



How eG Enterprise
addresses the 7 key needs
of digital workspace
professionals



2020/21: A pivotal period for digital workspace deployments



The Covid-19 pandemic forced most people to work from home. Some organizations had to deploy digital workspaces from scratch. Others had to scale their deployments in a hitherto unforeseen manner.

With remote working and EUC technology uptake likely to continue beyond the COVID-19 crisis, the shift to remote and hybrid working will become the normal. At this time, organizations who have turned to virtual desktops and applications are now looking to address the challenges of supporting remote workers and ensuring a great digital employee experience (DEX), whilst addressing the demands of the business and making sure key needs such as security are addressed.

eG Innovations and xenappblog conducted a full survey released in Spring 2021 covering key questions regarding the use of Digital Workspace technologies covering Citrix Virtual Apps and Desktops, Citrix Cloud service, Microsoft Remote Desktop (RDS), VMware Horizon, VMware Horizon Cloud Service, Microsoft Azure Virtual Desktops, Amazon WorkSpaces, etc. The results of this survey highlighted some of the key needs and challenges of digital workspace professionals.

This eBook discusses how the eG Enterprise application and infrastructure monitoring solution addresses these key needs and challenges.

7 Key findings about digital workspace technology deployments and IT operations needs



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- 1 54% of organizations are deploying **multiple different digital workspace technologies** in parallel. While on-premises deployments of Citrix and VMware Horizon are popular, cloud deployments of these technologies and other DaaS services like Microsoft Azure Virtual Desktop (previously called WVD) and Amazon WorkSpaces and AppStream are also being deployed.
- 2 **User experience monitoring** is the number one focus of digital workspace professionals. 33% of organizations assess the ROI of monitoring tools by the improvement in user experience.
- 3 Getting **end to end visibility** of the digital workspace service delivery chain is a challenge for most organizations. 68% of organizations are using 2 to 5 monitoring tools, while 11% are using 5 to 10 tools. 87% of the time, the problem was not in the digital workspace track itself. Hence, visibility across the entire service delivery chain – network, data center, end user, applications, etc. – is very important.
- 4 The primary reason why organizations are deploying monitoring tools is so that IT admins can be **proactively alerted** to problems.
- 5 Digital workspace admins are **spending too much time troubleshooting** problems. Their IT help desks are not effective 50% of the time.
- 6 It has become more difficult to **troubleshoot problems** effectively. Built-in monitoring capabilities in the digital workspace stacks are not sufficient. Only 24% of admins are happy with the built-in monitoring tools.
- 7 During the pandemic, 41% of organizations have had to **accommodate more users** in their digital workspace deployments. Growth, whether predicted or sudden, brings challenges for IT teams to handle.

1 Monitoring of multiple digital workspace technologies from a single console is growing in importance

Over 54% of participants of our digital workspace survey indicated that they are using more than one digital workspace technology in their organization.



Each of these technologies has built-in monitoring tools that provides insights into their technology stack, but organizations deploying multiple different technologies will need a consistent and unified way in which they can monitor, diagnose and report across all these technologies. Multiple, independent and diverse monitoring consoles make the IT operations team's job manual, people-oriented and error-prone.

Therefore, support for all digital workspace technologies in use is an important criteria when considering monitoring tools.



eG Enterprise is a single pane of glass for all digital workspaces

eG Enterprise provides a single integrated web console from where organizations can monitor, diagnose and report on all the popular digital workspace technologies. Monitor every layer, every tier supporting your digital workspace from a web console or a mobile app. The same universal agent technology can be used to monitor Citrix (on-premises and cloud), VMware Horizon, Amazon WorkSpaces, Amazon AppStream and Microsoft Azure Virtual Desktops.

The use of a unified monitoring solution across digital workspace technologies allows:

- Runbooks to be created for IT operations
- Easy integration of monitoring with ITSM and Service Desk tools
- Reports and dashboards to be configured in a consistent manner across different technologies
- Simpler usage model with a shorter learning curve for IT admins
- Avoid lock-in and change workspace providers without disrupting monitoring and help desk processes

“With a host of support for new features and products, user experience focused metrics, dashboard enhancements, new reports and more, eG Enterprise is uniquely positioned to address digital workspace user experience challenges and performance problems.”

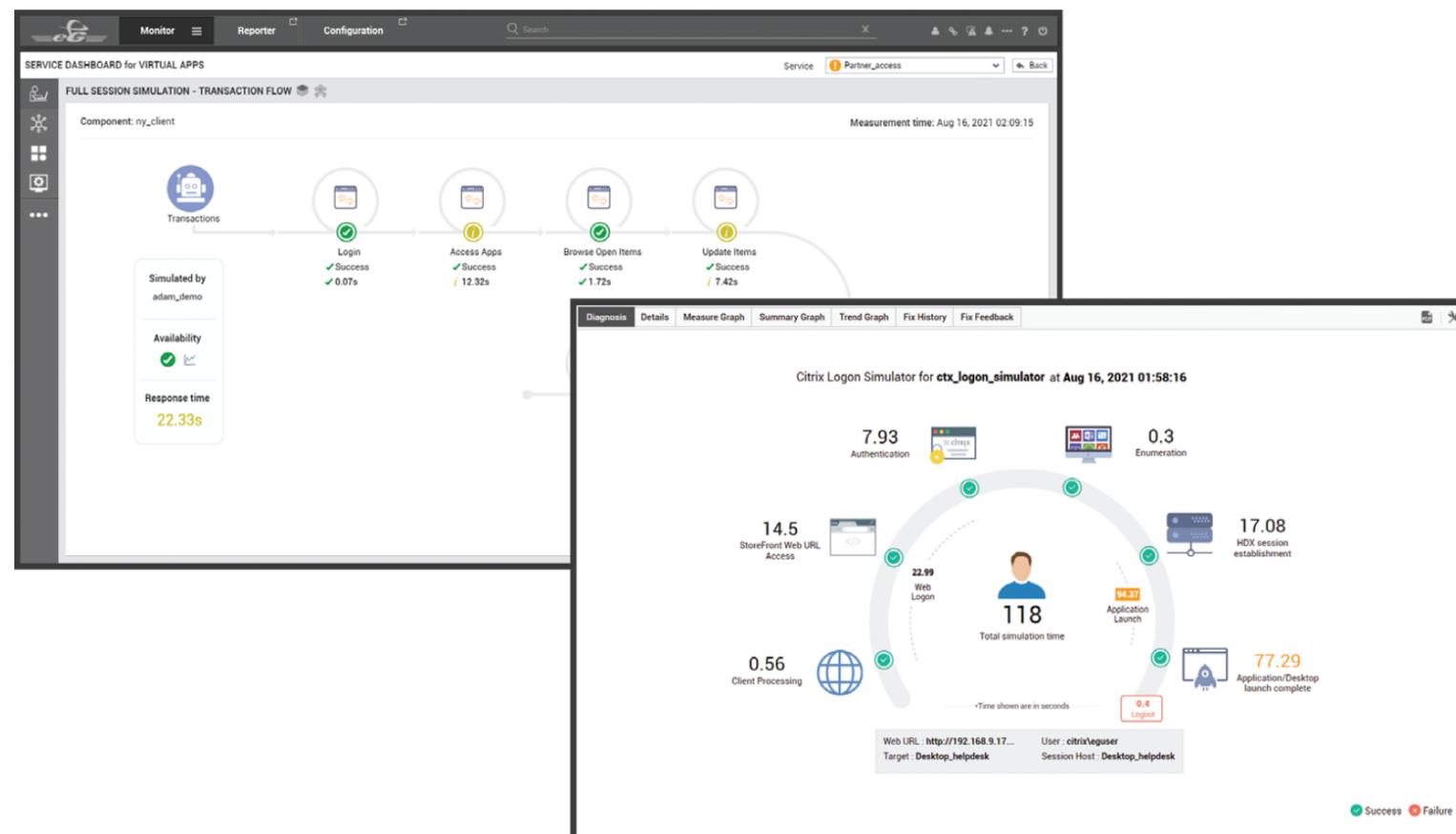


George Spiers
Citrix Technology Professional - Citrix Architect

2 User experience monitoring is the #1 focus of digital workspace professionals

Historically, performance monitoring has focused on resources such as CPU, memory and disks. 46% of respondents to our survey report that digital user experience monitoring which includes tracking service availability, logon times, application launch time and screen refresh latency is their number one focus when it comes to performance monitoring.

Conventional IT monitoring tools do not have digital workspace awareness. While they can report on service up/down status, they do not have the capability to track the different aspects of user experience such as logon times, application launch times, screen latency, bandwidth available, etc.



Monitor all aspects of user experience with eG Enterprise

eG Enterprise uses a two-pronged approach to user experience monitoring:



Synthetic monitoring emulates user activity and tracks service availability and response time by emulating users accessing their digital workspaces. The simplest form of simulation emulates users logging in and logging out to their workspaces and reports on service availability and response time. A more holistic simulation emulates a full user session including user activities within their virtual app or virtual desktop sessions.



Real user monitoring involves passively tracking logon times, session latencies, disconnects, application launch times etc. This is done using agents that integrate with vendor APIs and OS APIs to collect key metrics of interest about virtual channels, application launch and even web URLs accessed.

“Users get frustrated and productivity drops when their desktops and applications run slow. We had searched a long time for a tool that would give us visibility into individual Citrix user sessions, including application-specific details. Finally, we found what we needed in eG Enterprise.”



Patrick Vanderbauwede
ICT Manager, RSVZ

With user experience monitoring in place, you can

- ✓ Proactively learn of problems before users do
- ✓ Know when logon time is slow and also why: AD authentication, VM start, profile loading, GPO processing, etc.
- ✓ Get historical insights give admins what they need for post-mortem analysis
- ✓ Track connection quality indicators that help differentiate times when workspace access is slow vs. when user connectivity is a problem

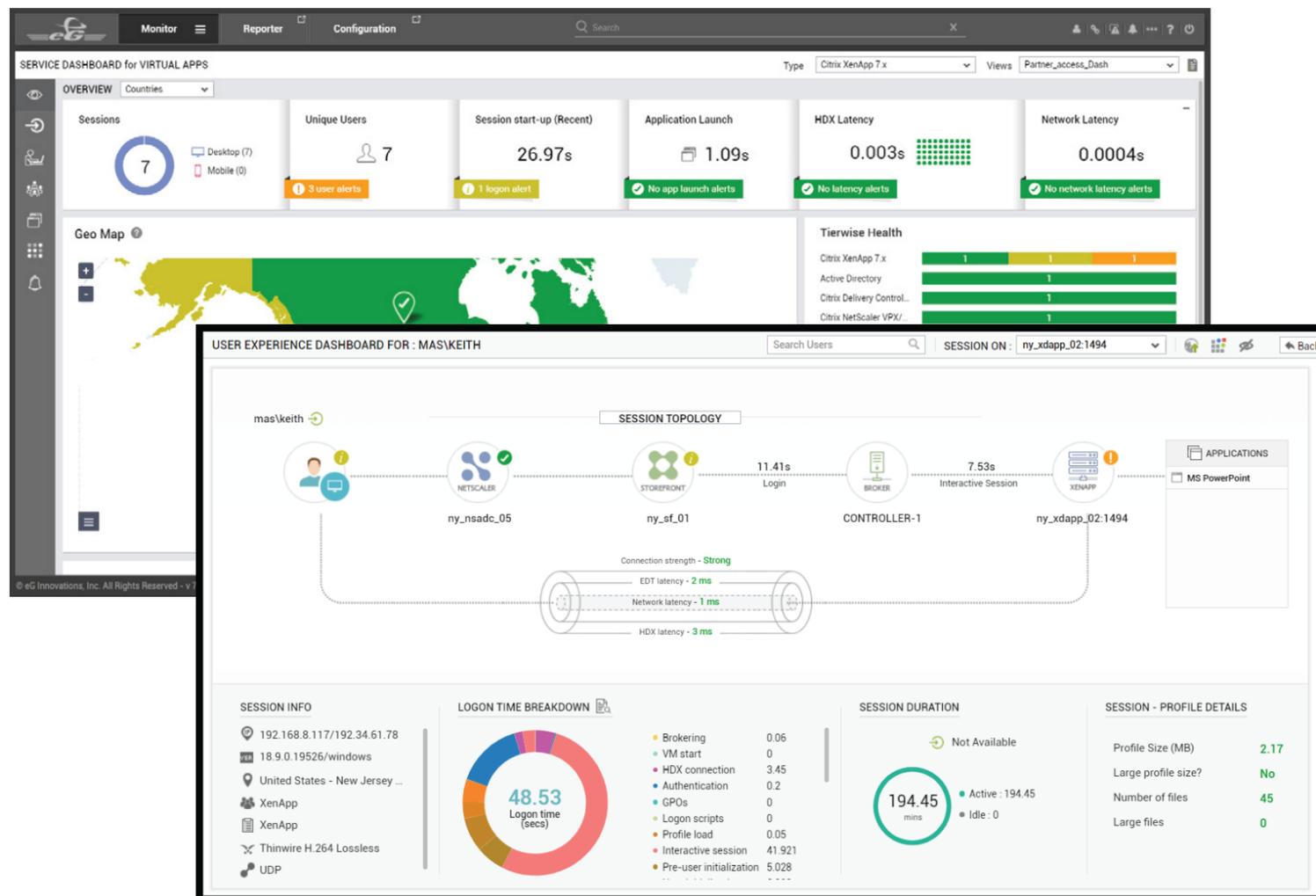
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Getting end-to-end monitoring is a challenge for most organizations

Digital workspaces involve many tiers of hardware and software. There are load balancers, VPN engines, web access stores, connection brokers, streaming servers, license servers, etc., all of these have to work well for the virtual app or desktop to work well. In addition, these tiers often run as virtual machines on-premises or in the cloud.



Slowness in the virtualization or cloud infrastructure or underlying storage can affect user experience. Network bandwidth and connectivity issues also affect user experience. To identify what is causing a problem, an end-to-end view covering every layer and every tier of the service delivery chain is necessary.



50%

of the organizations see a need to monitor beyond the digital workspace stack.

68%

of respondents to our survey note that they need 2 to 5 monitoring tools. 11% need more than 5 monitoring tools for their digital workspace service.

eG Enterprise provides visibility into every layer and every digital workspace tier

- Our universal monitoring has embedded expertise to monitor all the digital workspace tiers and the underlying supporting infrastructure. The metrics we collect are specialized for each tier and are designed to provide early warning indicators and proactive alerts of problems. An elegant layered stack representation model for each tier ensures that IT admins do not get a deluge of metrics to analyze nor do they have to scroll through lengthy grid views to see what is essential. What's more they see a consistent look and feel when monitoring different digital workspace technologies – on-premises or in the cloud.
- Our service topology views provide an at-a-glance view of the entire service delivery chain. Administrators can easily see where the potential problem areas are. Color-codes for each tier help administrators prioritize where the root-cause of problems are. Drilldowns from the topology views provide the additional insights needed to quickly troubleshoot and fix issues.

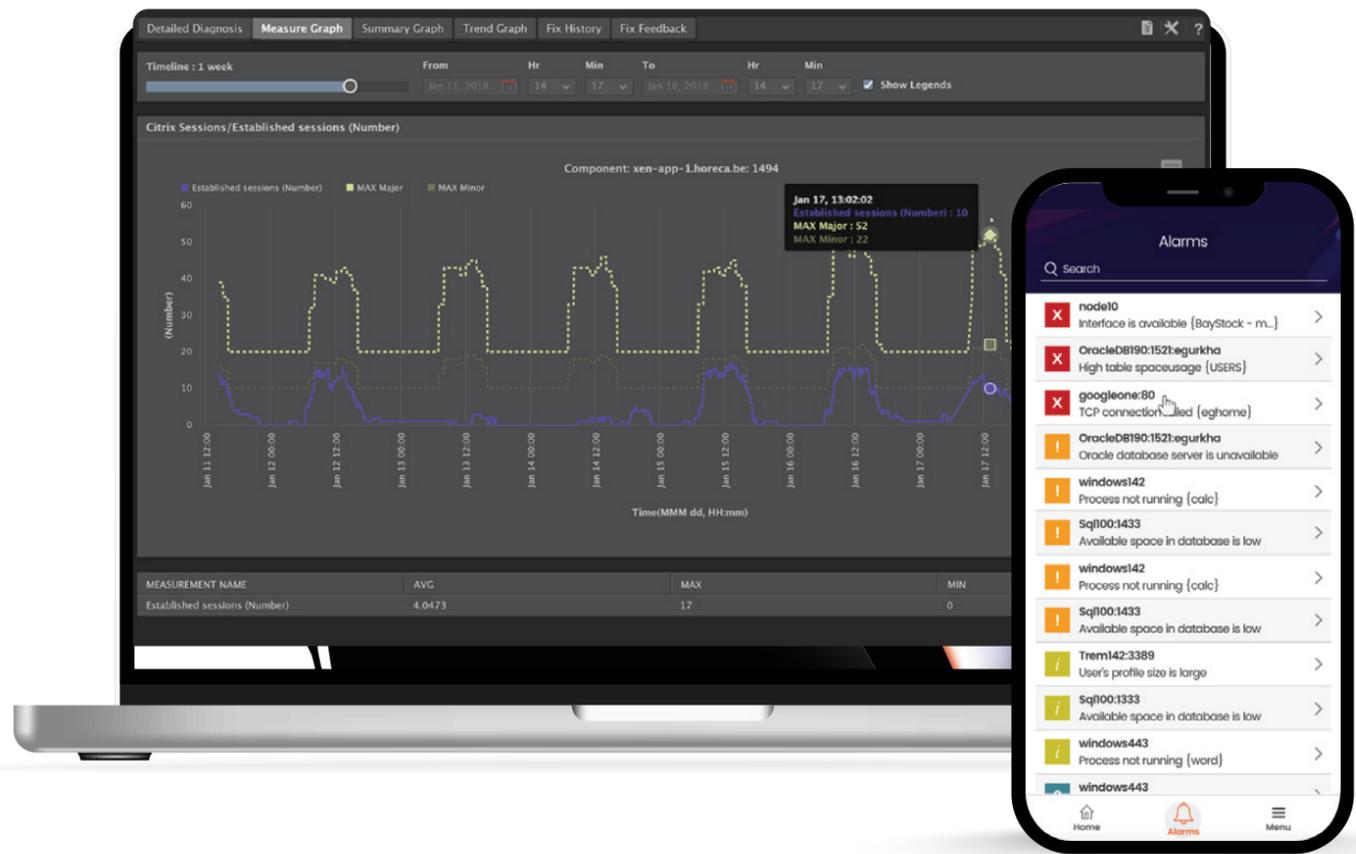
“Previously, we had to run after incidents and perform very complex analysis to prove the root cause and its effects. Today, it's just a click in eG Enterprise.”



Thomas von Jan
Department Head of IT Frontend Systems, DACHSER

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Proactive alerting is an important reason why digital workspace admins are deploying monitoring tools



“Due to eG Enterprise software, Equalit has made a distinctive turn-around from reactive to proactive monitoring. This was by far the biggest benefit to us.”



Martijn Langer

Coordinator Operations & Servicedesk, Equalit

33% of respondents to our survey believe that executive management now has a greater focus on digital workspaces as they supported remote employees working from home. Proactive monitoring allows IT admins detect issues before they become business impacting.

To a degree, synthetic monitoring tools can provide early detection of problems since they check the health of the service delivery chain 24x7. For example, a logon problem can be detected at 3am in the morning and fixed before 7am when users connect to the service. At the same time, synthetic monitoring is not sufficient since it detects problems only after the service is affected.



To be truly proactive, IT admins must track early warning indicators – such as memory leaks, process handle leaks, TCP connection growth, increased latency in brokering or disk access slowdowns etc. Many of these metrics may worsen over time. For example, memory leaks on print servers can impact critical healthcare printing services such as printing drug labels.

Machine learning a key for eG Enterprise’s proactive monitoring

eG Enterprise embeds an AIOps platform that analyzes millions of metrics in real-time, correlates between different metrics, logs, and traces, and prioritizes alerts, so IT admins can focus on the key problems in their infrastructure, rather than be distracted by their effects.

A key to proactive monitoring is an auto-baselining capability that analyzes past history of metrics and uses time of day, day of week patterns to estimate what the baselines should be in the future and provide anomaly detection. When any metric violates its auto-computed baseline, IT admins receive proactive, early warning alerts.

Auto-baselining also greatly simplifies operation of the monitoring solution. You no longer have to configure thousands of thresholds and deal with hundreds of false alerts. Just let the monitoring software learn your norms and alert you about abnormalities.

Besides auto-baselining, eG Enterprise also includes auto-discovery, auto-correlation, auto-ticketing, auto-diagnosis and auto-remediation capabilities that make the job of digital workspace professionals easy. Benefit from eG Enterprise's right-sizing, optimization and forecasting capabilities to get the most out of your digital workspace assessments.

5

Digital workspace admins are spending too much time fire-fighting problems



“The ROI of eG Innovations exceeded our expectations. Not only did we get those chargebacks reduced, we also benefitted IT as a whole because help desk tickets weren't created and time management was a lot better-- we weren't spending hours trying to pinpoint issues, we could reallocate those resources to other, more important activities.”



Peter Dinh

Senior Virtualization Engineering Lead, eBay Inc.

47% of IT admins are spending over 25% of their work week troubleshooting routine problems. Of these, 18% spend over 50% of their time in fire-fighting problems. The result is over 40% believe they are not getting to explore new technologies, and 31% believe they are overworked and are not getting enough help.

Part of the problem is due to the ineffectiveness of the help desk. 51% of respondents believe that help desk staff are not able to resolve issues at least 50% of the time. This is partly down to needing too many tools to get end-to-end visibility. Another reason is that many of these tools are too complicated for help desk staff, who are not digital workspace experts.

eG Enterprise empowers help desk staff to triage problems quickly and effectively

eG Enterprise is the only monitoring tool that provides multiple topological views of the digital workspace infrastructure.

- Service topology views map every layer and every tier supporting the service and the inter-dependencies between them. This topology is auto-discovered, so configuration is real easy. Color cues make it easy for help desk staff to determine where the real problem lies and where the effects are. The color codes are based on a patented auto-correlation and root-cause diagnosis engine that eG Enterprise embeds. Using knowledge of all the inter-dependencies in the infrastructure, eG Enterprise clearly highlights the areas that the IT team needs to focus on. As a result, help desk staff can triage problems quickly, MTTR (Mean Time To Resolution) is reduced and service uptime is enhanced.
- Session topologies provide a view into just the chain of systems and applications supporting a specific session. Help desk staff can use this view to spot why a specific user's session is slow.

6 Troubleshooting problems has become tougher



With the multitude of new technologies being deployed, digital workspace deployments have become more complex to monitor and administrator. At the same time, with work from home being a common use case, external factors (internet connectivity, home network, etc.) have added to the challenge. That IT admins too have had to work remotely makes the problem worse!

Over 1/3rd of digital workspace professionals feel that troubleshooting is a bigger challenge now than ever before.

Increasing expectation of service levels by users and an increasing focus on digital workspaces by executives has meant more pressure on digital workspace professionals. In many cases, troubleshooting must be done after the fact. E.g., a user may complain that their logon at 2am was slow and their virtual desktop may no longer be available on the network. In a similar vein, a server may have to be rebooted because it froze, and the IT admin must perform post-mortem analysis of the problem.

eG Enterprise provides the insights needed for effective post-mortem diagnosis

Monitoring of every tier of the infrastructure has been carefully designed to capture the most important metrics that are indicators of problems. Besides collecting metrics, when problems occur, eG Enterprise also runs detailed diagnosis checks automatically. These checks collect additional detail that is critical for quickly troubleshooting a problem. E.g., when a user's logon is slow, what GPOs were processed and how long did each one take? Just prior to a server reboot, was there any usual activity and who caused it? Details like these are collected and logged in eG Enterprise's historical database for post-mortem diagnosis.

Admins have full control over how long the data resides for. Granular configurations are possible. The same console that is used for live monitoring also provides reports for historical analysis. Context sensitive help provides recommendations on what actions can be taken to alleviate a problem.

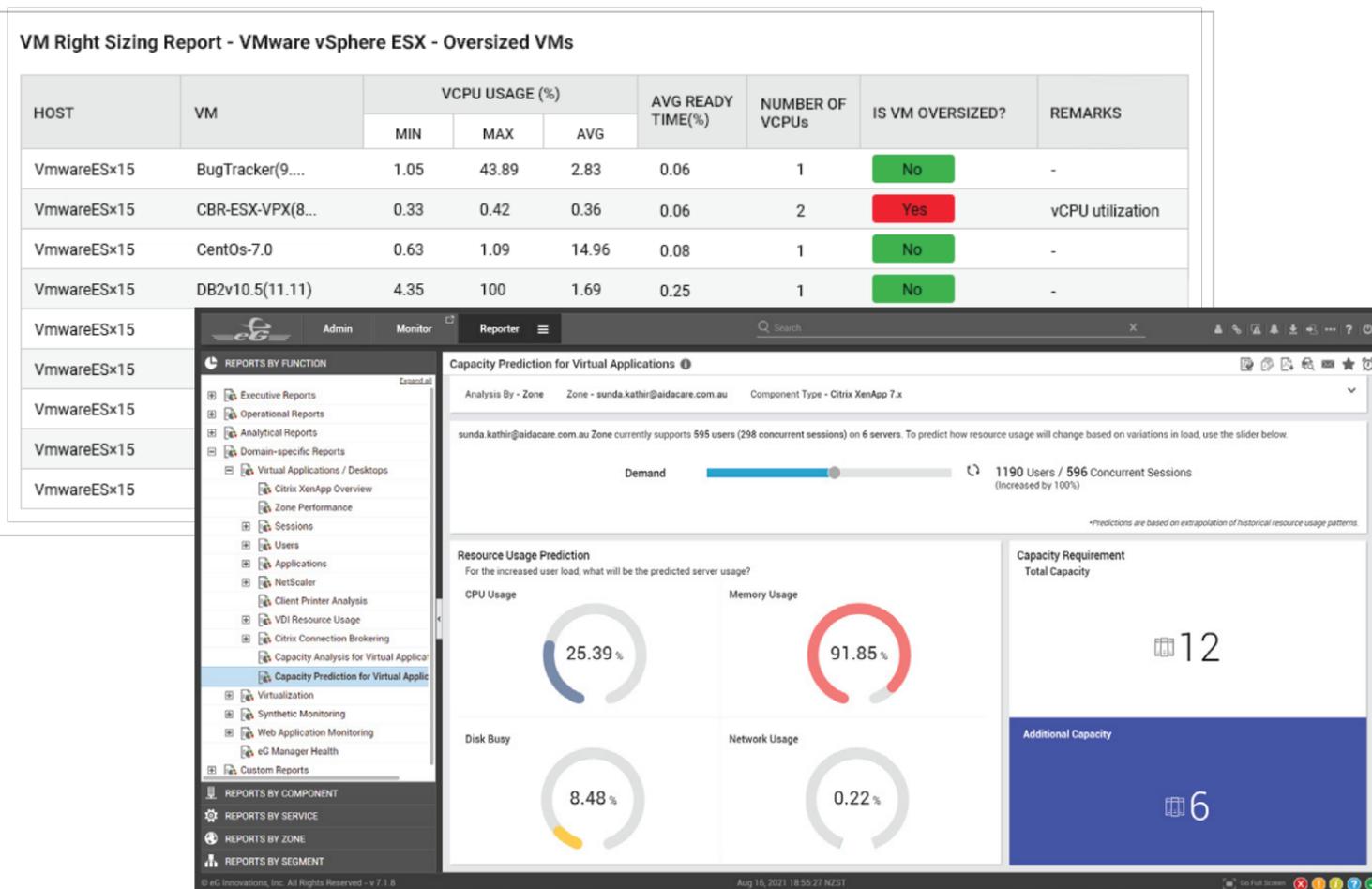
“Being able to dig into issues and find the cause with so much ease is something I am seriously impressed by after using eG Enterprise. It's even possible to dive another level deeper and run a code-level inspection.”



Johan van Amersfoort
Technologist EUC & AI at ITQ

7

User-base growth makes capacity management challenging



83% of organizations deploying eG Enterprise saw value within the first month of installing it.

TechValidate
Survey of 100+ customers

The pandemic caught most organizations off-guard. No one had anticipated 100% of employees working remotely. The sudden increase in workload strained most IT organizations and digital workspace deployments were affected more than most.

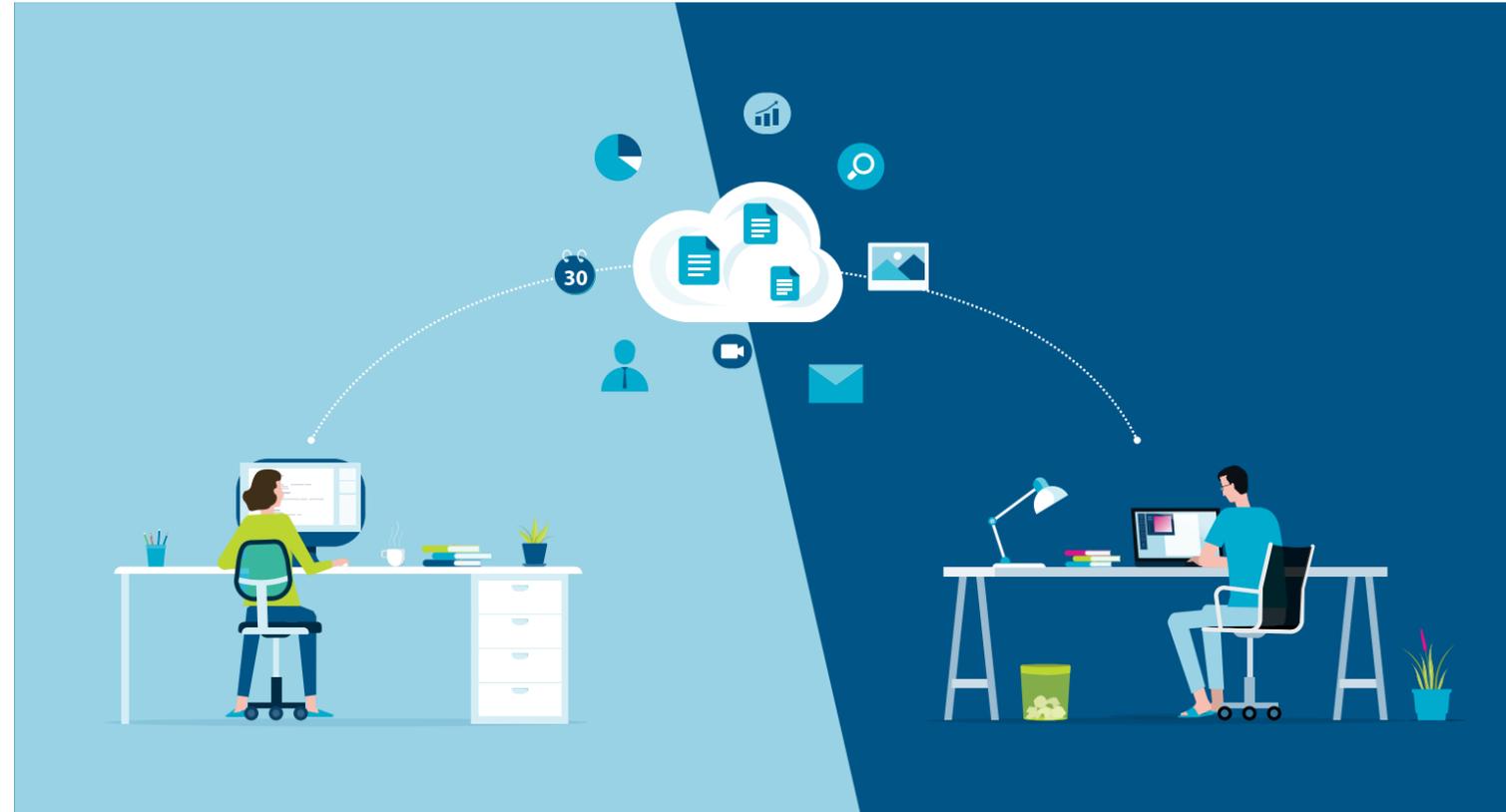
Increasing focus of organizations on keeping budgets tight also mean that digital workspace professionals have to find ways to do more with less. They also must look into how to get the most out of their current investments, by increasing user density on each system.

Empirical reporting and analytics help capacity optimization and planning

Embedded analytics in eG Enterprise analyzes the millions of metrics collected and provides insights and reports that digital workspace architects and managers find extremely useful. Analysis of usage patterns and trends reveals who the top resource consuming users and applications are. By analyzing these users and applications, IT teams can determine ways to optimize their deployments. Examples include blocking access to non-corporate web sites from digital workspaces, not allowing users to deploy database applications on their desktops, etc.

- Right-sizing**
reports in eG Enterprise highlight VMs that are under and oversized in the infrastructure. Immediate action must be taken to address such inefficiencies.
- Capacity prediction**
reports highlight how many more servers does the organization need to accommodate an expected increase in users.
- Forecasting**
reports can be used to estimate when systems may run out of capacity in the future and to plan in advance.
- User Productivity**
reports that highlight user active and idle time patterns, applications accessed and resources used.

Why eG Enterprise is the preferred choice for digital workspace deployments



- 1 **Scalable, 100% web-based architecture** built on web technologies. No thick client interface, no need for multiple consoles, scalable to handle deployments with tens of thousands of users.
- 2 **Embedded domain expertise** in monitoring digital workspace technologies. Hand in hand upgrades as workspace architecture changes. Support for Citrix HDX/EDT, PCoIP, Microsoft RDP, NICE DCV, VMware Blast and other protocols, support for AppLayering, WEM, GPU and other new technologies.
- 3 **End-to-end visibility across every layer and every tier** including network, virtualization, cloud, storage, databases, etc.
- 4 **Elegant and simple user interface** integrated with an AIOps engine to make monitoring, diagnosis and troubleshooting easy and effective.
- 5 **Secure and multi-tenant architecture.** Agents do not listen on TCP ports. SAML, SSO and 2FA authentication options, tight integration with Active Directories. Support for role-based access and personalized views. Supports SaaS and on-premises deployment models.
- 6 **Unparalleled licensing flexibility.** Subscription or SaaS deployment model. Server-based or user-based licensing options depending on user density achieved.
- 7 **Follow the sun support model** with 11+ regional locations including local language support in many regions, ensures you get support instantly, wherever you are and when you need it.





About eG Innovations

eG Innovations is dedicated to helping businesses across the globe transform IT service delivery into a competitive advantage and a center for productivity, growth, and profit. Many of the world's largest businesses use eG Enterprise to enhance IT service performance, increase operational efficiency, ensure IT effectiveness, and deliver on the ROI promise of transformational IT investments across physical, virtual, and cloud environments.

For more information

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