



Informatica Gains Enterprise-level Support with Tetrade and Hardens Security

Executive Summary

Informatica, an enterprise cloud data management leader, empowers more than 5,000 customers to realize the transformative power of data. As a software provider, many of its applications are broken down into microservices. To manage them, Informatica uses Istio, an open-source service mesh platform for distributed applications. But, as Informatica scaled to roughly 300 clusters on Amazon Elastic Kubernetes Service (Amazon EKS), product teams were challenged with continuous update cycles and security certificates. Plus, Istio lacked the compliance necessary to build in AWS GovCloud. Tetrade provided Informatica with enterprise-level support to improve and streamline operations and harden security for AWS GovCloud.

Grappling with Istio's Short Lifecycles and Scaling to 300 Amazon EKS Clusters

As a leading software development company, [Informatica](#) provides a range of data management and integration solutions for its customers across industries. Its customers can efficiently unify data across any multi-cloud or hybrid system, empowering them to modernize and advance their data strategies. Before Informatica transitioned to a microservices architecture, it used mutual transport layer security (TLS) for authentication to ensure its network connection was secure. However, once the company adopted microservices and Kubernetes for more scalability, flexibility, and resiliency, it became challenging to manage mutual TLS (mTLS) certificates at scale. By bringing in Istio, Informatica removed the headache of mTLS management and also gained observability.



About Informatica

Informatica is an enterprise cloud data management leader that brings data to life, empowering businesses to realize the transformative power of their most critical information.

AWS services used

- [AWS Graviton](#)
- [Amazon EKS](#)

Benefits

- Decreased manual effort of building ARM Images from 3-4 days to a few seconds
- Secured end-to-end FIPS compliance for AWS GovCloud
- Obtained customized Helm charts for its 300 Amazon EKS clusters

Grappling with Istio's Short Lifecycles and Scaling to 300 Amazon EKS Clusters (Cont.)

Unfortunately, this strategy also created engineering challenges and inefficient operations for several reasons. For starters, developers were hampered by Istio's short lifecycles, having to manually upgrade every 5–6 months. Eventually, different product teams were running different versions of Istio, which led to separate pipelines for deployment. Developers were also unable to build a version compliant with Federal Information Processing Standards (FIPS) for customers who wanted to run in [AWS GovCloud](#).

Achieving Enterprise-level Support with Tetrade Istio Subscription

After a competitive evaluation, Informatica chose [Tetrade Istio Subscription](#) because of its comprehensive and integrated approach to managing and securing microservices environments with Istio. As Saptak Sen, vice president of strategic alliances at [Tetrade](#), put it, "Service mesh is becoming an important part of the cloud journey. As businesses modernize, they realize the need for enterprise capabilities and support to manage their Istio instances. That's when customers choose Tetrade for consistency across their AWS environments." Tetrade helps accelerate service mesh adoption, drive Zero Trust architectures, and reduce hybrid cloud complexity.

Today, Tetrade provides Informatica with the enterprise-level support needed to handle its 300 clusters on [Amazon EKS](#). During the implementation phase, Tetrade's engineers were available and ready to support Informatica. Deepak Deore, DevOps architect at Informatica said, "We had weekly calls initially, and Tetrade was there to help with any technical issues and any disruptions that arose during Istio upgrades."

Eliminating Manual Tasks with Instantaneous ARM Images

When Informatica began using Istio, support for advanced RISC machine (ARM) workloads was unavailable, so the company opted for more expensive Advanced Micro Devices (AMD) processors. To cut costs, Informatica later migrated to ARM workloads that run on [AWS Graviton](#). However, that meant the team spent 3–4 days manually building ARM images, including those for every Istio patch. With Tetrade, Informatica was able to save time by eliminating the extra step of building ARM images. "The time it takes to build ARM images is now zero at Informatica," Deore said. "We raise a ticket and immediately a multi-arch image is available out of the box."

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Transitioning to End-to-end FIPS Compliance on AWS GovCloud

Tetrate follows a Zero Trust security model that provides multi-layer security for microservices, making it the preferred solution for Informatica. Many of Informatica's customers are required by law to meet FedRAMP compliance while its government customers require an additional FIPS compliance. Open-source Istio did not have a FIPS-compliant version available and Informatica's development team was not able to build its own environment. With Tetrate, however, Informatica has achieved end-to-end FIPS compliance and automated the management of mTLS certificates—completely removing this overhead. What used to take several days for the engineering team is now instantaneous.

Deploying Customized Helm Charts for Simplified Management

Initially, Istio lacked support for Helm charts, so Informatica used Istioctl for configuring its Istio deployments. However, this command line tool wasn't compatible with the team's GitHub process and all other applications used Helm charts for Kubernetes configuration. With Tetrate, Informatica transitioned from its Istioctl approach to using customized Helm charts that allowed its development teams to easily deploy Istio to its Amazon EKS clusters. Ultimately, this has saved Informatica significant time and effort in managing its Istio deployments.

About Tetrate

[Tetrate](#) is an enterprise service mesh company managing the complexity of modern hybrid cloud application infrastructure. Its flagship product, Tetrate Service Bridge, provides an edge-to-workload application connectivity platform to deliver business continuity, agility, and security for enterprises on the journey from traditional monoliths to the cloud. Customers get consistent, baked-in observability, runtime security, and traffic management in any environment. Tetrate remains a top contributor to the open-source projects Istio and Envoy proxy.

