ONELAYER

Asset Management and Security for Private LTE Networks

Automate SIM Provisioning

Efficiently manage device onboarding and secure a growing number of devices.

Eliminate Blind Spots

Achieve full visibility behind cellular routers.

Track & Secure Devices

Implement device-level geofencing and effectively integrate across OT/IT and LTE solutions.

Internet of Things (IoT) technologies are revolutionizing utility services and driving industry innovations. However, the vast reach of utility infrastructure poses challenges in fully leveraging IoT.

LTE cellular technologies address this by:

1. Supporting large IoT device deployments with high-speed, low-latency data delivery.
2. Offering practical and cost-effective private network solutions with evolving enterprise LTE technologies.

Together, IoT and LTE are set to transform metering and advance innovations like smart grids and VR/AR employee enablement. Utilities must balance these benefits with maintaining operational excellence and meeting rigorous security and compliance standards.

Key Asset Management and Device Onboarding Considerations

Lack of scalable and operational onboarding tools

Private networks are transitioning from pilots to operational. As the network scales, challenges concerning device onboarding and SIM Provisioning arise. The lack of processes and tools, and the existence of complex workflows result in slow-moving network adoption. Enterprises use scripts and manual procedures to provision SIM cards and onboard devices, which introduce the risk of human error and consume valuable time when the number of devices scales from dozens to thousands.

Inability to shift responsibility to operational and security teams

The complexity of existing device management methods often burdens private cellular teams with the onboarding process, rather than enabling a shift of responsibility to the operational team and security team. This diversion of focus prevents private network teams from dedicating their full attention to their core responsibilities.

Realize End-to-End Asset Management and Device Onboarding.

The OneLayer Bridge™ platform enables enterprises to fully orchestrate and manage their private cellular network devices, offering teams operational freedom and flexibility while maintaining security and networking standards.

OneLayer Bridge™ enables automated device onboarding and SIM provisioning at scale. It provides seamless network visibility, including details of devices hidden behind cellular routers, thus eliminating device visibility challenges and enabling real-time monitoring of devices across IT/OT and public/private cellular networks, allowing enterprises to manage and secure an increasing number of devices efficiently.

Key IoT and LTE Security Considerations

Utilities often use various enterprise and legacy OT networks secured by practices like the Purdue Model and Zero Trust Architecture. However, these cannot extend to LTE networks due to architectural differences, resulting in security blind spots and new risks to critical infrastructure.

Device Onboarding Security Challenges

Device onboarding in private cellular networks demands secure integration into existing frameworks. Authentication and authorization are critical to ensuring that only verified devices connect to the network. By aligning with IT/OT management systems and using role-based permissions, organizations ensure devices join a secure environment from the start, reducing unauthorized access and maintaining network integrity.

Device Identity and Monitoring Blind Spots

Cellular networks assign unique device identifiers, with all traffic routed through a central packet core, obscuring individual device identities from security tools. This results in existing security monitoring workflows becoming ineffective.

Geo-Fencing Devices Challenge

With the rise of IoT devices and uncertain physical control, Zero Trust Architecture is crucial. Geo-Fencing allows location-based policies, blocking network access when a device is outside its designated area.

OneLayer Extends Utility Security and Compliance Practices to Private LTE Networks

The OneLayer Security Platform allows utilities to securely leverage IoT and LTE by extending security visibility and segmentation frameworks like the Purdue model and Zero Trust Architecture to Private LTE. It bridges the gap between the LTE packet core and your IT and OT security tools. The platform directly integrates with leading cellular packet core technologies, including Ericsson, Nokia, Verizon, Athonet, Celona, Druid, Mavenir, Pente, and Monogoto, to:

- Enhance the visibility of your existing security tools and achieve full visibility behind cellular routers
- Deploy granular Zero Trust segmentation policies on your Private LTE networks, including Geo-Fencing devices - Track & secure devices with device-level geofencing and location-based connectivity policies
- Extend Perdue model network architecture to LTE networks
- Ensure compliance with utility regulations such as NIST Smart Grid Framework and SP-1800-23
- Enable the evolution to private 5G networks

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