11 Reasons
why eG Enterprise
is a must-have for
Digital Workspaces

User experience monitoring, insights from every layer and every tier, root-cause analysis, and right-sizing recommendations - all from one console.

11 Reasons why eG Enterprise is a must have for your digital workspace

01   Deepest integration with the latest digital workspace architectures

02   Full range of synthetic and real user monitoring options

03   End-to-end monitoring for true observability

04   Intelligent analytics and AIOps capabilities to simplify troubleshooting

05   Single integrated interface for all your monitoring needs

06   Automated incident management by tight integration with service desk tools

07   Built for help desk teams

08   Flexible licensing – user based or server based

09   Flexible deployment - 100% on-premises or SaaS deployment

10   Monitor enterprise applications accessed through your digital workspace

11   eG Enterprise is built for the entire team

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Digital workspaces and the need for observability tools

One of the highest priorities for modern IT is the deployment and operation of digital workspaces to support remote workers. Technologies like Citrix workspaces, VMware Horizon, or even plain old Microsoft RDS are being used on-prem by many organizations. Some are also trying cloud-based DaaS alternatives like Windows 365 Cloud PC, Azure Virtual Desktops (AVD), Amazon WorkSpaces and AppStream 2.0.

A big challenge with digital workspace technologies is that they are highly interactive. With virtual desktops and applications, keystrokes and mouse movements are sent from a user endpoint to a server/desktop in the data center and then presented in the user's console. To be effective, these technologies must provide low latency and be highly reliable, so users can work productively. Even a slight glitch in any of the different IT elements supporting a digital workspace service can result in screen freezes, session disconnects, slow screen refresh and so on.

This is where modern observability tools for digital workspaces help. There are dozens of monitoring tools that you can select from for your digital workspace service. These monitoring tools might look similar on the surface but there are significant differences between them.

Requirements of an Observability Solution for Digital Workspaces

○ Monitor user experience and proactively alert admins when users are likely to experience slowness.

○ Monitor every layer and every tier supporting the digital workspace service. After all, a glitch anywhere in the service delivery chain can result in slowness.

○ Auto-correlate performance across tiers and pinpoint where the root-cause of problems lie.

○ Recommend ways to right-size and optimize your digital workspaces.

In this whitepaper, we focus on eG Enterprise, the flagship observability solution from eG Innovations. Built based on decades of experience with digital workspace technologies, eG Enterprise is currently used to support some of the largest and most complex digital workspace deployments. This whitepaper presents 11 reasons why eG Enterprise is a must-have tool for any digital workspace deployment.
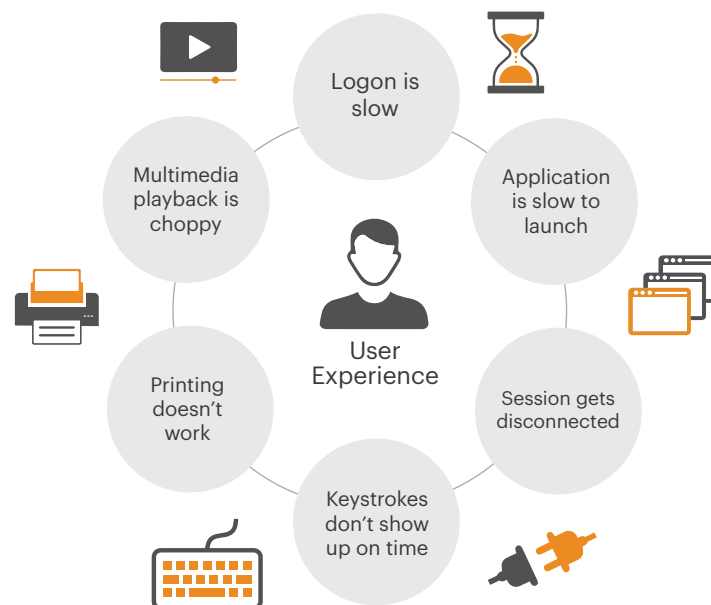

Figure 1: Often, user experience governs the success of any digital workspace initiative.

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While there are many monitoring tools available, very few are purpose-built for digital workspace architectures. Digital workspaces have unique characteristics, monitoring requirements and analysis and reporting needs. General-purpose monitoring tools that simply monitor resource usage are not sufficient for monitoring digital workspaces.

The digital workspace technology vendors offer point solutions for monitoring their own technologies. For example, the Citrix stack includes Citrix Director, VMware Horizon has VMware Aria Operations and Azure has Azure Monitor. These solutions have two major failings:

➤ **Limited visibility:** These solutions monitor some (but not all) of the elements of the digital workspace delivery chain. For example, Citrix Director provides insights into user sessions, but to get end-to-end visibility, you will need to use separate consoles to check the status of StoreFronts, Citrix ADCs, WEM, AppLayering, License servers, data stores and so on.

54% of organizations use more than one digital workspace technology. As a result, they need multiple monitoring tools, one for each technology.

Source: eG Innovations xenappblog survey on digital workspace adoption in the new normal

➤ **Lack support for multiple digital workspace technologies:** The recent eG Innovations xenappblog survey of digital workspace deployments reported that 54% of organizations have deployed multiple digital workspace technologies. Since Citrix Director only monitors the Citrix stack and Azure monitor only monitors AVD, you cannot get one console to monitor the different digital workspace technologies in use.

While there are 3rd party digital workspace-specific monitoring tools available, most have not kept pace with the evolution of digital workspace technologies. For example, modern Citrix deployments are based on the Citrix FMA (Flexcast Management Architecture) and the protocol in use is Citrix Adaptive Transport. Likewise, Citrix Workspace Environment Management (WEM) is widely used for intelligent profile and resource management and AppLayering for image management. To be effective, monitoring tools must provide insights into the performance of these latest technologies.

Citrix | Ready   **vmware READY**   **Azure**

IGEL | Ready   **NUTANIX READY**   **aws PARTNER Digital Workplace Software**

eG Enterprise is tightly integrated with the latest advances in the technology stacks of all popular digital workspace vendors. Most other digital workspace monitoring tools lack the detailed insights that eG Enterprise provides for these technologies.

? Who does Citrix use for monitoring their demo systems across the world?

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eG Enterprise is certified by the leading digital workspace technology vendors for their respective digital workspace stacks.

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Digital workspace monitoring with eG Enterprise

One of the biggest needs of digital workspace admins is to be proactive. They want the capability to detect issues before users notice and complain. User experience monitoring is a key for this. There are two different ways of monitoring user experience:

➤ **Synthetic monitoring** where user activities are performed by software robots from strategic locations, service availability and response time are measured and alerts generated if availability issues or slow responses are detected. Synthetic monitoring is critical for getting proactive alerts, especially during times of low load.

➤ **Real user monitoring** refers to passively collecting metrics about real users – their logon times, input delays when they perform keystrokes or move the mouse, delay in launching of an application within a virtual desktop, and screen refresh latency.
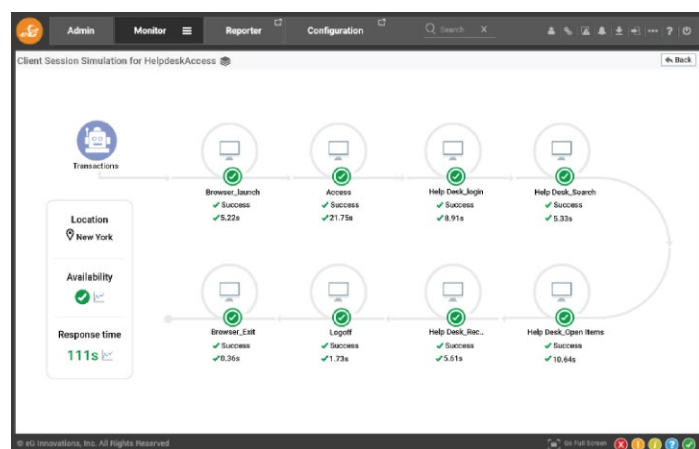
Figure 2: Full session simulation with eG Enterprise

Digital workspace monitoring tools must support both synthetic and real user monitoring. eG Enterprise includes a full suite of synthetic monitoring solutions. You can choose to deploy just simple protocol emulation, or configure real browser-based logon simulation. Browser-based logon simulation does not require any user recording of actions and is pre-built

for the popular workspace technologies. Full session simulation is a third option. Here, a complete user session (not just logon) is recorded and replayed and the latency at each step is reported. No other solution provides such a comprehensive set of synthetic monitoring options.


Figure 3: Monitoring real user sessions with eG Enterprise

Many monitoring tools require agents to be deployed on user desktops/clients to monitor users. Since most digital workspace technologies have built-in instrumentation within their stack to capture user experience, eG Enterprise integrates with this instrumentation and does not require agents on every single desktop/client. Going well beyond just monitoring user experience, eG Enterprise automatically collects insights into why user experience may not be up to the mark (e.g., which GPO is causing logon to be slow, is increased latency due to poor home WiFi, etc.). Automatic diagnosis makes the details available instantly to IT admins, without needing them to execute manual scripts to get details of a problem.

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Synthetic monitoring for Azure Virtual Desktop (also works for other digital workspaces)

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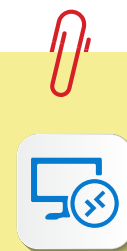
03	**End-to-end monitoring for true observability**

68% of digital workspace professionals needed 2 to 5 monitoring tools to get end-to-end visibility.

Source: *Digital Workspace & Performance Monitoring in the New Normal Survey Report*

Many digital workspace monitoring tools focus mainly on user sessions and the hosts on which these sessions run. However, the digital workspace service depends on many other tiers, and any bottleneck in these tiers also affects the service. For instance, in a Citrix deployment, the performance of the NetScalers, StoreFronts, License servers, Provisioning servers, and data stores can affect performance. Anomalies in the infrastructure tiers – network, server, storage, virtualization, etc. – also affect user experience. To be able to accurately pinpoint where the root-cause of slowness lies, end-to-end monitoring is required.

Very few digital workspace monitoring tools provide complete, end-to-end visibility into every layer and every tier of the entire digital workspace delivery chain like eG Enterprise does. As a result, IT teams often have to use many tools for monitoring and troubleshooting and diagnosis becomes a time-consuming, manual exercise.
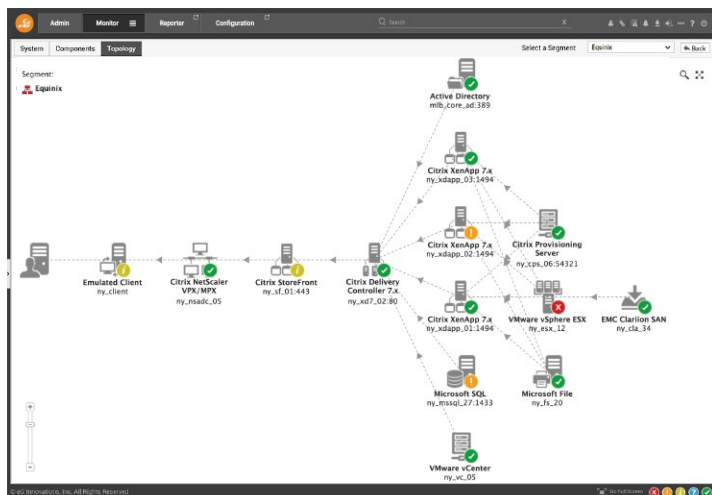
In comparison, eG Enterprise is designed to be the complete digital workspace observability and monitoring platform. It monitors everything from the user device to the application, including the network and underlying IT infrastructure. With over 500+ technologies supported in a single console, eG Enterprise is a true observability platform that doesn't just monitor, but proactively tells you what's happening and why.

> At Citrix, our mission is to deliver a superior user experience in both our digital workspaces and physical locations and events.
>
> With eG Innovations, we have an innovative solution we can use to manage and monitor our demo infrastructure in a simple unified way, which empowers our employees and partners to perform at their best and delight our customers.

Ed Duncan,
Technical Marketing Systems Architect, Citrix.

Figure 4: End-to-end topology of a digital workspace service

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Proactive monitoring helps eBay address IT challenges

04 Intelligent analytics and AIOps capabilities to simplify troubleshooting

There are many free open-source tools and real-time monitoring tools that give you hundreds of metrics and create beautiful dashboards but force you to spend hours analyzing the metrics one by one to deduce where the bottlenecks are in your infrastructure. Every minute that your digital workspace is slow costs your organization money and results in loss of user productivity.

eG Enterprise complements its in-depth monitoring capabilities for digital workspaces with several built-in AIOps capabilities. These capabilities make it easy for IT admins to proactively monitor and troubleshoot digital workspaces.

○ **Auto-baselining** uses machine learning to learn norms of metrics. These norms are used to detect performance anomalies and to proactively alert IT admins. Auto-baselining saves a lot of effort as IT admins do not have to spend hours configuring thresholds for each and every metric manually.

○ **Automated diagnosis** triggered in a context sensitive manner makes the right details available in real-time and for historical analysis. This means you do not have to be on the monitoring console to troubleshoot a problem. You get all the live and historical insights you need to resolve issues quickly. All the diagnostic data is stored in the eG Enterprise database, so post-mortem analysis can be done without the target server/desktop being accessible during the analysis. Since eG Enterprise automatically triggers diagnosis, IT admins do not have to manually execute any script-based actions, thereby saving time and effort.

○ **Automated root-cause analysis** eliminates guesswork and finger-pointing. eG Enterprise automatically determines what is causing the problem and what is a symptom resulting from it (e.g., an issue on a VMware ESX server is slowing down a Citrix Virtual App server and in turn is causing a user to complain that Citrix is slow). This greatly simplifies troubleshooting, allows IT admins to triage problems quickly, and cuts down the mean time to repair (MTTR).

Figure 5: Pinpoint the root-cause of problems with one click

How and why AIOps technologies help simplify and accelerate troubleshooting?

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Many monitoring tools have different consoles for different needs – one console for real-time monitoring, another for reporting, another for web-based access, yet another for synthetic monitoring and so on. Multiple consoles mean you must spend time manually analyzing and correlating performance data from each one. This is time-consuming and cumbersome.

eG Enterprise provides a unified web console from where you can monitor in real-time, analyze historical performance reports, track configuration changes, and get proactively alerted to problems and their root-cause. Since the console is web-based, the learning curve for IT admins is short.

The dashboards and reports are designed keeping in mind what digital workspace admins need.

○ A user experience dashboard shows all active users and their user experience.

○ A digital workspace view highlights how the core components of the infrastructure are performing and whether there are any bottlenecks.

○ The top 25 reports that digital workspace admins need are also available out of the box.

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[8 delightful UI features in eG Enterprise that make the user experience better](#)

Figure 6: eG Enterprise provides a single unified console for real-time monitoring, synthetic monitoring, reporting and analytics.

Your team doesn't live in a vacuum and neither should your monitoring tool.

That's why eG Enterprise comes with robust integration with the most popular service desks to automatically raise tickets when alarms are triggered and close these tickets when alarms are fixed. Give help desk staff immediate and complete access to information about every alert - from measurement value to detailed diagnosis, so problems can be tackled quickly and efficiently.

No manual action is required to ensure tickets are accurately logged, updated and closed in your service desk tools. Configure maintenance policies in eG Enterprise and automatically avoid tickets being generated in your service desk tool during maintenance periods.
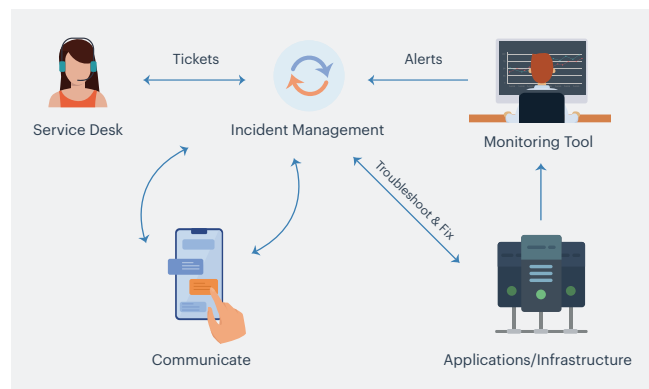

Figure 7: How automatic ticketing through ITSM integration works

Read more

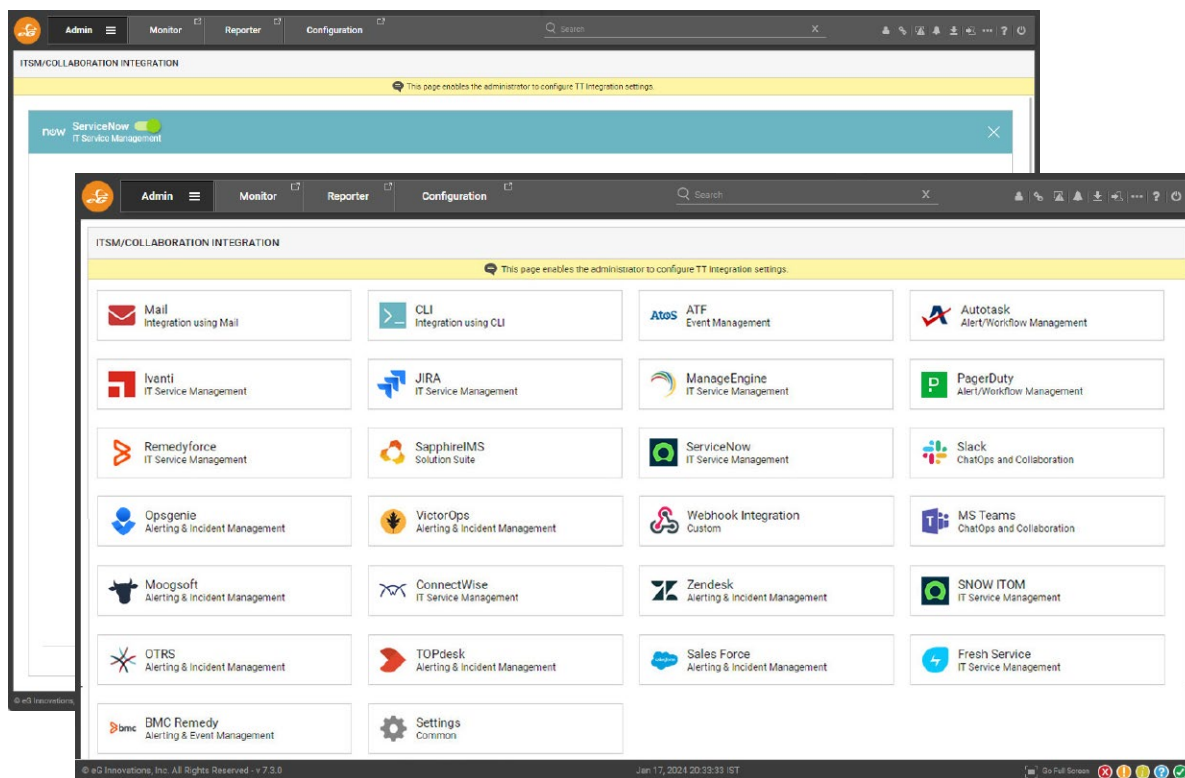[How eG Enterprise integrates with ServiceNow to automate incident management](#)

Figure 8: eG Enterprise has API integration with 25+ popular ITSM tools including ServiceNow

51%
of digital workspace admins believe that their IT help desks are not able to assist with problem triage at least half the time.

Source: _Digital Workspace & Performance Monitoring in the New Normal Survey Report_

One of the main reasons why help desk teams struggle to add value is that most monitoring tools are too complicated for them.

○ eG Enterprise is designed to be easy to use. The help desk team has instant access to eG Enterprise alerts and can triage quickly by seeing where the cause of a problem lies. They can involve the right technical team for troubleshooting and remediation.

A Healthcare Analogy

Most organizations have many specialized monitoring tools - one or more for the network, database, application, servers, etc. A general practitioner-like capability is totally lacking, so when a user says, "VDI access is slow," the ticket is assigned to the VDI team. VDI access may indeed be slow, but the user is not aware of the underlying infrastructure delivering the service. The problem could be in the network, in the virtualization platform, in storage, or in the cloud.

Help desk teams need a general practitioner-like capability that they can use to determine what is causing a problem and which team they can direct the problem to. The focus should not be on giving more checklists and decision trees to the help desk, but rather in providing them with tools that can empower them to troubleshoot complaints effectively and quickly. This is where eG Enterprise helps!

○ Help desk staff also have access to color-coded topology views that show an at a glance view of all the tiers involved in supporting a digital workspace service. By simply following the color cues, help desk staff can quickly and easily triage problems and direct a problem to the right subject matter expert (SME). This saves organizations several hours of valuable SME time and helps achieve lower MTTR.


Figure 9: Help desk staff can search by user name and zoom into a specific user's session and analyze latencies they are seeing and resources they are using.

○ With role-based policies in eG Enterprise, you can give help desk teams just the information they need to be effective and you can limit details to information that would be overwhelming for the help desk staff, or ones they could use incorrectly (e.g., remote control actions on key servers).

○ Customizable dashboards and reports in eG Enterprise can also be used to provide help desk teams ready access to key metrics. These dashboards can be displayed in kiosk (TV), toggling automatically between different dashboards.
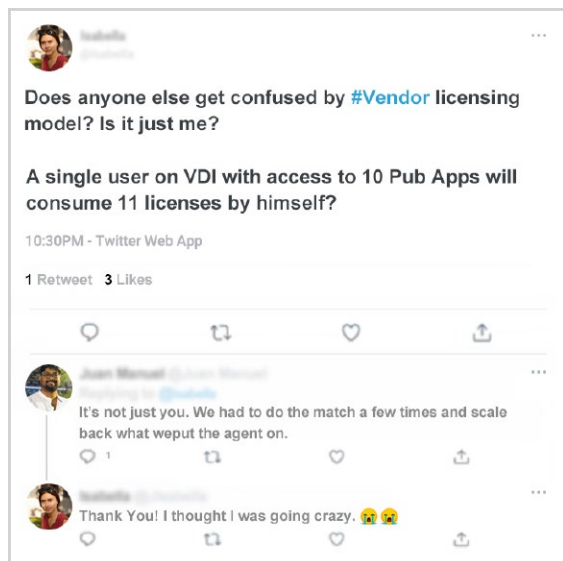
Read more
Hundreds of customers have received great ROI from using eG Enterprise by shifting many of the troubleshooting tasks to the help desk.
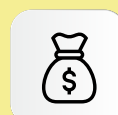
Many digital workspace monitoring tools are licensed by concurrent user sessions. A key problem with this is if a user is logged into two sessions – e.g., they are accessing two applications – this will count as two licenses.

To handle different types of workloads, eG Enterprise offers named user and concurrent user licensing. Named user licensing is ideal if you have a defined set of users accessing the digital workspace. Concurrent user licensing is ideal for organizations that have users in different shifts. You only license for the maximum number of users who are concurrently using the digital workspace at any time.

At the same time, eG Enterprise also offers you a server-based licensing option (for Citrix, VMware Horizon and Microsoft RDS).

If you have a high density of users to servers, you can get an even lower cost per user by using our server license model. And what's more, if you can accommodate more users per server, you don't have to buy new licenses.

License only for servers you choose to monitor, not for all the servers in your infrastructure, under a vCenter, or Active Directory domain. Use GPOs to control which VDI users are monitored by eG Enterprise and control your cost.

All eG Enterprise licenses are transferable across technologies. Licenses used for Citrix on-prem can be reused for monitoring AVD users in the cloud, should you migrate your digital workspace to the cloud. This avoids the observability solution becoming shelfware.

Read more
[Different types of licenses available for eG Enterprise](#)

MSP-friendly Licensing

Leverage our pay-per-use model for MSPs. Deploy in a multi-tenant model and save on hosting costs. You don't have to provision dedicated systems per client, nor do you need dedicated VPN connectivity to each client. At the same time, track KPIs for all clients and respond instantly. Learn more about MSP specific features in eG Enterprise [here](#).

Multi-Tenant
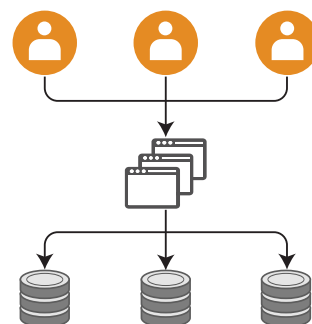
Citrix Monitoring Perfected with eG Enterprise
Cost per user is less than just one cup of coffee

Try it now

09 Flexible deployment - 100% on-premises or SaaS deployment

You can deploy eG Enterprise on-premises or use our SaaS offering – we give you complete flexibility to use whatever model works best for your business. On the other hand, many other monitoring solutions are cloud-only or employ a hybrid model with some data on-premises and some data in the cloud. Fully on-premises deployments, if supported, are not straightforward to deploy and maintain.

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Choosing between different deployment models for IT monitoring solutions

Deploying eG Enterprise on-premises is secure and easy. And you do not need expensive hardware to host the management server.

Licensing on-premises can be in a perpetual mode or in a subscription mode. In a perpetual mode, you own the licenses and can use the manager forever. In a subscription mode, the eG Enterprise license is limited to your subscription period.

No other digital workspace monitoring solution provides this array of choices for deployment.

Our SaaS offering is available on AWS and Azure. Our processes are SOC-2 compliant and our deployment architecture follows AWS best practices and is AWS Well Architected-certified. We also host management servers in different regions in the world, to address data residency and privacy requirements.

10 Monitor enterprise applications accessed through your digital workspace

If you suspect that users are seeing slowness because of backend applications, you can deploy eG Enterprise to monitor your enterprise applications as well.

eG Enterprise includes support for 500+ application technologies including SAP, PeopleSoft, MS Teams, SharePoint, Office 365, AllScripts, Cerner and others. This way, you don't just say "It's not your virtual desktop", you can actually show where the performance bottleneck lies.
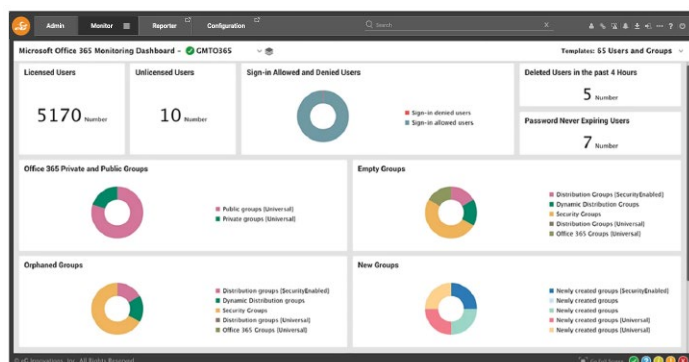
Figure 10: Monitoring dashboard for Microsoft Office 365

Read more

Monitoring Office 365 using eG Enterprise

How to monitor MS Teams using eG Enterprise

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eG Enterprise is built for the entire team

We believe that modern IT is a team sport and not about individual fiefdoms. eG Enterprise is built to be used by the whole IT team with granular role-based access controls so everyone from the service desk to the domain experts can use the tool to identify, triage and resolve problems faster. Other monitoring tools require a single IT expert to operate which might be fine for that individual, but not good for the company if the expert is out of office or leaves the job.

Our IT monitoring philosophy

At eG Innovations, we believe that modern IT requires observability into the entire IT delivery chain, from end user device to application to underlying infrastructure. You need to know why something went wrong, not just what went wrong. Furthermore, problem resolution is the responsibility of the entire IT team, not one or two individuals, so eG Enterprise has been built to be used by everyone.

How eG Enterprise helps with collaborative IT monitoring?

○ Role-based access and personalized views ensure that admins can see what they need and at the same time have restrictions based on their responsibilities.

○ Use alarm acknowledgements to communicate the resolution status to other IT ops personnel.

○ A site-specific knowledge base capability allows sharing of problem resolutions amongst the IT team, thereby avoiding the dependence on a few staff members.

○ Out of the box, correlated alerts eliminate finger-pointing. Every one on the IT operations team knows where the root-cause of problems are and where the effects are.
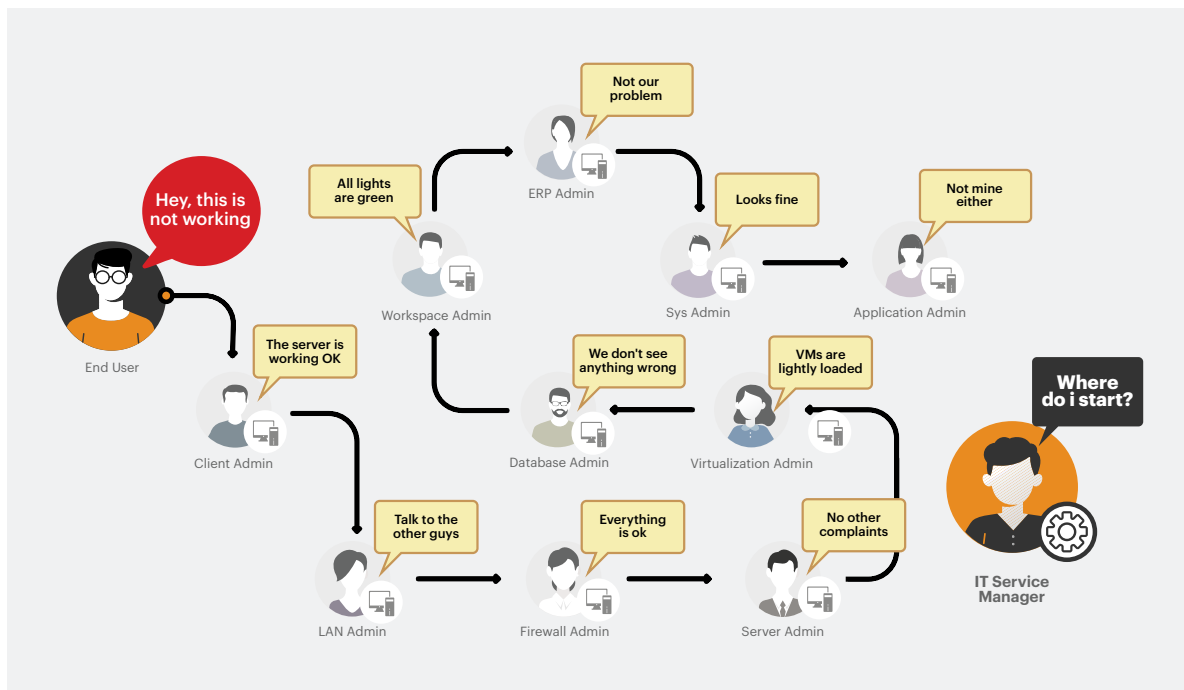

Figure 11: IT problem resolution is often a challenge because of the silo-oriented approach adopted by most organizations.

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There are always going to be questions when comparing different products. If you want to get into a more granular feature by feature comparison, please request a demo that is tailored to your requirements. Speak to the eG Innovations team in your region to schedule a demo.

? I have seen monitoring tools that offer high resolution monitoring. Monitoring frequencies can be as low as three seconds. Does eG Enterprise offer this?

By default, eG Enterprise is set to monitor your infrastructure continuously and upload metrics to the management server every 5 minutes. E.g., the network traffic over an interface is the total over a 5 min period, not an instantaneous value. The monitoring frequency is configurable, so if you absolutely need to collect metrics every few seconds, you can. Note that the responsiveness of the target device/server/application also plays a role here.

Remember that the greater the frequency of monitoring, more the overhead on the target infrastructure being monitored. Hence, keep this in mind when deciding what frequency you want to do the monitoring at.

Also note that unlike many other solutions, eG Enterprise performs comprehensive monitoring. While many solutions collect only the top 10 metrics from an application, eG Enterprise could collect hundreds of metrics, because our goal is to be able to unearth problems wherever they may be. Collecting more metrics more often would mean that you need to provision more space for the database.

Another factor to consider is that rarely are IT admins interested in fixing problems that just last a few seconds. A problem has to persist for a while before the help desk is alerted and this avoids a number of "false alerts". This is another reason why the monitoring frequency should not be too low for IT operations.

Our default measurement frequency is determined keeping all of these factors in mind. The flexibility to change the defaults allows IT experts who are troubleshooting a problem to increase the frequency of monitoring for a short period of time.

? Many monitoring tools can run scripts to perform routine processes like restarting a service. Can eG Enterprise do this?

eG Enterprise supports auto-corrective actions out of the box. There are default actions that can be turned on for simple actions like restarting a Windows service or a process. Domain-specific actions are also supported. For any OS, actions can be configured to cleanup disk space in temporary folders whenever disk space available is low. Admins can also configure their Windows agents to trim standby memory of the OS when free memory is low. On Citrix servers, admins can configure the agents to automatically logoff users if they stay disconnected for a long time. These are just some examples of auto-corrective actions available in eG Enterprise. At the same time, eG Enterprise also allows admins to provide their own scripts to initiate actions, if so desired.

Remote control from the browser interface is also supported. Pre-configured commands and custom commands are supported.

Role-based access can be provided to these commands, so for example, only SMEs are allowed the rights to perform these actions.

Rather than let customers download community scripts which are often untested or without support and which could also pose security risks, if customers find certain actions/scripts to be useful, we include these actions/scripts by default in our product suite, so they are fully supported and maintained by eG Innovations.

Interested? Try eG Enterprise today. You can get started in minutes by registering for our cloud-based trial here.

FAQs

? Most monitoring tools support IT service desk integration, what's the difference?

eG Enterprise has a tight, API-driven integration with multiple IT service desks that allow for automated incident creation, updation and closures. Many tools offer integration but often it is simple email forwarding where the alert email is forwarded to the service desk and no further updates can be provided.

Furthermore, due to the AIOps engine and automated root-cause analysis, eG Enterprise provides contextual information about the alert to explain why something has gone wrong.

Finally, using dynamic thresholds combined with machine learning to learn your IT environment's usage patterns, eG Enterprise reduces the number of false-positive alerts, which in turn reduces the number of tickets sent to your IT service desk.

eG Enterprise monitors user experience by integrating with different digital workspace technologies. So without installing any agent on a user's endpoint, eG Enterprise can highlight when a user's experience is poor.

? Can eG Enterprise monitor a WFH employee's home network and determine if the problem he/she is having is due to their home WiFi network?

If an agent is deployed on a user's endpoint, eG Enterprise can provide additional details regarding the issue: is it due to the CPU/memory usage on the endpoint, is it due to a poor WiFi connection in the user's home, or could it be due to a poor Internet connection?

? What is the cost of eG Enterprise for a digital workspace deployment?

eG Enterprise is very competitively priced. Typical pricing for end-to-end monitoring of a digital workspace is less than the cost of a cup of coffee per user per month!

When comparing the cost of different monitoring solutions, care should be taken about the licensing model. Is it licensed by concurrent users or user sessions? A user accessing ten applications could initiate ten sessions and a thousand such users could result in 10,000 sessions. Your billing in this case could be for 10,000 sessions, not a thousand users!

Also note that our AIOps technology, auto-corrective actions and synthetic monitoring capabilities are available as a standard part of our solution and there is no need to buy additional licenses or upgrade to a platinum product to get these features.

Furthermore, unlike other solutions, you can have as many users as you want using the monitoring and reporting console. There is no additional licensing by user for access to the eG Enterprise console.