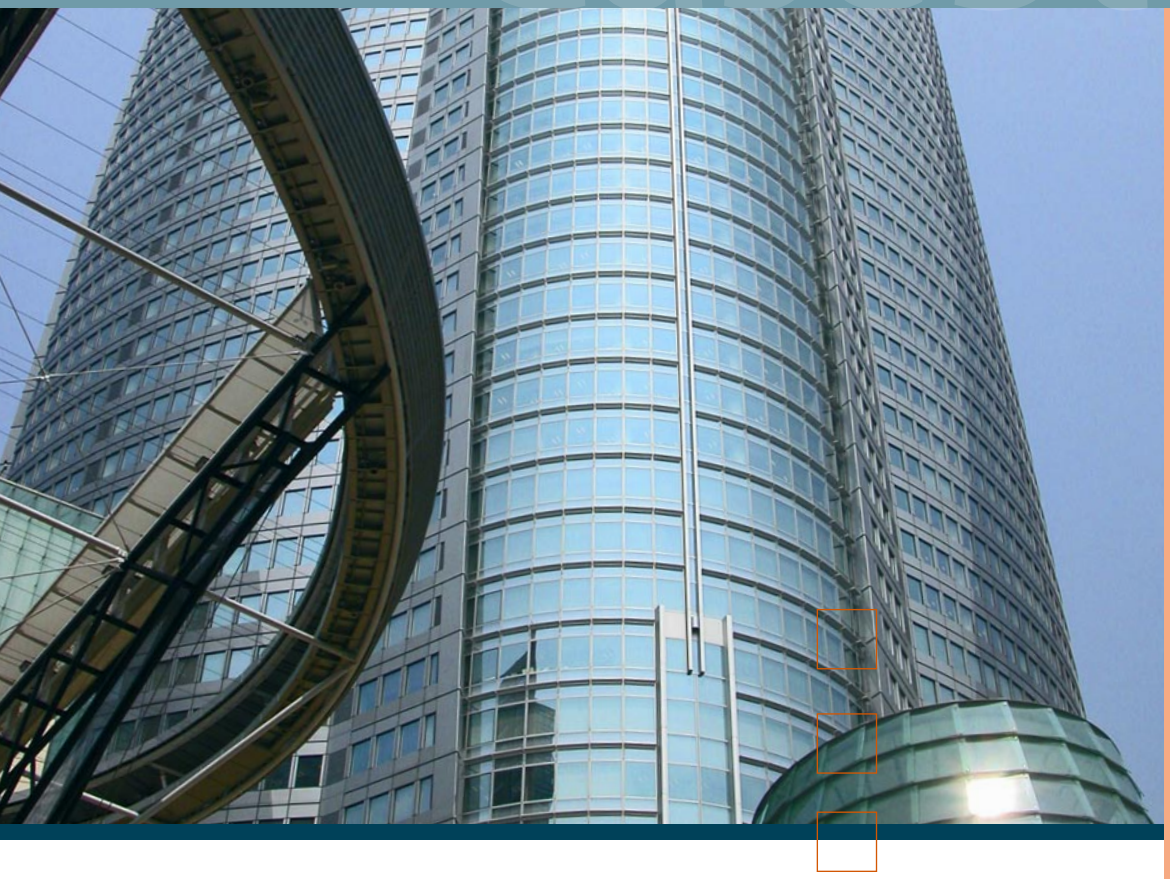
Roppongi Hills Mori Tower

Japan's largest redevelopment project improves tenant service, reduces operation costs and optimizes energy utilization as a result of using Nexa



THE CHALLENGE

Mori Building Co. Ltd was founded in 1959 and has over 1,000 employees. It is headquartered at Mori Tower, Roppongi Hills in central Tokyo. Roppongi Hills is referred to as 'The Artelligent City' – where art and intelligence unite.

Mori Building is involved in all aspects of the urban landscape, from redevelopment to the design supervision, operation and management of residential and commercial facilities.

Mori Tower, at 11.6 hectares, is one of the largest redevelopment projects in Japan. Mori Building's business objectives for the Tower were to improve tenant service and reduce operating and maintenance costs. They also wanted to implement a flexible system for centralized continuous monitoring and control of multiple facilities.

THE SOLUTION

Citect, its Japanese partner, Fuji Electric Systems, and Mori's Systems Integrator (SI), delivered a fully automated state-of-the-art Facilities Monitoring solution that provides instantaneous information on the entire Mori Tower. Nexa was selected as it offered the most open, reliable and scalable system with hot-backup and full redundancy. It was able to easily integrate climate, lighting and other controllable devices from multiple facilities, allowing building-wide processing of data from more than 368,000 points to be monitored in real time.

PROJECT DESCRIPTION

Open Standards employed

As the Mori Tower has significant numbers of areas to be controlled, it was decided to choose an open method of communications

THE CHALLENGE

To provide a 24hr continuous enterprise-wide facilities monitoring and control system, improving tenant service, reducing operating costs and optimizing energy utilization.

THE SOLUTION

Nexa was implemented as part of a fully integrated and automated Facilities Monitoring Solution. This system has allowed for building-wide processing of data from more than 368,000 points, monitored in real-time from a central control room.

CONCLUSION

With Nexa, Mori Tower has been able to integrate climate, lighting and other controllable devices from multiple facilities, creating an enterprise-wide monitoring and control system. With the ability to access all points through a central control room, Mori Building has been able to optimize energy utilization, significantly reduce operational costs and improve tenant service.

Citect
Real-time Intelligence

"The big advantage with Nexa is the ease of use and future maintenance. Citect ensure that customers like Mori Building can grow with their systems and encourage customer management of the systems. Maintenance and design for future expansion is ensured in all Citect systems."

Mr. Toshihiko Tatsuki, General Manager, Fuji Electric Systems.

based on the OPC standard. Citect is an OPC Foundation Member and Nexa is both an OPC Server and OPC Client, a true reflection of the open data exchange policy of the company.

Large System Capability

The building's system points total more than 368,000 with 64 included projects into one common runtime database. More than 42,000 trends and 110,000 alarms are configured in the system. Using Read-on-Demand technology, unnecessary read and write loads are not placed on the system servers and only those points requested by the client are displayed. This technology allows Nexa to easily handle the vast amount of data so that users can view continuous alarm states, trends at pre-defined rates and current active display pages for the data they want, when they want.

Structured Engineering Approach

Mori has made full use of Nexa's ability to include multiple individual projects into a single runtime database. This allows several systems integrators to work at the same time. By defining a structured tag name convention, people from various companies specializing in air conditioning, lighting and power engineering can all work on a common variables database.

Hot Backup – Full redundancy

The standard redundancy built within the system architecture of Nexa appealed to Mori. It was critical to have continuous 24hr monitoring and operation of the Mori Tower Facility. Nexa allowed full redundancy of all server tasks, I/O, Trend, Alarm, and Reporting.

CONCLUSION

Using Nexa, Mori Building was able to successfully integrate power, lighting, HVAC systems and other controllable devices from multiple facilities. This enabled them to achieve their business objective of implementing a 24hr continuous enterprise-wide monitoring and control system. This solution allows the processing and real-time monitoring of data from more than 368,000 points in the Mori Tower. With the ability to access all points through a central control room, Mori Building has been able to optimize energy utilization, significantly reduce operational costs and improve tenant service.

STATISTICS

	Air conditioning	Lighting	Power
IO Servers	10	4	
Data Server	6	4	
IO Devices	307	4	
Variable Tags	180,000	145,000	43,000
Trend Tags	40,000	0	2,000
Alarm Tags	63,000	42,500	5,700
Graphics Pages	500	150	100

Contact Citect's experienced specialists to find out how we can help you improve efficiencies in facilities monitoring at www.citect.com/nexa

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