Open Source Development with the Elastic Path Ecommerce Platform

"This white paper will help you explore the benefits of the Java-based Elastic Path ecommerce platform, learn more about the components of its open source stack, and determine if the Elastic Path platform is the right choice for your organization."

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Executive Summary

Open technologies such as the Elastic Path™ ecommerce platform provide benefits of both pure open source solutions and proprietary solutions. The Java-based Elastic Path platform is built using the best of open source technologies. Enterprises achieve the ultimate in flexibility and control to meet their unique requirements while also tapping into a wider pool of development resources and a lower total cost of ownership. This allows even risk-averse enterprises to select an open ecommerce platform for their key projects. Many Fortune 500 companies rely on the Elastic Path platform such as Google, Time Inc., and Virgin Media.

This white paper will help you explore the benefits of the Java-based Elastic Path ecommerce platform, learn more about the components of its open source stack, and determine if the Elastic Path platform is the right choice for your organization.

Introduction

Pure open source means allowing the public developer community to contribute to your technology with their code. On the other side of the spectrum, proprietary technologies allow only the vendor's developers to contribute to the technology. In the middle of the spectrum sits open technologies such as the Elastic Path ecommerce platform, which provides benefits of both open source and proprietary worlds.

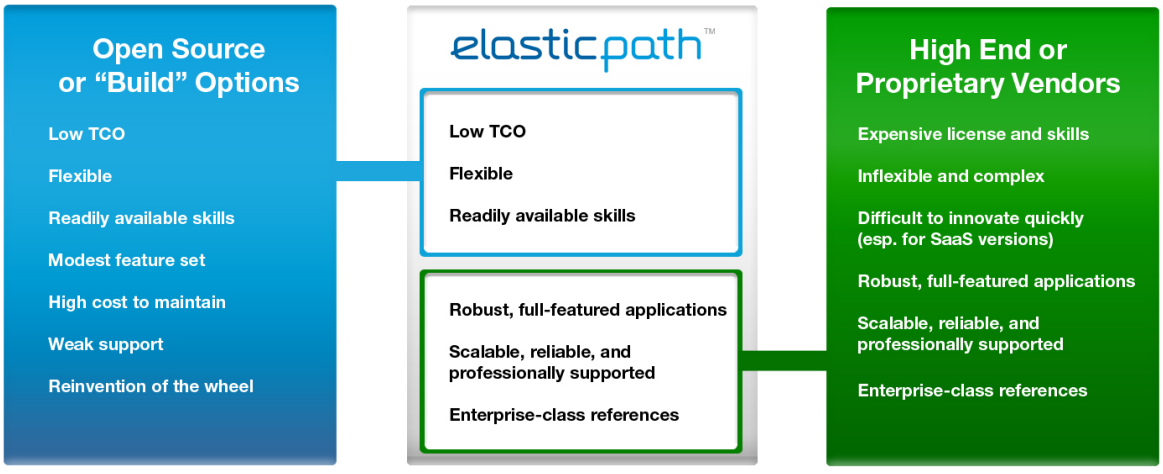
What is open source development with Elastic Path Software?

The Elastic Path ecommerce platform is developed using open source technologies. Although many of our developers are active open source community members who contribute on a regular basis, the platform itself is not provided as an open source product. All open source components used in the Elastic Path platform use the Apache Version 2.0 license or equivalent. In order to use the Elastic Path ecommerce platform, enterprises must buy licenses from Elastic Path Software. With a license, your internal developers will be free to customize the code base as needed for your organization.

Why go open?

Major global enterprises have opted to go open with the Elastic Path ecommerce platform for three core reasons:

- Ultimate flexibility and control
- Greater availability of resources
- Lowered total cost of ownership (TCO)



The Elastic Path platform is the best of both open and proprietary worlds.

Ultimate flexibility and control

If you have decided to bring an ecommerce platform in house, regardless of the vendor and technology, the platform will need to be customized to meet the unique needs of your enterprise.

Examples:

- You may need to provide a particular type of loyalty point system or virtual currency.
- You have a unique business model that has specific rules by which the customer is allowed to use the shopping cart.

These needs cannot be met from an off-the-shelf solution. A flexible ecommerce platform means that it will bend to your business needs instead of vice versa.

Flexibility also extends to the capability to integrate with existing back end systems such as CMS, CRM, and ERP systems. The ecommerce platform itself is simply one node within the greater enterprise eco-system, which may include third party or homegrown solutions.

The Elastic Path platform provides out-of-the-box integration capabilities with open source integration-ready frameworks such as Spring, the Core Java API, and a SOAP web-services based on JAX-WS. Some proprietary ecommerce solutions force customers to use their own applications such as a CSR tool. The flexibility of the Elastic Path platform gives enterprises the choice to use best-of-breed technologies or their own homegrown solutions.

To support the enterprise in their endeavor to bring ecommerce in house, we provide full access to source code of the Elastic Path platform. You will control the code base and all customizations. With source code control, you won't be at the mercy of a vendor for change requests or upgrade cycles. With an open ecommerce platform, you can address issues such as upgrading to preferred library versions or patching particular libraries without having to depend on a particular vendor's support or patch process.

Benefits:

- There are no roadblocks to in-house customizations.
- Faster development turnaround time will mean faster time to market.
- Cater to the unique requirements of your enterprise and your end customers

With the Elastic Path platform, you have full control over your ecommerce strategy, thus, future proofing your business from the eventual demise of proprietary technologies and vendor lock in.

Greater availability of resources

It's much more common to find resumes with popular open source technologies than with proprietary technologies. Regardless of the industry, it has always been more difficult to obtain development resources where the knowledge or technology was of a closed, proprietary nature. As a result, there is normally a higher cost associated with choosing proprietary solutions.

By choosing an open ecommerce platform, you align your organization with the dominant internet technology stack. This gives you access to a wider market of IT professionals, the skills of whom can now transfer from domain to domain, instead of being tied to one particular niche.

Lowered total cost of ownership (TCO)

There are some financial benefits to selecting an open ecommerce platform that will satisfy your CFO and CIO:

- By leveraging common open source technologies, you can speed up developer ramp up time. This, in turn, lowers development costs.
- It's easier to find IT resources with skills in open source technologies, lowering the cost of acquiring those resources and the cost of recruitment.

These factors help contribute to the lowest TCO for enterprise ecommerce software.

Conversely, tying yourself down to proprietary technologies increases the cost and time of finding these scarce resources that will likely be expensive to hire. Adding to this cost is the resulting slower feedback cycle and increased delivery time to better understand and work with proprietary technologies.

If you already have open source resources in house, you are perfectly positioned to ramp up quickly with the Elastic Path platform, increasing the agility of your organization to respond to market needs.

The open source stack

When you decide to use open source technologies you are presented with many choices. Elastic Path Software has chosen those languages and frameworks that already have industry-wide acceptance and are, therefore, considered enterprise-ready.

JAVA

Java is the dominant enterprise open source technology. The Internet Retailer 2010 Top 500 study finds that:

"At this point, more than 95% of the Top 200 ecommerce sites in North America using a commercial platform are Java-based, and that number is growing, the remaining being based on Microsoft. Virtually all the significant new technologies being released for use by sophisticated sites are Java-based. In documented instances, Microsoft-based platforms have been unable to meet volume, security or functionality requirements and have been replaced by Java platforms. Java developers with sophisticated site experience are much more plentiful than Microsoft developers with such site experience."

In terms of industry alignment, and availability of resources, Java is an easy choice.

Spring Container Framework

The Spring container framework is the major underlying architectural framework in the Elastic Path platform and is also responsible for the majority of system-level services including object life cycle management, transactions, security, and job scheduling via the inclusion of several Spring modules. Spring's Dependency Injection and Inversion of Control allows the Elastic Path platform to be "coded to interfaces" rather than to classes. This makes it possible to customize the implementation of any class without changing the code that invokes that class provided it adheres to the same interface. This loose coupling provides a tremendous level of flexibility and simplicity to application developers looking to customize the Elastic Path platform.

Spring MVC Framework

Spring MVC is a modern, full featured Model-View-Controller framework that was written in reaction to deficiencies in other MVC frameworks as perceived by the Spring community. It is used to logically separate the presentation layer from the underlying implementation. Spring MVC makes every piece of logic and functionality highly configurable and integrates easily with most popular web view technologies including Velocity.

Spring Security

Spring Security provides comprehensive authentication, authorization, instance-based access control, channel security, and human user detection in a package designed specifically for enterprise applications built on Spring. Spring Security features easy configure and a pluggable architecture with support for a wide variety of industry-standard authorization service integrations.

Apache OpenJPA

Apache OpenJPA is a JPA (Java Persistence Architecture) 1.0 compliant persistence layer that features lightweight and transparent persistence of Java entities and database independence. OpenJPA combines the best features of ORM with a rich set of options for performance tuning and a pluggable L2 cache and fetchplans.

Ehcache

Ehcache is an open source, standards-based cache used in a wide array of applications to boost performance, offload the database and simplify scalability. The Elastic Path platform uses Ehcache for application level caching of frequently requested objects in the storefront such as products and SKUs.

SOLR Enterprise Search Server

Apache SOLR is a popular enterprise search platform based on the Apache Lucene project. SOLR is prevalent amongst cutting edge technology companies and large enterprises due to its reputation for performance and functionality, with rich support for full-text search, faceted search, dynamic clustering, distributed search and scalability. SOLR is used within the Elastic Path platform for all in-site and Commerce Manager search functions. The Elastic Path platform also uses SOLR extensively to drive filtered search and browse capabilities.

Eclipse Rich Client Platform

The Eclipse Rich Client Platform (RCP) is used as the platform for the Elastic Path Commerce Manager application, as it combines the rich interface of a desktop application with the power of web connectivity. It provides powerful customization capabilities via the plugin architecture, native look and feel across platforms, and extensive GUI libraries and toolkits. Finally, as part of Eclipse, the most widely used Java environment, its powerful development tools and broad familiarity enable developer productivity.

Maven

Maven is a sophisticated builds and release management tool. It is used for dependency-management within the Elastic Path platform and customization management. More information is available at elasticpath.com/docs

Enterprises that have chosen to go open with Elastic Path Software

Elastic Path customers are enterprises that sell digital goods or services such as Google, Time Inc., and Virgin Media. They considered proprietary solutions and pure open source solutions for their ecommerce projects but chose the Elastic Path platform for key benefits:

- They wanted to take their ecommerce platform and capabilities in-house for greater control and faster change cycles.
- They needed a solution they could quickly integrate with their existing infrastructure.
- They wanted an easily customizable platform that would align with their current IT capabilities and provide industry alignment in terms of choice of technology.

The Elastic Path platform will provide the innovation of an open source solution with the robustness of a proprietary solution.

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Conclusion

Proprietary solutions are not wrong, but, ultimately, they will be more expensive due to the scarcity of resources and difficulties with performing customizations. Enterprises have selected the Elastic Path platform for the ultimate flexibility and control; greater availability of resources; and lowered TCO. We provide full access to source code, comprehensive technical documentation, developer training, a developer community, and professional services to help internal teams succeed with the Java-based Elastic Path ecommerce platform.

About Elastic Path Software

Elastic Path is the leader in digital commerce technology and expertise for enterprises selling digital goods and content. Major global brands such as Google, Time Inc., and Virgin Media rely on Elastic Path to monetize digital relationships with their customers in ways that are frictionless, social, and everywhere.

Read technical documentation on the Elastic Path ecommerce platform:
www.elasticpath.com/docs

Learn from other Elastic Path developers and customers in the Grep developer community:
grep.elasticpath.com

Connect with Elastic Path developers
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