

# Itaú Unibanco Scales Securely Toward 100% Cloud with Docker as a Strategic Partner

Accelerating developer security and standardization across 480,000 repositories



<b>Industry</b>	: Finance & Insurance
<b>Headquarters</b>	: São Paulo, Brazil
<b>Employees</b>	: 95,700+ (17,600+ in technology)
<b>Key Technologies</b>	: Docker Business, Enhanced Container Isolation, Registry Access Management, Image Access Management, Docker Compose, LocalStack, AWS
<b>Challenge</b>	: Secure, scalable developer environments for a cloud-first transformation

## The Challenge

### Standardizing development in a massive organization while maintaining strict security standards

As Latin America's largest private bank, Itaú Unibanco set a bold goal: migrate 100% of its infrastructure to the cloud by 2028. With operations in 18 countries and over 4,000 developers actively working in containers, the stakes were high and the transformation complex. Moving infrastructure to the cloud would modernize its operations across 18 countries, improve agility, and support faster digital product delivery.

To support this transition, the bank evaluated various container tools and platforms. During the comprehensive evaluation of containerization alternatives, the team encountered several challenges. As the bank explored different options for its containerization stack, issues with developer productivity, security controls, and integration with AWS infrastructure created significant friction. Itaú's internal Red Team identified security gaps in some alternative solutions that lacked comprehensive developer workstation configurations and access controls. Integration challenges with AWS, Itaú Unibanco's primary cloud provider, further impacted development velocity, causing some teams to experience delays. For a transformation of this scale, fragmented workflows and inconsistent security practices posed serious risks, including potential non-compliance and increased operational overhead.

"Docker has proven to be an effective solution for achieving the level of security and virtualization that meets our institution's requirements."

**Lucas Polaquini, Staff Software Engineer**  
Itaú Unibanco

"We reduced local build time by 90% with Docker Build Cloud."

**Denis Rodrigues, Staff Plus Engineer**  
AI & Protocol Engineering Lead at Itaú

Beyond security considerations, the developer experience was also being impacted. Engineers who were familiar with Docker workflows began creating custom scripts or aliasing commands to replicate functionality when testing alternatives. Environments became fragmented across teams, and container standards became inconsistent.

Faced with these challenges, the bank needed to make a strategic choice: continue with an approach that presented risks—or invest in a platform that could provide secure, scalable cloud-native development capabilities.

## The Solution

# A strategic partnership with Docker for security, scale, and standardization

After thorough evaluation, Itaú made the strategic decision to standardize on Docker Business, positioning it not just as a development tool, but as a foundational platform supporting secure cloud transformation. The comprehensive security features, consistent developer experiences, and reliable AWS integration made Docker the best fit for aligning development velocity with Itaú's strict compliance standards.

With the strategic partnership, the team implemented authentication controls, applied Registry and Image Access Management, and deployed pre-configured base images with Enhanced Container Isolation on developer workstations. At scale, these configurations brought standardization and security to an organization managing over 480,000 repositories.

## Here's how it works:



**Registry Access Management** restricted container image sources to approved registries

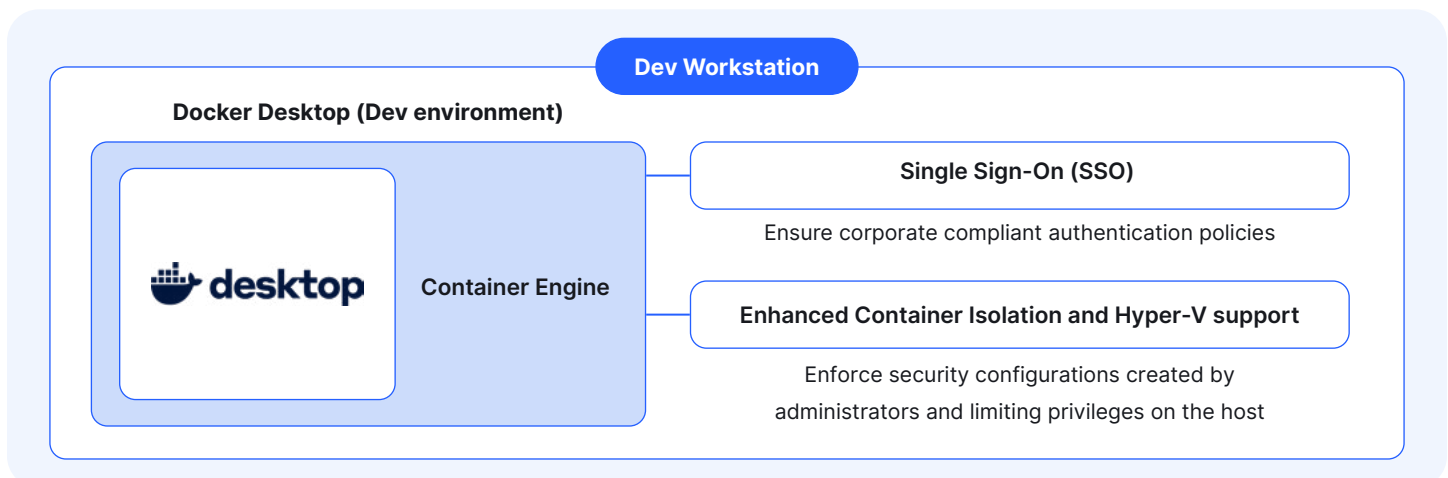


**Enhanced Container Isolation and Hyper-V support** enforced operating system-level segmentation, which significantly improved Itaú's security posture, a priority for the bank



**Single Sign-On (SSO)** and authentication policies ensured traceable user access across environments

## Two levels of protection: Local development and SDLC



By distributing pre-configured, secure base images, developers no longer needed to set up their own environments, drastically reducing misconfigurations, human error, and vulnerability exposure.

“Docker’s support has always been top-notch. When we had issues with PowerShell access, Docker released a new version within a day to address our specific use case.”

**Sergio Lopes, Principal Software Engineer**

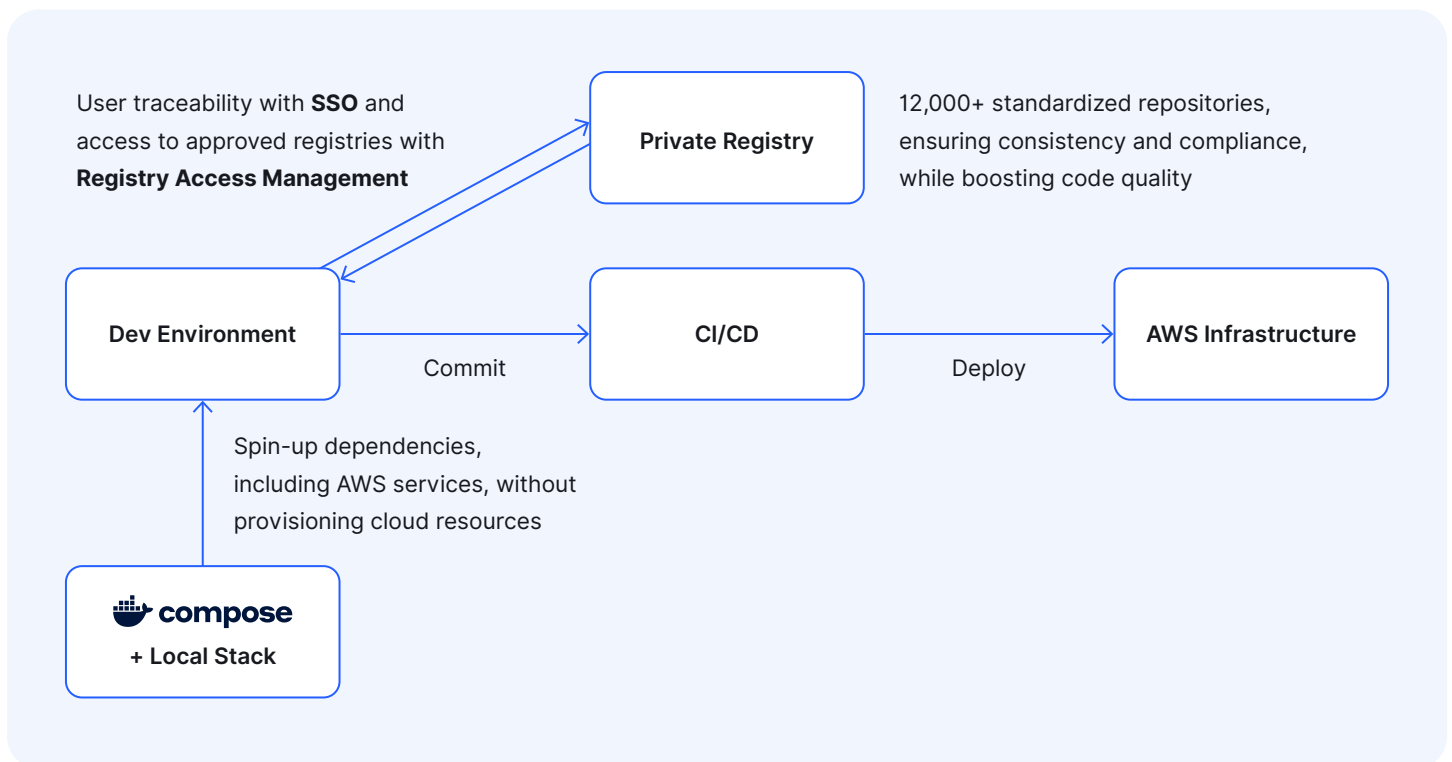
Itaú Unibanco

For Itaú, modernizing infrastructure encompasses both security and speed. Docker Compose and Docker's integration with LocalStack enabled Itaú to virtualize entire environments including AWS services, like databases and caches, without provisioning cloud resources.

Developers can now spin up services locally, run tests faster, and reduce reliance on cloud infrastructure, saving cost and time. This also ensures test environments remain isolated from production systems, further minimizing security risk.

Adoption on such a massive scale requires ongoing collaboration and partnership that transcends technology. Through targeted engagements, ranging from strategic planning sessions to hands-on Tech Talks and high-impact events like Itaú Docker Day, the teams were able to drive effective adoption, which contributed to improved results. These initiatives were instrumental in building trust, aligning on shared goals, and creating momentum. The first Docker Day brought together many engineers in their HQ and remotely, demonstrating strong organizational engagement.

## Two levels of protection: Local and SDLC



# Boosting Productivity with Docker Build Cloud

Docker Build Cloud testing reveals significant reductions in build time. "We reduced local build time by 90% with Docker Build Cloud," explains Denis Rodrigues, Staff Plus engineer at Itaú. "It's impressive."

## Strategic Contract Renewal and Partnership Expansion

To support their growing containerization needs and long-term cloud strategy, Itaú recently renewed their contract with Docker, securing unlimited licenses with premium support. This renewal was facilitated through a strategic partnership with Google, which provides access to complementary cloud services while delivering significant financial savings.

The combination of Docker's containerization capabilities with Google's cloud services has enhanced team productivity substantially, allowing existing teams to deliver more value without requiring additional headcount—generating considerable soft money benefits for the organization. This strategic approach demonstrates how thoughtful vendor partnerships can amplify technology investments while optimizing operational costs.

### Measurable Impact

## Secure Scaling and Accelerated Development

Since reintegrating Docker Business, Itaú has achieved significant technical and operational gains:



### Cloud Migration Back on Track

About 65% of the workloads have been migrated to AWS, with Docker helping to accelerate a safe transition to the cloud.



### Hardened security across 4,000 developer workstations

SSO, Hyper-V, Registry Access Management, and IAM policies brought centralized governance to containerized workflows.



### 12,000+ repositories standardized

Using Docker Desktop and Compose, developers now work in consistent, compliant environments, reducing deployment errors and boosting code quality.



### Build times reduced by 90%

Initial testing with Docker Build Cloud slashed image compilation times 90%, significantly improving developer velocity.



### Strategic cost optimization

Unlimited Docker licenses with premium support through Google partnership delivered financial savings while enabling comprehensive containerization capabilities.



### Productivity amplification

The Docker and Google services combination enhanced team output without requiring additional headcount, generating substantial soft money benefits.



# A Foundation for Future-Ready Cloud Transformation

With around 65% of its infrastructure migrated and 12,000+ repositories running in secure, standardized containers, Itaú Unibanco is well on track to reach its 2028 cloud goal. The Docker-Itaú partnership is more than a tooling choice, it's a shared commitment to secure innovation at scale.

By prioritizing **developer productivity**, **enterprise governance**, and **container security**, Docker has helped the bank minimize operational risk while empowering thousands of developers to build securely and efficiently.

As the bank continues expanding its digital services, Docker remains a key component in its cloud-native architecture. With unlimited licenses and premium support secured through their Google partnership, the bank is well-positioned to optimize Docker's capabilities further while maintaining cost efficiency. This strategic foundation ensures that their infrastructure remains secure, scalable, and ready for future growth while maximizing the value of their technology investments.

“Beyond the technology, Docker and Itaú collaborate to accelerate adoption and embed containerization best practices across the organization. The availability of a skilled, dedicated team is a key factor in choosing the right containerization platform.”

**Pedro Ignacio, Sr. Platform Engineer**  
Itaú Unibanco

