

## Xoriant Implementation of an OpenStack Private Cloud



Organizations widely use desktops to perform their day-to-day operations. These desktops in any organization have the following limitations.

- Increased operational costs.
- Challenges in the overall infrastructure management processes.
- Escalating support costs because of the hard-to-manage legacy desktop infrastructure.
- Planned technology refresh for the legacy desktop infrastructure can wreak havoc on the business continuity.
- Threat to the IT security and compliance processes as there is no single point of management of the desktop infrastructure.

### Monitoring the System

Xoriant is observing optimum usage of desktop resources by implementing OpenStack Private Cloud. OpenStack usage in Private Cloud provides multi-tenancy across different projects and scalability in terms of compute, network, and storage. Xoriant Private Cloud implementation using OpenStack ensures the cloud initiative across the organization is used by end-user. Xoriant has implemented Private Cloud by using OpenStack (Havana & Icehouse). The Cloud Infrastructure is deployed over Ubuntu 12.04 along with KVM hypervisor being used for virtualization. Xoriant Private Cloud differs from pure virtualization. The OpenStack (Havana) Cloud Framework uses KVM hypervisor and performs the orchestration of the resources. Therefore, virtualization of resources (compute, storage, and network) is performed by using KVM hypervisor and the underlying infrastructure resources are provided as a service by using OpenStack Cloud Framework.

In Cloud monitoring OpenStack Ceilometer aims to deliver a single central contact point, via a REST API, Ceilometer's metric collecting mechanisms are tightly coupled to OpenStack which limits both its portability and interoperability. **JCatascopia** Monitoring System is platform independent, thus it is deployable and functional on any underlying IaaS cloud platform since its metric collecting mechanisms are not cloud platform specific so Xoriant has deployed **JCatascopia** in OpenStack Private Cloud.



### OpenStack Private Cloud Key Features

- REST-based API.
- Horizontally and massively scalable.
- Hardware agnostic: supports a variety of standard hardware.
- Hypervisor agnostic: support for Xen, Citrix XenServer, Microsoft Hyper-V, KVM, UML, LXC and ESX Server Virtualization.
- Monitoring system through **JCatascopia**.



### OpenStack Private Cloud Key Benefits

- Addresses the challenges of desktop virtualization by scaling end user desktops on demand.
- Enables dynamic scale-up and scale-down based on the usage.
- Enables implementing the "pay-per-use" model which includes the self-service portal for centralized management.
- Monitoring/Tracking system through **JCatascopia**.
- Leverages the datacenter of the service provider.