MODERN IT INFRASTRUCTURE MANAGEMENT: 3 PILLARS FOR SUCCESS

BROADCOM®
SOFTWARE

Something has to give.

For the teams responsible for managing today's IT infrastructures, demands continue to expand, while hours in the day stay largely static.

Ensuring optimized performance and availability of today's digital services is more critical than ever. At the same time, modern IT environments keep getting more dynamic, complex, and interdependent.

For these reasons, the requirements for successful IT infrastructure management have changed substantially.

BROADCOM®
SOFTWARE

→ **READ ON TO DISCOVER THE THREE PILLARS THAT SUCCESSFUL MODERN IT INFRASTRUCTURE MANAGEMENT NOW NEEDS TO BE BUILT UPON.**

The Advent of Complex, Dynamic IT Ecosystems

In recent years, IT operations teams have taken on responsibility for an environment that bears little resemblance to the ecosystems that were in place just a few years ago. The stove-piped, relatively static on-premises infrastructures of the past have been subsumed by completely different architectures with completely different demands. Following are a few of the key defining features of these modern environments:

- **Cloud services**. Now, business services of most enterprises are highly reliant upon a mix of private and public cloud services, and these environments will continue to represent an increasing share of implementations. In fact, by 2025, analysts estimate that more than half of IT spending will shift from traditional environments to public clouds.[1]

- **Containers**. In recent years, the move to container-based services has grown dramatically. In 2022, 96% of enterprises will adopt container technologies, such as Apache Mesos, Docker, and Kubernetes.[2]

- **Virtualization and converged infrastructure**. Both within data centers and external provider environments, the reliance on virtualization, converged infrastructures, and other advanced technologies has also continued to expand.

At the same time, legacy technologies remain in the data center, and must continue to be monitored, tracked, and optimized.

Legacy Approaches Don't Cut It

For IT operations teams, significant challenges have emerged along with these modern ecosystems:

- **Tool sprawl**. To accommodate the expanding types of technologies and cloud services being used, teams have had to continue to add monitoring tools. Now, 80% of enterprises are running 10-20 IT infrastructure management tools.[3] This tool proliferation leads to high cost, excessive administrative efforts, and operational complexity. In fact, a recent report found that, given the tool sprawl occurring, the top challenge was complexity, cited by 41% of respondents.[4] Given these challenges, it keeps getting tougher for teams to stay on top of their organization's expanding, ever-more quickly evolving environments.

- **Limited, siloed visibility**. In spite of, and because of, the many tools deployed, teams still fundamentally lack the visibility they need. That's because the tools deployed provide narrow visibility of specific technologies and domains, not the complete ecosystems business services rely upon. Teams only get partial visibility of their deep technology stacks and hybrid environments.

- **Slow, inefficient triage**. When issues arise, operators lack a unified view of the environment. Given this, disparate teams with different tools all need to be engaged in troubleshooting.

- **Unpredictable operations and degraded service levels**. Given all the obstacles and limitations above, teams can't track or optimize service levels. When performance issues and outages arise, teams invariably find out from end users and customers. Because it takes too long to determine the root cause of issues, it takes too long to address issues, which means downtime goes on too long. As a result, performance and service levels suffer, which can have a direct and devastating impact on business performance.

What's worse is that, given they're struggling to keep pace with the constant firefighting and demands of their existing environments, IT operations teams are increasingly ill equipped to support the process and technology innovation that the business needs.

To address these challenges, teams need to leverage an advanced IT infrastructure management platform. In the following sections, we look at the key pillars these platforms must be built upon.
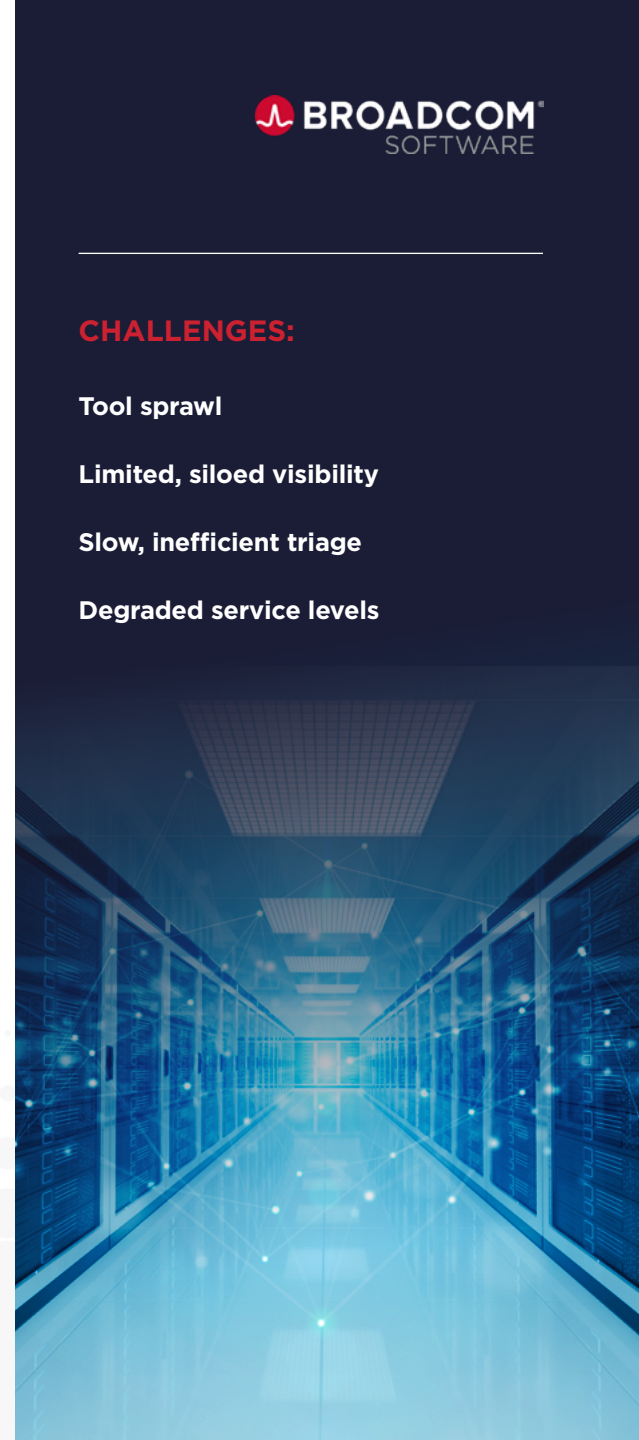
CHALLENGES:

Tool sprawl

Limited, siloed visibility

Slow, inefficient triage

Degraded service levels

Pillar #1: Unified Hybrid Infrastructure Observability

To meet their imperatives, IT operations teams simply can't continue to invest in and maintain a complex set of point solutions.

Now, it's absolutely imperative that teams can leverage a platform that offers a centralized, unified way to manage their traditional data center deployments and their entire modern IT ecosystem, including public and private cloud services, containers, virtualization, converged infrastructure, and more.

To be practical, platforms must be able to aggregate and correlate thousands of data types, and provide a unified view to make sense of it all.

Pillar #2: Intelligent Operations

Today's IT operations organizations need platforms that enable them to work and respond smarter. To do so, they need these capabilities:

- **Streamlined, automated operation**. Teams need to maximize operational efficiency, leveraging automated discovery, configuration, and deployment as new technologies are added. Plus, capabilities need to be in place to ensure monitoring is removed when computer systems are taken offline or decommissioned.

- **Timely, actionable insights**. Teams need to be able to leverage current, intuitive dashboards and intelligent alarms so they can quickly respond when issues arise, and gain the insights needed to spot and preempt potential issues. It is also vital that platforms minimize alarm noise, while ensuring critical alarms are automatically distributed and escalated.

- **Service-level visibility**. Teams must be able to track and manage end-to-end IT services, regardless of how dynamic or complex the underlying infrastructure, and no matter where or how many locations that infrastructure is running in.

Pillar #3: Scalability for Enterprise Complexity

In today's large enterprises, operations teams must contend with evolving requirements and rapidly expanding, increasingly complex environments. At the same time, budgets and staffing levels typically don't see similar spikes.

To address imperatives for service levels and policy compliance across these organizations, teams need to establish IT infrastructure management capabilities that can efficiently, seamlessly scale.

Platforms must offer easy integrations and extensions with flexible APIs and software development kits, so teams can effectively adapt implementations to their organization's specific needs. In addition, it's vital that platforms offer support for multi-tenancy, so a single implementation can support a range of different customers and internal organizations.

DX UIM: The IT Infrastructure Management Platform for Modern Enterprises

DX Unified Infrastructure Management (DX UIM) provides reliable, secure, and scalable IT infrastructure management for the world's largest and most complex enterprises. DX UIM effectively delivers the three pillars of modern IT infrastructure management:

UNIFIED HYBRID INFRASTRUCTURE OBSERVABILITY

Use a single platform to gain monitoring coverage of all the technologies your organization relies upon, whether traditional, virtual, cloud, or hybrid.

INTELLIGENT OPERATIONS

Gain smart incident correlation, service-level insights, and automated inventory and alarm management.

SCALABILITY FOR ENTERPRISE COMPLEXITY

Employ an open, multi-tenant architecture that has been proven in some of the largest, most complex enterprise environments. Maximize reliability, security, and scalability.

Unified Hybrid Infrastructure Observability

To perform optimally, your business services are reliant upon an increasingly diverse, distributed infrastructure. DX UIM delivers unified views of every facet of your modern IT infrastructure, so you can efficiently, intelligently track and optimize service levels.

The solution offers probes for hundreds of technologies, aggregates and correlates thousands of data types, and delivers unified views of the intelligence gathered. DX UIM delivers coverage of these technologies and environments:

- Public cloud services, including those running in AWS, Google Cloud Platform, Microsoft Azure, and OpenStack-enabled cloud deployments.

- Orchestrators and containers like Docker.

- Virtualization platforms, including Citrix XenServer, Microsoft Hyper-V, and VMware.

- Hyperconverged infrastructure platforms, including Nutanix.

See our DX UIM integrations page for a comprehensive list of technologies supported.

"Before DX UIM, we had six point solutions in place. With DX UIM, we could confidently collapse everything into a single interface. This not only made my team's life easier, but for the first time we had one view of our entire infrastructure, which made optimizing the digital experience much more straightforward."

—VP of IT operations at an international financial services firm

Intelligent Operations: Automated Discovery, Deployment, and Configuration

DX UIM can automatically discover devices and then automatically deploy configurations and alarm policies as needed based on device type. Further, when issues arise, DX UIM can be configured to initiate targeted, automated remediation actions. DX UIM delivers direct integration with email, SMS, service desk, and CMDB applications, enabling automated alarm routing and faster repair.

"We have 25,000 devices under management, so managing the monitoring configurations for this would be massively time consuming. With DX UIM, you can leverage Monitoring Configuration Service (MCS) to create configuration profiles that can be applied appropriately across device groups—literally hundreds at a time. You can also use MCS to set alarm configurations for those same groups at scale. Therefore, we can apply a specific set of alarm baselines and thresholds and custom alarm messages in bulk. It saves us countless hours when we want to change a setting or alarm configuration."

—Head of infrastructure management at a Fortune 500 financial services organization

Intelligent Operations: Powerful Analytics and Insights

The last thing your IT operations teams need is more data. What they need is tangible, actionable insights.

DX UIM offers smart incident correlation, alarm filtering, and noise suppression, so you can ensure administrators are focused on what matters—not chasing false or redundant alerts. The solution enables fast, efficient triage and predictive insights so teams can prevent downtime and minimize outages when they occur. DX UIM offers such robust features as dynamic baselines and centralized alarm policy management.

With its prepackaged reports and dashboards, DX UIM enables your teams to get started and realize value fast. Further, dashboards and reports can easily be created and customized via an intuitive, drag-and-drop editor. You can create views for a range of specific roles across the organization, including for top-level business executives, IT leadership, product and service managers, site reliability engineers (SREs), level one and level two operators, and more.

DX UIM offers advanced insights, enabling teams to leverage intelligent performance and health management reports. In addition, your teams can quickly gain insights for tracking and optimizing service levels of your organization's most important digital services and gain historical views to optimize resource investments, allocation, and utilization. Finally, through its integration with DX Operational Intelligence, DX UIM enables your team to leverage AI and machine learning-driven observability.

Executive View

Ops Manager View

"DX UIM reporting is a solid feature right out-of-the-box. It goes beyond metrics with insights into performance, such as the Top-N and Health Index reports. I personally love the 'situations to watch' widget on the dashboard because I can proactively understand when we are reaching capacity for a certain resource or environment."

—IT director at a U.S. healthcare services provider

Scalability for Enterprise Complexity

OPEN, SEAMLESS SCALABILITY

DX UIM delivers maximum scalability, and it has been proven in some of the largest, most demanding enterprise and service provider environments. The solution's open, multi-tier architecture offers efficient inter-component communications, horizontal scalability, and high throughput. DX UIM offers modular, customizable data collection that enables you to address your specific monitoring needs, while minimizing your footprint and overhead.

MULTI-TENANCY SUPPORT

DX UIM's architecture is natively multi-tenant, so it can elegantly support multiple organizations or divisions. The solution features the intelligent partitioning and role-based access controls needed to ensure assets and reports can only be accessed by authorized roles and tenants. DX UIM enables customizable branding and labeling to efficiently support a range of internal teams or external customers.

ROBUST SECURITY

The DX UIM team employs advanced DevSecOps practices to safeguard development, delivery, and deployment. Consequently, customers can rest assured that their DX UIM implementations have the strongest defenses against cyber-attacks and breaches.

"Our company has multiple business units with differing needs, reporting requirements, and vastly different infrastructure models. We found that DX UIM could handle the complexity without requiring us to deploy multiple instances."

—Head of IT operations at a large international financial services firm

How Your Organization Benefits

Put DX UIM to work for your IT operations team. With the solution, your organization can:

- **Boost service levels and SLA compliance**. Enhance service levels and more consistently ensure service level agreement (SLA) compliance. With the solution, you can resolve issues more quickly—and you can gain the insights you need to predict and preempt issues and capacity bottlenecks before they affect the user experience.

- **Maximize operational efficiency**. Gain complete visibility across your entire IT infrastructure. DX UIM gives your team unified, correlated visibility across disparate environments and data sources. Efficiently monitor your critical business services, whether they're running in traditional data centers, public clouds, private clouds, or any hybrid mix.

- **Maximize cost efficiency**. With DX UIM, you can leverage a single platform for the entire enterprise, eliminating the cost and complexity of running multiple point tools. Plus, DX UIM provides you with insights for optimizing utilization of existing resources and predicting demand to optimize infrastructure spending.

"Supporting a modern enterprise means that an infrastructure monitoring platform will likely have to support federated organizations with multiple business units and complex hybrid environments. That is why we selected DX UIM—because we needed a platform that monitors highly dynamic cloud environments. What I tell my peers is that the more complex an infrastructure is, the better DX UIM will perform because it is built to manage complexity."

—IT director at a U.S. healthcare services provider

PUT DX UIM TO WORK FOR YOU

Get started with DX UIM and see how this advanced solution gives you enterprise-grade scalability and intelligent observability for your complex, hybrid IT infrastructures.

Visit the [DX Unified Infrastructure Management page](#) on the Broadcom Software Academy to learn more.

Endnotes

[1] Gartner, "Gartner Says More Than Half of Enterprise IT Spending in Key Market Segments Will Shift to the Cloud by 2025," February 9, 2022, URL: https://www.gartner.com/en/newsroom/press-releases/2022-02-09-gartner-says-more-than-half-of-enterprise-it-spending

[2] Cloud Native Computing Foundation, "CNCF Sees Record Kubernetes and Container Adoption in 2021 Cloud Native Survey," February 10, 2022, URL: https://www.prnewswire.com/news-releases/cncf-sees-record-kubernetes-and-container-adoption-in-2021-cloud-native-survey-301479915.html

[3] BitSight Technologies, "More Network Security Monitoring Tools Doesn't Mean More Visibility," Kaitlyn Graham, October 20, 2021, URL: https://www.bitsight.com/blog/network-security-monitoring-tools

[4] ITOps Times, "Report: Majority of companies use up to nine different tools for observability," March 10, 2022, Katie Dee, URL: https://www.itopstimes.com/softwaredev/report-majority-of-companies-use-up-to-nine-different-tools-for-observability

About Us

Broadcom Software is one of the world's leading enterprise software companies, modernizing, optimizing, and protecting the world's most complex hybrid environments. With its engineering-centered culture, Broadcom Software is building a comprehensive portfolio of industry-leading infrastructure and security software, including AIOps, Cybersecurity, Value Stream Management, DevOps, Mainframe, and Payment Security. Our software portfolio enables innovation, agility, and security for the largest global companies in the world.

For more information, please visit our website at: software.broadcom.com