Liquidware Labs™

Customer Profile

ProfileUnity™ Does the Heavy Lifting on Windows® XP Migration Project for Hyundai Heavy Industries

"ProfileUnity makes it practical to build and manage large-scale virtual desktop environments. We absolutely could not have moved this quickly otherwise."

- Taeseok Kim
HHI Migration Project Lead

Organization:
Hyundai Heavy Industries

Virtual Desktop Users:
1,800 initial group;
3,000 target group.

Product:
ProfileUnity™

Overview

Hyundai Heavy Industries (HHI), one of South Korea's largest companies, is transitioning its desktop users to the VMware® View virtual desktop infrastructure where eventually all desktops will run Windows 7. With support for Windows XP ending in 2014, HHI prioritized the migration of its Windows XP virtual desktops to the Windows 7 platform. The initial migration project, which targeted 1,800 of the 3,000 desktop virtual desktop users at the company, would be by far the largest migration HHI ever attempted. When HHI completes its desktop transformation to the VMware View environment, it will have one of the largest virtual desktop infrastructures in South Korea.

HHI IT management became convinced that an automated solution was needed to make a large-scale migration possible when they saw how much time it would take to accomplish it manually. Knowing that they needed to move quickly, Hyundai turned to Liquidware Labs™ partner Daou Tech, (www.daou.com) a leading South Korean IT services company with extensive implementation experience in both VMware and Citrix® virtual environments. Daou Tech staff, working with internal HHI IT staff, migrated the group of 1,800 Windows XP users to VMware View desktops in approximately three weeks using ProfileUnity.

"The support we received from Daou Tech and Liquidware Labs was outstanding," said Taeseok Kim, Hyundai Heavy Industries' main internal lead for the migration project. "Their knowledge and experience helped prevent big delays and kept our project on schedule."

The Challenge

HHI's Windows XP and Windows 7 desktop users were running hundreds of different applications at its shipbuilding facility. The company's first large-scale experience with virtual desktop infrastructure (VDI) involved creating virtual desktops for 1,200 Windows 7 users. Hyundai also moved about 1,800 of its Windows XP users onto virtual desktops, with plans to upgrade these users to Windows 7 as soon as possible in light of the Microsoft® announcement that it would end XP support in early 2014. However, HHI discovered that converting virtual Windows XP desktops to virtual Windows 7 was much more challenging and time-consuming than anticipated.

When Windows Vista was launched in late 2005, Microsoft introduced a user-profile format with new folder names and storage locations. With this change, users of Windows XP/2000/ Server 2003 roaming profiles, and solutions that rely on roaming profiles, could no longer migrate or co-exist with Windows 7 (and subsequent) operating systems. Microsoft's User State Migration Tool (USMT) is commonly used for Windows XP migrations, but the tool requires labor-intensive scripting and hands-on tasks for every desktop to be migrated.

HHI IT staff used USMT and other tools to start the migration project, spending three months manually harvesting data from Windows XP desktops, copying application settings, capturing user settings and preferences, mapping drives and printers, creating backups and building new virtual desktops. But because the staff retained responsibility for day-to-day support of HHI's IT environment, they could only work on the migrations on a "time-permitting" basis. HHI IT staff also had to schedule their work so that it would not interfere with worker productivity. Realizing that it was essential to accelerate the migration process without compromising accuracy, HHI management consulted partner Daou Tech for their input.

The Solution

From its experience working with numerous VDI projects across both VMware and Citrix platforms, Daou Tech knew that the existing migration tools from Microsoft and platform vendors were not up to the task for a migration project of this size. Daou Tech's solution called for the use of Liquidware Labs ProfileUnity to automate the Windows XP to Windows 7 migration on the VMware View platform.

Using ProfileUnity, Haksoo Lee of Daou Tech and two HHI employees, with offsite support from Joseph Ahn of Liquidware Labs, completed the migration in approximately three weeks. Most of the migrations were carried out after peak work hours to avoid interfering with day-to-day operations or diverting IT staff from other projects. Because ProfileUnity performs anytime migrations in the background, worker productivity was not affected. The desktops undergoing migration were functional throughout the migration, and the cutover to Windows 7 was smooth. In fact, at one point the team completed 250 migrations in a single night.

"Manual conversion, even with the tools Microsoft offers, takes a lot of people and time," said Haksoo Lee of Daou Tech. "Manual migration can be a nightmare because you have to collect data and settings from so many sources and no single person ever knows where it all is. The Reporting feature in ProfileUnity is critical because you are able to verify that the work you have completed was done correctly, and you can track your progress."

ProfileUnity launches a very tiny agent on the existing physical PC to start the migration process, which is completely automated through key activities that support a clean and safe migration as follows:

Capture User Settings and Personalization
ProfileUnity automatically virtualizes user profiles and settings, and synchs mission-critical user-authored data to network or cloud storage. From the first time that ProfileUnity runs, the solution creates universal Windows user profiles in native format that supports users' ability to transition to any modern Windows operating system including XP/2000/Server 2003/Vista/Windows 7/Server 2008 and, now, Windows 8. With ProfileUnity, users are ready for an Anytime Migration™ to Windows 7. User productivity is unaffected, and acceptance of the new OS platform is routinely accomplished.

Capture User Data
ProfileUnity offers an exclusive automatic data-migration feature in its folder redirection module to ensure that no mission-critical user-authored data is left behind. When applied, this feature harvests user-authored data such as My Documents,

My Pictures, etc., from legacy desktops. The data is synched to a new location such as a network drive or external cloud storage. When the background synch has successfully completed, the folders are redirected to the new location.

Capture Application Data Settings
A key consideration for HHI was that they were also upgrading applications during the transition to the new virtual platform and wanted to avoid losing workers' application data settings such as Microsoft Outlook configurations, signatures, personal spell-checker data, contact lists, and the like. ProfileUnity seamlessly makes users' custom application-data settings available across disparate versions of almost any application, which was essential for HHI's migration project.

For the final cutover, virtualized user preferences and user data are merged with the master golden desktop image, providing a workspace that is completely personalized and ready to use when the user initially logs on to the virtual platform. After migrations, ProfileUnity provides complete enterprise user virtualization with flexible profile management and configuration.

"Just doing the backups for the 1,800 Windows XP virtual desktops that HHI wanted to migrate would have taken a tremendous amount of time, manpower and storage," said Ahn. "HHI IT staff recognized this challenge when migrating the first 70 or 80 XP users. At that pace, they estimated it would have taken them at least six months, maybe more, to complete the first phase without automated tools."

Organizations typically upgrade their applications when they upgrade from Windows XP, and HHI was no exception. ProfileUnity enhances the upgrade process as well: users can roam between versions of Microsoft Office and most other applications, experience automatic configuration of new versions of applications, and retain custom configurations on their Windows desktop.

HHI's communication messenger application did present a hurdle during the migration: the program had been customized, causing configuration data problems in the Windows registry. Daou Tech and Liquidware Labs staff immediately investigated and found that parts of the application were spread across the registry. Using the configuration flexibility in ProfileUnity, the team wrote a script that scanned all registry locations to collect the data needed for migration. The troubleshooting process and problem resolution were completed in about a day.

"The registry problem was a slight setback, but we got it corrected. With ProfileUnity we could run a script and everything ran automatically on the rest of the migrations. After that, all other aspects went smoothly," said Ahn. "A lot of people do not realize how tedious and potentially error-prone a migration is without the right tools that support a reliable and secure automated process."

The Results

For HHI, ProfileUnity made the Windows XP migration project efficient and comprehensive. Not only was the initial phase of the migration completed without flaw within three weeks of the introduction of ProfileUnity, there was minimal impact on IT staff and workers using the desktops, allaying important concerns for HHI management.

Automating the migration with ProfileUnity transformed the entire project, as HHI would have been hard-pressed to commit the staff resources and time allotment required for a manual migration using USMT. ProfileUnity also proved to be economical, as it runs as a virtual appliance on a VMware host, so no additional back-end systems were needed to get the solution up and running quickly.

"The tools and support we got from Daou Tech and Liquidware Labs made it possible to move our employees onto the virtual environment quickly and without disrupting their work, even while retaining their user, data and application settings," said Kim of HHI. "ProfileUnity makes it practical to build and manage large-scale virtual desktop environments. We absolutely could not have moved this quickly otherwise."

Liquidware Labs™