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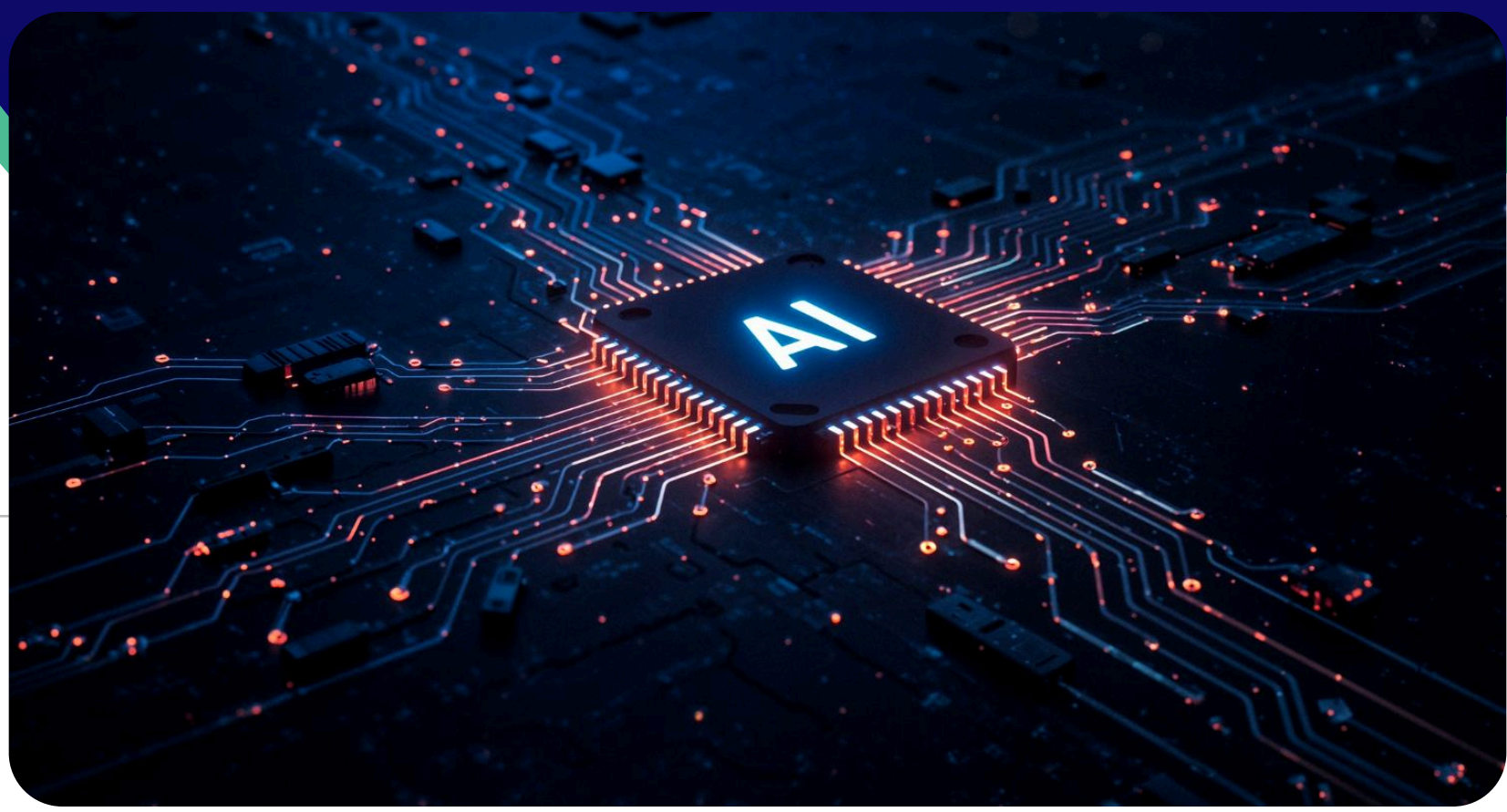
Cloud Models for Sovereign and AI Workloads

Executive Summary



Enterprise cloud adoption has entered a new phase. The challenge today is not simply moving workloads to the cloud, but selecting a cloud model that balances regulatory compliance, operational control, cost predictability, and readiness for AI-driven workloads.

Larsen & Toubro-Vyoma Sovereign Cloud Platform is designed for organisations that require full control over data, infrastructure and governance while retaining the flexibility of cloud-native operations. Built on Larsen & Toubro's engineering expertise and powered by a proven cloud platform, it enables enterprises and public-sector institutions to deploy secure, AI-ready private cloud environments aligned with India's data sovereignty and localisation priorities.

The Problem Landscape

1. Fragmented Cloud Choices

Enterprises today operate across hyperscalers, colocation facilities and on-premise infrastructure. While public clouds provide scale, they often introduce challenges related to:

- ***Data residency and sovereignty***
- ***Licensing and pricing volatility***
- ***Limited control over infrastructure and service roadmaps***

At the same time, traditional on-premise environments lack the agility, automation and GPU density required for modern AI and high-performance workloads.

2. Regulatory and Sovereignty Requirements

Government, BFSI, healthcare and digital public infrastructure platforms operate under strict compliance obligations. These include:

- ***Data localisation***
- ***Auditability and traceability***
- ***Secure environments for sensitive workloads***

3. AI-Driven Infrastructure Pressure

AI and GenAI workloads are accelerating demand for GPU-dense infrastructure. Model sizes are growing rapidly, creating challenges around cost efficiency, scalability and lifecycle planning for static infrastructure investments.

Why the Cloud Model Matters

Choosing the right cloud model has become a strategic decision. Organisations must balance:

- ***Control versus scalability***
- ***Compliance versus agility***
- ***Predictable costs versus long-term innovation***

A sovereign private cloud offers a middle path that combines cloud flexibility with infrastructure ownership, compliance control and long-term cost transparency.

Larsen & Toubro-Vyoma Sovereign Cloud Platform Overview

Larsen & Toubro-Vyoma Sovereign Cloud Platform is a single-tenant private cloud solution that unifies compute, storage and networking under a common control plane. It enables organisations to build and operate their own cloud environments while supporting AI and GPU-accelerated workloads.

Internal assessments indicate that organisations adopting the platform can achieve significant cost efficiencies compared to public cloud deployments, with break-even timelines improving as deployments scale.

Platform Capabilities

1. Infrastructure Management

- ***Virtual machine orchestration and lifecycle management***
- ***Object and block storage with encryption at rest***
- ***Network management with software-defined networking***
- ***Native Kubernetes integration***
- ***Managed database services***
- ***API access for programmatic infrastructure control***

2. Administrative Features

- ***Role-based access control (RBAC)***
- ***Usage monitoring and reporting***
- ***Audit trails for compliance and governance***
- ***Multi-tenancy for organisational isolation***
- ***Multi-factor authentication***

3. AI Services

- ***GPU-enabled instance orchestration***
- ***Model management***
- ***Training pipeline integration***
- ***Inference scaling for AI workloads***

Security, Operations and Resilience

The platform incorporates operational and security capabilities designed for regulated and mission-critical environments:

- ***24×7 Network Operations Centre (NOC) and Security Operations Centre (SOC) for proactive monitoring and incident response***
- ***Disaster recovery and business continuity planning, and***
- ***Hybrid DDoS protection to ensure uninterrupted service***

Addressing Licensing and Vendor Risks

Recent changes in the licensing structures of dominant licensed applications have introduced uncertainty for many enterprises. As a result, migrating workloads from such dominant licensed platforms to private or public cloud environments has become a strategic consideration for long-term stability and cost control. Larsen & Toubro-Vyoma Sovereign Cloud Platform provides a vendor-neutral alternative by supporting virtual machine-based workloads on a sovereign private cloud. Built on open foundations, it avoids long-term lock-in while offering transparent pricing and full lifecycle support.

Future Infrastructure Roadmap

Larsen & Toubro-Vyoma's expansion roadmap is focused on scalable, geographically distributed capacity across 4 key Indian regions:

- ***Mahape (Navi Mumbai): 40 MW edge data centre***
- ***Panvel: 60 MW facility on a 7-acre land parcel***
- ***Bengaluru: 30 MW facility***
- ***Chennai: Significant expansion potential on a dedicated 300-acre parcel***

Conclusion

Larsen & Toubro-Vyoma Sovereign Cloud Platform offers a practical and controlled approach to enterprise cloud adoption. By combining sovereign infrastructure, AI-ready capabilities, operational resilience and predictable economics, it enables organisations to modernise their digital platforms without compromising on compliance, security or long-term control.

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