TCS OpenStack IaaS Offering

IT Infrastructure Services

Awards & Recognition

To know more
Visit the Technology Operations page on www.tcs.com
Email techops.marketing@tcs.com

About Tata Consultancy Services Ltd (TCS)
Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model, recognized as the benchmark of excellence in software development. A part of the Tata Group, India’s largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

For more information, visit us at www.tcs.com
Innovation and agility have become crucial for companies to stay competent and profitable. However, several enterprises are struggling with traditional infrastructure provisioning tools that limit their responsiveness. Legacy infrastructure is also associated with high licensing costs and vendor lock-ins, which raises expenditure, while limiting choice. To improve organizational efficiency, companies need to ensure that not much time is invested in operational tasks like deployment of application environments and provisioning of virtual machines.

Tata Consultancy Services’ (TCS’) OpenStack IaaS offering comprises end-to-end consulting, design, deployment, and support services for leveraging the open source OpenStack cloud platform in private cloud implementations. We help companies consolidate and boost server utilization across x86 systems, and rapidly build and run applications on the OpenStack platform, accelerating cloud adoption. Our proprietary reference architecture comes with a validated configuration that provides scalability, improves availability, and promotes resilience across servers, storage, and networking.

**Overview**

Companies usually depend on onsite infrastructure teams and administrators for infrastructure provisioning and scaling up initiatives, amid limited automation and self-service capabilities. This increases operational complexity and increases turnaround time, leading to low business agility. Resource utilization is often suboptimal, with new virtual machines being requested even as inactive ones continue to exist. It also causes long de-commissioning timelines. Further, organizations are expected to purchase additional infrastructure components from the same vendor due to proprietary dependency and complexities in management of heterogeneous infrastructure, thereby limiting choice.

TCS’ OpenStack IaaS offering enables rapid deployment of private cloud infrastructure with faster time to market, using a stable OpenStack deployment architecture. This includes features such as load balanced control, data plane services with network segregation and security, and tight integration with various infrastructure tools. The entire technology stack is thoroughly tested and validated before the implementation.

Users can easily scale up infrastructure, and provision and de-provision components through automated self-service menus and orchestration. Additionally, a common interface is provided for management of multi-vendor infrastructure, enabling synergies arising out of a heterogeneous infrastructure environment.

**Our Solution**

TCS provides services across the following areas:

- **Assessment:** Evaluates business requirements to map corresponding OpenStack services, and determines workloads to be migrated to OpenStack. Enlists prerequisites for multi-vendor coexistence, integration, and creation of interfaces with existing systems. Conducts a comprehensive risk assessment and identifies necessary initiatives for boosting OpenStack adoption, including training and creating proofs of concept (PoCs).

- **Planning and Design:** Provides the OpenStack architecture design and run book, determines bill of material, and chalks out the deployment and migration plans.

- **Implementation:** Enables the deployment of infrastructure and OpenStack, integration with existing systems, and end-to-end testing. Creates tenants, users, images, networks, storage, and heat templates, while ensuring security and controlled access.

- **Migration and Support:** Involves workload migration and testing, staff training, and smooth handover to operations team, while ensuring continuous improvement.

**Benefits**

With TCS’ OpenStack IaaS offering, you can reap the following benefits:

- **Optimize Infrastructure Cost:** Lower server infrastructure cost by up to 30% and reduce personnel expenditure owing to self-service features and a simple interface for provisioning and de-provisioning of infrastructure components. Minimize license costs with the open source OpenStack platform and zero vendor lock-ins. Boost the ROI of existing investments by effectively reusing infrastructure components. Monitor the usage of infrastructure by various business units through OpenStack metering, to streamline budgeting and planning.

- **Boost Business Agility:** Add or remove instances, storage volumes, and network segments in a fast and efficient manner, enhancing scalability. Standardize and automate repetitive tasks, and improve skilled workforce productivity, using in-built orchestration capability through OpenStack Heat templates.

- **Enhance System Availability:** Ensure 99.9% system availability with virtualization, migration to cloud, and strict SLAs delivered by TCS.

**The TCS Advantage**

By partnering with TCS, you can leverage the following differentiators:

- **Technical Expertise:** Our team has extensive experience in implementing private cloud infrastructure, firewall-as-a-service, and business applications on platform-as-a-service (PaaS), all deployed on the OpenStack cloud platform. TCS has over 40 architects certified on Red Hat OpenStack and we continue to boost our capabilities with continuous training for competency development and cross-training for consultants.

- **Proprietary Tools:** We have built a comprehensive repository of accelerators and application templates to speed up deployments. We use our in-house frameworks to perform critical testing activities across networks, block storage, object storage, and images, improving system performance and security.

- **Strategic Alliances:** TCS maintains a strong working relationship with leading OpenStack providers, and has signed the Corporate Contributor License Agreement for OpenStack CCLA to accelerate feature development, bug fixing, and code housekeeping. We regularly collaborate with Red Hat for its robust cloud infrastructure and CloudForms solutions, superior governance capabilities, and undivided focus on integration, open source, and interoperability.
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