

Technology Audit

Integration and BPM

IBM WebSphere Portal v6.0

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Abstract

WebSphere Portal v6.0 is a comprehensive integration tool from IBM that enables organisations to develop and deploy composite applications within a portal framework. Many organisations have implemented portals over the past few years, and today the biggest advantage has been the single sign-on capability. WebSphere Portal v6.0 introduces the concept of composite applications that can dynamically exchange data ‘on the glass’ between different back-end applications. Butler Group considers the simple and easy-to-use administration screen, the support for contextual menus, and the capability to connect multiple LDAPs, as particularly significant developments in the portal marketplace. IBM has packaged WebSphere v6.0 in four variants, but we find the licensing overly complex. WebSphere Portal v6.0 provides an ideal tool to integrate back-end systems and increase user productivity by having the same look and feel to all applications. WebSphere Portal v6.0 also provides organisations with a tool that can support any Service Oriented Architecture (SOA) implementations.

KEY FINDINGS

Key: ✓ Product Strength ✗ Product Weakness ⓘ Point of Information

✓	Support for multiple LDAPs.	✓	Supports contextual menus.
✓	Document Manager provides support for Microsoft Office.	✓	Portlet palette supports drag –and-drop of portlets by the user.
✓	Allows dynamic exchange of data between different applications at the terminal.	✓	Supports SOA implementations.
ⓘ	Operates on a wide range of platforms.	ⓘ	Supports JSR 168 and WSRP open standards.
✗	Licensing is overly complex.		

LOOK AHEAD

IBM is positioning WebSphere Portal as a Service Oriented Architecture (SOA) integration tool to help organisations to deploy SOA cost effectively using the existing infrastructure and applications. IBM is committed to open standards and has developed WebSphere Portal v6.0 so that it will work with any portlets that conform to Java Specification Request (JSR) 168 or Web Services for Remote Portlets (WSRP) standards. IBM has stated that it intends to introduce an Express version for the Small and Medium sized Businesses (SMBs), thereby providing the WebSphere Portal offering to organisations of any size.

Butler Group considers IBM’s commitment to open standards and the development of the comprehensive capabilities of WebSphere Portal v6.0 to be a market leading position that others will follow. We particularly consider the range of coverage from SMBs to global organisations – with product offerings targeted at the different segments – as a significant differentiator.

► FUNCTIONALITY

An Enterprise Portal is not a solution in its own right; rather it is a piece of software infrastructure that facilitates the deployment and use of business solutions. These solutions are displayed/accessed in the portal through the use of Portlets – small applications, written to a standard format, which can access the underlying applications – returning the information in the format specified in the portal framework.

Portlets that are compliant to either Java Specification Request (JSR) 168 or Web Services for Remote Portlets (WSRP) standards have enabled the creation of a SOA for portals. Within the SOA, such portlets can be utilised by Business Process Management (BPM) tools or Workflow Engines to assemble ‘composite’ applications within the portal, giving the user a single interface with which to interact with all the relevant information and workflow tasks, but without the responsibility of personally determining and organising the underlying mechanics of the process.

Therefore, the portal allows movement between platforms, and the ability to outsource applications, without having to worry about the risks of change management at user level. Thus, the Enterprise Portal epitomises the concept of software as a service, and as the IBM Model shows (Figure 1), the abstracted nature of presentation from business processes, applications, and those from data stores, makes the Enterprise Portal the ideal framework for those organisations seeking to implement a SOA.

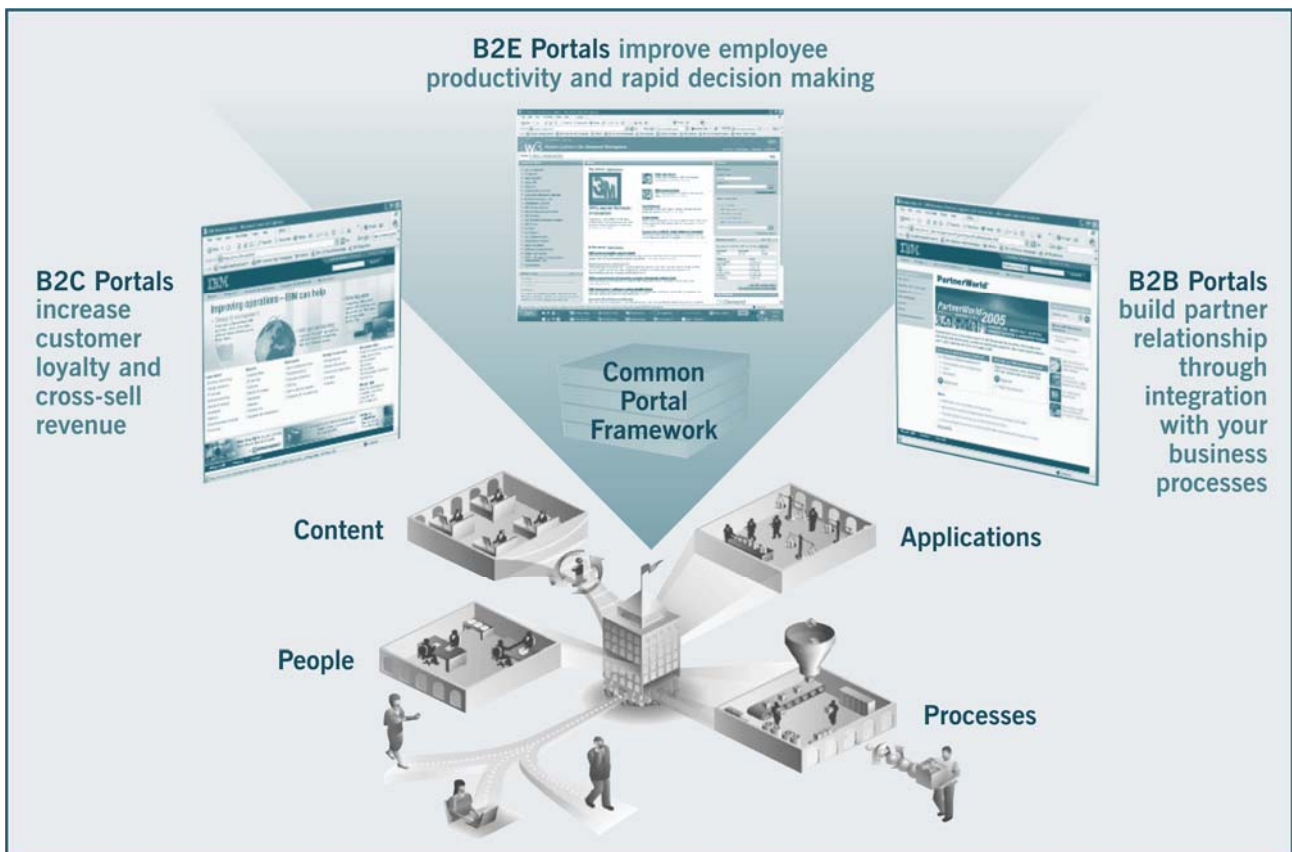


Figure 1: Portal Model (Source: IBM)

Product Analysis

Organisations are looking for a method of communicating with its business partners, employees, and customers using a single technology. For Business to Business (B2B) the key requirement is build-partner relationships by enabling all participants in the supply chain for example, to share information regardless of platform. In the Business to Customer (B2C) environment the objective is to secure loyalty by personalising the experience, and allowing targeted-up and cross-selling opportunities. While in the Business to Employee (B2E) environment the imperatives are to increase employee productivity, increase teamwork and collaboration, and enable rapid decision making. These issues are as true in the public sector as they are in the private sector, particularly given the e-government initiative currently being deployed by many local authorities.

Although the issues are different for each category the underlying requirements are to enable people to access information quicker and more effectively. WebSphere Portal v6.0 introduces the concept of composite or co-operative applications; these can be defined as a combination of a variety of heterogeneous applications that users may be accessing sequentially to undertake a particular business procedure, which are drawn together as a 'single' application. Relevant access and task sequences are controlled to ensure security, integrity, and consistency. The BPM or Workflow functionality also provides an audit trail through composite applications, enabling real-time automated alerts from the processes, and detailed analysis for review and improvement in those processes. WebSphere Portal v6.0 can deliver composite applications through a SOA, and BPM or Workflow environment.

WebSphere Portal v6.0 enables organisations to perform horizontal integration of applications, and provides access to a catalogue for standard applications that users can simply click to implement. IBM states that one major differentiator between WebSphere Portal v6.0 and other portals is the ability it has to support 'green on black' applications using Host Access Terminal (HAT); this enables organisations to Web enable these 'older' applications without the need to re-write them.

WebSphere Portal v6.0 is part of the WebSphere family of products; and it comes as a self contained product that does not require any other members of the family to be acquired separately. WebSphere Portal v6.0 comes in three editions. WebSphere Portal Server the entry offering, which provides core portal functionality and WebSphere Portal Enable and WebSphere Portal Extend, which add additional functionality to the base edition. Therefore, if an organisation requires the workflow development capabilities, it must purchase the correct edition or use another product and integrate it through APIs.

Butler Group considers WebSphere Portal v6.0 to be an extremely comprehensive product that is a market-leading solution providing organisations with the ability to quickly and easily create and deploy solutions to address the requirements of dealing with partners, customers, and employees via a single technology.

Product Operation

WebSphere Portal Server

WebSphere Portal Server is the foundation offering of the WebSphere Portal product family. Figure 2 shows the administrator screen that is used to manage and configure a user's portal.

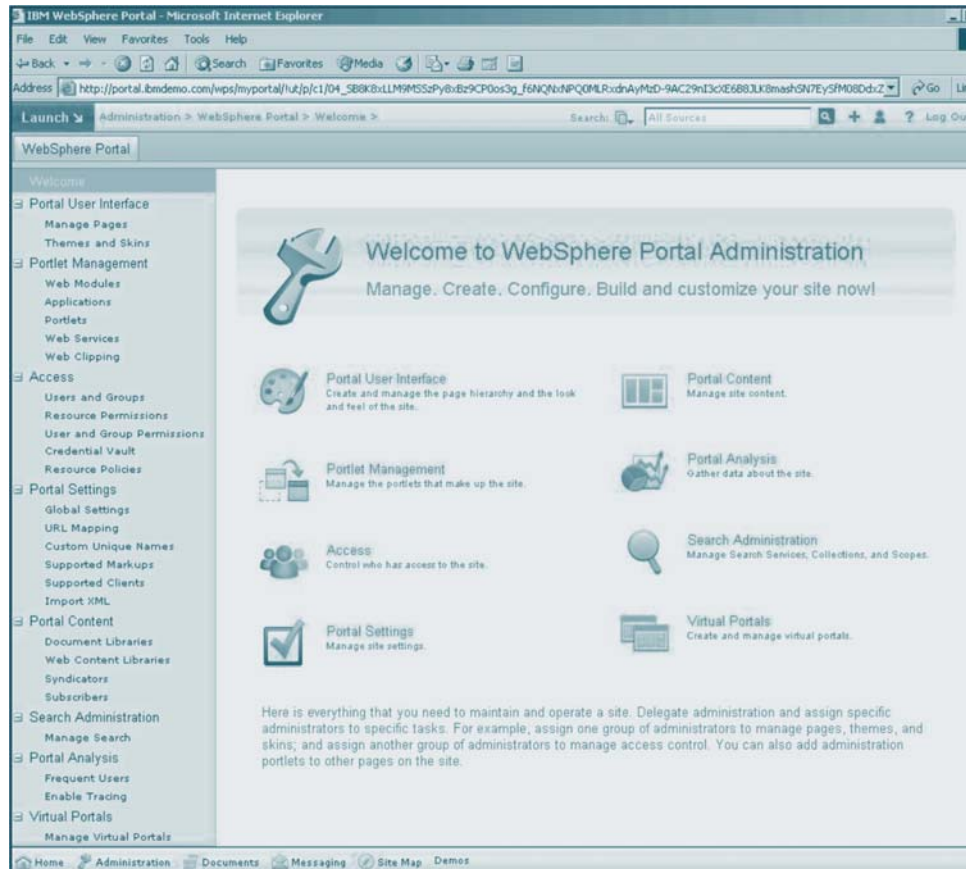


Figure 2: WebSphere Portal v6.0 Administrator Screen (Source: IBM)

WebSphere Portal v6.0 provides core portal services that aggregate applications and content, and deliver them as role-based applications, such as:

- WebSphere Portlet Factory Designer, which is used to build composite applications from enterprise back-end systems. Portlet Factory allows organisations to deploy WebSphere Portals without the need for highly-skilled developers; the use of its graphical user interface allows organisations to rapidly modify the portal to meet changing market conditions.
- Portal applications can be saved as templates for easy customisation, deployment, and 'reuse' by different user communities. Once a developer has built a template, which can be parameterised the deployment and customisation can be performed by end-users given the relevant permissions.
- Portal interface includes the 'fly out' portlet palette that is designed for end-users to use as a method of customising their portal. The portlet palette supports drag-and-drop from the palette to the user's portal, and if permission is granted, the user can dynamically change the portal page layout, from two columns to three columns for example.
- Contextual menus provide users with a personalised experience and remove the 'greyed' out options that are not applicable and reduce the number of options to only those needed to perform the tasks associated with that role. Butler Group considers the use of contextual menus as a major benefit in organisations obtaining improved productivity from the deployment of portals.
- Policy-based administration allows developers, integrators, administrators, and others to implement custom policies, via a range of methods including an API, XML, and the Personalisation Editor. Advanced personalisation is supported via the use of business rules that allow pages and portlets to be hidden dynamically.
- Improved performance and page throughput, with support for up to 30,000 dynamic portal pages.
- Site map that shows the hierarchy of pages so that administrators and users can easily navigate the portal. Butler Group considers that the omission of a drag-and-drop capability allowing administrators to simplify the movement of pages a minor weakness.
- Click-to-Action (C2A) technology supports portlet-to-portlet communication, ensuring the accuracy of information passed – this can be dynamic in composite applications where the user selects the field to copy, or it can be hardwired in co-operative applications so that it happens automatically, i.e. when the CRM system is used, the customer number is auto populated to any other relevant system.

WebSphere Portal Enable

WebSphere Portal Enable includes all the features of WebSphere Portal Server plus:

- Workflow Engine that allows for any workflows developed to be executed from within the portal enabling business processes to be deployed quickly and easily.
- Web Content Management authoring capabilities, including a welcome page for new users, inline editing of Web content, simplified content templates, and improved search of Web content.
- Document Manager integrates with Microsoft products and allows for centralised file management. It allows users to create folders and open documents from within the portal and displays the document in HTML; it also allows editing of the document without the need for the user to have Word installed. Butler Group considers this ability to integrate with the Microsoft Office product suite a major benefit to organisations as it now enables sharing directly from Microsoft Windows and Microsoft Office. Figure 3 shows a typical Document Manager view.

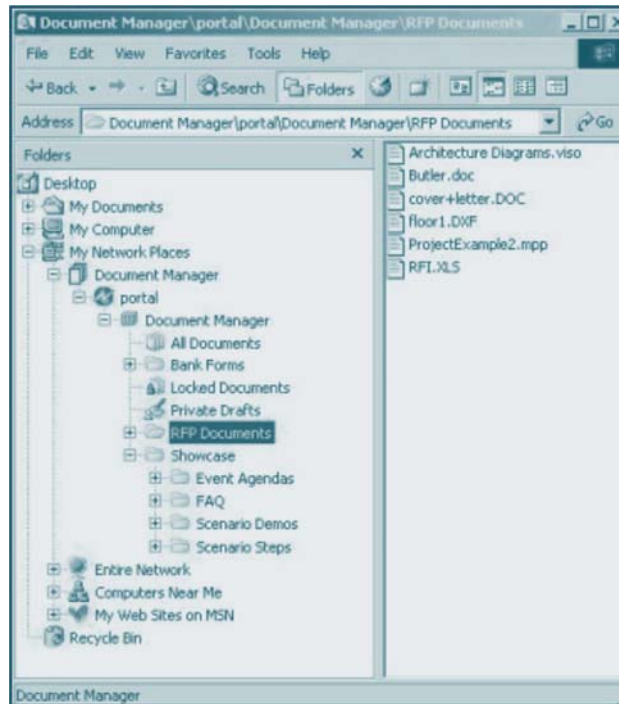


Figure 3: Typical Document Manager View (Source: IBM)

WebSphere Portal Extend

WebSphere Portal Extend includes all the features of WebSphere Portal Enable plus:

- IBM Workplace Forms simplifies form development, delivery, and processing, allowing portal users to edit electronic forms as part of a business process and store them in the Portal Document Manager (PDM) repository. Workplace Forms can eliminate costly paper, reduce forms processing time, reduce form errors, simplify complex form approval processes, and can provide other benefits to help enhance productivity and improve efficiency.
- Powerful collaborative services including instant messaging, team workplaces, and people finder, that allow users to quickly make business decisions with other employees, customers, and trading partners.
- Workflow Builder, which allows organisations to develop simple workflows and execute them from within the portal.

Product Emphasis

IBM is aiming to move the use of portals beyond the current solution of providing a single sign-on for users, to exploiting enterprise applications and as an integration tool. IBM states clearly that it sees the use of WebSphere Portal v6.0 as instrumental in the wider adoption of SOA. Butler Group considers WebSphere Portal v6.0 as a market-leading product not only for its extensive capabilities, but also for its use of open standards. We also believe the simple four variants, offering ranging from the SMB to large multi-national deployments, as another example of IBM's thought leadership in this market.

► DEPLOYMENT

WebSphere Portal v6.0 is typically implemented by an organisation's IT department; with the in-house resources required, including IT administrators and Web developers. These may be supported by IBM lab services teams, IBM Global Services, and/or third-party Systems Integrators. Implementation requires knowledge of the organisation's applications and content repositories as well as Web development and integration skills.

The length of time required to implement WebSphere Portal v6.0 depends on the scale, scope, and number of portlets required. Front-end integration requirements can also influence the deployment time. Typical implementations take between three and ten weeks. WebSphere Portal v6.0 is often deployed in a phased approach, starting with a limited group, or for a single pilot group (for example, a single department), and then rolled out across other users in the organisation.

Administration overheads, once the product has been implemented, are much the same as for any other Web application, and include managing the permissions and users access. Generally, this work is devolved to departmental administrators, WebSphere Portal v6.0 can link with separate Lightweight Directory Access Protocol (LDAP) sources, such as Microsoft Active Directory, which makes administering the users and access simpler and easier.

IBM operates a number of training courses that include programming, installation and deployment, administration, and management overview. These courses are typically classroom and instructor led, but with an emphasis on 'hands on' so that students leave the course with the necessary skills and knowledge to perform all aspects of WebSphere Portal v6.0 tasks.

WebSphere Portal v6.0 operates on a wide range of platforms from Sun Solaris to IBM Z series mainframes. WebSphere Portal v6.0 is not dependant upon any other product from IBM. However, it is part of the WebSphere family of products that includes WebSphere Application Server, WebSphere Business Integration Broker, WebSphere Enterprise Service Bus, WebSphere MQ series, and WebSphere Studio. This extensive range of products enables organisations to use WebSphere Portal v6.0 in isolation or as part of a larger deployment that operates seamlessly together.

► PRODUCT STRATEGY

WebSphere Portal v6.0 is aimed at organisations of any size through the clever packaging of the capabilities. WebSphere Portal Express is aimed at the small-to-mid market customers (less than 1000 seats), WebSphere Portal Server is seen as an entry-level product for the Small and Medium sized Businesses (SMBs), WebSphere Portal Enable addresses the needs of larger organisations, with WebSphere Portal Extend suited to those organisations that require the full functionality of the offering.

IBM traditionally uses channel partners as its route to market, and these are specifically chosen to ensure that they can add value to a customer by having an extensive knowledge and capability to design, deploy, and support WebSphere Portal v6.0.

The licensing of the WebSphere Portal family is a complicated arrangement, which is in direct contrast to IBM's simple four variant offering for the solution. Butler Group considers this licensing a weakness as it is very confusing. The following is an example of the licensing:

WebSphere Portal Extend, Portal Enable, and Portal Server (CPU license)

- 1 Portlet Factory CPU per Portal CPU.
- 1 Portlet Factory Designer for every 6 Portal CPUs.

WebSphere Portal Server (20 User pack license)

- 1 Portlet Factory CPU per Portal CPU.
No Portlet Factory Designer Entitlement.
- WebSphere Portal Enable Limited Use.
- WebSphere Portal Extend Limited Use.

IBM has only just released v6.0 of WebSphere Portal, and this release includes some major new enhancements, therefore, IBM does not have any immediate plans for WebSphere Portal other than to release maintenance updates as and when needed.

Butler Group considers IBM to be the market and though leader in respect of portal technology. However, in the last three years, the focus of Enterprise Portal deployments has appeared to revolve around providing an interface for Enterprise Content Management (ECM) or Document and Record Management (DRM) solutions. This was both encouraged and driven by the ECM vendors, add to this the fact that many Internet-facing portal deployments have been used to deliver Web Content Management (WCM), and it is understandable that there is now a perception by many that the Enterprise Portal is part of the ECM 'stack'. An Enterprise Portal is a framework for accessing and connecting information, applications, and services. It is not an application in itself. Butler Group believes that IBM is addressing the business needs with WebSphere Portal v6.0.

► COMPANY PROFILE

IBM is the world's largest information technology company, and was founded over 80 years ago. Drawing on resources from across IBM and key business partners, IBM offers a wide range of services, financing, solutions, and technologies. The company has over 329,000 employees, and is represented throughout every area of the populated world, operating in over 160 countries. In 2002, Sam Palmisano became IBM's CEO and realigned it with an initiative to enable 'On Demand', which has since pervaded the whole company and its products. Although its aims also relate to business strategy, On Demand is enabled by IBM's middleware technology, and has to be mirrored in its technology strategy – On Demand delivery has been defined as requiring software to be based on open standards, to enable integration, to cater for virtualisation of resources, and to be autonomic (resilient to failure).

IBM common stock is listed on the New York Stock Exchange (NYSE: IBM), and on other exchanges in the United States and around the world. The company's revenues in the last three completed financial years were as follows (the 2005 figures include only four months of IBM's PC business, sold to Lenovo):

	2005	2004	2003
Revenue (US\$ millions):	91,134	96,293	89,131
Revenue Growth over previous year:	(5.6%)	8.0%	9.7%
Total Net Income (US\$ millions):	7,994	7,497	6,588

IBM manufactures a broad range of computers, including mainframes, network servers, and peripherals. Its services arm employs about half of the employees, and contributes just under half of the company's revenues. IBM also specialises in infrastructural software, offering solutions based on its DB2 information management software, WebSphere integration and development, Lotus collaboration and messaging, Rational development and testing, and Tivoli infrastructure and run-time management, products.

► SUMMARY

WebSphere Portal v6.0 is a market-leading product, the ability to exchange data between back-end applications at the terminal (or in IBM speak 'at the glass') allows organisations to increase user productivity and develop composite applications. IBM has developed WebSphere Portal v6.0 to enable organisations to use it as a tool in the deployment of any SOA implementations. WebSphere Portal v6.0 operates on a wide range of platforms, and now comes with full support for the Microsoft Office stack, which allows users to drag-and-drop content from file systems to Portal repositories, and also to view and edit documents without the need for Microsoft Office to be installed.

Butler Group considers that with this version of its WebSphere Portal product, IBM has exceeded user expectations and delivered a product that, depending upon which variant is used, allows any organisation to exploit its back-end applications, build comprehensive workflows using e-forms, and deploy business processes that require human intervention quickly and easily.

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