# LATIN AMERICA AIRLINE REEVALUATES ITS TELECOMMUNICATIONS INFRASTRUCTURE

In this case the company is a specialized air transportation group, based on Latin America. The conglomerate has a total of five companies. The main one is the airline and the others are the air cargo, aircraft maintenance, ground services and a hotel chain.

The organization was the market leader within its area, operating 86 airplanes and employing 13.000 people throughout its 386 offices. 286 of these offices were located within Latin America and 110 were spread throughout the world.

The organization has four datacenters located in four different cities, although the main one was outsourced to IBM.

The wide area network was outsourced three years earlier. Several problems related to the resilience, performance and cost convinced the management that it was necessary to review the current infrastructure.

The company wanted to know how much a new structure would cost , including installation and operation (Using internal and external personnel). This information would identify the basic parameters to discuss the current situation with the outsourcer (A traditional telecommunication services provider to the airline market). The study would also base the decision whether or not the Network would be kept outsourced and would identify if there was economical gains attainable through integrating the five separate networks (each company of the group had its own), merging them into one.

With these three objectives in mind, and using the design software Ariete® several scenarios were simulated (Each company having its own network, combining each company with 2, 3 and 4 others) and using a large spectrum of interconnection possibilities (Frame-Relay, MPLS and clear channels).

The results demonstrated that there was a large potential to cost savings and it could be achieved through:

- Rearranging the topology;
- Integrating voice and data;
- Renegotiating the values paid for interconnection services and hardware;
- In sourcing the network management;
- Merging the networks of the five companies into only one.

Analyzing the traffic interest and the interconnection costs available and assuming a complete hardware renovation the Ariete® software identified a possible monthly cost reduction of **USD 583.314,14**. This was more than half of the current expenditures. In addition of that the new structure was more reliable (Having backups in all nodes) and had almost two times the bandwidth availability. Therefore, what was identified was the possibility of having a structure almost two times bigger, more reliable and costing less than half of the current value.

Analyzing the alternatives, the software identified that through topological rearrangement, voice and data integration and prices renegotiations would be possible to reduce the current expenditures from **USD 1.015.196,63** to **USD 431.882,48**.

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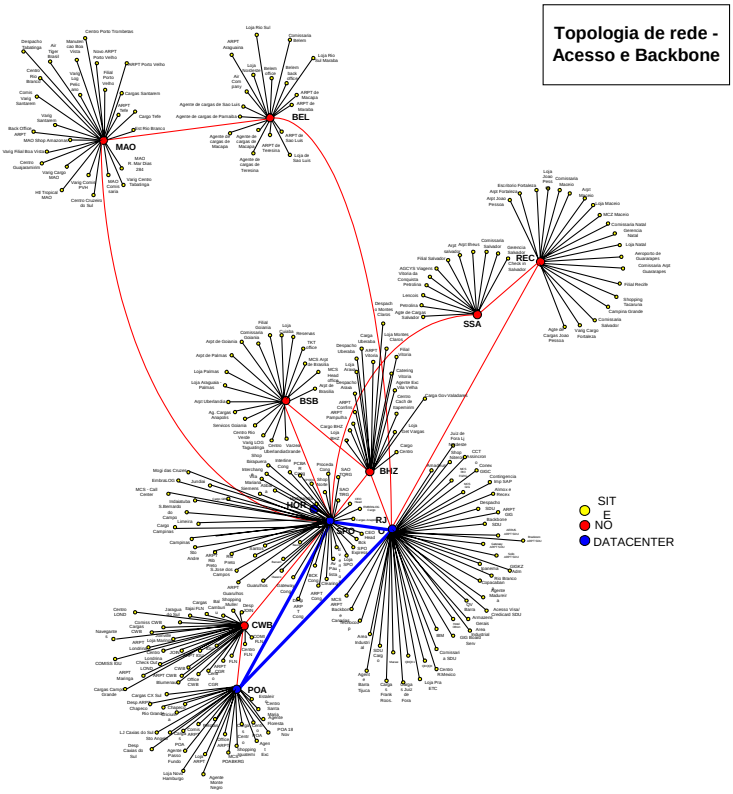
The analysis showed an ideal topology of eleven nodes as follows:




## Current scenario

| Type of Service | Monthly value Brazilian Reais | Monthly value US dollars | % |
|---|---|---|---|
| International network | R$ 1,350,000.00 | USD 450,000.00 | 44.33% |
| Voice hardware | R$ 150,000.00 | USD 50,000.00 | 4.93% |
| Domestic network | R$ 784,589.88 | USD 261,529.96 | 25.76% |
| corporate Voice | R$ 376,000.00 | USD 125,333.33 | 12.35% |
| Network management | R$ 25,000.00 | USD 8,333.33 | 0.82% |
| Type B | R$ 360,000.00 | USD 120,000.00 | 11.82% |
| **Total** | **R$ 3,045,589.88** | **USD 1,015,196.63** | **100.00%** |

## Proposed scenario

| Type of Service | Monthly value Brazilian Reais | Monthly value US dollars | % |
|---|---|---|---|
| International network | R$ 450,000.00 | USD 150,000.00 | 34.73% |
| Data hardware | R$ 180,000.00 | USD 60,000.00 | 13.89% |
| Voice hardware | R$ 100,000.00 | USD 33,333.33 | 7.72% |
| Last-Mile | R$ 118,274.45 | USD 39,424.82 | 9.13% |
| Backbone | R$ 98,373.00 | USD 32,791.00 | 7.59% |
| corporate Voice | R$ 60,000.00 | USD 20,000.00 | 4.63% |
| Network management | R$ 25,000.00 | USD 8,333.33 | 1.93% |
| Type B | R$ 264,000.00 | USD 88,000.00 | 20.38% |
| **Total** | **R$ 1,295,647.45** | **USD 431,882.48** | **100.00%** |

Having this view the company's management saw clearly what had to be done to achieve that. The contracting and implementing of the new structure, took eight months and the whole project had a payback of four months. The migration costs were distributed as follows:

| Type of expense | Value |
|---|---|
| Parallel operation for two months | USD 1,293,000.00 |
| Instalation fees | USD 86,000.00 |
| Penalties payments | USD 300,000.00 |
| Professional services | USD 60,000.00 |
| **TOTAL** | **USD 1,739,000.00** |

This project demonstrated how the deployment of specialized design tools can be crucial when evaluating Wide Area Networks in large organizations. These tools were what made possible the quick identification of the achievable savings and gave the management a clear view of where these savings were. The whole evaluation/analysis process took six weeks.