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Nutanix Monitoring

The emerging opportunities for service providers and how
CA Unified Infrastructure Management can help



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Executive Summary

Today, your customers are in the midst of a massive paradigm shift, undertaking digital business transformation so they can compete more effectively in their dynamic markets. As they seek out technologies that can help accelerate their digital transformation, IT decision makers are increasingly gravitating toward hyperconverged infrastructures from Nutanix. This paper offers a detailed look at the drivers that are prompting the adoption of Nutanix solutions—and the challenges that enterprise IT teams are likely to confront when they start leveraging these technologies. The paper then introduces CA Unified Infrastructure Management (CA UIM) and shows how the solution enables service providers to deliver managed monitoring service offerings that address their customers' emerging requirements.

Converged Infrastructures: A Key Enabler of Digital Transformation

“Only those organizations that become truly digital businesses will be able to operate with the speed, agility and efficiency that emerging markets will demand.”

The digital transformation imperative

To compete and win in the application economy, it's critical for enterprises to pursue digital business transformation. Only those organizations that become truly digital businesses will be able to operate with the speed, agility and efficiency that emerging markets will demand.

Digital transformation requires innovation across the spectrum of how digital services are developed, supported and delivered. As a result, businesses are adopting a wide range of new technologies and approaches. The following sections highlight one technology framework that will be increasingly vital in supporting digital business transformation: converged infrastructures.

Why converged infrastructures are so vital to digital transformation

Over the decades, enterprise IT environments have continued to evolve and expand. While the specifics vary according to each organization, common themes have emerged.

Each element and service within the environment has typically been individually procured, deployed, configured and integrated. Ultimately, a complex ecosystem with disparate platforms, versions, vendors, support mechanisms and more has emerged. Given this complexity, administrators struggle to handle ongoing efforts like patches and upgrades—which can take weeks—given the interdependencies that have to be accounted for. IT teams contend with spiraling costs. Ultimately, the infrastructure impedes the business in harnessing new technologies and approaches and in delivering new innovations to market.

Converged infrastructures were introduced to enable organizations to address these challenges. By offering complete, pre-integrated computing stacks, converged infrastructures present organizations with a much more streamlined experience in both implementation and ongoing support.

“55 percent of agencies that deployed hyperconverged infrastructures say that it is very easy to incorporate new technologies ... only two percent of agencies without hyperconverged infrastructures voiced that sentiment.”

The emergence of hyperconverged infrastructures

In recent years, hyperconverged infrastructure solutions have been introduced that build on the advantages of converged infrastructures. These hyperconverged infrastructures offer significant advantages in efficiency and agility, enabling faster support of new applications, cloud services and virtualization approaches. For example, because of their agile, elastic nature, hyperconverged infrastructures are well suited to support dynamic private cloud infrastructures.

Quite simply, organizations that leverage hyperconverged infrastructures are better equipped to pursue digital transformation initiatives. These advantages were clearly demonstrated in a recent survey of federal government agencies in the U.S.¹ The survey looked at the contrasting experiences of agencies that have deployed hyperconverged infrastructures and those that haven't. The survey reported that agencies that were using hyperconverged infrastructures were more satisfied with:

- Application uptime (69 percent versus 39 percent)
- Compliance support (83 percent versus 31 percent)
- Speed of implementing new applications (76 percent versus 20 percent)
- Ease of deployment (79 percent versus 24 percent)

Perhaps most significant was the contrast seen in the ability to incorporate new technologies. This capability is one of the key enablers of agility, which is the cornerstone of digital transformation. In this regard, 55 percent of agencies that deployed hyperconverged infrastructures say that it is very easy to incorporate new technologies and architectures into their existing environment. On the other hand, only two percent of agencies without hyperconverged infrastructures voiced that sentiment.

Nutanix: A Strategic Enabler of Digital Business Transformation

Within a few years, Nutanix has emerged as one of the leading providers of hyperconverged infrastructure solutions. Nutanix solutions feature seamlessly integrated storage, computing resources and virtualization. The company's offerings squarely address a lot of enterprise customers' fundamental requirements for digital transformation. Nutanix products are helping customers to pursue a range of initiatives:

- Virtual desktop infrastructures (VDI), through packaged integrations with offerings like the VMware Horizon suite, Citrix XenDesktop and Citrix XenApp.
- Private cloud and server virtualization, through a turnkey platform for running popular applications, such as Oracle, SAP and Microsoft® SQL Server®, Exchange and SharePoint®.
- Big data and analytics implementations based on Hortonworks and Splunk.

Nutanix solutions

Today, Nutanix offers a range of offerings:

- **Nutanix Acropolis.** This core offering features native integrations of computing, virtualization and storage in a resilient, software-defined solution. With this platform, capacity can be expanded without disruption, enabling dependable, agile scalability.

“Between the 2015 and 2016 fiscal years, the company saw 106 percent growth.”

- **Nutanix Xpress.** This platform brings the power of hyperconverged infrastructure to the small and midsize business. Nutanix offers customers simple deployment, ease of management and lower total cost of ownership.
- **Nutanix Prism.** This is the company’s administration tool, which helps simplify the management of virtual environments running in Nutanix platforms.

Nutanix corporate momentum

In just a few years, Nutanix has emerged as one of the top success stories in the high technology arena. The company’s successful track record has been evidenced in several ways:

- **Market valuation.** At the end of September 2016, the company had an initial public offering of its stock, and its valuation has reached USD\$5 billion.
- **Customer traction.** Almost 4,000 customers have adopted Nutanix solutions, including top brands like Aflac, Best Buy, Department of Defense, eBay, Honda, Nordstrom and Nintendo.
- **Revenue growth.** Between the 2015 and 2016 fiscal years, the company saw 106 percent growth. Further, over the last five quarters, the company has seen sequential revenue growth of between 12 and 22 percent.
- **High repeat purchases.** Attesting to the solution’s value and the company’s service, customers continue to buy more Nutanix solutions, and make larger purchases. In fact, on average, customers spend 3.6 times more on repeat purchases than they did on their initial order.

Customer Challenges: Managing Service Levels in Nutanix Environments

Once deployed, Nutanix systems represent critical elements of the IT infrastructure. If these systems encounter downtime or performance issues, it can have an immediate and significant impact on customer-facing services, workplace productivity and company revenues.

Consequently, establishing effective, continuous monitoring of Nutanix implementations is critical. IT staff members need to constantly monitor the hyperconverged framework so they can identify bottlenecks and fix issues. To be effective, organizations need to gain robust capabilities for tracking and managing performance, availability, utilization and service levels.

However, for many enterprise IT teams, it will be difficult to establish, operate and support the required monitoring capabilities. The reality is that organizations are typically running a mix of Nutanix, cloud services and traditional infrastructures. While Nutanix provides monitoring capabilities through its Nutanix Prism offering, leveraging this functionality means that internal IT teams will need to learn, work with and integrate another tool—when they may already have many monitoring tools in place. Running multiple, disparate monitoring tools can present a number of challenges:

- **Disjointed alerting.** With myriad monitoring tools, IT teams are exposed to inconsistent, fragmented alerting, with each tool generating unique data, alerts and escalation processes. Not only does this mean a lot of work in compiling and aggregating data for reporting, but administrators may have to deal with issues like so-called “alarm blizzards” when one system failure has a ripple effect on other systems.

“Delivering these monitoring services can help you grow your offerings, revenues and market share.”

- **Time-consuming troubleshooting.** When issues arise, administrators struggle because distinct teams each need to check their own tools to try and identify the source, adding to the effort and complexity associated with managing IT environments.
- **Limited insights into service levels.** Working with multiple tools, teams fundamentally lack insights into the performance of the end-to-end infrastructure and the business services that users rely on. IT teams have a hard time gaining timely, useful insights needed to pre-empt issues, so they remain consumed with reacting to issues after the fact, and service levels suffer.
- **Lack of holistic insights for capacity planning.** Relying on isolated tools, IT teams struggle to track resource utilization across various storage silos. As a result, it is time consuming and difficult to intelligently allocate workloads and make optimized infrastructure investments.

Finally, in spite of all their benefits, hyperconverged environments represent fundamentally new technologies for most internal enterprise IT teams. Particularly if they're not staffed with experts that have deep experience with these platforms, internal teams may struggle to contend with ongoing efforts like tuning, clustering and synchronization. It can be difficult to detect and address such problems as configuration issues, performance degradation, storage unavailability, hardware failures and so on. It can be challenging to track and predict how applications, particularly those running in dynamic VDI environments, affect the input/output performance of Nutanix platforms. As a result, performance can suffer, cost savings can be eroded and digital transformation efforts can be impeded.

The Opportunity for Service Providers: Managed Monitoring Services for Nutanix

Given their proliferation in the market, solutions from Nutanix are likely to be playing an increasingly prominent role in your existing customer accounts and prospect organizations. By establishing expertise and services around Nutanix solutions and deployments, your service provider business can gain a significant competitive advantage.

In working with existing clients that haven't yet employed hyperconverged platforms, your organization can leverage expertise with solutions like Nutanix Acropolis and Nutanix Xpress, and deliver significant value by offering initial consulting and integration services. Your organization can help with evaluations, architecting implementations and assisting with deployments.

You can gain further differentiation for these offerings by bundling in high-value and differentiated monitoring services. In addition, monitoring services can represent a great way to build a presence in new accounts that have already implemented Nutanix solutions.

By delivering compelling managed monitoring services, you can establish your organization as a trusted partner and expand your presence in your accounts. Providing these monitoring services can help you grow your offerings, revenues and market share.

The Solution: Deliver Compelling Managed Monitoring Services With CA Unified Infrastructure Management

Delivering managed monitoring services represents a compelling opportunity for many service provider businesses. However, the only way service providers can establish monitoring services that stand out in the marketplace and deliver compelling value to customers is by leveraging robust, enterprise-grade monitoring platforms.

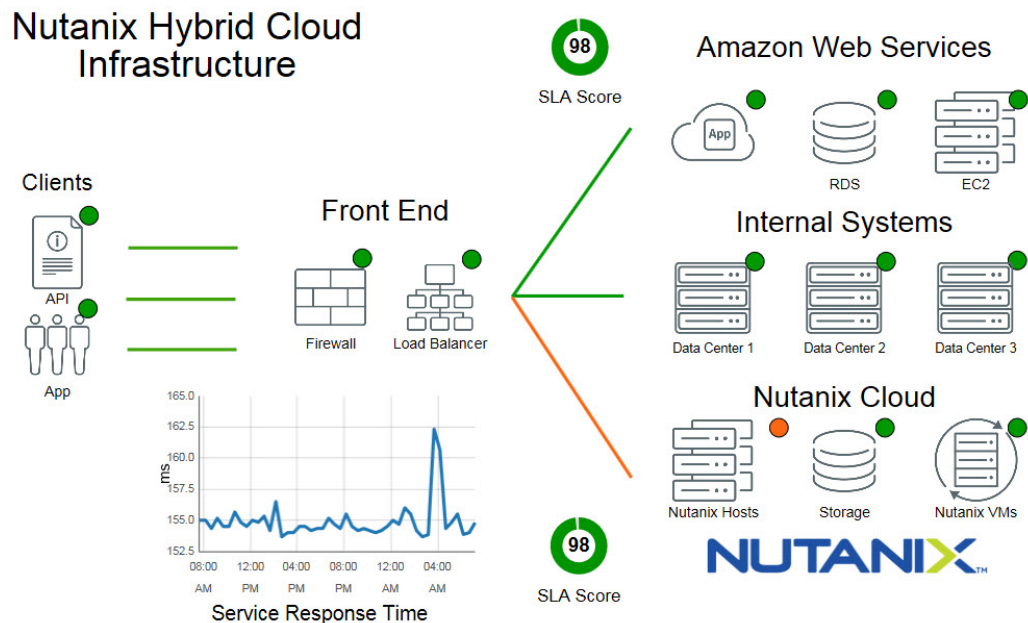
That’s why so many of the world’s most successful service providers build their monitoring services on CA Unified Infrastructure Management (CA UIM). CA UIM offers a range of technological advantages that service providers around the world are leveraging to improve service, expand offerings and boost margins. Browse the sections below to learn more about these unique strengths and the services the solution can power.

Comprehensive capabilities that fuel unified monitoring services

To maximize revenue potential and customer value, your service provider business needs to leverage monitoring platforms that can provide visibility across customers’ IT environments and from the top to the bottom of their IT stacks. CA UIM offers the comprehensive capabilities that are critical to establishing successful Nutanix managed services:

- **Extensive Nutanix coverage.** CA UIM can help your business deliver compelling, high-value managed monitoring services to clients running Nutanix platforms. With CA UIM, you can track and optimize the performance of your customers’ Nutanix deployments. CA UIM collects data about the health, availability and performance of Nutanix. The solution provides comprehensive coverage and insights, delivering metrics on environments, clusters, hosts, VMs, storage pools, containers and disks.

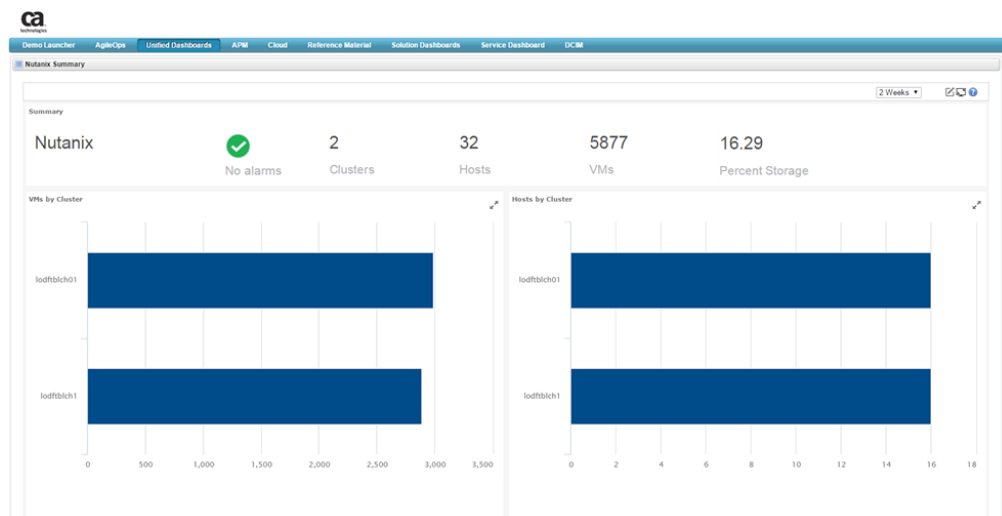
Figure A. With CA UIM, organizations can gain unified monitoring views of hybrid IT environments, including cloud services, Nutanix, and many other services and systems.



- The most comprehensive coverage of cloud and hybrid IT environments.** CA UIM provides a solution for monitoring all elements across a heterogeneous IT environment—all with a single product, architecture and console. CA UIM supports more than 140 technologies, including physical and virtual servers, networks, storage systems, databases, applications, user experience, public and private clouds, power and cooling infrastructure and more. With CA UIM, you can monitor and manage virtually all business applications—whether they’re running in SaaS, hosted or virtualized environments. With CA UIM, service providers can quickly address new, high-growth markets and changing customer demands.
- Intelligent alarms and predictive analytics.** CA UIM offers sophisticated alarm functionality that enables fast, effective response when issues arise. The solution offers dynamic thresholds that minimize false alarms and improve staff productivity. In addition, with CA UIM, you can leverage predictive analytics capabilities that help you proactively identify issues before the user experience suffers. The solution can provide a prioritized list of problems that represent situations administrators should watch.
- Multitenancy support.** CA UIM provides true multitenancy—enabling service providers to use a single instance of the solution to support many customer infrastructures. As a result, you can centrally and efficiently monitor and manage all customer environments. At the same time, the solution enables you to deliver secure, tailored reports, dashboards and portals to each customer.
- Scalability to support large-scale deployments.** Many of the world’s largest cloud providers, service providers and hosting providers rely on CA UIM to deliver the high scalability required. With CA UIM, organizations get the monitoring scalability they need to serve more clients with existing staff, serve larger clients and monitor more devices and simultaneous events. CA UIM features an efficient, high-performance event processing engine that can scale to support event volumes generated from tens of thousands of servers. Plus, it offers a secure, reliable and efficient client access model that can support hundreds of concurrent connections.

Figure B.

CA UIM gives administrators at-a-glance insights into the status of Nutanix environments.



Unified monitoring services powered by CA UIM

By delivering comprehensive coverage of Nutanix environments and the entire IT infrastructure, CA UIM can help your organization maximize the business opportunities presented by the emergence of Nutanix solutions in your markets. By leveraging CA UIM, your organization can deliver a range of monitoring services:

- **Unified Nutanix platform monitoring.** Combine CA UIM and your hyperconverged infrastructure expertise to provide around-the-clock monitoring services of customers' critical Nutanix implementations. With CA UIM, you can deliver a compelling monitoring service that offers deep coverage of all aspects of Nutanix implementations. Monitor availability, performance, usage and more.
- **Unified, multi-vendor converged infrastructure monitoring.** The reality is that many organizations will run Nutanix along with other converged infrastructure platforms. With CA UIM, you can monitor customers' complete converged infrastructure environments, whether they're running FlexPod, Nutanix, Vblock or any combination thereof.
- **Unified custom application stack monitoring.** Customers may deploy Nutanix in a broad range of environments. Ultimately, all the heterogeneous elements that make up the environment need to be performing optimally if service level commitments are to be met. With CA UIM, you can deliver monitoring visibility that spans the customer's entire application stack, including all the elements running within Nutanix platforms, any applications and databases that may be running on top of these platforms and the underlying network. In addition, you can use synthetic transaction monitoring to track performance from the end user's perspective.
- **Unified business service monitoring.** Today, any given business service your customers operate may rely on different technology stacks and hybrid IT environments, including different hosted infrastructures, cloud services and on-premises data centers. Nutanix solutions, not to mention a wide range of other systems and technologies, can be deployed within each of these locales. Tracking service levels across these composite, hybrid environments can present a real challenge for customers, particularly if they're relying on a collection of point tools. By leveraging CA UIM, you can deliver unified visibility across these environments and track service levels from end to end, no matter where underlying components reside. As a result, your organization can provide significant, strategic value to customers.

Within each of these offering categories, your organization can provide multiple levels of service. For example, in addition to standard performance and availability monitoring, your organization can offer advanced, predictive analytics, dashboards and remediation services. With CA UIM, your organization can also provide advanced capacity planning services that leverage comprehensive visibility across technology and service silos.

Conclusion

Regardless of the markets you serve, chances are good that the customers you work with have either implemented Nutanix solutions or may soon be doing so. By leveraging CA UIM and establishing Nutanix monitoring services, your business can provide significant value—and help accelerate customers' digital transformation. Through these services, your organization can expand its revenues, margins and market share.

For more information about Nutanix, visit the company's [product page](#) and [partner page](#).

For more information about CA UIM, please visit the [product page](#). For more details on how CA supports service providers, see the [CA service provider page](#).



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