

Enabling the Mobile Enterprise

Mobile Performance Management: Game-Changer for Utilities

Advancements in distributed energy resources, the smart grid and deeper use of analytics are bringing new challenges and presenting new opportunities to utilities. Utilities are re-emerging as modern, nimble and agile enterprises in order to apply new innovations as well as adapt to the shifting work force expectations. Mobile technologies are shifting the way people work and the utility industry is no exception. For electrical utilities, smart meters, a more intelligent electrical grid and private electrical generation will mean more data for field workers and more applications for processing and making use of it. For water, wastewater and gas utilities, the Internet of Things will bring a wide variety of new sensors for monitoring, managing and controlling distribution, and delivering all kinds of new efficiencies.

The Importance of Connection Management

From the time of the earliest mobile data networks, utilities have empowered their field crews with mobile data access. One of the cornerstones of these deployments has been Mobile Performance Management: software that accelerates, optimizes and secures mobile-device traffic. It handles the complexities of dealing with multiple connections and variable coverage conditions so that workers can focus on their jobs. Here is how this software improves productivity and makes the mobile environment more manageable for IT.

Greater Efficiency for Field Workers

Every cellular network has dead spots for coverage, whether caused by structures that block signals, sources of radio interference, variations in terrain, or areas that are simply not covered by antennas. Utilities that serve rural areas often find their crews working with connections at the fringe of coverage areas. This means field workers have to re-authenticate and re-establish their connections to the network, to their applications or to both, multiple times during the day. If the coverage loss happens while entering data, workers often have to re-enter it. With sign-on continuity through Mobile Performance Management, each worker only has to log in once at the start of the shift to establish a connection that lasts all day. It also keeps applications stable through disconnects, pausing the connection and then resuming so workers don't need to re-enter data. Utilities note a sharp decrease in help desk calls, more jobs completed and an increase in overall productivity.

Seamless Connections Across Multiple Networks

Utilities often work with multiple cellular carriers in order to obtain coverage throughout their service area. In some cases, that means workers transitioning between carriers have to pull over to the side of the road to re-establish connections. Workers also have to switch between the utility's own internal network and the cellular carriers. Some workers start their day in an office connected to the wired LAN and then transition out to the field, or organizations provide Wi-Fi coverage where the vehicles park to keep large file transfers, synchronizations and other data-intensive uses off the metered carrier networks. Mobile Performance Management transparently handles the various transitions, enabling seamless roaming among cellular and Wi-Fi connections so one login gives the worker access to all of the networks that are authorized.

The Future of Mobile Performance Management

For utilities, emerging technologies will require highly mobile, technology-equipped workers to maintain them and knowledge workers to make use of the new insights. This presents a special challenge for utilities because of the criticality of the infrastructure. Mobile Performance Management software, widely used by utilities today, will continue to be an important element of the landscape for years to come.

Traffic Optimization ensures applications and resources are optimized for weak and intermittent network coverage, and workers can roam freely between networks as conditions and availability change.

Adaptive Policies fine tune the mobile user experience, prioritizing applications and network access based on network, situation and location parameters specified by IT.

Performance Analytics and Diagnostics deliver constantly updated analytics on data use by devices, applications and networks, so IT can fine-tune the user experience. Root-cause detection quickly pinpoints problems for fastest troubleshooting to get workers productive again.

Security through Software-Defined Mobility supports highly flexible and programmable secure access capabilities. IT can configure secure tunnels per-app or device-wide, securing access to enterprise applications and resources.

Extending Access to New Classes of Workers

Because Mobile Performance Management makes connectivity simple for the user, utilities are providing the software to executives, administrators, and others who occasionally or regularly work from home. When these users connect via their own private networks via wired Ethernet or Wi-Fi, the software applies policies and enforces security to ensure that corporate connections and data are fully protected. Offering more-flexible workstyles is a key for recruitment and retention, and support for mobile technologies is an absolute must for attracting younger workers as experienced workers approach retirement age.

Enforcing Remote-Access Policies

With the growing trend toward smaller and more mobile devices, there is a greater need for utilities to enforce secure and appropriate remote-access policies. This is especially important since utilities are critical infrastructure from a national-security standpoint. Mobile Performance Management applies a secure tunnel at the highest-available cryptographic standard. Just as important, it allows policies to be created and enforced to tightly control the users, devices and applications that are allowed to connect over the various available networks and have access to corporate resources. Policies allow IT to perform management tasks over the most appropriate connections, and also manage how the devices and applications access the connections available to optimize bandwidth use, enforce security, control costs and keep the users productive.

Freeing More Time for Productive Work

Because of the assured connectivity delivered by Mobile Performance Management, vehicles become fully connected mobile offices. Some utilities, especially in rural areas, have taken advantage by giving workers more time to spend in the field. Workers only visit the office to replenish supplies or attend safety meetings. When they climb in the vehicle at the start of the shift, they download their work orders and GPS coordinates, and head directly to the first work site. Time saved to and from headquarters translates directly into more jobs completed.

Disaster-Response Support

In a disaster response-and-recovery situation, cellular sites might be knocked out or congested, or power cut to access points. Crews might have to improvise to gain coverage or use emergency satellite connections. In these situations, the ability of Mobile Performance Management to switch between connections automatically, switch to the highest-speed connection available, compress and optimize traffic sent over lower-speed connections and maintain a secure tunnel over any connection plays a big part in any contingency plan. Temporary crews can be brought in with less training and fewer support issues.

Transition to FirstNet

While the FirstNet network is being developed as a dedicated wireless network for first responders, expectations are that utilities will access it as well. Because FirstNet is being built on LTE technology, Mobile Performance Management software will provide the exact same capabilities over FirstNet. The ability to switch between networks will enable a smooth transition as FirstNet comes online.

Conclusion

Mobile Performance Management solves for multiple issues. In the same way that IT departments have adopted Enterprise Device Management or Enterprise Mobility Management to centrally manage their devices, Mobile Performance Management manages the connections on which those devices depend. It more than pays for itself in decreased costs for connectivity, reduced support costs and higher productivity. Moreover, it is a key enabling technology as utilities re-invent themselves as more-nimble enterprises, and poised to take advantage of new opportunities.