

## Design Scenario 2- Auteco Mobility

This is a summary of the most important events and points after meeting with the executive team and visiting Auteco's facilities:

The director has expressed that they will grow by 120% in users next year and expect to continue growing the next years, that they are going to expand their operation to South and Central America; also that he considers that new applications must be installed to control the production, distribution, marketing and commercialization of their products. Therefore, for him this project is strategic for the operation, growth and expansion of the organization and they have a budget of 400,000 USD and it should be done in four months.

Talking to an executive who is familiar with technical issues, he commented that the plan to update and renew the IT technological infrastructure should include business intelligence, data analytics and artificial intelligence tools.

In an initial evaluation of the central office network, very little documentation was found and it is not clear what the current network topology is and how the other remote offices are connected.

Internet access is through a local carrier via enterprise DSL, there is a Cisco 1811 router and a Fortigate 50E firewall, the latter installed by Unilago Solutions, but it is noted that a DMZ has not been defined. The servers (5) are located in a room on the second floor adjacent to the TR and there are no adequate environmental and security conditions for them. Although there is a TR, the cabling has been extended in a disorderly manner and switches have been placed to reach points in the offices.

Some users complain that the network goes down at least once a week. Although it has not been easy to interact with the network outsourcing people, one of the Unilago Solutions technicians has stated that the security issue is quite precarious and it would not be unusual for attacks to have occurred on the network without being identified or noticed.

As for voice systems, traditional telephones and a few IP phones are installed. An outsourcing technician has stated that they have a cloud-based IP telephony service that is paid monthly by the number of users.

1. Would you update the list of business objectives and constraints? Explain
2. List Auteco's technical goals. What tradeoffs might you need to make to meet these goals?
3. What security concerns should you bring up as you design the network upgrade?
4. What level of availability would be acceptable for this customer?
5. Do you believe that a wireless network could help improve the connectivity and performance of Auteco's network? Defend your question.
6. At this point, would you think it would be better for Auteco to have all of its applications in the cloud and not build an on-site infrastructure? Defend your answer.
7. Complete the network applications chart, as explained in chapter 2.