

MODERNIZING ENTERPRISE INFRASTRUCTURE FOR HIGH-DENSITY COMPUTING

Legrand delivered an integrated infrastructure platform designed to support higher compute capacity, enhance operational visibility and create a scalable foundation for future enterprise workloads.



PROJECT OVERVIEW

As enterprise applications become increasingly compute-intensive, organizations are rethinking the physical infrastructure that supports them. A leading global software and technology enterprise undertook a critical transformation of its live data center in Bangalore to support evolving enterprise workloads and higher compute densities.

Legrand delivered an integrated infrastructure platform spanning rack systems, intelligent power distribution, cable management, airflow optimization and environmental monitoring. The result was a modern, scalable infrastructure designed to support today's workloads while remaining ready for future expansion.



70
High-Density
Server Racks



14 kW
Per Rack



N+N
Power
Redundancy



800 × 1200 mm
Rack Upgrade



2-3
Month Deployment



T3H1
Environmental Sensors

THE CHALLENGE

Higher Density, Limited Space

The existing data center needed larger 800 × 1200 mm racks while optimizing available white-space.

Modernization, Without Disruption

The upgrade had to be completed faster within a live environment, with minimal downtime and business disruption.

More Heat, Same White Space

Higher rack densities created greater demands on airflow, cooling and thermal management.

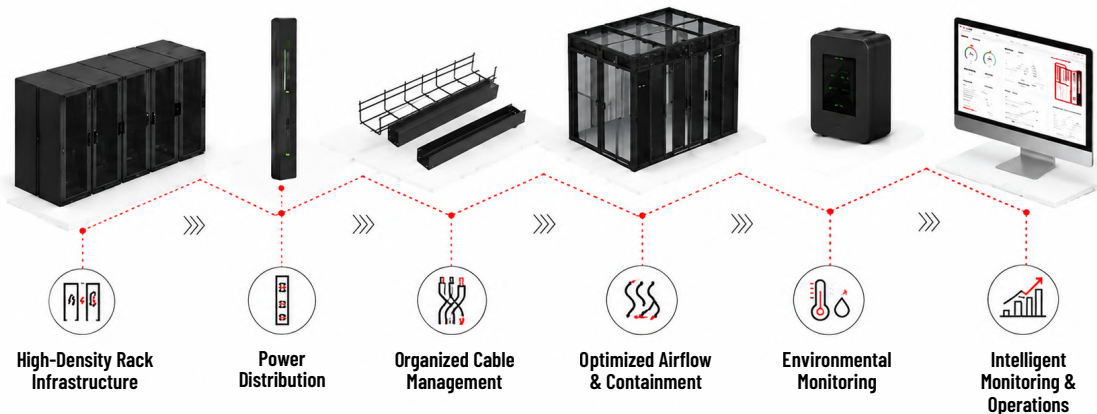
More Power, More Visibility

The infrastructure needed intelligent monitored power distribution, socket-level visibility and N+N redundancy.

Modernizing an existing data center to support higher rack densities required careful planning and precise execution. The project needed to accommodate 14 kW rack deployments, improve airflow and power visibility, optimize white-space and maintain operational continuity throughout implementation.

ENGINEERED FOR CONTINUOUS PERFORMANCE

A unified infrastructure ecosystem where power, cooling, containment and monitoring work together seamlessly to support high-density enterprise operations with maximum uptime.



THE LEGRAND APPROACH

Rather than addressing individual infrastructure elements separately, Legrand adopted an integrated design approach where racks, power distribution, cable pathways, containment and intelligent monitoring function as a coordinated ecosystem. This simplified deployment, improved operational efficiency and created an infrastructure platform capable of adapting to changing technology requirements.



RESULTS

OPERATIONAL RELIABILITY Integrated critical infrastructure ensures reliable operations, uninterrupted uptime and mission-critical performance.	ENHANCED THERMAL PERFORMANCE Optimised airflow and containment ensure efficient cooling and consistent thermal performance even at higher densities.	INFRASTRUCTURE VISIBILITY Intelligent monitoring provides real-time insights for proactive management and faster decision-making.
FASTER MODERNIZATION Pre-engineered and modular solutions reduce on-site complexity and accelerate deployment timelines.	SCALABLE INFRASTRUCTURE FOUNDATION Flexible and adaptive architecture supports future growth and evolving business needs.	OPERATIONAL EFFICIENCY Optimised power distribution and cooling reduce operational overheads and improve overall efficiency.



“ WHY THIS PROJECT MATTERS

As enterprise workloads continue to evolve, infrastructure must do more than support today's requirements, it must be ready for what's next. This project reflects our integrated approach to data center design, bringing together power distribution, rack infrastructure, airflow management and intelligent monitoring to help customers build resilient, scalable environments with confidence.

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