

# Illinois State Government Transitions to Remote Work

Category: Enterprise Management IT Initiatives

State: Illinois

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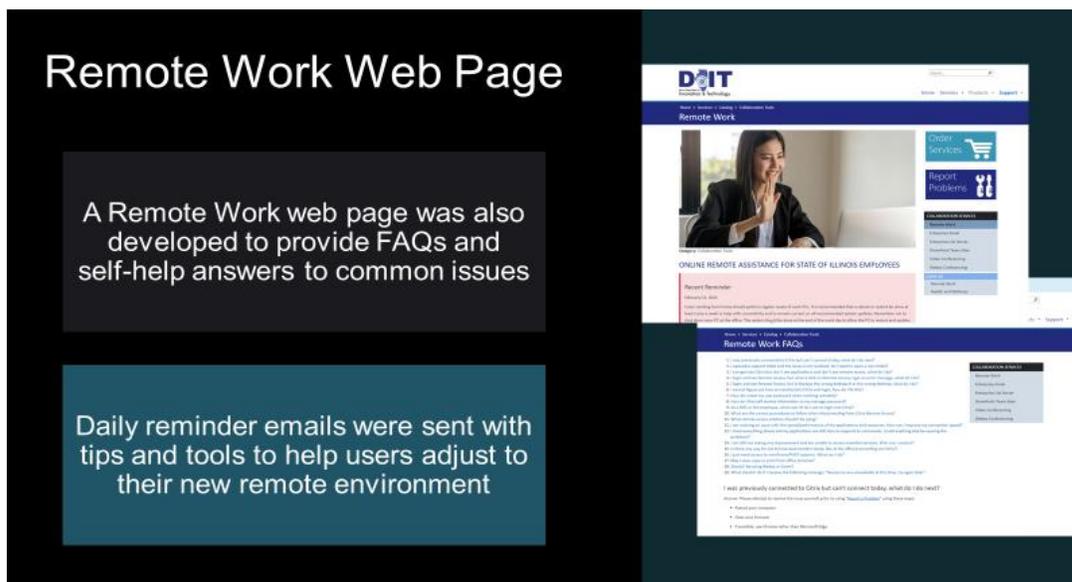
## EXECUTIVE SUMMARY

In March of 2020, the State of Illinois was ordered into a 'work from home' posture in response to the COVID-19 pandemic. The tools and processes that were put in place in response to what was happening across the globe at that time remain central for technology rollouts today and into the future.

Work began immediately to provide remote capability to employees who were delivering a myriad of services to Illinois residents in every corner of the state. Traditionally, state employees worked almost exclusively from the office, so existing solutions for remote work were not scalable to the volume needed to continue critical services. Many services soon realized exponential growth, including employment benefits and remote contact centers.

To respond to the immediate need for remote access, current solutions were assessed for capabilities and partner/vendor engagements were initiated. Not surprisingly, vendor partners were inundated by expansion requests from other customers. Leveraging relationships with partners and ensuring that the response received high priority, the state of Illinois was able to respond rapidly to the needs of employees, as well as citizens.

Almost immediately, DoIT established remote access for critical personnel who needed remote capabilities to serve Illinois citizens across the state. Within three weeks, teams built out the infrastructure, secured licensing and configured accounts for over 20,000 remote users. Support tools were built and published to provide self-help answers to common issues (see image below), as staff became accustomed to the remote environment. The remote solution not only included DoIT supported agencies, but several other external partner agencies in need of a remote solution. Illinois is now productively working in a quickly deployed, reliable and feature rich virtual workspace that not only addressed the remote work needs caused by the COVID-19 pandemic, but remains a foundation for providing a secure and stable environment for technology growth in an ever evolving technology landscape.



## IDEA

In anticipation of a likely 'work from home' scenario, planning began in late February to design a blueprint to accommodate up to 30,000 remote users. Fortuitously in November 2019, the Citrix team had upgraded our legacy Citrix environment and moved the infrastructure to the Citrix cloud. This effort, initially intended to keep pace with technology advancements and adhere to our lifecycle planning, proved to be invaluable in the coming weeks.

Due to the recent upgrade to reach the anticipated target, the infrastructure initially only needed minimal resources to scale. The Illinois team then quickly secured adequate licenses and a few additional pieces of hardware to accommodate the increased traffic.

After exploring other partner options, the decision to scale the Citrix environment incurred the lowest cost, took advantage of legacy knowledge and provided a solution that offered the most capability in the least amount of time.

## IMPLEMENTATION

The implementation of this capability was quick, but not without challenges. First, it was needed to engage additional skilled personnel to supplement two in-house resources. The initial solution was not a true Virtual Digital Workspace (VDW) environment. Instead, it was possible to use the Citrix Remote Access (RA) feature to allow users to remote into their PCs back in the office. Several other remote access solutions were utilized for specific uses, but Citrix RA was the primary solution as it easily accommodated a 'Bring your own device' (BYOD) method that did not require an agent or special software to be locally installed. Any state-owned laptop or tablet accessed the network via *Beyond Trust*, *Cisco AnyConnect* or *Netmotion*.

Reconfigurations within the network allowing a single-entry point from users reduced the need for locally installed software. A web portal allowed employees to access their PCs remotely. This enabled users to leverage their personal devices, in the absence of a state asset, to access the state network securely and with relatively low requirements of their personal system. The Network Team deployed additional NetScalers to more efficiently load balance the explosive growth in traffic.

The storage teams expanded the hardware footprint for the exponential growth as new users were added. This proved valuable in the coming months, as new features were added to Citrix. While demand for true VDW solutions became more prevalent, storage needs increased.

As expected with any new service, the Help Desk and the End User Support Teams were inundated with calls and web submitted tickets regarding connectivity. Many of the issues were a matter of training in the new offering, but there were also many bugs to work out. While the technology is centralized, DoIT supports close to 40 agencies with unique business needs.

Users had adapted to the new norm and remote access was stabilized in approximately 6-8 weeks following initial deployment. New troubleshooting steps are now documented and socialized. With this came the ability to scale out and tune the support teams as well as expand the service to include true VDW, application layered solutions. DoIT's use of Citrix image management has expanded beyond the traditional method.

## IMPACT

With COVID as a catalyst, the need for remote work capability was obvious. It was later realized that these same solutions and capabilities also addressed outstanding issues the team had been struggling to solve.

Legacy operating systems residing on the PCs can now be addressed by using the same hardware to connect to a server based VDW. This method has reduced the urgency for PC tech refreshes, end user support for hardware upgrades, and brought software support in-house. Instead of installing/imaging on individual PCs, installs can be performed remotely en masse.

This capability to manage operating systems and software on the VDW greatly enhances the state of Illinois' security posture by allowing for needed updates and patches as the threat landscape changes. The extension of control to the edge helps to standardize and gain visibility into end points around the state. We can accomplish this while enabling the business units to customize their VDW environments, from shared terminal scenarios often seen in call center environments to power users that need dedicated workspaces with higher administrative rights.

Use cases that were troublesome in the past and logistically difficult to execute, are now a non-issue. Access for contractors in the past would have had to be customized; a PC issued and delivered, and training in support processes offered. Now a specific VDW can be offered in minutes instead of days or weeks, regardless of the model of PC, operating system or access needs. The on and off boarding process is also streamlined, reducing the need to recover hardware from the users, while minimizing the exposure of network assets and providing a reliable and repeatable offering and support solution.

These capabilities and their impact, initially designed to respond to COVID-19, will endure as part of the culture as a service provider to the agencies of the state of Illinois. Steps are currently being taken to develop and deploy these capabilities in an efficient timeframe as part of the standard offering. From the standpoint of onboarding, the goal is to send a laptop to a new team member and have them operational the same day. Standardizing on Beyond Trust as a remote support tool ensures the required functionality and the security that our citizens demand.

While the COVID pandemic is a crisis that affected all of us, the lessons learned and the advancements made in technology deployment and support accelerated the state of Illinois' use of the tools available and the momentum will be felt for decades to come.