

# WebSphere Commerce V7 Feature Pack 6

## Feature pack overview



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This presentation provides an overview of the product enhancements in WebSphere® Commerce Version 7 Feature Pack 6. You should have a general knowledge of the features in WebSphere Commerce Version 7 before viewing this presentation.

## Table of contents

- Enhancements for business users
- Store enhancements
- Integrating products
- Foundation enhancements
- Virtual system pattern

WebSphere Commerce version 7 Feature Pack 6 delivers features in many areas of the product. This presentation separates the new features into five sections. The enhancements for business users section describes several updates and improvements in the Management Center tools. These features are described first. The store enhancements section describes updates to the Aurora starter store. Next are the integrating product updates. In Feature Pack 6, these include IBM Tealeaf Customer Experience and IBM Worklight. The foundation enhancements summarize core product updates such as data load and search while the virtual system pattern section describes the WebSphere Commerce pattern for IBM Pure Application Systems.

## ***Enhancements for business users***

This section covers the improvements in the Management Center tools.

## Management Center tool enhancements

- Dynamic merchandising
- Enhanced e-Marketing Spot control
- Image map support
- Business object support with folders
- Extended site overrides
- More efficient store preview

Feature Pack 6 includes updates to several existing Management Center tools. Rather than focusing on individual tool changes, this section looks at the main enhancements for business users in this release. These include: dynamic merchandising, enhanced e-Marketing Spot control, image map support, folder support, extended site overrides, and a more efficient store preview.

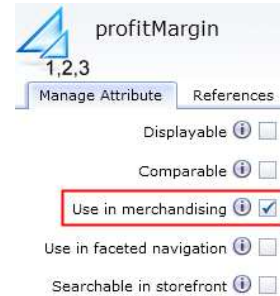
## Dynamic merchandising

- The ability to recommend / advertise / promote products more likely to be of interest to a shopper based their actions in the store
- Allow business users to define rules / filters / conditions for making adaptable merchandising decisions rather than hard coding recommendations

The concept of dynamic merchandising continues to expand and evolve in Feature Pack 6. This release further extends business user tools for defining the parameters of products to promote in the storefront. Product recommendations through web activities and search result modification through search rules both benefit from these enhancements. The next four slides look at the specific changes to Management Center.

## Merchandising attributes

- New “Use in merchandising” property
- Usage
  - Enable business users to tag products with hidden attributes
  - Build attribute-based product recommendations and search rules
  - Hide attributes and values from shoppers
    - Attribute is only visible if another property is also selected
- Examples
  - Profit margin
  - Exclusive
  - Clearance



To support dynamic merchandising in the storefront, a new property has been added for attribute dictionary attributes. The “Use in merchandising” property signals that the attribute should be added to the search index but hidden from shoppers. Creating hidden, merchandising-only attributes allows business users to create attribute-based product recommendations and search rules. The attribute is not displayed to shoppers unless one of the other properties such as “displayable” or “searchable in storefront” are also selected. An example of a merchandising attribute is the profit margin for a product. This is not an attribute shoppers should see but it is valuable for business users in creating product recommendations and search rules. Other examples include attributes to mark products as exclusive or clearance.

## Dynamic merchandising with web activities

- Enhanced **Recommend Catalog Entry** web activity action
  - Product recommendations can respond to browsing behavior and facet selection
  - Merchandising attributes can filter which products are recommended



### Recommend Catalog Entry

Recommendation method ⓘ

- Specify a list of catalog entries
- Use search to recommend catalog entries found using a specified keyword
- Use search to recommend catalog entries found using the customer's search keyword
- Use search to recommend catalog entries found using specified filters

Since FEP 2



### Recommend Catalog Entry

Recommendation method ⓘ

- Specify a list of catalog entries
- Create one or more search conditions that recommends catalog entries

New in FEP 6

In Feature Pack 6, the “Recommend Catalog Entry” web activity action has been updated with enhanced search-based recommendation capabilities. The three search-based options introduced in Feature Pack 2 have been combined into a single, condition-based, dynamic recommendation option in Feature Pack 6. The condition-based recommendations include options such as current browsed category, facet selection, and merchandising attribute values.

## Dynamic product recommendations

- Leverage shopper's browsing behavior
  - Use current selected category to filter results
  - Use current selected facets to filter results
    - Option to ignore price facet
- Set additional search filters
  - Product properties
  - Catalog entry type
  - Merchandising attributes
  - Category
    - Only available if current browsed category is not being applied

Using customer's navigation selections

Category the customer is currently viewing

Selected facets

Ignore these facets

| * Name      |
|-------------|
| Offer Price |

1 of 1 selected

Search filters

| * Type | * Name             | * Matching rule              | * Value |
|--------|--------------------|------------------------------|---------|
|        | Manufacturer Name  | Matches one of the follc ... | Gusso   |
|        | Catalog entry type | Matches one of the follc ... | Product |
|        | profitMargin       | Matches the following v ...  | High    |

1 of 3 selected

This slide shows several options available when defining a dynamic product recommendation. On the top half of the slide are options relating to the impact of the shopper's browsing behavior on the product recommendations. Business users can select whether to use the currently selected category and facets to filter the recommendations. When selected facets are included as a filter for recommending products, the price facet can optionally be excluded. This allows for recommendations that might cost more than the current selected price facet range.

On the bottom half of the slide is the new search filters table. From here, business users can add one or more additional filters to refine which products are recommended. There are four available filter types. These include: product properties (such as product or manufacturer name), catalog entry type, merchandising attributes, and category. A specific category filter can only be applied if the current browsed category option is not being used. This combination of filters allow business users to create very specific recommendations without having to select individual products to recommend.



## Search rule updates

Change Search Result Order

Action  Change how initial search results are ranked  
 Change how initial search results are sorted

| * Ranking criteria | * Ranking action | * Ranking factor | * Type | * Name             | * Matching rule          | * Value    |
|--------------------|------------------|------------------|--------|--------------------|--------------------------|------------|
|                    | Promote          | 20               |        | Manufacturer Name  | Matches one of the 1...  | Sharpson   |
|                    | Promote          | 1                |        | Category           | Matches the followin ... | Appliances |
|                    | Promote          | 1                |        | Catalog entry type | Matches one of the 1...  | Product    |
|                    | Promote          | 1                |        | profitMargin       | Matches the followin ... | High       |

1 of 4 selected

Same filter types as for product recommendations

Specify ranking action to promote or demote certain results

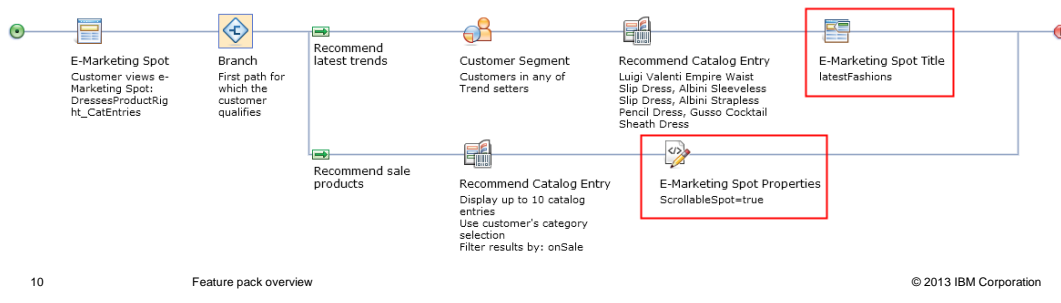
Ranking factor sets strength of promote or demote action

- Filter type changes apply to both Change Search Result Order and Add or Replace Search Criteria actions

The same search filters used for catalog entry recommendations are also available in search rules. Search rules are used to adjust the ordering of products in the search results page in the storefront. Both the “Change Search Result Order” and “Add or Replace Search Criteria” actions are updated to use the new filters as ranking criteria. Compared to previous versions, the addition of merchandising attributes and product properties as individual ranking criteria types provides greater flexibility without the customization that was previously needed to include this data in search rules. In Feature Pack 6, the “Change Search Result Order” action also includes the concept of a ranking action. For each criteria specified, business users can select whether that criteria should be used to promote matching products higher in the search results or demote them to lower in the list. In the example on the slide, products from the manufacturer Sharpson will be promoted by a factor of 20.

## Additional control for e-Marketing Spots

- E-Marketing Spot Title
  - Title represented as marketing content for full language and image support
  - Default value can be set for each spot
  - Web activity action added to dynamically update titles
- E-Marketing Spot Properties
  - Properties represented as name-value pairs
  - No default values
  - Web activity action added to pass properties to the storefront

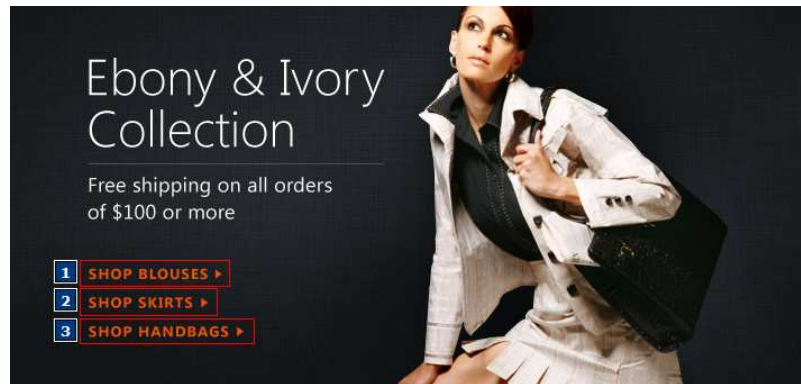


Another area of enhancement in the Marketing tool is the increased control business users have over the display of e-Marketing Spots in the storefront. Two new web activity actions have been added specifically to allow more control. The first is the E-Marketing Spot Title action. This action allows business users to create marketing content to represent the title for an e-Marketing Spot. In this way, web activities can be used to dynamically update the display title for an e-Marketing Spot in the store. In the example on this slide, the first path uses the new action to set the e-Marketing Spot title to the latestFashions marketing content for shoppers in the trend setters segment. In the second path, no title is specified so the default title advertising sale items is used instead. Default titles can be set in the e-Marketing Spot properties view by business users. As in previous releases, default titles can also be set directly in the store JSP. Store developers and business users should plan for which types of marketing content will be used as e-Marketing Spot titles so that the store JSP displays the titles correctly.

The second new action is called “E-Marketing Spot Properties”. This action is used to pass additional information to the storefront to adjust the display of the e-Marketing Spot. Business users and store developers must plan the display options in advance so the storefront can respond to the properties when they are received. In the example activity on the slide, the first path recommends four specific products, which can all be shown at the same time. The second path uses a dynamic recommendation to return up to 10 products with the attribute 'onSale' from the shopper's currently browsed category. To accommodate the larger number of results, a ScrollableSpot property is passed to the storefront to indicate a scrolling e-Marketing Spot should be used for the display.

## More flexible marketing content

- Add multiple click actions to a single image to create an image map



Continuing with Marketing tool updates, support for multiple click actions has been added to marketing content. This allows for the creation of image maps such as the example shown here. In this case, the three highlighted areas of the image link to three different category pages.

## Defining multiple click actions

Number of click actions: Multiple (image map)

Input option: Specify individual areas

Specify individual areas  
HTML

Rectangle  
Circle  
Polygon

Areas (United States English)

| * Shape   | * Coordinate   | * Name        | URL                                       |
|-----------|----------------|---------------|---|
| Rectangle | 62,228,195,252 | Shop Blouses  | CategoryDisplay?identifier=Women+storeId# |
| Rectangle | 62,253,183,277 | Shop Skirts   | CategoryDisplay?identifier=Women+d#       |
| Rectangle | 62,278,217,302 | Shop Handbags | CategoryDisplay?identifier=Women+oreId#   |

1 of 3 selected

Click action type: Custom URL as click action

\*URL: CategoryDisplay?identifier=Women+Shirts+Blouses&catalogId=#catalogId#&storeId=#storeId#

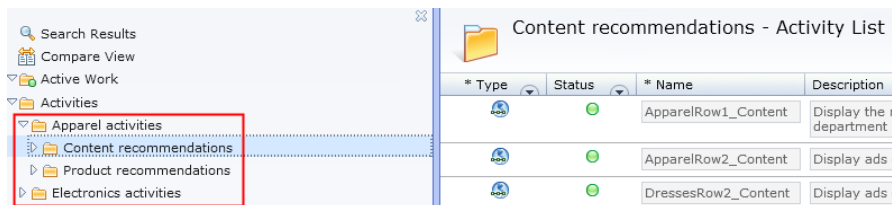
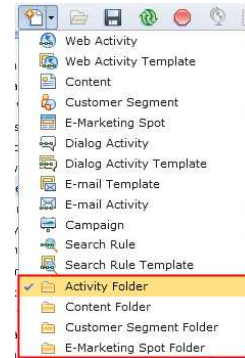
Content behavior: Static

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By selecting the “multiple” option in the new “Number of click actions” dropdown, an editor for defining image map links is displayed. Business users have the option of associating links with individual shapes within the image, as shown here, or providing an HTML definition of the image map. When using the shape editor, rectangles, circles, and polygons can be defined by specifying coordinates. Each shape can have an associated click action. Predefined click actions and custom URLs are supported for image maps. Promotion click actions are not available. The HTML editor provides a text box to enter the map definition. All links and click actions must be defined within the HTML.

## Enhanced business object management with folders

- Business users can create folders to organize and manage various business objects
  - Promotions
  - Attribute dictionary attributes
  - Marketing activities
  - Marketing content
  - Customer segments
  - E-Marketing Spots



The concept of folders for organizing promotions was introduced in Feature Pack 5. In Feature Pack 6, the folder concept is expanded beyond the Promotions tool to also support marketing objects and attribute dictionary attributes. Business users can create a folder structure for each business object type listed on the slide. The folder structure exists in Management Center only and is shared across all business users working in a particular tool. Folders store a reference to each business object, not the object itself. This means that removing an object from a folder does not cause it to be deleted. The screen captures on the slide show the folders that can be created for different marketing objects and a sample structure for organizing web and dialog activities.

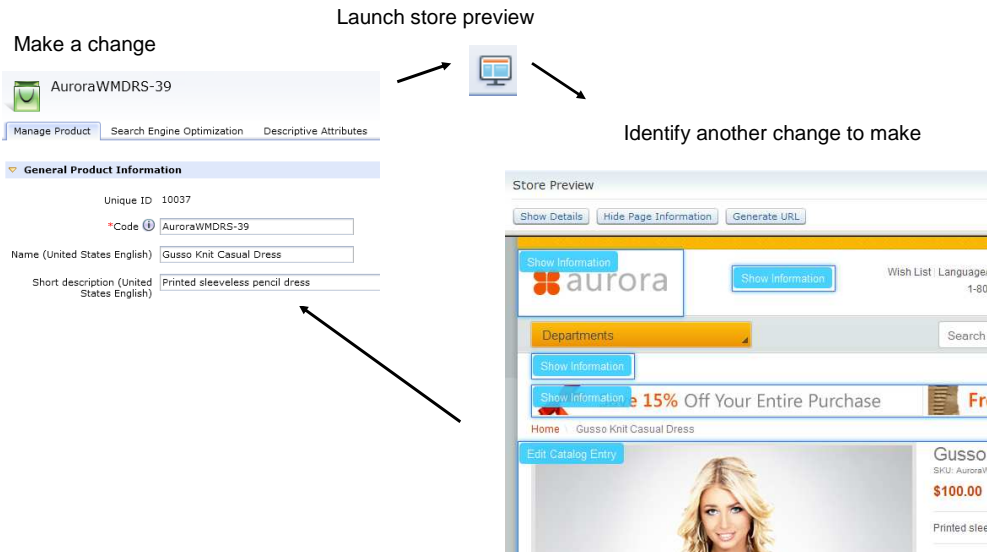
## Extended site overrides

- UI support added in Management Center

The screenshot displays the Management Center interface for the product AuroraWMDRS-41. The interface includes a header with the product name and a navigation bar with tabs: Manage Product, Search Engine Optimization, Descriptive Attributes, and Defining Attributes. Below the navigation bar, the Unique ID is 13239. The Code field is AuroraWMDRS-41. The Name (Extended Sites Catalog Asset Store) - (United States English) field contains Hermitage Gored Evening Dress. The Name (AuroraESite) - (United States English) field is highlighted with a red box. The Short description (Extended Sites Catalog Asset Store) - (United States English) field contains Sleeveless evening dress with sequence work and gored skirt. The Short description (AuroraESite) - (United States English) field is highlighted with a red box.

Extended site overrides allow e-sites to provide store-specific descriptive information for catalog entries that are owned by an asset store. In Feature Pack 5, support was added for loading override information through command line data load or catalog upload. Feature Pack 6 brings this override capability to the Management Center Catalogs tool.

## Improved store preview flow



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Feature Pack 6 includes several enhancements to store preview that make it quicker and easier to test your changes. This slide shows the improved workflow between editing and previewing. First, you make an update to your store catalog or a page layout. Next, you launch store preview and the store opens to the page with the change you just made. After viewing your change, you find additional updates that need to be made. You use the “Show Page Information” button to bring up links that allow you to open the property editor for the selected object. You can continue the cycle of previewing changes and launching new editors from within store preview until all your changes are complete. Re-launching the preview will reset the page information tags to hidden. You can also use the “Hide Page Information” button to hide the tags and return to regular preview mode. Once your changes are complete, you can generate a link for other managers or approvers to view your changes. The next three slides look at these features in more detail.

## In-context preview

- Open store preview directly to the object being edited
- Supports objects with SEO URLs
  - Catalogs tool
    - Categories
    - Catalog entries
  - Page layout tool
    - Category pages
    - Catalog entry pages
    - Static pages

Store Preview Options List

Which store URL do you want to preview?

Store URL

http://localhost/webapp/wcs/stores/servlet/en/aurora/dresses

Store URL alias

Aurora - dresses

Options

Launch Store Preview Cancel

The in-context preview feature allows business users to open store preview to a specific page rather than having to navigate to the updated page. This feature requires that SEO URLs are used by the store. For specific changes made in the Catalogs tool and Page Layout tool, the store preview URL list is populated with the SEO URL of the changed page. When an object is changed in an asset store, URLs are generated for each extended site store that inherits from the asset store.



## Click to create / edit



- Show Page Information button provides links to create or edit page objects

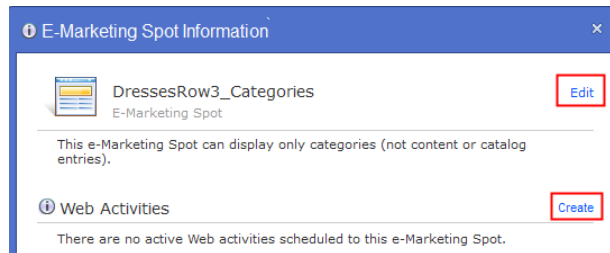
- Catalogs tool (edit only)

- Product
- SKU
- Bundle
- Package
- Kit



- Marketing tool (create or edit)

- E-Marketing Spot
- Web activity
- Search rule



The click to create and click to edit features provide a quick and easy way to access the Management Center properties panel when you see something in store preview that needs to be changed. For example, when you preview a category, you can use this feature to jump directly to editing a specific product or creating a web activity for an e-Marketing Spot on the page. The edit option is available for both catalog entries and marketing objects such as e-Marketing Spots, web activities, and search rules. The marketing objects can also be created if they do not already exist. To access the click to create and edit options, use the “Show Page Information” button in the store preview header.

## Preview link generation



- Generate links to preview specific store pages
  - Links support desktop and mobile web stores
  - Inherits all store preview settings selected when launching the preview
    - Date, time, etc
  - Limited life time
  - Password protected

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Preview link generation allows business users to share links to store preview with reviewers and approvers who might not have a Management Center account. For example, a reviewer from the legal team. The “Generate URL” link has been added to the store preview header area. The generated URL will inherit all the store preview settings selected when launching the preview, such as preview date and time. In addition to the store preview options, the generated URL can also be protected by setting a limited life time for it to be active and a password that must be entered before viewing the link. Preview links can be used for previewing both the desktop and mobile web stores.

## ***Store enhancements***

This section covers the store enhancements contained in the Aurora starter store.

## Aurora update summary

- Aurora desktop store enhancements
  - Product swatches
  - Advanced search
  - E-Marketing Spot feeds
- Aurora mobile enhancements
  - Updated smart phone web store
  - Updated hybrid application
- Starter store companion updates

Feature Pack 6 includes updates to the Aurora desktop store, the Aurora mobile stores and the starter store companions.

## Product-specific swatch images



AuroraWMDRS-2

Manage Product Search Engine Optimization Descriptive Attributes Defining Attributes Merchandising Associations Associated Assets

Associated assets

| Sequence | * Type | * Usage      | Path  | Code                             |
|----------|--------|--------------|---|----------------------------------|
| 0.0      |        | Swatch Image | /Aurora/images/catalog/apparel/women/Swatches/AuroraWMDRS-2/WD_015_a_gray_s.jpg   | AuroraWMDRS-2_swatchcolor_Gray   |
| 0.0      |        | Swatch Image | /Aurora/images/catalog/apparel/women/Swatches/AuroraWMDRS-2/WD_015_a_orange_s.jpg | AuroraWMDRS-2_swatchcolor_Orange |
| 0.0      |        | Swatch Image | /Aurora/images/catalog/apparel/women/Swatches/AuroraWMDRS-2/WD_015_a_red_s.jpg    | AuroraWMDRS-2_swatchcolor_Red    |
| 0.0      |        | Swatch Image | /Aurora/images/catalog/apparel/women/Swatches/AuroraWMDRS-2/WD_015_a_teal_s.jpg   | AuroraWMDRS-2_swatchcolor_Teal   |

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In Feature Pack 5, the Aurora store introduced support for displaying attribute images (or swatches) on the product display page instead of attribute value names. Feature Pack 6 extends this capability to support individual product-specific swatch images. In the Aurora store, you can now see specific fabric samples rather than solid colors. Product-specific swatches are defined as associated attachment assets for the product. The attachment code must follow the pattern *ProductCode\_AttributeCode\_AttributeValue* to be recognized as a swatch image. Also, the usage type for the attachment must be set to “Swatch Image”.

## Advanced search



Wish List | Language/Currency | Sign In/Register  
1-800-555-1234 | Store Locator

Subtotal: \$0.00  
Cart: 0 item(s)

Departments  All Departments

### Advanced Search

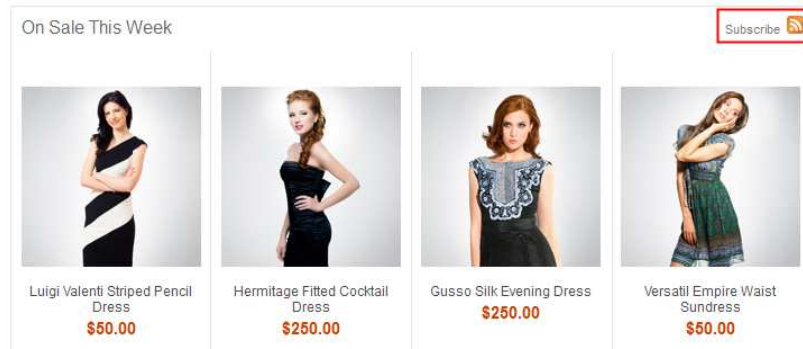
Enter one or more Advanced Search parameters in the fields below

|  |   |   |   |
|--|---|---|---|
| Search for:<br><input type="text"/>  | all of the words <input type="button" value="v"/> | Exclude:<br><input type="text"/>                                  | all of the words <input type="button" value="v"/> |
| Search in:<br>All Departments <input type="button" value="v"/>               |   | Brands:<br><input type="text"/>                                   |   |
| Located in:<br>product name and description <input type="button" value="v"/> |   | Price range:<br>\$ <input type="text"/> - \$ <input type="text"/> |   |
| Number of results per page:<br>12 <input type="button" value="v"/>           |   |   |   |

The Aurora store in Feature Pack 6 adds an advanced search option that was not included in Feature Pack 5.

## E-Marketing Spot feeds

- E-Marketing Spot feeds included on department pages in Aurora
- No remote widgets created for the Aurora store
  - KickApps is not accepting new customers



Similar to the advanced search page, the e-Marketing Spot feed capability was not demonstrated in Aurora in Feature Pack 5 but has been added for Feature Pack 6. By default, feeds are available for the product recommendation e-Marketing Spot on the department page. There are no remote widgets created for the Aurora store since the KickApps product previously used to generate the widgets is no longer accepting new customers.

## Other Aurora store updates

- Improved performance for mini shop cart
- Update to IBM Dojo Toolkit 1.8

This slide summarizes some other notable Aurora store updates. The mini shop cart performance has been improved and the store has been updated to use the IBM Dojo Toolkit version 1.8.



## Mobile enhancements

- No additional store publish needed for tablet web store
- Updated smart phone web store
  - Re-branded to Aurora
  - Usability enhancements
  - New packaging
    - AuroraMobile.sar
- Updated hybrid application for Android smart phones
  - Based on Worklight platform
  - Delivered as a sample project to deploy cross-platform hybrid applications

The mobile web stores are significantly simplified from previous releases. For tablets, no additional store publish is required. The Aurora store provides a tablet-compatible display. The smart phone web store has been re-branded to match the Aurora store branding. It also includes usability enhancements. To support a web store on smart phones, a single add-on SAR file, AuroraMobile.sar, must be published. The AuroraMobile.sar file is also required to make use of the hybrid application for smart phones. This application is now provided as a sample Worklight project. The hybrid and native applications released in Feature Pack 4 will continue to be supported as-is.

## Mobile stores

The image displays two mobile device screens showing the Aurora store's home page. The tablet screen (left) shows a full-width layout with a navigation bar, a search bar, and a main promotional banner for 'The Season's Hottest Stripes' featuring a woman in a striped shirt. Below the banner are sections for 'Save 15% Off Your Entire Purchase', 'Free Shipping', and 'New This Week'. The Android phone screen (right) shows a similar layout but with a more compact design, featuring a shopping cart icon, navigation tabs for 'Featured', 'Departments', and 'Stores', and a search bar. The main banner is also present, along with buttons for 'Check-in', 'Weekly e-flyer', and promotional offers for 'coffee makers' and 'cookware'.

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This slide shows the home pages for the Aurora store using the tablet web store and the Android hybrid smart phone application. The smart phone web store is not shown.

## Starter store companions asset updates

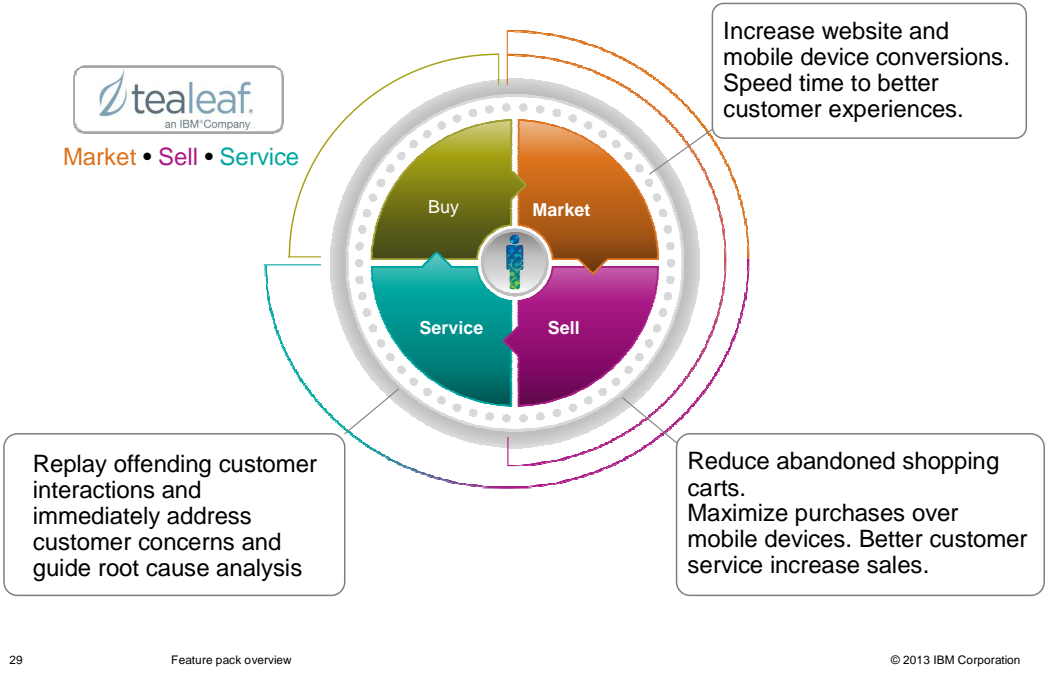
- Companion assets include
  - Use cases
  - Wireframes
  - CSS style guide
  - Static HTML starter store
  - Test assets
- Feature Pack 6 updates
  - All assets affected by Aurora desktop store updates
  - Static HTML and test assets for Aurora mobile web store

The IBM WebSphere Commerce starter store companion assets are a customizable set of resources that are designed to reduce the overall cost of implementation. You can use the assets to understand, customize, test, and develop your customized store that is based on the starter store. In Feature Pack 6, the companion assets for the Aurora desktop store have been updated to include changes made to the store in this release. The static HTML and test assets have also been updated to reflect the re-branded mobile web store.

## ***Integrating products***

This section covers the product integrations added in Feature Pack 6.

## Tealeaf enhances the commerce cycle



Integration with IBM Tealeaf has been added to the Aurora store in Feature Pack 6. Tealeaf is a customer experience management solution that enhances the market, sell, and service components of the commerce cycle. By helping to locate and isolate the root cause of negative experiences faced by customers, Tealeaf allows you to quickly address problems. Improved customer experience leads to better conversion rates and fewer abandoned shopping carts.

## Quantitative versus qualitative analytics

### Quantitative digital analytics ("What, Where, and How")



IBM Coremetrics® Digital Analytics provides quantitative insight by capturing website and mobile interaction data and providing easy to use interfaces showing:

- Purchase funnels
- Real time sales data
- Traffic flow through site
- Conversion benchmarks

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### Qualitative digital analytics ("Why")



Tealeaf provides qualitative insight by capturing, replaying, and analyzing individual user interaction data showing:

- "In page" content (including dynamic personalized experiences)
- All UI interactions
- Error messages displayed
- Identify impacted visitors

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Tealeaf provides qualitative rather than quantitative analytics. Quantitative solutions, such as Coremetrics, enable you to segment the behavior of shoppers to uncover hidden issues or opportunities. For example, a drop in the conversion rates on shopping carts. Qualitative solutions, such as Tealeaf, allow you drill into specific shopper sessions to understand the shopper experience and what might be causing them to abandon their carts at that point.

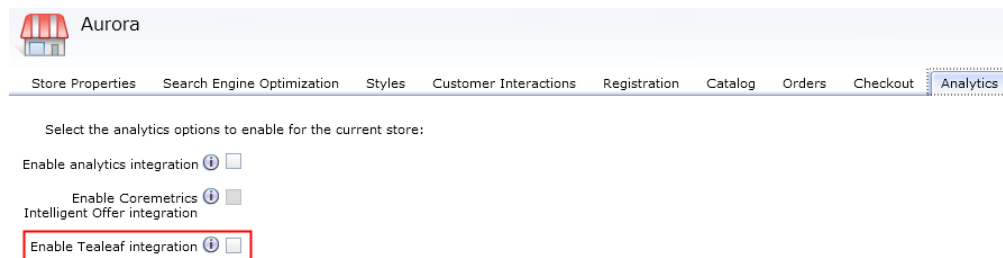
## Where Tealeaf helps

- Organizations use Tealeaf to help optimize the entire customer experience including the mobile channel, specifically:
  - Provides visibility into the actual customer experience
  - Allows you to quickly diagnose and resolve site obstacles
  - Affords the ability to quantify the business impact of any given issue for more effective prioritization
  - Provides real-time Customer Experience analytics to engage discovery and website optimization efforts
  - Seamlessly integrates with Sales and Support systems to make online customer service more effective
  - Improves online self service capabilities reducing calls handled by (more expensive) call centers

Tealeaf helps organizations optimize their customer experience across multiple digital channels including desktop and mobile applications. Integrating Tealeaf with your WebSphere Commerce store provides visibility into actual shopper experiences and helps you quickly diagnose and resolve obstacles in your store flow. Using the diagnostic tools provided, you can quantify the business impact of issues to help prioritize fixes. Real-time analytics assist in website optimization efforts and integration with Sales and Support systems can improve online customer service. Tealeaf can also reduce the number of customer service calls by improving online self service capabilities. The references page at the end of this presentation contains a link to more information on Tealeaf.

## Tealeaf with WebSphere Commerce

- Integration added to the Aurora store to demonstrate Tealeaf capabilities
  - Guest user checkout
  - Registered user checkout
- Enabled through the Analytics tab in Store Management tool
- Supported version
  - IBM Tealeaf Customer Experience V8.7



In Feature Pack 6, Tealeaf data capture has been enabled for the registered and guest user checkout flows in Aurora. The feature can be enabled through a new feature check box on the Analytics tab in the Store Management tool. Updates to the storefront include the inclusion of a Tealeaf JavaScript file to pass user interaction data to the Tealeaf server. The Aurora integration is for demonstration purposes; you will need to engage with the Tealeaf services team to enable your own store even if it is based off Aurora. The supported version of Tealeaf for this integration is shown on the slide.



## Replay checkout flows using RealiTea Viewer

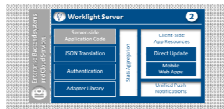
Once Tealeaf is enabled, shopper interaction data is captured by the Tealeaf server. Customer pain points can be replayed using the RealiTea Viewer.

## Worklight overview



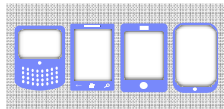
### **Worklight Studio**

The most complete, extensible environment with maximum code reuse and per-device optimization



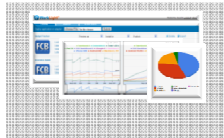
### **Worklight Server**

Unified notifications, runtime skins, version management, security, integration and delivery



### **Worklight Runtime Components**

Extensive libraries and client APIs that expose and interface with native device functionality



### **Worklight Console**

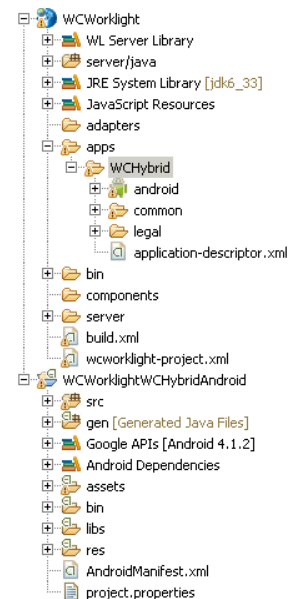
A web-based console for real-time analytics and control of your mobile applications and infrastructure

- Supported versions
  - IBM Worklight Consumer Edition V5.0.5 and V5.0.6
  - IBM Worklight Enterprise Edition V5.0.5 and V5.0.6
  - IBM Worklight Developer Edition V5.0.5 and V5.0.6

The other new integration added in Feature Pack 6 is with IBM Worklight. The latest Android hybrid smart phone application for Aurora is based on the Worklight platform. IBM Worklight provides an open, comprehensive, and advanced mobile application platform for smart phones and tablets. Using standards-based technologies and tools, IBM Worklight provides a single integrated platform that includes a comprehensive development environment, mobile-optimized runtime middleware, an enterprise application store, and an integrated management and analytics console. The supported versions of Worklight for this integration are shown on the slide.

## Worklight Studio and WebSphere Commerce

- Standalone Eclipse-based IDE
  - Common JavaScript frameworks are included
  - Android SDK plug-ins can be added
- Used to develop client-side portion of smart phone hybrid application
  - Client-side HTML / CSS / JavaScript
    - For example splash screen and settings page
  - Android native code
    - For example application shell, initialization code, native feature interface



Worklight Studio is a stand-alone, Eclipse-based IDE for mobile application development. The Worklight development tools are not included in WebSphere Commerce Developer. The Worklight Studio IDE comes with several popular JavaScript frameworks such as Dojo, jQuery Mobile, and Sencha Touch already installed. SDKs for specific mobile platforms, such as Android, need to be added on.

In Feature Pack 6, Worklight Studio is used to develop the client-side portion of the Aurora smart phone hybrid application. The server-side web content comes from the Aurora mobile web store and is included in the Stores project in WebSphere Commerce Developer. The files created and updated in Worklight Studio include the client-side HTML, CSS, and JavaScript code for the splash screen and developer settings page. Also included is the Android native code for the application shell, initialization, and native feature interface.

## Worklight runtime components and WebSphere Commerce

- Worklight runtime API
  - Built on top of Apache Cordova
  - Replaces JavaScript bridge code from Feature Pack 4
  - Used to access native device features
    - Address book
    - Store locator / maps
    - Barcode scanner
    - Voice search
    - Menu options
- Store developers need to import Worklight runtime libraries into their toolkit environment

To support the Aurora hybrid application, the mobile web store code includes some hooks to native device capabilities. In Feature Pack 4, these hooks were implemented using custom-built “JavaScript bridge” code. In the updated Feature Pack 6 store, the custom code is replaced with Worklight runtime API calls. The Worklight runtime API is based on Apache Cordova. The native features used by the hybrid application have not changed from Feature Pack 4. They are address book for contacts, Google maps for store location, barcode scanner (providing a vendor application is installed) and voice search. The menu options populated in the device menu bar are also set using the APIs. To make use of these APIs, store developers need to import the Worklight runtime libraries into WebSphere Commerce Developer.

## Worklight Server and WebSphere Commerce

- Manage applications under development with IBM Application Center
  - List versions of applications under development that are available to test
  - Install and uninstall applications outside of a vendor marketplace
  - Switch between different versions of the same application
- Manage deployed applications
  - Direct update of web assets
    - Installed application prompts customer to install new web assets
    - Does not apply to native code updates
  - Version control
    - Send notifications to customers when a new version is available to install
    - Disable specific versions to force customers to upgrade

The Worklight Server provides application management capabilities that were not previously available in the mobile solution. While applications are under development, the IBM Application Center provides a way to easily manage and deploy them to test devices. A management application needs to be installed on the test device. This application provides a list of all store applications under development including version numbers. The applications can be installed or uninstalled through the Application Center, a task that normally requires a vendor marketplace. Since version numbers are tracked, it is also possible to see when a new version of the application is available to test and to switch between versions.

Once an application is deployed to the vendor marketplace, the Worklight Server allows you to retain some control over which version of the application your customers are running. Direct update allows new web assets to be pushed out to customers with a previously installed version and prompts them to install the new web assets. This update method does not work for native code updates. In that case, the application must be reinstalled from the marketplace. In the event that a new version of the native code is released, Worklight Server provides the option to send a message to all users of the current version informing them of the update. It is also possible to disable specific versions of the application to force customers to upgrade to a new version.

Worklight Server includes some capabilities not demonstrated in this integration. These are: push notifications, adapters, and application authentication.

The screenshot displays the IBM Worklight Console interface for the 'Aurora WLHybrid' application. At the top, the IBM logo and the text 'Worklight Console and WebSphere Commerce' are visible. Below this, the 'IBM Worklight Console' header includes a user greeting 'Welcome, Guest | Logout | About'. The main interface features a 'Catalog' and 'Push Notifications' tab. A deployment bar at the top indicates 'Deploy application or adapter: Choose File | No file chosen | Submit'. The application details for 'Aurora WLHybrid' are shown, including a version management table. A yellow callout box labeled 'Selected version' points to the 'Version 1.11' row. Another yellow callout box labeled 'Set version status' points to the status dropdown menu for 'Version 1.11'. The table shows three status options: 'Active', 'Active, Notifying', and 'Disabled'. The 'Active' status is currently selected. The table also shows 'Security Test' and 'Authentication' settings for each version.

| Version      | Status            | Security Test | Authentication |
|--------------|-------------------|---------------|----------------|
| Version 1.11 | Active            | Default       | Disabled       |
|              | Active, Notifying | Default       | Default        |
|              | Disabled          | Default       | Default        |

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This is a screen capture of the Worklight Console, which provides access to the Worklight Server capabilities. Using the version management tools, you can send notifications to customers or disable a specific version of the application.

## ***Foundation updates***

This section summarizes several foundation enhancements.

## Overview

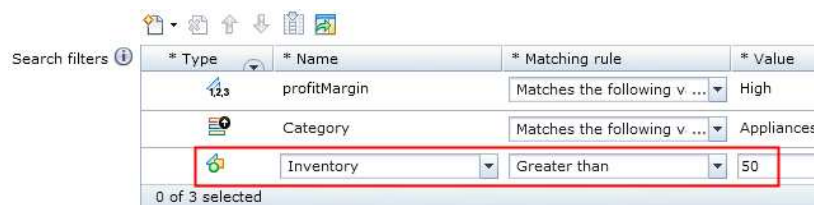
- Search updates
  - Inventory index
  - Search relevance setting
- Data load updates
- Stack updates

Feature Pack 6 includes updates for WebSphere Commerce search including a new index for inventory and relevance settings.



## Inventory index

- Resides in a separate index
  - Quicker to refresh
  - Can be refreshed more often
- Acts as an extension of the catalog entry index
  - Multi index reader merges results
- Follows same preprocessing / index building process
  - INVENTORY table (if used) is preprocessed
  - Preprocessor table can also be loaded from an external source
  - Item inventory counts are summed to create product inventory total



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Feature pack overview

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Indexing inventory information makes it available to business users to include as an additional filter when creating dynamic product recommendations or search rules. Inventory data is kept in a separate index so that it is quicker and easier to refresh than the full catalog entry index. When search queries are evaluated, the index data is combined with the main catalog entry index results using a multi index reader to merge the results. The default configuration is to index non-ATP inventory information stored in the INVENTORY table. This data is preprocessed and the index is built using the same utilities as the other search indexes. When inventory comes from an external source, such as with a DOM integration, it is possible to load data directly into the preprocessor table and use that to build the index. Since inventory data is maintained at the SKU level and search results are at the product level, inventory counts for each SKU are summed to produce the product inventory total.

## Search relevance settings

- Relevancy denotes how well the search results relate to what a shopper was looking for
- Default relevance properties are provided for common search fields
  - Category name: 100
  - Product and manufacturer name: 10
  - Short and long description: 5
  - Searchable attributes: 1
- Relevance properties can be added or updated by IT
  - Setup search index script
  - Direct database update (SRCHPROPRLV)
- Relevance can be adjusted for specific cases using search rules
- Extended DisMax query parser is used to improve search relevancy

Search relevance settings allow you to specify which fields in your index should be the most important in calculating the search results. Default values are provided for the common search fields and these values do not need to be changed unless they need to be optimized for your store. Updating the default relevance settings is an IT task. The values are initially populated when the setup search index script is run and can be updated directly in the database. To adjust the relevance of a search field in specific instances, the boost factor in search rules can be used. For example, setting a boost factor for a particular attribute value increases that attribute's relevance in the search results. In Feature Pack 6, the Extended DisMax query parser is used by default to improve search relevancy. This replaces the Lucene parser used in previous releases.

## Data load updates

- Support for XML upload
  - Command line load
  - Catalog Upload in Management Center
    - Single XML files
    - Archive files containing XML
    - Archive files containing XML and CSV
- File difference support
  - Compares two complete load files of the same type
    - CSV or XML
  - Produces a load file that contains just the changed records between the old and new file
    - Optionally processes the difference file immediately
  - Useful in cases where delta load files cannot be generated

Feature Pack 6 extends the capability of the data load tool by introducing support for loading XML formatted files, including massload format. Both CSV and XML formats are now supported from the command line and in the Management Center catalog upload tool. Similar to CSV files, catalog upload supports loading individual XML files and archive files containing several XML load files. It is also possible to mix CSV and XML formats in a single archive file.

Another enhancement in Feature Pack 6 is file difference support for data load files. This tool is particularly useful for customers whose load file generation process does not allow them to identify the changes from one load to the next. Performing a full catalog load each time updates are made is extremely expensive. This diff tool allows two full load files, either CSV or XML, to be compared and a delta file generated. Assuming the original full load file was run successfully, the generated delta load can then be run in place of the updated full load file. The difference function is highly scalable and can deal with millions of records in the files. The performance and memory footprint can be controlled through configuration parameters.

## Stack updates

- Installation
  - Installation Manager 1.6.2 64 bit
  - Common Launchpad 3.2.2
- Recommended stack
  - WebSphere Application Server 7.0.0.27
  - DB2® V9.7 FP7
- Support for IBM Rational® Application Developer V8 (8.0.4.2 + iFix 001)
  - New option, no change to minimum required level
  - Requires WebSphere Commerce Developer Fix Pack 7 (7.0.0.7)
  - Developer edition packages updated to include Rational Application Developer 8.0.4 software entitlement
  - Updated license terms are accepted during installation of WebSphere Commerce Developer Fix Pack 7 (7.0.0.7)

This slide summarizes the stack updates for Feature Pack 6. There are no changes to the minimum required levels for either runtime or toolkit environments.

## Supported browsers

- Internet Explorer
  - Accelerator / administration tools: versions 7 and 8
  - Management Center: versions 7, 8, and 9
  - All storefronts: versions 7, 8, and 9
  - Aurora storefront only: version 10
- Firefox
  - Management Center: 3.6 and any ESR version
  - All storefronts: version 10 and later
- Chrome
  - All storefronts: version 13 and later
- Safari
  - All storefronts: versions 5 and 6

This slide summarizes the supported browser versions for tools and the storefront.

## Mobile platform support

- smart phone (mobile web)
  - Android 2, 4.0, and 4.1
  - iPhone iOS 4, 5, and 6
  - Blackberry 6 and 7
- Tablet (mobile web)
  - Android 4.0 and 4.1
  - iPad iOS 4, 5 and 6
  - Blackberry 6 and 7
- Hybrid smart phone application
  - Android 2.2, 2.3, 4.0, and 4.1

This slide summarizes the operating systems supported by the various mobile store options. Applications released in previous feature packs and not updated in Feature Pack 6 will continue to be supported as-is.

## ***Virtual system pattern***

This section introduces the WebSphere Commerce pattern for IBM Pure Application Systems.

## IBM Workload Deployer

### 1. An appliance from IBM...

*Includes*

- Hardware
- IBM Workload Deployer function
- Hypervisor Edition images
- Best practice topology patterns
- Web application workload pattern

Users and Groups    OVF images    Patterns and Scripts



Web 2.0 UI, CLI, and REST APIs

### 2. ...that manages your on-premise cloud...

*Bring your own Enterprise cloud*

- Hypervisors (VMware, PowerVM®, z/VM®)
- Storage
- Network



### 3. ... comprising Virtual Systems

- Customize and extend images and patterns for your applications
- Dispense and run in the cloud
- Life-cycle management, optimization, license tracking

IBM Workload Deployer is a hardware appliance that provides access to IBM middleware virtual images and patterns to easily, quickly, and repeatedly create application environments. The environments can be securely deployed and managed in a private cloud. If you already have a cloud environment set up, this appliance is all that is needed to provide cloud management including the deployment of the WebSphere Commerce virtual system pattern.



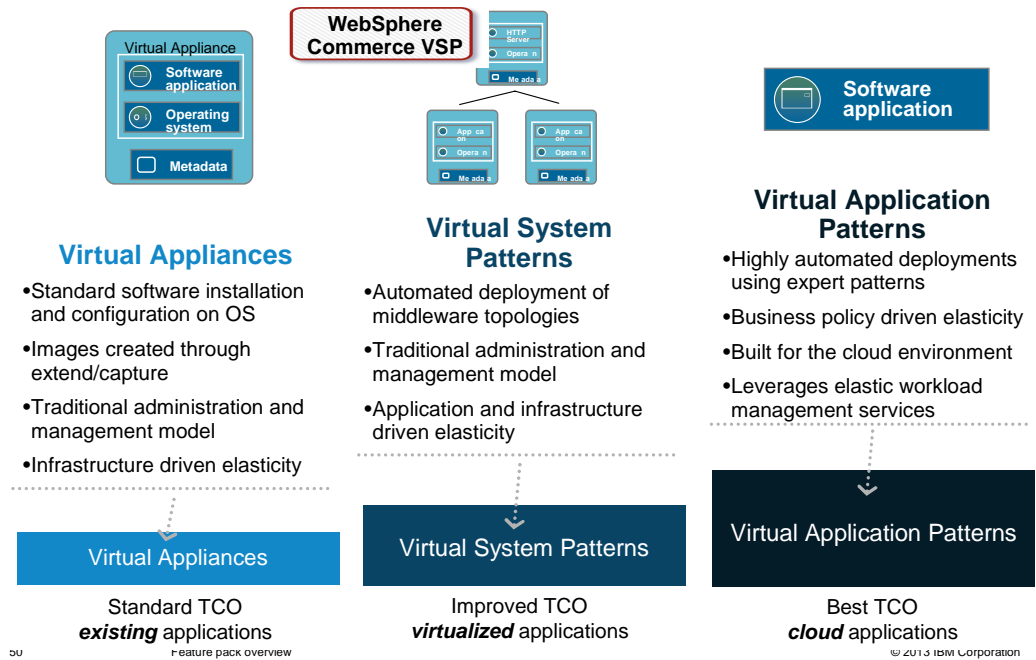
## Introducing IBM Pure Application System Combining virtualized workloads with scalable infrastructure

- **Complete, Ready-to-Go Systems**
  - Pre-optimized for highest workload performance
  - Virtualized across the stack for efficiency
  - Resilient, secure, scalable Infrastructure
- **Simple Delivery**
  - Arrives pre-integrated
  - Single point of management
  - Easy to integrate with existing environment
- **Ready for Cloud**
  - Integrated middleware
  - Elastic runtimes and data
  - Application-aware workload management



If you are just getting started with a cloud environment, IBM Pure Application Systems is the recommended starting point. This system includes Workload Deployer and all the other components you need to run a private cloud environment, such as storage and networking. It also comes pre-integrated with entitled software content such as WebSphere Application Server hypervisor editions and DB2 virtual images, virtual application patterns and virtual system patterns. Simple delivery means your cloud can be up and running in as little as a few hours.

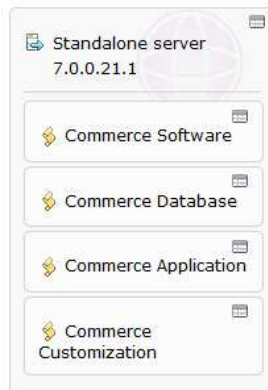
## Multiple pattern types to enable open ecosystem



Regardless of whether you are using Workload Deployer directly or as part of a Pure Application System, there are three types of contents that can be deployed. Each type is described on the slide. WebSphere Commerce uses the Virtual System Pattern.

## WebSphere Commerce virtualization sample pattern

- Virtual system pattern sample late 2012
- Sample for you to create your own patterns
- Virtual system pattern with script packages on stand-alone server
- Single tier topology to be used directly for non-production
- Custom code can be deployed when creating the instance



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Feature pack overview

The screenshot shows the 'Virtual machines' management page. At the top, it says '1 total - 1 started'. Below is a table with columns for Name, CPU, Memory, SSH, Actions, and Group Actions. The instance 'iwdtest76-Standalone-Commerce S' is listed with 2% CPU and 12% memory usage. Below the table is a 'General information' section with details like creation time, image source, and status. It also includes a section for 'IBM products (with license count for isolated usage)' and 'Hardware and network' settings.

| Name                            | CPU | Memory | SSH   | Actions | Group Actions |
|---------------------------------|-----|--------|-------|---------|---------------|
| iwdtest76-Standalone-Commerce S | 2%  | 12%    | Login | Manage  |               |

**General information**

- Created on: Jul 27, 2012 8:19:28 AM
- From virtual image: WebSphere Application Server 7.0.0.21 - 45GB
- Part name: Standalone
- Current status: Virtual machine has been started
- Updated on: Jul 27, 2012 4:10:52 PM
- On hypervisor: idptest04
- In cloud group: siteIT
- Registered as: iwdtest76-Standalone-Commerce S
- Stored on: idptest04-ds3
- In virtual application: None provided

**IBM products (with license count for isolated usage)**

Waiting for initialization to complete

**Hardware and network**

Virtual CPU count: 1 (You must stop this virtual machine in order to change this value.)

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In late 2012, the first WebSphere Commerce sample patterns were released. The pattern is for a simple single-tier topology, not for a production system. You can use this pattern as the basis for creating your own patterns.

The screen capture on the left shows the topology diagram for the pattern as seen in the Workload Deployer user interface. On the right is a screen capture on the instance management screen for a deployed instance. From here you can manage the resources available to the instance such as processors and memory. You can also manage the instance itself with options to stop, clone, snapshot, and delete the instance.

## Summary

- Enhancements for business users
- Store enhancements
- Integrating products
- Foundation enhancements
- Virtual system pattern

WebSphere Commerce version 7 Feature Pack 6 delivers features in many areas of the product. This presentation separated the new features into five sections. The enhancements for business users section described several updates and improvements in the Management Center tools. The store enhancements section described updates to the Aurora starter store. Next were the integrating product updates. In Feature Pack 6, these include IBM Tealeaf Customer Experience and IBM Worklight. The foundation enhancements section summarized core product updates such as data load and search while the virtual system pattern section described the WebSphere Commerce pattern for IBM Pure Application Systems.

## References

- What's new in Feature Pack 6  
<http://pic.dhe.ibm.com/infocenter/wchelp/v7r0m0/topic/com.ibm.commerce.admin.doc/concepts/cwnFEP6summary.htm>
- Installing feature packs  
<http://pic.dhe.ibm.com/infocenter/wchelp/v7r0m0/topic/com.ibm.commerce.install.doc/tasks/tigfepmaster1.htm>
- Tealeaf  
<http://www-01.ibm.com/software/marketing-solutions/tealeaf/>
- Worklight  
<http://www-01.ibm.com/software/mobile-solutions/worklight/>

This slide contains references to more information on Feature Pack 6.

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