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Application Integration with WebSphere Portal V6.1

WebSphere Portal
and
Collaborative Products



IBM developerWorks **Live!**

Abbreviated Title Here

Objectives

- The Front-End of Service Oriented Architectures
- Portal and collaborative products
- Understand the role of WebSphere Portal

Service Oriented Architecture (SOA)

... a service?

A **repeatable business task** – e.g.,
check customer credit; open new account



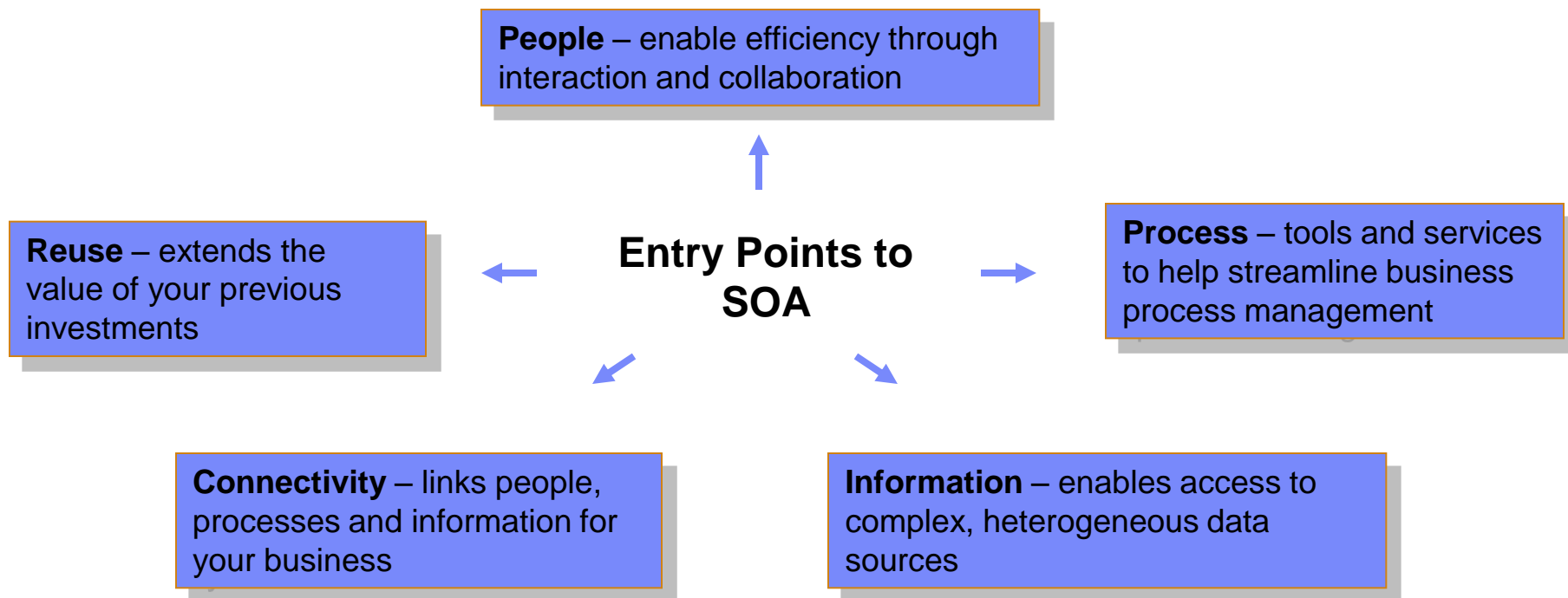
... **service oriented architecture (SOA)?**

An IT **architectural style** that supports
integrating your business
as linked services

"SOA impacts every aspect of IT and business."

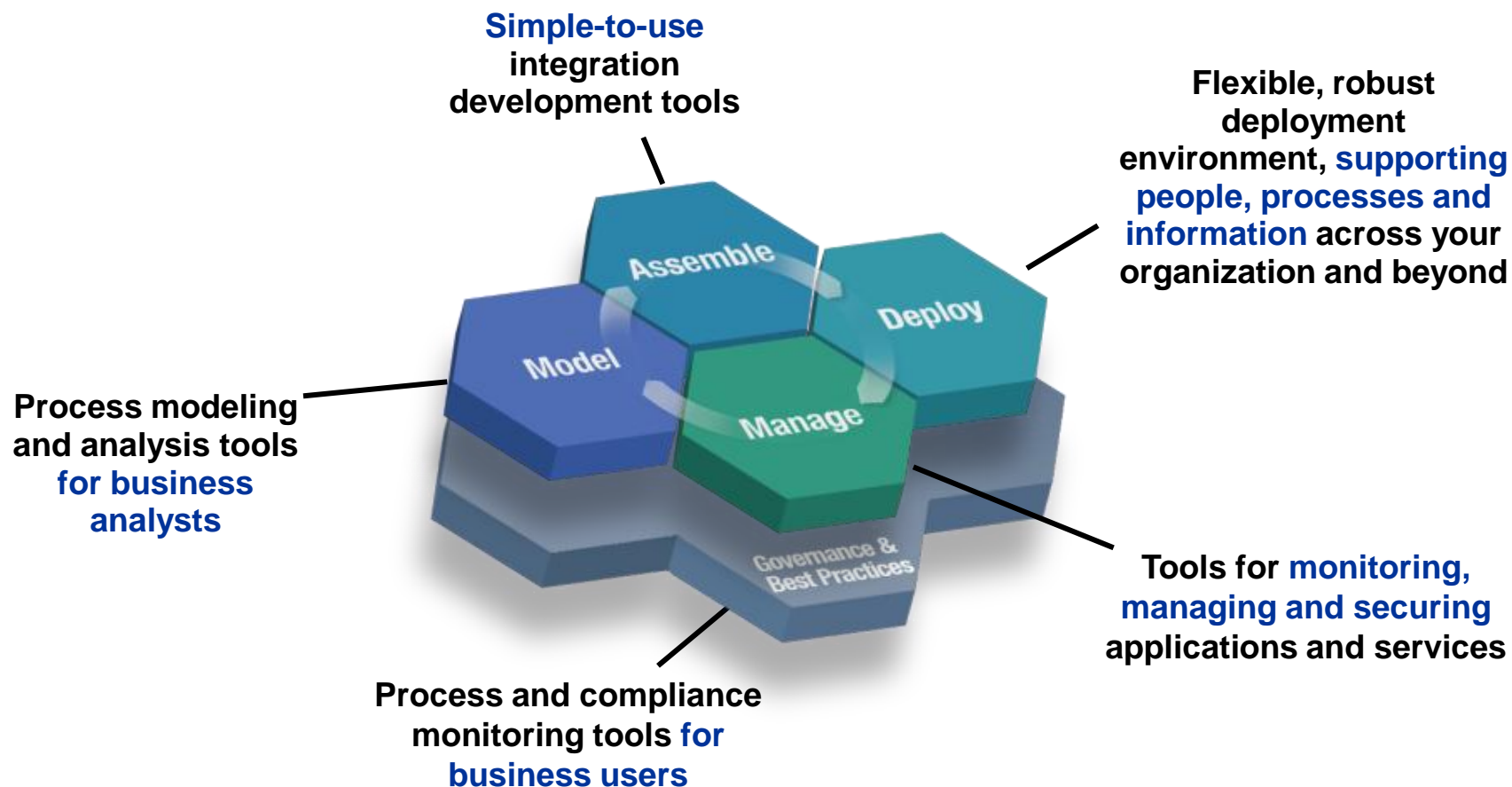
Service Oriented Architecture (SOA)

- Business-centric IT architecture approach that supports integrating your business as linked, repeatable business tasks, or services



IBM's flexible approach to SOA

- The SOA Lifecycle requires different tools for different needs



Maximizing people productivity within an SOA

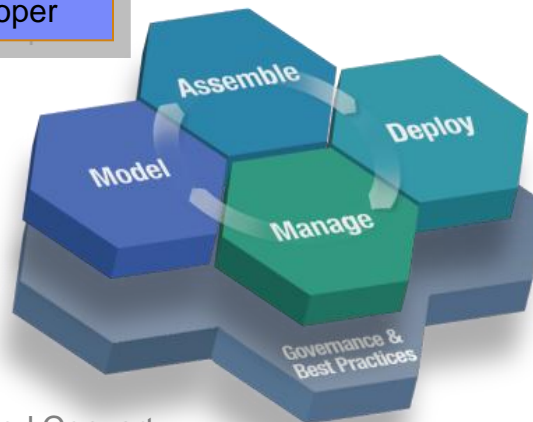
- Delivering a natural, intuitive, adaptive user experience

Create and assemble collaborative and composite applications

Lotus Component Designer
IBM Lotus Forms
IBM WebSphere Portlet Factory
 Rational Application Developer

Delivering secure, modular, extensible role-based environments

WebSphere Portal
Lotus Notes/Domino
Lotus Expeditor
 WebSphere Process Server



Model and simulate business processes and underlying IT assets

WebSphere Business Modeler
 Rational Software Architect

Achieve real-time visibility into process performance while ensuring availability & security meet service levels

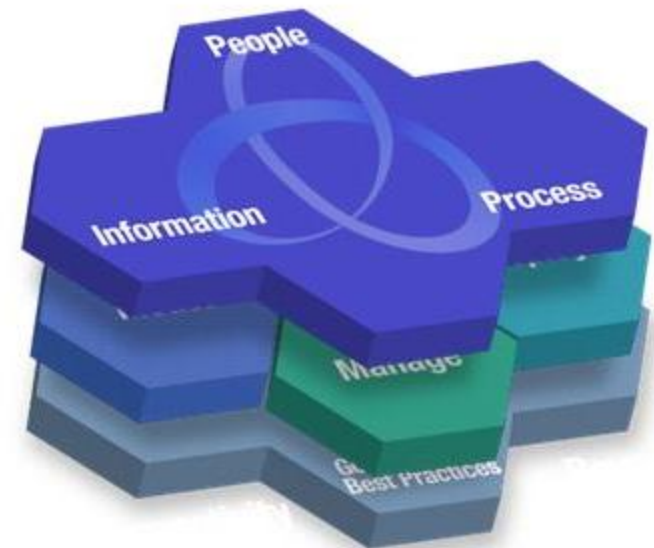
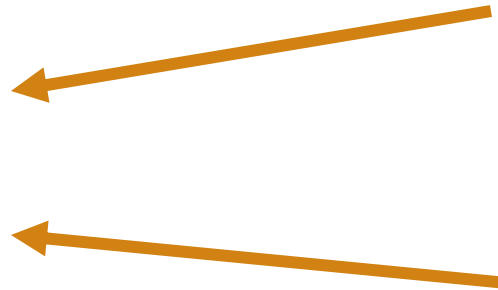
Domino Domain Controller
 WebSphere Business Monitor
 Tivoli Composite Application Manager
 Tivoli Federated Identify Manager

Support Corporate Governance and Convert Strategy into Concrete Objectives

Lotus ActiveInsight
IBM Workplace for Business Controls & Reporting
 Support Corporate Governance and Convert Strategy into Concrete Objectives

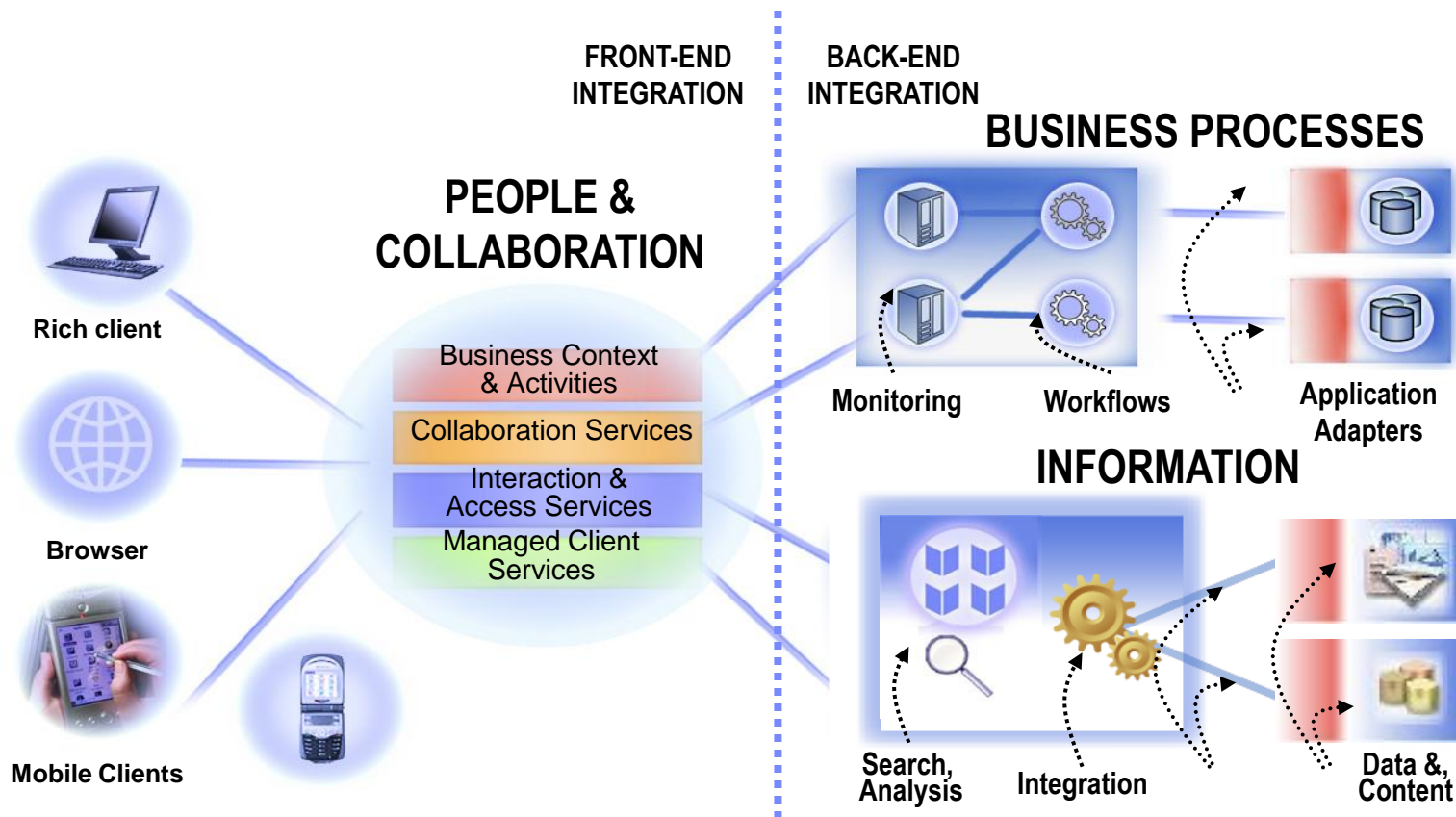
The Front-End to SOA

- Companies increasingly use software based on SOA to drive innovation and optimize business processes.
- Portal can play a fundamental role in providing the *front-end* to an SOA-based application infrastructure.



Portal and Collaboration

- Making More People More Productive in the Context of the Business They Do Every Day



Rich and personalized portal



For employees... enabling comprehensive, responsive, realtime business applications that create competitive advantage



For partners... delivering customized sets of functionality that make it easier to do business

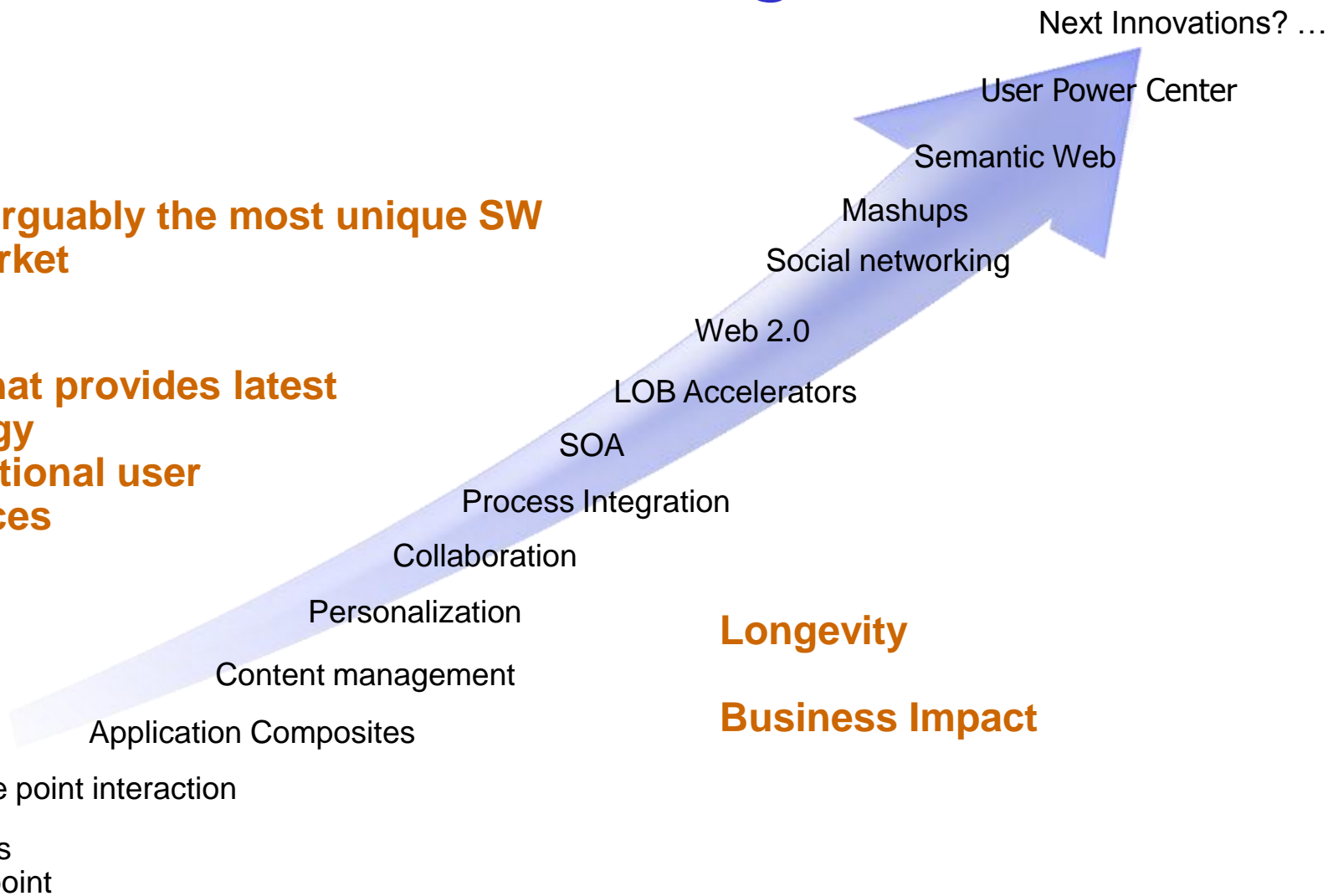


For customers... crafting compelling, self-service online experiences that drive return visits

WebSphere Portal - Technologies

Portals, arguably the most unique SW in the market

Vehicle that provides latest technology for exceptional user experiences

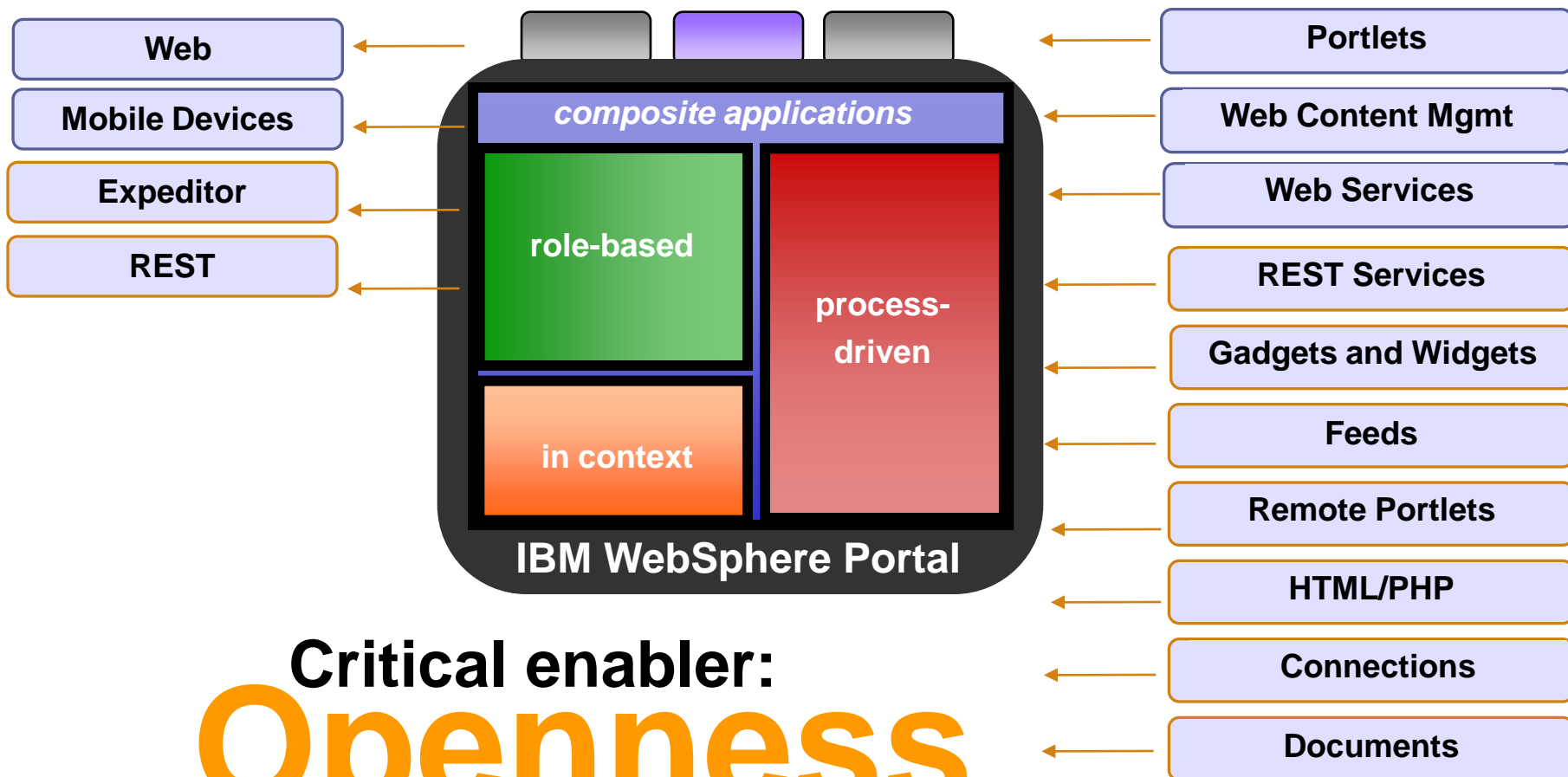


Longevity

Business Impact

WebSphere Portal Technologies

Produce and Consume



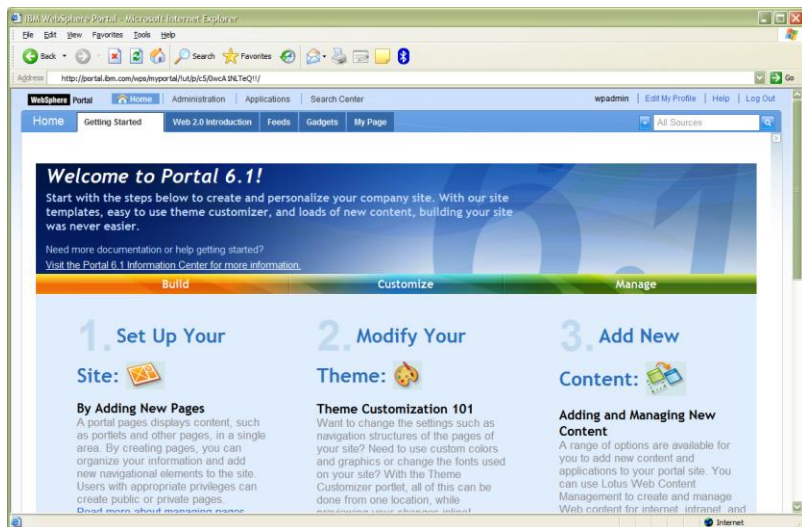
Critical enabler:
Openness

Standards based access to integration and innovation

Objectives

- The Front-End of Service Oriented Architectures
- Portal and collaborative products
- Understand the role of WebSphere Portal

Portal and Collaborative Products



Personalization, Web Content Management (Server, Express, Extend and Enable Editions)

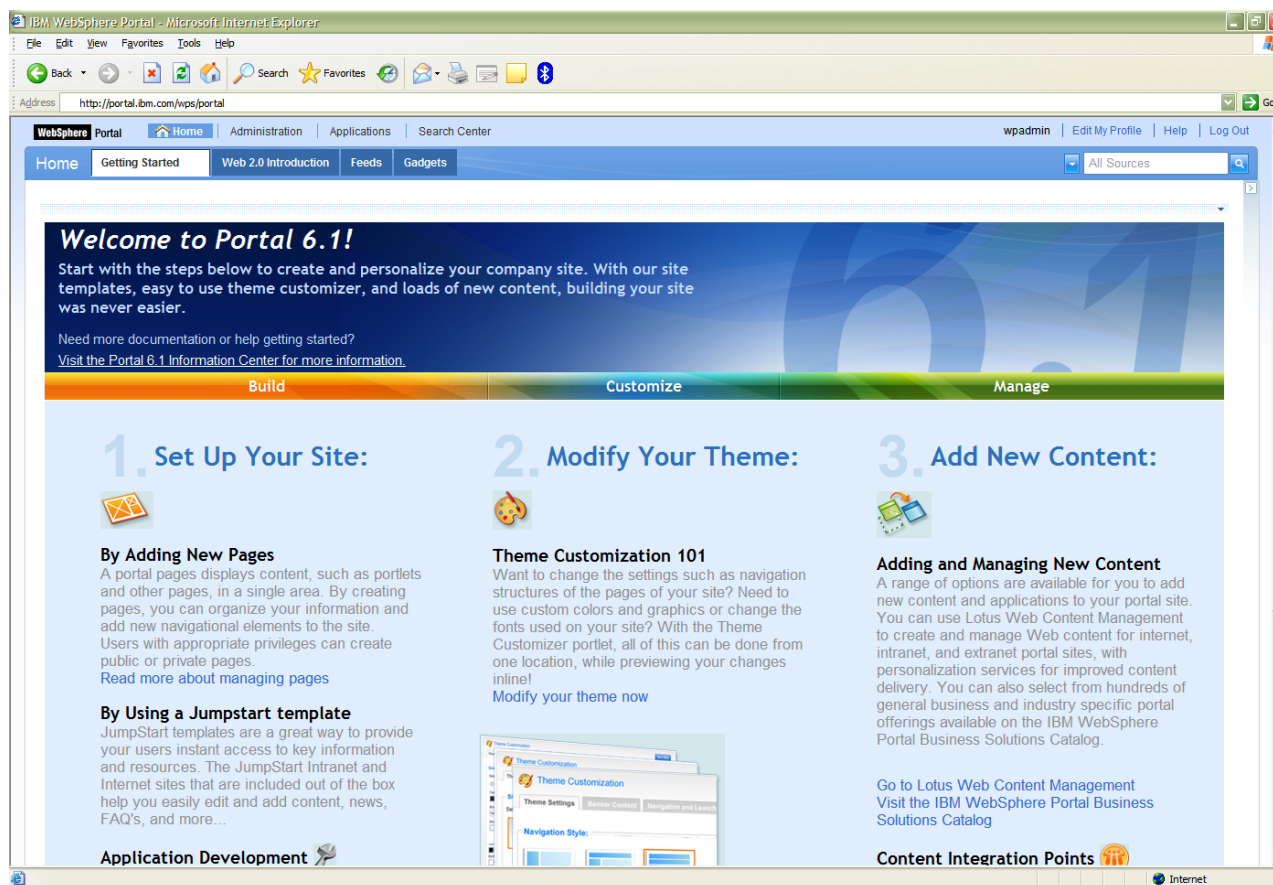
- | | |
|-------------------------|------------------------|
| Electronic Forms | Web Conferencing |
| Development Tools | E-mail and Calendaring |
| Disconnected Operations | Social Networking |
| Instant Messaging | Team Places |
| Productivity Suites | Content Libraries |

WebSphere Page Portal Base Offering + Extended Collaborative Features = Portal Effectiveness

Foundation technologies

- WebSphere Portal
- WebSphere Portal Express
- Lotus Forms
- Lotus Domino
- Lotus Quickr
- Lotus Connections

WebSphere Portal



- UI framework for integrating applications, content and processes in front of the user
- Includes features which add value to this integrated environment, like search, single sign-on (SSO), composite application, workflow, etc.

WebSphere Portal Express 6.1

- An easy to deploy WebSphere Portal based solution for small to medium-sized businesses (SMBs)
- Includes pre-built intranet/internet Web sites that can be used out of the box or easily tailored to customers needs
- Supports and upgrade path to WebSphere Portal Enable/Extend products

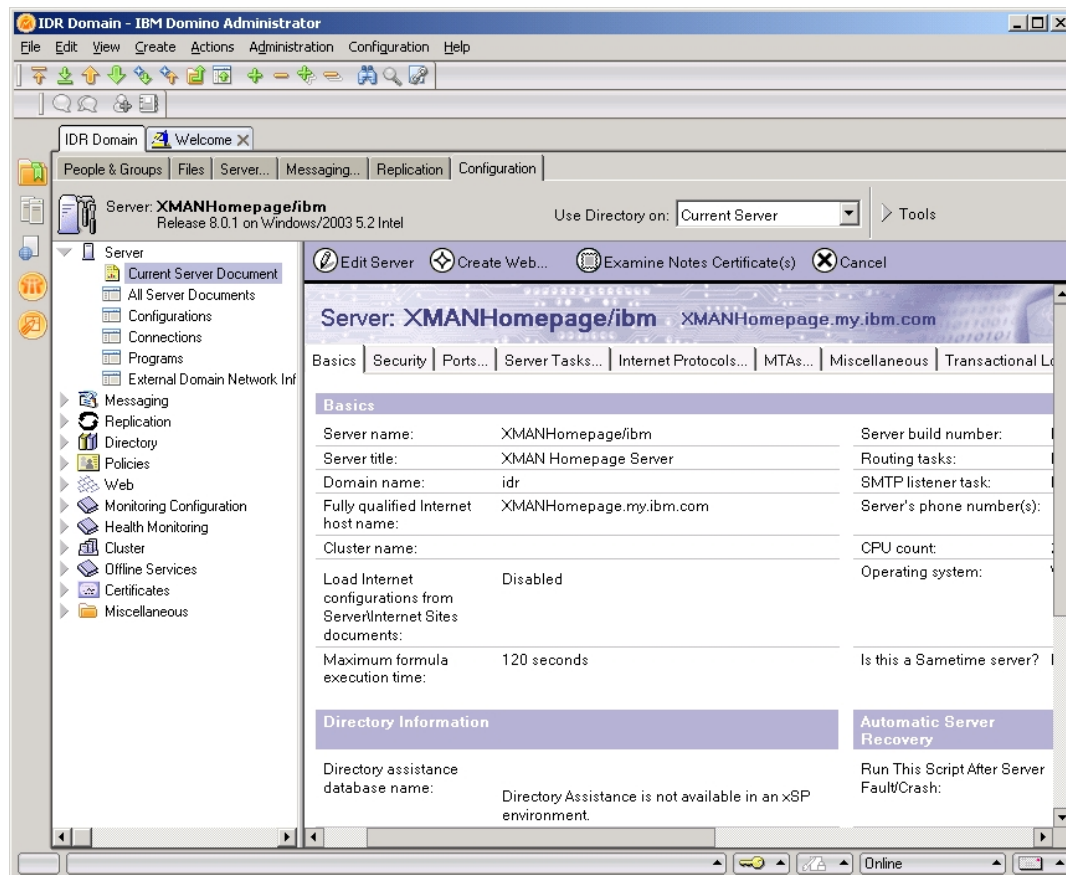
Lotus Forms

- Provide a secure, dynamic and intelligent front-end to business processes
- Consist of server, designer, and client viewer that enable creation, deployment, and streamlining of XML forms-based processes

The image displays two overlapping Lotus Forms Viewer windows. The top window is titled 'IBM Lotus Forms Viewer - BAA' and shows the 'Brokerage Account Application' form for Mountain-Sure INVESTMENTS. It includes sections for 'INVESTMENTS' (Account Type, Solioted, Unsollioted), 'Applicant Information' (First Name, Middle Initial, Last Name, SSN, Date of Birth, Business Phone, Mailing Address, Legal Address), and 'Banking/Brokerage Reference'. The bottom window is titled 'IBM Lotus Forms Viewer - Mortgage Pre-Approval Form' and shows the 'Mortgage Pre-Approval Form'. It features a 'Steps' sidebar with 'Mortgage Requirements' selected, a 'Mortgage Requirements' section with input fields for Mortgage Amount (\$100,000.00), Down Payment (\$5,000.00), Interest Rate (4%), Payment Frequency (Monthly), Amortization Period (30 Years), and Start Date (2007-03-01). A 'Mortgage Calculator' pop-up window is also visible, showing fields for Purchase Price, Down Payment, Interest Rate, and Amortization Period, with 'Calculate' buttons for both monthly payment and purchase price.

Lotus Domino

- World class collaboration capabilities
- Reliable, security-rich messaging and collaboration environment
- Evolution of the Domino Application Platform continues
 - ▶ E-mail, calendar, instant messaging
 - ▶ Rapid application development
 - ▶ Low TCO administration
- Web Services Support



Lotus Quickr

- Team collaboration software that helps you share content, collaborate and work faster online with your teams



Personal file sharing
Create your personal content library online.



Templates
Use prebuilt team places to get started fast.



Connectors
Work where you are without switching applications.



Content libraries
Organize and share content faster.



Team places
Create online places for projects or teams.

Lotus Quickr Places Files Heather Reeds Help Logout

Places My Places Search All

Go Green Program at Renovations

Home Discussion Library Calendar Tasks Go Green Wiki Index Members

New Place or Folder... Customize this place

Place Tools Advanced Search

You are in: Go Green Program at Renovations > Go Green Wiki

Check Out and Edit More Actions

Article History

Welcome to the "Go Green" program at Renovations

We'll use this wiki to collect information about, and collaborate on, environmentally friendly business practices we can implement at Renovations that will not only minimize our impact on the environment, but prove beneficial to our bottom line. You'll also find here new policies and procedures that result from the Go Green program.

"Business is the only mechanism on the planet today powerful enough to produce the changes necessary to reverse global environmental and social degradation"
- Paul Hawken

A business "going green" can take many forms, from a manufacturer using alternative, or off-peak energy, to Ferrari's "forest" in the middle of their engineering building that helps clean the air and maintain proper humidity levels (not to mention the positive effect plants in the workplace has on it's employees.) - Dan Misawa

Content in this wiki can be categorized into the following high-level topics:

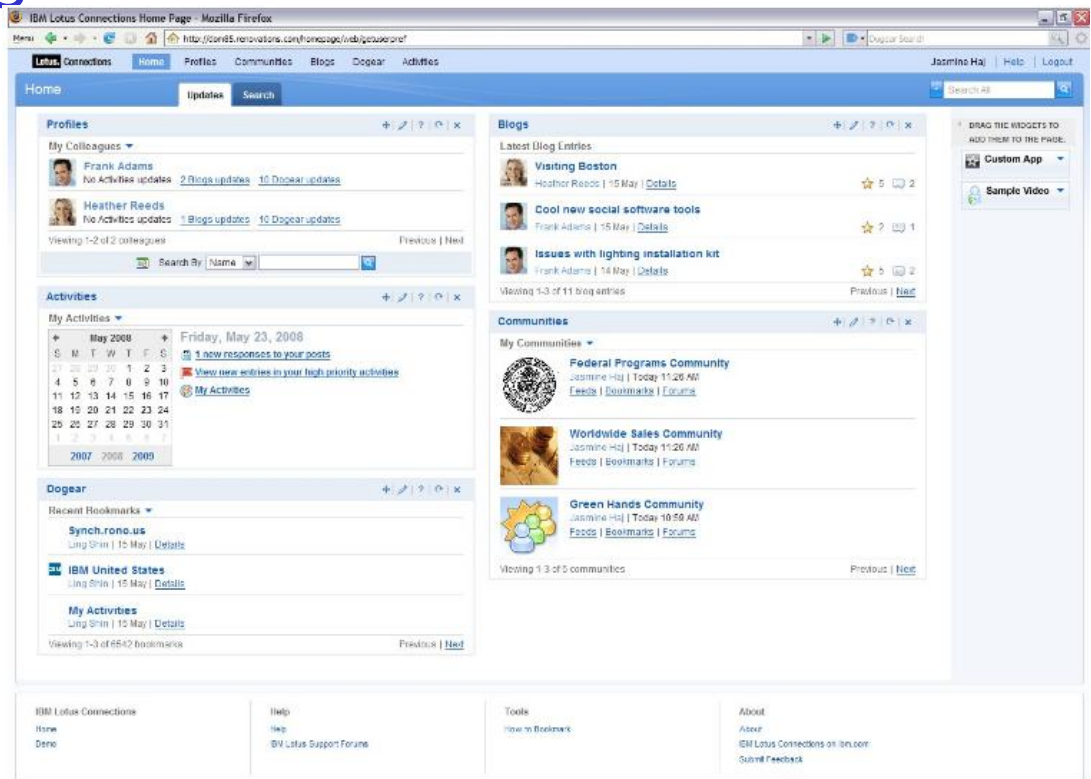
- [Government Programs, Research, and Incentives](#)
- [Technology and the Environment](#)
- [Conservation practices \(Reduce, Reuse, Recycle\)](#)
- [Alternative energy sources](#)
- [Sustainability in the supply chain](#)
- [Green Buildings](#)
- [Green Auditing](#)
- [Green product design](#)
- [Eliminating toxic/hazardous substances](#)
- [Environmentally responsible business travel](#)
- [Examples of other Eco-friendly businesses/practices](#)

Many contractors are now looking towards green suppliers in order to satisfy a growing demand.

The Go Green Program will look at all aspects of the Renovation business, from procurement, manufacturing, and distribution, to physical plant, to our business practices and employee benefits/incentives. *The overall goal of the program is to reduce the "carbon footprint" of our business, and to also help lower those of our employees, when and where possible.* - Gail Chao This program has been sanctioned by the Chairman of the Board, and is being overseen by Renovations CEO Pat Jameson. Renovations has also begun a new Corporate Social Responsibility Reporting program that will assess and report on the social, as well as environmental, impact of our business. Management understands that helping the environment can help the bottom line, and will be releasing regular updates to our shareholders and stakeholders documenting our progress in these areas.

Lotus Connections

- Social software for business
- Empowers you to be more innovative and helps you execute more quickly using dynamic networks of coworkers,



Home page

See what's happening across your social network



Blogs

Present your own ideas, and learn from others



Dogear

Save and share bookmarks



Profiles

Find the people you need



Communities

Work with people who share common interests and expertise



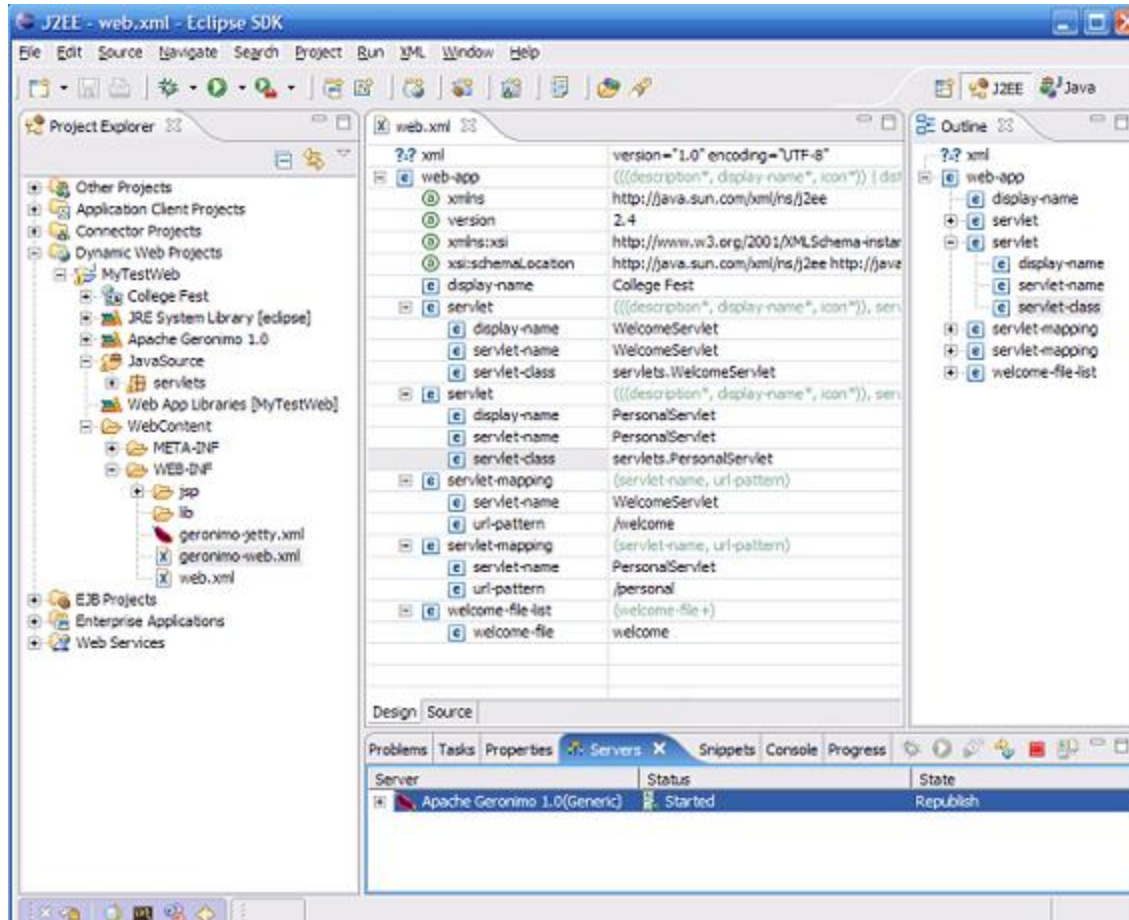
Activities

Organize your work and tap your professional network

Client technologies

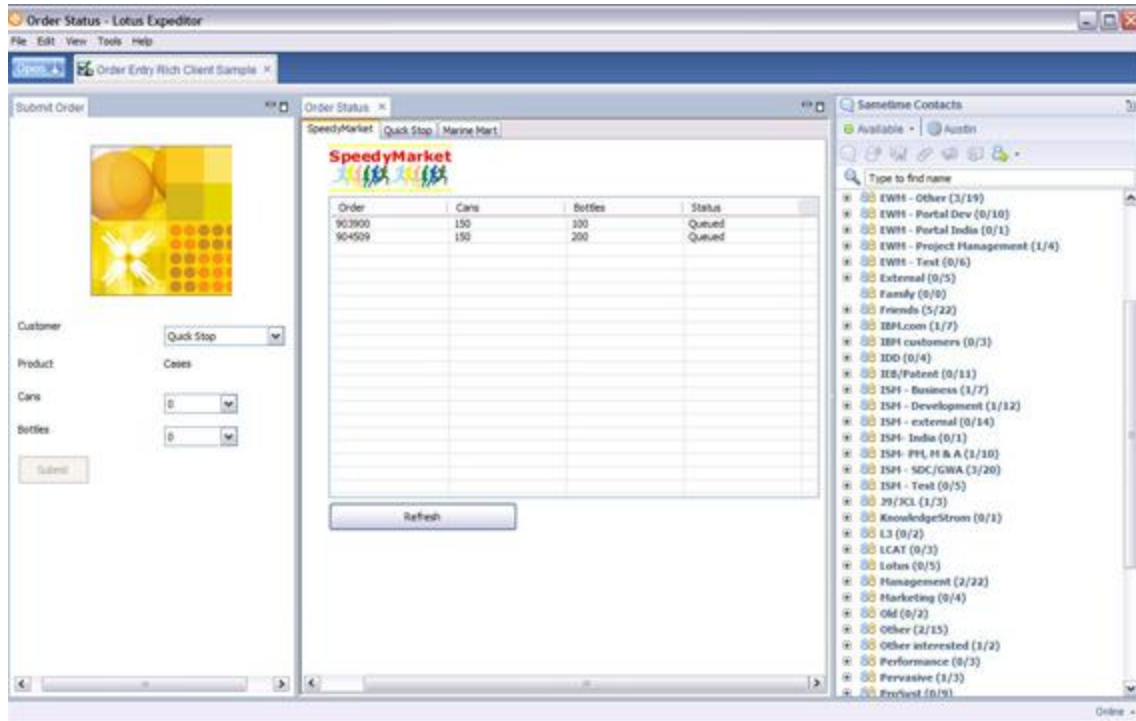
- Eclipse Rich Client Platform
- Lotus Expeditor
- Lotus Notes
- Lotus Symphony

Eclipse Rich Client Platform



- Integration on the desktop
 - ▶ Eclipse plug-in architecture
 - ▶ Proven update model
 - ▶ Robust file, metadata and preferences management
- Rich user experience
 - ▶ SWT and JFACE provide native look and feel
 - ▶ Smart client and increased array of widgets allows better user experience than browser for input-intensive applications (data entry, drawing, layout, etc)

Lotus Expeditor



- Universal desktop client integration software
- Support for local and/or disconnected operation
- Centralized administration of applications, roles and software delivery
- Restricted access to local desktop applications and OS features
- Dynamic provisioning of the client and subsequent updates on an as-needed bases

Lotus Expeditor: Portal Administered Topology

- Portal Server drives definition of composite applications (layout, access control, policies) cow
- Portal Server delivers portlets to be run in an offline mode
- Expeditor Server, if present, is used as an application connector, not client management
- Features and Bundles downloaded “on-demand” from Install/Update site based on feature requirements specified in portal markup



Lotus Expeditor: Portal Managed Client

PortSelectCar - Lotus Expeditor

File Help

Open ITSO Car Rentals

Customer Information

Customer ID: 1111

Name: Rodriguez, Juan
Street: 6290 Redbook Street
City: RTP, 27122, NC
Phone: +1 919 555 1234
Email: juanrodr@us.ibm.com
Card: C3-4321 7654 3030

Car Information

Make	Model	Size	Color	Slot	Rate
Green	Amarillo	M	Red	54	123.45

Booking Information

Start date: 3/15/07 Amount: 123.45
End date: 3/16/07

Card Information

C3 4321 7654 3030

Transaction Amount

Transaction Result

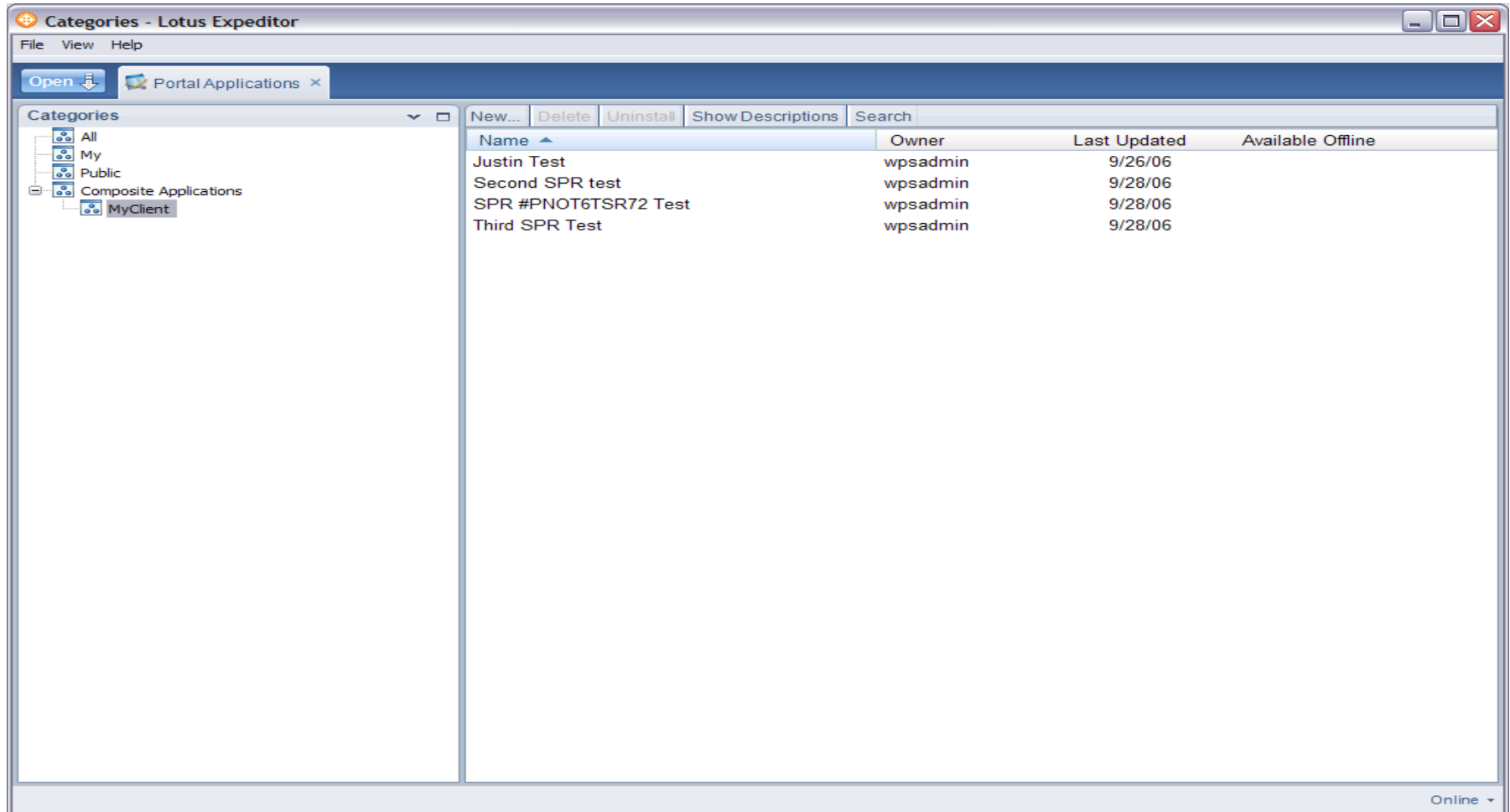
ITSO Weather Channel

Today	Tomorrow	Thursday	Friday
Occasional Light Rain	Light Rain	Mostly Clear	Rain
High: 69F Low: 63F	High: 66F Low: 52F	High: 71F Low: 58F	High: 56F Low: 51F

IBM Expeditor Car Rental Customer Service 3:20 | 4:50

- The term portal administered client simply means the Expeditor Client can install, load and run applications defined by Portal
- The Portal Server is used to control application layout and provisioning of the applications to the client

Lotus Expeditor: Portal Applications



The screenshot shows the Lotus Expeditor interface. The window title is "Categories - Lotus Expeditor". The menu bar includes "File", "View", and "Help". Below the menu bar is a toolbar with an "Open" button and a "Portal Applications" tab. The main area is divided into two panes. The left pane, titled "Categories", shows a tree view with the following structure:

- All
- My
- Public
- Composite Applications
 - MyClient

The right pane displays a table of portal applications with the following columns: Name, Owner, Last Updated, and Available Offline. The table contains the following data:

Name	Owner	Last Updated	Available Offline
Justin Test	wpsadmin	9/26/06	
Second SPR test	wpsadmin	9/28/06	
SPR #PNOT6TSR72 Test	wpsadmin	9/28/06	
Third SPR Test	wpsadmin	9/28/06	

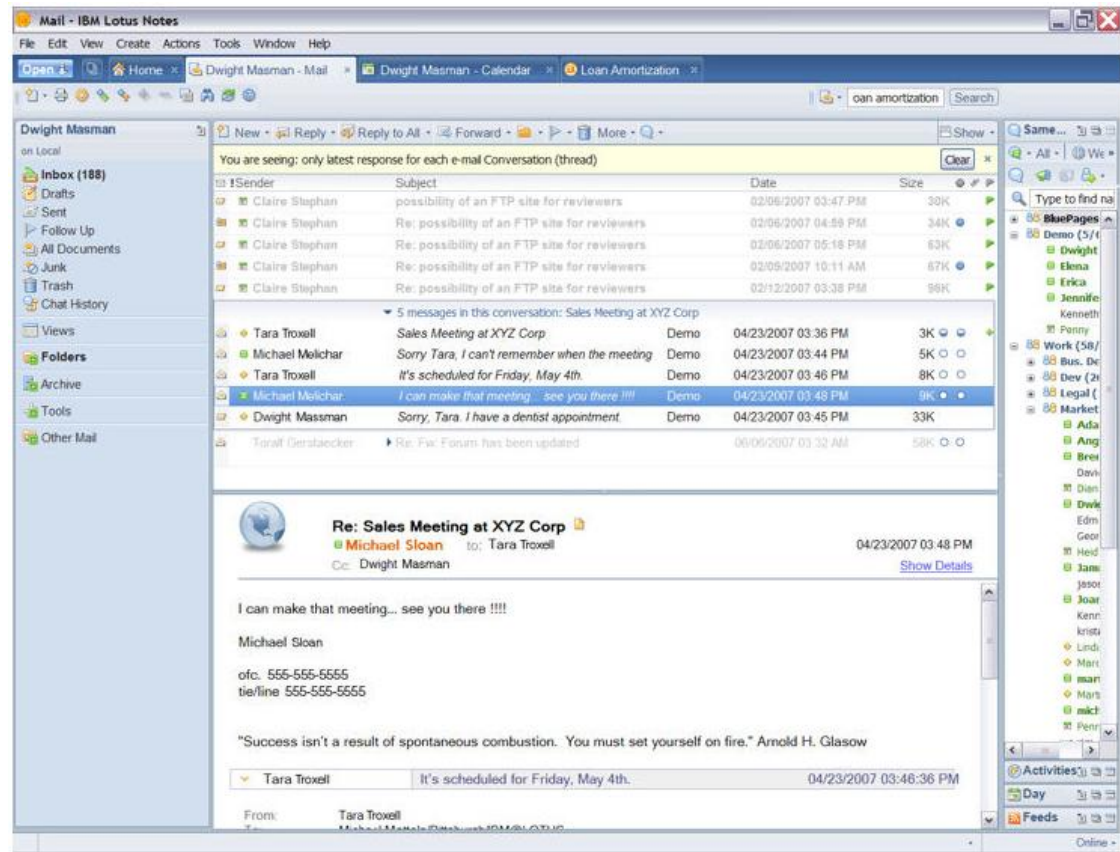
At the bottom right of the window, there is a status indicator that says "Online".

Lotus Notes

- Extensible, Lotus Expeditor based client
- Business email software that helps people effectively locate,



Advanced email, calendaring and contact management
Designed for the business user



Business mashups
Rapidly assemble and deploy composite applications to support business agility.

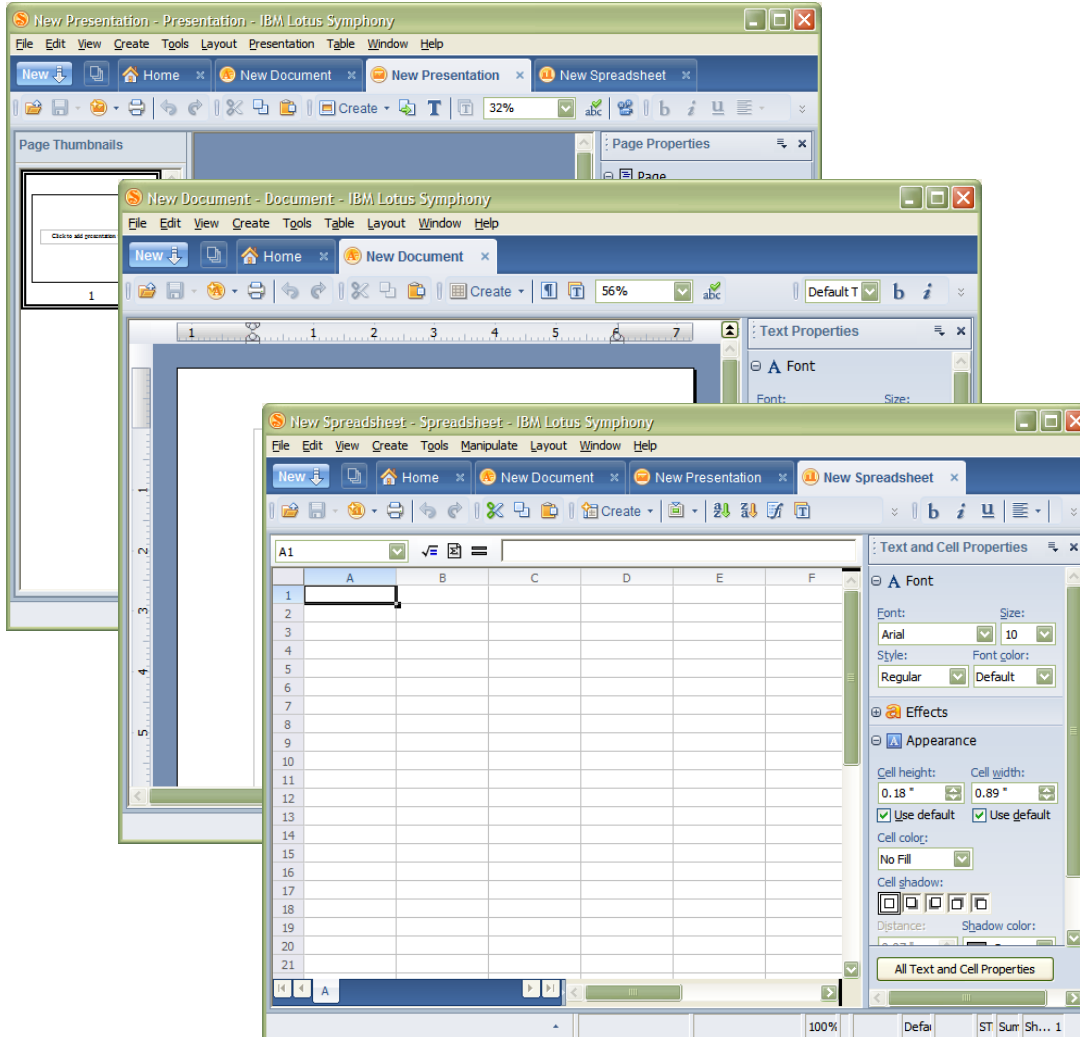


Mobile and offline access
Productivity away from the office and on the road



Integrated collaboration tools
Instant messaging, office documents, and teamspaces

Lotus Symphony

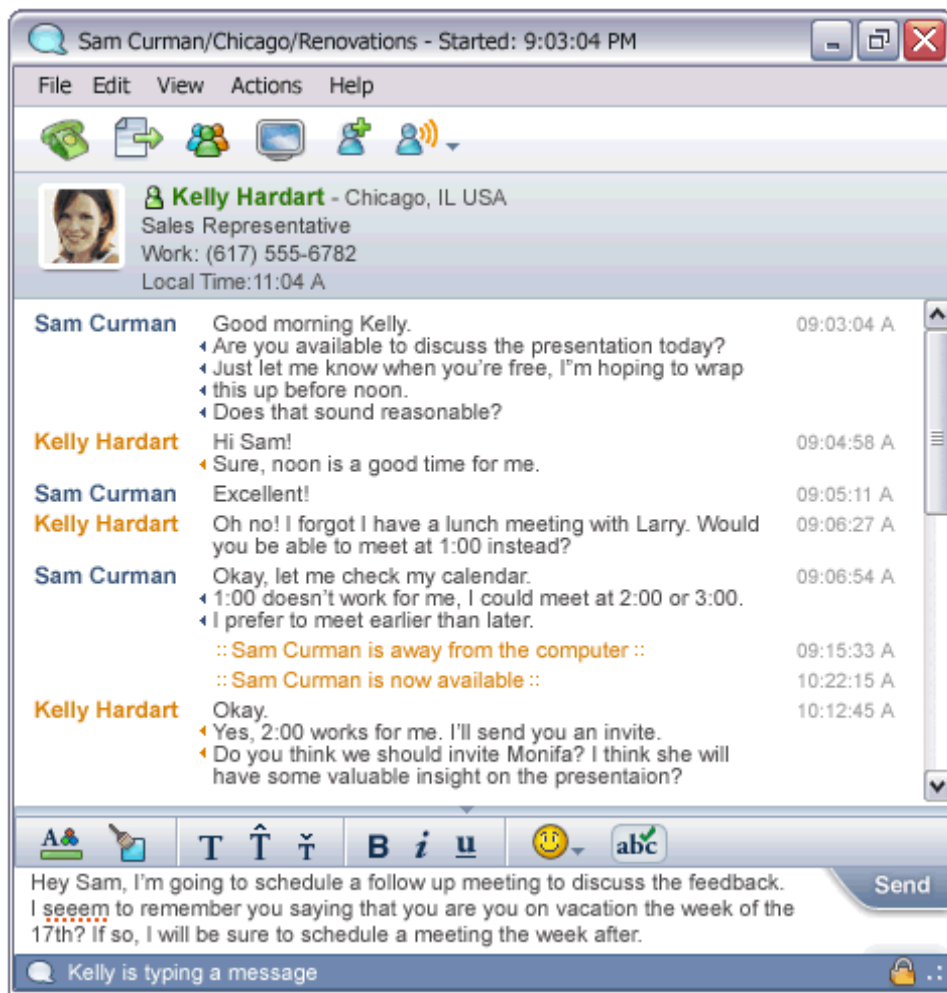


- Intuitive, rich feature, easy to use office productivity software at no charge
- Compatibility with Microsoft Office file formats
- Support for ODF standard
- Based on OpenOffice.org Technology
- Online community for templates, tips and support

Synchronous communication technologies

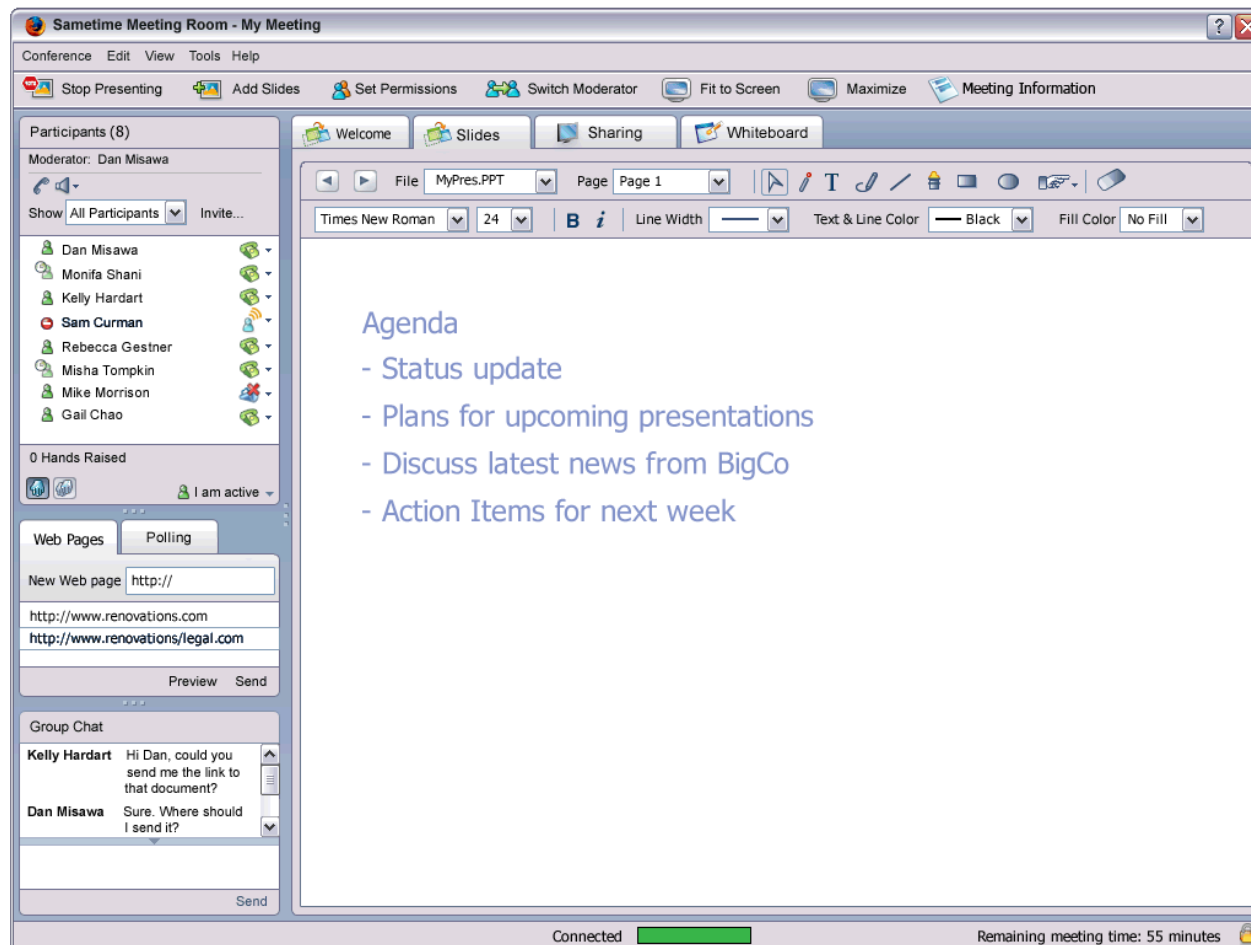
- Lotus Sametime Instant Messaging
- Lotus Sametime Web Conferencing
- Lotus Sametime Real-time Collaboration Gateway

Lotus Sametime 7.5 Instant Messaging



- Unified IM client for Portal and Sametime
- Features:
 - ▶ Multi-community support
 - ▶ Business card
 - ▶ Location awareness
 - ▶ Real-time spell checking
 - ▶ Rich fonts and emoticons
 - ▶ Chat history with time stamps and support for late joiners
 - ▶ File transfer with virus scanning
 - ▶ Image capture and send
- Audio / Telephone integration
 - ▶ Click to talk / Click to call
 - ▶ Web conference integration
- Extensible, Eclipse-based client

Lotus Sametime 7.5 Web Conferencing

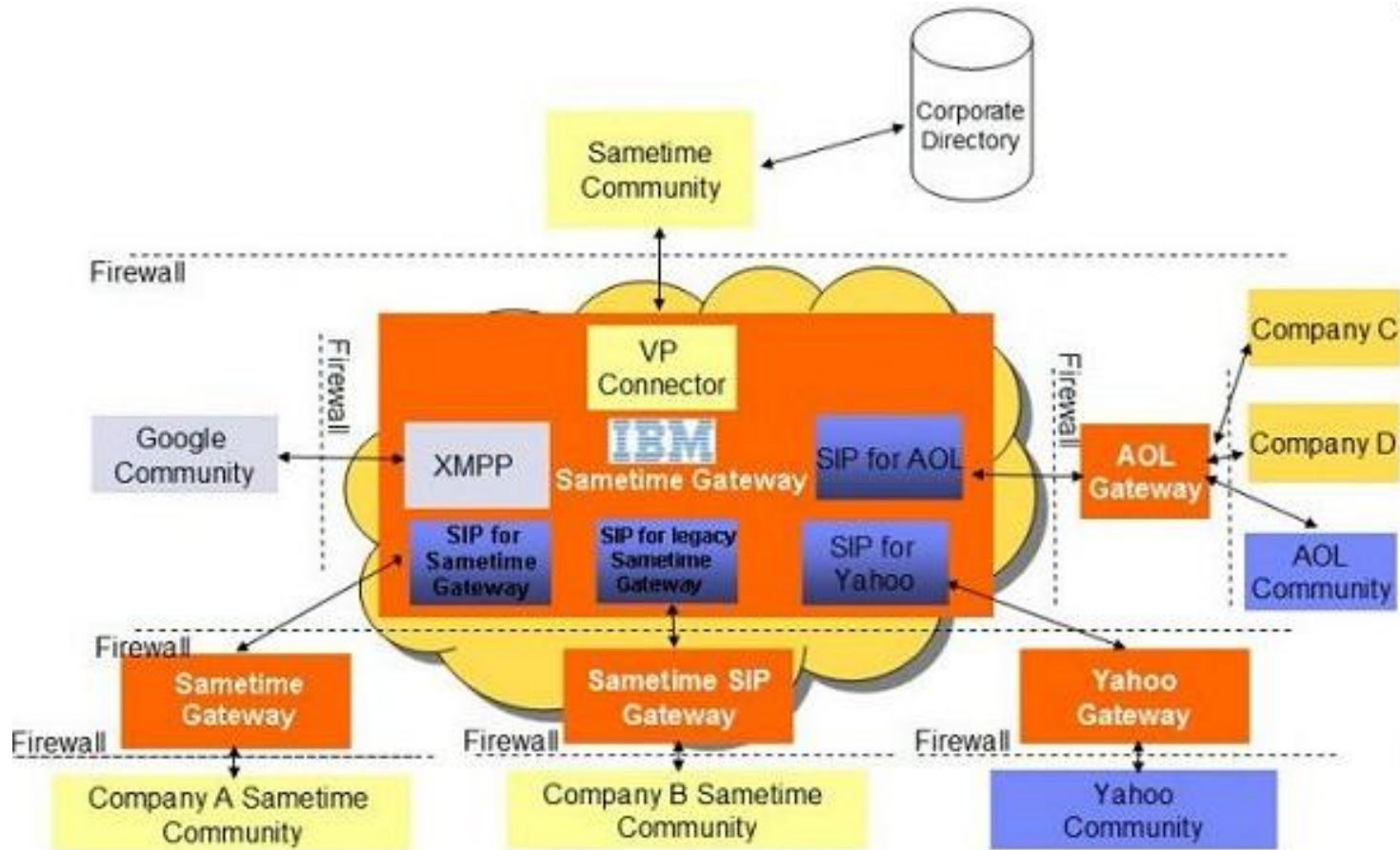


- Enhanced user experience
- Improved connection resilience
- Reduced number of pop-ups

Lotus Sametime Gateway

- Real-time collaboration with other Sametime communities
 - ▶ Also public instant messaging services e.g. AOL, Google Talk, ICQ, Apple iChat, Yahoo Messenger
- Server-to-server interoperability between disparate communities
- Conversion services for different protocols, presence awareness and instant messaging
- Delivers open programming model
 - ▶ APIs for adding protocol support for other IM services
 - ▶ APIs for adding additional processing services
- Lotus Sametime Gateway 8.0:
 - ▶ Easier to install
 - ▶ Automatic-enabled administrative security
 - ▶ Wizard based LDAP configuration

Lotus Sametime Gateway



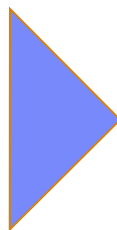
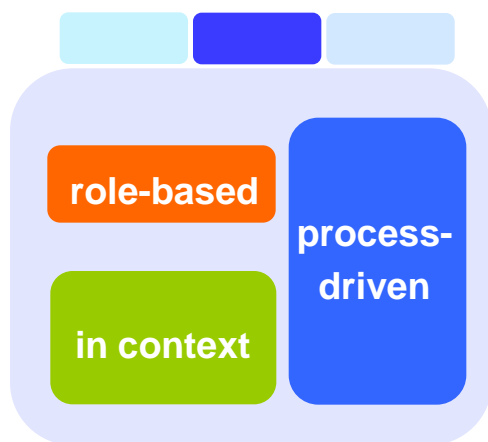
Objectives

- The Front-End of Service Oriented Architecture
- Portal and collaborative products
- Understand the role of WebSphere Portal

Role of WebSphere Portal

- Integrate your enterprise into a single, customizable interface
- Combines components, applications, processes, and content from a variety of sources into a unified presentation, accessible from variety of devices

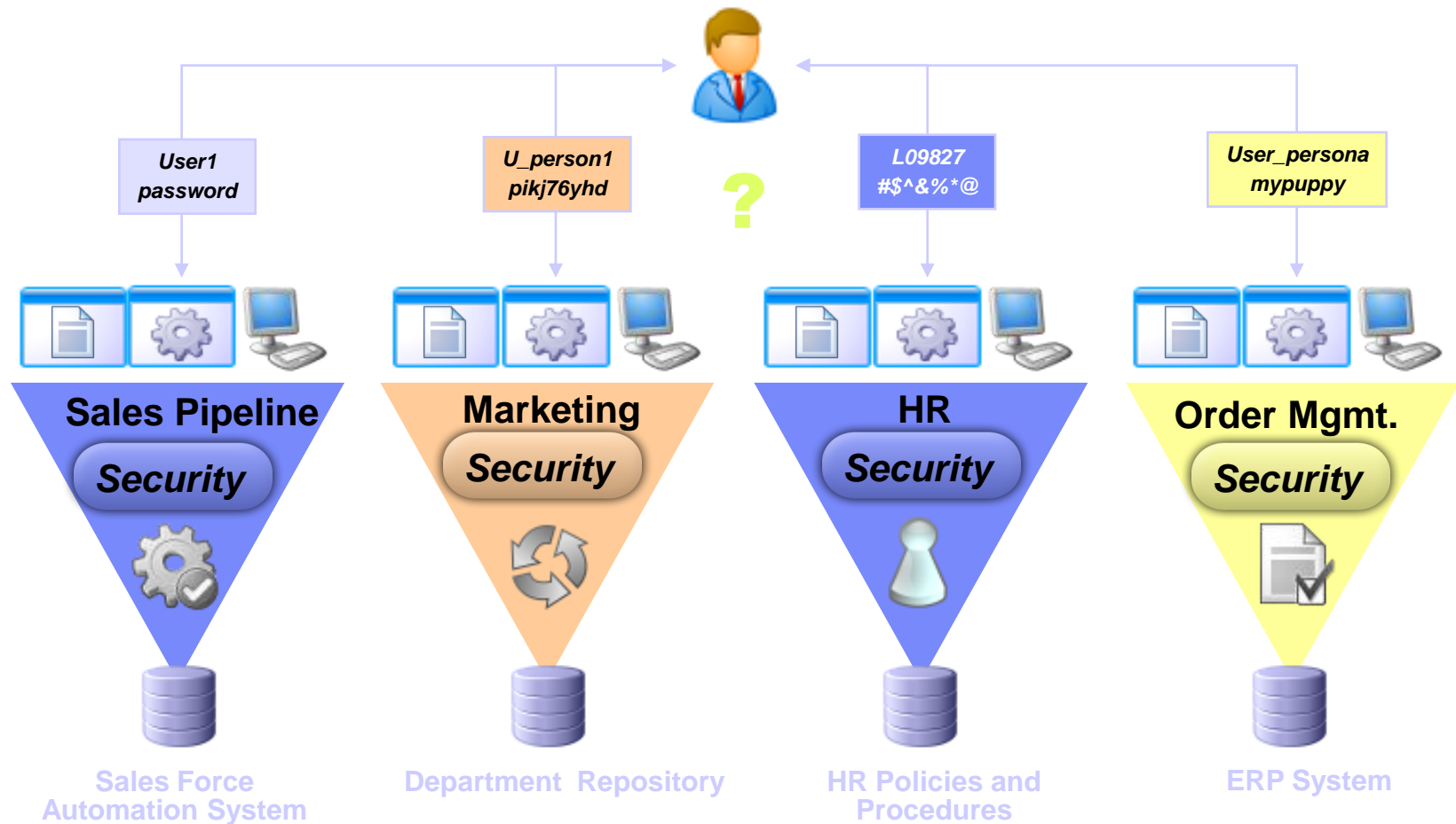
WebSphere Portal: Natural, Intuitive, Adaptive User Experience



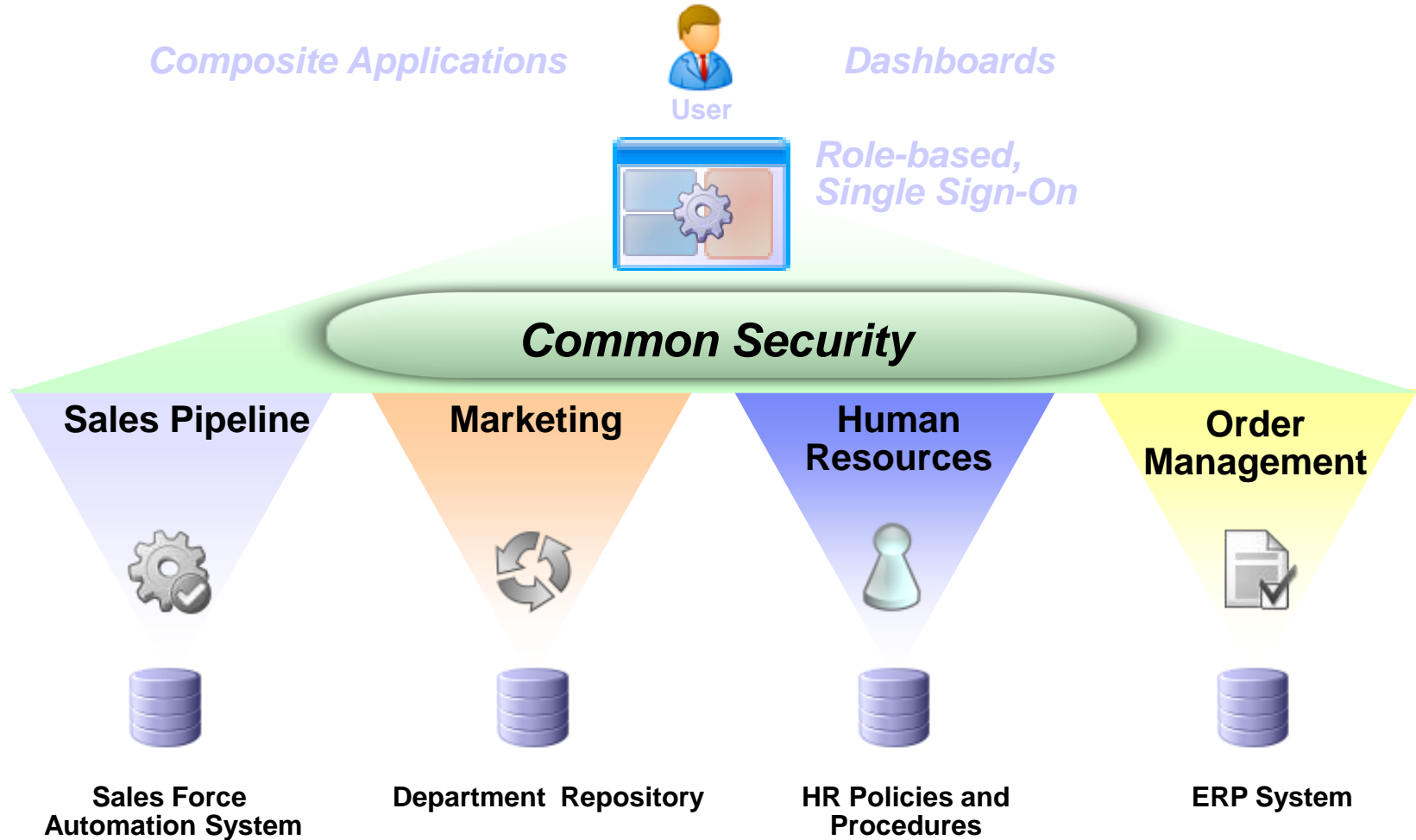
Management Dashboards	Collaboration
Sales Force Automation	eHR
Customer Relation Management	Composite products
E-Forms	Syndicated Rates
Content Management	Claims

The usability challenge

- Applications and information are delivered in silos



The usability need:



WebSphere Portal 6.1 feature highlights

- New infrastructure to enable Web 2.0 theme
- Site management
- Theme Customizer portlet
- Security – Remember me cookie
- Updated, friendlier categories in Portlet Palette

WebSphere Portal #1 in Marketshare

- WebSphere Portal has been **#1** in Marketshare (IDC) for the past 5 years and **#1** In Gartner's Magic Quadrant for the past 6 Years

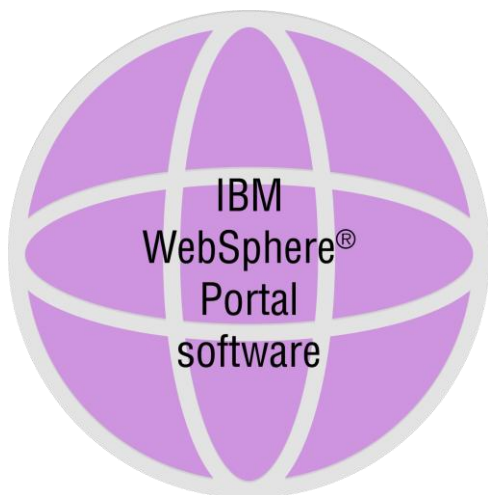


WebSphere Portal 6.1 offerings

WebSphere Portal Extend

WebSphere Portal Enable

WebSphere Portal Server



- Application Server
- Database
- LDAP Directory Server
- Admin
- Workflow Portlets
- Application Templates
- Cluster Support
- Single sign on
- Search
- Personalization
- Presentation
- Customization
- Application aggregation
- Java Portlet API
- Use of 100's of portlets
- WSRP support
- Web 2.0 APIs: REST services, CSA, Live Text
- WebSphere Portlet Factory (1 PF Designer per enterprise)



- Web Content Management*
- Document Management*
- Enterprise Search*
- Process Workflow*

*Limited entitlements

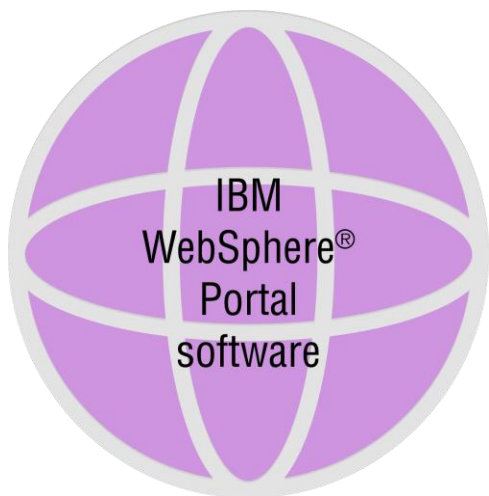


- Instant messaging*
- Team Collaboration*
- Electronic Forms*

*Limited entitlements

WebSphere Portal Express 6.1 offerings

WebSphere Portal Version 6.1 Express



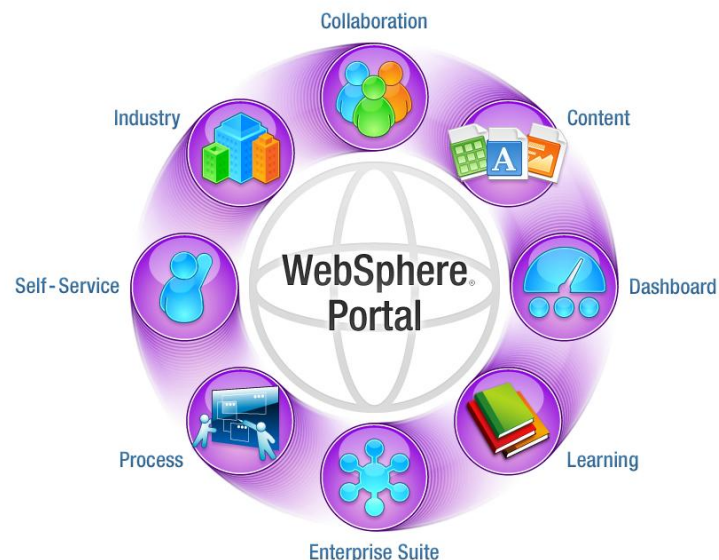
- Application Server
- Database
- LDAP Directory Server
- Admin
- Workflow Portlets
- Application Templates
- Failover Support (requires Idle Standby license)
- Single sign on
- Search
- Personalization
- Presentation
- Customization
- Application aggregation
- Java Portlet API
- Use of 100's of portlets
- WSRP support
- Web 2.0 APIs: REST services, CSA, Live Text
- WebSphere Portlet Factory (1 PF Designer per enterprise)



- Web Content Management*
- Document Management*
- Instant Messaging*

WebSphere Portal Accelerators

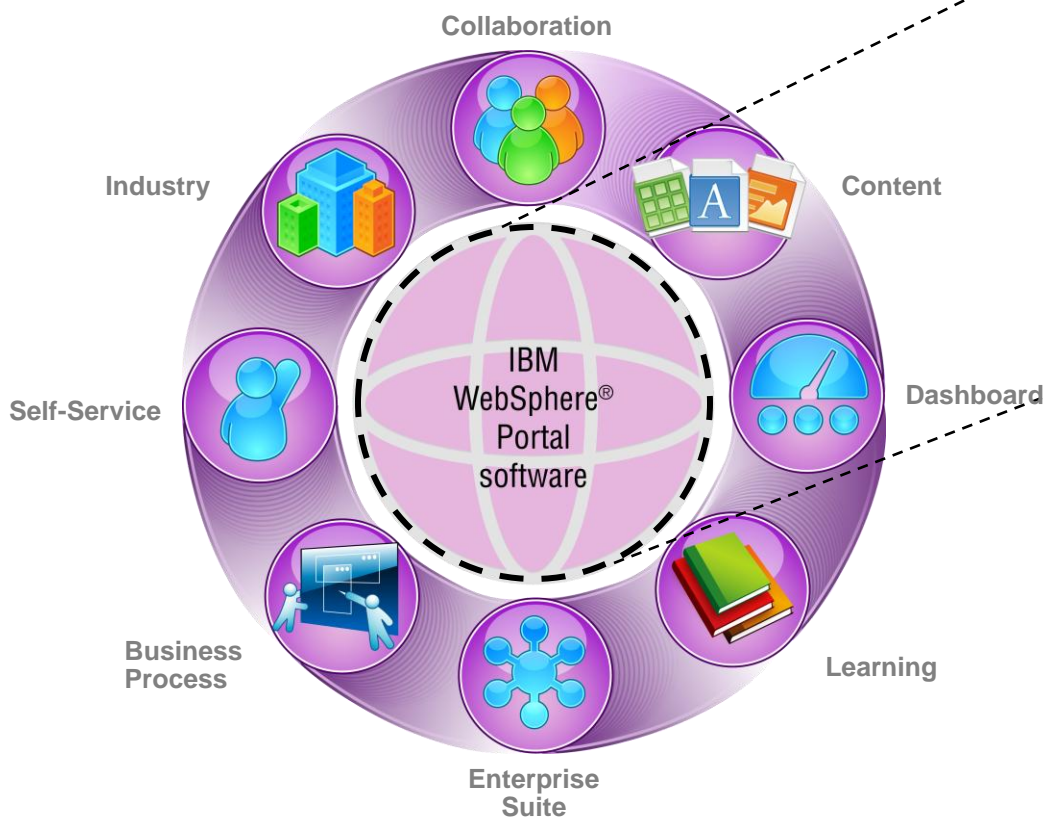
- Introducing new Business Accelerators...
 - ▶ Integrated packages that easily snap-on to WebSphere Portal to deliver rapid time-to-value for specific business challenges
 - ▶ Highly flexible, configurable, and scalable
 - ▶ Start small. Snap on additional Accelerators for additional value
- Accelerators help customers to dramatically speed time to value and reduce the cost of deploying portal-based business solutions
 - ▶ Shorten implementation cycles
 - ▶ Realize Time to Value without sacrificing flexibility
 - ▶ Realize quicker ROI on portal investment



Accelerators are integrated packages that easily snap-on to Portal to deliver rapid time-to-value

IBM WebSphere Portal – Portfolio

*A Single Strategic Portal Base Offering
The Industry's Broadest Set Of Capabilities*



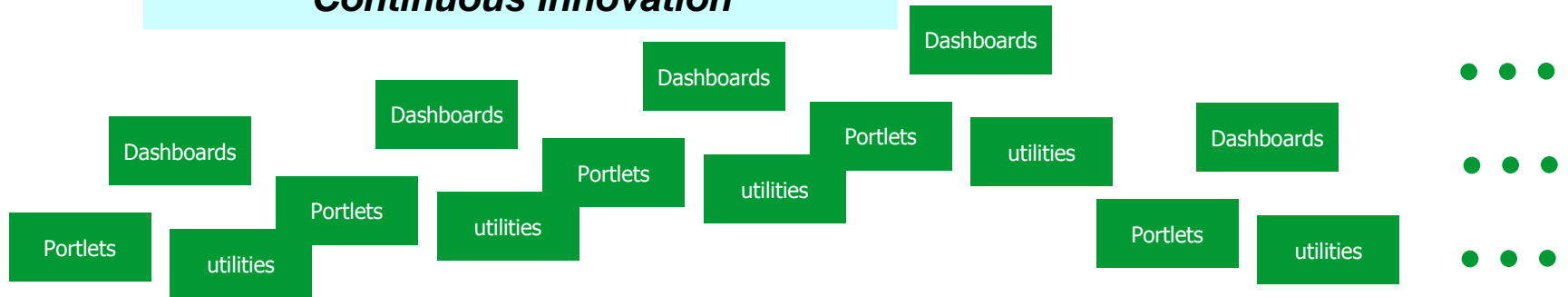
- WebSphere Portal Server
- WebSphere Portal Enable
- WebSphere Portal Extend
- WebSphere Portal Express

- Additionally For:**
- **z Series Customers:** *WebSphere Portal Enable for z/OS*
 - **Mobile Requirements:** *WebSphere Everyplace Mobile Portal Enable*

Packaging Strategy

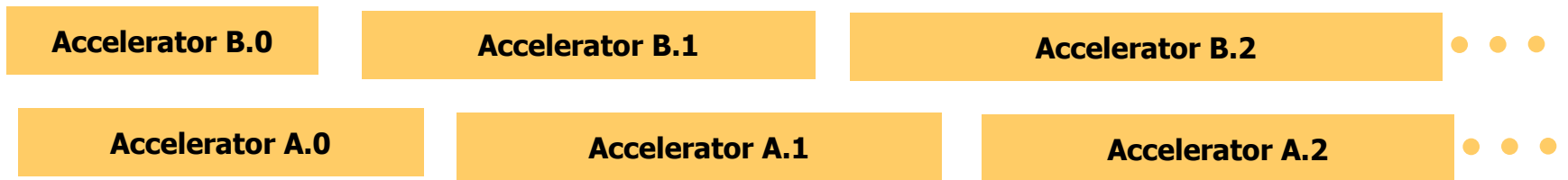
Continuous Innovation

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Focus on Line of Business Value and Time to value

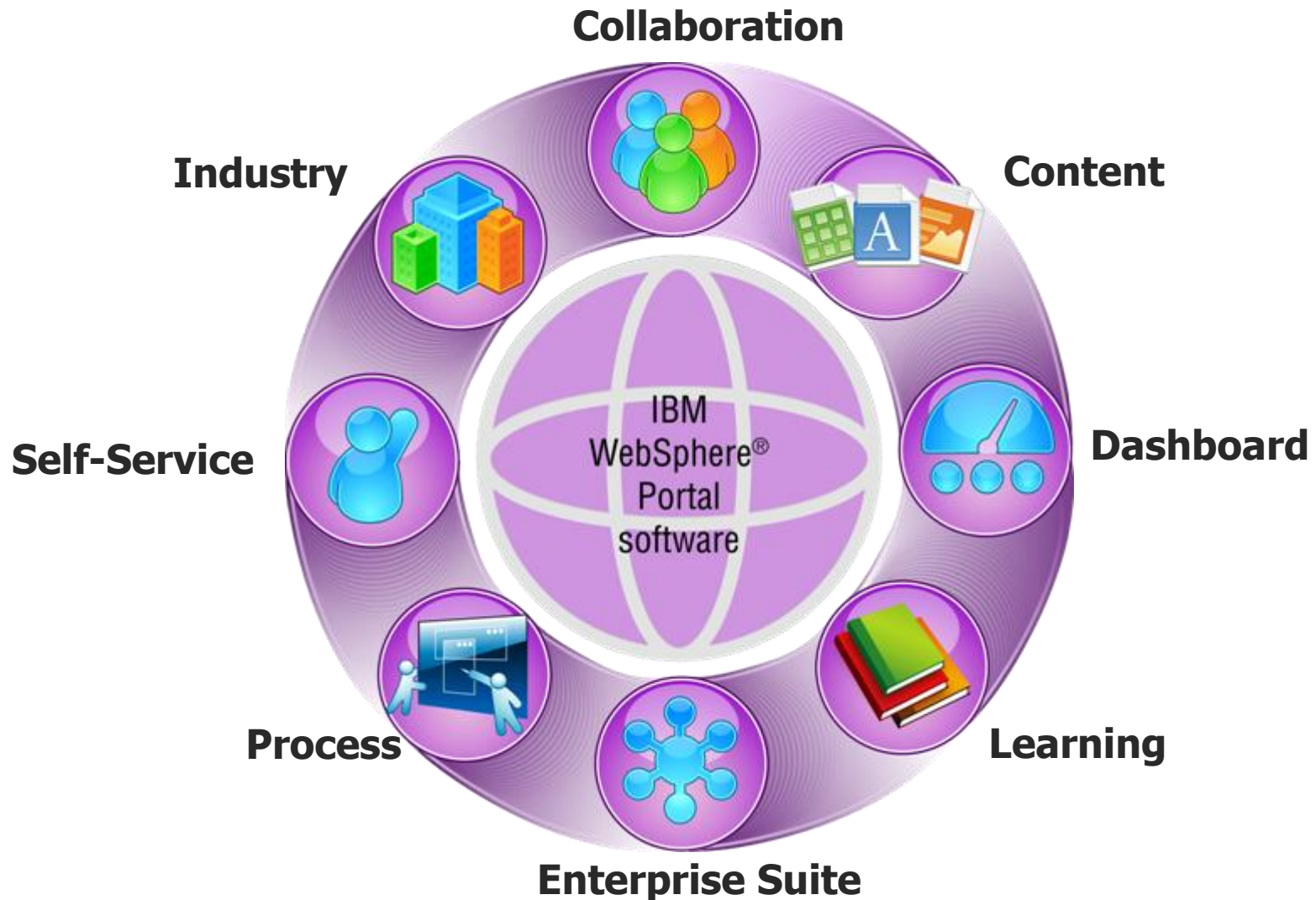
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IBM Accelerators for WebSphere Portal



Updated Packages – What’s included

Dashboard Accelerator

Learning Accelerator

Self-Service Accelerator

Business Process Accelerator

Content Accelerator*	Collaboration Accelerator *	Enterprise Suite Accelerator*	WebSphere Portal Enable	WebSphere Portal Extend
WCM 6.1	ST 8.0 (no ST client)	Content Accelerator	WCM 6.1 (1 per 6 cpu)	WCM 6.1
Quickr 8.1 (no connectors)	Connections 2.0	Collaboration Accelerator	Quickr 8.1 (no connectors)	Quickr 8.1 (no connectors)
OmniFind 8.5(limited entitlement)	Quickr 8.1 (no connectors)	Dashboard Accelerator 6.1	OmniFind 8.5(limited entitlement)	OmniFind 8.5 (limited entitlement)
		Forms 3.0 (1-1 Server)		Sametime 8.0
		Expeditor 6.1		Forms 3.0

Portal Server 6.1		
<ul style="list-style-type: none"> • Presentation • Customization • Application aggregation • Java Portlet API • Use of 100's of portlets • WSRP support 	<ul style="list-style-type: none"> • Admin • Single sign on • Search • Personalization • 1 PF Designer and per enterprise 	<ul style="list-style-type: none"> • Composite Templates • Cluster Support • Application Server • Database • LDAP Directory Server • Workflow portlets

* Accelerators available with and without Portal Server.

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Application Integration with WebSphere Portal V6.1



Portal Technical Overview

IBM developerWorks **Live!**

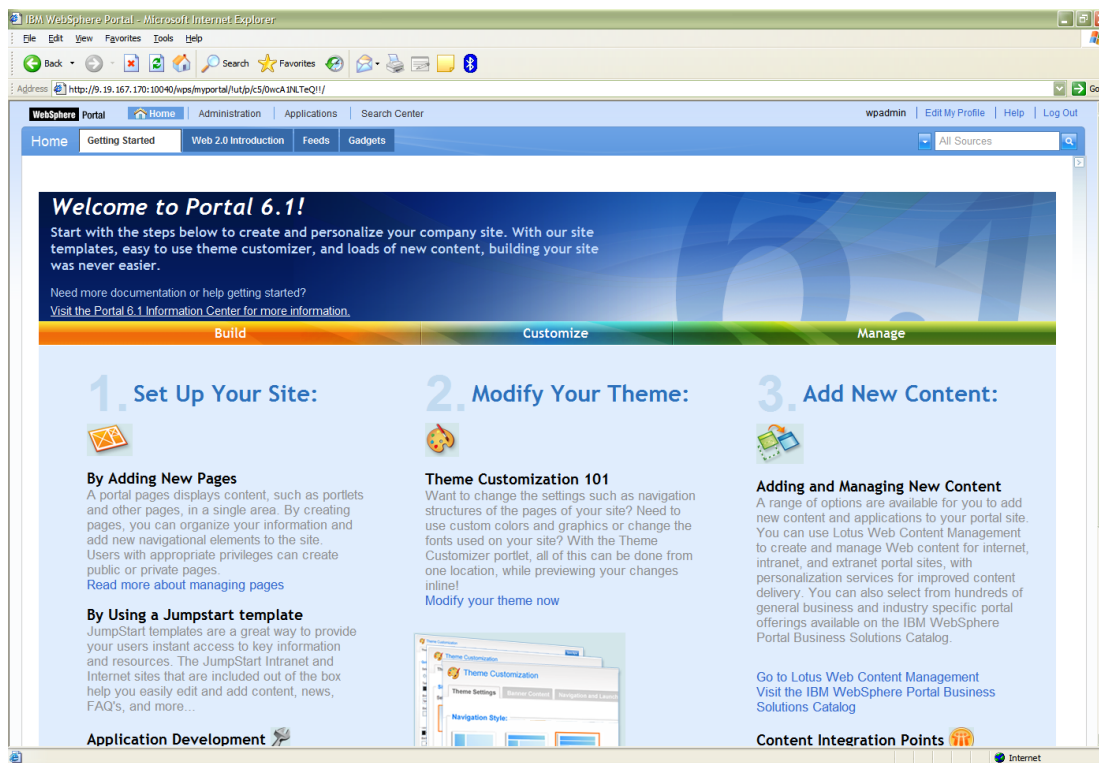
Abbreviated Title Here

Objectives

- **WebSphere Portal Overview**
- Portal Architecture and Topology
- Understanding Portlets
- Portal Layout
- Portal Administration
- Portal Enhancements

WebSphere Portal Product Overview

- Enterprise portal solution with complete services to deliver single point of personalized interaction to:
 - ▶ Applications
 - ▶ Content
 - ▶ Business processes
 - ▶ People
- Product consists of middleware, applications (called portlets) and development tools for building and managing secure B2B, B2C, B2E portals



Standard, reusable, intuitive portal framework

Legacy Systems+ SOA

Portal Services



Standard, Reusable, Intuitive, Adaptive User Experience



Composite applications integrate services in the form of portlets, within a security-rich environment in the context of a business process

Delivery of right services to the right audience

Enterprise Portal Framework

Delivering Reusable Services Inside or Outside the Organization

Employee	Position	Band	Band Mos	Pay Code	Job Family	Work Location	PBC History
Carlin Garfield	Media Specialist	07	70	4954	24A	Chicago	-0-2
Herb Medway	Copy Writer	08	45	4954	24A	New York	-0-2
Lisa Young	Media Specialist	08	88	4954	24A	Paris	-0-2
Mail Vo	Promotions Coordinator	04	28	4664	24A	Chicago	-0-1
Sabra Mazar	Media Specialist	08	70	4954	24A	New York	-1-1

Services: Framework Services, Integration Services, Content Services, Collaboration Services

Information Access Layer: Content, Data, Applications, Mainframe / Legacy, Business Processes



Rich Clients



Browser



Mobile Clients

Customers



Rich Clients



Browser



Mobile Clients

Employees



Rich Clients



Browser

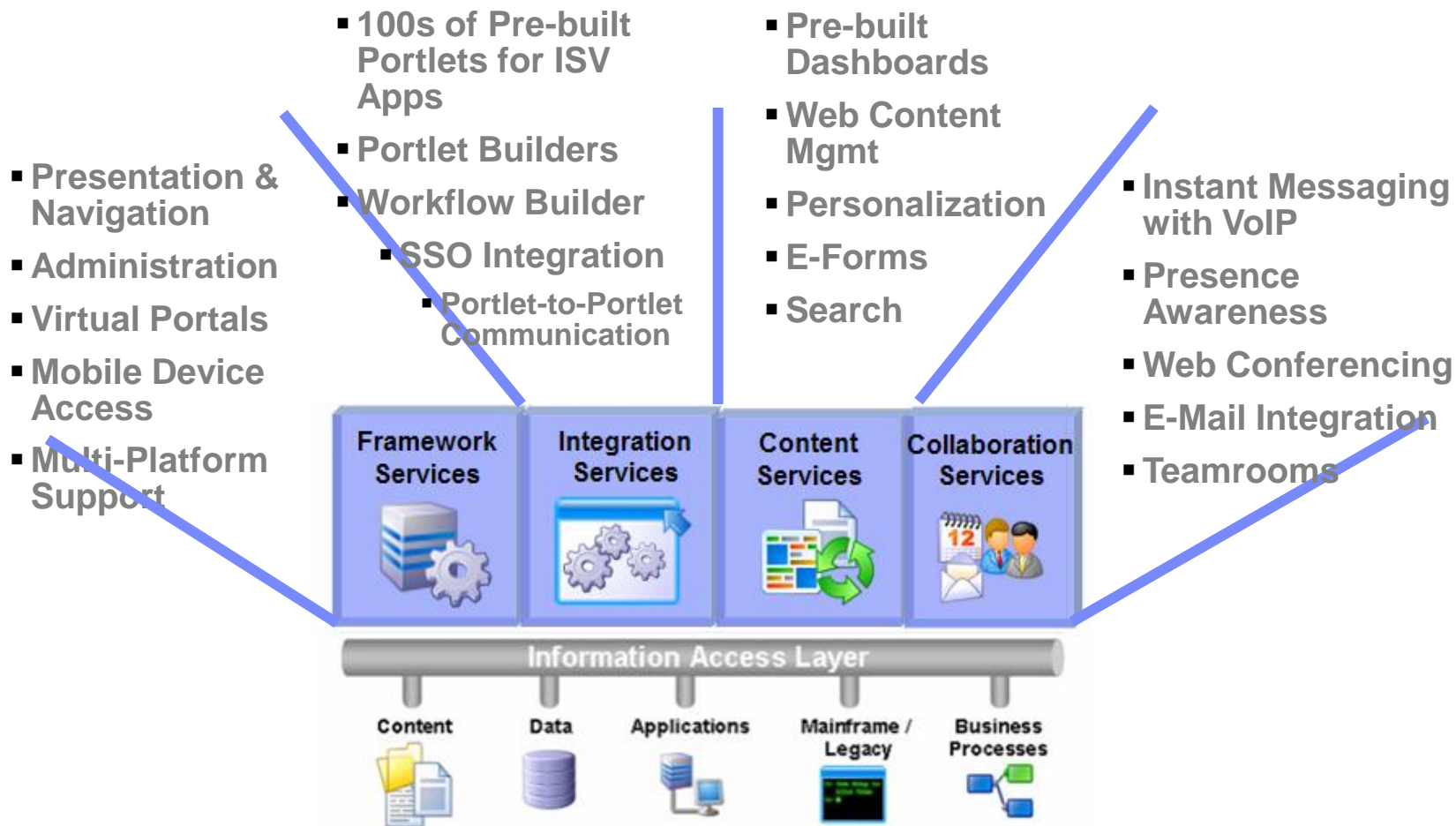


Mobile Clients

Partners / Suppliers

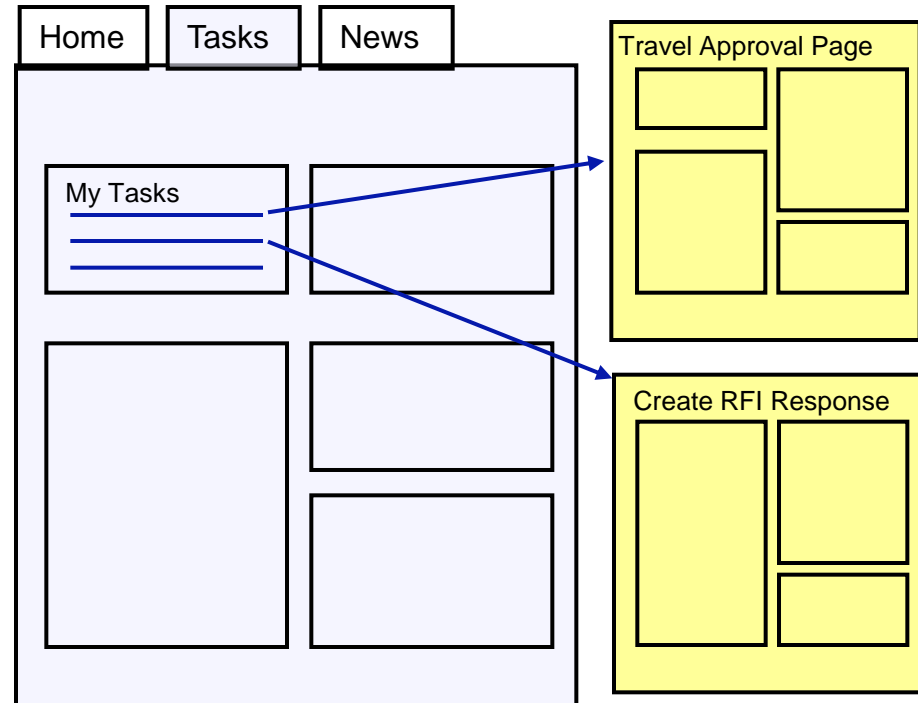


WebSphere Portal Product Overview



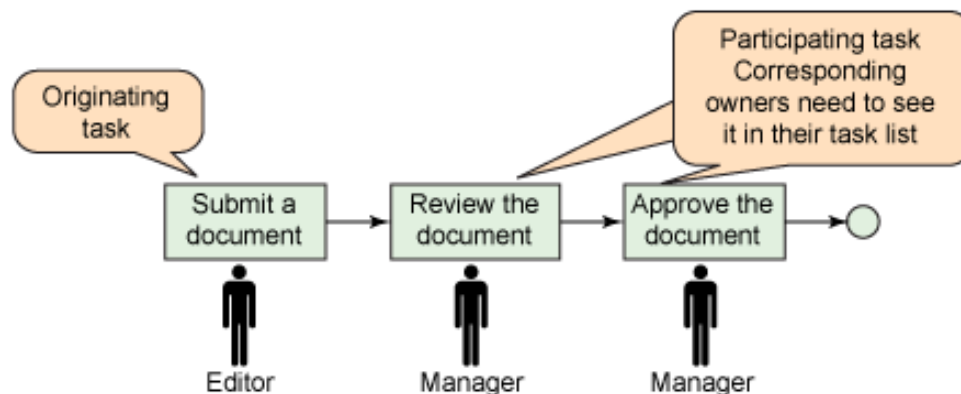
WebSphere Portal Business Process Integration

- Enables easy deployment of powerful workflow applications
 - ▶ Dynamically works with business processes via a portal
 - ▶ Task list portlet exposes workflow activities that are driven by the WebSphere Process Server Process Choreographer
 - ▶ Business processes leverage instant messaging, search and document management
- Business value
 - ▶ Quickly integrates business process with people – the most flexible part of a business process
 - ▶ Improves productivity through self-service process such as travel approval
 - ▶ Reduces deployment cost for automating business process that are executed dynamically through a user workplace



Simplicity from an individual user's perspective

- The Portal becomes the user interface for all user facing tasks
- To each user, the Portal presents exactly the tasks at hand, and is also the integration point for all information and applications required to process those tasks
- WebSphere Portal displays alerts for users when tasks are pending. When user clicks on the alert, the portal displays the user's task list, which lets the user to launch the Task Pages



Task List						
<input type="button" value="Claim"/> <input type="button" value="Release"/>						
<input type="checkbox"/>	TITLE	DESCRIPTION	STATE	OWNER	ESCALATED	PRIORITY
<input type="checkbox"/>	ReviewProposal		Available			5
<input type="checkbox"/>	ReviewProposal		Claimed	Administrator		5
<input type="checkbox"/>	ApproveProposal		Available			5

Portal Welcome Page

IBM WebSphere Portal - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Print Mail Bluetooth

Address http://portal.ibm.com/wps/portal

WebSphere Portal Home Administration Applications Search Center wpadmin Edit My Profile Help Log Out

Home Getting Started Web 2.0 Introduction Feeds Gadgets All Sources


Welcome to Portal 6.1!

Start with the steps below to create and personalize your company site. With our site templates, easy to use theme customizer, and loads of new content, building your site was never easier.

Need more documentation or help getting started?
[Visit the Portal 6.1 Information Center for more information.](#)


Build Customize Manage


- ### 1. Set Up Your Site:



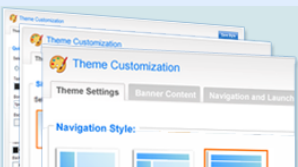
By Adding New Pages
 A portal page displays content, such as portlets and other pages, in a single area. By creating pages, you can organize your information and add new navigational elements to the site. Users with appropriate privileges can create public or private pages.
[Read more about managing pages](#)


By Using a Jumpstart template
 JumpStart templates are a great way to provide your users instant access to key information and resources. The JumpStart Intranet and Internet sites that are included out of the box help you easily edit and add content, news, FAQs, and more...

Application Development 
- ### 2. Modify Your Theme:




Theme Customization 101
 Want to change the settings such as navigation structures of the pages of your site? Need to use custom colors and graphics or change the fonts used on your site? With the Theme Customizer portlet, all of this can be done from one location, while previewing your changes inline!
[Modify your theme now](#)


- ### 3. Add New Content:



Adding and Managing New Content
 A range of options are available for you to add new content and applications to your portal site. You can use Lotus Web Content Management to create and manage Web content for internet, intranet, and extranet portal sites, with personalization services for improved content delivery. You can also select from hundreds of general business and industry specific portal offerings available on the IBM WebSphere Portal Business Solutions Catalog.

[Go to Lotus Web Content Management](#)
[Visit the IBM WebSphere Portal Business Solutions Catalog](#)

Content Integration Points 

Internet

Objectives

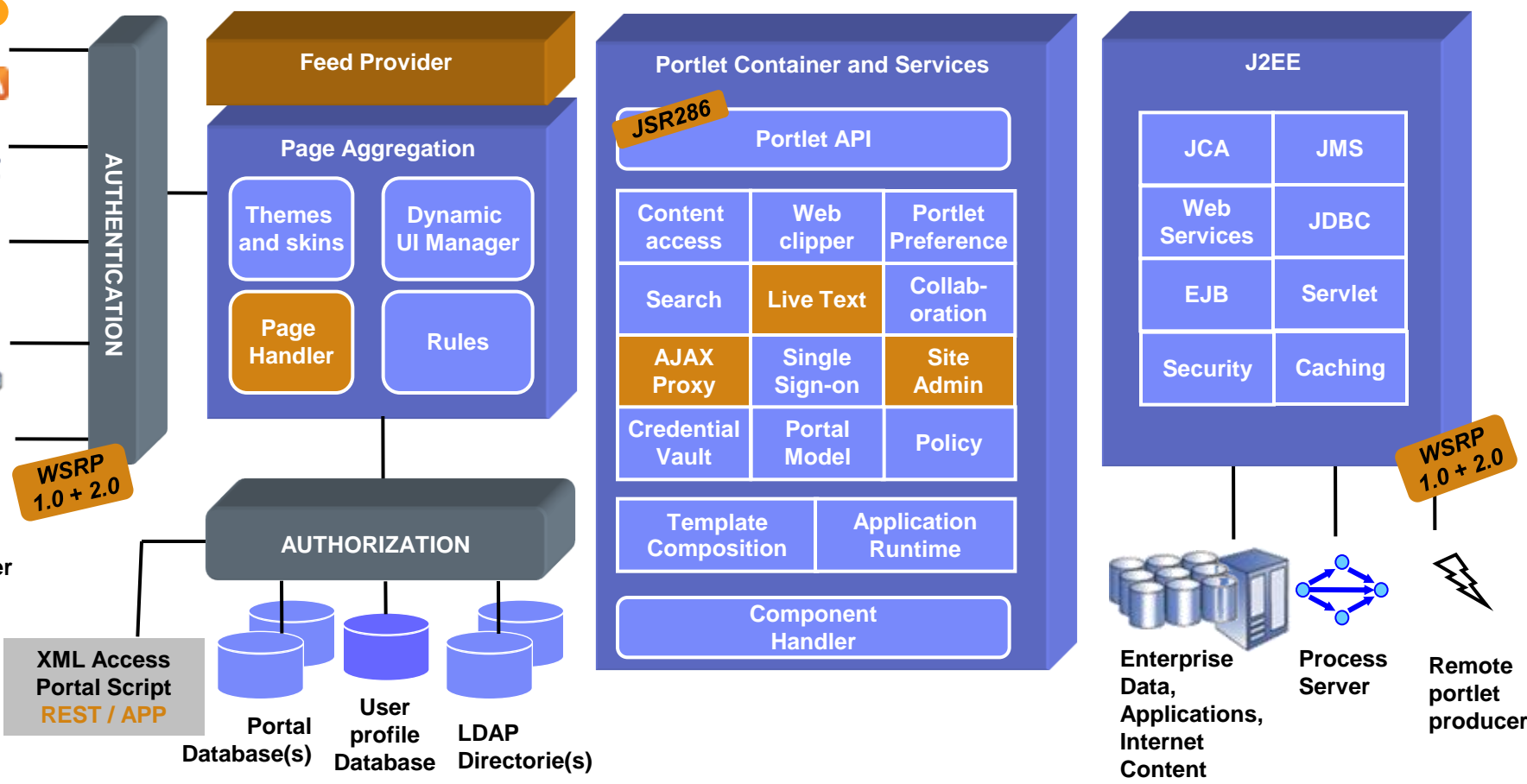
- WebSphere Portal Overview
- Portal Architecture and Topology
- Understanding Portlets
- Portal Layout
- Portal Administration
- Portal Enhancements

WebSphere Portal Architecture

Desktop and mobile Browsers, Mashups and offline Clients



Remote portlet consumer



WebSphere Portal Architecture – Main Components

- WebSphere Application Server
- HTTP Server
 - ▶ Apache Server, IBM HTTP Server, Microsoft IIS, Sun Java System Web Server
- User Registry
 - ▶ LDAP
 - ITDS, Domino Enterprise Server, MS AD, Sun Java System Directory, Novell eDirectory
 - ▶ Database
 - ▶ Custom User Registry (CUR)
- Database
 - ▶ Out-of-the-box database is Apache Derby 10.1
 - ▶ DB2 UDB, Oracle, MS SQL Server
- Security Manager
 - ▶ Tivoli Access Manager, CA SiteMinder

WebSphere Portal and WebSphere Application Server

- J2EE application that runs on WebSphere Application Server (WAS)
- WAS executes the Java portlets, JavaBeans, JSPs and EJBs used by WebSphere Portal

The image displays two screenshots of the WebSphere Integrated Solutions Console (ISC) interface.

Left Screenshot: Application servers page
 - Title: **Application servers**
 - Description: Use this page to view a list of the application servers in your environment and the status of each of these servers. You can also use this page to change the status of a specific application server.
 - Table of Application Servers:

Name	Node	Version
WebSphere Portal	portal	N
server1	portal	N

Total 2

Right Screenshot: Enterprise Applications page
 - Title: **Enterprise Applications**
 - Description: Use this page to configure an enterprise application further configuring of the application or its modules.
 - Configuration section:

General Properties

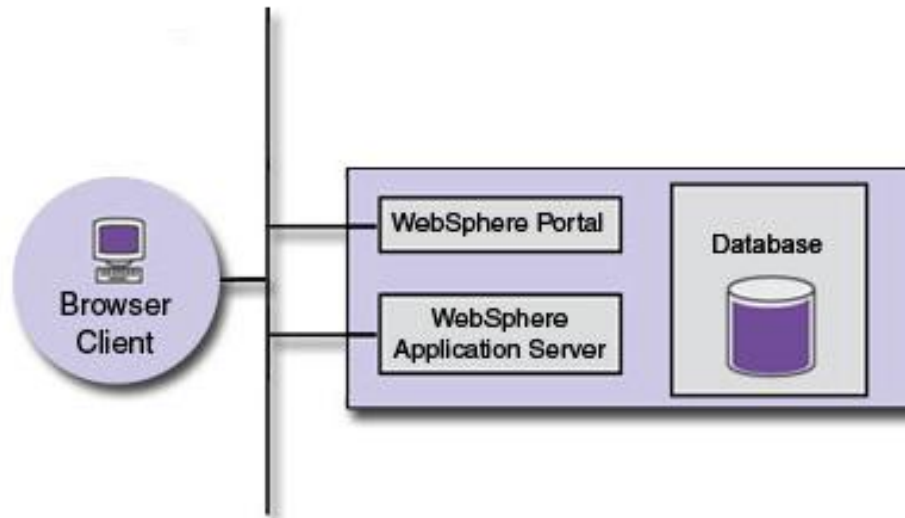
- * Name: wps
- Application reference validation: Issue warnings

Detail Properties

- Target specific application status

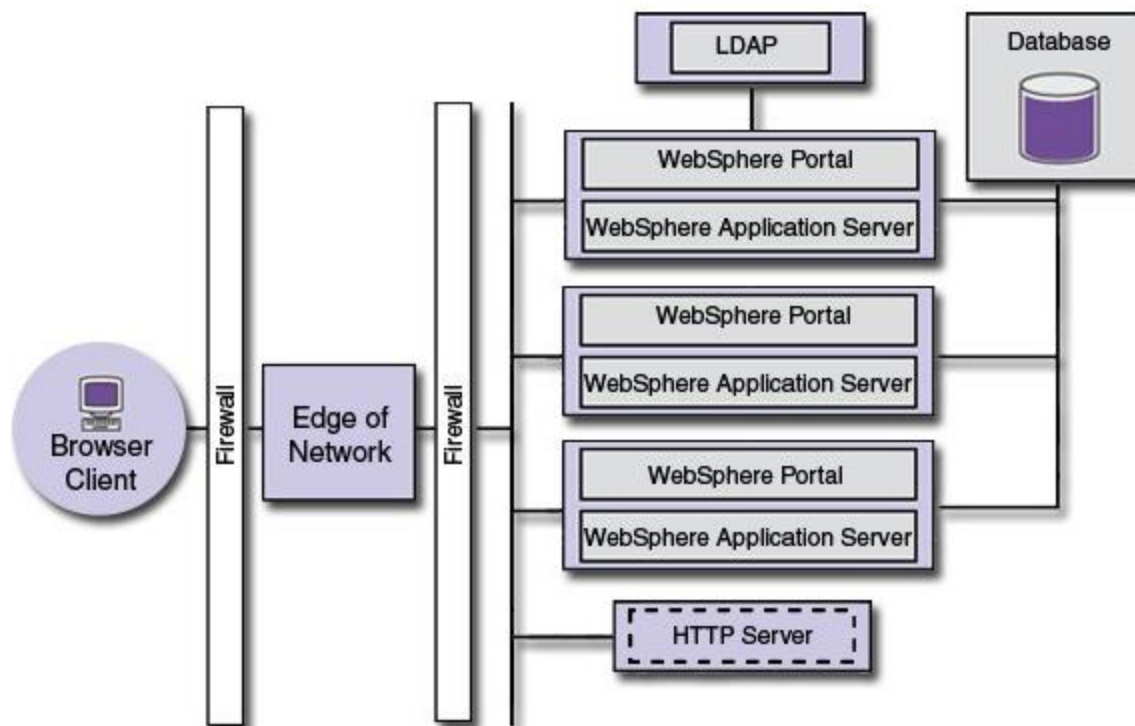
WebSphere Portal Topology – Single Server

- Illustrate a simple environment for demo, POC
- WebSphere Portal, WebSphere Application Server and database installed on the same server
- Utilizes out-of-box security, file based user registry



WebSphere Portal Topology – Production Environment

- Horizontal or Vertical cluster
- WebSphere Network Deployment Manager for maintaining and configuring the cluster
- Support failover



Objectives

- WebSphere Portal Overview
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Portlets

- Window into specific information or a service
- Building blocks of web portals
- Have individual sets of controls for affecting their appearance or behavior
- May be added, removed or moved on a portal page
- Run inside a Portlet container – *JSR 168 and JSR 286 APIs*

News

Latest News

The news section of your site can become a trusted source of information for employees. Provide a list of links to the latest news for your company.



[Show the Top](#)
Create the featured




- [Links to the Latest](#)
- [Tips for Writing](#)
- [Write an Effective](#)
- [Include an Image](#)

[Create an Article](#)
[View all](#)

Google Gadgets

Current Temperature
Location: Atlanta, GA (30308)
Cloudy
Wind E 9mph
Humidity: 88%
Feels like: 60°F


Forecast - Click date for detailed forecast.


Today	Friday	Saturday
		
Hi 71° Lo 62°	Hi 84° Lo 68°	Hi 89° Lo 68°


Gadgets powered by Google


RSS Feed Portlet

RSS Feed (4)

 **Ernesto Weak, but Building**
Ing er ad exercidunt wis nulla feui te magna adit nonsectem ero commodiam, vero ecte tat vent irit praesequis nonse feu faocum duisi.

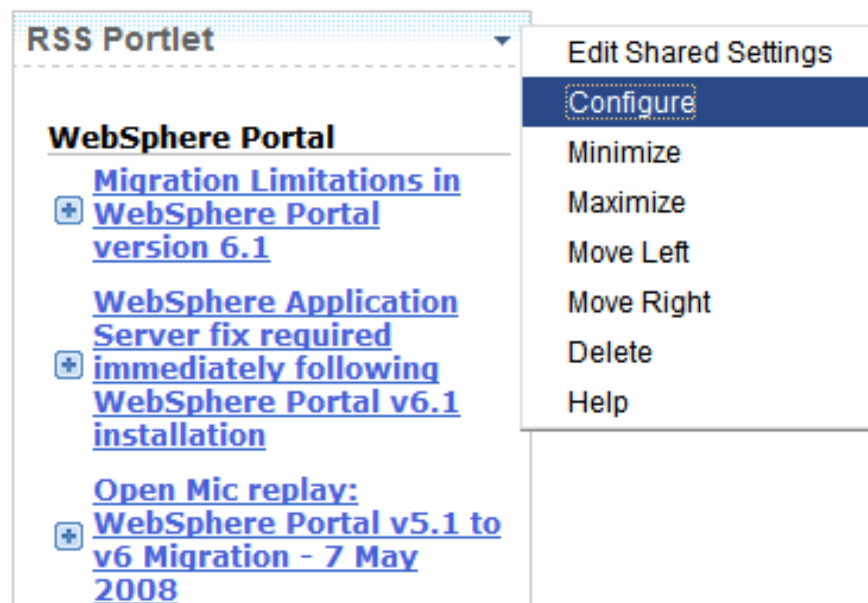
 **Chelsea takes another win**
Esto diamconsed tionullam ipit vel ulputatio dolorer sim ipit lutpat aliquametuer sustrud eui te commy nulputpat nulla con ullut la faciliqui

 **New Monument to be built downtown**
Rud tem delis esto eum vulla adipis essed tisi. Ex ent nostrud min ullaorp eriustrud eraessim verat lore eriuscidui blaore min ut lum nibh

 **Concert show rocks the house**
incidui pising eummolorting et, quatum quat. Ut ipit laore facilis ex euus endre core commummy nibh ent ectet, sim do dipit, sum

Portlets states and modes

- Independently developed, deployed, managed and displayed
- Portlets have multiple states and modes:
 - ▶ States: Maximize, Minimize, Normal
 - ▶ Modes: View, Edit, Configure, Help
- Portlets support multiple devices:
 - ▶ Phones, Organizers, Voice
 - ▶ Unique views for each device with shared business logic



Portlet to Portlet Communication

The screenshot shows a web application with three portlets: "Destination Example - Weather", "Destination Example - Tourist Information", and "Destination Example - Click Map".

Destination Example - Weather: Displays weather for Las Vegas (59°F, Humidity 19, UV Index 4, Pollen Index 2, Wind 8 mph SE). Includes a "Change City" button.

Destination Example - Tourist Information: Displays tourist info for Las Vegas (Population: 1,425,723). Includes a "Change City" button.

Destination Example - Click Map: Shows a map of the US with Nevada highlighted in orange. A context menu is open over Nevada, listing actions: "Send to Destination Example - Weather", "Send to Destination Example - Tourist Information", "Send to Destination Example - Click Map", and "Invoke all actions".

Annotations:

- A blue callout box points to the weather data: "Weather information changes according to the selected city".
- A blue callout box points to the context menu: "Context menu for target portlet selection".
- A blue callout box points to the tourist information: "Tourist information automatically populated based on the selected city".
- Green arrows point from the map to the weather and tourist information portlets.

Comparing Portlets to Servlets

- Portlets run inside the portlet container of a portal server
- Interface between Portlet and portlet container is defined by the Portlet API
- Servlets run within a web container on an application server
- Interface between Servlet and container is defined by the Servlet API

If you have developed Servlets with the Servlet API, you will discover that the Portlet API is conceptually very similar.

IBM Portlets for Google Gadgets


- Create, customize and use rich Internet applications with Google Gadgets
- Ready-to-use services
- Download, Access and Customize!

IBM Portlet for Google Gadgets


iGoogle Search Gadget
e.g. calendar, Dilbert, Washington Post


Please select the Gadget you would like to display in this portlet (1 - 9 of 46598) [more >>](#)


Popular
[News](#)
[Tools](#)
[Communication](#)
[Fun & Games](#)
[Finance](#)
[Sports](#)
[Lifestyle](#)
[Technology](#)
[New stuff](#)


[Useless Knowledge](#)

 Select Gadget


[Billboard News](#)
Billboard.com
 Select Gadget


[Random Classic Art](#)

 Select Gadget


[Kraft Foods Recipe Finder](#)

 Select Gadget

[ToDo](#)

 Select Gadget

[Current Moon Phase](#)

 Select Gadget

[Weather Forecasts](#)

 Select Gadget

[National Geographic Photo of the Day](#)

 Select Gadget

[Date & Time](#)

 Select Gadget

Number of items: [3](#) [6](#) [9](#) [12](#) [15](#) [18](#) [more >>](#)

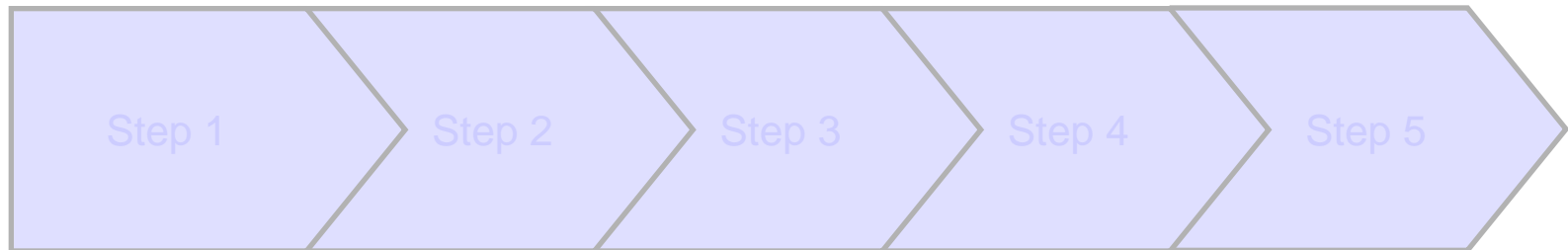
Your use of Google Gadgets is governed by the [Syndicated Google Gadgets Terms of Service for Webmasters](#) which are provided by Google and are accessible by this link

Done

Objectives

- WebSphere Portal Overview
- Portal Architecture and Topology
- Understanding Portlets
- Portal Layout
- Portal Administration
- Portal Enhancements

How Portal constructs pages



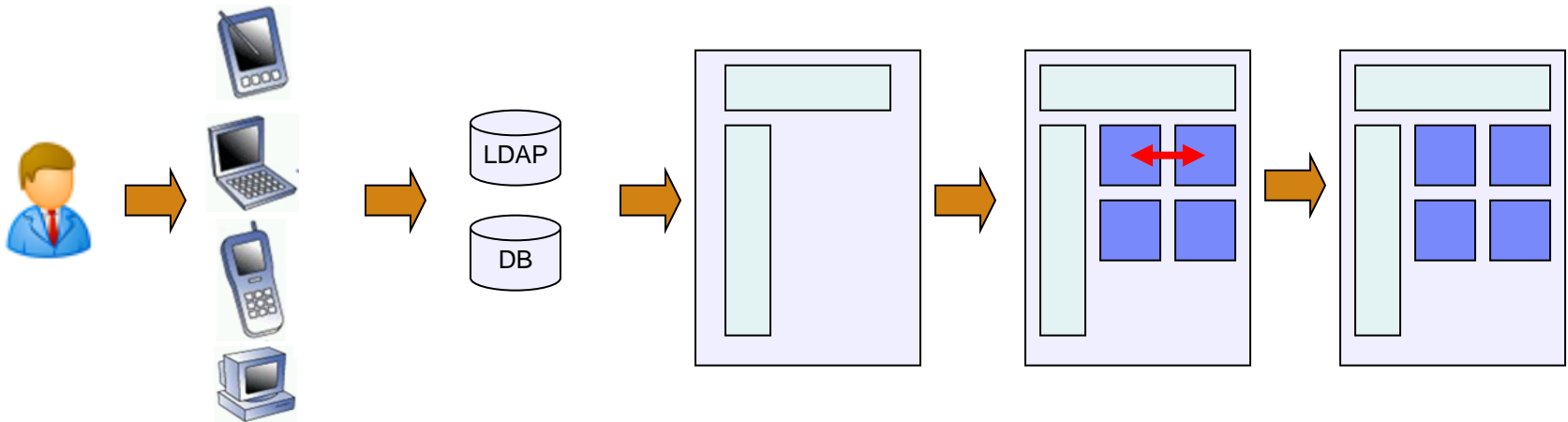
Portal servlet examines the request

Portal database and security settings are checked

Layout system is called for the target markup

Portlets are processed in two phases

Portlets render themselves in the 2nd phase



Portal Layout

Quick Links

Tab navigation + contextual menus

Search

Log out

The screenshot shows a WebSphere Portal interface with the following components:

- Navigation Bar:** Includes 'WebSphere Portal', 'Home', 'Administration', 'Applications', 'Search Center', and user information 'wadmin | Edit My Profile | Help | Log Out'.
- Tab Navigation:** A row of tabs including 'Home', 'Getting Started', 'Web 2.0 Introduction', 'Feeds', 'Gadgets', and 'My Page'.
- Search:** A search box labeled 'Sources' with a magnifying glass icon.
- Portlets:** A vertical column on the right side containing various portlets such as 'Lotus Notes View', 'Mail', 'Microsoft Exchange2003 Calendar', 'Microsoft Exchange2003 Contacts', 'Microsoft Exchange2003 Mail', 'Microsoft Exchange2003 Notes', 'Microsoft Exchange2003 Tasks', and 'Sametime Contact List'.
- Main Content Area:** Divided into two columns. The left column features a 'Feed Reader Portlet' with 'CNN' news items and a 'Portlets' callout box. The right column features an 'IBM Redbooks' section with articles like 'WebSphere Application Server Version 6.1 Feature Pack for EJB 3.0' and 'Getting Started with IBM WebSphere Business Services Fabric V6.1'.
- Callouts:** Several blue callout boxes with white text and arrows pointing to specific UI elements: 'Quick Links', 'Tab navigation + contextual menus', 'Search', 'Log out', 'Portlets', and 'People and Content palettes'.

Portal Layout

The screenshot shows the WebSphere Portal Administration interface. At the top, there are navigation tabs for 'Home', 'Administration', 'Applications', and 'Search Center'. The user is logged in as 'wadmin'. The main content area is titled 'Administration' and 'WebSphere Portal'. On the left, there is a 'Left navigator' menu with categories like 'Portal User Interface', 'Portlet Management', 'Access', 'Portal Settings', 'Portal Content', 'Search Administration', and 'Portal Analysis'. The central area is titled 'Manage Pages' and contains a table of pages in the 'Content Root'. A callout box labeled 'Administrative Portlets' points to the top navigation area. Another callout box labeled 'Content and People Palette' points to the right-hand side of the interface, which displays a list of portlets including 'Lotus Notes View', 'Mail', and various Microsoft Exchange 2003 services.

Administrative Portlets

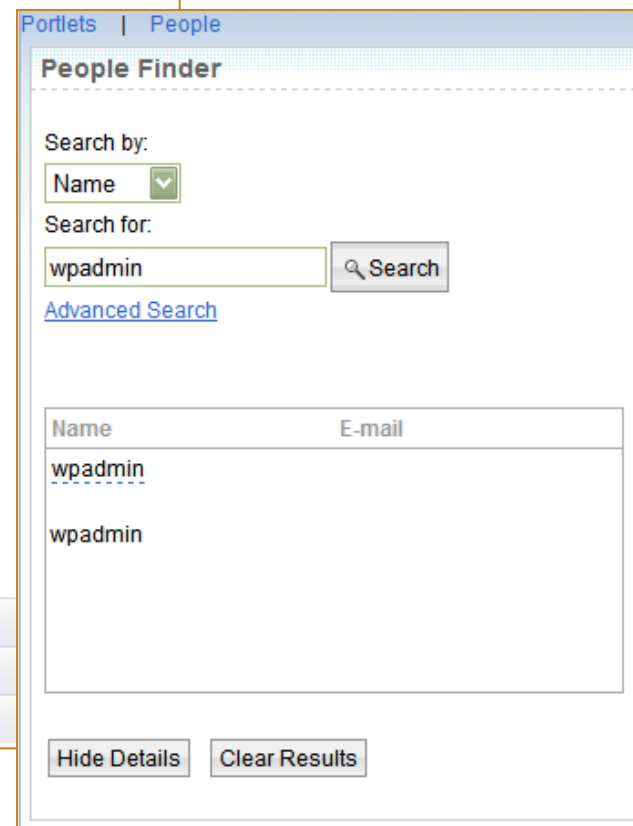
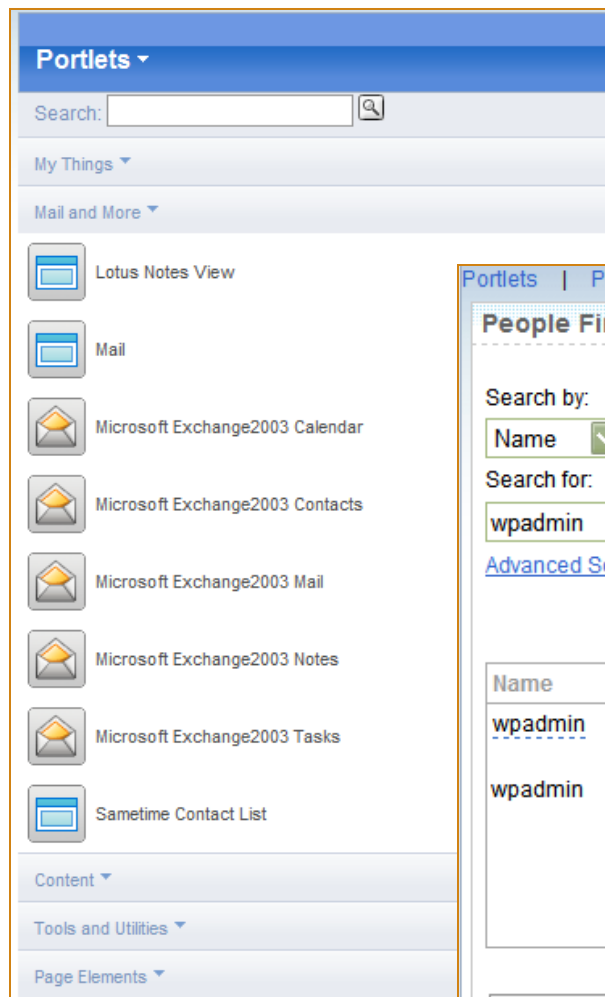
Left navigator

Content and People Palette

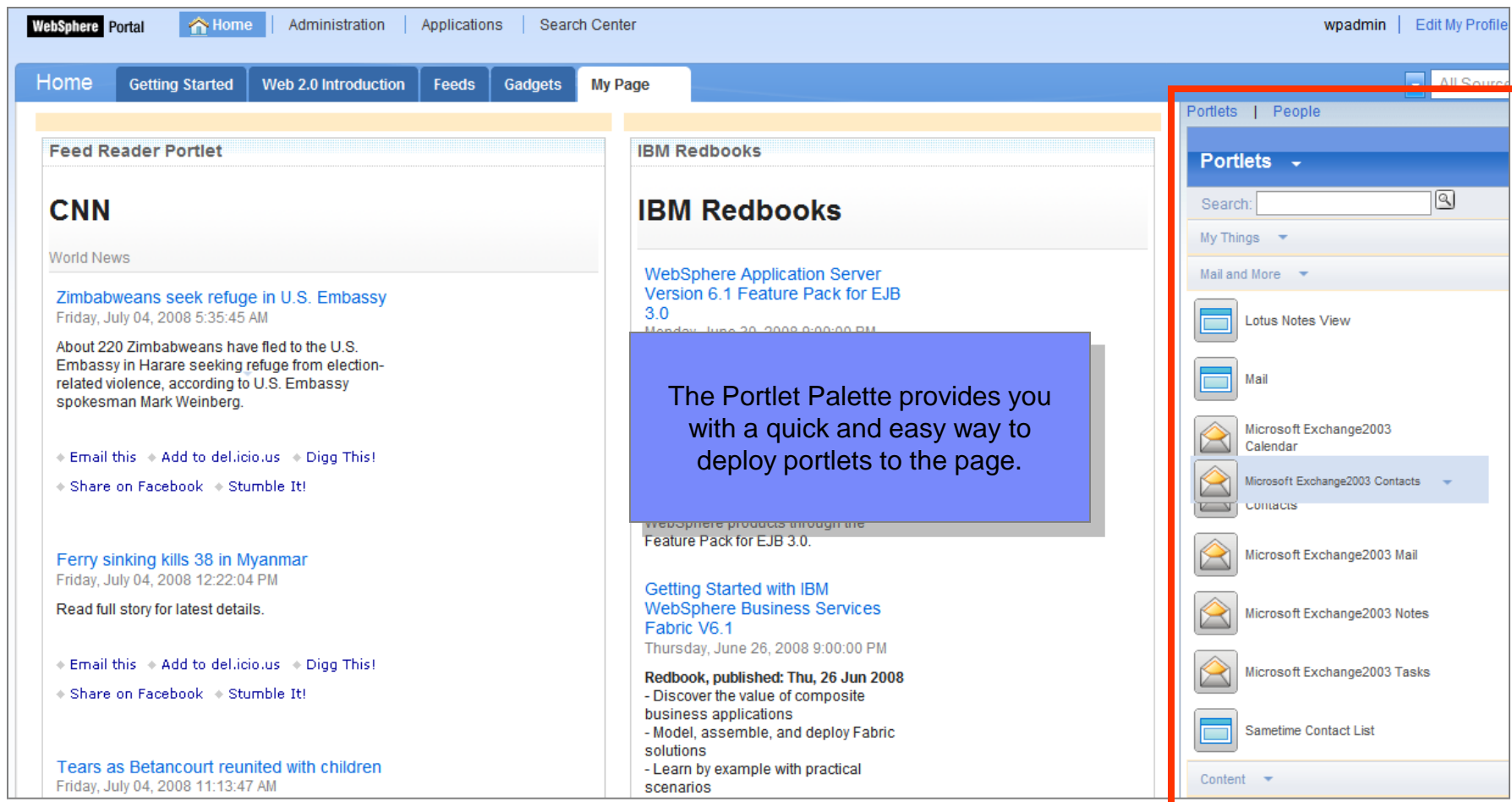
Title	Unique name or Identifier	Status
Home	ibm.portal.Home	Active
Administration	ibm.portal.Administration	Active
Applications	ibm.portal.page.Applications	Active
Login	wps.Login	Active
Personalization Picker	ibm.portal.Personalization.Picker	Active
List	ibm.portal.addtolist	Active
Editor	ibm.portal.PolicyEditorCPP	Active
Editor_CA	ibm.portal.PolicyEditorCA	Active
Search	ibm.portal.Search	Active
Edit My Profile	wps.Selfcare	Active

Content Palette

- Display via toggle icon
- Provide quick access to content
 - ▶ People Palette
 - ▶ Portlet Palette
- Customizable by users*, administrators and developers
 - ▶ Categories and content can be customized
 - ▶ Drop zones can be customized
 - Control what content can be dropped on a page
 - ▶ API and custom tags provided to allow for additional content types and drop zones



Drag-and-Drop re-arrangement of portlets



The screenshot displays a WebSphere Portal interface. The top navigation bar includes "WebSphere Portal", "Home", "Administration", "Applications", and "Search Center". The user is logged in as "wpadmin" and can "Edit My Profile". The main content area is divided into two columns. The left column features a "Feed Reader Portlet" with "CNN" news items, including "Zimbabweans seek refuge in U.S. Embassy" and "Ferry sinking kills 38 in Myanmar". The right column features an "IBM Redbooks" portlet with articles like "WebSphere Application Server Version 6.1 Feature Pack for EJB 3.0" and "Getting Started with IBM WebSphere Business Services Fabric V6.1".

On the right side, a "Portlets | People" sidebar is visible, containing a search box, "My Things", "Mail and More", and a list of portlets: Lotus Notes View, Mail, Microsoft Exchange2003 Calendar, Microsoft Exchange2003 Contacts, Microsoft Exchange2003 Mail, Microsoft Exchange2003 Notes, Microsoft Exchange2003 Tasks, and Sametime Contact List. A red box highlights this sidebar. A blue callout box is overlaid on the main content area, stating: "The Portlet Palette provides you with a quick and easy way to deploy portlets to the page."

Drag-and-Drop re-arrangement of portlets

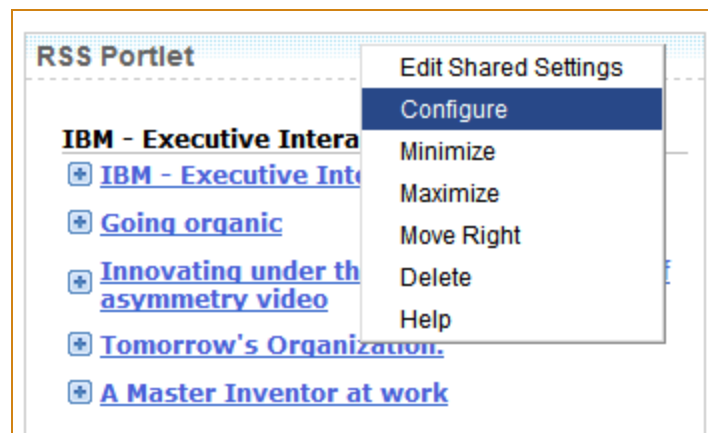
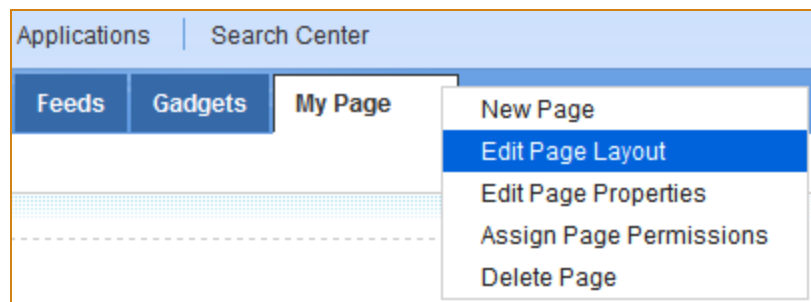
The screenshot displays a WebSphere Portal interface. At the top, there are navigation tabs: Home, Getting Started, Web 2.0 Introduction, Feeds, and Gadgets. A red box highlights a horizontal bar that appears as a portlet is being dragged over it. A blue callout box with white text states: "A horizontal bar appears as you drag the portlet over areas on the page available for deployment." The main content area shows a "Feed Reader Portlet" on the left and a "Microsoft Exchange2003 Mail" portlet on the right. The "Microsoft Exchange2003 Mail" portlet is titled "IBM Redbooks" and contains a message about "Draft Redbook, last updated: Mon, 30 Jun 2008". The right sidebar contains a "Portlets" section with a search box and a list of portlets including Lotus Notes View, Mail, Microsoft Exchange2003 Calendar, Microsoft Exchange2003 Contacts, Microsoft Exchange2003 Mail, Microsoft Exchange2003 Notes, Microsoft Exchange2003 Tasks, and Sametime Contact List.

Drag-and-Drop re-arrangement of portlets

The screenshot displays a WebSphere Portal interface. At the top, there is a navigation bar with links for 'Home', 'Administration', 'Applications', and 'Search Center'. Below this, a secondary navigation bar includes 'Home', 'Getting Started', 'Web 2.0 Introduction', 'Feeds', 'Gadgets', and 'My Page'. The main content area is divided into several portlets: 'Feed Reader Portlet' (displaying CNN news), 'Microsoft Exchange2003 Mail' (highlighted with a red box), 'IBM Redbooks' (displaying a book titled 'Application Server Feature Pack for EJB'), and 'Lotus Notes View'. A blue callout box is overlaid on the page, containing the text: 'Drop the portlet to the page as appropriate by releasing the mouse key to add the portlet where you view a horizontal bar.' On the right side, there is a 'Portlets' sidebar with a search field and a list of available portlets, including 'Lotus Notes View', 'Mail', 'Microsoft Exchange2003 Calendar', 'Microsoft Exchange2003 Contacts', 'Microsoft Exchange2003 Mail', 'Microsoft Exchange2003 Notes', 'Microsoft Exchange2003 Tasks', and 'Sametime Contact List'.

Page and Portlet Context Menu

- Available for Page and Portlets
- Easy access to Page/Portlet menu
- Page menus examples:
 - ▶ New Page
 - ▶ Edit Page Layout
 - ▶ Edit Page Properties
- Portlet menus examples:
 - ▶ Edit Shared Settings
 - ▶ Personalize
 - ▶ Configure
 - ▶ Help



Portal Page Layout – Page Customizer

- Changing page content (Portlets)
- Page appearance, content locking and wiring (Cooperative Portlet)

The screenshot displays the IBM Page Customizer interface. At the top, there is a navigation bar with links for Home, Administration, Applications, and Search Center, along with a Log Out button. Below this is a blue header for the Page Customizer, with tabs for Content, Appearance, Locks, and Wires. The main content area is titled 'Edit Layout' and includes a help icon and text explaining that this section allows for adding and arranging portlets, columns, and rows. The page title is set to 'My Page'. There are several layout icons for selection. A 'Show Portlet Rule Mappings' link is visible on the right. The main workspace shows two portlets: 'Feed Reader Portlet' and 'IBM Redbooks', each with a dropdown arrow and an 'Add portlets' button below it. A 'Done' button is located at the bottom left of the workspace.

Portal Administration

- WebSphere Portal Overview
- Portal Architecture and Topology
- Understanding Portlets
- Portal Layout
- Portal Administration
- Portal Enhancements

Portal Administration Tools

- Portal Administration Portlets
- XML Configuration Interface
- Portal Scripting Interface

Administration Tools: Portal Administration Portlets

- GUI interface to perform portal administrative tasks and actions on portal resources
 - ▶ Install portlets
 - ▶ Create new Portal page
 - ▶ Manage user and group permission
 - ▶ Configure Portal global settings
- User must log in as Portal administrator
- Accessible Administration quick links

The screenshot displays the WebSphere Portal Administration interface. At the top, there is a navigation bar with links for Home, Administration, Applications, and Search Center. The user is logged in as 'wpadmin'. The main content area features a large welcome message: 'Welcome to WebSphere Portal Administration. Manage. Create. Configure. Build and customize your site now!'. Below this, there are several quick links, each with an icon and a brief description:

- Portal User Interface**: Create and manage the page hierarchy and the look and feel of the site.
- Portal Content**: Manage site content.
- Portlet Management**: Manage the portlets that make up the site.
- Search Administration**: Manage Search Services, Collections, and Scopes.
- Access**: Control who has access to the site.
- Portal Analysis**: Gather data about the site.
- Portal Settings**: Manage site settings.
- Virtual Portals**: Create and manage virtual portals.

Administration Tools: XML Configuration Interface

- Batch processing interface for portal configuration updates
 - ▶ Export entire server configuration
- Command line tool that connects to Portal server using HTTP connection (therefore, can work remotely)
- Security:
 - ▶ User only needs access rights on virtual resource XML_ACCESS. User does not need rights on resources
- Sample XML configuration file can be found in WebSphere Portal 6.1 InfoCenter

```

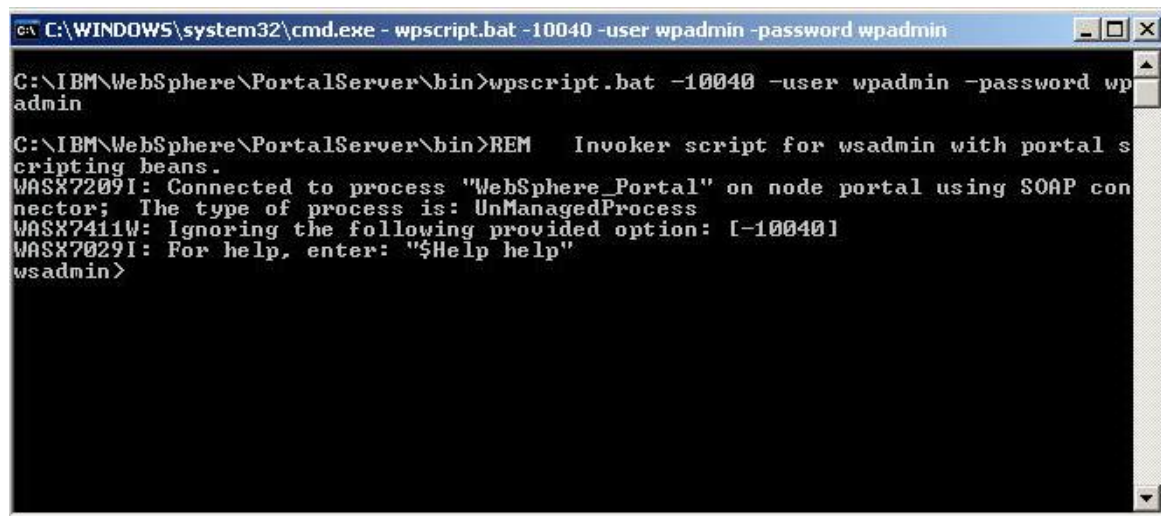
C:\WINDOWS\system32\cmd.exe

C:\IBM\WebSphere\PortalServer\bin>xmlaccess
Licensed Materials - Property of IBM, 5724-E76, 5655-R17, and 5655-M44, (C) Copy
right IBM Corp. 2001, 2007 - All Rights reserved. US Government Users Restricted
Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract
with IBM Corp.
EJXPB0001I: Command line parameters:
  -in <xml input file>
  [-user <user name>]
      Will be queried over the console, if omitted
  [-password <password>]
      Will be queried over the console, if omitted
  [-out <output file>]
      default: write to stdout
  [-url <portal config URL>]
      default: http://localhost/wps/config
  [-attempts <max. connection attempts>]
      default: 1 attempt, no retries
  [-truststore <file name of the trust store for HTTPS>]
      default: $JAVA_HOME/lib/security/cacerts
  [-trustpwd <password for the trust store for HTTPS>]
      default: <empty>
  [-trusttype <file type of the trust store for HTTPS>]
      default: jks
  [-keystore <file name of the key store for HTTPS>]
      default: $JAVA_HOME/lib/security/cacerts
  [-keypwd <password for the key store for HTTPS>]
      default: <empty>
  [-keytype <file type of the key store for HTTPS>]
      default: jks
  [-credentialsexport]
      enables export and import of credential secrets
  [-encryptionPassphrase <passphrase>]
      passphrase for credential encryption and decryption
  [-echo]
      simply return input instead of processing it

C:\IBM\WebSphere\PortalServer\bin>_
  
```

Administration Tools: Portal Scripting Interface

- Command line tool
- Scripting syntax is based on JACL
- Delegated administration
 - ▶ User needs access permission on Portal and on the resources that the user administers
- Advantages:
 - ▶ Security
 - ▶ Safety and availability of the production portal
- Limitation:
 - ▶ Administer Portal pages only. It does not process other Portal resources



```
C:\WINDOWS\system32\cmd.exe - wpscript.bat -10040 -user wpsadmin -password wpsadmin
C:\IBM\WebSphere\PortalServer\bin>wpscript.bat -10040 -user wpsadmin -password wpsadmin
C:\IBM\WebSphere\PortalServer\bin>REM Invoker script for wsadmin with portal scripting beans.
WASX7209I: Connected to process "WebSphere_Portal" on node portal using SOAP connector; The type of process is: UnManagedProcess
WASX7411W: Ignoring the following provided option: [-10040]
WASX7029I: For help, enter: "$Help help"
wsadmin>
```

Administration: Installing portlets

- Portlets are packaged and installed on the servers as Web modules (WAR) files
- After installation, the first administrative action is usually to specify ACLs for portlets
- Updating Portlet WAR files does not require re-configuration of ACLs

The top screenshot shows the 'Manage Web Modules' page in the WebSphere Portal Administration console. It features a search bar with a dropdown menu set to 'File name starts with' and a 'Search' button. Below the search bar is a table of installed web modules:

Name	API Type	Status
login_war	JSR 168	
selfcare_war	JSR 168	
wsrproxy_war	JSR 286	
WelcomePortlet_war	IBM API	

The bottom screenshot shows the 'Installing a Web module, Step 1: Select WAR file' dialog. It prompts the user to click the 'Browse' button to specify the location of the WAR file to install. The dialog includes a 'Directory:' field, a 'Browse...' button, and 'Next' and 'Cancel' buttons.

Administration: Manage pages

- Accessible via Administration → Portal User Interface
- Create, edit, activate, delete and order Portal pages, labels and URLs

Manage Pages

Use the controls below to work with your pages. Browse or search for pages to work with. Click New to create new pages, labels and urls. Activate and deactivate pages, re-order, edit properties and layout, move, export, assign permissions and delete pages. For more information, click Help.

Search by: Search:

[Select Page](#) > [Content Root](#) > [Home](#)

Pages in [Home](#) Add, Edit, Delete, and Reorder pages

Title	Unique name or Identifier	Status	
Getting Started	ibm.portal.Home.Getting Started	Active	▼ [edit] [move] [export] [permissions] [delete]
Web 2.0 Introduction	ibm.portal.Home.Web20Introduction	Active	▲ ▼ [edit] [move] [export] [permissions] [delete]
Feeds	ibm.portal.Home.Feeds	Active	▲ ▼ [edit] [move] [export] [permissions] [delete]
Gadgets	ibm.portal.Home.Gadgets	Active	▲ ▼ [edit] [move] [export] [permissions] [delete]
My Page	wps.page.mypage	Active	▲ [edit] [move] [export] [permissions] [delete]

Page 1 of 1

Order, Edit, Activate, Delete, Export, Mark pages

Administration: Hierarchical Access Control

- Fine grain access control to application components based on user roles
- Control who has access to what components of your application

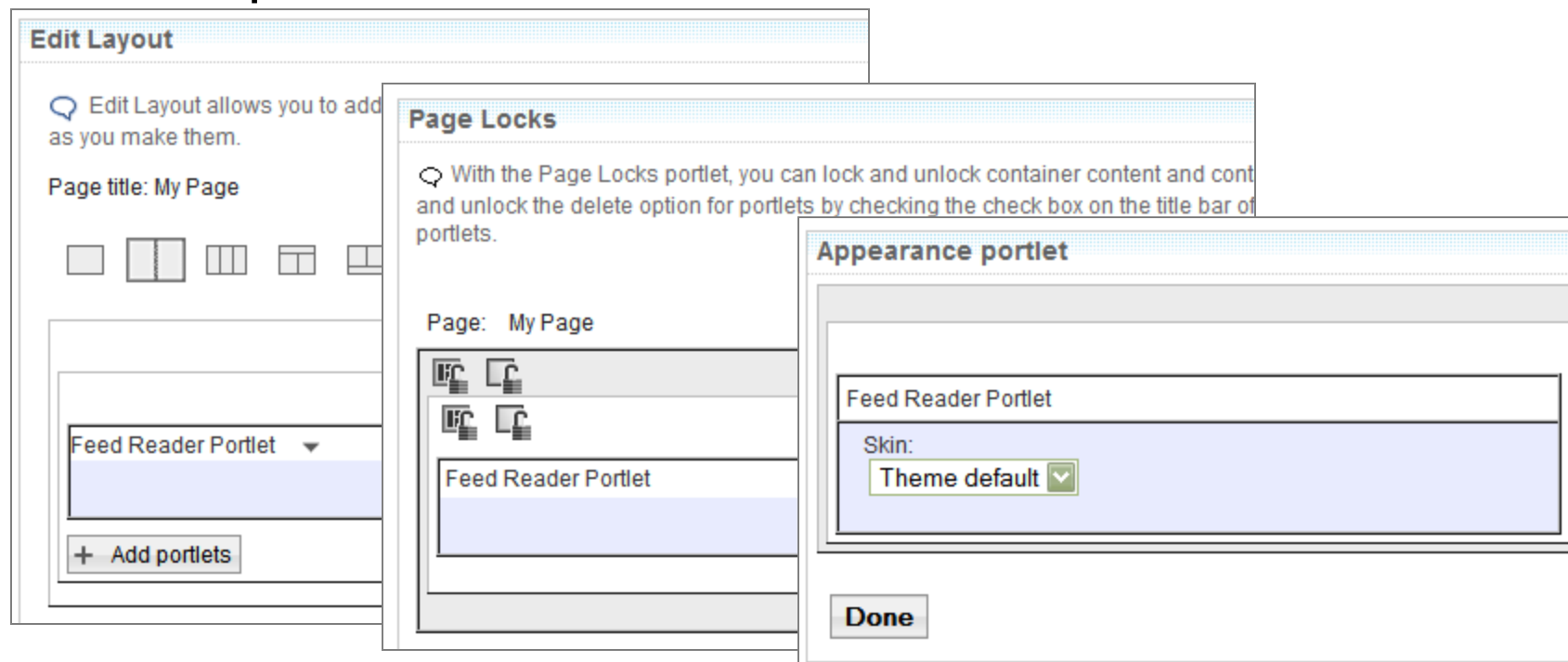
The image displays three overlapping screenshots from the IBM developerWorks administration interface. The top-left screenshot shows the 'Resource Permissions' page with a 'Select Resource Type' dropdown menu containing options: Pages, PSE Sources, Policies, Policy Root, and Portlet Applications. The top-right screenshot shows the 'User and Group Permissions' page with a 'Principal Types' dropdown menu containing options: Users and User Groups, Users, and User Groups. The bottom screenshot shows a detailed view of 'Resource Permissions' for 'login.war', displaying a table of roles and their permissions.

Roles	Allow Inheritance	Edit Role
Administrator	✓	
Security Administrator	✓	
Delegator	<input checked="" type="checkbox"/>	
Manager	<input checked="" type="checkbox"/>	
Editor	<input checked="" type="checkbox"/>	
Privileged User	<input checked="" type="checkbox"/>	
User	<input checked="" type="checkbox"/>	

A blue callout box with an arrow pointing to the 'User' role in the table contains the text: "Available Portal user roles on resources".

Administration: Portlet and its appearance

- Users can add/move Portlets on Portal pages using the Portlet Palette or the page customization portlet (above)
- Administrators can also lock-down the placement and skin of specific Portlets



Attribute-based Administration

- Attribute Based Administration provides a facility to customize the site layout for individual users or groups of users via “Visibility Rules”
- “Visibility Rules can instruct Portal to show or hide pages and portlets based on dynamic characteristics that are determined at runtime
- Portal Access Control takes precedent over Visibility Rule

The screenshot displays two overlapping windows from the IBM Portal Administration tool:

- Edit Layout:** This window shows a page titled "My Page" with several layout templates. A "Feed Reader Portlet" is selected, and a context menu is open over it, offering options: "Create New Rule" (highlighted), "Select Rule", "Edit Rule", and "Deselect Rule". There is also an "Add portlets" button and a "Done" button at the bottom.
- Personalization Picker:** This window is used to configure a new rule. It has a "New Rule" button and a "Preview" button. The rule is named "Visibility Rule 1" and is located in "Workspace Root". It is configured as a "Visibility Rule" with a description: "Visibility rules allow pages and portlets to be shown or hidden based on user attributes." At the bottom, it shows a template for a rule: "Show page or portlet when attribute * is value *" with a link to "add Condition" and the instruction "Otherwise hide".

Attribute-based Administration

WebSphere Portal

Personalization Picker

Personalization Picker

New Rule

New Rule Preview

Visibility Rule 1

Located in Workspace Root

Description

Rule Type Visibility Rule

Visibility rules allow pages and portlets to be shown or hidden based on user attributes.

Show page or portlet when

attribute * is value *

Portal Users

businessCategory

c

children

cn

countryName

departmentNumber

description

displayName

Distinguished Name

employeeNumber

entitlementInfo

First Name

Groups

homeAddress

homePostalAddress

ibm-jobTitle

identifier

I

Last name

localityName

mail

manager

parent

- Example of attributes:
 - ▶ LDAP attributes
 - ▶ Day / Time
 - ▶ Browser capability
 - ▶ etc

Rule Type Visibility Rule

Visibility rules allow pages and portlets to be shown or hidden based on user attributes.

Show page or portlet when

current Portal Users.countryName is Japan

add Condition

Otherwise hide

Administration: Users and Groups

- Portal stores users and groups either in LDAP or a relational database
- Portal-specific attributes are stored in database
 - ▶ Reduces need for change to existing LDAP schema
 - ▶ Supported directories:
 - Sun One Directory
 - Microsoft Active Directory
 - Novell eDirectory
 - Domino Directory
 - Tivoli Directory

Manage Users and Groups


Search: ▼

Search by: ▼

[Users and Groups](#) ▶ All Portal User Groups

Members of All Portal User Groups - add, edit and delete user groups and users


ID

 [wpsadmins](#)

Manage Users and Groups

Membership for: uid=wpadmin,o=defaultWIMFileBasedRealm

Groups that uid=wpadmin,o=defaultWIMFileBasedRealm belongs to

<input type="checkbox"/>	Group name
<input type="checkbox"/>	 wpsadmins

Administration: Theme Policy

- Parameterize the theme using Theme Policy and Policy Service
- Theme Policy contains attributes that control how the theme should render the page
 - ▶ Abstracts layout parameter and content inclusion from the theme markup itself
 - ▶ Allows for multiple types of left-navigation, for example
- Default theme policies will be installed
 - ▶ Theme Policy is assigned to a page via the page properties portlet (specific dropdown)
 - ▶ Simplifies maintenance as opposed to storing all attributes in page metadata
 - ▶ Policies inherit from parent policy – possible to refine and override with differing values

Administration: Theme Policy

- Policy created and stored using XML configuration interface
 - Import theme policy file (XML)

```
<?xml version="1.0" encoding="UTF-8"?>
<policyList xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
            xsi:noNamespaceSchemaLocation="Policy.xsd">
<policy>
  <policyValue
    Name="renderMainMenuActions"
    Factory="com.ibm.wps.policy.parse.BooleanFactory">
    <value>true</value>
  </policyValue>
  <policyValue
    Name="renderSelfCare"
    Factory="com.ibm.wps.policy.parse.BooleanFactory">
    <value>true</value>
  </policyValue>
  <policyValue
    Name="renderBreadcrumbTrail"
    Factory="com.ibm.wps.policy.parse.BooleanFactory">
    <value>false</value>
  </policyValue>
  ...
</policy>
</policyList>
```



Page Properties


Edit page: Getting Started
 Use the controls below to work with your pages to

Title:

Unique Name:

Note: If the unique name you entered for this page a
 Friendly URL name:

Theme:
  

Theme Style (Theme Policy):
 

----Inherit Parent Theme Policy----

SingleTopNav

SingleTopNavMinimal

DoubleTopNav

DoubleTopNavMinimal

SideNavOnly

SideNavOnlyMinimal

NoTheme

SingleTopNavLevel2

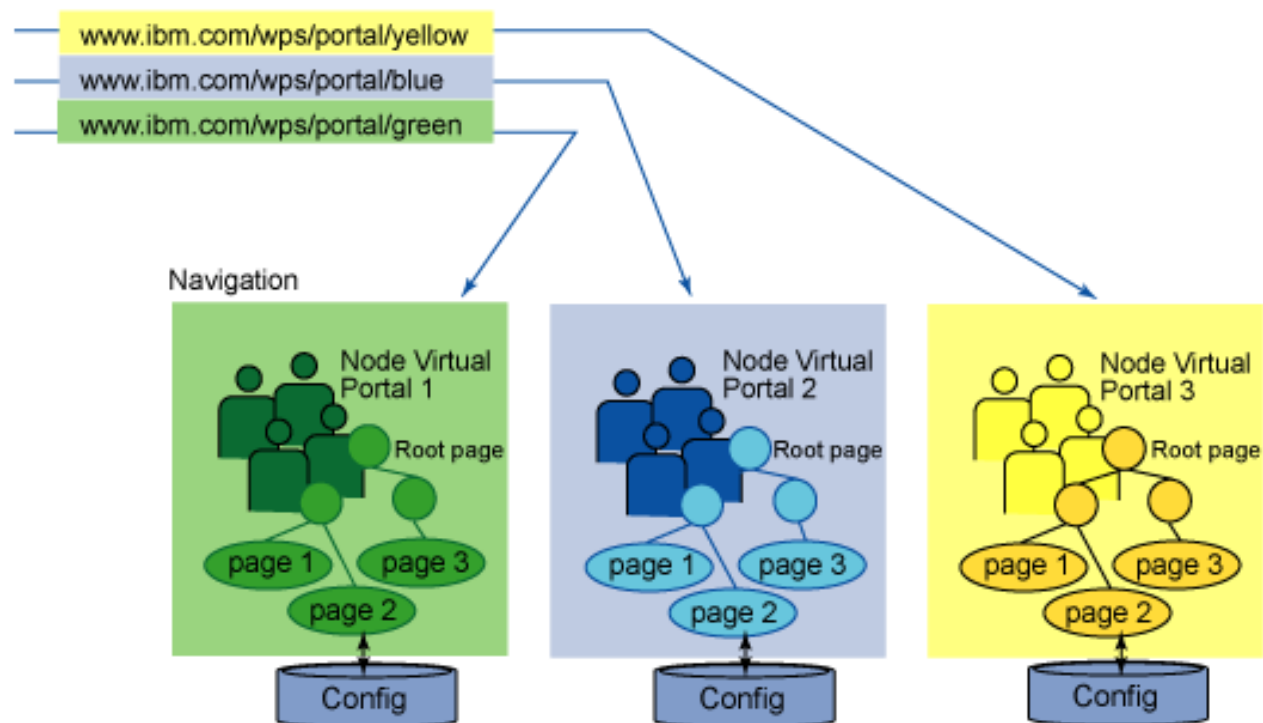
Palette

InternetStyle

IntranetStyle

Administration: Virtual Portals

- Logical portals that share the same hardware & software installation
- Partition WebSphere Portal by creating and managing additional Virtual Portals
- Portal end users cannot distinguish normal / virtual portal



Administration: Manage Virtual Portal

Virtual Portal Manager

Create New Virtual Portal
 Provide the information requested below and click OK to create a new virtual portal. Click the preview icon to preview the theme.

Virtual portal title:

Virtual portal description:

URL Context: /wps/portal/

Virtual portal hostname: http:// :10040/wps/portal/

User realm: defaultWIMFileBasedRealm

Initial admin user group: (a valid user realm must be specified first)

Default theme: Portal

Warning: Creating a virtual portal may take several minutes.

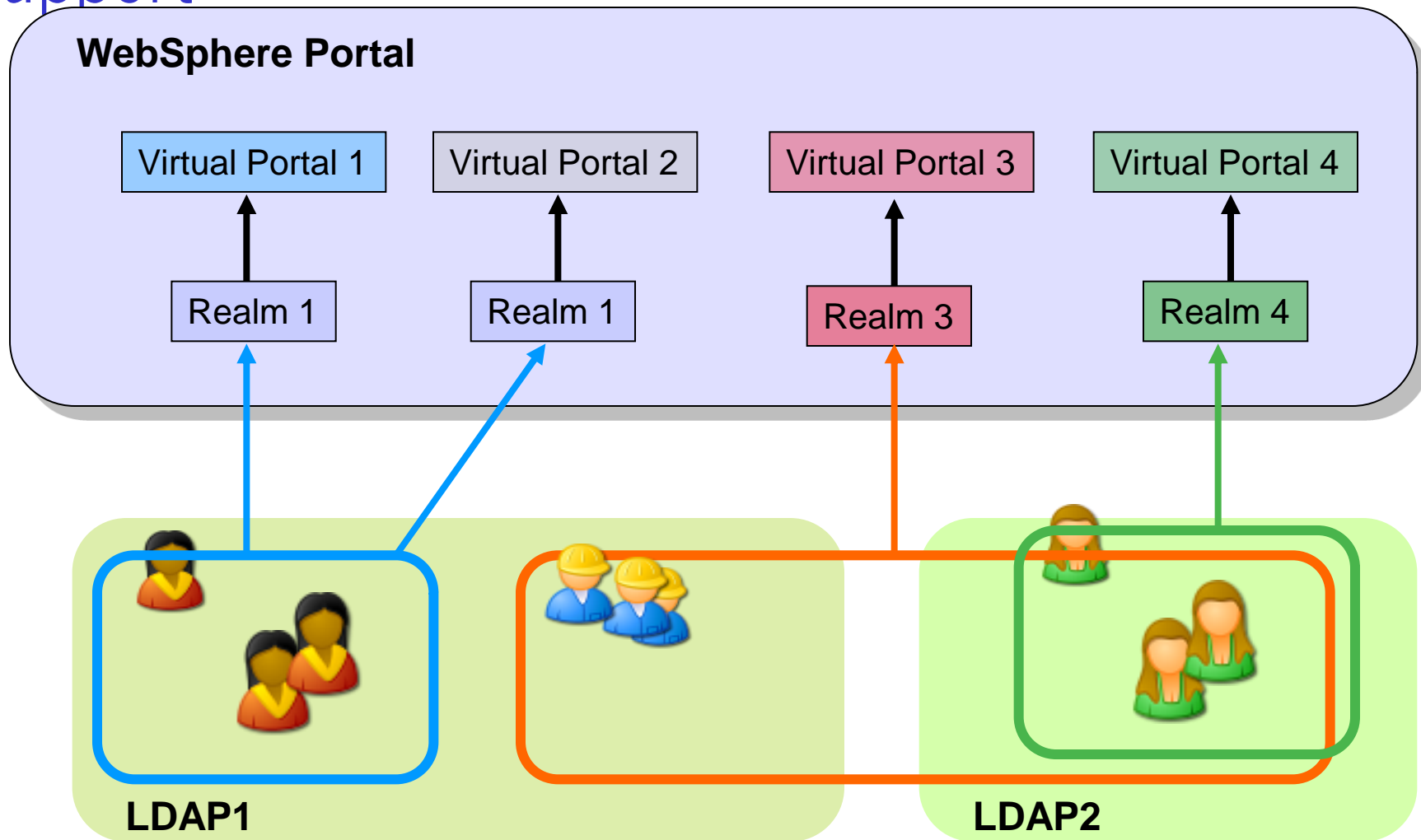
The diagram shows a dialog box titled 'Virtual Portal Manager' with several input fields. Blue callout boxes point to the following fields:

- Virtual Portal name**: points to the 'Virtual portal title' field.
- Unique URL context path**: points to the 'URL Context' field.
- Optional hostname**: points to the 'Virtual portal hostname' field.
- Support user realm**: points to the 'User realm' dropdown menu.
- Sub-administrator**: points to the 'Initial admin user group' field.
- Own Portal theme**: points to the 'Default theme' dropdown menu.

- Usage scenarios:
 - ▶ Multi-Portal enterprise
 - ▶ Workgroup service provider
 - ▶ Hosted enterprise
 - ▶ Multi-tenant Software-as-a-service (SaaS) business model

- Support multiple realms, multiple LDAP


Administration: Multiple LDAP, multiple realm support



Administration: Theme Customizer

- New in Portal 6.1
- Customize key site elements including banner, navigation, fonts and colors
- Create/Edit theme style through theme customizer portlet


Theme Customizer

 **Theme Customizer** You are customizing style "My Theme Style". ([switch style](#)) **Save Style**
[More Actions](#)

Page
Banner
Navigation
Portlet Area
Footer

Page Settings

To select a background for your page, browse for an image using the following link.



[Browse for background image](#)

Background repeat: Theme default ▼ Background position: Theme default ▼ Background color: #fbfcfd

Text color: #202020 Link color: #3366cc

Page Content

Select the type of content you want to display on the page.

- Portlets link
- People link
- Help link
- Search controls
- Application name
- Customize theme link

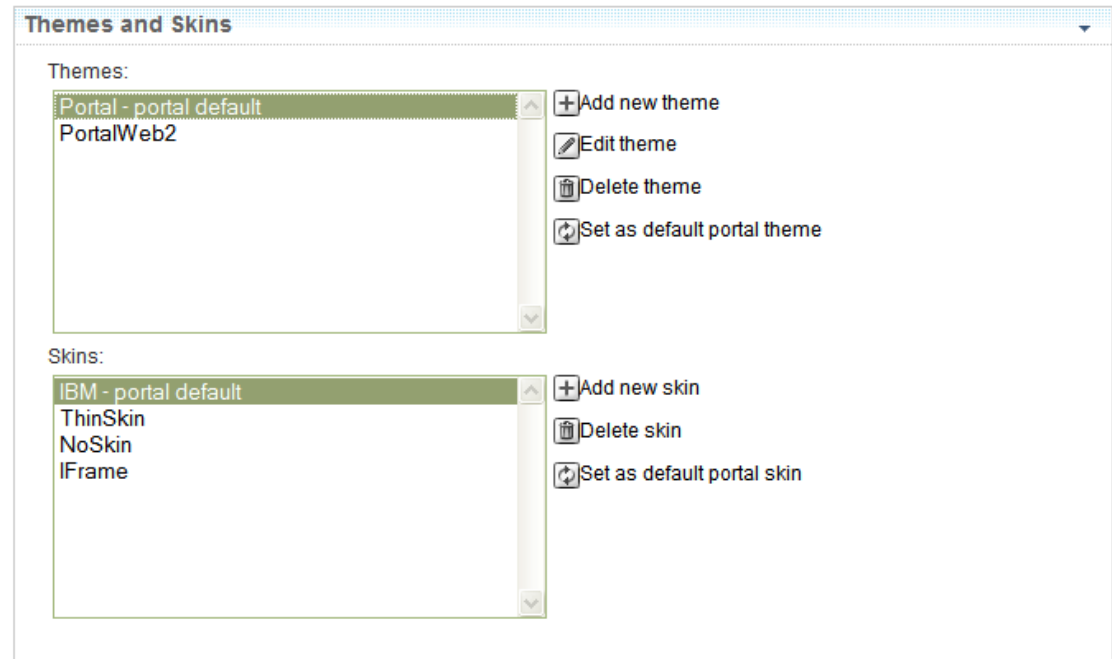
Breadcrumb Trail Settings

Display breadcrumb trail

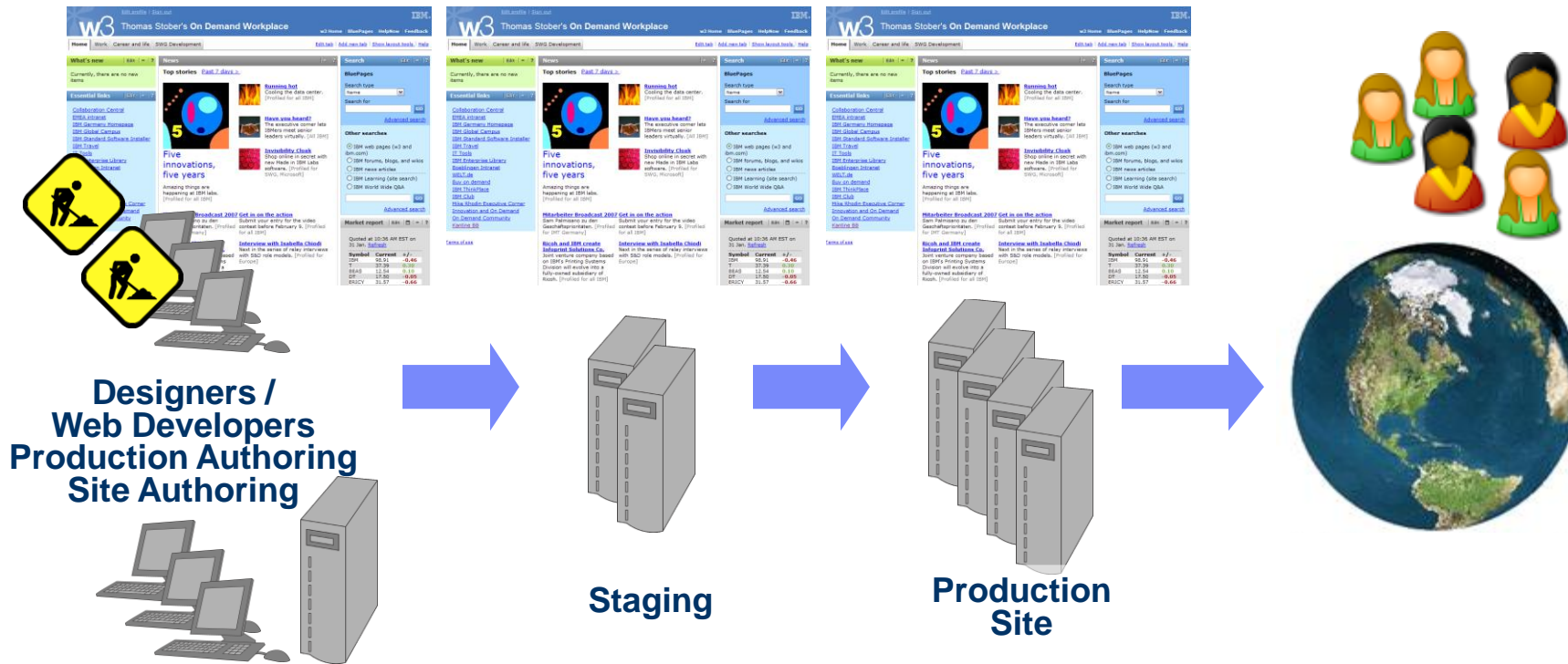
Text color: #666 Link color: #3366cc

Administration: Themes and Skins

- Use Themes and Skins portlet to do the following:
 - ▶ Set the portal default theme
 - ▶ Set the portal default skin
 - ▶ Associate skins with a theme
 - ▶ Add/delete themes/skins



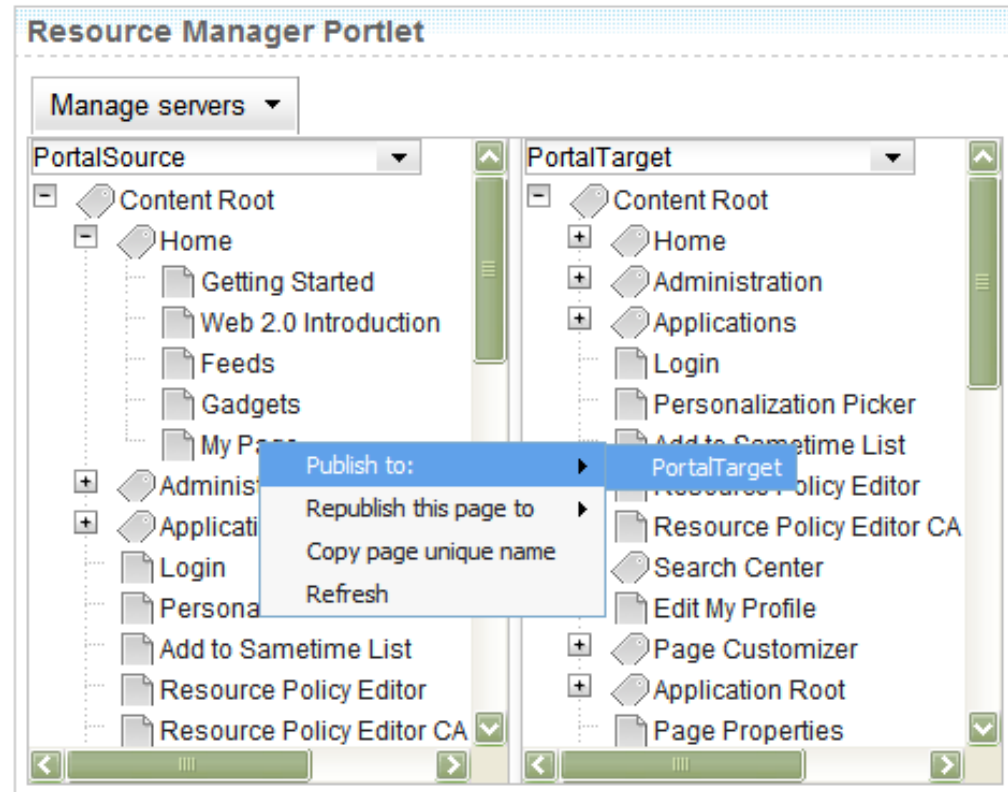
Administration: Site Management



Managing production sites is based on a *business process*

Administration: Site Management

- Create pages, labels and URLs on source server and publish to target server
- Target server can be located remotely / virtual portals
- Easily create and manage pages publications



Administration: Web Services for Remote Portlets (WSRP)

- Enables the sharing of portlets (markup fragments) over the Internet
- Cross vendor publishing and consuming of content
- Consumer Side implementation
 - ▶ Enables the portal to integrate WSRP entities via admin GUI creating a local proxy portlet for each remote portlet
- Producer Side implementation
 - ▶ Enables the portal to provide portlets with a few mouse clicks

Web Service Configuration

New Producer

Title:

Description:

Manage Web Modules

Search by: Title starts with Search: Search

Select Web module > reminder.war > ReminderPortlet

Portlets Click Copy to create a duplicate of the portlet. Click Configure to set titles, descriptions and parameters. Click Delete to remove the portlet from your portal. Click Assign Access to allow others to work with the portlet.

Title	API Type	Unique name	Provided	Status
Reminder	IBM API	wps.p.Reminder		

URL to WSDL service definitions:
http://localhost:10040/wps/wsd/service.wsdl

[I want to specify the user attributes that should be passed to this Producer.](#)

Next Cancel

Creating a WSRP Producer using Web Service Admin Portlets

Provide portlet as WSRP

Portal Administration

- WebSphere Portal Overview
- Portal Architecture and Topology
- Understanding Portlets
- Portal Layout
- Portal Administration
- Portal Enhancements

WebSphere Portal 6.1 Enhancements

- Move themes and skins out of the WPS.ear
 - ▶ Allows them to be self contained and they can be updated dynamically, without restarting portal.
- Page publishing
 - ▶ Make pages and their related artifacts publish-able in a consistent/predictable fashion
 - ▶ Support many daily updates, and publishing whole sites
 - ▶ Version-able and Archive-able (post V6.1)
 - ▶ Workflow pluggable
 - ▶ Be able to go back to previous version very quickly
 - ▶ Allow test/friendly users to validate a publish occurred correctly
- Friendly/Predictable/Readable URLs
 - ▶ Ability to specify a friendly name on pages
 - ▶ When any url is generated by portal, it will use the friendly name if there is one, when generating all urls.
- HTML and other page types

New Web 2.0 Enabling Technologies

- **Portal REST Services**
 - ▶ Separate portal user experience from portal data to open up portal for mashup applications
 - ▶ Access to portal models (content, navigation, layout), portlet preferences and user profile information
 - ▶ Public APIs
- **Client Side Aggregation and Customization**
 - ▶ Mashup applications using Portal REST Services
 - ▶ Improved user experience and performance
- **Client Side Feed Consumption**
 - ▶ Highly efficient integration of information through feeds (Atom and RSS)
 - ▶ AJAX proxy to manage /restrict access to other domains
- **AJAX Portlet Development**
 - ▶ AJAX Portlet Programming Model Extensions based on Dojo+IBM Extensions
 - ▶ Sample AJAX Portlets with source showcasing the new capabilities
- **Semantic Tagging**
 - ▶ Allow smart markup to enable value add by portal, e.g. dynamic menus
 - ▶ Client Side Click2Action /Property Broker and Drag & Drop based on semantic tagging to enable cross-portlet interaction locally in the browser as well as with server side code

More about Web 2.0 in the next presentation...

Presented by IBM developerWorks
ibm.com/developerworks/



Application Integration with WebSphere Portal V6.1



Web 2.0 Enabling Technologies

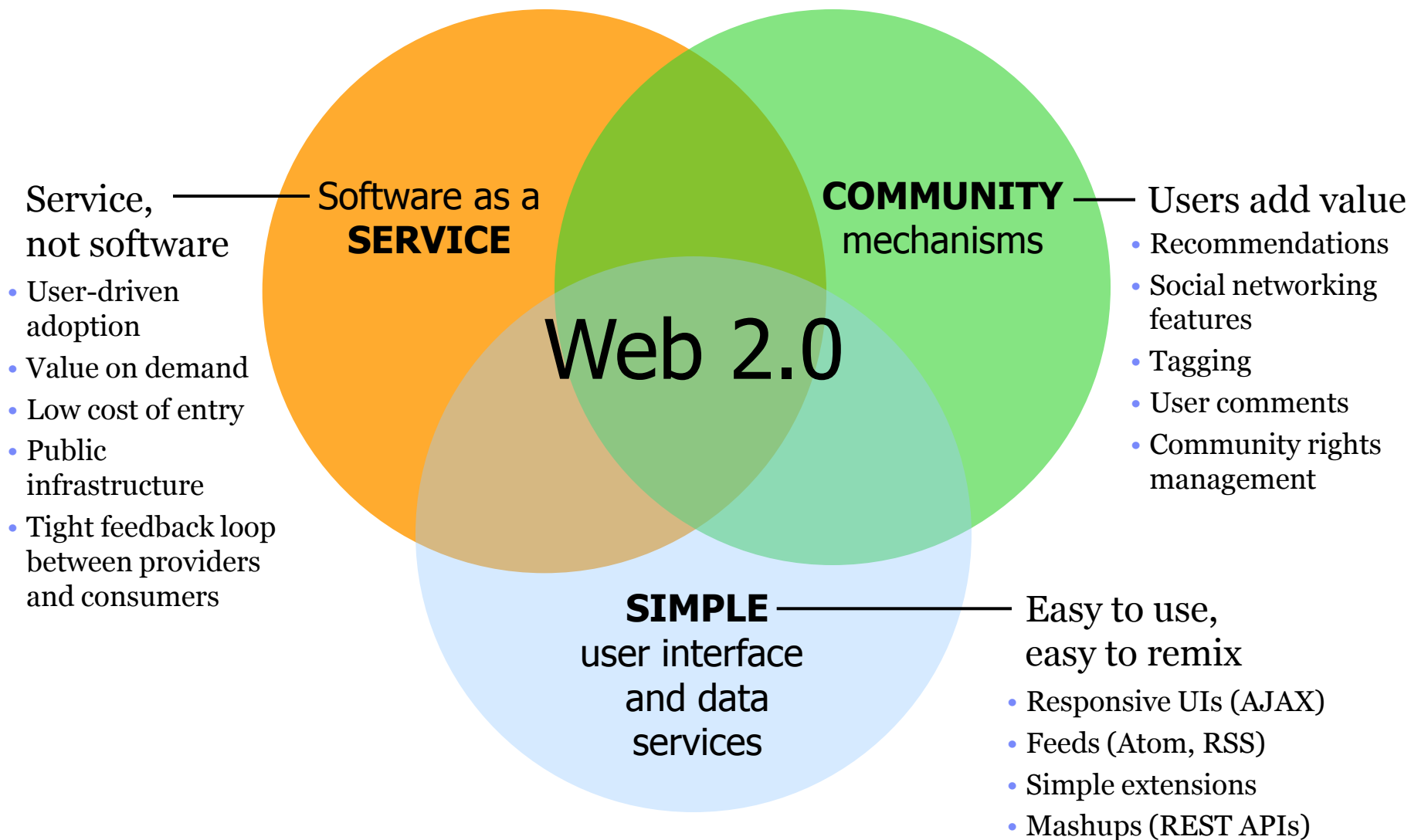
IBM developerWorks **Live!**

Abbreviated Title Here

Objectives

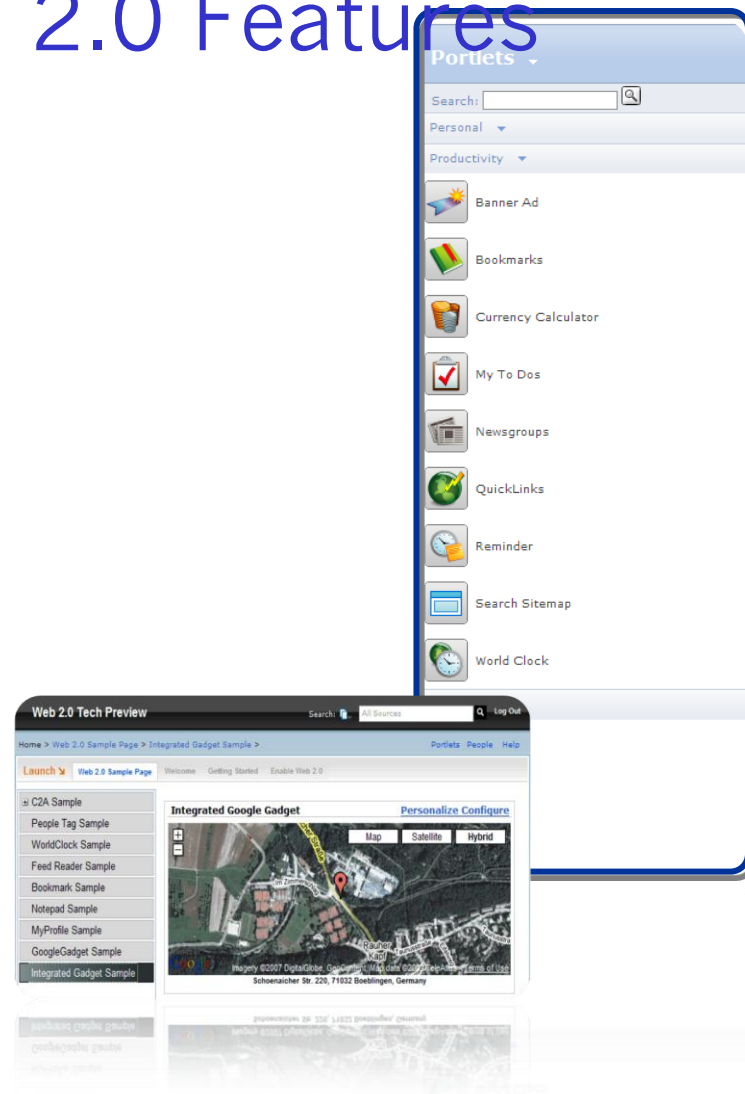
- ✓ WebSphere Portal and Web 2.0
- WebSphere Portal V6.1 Web 2.0 Features
 - ▶ REST Services
 - ▶ Client Side Aggregation
 - ▶ AJAX Client Side Feed Consumption
 - ▶ AJAX Portlet Development
 - ▶ Semantic Tagging
 - ▶ HTML Page Aggregation Support
 - ▶ Social Features
 - ▶ Google Gadgets, Lotus Mashups and iWidget Support

The Three Software Patterns Driving Web 2.0



Portal V6.0 has many Web 2.0 Features

- **Social Software** with **Lotus Connections** portlets
- **Blogs, Wikis, and Forums** in **Quickr**
- Allows **User Contribution** to portal sites through WCM
- Enables **Situational Development** through the Portlet Palette, Drag and Drop page composition, and Composite Application Templates
 - A rich set of portlets that users can add to their own pages including content, feeds, and gadgets
- **Custom AJAX Portlets** can be written today to run on WebSphere Portal using Portlet Factory's or RAD's AJAX support and/or frameworks such as the Dojo framework
- **Exploits AJAX** for context menus, search menu, and some admin portlets
- **Google Gadget** integration



And There is Even More Web 2.0 in V6.1.....

..and even more Web 2.0 in V 6.1

- Social Features
 - ▶ **Social Software** with **Lotus Connections**
 - ▶ **Blogs and Wikis, and forums** in **Quickr**
 - ▶ **User Contribution** to portal sites through WCM
 - ▶ **Situational Development** through the Portlet Palette, Drag and Drop page composition, Click-2-Action, Property Broker and Composite Application Templates

- Technical Features
 - ▶ Support for **AJAX Portlets**
 - Portlet Factory builder, RAD tooling, DOJO, Samples,...
 - ▶ **Exploits AJAX** for context menus, search menu, and more
 - ▶ Provides **REST services*** for browser side programming
 - ▶ **Client Side Aggregation*** improves user experience
 - ▶ **Semantic tags*** and **Microformats*** support Smart Markup
 - ▶ Provides and consumes **ATOM*** Feeds

The logo consists of the text "WP 6.1" in a stylized, blue, outlined font. A small asterisk is positioned to the left of the "W".

WebSphere Portal 6.1

The benefits of Web 2.0 to your Users

- Greatly enhanced User Experience
 - ▶ Improved response times – AJAX, REST, client-side aggregation, C2A
 - ▶ Enhanced flexibility – easy end user customization through drag & drop, Google gadgets, etc.
 - ▶ Smart markup and dynamic menus through semantic tags
- Drive Innovation and Productivity through Social Software
 - ▶ Lotus Connections portlets: profiles, communities, blogs, tagging, activities
 - ▶ Lotus Quickr: content libraries, team spaces, personal file sharing, templates, blogs, wikis, and forums
- Improve time to value, time to market
 - ▶ Business user situational application development through the Portlet Palette, drag & drop page composition, and composite application templates
 - ▶ Business user contribution of WCM content
 - ▶ More assets (REST, ATOM, gadgets, widgets) available to choose from.

Rich, desktop-like application experiences improve performance and increase end user productivity and satisfaction

New Web 2.0 features for increasingly Web-savvy users

The image displays two screenshots of the WebSphere Portal 6.1 user interface. The top screenshot shows the 'Getting Started' page with a 'Welcome to Portal 6.1!' message and navigation buttons for 'Build', 'Customize', and 'Manage'. The bottom screenshot shows the 'Introducing the Web 2.0 Theme Pack' page with a 'New Features...' section and various portlets like 'Feed Portlets', 'Google Gadgets', and 'Client Side Aggregation'.

Objectives

- WebSphere Portal and Web 2.0
- ✓ WebSphere Portal V6.1 Web 2.0 Features
 - ▶ REST Services
 - ▶ Client Side Aggregation
 - ▶ AJAX Client Side Feed Consumption
 - ▶ AJAX Portlet Development
 - ▶ Semantic Tagging
 - ▶ HTML Page Aggregation Support
 - ▶ Social Features
 - ▶ Lotus Mashups and iWidget Support

WebSphere Portal V6.1 Web 2.0 Features

- **Portal REST Services**
 - ▶ Separate portal user experience from portal data to open up portal for mashup applications
 - ▶ Access to portal models (content, navigation, layout), portlet preferences and user profile information
Public APIs
- **Client Side Aggregation and Customization**
 - ▶ Mashup application using Portal REST Services
 - ▶ Improved user experience and performance
- **Ajax Client Side Feed Consumption**
 - ▶ Highly efficient integration of information through feeds (Atom and RSS)
 - ▶ AJAX proxy to manage /restrict access to other domains
- **Ajax Portlet Development**
 - ▶ AJAX Portlet Programming Model Extensions based on Dojo+IBM Extensions
 - ▶ Sample AJAX Portlets with source showcasing the new capabilities
- **Semantic Tagging (*Live Text, Microformats, C2A*)**
 - ▶ Allow Smart Markup to enable value add by portal, e.g. dynamic menus
 - ▶ Client Side Click2Action /Property Broker and Drag & Drop based on semantic tagging to enable cross-portlet interaction locally in the browser as well as with server side code
- **HTML Page (Aggregation) Support**
- **Support for Lotus Mashups and iWidgets**

Objectives

- WebSphere Portal and Web 2.0
- WebSphere Portal V6.1 Web 2.0 Features
 - ✓ REST Services
 - ▶ Client Side Aggregation
 - ▶ AJAX Client Side Feed Consumption
 - ▶ AJAX Portlet Development
 - ▶ Semantic Tagging
 - ▶ HTML Page Aggregation Support
 - ▶ Social Features
 - ▶ Google Gadgets, Lotus Mashups and iWidget Support

Portal REST Services – What is REST ?

- Representational State Transfer (REST)
- REST Web Service Conventions:
 - ▶ Plain XML is the data representation format
 - ▶ HTTP is the transfer protocol
 - ▶ HTTP's GET, POST, PUT, and DELETE are the access/manipulation verbs
 - ▶ URIs point to individual data records (such as catalog items or customer info)
 - ▶ HTTP authentication and SSL provide security
- REST is Not a standard - just a ***design pattern***
 - ▶ You can't bottle up a pattern
 - ▶ You can only understand it and design your Web services to it
- REST does prescribe the **use** of standards:
 - ▶ HTTP
 - ▶ URL
 - ▶ XML/HTML/GIF/JPEG/*etc.* (**Resource Representations**)
 - ▶ text/xml, text/html, image/gif, image/jpeg, *etc.* (Resource Types, MIME Types)



History Behind REST

- "REST" was coined by Roy Fielding in his Ph.D. dissertation to describe a design pattern for implementing networked systems

- Why is it called Representational State Transfer?
 - ▶ A **representation** of the resource is returned
 - ▶ The representation places the client in a new **state**
 - ▶ When the client selects a hyperlink in returned resource, it accesses another resource
 - ▶ The new representation places the client application into yet another state
 - ▶ Thus, the client application **transfers** state with each resource representation

REST Architectural Style

- Stateless service
 - ▶ Well suited for clusters, proxy caches, and remote client mashups
- URI addressable resources
 - ▶ Nouns in address are clearly defined and easily manipulated by client applications
- Standards driven interfaces
 - ▶ ATOM, RSS, JavaScript
- Layered
 - ▶ Leverage the scalability and security of existing proxy caches and firewalls

The REST API

- **API** is the wrong word
- REST is a design pattern to be used
- The Atom Publishing Protocol (APP) gives you a REST “API” to perform the following actions on any kind of application data:
 - ▶ Create
 - ▶ Read
 - ▶ Update
 - ▶ Delete

The REST Design Pattern

- Create a resource for every service
- Uniquely identify each resource with a logical URL
- Design your information to link to other information
 - ▶ That is, the information that a resource returns to a client should link to other information in a network of related information
- All interactions between a client and a web service are done with simple operations
- Most web interactions are done using HTTP and just four operations:
 - ▶ Retrieve information (HTTP GET)
 - ▶ Create information (HTTP PUT)
 - ▶ Update information (HTTP POST)
 - ▶ Delete information (HTTP DELETE)

REST Request/Response Format

■ REST Request Format

- ▶ Is the simplest request format to use
- ▶ It is a simple HTTP GET or POST action
- ▶ To request the echo service, invoke like this:
 - <http://www.ibm.com/services/rest/?method=com.ibm.demo.echo&name=athica>

■ REST Response Format

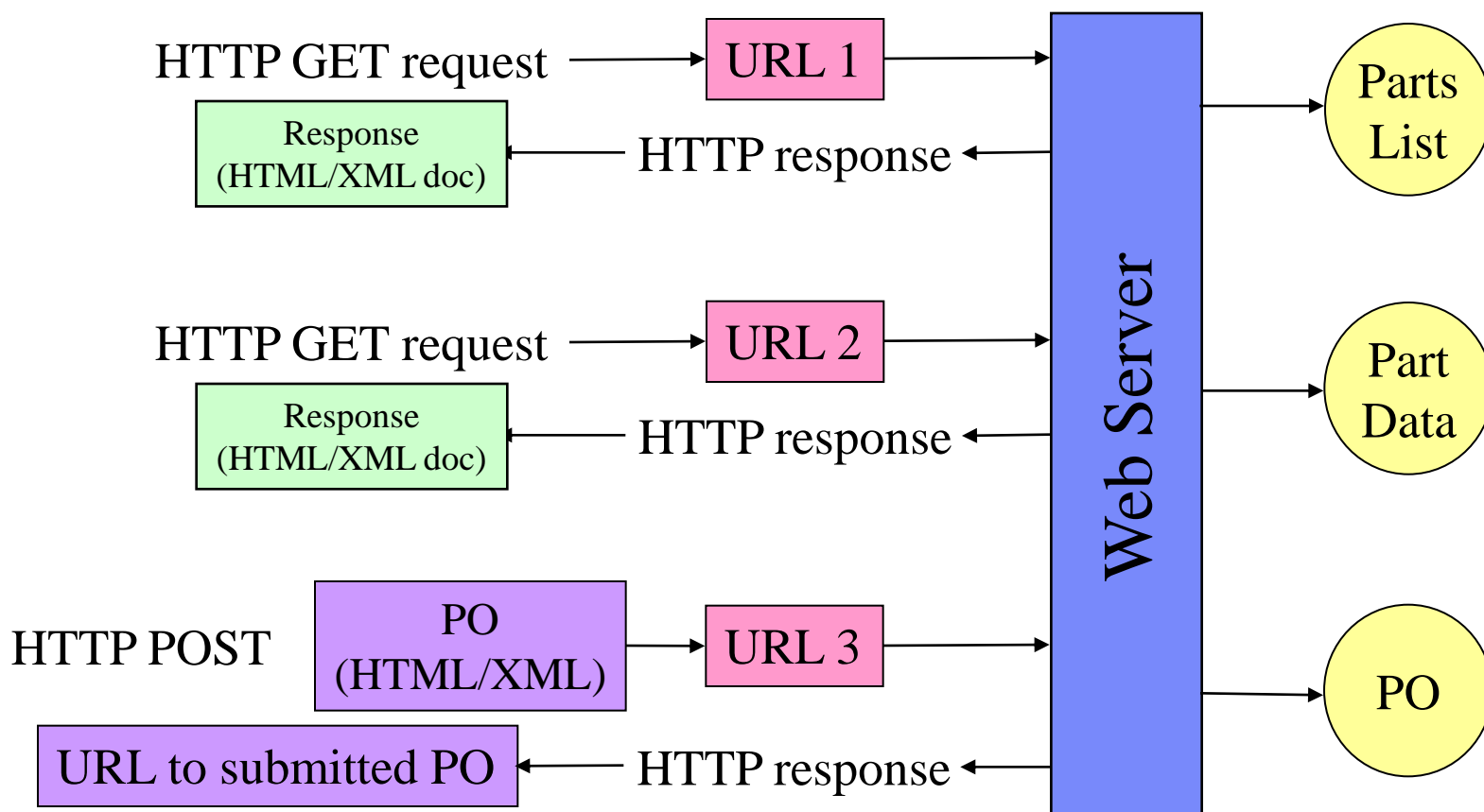
- ▶ Is the simplest response format to use
- ▶ It is a simple XML block
- ▶ A method call returns this:
 - ```
<?xml version="1.0" encoding="utf-8" ?>
 <rsp stat="ok">
 [xml-payload-here]
 </rsp>
```

# Example of REST

- The REST design pattern is best explained with an example
  - ▶ A company deploying three Web services using the REST design pattern
- Spacely Sprockets has deployed some web services to enable its customers to:
  - ▶ Get a list of parts
  - ▶ Get detailed information about a particular part
  - ▶ Submit a Purchase Order (PO)



# The REST Way of Designing the Web Services



# Web Service for Clients to Retrieve a List of Parts

- Service: Get a list of parts
  - ▶ The web service makes available a URL to a parts list **resource**
  - ▶ A client uses this URL to get the parts list:
    - <http://www.SpacelySprockets.com/parts>
  - ▶ Note that **how** the web service generates the parts list is completely transparent to the client
  - ▶ This is ***loose coupling***
- REST Fundamentals
  - ▶ Create a resource for every service
  - ▶ Identify each resource using a URL





# Data Returned - Parts List

```
<?xml version="1.0"?>
<Parts>
 <Part id="00345" href="http://www.SpacelySprockets.com/parts/00345"/>
 <Part id="00346" href="http://www.SpacelySprockets.com/parts/00346"/>
 <Part id="00347" href="http://www.SpacelySprockets.com/parts/00347"/>
 <Part id="00348" href="http://www.SpacelySprockets.com/parts/00348"/>
</Parts>
```

- Note that the parts list has links to get detailed info about each part
  - ▶ This is a key feature of the REST design pattern
  - ▶ The client transfers from one state to the next by examining and choosing from among the alternative URLs in the response document
- REST Fundamentals
  - ▶ The data that a Web service returns should link to other data; thus, design your data as a network of information
  - ▶ Contrast with OO design, which says to encapsulate information

# Web Service for Clients to Retrieve a Particular Part

- Service: Get detailed information about a particular part
  - ▶ The web service makes available a URL to each part resource
  - ▶ *For example*, here's how a client requests a specific part:
    - <http://www.SpacelySprockets.com/parts/00345>



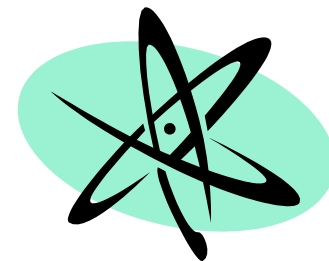
## Data Returned - Part 00345

```
<?xml version="1.0"?>
<Part>
 <Part-ID>00345</Part-ID>
 <Name>Sprocket-A</Name>
 <Description>This part is used within the housing assembly</Description>
 <Specification href="http://www.SpacelySprockets.com/parts/00345/specification"/>
 <UnitCost currency="USD">4.16</UnitCost>
 <Quantity>10</Quantity>
</Part>
```

- Again observe how this data is linked to still more data
- The specification for this part may be found by traversing the hyperlink
- Each response document allows the client to drill down to get more detailed information

# What is Atom ?

- Atom is a simple way to read and write information on the web
- Benefits of Atom
  - ▶ Allows you to easily keep track of more sites in less time
  - ▶ Platform for next generation Web-based services and content distribution
  - ▶ Universal publishing standard for personal content and weblogs
- Atom Protocol (aka API) applies to a pair of related standards:
  - ▶ **Atom Publishing Protocol (APP)**
    - A simple HTTP-based protocol for creating and updating Web resources
  - ▶ **Atom Syndication Format (ASF)**
    - XML used for web feeds



# The Atom Protocol

- The Atom Publishing Protocol (APP) defines a REST-style protocol to perform the following actions on any kind of application data:
  - ▶ Create
  - ▶ Read
  - ▶ Update
  - ▶ Delete
  
- The Atom Syndication Format (ASF) defines how the information is returned
  - ▶ it achieves the goal of providing a simple, well-defined, and unambiguous format for content syndication on the Web

# Atom Feeds

## ■ Feed

- ▶ A Feed is returned whenever you issue a GET against a Collection
- ▶ A Feed contains one or more Entries
- ▶ A Feed also contains metadata about itself
- ▶ A Feed is an XML document

## ■ Entry

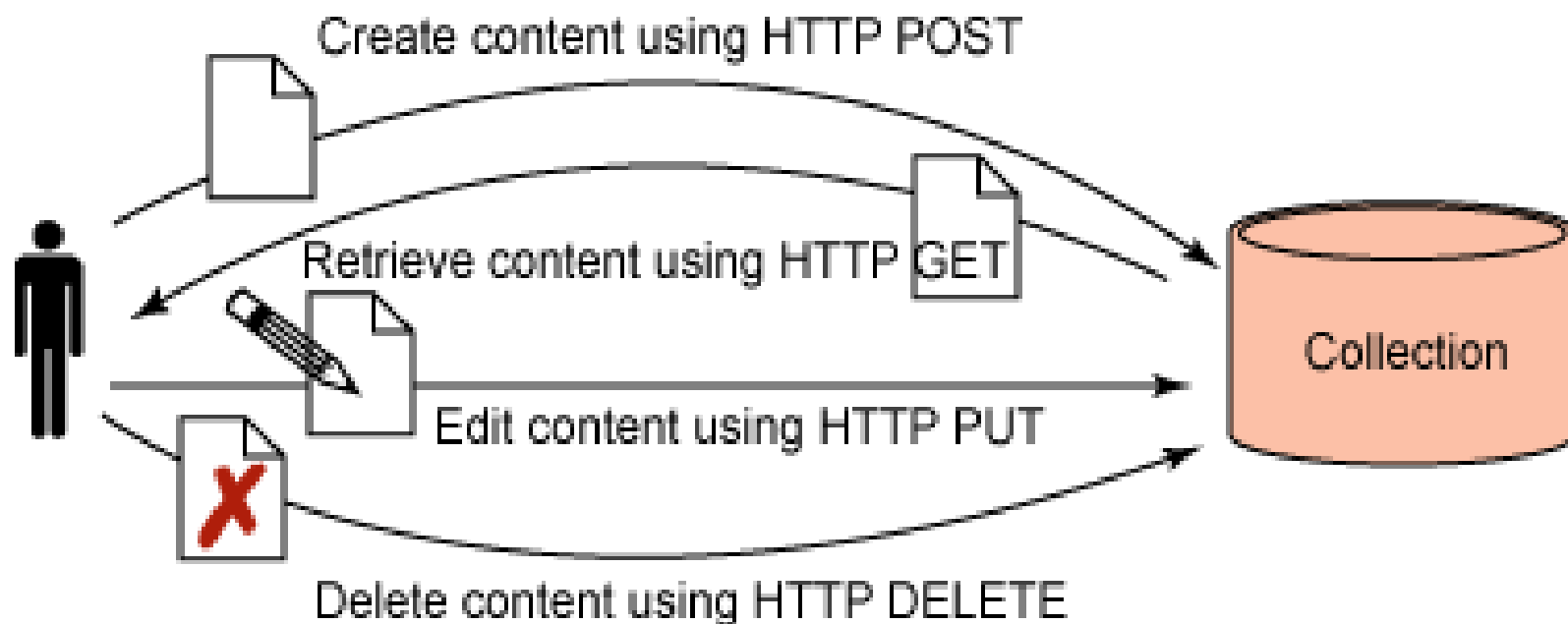
- ▶ An entry contains the content as well as some metadata about that content
- ▶ An entry is an XML element

## ■ Every feed and entry must contain following three elements:

- ▶ A **unique identifier**, which can be as simple as the URI of a blog entry or other Web resources represented by an entry
- ▶ A **title**, which expresses a short, human readable subject line for the entry
- ▶ A **timestamp**, which indicates when the last update occurred

# APP High Level Overview

- APP uses simple HTTP methods for publishing and managing content





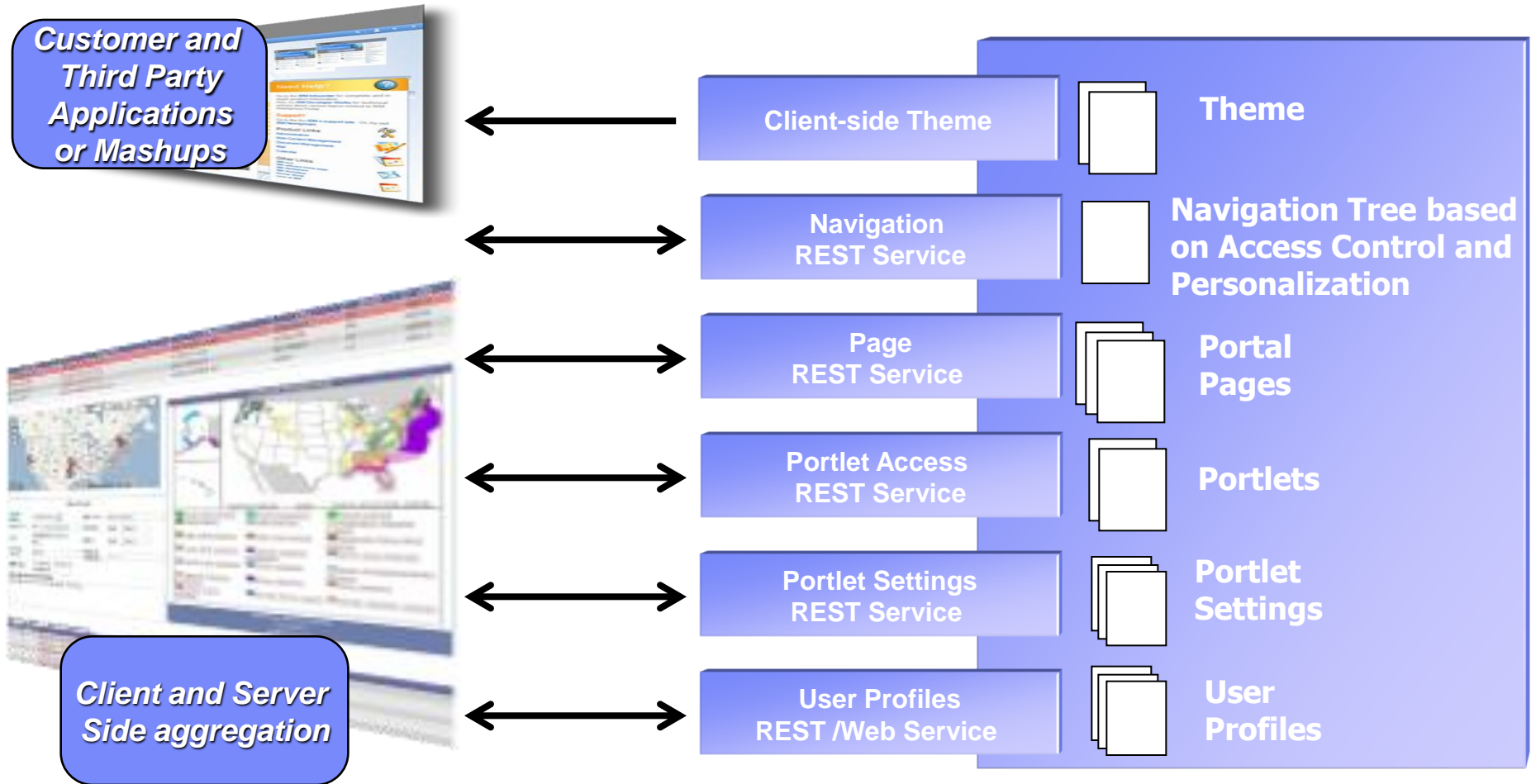
# Portal REST Services

- All REST Services use the ATOM format and APP for Write access.
- Navigation/Content Model
  - ▶ Pages, site structure
  - ▶ Corresponds to navigation loop JSP tag in the theme JSPs
- Layout Model
  - ▶ Layout of the page (rows, columns)
  - ▶ Corresponds to the UnlayeredContainer-H.jsp and UnlayeredContainer-V.jsp in the skin.
- Portlet Fragment
  - ▶ Rendering individual portlets
- Portlet Model
  - ▶ Gives access to the portlet definition, portlet preferences
  - ▶ Preferred way to access is the Client-Side Programming Model
- User Profile
  - ▶ Access user information

# Objectives

- WebSphere Portal and Web 2.0
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  - ✓ Client Side Aggregation
    - ▶ AJAX Client Side Feed Consumption
    - ▶ AJAX Portlet Development
    - ▶ Semantic Tagging
    - ▶ HTML Page Support
    - ▶ Social Features
    - ▶ Google Gadgets, Lotus Mashups and iWidget Support

# Client Side Aggregation

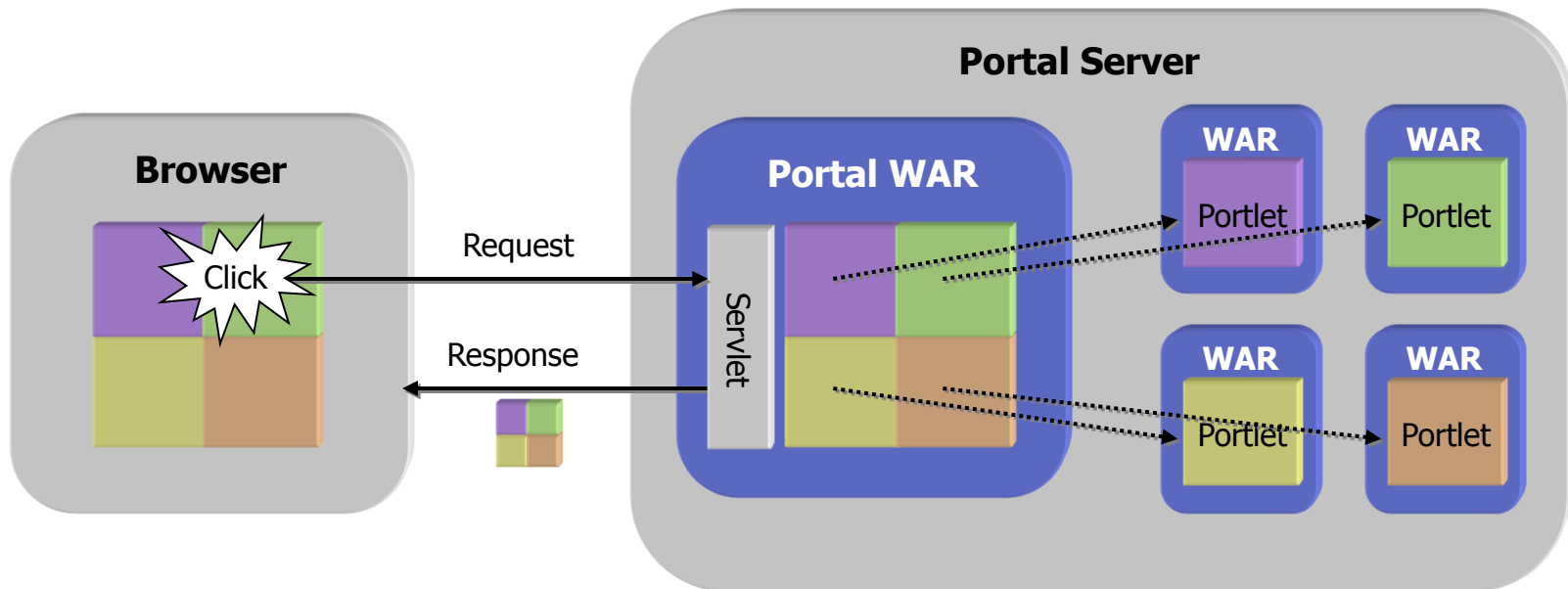


# Client Side Aggregation (CSA) Features

- Only the “changed” portion of the page is updated as a result of a user interaction with the server
  - ▶ The traditional model requires the entire page (every portlet) to be re-rendered when a user interaction requires an interaction with the server (full server roundtrip)
  - ▶ Only the updated portlet has to render (especially useful if one portlet is particularly slow).
  - ▶ Results in a snappier (and “flicker” reduced) feel to the user
- Navigational State is maintained on the client
  - ▶ Back button can still be supported in most cases (80/20 rule)
  - ▶ Bookmarkability is supported via a “Create Link to this Page” link (similar to how Google Maps works)
    - Current navigational state has to be serialized into a URL that can be entered into the browser address bar
- Enhanced Skin
  - ▶ Inline mode support
    - Make changes in Edit mode and see the results immediately
- Client-side Drag and Drop
  - ▶ No full page refresh when dropping a portlet on to the page or re-arranging portlets on a page.

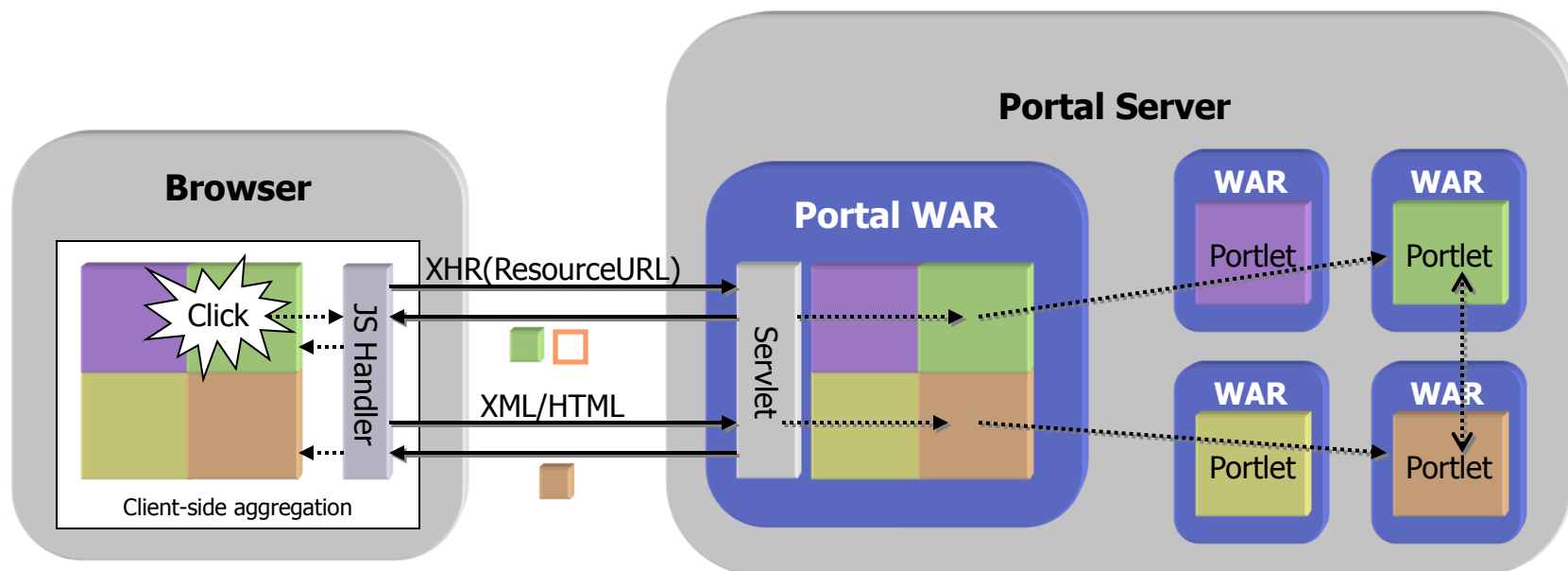
# The Classic Portal Interaction Model

- Each request goes to the main portal servlet
- Each interaction causes a full page refresh
  - ▶ Even if the portlet does not communicate with other portlets



# The Client Side Aggregation Portal Interaction Model

- AJAX handling implemented entirely by the portal
  - ▶ AJAX-enabled portlet refreshes only those portlets affected by the user interaction (using a resource request)
  - ▶ JavaScript call points to the Portal Application
  - ▶ Portal Application dispatches resource serving call to portlet



# Client Side Aggregation (CSA) Limitations

- Client Side Aggregation is really a bleeding edge technology and pushes the browser to the limit. As with any bleeding edge technology, there are some limitations. This is especially true given the scope of what we support in Portal.
- Not every portlet works in CSA
- CSA supports a forced SSA (Server-Side Aggregation) mode for cases that do not work
  - ▶ Can be applied on a page or a portlet level
    - Page Level: Assign a page parameter (a.k.a. Meta Data attribute) to a particular page
    - Portlet Level: Add the portlet application id to a javascript file in the theme OR add a config level portlet preference
- Back button only works until the next full page refresh
  - ▶ Uses Dojo's backbutton support so subject to the same limitations as Dojo
  - ▶ Waiting on browser/standards support to catch up with the needs of the web
- Different interaction paradigm
  - ▶ Partial page update is normal, as opposed to a full page refresh for every portlet interaction
  - ▶ Dojo widget parser must be invoked manually
  - ▶ Can't rely on a page refresh to clear out global javascript variables

# Enhanced Web 2.0 Skin in Action

'Actions' toggles Portlet Mode and Delete actions

Portlet Title

Personalize **Configure** Edit Settings Delete

- Lorem ipsum dolor sit amet, consectetur adipiscing elit.
- Pellentesque uma. Integer mi.
- Pellentesque eget ante. Proin non neque. Cras cursus
- Etiam dictum augue vel felis. Ut mauris.
- Morbi orci. Proin turpis lectus, pulvinar imperdiet, pretium aliquet, placerat a, risus.
- Etiam hendrerit justo eget diam.
- Sed tristique, odio dapibus vehicula cursus, nisi lorem

Selecting a mode will render that mode inline

Portlet Title

Personalize **Configure** Edit Settings Delete

To edit the content displayed in this portlet, choose a new feed from the list of popular feeds -or- if you know the URL of the feed you wish to display, type it in the text field below.

# of feed items displayed in portlet: 10

Feed Title: CNN Save

Feed URL: http://www.cnn.com Save

Popular Feeds: None Save

- Lorem ipsum dolor sit amet, consectetur adipiscing elit.
- Pellentesque uma. Integer mi.
- Pellentesque eget ante. Proin non neque. Cras cursus
- Etiam dictum augue vel felis. Ut mauris.
- Morbi orci. Proin turpis lectus, pulvinar imperdiet, pretium aliquet, placerat a, risus.
- Etiam hendrerit justo eget diam.
- Sed tristique, odio dapibus vehicula cursus, nisi lorem

Note that view mode is still displayed



# Objectives

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    - ▶ HTML Page Support
    - ▶ Social Features
    - ▶ Google Gadgets, Lotus Mashups and iWidget Support

# AJAX-based RSS /Atom Feed Consumption

- Allow simple consumption and display of **Feeds** in portal pages
  - ▶ **Atom** feeds
  - ▶ **RSS** feeds
- Implemented using AJAX, Dojo and JavaScript
- Gets settings defining the feed to display from portal
- Retrieves feeds from origin servers via **AJAX proxy**
- **Renders feeds in the browser** rather than causing server load

## IBM Press Releases

IBM Press Releases

[IBM Global Financing to Fund En Pointe Solutions for IBM's Services Business](#)

Tuesday, July 22, 2008 8:00:00 PM

[IBM Opens Service Management Center of Excellence in India](#)

Tuesday, July 22, 2008 8:00:00 PM

[IBM Recognized for its Green Recycling Practices by IT Analyst Firm IDC](#)

Friday, July 18, 2008 8:00:00 PM

[IBM Partnering With ABM Industries on Integration of Acquired Company](#)

Friday, July 18, 2008 8:00:00 PM

[Report: IBM Extends Overall Lead in IT Operations Management Software Revenue](#)

Friday, July 18, 2008 8:00:00 PM

Show: [5](#) | [10](#) | [20](#) items per page [Previous](#) | [Next](#)

# Objectives

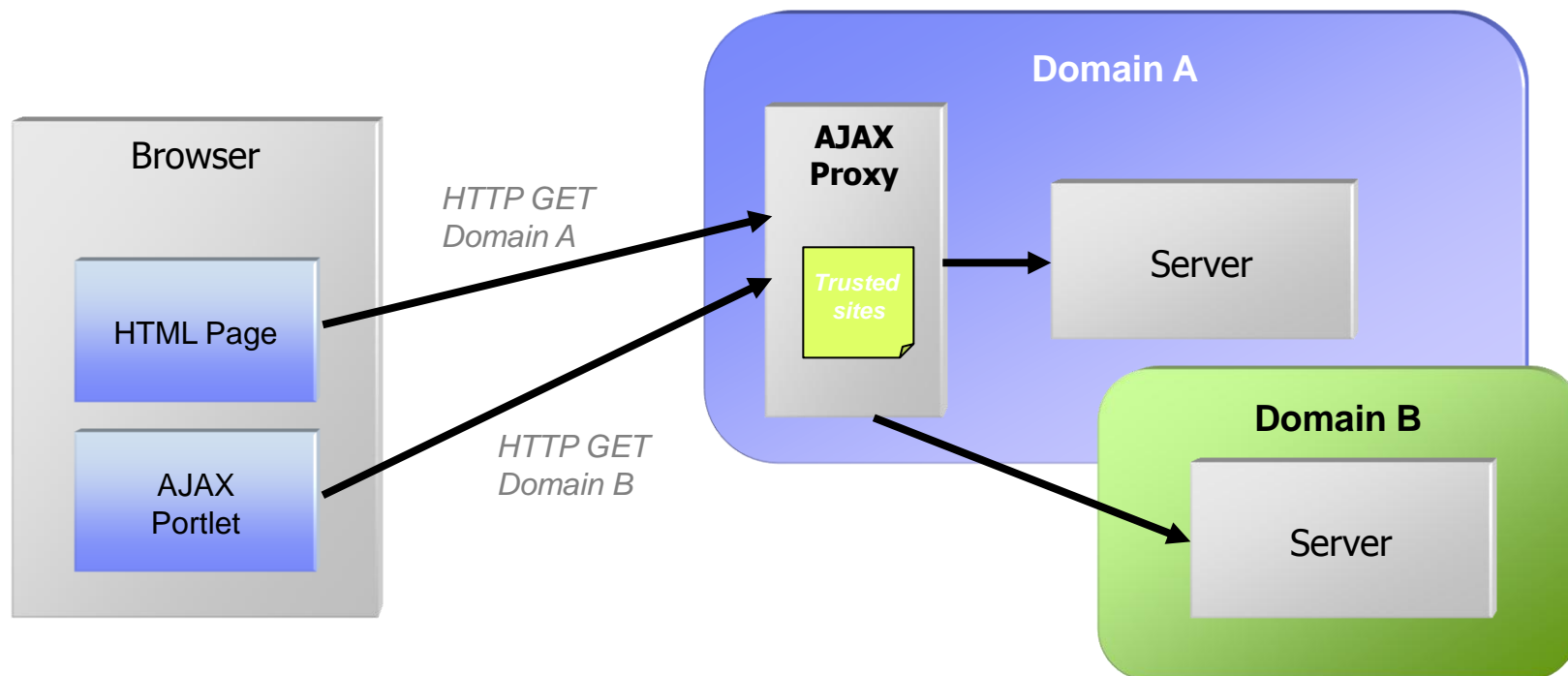
- WebSphere Portal and Web 2.0
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# Ajax Portlet Development

- Portal 6.1 introduces several new capabilities to make AJAX development in portlets much easier.
  - ▶ AJAX Proxy
    - Supports cross-domain requests
    - Easily administered
  - ▶ JSR 286 Portlet support
    - Adds ResourceRequests for retrieving Portlet resources without the full Portal aggregation
    - Navigational State can not be altered
  - ▶ Client Side Programming Model support
    - Adds easy to use APIs for accessing portlet preferences, user profile information, and maintaining navigational state on the client

# AJAX Proxy

*AJAX proxy: Central security component to manage access to other domains*

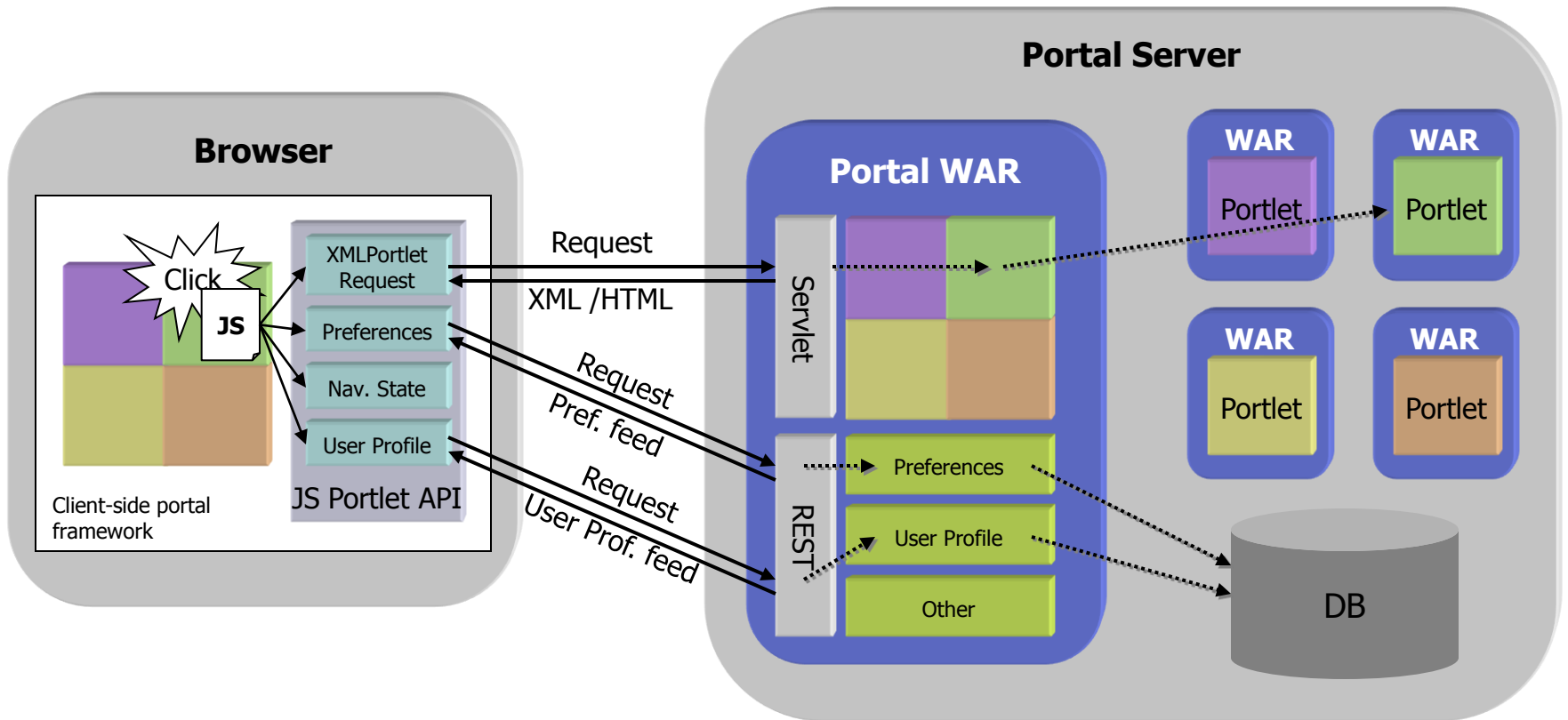


- Today's browsers restrict the functionality of asynchronous requests to the same domain because of security reasons.
  - ▶ **Example:** Your portlet is served from `www.mycompany.com` but your AJAX application tries to load a feed from `cnn.com`. This would be blocked from the browser

# Client Side Programming Model support

- Client-side portlet programming model
  - ▶ Convenience JavaScript APIs simplifying AJAX portlet development
  - ▶ Client-side API similar to the Java Portlet API
  - ▶ Coordinates AJAX calls with the portal
    - Consistent behavior after a full page refresh
    - Navigational state changes
- Functionality
  - ▶ XMLPortletRequest
  - ▶ Read & write navigational state (mode, window state, render parameters)
  - ▶ Read & write portlet preferences
  - ▶ Read user profile information
  - ▶ Report errors to the portal framework

# Client Side Programming Model support (part 2)



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# Semantic Tagging (Live Text, Microformats)

*HTML Markup is enriched by tagging interesting areas in the Markup, these parts become like (live) objects a user can interact with.*

- No programming needed, simply tag the markup (Microformats).
- Supports web content from all places:
  - any content management system
  - Application Portlets
  - ...
- Examples:
  - Select a user name and..
    - see the user profile, or email address,...
  - Click on an order item and..
    - see current delivery state
    - check customer Account details
- Technology:
  - Semantics are wrapped in ordinary XHTML structures (class, rel)
  - microformats.org (9 Open Standards, 11 Drafts)
  - Designed for humans first and machines second

```
 112001000001
```

```
 Stuttgart
```

# Live Text - Microformats

- Add semantic keywords to markup to simplify information discovery, retrieval, and navigation
- Semantic Web vs. Collaborative Tagging (del.icio.us, flickr)
- **Microformats (<http://microformats.org/>)**
  - ▶ Set of simple data formats
  - ▶ Built upon existing standards (XHTML)
  - ▶ Available for many areas /domains
    - People and organizations
    - Calendar events
    - Rating and opinions
    - Social networking
- Allows for Client Side Click to Action (C2A)

```
<div class="vevent">
 WebSphere Portal
 Technical Conference 2007
 <abbr class="dtstart" title="2007-09-
 10">September 10</abbr>-
 <abbr class="dtend" title="2007-09-
 12">12</abbr>
 Hilton Munich
</div>
```

# Live Text in Action

**Web 2.0 Tech Preview**

[Home](#) > [Web 2.0 Sample Page](#) > [People Tag Sample](#) >

Launch ▾ [Web 2.0 Sample Page](#) [Welcome](#) [Getting Started](#) [Enable Web 2.0](#)

+ C2A Sample

People Tag Sample

WorldClock Sample

Feed Reader Sample

Bookmark Sample

Notepad Sample

MyProfile Sample

GoogleGadget Sample


Integrated Gadget Sample

### Sample People Tag Portlet

This is a demo portlet showing the people tag capabilities. Click the names below for further options

[Thomas Schaeck](#)

[Stephan Hesmer](#) [found online]



**Stephan Hesmer**  
 stephan.hesmer@de.ibm.com  
 WebSphere Portal - Performance Chief  
 Developer - WAS Technical Focalpoint  
 49-7031-16-3275

- Show Profile
- Send E-mail
- Go to Blog...
- Send Instant Message...
- Google Map...

Search:  All Sources

[Tag Sample](#) > [Home](#) [Getting Started](#) [Enable Web 2.0](#)

### Sample People Tag

This is a demo portlet showing the people tag capabilities. Click the names below for further options

[Thomas Schaeck](#)

[Stephan Hesmer](#) [found online]

[Stephan Hesmer](#) [found online]  
IBM Deutschland Entwicklung  
 Werk address: Schoenaicherstr.  
 70372 Böblingen, BW 71032  
 Germany  
 49-7031-16-3275 (w, vo)  
 49-7031-16-4888 (wf)

# C2A for Standard Portlets – Live Text

*HTML Markup is enriched by tagging interesting areas in the Markup, these parts become like (live) objects a user can interact with.*

1. An Order Summary Portlet lists a set of active orders for the current month. (Each Order Id is represented as a “live object”)
2. The user clicks on the icon next to an Order Id.
3. A menu appears with a header that displays information about the item ordered and a photo of it.

Below the header are menu items which represent actions on the Order Id.

The list of menu actions depend on which target Portlets are on the same page.

4. The user clicks on a menu item to execute an action.
5. Another Portlet on the page updates to display the result of that action.

Order_ID	Customer_ID	Status
112001000000	2867377	DELAYED
112001000001	3542877	ON_TIME
112001000002		

Standard Order Detail

Order_ID	SKU	Quantity	Status
112001000001	AB-299011	200	ON_TIME

Enter order id:

Small Gear (112001000001)  
Availability: in stock

Account Detail

Enter month:

Show Account Details

Show Order Details

```
<div class="c2a:source someotherclass">
 <span class="c2a:typename"
 style="display:none">http://...datatype#email18
 22
 <b class="c2a:value">johndoe@acme.com
 <p class="c2a:header" style="display:none;">
 <c>This is a sample C2A
 source</c>

 <c>You can add an optional header
 </c>
```

Source

```
<FORM class="c2a:target"
 onsubmit="doSomething(this);return false"
 action="javascript:void(0)" style="display:none">

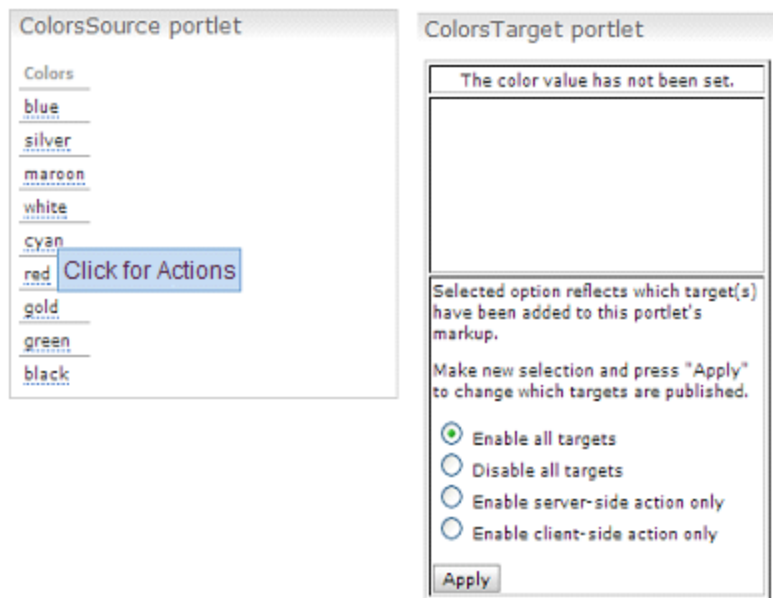
 http://www.ibm.com/xmlns/prod/datatype#email
 822
 <p class="c2a:action-label">Show inbox</p>
 <input type="text"
 class="c2a:paramname"></input>
```

Target

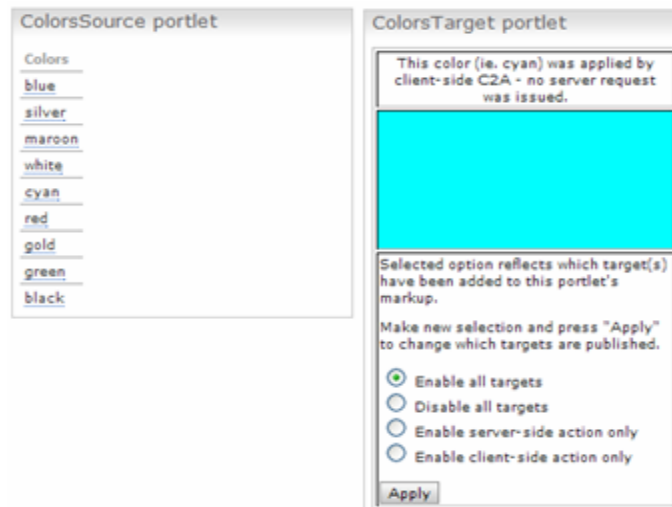
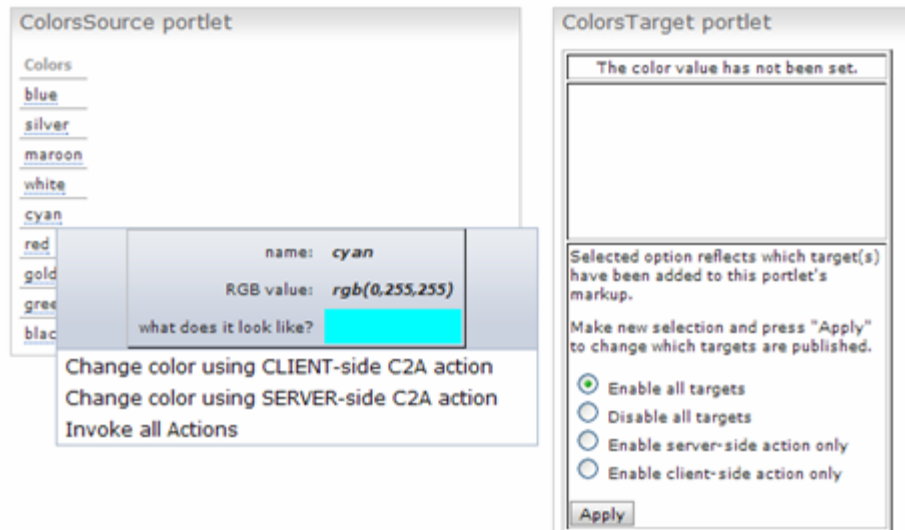
</FORM>

# Client Side Click-to-Action

1. Hover UI shows when user moves mouse over C2A source.



2. C2A menu appears when user clicks on the Hover UI.



3. Result of C2A action shown in target portlet.

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# HTML Page Support

***Simplify creation of portal pages***

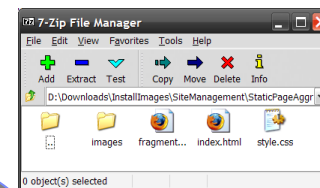
***Use HTML design tools and publish to WebSphere Portal***

***Enable your designers to create smart HTML pages using live text in WebSphere Portal***

***Unleash the power of your web design teams***



**HTML Design tool**



**WebSphere Portal**

# Render HTML Pages within WebSphere Portal

*Create HTML pages in your preferred tool and upload them into Portal...  
...optionally use Portal Navigation, Portlets, and more on your HTML Pages.*



Use of the <HTML> tag within the HTML pages defines the rendering mode.

## Technical Capabilities:

- ✓ Any HTML page can be imported into Portal
- ✓ HTML pages (full page /embedded page) can be used side-by-side with "portal layout pages"
- ✓ Different modes of portlet rendering can be specified (Server Side, AJAX or iFrames)
- ✓ Support for multiple languages or markup versions of the page
- ✓ Include any web resources (images, java script files, style-sheets) used by the page.



# Defining a Portal Page using HTML

*Import your packaged HTML Page and select the HTML page to be rendered by WebSphere Portal.*

**1**

Stefans Page

- New Page
- Edit Page Layout
- Edit Page Properties
- Assign Page Permissions
- Delete Page

Site Map

**2**

Page Properties

New page: Stefans Page

Use the controls below to work with your pages to specify your p

Title:

MyStatic Page

Unique Name:

static

Icon:

Friendly URL name:

static

Theme:

----- Inherit Parent Theme-----

Theme Style (Theme Policy):

----- Inherit Parent Theme Policy-----

I want to make this page my private page

**3**

Page Properties

Use the controls below to specify layout properties of a static content page.

This page supports (at least one must be selected):

HTML

Static Page Layout File: index.html

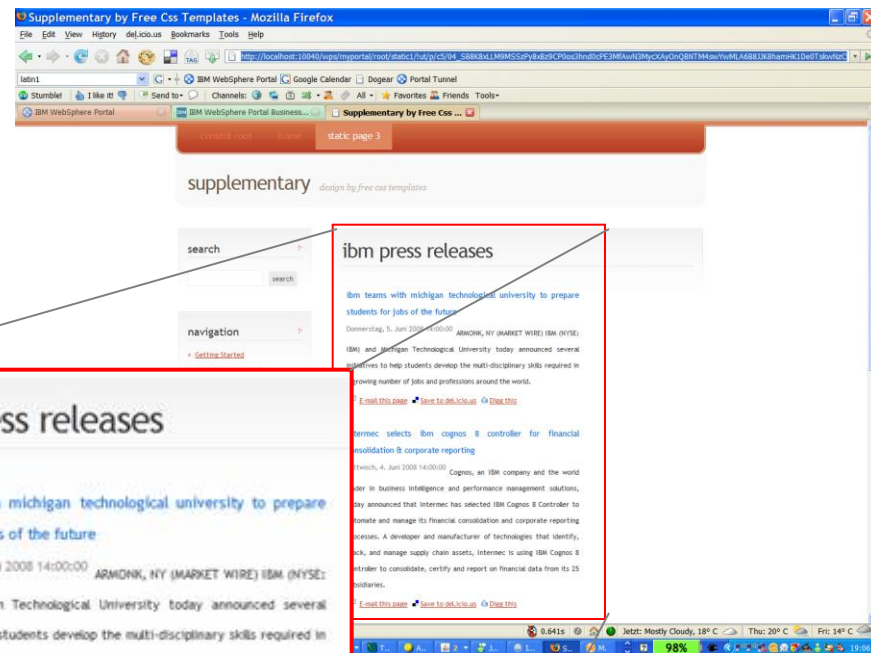
ZIP or HTML File Location: E:\book\_store.zip

Portlet window display option: Included Markup

OK Cancel

# Add dynamic elements to the HTML page

- Portlets are referenced via a microformat in the HTML source code
- The server parses the HTML and replaces the microformat with the portlet markup
  - directly on the server
  - in a way that JS in the page can reload portlet fragments (AJAX)
  - as an IFrame
- WP 6.1 ships a navigation portlet and a breadcrumb trail portlet out of the box



Portlet

# Reference static resources

- Images, CSS and JS are referenced via relative URLs in the static HTML
- These images are either served out of the ZIP file of the page ...
- ... or out of the portal theme, which allows to share the resources across pages
  - ▶ important for large JS libraries such as DOJO
- **URLs to resources do not require to use any special API!**

Shared DOJO copy from the theme

JS and CSS files packaged with the static page

```

<script type="text/javascript" src="dojo/dojo.js"
 djConfig="parseOnLoad: true">
</script>

<script type="text/javascript" src="js/init.js">
</script>

<link rel="stylesheet" media="screen" href="style.css" />

```

# Reference other pages (navigation links)

- Direct URLs if the friendly name of the target page is known
- POC URLs if the unique name of the target page is known
- By referencing the „navigation link portlet“ for a completely dynamic navigation inside a static page

The navigation portlet renders a “navigation microformat” that can be styled via the CSS of the static page

The screenshot shows a Mozilla Firefox browser window displaying a web page titled "supplementary by Free Css Templates". The page features a search bar, a "navigation" portlet, and "ibm press releases". The "navigation" portlet is highlighted with a callout box that shows its microformat output, which is a list of navigation links with a unique name attribute.

The navigation portlet output (microformat) is as follows:

```

navigation
 x Getting Started
 x Web 2.0 Introduction
 x Feeds
 x Gadgets
 x CTF Test Page
 x CTF Legacy Test Page
 x Static Page 1
 x Static Page 2
 x Static Page 3
 x Dynamic Page

```

# Operational Aspects

- All resources for a static page are packaged and deployed via a simple ZIP file
- The ZIP file is stored in the portal DB
  - ▶ Automatic backup/restore
  - ▶ Tight integration into staging-to-production and migration
  - ▶ ZIP is part of XMLAccess exports and SiteManagement ATOM feeds
- Storing the ZIP in the DB limits its size to 1MB per page

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# Lotus Connections Services in Portal

Quickly connect to an author or an expert as a way to add more depth to an interaction in context to a Portal-enabled task/process; facilitates knowledge sharing and innovation

Advanced profiles within a Portal enable an entirely new method to facilitate expertise location

Communities are a good way to understand who else is a resource and has shared interests.

Dogear is a new a way to add depth to Portal content and applications

Blogs are a simple and easy way to share expertise in context with more formalized documents or application

Activities are a simple and fast way to get a project up and running. You can add them into a Composite Application or use it as a simple to do list mechanism



# Lotus Connections Portlet

- Available for download from the Portal Catalog
- Single portlet
  - ▶ Can be configured for all five Lotus Connections features
  - ▶ Create portlet instances for each Lotus Connections feature
- Packaged in a war file and deployed using normal Portal Administrative procedures
- Configuration required via WebSphere Integrated Solutions Console and WebSphere Portal portlet configuration



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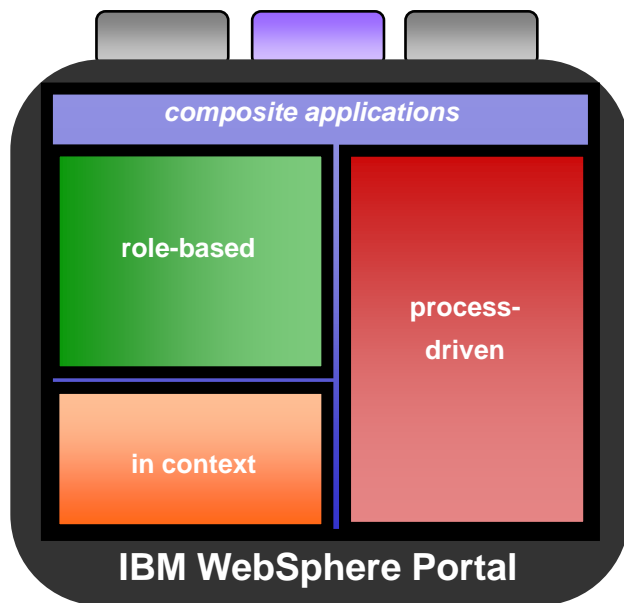
# WebSphere Portal and Google Gadget Integration

*Seamless Integration With Thousands of Web-based Solutions Extends IBM's Market Leadership*

## Enhanced IBM Portlet for Google Gadgets

Easily Configure Google Gadgets to Portal applications:

- Search and select any Google Gadget
- Customize to portlet
- Leverages Portal's Web 2.0 APIs support
- **Added support** for inter-portlet communication between Portal portlets and Google Gadget portlet instances.



- Community SOA Wiki
- Business Catalog forum
- > 3600 Assets in IBM SOA Business Catalog



- Google Gadget Services
- > 4000 Applications and Utilities

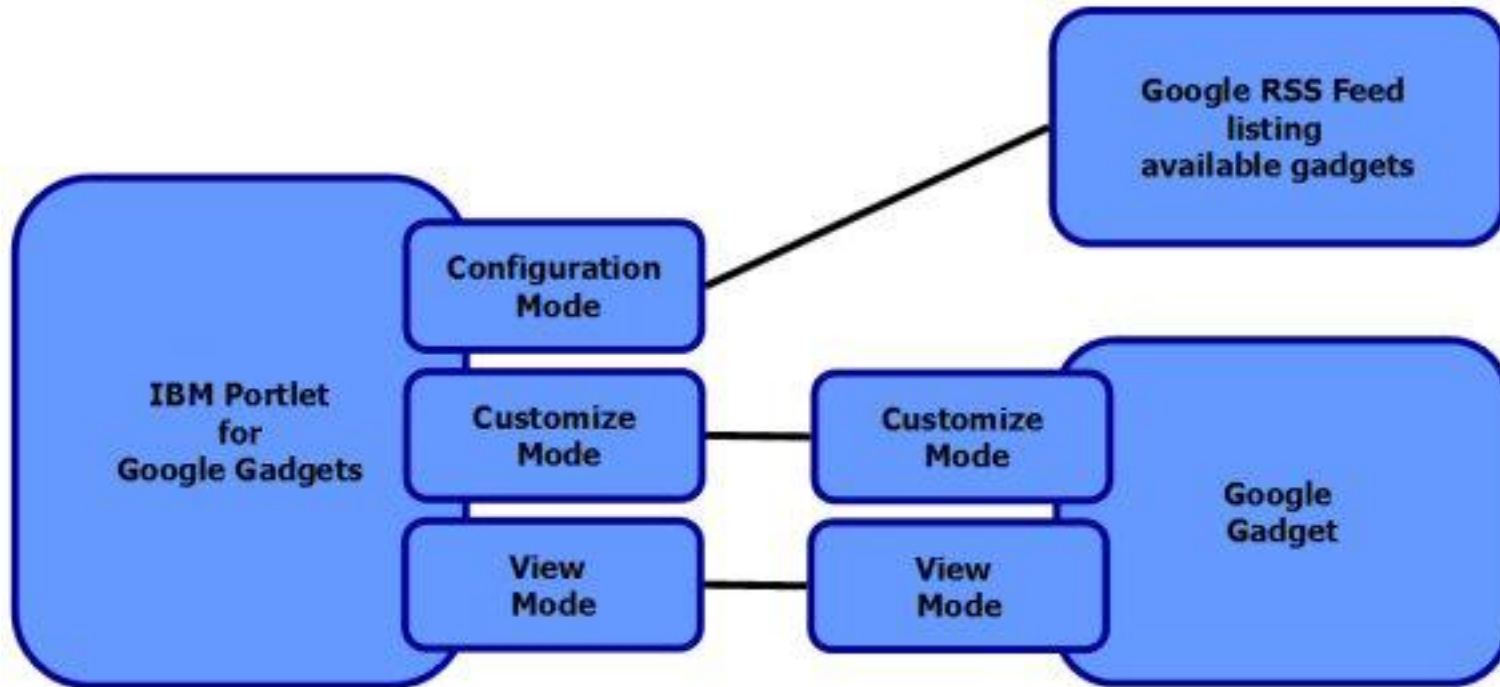
### **Business Benefit:**

***Extends reach of rich internet services to role-based business centric composite applications for improved flexibility and responsiveness.***

# Catalog Support for Google Gadgets

- Only available on the Catalog (<http://catalog.lotus.com/wps/portal/portal>)
  - ▶ Does NOT ship with Portal but a download link is provided (there is version for WebSphere Portal 6.1).
- Integrates Google Gadgets into portal pages
  - ▶ Google Gadgets integrated in WebSphere Portal will behave like local portlets
  - ▶ Viewable and customizable like any local portlet
  - ▶ Why? Large amount of user contributed content available via Google Gadgets instantly available from one portlet
- Administrators can pre-configure Gadget Portlets for the *portlet palette*
  - ▶ Generic Gadget Portlet is pre-configured by the admin to connect it to a certain gadget, e.g. an admin could create a “Map Portlet” by creating a Gadget Portlet and connecting it to the Google Maps Gadget
  - ▶ Users can select such pre-configured Gadget Portlets and drag them onto their pages like any local portlet
- If allowed by admin, users can drag unconfigured Gadget Portlets on their pages and select Gadgets from the Google Gadget Catalog
  - ▶ An unconfigured Gadget Portlet initially lets user select Gadget to display from the Gadget Catalog
  - ▶ The Gadget Portlet then displays the selected Gadget
  - ▶ User can view and customize the selected gadget like any local portlet

# IBM Portlet for Google Gadgets Architecture



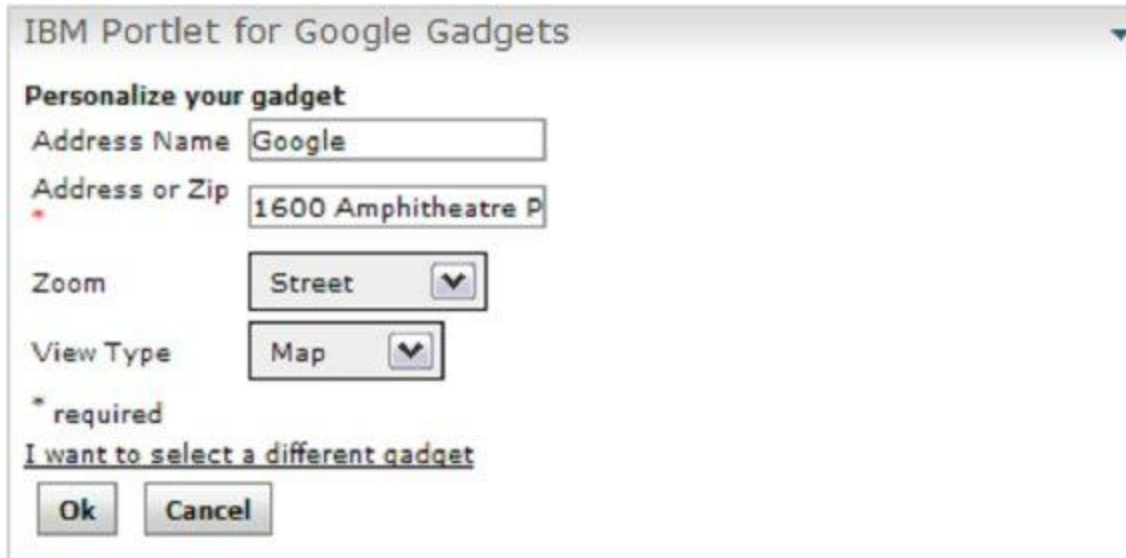
# Google Gadgets Integration

- To add a Google Gadget to a page, users can simply drag-and-drop it from the portlet palette to the page.
- A portal page showing an integrated Google Gadget displays the view mode of the gadget inline, aggregated in the page. For example, using a maps gadget, the map displays the queried location.



# Google Gadgets Personalization

- Like for any other portlet, the portal displays an icon to activate the personalize mode.
- Depending on the administrative settings, your users can click a link and select a different gadget to displayed



IBM Portlet for Google Gadgets

**Personalize your gadget**

Address Name

Address or Zip

Zoom

View Type

\* required

[I want to select a different gadget](#)



# Google Gadgets Administration

- Administrators can provide a lot of flexibility to end user by:
  - ▶ Setting access rights to permit end users to create new IBM Portlet for Google Gadgets configurations
  - ▶ Selecting which gadget they want to incorporate into their portal view
  - ▶ Pre-defining a fixed set of IBM Portlet for Google Gadgets configurations



# What is a Mashup?

A “mashup” is a lightweight web application created by combining information or capabilities from more than one existing source to deliver new functions & insights.

The screenshot displays a web application mashup with three main components:

- Search Form:** A window titled "Search" with input fields for "ETA", "Libelle POD" (set to "Singapore"), and "Libelle fournisseur", and a "Search" button.
- ImprovedDataViewer (Top):** A table displaying search results with columns: ETA, Libelle POD, and Libelle fournisseur.
 

ETA	Libelle POD	Libelle fournisseur
2007-10-01	SINGAPORE	LANDBOND MARKETING (F.E.) PT
2007-10-01	SINGAPORE	LANDBOND MARKETING (F.E.) PT
- Generic Map:** A map of Southeast Asia showing various cities like Kuala Lumpur, Singapore, and Medan. A red line indicates a shipping route.
- ImprovedDataViewer (Bottom):** A table displaying detailed shipment information with columns: ETD, ETA, Transit Time, POL, Libelle POL, POD, Libelle POD, Navire, NO Voyage, Compagnie, and Feeder Arriv.
 

ETD	ETA	Transit Time	POL	Libelle POL	POD	Libelle POD	Navire	NO Voyage	Compagnie	Feeder Arriv
2007-10-05	2007-10-08 3		VNSGN	HO CHI MINH CITY THBKK	BANGKOK		HETHI BHUM S110		SUPPLIER CARRIER	

- Rapid creation (days not months)
- Reuses existing capabilities, but delivers new functions + insights
- Requires limited to no technical skills



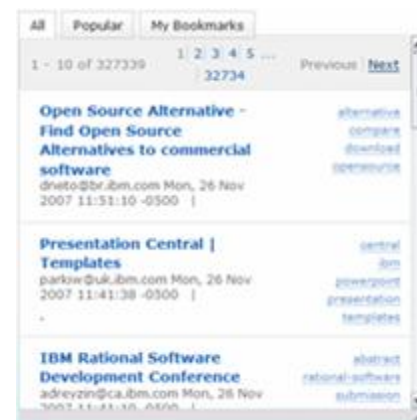
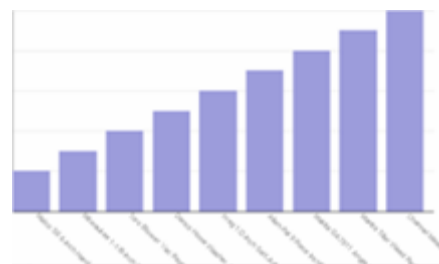
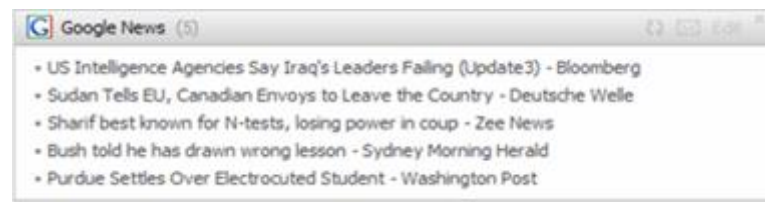
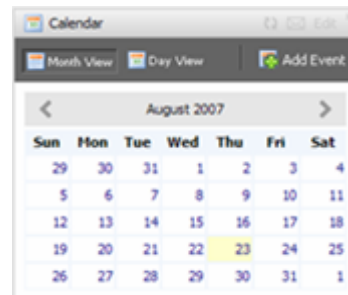
# Lotus Mashups

- Lotus Mashups provides a place for users to build and share these situational applications without impacting other mission critical apps (such as those running on Portal)
- We intend to enable these situational applications to also run on WebSphere Portal
- Mashup Makers create Situational Applications
  - ▶ Rapidly created to address an immediate need of an individual or community
  - ▶ Typically, but not necessarily, short-lived (a just-in-time solution)
  - ▶ Good enough
  - ▶ Built by domain experts (knowledge workers) to solve their own problems



# What is a Widget?

- A **widget** is a small application or piece of dynamic content that can be easily placed into a web page.
- Widgets are called different names by different vendors: *gadgets*, *blocks*, *flakes*.
- Widgets can be written in any language (Java™, .NET, PHP, etc.) and can be as simple as an HTML fragment.
- “Mashable” widgets pass events, so that they can be wired together to create something new.



# Enterprise Mashups and Portals

- Enterprise *Mashups* deemed valuable for a larger audience could be pushed out to portal for additional management and IT control, such as role-based security, rich personalization services, etc.
- Portals can also consume feeds and widgets generated by lightweight mashup environments.



## IBM Mashup Center



Mashups, widgets, feeds

## IBM WebSphere sMash

# Integration With WebSphere Portal

- JSR 286 **iWidget** Portlet will be available on the Portal catalog for WebSphere Portal 6.1
  - ▶ Currently supported Use Cases are:
    - Add widget to a page
    - Add widget to portal
      - Using a url
      - Using Lotus Mashups Server
      - Browsing the Mashup Hub
    - Eventing between widgets and portlets
  
- JSR 168 **iWidget** Portlet will be available on the Portal catalog for WebSphere Portal 6.0, 5.1.x, and just WebSphere Application Server 6.1
  - ▶ Currently supported Use Cases are:
    - Add widget to a page
    - Add widget to portal
      - Using a url
      - Using Lotus Mashups Server
      - Browsing the Mashup Hub

# Questions





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End of Presentation



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Abbreviated Title Here