LANTRONIX®

INDUSTRY:

Utilities Management
Lantronix Contributes to Smart Energy System in Toronto High Rise

Success Highlights

- New fiber-optic backbone for each floor
- Smart energy management platform for controlled energy usage and costs
- Reduced greenhouse gas emissions
- New electronic door locking system for each tenant

Case Study Overview

In 2007, one of the most iconic skyscraper buildings in the heart of Toronto's financial, entertainment, and shopping districts completed a $100 million transformation of luxury condominiums. This modern Renaissance-style building offers over 600 spacious high-end suites along with private penthouse living areas with amazing views and luxury amenities.

With the support of Lantronix's Smart Managed Gigabit Ethernet PoE+ Switch (SM24TAT2SA) and remotely managed Network Interface Device (NID) with built-in traffic generator (S3290), project management services company PLATEK Services Inc. installed a new fiber-optic backbone network to create a smart energy management platform for this historic building.

> " Lantronix's solutions were key to the project's overall success. We now have a model reference for one of the first smart energy management buildings ever installed in Toronto. This is a significant accomplishment. "
>
> – Vlad Platek, General Manager, PLATEK Services Inc.

CHALLENGE: Create Fiber-Optic Backbone Network for Smart Energy Management Platform

The City of Toronto set an ambitious city-wide goal to reduce greenhouse gas (GHG) emissions by 80 percent by 2050. Since buildings represent 11 percent of Canada's GHG emissions, commercial buildings are an important improvement sector.

For the luxury condominiums, the building management team wanted to implement a smart energy management platform to enable tenants to control energy usage and costs. In addition, due to the distance between all the floors, a new fiber-optic backbone network was necessary for each high-rise floor.

Lantronix SM24TAT2SA

The Lantronix Smart Managed Gigabit Ethernet PoE+ Switch (SM24TAT2SA) features 52Gbps switching capacity and provides (24) 10/100/1000Base-T copper ports with IEEE 802.3at PoE+ capability and two additional 100/1000 dual-speed SFP slots. The embedded Device Management System software provides time-saving features, enabling network administrators to remotely configure attached IP-powered devices.

https://www.lantronix.com/products/sm24tat2sa/

Lantronix S3290 Series

Lantronix's managed S3290 NID provides advanced packet performance metering and service creation directly at the customer premises and cell sites. SFP ports support 100Mbps, 1000Mbps, or SGMII SFPs, and CWDM and Bi-Di SFPs are also supported, allowing for flexible network architectures.

https://www.lantronix.com/products/s3290-series-2/

Challenges included:

- Retrofit existing buildings' mechanical HVAC systems, lights and more
- Control energy usage and costs
- Add new fiber-optic backbone network for each floor
- Reduce GHG emissions

SOLUTION: Lantronix's Smart Managed Gigabit Ethernet PoE+ Switch and Network Interface Device

Working closely with PLATEK Services Inc. engineers, Lantronix provided a detailed fiber network design along with network equipment specifications and application requirements. The new network was designed to ensure a highly available and resilient fiber network and to power and connect wireless access points throughout each floor.

A fiber-optic backbone extended from the top floor to the first-floor server room to enable the smart energy management system. Wireless access points were installed on each floor, supporting a redundant wireless mesh network for connecting individual room thermostats integrated into the new energy management system.

Installing new AC electrical conduit and cabling on each floor to power the WAPs was too time-consuming and cost-intensive and would be especially difficult to install in the riser system. However, with Power-over-Ethernet Plus (PoE+) switches from Lantronix, each WAP was powered by PoE, thus eliminating all AC electrical costs. The redundant mesh network of WAPs is fully operational and networked by Lantronix PoE+ switches.

In addition Lantronix switches also provided the network communications for a new innovative ASSA Abloy electronic door locking system for private tenant living areas.

> **" Lantronix, with its 30+ years of network experience, provided expert customer-centric services and built-to-last, TAA-compliant, smart-managed network products. "**
>
> – Vlad Platek, General Manager, PLATEK Services Inc.

RESULTS: Successful Installation of Intelligent Energy Management Platform

With the PoE+ switches and NIDs from Lantronix, PLATEK Services Inc. successfully completed the network installation of an intelligent energy management platform designed to reduce energy costs and significantly increase property owner satisfaction.

Benefits Include:

- Reduced Greenhouse Gas Emissions
- Multi-Use Smart Energy Management Platform
- Controlled Energy Usage and Costs
- Tenant Thermostats and Occupancy Sensors
- ASSA Abloy electronic door locking system for each tenant
- Significant Improvement in Property Owner Satisfaction

About PLATEK Services Inc.

PLATEK Services Incorporated is a full-service engineering design and management expert consultant, providing engineering and building project fulfillment services such as project and construction management and design-build services for new construction and renovation projects in Commercial, Institutional and Industrial industries. PLATEK focuses exclusively on delivering the best project development and fulfillment experience for its customers.

About Lantronix

Lantronix Inc. is a global provider of secure turnkey solutions for the Internet of Things (IoT) and Remote Environment Management (REM), offering Software as a Service (SaaS), connectivity services, engineering services and intelligent hardware. Lantronix enables its customers to accelerate time to market and increase operational up-time and efficiency by providing reliable, secure and connected Intelligent Edge IoT and Remote Management Gateway solutions.

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