

Railway Communications Network

Case Study



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National Company of Romanian Railways (CFR)



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Challenge

Connectivity between train stations to achieve operational, tactical and strategic management for the railway

Solution

RAD's MAP and Last Mile solutions provide voice and data connectivity among Romania Railways' 400 train stations.

Benefits

- Wide range of interoperating products
- Central network management

RAD Equipment Connects Hundreds of Train Stations in Integrated Railway Information System (IRIS)

Romanian Railways Purchases More Than \$1 Million in RAD's MAP and Last Mile Products

When doing business in Romania, one of the first things that strikes the visitor is the wide distribution of businesses throughout the country. Each town has its own factories and industrial center. Therefore, the transport sector is of tremendous importance for the country's industrial growth. And the National Company of Romanian Railways (CFR), the fourth largest railroad network in Europe, with over 14,000 km (8,700 miles) of track, is a vital form of transportation in this country.

To improve its customer service and boost profits, CFR has developed the Integrated Railway Information System (IRIS). The main target of this information technology (IT) system is to assist the operational, tactical and strategic management for the railway, in the areas of ticketing, financial management, railway infrastructure and rolling stock maintenance and administration, freight shipping administration and train traffic planning and monitoring.

CFR installed a fiber optic infrastructure for high data rate Ethernet transmissions between stations. All stations communicate with CFR's Management Information Center, located in Bucharest, which processes the information. IRIS also provides high speed intranet and Internet access.

CFR deployed RAD's multiservice access platform (MAP™) and Last Mile solutions in over 400 train stations to provide the access to the fiber optic network. The entire network is divided into nine sectors. In each sector, a Cisco router connects to a DXC™ multiservice access node, which grooms the data from each site in the sector. A variety of RAD devices, such as Megaplex™ multiplexers, FCD™ network termination units, HTU™ access units and ASMi™ intelligent modems, is installed at the various sites, according to the amount of traffic handled by the site and its distance from the DXC unit.



data communications

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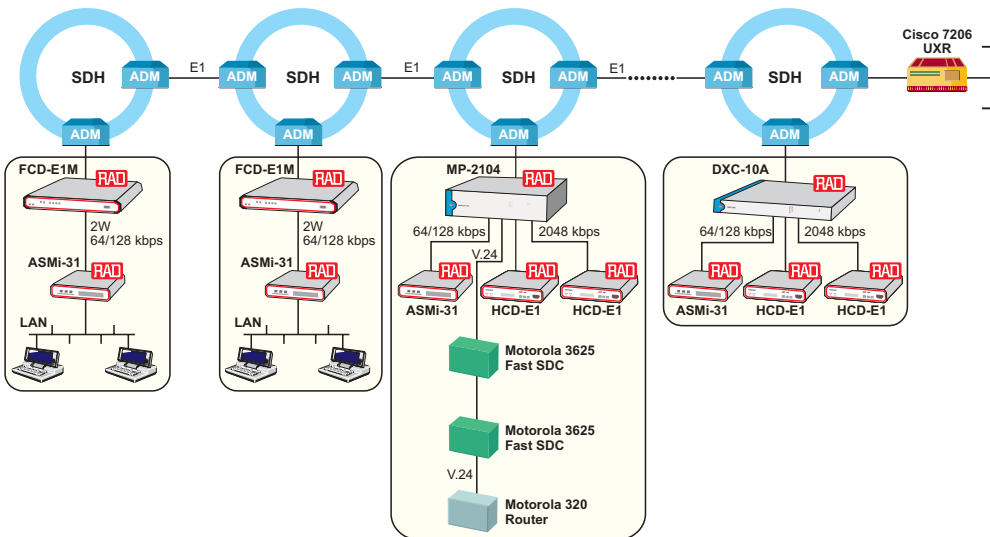
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“RAD's leased line solutions made the most sense for this network, due to the wide range of interoperating products that enabled us to put the optimal device at each site,” says Mr. Mihai Gherman from ICL (Fujitsu), the international, Romania-based system integrator for the project. The RAD products fulfilled all the needs of the IRIS system, including interoperability with Cisco routers, central management support and system redundancy.

“We considered implementing a modems-based configuration proposed by Telindus, but for larger sites we needed a multiplexer solution,” continues Mr. Gherman. “We also considered a proposal from Cisco based on Frame Relay, X.25 and IP networks, but TDM, with its consistent bandwidth, proved the most appropriate technology in this particular application. RAD's solution was also more cost-effective, and we experienced excellent cooperation with personnel from RAD and its local distributor ICC,” he concludes.



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