LOGIN**VSI**

The Cure for Digital Workspace Reliability

Leveraging Technology to Deliver
Great Staff Experiences

At the intersection of optimized digital workspaces, resilience, and employee satisfaction lies better business outcomes and higher patient satisfaction.

The overwhelming pace of technological change can undermine the system stability, performance and security of any business, as well as degrade the staff experience. But healthcare comes with its own unique challenges that not only threaten operational efficiency and peak financial performance but can also play an indirect role in declining patient satisfaction by way of poor clinician experience.

The global pandemic hit the healthcare industry hard—not only by way of clinician burnout—but also by sending service providers and their IT departments scrambling to adapt to a greater and immediate need for increased remote workspaces and increased digital and self-service capabilities for staff and patients.

The impact of an increasingly spread-out workforce, increased digitalization, the implementation of new applications and system upgrades, staffing shortages and increased patient volumes related to COVID-19 have directly impacted clinician and patient satisfaction.

The last thing any healthcare organization wants or needs is for poor performance in the digital workspace to interfere with the ability of staff to do their jobs efficiently and with pleasure. Frustrations with degraded workstation performance, system conflicts that stop them in their tracks, or keep them from performing necessary security patches and updates affecting regulatory compliance only add to the problem.

The business impacts of degraded digital workspace performance include:

- ✓ Longer release/upgrade cycles
- ✓ Too much IT and end-user firefighting
- ✓ Higher IT incident escalations
- ✓ Reduced employee retention
- ✓ Higher patient dissatisfaction

- ✓ Higher volume of EMR escalations
- ✓ Heightened security risks
- ✓ Lost employee productivity
- ✓ Increased patient cycle time

Organizational management may be surprised at just how important Digital Employee Experience (DEX) is to employee satisfaction and retention—and, by the transitive property, to patient outcomes and business performance. IT can hugely impact DEX by ensuring optimal digital workspace performance, while at the same time optimizing and maximizing the organization's current technology investments across the entire lifecycle.

What is Digital Employee Experience (DEX)?

DEX encompasses the relationship between employees and their digital workplace tools in terms of effectiveness, efficiency, and engagement.

When DEX is low, distractions from poor tech performance create digital friction which Gartner defines as "unnecessary effort an employee has to exert to use data or technology."[1]

The latest research is only just starting to uncover the direct relationship between good employee experiences and better business outcomes. According to Deloitte, organizations ranked in the top 25% of employee experience are over one-and-a-half percent more likely to achieve better customer outcomes, 25% more profitability than organizations in the bottom 25 percent and double the Net Promoter Score® for customer satisfaction.[2]

Login Enterprise is Login VSI's platform for ensuring digital workspace performance to help IT positively impact DEX. This human-centric automation platform validates the impact of change from the end user's perspective on the entire system (not just one application) — allowing healthcare organizations to increase efficiency and reduce costs. Digital workspaces become more resilient, and staff remain happy and productive.

In this eBook, we will detail 4 specific computing challenges negatively impacting performance and ultimately threatening staff retention and outcomes within the healthcare industry—and more importantly, how Login Enterprise can help your organization overcome them.

[1]Gartner, "How to Make Your Digital Workplace Happier, Faster and Smarter," November 12, 2021
[2]Deloitte, "The Digital Workspace Reimagined" Issue 1

Four Major Challenges in Healthcare Computing

It's a constant battle to keep pace with technological change, and the volume and cadence of changes are overwhelming digital workplace and end-user computing teams—causing more disruption and slowing innovation.

When technology is slow or fails, it interrupts, distracts and disengages even the best employee—impacting revenue and patient satisfaction. Given the current operating environment of most healthcare institutions worldwide, it is essential to eliminate as many obstacles to success as early as possible.

The challenge, then, is how to balance speed, reliability, and rising expectations.

Reliability
Technology changes are overwhelming digital workplace and end-user computing teams – causing more disruption and slowing innovation.

Experience
When technology is slow or fails, it interrupts, distracts, and disengages even the best employee – impacting revenue and satisfaction.

One key area for improvement that can have an enormous impact on employee retention, patient satisfaction, operational efficiency—and ultimately your bottom-line (and can achieve significant impact in a short amount of time)—is DEX.

Here are four common computing challenges that, if not met, threaten DEX.

1 Dealing with an Increasing Rate of Change

2 Proactively Detect and Fix Issues that Impact Quality Care

3 Release OS and Application Upgrades into Production Faster

4 Optimize and Extend the Life of Existing Computing Environments

Challenge 1: Dealing with an Increasing Rate of Change

You need an automated way to keep pace with an increasing volume of routine system changes and updates and to analyze their impact to end-users, if any, before implementing them.

Digitalization has been happening at a break-neck pace, and the pandemic has only exacerbated the need for continuous, seamless operations in a rapidly changing computing environment. Due to the increasing number and complexity of systems in use—and the continual patches and updates that come with them—it is essential that the impact of these changes is detected and mitigated before end-users are affected.

The potential costs associated with failing to proactively identify and resolve issues to minimize incident escalations can be staggering:

- $1.27M spent annually on escalations that could be avoided[3]
- $3.36M lost due to engineers focusing on non-critical tasks[4]

Testing planned changes in pre-production will ensure no negative impact to end-users—and no disruption to business as usual. The organization will also save time and money by avoiding unnecessary, reactive IT fire drills and ensure compliance with regulations.

[3]Digital Enterprise Journal, "The Total Business Impact of IT Performance," Sept. 2021.
[4]Digital Enterprise Journal, "Identifying Effective Digital Employee Experience (DEX) Management Solutions," Oct. 2021.

Case in Point

Healthcare Organization Learns from Past Mistakes to Turn User Experience Around

> *Within 30 mins of dropping a new build, I know with confidence that each site can access all our business-critical applications, including our affiliates. Once my head hits the pillow after our outage window, I know my phone's not going to start buzzing a few hours later. It's been fantastic.*
>
> *--Director of Desktop Services*

Despite having systems and "real-user" monitoring in place, one pharmaceutical healthcare organization with over 10,000 employees experienced multiple failures tied to unplanned changes. In some cases, planned changes that had been tested, but somehow highlighted a minor deviation between the test environment and the existing production system, proved fatal.

The organization used Login Enterprise in production to continuously test business-critical applications for efficacy (does it work) and efficiency (does it perform as expected). Within a few minutes of deploying a new build to the environment, each application was rigorously tested based on real workflows and reported from discrete workspaces scattered around the organization.

In short, the Login Enterprise platform identified potential areas of friction and failure that its legacy monitoring systems missed, helping the organization avoid the time and money needed to remediate issues as well as garnering positive feedback from employees.

Challenge 2: Proactively Detect and Fix Issues that Impact Quality Care

You need to continuously monitor individual digital workspace performance to proactively determine issues in the entire system before performance degrades.

The modern reality is healthcare organizations rely on the expertise of numerous, specialized third-party IT providers for critical systems architecture and applications. Service level agreements (SLAs) define the expectations for the performance of any one given service, but typical SLA metrics only report on the availability of machines, not the performance of the application or the end-user experience, which is the metric users genuinely care about.

Just like with human patients, prevention is better than triaging when it comes to keeping IT healthy. Administrators of central desktop infrastructures frequently use advanced monitoring software focused on the infrastructure and give information about the load of the system, such as CPU, memory, storage, network, and other system statistics.

But while all those measurements may be acceptable on the surface, it is possible for the helpdesk to be overwhelmed with unsatisfied end-users. Because they give insight into the quality of the system when real users are present, it is reactive by nature. A proactive approach based on predictions of user behavior is close to impossible because real user behavior is always variable.

To deal with this, organizations should deploy a specialized 24/7 active monitoring solution that simulates common business workflows that can not only detect problems before the real end-users come in, but even predict when system performance will begin to degrade. This way IT can proactively address the issue before users experience hiccups.

When one leading healthcare insurance provider's client support team encountered an intermittent error it could not troubleshoot, it turned to Login Enterprise to test the interaction between multiple systems and pinpoint the root cause.

Calls coming in from the organization's Interactive Voice Response (IVR) were programmed to pass basic identifying information from the agent's desktop through the Citrix server and on to Facet which would open a prepopulated contact record for the call.

Intermittently, agents would experience an issue where new records were being created and opened within Facet every 30 seconds. IT was having trouble identifying the cause of the issue because it was not occurring regularly enough.

The EUC team used Login Enterprise to test and recreate the issue by running through the same workflow its agents performed over and over and until it could be replicated enough times to identify a pattern.

This testing enabled IT to confirm that the issue was, as it had suspected, a result of user load. The ability for the organization to troubleshoot the issue by simulating real user actions with no impact to actual operations or end-users saved the company valuable time while improving end-user satisfaction and efficiency.
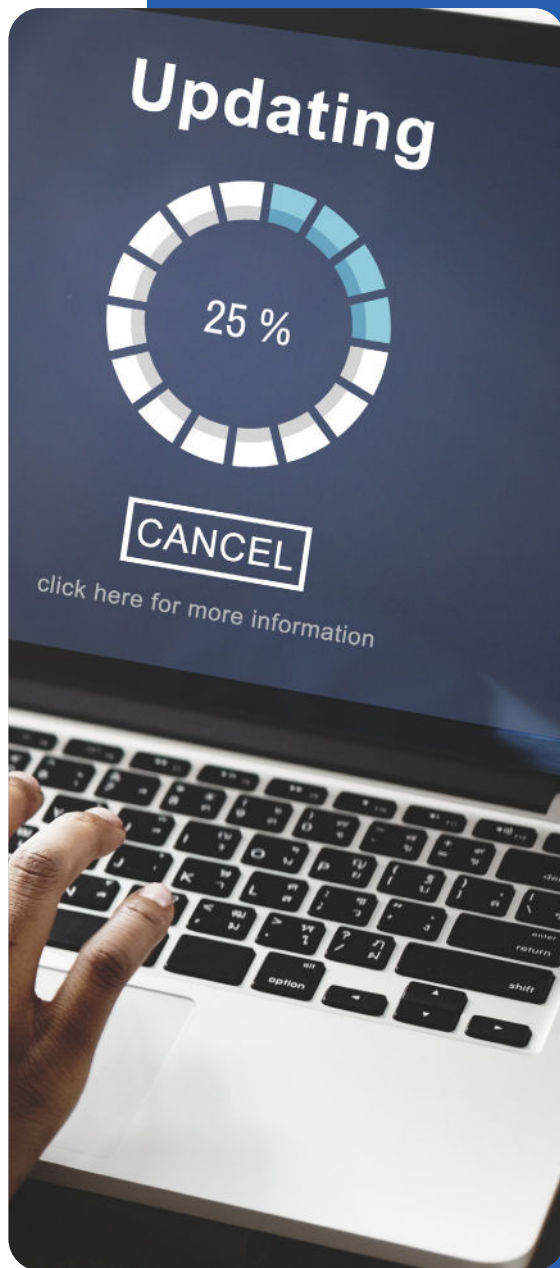
Challenge 3: Release OS and Application Upgrades into Production Faster

You need to get systems and application upgrades into production faster, even in the face of ever- increasing volume.

If your organization is faced with a major upgrade to your operating system or a business-critical application, like Epic or Cerner, or contemplating a move to the cloud or migrating from a physical to virtual environment, time is money—and disruption and delays are expensive. Speedy implementations also help your organization leverage new or upgraded features and functionality in existing applications so end-users can take advantage of them sooner and your organization can maximize the return on its technology investments.

Your organization must understand the impact end-users will experience when going about their essential daily activities in the new environment. IT will need a robust set of test measurements to build confidence in the migration or upgrade plan.

Testing changes on-deck in pre-production will ensure proper baselining/ rightsizing of the environment and provide early detection of potential problems. Testing also helps control unnecessary technology expenditures, since IT will be able to choose the perfect-sized environment needed to deploy the changes before making final purchasing decisions.

A leading healthcare provider with over 10,000 employees needed to move their Windows® 7 Epic environment to Windows 10 and ensure that individual application interactions in Epic did not increase overall exception rates.

The organization chose Login Enterprise to understand how many Windows 10 desktops it could support on the hardware supporting their Windows 7 VDI deployment. This enabled them to validate:

- ✓ The amount of hardware necessary to meet their user experience requirements

- ✓ The functional and at-scale performance of Epic before production

- ✓ Any modifications to their configuration needed to deliver the best performance

OS updates deployed to individual desktops as opposed to VDI environments can be particularly risky due to the unique environment and configuration of each workstation. It was essential for the organization to evaluate any issues before rolling out the upgrade to such a large user base or risk a large influx of time-consuming and potentially crippling conflicts and performance issues.

As a result, the transition from Windows 7 to Windows 10 was seamless and their user experience improved compared to the previous environment. With Login Enterprise, the organization can now identify user experience issues in advance of reporting to the helpdesk.

Case in Point

Leading Healthcare Provider Keeps Its EPIC Environment Healthy in an Ever-Changing World

" *The data that [Login Enterprise] has been providing has been invaluable to our troubleshooting and performance monitoring. It's working as intended and even more!*

-- EUC Engineer

Challenge 4: Optimize and Extend the Life of Existing Computing Environments

Manage the workstation lifecycle more efficiently and effectively and deploy with confidence. Select the best provider at the best cost while achieving optimal performance from implementation to retirement.

Whether switching one virtualization provider for another in your technology stack or leading a migration of desktops to the cloud, you must understand the impact end-users will experience when using their business-critical applications in the new environment before making any final decisions.

Testing your migration target in pre-production will ensure proper baselining/rightsizing of the environment and provide early detection of any problems, ensuring optimized performance while reducing the total dollars per desktop expenditure.

Building and executing these test plans enable side-by-side comparisons of the incumbent technology versus the target platform. Once you get visibility into the performance of these various scenarios, you can ensure your migration will not negatively impact the digital workspace and that you've selected the best configuration to optimize performance, e.g., by selecting the best performing cloud instance size in a set of tests comparing one to another.

Case in Point

Cherry Health Gets More for Less

> "
> *Login VSI allows us to be proactive at managing the user experience, and we don't ever wait for our customers to make a complaint.*
>
> *-- Systems Engineer, Cherry Health*

When Cherry Health initiated a project to move its desktop to a virtualized environment, it turned to Login Enterprise to test the proposed virtual workspace performance and reliably predict it could reduce host infrastructure while providing better performance.

The simplicity of Login Enterprise made it easy for Cherry Health to load test, benchmark, and plan capacity.

When Cherry Health initially tested its legacy production servers using the Login VSI benchmark, it immediately realized it could support 40 to 50 users on a single VM and up to 200 users on a single host.

IT could accurately predict that by migrating to newer hardware, it could reduce the host infrastructure and support the same number of virtual desktops.

Login Enterprise Platform

The Login Enterprise Platform, a digital workspace reliability platform, provides a human-centric and automated approach to objectively measure experience and deliver immediate insights into the impact of change. **Your digital workspaces become more dependable, and your staff remain happy and productive by focusing on three key tenets:**

Full coverage of the digital workspace

Application and infrastructure performance is inherently intertwined and requires a solution that evaluates the entire experience.

Your applications are delivered to users through a variety of technologies, such as Citrix Virtual Apps and Desktops, Horizon Horizon Cloud, or Azure Virtual Desktop. Application delivery and lifecycle management can have profound impacts on user experience. Login Enterprise ensures optimal interoperability.

End-to-end observability

Subtle changes in pre-production and production create unpredictable results and require a solution that observes and compares both for higher reliability.

Automated change processes

Adapting to constant change requires a solution that increases efficiency through automation that mimics real user behavior.

According to Deloitte, continuous monitoring and end-user experience measurement is essential to achieving the pinnacle of positive workforce experience and positive business outcomes by being a digital workplace leader.[5]

[5]Deloitte, "The Digital Workspace Reimagined" Issue 1

Industry Benchmarks

Create consistent benchmarks that aid with technology evaluations and change impact decisions

Zero Impact

Robotic users run at any time, anywhere and with no agent footprint

02

Flexible Automation

03

Schedule once, daily or weekly, or continuously for 24x7x365 coverage

01

Low-Code Workflows

Workflows mimic real-user behavior with support for business-critical applications, and productivity/ collaboration tools

04

Reporting and Insights

06

Real-time dashboards provide insights on how your digital workspaces and applications are performing

Broad Ecosystem Support

Prebuilt customizations and integrations for the most popular VDI, DaaS and Cloud platforms -- VMware, Citrix, Microsoft, Nutanix and more

05

Proactive Alerts, Faster MTTR

07

Define thresholds for proactive issue notification and share logs/screenshots for faster remediation

Change Impact Testing and Analysis

Automate your digital workspace change processes to release faster with confidence, eliminate unplanned issues in production, and stay compliant.

- **Deploy changes with confidence**
  Shrink your change backlog from days to hours with automated pre-production testing.

- **Isolate issues within a planned set of changes**
  Uncover unintended consequences by evaluating the impact of change across your full environment.

- **Ensure a consistent experience from pre-production to production**
  Leverage the same tests in both environments to catch issues before they reach end-users.

- **Maintain security and compliance**
  Facilitate the timely rollout of critical patches and validate security policies and endpoint security solutions work as designed.

Proactive Issue Detection and Alerts

Continuously monitor, alert, and respond to the performance issues from the end user's point of view.

- **Detect problems before they impact users**
  Monitor performance—all day, across all locations—without the need for agents or users to be present.

- **Stay ahead of creeping degradation**
  Analyze every change so that gradual deteriorations are detected well before they slow down end-user productivity and disrupt normal operations.

- **Stay on-plan and on-budget**
  Understand when it's time to evaluate additional tuning or new hardware required to maintain optimized performance.

- **Consistently deliver great experiences**
  Generate Service Level or Experience Agreement reports to satisfy internal management reviews or provide operational reviews to service customers.

OS and Application Modernization

Eliminate roadblocks to delivering better services faster for staff and patients alike.

- **Update and migrate with confidence**
  Easily validate thousands of applications to ensure they work on a new Windows build or in the cloud.

- **Streamline application upgrades and migrations**
  Identify migration problems, often ahead of time, and review and analyze the data you need to make rapid decisions and take corrective action in real-time, saving time and money.

- **Simplify end user acceptance through automation**
  Transition from manual feedback loops and simulate their requirements for rapid, continuous testing. No waiting – just results.

Workplace Planning and Optimization

The most expensive solution does not always equate to better user experiences.

- **Eliminate guesswork when making technology decisions**
  Leverage industry benchmarks to objectively evaluate performance and compare potential VDI, DaaS or Windows® systems based on your unique technology stack.

- **Streamline and ensure smooth technology migrations**
  Confidently accelerate your migration with insights relating to performance and user experience.

- **Guarantee platform availability for office and remote workers**
  Continuously monitor accessibility and availability from a global perspective at any remote location.

- **Extend the life of existing investments**
  Established benchmarks help evaluate whether incremental investments are sufficient or build a case for a major upgrade.

Login Enterprise Platform for a winning EUX strategy

With an established track record, Login VSI is trusted by these top healthcare organizations around the world:

aetna℠

BlueCross BlueShield Arizona

CAMBIA HEALTH SOLUTIONS

CardinalHealth™

Cherry Health

Benefiting Children's Hospital LOS ANGELES

Cigna

NHS

OPTUM

ROSWELL PARK COMPREHENSIVE CANCER CENTER

Ready to begin your Digital Employee Experience journey?

Learn more about how a digital workspace reliability platform can be your competitive advantage.

Want to learn more about how Login VSI can help your organization?
Check out our blog.

Ready to see more?
Request a live demo of the Login Enterprise Platform

Get in touch with the Login VSI team.

USA   +1 844 828 3693
EMEA   +31 20 705 1200

www.loginvsi.com
info@loginvsi.com

USA
300 Tradecenter, Suite 3460
Woburn, MA 01801

EMEA
Maassluisstraat 2
1062 GD, Amsterdam, The Netherlands

LOGINVSI