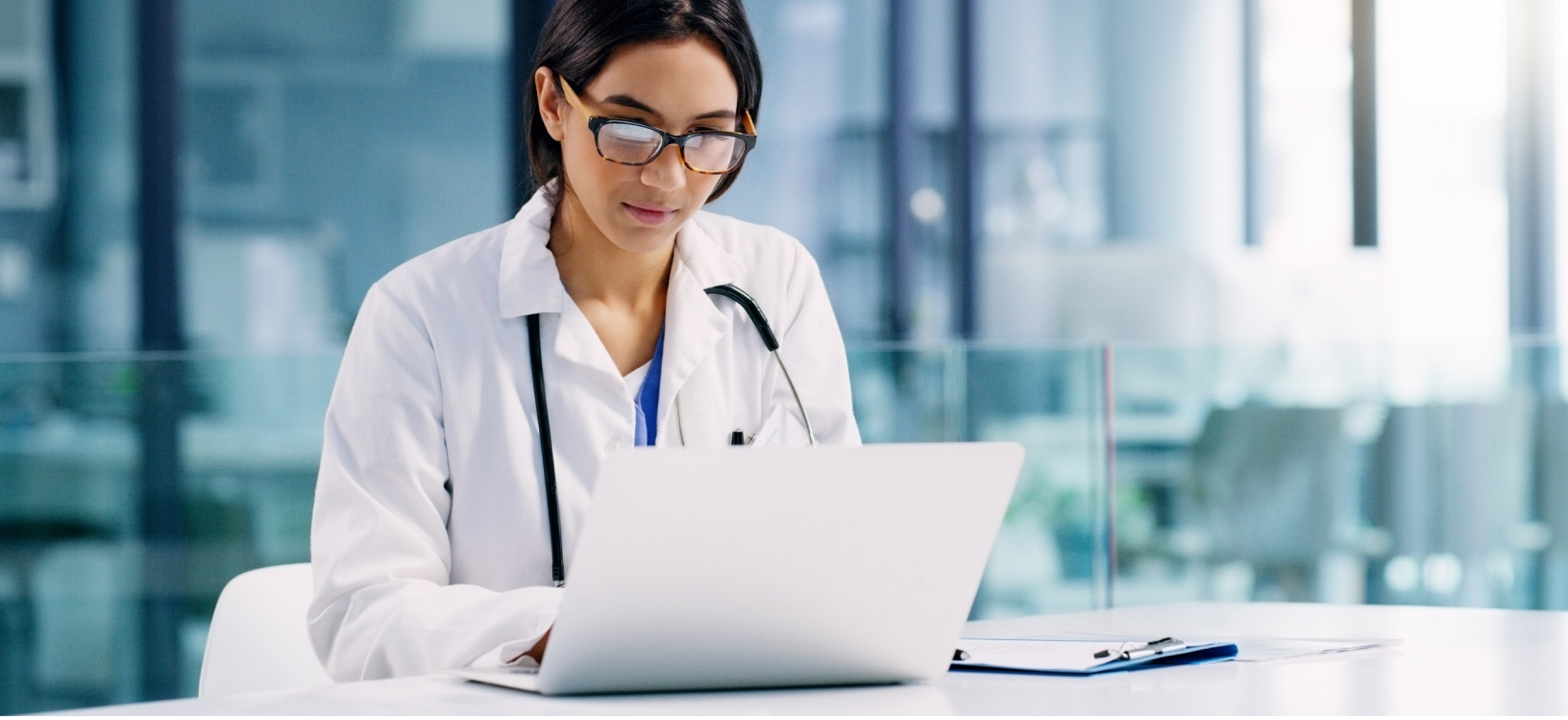
WHITE PAPER

# Health IT: Troubleshooting Guide to Clinician Experience Issues

How to Troubleshoot Clinician EHR Experience Issues Across your Citrix or VMware Horizon Environments

GOLIATH TECHNOLOGIES®



# Introduction

Wellness care is the best way to avoid illness. And wellness care in Health IT means preventing problems before they begin. It's an idea simple enough for everyone to get on board with—especially today's hard-pressed Health IT professionals whose daily struggles include keeping clinician digital workspaces off life support.

What catches up wellness seekers every time is the gap. The data gap. Sure, you can monitor a given system and carefully watch for performance issues. But, can you proactively monitor a specific clinician workspace experience that is rendered through a sequence of systems with a complex underlying infrastructure? That's a tough nut for anyone to crack. Super tough.

## Imagine this.

A doctor is sitting at a keyboard in an exam room. A patient, pale and clammy, is watching over her shoulder. He flinches as the doc hammers the keyboard in frustration over slow response time. Hearing the commotion, a person in scrubs pops a head inside with a quizzical look.

"Tell those people in IT to get Allscripts running like it should be! I'm burning time here."

Here's what the doctor doesn't know: the problem isn't Allscripts. The performance bottleneck began the moment she opened a Citrix session, and every app in that session is suboptimal. The doctor assumes it's Allscripts because the Allscripts app is also slow, and that Allscripts logo keeps staring back at her.

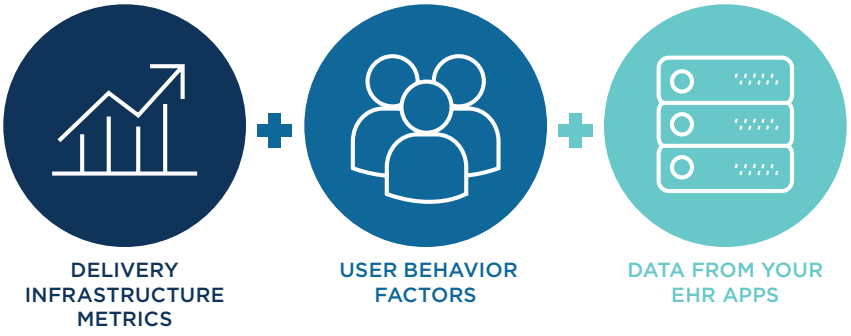
## What if...

What if the Health IT service desk team—who are about to get a random demand from a passing PA to "fix whatever's wrong with Allscripts"—could see all the factors impacting the doctor's experience at a glance? And single out the root cause in an instant? And almost as quickly remediate it? And we mean, all the factors.

You'll surely need visibility into Citrix or VMware Horizon **delivery infrastructure metrics**: logon times, logon duration, session performance, Citrix and VMware Horizon protocols, etc.

You'll also need a performance view into **user behavior factors**. Does the clinician have a large audio file running in the background? Is a large document file sitting in Clipboard? Careless clinician workspace behavior can impact performance heavily. Can you see it?

Now, the trifecta: **data from your EHR apps** themselves (Epic, Cerner, MEDITECH, Allscripts). Within your single view, you can now see performance data from your Allscripts app so you can correlate key metrics with other performance applications.




And now you've got it: a single view of technology factors affecting the clinician experience: virtual desktop delivery infrastructure, user behavior, and EHR apps.

## Three big steps.

We're called Goliath Technologies, at least in part, because we solve big problems. And today, we're the only monitoring and troubleshooting software vendor who can give you deep analytics about the clinician's digital workspace experience factoring in metrics from the virtualized desktop vendors and the EHR vendors.

In this white paper we're not going to spill all our secrets. But we will call out three big steps that can change your world for the better. And, yes: we can help you with those. But first, read on and discover what it takes to set a new standard in Health IT.

# Ensure Uptime, Availability & Seamless Access—All While Updating Your EHR

## You can do it all.

Why is it that every time you're close to stabilizing your EHR application, a new "must have" enhancement update lands in your lap? Whether it's the latest upgrade to Epic Hyperspace, migrating from Windows 7 to 10, pushing a new security update across all workspaces, or upgrading your Citrix or VMware infrastructure—there's always something impacting your EHR environment.

Why is it so difficult? You know you can achieve stability across the tech mix—Epic Hyperspace, Cerner Millennium, MEDITECH, Allscripts, plus virtual workspaces themselves—if you can just keep things quiet long enough to work out the kinks. With enough time and stability, you can ensure that everything's available, seamlessly accessible, and fast.

But it never happens. With the constant influx of changes, complexity only increases. And that window of time when the tech ecosystem is stable enough never comes.

Adding to the challenge, there are clinician behavior factors and environmental factors that can impact performance just as drastically. Not to mention security threats from within and without.

Before kicking off your next big EHR initiative or virtual desktop upgrade, here are three best practices to help you lock in uptime, availability, and seamless access for your clinicians. Your next Health IT roll-out really can be a surefire success.

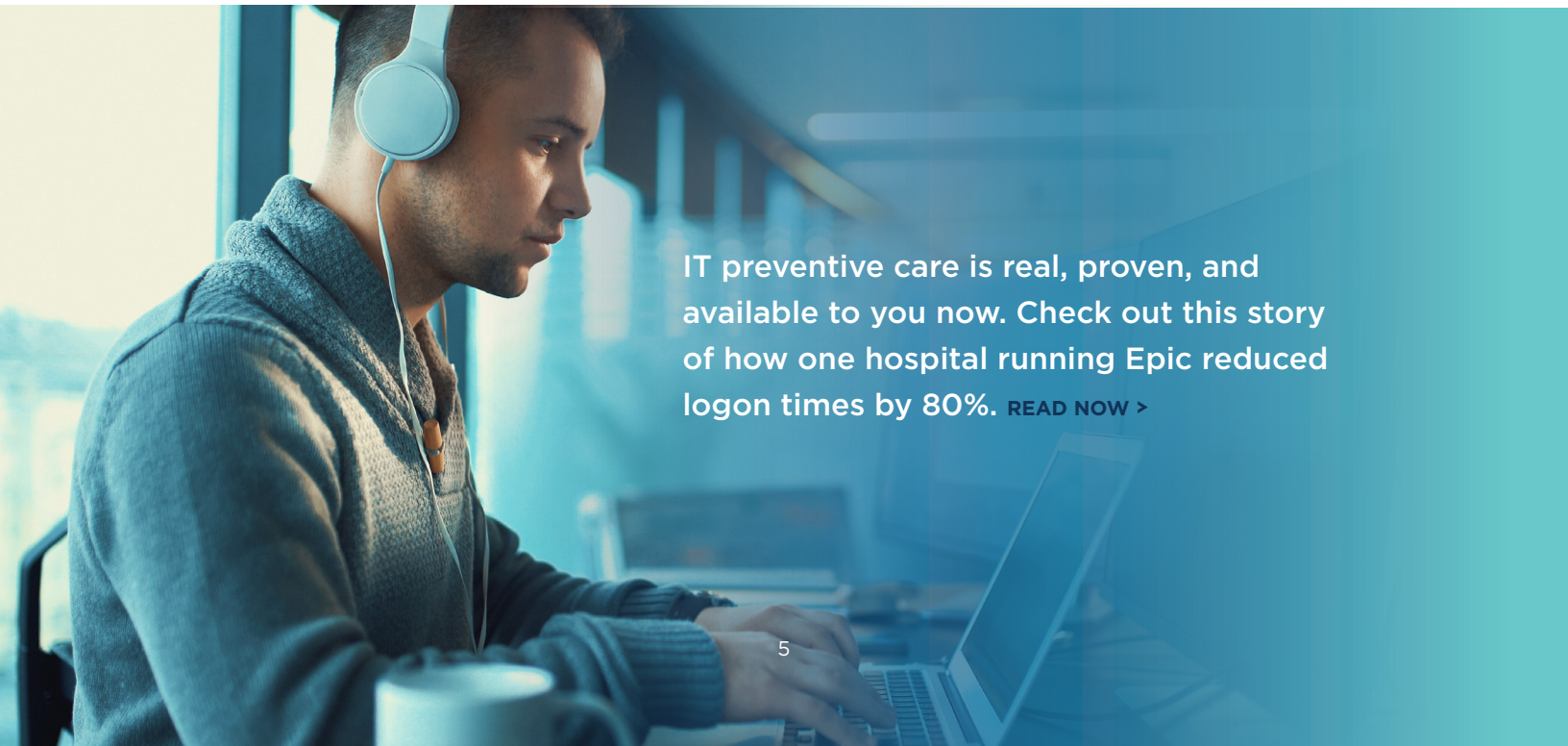
# 1 It's Not Just for Caregivers!

## Preventive Healthcare for the Clinician Workspace Experience

EHR applications are all about functionality for the clinician. They're not concerned with making life easier for IT, and therefore don't include built-in, enterprise-grade monitoring tools for the entire clinician experience. So, IT can't rely on EHR to give you the visibility you must have to proactively monitor conditions, events, or known failure points that can turn the clinician experience inside out and upside down with a few careless keystrokes. In fact, there are over 250 events, conditions and failure points that can disrupt those workspaces.

## It's time for some IT preventive care!

To ensure that your clinicians are successful, you certainly need to monitor the metrics. But you must also be able to anticipate what could go wrong so you can jump on top of it right away. So while you're closely watching user experience, delivery infrastructure, and EHR app metrics in one, panoramic view, at the same time you're proactively anticipating and monitoring every potential point of failure. Then you can swoop in and save the day before things really go sideways—not after, when you've got angry clinicians at your door. (There's more on this topic below under #3, "Expect the Unexpected," but we're mentioning it here, too, because anticipation and prevention are the things that will change your world.)



Proactive monitoring, or IT preventive care, is also your best path to capturing a critical performance baseline before kicking off any major project. With a baseline, you can quickly spot and assess performance variances, choosing not only what requires remediation, but what remediation tasks are most critical.

IT preventive care isn't an impossible job. With the right technology, that power is at your fingertips. You can monitor performance data from end to end, focusing on the areas that create the greatest amount of support tickets: initiating a logon, the logon process, and in-session performance. Custom alerts can be triggered by logon time length or memory utilization so you can take corrective action—before your clinicians and staff are even impacted.

**Did you know that if your EHR is deployed within a virtual desktop by Citrix there are 33+ channels in the logon process—any one of which can cause a performance bottleneck?** LEARN MORE >

## 2 Don't Miss a Thing.

### An End-to-End, Single-Console View for Rapid Response

Survey any Health IT organization and you'll find one of the top frustrations for clinicians is that they're service desk techs are just too slow to diagnose problems. Clinicians are famously short-fused people who don't have time to wait while IT digs into the tech stack to diagnose tricky logon problems and application loads that aren't fast enough. To be successful, you need to be able to deep dive right where the trouble spots most likely are.

A good troubleshooting solution will not only break down failure points at each stage, but look holistically at issues beyond the app, such as user behavior. If a clinician has a massive audio file running in the background, and an image of someone's intestines still copied to Clipboard, the Citrix ICA[1] protocol can spot that resource consumption. And Goliath combines that data into a single-console view of your clinician's workspace.

The Citrix ICA/HDX or VMware Horizon PCoIP/Blast protocol can identify such issues as a clinician unknowingly having a large audio file running in the background, a large file sitting in the Clipboard or other clinician actions that impact performance. It isn't easy to get to this data without a tool that correlates the information all together to identify real performance bottlenecks.

There's more. Troubleshooting data shouldn't be limited to just a single point in time. The best solutions will store data per user for at least 30 days so you're looking at trends, not momentary glitches. You'll be vastly better equipped to identify external factors that could be causing trouble. Say your doctors report performance problems at a certain time each day. With more comprehensive data taken over time, you can quickly single it out: every day at shift change, nurses log onto EHR to review patient records with the incoming nurse. Nice. There's your performance problem: access point congestion.

Resolving issues quickly not only reduces frustration between the clinician and the help desk, it can improve patient care by minimizing disruptions to their care plan.

# 3 Expect the Unexpected!

## An Ounce of IT Preventive Care Is Worth a Pound of Help Tickets.

It's one thing to monitor all aspects of the clinician's digital workspace experience. But for enduring success, Health IT pros like you need to set up early warnings for potential points of failure or slowness. A best-in-class early warning system will automatically use real logons to proactively confirm that all systems are available and responsive, and that critical apps are available everywhere.

This means monitoring every step the clinician takes: logging on, loading the workspace, loading apps, and running apps. It means ensuring that every initial logon is monitored throughout its duration. It means carefully watching environmental and behavior factors and keeping tabs on the entire delivery infrastructure. And it means keeping watch on every touchpoint with the EHR app.

This level of IT preventive care can be a reality with technology that understands every detail and nuance of the logon process and has a really tight relationship with and knowledge of the EHR apps. Like, for example, a technology solution that's listed and certified in the Epic App Orchard Program or deployed in Cerner RHO.

**Yes. That's Goliath Technologies.**

Read how one hospital detected a Citrix and Epic performance issue early before it impacted 25,000 of their users. **LEARN MORE >**

Goliath Technologies is a Cerner RHO Partner.

[1] Independent Computing Architecture (ICA) is a proprietary protocol for a Citrix app server system that specifies how to pass data between server and clients. ICA isn't bound to any one platform. Citrix ICA is an alternative to Microsoft Remote Desktop Protocol (RDP).

## Great news!

There are tools that are purpose-built to anticipate, monitor, and troubleshoot any event, condition, or failure point that could potentially impact the clinician workspace experience, alerting you to problems as they happen, or even before.

Don’t wait for that first cough. You owe yourself a wellness check.

Check out Goliath Technologies >

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