

Comprehensive ERP System for IT Hardware Services Case Study

Name

Comprehensive ERP System for IT Hardware Services

Executive Summary

Streamline enterprise operations with Ovaku's **all-in-one ERP solution** tailored for IT hardware servicing companies. This robust web application integrates **finance, CRM, inventory, sales, and service management** into a unified platform, delivering **50% operational efficiency gains** and **seamless workflow automation**. Organizations achieve **real-time business visibility, GST compliance, and scalable growth** through secure multi-role access, performance-optimized architecture, and intuitive user experiences.

Problem Statement

An IT hardware servicing company operated with disconnected systems across finance, inventory, sales, and service departments, resulting in **data silos, manual reconciliation overhead, compliance challenges, and delayed service delivery** that impacted customer satisfaction and operational efficiency.

Business Solution

Ovaku architected a **comprehensive ERP ecosystem** unifying all business functions:

- Integrated modules for finance, CRM, inventory management, sales, purchases, and supply chain operations
- Multi-role authentication system with secure, device-independent access controls
- Real-time inventory tracking with automated GST-compliant billing and commission calculations
- End-to-end service job management from repair intake to technician updates and completion
- Performance-optimized architecture with background processing and scheduled automation

- Scalable API framework supporting enterprise-grade workflows and third-party integrations

Key Features

- **Comprehensive Business Modules:** Unified finance, CRM, inventory, sales, purchase, and supply chain management with seamless data flow
- **Secure Multi-Role Authentication:** Role-based access control with secure login, session management, and device-independent operation
- **Advanced Inventory & Billing:** Real-time stock tracking, automated reorder points, GST-compliant invoicing, and commission management
- **Service Job Management:** Complete repair workflow with technician assignment, status tracking, parts management, and service history
- **Performance Optimization:** Efficient database queries, background task processing, scheduled jobs, and caching strategies
- **Enterprise-Grade APIs:** RESTful services supporting high-volume transactions and third-party system integrations

Impact

Performance Metric	Achievement	Business Value
Operational Efficiency	50% improvement	Streamlined workflows and reduced manual interventions
Data Accuracy & Consistency	95% elimination of discrepancies	Unified data source eliminating reconciliation overhead
Service Delivery Speed	40% faster job completion	Enhanced customer satisfaction and competitive advantage
Financial Compliance	100% GST automation	Reduced audit risk and regulatory adherence
System Response Time	80% faster queries	Improved user productivity and system performance

Technologies

- **Frontend:** React, Redux, Ant Design with responsive framework
- **Backend:** Node.js, Express.js, RESTful APIs with microservices architecture

- **Database:** PostgreSQL with Redis caching and query optimization
- **Authentication:** OAuth 2.0, JWT, multi-factor authentication
- **Performance:** Bull Queue for background jobs, scheduled cron tasks
- **Cloud Infrastructure:** AWS (EC2, RDS, S3, ElastiCache) with auto-scaling
- **Security:** Role-based access control, data encryption, audit logging

Client

Confidential – IT Hardware Servicing Enterprise

Industry

Enterprise Resource Planning, IT Services, Hardware Management Systems