Schiphol Airport

Benefits

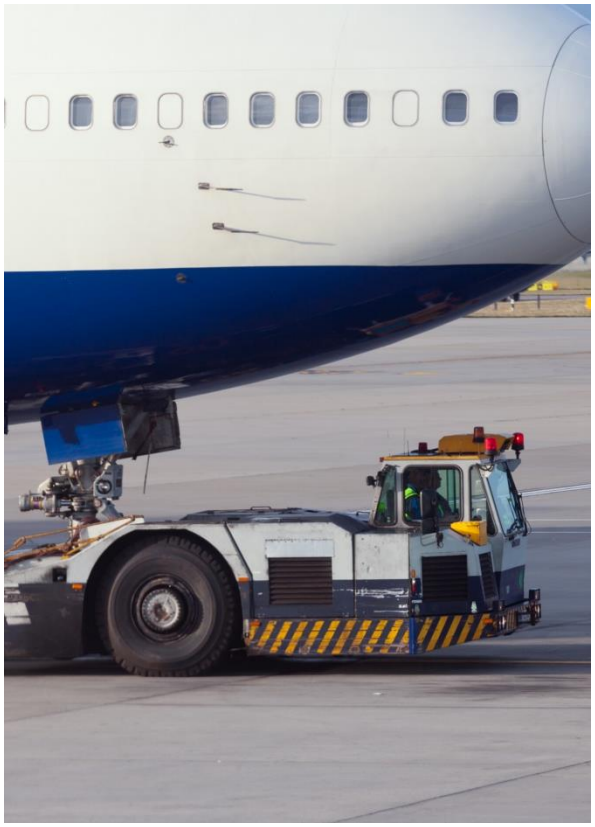
- Strict separation of end-user groups (VPN)
- Future proof IP-based platform supporting high capacity voice & data
- High capacity main site (16 carriers and 2 control channels)

Client overview

Amsterdam Airport Schiphol in The Netherlands is a busy, and valued airport with five main runways with over 3.000 meter length.

On an annual basis it transports way over 52 million passengers and 1,5 million tons of cargo to 320+ destinations in nearly 100 countries; 40% of the passengers are in transit to an onward destination.

The airport operates 24 hours per day, every day. At the airport premises are about 500 businesses that together employ ca 65.000 people. The airport premises houses an underground railway station for smooth accessibility.



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Schiphol Airport

Project challenge

Schiphol airport is probably one of the most demanding environments in the world for the daily exchange of critical information in terms of volume and speed. The operation of commercial airlines and support services requires swift and reliable mobile communications for a quick and efficient response to the dynamics of change. At the same time, the airport emergency services require reliable ways of communication in their continuous fight against incidents, fire and the threat of terrorist attacks.

To support their airport operation, Schiphol used a number of successive radio network solutions, and 2006 it migrated to TetraNode TETRA. During the migration period, old network users were transferred to the new network well prepared and trained, user group by user group.

During the migration phase a gateway existed between the previous and the new TETRA network, to allow for some inter network communications. Finally all users were migrated without any user complaint.

Solution

The TETRA radio infrastructure is based on TetraNode High End. The technology behind it is based on open industry standard, high availability server platforms. These are specially designed for carrier grade telecom applications with excellent system performance and availability. The radio network at Schiphol is crucial for the daily exchange of critical information during day and night.

About 10.000 different users share some 3.500 radios. The network has to be able to manage a high traffic load and has to be operational at all times; daily traffic peaks of 34 Erlang are easily handled without any call queuing. The network is built without a single point of failure. During flight incidents on or around the airport performed well, as usual.

The technical and operational management of the network is done remotely; on the airport is a support team present to assist with any user issue.

Radio coverage is provided by two sites: a main site with 16 and a remote site with two TETRA carriers. It offers outdoor coverage on and around the airport premises; it also feeds some 35 km of leaky feeder for in house TETRA coverage.

The network is interconnected with the airport's telephone system and offers telephone regular duplex telephone calls to and from TETRA, but also group calls to TETRA.
In a different location, the airport has a complete networked TETRA Emergency network on hot standby as an ultimate system back up.