

Application Observability

Connect Application Performance to the Complete Execution System

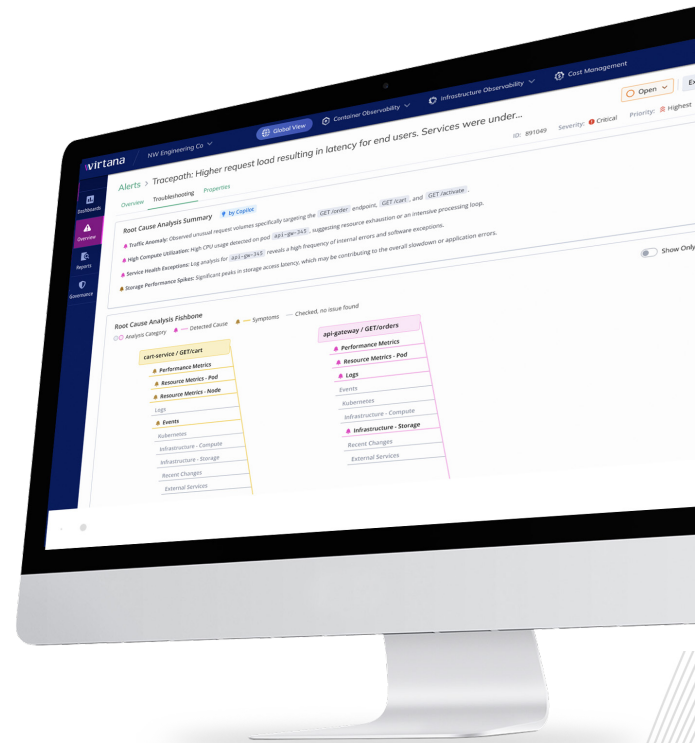
Modern applications depend on complex execution systems spanning business transactions, application services, containers, cloud infrastructure, compute, storage, networking, databases, APIs, shared platform services and increasingly agents, LLMs and GPUs. When application performance degrades, SRE, application, and Platform Engineering teams need to quickly understand which users and transactions are affected, where processing time is being consumed, why the issue occurred, and how to restore performance before customer experience and business operations suffer.

Legacy monitoring tools collect metrics, logs, traces, and events, but they present fragmented or code-centric views of the environment. Teams are left to manually correlate application behavior with container conditions, infrastructure dependencies, network paths, storage performance, and log events spread between multiple monitoring tools. As applications become more distributed and dynamic, investigations take longer, ownership becomes unclear, and Mean Time to Resolution increases.

Virtana Application Observability, delivered through the Virtana Agentic Observability Platform, transforms application telemetry into system understanding. The platform continuously builds a Single Source of Truth by connecting business transactions, services, container resources, infrastructure, storage, networks, logs, and their dependencies into a real-time operational model of the complete application execution system. Diagnostic Agents use this unified context to perform Agentic Root Cause Analysis, reasoning across transactions, traces, topology, runtime dependencies, infrastructure conditions, log events, and historical behavior to identify the operational constraint responsible for application degradation. Remediation Agents then recommend or orchestrate policy-driven workflows that accelerate restoration while maintaining governance and operational control.

Virtana understands applications as complete execution systems, extending beyond code to the services, platforms, and infrastructure that govern performance. This enables teams to move from application symptoms to verified root cause and corrective action with confidence.

Legacy monitoring tools show what happened. Virtana explains why.



Key Capabilities

Transaction and TracePath Observability

A single service carries dozens of unique transaction types with many varying paths. Virtana identifies slow performing transactions and services, so teams managing performance problems and outages work the paths that are actually degrading, instead of non-root-cause paths.

Paths extend end to end across services, containers, nodes, VMs, storage, and network. On any response time, error, or throughput anomaly, Virtana analyzes the problematic traces on that path, then identifies and triggers root cause analysis on the responsible operation. Along with the anomaly data, Virtana provides users with the needed evidence to act on it: logs, problematic lines of code, events, metrics, resource consumption data, and recent application changes.

Container Observability

Map application services to the container resources and runtime dependencies that govern performance. Connect transactions to clusters, namespaces, workloads, pods, containers, and nodes to understand how platform conditions affect application delivery.

Identify contention and instability that traces alone cannot explain, including resource throttling and noisy-neighbor conditions. Relate pod and node behavior directly to the transactions and services they disrupt.

Log Analysis and Correlation

Correlate log events with traces, alerts, transaction context, and application dependencies to reconstruct the complete failure chain.

Virtana clusters related issues into a coherent incident story, reducing false positives and helping teams focus on the log signals most relevant to the impacted application. This reduces manual searching and accelerates evidence-based diagnosis.

Synthetic and Availability Observability

Continuously test critical user paths to identify performance degradation and availability risks before they become widespread business incidents.

Differentiate true application downtime from localized failures involving DNS, network paths, shared services, or downstream dependencies. Track availability against business service-level objectives and service-level agreements using clear operational evidence.

System-Aware Application Observability

Follow applications and their dependencies across cloud, on-premises, hybrid, and secure disconnected environments.

Virtana provides visibility from business transactions and services through Kubernetes, virtualization, compute, storage, and network infrastructure. Teams can correlate signals across distributed environments without the visibility gaps created by separate application and infrastructure tools. The platform also supports secure air-gapped environments, including federal and mission-critical deployments.

Agentic Root Cause Analysis

Using the platform's unified operational model, Diagnostic Agents reason across transaction behavior, application topology, Kubernetes dependencies, infrastructure telemetry, logs, events, anomalies, and historical behavior to identify the true operational constraint behind application degradation.

The platform goes beyond alert and trace correlation. It verifies root cause, explains how the issue propagates through the application execution system, determines user and business impact, and provides evidence-based recommendations that accelerate resolution.

System-Aware Application Operations

Accelerate incident response with AI-generated incident summaries, live dependency context, affected transaction information, operational evidence, and recommended next actions.

Application, SRE, Platform Engineering, and infrastructure teams gain a shared understanding of the affected services, probable root cause, supporting dependencies, and business impact. This improves collaboration, reduces escalation cycles, and shortens investigation time.

Automation and Remediation Governance

Remediation Agents recommend or orchestrate policy-driven workflows based on application health, dependency context, and business risk.

Organizations can automate repetitive operational tasks, accelerate application restoration, and maintain human oversight, enterprise governance, and operational control.

Why Virtana AI Factory Observability?

Connect Application Behavior to Business Impact

Understand how transactions, application services, Kubernetes resources, infrastructure, storage, networks, and shared services collectively affect user experience and business outcomes.

Single Source of Truth

Continuously maintain a unified operational model that connects application transactions, services, runtime resources, infrastructure dependencies, and operational context.

Complete Execution-System Visibility

Trace performance across the entire delivery system, from business transactions and application services through Kubernetes, compute, storage, and network paths.

Business Outcomes

Organizations using Virtana Application Observability can:

- Reduce Mean Time to Resolution
- Identify verified root cause faster with Agentic Root Cause Analysis
- Improve application availability and customer experience
- Identify the dependency driving transaction latency
- Connect Kubernetes and infrastructure conditions to application impact
- Reduce investigation effort through trace, log, event, and dependency correlation
- Improve collaboration across application, SRE, Platform Engineering, and infrastructure teams
- Validate critical user journeys and service-level commitments
- Enable governed automation for faster application restoration
- Establish the operational foundation for autonomous application operations

Agentic Root Cause Analysis

Move beyond code-centric analysis and alert correlation. Diagnostic Agents identify the true operational constraint, explain why application degradation occurred, determine user and business impact, and recommend the next best action.

Cross-Domain Correlation

Connect traces, logs, alerts, Kubernetes conditions, infrastructure behavior, and dependency context into one coherent incident understanding.

Governed Remediation

Use Remediation Agents to guide or automate operational workflows while maintaining policy controls, enterprise governance, and human oversight.

Hybrid and Sovereign Deployment Coverage

Operate applications across multi-cloud, on-premises, hybrid, edge, air-gapped, and mission-critical environments with continuous dependency context.

About Virtana

Virtana, provider of the deepest and broadest Agentic Observability Platform for hybrid and multi-cloud environments, delivers system-aware observability spanning applications, services, data pipelines, GPUs, CPUs, networks, and storage. Powered by high-fidelity operational data and agentic AI, Virtana provides unmatched visibility across end-to-end IT services and AI execution systems, correlating health, performance, cost, and user impact in real time. With advanced event intelligence and AI-driven reasoning, Virtana delivers clarity no other provider can match. Trusted by Global 2000 enterprises and public sector organizations, Virtana helps IT operations, Platform Engineering, SRE, and DevOps teams reduce risk, strengthen resilience, improve efficiency, and modernize with confidence across multi-cloud, on-premises, edge, and sovereign environments.

Learn more at virtana.com