ArcelorMittal Improves Performance for Business-Critical Applications with Cisco HyperFlex

ArcelorMittal Temirtau · Industry: Mining and Steel · Size: 32,958 employees · Location: Temirtau, Kazakhstan

ArcelorMittal Temirtau JSC is a part of ArcelorMittal Group and is the largest enterprise in the Republic of Kazakhstan’s mining and metallurgical sector. The enterprise is an integrated mining and metallurgical complex with its own raw material (Coal and Iron Ore Divisions) and power facilities. For more information, visit arcelormittal.com.

**Challenges**

- Reduce complexity associated with adding new services
- Eliminate downtime for business-critical applications
- Achieve greater stability and accessibility for users

**Solutions**

- Cisco HyperFlex™ system
- Cisco Intersight™ infrastructure management

**Results**

- Achieved zero downtime for Hot Rolling Mill production systems
- Reduced installation time for new services from hours to minutes
- Improved recovery time from two to three days to two hours
- Gained the ability to update infrastructure within seconds, eliminating any user disruption

For more information

- Cisco HyperFlex
- Cisco Intersight

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Challenge: Achieving a high-performance infrastructure

ArcelorMittal’s traditional converged architecture was causing several issues for the company’s IT team. With more than 100 servers, performance and management were both significant challenges. If there was a system crash in the web portal or database application, it took approximately two to three days to recover.

Any time the IT team wanted to add a new service, it was faced with complexity and long implementation timeframes. Standing up the physical server, defining rack space, cabling, and installing the operating system typically took approximately four hours.

“Our operational and business-critical systems needed a high-performing foundation, and we had to simplify management,” says Alexandr Chsherbov, IT Infrastructure Lead at ArcelorMittal Temirtau. “We believed that moving from a physical to a virtual environment would deliver the performance, stability, and accessibility that we wanted for our key systems and core applications.”

“Based on our positive experiences, I would tell anyone in IT or business—from the system administrator or business analyst, to the head of IT, right up to CIO, CFO, and CTO—Cisco HyperFlex is a brilliant solution with a brilliant future, which has delivered tremendous value to our IT organization.”

Nestor Komarnitskiy, Deputy Finance Director, ArcelorMittal Temirtau
Simplifying architecture and management

ArcelorMittal Temirtau implemented Cisco HyperFlex in two phases. The first, which was six nodes in two data centers, addressed the general server infrastructure supporting day-to-day operations, including SAP, databases, applications, MES (manufacturing execution system), and industrial networks. The second, which was four nodes, focused on supporting the company’s Hot Rolling Mill (HRM) SCADA and automatization production system. The company has 80 virtual servers on the Cisco HyperFlex. The IT team is also using Cisco Intersight to gain greater clarity on capacity management while simplifying the process.

With Cisco HyperFlex in its environment, many of the company’s IT challenges have been solved. Chsherbov points out that a Windows install now takes two minutes from start to finish, as opposed to approximately four hours. When required, recovery for key systems, including the web portal and database application, is now two hours instead of two to three days.

“Our MES system runs all of our industrial processes for steel production, so without it, we can’t do business,” says Chsherbov. “When we ran it on physical servers, we had significant issues with downtime. Once we implemented Cisco HyperFlex to support the MES system, productivity increased enormously, and we’ve had zero downtime.”

In addition to being able to allocate resources more effectively to satisfy business and user demands, new service introductions have improved significantly. Programmers and developers can copy the system in 20 minutes to create a testing environment. They can test the new service and then migrate from testing to production in 15 minutes.

“We now have a more powerful architecture that enables IT to meet performance KPIs and delivers a high availability application environment for our users,” notes Nestor Komarnitskiy, Deputy Finance Director at ArcelorMittal Temirtau. “We can keep our infrastructure up to date and high performing without any downtime while achieving business value and predictable ROI.”
Building a foundation for automation

The Cisco HyperFlex implementation was an important first step in ArcelorMittal’s plans for future automation. With the improved infrastructure performance and reliability, the IT team can now confidently establish a data lake.

“With the data lake, we can capture a snapshot of our environment from a data perspective, analyze what we learn and make an informed decision about the right automation system,” says Komarnitskiy. “Cisco HyperFlex has provided us with the strong foundation that we need to pursue innovation.”

The company also has a vision to move to a hybrid cloud environment, creating the ability to allocate resources as the business demands.

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Alexandr Chsherbov, IT Infrastructure Lead, ArcelorMittal Temirtau