began to report persistent concerns regarding the speed and reliability of the EHR. Anecdotal accounts, user complaints, and periodic survey data collectively signaled growing dissatisfaction among clinical staff - an issue with potential ramifications for both morale and the quality of patient care. Leadership recognized the imperative to not only ascertain the breadth of these challenges but also to pursue a methodical, data-driven resolution.

# Challenge

## Clinician Feedback and the Need for Empirical Evidence

The initial indication of systemic EHR performance deficiencies was identified through a KLAS Research survey, which documented broad clinician dissatisfaction with Oracle Health EHR. While such surveys captured general perceptions - such as slow response times, slow logon times, or unresponsiveness - they lacked the actionable data required for identifying and resolving root cause.

Accordingly, leadership articulated two key priorities:

- Empirical Data: Move beyond subjective survey-based methodologies to collect objective evidence derived from the actual digital experiences of all clinicians. This approach would overcome biases associated with voluntary feedback and ensure a holistic data set representing 100% of the user base, rather than a select subset.
- Root Cause Identification: Utilize this comprehensive data to precisely determine not only the nature of issues but also the specific individuals, locations, timings, and frequencies involved. Critically, this would enable differentiation between information technology challenges and other contributing factors, such as workflow inefficiencies or insufficient training.

## Limitations of Conventional Approaches

Traditional information technology monitoring tools frequently prove inadequate in capturing the complexities of end-user experience. While such tools may affirm that infrastructure is functioning within expected parameters, they often fail to recognize the practical frustrations confronted by clinicians. Subjective feedback - such as “Millennium is slow” or “it crashes frequently” - is valuable for flagging issues, but does not support root cause analysis. There was a clear necessity for solutions capable of correlating real-time user experience data with backend system metrics, thereby illuminating issues that remain undetected by standard monitoring tools or support teams.

# Solution

## EHR Speed & Reliability Improvement Program

To address these challenges, the health system engaged Goliath Technologies in the implementation of a 45-day EHR Speed & Reliability Improvement Program. Central to this initiative was the deployment of Goliath’s Monitoring and Troubleshooting Analytics - an advanced solution leveraging embedded intelligence, automation, and artificial intelligence.

The implementation process was notably efficient:

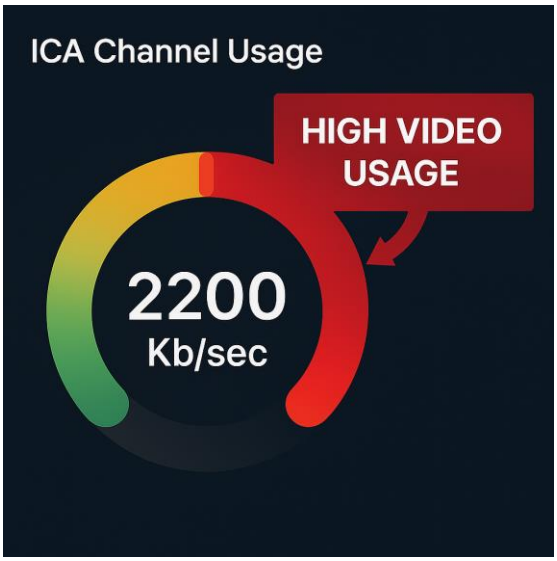
- Expedited Deployment: Installation and initial configuration required approximately four hours and was accomplished through coordinated efforts between the Oracle Health hosting team and local information technology personnel.
- Automated Intelligence: Goliath automatically deployed and configured to identify events, conditions, and failure points causing clinician experience issues.
- Actionable Insights: The platform correlated telemetry across the IT delivery infrastructure, including user experience and behavior metrics, identifying clinicians having a poor experience with Millennium and the likely root cause – providing IT and Clinical teams common facts to work together to resolve issues.

## Illustrative Example: Diagnosing Slowness at a Remote Clinic

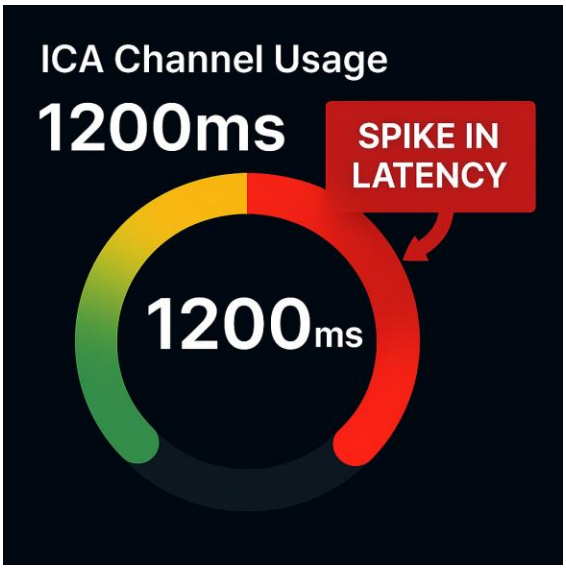
One salient case arose at a remote clinic where clinical personnel reported notable Millennium slowness. The network operations team initially excluded bandwidth limitations - their monitoring tools indicated sufficient available capacity. Oracle’s support team similarly confirmed the absence of hosting-side issues. Nevertheless, clinician productivity continued to be compromised.

The Goliath platform provided critical insights:

- Detailed logs established that affected clinicians were utilizing a video-intensive application within Millennium during the precise periods of reported slowness.




- Analysis of user experience data revealed that these clinicians were experiencing significant network latency - an issue not apparent in aggregate network performance dashboards but directly affecting end users.




- Further investigation determined that, despite sufficient overall site bandwidth, the allocation of bandwidth to Citrix (the remote application delivery platform) was inadequate for the increased video usage following a recent application upgrade.


Root cause analysis thus identified a key gap: existing network settings, previously adequate, could no longer accommodate the evolving application requirements - specifically, the surge in video utilization post-upgrade. This subtle but impactful factor had eluded other monitoring tools.

### Collaborative Remediation

Armed with empirical evidence, the organization's IT and clinical teams were able to collaborate more effectively. Consultations with the application team substantiated the correlation between the upgrade, increased video usage, and the resultant network performance bottleneck.

Remedial measures included:

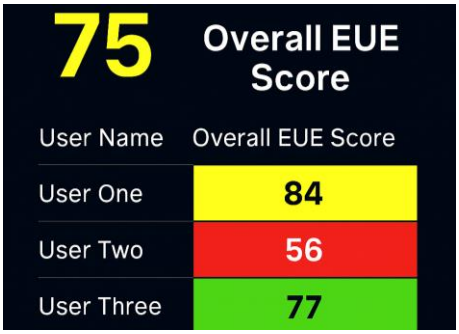
- Adjusting network configurations to prioritize Citrix user traffic and support video-intensive workflows.
- Upgrading select network hardware at the impacted site.
- Instituting ongoing monitoring through the Goliath platform to validate improvements and proactively address future concerns.

## Results

### Quantitative Outcomes

The results of the 45-day initiative were both immediate and substantial:

- The overall clinician experience score increased from 75% to 92%, representing a 17% enhancement in speed and reliability as measured by the program's criteria.





- Other contributing variables - including incident frequency, issue duration, and response times - also recorded marked improvements, further corroborating the efficacy of the interventions.
- Issues previously undetectable to IT and network monitoring teams became visible, actionable, and resolvable, contributing to a more stable and efficient clinical environment.

## Testimonial from Project Leadership

The project leader provided the following perspective:

"In a matter of one week we were able to review data about the daily experience of our clinicians when using Millennium. It was truly amazing to have hard facts about which clinicians were experiencing issues, what time of day, location, and how that changed based on what they were doing within the application. In some cases, we found problems we didn't know existed, and others confirmed our suspicions. Now that we had facts, the clinical and IT teams could partner to improve experience, and we did."

## Continuous Experience Management

It was recognized that clinician engagement with Millennium demands ongoing oversight. The dynamic nature of healthcare operations, shifting application usage, and frequent technology upgrades necessitate vigilant, continuous management. By instituting real-time monitoring and data-driven feedback mechanisms, the organization established a durable framework for proactive experience management, ensuring that emerging issues could be identified and resolved prior to escalation.

## Key Insights

- Empirical Evidence Over Perception: Objective, real-time data encompassing the entire user base is indispensable for the identification, diagnosis, and resolution of performance challenges impacting productivity and satisfaction.
- Collaborative Problem-Solving: When Clinical, IT, and vendor teams are aligned around the same empirical evidence, effective partnership and rapid remediation are achievable.
- Commitment to Continuous Improvement: The dynamic healthcare environment requires sustained monitoring and adaptation to maintain exemplary digital experiences for clinicians and ensure patient care outcomes.
- Measurable Gains: The 17% increase in experience scores illustrates the transformative potential of targeted, data-driven interventions in improving EHR speed and reliability and clinician satisfaction.

## Conclusion

This case study underscores the profound impact of transitioning from perception-based feedback to a rigorously data-driven approach in elevating EHR speed and reliability. By deploying advanced analytics and automated monitoring, the organization not only resolved immediate concerns but also nurtured a culture of continuous improvement and cross-disciplinary collaboration. Health systems facing analogous challenges are encouraged to adopt similar methodologies, thereby empowering their IT and Clinical teams with data that consistently supports clinician and corresponding patient experience.