

Providing innovative digital access to a range of services for financial well-being

F1Soft is a leader in Nepal's fintech industry. The company deployed Dell PowerFlex software-defined architecture across its two data centers to optimize performance, agility, scalability and reliability.



Business needs

Undergoing rapid expansion, F1Soft's workloads had increased to as much as 10 million transactions per day, totaling 30 billion Nepalese rupees (NPR). This also necessitated managing around 30 million new database records daily. F1Soft needed to maintain system performance, scale to meet growing demands, and ensure reliability and security.

Business results



Processes transactions three times faster for more efficient batch, settlement and interest calculations.



Reduces response times on database queries to mere milliseconds for faster insights.



Handles massive workloads with up to 30 million journal entries daily.



Leverages automation to streamline routine tasks by 40%, ensuring more time for value-added contributions.



Decreases hardware requirements by 40% to shrink data center footprints and lower ownership costs.



Enables provisioning and configuration within minutes, rather than hours.



Shortens the time for full backups from eight hours to less than an hour.

Solutions at a glance

- [Dell PowerFlex](#)



Transaction speeds increased threefold, while queries were cut from a second or longer to milliseconds.

Headquartered in Kathmandu, Nepal, F1Soft Group is a leading provider of digital products and services — including banking, payment and remittance solutions — across more than 15 verticals. The company created Nepal's first online payment gateway and introduced its first digital wallet for consumers. F1Soft offers customers over 60 financial products ranging from omnichannel banking and AI-enabled digital lending to SaaS-based banking platforms — as well as payment services for Nepal's Central Bank.

Through its eight companies, F1Soft Group has a sweeping impact on Nepal's financial landscape. The group touches the lives of 60% of the nation's population of 30 million, processing more than 90% of all retail payments through its platform 'rails.' F1Soft's technology connects nine out of ten financial institutions serving over 1.3 million merchants.

Identifying a storage platform for growth

F1Soft's platforms had to be exceptionally reliable and highly scalable to handle the soaring demands. And of course, top security was an absolute necessity.

"We engaged with the Dell Technologies team and implemented Dell PowerFlex, an adaptable software-defined infrastructure," says Akbar Khan, chief information officer for F1Soft Group. "PowerFlex ensures optimal performance, high availability and the capacity to handle substantial data loads. The Dell partnership steered us toward a solution that aligns perfectly with our operational requirements and strategic objectives."

Maximizing agility, performance and scale

F1Soft deployed PowerFlex to meet its storage needs across two data centers. Most of the company's systems operate within VMware environments, with Red Hat as the operating system. But PowerFlex can easily be configured to manage storage

components within bare metal as well as other virtualized environments using almost any hypervisor — to address a broad scale of workloads and range of requirements.

In addition, F1Soft seamlessly runs containerized applications in Kubernetes clusters, with storage efficiently mounted on PowerFlex. The company has consolidated previously siloed applications onto a single efficient software-defined platform. PowerFlex's node-based architecture ensures resource optimization and low latency for maximum performance.

"We're getting significant benefits from the integration of leading-edge technologies," Khan remarks. "PowerFlex delivers high performance and scalability, along with up to 99.9999% uptime. Further, robust data reduction makes it suited for the most demanding data environments."

Using PowerFlex, F1Soft has achieved impressive transaction speeds, with read and write performance that's as much as three times faster than its previous solution. This allows swift handling of the largest batch processing, settlement and interest calculation workloads.

Query response times have also been slashed from a second or longer to a few milliseconds. And the time required to run a full backup of F1Soft's databases has been reduced from approximately eight hours to less than an hour.

"With PowerFlex, we can seamlessly handle up to 30 million journal entries a day, three times what we did in the past," relates Khan. "This is only possible due to how PowerFlex has improved our systems' performance and capacity."



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Enhancing efficiency and reliability

PowerFlex has helped F1Soft significantly decrease the number of physical servers and storage devices it needs. Hardware requirements are approximately 30% less, limiting spending on equipment purchases and maintenance for a lower total cost of ownership. This consolidation has also allowed F1Soft to better utilize its existing data center footprints within space-constrained colocation facilities.

“The platform’s automation capabilities greatly contribute to our efficiency,” Khan notes. “With PowerFlex, we’ve reduced the time spent on routine tasks by around 40% — decreasing operational costs and allowing our IT team to focus on strategic initiatives.”

Adds Khan, “Previously, we operated an architecture with multiple layers of dependencies. Provisioning was a complex and time-consuming process that could take hours to complete. With PowerFlex, we can now provision and update configurations within minutes, dramatically reducing our time and effort.”

In addition, PowerFlex provides comprehensive performance metrics and alerts, enabling Khan’s team to effectively monitor and manage the system. Self-healing further contributes to the outstanding reliability. Plus, PowerFlex supports F1Soft’s implementation of the most stringent cybersecurity protections and other measures to safeguard sensitive financial information.

Embracing AI, cloud and more

In the near term, F1Soft envisions leveraging more artificial intelligence (AI), generative AI and advanced analytics. Integrating these will unlock new levels of operational efficiency, product development and personalized customer experiences.

“AI will make our solutions more adaptive and intelligent — driving innovation in areas such as fraud detection, risk management and digital lending,” Khan relates.

F1Soft worked closely not only with Dell Technologies, but also with Dell partner Max International to implement PowerFlex, as well as other Dell Technologies products such as Dell VxRail hyperconverged infrastructure, Dell PowerEdge servers, Dell networking fabrics and more.

“Max International’s track record of delivering reliable services with unmatched support instills confidence, allowing us to focus on our core business and ensuring peace of mind,” says Khan. “Max International’s deep knowledge and experience with PowerFlex has ensured optimal performance, scalability and reliability.”

Concludes Khan, “Our partnership with Dell Technologies has provided us with robust infrastructure solutions that significantly increase our transaction capacity and ensure seamless performance and the ability to meet our growing business demands.”



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