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Customer Profile

ProfileUnity's Automated Profile, Domain Migration Add Successful Chapter to M&A Playbook

With this combination of profile management, data management and network management features, Forthright and Liquidware migrated the first 30,000 users to the new environment within the allotted time without preventing access to systems or disrupting enterprise operations. A major M&A integration milestone had been reached.

Organization:
Large Regional
Health Care Network

Virtual Desktop Migrations:
30,000 (flagship cohort)

Products:
Liquidware ProfileUnity™

Overview

With a goal of becoming its region's leading integrated care network, a large health system went on an acquisition spree that brought new physician practices, hospitals, skilled nursing centers, clinics, and other care facilities into its organization. But for the provider to achieve the patient care and financial benefits of operating a true integrated care network, it had to first integrate and unify the information system supporting delivery of services. The thousands of new employees that were brought into the health system through M&A were accompanied by a mishmash of PCs, laptops, peripherals, operating systems, security protections and user policies, which greatly complicated management, put compliance with enterprise security standards at risk and undermined efficiency.

The Challenge

To achieve the needed consistency, IT architects and leaders realized they needed to migrate all users to a new domain and to standardize on Windows 10, along with implementing a single username standard, which would be required in the new environment. One estimate from an outside consultant calculated that the process would require multiple steps and the efforts of roughly 100 people over the course of 18 months. The health system had neither the time, staff nor budget for that option. Instead, it set a seemingly staggering goal of migrating the first wave of 30,000 desktops during just two weekends while keeping systems and workspaces accessible to clinical staff during the transition.

The health care organization began consolidation efforts in-house by writing more than 6,000 lines of PowerShell scripts, while continuing to get consulting estimates that were cost prohibitive. Finally, the realization dawned that to reach its goal, the organization would require a solution that could automate the efforts and steps in the migration.

With that realization, the health system began investigating options, which led them to Liquidware ProfileUnity. Well known for its zero-downtime Windows OS migrations, ProfileUnity could easily be applied to help migration to the new domain server. ProfileUnity had several capabilities and advantages for this project:

- It could execute the domain and Windows OS migrations and the conversion to a standardized username in a single step. Compared to the methods the health system had been considering, that capability significantly reduced the overall expected conversion time and the corresponding costs. Since cost takeout is an important element of any merger or acquisition, ProfileUnity's ability to produce savings made it a valuable tool for the health system.
- Just as significant, the migration would execute without blocking users from accessing their desktops and systems during the transition. This was an essential requirement for the health system because its doctors and other caregivers need access to their notes and patient files at all times.
- ProfileUnity can import an organization's existing ADMX templates to the new Active Directory server and assign context-aware filters. This approach can greatly speed login times by leveraging ProfileUnity's efficient AD lookup.
- ProfileUnity works for all Windows OS versions and for any kind of desktop – physical or virtual, including Microsoft RDSH, Windows Virtual Desktops (WVD), Amazon WorkSpaces, Citrix Virtual Apps and Desktops and VMware Horizon. While the new desktops would be standardized on physical machines running Windows 10, the pre-migration population was not homogenous.

ProfileUnity is installed on user desktops and automatically harvests the user profile, including OS and application personalization settings and user-authored data. It also harvests user-authored data, like documents and files. ProfileUnity is configurable to clean up profiles and only lift important user profile data, leaving caches and bloated areas behind. When the harvest is complete, ProfileUnity creates a "universal user profile" that supports co-existing (both backward and forward compatibility) over multiple Microsoft Windows OSs, allowing organizations to "migrate once and forever" to newer desktop or server OS versions. Its advanced Active Directory capabilities automatically retrieve user account information from domain servers. In this case, the profiles could be loaded to the new domain server and to desktops the first time users logged in. ProfileUnity also handles folder redirection and establishes access to the user's local printers and scanners.

The health system's widespread desktop inconsistencies, paired with its requirements for simultaneous OS-domain-username changeover, tight timeline and 100 percent uptime requirement, made this a hugely challenging migration effort. Worse, any single mistake in the domain changeover could lock users out of the system, which created a risk to patient care. Mistakes would also undermine user confidence, which can be difficult to regain following a merger or acquisition.

Because this project required experienced and solid guidance, Liquidware brought in its partner, Forthright Technology Partners, to lay the groundwork and provide on-site support. Forthright was chosen for its engineering skills that complemented ProfileUnity's advanced capabilities, which it had demonstrated in previous migration projects.

The Solution

Forthright conducted a pilot that identified several new challenges. Health system staff, Forthright and Liquidware already knew that the various desktop environments had inconsistent permissions and policies in place. During the pilot they learned the desktops contained a lot of personal files and non-enterprise applications that normally wouldn't be brought over in a migration. Such files represented security risks and added to enterprise storage requirements. However, the health system was very concerned about user experience and keeping its employees happy, so it decided to allow (within reason) anything that was on the old desktops to be included with the new ones. The pilot found personal files and folders throughout the desktop environment and needed to ensure they would all be found and brought over to the target environment. ProfileUnity's harvesting capabilities could find them all without requiring time-consuming manual searches.

The printing architecture added another complication. Many of the users to be migrated were set up for direct IP connection to printers and scanners. Direct IP printing and scanning can be problematic to scale and require each desktop to be configured for all the printers and scanners it needs to access. The conversion to a new domain server meant extensive mapping was required. ProfileUnity could harvest the data and handle the mapping. However, the printer and scanner drivers would still need to be reinstalled on local machines before ProfileUnity restored the IP connections to the printers and scanners. Forthright's domain expertise enabled it to solve this challenge by writing an effective script. As a result, users had immediate access to the scanners and printers they needed immediately after the changeover.

The username change turned out to be not much of a challenge for Forthright. The company solved it by writing a four-line script that automatically mapped usernames from the old format (first initial, last name; for example gsmith) to the new one (first name.last name; for example, greg.smith). The script directed ProfileUnity to restore the user profile saved from the old username to the desktop in the new environment the first time the user logged in. It also had built-in error checking to uncover any mapping issues, which was another value-add.

The pilot was essential in uncovering these and other potential glitches to the changeover, which Forthright and Liquidware were quickly able to solve. They then readied the health system for large-scale migration. The plan called for the first 30,000 users (a non-homogenous group with users from multiple practices and hospitals that had been acquired) to migrate over two weekends. ProfileUnity was installed on their desktops before the cutover to collect the user profile and user-authored data. The migration began as users logged on for the day. While other solutions only redirect folders, ProfileUnity can automatically migrate user-authored data. The user-authored data (e.g., documents, videos, pictures, etc.) syncs automatically in the background without affecting user productivity. It can be migrated and saved to a central share or cloud storage service such as Microsoft OneDrive, Amazon WorkDocs, or Dropbox Enterprise.

Profiles and user-authored data were transferred to the new domain server to be available the next time users logged in. After all data has been synchronized ProfileUnity invokes folder redirection, which can be used with 144 context-aware filters (such as location, subnet range, OS type, as well as more common values such as group, OU, machine class, etc.) to make redirection extremely granular.

ProfileUnity's Centralized Data Migration Reporting validates that groups of users are migrated successfully. These advanced features report that user data is migrated and that administrators know exactly which migrations were successful and which were not. Built-in network throttling capabilities prevent the migration from impacting other operations on the network, even if folders have been redirected and synced for thousands of users. User profiles are compressed at ratios up to 50:1 to save on bandwidth and storage needs.

With this combination of profile management, data management and network management features, Forthright and Liquidware migrated the first 30,000 users to the new environment within the allotted time without preventing access to systems or disrupting enterprise operations. A major M&A integration milestone had been reached.

The Results

The changeover was nearly seamless for end users – all they needed to do was log in with their new username and domain name instead of the old ones. As soon as they did, their new Windows 10 desktops launched with all previous personalizations, files and application rights in place. Printing and scanning operations went off without a hitch.

Because ProfileUnity is so automated and scalable, the mass migration was accomplished with a relative handful of people over two weekends, not the dozens that would have been needed if it used common tools to manage the domain change and profile migration. The health system's small team, working with a few representatives from Liquidware and Forthright, got the job done. Liquidware's flexible licensing terms also played a big role in making the project affordable.

The program will also provide ongoing value. Mergers and acquisitions will continue, and now this health system has a proven playbook for bringing new staff into its environment reliably and cost effectively.

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