



Bancolombia

It is the largest bank in Colombia that offers various financial products and services to individual and corporate clients throughout the country, Central America, and the Caribbean. It has two agencies, one in Panama and one in Puerto Rico, and allied banks such as Banitsmo, Banco Agrícola, and Agromercantil.

Bancolombia has been named the best bank in the country, and according to Merco, it is the best company to work for in the nation. In 2020, Bancolombia celebrated its 25th years on the New York Stock Exchange (NYSE).

It has 22,000 employees in Colombia who work every day to serve their more than 20 million clients.

Industry

Financial

Location

Medellin, Colombia

VMware Footprint

VMware SD-WAN™

VMware Learning

Bancolombia connects branches and ATMs with VMware SD-WAN™

The financial institution implemented SD-WAN technology to reduce connectivity costs between its branches and automatic cashiers, increase traffic visibility, optimize application performance, and continue its journey to the multi-cloud model.

Background

Grupo Bancolombia is an organization with more than 140 years of history that has preserved the purpose of being one of the engines of economic and social development in the countries where it is present.

Throughout its history, innovation has been one of the constant goals, not only in the development of products and services, but also in the experience of its customers, seeking to contribute more to people's quality of life, being a more compassionate Bank.

As part of its commitment to innovation, Bancolombia invested in Software Defined Wide Area Network (SD-WAN) technology to simplify branch networks, increase their bandwidth, provision branch offices faster and optimize hybrid cloud application performance.

This was in response to the issue that, every year, the organization had the problem of expanding the bandwidth of the MPLS links over the entire branch network, which involved high costs in time and money.

Bancolombia's Telecommunications team analyzed WAN solutions to reduce the cost of connectivity and comply with the security regulations of the Financial Superintendency. The research group validated various solutions and market trends and did proof of concepts, not just with VMware but with other vendors.

“We chose VMware because it matched the needs and criteria defined by the organization, like increased bandwidth and ease of implementation. VMware gave us peace of mind during testing phase as the VMware SD-WAN solution proved to be the reliable solution we were seeking, thanks to VMware’s superior architecture and technology.”

Angel David Niebles
Leader of Branches and ATM's Connectivity Area of
Telecommunications Management

Initially, in Bancolombia, Software-Defined Networking (SDN) technology was used in the data center and now became part of the WAN, and in the future, the entity is considering making this transformation on the LAN.

Specifically in the WAN network, in 2019, the project was started by implementing SD-WAN in 642 branches and 1,270 ATMs, which do not depend on office infrastructure. The rollout of this technology will continue to cover the entity's 2,400 nationwide locations.

In terms of investment, where before the organization paid for MPLS connections with limited capacity, with SD-WAN they switched to Internet, growing capacity by 10x and using parallel MPLS connections, which helped optimize costs and increase bandwidth. Early estimates show that the organization will achieve a 20% reduction in maintenance costs for branches and ATMs within two years.

Other SD-WAN technology benefits include centralized management and automation, which helps Bancolombia standardize all sites from a unified platform, without having to manage each site one by one. It also increases time-to-market capacity by enabling rapid deployment in hours, not months. VMware SD-WAN also allowed for easier monitoring and improved service quality over available links.

Impact on the user

Positive impacts were achieved in Bancolombia with the SD-WAN implementation in branches and ATMs.

While this technology impacts two types of users, the client and the internal user, the agility in service delivery has been remarkable for the former. For the latter, it has been helpful to streamline processes that have helped the ATM or branch office manager, such as updates that previously took significant time by requiring an agent to visit each site.

Similarly, internal users at each branch can control their information and resources more effectively. In fact, on a day-to-day basis, it is not necessary for multiple applications to go to centralized sites to be able to access them but may be accessed from the same branch office. This is evident in the use of Office 365 or Success Factor, which has been streamlined so that end-users, who are the consumers of these applications, have a better experience using these services.

Another area that this technology has impacted for the better is in cybersecurity. With VMware SD-WAN, the organization may have more control over devices that monitor branch office or ATM surroundings at a distance.

“In the past, monitoring was virtually offline, but now it can be online, considering there is increased bandwidth. Also, thanks to the assurance capabilities (QoE), we can now segment and secure transactional issues as well as physical security. Furthermore, we can segment and secure non-transaction related applications. Thus, we have physical security issues isolated and therefore do not combine these with any other traffic, which helps the area to have visibility into the infrastructure and greater control of its devices.”

Angel David Niebles
Leader of Branches and ATM's Connectivity Area of
Telecommunications Management

SD-WAN regulatory compliance

Given VMware’s unique architecture, VMware SD-WAN helps meet the Colombian Financial Superintendence’s standard for encrypting data links. “With this technology, I can have encrypted tunnels and assign any means of transmission, like the Internet, MPLS, LTE or satellite, for transporting, while the SD-WAN overlay ensures traffic to the endpoint” mentioned Angel David Niebles.

Furthermore, with SD-WAN, the best cybersecurity practice are in place, as one of its main features is segmentation, where both transactional and normal user traffic is segmented along the path.

“SD-WAN allows us to segment the different traffic and encrypt each separately, making it easier to transport to any of the data centers, knowing the type of information and traffic that is running.”

Angel David Niebles
Leader of Branches and ATM's Connectivity Area of
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The future

Through its vice president of technology, Bancolombia established a goal to be multi-cloud. In that context, SDN was born in the cloud, and SD-WAN is also one of the first technologies or applications in the cloud. This environment is hybrid because it keeps its own data center but is migrating multiple applications to the cloud, with a goal to ultimately be 100% cloud native.

“We believe that we can continue to evolve SD-WAN, with new capabilities and protocols that we can integrate, like SASE—that we are already starting to analyze from our telecommunications research area. In the future, we want to continue exploring and leveraging investment in these types of technologies. In that sense, VMware is a great partner. We want to continue learning and developing automation and the entire SDN concept to improve our entity's infrastructure and response times, as well as providing more and better services to our customers and users” concluded Angel David Niebles.

Key Challenges

- Improving the performance of critical banking applications and services.
- Reducing branch implementation time, especially where physical access is not easy, and the troubleshooting process is complex.
- Optimizing access to SaaS and cloud applications.
- Providing cost savings over existing infrastructure with expensive, redundant network infrastructure, broadband, and different link types.
- Complex visibility.

Business Impact

- Increased business agility by upgrading and connecting ATMs and branch offices due to the easy implementation of the VMware SD-WAN solution.
- Reduced costs thanks to additional link connectivity capabilities, regardless of type
- Increased ability to offer new services to their customers
- Compliance with financial sector security requirements
- Optimized operations and improved broadband transport and access to cloud-hosted applications.
- Enhanced Visibility into traffic flow related to applications and services.

“We are very pleased. The implementation of 680 branches was carried out in four-months, which is record time; obviously, there was prior work done in terms of design, the implementation of the central layer, configurations, and concept test, but once defined, the ease and performance have been extraordinary. The area is getting the most out of this SD-WAN technology, and the challenge is to continue to exploit it further.”

Angel David Niebles
Leader of Branches and ATM's Connectivity Area of
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