

Client: Southern Railways, Chennai

What was the customer's requirement?

Southern Railways wanted to expand their "Online Passenger Reservation Network System", which already had 18 Routers of another brand in their existing network. Southern Railways was very specific that any new router being deployed in the existing network should seamlessly integrate and be completely interoperable with the existing routers, including proprietary routing features/protocols.

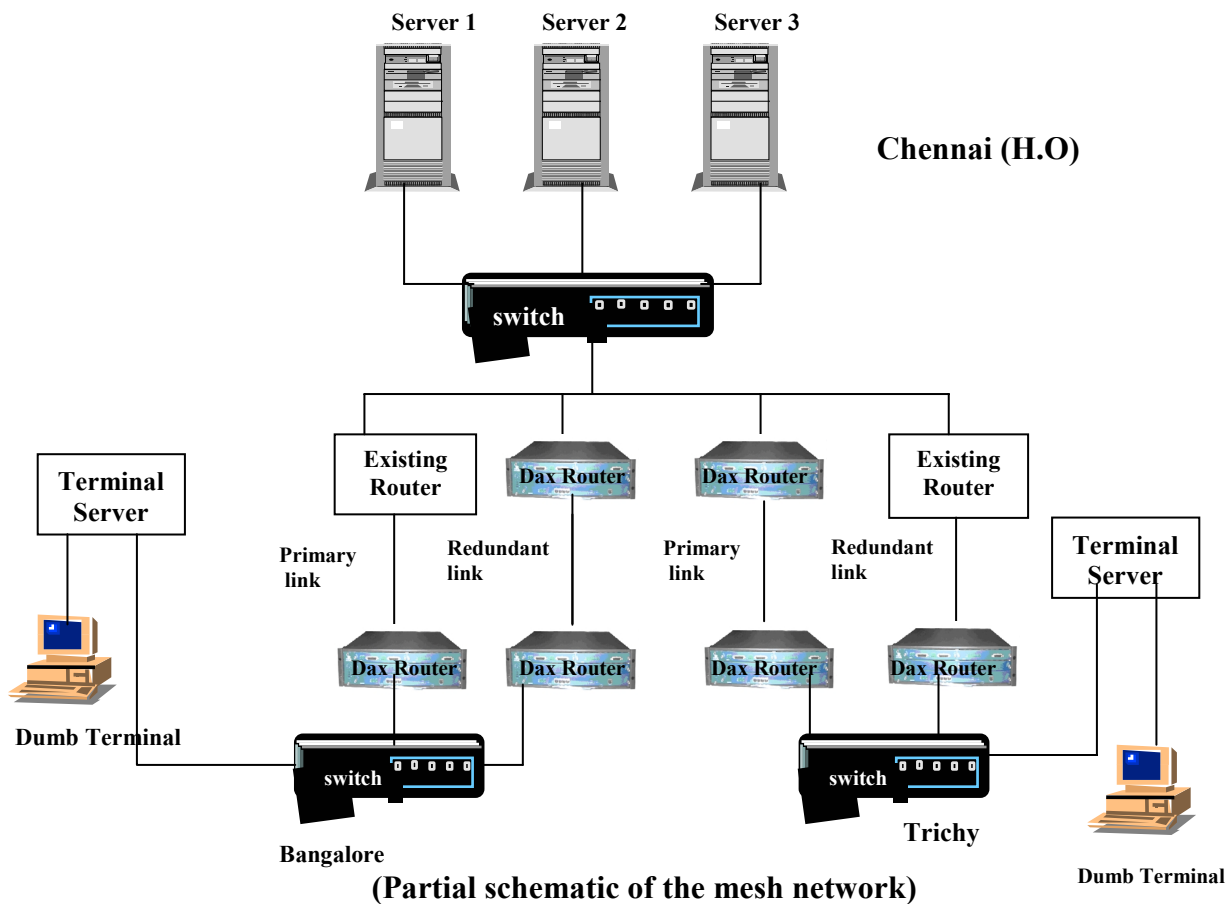
Possible connectivity solutions:

Southern Railways had the following options:-

- Mesh network
- Hub & Spoke network
- Network with redundancies

Our recommended solution:

Network with redundancy i.e., more than one route to any of the destination network was recommended. The network layout is as below:-



Challenges faced during implementation:

Pre-sales challenge:

The tender floated for 14 Nos of chassis based Enterprise WAN routers for 7 locations was totally inclined towards existing routers in the railway network. One of the existing vendors of Southern Railways ensured that the technical specifications of the routers were completely drawn on the existing routers.

As many as 6 System Integrators participated in the prestigious tender and Dax decided to partner with the System Integrator, who was less favored by the competitor.

With the help of Maipu, Dax confirmed 100% technical compliance vide DXMP-3640B Enterprise WAN Routers.

When Dax was declared L1 in the tender, the competitor tried to nullify by questioning the technical capabilities of Dax Maipu Routers. A full featured, time tested demonstration was shown and Dax came out with flying colours. The technical demonstration covered the following key features comprehensively:-

- Throughput
- Performance on load
- Modularity
- Interoperability with proprietary protocols supported by the existing routers.

In addition, Dax also introduced Southern Railways to few prestigious Dax Maipu router customers who are already deploying Dax Maipu Routers for high mission-critical applications. The overwhelming feedback given by these delighted Dax customers assured Southern Railway that they were betting on the right horse.

Post-sales challenges:-

- Interoperability with the existing routers' proprietary link level protocol using stacker compression: - This was specially developed and demonstrated for complete co-existence without the need to effect any changes in the existing network.
- Faster re-routing of data through tuning timer of RIPv2 (Routing Internet Protocol) to realize zero network downtime at the front-end (passenger booking counter):- All 4 timers of RIPv2 were proportionately adjusted/negotiated to achieve the desired time-bound network uptime (less than 180 seconds).
- Interoperability with a proprietary redundant resilient protocol supported by the existing routers:- This was specially developed and demonstrated vide VBRP (Virtual Backup Routing Protocol)
- The synchronous port of the Router was not receiving clocking information from DCE (Data Communication Equipment) i.e., Leased Line Modem: - This was resolved by inverting receive clock in DXMP-3640B.

Key benefits articulated by the customer:

- Southern Railways benefited from cost-competitive, industry standard enterprise routing solution.
- Southern Railways realized complete interoperability with the existing routers without any change in the existing network.
- Southern Railways witnessed better throughput in DXMP-3640B routers, which resulted in high speed and better performance. This led to faster response time as compared to the existing routers running alongside in the network.
- Southern Railways enjoys a comprehensive 3 years warranty as compared to 1-year warranty offered by the competitor. This meant that the total cost of ownership is significantly low with DXMP-3640B Enterprise WAN Routers.