BROADCOM

WHITE PAPER

DX NETOPS

A History of Network Management Innovation



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EXECUTIVE SUMMARY

For more than 30 years, network operations teams worldwide have relied upon DX NetOps to establish scalable experience monitoring and optimize network performance and reliability.

DX NetOps provides a full suite of diagnostic capabilities, enabling teams to analyze and track root cause, topologies, device metrics, faults, flow, packet, and controllers. The solution reveals valuable user-experience insights and offers coverage that spans physical and virtual infrastructures, including pathways into and from hybrid cloud environments.

Since Broadcom acquired CA Technologies, the DX NetOps team has been focused on selling to the top organizations with the most demanding network environments. To serve these markets, Broadcom has continued to invest in solution innovation, including in such areas as security, architectures, user experience, and scalability.

DX NetOps has been established as a leading network monitoring solution, and Broadcom continues to invest to keep it at the forefront of the industry. The following sections offer a look at where innovation has been focused, and what is in store for the future.

DX NETOPS: KEY INNOVATION AREAS

In order to innovate, the DX NetOps team has acquired, developed, created, and integrated new technologies. Innovation has been realized in the following key areas.

Pricing and Licensing Innovations

Within Broadcom, teams have pursued a range of innovations in order to streamline and accelerate internal business processes—and deliver more value for enterprise customers. This innovation has resulted in

consolidated and simplified pricing models, which give customers maximum flexibility and unrestricted access to the DX NetOps network monitoring suite. With these new models, customers can:

- Access the full range of solutions in a product line.
- Enjoy predictable annual costs, even when usage expands.
- Reduce overall network management costs.
- Gain increased flexibility in trying new network technologies, with no financial risk.
- Experience simplified maintenance, upgrade, and renewal processes.
- Get easy access to additional licenses, without the need to go through a procurement process.

The team at Broadcom has a keen understanding of the integral role the network has historically played in the delivery of digital services—and how that role only continues to get more critical.

Modern Technology Coverage

The team at Broadcom has a keen understanding of the integral role the network has historically played in the delivery of digital services—and how that role only continues to get more critical. In order to meet the challenges posed by today's complex, dynamic networks, teams need advanced levels of observability and insights.

With each new release, DX NetOps continues to help customers address these challenges directly—delivering industry-leading scale, speed, and simplicity. In recent years, product advances have been delivered to address customer requirements in such areas as compliance, security, and integration. Through the solution's continued innovation, DX NetOps enables customers to adapt to the challenges posed by work-from-anywhere models, SD-WAN, and multi-cloud environments.

Following are a few of the advances delivered:

- **Increased scale**: DX NetOps can now support user-experience monitoring in environments with more than 500,000 hyper-scale devices and 300,000 SD-WAN tunnels.
- **Expanded vendor support**: DX NetOps delivers the most comprehensive coverage of modern, multi-vendor architectures—enabling teams to monitor their entire ecosystem with a single operations portal. The solution offers coverage of software-defined WiFi and such SD-WAN offerings as Fortinet Secure SD-WAN, Aruba EdgeConnect SD-WAN, VeloCloud, and Cisco Meraki. The solution supports software-defined data center (SDDC) technologies like Cisco ACI, Cisco DNA Center, and VMware NSX-T.
- **Improved intelligence**: DX NetOps now offers enhanced alarm noise reduction with software-defined network (SDN) event filtering.

This set of innovations build upon the solution's next-level network management and monitoring capabilities. With DX NetOps, site reliability engineers (SREs) can prioritize the problems that matter—based on the user experience—instead of chasing utilization spikes.

Cloud-Native Technology Support

The DX NetOps product team understands the importance of adopting cloud-native technologies, such as Kubernetes. Through these technologies, DevOps teams can realize dramatic improvements in efficiency, scalability, and cost.

Some key components of the DX NetOps solution now support deployment through containers or pods in Kubernetes and leverage Kafka as a data bus for streaming. The updated components coexist and work in parallel with traditional components. As a result, teams can adopt this new technology and capitalize on the scalability and high availability of microservices, without any disruption.

DX NetOps features a converged architecture that brings all your monitoring metrics into a unified, easy-to-consume portal.

Optimized Operations

The DX NetOps team has made optimizing operations a key area of investment. We have transformed NOC triage and response by consolidating multiple capabilities into a single portal. With the solution, teams can use a single tool that employs standardized operational workflows for routing user-experience metrics.

DX NetOps features a converged architecture that brings all your monitoring metrics into a unified, easy-to-consume portal. This architecture can scale to address the dynamics of modern networks and deliver end-to-end coverage across any network. Through these ongoing innovations, our team continues to deliver a single NetOps tool that maximizes operational simplicity.

Through this innovation, DX NetOps has enabled teams to contend with the massive and rapid shift to work-from-home approaches. To see an example of how this benefitted one of our customers, be sure to read the blog post, "How Modern Network Monitoring Can Deliver a Healthy Customer Experience for Remote Workers."

Strengthened Security

Security is a top priority for the DX NetOps team. We continue to make significant investments in order to adapt to evolving threats and maximize the security of the solution. At the same time, we continue to balance the need to address security requirements while delivering an optimized user experience.

With DX NetOps, teams can manage most security configurations from a centralized, intuitive portal. In addition, when combined with AppNeta®, DX NetOps offers unprecedented levels of visibility into secure access service edge offerings (SASE) and beyond—including to

individual workstations. By delivering this visibility, DX NetOps enables teams to pinpoint the root cause of performance roadblocks that arise in highly secured environments, and do so in a vendor-agnostic manner.

The DX NetOps team has partnered with the Symantec division within Broadcom to provide valuable integrations and visibility for Symantec® Secure Web Gateway. As a result, your team can manage the performance of these solutions within the context of your broader network delivery strategy.

Finally, the DX NetOps team provides full transparency into its entire secure software development lifecycle (SSDLC) and data privacy processes.

The DX NetOps team is committed to delivering top capabilities that enable customers to address key requirements today—and those that emerge in the future.

Fast Adaptability

The DX NetOps team is committed to delivering top capabilities that enable customers to address key requirements today—and those that emerge in the future. DX NetOps customers can leverage a number of innovative capabilities with minimal effort and disruption. With DX NetOps, teams can:

- Get real-time insights into network performance via modern network telemetry collection.
- Deploy advanced traffic engineering microservices for highly scalable and available flow analysis.

DX NetOps provides software-to-silicon coverage and integration with Broadcom® BroadView™ Buffer Statistics Tracking (BST). With these capabilities, teams can identify and isolate network congestion within their data center's switch fabrics.

In an EMA report, analysts stated, "Broadcom is ranked a Value Leader with the Highest Vendor Strength Score because they push the limits of modern network monitoring with features like chipset network visibility, high-scale and one of the strongest suites of network analytics capabilities in the industry."[1]

BROADCOM ACQUIRES APPNETA

Early in 2022, Broadcom acquired AppNeta, a vendor that delivers digital experience monitoring solutions. This represented a key move, one that helps Broadcom to keep innovating, enriching, and strengthening the NetOps offerings we deliver to our customers. Our industry-leading network monitoring software can now deliver visibility beyond the network edge, into ISP, SaaS, and cloud provider networks.

With these offerings, operations teams get a complete understanding of network delivery from the end-user perspective—across any device and any network, anywhere in the world. By leveraging the combined solutions' capabilities for active and passive monitoring, teams can establish innovative Experience-Driven NetOps.

You can see the full set of capabilities unleashed by this acquisition in our Experience-Driven NetOps Capabilities Brief. This combined solution is already providing value to our customers, offering a strong example of how to innovate through acquisition.

THE NEXT CYCLE OF INNOVATION

Broadcom continues to innovate in order to help customers maximize the performance and availability of their networks, whether they are software-defined or hybrid networks, or whether they are managed internally or by external service providers.

At Broadcom, NetOps innovation continues, with a dedicated focus on delivering capabilities for Experience-Driven NetOps. Broadcom continues to innovate in order to help customers maximize the performance and availability of their networks, whether they are software-defined or hybrid networks, or whether they are managed internally or by external service providers.

We are actively pursuing further advancements and helping our customers harness our innovations. We continue to invest in innovative observation technologies that leverage collected data in order to provide actionable insights for optimizing the user experience. We'll continue to deliver innovative deployment options and help teams harness automation in order to advance their self-driving observability journey.

CONCLUSION

DX NetOps represents a core part of the Agile Operations Division of Broadcom. In order to deliver increasing value to its customers, Broadcom continues to innovate its products, business models, and community efforts. Throughout its history, DX NetOps has continued to deliver industry-leading innovation. Over the years, Broadcom has continued to align its offerings with evolving customer requirements, including as teams look to adopt software-defined networks. Through its acquisitions and continued innovation, Broadcom will deliver the Experience-Driven NetOps solutions that will enable teams to maximize the availability of their modern, dynamic networks, now and in the years ahead.

To learn more about the Broadcom® award-winning network monitoring solutions, schedule a demo with our team.

Sources

1 EMA, "2021 EMA Radar Report For Network Performance Management," August 2021, URL: https://enterprise-software.broadcom.com/hubfs/ESD/ESD_FY21Q4_AIOPS_AIOps-Virtual-Summit_On-Demand_General/NPM-RadarReportSummary-Broadcom.pdf

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