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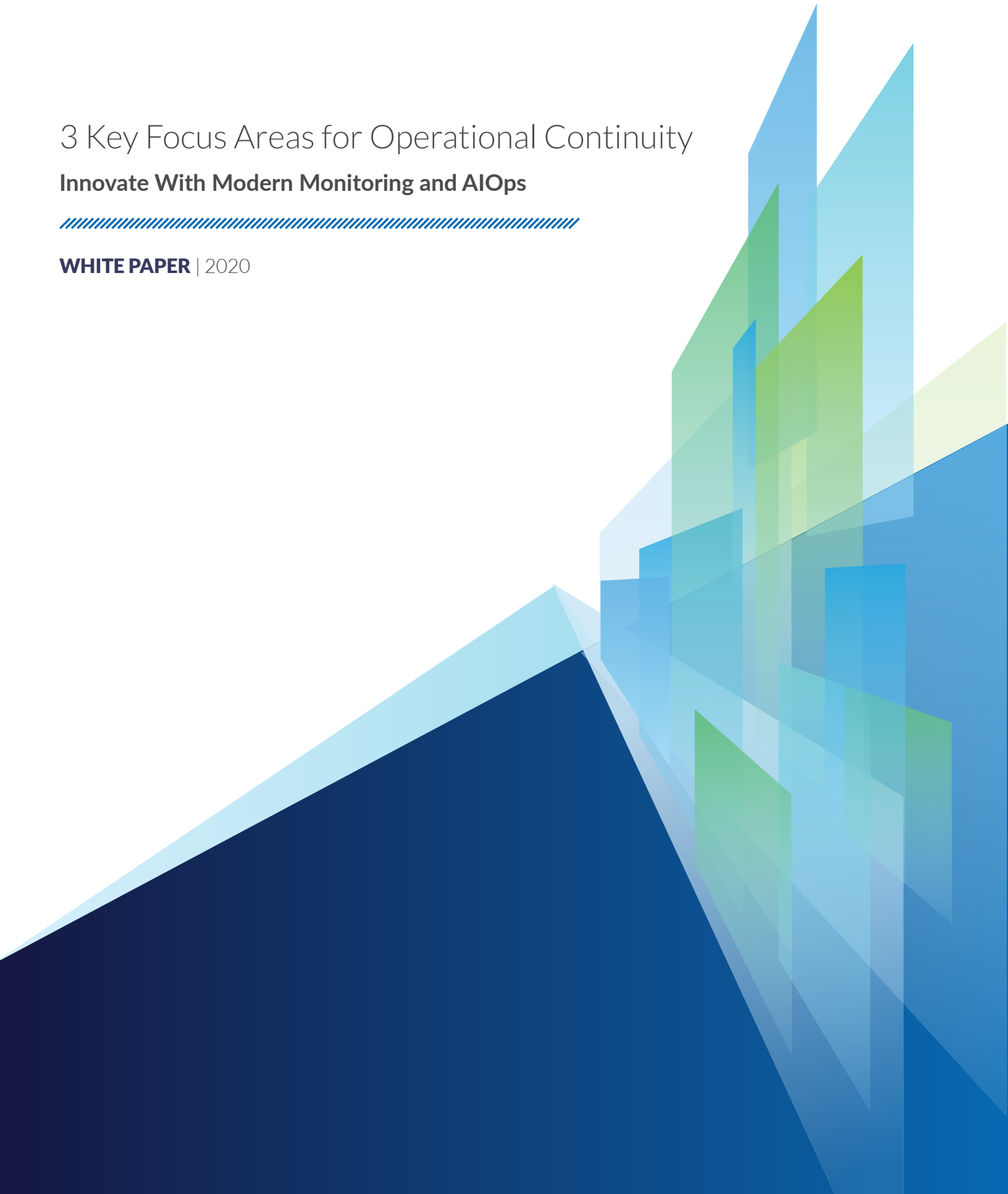
Own IT.

3 Key Focus Areas for Operational Continuity

Innovate With Modern Monitoring and AIOps

WHITE PAPER | 2020



COVID-19 has impacted the lives of almost everyone on the planet. Health and safety are obviously the top concerns. But as everyone knows, it has also severely disrupted businesses worldwide and has, specifically, created chaos for CIOs as they struggle to ensure operational continuity even as things change in an unprecedented fashion overnight.

Google has shared aggregated and anonymized insights from products such as Google Maps to enable communities to understand how movement patterns have shifted due to COVID-19. At the time of this writing, it reported that:

Transit stations were down 75% in the U.K. and 51% in the U.S.

Workplaces overall were down 55% in the U.K. and 38% in the U.S.

This may come as no surprise as governments imposed broad isolation rules and forced organizations to embrace remote working in the interest of safety. Importantly, the statistics reinforce the fact that lockdowns are being taken seriously. They also raise the question: Will things ever go back to the way they were? Of course, no one knows. But it's quite possible the answer is no. There are many reasons for this. Some employees have a newly discovered sense of autonomy, an improved work-life balance as they save time they used to spend commuting and have begun to question why they didn't make the transition to remote working sooner. For the IT department, in many cases, it means they will have to ensure their infrastructure and tools are capable of supporting higher volumes of traffic for sustained periods of time. It has also become more important than ever to help ensure operational continuity by immediately resolving IT issues and, where possible, preventing them before they even happen.

According to Gartner, "While customer service and support leaders are familiar with business continuity and disaster recovery planning, pandemic planning is different because of its wider scope and the uncertainty of impact. The global and dynamic impact of events such as COVID-19 also require planning for longer recovery times and many scenarios; because pandemic events are so fluid, things can change quickly and without notice. Customer service and support leaders need well-developed but flexible plans to deal with COVID-19. These plans should address **operational continuity**, staff morale and customer demand."[1]

What does operational continuity look like in the new normal? The new normal will likely include significant paradigm shifts — but rather than preparing to respond to a specific anticipated change, leading IT innovators are already **preparing for change itself.** This includes intensified focus on these three key areas:

Cloud Mobility
Cloud computing has obviously already had a huge impact on IT architectures, but going forward, IT leaders will require tools to help seamlessly move workloads to and from the cloud and to help them understand when to do so.

Unified Communications
Recent months have enlightened many business leaders regarding what can be accomplished remotely, and IT leaders will require tools to optimize audio and video cost and productivity for a workforce that can change dramatically overnight.

Automation
IT leaders have long sought a "lights-out data center" where everything is automated, but there is a new level of rigor to build these solutions to increase efficiency, deal with dynamic workforces and architectures, and remove the element of human error.

These aren't new concepts or technologies, but the importance that will be placed on these areas will likely rise dramatically. This white paper examines each of these topics.

Cloud Mobility

Cloud computing is mainstream, and the vast majority of businesses have cloud deployments in some fashion. Despite this, most medium and large organizations' IT infrastructures were still mostly on prem. COVID-19 has definitely impacted this in a number of ways. Efficiencies gained from having the infrastructure where the employees worked were quickly diminished. In many scenarios, the IT staff being remote also brings the on-prem management capabilities more in line with cloud management capabilities. But most of all, many companies realized overnight they needed to be more agile.

> *"Cloud is about how you do computing, not where you do computing."*
>
> *- Paul Maritz*

A new priority has been placed on cloud mobility — the ability to not only move workloads between clouds but also from on prem to cloud and vice versa. This means being able to seamlessly migrate workloads in physical infrastructures to/from public, private and multicloud environments without disruptions. A significant challenge for this is understanding system interdependencies and having a clear view into all systems that constitute an IT service. This includes before, during and after cloud migrations occur.

In order to simplify cloud mobility, organizations should ensure the feasibility and benefits before moving systems to or from the cloud (or between clouds). The ideal way to do this is to manage public and private cloud platforms along with traditional infrastructure deployments from a centralized view. This enables them to quickly and effectively transition workloads while ensuring consistent service delivery across cloud and on-prem systems. A unified view can also help to identify redundant equipment and eliminate the costs of repairing unnecessary systems before migrations occur while also introducing new levels of redundancy and scalability during cloud migration, reducing operational costs.

Cloud environments will continue to be given even more consideration in almost every circumstance, and it's more important than ever. This is only possible with automated service impact models — the only way to quickly visualize all infrastructure dependencies for a given service regardless of the type or location of the assets, whether on premises or in the cloud. This has been an elusive accomplishment, but modern monitoring and AIOps solutions are making it a reality.

Intelligent monitoring and AIOps capabilities can be combined to derive the much-needed **context**, an ingredient that has proven to be paramount in enabling efficient cloud mobility with minimized risk. When data collection and analysis is ubiquitous, this can result in the much-needed improvements in IT efficiency while simultaneously lowering costs and mitigating risk. Innovative organizations are focusing their monitoring and analytics approach to develop this elusive context.

Unified Communications

There are many arguments for and against remote working. But regardless of which camp you're in, there are common objectives — primarily, to keep employees productive, collaborative and focused.

"True interactivity is not about clicking on icons or downloading files, it's about encouraging communication."

- Edwin Schlossberg

There are a number of communication tools, such as Zoom, WebEx and Teams, that partially solve these challenges by enabling staff to remain connected wherever they are in the world through voice and video. This isn't new. However, nobody could have anticipated the world shifting to remote working overnight and the reliance on such tools for business continuity. Some organizations are reporting a 50x increase in video conferencing usage during the COVID-19 crisis.

The pressure now being applied to IT organizations has increased significantly, and expectations are higher than ever. In addition to their usual barrage of tickets, IT Ops must now also support users remotely — many of whom have never used collaboration tools. How do you ensure a consistent end-user experience that is free of dropped calls and other issues that distract from keeping employees productive, collaborative and focused?

IT departments must sharpen their tools and switch from being reactive to proactive. Effective monitoring of communications focuses on quality of service, which extends far beyond simply knowing if a device is up or down or the number of calls attempted/active/completed. Just because a call was completed does not mean the user experience was high quality. If a conversation is negatively affected by packet loss, incorrect codecs, flawed deployment configurations, or network latency across multiple network hops, the number of calls completed becomes irrelevant when weighed against the reality that information was not able to be successfully and efficiently exchanged.

Pinpointing such issues is complex and time-consuming. A single call/video can travel through multiple servers, routers and gateways, across firewalls, and through multiple networks. These multiple hops can dynamically affect signal quality depending on the resources available at any given time. This makes accurately diagnosing call reliability and audio/video quality issues complex and often costly without the proper solution.

By utilizing proactive unified communications monitoring, problem isolation can be greatly simplified, and the time it takes to fix system issues can be significantly shortened. Rather than relying on inefficient packet sniffers and simple alerting, network engineers are able to utilize actionable information for real-time troubleshooting and system optimization.

By utilizing QoS, MoS, jitter and call-path monitoring alongside networkwide correlation, modern unified communications monitoring tools empower companies to:

Capture critical events instantly via customizable policies

Pinpoint quality issues and expose bottlenecks via multihop call-path analysis

Visualize application and infrastructure health in real time

This means that IT Ops has the ability to take real-time action to ensure end-user experiences and daily remote working can be sustained in this new way of working. It means that regardless of what changes are coming, companies can keep employees productive, collaborative and focused.

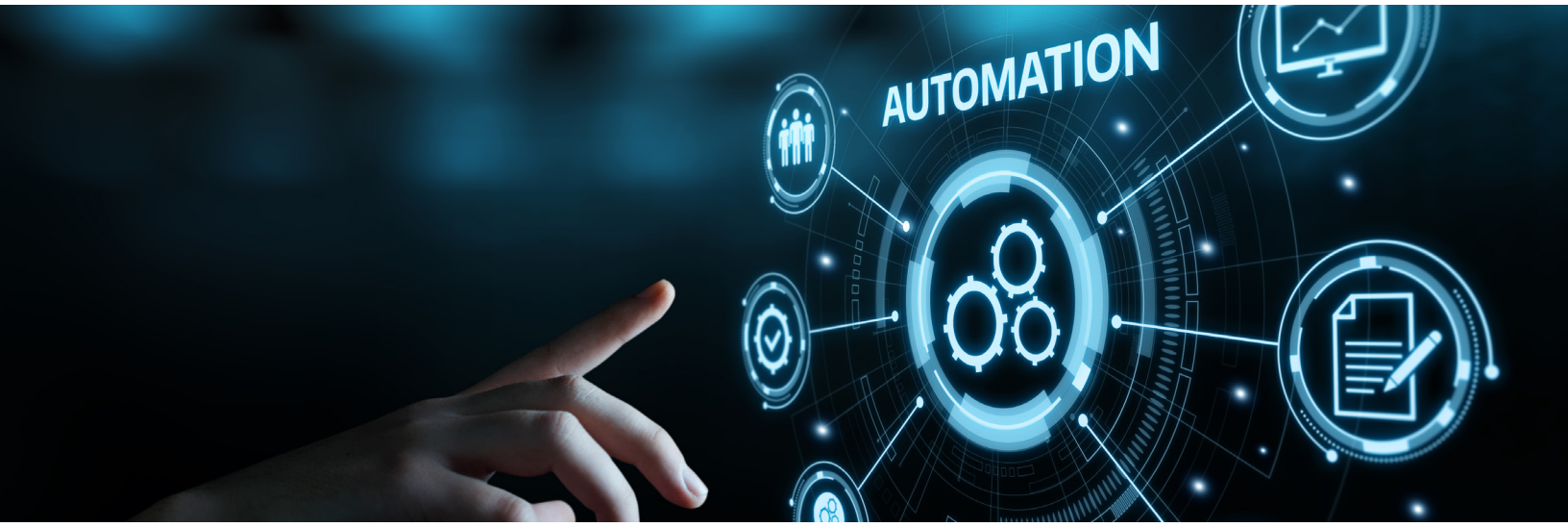
Automation

The pursuit of automation is not a new endeavor. But because of COVID-19, the outlook of automation seems to have had a dramatic shift. Particularly as it pertains to IT, organizations seem to have quickly adopted a more progressive attitude toward automation. When it was perceived as a nice-to-have capability, conventional wisdom seemed to advocate dipping a toe in the automation waters. Then COVID-19 came along and shoved them into the deep end.

> *"The first rule of any technology used in a business is that automation applied to an efficient operation will magnify the efficiency. The second is that automation applied to an inefficient operation will magnify the inefficiency."*
>
> *- Bill Gates*

Over the past four or five years, enterprises started digital transformation initiatives to remain relevant. For most organizations, digital initiatives have been an uphill battle with limited progress. But this has changed overnight. Satya Nadella, CEO of Microsoft, recently said on an earnings call that "we saw two years' worth of digital transformation in two months." The global situation has dragged virtually all companies into uncharted territory, which is catalyzing digital transformation projects and the focus on intelligent automation.

IT organizations have long been plagued with too many views of the "truth," created by monitoring tool sprawl. The inability to leverage any of this siloed data to provide context around IT incidents has been a key inhibitor in getting to root causes quickly and accelerating problem resolution. With scale and complexity growing at ever-increasing rates, a modern approach is required for managing modern environments. Intelligent monitoring and AIOps capabilities can be combined to derive the much-needed **context**, an ingredient that has proven to be paramount in enabling intelligent automation to immediately address a broad range of IT issues. When data collection and analysis is ubiquitous, this can result in dramatic improvements in IT efficiency while simultaneously lowering costs and mitigating risk. If you're trying to implement automation with silos of data from disparate sources, you're probably going to magnify the inefficiency.



Summary

Intelligent monitoring and AIOps capabilities can be combined to derive the much-needed **context**, an ingredient that has proven to be paramount in enabling cloud mobility, unified communications, and intelligent automation with minimized risk. When data collection and analysis is ubiquitous, this can result in the much-needed improvements in IT efficiency while simultaneously lowering costs and mitigating risk. Innovative organizations are focusing their monitoring and analytics approach to develop this elusive context and achieve the following results:

Immediate Root-Cause Analysis

- Use real-time modeling to gain awareness of end-to-end infrastructure-related risks
- Isolate problems immediately to improve MTTR and eliminate service outage losses
- Gain total visibility of overall IT service health with intelligent dashboards and reports
- Collaborate across teams to coordinate investigation and problem-solving

Prevention of IT Disruptions

- Leverage high-cardinality data to ensure continuous reliability of ephemeral systems
- Leverage AI and machine learning for predictive analytics
- Evolve from availability and performance to capacity and optimization
- Eliminate risk associated with digital transformation

Optimized Application Performance

- View performance and anomalies across all on-premises and cloud infrastructures
- Get AIOps insights to predict service health and performance issues
- Apply consistent monitoring policies across all cloud and on-premises systems
- Deliver management as a service for DevOps teams

Intelligent Automation

- Share key data and insights with other ITOM tools to automate a rapid resolution
- Future-proof your monitoring platform to run at any scale and accelerate digital transformation
- Enable agile IT while eliminating employee fatigue by reducing alerts by 99.9975%

The world has changed dramatically in 2020, and this has prompted a significant change in long-term planning. Innovative organizations in all industries are changing their priorities for the long haul, not just to endure the current situation. The emerging trends are unlikely to abate when normalcy is restored in our abnormal world — organizations are changing their mindsets from architecting solutions built to last to architecting solutions built for change. Zenoss full-stack monitoring and AIOps capabilities provide the foundation for these architectures.

[1] Coronavirus Impact on Service Delivery Continuity, Employees and Customers by John Quaglietta and Deborah Alvord