Visibility for Oracle Cloud Infrastructure

Introduction

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. Quality end-user experience, greater agility in application introductions, and successful workload migrations can only be achieved with visibility for high-quality performance management and service assurance.

NETSCOUT® is an Oracle Partner Network Member and NETSCOUT’s vSTREAM™ virtual appliances, with its patented Adaptive Service Intelligence™ (ASI) technology, and virtual nGeniusONE® Service Assurance platform are Oracle Cloud Ready to provide the visibility necessary to assure a superior experience across your OCI environment.

Visibility Challenges with Multi-Cloud Strategies

Delivering application services to end-users has been a unique journey for many companies, and the ways they have migrated from legacy data centers to private cloud, public cloud, hybrid clouds, and multi-cloud are not identical. However, most companies are deploying or planning to use a multi-cloud strategy. In fact, according to the Flexera 2020 State of the Cloud Report, 93% of the 750 enterprises surveyed have a multi-cloud strategy.

OCI provides enterprise organizations with the opportunity to reduce expenses, innovate rapidly, and improve productivity by offering a platform that delivers scalability, reliability, and security. By giving these organizations flexibility in how and when they migrate services to the cloud, across data centers worldwide, OCI is fast becoming a key part of global, multi-cloud strategies.

Every user expects a flawless experience when accessing their business applications; anything less puts revenue, customer loyalty, and corporate reputation at risk. Yet, for enterprises deploying multiple public clouds, e.g. OCI and Microsoft Azure, and multiple private clouds, the potential for degradations and disruptions increases exponentially. The complexity of the environment, the multiple vendors, and the scope of geographic locations and end users can make troubleshooting performance issues a protracted, rarely successful exercise in futility.

What is needed is packet-based visibility from real-time monitoring for performance management in their legacy data centers, software defined networks (SDNs), and public clouds, without exception. NETSCOUT smart data visibility sees what others cannot, providing immediate views across every pathway, seamlessly mapping and measuring user experience and application performance throughout the private and public cloud environments, including OCI.

Figure 1: Visibility into Oracle Cloud environments is provided with rich ASI from the vSTREAM virtual appliances when deployed in combination with the nGeniusONE Service Assurance platform. All members of the IT organization, from NetOps to DevOps, AppOps, SecOps, and CloudOps, will benefit from the improved collaboration that comes from leveraging the same automated analysis.
As Oracle Cloud Ready, NETSCOUT’s ASI technology provides the foundation for the most robust data sources available to monitor and analyze service delivery of applications throughout OCI, as well as the other public cloud environments. Our innovative vSTREAM virtual appliances expand the reach of ASI to places not feasible to instrument with a physical probe, thus overcoming visibility challenges.

vSTREAM Capabilities

vSTREAM, powered by ASI technology, 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. NETSCOUT's technology converts high-volume network traffic into highly structured, multi-dimensional metadata, that is, “smart data,” in real time.

The vSTREAM virtual appliance provides the full functionality of an InfiniStreamNG® (ISNG) appliance for the cloud and virtualized environments. vSTREAM is:

- Implemented as an instance in Oracle Cloud Infrastructure, as well as Amazon Web Services (AWS), Microsoft Azure (Azure), and Google Cloud Platform (GCP).
- Deployed as an instance in a cloud environment or as a Virtual Machine on a hypervisor.
- Scalable based upon the number of vCPUs, RAM, and Storage leveraged.
- Built to support VMware, OpenStack, and KVM private cloud.
- Fully integrated with the VMware vSphere & KVM / OpenStack tools in virtualized environments.

As used in conjunction with the nGeniusONE Service Assurance platform and/or Virtual nGeniusONE platform, vSTREAM provides the full features of an ISNG hardware or software appliance, presenting real-time views of sessions, conversations, end-to-end call trace data, packet analysis, and network-wide key performance indicators (KPIs). vSTREAM delivers the following:

- Provides insight into packet traffic and application workloads, providing IT organizations visibility for service assurance, performance management, and cybersecurity purposes.
- Delivers views of end-to-end call trace data, network-wide KPIs, alerts, network and application error details, specialized service monitors, and packet decodes.
- Used for proactive monitoring, troubleshooting, baselines, and dependencies to protect end-user experience, as well as the reliability and availability of application and network services.

vSTREAM can be deployed in combination with ISNG software and hardware appliances to provide seamless, end-to-end, ASI-based analysis across the hybrid cloud and application service infrastructure. At NETSCOUT, we are transforming our solutions to provide flexible, scalable, and cost-effective instrumentation options across the data center and hybrid cloud, providing ASI-powered Smart Data to ensure top service performance and rapid problem resolution, so enterprises can unlock the benefits of Hybrid IT and migrate to OCI with confidence.

Benefits of vSTREAM in OCI Environments

- **Seamless, Affordable OCI Visibility**
  - vSTREAM is cost-effective, making pervasive instrumentation in OCI feasible.
  - vSTREAM is delivered using a scalable deployment model that can be configured to meet the performance dictated by the volume of packet data.

- **Optimize Performance**
  - of application workloads in OCI, as well as hybrid cloud environments that include Azure and other cloud providers.

- **Reduce Tool Complexity and Optimize Investment**
  - vSTREAM and ISNG appliances are all ASI-based data sources and supported by the same nGeniusONE workflows for a complete network and application service assurance solution.

- **Have Confidence in Your Hybrid Cloud Deployment**
  - Solve problems quickly with visibility throughout the hybrid cloud via vSTREAM, armed with the same smart data and smart analytics enterprise IT staff are using for network and application service assurance in data centers today.

- **Performance monitoring for Oracle-based applications**
  - For applications using underlying Oracle database structures, vSTREAM and nGeniusONE monitoring capabilities provide statistics and services to closely track KPIs for troubleshooting Oracle-based applications.

- **Complex applications that access resources in multiple cloud platforms are monitored**
  - such as applications using data from both OCI and MS Azure, for example. nGeniusONE and vSTREAM use a service-based workflow to assure continuous availability and performance monitoring of applications.

- **Triage Issues Quickly**
  - Accelerate Mean-Time-to-Knowledge (MTTK) and decrease Mean-Time-to-Repair (MTTR) with proven metrics useful in the OCI environments for end-to-end, comprehensive service assurance across today’s multi-cloud environments.