TANIUM

WHITEPAPER

Achieving complete IT visibility with Tanium

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Introduction

Imagine sailing a ship through uncharted waters — without a map, without a compass, in unpredictable tides, and at any time sails and rigging could appear or disappear. That sounds daunting, doesn't it? Well, that's what it can feel like for a CIO managing an IT environment without complete visibility. Servers, virtual machines, laptops, IoT devices, and operational technology systems are not only diverse, but some are constantly shifting — often appearing on your network temporarily and unpredictably.

This volatility can create glaring gaps in observability, leaving CIOs uncertain about what devices exist, where they are, and how secure they may be. Visibility gaps pose significant security risks[1] and make strategic planning, compliance, and risk mitigation nearly impossible. But it doesn't have to be this way. Real-time IT visibility gives the clarity you need to confidently steer your organization toward stronger security and optimized operations.

The fragmented nature of many visibility tools adds another layer of complexity. Each tool offers only a sliver of the complete picture, requiring IT teams to manually piece together data from various sources that collect data over time. That data itself might be a minute old, a few hours, days, or even longer – this is true of data between different endpoints or data within each individual endpoint. This leads to data that's not only out of date but data that is randomly and inconsistently out of date.

This patchwork approach slows down decision-making and drains resources, as organizations need custom solutions to align disparate data sets. Even then, data accuracy is questionable.

This struggle with inconsistent and outdated data has profound implications. IT teams are caught in a cycle of lengthy response times, missed vulnerabilities, and escalating risks. Ponemon research found that the average time to detect and contain a breach in 2024 was 258 days[2], often due to fragmented visibility — and in 40% of the cases — involving data stored across multiple environments. The financial costs are substantial too, with excess expenditures on tools, compliance failures, and reactive measures that could have been avoided with more comprehensive oversight.

In this eBook, we'll explore how comprehensive asset discovery and real-time data collection and analysis can transform IT visibility, management, and decision-making. You'll learn why Tanium is the key to unlocking this power and why CIOs can no longer afford partial solutions. Discover how Tanium's real-time visibility across all endpoints empowers CIOs to make informed decisions, improve operations, and elevate security standards.

> **69% of organizations[3] have experienced breaches through unknown assets.**

Challenges organizations face

The digital footprint of a modern IT organization can resemble a quickly growing metropolis, where new endpoints seem to spring from thin air — servers hum in data centers, laptops connect in urban coffee shops, and IoT devices quietly monitor everything from temperature to inventory. This increasingly complex landscape, with its mix of virtual workstations and operational technology (OT) systems, creates a challenging environment where keeping track of assets feels like trying to count stars in a moving sky.

Current visibility solutions struggle to keep up with this complexity. Rather than providing a clear, comprehensive view, available tools offer only snapshots — glimpses that don't quite sync with reality. IT teams find themselves cobbling together custom solutions and specialized tools to create a complete picture — a process that's not only time-consuming and even manual but prone to costly errors.

The challenge deepens when disparate monitoring systems collect data at varying intervals to create a patchwork of information that's often outdated before it can be analyzed. This inconsistency undermines trust in operational reports and security assessments, leaving your organization vulnerable to risks they can't fully see or understand.

For IT operations and security teams, the impact is immediate and tangible: response times lag, vulnerabilities go unaddressed, and risks accumulate. Beyond the immediate technical challenges, organizations face mounting financial pressures from increased operational costs and potential compliance violations — obstacles that can significantly impede their ability to grow and adapt in an increasingly digital marketplace.

How IT visibility can help overcome these challenges

Now, imagine the power of comprehensive IT visibility. This is your organization's high-powered telescope. It brings every corner of your technology landscape into sharp focus. When you can see your entire digital estate — from the shared printer in accounting to the newest cloud-based workstation — you're equipped to make decisions with confidence rather than concern.

This enhanced visibility transforms raw data that provides a general sense of the environment into accurate intelligence your teams can act on. Instead of piecing together information from multiple sources, they can work with a unified stream of real-time data, capturing the pulse of their digital environment as it beats. This immediate access to accurate information makes the difference between taking decisive actions versus the wrong ones that can prolong issues or even create disruption.

With this comprehensive view, IT teams evolve from reactive firefighters to strategic planners. Business units can prioritize actions, remediate issues, and achieve mission-critical outcomes because they will be able to spot patterns, anticipate problems, and allocate resources where they'll have the greatest impact. Compliance audits will now be straightforward check-ins instead of dreaded ordeals, and risk management will shift from educated guesswork to data-driven strategy.

The result? Leadership will receive clear insights instead of confusing technical reports. Teams will spend less time hunting down basic information and more time driving meaningful improvements. Enhanced visibility builds a foundation for smarter, faster, and more confident decision-making across the organization.

> "The beauty of Tanium is that everything flows in real time. We're not working with stale data anymore. Now everything reflects how our environment actually looks."

Anil Nomula
Assistant Vice President &
Global Enterprise Architect,
Genpact

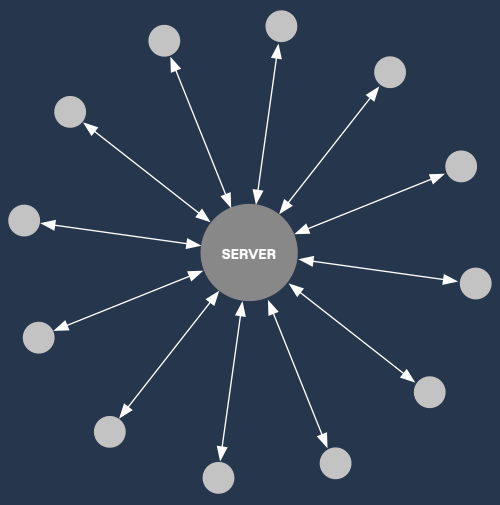
How Tanium provides IT visibility

Tanium can be your organization's advanced navigation system, helping you chart a precise course through even the most turbulent waters. Unlike traditional tools that offer only surface readings, Tanium provides real-time visibility that transforms how your organization understands and controls its digital assets.

Unlike siloed competitor solutions, Tanium Asset Discovery and Inventory (ADI) provides complete access to every endpoint in your environment, eliminating unseen and unmanaged devices — even across global networks. With patented linear chain architecture, Tanium has increased the speed of endpoint communication to get accurate, real-time data on demand. While traditional hub-and-spoke architecture overcrowds the network resulting in both slow response times and performance, Tanium's linear-chain architecture reduces an impact on the network to ensure fast response times and a higher level of performance. With this, get real-time inventory and data about all endpoints in minutes – not hours, days or weeks. With a view of the entire breadth and depth of their endpoint estate and granular endpoint data, Tanium builds the confidence necessary for swift, decisive action.

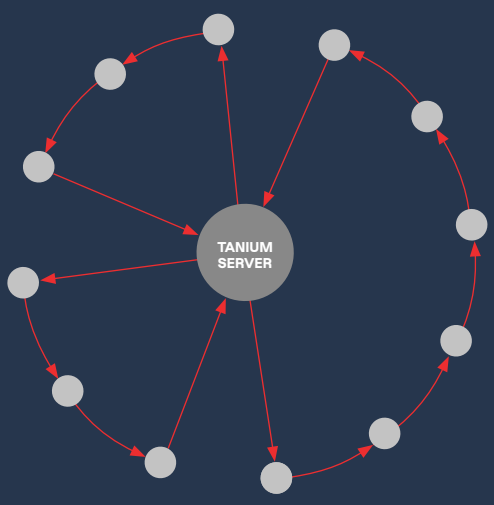
Traditional hub-and-spoke architecture

- Overcrowding network
- Slow response times (hours or weeks)
- Slower performance



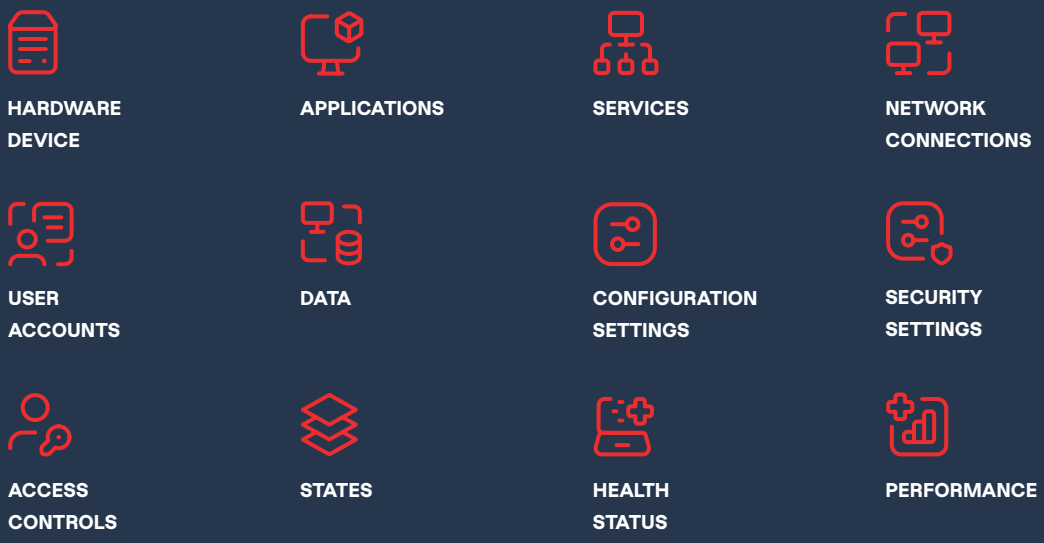
Tanium's linear chain architecture

- Reduced impact on network
- Fast response times (seconds)
- High level performance



This comprehensive platform doesn't just track endpoints — it reveals their complete context, from configuration states to potential vulnerabilities. Every hardware device, application, network connection, and literally any type of data that can be discovered on an endpoint can become part of a clear, actionable real time picture that you can create instantly on demand.

Top examples of the types of data collected



Using natural language processing (NLP), teams can query their environment with straightforward questions and receive immediate, accurate responses, eliminating the frustration of traditional management tools and their cryptic interfaces. And Tanium offers extensive, customizable reports and dashboards that render accurate, real-time data, enhancing productivity and decision-making.

The platform's strength extends through its seamless API integration with third-party tools such as ServiceNow and Microsoft. Rather than forcing organizations to adapt to rigid frameworks, Tanium enhances existing workflows while elevating their effectiveness by providing a single source of truth for inventory and endpoint data. This adaptability, combined with real-time data access, transforms the traditionally slow process of asset discovery into a dynamic system that matches the pace of modern business demands.

> "Aside from Tanium, there's really nothing else in the market that could solve our problem of gaining visibility for nearly 100,000 endpoints. Nothing else comes close."

Doug Shepherd
Senior Director,
Offensive Security Services, JLL

Across 48,000 endpoints in the composite organization[4], 20% have reclaimable software. Tanium XEM enables the successful reclamation of these licenses through the solution's comprehensive visibility and control over endpoints. Over three years, reclamation savings with Tanium XEM are worth more than $4.8 million.

> "Without the visibility that Tanium supplies, we wouldn't be able to grapple with the ever-present security threats."

Tom Barker
Chief Security Officer,
BAE Systems

How companies overcome challenges with Tanium IT visibility

Tanium doesn't just solve visibility challenges — it streamlines operations, reduces costs, and creates a foundation for more agile, responsive IT management.

Asset discovery and inventory

Today's CIOs struggle to answer basic questions about their IT assets, even with multiple tools. Tanium enables organizations to discover every endpoint and container in their environments and access real-time data on demand. This eliminates the need for multiple discovery tools or scans when assets are offline. With Tanium, you attain a complete, accurate inventory of your complex environment, enhancing workflows, asset management, and integration with third-party systems like CMDB and SIEM.

Software inventory and usage

Companies often struggle to track software usage and distribution. This can affect license management during audits, lead to improper allocation, and increase costs due to unused licenses.

Tanium offers real-time visibility into software usage and distribution, providing data in seconds. Users can view current and past software on each endpoint, helping prevent version drift and eliminate or upgrade vulnerable software. With accurate software inventory data, organizations can streamline audits, save on unused licenses, and manage entitlements effectively.

Managing and responding to vulnerabilities

Cybersecurity teams are currently facing challenges due to increasingly complex IT environments and solutions that do not fully address their needs. The tools employed for scanning take excessive time, and prioritizing vulnerabilities across the entire estate remains difficult.

With Tanium, however, endpoints can be scanned for vulnerability and compliance risks within minutes rather than days or weeks, without adversely affecting the network. Users are able to collect risk data from both managed and unmanaged endpoints, with comprehensive visibility into issue severity, endpoint context, and peer comparisons. Tanium's vulnerability management enhances efficiency and reduces the likelihood of costly breaches.

"Tanium is part of our M&A strategy. We can take a more controlled approach, understand the vulnerabilities and then make the business decision."

Matthew Wilmot
Group Head of Enterprise IT & Information Security,
Frasers Group

Investigating an IT incident

Organizations often face challenges when trying to investigate incidents promptly enough to remediate them before they cause harm. IT and security teams lack the necessary tools to conduct hunts with real-time data, evaluate alerts, and obtain visibility and context into incidents. The process of accessing data required for investigations is time-consuming, thereby increasing the risk of significant harm.

Tanium significantly enhances the mean time to resolve (MTTR) security incidents by providing comprehensive visibility. Operators gain real-time access to critical incident data that SIEM and EDR tools do not offer and would typically require manual effort to obtain. Within seconds, they can efficiently analyze both real-time and historical endpoint data to complete hunts and investigations. This data provides insights at scale across the entire environment. With no informational gaps, operators can identify in-progress incidents, investigate their causes, determine the full scope of the threat, and devise effective mitigation strategies.

"I've spent my entire career focusing on end-user experience and trying to get vendors and organizations to prioritize it, so I really like seeing tools like Tanium's Digital Employee Experience coming to the marketplace to help keep end users happy and productive while lightening the load on IT departments."

Gabe Knuth
Senior Analyst,
Enterprise Strategy Group

Managing certificates

Managing an increasing number of digital certificates within an organization is challenging, involving tedious tasks such as dealing with expirations, potential attacks, and complex manual tracking.

Tanium provides modern visibility into your certificates across all endpoints. It identifies certificate locations, health, and status, pinpointing non-compliant ones for replacement. Automated expiry reporting and alerts prevent service disruptions, reduce manual workload, boost operational efficiency, and mitigate risks with real-time, accurate data.

Uncovering a root cause impacting digital employee experience

When IT teams are forced to guess the root cause of an end-user issue, users often suffer. For example, an app crashes, and by the time IT checks, the app is restored, making it hard to diagnose.

Tanium DEX provides device-side data to pinpoint what happens during crashes or performance issues. It can identify problems such as anti-virus or VPN issues. With Tanium's real-time and historical visibility, operators can analyze and resolve issues confidently.

> "We had a real lack of visibility into the assets across the University in our ability to patch them, manage them and make sure they were safe, secure and up to date. Tanium gave us full visibility of our assets, and with that visibility, we have been able to remediate some of the issues that we found along the way, including something in the region of 38,000 missing critical patches."

Mark Wantling
Chief Information Officer,
University of Salford

Managing and improving the efficacy of software patches

Organizations often face challenges with tools that report high patch efficacy numbers, while many systems remain non-compliant. This issue arises because the tools lack the visibility to detect a significant portion of the endpoints in the environment. For instance, it is not unusual for other tools to miss up to 20% of the endpoints, yet still report high patch efficacy numbers.

For example, a patching tool might report to see 80 endpoints and then patch 75 of them, reporting a 94% patch efficacy. However, there are actually 100 endpoints in the environment, so the actual patch efficacy is 75%.

Tanium's visibility identifies these missing endpoints and accurately reports on their patch status. Tanium Patch can then bring these endpoints into compliance by applying the appropriate patches and software using a resilient, fault-tolerant process to ensure patch success. Once applied, Tanium rapidly reports the results.

Verifying software deployment

Many commonly used tools employ a process of rolling software deployments over time to avoid network overload. However, this method does not allow precise control over when software updates occur and makes it difficult to verify which endpoints have been successfully updated. In addition, many organizations do not collect data from all endpoints that periodically connect to the network, making it challenging to keep software current.

Tanium Deploy enables administrators to target specific sets of machines and execute software deployments immediately. This process helps conserve bandwidth and associated costs while providing key insights into deployment results. Administrators can query all endpoints for their current update status and receive this information in real time, allowing for prompt resolution actions and accurate monitoring of software deployments.

Visualizing your IT environment

Leveraging endpoint data from multiple products and sources results in cumbersome workflows and analysis. Outdated and conflicting data between the sources may lead to inaccurate analysis and compromise decision making. When time is of the essence it's imperative for operators have accurate data so they can take the correct next steps.

Tanium delivers powerful, out-of-the-box and highly customizable real-time reports and dashboard visualizations of all your live endpoint data at any level of granularity. Additionally, operators regardless of expertise can easily use completely natural language to ask any question in Tanium Interact to get the answers about nearly any endpoint question in seconds. As a centralized means to get real-time endpoint data, Tanium can also share its data with other solutions, like a CMDB, to enrich those experiences. Tanium's accurate real-time data across each of its visualization experiences ensures operators always have the data they need to successfully take actions, execute workflows, investigations, and can share that information with other operators, teams, and leadership.

> "The speed and efficiency at which Tanium operates allow our security teams, our endpoint management teams, and IT teams in general to be able to collect information and gain visibility quicker than any other solution we've had in the organization, which extends to efficiencies across the board."

— Lead cybersecurity engineer in the Insurance industry

Conclusion

The challenges of managing an ever-expanding digital environment extend far beyond a simple inventory of assets. They touch every aspect of operations, from security and compliance to resource allocation and strategic planning. To successfully meet those challenges, you need a sophisticated solution that doesn't add to the complexity.

Traditional approaches, with their fragmented views and delayed reporting, can leave your organization open to risks it cannot see and unprepared for threats it cannot anticipate. When you can't see your full IT environment clearly, you pay the price twice: first in hard-to-quantify losses across the business as teams waste countless hours piecing together mismatched data and then again with the frightening potential costs of security and compliance risks that go unchecked.

This is where Tanium's visibility steps in to transform your organization by providing real-time, comprehensive visibility across your entire digital estate. Tanium eliminates the guesswork that plagues traditional IT management. Its NLP capabilities and customizable reporting turn complex queries into straightforward conversations, while seamless integration with existing tools ensures that this enhanced visibility strengthens rather than disrupts current workflows.

This transformation extends throughout your organization: IT teams evolve from reactive troubleshooters to proactive strategists. Security responses shift from delayed reactions to preventive actions. Compliance becomes a continuous state, not a periodic scramble. And most importantly, your leadership team gains the clear, accurate insights it needs to make confident decisions about investments and strategic initiatives.

Tanium gives your organization the clarity, control, and confidence it needs to navigate the complexities of modern IT management.

TAKE A TOUR OF THE TANIUM PLATFORM

Take the Tour →

SEE MORE TANIUM VISIBILITY THROUGH A LIVE DEMO

Schedule a Demo →

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