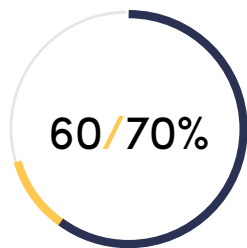# Better
TOGETHER

Embrace Digital Experience Monitoring With RUM and Synthetics

SUMMARY

Synthetic Transaction Monitoring (STM) and Real-User Monitoring (RUM) are two different approaches for monitoring end-user experiences with SaaS, Desktop, and networked applications. But in today's digital world, response time, availability, and work-from-anywhere initiatives are becoming closely aligned. Employees need the flexibility to collaborate from any location without disruption. Organizations must look towards a holistic monitoring strategy to make this feasible every day.

Modern Digital Experience Monitoring (DEM) practices must encompass synthetics for proactive insight and RUM to provide complete coverage for hybrid work. Leveraging both technologies within a cohesive platform enables IT technology teams to deliver superior employee digital experience no matter where employees work.

KEY INSIGHTS

60/70%

60-70% of application performance problems are within the corporate network or the home network/ISP

Measuring and improving the overall digital experience is vital to employee productivity, satisfaction, and retention

Proactive Monitoring & complete coverage for the hybrid workforce are possible and cost-effectiveor the home network/ISP

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![exoprise logo]

Traditional Synthetic Monitoring for Simple Web Performance

Is Your Website Up and Running?

Modern application performance and SaaS-page responsiveness from any device or browser are critical to a seamless employee experience. Most monitoring tools offer basic functionality to ping or check a site URL - and that's it. But that's not what end-user perspective monitoring looks like when testing online SaaS applications. A synthetic (transaction) monitoring tool is the only way to test the employee experience and predict outages in real-time continuously is a synthetic (transaction) monitoring tool.

■ during testing, many tests are run against the system in a staging environment.

STAGING

PRODUCTION

■ the tests join the regular traffic for monitoring

■ synthetic monitoring runs a few of these tests against the production system

■ test monitoring is picked out for special display

What is Synthetic Monitoring For SaaS Apps?

Synthetic monitoring (also known as active monitoring) is an application performance monitoring discipline that simulates real user interaction at frequent intervals. Synthetic monitoring for 3rd-party SaaS applications provides visibility into downtime or performance degradation before users notice and productivity is impacted.

EXAMPLE METRICS INCLUDE:

- Login Time, thoroughly testing authentication & SSO solutions
- Authentication Time
- Packet Loss, Latency, & Jitter

- Initial layout, DOM Loaded, & First Content Paint
- Time to first byte
- Proxy overhead, DNS Lookup Time

Analyzing, crowd-sourcing, and proactively alerting any of these metrics provides network administrators with immediate insights into SaaS property such as Microsoft 365, Salesforce, Workday, or GSuite. Generally, IT teams need to understand and benchmark how mission-critical productivity apps perform on any given day from wherever employees are working.
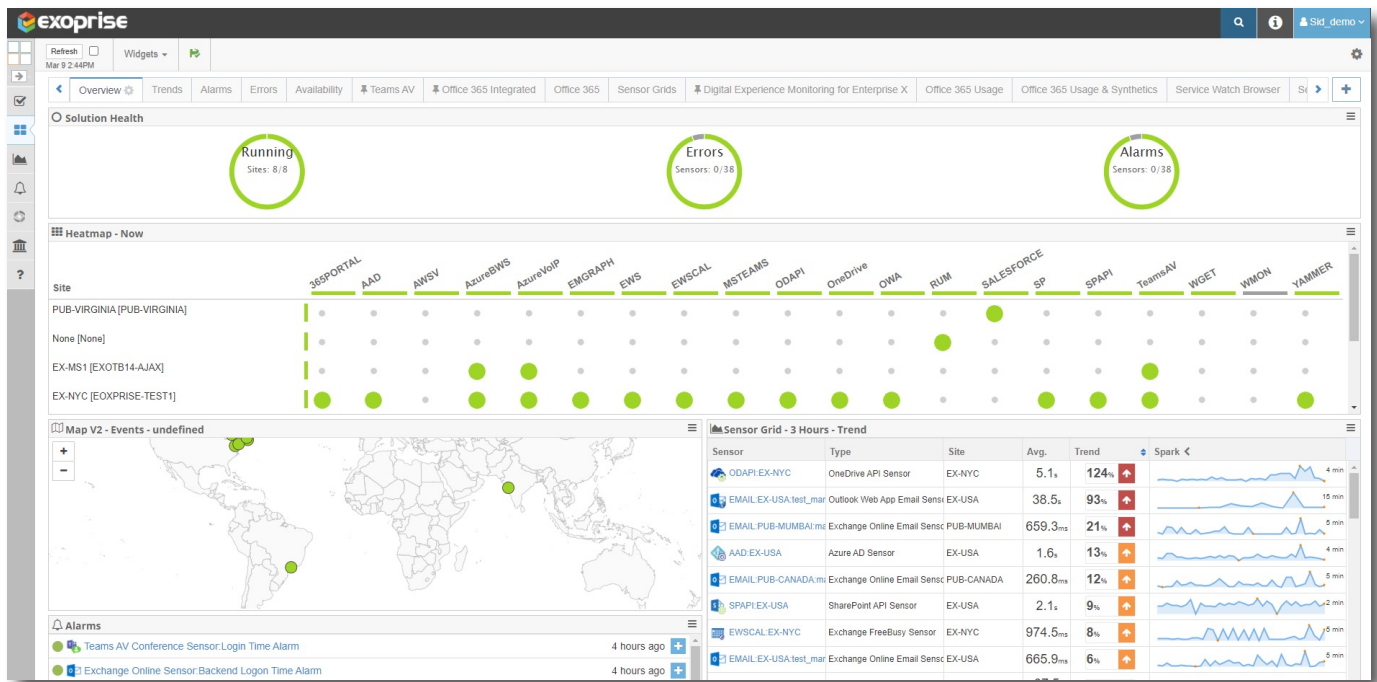

Figure 1: Exoprise Synthetics to Monitor ALL of Your Web and SaaS Apps from One Dashboard

So why should you care?

According to Forbes, by 2020, a staggering 83% of company workloads were already cloud-based, and that number will only increase as more companies decide to move from on-premise to public clouds. As a result, synthetic transactions will vitally monitor the reliability and uptime of these cloud services 24x7. In addition, synthetic monitoring can predict performance problems and enhance the root cause when outages happen when it comes to service degradation. Exoprise CloudReady Synthetic monitoring promises robust script-free monitoring to capture dozens of performance metrics, detect outages, and benchmark networks. IT can fix issues that affect employee productivity with these capabilities.

Exoprise Cloudready Synthetic Monitoring Use Cases

According to a recent customer survey done by Exoprise, 60-70% of application performance issues occur within the corporate LAN, WAN, or SDWAN. This statistic also holds true or worse for home networks/ISPs when people are working remotely. Use synthetic transaction monitoring to test specific scenarios related to critical business transactions and application paths in your environment.
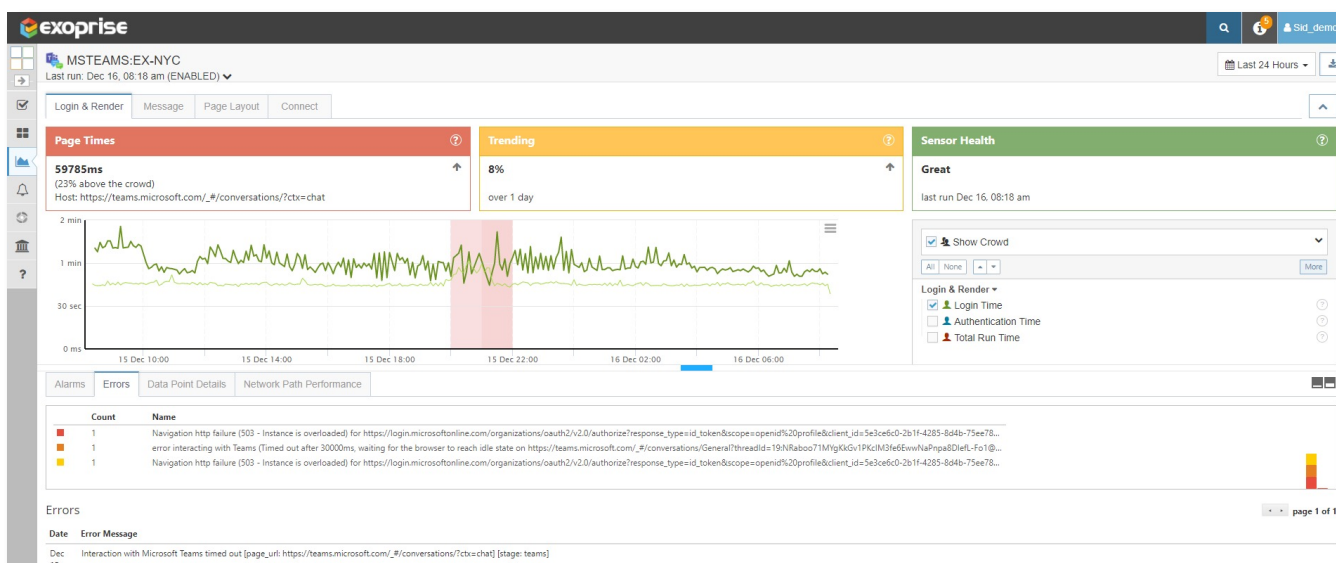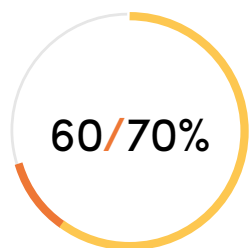
Figure 2: Microsoft Teams Monitoring and Performance Benchmarks

60-70% of application performance issues occur within the corporate LAN, WAN, or SDWAN

This statistic also holds **true or worse** for home networks/ISPs when people are working remotely.

Proactive Issue Identification – Businesses need to detect performance issues before impacting productivity. Exoprise script-free synthetics emulate high-level actions for complete end-to-end visibility and capture low-level metrics for root-cause diagnostics.

Early Outage Detection – Exoprise customers receive early outage detection, and performance impact reports 30 minutes to 3 hours before notification from third-party service providers, including Microsoft. In addition, IT can instantly pinpoint the source, whether it's Single Sign-On Vendors, MFA, networks, Proxies, ISPs, network peers, or the provider.

Crowd-Sourced Analytics for Benchmarks – Is Microsoft Teams slow for everyone? How does our SaaS performance compare to others in the industry? Exoprise crowd-sourced analytics automatically aggregates and leverages application health data to provide baseline metrics. Armed with this data, support teams have visibility in their environment to diagnose problems faster, reduce mean time to repair (MTTR), and optimize end-user digital experience.

Ensuring SLA Compliance for Service Credits – A Service Level Agreement (SLA) is a commitment regarding the level of service you can expect from your vendors. Modern businesses rely on SLAs for smooth network operations. Exoprise monitors service availability in real-time so that you can recover costs when vendors don't meet their SLA expectations and uptime guarantees.
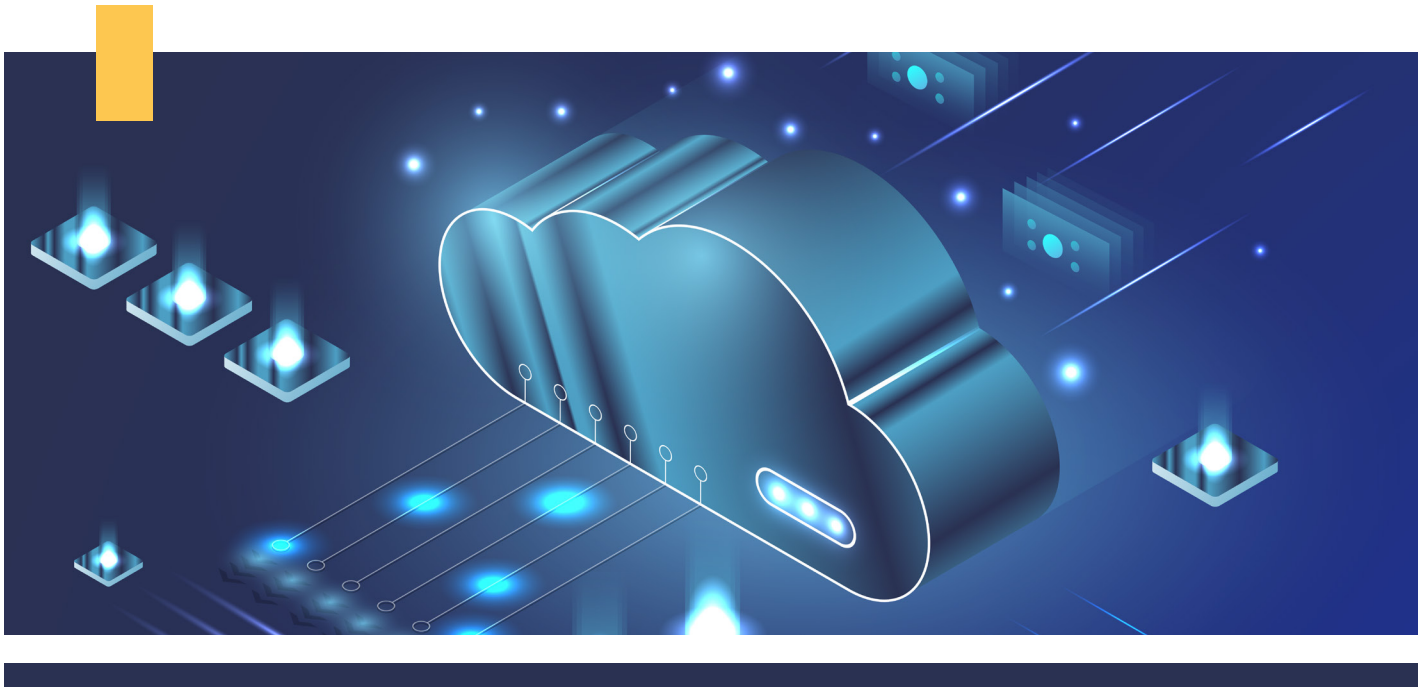
Reality Of
Synthetic Monitoring
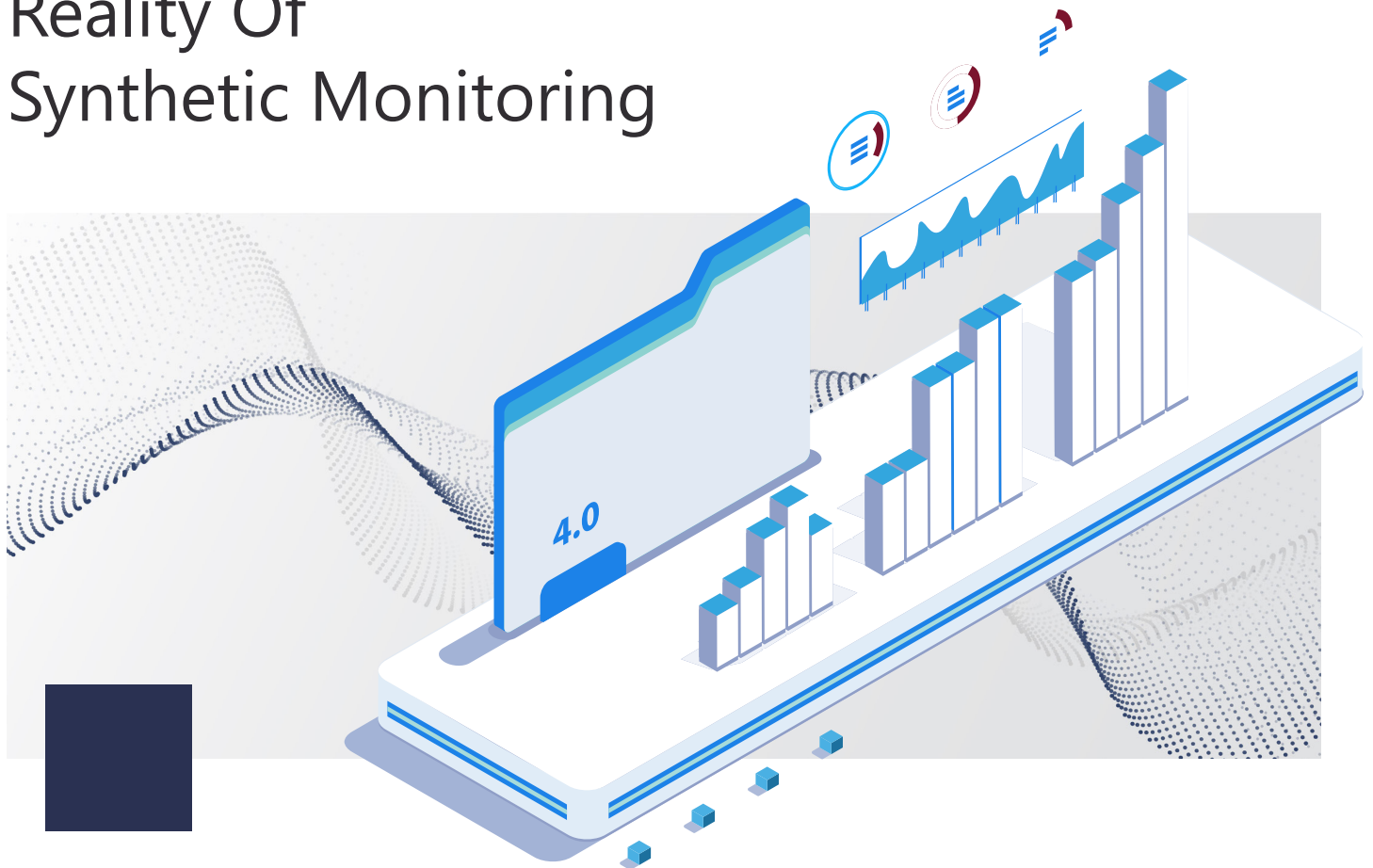
While synthetic monitoring is superior for benchmarking and proactive detection, it can miss specific performance problems for certain users, remote conditions, or applications that are not widely used.

Additionally, STM cannot characterize , their real application behavior, and the business apps running on the devices.

For example, the following activities challenge synthetic monitoring:

- At home or local network conditions specific to remote or branch office users

- Problems with thick client network or collaborative applications that may impact individual users

- Device-specific resource or application problems

- Quantifying the overall digital experience across a user base

Look beyond internet insights with RUM for SaaS and Network DEM

Is Your Saas or Desktop Application Slow?

42% of SaaS users consistently suffer poor performance daily, according to NTT.

Digital and SaaS services are increasingly an area of focus for businesses to satisfy the demands of a distributed workforce. Delivering excellent employee digital experiences (DX) is gaining strategic importance for all companies. However, most teams encounter challenges assuring this capability as application performance degradation issues happen outside the organization's perimeter. EMA research shows that 74% of end-users experience problems with their SaaS and Desktop apps even before network operations are aware of it.

We should accept that remote work isn't going away anytime soon, and that poor visibility into application and network performance will worsen in the coming years. Compounding this with the move to multi-cloud architectures will further complicate the issue for IT teams and leadership.

What is Real User Monitoring?

Real user monitoring puts end-users first. By passively capturing and analyzing all the digital transactions and interactions with core applications, RUM provides visibility from a user's perspective to understand their experience.

Also referred to as front-end monitoring, real user monitoring is an increasingly important aspect of Application Performance Management (APM). RUM relies on application monitoring services for the web and desktop endpoint to continuously observe a system in action for reliability, performance, and responsiveness.

Service Watch

EXAMPLE METRICS INCLUDE:

- Web & Desktop Experience Scores
- Page Navigation and Resource Times
- Client, Server, and Network Timings
- Complete App & System Resource Utilization

- Connected and Streaming Latency, Jitter, & Packet Loss
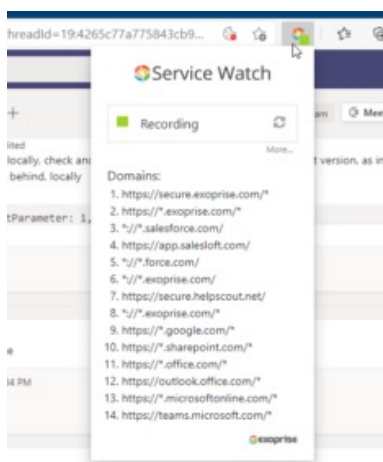- App Crashes, Hangs, and Reliability scores
- OS Stability and Reliability

Figure 3: Service Watch Browser Extension from Exoprise

Unlike active or synthetic monitoring, Exoprise Service Watch Browser supplies network teams with clear visibility into how users interact with any third-party site, such as mission-critical SaaS apps like Salesforce or Microsoft Dynamics.

From page load time to SSL negotiation and Time-to-First-Byte, application and network owners can better understand how front-end browser, local endpoint, and global networking issues impact end-users everywhere.

By deploying a browser extension, Exoprise Service Watch Browser captures deep session performance metrics for specific configured URLs and domains critical to the business. Combining the overall page, client response, proxy overhead, and hop-by-hop pinpointing provides a clear experience score between users and their applications.

Exoprise RUM Benefits
End Users and Businesses

Capture Beyond Synthetics – Real user monitoring allows network administrators to collect application and network monitoring performance metrics from end-user devices and machines, no matter what location. Service Watch Browser and Service Watch Desktop provide IT with the visibility and insights to identify and diagnose poor front-end performance impacting your workers.

Diagnose and Optimize Website Performance – Application owners can understand how employees navigate different domains, URLs, Single Page Apps, or mission-critical SaaS applications using the Exoprise Service Watch Browser RUM data. Information such as page load time, response time, navigation time, experience scores, etc., helps streamline the user journey and improve performance.
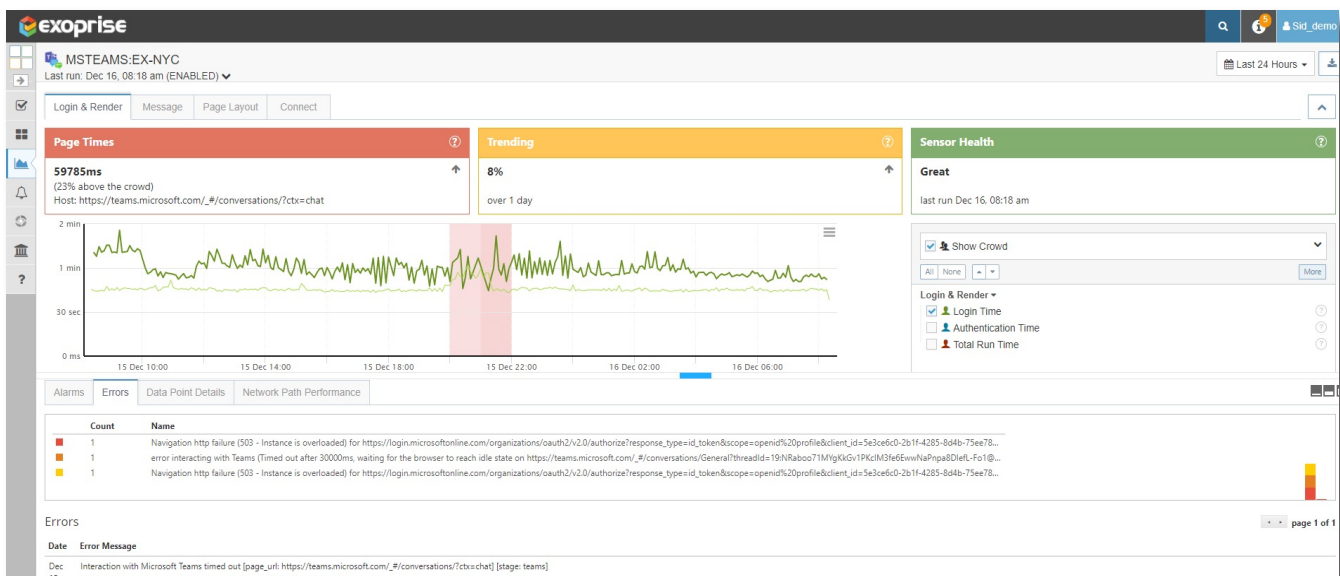

Figure 4: Service Watch Browser Monitoring Configured URLs and Corresponding Web Experience Score (WXS)

Troubleshoot Microsoft 365 and Networking Issues – Service Watch Desktop captures critical networking metrics (packet loss, response time, and latency) for thick-client apps such as Microsoft Teams, Zoom, OneDrive, Outlook, etc., any user workstation. As a result, analysts can optimize and improve the collaborative experience within your organization.

Quantify User Experience from Multiple Locations – After collecting and aggregating RUM data from employee browsers and desktop machines, Exoprise can benchmark or baseline experience scores across your entire user base. Analyze long-term trends and prioritize troubleshooting for users that need immediate support.
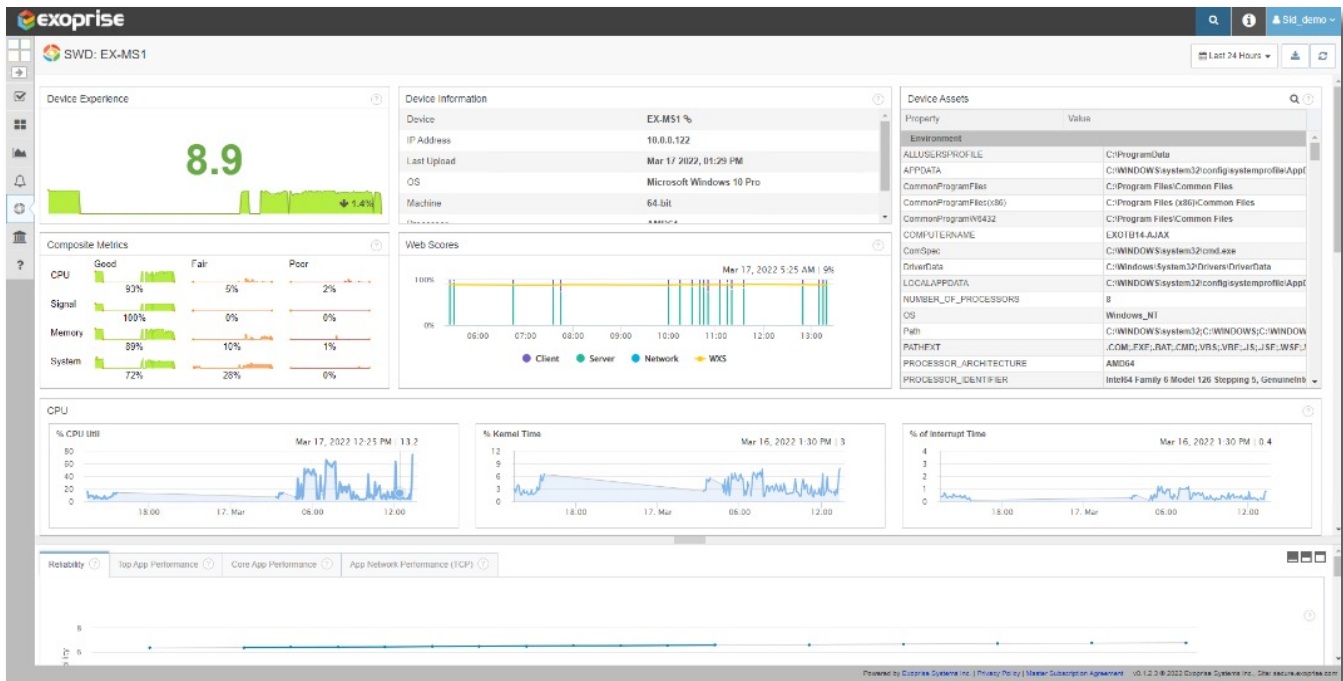
Figure 5: Service Watch Desktop Monitoring Desktop and Web Experience Score Together

Stabilize Slow Endpoint Devices – When productivity apps such as Outlook, OneDrive, Zoom, or Teams are either slow or crashing on endpoint devices, it impedes individual performance and leads to a frustrating experience. Exoprise collects and aggregates OS reliability data to identify and report applications causing grief immediately.

Real User Monitoring for Coverage, Not Advance Detection

Take an example of a pre-production environment. A company looking to launch a new product website cannot measure real user experience unless the site goes live.

Furthermore, real user monitoring alerts you of any problems with third-party applications and cloud services only when users are not idle and actively using the app.

For enterprise apps such as Microsoft 365, Salesforce, Workday, etc., -- uptime and availability are a must. Therefore, you want to know about all issues, such as outages or downtime, and inform your users in time.

In addition, there could be periods of low engagement with a given application. For example, people are usually not actively engaging with a site during the middle of the night or early morning. Unfortunately, RUM can't predict performance and measure end-user experience in these scenarios.

Here's a Better Together Solution:

Synthetics + Real-user Monitoring

No matter what monitoring technique you use today, don't stay complacent with either technology.

As Forrester analyst Andrew Hewitt likes to put it, **"We see synthetics and RUM as complementary capabilities right now for faster RCA [root cause analysis] and better proactive incident management."**

That begs the question: - Does your support team have a successful Digital Experience Monitoring strategy that includes active and passive monitoring?

Businesses looking to build and deliver a great employee experience should look beyond traditional DEM solutions. With increasing SaaS adoption and changing work anywhere policies, companies must ensure that they sustain themselves digitally in a competitive environment.

Complete Experience Picture – Digital Experience Monitoring from Exoprise uses a combination of synthetics and RUM to get a complete and robust picture of the end user's experience, system, underlying dependencies, and overall infrastructure.

Eliminate Blind Spots – Synthetic transaction monitoring can miss issues experienced by real users. RUM can miss outages, page errors, and third-party cloud problems. Combining both approaches remove barriers to successful application monitoring.

High Collaboration and Low MTTR – When application problems occur outside IT's control, it can lead to finger-pointing among support teams. DEM enhances team collaboration and eliminates finger-pointing. Synthetics can detect outages early on and isolate the bottleneck. RUM can help understand the actual impact on users during these types of occurrences.

Single Source of Truth – A unified system that combines and correlates both synthetics and real user monitoring data in a single pane of glass is easier to manage and generates a higher return on investment for the business.

Reduce Attrition – Troubleshooting device issues on time ensures that employees are more productive to contribute to the business and less likely to leave a job. Employ DEM into the HR stack to learn more about employee engagement with technologies and solve the Great Resignation issues.

Better Alignment – Digital Experience Monitoring is a corporate-wide initiative to align IT and business interests. As more apps move to the cloud, joint decision-making regarding the infrastructure shift and employee experience is more crucial.

"Due to Covid, our IT model has shifted from primarily supporting call center operations to supporting a significantly larger virtual environment. That was when we became interested in **better measuring digital experiences from the end user's perspective.** Synthetic sensors in our central data centers collect performance data on Microsoft 365, but we wanted an even more complete picture. **Together with a real user monitoring on-demand solution,** we can better understand the issues of our users at any geographic location,"
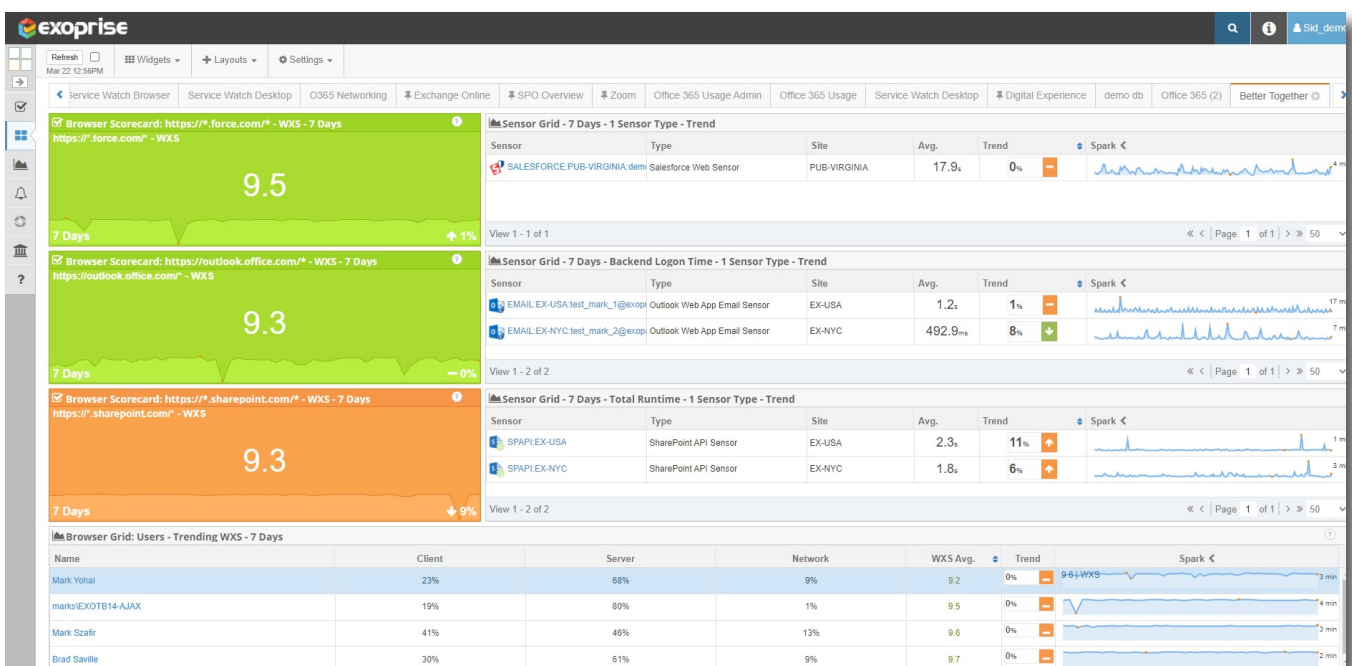
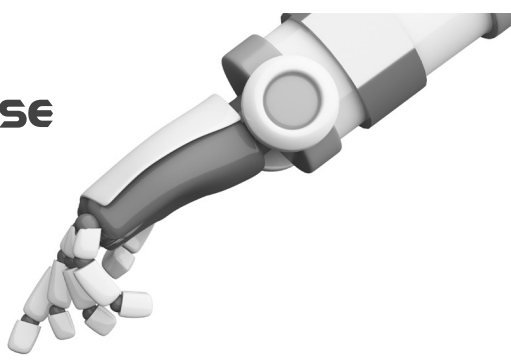**Kevin Santos, Senior Director of IT, NOC, BCD Travel**

Figure 6: Exoprise DEM Dashboard with Synthetic and RUM Metrics Together

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Better Together
Use Cases

Root Cause Everywhere – Real-user Monitoring for complete coverage and synthetics for advance notifications is the only way for IT teams to make sense of the growing surface area of multi-cloud, hybrid work and the demand for advanced collaboration tools.

Network Transformation – Both synthetic and real-user monitoring are critical to determining if current or past network transformations are getting the job done. SD-WAN, cloud or premise-based proxies, VPNs, and ISP insights will benefit from the active user emulation that Exoprise CloudReady synthetics provides. Combined with Exoprise Service Watch RUM for complete coverage enables elevating real-user telemetry to the responsible network administrators ensuring no stone is left unturned.

Monitor ALL of Microsoft 365 – The growth in adoption of Microsoft Office 365 means IT teams need to measure the user experience of the Microsoft 365 application suite and service. And this includes integration with all of the services IT is responsible for such as; Single Sign-On (SSO), Client Access Security Brokers (CASB), and Secure Access Service Edge (SASE). The ability to monitor the digital experience of Microsoft 365 including Microsoft Teams with synthetic and real-user monitoring is the cornerstone of the Exoprise platform.

Global 24/7 Monitoring – When employees in different geographic regions connect to third-party cloud or internal proprietary apps, you need synthetics + RUM around the clock. Ensure global Internet insights from the VPNs to the ISPs and Internet health, synthetically from every vantage point. Combine that with passive monitoring to ensure digital experience scores for every branch and home user.

Synthetics + RUM In One Monitoring Platform

Derive real value for your monitoring teams and employees by embracing the Exoprise Digital Experience Monitoring platform including CloudReady and Service Watch. Gain end-to-end visibility into employee engagement levels and continuously improve their digital experience.

SYNTHETICS	RUM
Availability and Uptime	Observability
Ease of Setup. 50+ sensors for Microsoft 365 and Enterprise Apps.	Secure Browser Extension for Chrome and Edge
Early Outage Detection	Easy Desktop agent Deployment
Proactive Incident Management	Faster RCA
SLA Compliance	Coverage for Desktop and Browser Issues
Continuous 24*7 Monitoring	XLA Compliance
Baseline SaaS Performance < 5 Minutes	Actual and Live Experience Monitoring
Pre-Production Tests	Baseline Digital Experience Score < 5 Minutes
Competition KPIs and Actionable Insights	Production Tests
Cloud Performance and Service Visibility	Business KPIs and Experience Insights
	Location Independent Experience Visibility

Get Started
With Exoprise Today

There are massive benefits to combining synthetics and real user monitoring. when employees encounter problems with SaaS applications and call their support line, they don't want to hear – The site is up and running at my end!

Workers need better assurance than that. When time is critical for companies trying to stay competitive and go to the market first, they need to prioritize employee experience. So, where should an organization start?

Free Trial

Get the best of both worlds in one single Exoprise platform and start a **free 15-day trial.** DEM offers excellent employee experiences and valuable business outcomes.

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