

Implementation of a private network for secure communication in BANCOE



Valeria Pino Rivera
Juan Diego Rosero

ADVANTAGES

- Significant improvement in the security and efficiency of internal communication
- Increase in the productivity and competitiveness of the bank in the market

PROBLEM

Need to exchange sensitive information, both in text and audio format, among multiple offices.

Traditional communication solutions face significant limitations in terms of security, data integrity, and operational efficiency.

IDEAS

Implementation of a private network based on TCP/IP.

Security in the transmission of text and audio information between offices.
Minimization of physical displacements between offices.

Increase in operational efficiency and strengthening of security against external threats.

FEATURES OF THE PYTHON PROGRAM

Use of Dijkstra and Bellman Ford routing algorithms

Secure transmission of audio and text packets between hosts

Automatic detection and recalculation of routes in case of node or link failures

Encrypted communication between routers, controller, and network endpoints

Utilization of the NFSNET topology and visualization of routes between nodes

