How to Achieve Modern Monitoring for Nutanix Hyperconverged IT

NUTANIX READY

• AHV •
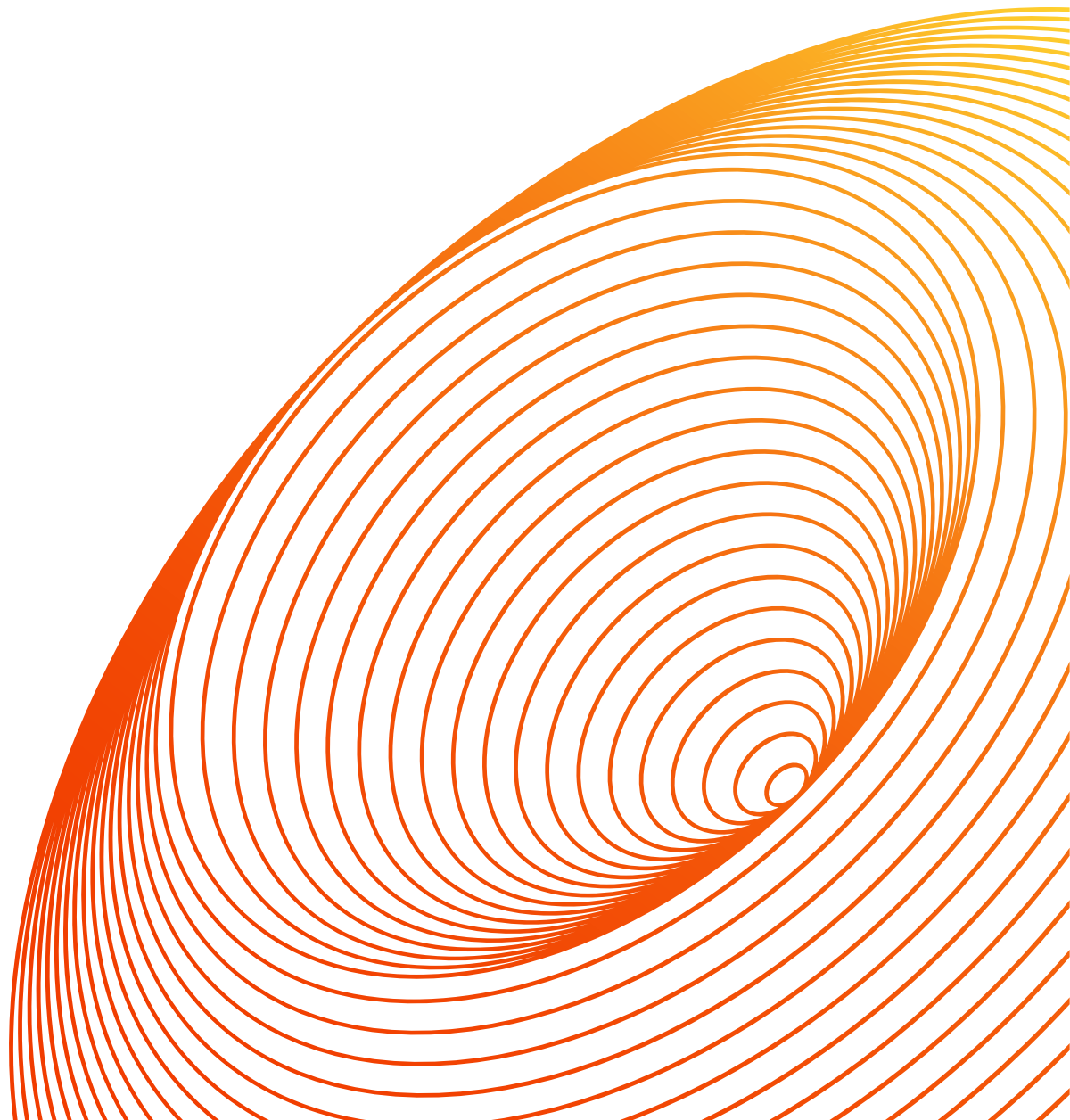
• INTEGRATED •

Organizations integrating Nutanix into their IT environments are looking for a way to maintain visibility and control across both new and existing elements in their infrastructure landscapes. Some applications may not migrate to the hyperconverged cluster, and organizations need to maintain operational awareness of those applications without complicating their toolchains further.

Nutanix faced similar challenges as they sought to integrate a hyperconverged infrastructure mindset into their day-to-day IT operations. Read on to learn how to merge hyperconverged infrastructure into a lean, connected operations workflow the way Nutanix did. Understand what else needs to be monitored, what a unified service view means, and identify the steps in building a well-designed toolchain.

Connected full-stack service awareness with Nutanix and Zenoss

Nutanix Prism Pro manages the Nutanix platform, letting customers streamline infrastructure management and track analytics. It's fast and easy to set up application VMs and storage. While it has effective VM monitoring, it doesn't reach beyond the hyperconverged infrastructure. There are three areas where Zenoss adds value to Prism.

Step 1: Deliver Comprehensive Visibility

The first step in building a toolchain is listing all of the organization's monitoring needs. For example, here are some monitoring requirements identified by Nutanix for their monitoring project:

- Incorporate performance metrics and fault events for F5 load balancers
- Check web portal function with synthetic web transactions
- Notify in advance of SSL certificate expirations
- Dig deep into Tomcat Java JMX applications by gathering thread counts, heap memory, and open file descriptors
- Track MySQL database essentials like data and index sizes, open connections and tables, and join statistics
- Support core Active Directory infrastructure by collecting number of connections and sessions, read/write activity, bind times, and cache hit rates

The list should include internal application details and core infrastructure pieces.

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Step 2: Organize for Service Context

The second step is organizing the incoming data to create context and meaning by defining services. The IT operations team will operate more effectively when they understand whether a MySQL database failure is affecting a customer-facing web portal or a long-running internal test system.

A web application is a useful example of a service. One common stack consists of one or more NGINX web servers, Tomcat application servers and MySQL databases. Create service groups for each application, and you'll have the context to understand which applications are affected by specific device failures.

Presentation

Application

Database
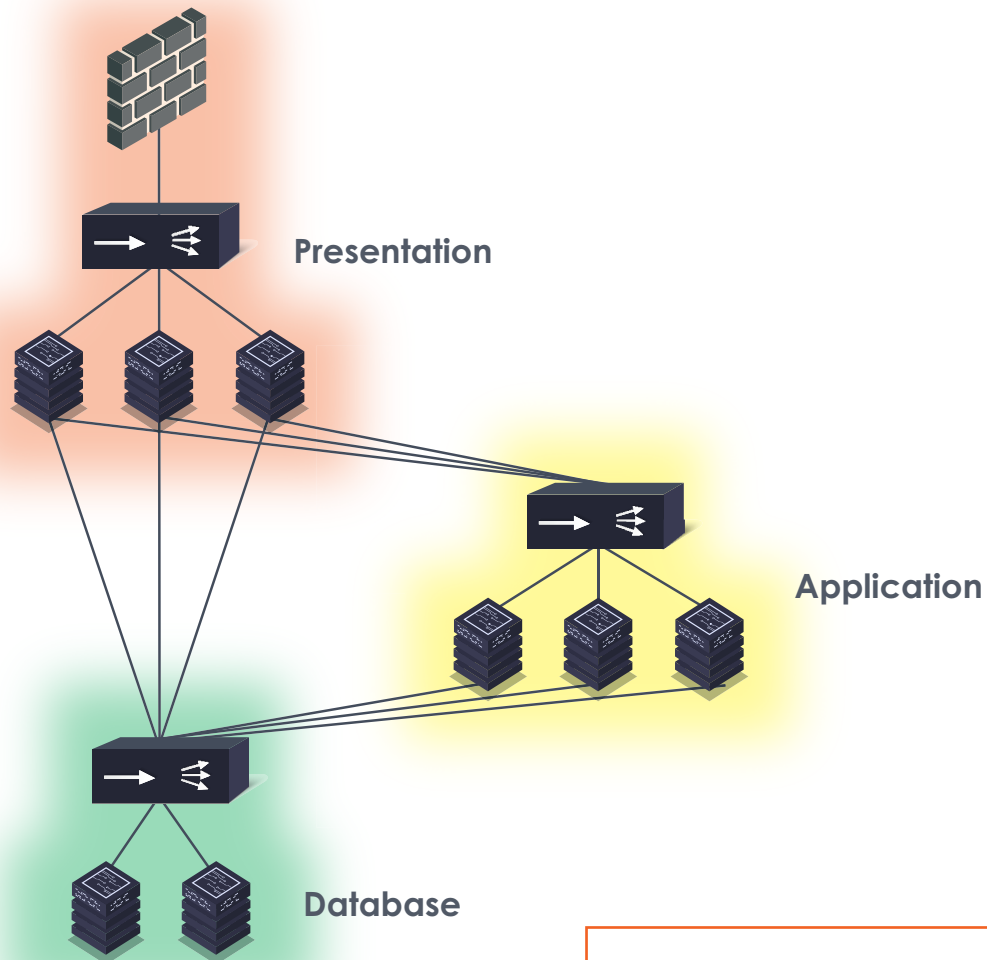
Active Directory (AD) is an outstanding example of an infrastructure service. Every AD deployment uses several domain controllers to provide continuous authentication availability. Organizations with multiple locations will disperse their directory services around the world, assured that no single location failure will stop this critical service. By delivering service context into the monitoring stack, no one needs to be disturbed if just one server fails.

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> *It's nice to have one view of the health of our entire services flow — from the infrastructure layer on out to our customers. With Prism Pro and the Nutanix ZenPack, we can focus on what matters — service quality.*
>
> - Wendy M. Pfeiffer, CIO, Nutanix

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It's a huge plus if the mapped services include the Nutanix infrastructure that supports each one. Look for a tool that automatically maintains the relationship between top-level service components and underlying infrastructure elements.

Step 3: Automate an Operations Toolchain

Delivering lean IT means eliminating boring, repetitive manual tasks. Identify how information flows end to end and automate the common use cases to eliminate inefficiencies.
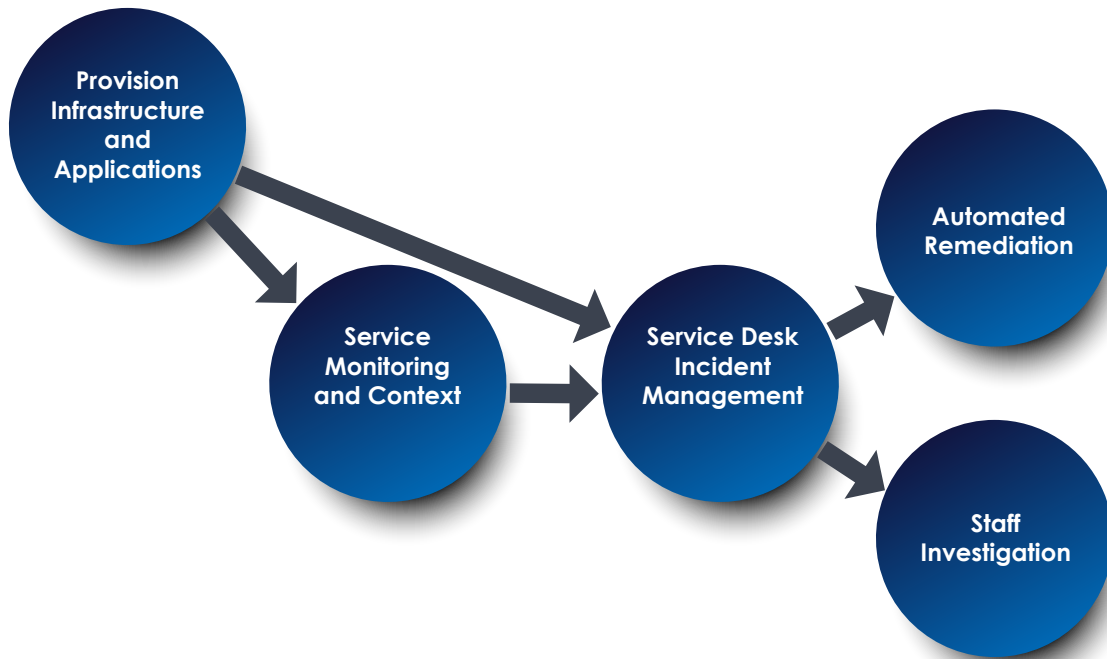
Here are four integration ideas to get started:

1. Send SNMP traps from Nutanix to your monitoring system for immediate fault awareness.

2. Create and update service desk tickets with monitoring events. (No more copy/paste!)

3. Provision new VMs and establish application services at the same time with Nutanix Calm.

4. Trigger autoscale up and down with performance thresholds. When a VM hits 90% memory, provision another one and tear it down when no longer needed.

Although this may sound daunting, it doesn't have to be. Picking the top few tasks to start with can enable IT teams to make rapid improvement in just a few sprints.

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How did Nutanix build connected full-stack service awareness?
They worked with Zenoss.
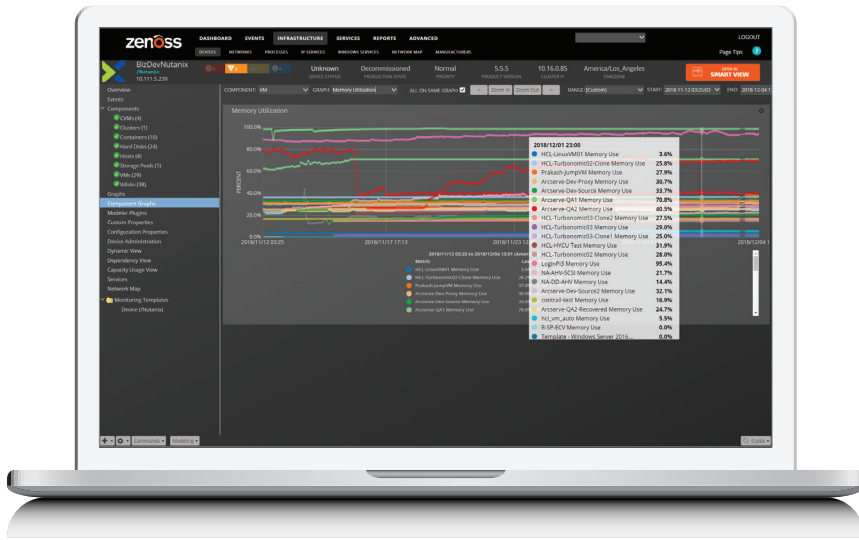
> " *Although we love the visibility and control that Nutanix Prism Pro gives us over our infrastructure, we still need to manage from a services perspective. The tight integration and enhanced visibility that the Nutanix ZenPack brings to our monitoring environment has improved our ability to triage and resolve issues. Automation is a breeze, and my team members don't have to learn a bevy of new tools and systems.*
>
> - Wendy M. Pfeiffer, CIO, Nutanix

Nutanix needed a tool to meet their team's needs for connected, full-stack service awareness – and they picked Zenoss. Why?

- They had a business-critical need for insight into application stacks and internals. Zenoss delivers a complete monitoring solution.

- The Nutanix ZenPack extension brings in all the information from Prism, so a team member can rely on one user interface to look at F5 performance, Tomcat application metrics and Prism alerts.

- Zenoss fills all the monitoring, service and integration needs of the Nutanix team. Standard extensions provide the base services, and a Python-friendly SDK ensures that Nutanix can handle special cases.

Zenoss extends the capabilities of the Nutanix Prism interface by collecting detailed data points on Nutanix clusters, hosts, CVMs, storage pools and more. When coupled with service impact analysis, the Nutanix ZenPack maps out not only the Nutanix resources but also all associated mission-critical services they enable. This gives users the ability to see when and where issues are occurring, identify affected services that rely on Nutanix infrastructure, and quickly pinpoint and resolve issues hindering service delivery. Zenoss also maintains a rich history of these data points over time so system performance can be explored retrospectively. Its machine learning algorithm utilizes this historical data to identify anomalous behavior and help you head off future issues before they occur.

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Nutanix and Zenoss enjoy a tight partnership that enables clients to get up and running quickly with a fully integrated modern monitoring solution for their hybrid IT environments. The key benefit Zenoss provides is clear visibility of IT status through deep infrastructure metrics collection coupled with a broad understanding of how different technology components work together to deliver a business service.
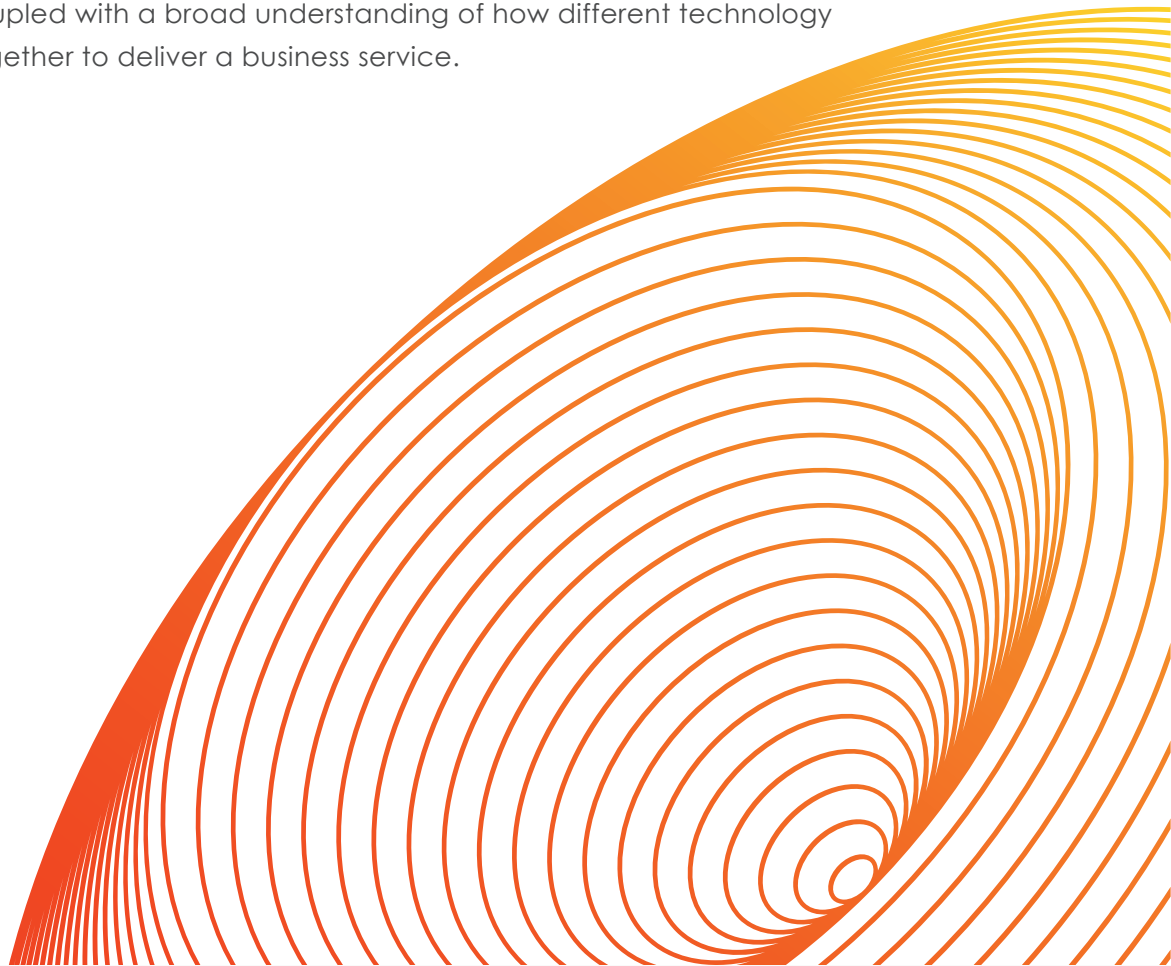
GET STARTED

Contact us today to schedule a consultation and live demonstration of the Zenoss-Nutanix integration.
https://www.zenoss.com/partners/nutanix

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