WNDRVR

Wind River Studio
Operator Capabilities: Analytics

The intelligent edge will compute, in near–latency-free time, exponentially more data and intelligence than ever before — information that is critical to the performance and adaptability of the cloud-based infrastructure delivering that compute. To harness the power of that information, integrated analytics processes are needed to help identify trends, detect anomalies, and prevent problems.

Wind River® Studio enables an integrated distributed cloud platform for operators that includes analytics, making it possible to effectively manage your edge cloud system by consuming and processing data to produce meaningful insights for decision-making. With full stack monitoring of the cloud infrastructure cluster and services, Studio collects, analyzes, and visualizes cloud behavioral data to help you keep your cloud up and optimized while reducing operational costs.

BENEFITS

A distributed edge cloud could be deployed on edge nodes numbering from the tens to the thousands. This geo-distributed design with numerous end points makes monitoring and management of such a cloud challenging. The analytics capabilities in Studio make that job easier, providing:

- **Proactive, optimal network operations:** Service assurance is achieved by allowing you to identify and address issues before they become problems, ensuring that the system continually operates within targets. You will have visibility into a relevant data set along with trend analysis, to help identify and predict the effects of network anomalies.

- **Operational cost savings:** Hiring the amount of staff needed to effectively monitor and analyze your distributed cloud network behavior isn't sustainable. Leverage Big Data and analytics instead.

- **Deeper, broader, and more tailored data collection:** Because analytics are fully integrated into Studio it allows you to access a much larger, full-stack data set that you can specify to your needs. It is customizable, so you can get the data you require to run your network.

COLLECTION	DISTRIBUTION	PROCESSING	ANALYSIS	ALERTS
Host Metrics	Data Enrichment	Storage	Visualizations	Proactive Alerts
Cluster Metrics	Data Transformation	Replication	Trend Analysis	Comprehensive
Network Metrics	Data Pre-processing	Indexing	Anomaly Detection	Reports
Log Events		Aggregation	Security Analysis	
Integrity Monitoring		Resampling	Machine Learning	
		Lifecycle	Alerting	

KEY FEATURES

Wind River Studio Analytics is an integrated data collection, monitoring, analysis, and reporting tool used to optimize your distributed network operation.

- **Collect** a broad and deep data set tailored for your needs. Data can be pulled across all layers of the system, including the infrastructure, cluster, services, and applications. Detailed memory, CPU, file system, and service state are gathered to ensure that the entire operational landscape is monitored.

- **Aggregate** both structured and unstructured data, including logs and metrics. Whether at the individual host level or aggregated with the local or distributed cluster, data is enriched to provide context beyond the metric and timestamp and includes tagging, transformation, and preprocessing.

- **Processing and storage** includes replication indexing, which provides redundancy as robust as the system and makes the data faster for search. Lifecycle management ensures that the data is managed appropriately and persists only as long as it needs to.

- **Analysis** puts the data to use to derive powerful insights into the distributed cloud. Visualizations, dashboards, and trend analysis provide a view that can be interpreted for proactive decision-making to keep your network healthy and optimized.

- **Proactive alerts and comprehensive reports** keep you up-to-date about what is happening in your distributed cloud.

ANALYTICS AT A GLANCE

- *Full-stack monitoring: infrastructure, cluster, and services*

- *Data aggregation and analysis across a distributed-cloud deployment*

- *Data analysis of unstructured and structured data: logs and metrics*

- *Context-aware data collection and enrichment across the entire cloud*

USE CASE

5G virtual RAN (vRAN) networks are being designed with a geo-distributed virtualization approach to accomodate applications that are fully software based and dependent on ultra-reliable low-latency communication (URLLC) access from the edge to the core. This new network architecture will have tens of thousands of deployed compute nodes within a single operator's infrastructure. Telco operators are looking to Studio's production-grade Kubernetes for the distributed edge. Studio is the optimal solution for these types of deployments, and network operators will need analytics capabilities so they can make sense of and take action on all the data being produced by the edge network.

CARRIER SUPPORT

Studio is backed by our award-winning global support organization. We offer live help in multiple time zones with 24/7/365 emergency recovery and service restoration and standard Tier 1 and 2 break/fix support. The online Wind River Support Network, with multifaceted self-help options and optional premium services, provides developers the fastest possible time-to-resolution. For more information, visit www.windriver.com/support.

HOW TO PURCHASE

To discuss how Wind River Studio can help you deploy and manage your distributed edge network, contact your Wind River account manager or visit www.windriver.com/contact.

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