

Bandwidth Saving for Tunisian Call Centres

Background

The client offers call centre services for the French speaking market. Customers include one of the leading French clothing catalogues. To take advantage of lower wage costs and other reduced overheads, part of the business is located in Tunisia. Unfortunately this business had become a victim of its own success – rapid growth had used up all the available telecoms capacity. Upgrading would be difficult and costly.

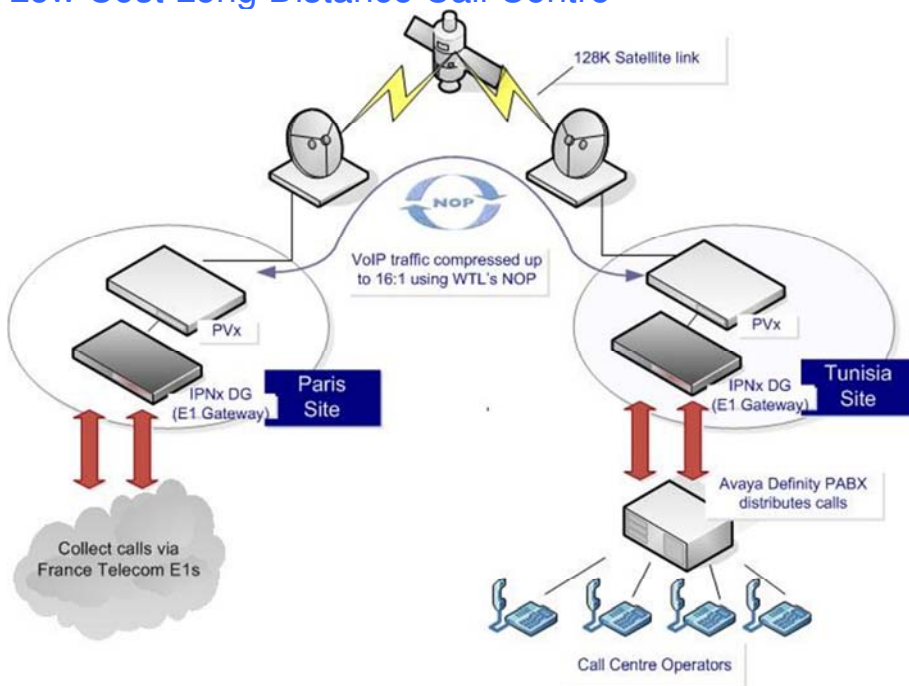
The existing system used a 128Kb international leased line from France Telecom. Using standard TDM equipment this allowed only a handful of seats to be used in the Call Centre. With greater capacity the client also wanted control the number of calls that each of their customers was using at any one time.

WTL Solution

WTL's distributor, Phone Control France, worked with the client to design a VoIP solution that would give the capacity for the anticipated growth.

The solution uses the PVx and IPNx DG (E1 gateways) to compress the call centre traffic and make the most efficient use of the costly international leased line. At present there are 20 operatives in the Call Centre but this project will ultimately allow that to expand to 200.

Low Cost Long Distance Call Centre

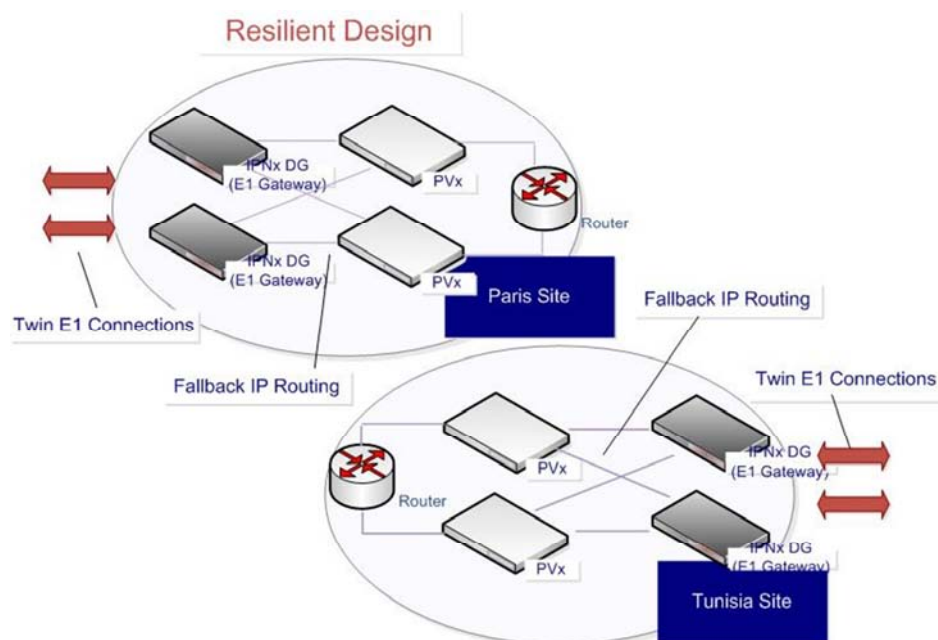


The deal was concluded after the excellent voice quality of the proposed solution was demonstrated to the customer. When combined with the great bandwidth savings and rapid payback period it seemed too good a solution to refuse.

Traffic is collected over the national network using French local access numbers. From here it is fed as conventional TDM traffic via E1 interfaces into IPNx E1 Digital Gateways. These gateways convert the calls into standard H323 packetised voice. These calls would still occupy too much of the leased line so the PVx now converts the calls into NOP (WTL's patented Network Optimisation Protocol). This gives 14 to 1 compression of the traffic and allows the greater call capacity that the client needs. Each call centre customer is allocated a range of Access (DDI) numbers which they publish for end users to call. The system is set up to inspect the DDI that was called and check this against the maximum number of simultaneous calls that customer has paid for. This ensures that heavy use by one Call Centre customer will not affect the others.

Resilient Design

An important feature of this project was the need to maintain very high levels of availability. For this reason, a resilient network design was proposed where all critical components have a load-sharing spare installed.



At each site there is a pair of IPNx DGs. Each of these Digital Gateways has 2 x E1 ports although only one is connected in normal operation. Should there be a problem with one of the IPNx DGs the E1 cable can be removed from it and temporarily plugged into the spare port on the other unit. Similarly, there are two PVXs at each site. Normally, each IPNx DG passes its traffic to its own PVX. However, should one of the PVXs fail the IP routing in the IPNx DG is set up to automatically try the

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other one. Each PVX has enough capacity to handle all the traffic from both IPNx DGs should this be necessary.

Benefits of WTL Solution

- High voice quality (so good that callers do not know they are being answered in Tunisia)
- Greatly improved usage of limited bandwidth
- Flexible system allows changes at short notice (for example, to support special promotions by the clients)
- System is stackable so easily expanded later
- Equipment is fully networkable so other locations are easily added
- Call capacity can be reserved per client
- Resilient design gives very high availability