ROHILL

Johannesburg City Power

Benefits

- Interconnectivity with telephony infrastructures
- Improved capacity and quality of service for lower operational costs
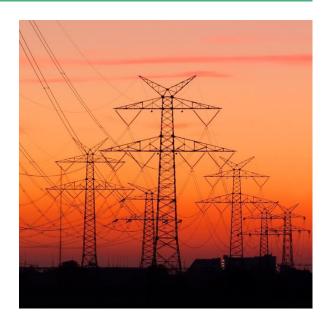- Providing more prompt and efficient customer services

Client overview

Johannesburg is the largest city in South Africa. Johannesburg City Power distributes electricity to Johannesburg, keeping the city's residents warm and its lights burning. City Power does not make power, but rather buys it from major generators.

City Power is a separate company, with the City of Johannesburg as its sole shareholder. Johannesburg has embraced a vision to become a world-class African city and, in line with this vision, City Power aims to become a world-class electricity utility.

City Power's customer base is segmented into key customers, large power users, and prepaid, domestic, agricultural and commercial customers. The domestic segment forms the majority of the customer base. To meet the needs of corporate customers. City Power has concentrated on improving the wire network to reduce outages and power surges.

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Project challenge

Johannesburg City Power started an ambitious program of implementing a new TETRA radio network from 2007 to replace various analogue conventional radio channels. Not all conventional channels could be replaced directly. Therefor the solution interfaces with conventional radio channels to allow for interoperability between the existing channels and the new network.

The TetraNode TETRA network not only serves City Power, but also other utility companies make use of the network, like the water company.

Solution

The TetraNode TETRA network provides a reliable network for City Power's mission critical needs. With a geo-redundant main and a standby TetraNode eXchange, the network has been fully made redundant to provide a high availability network for its radio users, modems for street lighting control and SCADA modems for electrical substations. SCADA systems enable City Power's employees to collect all Electrical Power information and transfer it to the server for processing.

City Power's Network Manager uses TetraNode Network Management Station and NodeView for network and subscriber administration and network usage monitoring.

The radio fleet and the interconnected conventional radio channels is managed from a Chameleon Line Dispatch Station complemented with a location positioning system. It offers access to advanced network features, which enables the dispatcher to efficiently communicate with radio users and manage the mobile fleet.

A Voice-data Logging System captures all network voice and data communications for eventual incident investigation and replay.

The TetraNode TETRA network is built with geo-redundant TetraNode eXchanges, 18 Base Station sites with a total of 36 TETRA carriers. The network further includes Line Dispatch Station Chameleon and a location positioning system.

The network offers interconnectivity with City Power's telephony infrastructures, while gateways to external networks allow the TETRA network to be connected to other systems, equipment or applications, such as SCADA & Telemetry. Network management is done with Network Management Station and Network monitoring through NodeView.