

NETSCOUT Service Assurance in Oracle Cloud

Visibility Without Borders for Hybrid Cloud Monitoring Starts With nGeniusONE and vSTREAM

In today's digital world, corporate enterprises include Oracle Cloud Infrastructure (OCI) as part of their multi-cloud strategies to deploy, build, extend, and integrate revenue- and customer-enhancing business services. OCI brings greater agility in application introductions and successful workload migrations, helping businesses cut time to market and improve customer satisfaction.

To reap the full benefits of OCI in a hybrid cloud world, companies need to optimize application performance and security. Existing tools have been unable to fill the huge monitoring gap, as they are unable to overcome:

- the architectural complexity of hybrid cloud environments.
- the ambiguity caused by disparate, vendor-specific tools.
- the packet-based visibility constraints found in alternative tools.

What's more, the uncorrelated data can compete and conflict with each other, making analysis time-consuming and inconclusive.

Enterprises running application workloads through hybrid cloud environments, including OCI, need visibility that does not begin and end at each physical boundary. You need insight into any private, public, or hybrid cloud environment, for any application service, anytime, anywhere in the world! You need visibility without borders. NETSCOUT®, an Oracle Partner Network Member, offers solutions that deliver actionable visibility to mitigate service performance issues, threats, and vulnerabilities. Leveraging the nGeniusONE® Service Assurance solution enables you to deliver, deploy, and secure applications and services across physical, virtual, and cloud environments.

Solution Overview

NETSCOUT uses the industry's most scalable, lightweight distributed architecture to generate Smart Data. Through continuous monitoring of packet-based traffic traversing the hybrid cloud environment, while simultaneously performing deep-packet inspection and real-time analysis, vSTREAM™ virtual appliances and InfiniStreamNG® software & hardware appliances generate Smart Data at its point of collection. nGeniusONE provides a centralized view into the performance characteristics of the applications and associated dependencies across geographically dispersed data centers and cloud environments. You gain valuable and timely intelligence into application performance and security, enabling you to proactively find and fix errors, latencies, and threats before they become service delivery problems.

The nGeniusONE solution facilitates workload migrations to OCI with confidence, providing a foundation for common troubleshooting, analysis, and collaboration among NetOps, SecOps and other IT groups. By monitoring a variety of availability, reliability, responsiveness and threat metrics, these disparate IT teams can easily share details in real time with the right subject matter experts, with custom views relevant to their respective function. Actionable visibility from NETSCOUT helps you take full advantage of OCI capabilities.

OVERVIEW

nGeniusONE and vSTREAM enable enterprise IT teams to:

- Accelerate deployments of services into OCI, while assuring application reliability, availability, responsiveness, and business continuity.
 - Achieve end-user experience objectives and swift issue resolution for application services with Smart Data and smart analytics from nGeniusONE.
 - Empower collaboration between enterprise IT departments and their OCI partners as they work together to achieve business, customer, and end-user goals.
 - Realize quick time to value with easy-to-deploy and easy-to-manage approach of available OCI services.
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Deployment Options for Generating Smart Data in Hybrid OCI Environments

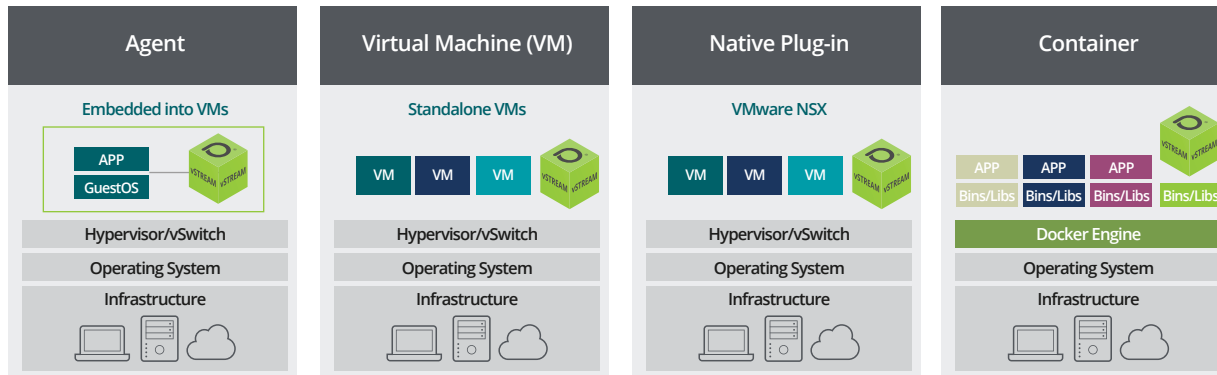


Figure 1: vSTREAM virtual appliances provide pervasive visibility in OCI environments with flexible deployment options including the agent embedded into virtual machines (VMs), as a virtual machine deployed as standalone VM, as a native plug-in as in VMware NSX environments, or as a container in Docker for instance.

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Manage Hybrid Cloud Complexity With Smart Data

Smart Data is a software-centric technology that can be deployed in any hybrid cloud environment in the form of vSTREAM virtual appliances. It offers pervasive visibility in OCI to monitor East West and North-South (E/W S/N) traffic environments, as well as in VMware NSX, to provide visibility into E/W traffic in micro-segmented clusters. vSTREAM technology, as exhibited Figures 1 and 2, is suitable for monitoring any software architecture and especially microservices, since it continuously monitors and analyzes traffic data exchanges between workloads, indexes it and correlates the information to identify dependencies and actionable intelligence on security threats and vulnerabilities, as well as performance issues.

Smart Data is generated by vSTREAM based on monitoring any environment in the hybrid cloud, including virtual machines (VMs), Docker or Kubernetes containers, or NSX with NSX manager as a Service Virtual Machine. In the VMware security group, it can efficiently receive traffic from the monitored VMs.

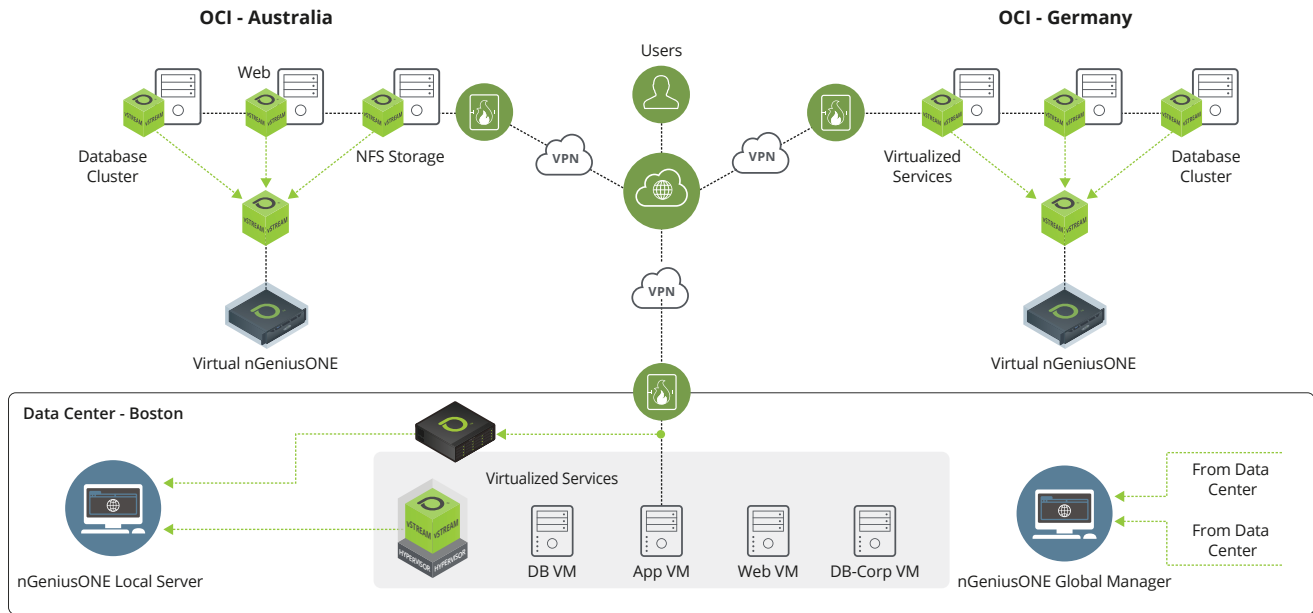


Figure 2: Visibility into Oracle Cloud environments is provided with rich Adaptive Service Intelligence metadata generated by vSTREAM virtual appliances when deployed in combination with the nGeniusONE platform.

Assuring Application Performance

NETSCOUT Smart Data fuels the end-to-end visibility and deep analytics needed to protect the enterprise, gain more control of service quality, and preserve the user experience in hybrid cloud environments.

With the nGeniusONE solution, as exhibited in Figure 3, information is timely, precise, and supports multiple, diverse stakeholders with flexibility to meet specific business requirements.

nGeniusONE provides application performance management for OCI to:

- Assure service delivery in hybrid cloud environments.
- Migrate application workloads to OCI, while reducing business risk.
- Deliver a consistent and high-quality user experience before, during, and after cloud migration.

Solution Components

OCI has certified NETSCOUT's vSTREAM virtual appliances, with patented ASI technology and the virtual nGeniusONE platform to provide the visibility necessary to assure a superior experience across your OCI environment. The nGeniusONE solution supports the successful migration of workloads to the cloud by providing real-time and continuous monitoring of packet-based traffic.

vSTREAM

vSTREAM, certified by OCI, is designed to provide deeper visibility into the interactions of the many components of modern applications, whether they run in the traditional data center or in the various forms of the cloud. Converting the high-volume network traffic into highly structured, multi-dimensional metadata provides a wide range of analytics for enhanced application performance and security insights.

As deployed in the OCI environment as either an agent, virtual machine, VMWare NSX plug-in, or application in a container, vSTREAM:

- Analyzes real-time views of sessions, conversations, and end-to-end call traces.
- Assesses application traffic volumes, server response times, and throughputs.
- Reports on critical key performance indicators (KPIs).
- Aggregates error counts and error codes specific to the various applications and servers.

Virtual nGeniusONE

Virtual nGeniusONE, also certified by OCI, works with vSTREAM to deliver an overarching view into the performance characteristics across infrastructure, application services, and their interdependencies. nGeniusONE recognizes more than 1,000 voice, video and business data applications, as well as custom applications, to help ensure end-user experience with hosted services.

As deployed in the OCI environment, virtual nGeniusONE:

- Supports proactive service triage for root cause analysis and application performance troubleshooting in hybrid cloud environments.
- Combines real-time monitoring, historical analysis, and multi-layered analytics capabilities.
- Promotes effective management of the health and availability of diverse applications and infrastructure with business impact analysis.



Figure 3: nGeniusONE dashboard view of a deployment of an application service in NY-based OCI, in this case, with the application, web, and database servers being monitored.



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