



Improved operational efficiency for consistent management



Centrally managed infrastructure for e-Office



Seamless movement of workload across primary and secondary data centers



Reduced provisioning time from days to minutes

RailTel Partners With VMware To Spearhead E-Governance Program In India And Develop Managed Services Platform

RailTel embarks on its cloud services journey to drive pan-India e-governance initiatives and offer managed services

RailTel is one of the largest neutral telecom infrastructure providers in India. With rich experience in Telecom and ICT fields, RailTel has implemented several mission-mode Government projects. To accelerate the e-governance initiatives and ensure its seamless delivery, RailTel decided to launch the NIC e-Office services through a cloud platform.

Modernizing network infrastructure

Since its inception, RailTel has been modernizing the train operations and administration network systems of Indian Railways. With its pan-India high capacity fiber network, RailTel has enabled broadband telecom to all parts of the country. It has a proven IT infrastructure that has been integral to the smooth deployment of all RailTel projects. To lead the e-Office project under the National e-Governance Programme, RailTel was looking for an efficient technology partner. “e-Office is a Digital workplace solution used by central, state and district level governments for effective inter and intra-government processes,” explains C. K. Prasad, Regional GM & Head – IT at RailTel Corporation. “And to facilitate seamless and reliable delivery of these cloud-based services, we decided to modernize our Tier-III Uptime Certified data center.”



Founded in 2000, RailTel is a "Miniratna" enterprise of the Government of India. Owing to its pan-India optic fiber network that covers 70% of India's population, RailTel is committed to bring cutting-edge technology and offer innovative services to the Indian Telecom market.

INDUSTRY

Government

HEADQUARTERS

Gurgaon, Haryana, India

ABOUT THE PARTNER

SISL Infotech is a leading system integrator in India. The company brings end-to-end IT services and solutions to businesses, government, institutions, and individual consumers.

VMWARE FOOTPRINT

- VMware vSAN™
- VMware vSphere®
- VMware vRealize® Automation™
- VMware vRealize® Business™ for Cloud
- VMware NSX® for vSphere®
- VMware vRealize® Operations Manager™
- VMware vRealize® Log Insight™
- VMware Site Recovery Manager™
- VMware vRealize® Lifecycle Manager™
- VMware Professional Services

With its unique value proposition and understanding of RailTel's requirements, VMware was ultimately selected as partner of choice to help RailTel achieve its objectives.

Laying the foundations for cloud service delivery

"A robust IT infrastructure is the backbone of any successful project deployment," says C. K. Prasad. "Recognizing this, RailTel had to transform its legacy, siloed data center and pivot toward an automated multi-tenant cloud enabled model to ensure the success of the e-Office initiative. The rapid evolution of the market also necessitated a re-evaluation of data center asset viability."

Deploying a cloud-ready data center would do away with the previously siloed infrastructure layers that resulted in complex deployments and operations. A key challenge faced by RailTel was manual resource provisioning, which was time-consuming and error-ridden. This extended the time to market of any new service.

Besides physical IT infrastructure consolidation, RailTel was also looking to simplify monitoring and manageability of its IT assets in the data center. Additionally, the company wanted to improve business continuity for which it sought an active-active DR architecture. Overall, resource scalability was also a big challenge that RailTel wanted to overcome with a hyper-converged IT infrastructure. Scalability would provide RailTel with the flexibility to deliver on-demand cloud-based services, such as e-Office, with consistent performance and high-availability.

Hyper-converging the data center

VMware was selected over the competition by RailTel after rigorous rounds of evaluation. The VMware Professional Services team was engaged with the RailTel team right from the project initiation and undertook an extensive solution validation against RailTel's requirements till successful implementation of the solution. To consolidate the physical data center and move away from a siloed traditional architecture, RailTel leveraged VMware vSAN and VMware NSX to achieve a hyper-converged infrastructure on a VMware vSphere based virtualized platform. This resulted in a hardware-agnostic virtual network which eliminated hardware lock-ins, allowing any network hardware of choice for the physical underlay. Besides network virtualization, VMware NSX has also helped in enhancing the security environment through micro-segmentation. Traditionally, perimeter firewalls were not suitable for securing east-west traffic between server workloads as configuration and manageability was complex, and not operationally scalable. Micro-segmentation would take care of any breaches and limit potential lateral exploitation of networks by cyber-criminals.

For business continuity VMware Site Recovery Manager (SRM) was deployed as a disaster recovery solution at DR sites. RailTel previously did not have a process to migrate data real-time between data centers in case of a disaster. With



VMware SRM deployed, RailTel can now plan, test, and run the recovery of virtual machines real-time with minimum latency between a protected data center site and a recovery data center site. As RailTel wanted to deploy an active-active DR architecture where Gurgaon acted as the DR site for Secunderabad data center and the Secunderabad acted as the DR site for the Gurgaon data center. This was enabled through stretched VMware NSX Cross VC architecture. This solution has enabled seamless resiliency and business continuity for RailTel. "We now have the ability to move critical workloads across data center sites based on any contingency and provide BCP readiness, which will help us to minimize downtime significantly," emphasizes C. K. Prasad.

The IT team of RailTel can now monitor and ensure optimal resource utilization through VMware vRealize Operations Manager in a multi-cloud environment. While, VMware vRealize Automation has transformed RailTel's manual resource provisioning process. Now, through a self-service portal user can request for resources, while IT administrators can allocate the same with just a few clicks. The IT team can now have a bird's-eye view of the complete cloud infrastructure through a single dashboard enabled through VMware vRealize Operations, providing improved operational efficiency.

The project partner, SISL Infotech, also was engaged in the deployment and they ensured smooth deployment with pre-installation and setting up the solutions for the data center.

"Cloud adoption helped us accelerate and deepen our participation in our customer's digital transformation journeys. Our collaborative approach with VMware during deployment helped in faster adoption. The team has delivered excellent work that matched our exact specifications."

C. K. PRASAD
REGIONAL GM & HEAD - IT, RAILTEL CORPORATION



With an on-premise disaster recovery solution, RailTel now has its two data centers work on an active mode, which has ensured resiliency. To protect applications across the data centers, VMware NSX Data Center has delivered the Service-defined Firewall that secures both the east-west and north-south network traffic. This has enabled RailTel to not only secure server to server communication within the NSX environment (east-west), but also to secure the network traffic between NSX environment and legacy data centers or vice versa (north-south).

This hyper-converged infrastructure has not just enhanced agility for RailTel but also reduced the cost of operations by 60%. The modernized data center has enabled RailTel to offer e-Office as cloud service to the Government agencies.

Delivering e-Office services securely

With this deployment, Railtel now has an enterprise-grade cloud-enabled data center that has been built to comply with Cloud Service Provider model defined by the Ministry of Electronics and Information Technology, an agency of Government of India responsible for IT policy, strategy and development of electronics industry.

“RailTel is now enabled with a centralized platform for control that allows the enterprise to automate and deliver a virtual infrastructure across the hybrid cloud with confidence and minimal manual intervention,” explains C. K. Prasad. “We realised that greater visibility across all platforms will exponentially increase RailTel’s capacity planning and resource forecast capabilities. With automated resource provisioning, the time taken for provisioning has now reduced from days to minutes. These steps have increased end-user satisfaction and resulted in faster time to market of new applications.”



@RailTel successfully leads Government **#eOffice** initiative with modernized data center, in partnership with **@VMware**