



# Styra x Extenda Retail: Powering Intelligent Retail

## Cloud App Flexibility, Local App Performance

The retail environment is changing rapidly. With constantly evolving customer expectations, retailers need to provide frictionless and flexible shopping journeys. No one knows that better than the team at Extenda Retail, a company with more than 40 years of experience in retail software development and presence in hundreds of retail chains around the globe. Their mission is to help retailers grow their business while improving customer experience.

As more and more of their customers moved to the cloud, Extenda Retail developed the Hii Retail platform, which translates to “High Intensity Intelligent Retail” and consists of a library of value-adding Software-as-a-Service (SaaS) applications, to help Extenda Retail continue to achieve their mission. Hii Retail provides key services that improve global retailers’ flexibility, agility and speed-to-market, from concept to store roll-out.

However, as they moved to the cloud, Extenda Retail’s engineering team realized that they had a problem at the authorization and policy level. They found that legacy, centralized authorization failed to scale or meet their compliance needs, and that rearchitecting authorization for cloud-native was more complex than anticipated. So, the team turned to Open Policy Agent (OPA) and Styra Declarative Authorization Service (DAS).

## Decoupling Authorization with OPA for Decentralized Control

The Extenda Retail team uses OPA at the microservices ingress authorization level. According to Shayne Clausson, VP of Engineering at Extenda Retail, “We process over two million transactions per year, with at least an order of magnitude more API calls behind that. So, we can’t be slowed down by long authorization decisions.”

His team uses Envoy as a service proxy, which asks OPA to make an authorization decision on all of the ingress traffic that is coming into the service. Extenda Retail engineering writes the policy within OPA to

decide whether or not traffic should pass into a service based on customer context that's passed as JSON data.

Because OPA allows the team to decouple policy logic from the service proxies, Extenda Retail developers don't need to hardcode rules into the services, or the proxies themselves. In other words, the developers can read, write, analyze, version, distribute, and in general manage policy without making any changes to the services, proxies, or app architecture itself. This was very important for Clausson and his team because it lowers their cognitive load, makes updates easier, and even increases app performance.

“The engineering team at Extenda Retail is focused on reducing the extraneous cognitive load on retail domain delivery teams, and Open Policy Agent helps us do just that.”

Shayne Clausson, VP of Engineering at Extenda Retail

OPA also gives Extenda Retail flexibility by providing local, or managed authorization decisions. This balance is very important because if a customer is in a store ready to check out, you can't pause for internet challenges. Policy decisions have to happen locally, and they have to happen immediately. That means any solution must accommodate local authorization, as well as being able to check for policy updates periodically through a cloud connection.

Having a flexible consistent way of writing policy and authorization enables the Extenda Retail team to focus on innovative features for their core products, rather than writing policy directly into a specific set of services and proxies. However, the company knew that if they wanted to scale OPA at both the cloud and local level, they needed a solution to help manage all of their instances of OPA, across all the various apps within the Hii Retail platform, and help ensure all their policy decisions were in compliance with regulations.

That's when they turned to Styra DAS.

## Managing OPA Across Locations with Styra DAS

Styra DAS, the management plane for OPA, let Clausson and his team speed time to deployment, increase productivity and easily prove compliance with all their policy decisions.

With a unified control point for the team to create and collaborate about policy, Styra DAS lets them all make policy changes in a single place, and then push those changes to the relevant instances of OPA locally in the stores. This eliminates the need for more manual updates or custom policy distribution scripts, which leads to less risk of accidental error.

Since Extenda Retail operates in a heavily regulated environment, compliance is critical. Before Styra DAS, Clausson's team had to manually track policy decisions for each instance of OPA. Now with Styra DAS, the team has real time monitoring and detailed logging of OPA decisions. This not only helps them maintain compliance in real time but helps them prove compliance to external auditors.

OPA and Styra DAS give the Extenda Retail engineering team a flexible, decentralized authorization solution, that works across stores, and enables flexibility in their service and proxy deployments. Decoupling policy from the underlying services has enabled Clausson's team to ensure they meet compliance regulations, but also gives them the freedom to innovate. “Authorization is hard to get right,” says Clausson. “We don't want teams to have to focus on that. We want them to be able to get to the interesting part of their services.”

### About Styra

We are reinventing policy and authorization for cloud-native. Today's cloud app infrastructure has evolved. Access, security, and compliance must also evolve. It's time for a new paradigm. It's time for authorization-as-code.

Learn more at [www.styra.com](https://www.styra.com)

