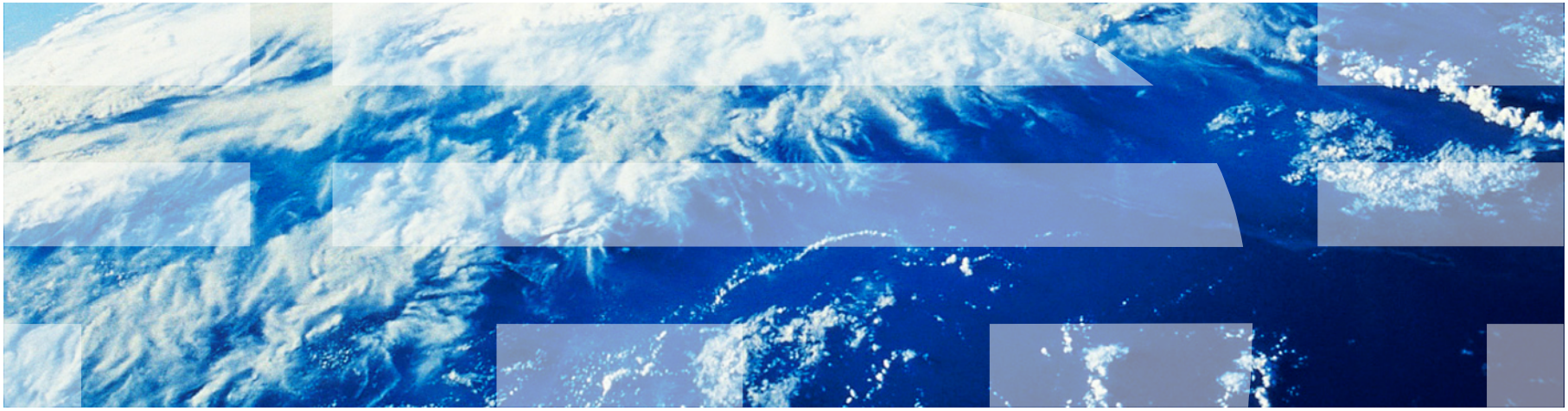
IBM WebSphere Commerce V7 FEP7

Responsive Web Design & Mobile



Agenda

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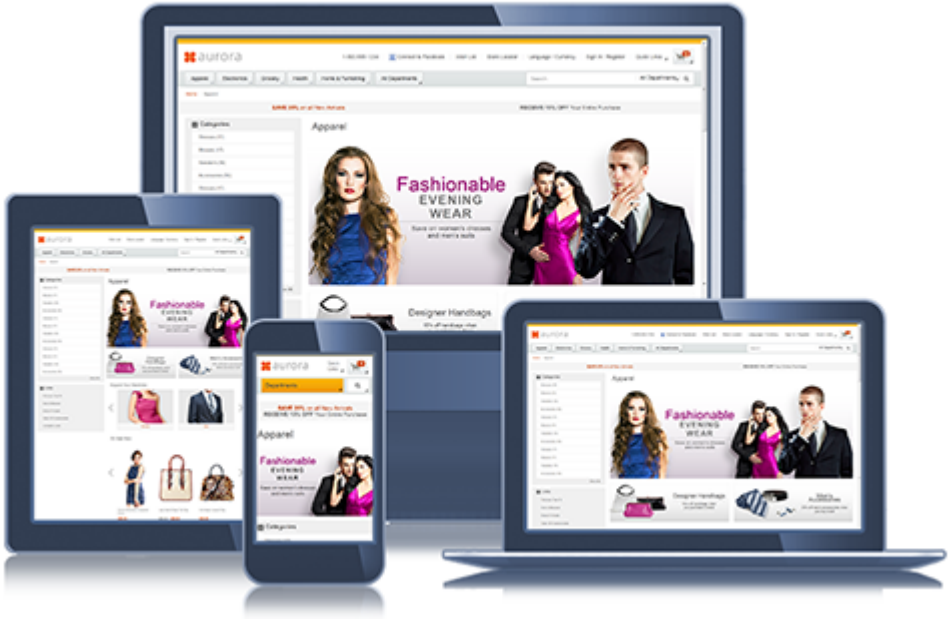
  - Creating responsive widgets
  - Creating repsonsive marketing contents

What is RWD?

- RWD is a web design approach aimed at crafting pages that are optimized for a wide range of devices. It advocates the use of primarily fluid layouts and media queries to optimize a site for different devices, instead of designing a separate site for each device.



Why RWD?

- Better user experience
- Saves time and money
- Future-proof

Goals of WC RWD

- Use industry standards like fluid layouts and media queries to make the Aurora store responsive
- Provide rich, retail-centric responsive page templates that are accessible, localized and touch-friendly
- Give business users complete control of page content and layout
- Provide workflow to design, assemble and test responsive pages

What's new/changed in FEP7?

- Most browsing pages in the Aurora store are now fully responsive/Commerce Composer-enabled:
  - Home page
  - All department pages
  - All categories pages
  - All subcategories pages
  - Women's hats and glasses search landing page
  - Search results page
  - All product/package/bundle/kit details pages
- All OOTB layout templates and widgets (new in FEP7) are fully responsive
- Some pages are now populated with responsive marketing contents:
  - Home page
  - Apparel department page
  - Women category page
  - Dresses subcategory page
  - Women's hats and glasses search landing page

What's new/changed in FEP7? (cont'd)

- The rest of the Aurora store pages will continue to be device-specific:
  - AuroraMobile.sar is now part of Aurora.sar
  - Device detection/forwarding is enabled OOTB
  - Aurora desktop pages are made fluid to support different tablet sizes
  - Key parts of the Aurora desktop/tablet and mobile pages (e.g. header and footer) have been updated to match the L&F of the responsive pages
- CMC store preview tool can now preview store pages in different viewport sizes to simulate how they look on different smartphone/tablet sizes

RWD features

- Supports all viewport widths >= 320px (in logical pixel*)
- Key viewport width ranges:
  - RWD-A: 320-600px
  - RWD-B: 601-1280px
  - RWD-C: 1281px+
- Responsive header and footer:
  - RWD-B/C: more quick links and department dropdowns will be shown as more horizontal space becomes available
  - RWD-A: the department dropdowns will collapse into a single departments dropdown with an expandable section for each department
  - RWD-A: the search box will collapse into a search button which shows the the search box when clicked
  - RWD-A: the footer sections will collapse into expandable sections
- Fluid layouts with column stacking in RWD-A:
  - Based on a 12-column responsive grid system
  - Slots will resize horizontally to fit the viewport
  - RWD-A: slots will stack to show widgets in a single column
    - e.g. sidebar widgets will collapsed into expandable sections and stacked with other widgets in a single column

*Logical pixel vs physical pixel: http://ariya.ofilabs.com/2011/08/mobile-web-logical-pixel-vs-physical-pixel.html

RWD features (cont'd)

- Responsive widgets:
  - Widgets will resize horizontally to fit the slots
  - The recommendation widgets will adjust the number of items per page based on slot width with touch support
  - The catalog entry list widget will adjust the number of items per row based on slot width
- Responsive marketing contents:
  - Marketing contents will resize to fit the slots
  - Some marketing contents are fully responsive and will adjust their compositions based on viewport width

Responsive grid system

- The Aurora store comes with a 12-column, fluid grid system with responsive features used by the OOTB layout templates
- Basic example of a row with 2 columns spanning 4 and 8 spaces:
  -

- Columns can respond to RWD-A and RWD-C by using one of the acol* (for RWD-A) and/or ccol* (for RWD-C) classes. Specifically, the following change will enable column stacking in RWD-A:
  -

Supported devices

- Browser Support:
  - IE10
  - Firefox (17esr+)
  - Chrome (same as FEP6)
  - Safari (same as FEP6)
- With touch support:
  - iOS5+ (smartphones and tablets)
  - Android (v2.3, 4.0+) on smartphones
  - Android (v4.0+) on tablets
  - WP8
  - IE10 on Win8/RT w/touchscreen
- With non-functional degradations:
  - IE8 - RWD-B only, no rounded corners, no transition animation
  - IE9 - no transition animation

Store assets

- Refer to the Commerce Composer session for more details
- Stores.war/<storedir>/Container/*.jsp
  - Container JSP
  - Each referenced by a container definition in the PLWIDGETDEF table
  - Divides a page into slots using our responsive grid system and imports the widgets assigned to each slot using the <wcpgl:widgetImport> tag
  - Does NOT include HTML boilerplate (e.g. <html>, <head> and <body>)
  - Imported by view JSPs using the <wcpgl:widgetImport> tag
- Stores.war/Widgets/<widgetidentifier>/<widgetname>_UI.jspf
  - Widget UI JSPF
  - Formats data fetched by widget data JSPF for presentation
  - Some widgets can have multiple widget UI JSPFs for different scenarios

Store assets (cont'd)

- Stores.war/<storedir>/css/base.css
  - Stylesheet for responsive CSS rules common to all store pages
  - Contains responsive grid system
  - Imported by:
    - Stores.war/<storedir>/css/common1_1.css
    - Stores.war/<storedir>/mobile30/css/common1_1.css
- Stores.war/<storedir>/css/styles.css
  - Stylesheet linked by the responsive view JSPs
- Stores.war/<storedir>/css/common1_1.css
  - Stylesheet linked by all view JSPs
- Stores.war/<storedir>/mobile30/css/common1_1.css
  - Stylesheet linked by the mobile view JSPs

Customization

Creating responsive layout templates

- Refer to the Commerce Composer session on how to create a layout template
- The simplest way to make a layout template responsive is by using a responsive grid system, such as the one we ship OOTB
- How to use a responsive grid system to markup a container JSP:
  - Divide the container into rows and columns using the CSS classes provided by the grid system
  - Markup the slots using the <wcpgl:widgetImport> tag
  - Add responsive behaviors (such as column stacking) to the slots using the CSS classes provided by the grid system
  - Customize the responsive behaviors of the slots using media queries
- Preview and test against different widgets and viewport sizes!

Creating responsive widgets

- Refer to the Commerce Composer session on how to create a widget
- Do NOT fix the width of the widget or preset its margin. i.e. the root HTML element of the widget should have the following CSS styles:
  - display: block; (default)
  - width: auto; (default)
  - Margin: 0; (default)
- This will allow the layout/container/slot to determine its width and the spacings between widgets.
- Contrary to width, you can give the widget a fixed height or minimum height, or let its content determine its height (i.e. height: auto) - the latter is better if you're making the widget fluid

Creating repsonsive widgets (cont'd)

- Make the widget's internal UI elements fluid using CSS. Some common techniques:
  - Use a responsive grid system to arrange the UI elements into rows and columns, such as the one we ship OOTB
  - Use display: inline-block or float: left to flow the UI elements left-to-right, top-to-bottom
  - Use overflow: scroll in combination with min-width if you need to display UI elements that requires a minimum amount of horizontal space (e.g. tables)
  - Avoid using absolute positioning in a fluid container unless you're trying to anchor the UI element to a specific corner or side of its container
- Text blocks:
  - Avoid fixing the heights of text blocks in a fluid container since text might reflow/rewrap when the container's width changes. If you need the text block to have a minimum height use min-height
  - Avoid using line-height to specify the height of a single-line text block - it won't look good if the text needs to wrap. Use padding instead if you need to pad the text block
  - Consider using display: table-cell if you need to vertically center text that may wrap

Creating responsive widgets (cont'd)

- If possible, optimize the widget's UI elements further for different viewport/slot widths:
  - If you're using a responsive grid system (like ours), use it to define responsive behavior like column stacking on smaller screens
  - Use media queries to optimize the widget's styling for different breakpoints
- Use JS to split the widget's content into multiple pages depending on the amount of space available (similar to our recommendation widgets)
  - Be aware that users on touch screens will expect pagination to work via swiping so if possible, do implement touch support
- Preview and test against different layout templates and viewport sizes!

Creating responsive marketing contents

- Responsive marketing contents are marketing contents with live image and text layers that, unlike flat images, can adapt to different viewport widths
- General guidelines:
  - Use HTML to layer the images and text instead of flattening them into a single image
  - Position and scale images using CSS
  - Use media queries to conditionally load smaller images on smartphones
  - Adjust font size using media queries and allow text blocks to flow naturally
- Alternatives:
  - Create device-specific layouts with different marketing contents for different devices
  - Our content recommendation widget will scale non-responsive marketing contents (e.g. flat images) to fit the slot width (to a maximum of 100%)
  - Use 3rd party client and server side solutions* that will fetch or serve images and videos based on viewport width or the browser's user agent

*Examples of such solutions:

- Adaptive images: http://adaptive-images.com/
- Img srcset polyfill: https://github.com/borismus/srcset-polyfill

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