Enterprise Portals Overview Guide

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Contents

Introduction

Welcome to the *Enterprise Portals Overview Guide*. This guide covers what an enterprise portals solution is in terms of Microsoft® SharePoint® Server 2010. This document provides a high-level, conceptual view of a typical enterprise portals solution and the corresponding engagement activities that should be conducted to successfully deliver the solution.

Information in this overview applies to SharePoint Server 2010 and Microsoft® SharePoint® Foundation 2010 and may not necessarily apply to earlier or later versions. The document is organized as follows:

- Enterprise Portals Sites. A brief overview of enterprise portal sites and a list of some prominent capabilities, their associated purposes, and infrastructure challenges.
- SharePoint Server 2010 Enterprise Portals Capabilities. An overview of SharePoint Server 2010 capabilities for enterprise portal solutions.
- WCM and Enterprise Portals Solutions. A comparison and contrast of Web Content Management (WCM) and enterprise portals solutions.
- Enterprise Portals Solution Engagement Activities. Engagement activities for each of the Microsoft Services Delivery Methodology (SDM) phases (Envision, Plan, Build, Stabilize, Deploy, and Post-deployment (Operations).
- Upgrade Considerations. Considerations for upgrading from Microsoft® Office SharePoint® Server 2007 to SharePoint Server 2010.
- New Enterprise Portals Capabilities. Capabilities and enterprise portals solutions that are new or updated in SharePoint Server 2010.
- References. Further references for enterprise portals and enterprise portals-related issues.

Enterprise Portals Sites

Enterprise portal sites are intranet or extranet sites accessible by authenticated users. These users might represent internal employees or external partners. Enterprise portals are characterized by their focus on branding, navigation, Line-of-Business (LOB) integration, advanced authentication schemes, availability of content in multiple geographies, and content discoverability.

Table 1 lists some prominent enterprise portal sites purposes and their associated key considerations and challenges.

Table 1: Enterprise Portals Sites Purposes

Purpose	Key Considerations	Challenges
Intranet portal	• Information architecture • Content authoring • Page design • Navigation • LOB integration • Search	• Reliability • Geographical distribution • Scale • Content deployment • Security
Extranet portal	• Information architecture • Security • Authentication • Content authoring and approval • Page design • Content presentation • Navigation • Search	• Supporting a large number of site visitors • Supporting large amounts of data of different shapes and sizes • Content deployment • High availability

Purpose	Key Considerations	Challenges
International portal	• Information architecture • Security • Authentication • Content authoring and approval • Page design • Content presentation • Navigation • Search • Multilingual capabilities • Variations	• Supporting a large number of site visitors • Supporting large amounts of data of different shapes and sizes • Content deployment • High availability • Network latency

SharePoint Server 2010 Enterprise Portals Capabilities

A structured publishing process is useful for publishing pages and content to an enterprise portal. SharePoint Server 2010 provides a rich, robust, and scalable platform to implement and deploy enterprise portals sites in an enterprise.

The highly integrated enterprise portals capabilities in SharePoint Server 2010 include the following:

- Customizable page layouts and Microsoft® ASP.NET master pages.
- Smart navigation controls.
- Site variations based on language and other criteria.
- Automated content deployment.
- Authoring, content approval, and content deployment in SharePoint Server 2010 have a familiar user interface (UI) that can be easily learned and adapted by the content authoring team. This frees the IT infrastructure team to focus on its core responsibilities (like deploying and operating the server infrastructure).
- SharePoint Server 2010 (or an earlier version of SharePoint) is already in use in the enterprise as a collaboration platform. This makes it easier for site authors and other contributors to learn how to create and customize enterprise portals solutions.
- Multilingual capabilities support using language packs to support advanced deployments.
- Content variations support allows you to maintain separate content for different languages (for example, providing different content for different reading devices).
- Providing an extensive security model that supports delegating administration, restricting access, and hiding content that is not relevant.
- The security model has been improved with support for claims-based identity.
- Microsoft Business Connectivity Services (BCS) supports advanced integration with external systems.
- SharePoint Server 2010 provides several capabilities for the IT operations team to manage and operate enterprise portals solutions:
    - The centralized configuration database in the configuration and management model automatically propagates and synchronizes centrally-stored configuration settings across all servers in the server farm.
    - The three-tiered administration model (encompassing central services, shared services, and site administration) makes it easy to differentiate administrative roles and assign administrative responsibilities.
    - The backup and recovery, migration, and monitoring support significantly improve general IT operations.
    - The solutions framework promotes reliable deployment and customizations management across server farms.

For more information on enterprise portals, see the MSDN article Enterprise Content Management (http://msdn.microsoft.com/en-us/library/ee554868(office.14).aspx).

WCM and Enterprise Portals Solutions

WCM solutions have many similarities to enterprise portals solutions, especially extranet portals. Both involve branding, content management, and authentication, and may also entail some customization using SharePoint capabilities. There are also many overlapping requirements from design, build, and deployment perspectives.

One clear difference between WCM solutions and enterprise portals solutions is that WCM solutions are typically content publishing oriented. WCM solutions often require a higher degree of customization to fulfill user experience and site branding requirements. The content and capabilities in a WCM solution is often targeted at external users not directly associated with the organization or company. In contrast, enterprise portals solutions are usually targeted at either employees or partner organizations in an intranet or extranet environment. The expectations for a WCM solution are significantly higher from a usability and availability perspective.

Given the emphasis on branding, navigation, and design elements needed for an enterprise portals solution, two teams are typically used: a design team and a development team. The design team focuses on user experience, branding, and producing the overall design and cascading style sheets (CSS). The development team focuses on development and incorporating the design requirements through site definitions, themes, and custom SharePoint Server 2010 capabilities.

Enterprise Portals Solution Engagement Activities

Enterprise portals solution engagements involve activities that span all of the SDM phases (Envision, Plan, Build, Stabilize, and Deploy) as well as a Post-deployment (also known as Operations) phase. The following is a list of enterprise portals solution engagement activities that correspond to each phase.

For more information about SDM, see the Microsoft Services Methodology Center homepage (http://infoweb2007/sites/sdm/pages/default.aspx).

Envision and Plan Phases

Enterprise portals solution engagement activities for the Envision and Plan phases focus on the following:

- Application architecture
- Security
- Governance
- Information architecture
- Multilingual capabilities and variations
- Capacity planning
- Business continuity management

Application Architecture

Application architecture is critical to the successful implementation, deployment, and operation of an enterprise portals solution. The SharePoint Server 2010 platform significantly influences and simplifies the architectural decisions that need to be made. The primary architecture decisions are centered on:

- Logical architecture:
    - The use of capabilities provided in the platform to implement the business processes needed to implement an enterprise portals solution.
    - The development of customizations and integration with the SharePoint Server 2010 platform to implement the business processes.
    - Integration with external systems including (but not limited to) credential stores, LOB systems, data sources, and external services.
- Physical architecture:
    - Determining the topology of the farm to meet the non-functional requirements associated with the enterprise portals solution (like performance, scalability, security, manageability, and availability).
    - Deployment of components and services in the appropriate tiers to meet the non-functional requirements.

Application architecture planning and solution development typically consumes the largest percentage of resources during the overall engagement. In addition to the technical solution, there are other aspects unique to enterprise portals (like branding, information architecture, and navigation) that you need to factor into your planning.

Security

Enterprise portals solutions may need to support authentication access for internal and external users. This means users access a system partially hosted in a screened subnet or perimeter network and partially hosted in the internal corporate network. Ports must therefore be opened to allow access to the corporate network, which means security risks must be addressed. You need to be concerned with overall architecture and security. These kinds of security risks require special attention with a focus on reducing the attack surface and using defense-in-depth strategies.

For more information on the defense in depth concept, see the MSDN article Design Guidelines for Secure Applications (http://msdn.microsoft.com/en-us/library/aa302420.aspx).

Governance

Governance is the set of policies, roles, responsibilities, and processes that you establish in an enterprise to guide, direct, and control how the organization uses technologies to accomplish business goals. Effective governance anticipates the needs and goals of both your organization's IT teams and its business divisions. Governance also provides policies and guidelines that make the deployment of products and technologies such as SharePoint Server 2010 both manageable for IT and also effective as a business tool.

Every organization has unique needs and goals that will affect its approach to governance. No single approach will fit the cultures or requirements of all organizations. For example, larger organizations will probably require more governance than smaller ones.

Because deploying SharePoint Server 2010 introduces new ways of sharing information, collaborating, and implementing business processes in your organization, there are unique considerations for governing SharePoint Server 2010 that you may not have previously encountered.

For more information about governance considerations for enterprise portals solutions, see the Microsoft TechNet articles Governance Resource Center for SharePoint Server 2007 (http://technet.microsoft.com/en-us/office/sharepointserver/bb507202.aspx), SharePoint Internet presence governance plan (white paper) (http://technet.microsoft.com/en-us/library/ee449547.aspx), and Plan governance (http://technet.microsoft.com/en-us/library/cc263341.aspx).

Note: Some of these resources (and others referred to later in this guide) reference Office SharePoint Server 2007. However, the information is still applicable to SharePoint Server 2010.

Information Architecture

Information architecture in SharePoint Server 2010 is the organization of information in an enterprise — its documents, lists, Web sites, and Web pages — to maximize the information's usability and manageability. Factors that contribute to the successful implementation of information architecture include:

- How easy it is to find information.
- How information is stored and retrieved.
- How users navigate to information.
- How redundant or overlapping information is.
- What metadata is available for each type of information.
- What templates are used for creating information.
- How well the information architecture is governed.

For more information on information architecture, see the *Information Architecture Guide* in the Platform Services for SharePoint Server 2010 offering documentation.

For more information about information architecture considerations for enterprise portals solutions, see the Microsoft TechNet articles White paper: Information architecture in Office SharePoint Server (http://technet.microsoft.com/en-us/library/cc262985.aspx) and Plan Web site structure and publishing (Office SharePoint Server) (http://technet.microsoft.com/en-us/library/cc262789.aspx).

Multilingual Capabilities and Variations

A customer will often advocate releasing the site in the customer's primary language initially and then addressing multilingual and variations capability concerns in later phases. While this approach might sound logical, it is very difficult to rework the design at a later date. You may need to educate the customer about the importance of information architecture and guide them through its development as needed.

For more information on multilingual and variations capabilities, see the *Multilingual Capabilities and Variations Guide* in the Enterprise Portals for SharePoint Server 2010 offering documentation.

Capacity Planning

For capacity planning, it is difficult to recommend specific guidance in terms of the necessary processing power required to meet performance and scale needs. Among the factors to consider are the number of users, the peak and average user load, the amount of data stored in the system, and the shapes and sizes of the data. Additional considerations include the location of data and end users, especially for geo-dispersed implementations. Understanding the success criteria (which is usually measured by requests per second) is critical to your planning efforts. Although there is abundant material available in terms of capacity planning for Office SharePoint Server 2007, it is not necessarily applicable toward implementing an enterprise portals solution for SharePoint Server 2010. You will need to investigate and design a methodology to define and test performance and load for the solution as well as document the

customer's specific success metrics. You will then need to define the design approach for the farm architecture and ultimately verify that the architecture meets the desired capacity requirements.

For more information about capacity planning considerations for enterprise portals solutions, see the Microsoft TechNet articles White paper: Capacity planning (http://technet.microsoft.com/en-us/library/cc526019.aspx), and Plan for performance and capacity (Office SharePoint Server) (http://technet.microsoft.com/en-us/library/cc262971.aspx).

Business Continuity Management

Business continuity management is used in close conjunction with capacity planning. Enterprise portal sites are expected to be up and available without interruption, regardless of the day or time. Performance is vital and site outages are likely to be viewed as a crisis. It is critical to understand and help define the service level agreements (SLAs) with your customer before designing the architecture. The SLAs should define what an outage is and what steps are to be taken to recover from the outage. For example, does an outage mean a site is down, images are missing, content is missing, or content publishing is down and the customer cannot update site content? Depending on your customer you will get different responses. It is important to talk through the SLAs to better plan the architecture and educate the customer where appropriate.

Build, Stabilize, and Deploy Phases

Enterprise portal solution engagement activities for the Build, Stabilize, and Deploy phases often focus on the following:

- Branding
- Authoring and publishing
- Customization
- LOB integration
- Performance testing

Branding

Branding is the process of designing, building, and deploying the visual artifacts that create the complete end-user experience. Unique branding in terms of the user experiences is an expected feature of enterprise portal implementations.

During the implementation of an enterprise portals site with SharePoint Server 2010 or with a custom Microsoft® .NET application, a design team will usually work in parallel with the development team. However, these teams are not independent of one another. The design team will typically create wire frames, design mock ups, and (potentially) CSS and HTML to fit their design specifications. There are facets of the technical solution that the development team can work on, but there is often an initial requirement for the design deliverables to be handed off to the development team before any branding work can start. There is also a similar coordination required between branding, content creators, and

developers. Enterprise portal solutions often involve a number of teams with a number of dependencies, and a misstep by any one team will likely have an important and cascading impact throughout the project.

For more information about branding for enterprise portal solutions, see the MSDN article Real World Branding with SharePoint Server 2007 Publishing Sites (http://msdn.microsoft.com/en-us/library/ee354191.aspx) and the *Branding Guide* in the Web Content Management for SharePoint Server 2010 offering documentation.

Authoring and Publishing

Authoring is the process of creating and contributing content to a publishing site, editing that content, creating content pages, translating variations for multilingual sites, approving content through workflows, and editing the UI. Publishing is the process of deploying branding artifacts, content, custom assemblies, and configuration files across a SharePoint Server 2010 farm.

Publishing enables you to deploy content and branding artifacts from one environment to other (like from development to production) based on content approval and schedules. Content deployment topologies are typically presented with two or more server farms to separate the authoring environment from the production environment. However, there are many cases where content deployment or publishing may occur directly on the production servers.

For more information on authoring, see the *Authoring Guide* in the Web Content Management for SharePoint Server 2010 offering documentation.

For more information on publishing, see the *Publishing Guide* in the Web Content Management for SharePoint Server 2010 offering documentation.

For more information about business authoring and publishing for enterprise portals solutions, see the Microsoft TechNet article End-to-End Content Deployment (white paper) (http://technet.microsoft.com/en-us/library/cc627268.aspx).

Customization

Customization is any addition to, change to, or removal of the settings, content, and templates provided by SharePoint.

From a technical perspective, there are many important questions to consider for customization, such as:

- How much custom development is acceptable?
- How to package custom development (for example, using individual Windows® SharePoint® Services Solution Package (.wsp) files within a site definition)?
- How to automate solution deployments through scripts?
- What type of application lifecycle management technology will be used for the project?
- How will content be deployed?

The answers to these questions help gather and frame the solution requirements that present important implications to the overall project timeline and any associated risks for the project. For example, the approach used for content deployment has implications on custom feature deployment and update schedules.

For more information about customization, see the MSDN article SharePoint Products and Technologies Customization Best Practices (http://msdn.microsoft.com/en-us/library/bb861954.aspx).

LOB Integration

LOB integration is a typical requirement for enterprise portals solutions. LOB integration can include integration with external business applications for custom workflows, third-party content management systems, and any number of external systems that can be crawled by search. Additionally, LOB integration can include integration with partner systems in an extranet portal scenario. LOB was supported in Office SharePoint Server 2007 with Business Data Connectivity (BDC). An improved version of BDC (known as BCS) is available in SharePoint Server 2010. Information architecture, governance, and security are process dependencies that influence LOB integration architecture and development.

Performance Testing

Performance testing is a critical activity for enterprise portals solutions during the Build phase. Enterprise portal solutions are accessed by a large number of users internal and potentially external to the organization. Network bandwidth is also a challenge in geo-dispersed implementations. Performance testing of enterprise portals solutions should be performed to understand and gauge response times, number of requests per second, and resource utilization in the farm (in order to service the requests).

Performance testing should be conducted in an environment that is similar to the production environment. If an environment similar to the production environment is not available, then another clearly understood method to extrapolate such data from the test environment should be used. The data derived through extrapolation may not be accurate. However, in most instances it should help develop a baseline for the performance measurements. Performing several iterations of such testing will enable you to develop a more accurate method of extrapolation.

Post-Deployment (Operations) Phase

Enterprise portal solution engagement activities for the Post-deployment (Operations) phase often focus on the following:

- Governance
- Information architecture
- Capacity management
- Performance tuning
- Scalability management
- Monitoring

- Logging
- Auditing
- Analytics
- Configuration
- Search tuning

Upgrade Considerations

You can choose between two approaches when you upgrade from Office SharePoint Server 2007 to SharePoint Server 2010: an in-place upgrade and a database attach upgrade. An in-place upgrade is used to upgrade all SharePoint sites on the same hardware. A database attach upgrade enables you to move your content to a new farm or new hardware. You can also combine these two types of upgrade into hybrid approaches that reduce downtime during an upgrade.

For more information on upgrading, see the *Upgrading Enterprise Portals* guide in the Enterprise Portals for SharePoint Server 2010 offering documentation. For more information about upgrading, see the Microsoft TechNet article Upgrading to SharePoint Server 2010 (http://technet.microsoft.com/en-us/library/cc303420(office.14).aspx).

Note: The Platform Services for SharePoint Server 2010 service offering documentation also covers the upgrade process in detail.

New Enterprise Portals Capabilities

There are several new capabilities for enterprise portals in SharePoint Server 2010. Table 2 is a list of some of the new enterprise portals features for SharePoint Server 2010.

Table 2: New Enterprise Portals Capabilities

Capability	Description
Browser support	In intranet scenarios, browsers are typically controlled by the IT department. For extranet business sites, you cannot control the visitor's browser or their browser settings. The browser support in the SharePoint Server 2010 is much improved. For more information, see the Microsoft TechNet article Plan browser support (SharePoint Server 2010) (http://technet.microsoft.com/en-us/library/cc263526(office.14).aspx).
Standards and Accessibility	Like browser support, Standards and Accessibility are critical considerations for enterprise portals scenarios. SharePoint Server has made strides towards compliance with Web Content Accessibility Guidelines (WCAG), cross-browser support, and XHTML compliance.
Publishing reliability	Publishing improvements include: • Reliability fixes for variations. • Reliability fixes for content deployment. • New options for workflow development (including new capabilities in Microsoft® SharePoint® Designer 2010 and Microsoft® Visio® Professional 2010 and Microsoft® Visio® Standard 2010).
Platform enhancements	Host header site collections are now supported (including micro sites and vanity URL support).
Streaming in blob cache	Streaming videos are now supported due to improvements in the blob cache.
User solutions	There is now the ability to build and deploy sandboxed solutions. IT Pros can throttle and otherwise minimize the impact of custom controls on a SharePoint Server 2010 farm.
Large lists	Indexing on large lists is now available, including support for lists much larger than Office SharePoint Server 2007 supports.
New and improved Controls	New controls for tag clouds and ratings have been created and significant improvements for the Content Query Web Part have been made.

Capability	Description
Managed metadata fields	Improvements have been made to: • Tagging • Metadata • Term sets
Search enhancements	SharePoint Server 2010 supports larger data sets, and the addition of Microsoft® FAST™ Search Server 2010 for SharePoint® introduces new capabilities to the platform.
Branding and theming	• Theming has been completely redesigned and is now easier to use. • Refactoring of CSS into multiple files is now available so you can choose what to download. • Master page changes also apply to the **_layouts** directory. • Microsoft® Silverlight Web Parts allow users to quickly add Silverlight applications to SharePoint Server 2010.
Insight	Improvements for traffic analysis and reporting (as well as health monitoring) have been made. This includes new reports and alerts for Web analytics.
Service application architecture	An extensible framework to implement load-balanced topologies as well as supporting custom service applications has been added.
Claims-based identity	Single Sign-on (SSO) is easier to do. For more information on authentication, see the *Authentication Guide* in the Enterprise Portals for SharePoint Server 2010 offering documentation
Client object model	Access to the SharePoint Server 2010 object model has been simplified.
Multilingual capabilities	Multilingual capabilities in SharePoint 2010 support multiple languages through language packs. Sites now support alternative languages, and end users can switch the desired language through the **Site Actions** menu.
Variations	Variations has been re-architected in SharePoint Server 2010. Variations is now more reliable and provides better status reporting. Variations processing has been moved out of band to timer jobs to reduce timeouts and overloading of server resources.

Capability	Description
BCS	BCS is a SharePoint Server 2010 platform capability that provides a mechanism to integrate data residing in external applications (like Enterprise Resource Planning (ERP) or database systems) into an enterprise portal or other SharePoint application to provide richer collaboration experiences.

For more information about new content management features, see the MSDN article What's New: Enterprise Content Management (ECM) (http://msdn.microsoft.com/en-us/library/ee559353(office.14).aspx).

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