Traffic optimization fine-tunes connection performance so that essential business applications run reliably across wireless networks. Optimization ensures that applications, resources and connections are tuned for weak and intermittent network coverage, and can roam between networks as conditions and availability change. It ensures that enterprise mobile workers can remain productive with real-time access to business-critical applications.

**Data compression & acceleration for better performance**
NetMotion’s traffic optimization improves the speed and reliability of applications by compressing and accelerating data. In particular, for collaborative technologies such as voice- and video-over-IP to be usable, data streams must be delivered without interruption. This enables usable results even over weak network connections with high packet loss.

**Enabling productivity regardless of coverage**
Traffic optimization insulates applications from lost or dropped network connections and can hold applications in a paused state until network conditions improve. The result? Applications remain stable and reliable even in the most challenging conditions. And workers no longer have to re-open applications or re-enter data when their network connection is lost.

**Staying connected anywhere workers roam**
NetMotion’s optimization capabilities enable organizations to stitch together different wireless networks into one broad coverage area. Whether the networks are public or private, workers can seamlessly transition between networks. After logging in, workers’ applications securely and seamlessly roam between networks based on bandwidth and IT policy, ensuring they are always connected to the fastest network.

**Better data control for better cost control**
Unlike the corporate WLAN, metered carrier networks create a significant expense as mobile deployment sizes and data requirements increase. NetMotion’s ability to compress and accelerate data on these networks equates to significant cost savings from less data sent and received. By efficiently compressing and packaging data, NetMotion dramatically increases data efficiency which ultimately drives down overall data costs.
Understanding the challenges of mobile networks — and how traffic optimization overcomes them

NetMotion traffic optimization ensures a reliable, productive user experience over wireless networks that IT doesn’t directly control. Compared to wired networks, wireless networks operate under highly variable conditions such as terrain, signal-blocking obstacles, signal attenuation with increasing distance, and congested cell towers. Latency is often high with packet loss measured as high as 45%. Since cellular networks are metered, traffic optimization can sharply curtail data use and resulting costs for bandwidth.

Data compression, acceleration and traffic shaping

NetMotion’s data compression can double the speed of slow and intermittent networks. And reduce data sent, simultaneously speeding throughput and lowering data utilization. By compressing data, organizations spend less on data plans and reduce the risk of overage charges.

Through intelligent shaping of data traffic, business-critical applications receive the majority of bandwidth while less-important applications and resources receive less. Traffic shaping helps keep users productive, especially when networks are congested or slow.

Real time protocol enhancements

Applications such as voice and video can be unusable even with slight packet loss and latency. For mobile workers this situation can be greatly exacerbated due to network connectivity issues. NetMotion effectively mitigates these issues via forward-error correction algorithms. Missing data packets are reconstructed instead of retransmitted so that users experience intelligible audio and video conversations during network congestion and packet loss. NetMotion can rebuild lost packets delivering “good” VoIP performance (MOS of 4, on a 1-5 scale) on networks with packet loss as high as 50%.

Mobile Performance Management (MPM) software accelerates, optimizes and secures all traffic to mobile devices across any network, application or operating system. It empowers IT with the tools to deliver an unparalleled mobile user experience, increase operational efficiency and end-user productivity.

Most reliable connection available

NetMotion’s traffic optimization capabilities enable continuous, reliable application connections, even in challenging network conditions such as coverage gaps, dead spots, areas of marginal signal strength, or roaming between networks. Mobile workers experience reliable application sessions, even through suspend-and-resume cycles or complete loss of connectivity.

Through its Software-Defined Mobility architecture, NetMotion manages application sessions both on the client device and at the server level. When a network disruption occurs, the client software maintains all open applications while the server does the same. Once network access is restored — whether seconds or days later — NetMotion’s client and server software reconnect, giving users uninterrupted application access.

Seamless Roaming

NetMotion unites any combination of cellular, Wi-Fi and wired networks into a single, unified network for the user. It persists the connection through network handoffs and handles all required logins transparently for the user. Thanks to this seamless roaming, workers can use multiple networks throughout the workday and freely cross network boundaries and continue to use their applications without having to manage their connections.

Link-layer optimizations

The TCP/IP protocol was initially designed with wired networks in mind and is excessively “chatty”, relying on excessive acknowledgements and control information to confirm successful delivery. NetMotion greatly improves the efficiency of the protocol over wireless networks through a variety of techniques that include coalescing messages, bundling data and control information into the same frame, adjusting for network latency, optimizing fragmented packets for wireless transmission, and optimizing both packet sizes and timing parameters for the network conditions.