



With Growing RTU Monitoring Needs, PLN Executes Real-time Monitoring and Management Solutions Supported by **IR615-S** Series Industrial-grade Cellular Router

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As a national electric power cooperation serving across the Indonesia, reliable and uninterrupted Internet access for data transmission and building connections with PLN servers are essential for remote terminal units (RTUs). InHand IR615-S fits in very well and it is a perfect choice for us.

| Background

PT Perusahaan Listrik Negara (abbreviated as PLN), a state-owned enterprise which exclusively take control of all power distribution in Indonesia, has been pushing its power grid forward to be more reliable, efficient and intelligent, given the urgent need to modernize their aging infrastructure and switch to smart grid for promoting digitalization in Indonesia. As the the world's largest archipelagic state, Indonesia encompasses over 17,000 islands spread across approximately 3,000 miles of ocean in Southeast Asia, posing a huge challenge for PLN about how to monitor and manage their remote terminal units (RTUs) in an effective and cost-effective way.



PT Perusahaan Listrik Negara (abbreviated as PLN), is an Indonesian government-owned corporation which has a monopoly on electric power distribution in Indonesia and generates the majority of the country's electrical power, producing 176.4 TWh in 2015.

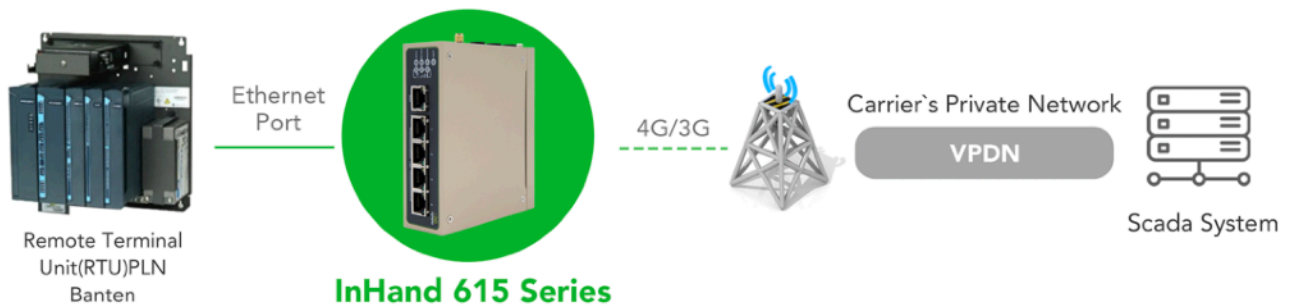
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Challenges

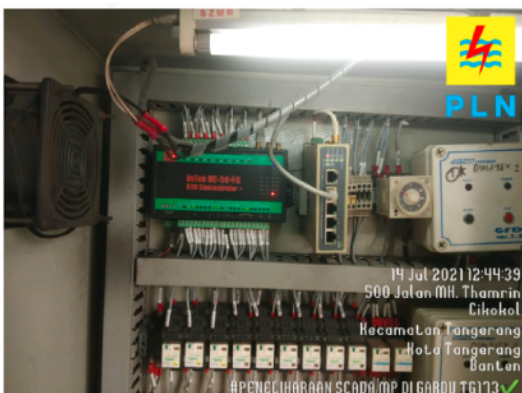
Limited Man Power visiting problematic RTUs & High Transportation Visit Cost

According to above-mentioned geographical factors, RTUs are might be placed far from PLN Headquarters in some provinces, where they monitored RTUs by using traditional way which needed a long time to reach that location physically and connect the serial cable with the laptop. It was a time-consuming process and would raise the cost of transportation visiting. Furthermore, due to the cycle time in monitoring and managing RTUs, staff members are apparently insufficient to monitor and troubleshoot on-site issues in time.

Solution



To improve management efficiency and service reliability they needed in Jakarta, Palembang, Pekanbaru, Sumatra Barat, Banten, Bali, and Kupang, PLN decided to deploy InHand Networks' Real-time Monitoring and Management Solutions, which is powered by InHand IR615-S cellular routers. In this solution, IR615-S provides highly reliable data transmission through VPN IPsec from RTUs to VPN server at PLN Headquarter, and ensures a faster connection by using LTE CAT4, saving PLN significant time and money.



Features



InRouter 615-S

- Uninterrupted and stable 4G cellular network access;
- LTE and multiple Ethernet interfaces enable remote management in the cloud;
- Multiple security strategies: supports IPSEC, L2TP, OPEN VPN, DMVPN, stateful packet inspection, port mapping, access control, MAC address binding
- Fully reliable design: EMC Level 3, wide temperature and voltage endurance, a C1D2 (class 1 division 2) certified device for hazardous locations;
- Easy to configure: supports many configuration methods, including WEB, CLI, telnet, etc.
- Supports system restart, LAN port online & offline, traffic alarm, SIM card failure and other alarms;
- Hardware + software watchdog ensures the long-term stable operation of the system.

Benefits

Multiple and Fast Network Access

IR615-S supports multiple fast LTE WAN networks and network access methods including Ethernet, 3G/4G and Wi-Fi, which can be flexibly selected according to onsite conditions.

Dual SIM, Uninterrupted Network Transmission

IR615-S supports dual SIM, which provides high availability with multi-carrier automatic failover, supporting dual network mutual backup to ensure the continuity of data transmission.

Guaranteed Data Security

IR615-S has various VPN encryptions and network protection measures, which effectively protect users' data from disclosure or being stolen.

High Reliability and Stability

Device fault self-recovery plus embedded hardware watchdog; self-recovery mechanism can be activated from malfunctions, maintaining device availability.

Third-party network management system for real-time monitoring and data collection

InHand IR615-S supports SNMP (simple network management protocol) for exchanging management information within a NMS (network management system), facilitating remote monitoring of large-scale device networks. Moreover, the data from large numbers of devices can be collected in a batch, improving maintenance efficiency significantly.

More Application Areas

The IR615-S - an IoT wireless router integrating 3G/4G network, virtual private network and other technologies is an enhanced version of IR6x5-S series from InHand Networks. With the help of 3G/4G, Wi-Fi and other technologies, IR615-S provides a variety of uninterrupted network access capabilities. With its comprehensive security, wireless services and other features, it supports networking of up to over 10K devices, and provides high-speed data channels for equipment informationization.

Learn more at:

<https://www.inhandnetworks.com/products/inrouter615-s.html>