IBM WebSphere Portal and Web Content Manager Version 8.0.0.1

Reviewer's guide

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Introduction

An organization's online presence is almost as important as the products and services it provides. Equally important to being competitive in today's marketplace is having an engaged, empowered and optimized workforce. Exceptional web experiences have the ability to build and strengthen relationships between organizations and people. People now have seemingly unlimited access to information and can instantly share it with the world. Social networking and mobile commerce have dramatically changed the dynamic between organizations and customers, employees and business partners. Remote devices have

created a 24x7 instantaneous response work environment. As the pace of business and the speed of content continue to accelerate, so does the demand to reach your audiences through a rich and robust online experience via multiple channels and devices. Successful organizations are reaching new audiences and building customer loyalty with exceptional digital experience solutions that generate higher levels of engagement with customers, employees, citizens and partners. IBM's digital experience software is designed to help create, manage, simplify and integrate your processes to address these demands.

By emphasizing delivery techniques that drive socially infused, rich web experiences across multiple channels in context with the right business applications and data, leading organizations are reaping the benefits of competitive differentiation, customer loyalty, profitable growth and enhanced employee interactions.

WebSphere Portal and Web Content Manager Version 8.0.0.1 software

IBM® WebSphere® Portal and IBM Web Content Manager Version 8.0.0.1 software are powerful solutions for delivering engaging web content and applications in an integrated, differentiated and personalized digital experience. The platform helps drive business agility with a performance-based foundation to build, integrate and manage service-oriented architecture (SOA) applications. Enterprise-class applications, processes and transactions reside on a proven, reliable, scalable and high-performance foundation. WebSphere Portal software also supports workflows, content management, social, mobile web delivery, simplified usability and administration, open standards, security, and scalability.

WebSphere Portal Version 8.0.0.1 software addresses the needs of today's enterprises to drive improved customer experiences, empower employees to react to marketplace dynamics, extend business assets and improve operational efficiencies. Building on the solid foundation of previous releases, WebSphere Portal Version 8.0.0.1 software includes new capabilities and updates that can provide users with a more social, mobile and integrated experience and provide insightful real-time analytics, giving users the right knowledge to the make the right decisions. Whether you are engaging with customers, business partners or employees, WebSphere Portal software can bring together the capabilities you need to deliver rich and productive online experiences, practically everywhere.

Combined, WebSphere Portal software and Web Content Manager software provide a foundation that enables organizations of virtually any size to address the exceptional digital experience expectations of today's user—as well as tomorrow's.

This guide describes the new features of version 8.0.0.1 and the other features available with WebSphere Portal and Web Content Manager software. It provides a comprehensive look at the software, making it a must-read for companies that are considering a WebSphere Portal solution.

Business user capabilities

For business users, WebSphere Portal Version 8.0.0.1 software enables the rapid delivery of targeted content that is relevant and compelling:

- Quickly and easily create and manage portal pages and content, allowing you to respond to rapidly changing business needs
- Go where your users are by providing rich experiences for content, applications and processes from practically any device
- Gather real-time insight into digital web page and channel delivery, giving you the information you need to make informed business decisions
- Deliver critical social services where they can have the biggest effect in the context of your digital web experiences

Creating portal pages

IBM WebSphere Portal Version 8.0.0.1 software gives users powerful control over portal pages. The page builder features enable organizations to quickly implement new business designs that are engaging and high performing. WebSphere Portal software's support for page builder universal integration hub implementation enables site designers to create portal pages using a broad array of components, including HTML and web content, feeds, portlets, iWidgets, and elements derived from frameworks such as Adobe Flex. The universal integration hub implements an open architecture that can permit new components to be assembled to web properties and enable advanced development for future web experience platform innovations. Version 8.0.0.1 in-line editor enhancements and the new content targeting editor offer digital experience site designers and marketing managers with seamless in-line services to create, adapt and optimize web experiences designed to anticipate and exceed target audience needs and preferences.
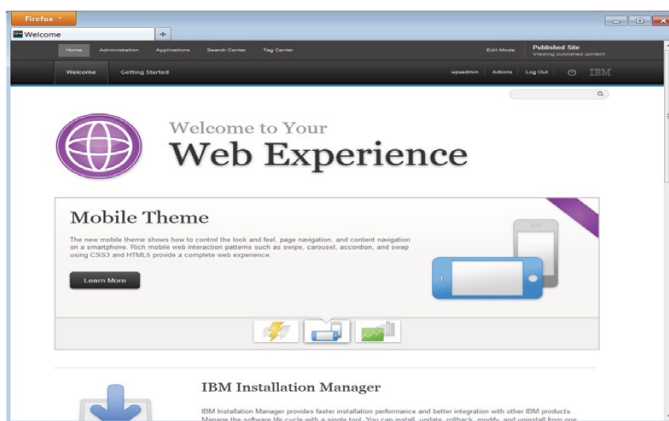

Figure 1. The intuitive welcome page helps administrators get started.

The architecture is extensible to enable a broad, interchangeable presentation of a modern user interface (UI) with widgets, for example, enabling easy inclusion of components developed via Flex frameworks to be easily assembled within WebSphere Portal pages. With component and runtime enablement services provided by the universal integration hub in WebSphere Portal 8.0.0.1 software, site designers and business users benefit from a consistent, consolidated and extensible infrastructure. The platform is architected to support existing and upcoming application types, enabling site designers the freedom to assemble and refine their web experiences to help meet and exceed constantly changing web audience requirements and interest.
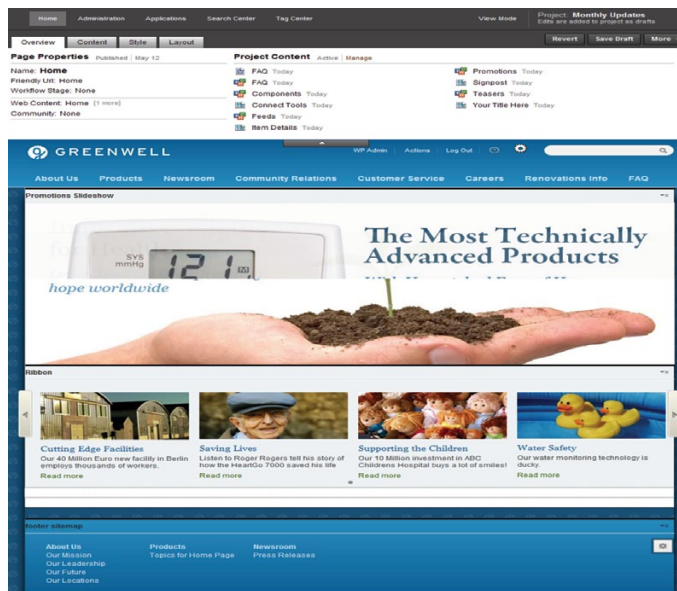

Figure 2. Business users can customize their own portal pages to include the elements they need.

Managing portal pages

Version 8.0.0.1 introduces the manage pages portlet, delivering new services for WebSphere Portal site designers, business users and administrators to create and manage portal and web content pages. The new enablement provides a consistent, full-featured approach designed to apply web content features such as work-flow, version control and syndication to all portal pages.

Key managed pages capabilities include the following:

- Changes are placed in a draft state without affecting the live server.
- Drafts are organized within projects. When draft changes are selected for publication to a live server, a project coordinates the updates and helps ensure that all drafts are published at the same time—and only after changes are approved.
- Organizations can create customized workflows to match requirements of their site and authoring environments.
- A new graphical toolbar integrates managed pages functions directly into portal page builder functions. The toolbar provides quick access to editing features, projects and workflow actions that apply to the page.
- Syndication provides a convenient and flexible method for transferring managed pages from a staging environment to a production environment.
- Scripting support is also available for automating managed pages (http://www-10.lotus.com/ldd/portalwiki.nsf/xpDocViewer.xsp?lookupName=IBM+WebSphere+Portal+8+Product+Documentation#action=openDocument&res_title=Managed_pages_wp8&content=pdcontent) tasks. The WebSphere Portal scripting interface includes methods for working with projects and web content libraries, and the XML configuration interface includes similar support for projects.

This support provides a robust and integrated method for performing site management by helping ensure that changes are coordinated and published together.
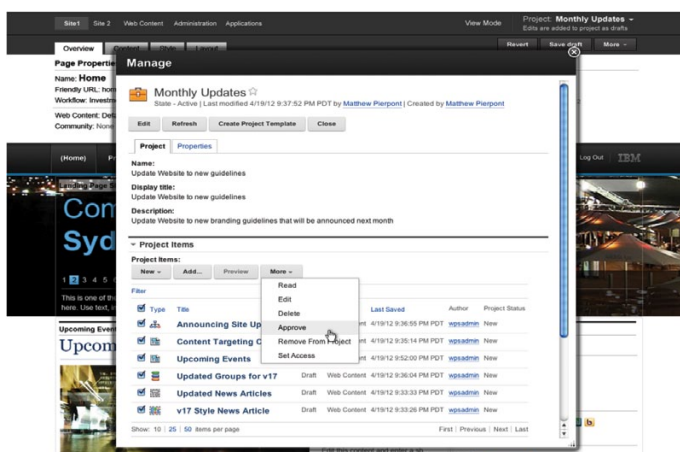
Figure 3. Administrators and site designers can use new manage pages workflow review and publish services to speed creation and collaboration activities.

Users and administrators with appropriate privileges can use the portal page builder and new manage pages features to quickly and easily create, customize and share website drafts, organized as projects, and to publish pages with teammates and community members. A variety of sources made available on the content catalog can be used to drag and drop content to portal pages, including portal portlets and shared pages; feeds; iWidgets and pages; and IBM Connections services, communities, social bookmarks and custom sources.
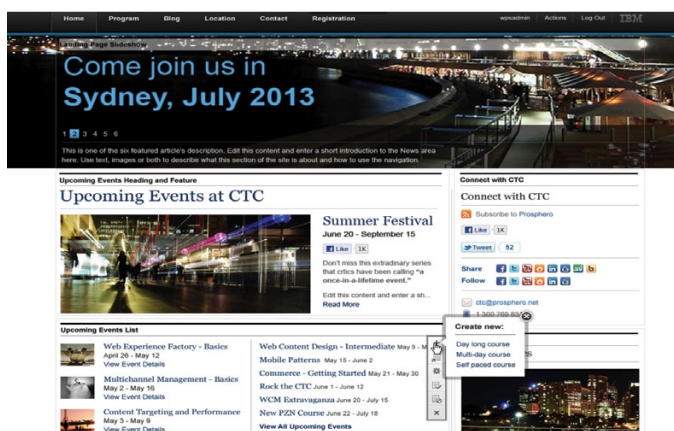

Figure 4. The new graphical site toolbar provides quick access to new manage pages editing features, projects and workflow actions that apply to the page.

Enabling content authoring

Web Content Manager Version 8.0.0.1 software can help empower business users to contribute to site content in real time. Organizations can also invite other user contributions and participation via social web functions such as articles, blogs, wikis, tagging and ratings—all without IT involvement and time-consuming site update cycles. High-quality, high-value content and in-demand capabilities, delivered in context to the specific user's role, promote increased web user loyalty, satisfaction and efficiency.

Using preinstalled web content libraries, content authors can add article, blog and wiki features to WebSphere Portal websites, and users can more easily contribute and share content and expertise. Blog libraries take blogs to the next level and can be used to keep track of multiple topics in a centralized location. Simple in-line editing, including the insertion of images and links, makes authoring wikis quick and easy.
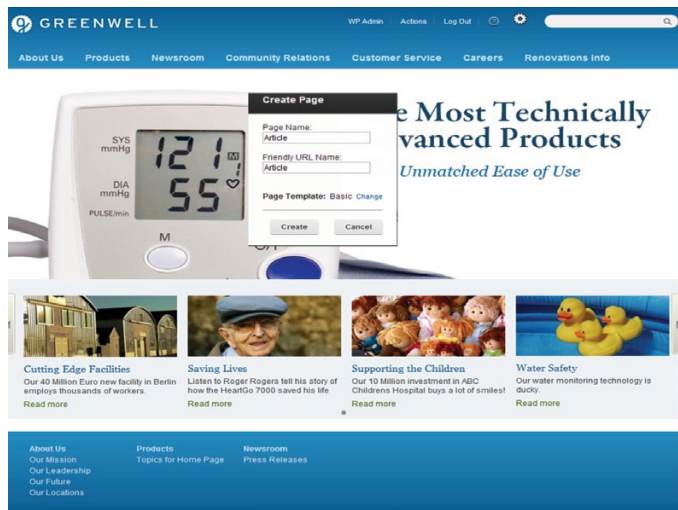
Figure 5. WebSphere Portal users can quickly create content and share expertise using new article, blog and wiki templates.

Web Content Manager Version 8.0.0.1 includes a new authoring home page with customized entry points for different types of users. The simplified, single-page user interface is designed to allow casual authors to easily create and submit content and frequent contributors to easily track site activity so that they can quickly create or edit items as necessary.
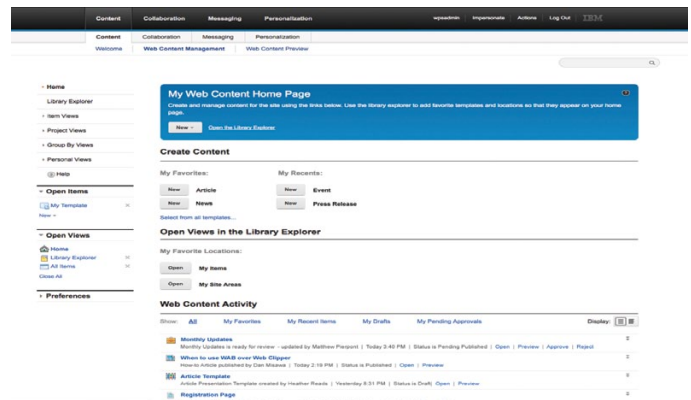

Figure 6. The new home page in Web Content Manager Version 8.0.0.1 simplifies content authoring for business users.

Accelerating rich website design

WebSphere Portal Version 8.0.0.1 software includes the Content Template Catalog (CTC, https://ibm.biz/BdxTeq), an expanded set of more than 30 prebuilt web content templates that enable more-rapid site assembly. Using point-and-click functionality, designers can quickly develop and deploy custom Internet and intranet sites based on the best practice designs provided by the templates. In minutes, site designers and content authors can build a new site with the necessary pages, portlets, content and components, including built-in analytics tags and social services integration. When installed to the WebSphere Portal and Web Content Manager platform, site builders can use the site toolbar to drop reusable components on pages for navigation, teasers, slideshows, carousels and other components. New updates to the CTC offerings are designed to make it even

easier for content authors and site designers to quickly create rich, modern, digital experiences and optimize them for presentation to connected and mobile audiences. These updates include built-in responsive design elements to automate content parity between mobile devices and desktop channels, helping enhance the user experience and brand consistency. Seamless changes in screen size, from small to large, are designed to automatically render according to device-specific capabilities while maintaining the order of the content.
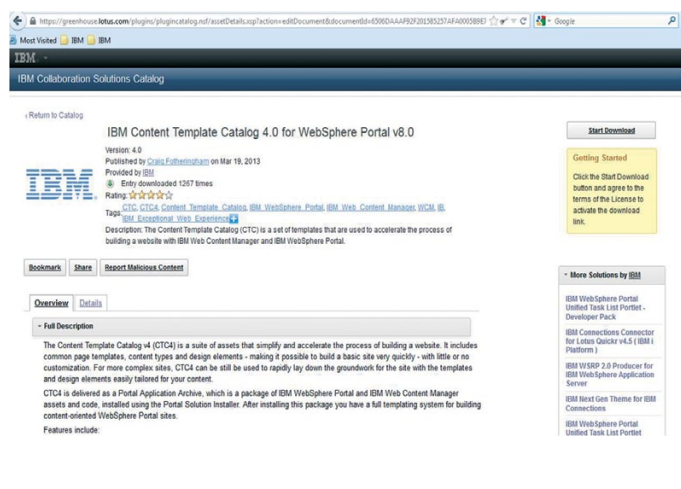

Figure 7. Downloadable web content templates power rapid, production-ready web content sites that include responsive web design services for mobile access.

A new Site Builder tool included with the CTC (https://ibm.biz/BdxTeq) enables website designers and content authors to more quickly create websites and microsite templates. Using the tool, designers can point and click to select templates and components for constructing entire websites. The ability to create, update and share site templates with others extends site creation capabilities to line-of-business managers, staff and business partners while enforcing a consistent look and feel and design

guidelines across websites implemented by different business units and teams. The Site Builder tool also provides ready-to-use multipage template samples that support customer and employee-facing microsites.
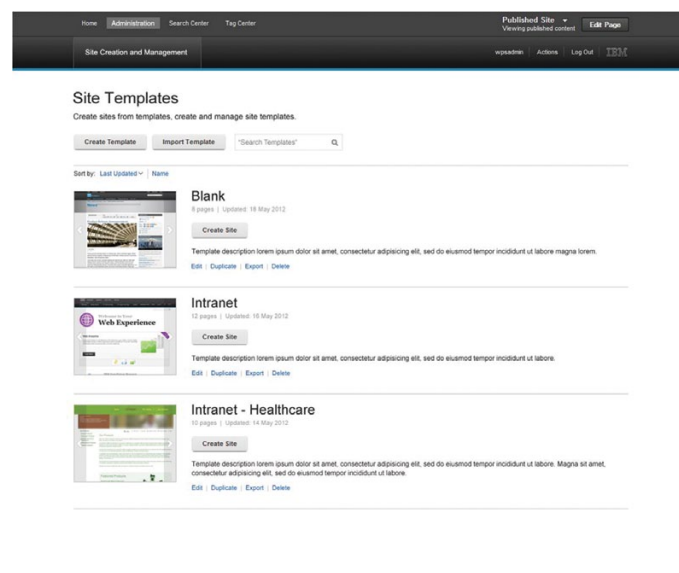

Figure 8. Create, select and deploy site templates and components with point-and-click simplicity using the Site Builder tool.

The new IBM Web Content Manager Rich Media Edition platform provides integrated digital asset management capabilities that can help organizations quickly publish persuasive content as well as take advantage of centralized management, search and comprehensive editing support for images, video and more. Using these new capabilities, site designers, designers, agencies and other creative professionals can consistently and significantly improve the impact of their digital experiences for user audiences across web and mobile channels.
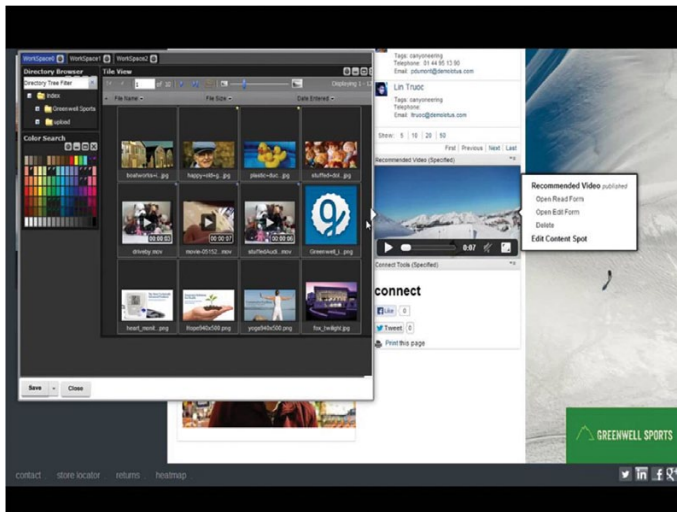
Figure 9. Use the Web Content Manager Rich Media Edition to more easily integrate images, content and video with online experiences for effective engagement.

The new IBM Web Content Manager for WebSphere Commerce feature enables commerce site designers to link rich content—including descriptions, images and video—authored within Web Content Manager into their storefronts.
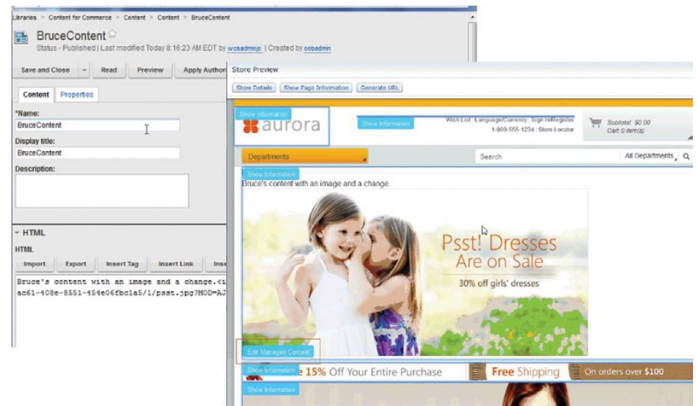
Figure 10. The Web Content Manager for WebSphere Commerce feature is designed to help site builders enhance their online business websites with rich content.

Optimizing content delivery

To help improve audience engagement and retention, version 8.0.0.1 offers new features that enhance the platform's content targeting, including elements that enable business users to quickly design segmentation rules that target WebSphere Portal and Web Content Manager content to specific audiences, devices, geographies and channels. Business users and market-place managers can apply these powerful content-targeting features—without IT involvement—to improve audience engagement and retention and reach into new channels for business growth.

Figure 11. Using the CTC assets, organizations can quickly apply rich, multichannel assets to their web properties to improve audience engagement.
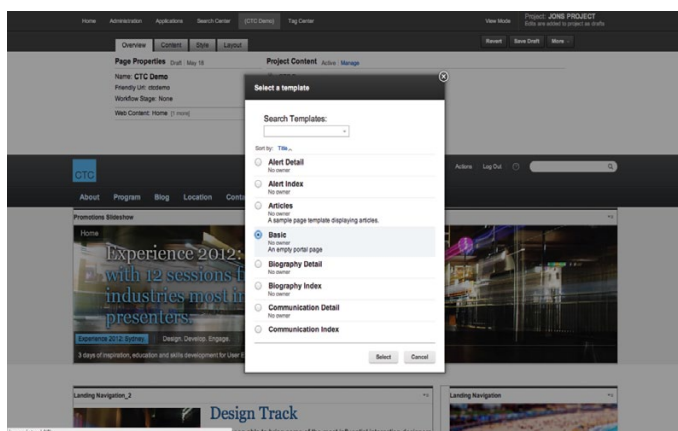

Figure 12. This example shows how the new content targeting editor makes it easier to select content to display to smartphone users.

Version 8.0.0.1 introduces a content targeting editor that provides in-line, point-and-click services to optimize delivery of information according to audience interests and preferences, identified as segments. Using the content targeting editor, site authors create rules as they work to target content to selected segments. For example, you can define an audience by parameters including date and time, visitor's web browser, mobile device, geolocation, search terms used, and website referral. The result delivers content and self-service functions designed to improve engagement with users according to their needs.

Publishing to social media

Version 8.0.0.1 includes new social media publishing capabilities designed to help organizations efficiently implement a publish-once, view-anywhere strategy and to measure the results of promotional efforts across social channels. Content template portlets provided by Web Content Manager enable content authors to more easily publish content to popular social media channels—such as IBM Connections, Facebook, LinkedIn and Twitter—helping increase their reach and drive higher customer engagement. With new social rendering services, site designers can more quickly create and render social lists that enrich portal pages with contextual social data from multiple sources, including lists of blogs, files or discussion topics.

Figure 13. Business users can target and automate promotional efforts across the social web.

Enhancing site design and performance with the modular theme framework
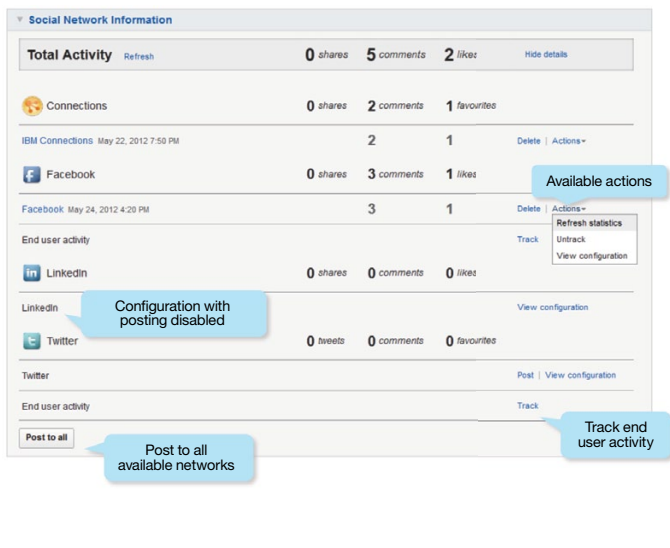
Using the new theme optimization module framework in version 8.0.0.1, site designers can create themes using different module extensions to contribute to different areas of the page, providing flexibility and helping enhance the user experience and maximize performance.

Designers can turn features on and off for certain pages and develop modules independent of each other for greater development speed and flexibility. Plus, designers can add capabilities to an existing theme or leverage existing themes to form the basis of new themes. The framework provides logical points where modules can contribute data into a theme at run time and to optimize those contributions by combining them where possible.
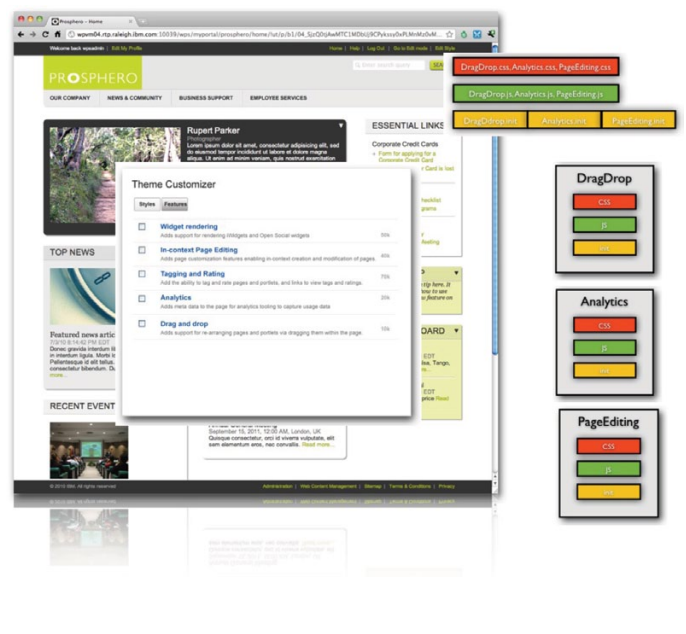
Figure 14. Site designers can use the modularization framework to enable theme features in a high-performance, easily maintained fashion.

The new framework also allows multiple, disparate remote sources to be combined into one request for greater performance. Available on the IBM Collaboration Solutions Catalog, the new Theme Optimization Analyzer portlet (https://ibm.biz/BdDKea) helps site designers further assess and optimize theme effectiveness.

Enabling mobile functionality

A mobile-enabled portal theme, the IBM WebSphere Portal Mobile Experience theme provides site designers with templates and code to more quickly extend WebSphere Portal sites to mobile devices that support WebKit (Apple iOS, Google Android and BlackBerry devices). This new theme shows how to control the look and feel, page navigation and content navigation on a smartphone and provides examples of rich mobile web interaction patterns such as swipe, carousel, accordion and swap using CSS3 and HTML5.

WebSphere Portal software's built-in device detection capability is designed to recognize the mobile device and layout presentation requirements to render properly. The device classes included with IBM WebSphere Portal software are used to define common properties for the device of a mobile client and can be updated as needed. For instance, tablet computers can be grouped into device class tablets because they share a form factor and possibly other traits such as touch interfaces or additional hardware sensors.

The mobile theme has been updated to use the version 8.0.0.1 theme optimization modular framework. The mobile theme is provided with profile and module definitions and offers the flexibility to easily add new capabilities, such as JavaScript, Dojo or jQuery elements, to the mobile theme samples.

Figure 15. The software provides a responsive, mobile-enabled theme that automatically optimizes the display to mobile devices.

Achieving real-time insights with web analytics overlays

Recognizing that it is a constant endeavor within organizations to better analyze and continually tune web applications for optimal performance, WebSphere Portal Version 8.0.0.1 software adds further platform support for web analytics tools, providing organizations with real-time insight into the use of their WebSphere Portal software and allowing site owners to optimize information delivery to improve business results.

Active site analytics platform support allows administrators to turn on the insertion of appropriate scripts, called aggregators, into portal pages or individual portlets and more easily incorporate third-party analytics tools to analyze visiting and content patterns, enhancing visitor quantity and quality. WebSphere Portal software incorporates sample aggregators, including a sample designed for use with the IBM Digital Analytics component of the IBM Digital Marketing Optimization Suite. The WebSphere Portal platform provides capabilities to instrument analytics-specific metadata tags to gather analytics into the WebSphere Portal and Web Content Manager framework for collection and analysis by third-party or custom analytics services.

Site designers, marketing professionals and business managers can view and interact with results from real-time analytics using new web analytics overlays. The in-line, user-friendly overlay delivers web analytics results that track the effectiveness of websites, components and campaigns.
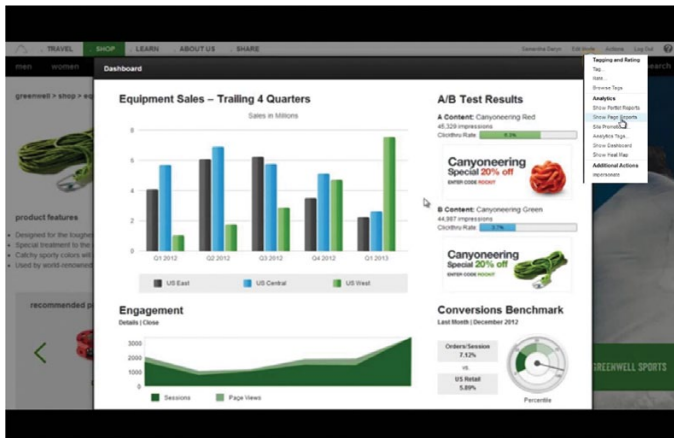
Figure 16. WebSphere Portal software site owners can view real-time digital analytics results of site visitor patterns and demographics using analytics overlay reports.

Using the portal's page builder features, site business owners can access, view and take action on individual web page analytics results in real time. For example, owners may make adjustments to the page presentation text, images or components to optimize the web experience for a specific user audience.

In addition to the page analytics tags provided, organizations can create additional custom analytics tags to match requirements. For example, if website portal marketing managers want to address mostly young professionals, they may create an analytics tag such as "targetAudience:youngProfessionals" and then associate the tag with all resources that contain content for this target user group. By using active site analytics and third-party analytics solutions, website managers can view the results collected from visits on specific web pages to continually assess how effectively their desired customer segments are being reached.

Analytics tags can also be used with site promotions. For example, a site promotion named "Holiday 2013" can reference pictures, blogs or gift shops on a website. By tracking the tag, marketing managers can track which section of the website was visited and how effective specific promotions were in driving click-throughs. With these real-time insights, managers can adjust campaigns to improve business outcomes.

Enabling social collaboration

Social collaboration capabilities are becoming an essential part of the business world. Changing workforce demographics, coupled with an explosion and use of technology that provides increased workforce flexibility, imposes challenges that are driving organizations to deliver socially infused, rich web experiences that include instant messaging, real-time web conferencing, dynamic team spaces, security-rich content sharing, social networking and speedy access to specialized knowledge and skills.

WebSphere Portal and Web Content Manager Version 8.0.0.1 software include several new features and enhancements that can empower organizations to leverage the benefits of social collaboration. Through the portal, organizations can deliver composite applications that bring social context to business applications. For example, by integrating social collaboration tools into online employee orientations, new employees could potentially go beyond the content of the training and establish key connections by instantaneously locating and reaching out to subject matter experts and new colleagues via real-time chat or post to a user's wall—without ever leaving the portal interface. These services can help deliver exceptional web experiences that can attract, engage and delight users; increase employee productivity; build customer loyalty; and reduce operational costs.

Integration with IBM Connections software can be configured, allowing users to access all features of the social networking software—home page, activity stream, activities, blogs, bookmarks, communities, forums, profiles, wikis, and tag cloud—through preconfigured and custom views and customizable portlets.
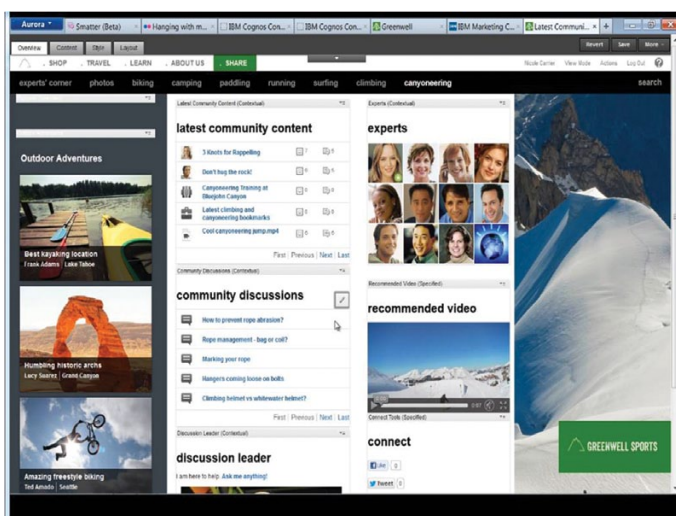
Figure 17. Connect with subject matter experts via the social integration of communities, activities and profiles within WebSphere Portal software.

Enabling social communities

WebSphere Portal Version 8.0.0.1 software includes a community page capability that allows a portal page to be associated with an IBM Connections community. This allows Connections portlets to dynamically draw on content relevant to the related community. For example, if the WebSphere Portal page is associated with a sales team community, then the bookmarks portlet can be set to dynamically show shared bookmarks of that community. Another example is the profiles portlet, which shows community membership and allows users to access a member's profile—including his or her business card—which provides easy access to core information about the member as well as links to other social content related to that member of the community.
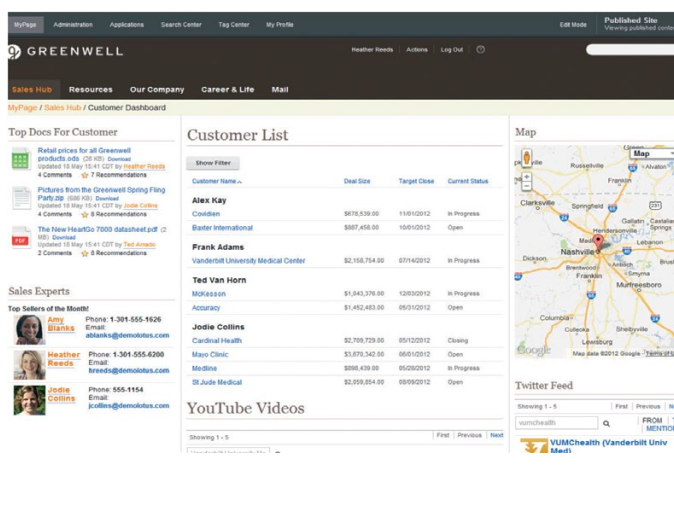

Figure 18. Users can access content, data, expertise and knowledge in context to their requirements using new community pages in WebSphere Portal software.

A new virtual member manager (VMM) adapter allows Connections communities to appear as a directory entry group from within WebSphere Portal software. This allows portal pages, elements and rules to perform filtering and security checks based on community membership. For example, a sales team page on the site can show or hide itself depending on whether the user belongs to the sales team community in Connections.

Organizing documents for collaboration

IBM Connections Content Manager provides a rich social networking and content management experience inside IBM Connections communities. This add-on software to IBM Connections facilitates content sharing in the context of community associations and engages people to collaborate as part of the content creation process. An IBM Connections Content Manager portlet is available for WebSphere Portal and Web Content Manager Version 8.0.0.1 users to access and use these services, which can accelerate information sharing and decision making for better business results.

Collaborating in real time

Integration with IBM Sametime® software gives users access to instant messaging, presence awareness and web conferencing through portlets. These features can help employees locate and contact their customers and colleagues quickly as they navigate through the portal.

Implementing Sametime software with WebSphere Portal software makes it possible to offer a new live help portlet that can provide users of external portal websites with access to personal advisers. The WebSphere portlet leverages Sametime technology to launch a web-based, zero-download chat client. The live help portlet is built with IBM Web Experience Factory software and is designed to be fully customizable.
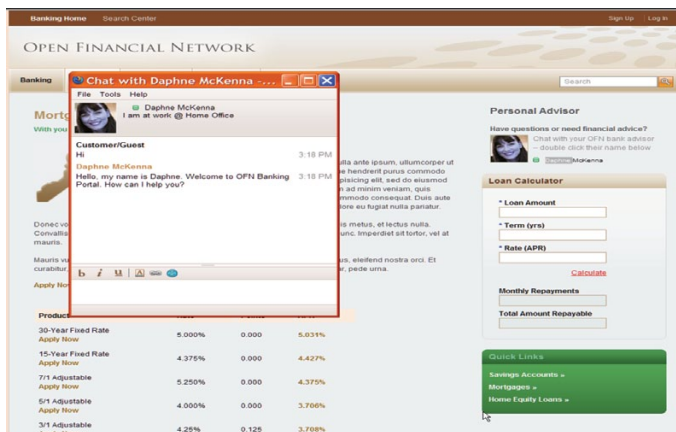
Centralizing communications in a single interface

WebSphere Portal Version 8.0.0.1 software provides ready-to-use portlets for accessing and managing email, including IBM Notes® and Domino® software, Microsoft Exchange Server, and Internet Message Access Protocol (IMAP) standards–based email. And the platform's support for OpenID enables new platform integration options to configure WebSphere Portal software to allow external identity providers, such as Google and Yahoo!, to authenticate users, expanding the communication channels for web properties to new audiences.

In addition, IBM Domino users can present Domino applications in WebSphere Portal solutions using XPages and surfacing components such as iWidgets, which can be presented through the WebSphere Portal page. For additional details please consult the IBM WebSphere Portal Family wiki: https://ibm.biz/BdDaXq

Figure 19. Deliver personalized, context-specific access to colleagues and experts with built-in presence awareness and chat services.
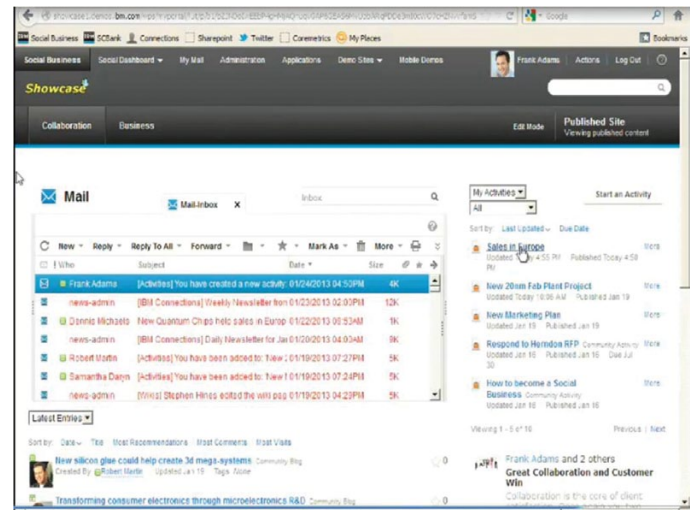

Figure 20. WebSphere Portal software delivers access to information, applications and tasks from a central interface.

Extending access to enterprise content management sources with REST services

Additional new features extend in-line access to enterprise content management (ECM) repositories and deliver extensibility through new standards-based Representational State Transfer (REST) services. Content authors can insert links to documents from repositories that support Content Management Interoperability Services (CMIS) Version 1.0.

The new Web Content Manager REST service is designed to make information in the repository easily accessible while retaining security. A simple URL interface allows developers to create queries and to use this information across multiple sources to easily extend the authoring user interface.
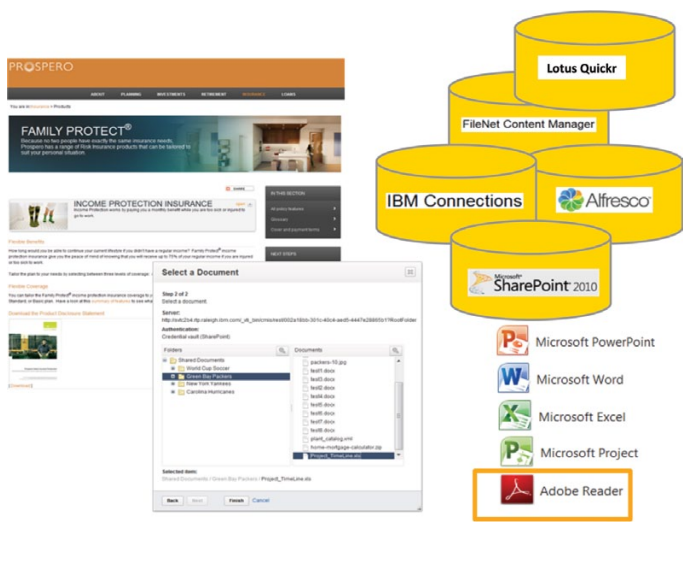

Figure 21. New support for federated repositories helps content authors more easily include content from remote repositories, including CMIS-compliant content sources.

Tagging and rating across federated sources

Version 8.0.0.1 provides tagging and rating features designed to allow users to easily tag or rate content and view tags and ratings. This empowers users with the ability to better organize, categorize and find portal content. Virtually all content in a portal can be tagged or rated. This includes portal resources such as pages and portlets, Web Content Manager resources such as articles or images, and custom content such as items in an online store or images in a portlet.

The *tag center* represents a central place in the portal that contains tagged content from the portal, Web Content Manager and Connections. From within the portal, users can search for tagged content, independent of whether this content resides in the portal, Web Content Manager or Connections software. This way, the portal can provide an easy and convenient approach to search for content that resides inside or outside of the portal. Configuration settings for WebSphere Portal tagging and rating features such as type-ahead, normalization, blacklists and white lists are also applied to the federated tags. Additional external tag cloud sources can be configured to the portal to participate in the federated tag services using the portal's administration tag features.
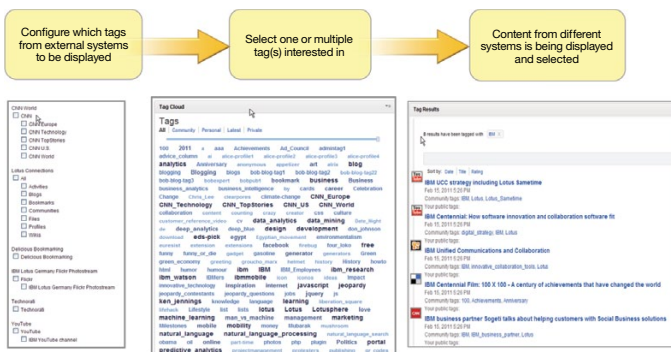

Figure 22. New federated tag support offers centralized access to tagged results across content and information sources that integrate with WebSphere Portal software.

Users can apply tags and ratings publicly and privately to suit their collaborative content management purposes, improving the value of information to their audiences. Public tagging and rating help users categorize, evaluate and find portal content based on tags and ratings by other users. Private tagging and rating can help users create their own personal way to categorize, evaluate and find portal content.

Easily integrating web applications

Creating highly engaging and exceptional web experiences often requires stitching together a range of different IT assets and sources contextually and seamlessly to the user. WebSphere Portal software ships a rich set of assets that enable organizations to deliver personalized web experiences across multiple channels in context with the right business applications and data, including portlets for displaying syndicated content, transforming XML, and accessing search engines and web pages.

The release also includes a capability called the SAP integrator that enables integration of existing SAP iViews to WebSphere Portal software while providing support for single sign-on (SSO). Additional details can be found in this white paper on the SAP network: http://scn.sap.com/docs/DOC-26539

WebSphere Portal software includes a web application bridge (WAB) that provides organizations with enhanced flexibility to integrate existing web applications, including Microsoft SharePoint software, for security-rich, personalized delivery through their portal solutions. The WAB provides a proxied web environment that enables presentation of external web content without requiring URL redirection or content introspection. This new technology is designed to make it easier than ever to integrate existing web applications and dynamically present content through the portal, including Microsoft .NET or Hypertext Preprocessor (PHP) applications and existing Java Platform, Enterprise Edition (Java EE) applications.

Figure 23. Use the web application bridge to more easily integrate existing web applications, such as Microsoft SharePoint software, with WebSphere Portal platforms.

Administrator capabilities

WebSphere Portal Version 8.0.0.1 software provides new features that help speed installation and configuration, improve performance, and provide the flexibility to deploy and extend web platform solutions quickly and efficiently:

• Realize increased productivity with a new install and configuration experience based on IBM Installation Manager that offers faster installation performance with lifecycle management of release components and maintenance updates in a single tool
• Enhance performance with improved Java Content Repository runtime operations
• Optimize solution delivery and availability with expanded virtualization and cloud deployment services

- Simplify enrollment and authentication with users from social channels with OpenSocial ID support
- Accelerate interactions with mobile users with the new device class detection framework
- Enjoy a consistent, in-place upgrade path from the previous two WebSphere Portal versions: 6.1 and 7.0
- Leverage support for WebSphere Application Server Network Deployment Versions 8.0.0.1 and 8.5

IBM is committed to an open-standards approach that works with a range of IT environments. IT administrators can take advantage of the software's open-standards-based framework, which supports a wide range of databases, directories, platforms and security protocols. Its broad interoperability can help leverage existing IT investments rather than replacing or recoding. In fact, WebSphere Portal software can play a key role in an SOA, where information and processes can be extended and reused across systems and presented via personalized, responsive user interfaces to the right audiences—without requiring major upheavals or modifications.

Improving installation time and management with IBM Installation Manager

WebSphere Portal Version 8.0.0.1 software offers new capabilities to efficiently manage solution installations and configurations; robust website design and production processes; and support to establish consistent, repeatable deployments such as cloud-managed infrastructures to save costs and gain agility. Plus, the portal enables administrators and application designers to leverage existing standards-based platform protocols and services to manage application integration and processing.
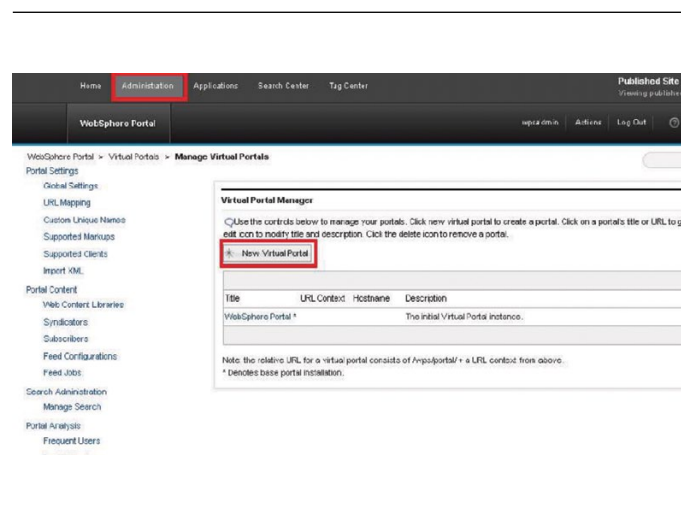
Figure 24. Administrators have central access to the tools needed to manage, create, configure, build and customize portals.

In version 8.0.0.1, new platform support for IBM Installation Manager improves install time and management options for administrators. Installation Manager is a single installation program that can use remote or local software repositories to install, modify or update new WebSphere Portal platform products. For platform administrators, Installation Manager determines and shows available packages—including products, fix packs and interim fixes—checks prerequisites and interdependencies, and installs the selected packages. Installation Manager can also be used to easily uninstall the packages that it installed.
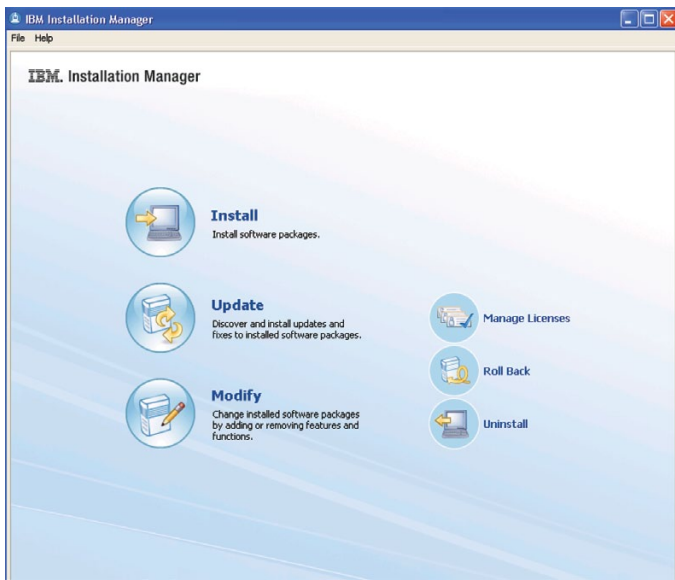
Figure 25. Version 8.0.0.1 includes IBM Installation Manager to manage platform component installations, updates and uninstall operations.

IBM Installation Manager is designed to streamline time to production when installing IBM WebSphere Application Server, WebSphere Portal and Web Content Manager components. IBM Installation Manager gathers essential information associated with selected packages, such as host name and node, and then performs the installation.

The installation program verifies the operating system and its prerequisites, available disk space, and any required software prerequisites before installation.
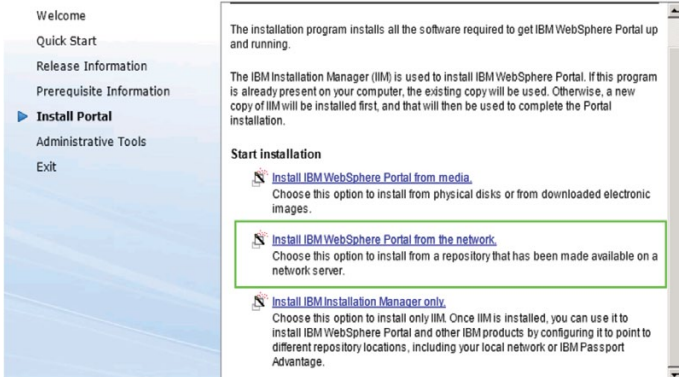
Figure 26. IBM Installation Manager provides an intuitive interface and effective platform install and management services for administrators.
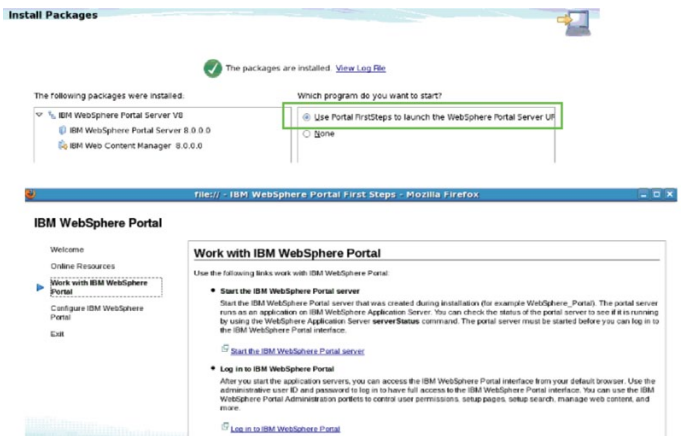
Figure 27. IBM Installation Manager guides administrators through the first steps to configure the production server.

After a successful installation, the summary panel displays. Administrators can select the WebSphere Portal "First Steps" radio button to start the installed services and begin configuring WebSphere Portal and Web Content Manager software.

factor and possibly other traits such as a touch interface or additional hardware. Device classes are extremely flexible and can be defined at a broad level or at a more-detailed level such as iOS tablet devices or Android devices. Devices classes are used with Web Experience Factory themes to help ensure optimal user experiences.
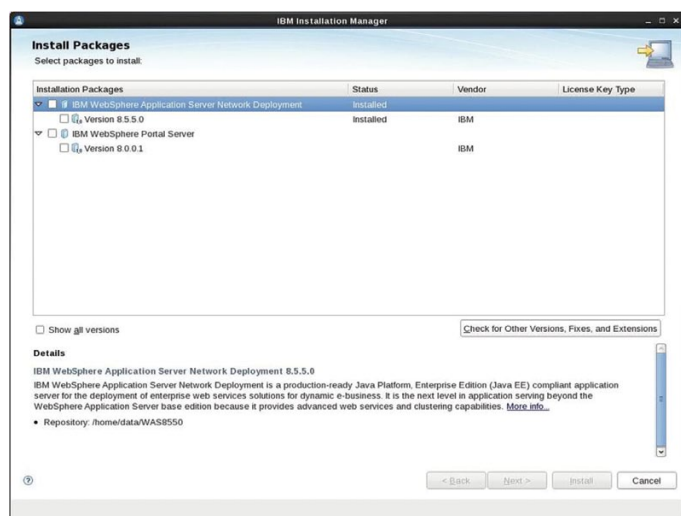
Figure 28. Use new IBM Installation Manager support to install the latest platform updates.

Figure 29. Administrators and site designers can apply efficient, responsive design approaches with the platform's device class detection framework.

Enabling device detection and responsive design

Version 8.0.0.1 includes a new device class detection framework that provides new and efficient capabilities for detecting devices and taking action to provide an optimal experience for that device. Device classes allow site designers and developers to define and update a common set of properties for the device of a client. For instance, through device classes, tablets can be grouped into a class named *tablets* because they share a form

Simplifying platform upgrades

Organizations benefit from the simplified in-place upgrade processes introduced with WebSphere Portal Version 7.0 software. Simplified migration helps eliminate lengthy procedures by handling migration from WebSphere Portal Version 6.1.5 or 7.0 software to version 8.0.0.1 as an in-place software upgrade.

In version 8.0.0.1, organizations can migrate from the previous two platform releases, WebSphere Portal and Web Content Manager Version 6.1.x software or from version 7 directly to WebSphere Portal and Web Content Manager Version 8.0.0.1 software. When organizations upgrade from version 6.1.x or version 7.0 to version 8.0.0.1, WebSphere Portal software automatically migrates the following applications and configuration data so that the new portal looks and behaves the same way as the earlier portal:

- Security configuration
- Access control
- Portal behavior
- Portlet applications
- Customized portal resources such as themes and skins, pages, and portlets
- Personalized content
- Virtual portals

Designing and managing digital experience platform configurations

In version 8.0.0.1, a new configuration wizard is provided to deliver a graphical interface for creating scripts for configuring databases, setting up security, migrating to new versions and more. This service provides administrators with an intuitive approach to manage tasks such as editing various platform properties directly. Using the configuration wizard, administrators may use workflows to guide through the process of creating customized scripts. The wizard may also be used to check the status of workflows running, import and export workflows, and troubleshoot configuration settings.
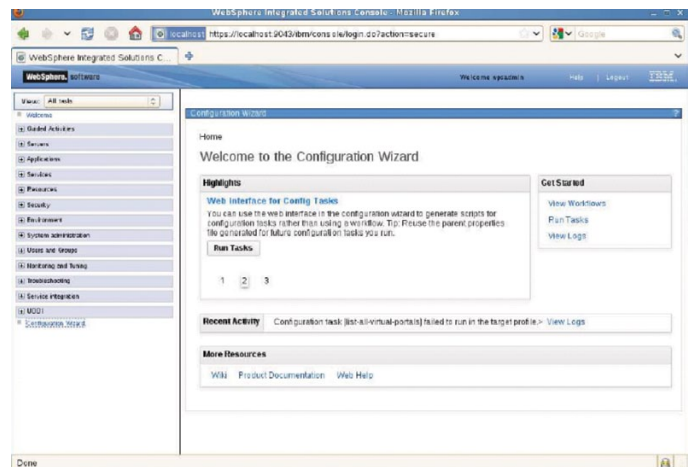
Figure 30. The new configuration wizard provides an intuitive graphical interface for administrators to design and manage web portal platform configuration operations.

The new IBM Connections Files and Profiles Integration Pack for WebSphere Portal software (https://ibm.biz/BdDaDb) can be used to automate integration of entitled IBM Connections Files and Profiles features into WebSphere Portal Server deployments.

Enabling virtualization

WebSphere Portal Version 8.0.0.1 software supports deployment to virtualized environments that can help organizations:

- Simplify installation and configuration complexity
- Deliver consistency
- Improve utilization of hardware and software resources
- Increase availability and reduce costs.

WebSphere Portal and Web Content Manager software offer published support (**ibm.com**/support/docview.wss?uid=swg27007791) for a variety of current and future hypervisor platform versions. In addition, to help organizations accelerate development and deployment processes and reduce IT costs, IBM offers a range of cloud-based services supporting deployment. These include platform-hosting environments from IBM and IBM Business Partners in which the portal server, administration and development functions reside in the public cloud, in a multitenant environment or in an on-premises private cloud deployment.

For private cloud requirements, IBM Web Experience Patterns for WebSphere Portal Server and Web Content Manager Hypervisor Edition software enable rapid deployment of web experience solutions in a private cloud and can reduce installation and configuration time from months or weeks to minutes. These offerings include images of WebSphere Portal Server Version 8.0.0.1 software, Web Content Manager Version 8.0.0.1 software and an included operating system. They can be deployed through IBM Workload Deployer software and into IBM PureApplication™ System. IBM WebSphere Portal Server and IBM Web Content Manager Hypervisor Edition software provide a single downloadable virtual machine image packaged in open-standards-based Open Virtualization Format (OVF). This edition is a preinstalled, preconfigured VMware instance capable of building stand-alone portal servers as well as complex cluster patterns within minutes with just a few clicks of the mouse and the filling out of a form. The IBM Web Experience Patterns for WebSphere Portal Server and Web Content Manager Hypervisor Edition software are a preinstalled and preconfigured, full-release implementation that includes IBM DB2® Enterprise Server Edition software and runs on the SUSE Linux Enterprise Server or Red Hat Enterprise Linux operating system. The Web Experience Patterns for WebSphere Portal and Web Content Manager Version 8 software also include patterns that can be executed to automatically install WebSphere Portal and Web Content Manager software in topologies that align with best practices, such as cluster patterns and remote database instance setup for added scalability.
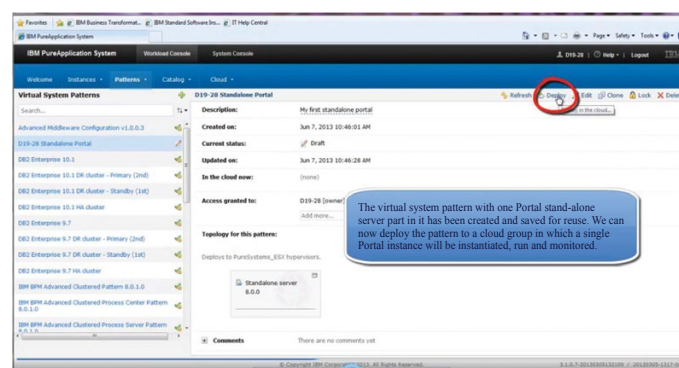
Figure 31. Leveraging IBM PureApplication System and point-and-click functionality, users can select software to deploy to production—virtually in minutes.

Script packages can be executed to add services to pattern-based deployments, such as to automate integration and configuration with a specified Lightweight Directory Access Protocol (LDAP) directory, or adjust performance variables including Java virtual machine (JVM) heap size, HTTP threads and data source connection pools. Custom script packages may be developed, added and shared through the PureApplication System console catalog. This innovative deployment and management platform helps enable IT professionals to reduce installation times and configuration errors and accelerate time to production.

Delivering optimized web experiences with IBM PureSystems software

For organizations seeking a purpose-built platform that includes hardware and software designed to optimize the application lifecycle, including software setup and workload deployment preparation, IBM offers the IBM PureSystems™ family of offerings. IBM PureApplication System is an expert-integrated, workload-optimized platform designed and tuned specifically for transactional web and database applications. This offering delivers expert-configured, tuned deployment templates and includes

the software components required to deploy and maintain applications. This workload-aware, flexible platform is designed to make it easy to deploy, customize, safeguard and manage products in cloud environments.

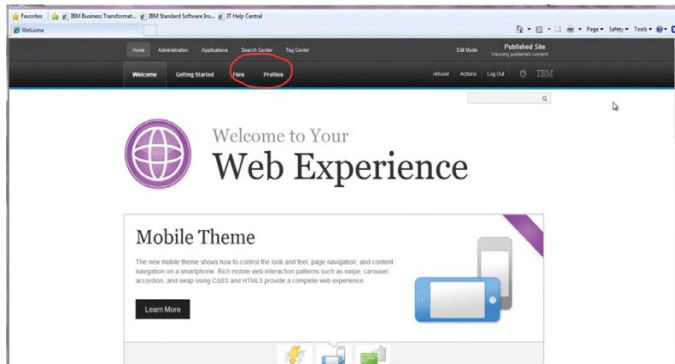*Figure 32*. Deploy WebSphere Portal software and a script package that automates IBM Connections Files and Profiles integration with speed and consistency for improved return on investment (ROI) on IBM PureApplication System.

The platform helps environments grow and shrink in response to changes in demand, increase hardware utilization by reducing the need to provision explicitly for peak utilization, and reduce system outages.

Designed to reduce installation and configuration times, the Web Experience Patterns for IBM WebSphere Portal and Web Content Manager Hypervisor Edition software are optimized to run in this IBM PureSystems virtualized platform environment. This approach provides robust WebSphere Portal and Web Content Manager features and drives rapid, optimized deployments of web portal and web content manager–based applications, enabling organizations to reduce installation and configuration cycles, automate software license tracking, and optimize hardware utilization.

The "Web Experience Pattern for IBM PureSystems" demo shows how IT professionals can deploy a preconfigured, optimized multinode WebSphere Portal cluster in minutes. View it at http://youtu.be/3DEFx0U7ows

Building public cloud solutions with IBM SmartCloud software

The IBM SmartCloud® Enterprise environment offers compute options with virtual IT infrastructure support, a standard level of security for sharing physical IT resources among many tenants and dedicated computing environments for organizations. The IBM cloud is designed to provide rapid self-service provisioning and high payback through reduced costs, error reduction and accelerated application development via provisioning on demand.

The SmartCloud Enterprise infrastructure allows enterprise clients to expand on internal development and test efforts through instant access to our security-rich, scalable cloud delivery model; IBM software; and IBM application lifecycle management capabilities. The IBM approach to cloud complements clients' current data centers and traditional development efforts, offering clients a number of potential benefits:

- A reduction in provision cycle times from weeks to minutes
- A decrease in software defects by up to 30 percent based on IBM client experience
- A reduction in the time required for test and quality assurance
- Rapid redeployment of environments across multiple IT projects

Product images available on the SmartCloud Enterprise infrastructure include WebSphere Portal and Web Content Manager software. For more information on SmartCloud Enterprise services please visit **ibm.com**/services/us/en/cloud-enterprise

Leveraging Amazon EC2

IBM teams with Amazon Web Services (AWS) to provide a number of cloud-based software solutions, including WebSphere Portal software and related technologies on the Amazon Elastic Compute Cloud (Amazon EC2). Amazon EC2 is effectively a platform as a service (PaaS) offering where users can create virtual machines with software running on the AWS infrastructure. IBM provides a number of development Amazon Machine Images (AMIs) that can be used by independent software vendors (ISVs) with no charge for the IBM software. A prebuilt and preconfigured development AMI that includes WebSphere Portal Server and Web Content Manager software, the site wizard, and some sample site templates is currently available at http://aws.amazon.com/ibm

Authenticating users through social channel identity providers

WebSphere Portal Version 8.0.0.1 software offers new security and authentication features with the OpenID standard that can simplify access and interactions from users of popular social channels to WebSphere Portal customer-facing web platforms.

Web applications provide information and services to public users and personalized information and services to authenticated users. Users often work with multiple web applications, which require multiple IDs and passwords. This requirement can be difficult to maintain. Integrating identity providers used by popular Internet services and social channels, such as Google, Yahoo! and Facebook, into your site can simplify logging in for existing and new users.

The platform's support for OpenID enables new platform integration options to configure WebSphere Portal software to authenticate users from these channels, which can create new audiences for an organization's web properties. Simplifying access and interactions with these social communities on your website can increase acceptance of your business or services.
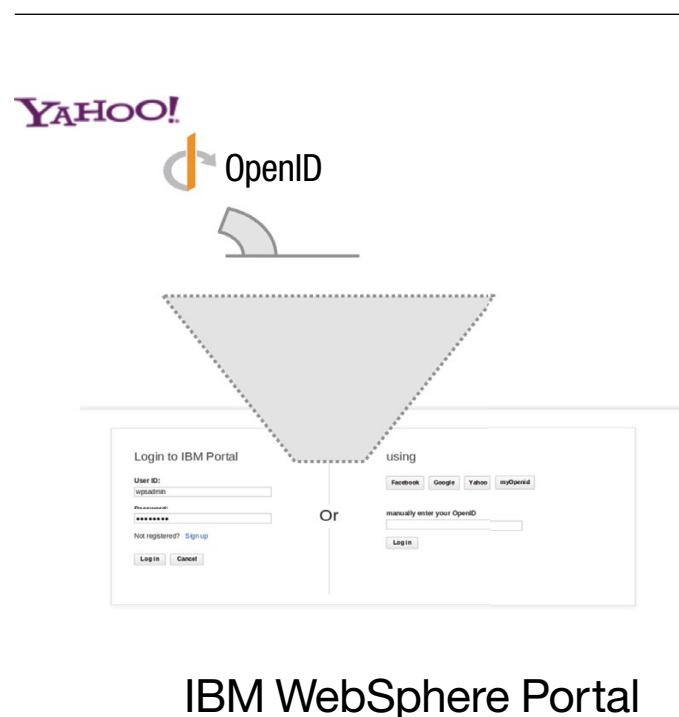
Figure 33. Support for OpenID authentication can increase the reach of web properties to new social channels.

WebSphere Portal software uses OpenID and OAuth to integrate relationships to an identity provider. OpenID provides a method of decentralized user management where users can select an identity provider to host their profile information, including user ID and password. WebSphere Portal software requires that a trusted relationship exist between the identity provider and IBM WebSphere Application Server software. Therefore, WebSphere Application Server software provides a plug-in point, called a trust association interceptor (TAI), designed to create trust based on the identity provider information.

WebSphere Portal software provides a new implementation of this plug-in point that handles the communication between the identity provider and WebSphere Portal software as the service provider. WebSphere Portal software trusts the identity provider and grants the user entrance. In version 8.0.0.1, administrators are given options to select how to configure authentication to work with these identity providers.

Administering website analytics

WebSphere Portal software provides capabilities for administrators and site managers to collect data about the usage of portal services and analyze the results. WebSphere Portal software generates standards-based access log files in a National Center for Supercomputing Applications (NCSA) combined log format. Depending on the configuration options selected by administrators, the log files can capture activities related to page management, such as creating, reading, updating and deleting pages. The files can also capture user interactions with portal pages, including user requests, portlet requests, and login and logout operations, as well as user management actions, such as creating, reading, updating and deleting users and groups. Standard database reporting tools can be used to analyze and report WebSphere Portal Server analytics log results to understand usage patterns and user management actions.

WebSphere Portal software also supports administrative and instrumentation support for integration with third-party web analytics and enterprise marketing management packages through its support for active site analytics. Active site analytics provides portal platform support to collect data about user behavior within portal deployments and promote that data to a service or third-party web analytics tool for analysis. This support improves an organization's ability to effectively work with portal analytics information to optimize a portal's effectiveness. Using site analytics integration, third-party analytics tools are able to access and analyze interactions with WebSphere Portal website solutions. Active site analytics page metadata tags are provided as microformats for common page identifiers such as page, title, visitor ID and content query search string.

The platform provides support that allows dynamic JavaScript values in page metadata. This enables calculated information to be managed and evaluated from the metadata values. Third-party analytics vendors and organization administrators or business users can write scripts, called aggregators, to retrieve the data. To get started, the portal theme includes two sample aggregators, which can be customized. New aggregators can be written and added to collect portal page metadata items. For example, working with web analytics packages such as IBM Enterprise Marketing Management solutions, including IBM Digital Analytics and IBM Digital Analytics On Premises; Google Analytics; Webtrends; and Adobe Marketing Cloud (formerly Omniture) software, administrators can add the aggregator scripts to pages as required using the *managed pages* function and editing the page parameters to include site analytics aggregator capabilities.
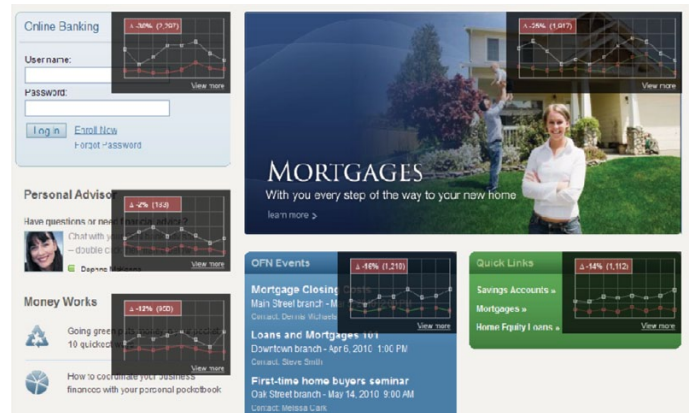

Figure 34. Active site analytics for the WebSphere Portal platform are designed to enable easy integration with popular third-party web analytics offerings.

Enabling search capabilities

WebSphere Portal software includes built-in search capabilities that allow users to search portal content and any linked sites. Users can initiate a search from the search form in the portal theme banner or from the search center page. The themes provide a search box on every portal page. When users enter a search term, the portal takes them to the enhanced Search Center portlet, which displays their results ranked by relevance across portal search–supported sources. From there, users can optionally refine their search criteria and extend them to other sources. Sources can include internal or external websites, content published by IBM Web Content Manager software, IBM Connections and IBM Content Analytics with Enterprise Search software–supported search sources, and content from the portal site and external web search sources.

When searching the portal site, the search engine can fetch and index all pages with portlets dynamically, presenting search results to users in the context of their specific page and portlet configurations. Faceted search services can also be configured, and the Search Center user interface may be customized to match organization-specific requirements. Search results adhere to the portal security model, so users can only find content and documents they are entitled to view via portal access controls. Security filtering is highly effective by applying prefiltering as well as postfiltering techniques.

In version 8.0.0.1, new capabilities were added to help site managers optimize the Web Content Manager search results display.

The Web Content Manager rendering interfaces present options to automate the collection of site content metadata contained in content rendered on WebSphere Portal pages. Search engines and crawlers can make use of additional metadata information embedded to the page markup by meta tags to optimize the creation of search indices, collections and search results.

WebSphere Portal software also includes a site map portlet, enabling administrators to target and optimize platform content to be more efficiently crawled, retrieved and presented by external search engines.
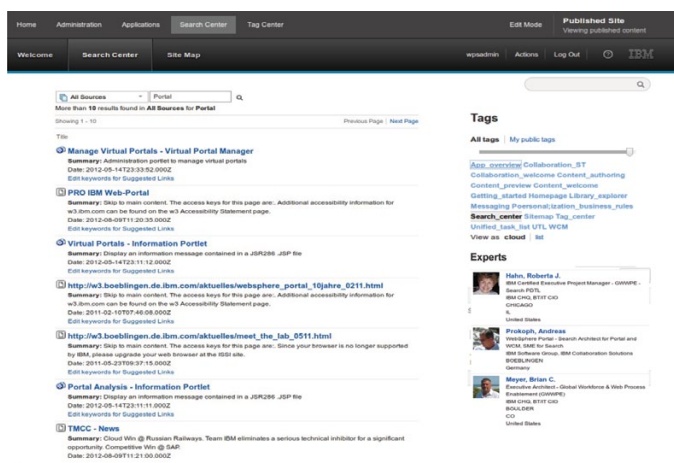
Figure 35. The Search Center feature supports federated search and allows users to tap into external search engines and benefit from suggested links.

Extending your reach with enterprise search

As the volume of content and information integrated with websites grows, it can become increasingly difficult for users to find what they need to make informed business decisions. IBM Content Analytics with Enterprise Search is designed to index and optimize a variety of content, database, social and information sources, including WebSphere Portal, Web Content Manager, and IBM Connections and Domino content. In addition, it integrates social software solutions, such as IBM Connections software, and enterprise content management, database and other enterprise information repositories, including Microsoft SharePoint solutions, into a single, relevant and security-rich search interface. Built on an extensible, open architecture, Content Analytics software delivers rich enterprise search capabilities to help bridge the gap between an information need and the ability to take action.

Content Analytics with Enterprise Search software is designed to install and integrate with WebSphere Portal software to provide scalable and security-rich enterprise searches directly from within the familiar WebSphere Portal interface. This integration provides several advantages over using the embedded WebSphere Portal search engine, including the ability to scale to millions of documents, reach to non–web enterprise content sources and access the rich search functionality available in Content Analytics software, including synonym expansion, quick links, dynamic summaries and autocategorization of results.

Content Analytics with Enterprise Search software provides integration with WebSphere Portal software:

- An automated deployment script for adding Content Analytics software as a search provider
- WebSphere Portal search center integration, enabling security-rich searches of enterprise content directly from within the familiar Search Center portlet
- The ability to search WebSphere Portal pages, as well as IBM Web Content Manager, IBM Connections, file systems, websites, Microsoft SharePoint and a wide variety of content and information sources, using native security features
- User interface search services, including high-performance faceted navigation, saved searches, document previews, type-ahead support and suggested queries
- Document previews
- Proxy and SSO/Secure Sockets Layer (SSL) support when accessing WebSphere Portal content

Content Analytics with Enterprise Search software provides security-rich index and search for content in systems:

- IBM FileNet® P8 software
- IBM Notes and Domino software
- IBM Case Manager
- IBM Content Manager
- WebSphere Portal pages

- IBM Lotus® Quickr® software
- Connections software
- Microsoft Windows file system
- Web Content Manager software
- Microsoft SharePoint software
- OpenText Livelink
- OpenText Connectivity Solutions (formerly Hummingbird)
- EMC Documentum
- IBM DB2, Oracle, Microsoft SQL Server and other databases

Learn more about IBM Content Analytics with Enterprise Search software on the web at **ibm.com**/software/ecm/content-analytics

Using IBM WebSphere eXtreme Scale software to enhance performance

IBM WebSphere Portal software can make use of DynaCache services to store rendered content retrieved from Web Content Manager when advanced caching is enabled. This caching can improve response times and reduce load on the database. IBM WebSphere eXtreme Scale software and the IBM WebSphere DataPower® XC10 Appliance product offer an implementation of DynaCache that stores cached content in an elastic data grid instead of using the default DynaCache implementation, which stores cached content in WebSphere Application Server heap space or on disk.

The result delivers more-efficient use of computing resources with a larger cache capacity, the ability to run portal platform JVMs more efficiently, reduced local memory requirements, faster platform startup times and improved consistency of performance. Organizations can achieve significant performance benefits of moving the WebSphere Portal advanced cache content into a data grid hosted by a WebSphere DataPower XC10 caching appliance—potentially without requiring any application code changes.

Application developer capabilities

WebSphere Portal Version 8.0.0.1 software provides an improved developer experience and new services to accelerate the design and delivery of website and mobile web experiences:

- Reduce reliance on bandwidth and improve responsiveness of mobile applications with new client-side architecture tooling support
- Build engaging mobile experiences on smartphones and tablets with Dojo Mobile tooling
- Integrate and leverage systems that rely on open standards with support for open standards application programming interfaces (APIs)

WebSphere Portal software includes preintegrated portlets; cross-portlet integration; web content templates; intuitive, drag-and-drop page builder tools; and a platform designed to enable easy integration of social and collaborative services, web assets, applications, and business processes. The platform offers the essential ingredients needed to deliver exceptional, differentiated web experiences that help organizations dramatically improve their online experiences across multiple channels, which can lead to increased employee engagement and productivity, enhanced customer satisfaction, better brand awareness, and improved profitability. Site designers and application developers can also design and deliver rich, dynamic web experiences that apply applications developed with web design tools of choice such as Adobe Flex, HTML, and mashup and social software applications.

Managing business processes

Portals provide an ideal environment for users to interact with business processes. The portal platform helps organizations deliver engaging, role-based web experiences with process automation capabilities that match user expectations and drive more-effective use of IT investments. The platform's role-based presentation services enable customers to surface business process management (BPM) activities in the context of social, web content or other applications on a portal page. For example,

a business partner onboarding BPM workflow action can be surfaced through the portal's task list portlet within a Connections community established to facilitate partner-to-partner activities.
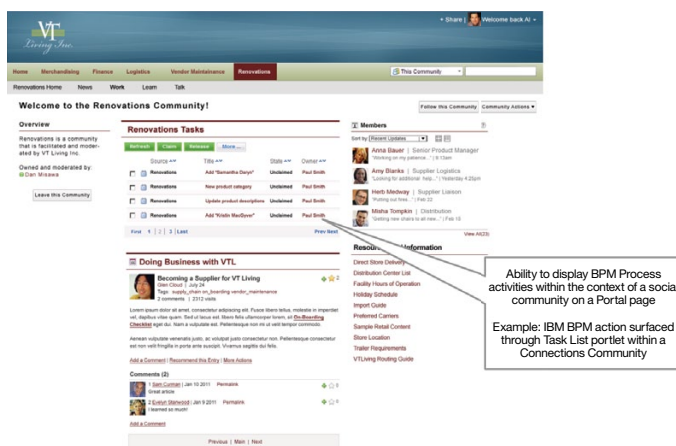
Figure 36. Deliver engaging, role-based web experiences with business process automation capabilities in the context of social, web content or other integrated applications.

For web solution developers and process designers, WebSphere Portal software provides:

- Role-based access to process instantiation and processing of supporting customer-, partner- or employee-facing websites
- In-context launching of processes
- Web page instantiation to manage the coordination of multiple processes concurrently
- User experience helper applications supporting forms completion and decision-making processes
- Tools to iteratively create and adapt user interfaces or add helper applications supporting business processes

Accelerating development with the unified task list

In version 8.0.0.1, the unified task list (UTL) portlet is included with the release as a means to accelerate development and delivery of a single point of integration between multiple systems and to present role-based tasks to users involved with workflow-managed processes. The UTL is an SOA-based application with entry points that enable integration of tasks and work items from different workflow processing systems (for example, IBM Business Process Manager, IBM WebSphere Process Server, IBM WebSphere Lombardi Edition, FileNet workflow, and IBM Forms and IBM Forms Experience Builder software as well as enterprise resource planning (ERP) systems such as SAP NetWeaver). The UTL portlet uses dynamic portlet pages, cross-page wiring or external URLs to communicate with other portlets and process workflows. The customizable solution includes task provider examples that demonstrate services that access back-end systems to retrieve tasks.

IBM WebSphere Portal Enable and IBM WebSphere Portal Extend software include entitlements to IBM Business Process Manager, IBM Process Server Express®, IBM Process Center and IBM Process Designer software to design and deliver role-based workflow managed business processes.

Delivering forms-based solutions

WebSphere Portal Version 8.0.0.1 offerings include entitlements to IBM Forms software components. Forms software enables organizations to quickly design and deliver efficient forms-based solutions ranging from simple polls to multipart transactions that require digital signatures. IBM WebSphere Portal solutions integrate with IBM Forms Server and IBM Forms Experience Builder, which delivers a web-based user interface to build dynamic forms and applications using a web-based interface. Site designers can use this new tool to design a form, set roles to create a workflow, deploy the application and review submitted results—all from a single web-based interface.

Forms Experience Builder is designed to make creating forms easier than before by dramatically reducing the time and effort required to deliver compelling, interactive applications. The simple, web-based user interface allows web designers to quickly assemble a series of application screens, capture data into a relational database and orchestrate notifications using an integrated workflow. Data captured in Forms Experience Builder can be more-easily integrated into existing line-of-business systems using a drag-and-drop web service interface. After users submit forms, you can sort data for export to a spreadsheet program.

Figure 37. Edit forms within WebSphere Portal software using IBM Forms Experience Builder Version 8.5

To present Forms solutions to WebSphere Portal users, Forms Experience Builder software includes a form viewer portlet for displaying applications through the WebSphere portal. The form viewer portlet includes configuration options for site designers to identify forms to display, include conditional event process options and customize portlet display sizes. This portlet provides a flexible, no-code approach to deliver the efficiencies and ROI of forms-based processes, including data verification and accuracy, accelerated processing time frames, and automated audit and storage services, to WebSphere Portal users. In addition, if the UTL portlet is used to create customized workflows for WebSphere Portal users, a Forms Experience Builder adapter is provided to seamlessly connect web forms to workflow processes managed by the UTL portlet. When integrated with WebSphere Portal software, site designers can apply the benefits of WebSphere Portal framework services, including personalization to target and optimize delivery to the right audiences and increase user satisfaction and web analytics to monitor the effectiveness of results.

In addition, the new IBM UX Screen Flow Manager for WebSphere Portal software provides a mechanism for developers to guide users through a well-defined sequence of screens that each present different artifacts or processes that are typically managed by individual users, enabling them to perform the linked steps or tasks in the appropriate sequence.

The UX Screen Flow Manager provides operators, developers and dialog modelers with the added flexibility to develop fine-granular, "small split" portlets and IBM Forms Experience Builder software–based forms that can be declaratively interconnected and managed by WebSphere Portal software.

Supercharging multichannel web delivery with IBM Web Experience Factory

IBM Web Experience Factory software, included in the WebSphere Portal platform, provides a dedicated development environment that supercharges delivery of enterprise-ready, standards-based, Web 2.0 applications with rich, interactive interfaces that can deliver exceptional web experiences to desktop browsers, smartphones and tablets. Web Experience Factory includes prebuilt connectors and builder components to guide the creation, customization, deployment and maintenance of user interface components for existing applications and data sources such as relational databases, web services, REST services, SAP, Oracle PeopleSoft, IBM Domino, Microsoft Excel and CMIS. Web Experience Factory software enables faster and simpler creation of even richer, more-interactive and scalable applications that provide exceptional web experiences.

Web Experience Factory provides flexible rendering and deployment capabilities with support for mobile delivery and specific "builders" that automatically generate interfaces optimized to the display capabilities of popular smartphones, including Apple iPhone, Google Android–based and BlackBerry devices, as well as deployment to WebSphere Portal and WebSphere Application Server software—all from a single code base.

New Web Experience Factory features and services supporting mobile development include:

- Advanced, responsive mobile capabilities using a client-side architecture
  - Enables developers to build rich mobile applications with Dojo Mobile and new user interface widgets
  - Reduces traffic and the amount of data between browser-based clients and servers to improve performance
  - Adds new features via Web Experience Factory: multichannel and responsive UI support and camera service integration builder
- Enhancements to the generated user interface to create exceptional web experiences
  - Includes new themes
  - Makes it easier to work with external creative and user interface teams with enhanced support for custom HTML designs and layouts

- New developer community features
  - Provides developers with the latest information with extensions to online community resources
  - Makes it easier to understand how to leverage new capabilities and deliver exceptional web experiences with new samples and best practices documents
- New CMIS builder for accessing enterprise content
  - Integrates with ECM repositories that support compliance with the CMIS standard, including IBM FileNet and Microsoft SharePoint software

Figure 38. Web Experience Factory automates development of rich, responsive mobile and multichannel website applications.

Providing comprehensive Java technology–based website development capabilities

IBM Rational® Application Developer Portal Toolkit software is a seamless extension to IBM's leading enterprise Java development environment, providing an integrated development environment (IDE) for the design, construction, testing, profiling and deployment of multichannel applications and portlets. The IBM Rational Application Developer for WebSphere Software offering provides a comprehensive environment to accelerate development of Java EE, SOA, OSGi Alliance, cloud,

Web 2.0, mobile web, service component architecture and modern batch applications for WebSphere Application Server Version 8.5.5 and IBM WebSphere Application Server Liberty Profile, IBM Workload Deployer Version 3.1 and WebSphere Portal software.

In addition to capabilities that help developers write software, Rational Application Developer software provides unit testing with embedded test servers as well as problem determination and code analysis tools to help ensure delivery of high-quality applications that can be easily maintained to provide value and time savings across the life span of your software projects. It includes an embedded WebSphere Portal test server, so developers can test portal applications during development. The latest release offers many enhancements for WebSphere Portal developers:

- Support for single-click Web 2.0 features to easily enable Asynchronous JavaScript and XML (AJAX), Java API for RESTful Web Services (JAX-RS), Dojo, analytics and other services key to delivery of exceptional user interfaces
- Support for creating JavaServer Faces (JSF) 2.0 portlets including a JSF 2.0 runtime environment (MyFaces) with WebSphere Application Server Version 8.x software and a JSF 2.0 portlet bridge
- Support for portlets built using Facelets
- Tools for creating portlets for smartphones and tablets:
  - A mobile browser simulator designed to make it fast and easy to preview and test multichannel applications
  - Improved smartphone and tablet support to reduce developer and test time
  - Mobile Dojo support that provides an exceptional user interface based on the Composite Capabilities/Preference Profiles (CC/PP) structure and device classes that help ensure standardized and uniform development experience
  - jQuery development samples, drag-and-drop design support, and mobile widget and page previews

- Rich page IDE editor functionality for portlet development with CSS3 and HTML5 support
- Support for WebSphere Portal Version 8.0.0.1 software as a run time to create and test portlet projects
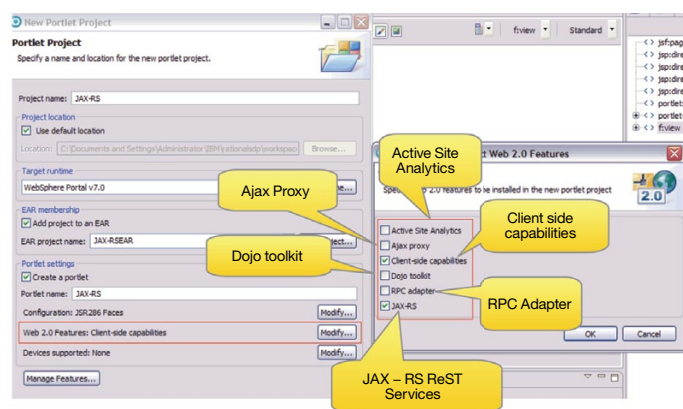- Support for using Dojo 1.7 in portlet projects

Figure 39. The enhanced Rational Application Developer IDE enables single click integration of Web 2.0 features.

Portlet frameworks supported by IBM tooling:

- JSF Version 2.0, 1.x
- Java EE standard
- IBM Rational Application Developer Version 8.0.0.1 and 8.5 software

Designing and delivering mobile digital experiences

Organizations are rapidly extending digital experience solutions to mobile audiences, matching the expectations of users as well as sales, marketing and services professionals to leverage mobile channels for successful sales and customer loyalty activities.

Mobile design and delivery approaches can include:

- "Native" development, which involves skilled resources with the ability to develop native applications and manage across continual operating system and application updates
- Mobile web based on HTML5, CSS, JavaScript or a client-side framework with the ability to augment with an Adobe PhoneGap technology–like container for native feature cases
- Mobile enterprise app platforms that use proprietary development language expertise to support the development of multichannel mobile app delivery

WebSphere Portal and Web Content Manager Version 8.0.0.1 software support flexible mobile delivery options to match the goals and skill sets of organizations. Using version 8.0.0.1, organizations can leverage platform services and add value to mobile development efforts as they create powerful web experiences that deliver web content, applications and processes personalized for the right user, optimized for the right access point and delivered in the right context.

The WebSphere Portal platform provides flexibility and choice to match an organization's mobile delivery requirements and skill sets:

- The WebSphere Portal Mobile Experience theme delivers a lightweight, visually rich mobile-enabled theme that exploits WebKit CSS3 visual effects. The mobile theme includes a set of showcase samples of common mobile application navigation patterns and page layouts designed to easily be extended with Dojo Mobile, jQuery and other components.
- Web Experience Factory provides a model-based IDE for website developers that can make it easier and faster than traditional coding to develop exceptional web experiences. The software includes more than 150 prebuilt builders, including smartphone builders, to accelerate development time. Its dynamic profiling allows developers to write once and deploy on many (desktop and mobile) platforms.

- Rational Application Developer software provides an IDE for the design, construction, testing, profiling and deployment of applications. The software delivers several features supporting mobile application development, including a what-you-see-is-what-you-get (WYSIWYG) editor showing a target device form factor; support for Dojo widgets, including mobile, automatically detected and shown in the palette; an in-line properties view to configure selected widgets; and a simulator to enable device testing inside browsers.

- IBM Worklight® software includes a client runtime container for developing hybrid applications, written in HTML and JavaScript, with access to native device functions. Worklight applications management services enable organizations to distribute mobile apps to employees through internal and external app stores. The platform includes a notifications capability that can engage users with notifications of time-sensitive information or actions to take. Using the IBM Worklight platform, organizations can control mobile app access and interactions with support for policy-based access, versioning, updating, tracking, and wipe or remove. In addition, IBM Tealeaf® CX Mobile clients can integrate Tealeaf CX Mobile iOS and Android software development kits (SDKs) into an IBM Worklight mobile app. The IBM Worklight app is enabled with insightful analytics data collection from the client side to be analyzed by using Tealeaf CX Mobile software on the server side. Organizations are enabled to better understand the purpose of a customer's online and mobile interactions and be able to enhance the customer experience. For additional information please reference http://pic.dhe.ibm.com/infocenter/wrklight/v6r0m0

IBM Worklight Mobile Platform Overview

Worklight Studio
A complete, extensible environment with maximum code reuse and per-device optimization

Worklight Server
Unified notifications, runtime skinning, version management, security features, integration and delivery

Worklight Runtime Components
Extensive libraries and client APIs that expose and interface with native device functionality and the Worklight server

Worklight Console
A web-based console for real-time analytics and control of your mobile apps and infrastructure
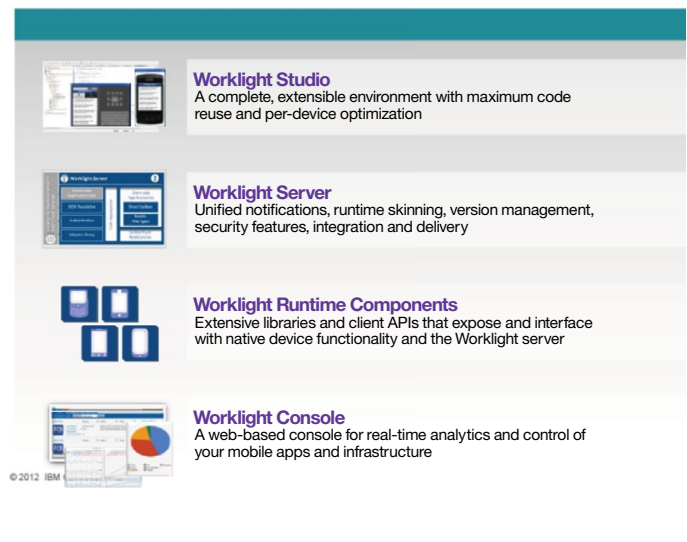
© 2012 IBM

Figure 40. IBM Worklight software extends WebSphere Portal solutions to mobile app stores to drive consistent, personalized experiences across web, mobile web and mobile hybrid channels.

WebSphere Portal and Web Content Manager solutions, including those developed with tools such as Web Experience Factory and Rational Application Developer, can be extended with integration to on-device capabilities such as cameras, contacts and accelerometers and can use delivery and management through app stores, mobile notifications and more using the IBM Worklight development IDE and server mobile delivery platform.

Figure 41. Using IBM Worklight software, interaction with digital experiences powered by WebSphere Portal software is enabled conveniently through mobile app stores as shown in this Greenwell example.

Figure 42. Mobile Portal Accelerator provides a multichannel server and device repository to deliver mobile web experiences that are optimized across a broad range of mobile devices.

The IBM Mobile Portal Accelerator delivers a multichannel server and device repository that integrates with WebSphere Portal and Web Content Manager solutions to automatically adapt and render web portal and web content pages to a wide variety of mobile devices. The technology includes a toolkit based on Eclipse; Rational Application Developer software, which is used to create portlets; XHTML Device Independent Markup Extensions (XDIME) JavaServer Pages (JSP) technology; and policies that are executed through WebSphere Portal software and the Mobile Portal Accelerator multichannel server. Using this approach, developers can create one set of markup for all mobile devices, which can then be interpreted and optimized by the Mobile Portal Accelerator components.

The device repository supports more than 10,000 devices worldwide and is continually refreshed with new devices and updates. This solution is designed to meet the needs of organizations seeking to reduce custom mobile application development efforts and deliver optimized web mobile experiences across a broad range of mobile devices including feature phones, smartphones and kiosks. Additional information can be found in the WebSphere Portal Family wiki at https://ibm.biz/BdDaXn
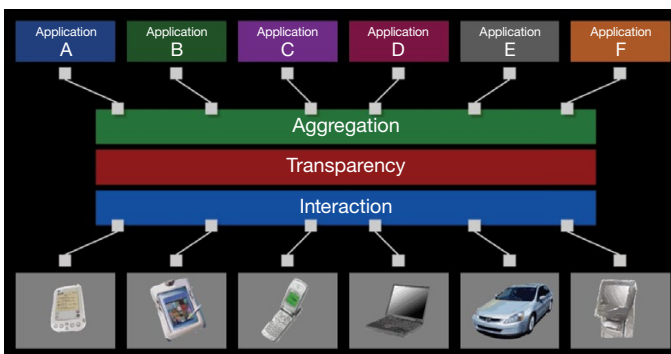
A number of technologies can be integrated with WebSphere Portal software to enhance its functionality. IBM is committed to an open-standards approach that works with a range of IT environments. WebSphere Portal software is built on open standards and can work with a wide range of databases, directories, platforms and security protocols. Further, the software provides an extensible framework for interacting with enterprise applications, content, people and business processes. That framework includes the scalable WebSphere Application Server software, which excels at supporting process and application integration solutions operating in SOA environments.

Designed as a framework housing a collection of portal services, the WebSphere Portal architecture can play a key role in adopting an SOA approach. Its basic services can be reused, extended and modified—helping usher in tighter integration and increased flexibility. To achieve rapid time to value, WebSphere Portal software provides a broad range of available services and extensive offerings from the IBM Solutions Catalog. Using the included web design and development technologies or development and site design tools of their choice as well as the skill sets of their employees, organizations can also develop custom components and use the portal to aggregate these assets into a comprehensive and personalized digital user experience.
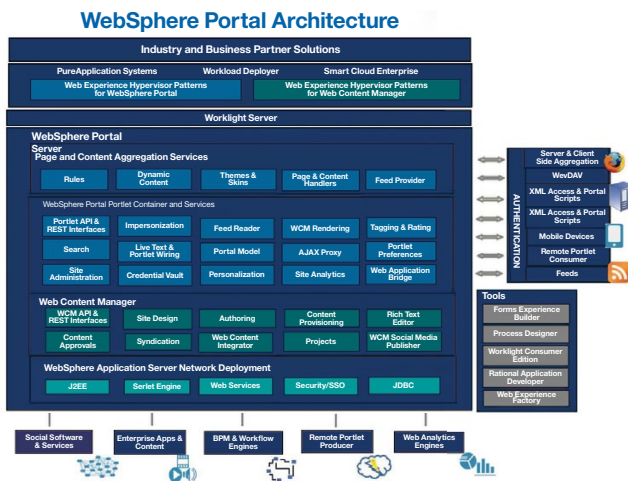
WebSphere Portal Architecture

Figure 43. Here's a look at the overall architecture of a WebSphere Portal software environment.

Why upgrade to WebSphere Portal and Web Content Manager Version 8.0.0.1?

The digital era is being driven by the proliferation of mobile and social networks that have transformed the way organizations engage their key audiences. Leading organizations are looking beyond websites to create more personalized, digital experiences to deepen their interactions with audiences through compelling content and design for mobile delivery, social engagement and analytics for data-driven decision making to engage audiences on their terms and their time. With WebSphere Portal and Web Content Manager Versions 8.0.0.1, 8, 7.0 and 6.1 software, clients can spot new opportunities to create next-generation, differentiated digital web experiences. Whether you are engaging with customers, employees or partners, WebSphere Portal Version 8.0.0.1 software delivers key new services that support the creation of compelling content that resonates with target audiences, including in-line edit and content targeting, workflows, social capabilities, analytics, mobile web delivery, microsite and virtualization support, simplified usability and administration, open standards, security, and scalability to build and deliver differentiated multichannel solutions while improving cost of ownership.

Features and benefits of WebSphere Portal Server Version 8.0.0.1 software

IBM WebSphere Portal Server is a powerful solution for delivering engaging web content and applications in an integrated, differentiated and personalized web experience. WebSphere Portal Version 8.0.0.1 software introduces new, powerful and essential web experience capabilities that can help you:

- Quickly create and manage powerful, integrated and content-driven digital experiences:
  - New managed page site author services use a new, integrated toolbar to simplify the creation and management of portal pages and web content with point-and-click simplicity.
  - New page project assembly, preview and publish services speed time to production for individuals and teams.
  - The new content target editor offers an in-line capability to select segments that direct the right content to the right users to help maximize audience engagement and drive expected outcomes.
  - The new Site Builder tool lets website designers and content authors create websites and microsite templates quickly.
  - A new modular theme framework enables greater design flexibility, enhances the user experience and improves performance.
  - New Web Experience Factory builders for development of solutions include a new CMIS builder designed to easily access CMIS standard data stores, such as FileNet software and Microsoft SharePoint.

- New IBM Installation Manager services offer faster, streamlined install, uninstall, modify and update processes for administrators. IBM Installation Manager determines available packages, including products, prerequisites, fix packs, interim fixes and other updates.
- A new, easy-to-use configuration wizard for administrators provides faster time to value for your organization.
- New IBM Connections Files and Profiles Integration Pack for WebSphere Portal software speeds implementation and user access to entitled IBM Connections Files and Profiles services.

• Go where your employees and customers are with multichannel experiences:
- New WebSphere Portal Mobile Experience themes help you control the look and feel, page and content navigation on leading smartphones. It includes rich mobile web interaction patterns, such as swipe, carousel, accordion and swap using CSS3 and HTML5, to enable a comprehensive web experience.
- Web Experience Factory Version 8.0.0.1 provides a new user experience with Dojo Mobile tooling for building engaging mobile experiences as well as support for a new client-side architecture, reducing reliance on bandwidth and improving the responsiveness of mobile applications.
- IBM Worklight applications and management services enable organizations to distribute mobile applications to their web property users through internal and external app stores.

• Enable social communication where and when it can most influence communication and productivity:
- New article, blog and wiki templates let users quickly contribute and socialize information across internal and external web communities.
- New community page support lets you more readily scope and place IBM Connections portlets in the right portal and Web Content Manager contexts.

- Enhanced Connections portlets deliver flexible summary and details options, as well as new Forum, Activity Stream and Connections Content Manager portlets for infusing social discussion, content management and collaboration into your web experiences.
- OpenID enables portal users to authenticate themselves with public social network credentials.

• Quickly gather real-time information and make insightful business decisions:
- Web analytics page overlays offer in-place, real-time web page and channel delivery analyses for data-driven decisions that help optimize digital experience results.
- There are flexible options to tag pages, portlets or web content and measure their usefulness through campaign and custom tags.

• Help your customers and employees quickly find the right information:
- Search enhancements provide more granular search index algorithms that optimize WebSphere Portal and Web Content Manager search results, allowing people to find the information they are looking for with greater speed and ease.

Features and benefits of Web Content Manager Version 8.0.0.1 software

IBM Web Content Manager helps increase the efficiency and accuracy of website deployments by placing content creation in the hands of content experts while IT retains control. Version 8.0.0.1 offers easy-to-use content creation and management tools with packaged support for video, images, audio and commerce integration designed to deliver rich, immersive digital experiences and faster time to market:

• Simple yet powerful rich-text editing tools enable line-of-business professionals and content owners to quickly create and manage rich web content without IT involvement.
• An expansive catalog of prebuilt, high-value content templates with responsive web design support speeds microsite and web page creation.

- A dynamic, contextually aware toolbar and built-in project management features make it easy to create, approve, version, publish and syndicate web content.
- A flexible workflow capability helps ensure that the content lifecycle follows the desired business processes and approvals before going live.
- The new REST services for Web Content Manager make information in the repository easily accessible while retaining security. A simple URL interface allows developers to create queries and to use this information to more easily extend the authoring user interface.
- The new authoring home page provides a customized entry point for different types of users. It is a simplified, single-page user interface allowing:
  – Casual authors to easily create and submit content
  – Frequent contributors to create and work with their items
  – Power users to more easily see what is going on across the site and to quickly create or edit any of the items for which they're responsible

Features and benefits of WebSphere Portal Enable software

WebSphere Portal Enable software (**ibm.com**/software/genservers/portal/enable) includes features of WebSphere Portal Server software plus:

- Integrated web content management capabilities that enable you to rapidly build next-generation websites with enhancements that can be used throughout the content lifecycle
- Social document libraries that allow users to easily share, view and organize files within the portal community
- Advanced enterprise search across a wide variety of sources
- Business process management design tooling and workflow management services

Features and benefits of WebSphere Portal Extend software

WebSphere Portal Extend software (**ibm.com**/software/genservers/portal/extend) includes features of WebSphere Portal Enable plus:

- Individual and shared social document library workspaces that allow you to collaborate and exchange ideas on projects, improving team productivity
- Instant messaging, so you can chat with other portal users and take action related to a task or application
- Editable electronic forms builder, designer, viewer and server technology to help streamline your business processes by enabling you to compose easy-to-use and scalable data collection applications that allow your employees, customers and partners to fill out, view and store forms electronically

Related value-added offerings

To help reduce implementation time and speed time to market, WebSphere Portal software provides a number of additional modules and related offerings that are designed to address common business goals and can easily snap on to the WebSphere Portal server for quick deployment. Below is a list of additional solutions available for WebSphere Portal Version 8.0.0.1 software.

IBM Business Process Manager

IBM Business Process Manager is a comprehensive BPM platform that provides organizations with visibility and insight to manage business processes. It scales smoothly and easily from an initial project to a comprehensive, enterprisewide program that harnesses complexity in a simple environment to better meet customer needs. For more information, please visit **ibm.com**/software/integration/business-process-manager

IBM Connections software

IBM Connections software lets you access virtually everyone in your professional network, including your colleagues, customers and partners. The latest capabilities in IBM Connections, such as moderation, ideation blogs and the media gallery, enable you to embrace networks of people who are engaged and to work in transparent and nimble ways to create business value. In combination with IBM's web experience platform and role-based contextual delivery, organizations can achieve sustainable competitive advantage by leveraging innovation from across their value chain and building stronger relationships. For more information, please visit **ibm.com**/software/lotus/products/connections

IBM Digital Analytics LIVE Profiles

To be successful at continual marketing optimization, successful marketing professionals must have consistent access to customer patterns and preference interactions—online and offline—over time, anticipate their future buying decisions based on this history and then tap that rich historical data to deliver the right message to each customer every time. A customer-centric focus is vital to an exceptional web experience.

IBM Digital Analytics LIVE Profiles (Lifetime Individual Visitor Experience) track and store consumer behavior over time. The online and offline intelligence of each visitor interaction stored in the LIVE Profile can deliver detailed insights into the behavior of your customers and prospects and make it easier to include that information in every marketing program.

IBM Digital Analytics software is the ad hoc reporting and analysis application of the continual optimization platform. Along with statistical data capture capabilities, IBM Digital Analytics software allows users to flexibly build, distribute and analyze user-defined reporting. Users can develop tailored reporting through advanced column, metric, filter and segment selections and visually explore the results to gain insight into visitor behavior and the performance of marketing as well as onsite and offsite initiatives.

Additionally, the WebSphere Portal and Web Content Manager personalization engine and content targeting editor can be used to present content on a rule-based or conditional basis with user-supplied information, group attributes, inferred data, transactional records and other variables (for example, time, web or mobile browser, and global positioning system [GPS] location). Because WebSphere Portal and Web Content Manager software are already instrumented to gather visitor-specific behavior information via active site analytics pages and component tags, they can be integrated with the Digital Analytics LIVE Profile.

Using the WebSphere Portal Version 8.0.0.1 platform's analytics overlays, marketing professionals and site designers can leverage reporting from IBM Digital Analytics modules in line, including:

- Dashboards for merchandising views
- Reports for top-line metrics
- Marketing program insights
- Marketing visitor activity or purchase funnel
- Content usage reports
- Profile segmentation

For more information, visit:
ibm.com/software/products/us/en/digital-analytics

Industry digital experience solutions

More than 8,000 organizations across 19 industries have bene-fited from digital experience portals based on WebSphere Portal software and its related offerings. Patient portals in healthcare, employee portals in manufacturing, citizen portals in local gov-ernment and store manager dashboards in retail offer many opportunities to increase efficiency and improve user satisfaction with a personalized digital portal experience.

To further help clients deploy solutions tailored to the needs of their industry, IBM has developed industry templates that include industry-specific sample sites built with WebSphere Portal, Web Content Manager and related IBM software. In addition, industry templates provide best practice examples common to particular industries, and the content, layouts and portlets included with each template can be customized and configured to address a client's specific needs. Finally, template assets can be integrated with existing systems and content, help-ing provide exceptional web experiences to a given industry's customers, employees, partners or suppliers. Read on for select examples of how WebSphere Portal, Web Content Manager and related software from IBM can be used to help address a wide range of industry-specific challenges.

WebSphere Portal software–based, industry-specific solutions

Aerospace and defense	Automotive	Banking
Chemical and petroleum	Consumer products	Education
Electronics	Energy and utilities	Financial markets
Government	Healthcare and life sciences	Industrial sector
Insurance	Media and entertainment	Retail
Telecommunications	Travel and transportation	Wholesale distribution
Midsize businesses		

Healthcare

The momentum of consumer-driven healthcare (CDH) is forcing healthcare providers to compete for patients and improve their quality of care. Healthcare organizations that understand the importance of IT can dramatically increase patient satisfaction while also improving clinical and financial operations. However, many organizations may have legacy sys-tems comprising numerous disparate applications. Most of these legacy systems require healthcare workers to sign on separately through distinct interfaces, with few (if any) applications avail-able for patients to access directly.

By leveraging WebSphere Portal software to provide online access, providers can empower patients to contribute to, and take responsibility for, their own healthcare experiences—which can lead to higher satisfaction. A healthcare portal can also eliminate the need for clinicians to scroll through multiple applications to manually coordinate information about a single patient—something they normally have to do hundreds of times a day. As a result, clinics can reduce administrative and billing processes, improve overall efficiency, and increase productivity.

Government

Portals can be a good fit for government organizations, as illustrated by government agencies around the world that rely on IBM portal solutions. These organizations typically benefit from WebSphere Portal software's role-based access features, defining access rights based on the user type, such as citizen, business, manager or employee. As governments focus on providing services to citizens, they need to increase productivity to make the most of their limited revenue. For example, new government employees must learn to use a number of applications and information sources quickly. A web portal flattens this learning curve by supplying a single point of access to critical systems and information—and helps make employees more productive faster. In addition, allowing citizens to access government services through a single web portal can lead to reduced operational expense and increased government efficiency.

IBM Web Experience Government Template

The IBM Web Experience Government Template provides functional components and development tools to help government entities accelerate delivery of citizen portals. The template includes a sample citizen portal website built using WebSphere Portal, IBM Forms Experience Builder, Web Content Manager, Web Experience Factory, IBM Worklight and IBM Connections software.
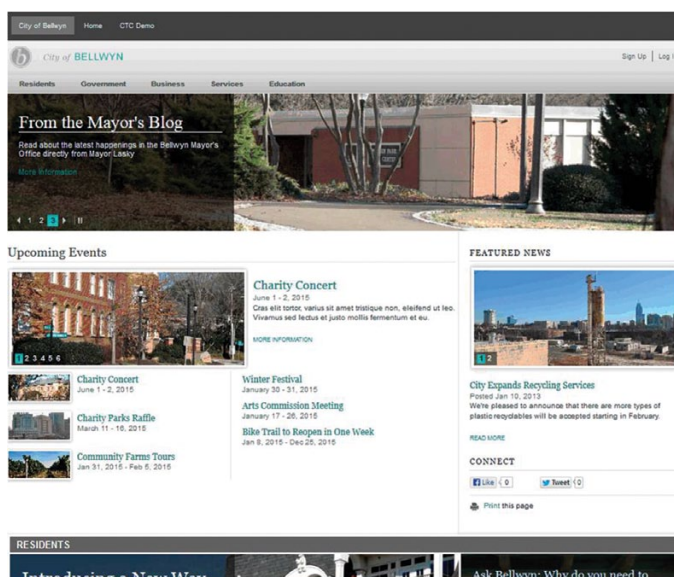
Figure 44. The IBM Web Experience Government template is a business-ready asset that can accelerate delivery of citizen portals.

Retail

Retailers must differentiate themselves, whether by reducing costs, offering better customer service or providing specialty products. Information and technology are quickly becoming useful tools for gaining customer loyalty and increasing employee productivity. Incorporating multichannel social technology is proving to be increasingly important to retailers for their internal and external web experiences. By improving visibility into online shopping metrics, inventory levels and corporate communications, retailers can make better decisions to

increase their share in the marketplace. Delivering real-time retail performance dashboards with WebSphere Portal and WebSphere Dashboard Framework software, retailers can quickly identify and address issues and opportunities—improving overall operational performance.

IBM Retail Supplier Collaboration Template
The IBM Retail Supplier Collaboration Template for WebSphere Portal software can help retailers accelerate the development of an online presence to strengthen relationships with existing suppliers or vendors as well as bring new vendors onboard more quickly and cost-effectively. The template includes a sample retail vendor portal website that has been built on top of WebSphere Portal, IBM Forms, Web Content Manager and Sametime software.

The template provides best practice examples for the many design patterns that are common in this type of portal. The content, layouts, forms and portlets can be customized and configured to address specific requirements. Template assets can be integrated with existing systems and content to provide an exceptional user experience for retailers and their vendors or suppliers.

Banking
Banks worldwide are facing significant challenges in the new economy; challenges that web portal software can help address. First and foremost, banks must focus on customer growth, retention and loyalty. They must survive tightening IT budgets, face emerging regulations, and prepare for mergers and acquisitions. In addition, the delivery of banking services to customers whenever they want and wherever they are is critical in today's highly competitive banking environment, virtually regardless of the size of the bank or the geographical region in which it

operates. Finally, bank customers are increasingly demanding access to bank services and products on a 24x7 basis. Customers want to be able to bank regardless of the time or their location; this requires banks to deliver services across multiple methods including traditional tellers, online, mobile and automated teller machines (ATMs).

Using WebSphere Portal software and related offerings, including IBM Forms, IBM Connections and IBM Worklight software, banks can monitor the performance of the business and automate existing paper-based processes, enabling them to provide their customers with exceptional multichannel digital user experiences that help set themselves apart from their competition.

IBM Retail Banking Template for WebSphere Portal
The IBM Retail Banking Template for WebSphere Portal software provides a platform for multichannel service and product delivery. Customers are demanding an exceptional online experience that is comparable to what they are experiencing on the Internet in general as well as on social networking and other consumer websites. As a result, online banking portals have become a critical platform for delivering important information and services.

Insurance
Insurance is an industry with requirements and needs that are distinctively synergistic to the marketplace-leading WebSphere Portal family of products. WebSphere Portal products allow for the implementation of role-based access to the specific applications and information an insurance customer, employee or partner needs. Many features such as dynamic content can

help insurance companies remain competitive by enabling the timely update of web content, helping ensure that customers, employees and partners have the information they need, when they need it.

Telecommunications

Telecommunications web portal software can help companies address multiple challenges, such as the need to innovate in response to digital convergence and the need to sell over the Internet. WebSphere Portal software and related offerings can help telecommunications companies extend their marketplace reach and address new marketplace opportunities.

Industrial sector

The industrial sector includes the automotive, electronics, aerospace and defense, and chemical and petroleum industries. Solutions based on IBM WebSphere Portal software can provide a high return on investment in a number of solution areas common across industrial sector industries, including dealer and franchise management, manufacturing and supply chain management, customer care, sales and service, workforce management, and plant and operations dashboards.

Travel and transportation

By integrating technology and intelligence into the transportation infrastructure, we can improve capacity; enhance travelers' experiences; and make our transportation systems more efficient, safe and security rich. WebSphere Portal solutions are used in virtually all sectors of the transportation industry to leverage collaborative, security-rich portals to deliver personalized content over the web. This allows travelers to have the right information at the right time, thereby increasing satisfaction and strengthening loyalty.

To learn more about IBM Exceptional Digital Experiences for Industry, please visit **ibm.com**/software/collaboration/digitalexperience/industry

IBM InfoSphere Data Explorer

To help clients discover, navigate and visualize vast amounts of structured and unstructured information across many enterprise systems and data repositories, IBM provides IBM InfoSphere® Data Explorer software, based on the IBM Vivisimo® Velocity™ Platform. WebSphere Portal and Web Content Manager solutions can be integrated with InfoSphere Data Explorer software to help organizations explore the value of big data technologies through a powerful framework for developing applications that leverage existing enterprise data.

Learn more about IBM InfoSphere Data Explorer at **ibm.com**/software/data/infosphere/data-explorer

IBM Intelligent Operations Center

IBM Intelligent Operations Center provides an executive dashboard to help city leaders gain insight into various aspects of city management. The solution leverages components, including IBM WebSphere Application Server, IBM WebSphere Portal, IBM Sametime and IBM Business Process Management software, and offers executive dashboards that span agencies and enables drill-down capability into underlying agencies, such as emergency management, public safety, social services, transportation or water. IBM Intelligent Operations Center enables city leaders to make better, faster decisions by using information from across agencies and departments to anticipate problems, minimize the effect of disruptions and coordinate resources more effectively.

For more information about IBM Intelligent Operations Center, please visit **ibm.com**/software/products/us/en/intelligent-operations-center

IBM Interactive

IBM Interactive is a leading interactive agency with a distinct ability to imagine, discover and deliver compelling user experiences. IBM Interactive leverages the spectrum of IBM's global capabilities—strategy, creative, technology, accessibility and business transformation—to implement solutions that strengthen relationships between organizations and their users. Integrating customer experience visions and strategic frameworks, IBM Interactive helps clients create brand differentiation, enhance business value and improve key customer interactions across channels. For more information, please visit http://www.ibminteractive.com

IBM Kenexa smarter workforce solutions

IBM Kenexa® smarter workforce solutions help organizations more effectively recruit, engage and retain the right talent for greater business impact. Integration with IBM's social and digital experience platform provides organizations new opportunities to:

- Attract and recruit the right talent with branded career websites
- Empower productive workforces by connecting them to the information they need
- Empower managers to motivate teams, gain insights and predict performance
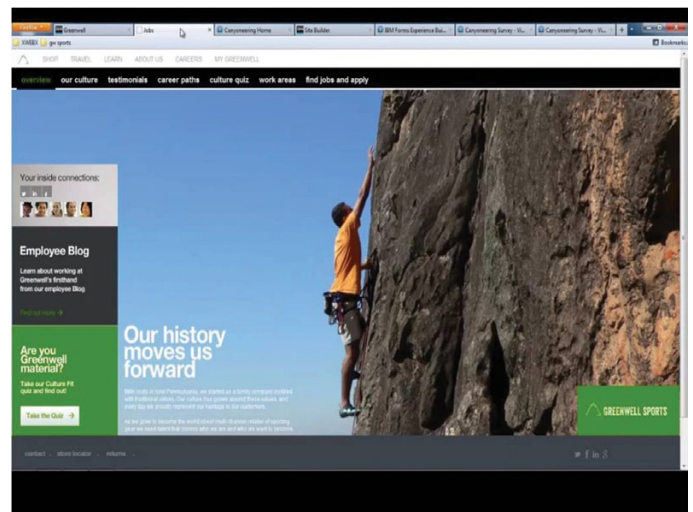
Figure 45. Integration with IBM Kenexa smarter workforce solutions enables organizations to attract and engage the right talent through branded WebSphere Portal digital experiences.

An example of these benefits can be viewed in this IBM Employee Experience Suite Version 8.0.0.1 and Kenexa smarter workforce video at http://www.youtube.com/watch?v=WnTsPwR6p_0

For additional information about IBM Kenexa solutions, please visit **ibm.com**/software/collaboration/announce/kenexa

IBM Software Services for Collaboration solutions

An effective strategy for technical services, training, certification and support is critical to the success of virtually any technology implementation. As a proven leader in IBM and WebSphere Portal technologies, IBM Software Services for Collaboration is a global organization ready to help accelerate business success with IBM and WebSphere Portal technologies.

By leveraging a global group of highly skilled technical experts and a robust community of business consulting and training alliances, the IBM Software Services for Collaboration team is ready to help successfully design, implement and deploy WebSphere Portal software solutions that produce quick results and ROI. Software Services for Collaboration solutions can help companies enhance the value of their software investments.

Technical consulting offerings include:

- IBM WebSphere Portal and IBM Web Content Manager deployment
- Delivering an exceptional web experience
- Developing a road map to an exceptional web experience
- IBM Connections QuickStart for IBM WebSphere Portal
- IBM Web Content Manager productivity workshop
- IBM WebSphere Portal configuration manager
- IBM WebSphere Portal upgrade
- IBM WebSphere Portal upgrade value assessment
- IBM WebSphere Portal forms enabler QuickStart
- IBM WebSphere Portal health assessment

The Software Services for Collaboration team offers WebSphere Portal training solutions that are designed to help technical users increase product capabilities quickly and easily for faster ROI. The IBM Software Accelerated Value Program provides an integrated set of support services that helps users sustain and optimize their WebSphere Portal infrastructure. These services are designed to offer the following benefits:

- Complement enhanced support
- Provide value through proactive support, knowledge sharing and problem management
- Move the organization forward rather than simply manage problems

The Software Services for Collaboration delivery teams offer WebSphere Portal installation, continuity and education bundled services to position organizations for future success with their portal deployment.

Accelerate the time to value of software investment

IBM Software Services for Collaboration solutions and select IBM Business Partners can help organizations better understand technology options and how to leverage IBM collaboration solutions to help lower IT total cost of ownership and increase an organization's productivity. Find out more about the technical consulting, training and IBM Software Accelerated Value Program services available to help accelerate success with IBM technology. For more information, visit
ibm.com/software/lotus/services

IBM Tivoli Composite Application Manager for Applications software

IBM Tivoli® Composite Application Manager for Applications software can help maintain the availability and performance of business-critical applications. The application management tool offers drill-down diagnostics for WebSphere, WebSphere Portal, IBM Domino and Connections application performance problems, helping administrators identify, in real time, sources of bottlenecks in code, server resources and related external systems. For more information about the integration between Tivoli Composite Application Manager for Applications and WebSphere Portal software, visit **ibm.com**/software/tivoli/products/composite-application-mgr-applications

IBM WebSphere Commerce software

IBM WebSphere Commerce software, available separately, can help organizations deliver a seamless, cross-channel shopping experience through contextually relevant content, marketing and promotions while extending brand identity across digital and physical customer touchpoints. WebSphere Commerce software provides integration services for WebSphere Portal and Web Content Manager software. WebSphere Commerce software is capable of ingesting Really Simple Syndication (RSS) and Atom feeds from content authored and managed by WebSphere Portal and Web Content Manager software and can also link directly with Web Content Manager library resources that provide rich, persuasive marketing content in IBM WebSphere Commerce sites. Additionally, sample WebSphere Commerce portlets are available to address common online business deployment requirements, including catalog, cashier, order, product and cart capabilities. For additional information, please visit the WebSphere Commerce Information Center or other helpful resources:

- WebSphere Commerce Version 7 Information Center: http://publib.boulder.ibm.com/infocenter/wchelp/v7r0m0/index.jsp
- *IBM Customer Experience Suite and Commerce:* http://public.dhe.ibm.com/common/ssi/ecm/en/sww14014usen/SWW14014USEN.PDF
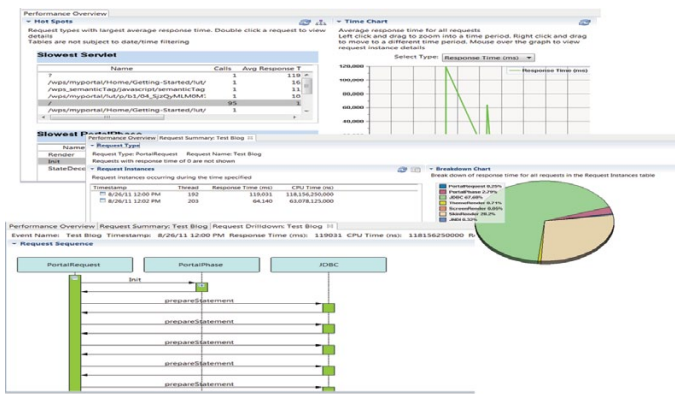

Figure 46. IBM Tivoli Composite Application Manager for Applications automatically generates topology data flows and monitors and highlights performance bottlenecks.
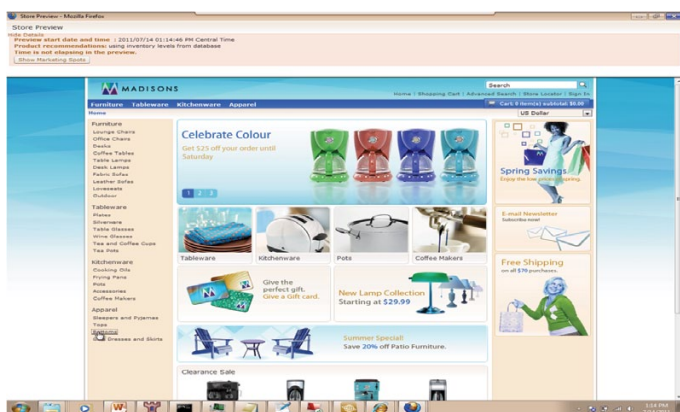
*Figure 4*7. WebSphere Portal and Web Content Manager software support integration with WebSphere Commerce software, enabling personalized, online business sites.

IBM WebSphere Dashboard Framework software

IBM WebSphere Dashboard Framework software augments the capabilities of WebSphere Portal software to rapidly build multi-channel SOA dashboards, reaching performance data practically wherever it resides and delivering it as real-time key performance indicators via personalized dashboards.

By leveraging WebSphere Dashboard Framework software, companies can quickly deploy highly tailored dashboards that consolidate data and processes from multiple back-end systems to be delivered by multiple front-end channels and server platforms. In addition, dashboards built using WebSphere Dashboard Framework software can facilitate problem resolution by enabling action right from the dashboard. As a result, with WebSphere Dashboard Framework software, companies can dramatically reduce their development costs and speed the time to value for their dashboard initiative.

IBM Web Experience NOW solutions

IBM Web Experience NOW solutions are a comprehensive set of templates combined with defined project plans to deliver results quickly and provide organizations with an exponentially greater ROI. These flexible and open templates help enable you to deploy a solution in about a month and then add additional capabilities as required.

The IBM WebSphere Portal NOW template lets organizations jump-start a web portal solution. IBM Web Content Manager NOW is a prepackaged solution designed to provide organizations with the ability to deploy websites with rich, compelling content quickly and more easily than open source solutions or niche providers. IBM Forms NOW allows you to establish an electronic forms processing platform in as little as two weeks. Templates address processes associated with onboarding new employees and customer trouble ticket application patterns. Each of the NOW solutions can be implemented in conjunction with services from IBM Software Services for Collaboration or IBM Business Partners. You can start with a manageable scenario, measure immediate success and grow from there. A project can be a simple, low-budget effort to start. Then, based on evolving business requirements, you can take advantage of a broad set of options to extend and add other capabilities. Review additional information about IBM Web Experience NOW solutions at **ibm.com**/software/collaboration/digitalexperience/nowsolutions
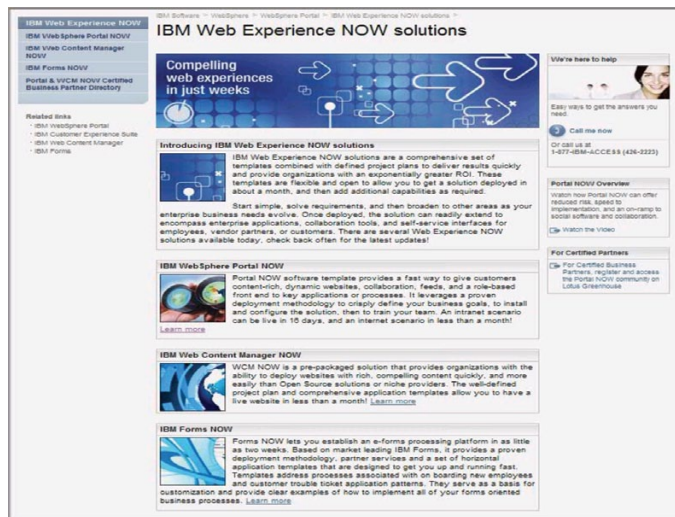
Figure 48. WebSphere Portal NOW software templates and related services can help organizations quickly deploy content-rich, dynamic websites that include collaboration features, feeds and a role-based front end to key applications or processes.

IBM Collaboration Solutions Catalog

The IBM Collaboration Solutions Catalog (https://greenhouse.lotus.com/catalog) is a web-based clearinghouse that includes an extensive set of WebSphere Portal and Web Content Manager portlets and solutions from IBM and hundreds of IBM Business Partners. The catalog can provide significant added value to WebSphere Portal software users. And the catalog itself is built on the WebSphere Portal platform, providing an excellent example of what is possible using portal software from IBM.

New software assets and templates available via the catalog include the following:

- Integration assets that provide templates and portlets as well as easily customized Web Experience Factory source code models
- A new solution installer and new prescriptive deployment guides designed to provide an easy way to deploy and configure solutions on top of WebSphere Portal and Web Content Manager implementations
- Dozens of assets including electronic forms, document and web content management, social software, real-time communications and BPM

These new software assets and templates help ease the integration of complementary products for common use cases.

Additional resources

IBM Exceptional Digital Experience software:
ibm.com/software/collaboration/digitalexperience

IBM WebSphere Portal family software:
ibm.com/software/products/us/en/websportfami

IBM Web Content Manager software:
ibm.com/software/products/us/en/ibmwebcontmana

IBM WebSphere Portal and IBM Web Content Manager product documentation: **ibm.com**/websphere/portal/library

IBM WebSphere Portal Family wiki:
http://www.lotus.com/ldd/portalwiki.nsf

IBM Collaboration Solutions Catalog:
ibm.com/websphere/solutionscatalog-portal

Conclusion

With the release of WebSphere Portal and Web Content Manager Version 8.0.0.1 software, IBM continues to provide the capabilities to create engaging and optimized digital experiences that can drive revenue and increase loyalty. Organizations can enjoy greater flexibility and drive incremental value by creating personalized, multichannel web experiences that combine a range of assets, including back-end applications, digital assets, enterprise search features, commerce solutions, social software and cloud-based services. With advanced analytics capabilities, organizations can make fact-based decisions to test, adjust and optimize messaging impact and time to value. With IBM WebSphere Portal and Web Content Manager Version 8 and 8.0.0.1 software, organizations can build, extend and optimize digital experience solutions that drive improved customer experiences, empower employees to react to marketplace dynamics, extend business assets and improve operational efficiencies.

For more information

To learn more about IBM WebSphere Portal and Web Content Manager Version 8.0.0.1 software, please contact your IBM representative or IBM Business Partner, or visit:

- **ibm.com**/software/products/us/en/websportfami
- **ibm.com**/software/products/us/en/ibmwebcontmana

Additionally, IBM Global Financing can help you acquire the software capabilities that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize a financing solution to suit your business and development goals, enable effective cash management, and improve your total cost of ownership. Fund your critical IT investment and propel your business forward with IBM Global Financing. For more information, visit: **ibm.com**/financing