

## Solution Showcase

# Uila Advanced Data Center Management with Integrated, Full Stack Monitoring

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**Abstract:** Uila has developed a product that provides an integrated, full stack monitoring solution for the modern data center. Uila created a solution that can span the depth and breadth of a data center, while automatically creating an integrated topology map that includes both infrastructure and applications. Uila can provide unprecedented visibility into a data center by bringing together infrastructure, network, and end-user performance monitoring, putting IT administrators only a few clicks away from the root cause analysis and remediation they need to manage an agile, modern virtualized data center.

## Overview

Uila is a growing company in the emerging segment of data center monitoring tools. This segment is filled with numerous vendors, all providing different levels of features and capabilities. Uila stands out by focusing on providing a level of visibility into data center operations that is not available with the existing tools in the segment. Uila is designed to manage the full stack of a data center, from physical to virtual, and most importantly, from the infrastructure all the way to the application's performance from an end-user point of view. This offers a depth of information that is generally not available from a single monitoring tool. In addition to collecting the depth of information, Uila integrates all the information into one tool, building the relationships between all the resources and allowing IT to understand the span of their data center, which gives the administrator a full stack understanding to quickly and easily resolve problems, ensure application performance for end-users, and better utilize their systems.

## The Demands of Modern Data Centers

Uila clearly recognizes the rapidly changing realities of the modern data center. As data centers have become increasingly virtualized, IT administrators have struggled to keep up the monitoring and troubleshooting of their resources. The existing management tools are focused on the core resources that they have traditionally monitored. Virtualization monitoring tools gather and report on information from the hypervisor or VM level, but lack the information about the applications and systems running within the guest. Traditional systems monitoring tools monitor the guest OS and applications that run in VMs, but lack the monitoring of the infrastructure itself and often require the deployment of agents to perform the reporting. Finally, we have application performance and network monitoring tools that gather information across systems. These solutions can provide a larger view of the data center but they lack from both the infrastructure systems and guest OS levels.

To manage a modern, virtualized data center, enterprises need a tool that can provide an integrated, full stack view of their systems. While existing monitoring solutions can gather the data needed for the full stack, they lack a level of

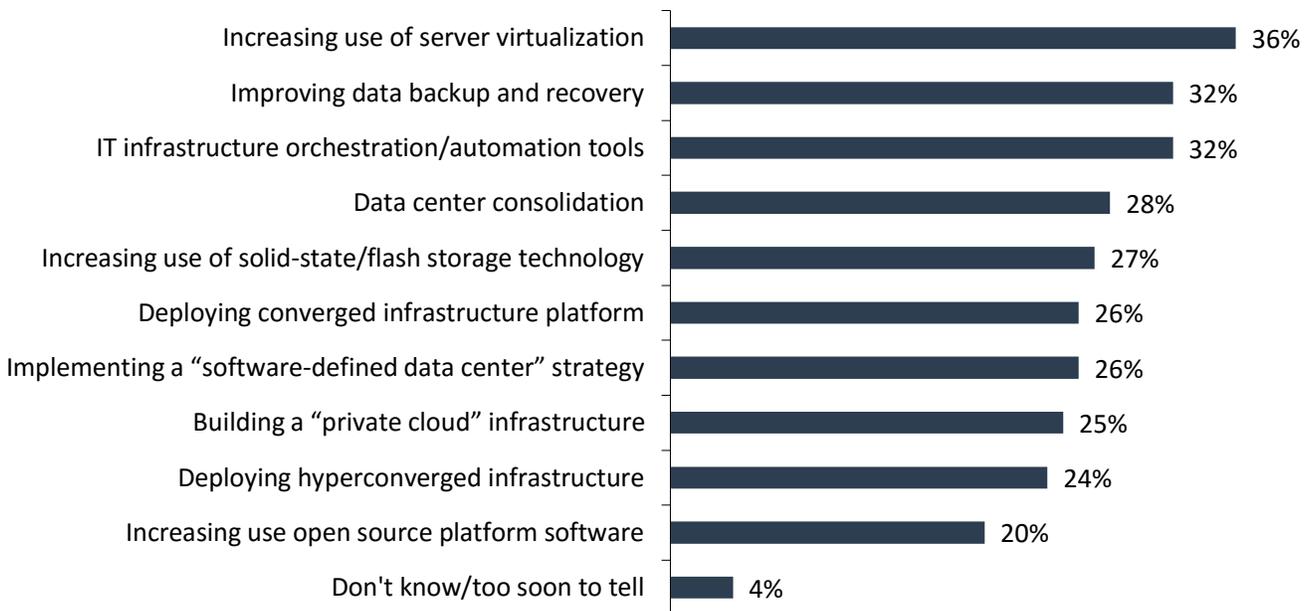
integration needed to understand the relationships within, in what has become an increasingly complex modern data center. This level of complexity and the lack of management insight into the full stack is continuing to limit the full potential of data centers.

### Why Full Stack Monitoring Is Needed

While the modern data center has progressed significantly from the pre-virtualized, low utilization data centers of the past, IT administrators are still looking to get the most out of their systems. As can be seen from Figure 1, ESG’s 2017 IT Spending Intentions Survey found that three of the top four spending plans for data center modernization are focused on getting better use out of the existing data center, as opposed to deploying new hardware technologies.<sup>1</sup> There is a clear need to help enterprises better understand their entire data center, resolve problems faster, and in the end, be more productive with what they have.

**Figure 1. Data Center Modernization Spending Priorities**

**We would like to learn more about your specific spending plans for data center modernization. In which of the following areas will your organization make the most significant investments over the next 12-18 months? (Percent of respondents, N=339, five responses accepted)**



Source: Enterprise Strategy Group, 2017

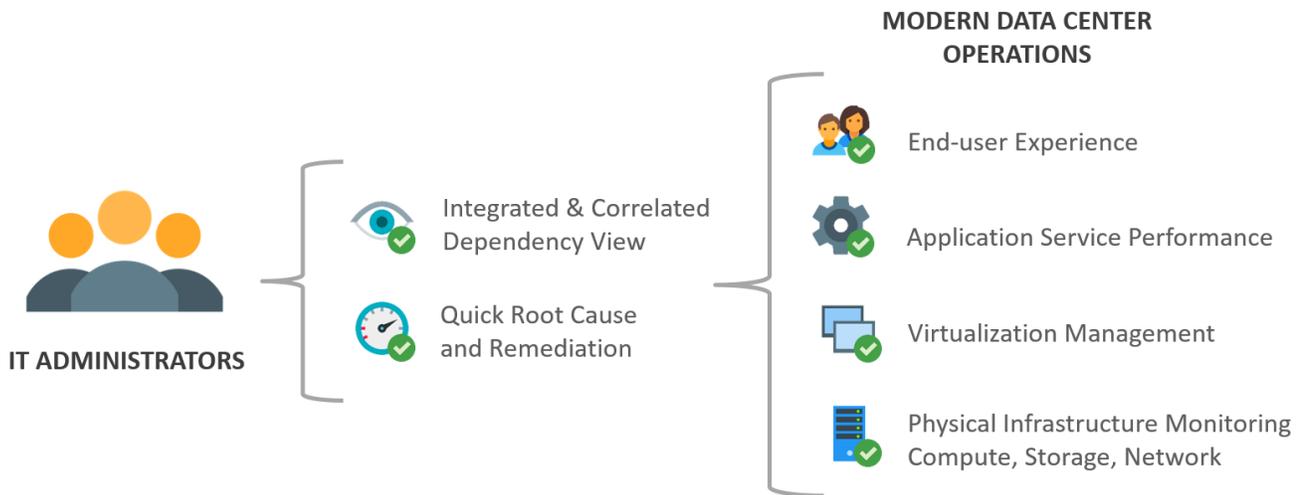
Full stack monitoring encompasses several critical features:

- It should manage both physical and virtual systems, with the same level of information and insight.
- It should manage all parts of the data center infrastructure, from network and storage to the application.
- It should be able to assess the entire application, from the infrastructure supporting the application to the actual end-user experience.

<sup>1</sup> Source: ESG Research Report, 2017 IT Spending Intentions Survey, to be published.

- All the information that is gathered should be integrated and correlated so that the IT administrator can visualize the entire data center topology and the dependencies.
- It should have the capability to provide root cause analysis and remediation across the data center, leveraging the insights on the data center topology to resolve issues quickly and completely.

**Figure 2. Full Stack Monitoring**



*Source: Enterprise Strategy Group, 2017*

In contrast to a full stack monitoring solution, traditional solutions are usually focused within the narrow viewpoint from which they derive their data, such as a virtualization, infrastructure agent, or application viewpoint. Even if a tool has multiple or wider views, it lacks the correlation of the data to build the dependency map needed to resolve problems at any level. The full stack monitoring solution goes beyond the narrow viewpoints of other solutions to provide a 360-degree view of the data center.

## What Uila Offers

Uila is designed to provide a full stack monitoring solution for the modern, virtualized data center. The benefits for the IT administrator are focused around three key outputs:

- **Fast root cause analysis for virtualized data centers** - Cutting down troubleshooting time significantly and reducing application downtime.
- **Optimal application service performance and end-user satisfaction** – Maintaining peak application performance by pinpointing infrastructure bottlenecks and leveraging proactive end-user experience monitoring.
- **Increased server utilization and consolidation** – Driving better server utilization by reducing overprovisioning and streamlining resources associated with applications.

Uila enables these benefits through a single management interface, which gathers all the different data sets across systems and builds a topology map of the entire data center. Critical dependencies are determined and visualized, across servers, networking, storage, databases, and applications. Unlike other management aggregation tools, Uila then builds a graphical

user flow, showing how the infrastructure is being used by each application managed. The applications or systems can be filtered and searched across the topology, giving a two- or three-click deep view of any part of the data center, with any associated performance issues and potential remediation available in detail. Companies using Uila can see their infrastructure and applications from across the entire environment, linked together, with the detail needed to resolve issues quickly and efficiently.

Uila provides full stack monitoring through deep packet inspection of the network, scanning the network traffic with source and destination identification. Uila uses a built-in database of over 4,000 known protocols and applications to help build the topology view. Deep packet inspection is then combined with Uila's agentless Virtual Smart Tap (VST), which acts as a listener on each host, eliminating the need to deploy agents across the data center and within VMs. VST enables end-user experience monitoring, showing the application's performance from the end-user's point of view. This combination of network and end-user experience monitoring means Uila offers the unique capability to manage applications from both the end-user and the data center infrastructure viewpoint. Problems and root causes can now be identified from both ends of the application flow, allowing the IT administrator to proactively monitor application issues, in order to resolve them before they create a significant disruption.

All this monitoring is then supported by an instant root analysis process, which uses automatic correlation built from a topology view to provide solutions that resolve application problems across different data center resources. Administrators can use Uila to monitor issues that span across a data center, such as a broad network issue that affects multiple applications, as well as issues that progress up and down a specific application stack. Finally, Uila includes intelligent alarms, which monitor both infrastructure and applications to create alarms that automatically learn and adapt their thresholds to changing conditions, creating an alarm system that is proactive yet avoids alarm fatigue.

The unique value of Uila is the ability to bring all these features together, meeting the requirements of a full stack data center monitoring solution. Only Uila combines network intelligence, application intelligence, and even metrics from virtualization providers such as vCenter, providing the depth of the narrower scope solutions while giving the 360-degree view of the data center. Having this wider view of the data center, within a single tool, is a critical capability for IT administrators who are looking to get the most out of their existing systems. Once a data center has this level of insight and understanding, the ability to troubleshoot and optimize a virtualized data center will be unlocked to its greatest potential.

## The Bigger Truth

Uila has developed a product that not only combines the capabilities found in several existing monitoring solutions, but also brings the information together to be correlated into a single management view. This is the concept behind integrated, full stack data center monitoring solutions. As data centers continue to become more complex in size and scope, administrators need a way to quickly assess and maintain the topology of their systems. Adding on top of that is the growing reality that applications are driving infrastructure change, and the impact of end-user application performance needs to be included to get the full view of a data center. Uila has created an integrated solution that gives administrators the vertical and horizontal view of their entire application stack.

This 360-degree view of the modern data center will be key to getting the most out of enterprise data center systems, and if Uila can continue to meet that goal, then customers will be able to leverage their virtualized data centers with efficiencies well beyond what they have today.

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