

# PT. Excelcomindo Pratama



## Sun™ Systems Simplify the Data Center

### Key highlights

#### Company

PT. Excelcomindo Pratama (excelcom)

#### Industry

Telecommunications

#### Products

- Sun Fire™ 6800 server
- Sun Enterprise™ 10000 server
- Sun StorEdge™ T3 array
- Sun consolidation solutions
- Solaris™ Operating Environment
- SAP applications

#### Key Business Issues

- Performance issues with too many servers from multiple vendors
- Floor space was being utilized unnecessarily
- Data center became increasingly complex to manage
- High total cost of ownership

#### Business Results

- 10 servers consolidated into two Sun servers and Sun StorEdge T3 array
- Floor space for data center and IT support staff reduced by half
- SAP system performance increased fourfold
- Estimated savings of more than \$300,000 (U.S.) over five years.

*“Consolidating on a single consistent Solaris platform powered by Sun servers and storage systems made sense to us. What made the completion of the complex project impressive, besides the excellent performance offered without any compromise, was the expertise and teamwork shown by Sun and its partners, completing it very smoothly in the planned schedule.”*

– S. B. Djatnika, IT Engineering Manager, PT. Excelcomindo Pratama

The management of PT. Excelcomindo Pratama (excelcom), a leading GSM dual-band telco operator in Indonesia, felt that the company had too many server and storage systems in its data center and that they were increasingly difficult to manage. These and other performance issues with its existing IBM and Compaq servers prompted excelcom to consolidate up to 10 servers on just two high-performance Sun servers—a Sun Fire™ 6800 and a Sun Enterprise™ 10000 system. Both are supported by a single Sun StorEdge™ T3 array, and all three systems run the Solaris™ Operating Environment.

The project migration was successfully completed in the scheduled time. As the result of consolidation, excelcom has achieved its objectives of easier management, cost savings through enhanced performance, and reduced floor space for its data center.

#### The Need to Consolidate

Excelcom was established in November 1995, as the third cellular telephone operator adopting the Global System for Mobile Communications (GSM) standard. It is a joint venture between an experienced Indonesian Telecommunications company and several respected foreign companies. On October 8, 1996, excelcom officially launched its mobile phone service to the Indonesian public. Branded as GSM-XL Langsung Kriiing (“instant ring”), the launch was extremely successful and the product was enthusiastically received by the marketplace.

Like most major organizations, excelcom’s data center consisted of many servers from multiple vendors, accumulated through gradual expansion as it sought to meet business needs. The servers included systems from Sun, IBM, and Compaq Alpha, which powered its SAP, billing, data warehousing, and other applications.

## Sun helps leading GSM dual-band telco operator migrate systems smoothly and on schedule.

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*– S.B.Djatnika,  
IT Engineering Manager,  
excelcom.*

In time, this mix of systems presented problems to the company, increasing the total cost of ownership (TCO) in running the servers and making them more complex to manage. The presence of many small and large servers within the company’s data center meant that much floor space was being ineffectively utilized. Several of the existing server and storage systems were also experiencing performance problems. In addition, maintaining multiple servers running on various operating systems increased operating and maintenance costs.

These factors prompted excelcom’s decision to consolidate its many servers into fewer high-performance servers, with the goals of easier manageability, reduced maintenance, and operational costs, as well as releasing precious data center space.

### **The Challenges of Consolidation**

When Sun was asked to bid for the project, one of the first tasks was to help excelcom assess its current IT infrastructure. To prove the viability of Sun’s solutions for consolidation, a pilot project was undertaken which showed how the performance of excelcom’s current applications could be improved when they were migrated and consolidated using the powerful combination of Sun servers and Sun StorEdge T3 arrays on a single Solaris platform.

When the actual implementation started, a major challenge was migrating excelcom’s huge amount of storage data to a new storage system. This meant that application downtime would be inevitable. As such, the migration could only be done during weekends to avoid affecting mission-critical services to customers. In addition, the scheduled weekend work had to be carefully executed, as any delays would mean an additional week’s delay in the entire project.

The project goal was to consolidate all its servers and storage into two high-performance Sun servers — the Sun Fire 68000 and Sun Enterprise 1000 servers, supported by a single Sun StorEdge T3 system. Due to the expected complexity of migration, the actual implementation was divided into six systematic phases to ensure minimal disruption to the business.

- Phase 1 started with the migration of the data warehouse from Digital Alpha platform and IBM ES to the Sun Enterprise 450 server as a temporary solution, along with the T3 storage system
- Phase 2 involved the tape library upgrade, which used two Sun StorEdge L180 tape libraries, each with 10 DLT8000 tape drives
- Phase 3 continued with data warehouse migration from the temporary Sun Enterprise 450 server to the targeted Sun Fire 6800 and Sun Enterprise 10000 servers
- Phase 4 proceeded with the storage upgrade from the IBM system to the Sun StorEdge T3 array
- Phase 5 began with the serverless backup implementation
- Phase 6 involved the SAP application migration from the Compaq Alpha system to a Sun Fire 6800 server

The project was completed successfully with help from Sun consultants, as well as Sun implementation partners. By the end of the project, up to 10 servers were successfully consolidated on just two Sun Enterprise systems. All of excelcom's storage needs were also consolidated on a single Sun StorEdge T3 system with 8.3 terabytes of storage plus the necessary supporting applications and hardware.

“Data center consolidation is complex but necessary for large organizations such as excelcom to ensure easy manageability, conservation of floor space, and lowering maintenance costs,” stated S.B.Djatnika, IT Engineering Manager, excelcom. “Consolidating

on a single consistent Solaris platform powered by Sun servers and storage systems made sense to us. What made the completion of the complex project impressive, besides the excellent performance offered without any compromise, was the expertise and teamwork shown by Sun and its partners, completing it very smoothly in the planned schedule.”

#### **Benefits to Excelcom**

After the consolidation, excelcom derived several benefits. Its floor space and IT support staff were reduced by half. As for its SAP system, performance increased more than fourfold. Excelcom estimates that it will have saved more than \$300,000 over five years.

#### **Benefits of System Consolidation**

<b>Element</b>	<b>Before Consolidation</b>	<b>After Consolidation</b>
Floor Space	75 square meters	30 square meters
O/S and backup data management staff	4	2
SAP average response time in milliseconds (ms)	1,900 ms	420 ms
EIS data warehouse average batch process time	11 hours	2 hours
EIS cold backup of 600 GB data	Database is down for 30 hours	Database is down for 5 minutes (using snapshot technology)
Savings in maintenance cost	1st year: \$ 150,000 2nd year: \$ 60,000 3rd year: \$ 60,000 4th year: \$ 60,000	

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