

Solution Showcase

Does VirtualWisdom Signal the End of the IT War Room?

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Abstract: Complex hybrid IT environments hamper troubleshooting efforts and impact the time, effort, and resources required to fix problems. In order to overcome these issues, organizations need comprehensive end-to-end solutions to provide contextual analysis and eliminate the traditional IT war room environment. To drive this transition, Virtual Instruments has:

- Just launched VirtualWisdom 6.0, its latest comprehensive monitoring and AI-based analytics solution, built for modern complex hybrid IT environments, that links each application to the underlying infrastructure. This includes applications that reside in either on-premises or cloud data centers or both.
- Created a solution that has the power to end the time-consuming and costly war room environment created when an unexpected slowdown or outage occurs. Having the right information in the hands of the right people enables organizations to collaborate and be far more proactive, leveraging AI-based analytics to find issues before they cause an outage, or at least enabling them to quickly isolate and rectify any issues.
- Demonstrated a long history of solving complex problems as a service for some of the world's largest and most complex IT environments. This experience has been codified and updated in its flagship product, VirtualWisdom 6.0.

Overview

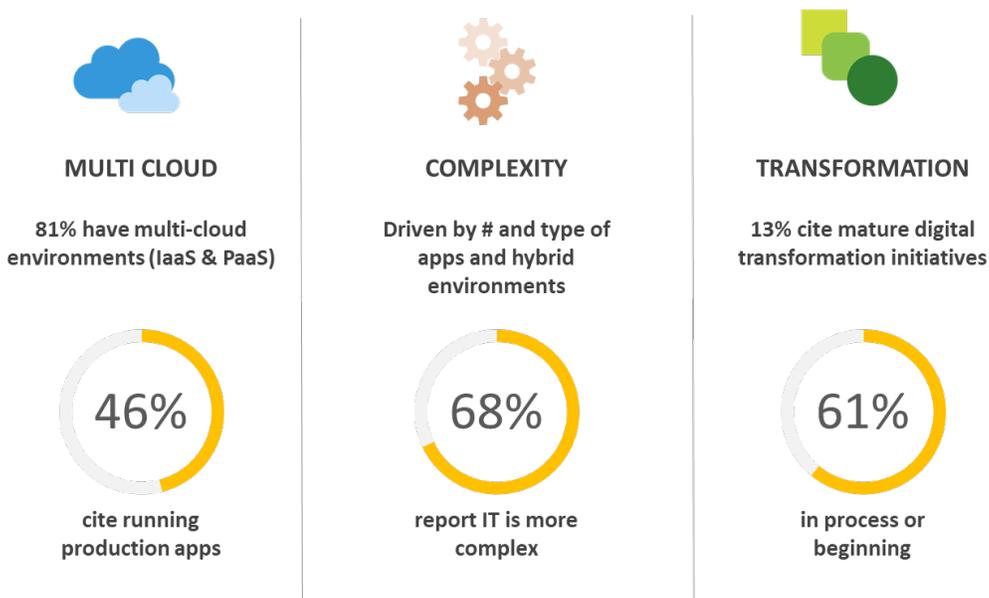
IT environments are becoming more complex and changing more quickly than ever before. This is driven by organizations adopting hybrid IT environments that contain on-premises and cloud computing environments and initiating digital transformation initiatives.

ESG research validates these trends. Eighty-one percent of organizations surveyed by ESG report having multiple cloud service providers (for IaaS and PaaS) and 46% report running production applications in the cloud. This data demonstrates that hybrid IT is now the new normal for most organizations. As a result, organizations report that their IT environments are becoming more complex, driven in part by the number and type of applications accessed and the need to connect both on-premises and cloud data centers. This is especially true for organizations leveraging DevOps and bringing modern applications (microservices-based and containers) online in either of these types of locations. Further complicating the issue is the fact that organizations are in the midst of implementing digital transformation initiatives. Although only 13% report that their initiatives are mature, the majority of respondents (61%) report having initiatives in process or just beginning (see Figure 1).¹ While this transformation will require changes to people, process, and technology, it will be

¹ Source: ESG Master Survey Results, [2018 IT Spending Intentions Survey](#), December 2017.

critical for the teams to be more proactive and collaborative to support the new processes and provide a superior experience. That starts by eliminating downtime.

Figure 1. IT Landscape Macro Trends



Source: Enterprise Strategy Group

Organizations need solutions to help them manage these complex hybrid environments more effectively and proactively. With the current pace of business, IT can't afford to take days or weeks to solve problems. In fact, moving forward, any degradation of service or outage that impacts customer experience will need to be rectified as soon as possible to mitigate the negative perception.

Why the IT War Room Must Be Replaced

The complexity resulting from hybrid IT environments makes it even more difficult to resolve issues quickly. This is further complicated by the legacy, domain-centric methods that organizations typically use to solve problems, typically referred to as the IT war room. Traditionally, when an IT environment has an outage or significant degradation, the following occurs:

1. The network operations center, or NOC, receives an alarm storm, basically a flood of alarms from all the domains impacted by the outage, including but not limited to alarms from the application, virtual machine, server, network, storage, and cloud domains. At this point, it is clear something is wrong, but what, exactly, is not clear. This is usually accompanied by a corresponding flood of phone calls from users and executives looking for answers to what went wrong and when the domains will be back online.
2. All relevant parties (the domains impacted) are notified by the NOC and asked to report to a single room (this would be the war room). Note: This frequently includes vendor support personnel as well as internal resources. Depending on what time it is (business hours or middle of the night), it will take time to marshal all these resources. Organizations scramble to identify which applications are down and how to prioritize the response, while disparate teams and vendor counterparts assemble. In many cases, these decisions are based on potentially out-of-date "tribal" knowledge or determined by customers or employees calling to notify IT that an application is down. In many cases, priority is given to those yelling the loudest.

3. Upon congregating, and typically lacking any end-to-end context, by default, everyone/every group will point the finger at another group, wasting more time. Then, each group will break off to examine its individual technology silo and report back some time later, consuming more time.
4. Keep in mind that the entire time all this activity is going on, critical applications are down or degraded, impacting the organization's bottom line, reputation, and stock price (if applicable). For most modern businesses, downtime is extremely costly, with outages costing millions of dollars per day. For digitally dependent organizations, the cost is potentially much higher.

Depending on the complexity and severity of the outage, this process could take hours, days, or even weeks to solve, especially if it is an intermittent error. It might also involve vendors escalating tickets internally to their engineering teams for their environments; however, without the appropriate context, analytics, and end-to-end visibility, the war room can remain active for an even longer period of time. Despite the heroic efforts of any number of IT members, troubleshooting in complex hybrid IT environments is very difficult without the appropriate real-time visibility.

IT needs to transform its operational efforts and move past this legacy approach to monitoring. It is time to leverage technology that will enable a proactive, collaborative approach and make the IT war room obsolete.

VirtualWisdom Enables Change

Historically, when organizations couldn't solve an IT problem via traditional war rooms and vendor escalations, Virtual Instruments would be called to bring in their technology and infrastructure expertise to help isolate the problem as part of a service engagement. This is something Virtual Instruments has been doing for over 15 years, starting in the complex FC SAN space. Virtual Instruments has recognized the value of collecting wire and machine data across all silos and applying AI-based analytics to identify and solve the most difficult issues.

Fast forward to today, and Virtual Instruments has greatly expanded its coverage area and focus, codifying this knowledge into a software solution it refers to as VirtualWisdom, now in its sixth edition. The key to VirtualWisdom is its ability to map applications to the underlying hybrid IT infrastructure topology in order to understand how it behaves under normal operating conditions. It also enables organizations to assign a business value and SLA tier to all infrastructure associated with a particular application, vastly improving the ability to ensure the finite infrastructure resources are prioritized. In most cases, VirtualWisdom can quickly find problems that have been nagging organizations for weeks (and racking up very large downtime costs) while domain experts heroically try to isolate problems with product point tools.

The addition of AI-based analytics (ML, statistical analysis, heuristics, and expert systems) allows IT organizations to be highly proactive in assuring the performance and availability of complex hybrid IT environments.

The release of VirtualWisdom 6 is well timed as organizations seek to overcome the daily complexity of operating a hybrid IT environment and can significantly help enable emerging digital transformation initiatives. Specifically, VirtualWisdom will provide organizations four key capabilities, including:

- **Application Service Assurance** – Key to ensuring SLAs are met or exceeded, this forms the foundation for future closed-loop automation capabilities.
- **Proactive Capacity Management** – Critical for fast growing environments is the ability to understand current and future needs based on historical analysis to ensure the infrastructure—compute, network, and storage—supporting the critical apps doesn't run out of resource capacity.

- **Workload Infrastructure Balancing** – Understanding that workload behavior is frequently changing, this is the ability to proactively optimize the underlying infrastructure, either on-premises or in the cloud, to ensure application performance. Workload Infrastructure Balancing works closely with Application Service Assurance.
- **Problem Resolution and Avoidance** – In the event of an outage or degradation, this capability provides a single pane of glass to identify the applications and infrastructure impacted. Even better, it enables organizations to leverage historical analysis and machine learning to do predictive intervention and take care of issues before they cause an outage.

Organizations need to become more proactive and transform their IT operations to match the modern and hybrid IT environments that are now hosting their applications. Deploying VirtualWisdom could eliminate the IT war rooms and provide a holistic view of the application environment to every technology domain, dramatically reducing the time to find and fix faults or degradations.

The Bigger Truth

The reality is that modern hybrid IT environments are extremely complex and evolving faster than ever before. IT engineering and operations teams need to keep pace. With the majority of organizations surveyed by ESG already leveraging multiple cloud service providers and also kicking off major digital transformation initiatives, the business cannot afford to troubleshoot via unnecessary, costly war rooms. Technology or domain-specific point tools don't provide the requisite application context to solve issues in complex hybrid IT environments.

Fortunately, hybrid IT infrastructure management solutions like those provided by Virtual Instruments provide organizations a way to map and monitor applications holistically and apply AI-based analytics to rapidly identify trends, anomalies, and suboptimal configurations. They can then provide all of IT with the impacted application and supporting infrastructure root cause, enabling organizations to quickly and proactively remediate the problem.

By leveraging both machine and wire data, VirtualWisdom can provide a complete view of application performance and dependencies (mapped to underlying infrastructure) across a hybrid IT environment. By providing the business with a single pane of glass to view, organizations can eliminate timely and costly war rooms and focus more on optimizing the existing environment to assure application SLAs are met and maintained. Most importantly, IT can transition from reacting to problems to proactively advancing key business initiatives.

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