

# BBVA (Banco Bilbao Vizcaya Argentaria)

## Tetration Case Study

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## The customer summary

### Size

+126000 employees

### Industry

Financial Services

### Headquartered

in Madrid, Spain

## Securely democratizing financial services

Securely democratizing financial services is a cornerstone of BBVA's long-term strategy. The purpose of this series is to present BBVA's view of the future, why BBVA chose Cisco Tetration to achieve it, and to share how we are working in partnership to achieve milestones on the journey.

In this first part of the series, we will learn about BBVA's goals, how Cisco® Tetration helps achieve them, and key visibility, segmentation, and enforcement performance indicators (KPIs) we will use to measure our progress together. The second installment will focus on where we are in the journey and how we are using our KPIs to update and to improve the deployment. The final release will show how Cisco Tetration enables BBVA to securely democratize financial services for customers around the world.

## We are BBVA!

BBVA is a customer-centric global financial services group founded in 1857. The Group has a strong leadership position in the Spanish market, is the largest financial institution in Mexico, and has leading franchises in South America, the Sunbelt region of the United States, and Turkey (through Garanti BBVA). BBVA wants to enable opportunities for all by providing the best solutions and financial advice through an easy and convenient experience. The institution executes on this mission by focusing on the company's core values: the customer comes first, think big, and we are one team. Its responsible banking model aspires to achieve a more inclusive and sustainable society.

BBVA signed a strategic alliance with Cisco that helps BBVA in its digital transformation process, allowing BBVA to underpin its commitment to progress toward far-reaching alliances that help the company accelerate the adoption of innovative technologies, the digitization of its business, and the global upgrade, deployment, and operation of solutions.

## Why do we need Tetration?

At BBVA, we knew the traditional business model of banking was not enough to meet our clients' needs, and we pivoted toward a modern services model in 2007. To enable this shift, we invested in a technology environment that today includes private and public clouds distributed across different regions. With business services architectures running on different sites and composed of a fluid range of integrated systems (mainframes, bare metal, virtual machines, and containers), it is critical to have full visibility of all of our sites in real time to improve problem detection and identification, independently of the physical location. Moreover, we needed powerful and actionable analytics to enable a proactive posture for IT, as opposed to being static and reactive in a traditional data center.

Finally, we needed a programmable and automated platform to improve response action and to reduce time-to-action for Network and Security events. We evaluated solutions on the market and found Cisco Tetration provided the best and the easiest solution to enable compliance through visibility, segmentation, and enforcement through its automation and programmability.

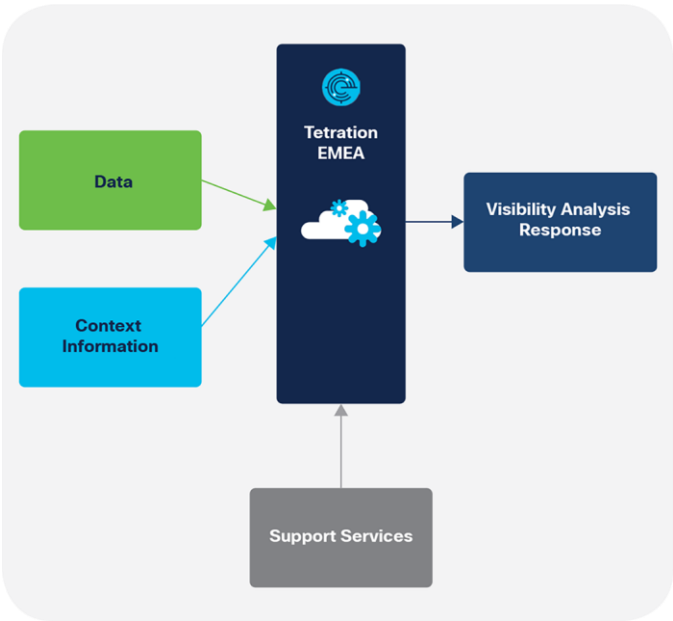
	Visibility	Analytics	Responses
Network	Network flows Telemetry data	Network behavior patterns	Predict and react to network anomalies
Application	App behavior App dependencies	Application policy definition	Compare app behaviors
Security	Software deployed System processes info Data processing	System behavior patterns Security anomalies Vulnerability assessment	Enforcement
	Detect	Protect	Respond

**Figure 1.**  
What does Cisco Tetration provide to BBVA?

Tell me about your experience with Tetration

From the beginning of the deployment, we found Cisco Tetration to be a powerful, flexible, and easy-to-use technology. More importantly, it helped us translate our business objectives into our technological environment. Part of this translation was having our deployment be a synchronized and multi-region solution—using clustering—to best support our subsidiary business structure. We collaborated with Cisco Customer Success (CX) to create an adoption plan around Tetration to ensure we implemented best practices for widespread availability of Tetration’s benefits to the company.

This strategy is built across the following fundamental blocks:



**Figure 2.**  
BBVA’s Tetration Fundamental Blocks

One of the first items we worked on with Cisco CX was a plan to ingest data and context information to realize fully the possibilities of Cisco Tetration. We focused on a flexible scope tree and annotation definitions to enable maximum visibility across our technology environment and to form a strong foundation for the actionable analytics and response capabilities we wanted to realize.

With this as our starting point, we fed our telemetry data into Cisco Tetration to see—for the first time fully—the complexity of our environment. In a few hours, we began to achieve an increasingly rich view of our network, workloads, applications, hardware, and software across multiple layers and source types through Cisco Tetration’s machine learning engine. We turned on the native integration to include our structured Configuration Management Database (CMDB) (as well as other databases) for additional context information. This offered a way for us to see a hierarchical view of our data center policies abstracted from the physical components.

These early wins led us to see the value of Cisco Tetration quickly and a desire to expand the technology’s availability in BBVA to more fully realize our goals. We led an internal initiative to build a cross-department adoption roadmap for our company’s multitude of end users. This allowed us to build a more comprehensive understanding and proactive posture for our environment starting with visibility, to followed shortly with analytics and response.



**Figure 3.**  
BBVA’s Tetration Use Case Roadmap

Our specific use cases map neatly to Cisco Tetration’s core capabilities (Table 1). Naturally, we wanted to measure our progress towards each our use case outcomes and defined KPIs to support this aim.

## Visibility

- Provides users flow visibility classified in terms of business owners and services
- Allows the analysis of current and past traffic to identify behavior patterns, early anomaly detection, detailed incident investigation, and root cause analysis
- Avoids visibility blackholes to gain full understanding of network behavior

## Behavior

- Detects anomalies with traffic pattern identification
- Employs wide range of known behavior models, predefined restrictions between zones and services, traffic volumetric, etc.

## Alert and response

- Acts on behavior and traffic pattern anomalies
- Allows custom configuration to environment based on policy definition

## Deep application analysis

- Deep visibility based on software agents from inside of the systems: users, processes, data, etc.
- Provides an end-to-end view customized to granularity preferences

## Enforcement

- Enables enforcement in software agents allows to apply security policies on end systems
- Policies are centrally managed from Cisco Tetration

**Table 1.** Use Case Alignment and KPIs

Cisco Tetration Core Capability	BBVA Use case	BBVA KPIs
Visibility	Visibility Behavior Deep Application Analysis	<ul style="list-style-type: none"><li>• # hardware/software sensors and endpoints</li><li>• Flows per second</li><li>• # concurrent jobs per users</li><li>• configured application dependency map workspaces</li></ul>
Segmentation	Alert and Response	<ul style="list-style-type: none"><li>• # configured alerts</li><li>• # resolved alerts</li></ul>
Enforcement	Enforcement	<ul style="list-style-type: none"><li>• application dependency map enforcement</li></ul>

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## To date, what technology outcomes has Cisco Tetration begun to enable?

We have seen Cisco Tetration provide benefits to multiple stakeholders in BBVA. The common benefit to each, however, is that Cisco Tetration enables a proactive posture that increases our up-time, improves and automates decisions, **and reduces response times from days to less than an hour.**

- Application owners now have the capability to monitor migration and upgrade processes, detect cross-services issues (e.g., anomalies in application service due to changes), identity services misconfiguration, and reveal configuration errors in endpoints.
- The Security team can now easily identify when an incident occurs, analyze how the security policy performed, and tune the policy to perform even better or automatically apply quarantine policies to suspicious workloads.
- The Networking team can discover network paths not allowed for specific services and detect non-compliance access to specific services with fewer resources due to the simplified monitoring, reporting, and management of Tetration.
- The Networking and Application teams can now identify Services configuration errors after Services patching by modeling traffic pattern and behavior.

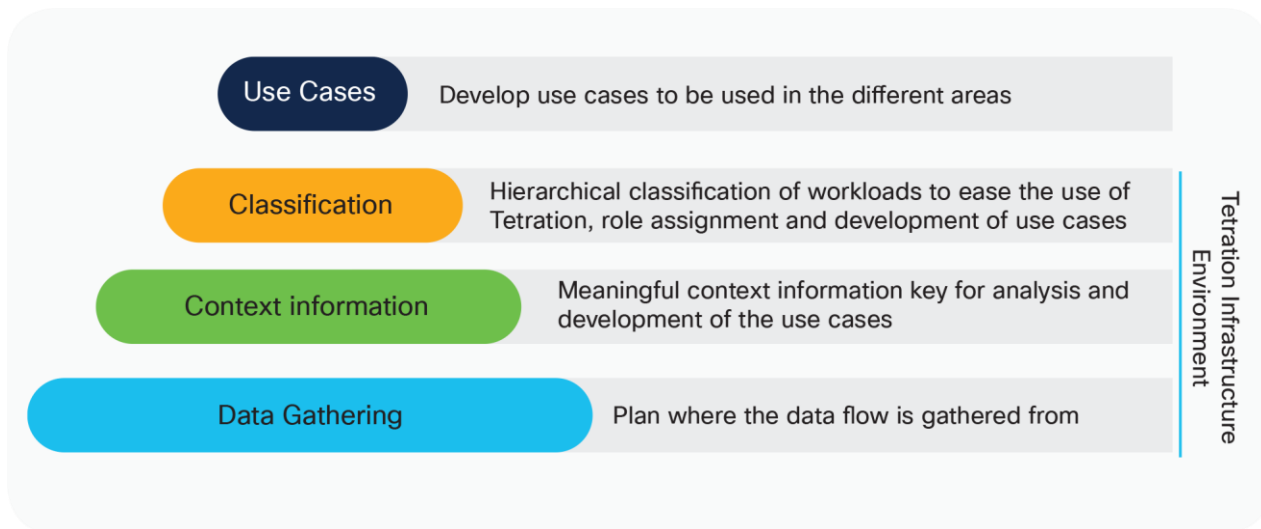
## To date, what business outcomes has Cisco Tetration begun to enable?

**According to Joaquín Crespo, BBVA Network Architect:** Cisco Tetration enabled BBVA's teams to make decisions rapidly based on insights from Cisco Tetration. Even early in the deployment, the business outcomes for BBVA are widespread, including specific requests from the network operations, monitoring, security teams for us to bring them in to the Cisco Tetration workflow. Frankly, it is the **glue between the needs of all my departments and stakeholders.**

**From the perspective of a manager:** As a manager with a budget, Cisco Tetration saves me operational costs. I have not needed to hire additional headcount because the technology drastically reduced the detection and reaction time of incidents from hours and days to minutes with automation, the adoption of virtual policies, and host-based enforcement.

## What recommendations do you have for new customers in how they can use and adopt Cisco Tetration?

For a deployment our size, our partnership with Cisco CX plays an important role during the adoption of Tetration. We shared our vision with CX, which in turn leveraged Tetration's capabilities to accomplish our business objectives. In two phases, they helped us execute a best practice-based deployment of our Cisco Tetration environment to support orderly data gathering, context, and classification. Then CX helped us refine our use cases to employ Cisco Tetration for maximum benefit.



**Figure 4.**  
Adoption Plan Strategy Schema

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