



IDC TECHNOLOGY SPOTLIGHT

Analytic Impact: The Value of Real-Time Mobile Analytics

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As enterprise organizations continue to dedicate significant portions of annual IT budgets to mobile initiatives — whether mobile devices, applications, services, or networks — having the ability to analyze how these mobile assets are performing in real time and then optimize workflows and user behavior accordingly as a result of that analysis is becoming increasingly necessary to get the most out of mobile investments. This document examines the core benefits of real-time mobile asset analytics and network optimization in corporate environments. It also looks at the role of NetMotion in the market for real-time mobile asset and network optimization solutions.

Introduction: Maximizing Mobile Investments

Mobility's explosive growth across the business landscape not only has forever changed the way we do business but also has sparked a multitude of markets specifically designed to help companies manage the massive influx of mobile devices, applications, and networks spreading across their organizations. As a result, there is growing demand for tools that help enterprise organizations better understand the impact mobile assets have on future business strategies and investments. All these mobile devices, apps, and networks are creating vast oceans of data that, when properly leveraged, can help enterprise organizations maximize their investments in mobility by providing actionable insight through device, user, application, and network data analytics.

As a by-product of enterprise mobility, mobile devices, applications, networks, and user behavior statistics are all generating data that should be viewed as a corporate asset. All too often, this data is either undervalued or not properly leveraged by enterprise organizations. In many cases, an organization may not be aware this data even exists, let alone understand its value. However, detailed analysis of this data can provide insight into problems and pain points that can enable organizations to modify mobile networks and user behavior and to optimize workflows, thus getting the most out of those investments.

The ability to optimize mobile assets over the course of deployment life cycles translates to a direct return on investment. In today's enterprise, the amount of IT spend being poured into mobility is substantial, with the goal of making workers more productive. As such, annual enterprise spend on mobility will only increase as the technology matures, and organizations should look beyond the up-front investment costs of deploying, managing, and maintaining mobile infrastructure and consider how they can then maximize those investments.

Mobile Business Intelligence: Beyond Device Management

Real-time analysis of the types of data generated by mobile traffic across corporate networks and applications provides organizations with actionable business intelligence. Companies can gain insight into peak usage patterns and network bandwidth. Understanding which applications, devices, or users are putting the biggest strain on corporate networks allows organizations to adjust their networks accordingly. Analysis of device uptimes and the types of networks accessed allows enterprise IT organizations to modify device security policies or investigate why a given device or group of devices isn't being used to its full potential.

Mobile device management (MDM) solutions, as well as enterprise mobility management (EMM) solutions, have become ubiquitous among enterprise organizations, enabling companies to manage an increasing number of mobile devices and applications that intersect with corporate data. The ability to set, monitor, and enforce corporate device and application policies has become a crucial tool for enterprise IT departments, and it will remain so for the foreseeable future. Mobile asset and network analytic solutions move beyond device and application management by providing valuable insight into how those assets are performing, and these solutions can be used to drive better and more efficient device policies and workflows. So while there is a core need for device and application management tools, analytic and optimization tools can pave the way for improvement.

Mobile asset optimization and analytic tools can provide insight into how a given device is performing on a network. IT administrators can see how strong a wireless signal the device is receiving and whether the device is experiencing network dropouts because of hardware limitations or whether signal strength is affected by geographic location. Perhaps network performance is being inhibited by high traffic outside peak usage hours or by data-heavy applications. Given the sheer dollar amount enterprise organizations are investing in mobile technology, these assets must be used to the maximum. IT administrators can see how corporate devices are being used, whether they are inactive, being misused, or simply performing at a suboptimal level. If an organization is going to invest in expensive mobile devices for field workers, those devices should absolutely be used to their full potential. If a worker experiences a poor connection or a slow application negatively affects a worker's productivity, that device or application may end up being sidelined by the worker. The negative impact is twofold because this not only affects the worker's productivity but also diminishes the overall investment the organization initially made in the device or application itself. Without the ability to investigate the root cause of these types of problems, issues often go unaddressed.

Security is the top concern among enterprise organizations with regard to mobility, and mobile asset analytic and optimization tools can play a big role in improving network, application, and device security. IT security teams can monitor traffic patterns to make sure corporate applications and devices are accessing networks securely and that the networks being accessed are secure. Mobile network analytic and optimization tools can also provide performance metrics and visibility into WiFi and cellular networks outside of IT's control, allowing administrators to modify or set more efficient device and application policies.

The Future of Real-Time Mobile Analytics

According to IDC, increased worker productivity is the main driver of mobility investment among enterprise organizations. Specifically, enterprise organizations are investing more in mobile hardware, software, and services than they have in prior years. Thus there has been a proliferation of mobile endpoints, applications, and mobile workers, all jockeying for bandwidth across corporate and cellular networks. Mobile technology can make workers more productive only if the technology is functioning efficiently. Indeed, slow networks and suboptimal mobile speeds will make workers less productive if the tools they need to complete their work aren't functioning at an optimal level. Again, the result is a poor return on mobile investments and less productive workers.

As these trends intensify, there will be an increased demand on network efficiency. IT administrators will struggle to maintain quality of service (QoS) when network availability is constrained or limited, and business-critical applications will need to be prioritized over other traffic. There will be high demand and an absolute need for mobile asset analytic and optimization solutions that provide enterprise IT departments with the tools required to optimize corporate networks and mobile device fleets.

The expanding number of mobile endpoints that are being incorporated into business-critical work processes will ultimately increase demand on enterprise IT departments and corporate networks. Real-time analytics tools will play a crucial role in IT's ability to be proactive instead of reactive in this scenario. The ability to anticipate network traffic volume or isolate a security risk before it negatively impacts business operations will be invaluable. The Internet of Things (IoT) stands to usher in millions of connected devices in the coming years, potentially exposing enterprise networks to new and unknown attack vectors. The need for real-time actionable intelligence will be critical.

Considering NetMotion

NetMotion has developed a set of solutions to arm enterprise organizations with the tools required to maximize their mobile investments and combat the challenges associated with optimizing mobile networks. NetMotion's mobile asset analytic and optimization solutions are designed to:

- Optimize and compress data traffic to increase network bandwidth
- Secure and protect network data and resource flows via VPN regardless of network
- Create adaptive policies to govern devices and enhance user experience
- Provide diagnostics and gather big data from mobile devices, applications, and user behaviors
- Provide IT- or user-executed device troubleshooting capabilities
- Visualize aggregated network, device, and diagnostic data into meaningful, easy-to-interpret reports

NetMotion's Mobile Performance Management suite consists of three software products: Mobility, Diagnostics, and Mobile IQ.

Mobility accelerates, optimizes, and compresses data traffic to increase network bandwidth, and it provides a secure VPN to ensure that application and resource data flows are protected regardless of the network to which a device or a mobile application connects. As a core feature, the ability to secure data traffic across networks that fall outside the jurisdiction of enterprise IT administrators is key. Users, especially field workers, are often connecting to mobile networks outside their own organization's firewall. Secure network access regardless of the network via VPN ensures that a user's mobile traffic stays protected. Mobility also enables IT administrators to set adaptive policies that optimize mobile traffic across the network and allow for fine-tuning data transmission based on a device's location as well as the level of connectivity and time of day. Applications that perform at a suboptimal level with limited connectivity can bog down a user's device, rendering it inoperable. NetMotion's adaptive policy controls give IT administrators the power to limit such applications, prevent inadvertent data charges outside corporate networks, and improve user experience by maintaining QoS on high-latency networks.

Diagnostics is NetMotion's real-time data collection client that aggregates location, connectivity, end-user experience, data throughput, and performance data across WiFi and cellular networks. Offered as an on-premises, subscription, or software-as-a-service (SaaS) solution, Diagnostics can deliver root cause detection for mobile devices, networks, and applications. A key feature of Diagnostics is that it natively provides real-time root cause troubleshooting capabilities that can be executed by IT or individual users or automatically by the device. Enabling users to self-troubleshoot application or network connectivity issues will ultimately decrease the number of help desk tickets because users can quickly determine the cause of the problem without IT intervention.

Mobile IQ transforms real-time data from the Mobility client and the Diagnostics client into visual analytics. Meaningful reports detailing critical device, application, and network data points are collated into troubleshooting and alert dashboards designed for IT and security teams. Real-time visual analytics tools provide enterprise IT departments and business units with actionable business intelligence, delivering detailed insight into how the mobile workforce is operating at a given moment. Given the volumes of data being generated, the ability to condense vast quantities of critical information into an easily digestible and visual format can be of tremendous value because it simplifies and expedites troubleshooting issues as well as highlights areas for improvement.

Challenges

NetMotion must find a way to include its solutions as part of the enterprise mobility management discussion among IT decision makers. Today, enterprise organizations are actively looking for solutions that consolidate mobility management, life-cycle management, and telecom expense management. It is not uncommon for mobility, network administration, and security teams to be separate entities within enterprise organizations, and NetMotion's solutions address each category, straddling mobile devices, network optimization, and secure data transmission. Bridging the communication gap between network efficiency and mobile devices will be key to demonstrating the full value of the sum of NetMotion's offerings.

The rise of the IoT and 5G networks also poses challenges for NetMotion to navigate. On one hand, the influx of connected devices will push network bandwidth and constraints to their limits, reinforcing demand for network and mobile device optimization solutions. On the other hand, with the rise of 5G networks comes the promise of network segmentation and super-fast bandwidth speeds. The guarantee of millions more connected devices accessing corporate networks, combined with the promise of 5G performance enhancements, is a double-edged sword for network optimization solutions. However, with faster speeds, higher-bandwidth applications and use cases will undoubtedly follow. Essentially, the more you have, the more you use. Video and real-time, data-rich application requirements will grow along with 5G networks, placing an emphasis on the need for optimization tools.

Conclusion

As enterprise organizations continue to dedicate significant portions of their annual IT budgets to mobile initiatives — whether mobile hardware, applications, services, or network infrastructure — having the ability to analyze how these mobile assets are performing in real time will be essential. Enterprise mobility markets are converging, and mobility in general is outgrowing the need to simply be managed. Mobility will need to be optimized as well.

The benefits of real-time mobile asset analytic and optimization solutions are compelling, and enterprise organizations stand to gain significant insight into their own business processes by leveraging such solutions. Failure to recognize this data as a valuable corporate asset is a wasted opportunity for return on mobile investments as well as an inhibitor of growth and productivity.

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