

Developing for SharePoint 2010

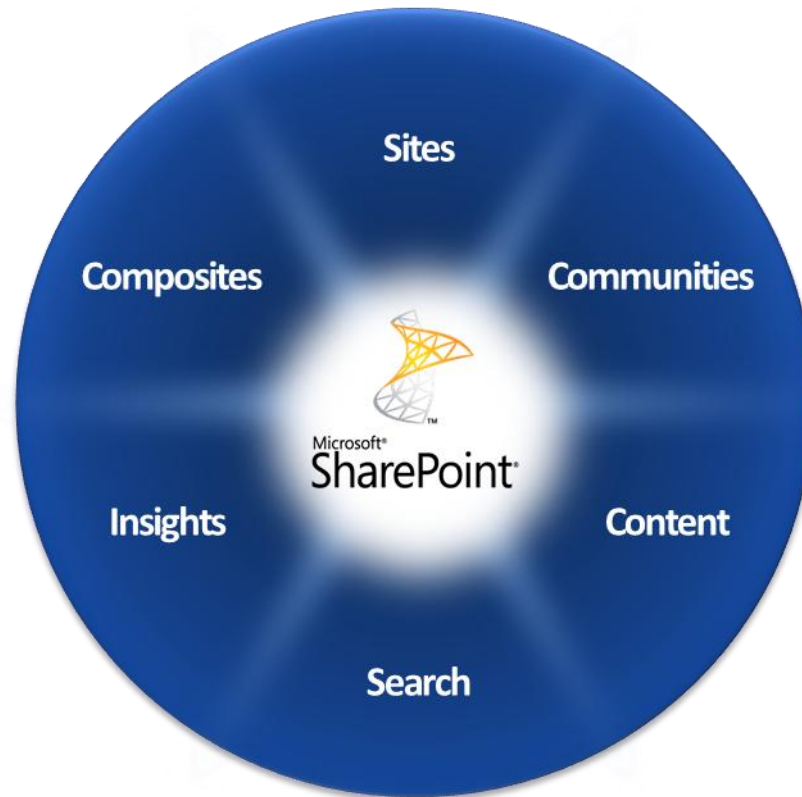
Regina Technology Community

May 2011

Agenda

- What is SharePoint?
- Why SharePoint?
- SharePoint architecture
- Object model
- Hardware setup
- Deployment
- Web Parts
- Event Receivers
- Workflows

What is SharePoint?

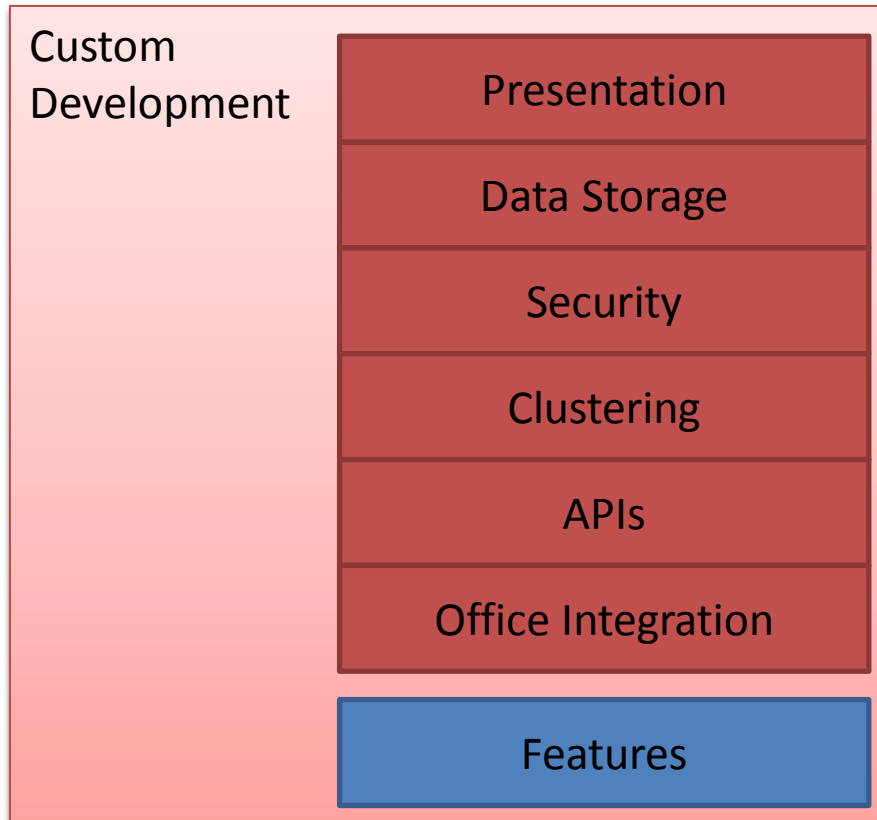


But *what is* SharePoint?

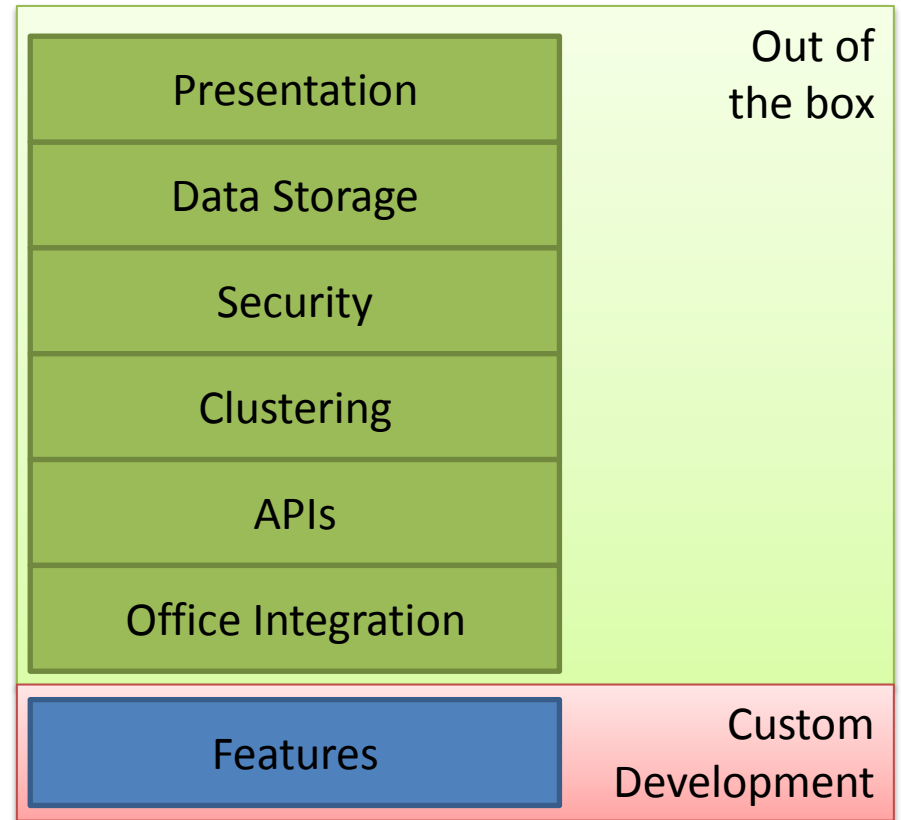
- .Net web application
- Application Platform

Why SharePoint?

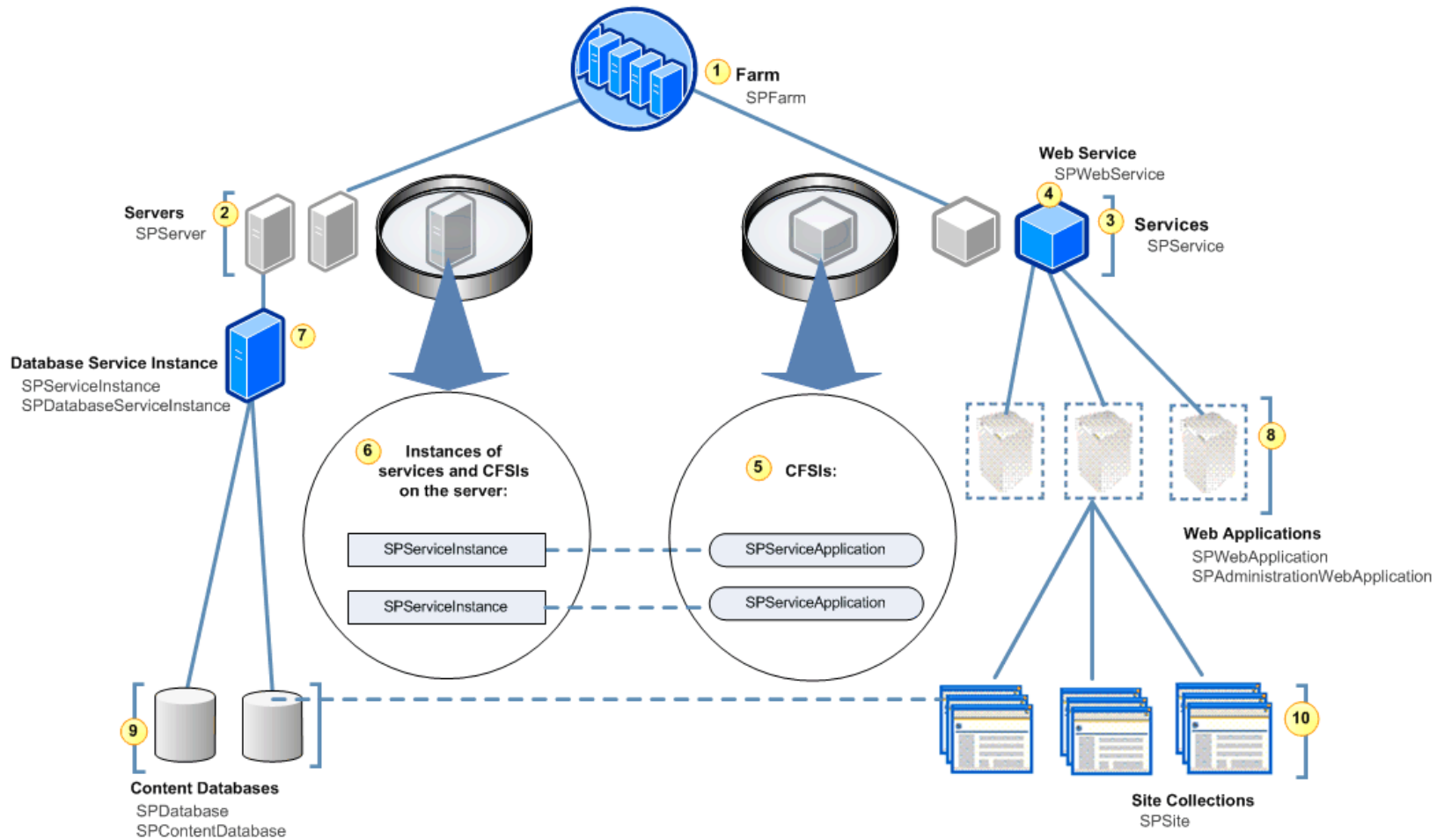
.Net



SharePoint



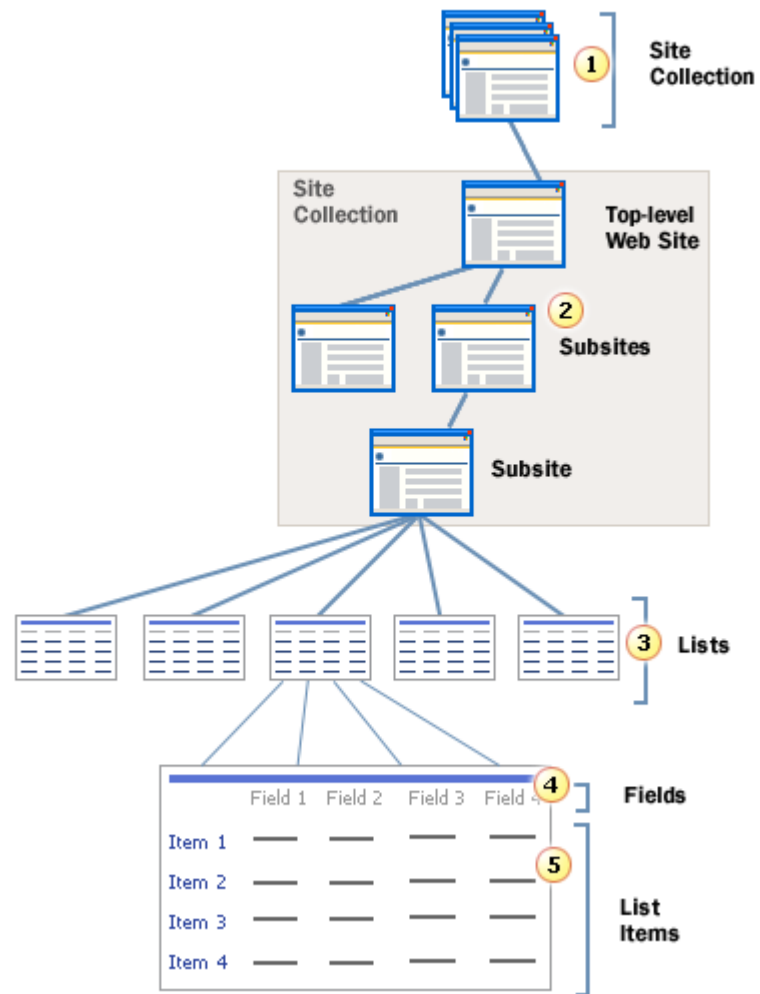
SharePoint Server and Site Architecture



Site Architecture and Object Model Overview

Site Architecture

1. SPSite
2. SPWeb
3. SPList
 - SPDocumentLibrary
4. SPField
5. SPListItem



SharePoint Object Models

- Server Object Model
 - Microsoft.SharePoint namespace
- Client Object Model
 - Microsoft.SharePoint.Client namespace (.Net)
 - SP namespace (ECMAScript)

Comparison of Object Models

Server	.NET / Silverlight	ECMAScript
Microsoft.SharePoint.SPContext	Microsoft.SharePoint.Client. ClientContext	SP.ClientContext
Microsoft.SharePoint.SPSite	Microsoft.SharePoint.Client.Site	SP.Site
Microsoft.SharePoint.SPWeb	Microsoft.SharePoint.Client.Web	SP.Web
Microsoft.SharePoint.SPList	Microsoft.SharePoint.Client.List	SP.List
Microsoft.SharePoint.SPListItem	Microsoft.SharePoint.Client.ListItem	SP.ListItem
Microsoft.SharePoint.SPField (including major derived classes)	Microsoft.SharePoint.Client.Field	SP.Field
Microsoft.SharePoint.WebPartPages. SPLimitedWebPartManager	Microsoft.SharePoint.Client. WebParts.LimitedWebPartManager	SP.WebParts. LimitedWebPartManager

Development Setup - Hardware

- Only supports 64-bit architecture
- Quad core processor
- 4 GB RAM
- 80 GB for the system drive

Development Setup - Software

- Operating system
 - Windows Server 2008 R2
 - Windows Server 2008 Service Pack 2
 - Windows 7 (non-production)
 - Windows Vista Service Pack 2 (non-production)
- Visual Studio 2010
- SharePoint Designer 2010

Deploying solutions

- Deployment to localhost - F5
- Deployment to server – WSP file
 - Copy file to server and install with STSADM.EXE or PowerShell

Features

- Modules or “chunks of code”
- Pluggable: can activate or deactivate at a given scope
- Can be activated/deactivated by
 - PowerShell, object model, STSADM.exe, User Interface

Web Parts

- ASP.NET Web Parts
- SharePoint-based Web Parts

Web Parts

- Standard Web Parts
- Visual Web Parts

Web Parts Demo

Break

Event receivers

- Event receivers contain event handlers
- Allows you to execute code before/after certain actions take place
 - ItemAdding, ItemAdded
 - FieldUpdating, FieldUpdated
 - SiteDeleting, SiteDeleted
- Synchronous (before)
- Asynchronous (after)

Understanding before and after

Before

- Cancelling an event
- Validating input/data

After

- Changing the properties of an object
- Notifying of success/failure

Event receivers: Lists

Before

- FieldAdding
- FieldDeleting
- FieldUpdating
- ListAdding
- ListDeleting

After

- FieldAdded
- FieldDeleted
- FieldUpdated
- ListAdded
- ListDeleted

Event receivers: List Items

Before

- ItemAdding
- ItemDeleting
- ItemUpdating
- ItemAttachmentAdding
- ItemAttachmentDeleting
- ItemCheckingIn
- ItemCheckingOut
- ItemUncheckingOut
- ItemFileMoving
- -

After

- ItemAdded
- ItemDeleted
- ItemUpdated
- ItemAttachmentAdded
- ItemAttachmentDeleted
- ItemCheckedIn
- ItemCheckedOut
- ItemUncheckedOut
- ItemFileMoved
- ItemFileConverted

Event receivers: List e-mails

Before

- -

After

- EmailReceived

Event receivers: List workflows

Before

- WorkflowStarting
- -

After

- WorkflowStarted
- WorkflowCompleted

Event receivers: Webs

Before

- SiteDeleting
- WebDeleting
- WebMoving
- WebAdding

After

- SiteDeleted
- WebDeleted
- WebMoved
- WebProvisioned

Event receivers: Features

Before

- -
- FeatureDeactivating
- -
- FeatureUninstalling
- FeatureUpgrading

After

- FeatureActivated
- -
- FeatureInstalled
- -
- -

Event receiver demo

Workflows

- Built on Windows Workflow Foundation 3.5
- Can create workflows with
 - Visio 2010
 - SharePoint Designer 2010
 - Visual Studio 2010
- Can attach workflows to
 - List / Libraries
 - Web sites

Workflows Demo

Wrap up

- Questions?
- Training
 - Microsoft SharePoint 2010, Application Development (10175)
 - Designing and Developing Microsoft SharePoint 2010 Applications (10232)
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