



CUSTOMER STORY

Fortune 500 Transportation Company Simplifies Access Control for 175,000 Users

Digital Transformation with
Attribute Based Access Control

 **AXIOMATICS**
a LEONARDO company

Executive Summary

One of the largest freight transportation companies in the world, with over 50,000 employees, stores and manages data with access in mind for over 175,000 user accounts. Over the past 50 years, the company has solved difficult technical problems for this population with innovative, forward-thinking solutions. With time however, some of the systems have been out grown, such as how the company manages user access. Historically, its authorization data and decisions were made from roles stored in enterprise systems, databases, or within application code, without a consistent, successful implementation.

Over time, the use of roles to manage access control began to unravel and became difficult to manage and scale. It equated to an increase from 3,775 roles to over 54,000 roles, with over 80,000 user assignments. Many groups contained duplicated or very similar membership data and a lot of time was spent adding users to groups.

The company attempted two previous role-based enterprise authorization implementations. While providing flexibility for developers, this came at the cost of inconsistent authorization decisions between related applications and significant complexity when troubleshooting authorization issues. There was also a performance cost, as the service returned all data related to authorization and allowed the application to sort through and find the relevant information. Developers were left to collect and interpret data, and at times, the data was interpreted incorrectly. Knowing this history, the project focus with Axiomatics was to provide a consistent, easy-to-use service to support enterprise-wide access control.

Our Client

A Fortune 500
freight transportation
company

User Accounts

175,000

Number of Employees

50,000+

IT Employees

1,200

Servers

10,000+

IP network covering 2/3 of
the United States | 18 million
authorization events daily



Challenges

Siloed Data

- Authorization data stored in many systems
- Data is often times duplicated
- The same type of authorization request from different sources could yield different results

“Axiomatics was able to adapt to our business processes,” said the Manager of Information Assurance. “At the same time, the Customer Support team provided the guidance and hard answers we needed, whether we wanted to hear it or not.”

Role explosion

In 2013, the company had 3,775 roles with 176,000 assigned users. By 2016, those numbers had grown to 54,000 groups and over 800,000 user assignments. This phenomenon is known as ‘Role Explosion’. Due to the increasing number of different roles, the company had an increasing number of roles to properly encapsulate the permissions. Managing all those roles proved to be extremely complex.

The solution

The company chose dynamic authorization with attributed-based access control (ABAC) from Axiomatics. This solution offers several key benefits that were important to the company, including:

- **Externalized Authorization:** Access control is externalized from the business logic
- **Centralized Management:** Access control policies are maintained centrally
- **Standardized Logic:** Access control policies use XACML, the eXtensible Access Control Markup Language, the standard defined by OASIS and implemented by most ABAC solutions
- **Flexible Architecture:** ABAC can be applied to APIs, databases, and more
- **Dynamic Access Control:** Access decisions are made dynamically at runtime
- **Context-based / Risk-based Authorization:** ABAC can take time, location, and other contextual attributes into account when reaching decisions
- ABAC intelligently uses roles as an attribute to build contextual access control policies, **eliminating role explosion**

Software solution

Axiomatics Authorization Management Platform is the most complete solution available for enterprise-wide roll out of externalized dynamic authorization, delivered with attribute-based access control (ABAC). The pains of role explosion, toxic combinations, and managing segregation of duties are all eliminated.

“Unlike earlier access control models, ABAC provides a multidimensional system that through its use of attributes and policies prevents role explosion, increases scalability, eliminates segregation of duty conflicts, and externalizes authorization for ease of management and control.”

- Manager of Information Assurance



Key benefits

- Show ROI on investment quickly
- Expand the possibilities and performance of development teams
- Gain competitive advantage and speed-to-market
- Visibility and control of access management

Results, ROI, and future plans

ABAC enabled the company to:

- Correct access control issues created by the management of roles
- Create consistent authorization across applications and the enterprise
- Shift responsibility for authorization away from IT to the business simplified implementation using provided tools

Enhancement to audit logging was an important item for the company, both for troubleshooting and for their audit trail when reporting on Sarbanes-Oxley apps or the handling of PII.

The CA Single Sign-On (formerly SiteMinder) plugin was a high value feature in the company's product selection. In working with the Axiomatics CA Validated extension, the company's IT team was able to improve the plugin's performance and resolve several outstanding issues.

The company is implementing a new Enterprise Service Bus (ESB) and Axiomatics is providing all of the authorization. With ABAC, the team is now able to move beyond the standard governance based model of ESB authorization and implement any necessary authorization, using data from any data source without incurring a large performance penalty.

The purchase of Axiomatics Authorization Management Platform has allowed the company to create a single service to provide authorization, a single way to ask authorization questions, and a consistent answer to authorization questions for the business.

We feel that our issues are identified and the promises that are made by Axiomatics are addressed appropriately. This is one of the biggest reasons that the team feels that they made the right product choice.

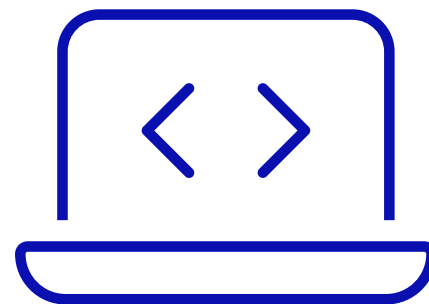
- Manager of Information Insurance



Take the next steps

Learn how a security vendor can help secure your access control while allowing you to focus on your core business initiatives.

[Meet with our solution experts for a demo](#) of our Axiomatics Authorization Management Platform and discuss how our approach can save your organization time and money.



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Axiomatics - a Leonardo Company is the originator and leading provider of runtime, fine-grained authorization delivered with attribute-based access control (ABAC) for applications, data, APIs, and microservices.

The company enables enterprises to effectively and efficiently connect Axiomatics' award-winning authorization platform to critical security implementations, such as Zero Trust or identity-first security. The world's largest enterprises and government agencies continually depend on Axiomatics' award-winning authorization platform to share sensitive, valuable, and regulated digital assets – but only to authorized users and in the right context.

Follow us on LinkedIn: <https://linkedin.com/company/axiomatics>

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Learn more or request a demo of our solution:

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