

Hyperglance: Streamlined Operations via Management System Abstraction

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Executive Summary

As enterprises adopt hybrid software-defined infrastructure, IT organizations need management tools that provide visibility and control over the entire infrastructure domain. With increased virtualization, new software-defined technologies, and multiple public and private clouds, the levels of abstraction in these enterprises are simply too complex for the sprawling management toolsets that many IT organizations have in place. Organizations need to find ways to consolidate visibility and management wherever they can. Hybrid infrastructure management vendor Hyperglance offers enterprises a visibility and control layer inspired by video game graphics. It can collect data from multiple technologies and domains and present it in one interactive view with live fault and performance information that IT teams can immediately take action on from within the tool.

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Hybrid Infrastructure Demands Better Management Visibility and Control

In recent years, enterprise IT organizations have seen the boundaries of their management domain expand and blur. Many enterprises are adopting a virtualized hybrid approach to infrastructure that challenges IT organizations with a high level of abstraction and complexity. Data center virtualization has progressed beyond just compute and storage to include networking, adding more levels of abstraction. Many enterprises have adopted hybrid or multi-cloud infrastructure, with applications and services running on both public and private cloud infrastructure. These enterprises have also adopted software-defined infrastructure with highly programmable infrastructure that changes rapidly depending on the needs of the applications.

These changes enable enterprises to adopt a DevOps model that requires developers and infrastructure operations to collaborate on rapid iterations of products and services. DevOps organizations need management tools that cross operational domains (systems, networking, cloud, etc) so that infrastructure teams can realign layers of infrastructure quickly without affecting critical relationships. In fact, two years ago Enterprise Management Associates (EMA) surveyed enterprises about adopting DevOps and continuous delivery practices and found that complexity and poor collaboration across silos were the number one and number two challenges, respectively, to successful DevOps adoption.¹ This same study revealed that 25% of respondents feel that a “lack of visibility to topologies showing how components connect and interact” is also a major challenge. DevOps has become the norm for successful and timely application delivery, resulting in more than 80% of companies forming cross-functional teams for support. To succeed with DevOps, IT organizations will need to equip these cross-functional teams with cross-domain, cross-platform visibility.

This evolution toward hybrid infrastructure and DevOps leads to more abstraction, more complexity, and more frequent changes. Many IT organizations come to find themselves relying on multiple management tools across various public and private infrastructure domains. As a result, it has become extremely difficult to get a comprehensive, contextual view of the health of infrastructure layers, applications and services in these environments.

¹ EMA, [“Automating for Digital Transformation: Tools-Driven DevOps and Continuous Software Delivery in the Enterprise.”](#) December 2015.

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Yet, in the face of all these challenging conditions, most IT organizations are not increasing their overall personnel numbers. Instead, the business often asks its IT organization to adapt to change quickly with existing staff levels. This means that now more than ever IT architects and operations engineers need to be able to spend less time troubleshooting existing infrastructure so they can spend more time building new hybrid architecture to support the business. If IT engineers are going to carve out more time for innovation, they need to spend less time resolving problems and rely on IT staff of varying levels to achieve rapid time to insight across multiple infrastructure platforms. Therefore, other IT teams need the right, easy to use tools to help them fulfill that requirement.

IT organizations that find themselves in this situation need a new approach to infrastructure management. They need tools that can provide cross-domain visibility across multiple platforms such as public and private cloud environments, virtualized and containerized environments, as well as more traditional and physical IT infrastructure layers. In most cases, these tools will need to be responsive to rapid change. Given that hybrid infrastructure enables enterprises to scale up quickly by bursting into the public cloud, these new management tools will also need to scale. Amid all of this change, most enterprises will continue to maintain and integrate vast amounts of legacy infrastructure, so any tool that provides hybrid infrastructure visibility will also have to provide legacy and brownfield technology visibility.

Management tools that provide comprehensive, visually intuitive monitoring across domains and platforms are essential in these environments.

IT Management Tool Glut Is Not Ready for Hybrid Infrastructure

To operate hybrid infrastructure, IT organizations will need to reevaluate their approach to management tools. Enterprise Management Associates (EMA) research has consistently found that many IT organizations have a fragmented and sprawling set of management systems in use. In fact, the typical large enterprise has between six and 10 network management tools in active use. Some have reported having 25 or more, and these numbers do not even include shelfware that was procured but never used.

This tool glut leads to inefficient processes and visibility gaps. Many IT administrators need to log into three or more tools to complete a single process. Each tool provides answers to specific questions that the administrator must string together in order to gain insight into the overall state of the infrastructure. While the administrator may be accustomed to this process, it is extremely inefficient. Also, when these administrators are gathering insight from multiple tools to assess a situation, they are prone to missing certain details or making mistakes as they correlate all this information. This fractured approach to management slows down an IT organization's ability to discover and mitigate infrastructure problems. Instead, the IT organization spends a significant time reacting to problems. EMA research has found that more than 40% of network outages, for instance, are reported by end users before network operations becomes aware of them.

The fewer tools administrators have to consult, the faster they will gain insight and be able to take action. Rather than a reliance on a glut of tools, today's modern IT environment needs streamlined management tools and processes that pay attention to how cross-domain, hybrid IT resources relate to or affect one another. A single graphical view of the total infrastructure estate of an enterprise can streamline operations so that IT organizations can deliver services more effectively and respond proactively to problems.

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Hyperglance: An Advanced Visibility and Control Layer for Your Infrastructure Management Platforms

Hybrid infrastructure management vendor Hyperglance offers an intuitive and interactive visibility layer that combines and organizes data from multiple infrastructure monitoring and management platforms to give enterprises a graphical, end-to-end topology view of an entire infrastructure estate, including public and private clouds, virtualized systems and containers, and network infrastructure.

Hyperglance extracts end-to-end infrastructure telemetry via API integration with private cloud management platforms, public cloud providers, virtualization and container platforms, networking platforms such as SNMP and software-defined networking (SDN) controllers. This data is presented in a dynamic graphical topology view that borrows techniques from the video game industry. Hyperglance's APIs allow enterprises to layer additional data into this topology view, including data from other tools that may have been built in-house.

The live, interactive display Hyperglance offers gives IT organizations a comprehensive view of all infrastructure dependencies, including cross-platform relationships, with a 360-degree view that can be zoomed in and out from full-scale to focused topology analysis. Live monitoring data, including alerts, are layered on top of this visibility layer, and administrators can drill down from this view for full diagnostic and metric analysis of any part of the infrastructure. The depth of analysis, however, is dependent on the data source. For instance, a view into CPU utilization in an organization's OpenStack environment may require the presence of OpenStack Ceilometer as well. Hyperglance includes integration with the likes of OpenStack Ceilometer, AWS CloudWatch, and Nagios to map alerts, enable metrics data, and chart analysis directly via Hyperglance.

Hyperglance also includes aggregated search capabilities for rapid isolation and faster time to insight. A user can search the system for attributes across all infrastructure elements from which Hyperglance collects data. Unified results are delivered where users can then delve into more analysis on a chosen entity and jump to where that entity exists within the topology. Users can also see a high level view or list of alerts and then immediately jump to where a specific alert is in the topology to quickly analyze what is going on with that entity and see how it might be affecting others.

With this comprehensive visibility layer, IT organizations have an opportunity to consolidate management tool interaction, which in turn enables them to gain insight into infrastructure conditions much faster and more effectively. As administrators spend less time correlating events across multiple tools, they are able to spend more time taking action or focusing on new innovations. Furthermore, Hyperglance's API integration with various management platforms and cloud providers allows administrators to take action through the Hyperglance interface. For example, they can start, stop, suspend, terminate, or reboot cloud instances.

Hyperglance takes a unique approach to delivering infrastructure visibility and control by leveraging API integration with cloud, container, virtual and networking infrastructure technologies. Hyperglance equips IT operations with the unified insight it needs to move from a reactive management posture to a proactive one that can prevent problems before users detect them.

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EMA Perspective

A sprawling infrastructure management toolset can lead to ineffective IT operations. In today's world where enterprises are increasingly adopting hybrid infrastructure, IT organizations need efficient and effective management tools that give a more comprehensive view of the IT domain. EMA advises enterprises to consolidate IT management tools where it makes sense. While there will never be one tool that addresses everything, too many tools adds needless complexity and inefficient practices.

Hyperglance addresses IT teams with fractured toolsets and platforms. If the operations team is struggling to consolidate management and gain better visibility, Hyperglance can offer a unified visibility and control layer on top of OpenStack, AWS, VMware vSphere, Docker, SNMP devices, Nagios, and SDN controllers. Hyperglance is continually working on new integrations based on customer demand. Additionally, Hyperglance's API can address any other data visibility needs. It can pull metrics from various sources and tie them together into a highly intuitive and interactive graphical view that provides faster time to insight and action. Hyperglance is offering an innovative approach that can help IT organizations address the fact that they miss 40% of infrastructure problems and only find out about them after users complain.

About Hyperglance

Hyperglance empowers IT operators with rapid, cohesive insight and proactive problem solving across domains and hybrid IT platforms. Hyperglance specializes in dynamic data aggregation and gaming quality graphics to present the unified data in a secure, intuitive, 3D topology visualization with 360° navigation, real-time data analysis, and context aware controls for immediate action. Hyperglance simplifies mapping, monitoring, and managing today's highly virtualized, software-defined platforms such as private and public clouds, containers, and SDN, as well as more traditional networking platforms. With Hyperglance, IT teams are equipped for greater efficiency and quality of IT services. More information about Hyperglance is available at www.hyperglance.com.

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on [Twitter](#), [Facebook](#) or [LinkedIn](#).

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