Improving Workspace Productivity in Healthcare

Healthcare Organization

This project was done for one of the largest Healthcare organizations in the Canadian Prairies region.

The Challenge

Canadian healthcare organizations today are facing unprecedented challenges, including financial pressures, changing mandates, and shifting regulatory requirements. With these factors added to their already complex operations, healthcare delivery organizations are turning to partners to help them find ways to improve the quality, efficiency, and manageability of the care they deliver.

Technology has the power to enhance care delivery. The issue is regulatory compliance and security requirements add complexity and create barriers to efficiency and productivity.

For our client, these challenges were especially critical in Hospital Emergency Departments. The organization faced the following issues that influenced response times, caused frustration of the medical personnel and overall affected the patient care quality:

- **Multiple Passwords**: Doctors and nurses had separate sets of credentials for various applications. The caregivers had to remember eight or more application passwords. Security best practices required those passwords to be unique, strong and frequently changed. Usernames and passwords had to be entered manually for each application causing caregivers to spend too much time entering passwords rather that giving care to patients.

Citrix

Imprivata

VDI

XenApp

Identity Management

Efficiency

Time Savings

iRANGERS

- **Security**: The requirement to manually enter complex credentials for applications caused users to leave the applications logged on and running on computers that were shared with other users, causing serious security concerns.

- **Inconsistency**: Emergency Departments are very dynamic environments by their nature. Caregivers are constantly moving from place to place and use various computing stations (Clinical Appliances). Users had to reopen all the required applications when moving between the Clinical Appliances and navigate through application interfaces to get to the screen they had worked with. That, again, caused caregivers to waste their valuable time and lose their focus trying to concentrate not on patients but on remembering what they previously worked with.

- **Usage Patterns**: As a side-effect of inconsistency, to avoid the issue, caregivers tended to use just one or two Clinical Appliances in centralized locations as opposed to reaching to the closest station. In addition to causing security issues, users were leaving their logged in applications running and that caused additional issues. First, doctors and nurses had to spend their time going to the central location and then sometimes waiting in line for their turn. Second, most of the Clinical Appliances were highly underutilized, while others constantly used forming lines. In fact, there were quite a few Clinical Appliances that were not used for years!

- **Logon Times**: Because each application had to be started separately on each Clinical Appliance for each user, the user logon time

coupled with applications start-up time took even more valuable time away from care providers.

To summarize, the biggest issues in the environment were the following:

- Time spent not on patient care but on computer systems
- Security
- Overall user frustration

The Objective

To achieve better patient care in Emergency Departments by giving as much time as possible back to the care providers and reducing user frustration, the organization decided to implement the following concepts:

- Implement Single Sign-On (SSO) to address the multiple password challenges by significantly reducing clicks and eliminating the need to remember and enter application usernames and passwords.

- Introduce card-based authentication reducing the need for users to enter their credentials.

- Simplify user access to reduce security risks by providing users with their own personal easily accessible workspace.

- Ensure environment consistency by enabling user personal workspace to be the same regardless of which workstation is being used.

- Optimize clinical workflows to eliminate inefficiencies and encourage care providers to use all available Clinical Appliances.

- Reduce user logon and application start-up times by leaving users logged in and

applications launched while ensuring the environment is secure and cannot be accessed by anyone else.

The organization decided to rely on two key vendors: Imprivata and Citrix (iRangers partners) and engaged iRangers and Imprivata to architect and help build the solution that would address the current challenges.

The Solution

First, **iRangers IT Research & Strategy** advisors together with Imprivata architects performed the discovery and assessment of the Healthcare organization infrastructure and supporting services. The project team studied Emergency Department workflows, interviewed doctors and nurses, and observed users and processes.

Next, the team worked with the organization stakeholders to architect the solution that would address the challenges while fitting organization's overall structure and development strategy.

The project team put together a solution design that included the following components:

- **Imprivata OneSign Single Sign-On** – to provide SSO and password management removing the need to remember, manage and repeatedly type application usernames and passwords.

- **Imprivata Proximity Card Readers** – to eliminate the need for users to type their Windows credentials. Users would utilize proximity smart card access instead.

- **Citrix XenApp Hosted Shared (Follow-Me) Desktop** – to provide a consistent and personalized workspace that would follow the user regardless of the workstation being used, while making sure patient data does not leave the organization's datacenters.

- **Citrix XenApp Published Applications** – to simplify application delivery and management.

- **Imprivata, Citrix and Active Directory Security Policies** – to ensure environment security while giving enough flexibility to provide superior user experience.

After that, **iRangers IT Solutions** architects created a detailed solution design which then was implemented by the team of iRangers, Imprivata and Healthcare organization engineers.

While the solution infrastructure has been built in organization's on-premises datacenters, iRangers architects ensured that the overall solution and all of its components are cloud ready and will easily support stretching or moving to Hybrid or Public clouds.

The solution currently implemented in an Emergency Department of one of the city hospitals is successfully accepted and adopted by users. In fact, a province-wide solution rollout is currently being planned and will no longer be limited to Emergency Departments. The solution allowed the Healthcare provider to give close to one hour a day back to caregivers, while providing improved security.

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