

Infovista KLERITY™

The most advanced carrier grade
cloud-native customer experience
assurance application available today

Bringing per-subscriber transparency to customer
experience, networks, services and applications



Monitoring and assuring customer experience in today's complex virtualized networks takes a new approach

Modern, virtualized and disaggregated networking architectures, and the diversification of the surrounding ecosystem, are creating more fluid and dynamic service delivery capabilities for operators. But efficiently detecting and effectively resolving defects and failures across networks, services, devices and applications is increasingly challenging.

Traditional probe-based monitoring and assurance solutions offer limited dynamicity and visibility into these new software-centric architectures – with complex interdependencies remaining across software components. For operators, this means increased likelihood of undetected failures, customer churn and trust erosion in the ecosystem.

Operators' NOC/SOC teams need a customer experience assurance capability that evolves continually alongside virtualized networking. It must provide ubiquitous visibility, on demand, anywhere in their network, with reduced assurance systems TCO that doesn't increase linearly with traffic volumes, but rather provides incrementally greater cost-efficiency as workloads increase.

A new approach is needed.

Meet KLERITY™

KLERITY™ is a fully containerized library of cloud-native functions and applications to leverage them. Bringing transparency to networks, services, devices, and applications, it empowers operations, performance and quality teams to quickly identify service-impacting issues and their true root cause. Unlike current solutions, KLERITY™ provides full transparency within and across network, service, device and application domains so that the 'what, where and why' of an issue is readily clear. KLERITY™ simplifies troubleshooting, optimizes root-cause analysis and accelerates mean-time-to-repair. Overall, it enables network, service and application providers to build trust with their ecosystem and end users.

KEY BENEFITS

- Automation reduces manual intervention, time and effort, errors and delays
 - A single 'pane of glass'-correlated view of network, infrastructure, services and devices
 - Reduce time-to-market for new services by removing assurance activation bottlenecks
 - Reduce TCO for customer experience assurance systems even as the workload and demands on NOC/SOC teams increases
 - Manage the quality of IoT applications
 - Establish visibility and trust across the service delivery ecosystem
 - Improve customer experience and reduce churn
 - Reduce operational costs by consolidating tools
 - Assure advanced networks and services architectures including 5G standalone, O-RAN, SDN/NFV and datacenter infrastructure
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Business processes and use cases supported by KLERITY™

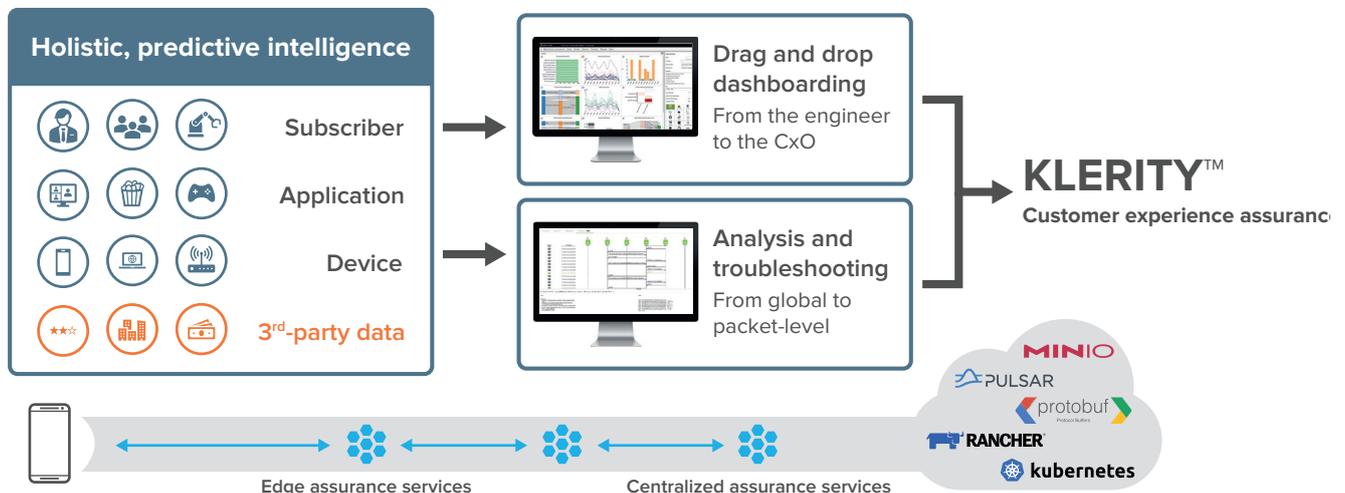


KLERITY™ enables monitoring of perceived customer experience for any service category

KLERITY™ contains lightweight virtual agents that can monitor traffic as it traverses through the network, in any location. KLERITY™ collects and monitors network connectivity sessions from end to end, in both the ‘control’ and the ‘user’ planes. Based on Infovista’s intelligent correlation engine, it summarizes this information in the form of intuitive dashboards expressing customer experience KQIs; how the traffic spanning network elements across the network domains correlates and influences these; and how these translate to trends over time.

Examples of processes supported by this capability include:

- **Enterprise SLA management and governance:** Monitoring and predicting complex SLA conformance, including where service delivery involves multi-party arrangements.
- **Proactive customer experience management:** Monitoring and predicting customer experience for specific service categories, such as OTT video; voice services; fixed and mobile broadband; gaming or specific social networks.
- **Per-service, per-subscriber, per-device and per-packet problem troubleshooting:** Investigation of, and detection of, the root-causes of problems impacting specific subscribers or groups; devices or types; services or categories. This can extend all the way to the individual packet level.



KLERITY™ provides real-time, per-subscriber intelligence, predictive diagnostics and automated troubleshooting for fixed and wireless networks, however complex

While current monitoring and assurance solutions provide limited visibility into issues and require users to interpret and triage what they see, KLERITY™ provides transparency within and across network, service, device and application domains, for:

- Accurate QoE monitoring of for diverse service categories across voice, video, OTT, broadband and others, including IoT services with diverse SLAs
- Elastic collection, analysis and correlation of events to monitor and manage services relying on complex, virtualized network architectures
- Rapid, automated root-cause analysis and troubleshooting of individual subscribers and packets, with open APIs enabling interoperability across peripheral components such as orchestrators
- Intuitive dashboards to visualize trends that indicate changes in service demand and performance, and the relationships between services, network functions, capacity and device types
- Transparent, vendor-agnostic reporting for multi-party ecosystem governance

Customer experience assurance that is cloud-native by design, and aligned to the challenges of modern network architectures for fixed, mobile and private connectivity services

Uniquely, KLERITY™ provides visibility of perceived customer experience for traditional communications services such as voice and broadband, and advanced connectivity services such as industrial IoT applications, unified communications as a service (UCaaS), live video broadcast and any business vertical-specific services with their own SLAs, with a completely re-architected, cloud-native-by-design approach. This removes the need for dedicated physical monitoring devices, and provides specific differentiated operational efficiency and performance benefits.



Distributed architecture

Support for advanced CUPS use cases with the most cost-efficient distributed architecture for asynchronous monitoring of networks, services, devices and applications based on virtual data collection agents, enabling, for example, the distributed collection and centralized correlation of control and user plane data for the same session, from separate locations. This means you can monitor services that leverage control and user plane separation (CUPS) technology, such as those in the network edge.



Functionally disaggregated

Lower your infrastructure workload through disaggregation of heterogeneous application functions into separate microservices. KLERITY™ optimizes workload efficiency. Each component with distinct functionality or workload characteristics (such as collection, correlation or aggregation) is a separate microservice. As such, KLERITY™ can more precisely scale to fit your overall workload.



Elastic scalability

Superior elastic scalability for greater cost efficiency across a broader workload spectrum. KLERITY™ is adaptable to a broader range of usage scenarios than alternative applications that are not truly cloud-native. Comprising more granular microservices, it can be deployed to support only the subset of requirements for a given scenario. But it can also support complex, demanding workloads, from campus networks to the largest mobile networks in the world.

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Evergreen functionality

Continuous innovation and DevOps support, with CI/CD for seamless rolling upgrades and ‘Evergreen’ features: KLERITY™ is based on Kubernetes for the orchestration of containerized microservices, including the deployment and roll-back of individual updates directly in the production environment. This avoids downtime, increasing application availability while enabling co-innovation and ‘localization’ to support users’ distinct requirements.



Seamless upgrades

Flexibility to rapidly adapt to emerging, evolving technologies and standards: Due to its fully functionally disaggregated architecture, KLERITY™ provides the flexibility to introduce new and updated adapters, connectors, listeners or analytical processes without extensive regression testing. It can therefore respond quickly to evolving standards like O-RAN.



Multi-tenancy support

Support for multi-tenancy scenarios such as enterprise self-service: KLERITY™ supports innovative monetization scenarios such as secure enterprise self-service portals through full multi-tenancy support. This increases efficiency by reducing the complexity of, for example, account management for multiple enterprise customers, by decentralizing and distributing monitoring and assurance activities among customers. This reduces workloads for service operations centers (SOCs).



Self-orchestrated

Consistent reliability and performance, even under unexpected workloads, with self-orchestration: KLERITY™ dynamically adjusts its infrastructural footprint, both of resource allocation and functional distribution across locations, depending on the network demands and service utilization characteristics at any point in time. This ensures optimal infrastructure workloads without sacrificing performance, particularly in non-cyclical utilization, when the application is most needed.

KLERITY™ is powered by the most advanced cloud-native technologies available today



- **Infrastructure-agnostic:** Deployable on any combination of on-premises, public or private cloud, KLERITY™ is simple, easily automated and entirely independent of operating system or platform.
- **Optimal microservices disaggregation:** KLERITY™ microservices are grouped into major categories, including: system orchestration; collection and mediation; data capture and processing; analytics and AI/ML; recording; interfaces; multi-tenancy and user management; and results management.
- **Advanced event and data correlation:** KLERITY™ collects, in real-time, diverse data to provide a holistic view of customer experience and the underlying contributors of it. The distribution of data collection across locations significantly minimizes infrastructure cost and workload
- **Openness, CI/CD and high availability:** KLERITY™ uses the latest cloud containerization and orchestration technologies, simplifying interoperability across peripheral products, reducing the time to support new service categories and resulting in more reliable performance and availability

About Infovista

Infovista is the global leader in network lifecycle automation (NLA) for the next-gen networks era. With its unique NLA approach, Infovista allows communications service providers (CSPs) and enterprises to improve their network performance and customer experience, optimize their productivity, and reduce their costs, while maximizing return on their investments. Spanning the entire network lifecycle, Infovista's products and solutions leverage an open, integrated, cloud-native portfolio that automates tasks, flows, analytics, and decisions to the greatest extent possible. More than 1,500 customers, including 400 Mobile Network Operators, around the world rely on Infovista to plan, design, deploy, test, operate, support, optimize, evolve, report on and monetize their networks.