



# A More Agile eCommerce Platform from IBM

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## Executive Summary

Every team in every business wants to be more agile. In commerce, both business users and IT professionals need a powerful cloud-based platform that can deliver results now and scale with their business as it grows.

How long does it take your team to deploy new customizations to your web store? Days? What about trying to make updates to custom search? Developers have long had to walk a fine line – they need to customize their eCommerce platform to accommodate the unique needs of their business, while keeping the underlying code and logic of the base platform intact.

IBM has developed a flexible Commerce cloud platform that enables IT to easily make changes that meet the needs of the business without fracturing the basic logic. Merchandisers and marketers can offer more exciting shopper experiences faster, with leading-edge capabilities.

This white paper will describe the agile IBM Digital Commerce cloud platform with externalized customizations (xC). It will explain its modern, API-based, architecture which makes it easier to customize your digital store that allows more programming freedom, yet provides durability and sustainability during updates.

## Introduction

ECCommerce continues to undergo rapid change. Factors like the explosive growth of data, recently empowered consumers and increased competition all force the industry to stay agile. Developers are being asked to make ongoing changes to an infrastructure that wasn't built for that degree of flexibility. With continued emphasis on optimizing the omni-channel customer experience to increase customer loyalty and improve revenue, it's likely that the pace of change will continue for some time.



In commerce, both business users and IT professionals need a powerful cloud-based platform that can deliver results now and scale with their business as it grows.

## ECommerce Platforms Today

Just as no two brands are alike, the architecture of commerce platforms will differ from business to business. Developers will be asked to make initial modifications as well as frequent upgrades as market conditions and internal conditions change.

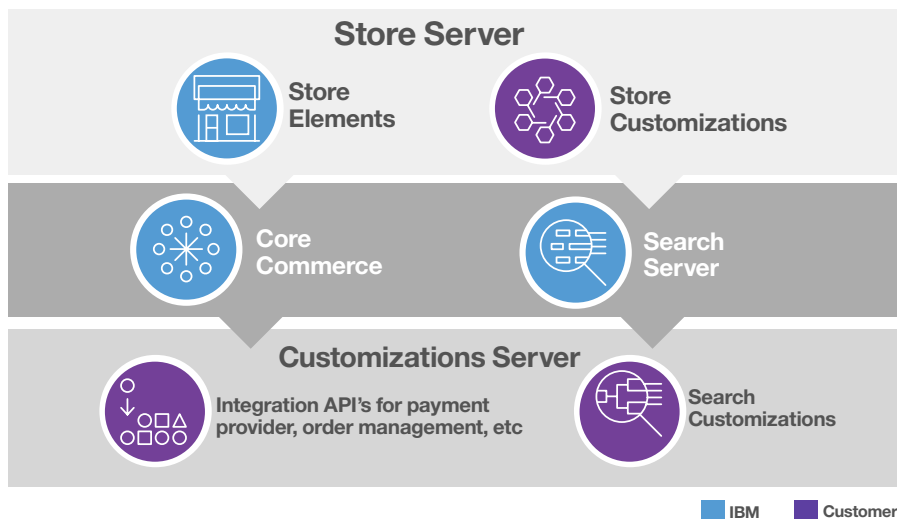
A commerce platform must be secure, yet flexible and stable enough to withstand frequent changes. Nobody wants to customize themselves into a corner where they're stuck on a back-version or facing untenable upgrade costs. Developers' time is valuable, and a platform that breaks as modifications are made consumes resources.

## A Better eCommerce Platform

To improve agility in eCommerce, IBM has developed a new programming model with externalized customizations (xC). Custom API extension code and customization logic is separated from platform logic and code. The separation exists in both the programming environment and in the cloud environment. Developers work on only the creation, function, and deployment of custom code and extensions. Platform logic is maintained solely by IBM.

To create the separation, three new servers are provided: a Customization server, a Search server, and a Store server are added to the cloud environment. The custom API extensions and other custom logic runs on these separated servers, while the platform code and logic continues to run on the provider server with out sacrificing upgradability. To start the customization, you simply set up the full SDK on your laptop. Each server is used to customize different parts of the commerce service and to run a different functionality.

## How the xC Platform works



- **Customization server:** Runs your User Exits and search API extensions
- **Search server:** Runs search index and runtime configuration
- **Store server:** Runs your customized storefront

All other components and functionality continue to run on the provider server, and any customization or change, such as business user tools, is done there.

## Benefits to both IT and Business

The xC platform is a flexible cloud solution that delivers the following benefits:

### 1. Always on and always secure service

Cloud service, with modules that can be independently upgraded, ensures zero outage performance backed by an SLA from the service provider.

### 2. Always current, regression-free updates

Modules are separately scaled and managed without you needing to do anything, so potential dependencies between your customized code and the base code are no longer an issue. Updates you generate can be seamlessly deployed and provider upgrades, such as new releases and fixes, can be applied more efficiently to your environments, with reduced regression test requirements. For example, only the base server can be upgraded, without impact to the operation of your extensions or without requiring changes to your custom logic.

### 3. Reliable, self-serve tools for deploying your extensions

Deployment of customizations is as easy as flipping a switch, automated in the cloud, on both the front and back ends. Customizations are packaged up into store, search, xC User Exits. A developer can simply upload and use a web UI to send them to a particular environment; test or production. Then they are deployed to those environments in a no-outage manner. There is little or no involvement by the cloud technology provider.

### 4. Speedy deployment

New features can be rolled out significantly faster than with other types of platforms. Projects that used to take several weeks can now take days because you are deploying smaller code packages.

### 5. Easy customization and testing

Separating the modules makes it is easier to write customizations and test them. You have greater control over your custom extensions, so you can create deployable packages faster. ***You can also deploy changes for each server independently and schedule releases on a per server basis to reduce the overall size of your releases.*** This can help you better allocate your testing resources and potentially reduce the overall time that is required for you to deploy, test, and externalize custom changes.

### 6. Improved developer team workflow

With modules operating independently, you can more easily allocate programming responsibilities among your developers. For example, a developer that needs to create a custom order API extension can develop their changes within a workspace that includes only the Customization server. The developer can then develop and deploy their changes independently from those who are working on store and search configuration changes. The Storefront and back-end integration teams have more flexibility and work with minimal dependencies on one another.

## Benefits At-a-Glance of an Externalized Customizations (xC) Platform

### Separated store, search, and Externalized Customizations (xC)

- Increased IT agility with rapid upgrades
- Reduced upgrade costs with automation, limited regression testing
- Guaranteed backward compatibility
- Flexibility to release client business changes and schedule customization releases with reduced dependency on provider

### Continuous Delivery

- Access to major features and functionality to deliver richer commerce experience via quarterly releases
- Automated near zero downtime OS patching for database and application servers
- Rapid user exits additions through RFE process
- Continuous delivery of your customizations

### Enhanced SaaS Security Standards

- Compliance with ISO-27001
- Data encryption, in motion and at rest
- ID for standardized and secured logins

## Conclusion

Optimizing the online shopping experience is an objective for both business leaders and IT teams. There are clear correlations between exceptional customer experiences, customer loyalty and increased revenue. Brands are more likely to create good customer experiences when IT can respond quickly and accurately to online customer needs.

The IBM externalized customization (xC) programming model will provide a more agile eCommerce platform. By separating the platform into base code and then three servers that operate independently, changes in one area won't affect code in another. Developers can optimize each area faster and more efficiently. The result is better utilization of IT resources and faster deployment. And a better eCommerce platform means better engagement with your online customers.

To learn more, please visit the IBM Knowledge Center: <http://ibm.co/2hbRvQh>

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