

AppNeta by Broadcom for Healthcare

Keep Critical Care Connected: Ensure Network Performance and Operational Continuity with AppNeta by Broadcom

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SOLUTION BRIEF

KEY BENEFITS

Proactive Performance Management

- Move from fire-drill mode to proactive operations. Use predictive insights to uncover problematic trends before they have an impact on care.

EHR and Telehealth Optimization

- Ensure high-performance access to critical records and video visits, even when networks support hundreds of remote clinics.

HIPAA and GDPR Compliance

- Promote the resilient delivery of PHI. Leverage performance telemetry and audit trails required to validate that networks adhere to regulatory and reliability standards.

Operational Efficiency

- Reduce MTTR and MTTI by enabling teams to immediately identify where an issue occurs.

Cost-Effectiveness

- Unify disparate tools and use portfolio-based licensing to scale enterprise observability and boost predictability. Minimize time spent on costly manual investigations and reduce total cost of ownership.

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The Challenge: Navigating Healthcare's Evolving Network Landscape

In recent years, the makeup of healthcare providers' technology ecosystems has changed dramatically. Isolated on-premises systems continue to shift to hybrid cloud and SaaS platforms. Facilities have become globally interconnected. In the wake of these transformations, the network has emerged as the backbone of clinical delivery.

For network and IT professionals, this new paradigm means comprehensive network observability is absolutely essential. Teams in healthcare organizations must gain true end-to-end visibility and proactive, AI-enabled insights. It is only with these capabilities that teams will be able to contend with rising complexity, enhance operational efficiency, and deliver the optimized service levels that are required for uninterrupted, high-quality patient care. To meet these imperatives, network teams must address these challenges:

- **Contending with the visibility gap in clinical workflows.** For many healthcare organizations, third-party providers now control most of the network path. With so many network hops outside of their visibility and control, network and IT teams face major blind spots. Consequently, identifying where performance degrades—especially across ISP-managed segments—becomes slow, reactive, and inefficient.
- **Relying on external networks for electronic health records (EHR) and telehealth.** External networks now underpin EHR, telehealth, and imaging services, making performance critical. Remote sites frequently hit bandwidth limits, and large imaging or lab transfers often strain public links. When clinicians report slow performance, the root cause may lie anywhere from local Wi-Fi to upstream ISPs to the application stack.
- **Managing hybrid cloud complexity.** Healthcare organizations now operate across hybrid clouds, balancing a mix of on-premises systems and public cloud services such as AWS, Azure, and Google Cloud. Legacy tools often can't span these diverse environments, creating operational silos. At the same time, teams must manage older hardware and applications that require specialized integrations, which further complicate operations.
- **Establishing intelligence-led compliance and integrity.** Healthcare institutions operate in a strict regulatory landscape that demands strong data protection. To address standards like the Health Insurance Portability and Accountability Act (HIPAA) and the General Data Protection Regulation (GDPR), teams need to employ advanced network monitoring, track audit trails, and detect unusual network behavior. These capabilities are a must if teams are to ensure the integrity of sensitive clinical data flows.

KEY CAPABILITIES

- **Active synthetic monitoring.** AppNeta simulates real clinician workflows—like Epic logins and EHR searches—to trace data paths, anchor network telemetry in true user experience, ensure responsiveness, and expose underlying network dependencies affecting performance.
- **End-to-end path analysis.** AppNeta provides a granular, hop-by-hop view of the network path. It identifies the exact location of latency or packet loss, whether it occurs within the hospital's own LAN, Wi-Fi, or SD-WAN; or a third-party ISP's network.
- **Clinical point-of-presence.** Teams can easily and flexibly deploy lightweight Monitoring Points at nurse stations, remote medical offices, and even home-based telehealth setups, while retaining centralized, efficient administrative visibility and control. AppNeta provides the visibility needed to validate the performance of last-mile ISP and transit networks and ensure a consistent user experience, no matter where care is delivered.

The Solution: AppNeta Maximizes Network Performance to Ensure Uptime of Critical Clinical and EHR Services

AppNeta by Broadcom provides the end-to-end network visibility needed to help network and IT teams in healthcare organizations troubleshoot faster and enhance clinician and patient experiences. AppNeta monitors performance from the perspective of clinicians and other users, revealing how applications and networks behave at the point of care. The product delivers comprehensive visibility across hybrid, multi-cloud, and on-premises environments. AppNeta helps teams streamline troubleshooting so they can reduce mean time to resolution (MTTR), improve mean time to innocence (MTTI), and keep clinical workflows running smoothly.

AI-Driven Insights and Predictive Resilience

As AI takes on a larger role in healthcare, it introduces new demands on the network. Broadcom is investing in AI across its solutions to help customers address the challenges—and capitalize on the opportunities—presented by AI. With AppNeta, teams can harness these AI-powered capabilities:

- **Anomaly detection.** Algorithmic thresholding and anomaly detection flag unusual traffic spikes or performance drops, helping teams identify and address congestion or device issues—before they have an impact on network reliability.
- **Automated root cause analysis.** Leveraging AI, teams can correlate data from across the network. With this intelligence, AppNeta can point operators directly to the source of a problem, saving hours of manual labor.
- **Predictive operational intelligence.** AppNeta employs AI-enabled analytics, trend modeling, and algorithmic baselining to filter out noise and uncover performance risks that can affect physician and patient services.

How it Works: Delivering Resilient Healthcare Operations and EHR Continuity

AppNeta combines the power of end-user experience monitoring with deep hop-by-hop telemetry. These capabilities enable network and IT teams to ensure that networks supporting critical healthcare applications like Epic remain fast and reliable. By supporting the move from traditional up/down device monitoring to a proactive, path-based model, AppNeta helps teams track and maintain clinical uptime and performance. The product offers these advanced capabilities:

- 1. Continuous synthetic EHR validation.** AppNeta uses lightweight Monitoring Points that can be deployed at clinics, hospital floors, and data centers. These Monitoring Points simulate critical clinician workflows on a 24/7 basis. This proactive testing identifies issues, such as delays in Epic logins and patient lookups. With the product, teams can spot and mitigate performance degradation before clinical services are affected.
- 2. Hop-by-hop path insight.** Unlike standard tools that lose visibility at the network edge, AppNeta provides total visibility across the entire delivery path—including paths that span Wi-Fi, ISP, SD-WAN, and internal data center environments. It offers precise measurements of such metrics as network latency, data packet loss, and available capacity at every stage of the journey.
- 3. Automated error domain isolation.** AppNeta eliminates the blame game by clearly separating network transit metrics from application metrics. For example, it enables teams to instantly determine if slow Epic response is due to an ISP outage or if an issue within the virtualized data center environment is causing EHR latency.

Network Observability

by Broadcom

- 4. Algorithmic baselining and anomaly detection.** By leveraging advanced analytics, the product automatically establishes performance baselines for clinical applications. Teams are alerted the moment performance deviates from historical norms, enabling fast remediation and preventing minor latency from escalating into clinical downtime.
- 5. Unified data ingestion and ecosystem integration.** AppNeta is part of the Network Observability by Broadcom solution. The solution features an open architecture that offers broad coverage of the technologies that matter most to healthcare organizations. It also features DX NetOps, which captures SNMP, flow, and packet data. Additionally, its network configuration management capabilities enable teams to ensure devices remain compliant with policies and standards, helping prevent configuration-induced downtime. For VMware Cloud Foundation (VCF) environments, the solution provides cross-cloud networking observability. With these capabilities, teams can establish performance baselines for VCF infrastructure, including before and during migrations. The solution further extends value through integrations with critical tools, including IT service management (ITSM) and collaboration platforms, to facilitate real-time incident collaboration.

Phase	Conventional Approach (The Blame Game—Without AppNeta)	AppNeta-Enabled Resolution (Recovery in Minutes)
Incident Reporting	8:00 AM: Clinician reports slow EHR responsiveness at a remote clinic, triggering manual triage.	8:00 AM: Clinician reports slow EHR responsiveness; the service desk has immediate visibility.
Investigation	9:00 AM – 11:00 AM: Network, server, and application teams audit disparate repositories of information, and ultimately report seeing no local errors.	8:01 AM: IT accesses the AppNeta dashboard for an end-to-end view of the specific network path. Data has already been collected through continuous monitoring.
Diagnostics	12:00 PM: Productivity remains stalled as teams focus on “proving innocence” rather than identifying the cause.	8:02 AM: Analytics instantly pinpoint 5% packet loss originating within the local ISP network segment. The data reveals issues began before 8:00 AM.
Response	Hours (or days) later: Resolution is achieved only after exhaustive, cross-functional manual testing.	8:05 AM: IT provides the ISP with definitive hop-by-hop telemetry that identifies the faulty router. They can then compel the ISP to immediately fix their internal network issue. They can also help staff find workarounds while services are being restored.
Outcome	Clinical stagnation: Prolonged downtime leads to physician frustration and potential risks to critical patient services.	Operational resilience and agility: The correct team is engaged immediately, maintaining the performance of clinical workflows and patient care services.

In critical healthcare environments, the interval between an issue report and its resolution directly impacts patient care. The “vicious cycle of blame” often delays recovery. In contrast, AppNeta-powered intelligence transforms hours of uncertainty and inefficiency into minutes of targeted action.

Real-World Success in Healthcare

CASE STUDY 1: Scaling EHR Managed Services

A large northwestern healthcare provider aimed to host an EHR system as a managed service for regional hospitals and clinics. This required them to support over 250 remote medical offices with varying ISPs and limited local technical expertise.

THE RESULT: With AppNeta, they achieved a significant reduction in bandwidth usage and optimized service levels. The product offers end-to-end visibility, which enabled the team to significantly reduce manual investigation time and achieve massive improvements in operational efficiency.

CASE STUDY 2: Managing Telehealth Growth

A not-for-profit healthcare system experienced explosive growth in demand for its telehealth services. Their network team was hampered by blind spots due to reliance on external networks.

THE RESULT: With AppNeta, they gained end-to-end visibility into hybrid networks, including those spanning third-party ISP and cloud provider environments. This enabled accelerated issue detection, improved service levels, and enhanced overall provider and patient experience.

The Broadcom Advantage: Seeing Every Part of the Network for Reliable Patient Services

Network observability is no longer optional—it is a prerequisite for delivering reliable patient services. [Network Observability by Broadcom](#) is a unified solution that ensures clinical continuity by combining end-user experience intelligence with deep infrastructure telemetry.

In addition to [AppNeta](#), the solution features [DX NetOps](#). DX NetOps delivers scalable network performance monitoring and algorithmic analytics, correlating device-level health with experience data. These capabilities help accelerate root cause isolation across complex healthcare environments.

For more information, visit our website at: networkobservability.broadcom.com