



POSCO DX Expands Business with VMware Horizon VDI

Based in South Korea, [POSCO DX](#) is leading digital transformation across industries from consulting to system deployment. The company specializes in deploying industrial robots in high-risk, high-intensity industrial environments to enhance worker safety and streamline logistics management.

Industry

Information Technology

Strategic priorities

- Cloud Infrastructure
- Anywhere Workspace
- Modern Apps

VMware footprint

- VMware® Horizon®
- VMware Cloud™ on AWS
- VMware Tanzu® Application Platform™
- VMware SD-WAN™

POSCO DX converges IT and operational technology (OT) with AI, Digital Twin, and robotics. The company aims to pivot into a subscription-based business model and cater to businesses looking to build smart factories and install robots at high-risk and high-intensity industrial sites. However, to expand, POSCO DX needed to transition to a unified platform with less complex authentication processes enabling its employees to log in remotely. By deploying the VMware Horizon full-stack, on-premises VDI system, the company was able to boost employee productivity and growth while lowering costs.

Building smart factories for enhanced safety and operations

Based in South Korea, POSCO DX is leading digital transformation across industries from consulting to system deployment. The company deploys industrial robots in high-risk, high-intensity industrial sites to ensure worker safety and optimize logistics management by integrating IT and OT with AI, Industrial Metaverse, and Robotics. Much of the business focuses on building smart factories with strong surveillance capabilities. In the electrical, instrumental and control (EIC) engineering business, POSCO DX leads intelligent control centered on factory automation and systematically combines electrical, instrumentation, and control to provide the best process automation solutions.

“By adopting server virtualization and app modernization technologies in our MES, we have significantly improved application development and operational productivity. And now, with the newly introduced VMware VDI solution, we have even achieved a business transformation based on a Zero Trust security framework.”

Seok Bae Yoon, Project Manager, IT Infrastructure Group, TSS Section, POSCO DX



Maintaining a high level of security and operational efficiency

With the new goal of discovering future businesses in smart logistics, automation, and industrial robots, POSCO DX wanted to move from its previous ad-hoc, revenue-based system integration to a subscription-based business model. By building a unified platform, its parent company, POSCO Group Subsidiaries, could also benefit and begin its own digital transformation. Additionally, POSCO DX realized that it needed to increase employee productivity to support the company's development and future growth. The company recognized that it was necessary to create a next-generation work environment for the distributed workforce and a smarter work culture.

The POSCO DX resolve to provide a flexible and secure work environment accelerated during the COVID-19 pandemic, when the company had to provide a highly safe work environment with a Zero Trust security framework. However, the company faced technical challenges, which included performance degradation in software-as-a-service (SaaS) applications like Zoom, Teams, and Microsoft 365 on existing VDI and complex multi-cloud infrastructure. As a result, data protection requirements made the login process more complicated, which affected its employees' job satisfaction.

Moreover, concerns about solution replacement arose from the company, including being able to securely connect devices and apps across multi-cloud infrastructure. Due to limited staff and complexity in infrastructure management, POSCO DX required seamless access from any device that can easily maneuver between private and public spaces while maintaining a high level of security and operational efficiency issues.

If the challenge was not addressed, POSCO DX might have deferred its culture of innovation due to a deterioration in employee experience, lowered satisfaction, and reduced productivity. Also, the absence of a common platform might have increased costs and reduced operational efficiency by investing, building, and using business systems separately for each subsidiary. Ultimately, it was expected for POSCO DX to delay the business innovation of POSCO Group as the customer takes the lead in accelerating digital transformation for all subsidiaries.

To meet these stringent requirements, POSCO DX sought VMware for assistance. POSCO DX has already based most of its infrastructure on a VMware Software-Defined Data Center (SDDC) and knew VMware provided solutions that could meet the company's additional needs, including cloud and VDI.

Strengthening Zero Trust security while simplifying authentication processes

POSCO DX deployed a full-stack VDI system that provides simple and fast Zero Trust security. The latest VDI system provides employees with innovative end-user computing on the cloud, apps, mobile, and security services for digital transformation. First, the user experience and security has been significantly improved. Since the new system provides FIDO (Fast Identity Online) Authentication which allows log-in without passwords and the simplified process for authentication and access, the employees now can have more convenient log-in experience. It also offers consistent UX/UI design across multiple devices including PC, mobile and tablets, which also provides seamless experience. Moreover, VMware Cloud on AWS offers strong Zero Trust security, which enhances mobile security and behavior-based endpoint response with micro-segmentation using distributed firewalls and information leakage monitoring. The corporate data is now in safer environment across multiple devices and VMs.

As a result of this partnership with VMware, POSCO DX also has experienced improved performance for applications including video conference and collaboration tools. It also showcased fast and flexible app services regardless of time and location. For instance, the access time to log in to the public VDI has been reduced from two to three minutes to under a minute, due to the lightened profile. The operations are also automated including VDI lifecycle management and user inquiry response, which resulted in cost reduction.

In addition, overseas connectivity was optimized by applying VMware SD-WAN on VDI, and production management system (MES) 3.0 was run across the cloud through VMware Tanzu Application Platform to introduce micro-service architectures. VMware Cloud on AWS provides fast migration and bi-directional portability of workloads without demanding any application refactoring or changes.



“By adopting server virtualization and app modernization technologies in our MES, we have significantly improved application development and operational productivity. And now, with the newly introduced VMware VDI solution, we have achieved a business transformation based on a Zero Trust security framework,” says Seok Bae Yoon, project manager, IT Infrastructure Group, TSS Section, POSCO DX.

In the future, POSCO DX plans to reduce costs, expand flexible services and achieve a stable revenue structure by providing a standardized system integration platform throughout POSCO Group. The company is also looking to enhance its integrated endpoint management, strengthen security and modernize load balancing with VMware Workspace ONE® and VMware NSX® Advanced Load Balancer™.

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Reducing carbon emissions while strengthening endpoint management

POSCO DX improved energy efficiency to reduce carbon emissions, and the company achieved improved corporate governance via enhanced security. With this system transformation, POSCO DX has created an “Everything-as-a-Service” business model that provides IT systems to customers when necessary. POSCO DX plans to expand its desktop as a service (DaaS) using the latest VDI to more than 40 POSCO Group affiliates to secure price competitiveness and business flexibility by minimizing unnecessary redundancy.