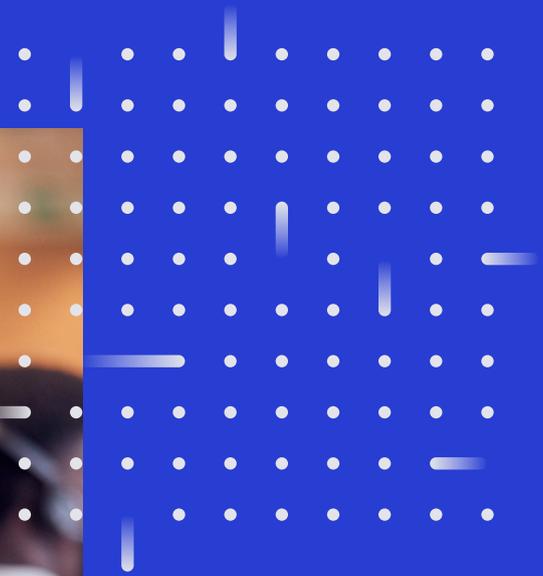


White Paper

# The Importance of Testing in Today's Ever-Changing IT Environment

Why Focusing on the End-User Experience Improves Business Continuity and Reduces Risk



# Introduction

While balancing business acceleration and risk management, IT is constantly introducing new solutions, upgrading, and patching applications, systems, and networks, all to maximise our productivity, increase revenue, and secure the business. The pace of this constant change in every IT environment is only getting faster.

Software vendors are rapidly pushing updates at an ever-increasing rate, driven by a DevOps frenzy that demands incremental updates on a frequent basis. But with users (employees, contractors, vendors) anywhere and everywhere, how do you prevent these updates from adversely impacting your organisation – slowing down your business, introducing risk, or disconnecting your data and applications from all your end-users?

This paper discusses the business advantages of prioritising the end-user experience for all digital workspaces. It highlights how you can decrease cost, save time, and reduce risk by automatically testing and validating the impact of changes on digital workspaces.

Login VSI is on a mission to maximise the true end-user experience for all digital workspace environments. Customers across finance, healthcare, public sector, services, retail, transport, utilities, and communications are testing their full end-user computing (EUC) stack with a focus on the user to safeguard availability and performance while avoiding data breaches.

## The Size of the Problem

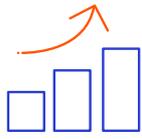
In 2020 there were 1,280 Windows 10 bug fixes and security updates. If running Windows 10, your users will face one of these updates at least once a day. And that's just Windows. Now add in your hypervisor, storage infrastructure, digital workspaces, and the rest of your application updates.

In 2020, the number of changes required for digital workspaces increased by more than 50%. If the pace continues, by 2030, we could be doing almost 60,000 updates per year or 164 per day. As Justin Trudeau, Prime Minister of Canada, said at the 2018 World Economic Forum in Davos, Switzerland, "The pace of change has never been this fast, yet it will never be this slow again."

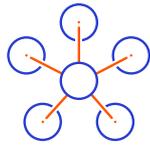
Improving performance and business continuity and reducing risk across digital workspaces requires frequent updates:

- Adding, replacing, updating, or removing applications
- Patching operating systems, hardware changes, or network changes
- Updating security, compliance configurations

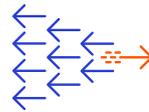
Without these constant changes and upgrades, you cannot achieve business goals. Each update could have consequences for your business: a poor end-user experience, bad application performance, downtime, system degradation, or dramatic overspending. Testing becomes essential to the roll-out of every update, yet 76% of IT issues are caused by change. A simple and best practice after every update is to launch every application to validate if it starts. However, most people skip this tedious task because of the number of changes required.



Size of VDI deployments is growing



84% of organisations have a complex technology stack



76% of IT performance issues are caused by change



Risk of failure from untested changes is catastrophic

**Windows 10 patches grew from 850 in 2019 to 1,280 in 2020**

Every IT environment is like a snowflake – it's unique. What may work in some environments may negatively impact performance in others. Without testing, you won't know how an upgrade or patch will break your system. And if you are not focused on the user, you won't know what's getting in the way of productivity. For example, you won't know that one location performs better than the other until you experience problems.

The end-users' experience is reality. If load times are bad, performance will be poor. If there is downtime, productivity will be impacted. If systems don't work, hardware will be thrown at the problem, and you will see dramatic overspending. And by the time a traditional monitoring tool identifies an issue, the organisation is already in trouble as users are already affected.

We need to look beyond a test of one component in a stack and instead focus on our end-users' experiences across the full stack. We need to shift left by capturing user workflows in a repeatable test to then execute that test on every change prior to deployment.

## Login Enterprise: End-User Focused

Login Enterprise is different. We focus on the end-user and what they will experience. We address the challenges of constant updates by automatically testing and validating results in

pre-production through production. We focus on the impact of change on all digital workspaces to safeguard application and desktop performance and availability - maximising the true end-user experience.

It allows you to put users at the heart of your business goals. Login Enterprise automatically detects the applications on your machine or images. When changes are made, Login Enterprise will report if applications are working as they should or defective. It allows you to derive the user experience, even at scale, from how applications respond.

Login Enterprise delivers plain and simple reports that enable you to make quick decisions on whether to move forward with a change or dive deeper into a specific application to see the potential issues. It catches productivity problems early in the change management process, tests many applications a day, and prevents breaking changes from reaching production systems. It increases the effectiveness of the change management process and prevents loss of end-user experience.

This is not simply a testing solution; it helps to deliver tangible business value by improving performance and business continuity and reducing risk.

## Benefits of End-User Focused Automated Testing

Today most of the global workforce is relying on an available and performing workspace. (Automated) pre-production testing is the only way to provide a reliable and cost-effective service for your users. IT administrators that test the end-user experience supported by data can drive faster decisions about moving changes into production. Login VSI is the only company that tests the result, not individual components. It tests the application and desktop as a whole and runs synthetic users 24x7 from pre-production through production.

### Pre-Production

#### Predict Performance

Good performance can be elusive largely because it's complex to get right. You need to understand the operating system, the hypervisor, the storage system, the network. But ultimately, it's all about the least technical part of your environment: the user's experience. How long does it take to log on, and how long does it take to start my applications? For example, in an EMR test, how long does it take to select a prescription drug and submit that to the pharmacy? Does it all still work after I change something? Login Enterprise enables you to test in pre-production to ensure that when an end-user experiences a change, you've pushed the last .1 % more performance out of the box.

#### Compatibility Comparisons

When upgrading your OS and optimising base images, you'll want to validate if your applications still work. You should compare application load testing results that show you if you are reducing logon times and by what percentage, or if you are making your applications faster. All business-critical applications can be tested in this way to ensure end-users are getting the best experience of all business-critical applications. You'll be able to demonstrate how the upgrades and optimisations you've made have impacted business goals.

#### Cloud Decision Making

If you want to gain the benefits of the cloud, you'll want detailed insights into how your application is running. Maybe you've just dipped your toes into the cloud and have started to move the first infrastructure components over. While you keep your workload machines on-premises for now, application and infrastructure load testing can help you decide when the right moment is to move a component over. With application compatibility testing, you can be confident in your decision and prepare for exceptional situations. For example, your entire workforce becomes remote and determines the best instance type suited to ensure an optimal end-user experience at the most cost-efficient price.

#### Business Continuity

With every change and update, business continuity is uncertain. Whether you are running a legacy system or migrating to the cloud, you'll be considering what technologies will suit your needs. You need to balance scalability, performance, and cost. Login Enterprise includes application and infrastructure testing (with no need for additional software) to ensure new changes don't limit scalability or business continuity.

#### Maximize the End-User Experience

Testing each component individually is far too time-consuming and doesn't guarantee the workings of the complete system. When you test from a user's perspective before deploying in production, you simply test the result. This is highly efficient and shows what the end-user will experience. Additionally, testing applications in a sandbox environment like traditional application test suites do, does not guarantee they will function and perform properly in a production environment. That's why it's important to test applications and desktops as a whole. Again, putting the user at the center of change.

## Production

### Continuous Performance and Availability

The previously mentioned benefits are focused on pre-production. While many things can be caught before going live, you'll always find something slips through the cracks or a component simply fails. As Murphy's Law dictates, anything that can go wrong will go wrong. It's best to be prepared. That's where it's beneficial to simulate user activity, day and night, from within your data center or any remote site to your on-premises VDI environment, cloud desktop, or software-as-a-service application. The ability to mix with real users and perform tasks similar to real production usage will alert you to any fluctuations in performance and availability.

In this mode, rather than going through 500 applications, focus on the most important ones for business continuity. If you're a hospital, this could be your electronic health records application, for example, Epic or Cerner. If you're in finance, it could be SAP or Bloomberg. And it doesn't stop at just starting the application. You should continuously validate whether processes are running as they should. For example, can you still look up a customer record? Is the application still responsive if you run a monthly report?



**Login Enterprise simply tests the result. You get the benefits of maximising the true end-user experience while reducing risk.**

## Summary

Software updates are occurring faster than ever, and you need the ability to respond to this change without risk. You must focus on the end-user, make decisions with outcome assurance and with the ability to test environments automatically. With everything you do, you must put the user experience at the center of change.

Login Enterprise is guaranteed to maximise the end-user experience for digital workspaces. It reduces risk and ensures business continuity by safeguarding application and desktop performance.

Login VSI does this using synthetic users to automatically test and validate the impact of change in physical, virtual, and cloud-based workspaces.

There's no better feeling than knowing that all your 500 apps are going to work when you make any changes.

### About Forfusion and Login VSI

Forfusion specialise in digital transformations empowering companies to prevent risk, plan for the future and optimise business performance by partnering with Login VSI we can help you procure and implement the only solution in the market guaranteed to maximise the end-user experience in your digital workspaces.



Ready to predict and assure  
your end-users experience?

[Book a demo →](#)

Interested in learning more  
about Login Enterprise?

[Head back to our toolkit →](#)