# Lab 12: Using Features to Provision Sites

#### Objectives

After completing this lab, you will be able to:

* Create a new Content Type as a new Feature
* Create and Provision a custom document library
* Create custom Actions to an existing list
* Apply the appropriate scope to a feature

#### Prerequisites

Before working on this lab, you must have:

* Labs 1 and 2 fully completed

#### Scenario

The objective of this lab is to gain an understanding of the new Features framework in Windows SharePoint Services 3.0 through an overview of the concepts and a walkthrough of several examples. The first exercise will walk you through the creation and provisioning of a custom document type. The second exercise walks through the elements of the custom document library related to Content Types. Finally, in the third exercise you will walk through associating Custom Actions to an existing Announcements list. These functionalities illustrated in this lab were either very difficult to do with custom lists or not possible at all in previous SharePoint version.

##### Estimated time to complete this lab: 75 minutes

### Exercise 1 Review the different elements that compose the HOLContentType Feature

In this exercise you will learn about different components of the custom HOLContentType feature. This feature creates a new Content Type called “**HOL Document**” based on the out-of-the-box “Document” Content Type and is categorized in a new “**Content Type Group**” called “HOL Content Type”.

1. Login as the Administrator
2. Open “**C:\HOL\Features\HOLContentType**” directory using Windows Explorer and browse the files included in this feature.
3. Open the “**feature.xml**” file and notice that the “feature” has a unique id and it has been scoped to a “Site”. The “Site” scope actually refers to the “Site Collection” of your installation. A “Web’ is a single site of that Site Collection! Another important section to notice is the “ElementManifests” element. It points to another file. The **HOLLibrary.xml** file. The “feature.xml” file content of the HOLContentType feature is listed below.

**Note:** A “content type” feature element needs to have a scope of “Site”.

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?>  <!-- \_lcid="1033" \_version="12.0.0.4407" \_dal="1" -->  <!-- \_LocalBinding -->  < Feature **Id**="**983BCDE5-77A3-4aae-9F16-CD94BE238EF4**"  Title="HOL Libraries"  Description="This feature provides support for a new Content Type called HOL Document."  Version="1.0.0.0"  **Scope**="Site"  xmlns="http://schemas.microsoft.com/sharepoint/">  <ElementManifests>  **<ElementManifest** Location="HOLDocContentType\HOLContentType.xml" />  </ElementManifests>  </Feature> |

### Exercise 2 Package and Review a Content Type Feature

Content Type instances are based on an existing content type template. A content type template can also be based on another content type template, retaining references to them that define that parent-child relationship. Because of this, you can create an entire Content Type hierarchy, where general Content Types serve as the parent of more specific Content Types. In fact, Windows SharePoint Services 3.0 and Microsoft Office SharePoint Server 2007 (MOSS 2007) installs with such a template hierarchy already included. Windows SharePoint Services 3.0 also contains mechanisms for you to manage your Content Type groups and hierarchies, and enables you (if so desired) to propagate changes made to the parent to the child templates and instances as well.

**Note:** For more detailed information on Content Types, please see the dedicated lab on this topic – Lab 7.

In this exercise we will walkthrough the Content Type elements of the HOL Document Content Type feature covered in Exercise 1.

1. Browse the “**C:\HOL\Features\HOLContentType\HOLdocContentType**” directory and open the “**HOLContentType.xml**” file included in this feature.

The “**HOLContentType.xml**” file content is listed below:

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?>  <!-- \_lcid="1033" \_version="12.0.0.4407" \_dal="1" -->  <!-- \_LocalBinding -->  <Elements xmlns="http://schemas.microsoft.com/sharepoint/">  <ContentType ID="**0x0101003D4F44E24FEF44BB93A8230B0E555023**"  Name="HOL Document"  Group="HOL Content Types"  Description="This is a document created at HOL."  Version="0">  <FieldRefs>  </FieldRefs>  </ContentType>  </Elements> |

### Exercise 3 Install the HOLContentType Feature

In this exercise you will install the HOLContentType feature.

1. **Login** as the Administrator
2. **Open** an “Office 12 Command Prompt” by double-clicking the shortcut found on the desktop.
3. Navigate to the Feature directory by issuing the following command “**cd \HOL\Features**”.
4. Copy the feature to the server’s feature folder with the following command: “**xcopy HOLContentType "C:\Program Files\Common Files\Microsoft Shared\web server extensions\12\TEMPLATE\FEATURES\HOLContentType\" /s /y**”
5. Install the feature to the server with the following command: “**stsadm -o installfeature -filename HOLContentType\feature.xml**”
6. Activate the feature for the Feature team site with the following command: “**stsadm -o activatefeature -filename HOLContentType\feature.xml -url** [**http://hol.litwareinc.com**](http://hol.litwareinc.com)”

**Note:** Due to the fact that “Content Types” have “Site” as scope, the top level site URL is entered.

1. The “**HOLContentType**” Feature has been successfully installed. To verify this installation, verify that the “**HOL Content Types**” group exist and list the “**HOL Document**” Content Type by launching IE, clicking “**Home**”, “**Site Actions**”, “**Site Settings**”, “**Modify All Site Settings**”, “**Site Content Types**” under the Galleries section.

### Exercise 4 Review the different elements that compose the HOLLibrary Feature

In this exercise you will learn about different components of the HOLLibrary feature. The HOLLibrary feature will be the next feature you will install and it will be installed on a new site you will create.

* Create the HOL Feature site first

1. **As an Administrator**, create a Team Site called “**HOL Feature**” located under the sitedirectory site. To do this, launch IE, click “**Sites**” in the top navigation, click “**Create Site**”, enter “**HOL Feature**” in the Title and “**HOLFeature**” in the URL name, and then select the “**Team Site**” template.
2. Click “**Create**”.
3. Open the “**C:\HOL\Features\HOLLibrary**” directory with Windows Explorer and browse the files included in this feature.
4. Open the “**feature.xml**” file and notice that the “feature” has a unique id and it has been scoped to a “web”. Another important section to notice is the “ElementManifests” element. It points to another file. The **HOLLibrary.xml** file. The “**feature.xml**” file content is listed below:

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?>  <!-- \_lcid="1033" \_version="12.0.0.4407" \_dal="1" -->  <!-- \_LocalBinding -->  <Feature **Id="35D10E49-31A2-4353-BD26-E44471968F03"**  Title="HOL Libraries"  Description="This feature provides support for HOL libraries."  Version="1.0.0.0"  **Scope="Web"**  xmlns="http://schemas.microsoft.com/sharepoint/">  <ElementManifests>  **<ElementManifest Location="ListTemplates\HOLLibrary.xml" />**  </ElementManifests>  </Feature> |

1. Open and examine the HOLLibrary.xml file. Its content is listed below:

* Notice that the ListTemplate name attribute is hollib which corresponds to the **HOLLib** subdirectory and the files in it. Also, notice that we have provisioned an instance of our library via the ListInstance tag at the Url **HOLDocs**.

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?>  <!-- \_lcid="1033" \_version="12.0.0.4407" \_dal="1" -->  <!-- \_LocalBinding -->  <Elements xmlns="http://schemas.microsoft.com/sharepoint/">  <ListTemplate  **Name**="**hollib**"  Type="1500"  BaseType="1"  OnQuickLaunch="TRUE"  SecurityBits="11"  DisplayName="HOL Library"  Description="This library contains docs created at HOL."  Image="/\_layouts/images/itdl.gif"  DocumentTemplate="101"/>  <ListInstance  Id="HOLLibrary"  Title="HOL Library"  Description="HOL Library"  TemplateType="1500"  **Url**="**HOLDocs**"/>  </Elements> |

1. Open the “**C:\HOL\Features\HOLLibrary\HOLLib\schema.xml**” file. The “**schema.xml**” file content is listed below:

* Notice the **ContentTypes** section. Content types provide a means to manage the metadata and behavior of SharePoint list items, making it possible to store different types of content within the same library or list.

|  |
| --- |
| <?xml version="1.0" encoding="utf-8"?>  <!-- \_lcid="1033" \_version="12.0.0.4407" \_dal="1" -->  <!-- \_LocalBinding -->  <List xmlns:ows="Microsoft SharePoint"  Name="HOLLibrary"  Title="HOL Library"  Direction="LTR"  Url="Shared HOL Documents"  BaseType="1"  EnableContentTypes="TRUE">  <MetaData>  <ContentTypes>  <**ContentTypeRef ID="0x0101"**>  <Folder TargetName="Forms/Document" />  </ContentTypeRef>  <**ContentTypeRef ID="0x0101003D4F44E24FEF44BB93A8230B0E555023"** />  <**ContentTypeRef ID="0x0120"** />  </ContentTypes>  <Fields>  <Field ID="{fa564e0f-0c70-4ab9-b863-0177e6ddd247}" Type="Text" Name="Title" ShowInNewForm="FALSE" ShowInFileDlg="FALSE" DisplayName="Title" Sealed="TRUE" SourceID="http://schemas.microsoft.com/sharepoint/v3" StaticName="Title">  </Field>  </Fields>  ... Omitted for brevity ... </List> |

* **Notice** ContentTypeRef ID="0x0101" that maps to the standard document content type associated with Document Libraries. The Content Type inheritance hierarchy is actually defined in the ID field. As such, this Content Type inherits from ContentTypeRef ID="0x01" the base Item content type which inherits from ContentTypeRef ID="0x" the System base content type.
* This file also contains the Folder Content Type definition found at ContentTypeRef ID="0x0120".

1. To best understand how the ID attribute maps to the specific Content Type, **open** the “**ctypeswss.xml**” file located at “**C:\Program Files\Common Files\Microsoft Shared\web server extensions\12\TEMPLATE\FEATURES\ctypes\ctypeswss.xml**”. The contents related to content types are shown below.

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?>  <!--  -->  <Elements xmlns="http://schemas.microsoft.com/sharepoint/">  <**ContentType ID="0x"**  Name="$Resources:System"  Group="\_Hidden"  Sealed="TRUE"  Version="0">  <FieldRefs>  <FieldRef ID="{c042a256-787d-4a6f-8a8a-cf6ab767f12d}" Name="ContentType"/>  </FieldRefs>  </ContentType>  <**ContentType ID="0x01"**  Name="$Resources:Item"  Group="$Resources:List\_Content\_Types"  Description="$Resources:ItemCTDesc"  Version="0">  <FieldRefs>  <FieldRef ID="{fa564e0f-0c70-4ab9-b863-0177e6ddd247}" Name="Title" Required="TRUE" ShowInNewForm="TRUE" ShowInEditForm="TRUE"/> <!-- Title -->  </FieldRefs>  <XmlDocuments>  <XmlDocument NamespaceURI="http://schemas.microsoft.com/sharepoint/v3/contenttype/forms">  <FormTemplates xmlns="http://schemas.microsoft.com/sharepoint/v3/contenttype/forms">  <Display>ListForm</Display>  <Edit>ListForm</Edit>  <New>ListForm</New>  </FormTemplates>  </XmlDocument>  </XmlDocuments>  </ContentType>  <**ContentType ID="0x0101"**  Name="$Resources:Document"  Group="$Resources:Document\_Content\_Types"  Description="$Resources:DocumentCTDesc"  V2ListTemplateName="doclib"  Version="0">  <FieldRefs>  <RemoveFieldRef ID="{67df98f4-9dec-48ff-a553-29bece9c5bf4}" Name="Attachments" /> <!-- Attachments -->  <RemoveFieldRef ID="{f1e020bc-ba26-443f-bf2f-b68715017bbc}" Name="WorkflowVersion" /> <!-- WorkflowVersion -->  <RemoveFieldRef ID="{bc91a437-52e7-49e1-8c4e-4698904b2b6d}" Name="LinkTitleNoMenu" /> <!-- LinkTitleNoMenu -->  <RemoveFieldRef ID="{82642ec8-ef9b-478f-acf9-31f7d45fbc31}" Name="LinkTitle" /> <!-- LinkTitle -->  <RemoveFieldRef ID="{ae069f25-3ac2-4256-b9c3-15dbc15da0e0}" Name="GUID" /> <!-- GUID -->  <RemoveFieldRef ID="{de8beacf-5505-47cd-80a6-aa44e7ffe2f4}" Name="WorkflowInstanceID" /> <!-- WorkflowInstanceID -->  <FieldRef ID="{5f47e085-2150-41dc-b661-442f3027f552}" Name="SelectFilename" /> <!-- SelectFilename -->  <FieldRef ID="{8553196d-ec8d-4564-9861-3dbe931050c8}" Name="FileLeafRef" Required="TRUE"/> <!-- FileLeafRef -->  <FieldRef ID="{8c06beca-0777-48f7-91c7-6da68bc07b69}" Name="Created" Hidden="TRUE" /> <!-- Created -->  <FieldRef ID="{fa564e0f-0c70-4ab9-b863-0177e6ddd247}" Name="Title" Required="FALSE" ShowInNewForm="FALSE" ShowInEditForm="TRUE"/> <!-- Title -->  <!-- TODO: The old display name was: 'DisplayName="Created Date">\_\_LDisp(camlionet37)' We may need to special case this for back compat -->  <FieldRef ID="{28cf69c5-fa48-462a-b5cd-27b6f9d2bd5f}" Name="Modified" Hidden="TRUE" /> <!-- Modified -->  <!-- TODO: The old display name was: 'DisplayName="Last Modified">\_\_LDisp(camlionet36)' We may need to special case this for back compat -->  <FieldRef ID="{28cf69c5-fa48-462a-b5cd-27b6f9d2bd5f}" Name="Modified" Hidden="TRUE" /> <!-- Modified -->  <!-- TODO hailiu: The old display name was: 'DisplayName="$Resources:core,Last\_Modified;">\_\_LDisp(camlionet36)' We may need to special case this for back compat -->  <FieldRef ID="{822c78e3-1ea9-4943-b449-57863ad33ca9}" Name="Modified\_x0020\_By" Hidden="FALSE"/> <!-- Modified\_x0020\_By -->  <FieldRef ID="{4dd7e525-8d6b-4cb4-9d3e-44ee25f973eb}" Name="Created\_x0020\_By" Hidden="FALSE" /> <!-- Created\_x0020\_By -->  </FieldRefs>  <XmlDocuments>  <XmlDocument NamespaceURI="http://schemas.microsoft.com/sharepoint/v3/contenttype/forms">  <FormTemplates xmlns="http://schemas.microsoft.com/sharepoint/v3/contenttype/forms">  <Display>DocumentLibraryForm</Display>  <Edit>DocumentLibraryForm</Edit>  <New>DocumentLibraryForm</New>  </FormTemplates>  </XmlDocument>  </XmlDocuments>  </ContentType>  ... Omitted for brevity ...  <**ContentType ID="0x0120"**  Name="$Resources:Folder"  Group="$Resources:Folder\_Content\_Types"  Description="$Resources:FolderCTDesc"  Sealed="TRUE"  Version="0">  <FieldRefs>  <FieldRef ID="{fa564e0f-0c70-4ab9-b863-0177e6ddd247}" Name="Title" Required="FALSE" Hidden="TRUE"/> <!-- Title -->  <FieldRef ID="{8553196d-ec8d-4564-9861-3dbe931050c8}" Name="FileLeafRef" Hidden="FALSE"/> <!-- FileLeafRef -->  </FieldRefs>  </ContentType>  ... Omitted for brevity ...  </Elements> |

### Exercise 5 Check the state of the HOL Feature site prior to installing the new Library Feature

In this exercise you will check the current state of the HOL Feature sire you created in exercise 4. You will notice that their will be only one Document Library (Shared Documents) currently available.

1. Launch IE and navigate to the HOL Feature site located at “**http://hol.litwareinc.com/sitedirectory/HOL Feature**”.
2. Click on “**View All Site Content**” located on the top left navigation element and **notice the site** has only one Shared Documents library under the Document Libraries section.
3. Keep your web browser on this page.

### Exercise 6 Install the HOLLibrary feature

In this exercise you will create and install a new feature (HOLLibrary) which will create the HOL Library document library. This library is a simple reuse of the standard Document Library (via copy-paste-rename) installed with Windows SharePoint Services 3.0. Using the functionality of Features, we will create an instance of a Document Library and a Content Type of “**HOL Document**” which will then be included in the root of the site on which we activate our feature on.

* Install the feature

1. Open an “Office 12 Command Prompt”, if not already opened, by double-clicking the shortcut found on the desktop.
2. Navigate to the Feature directory by issuing the following command “**cd \HOL\Features**” if not already there.
3. Copy the HOLLibrary feature to the server with the following command: “**xcopy HOLLibrary "C:\Program Files\Common Files\Microsoft Shared\web server extensions\12\TEMPLATE\FEATURES\HOLLibrary\" /s /y**”
4. Install the feature to the server with the following command: “**stsadm -o installfeature -filename HOLLibrary\feature.xml**”
5. Activate the feature for the Feature team site with the following command: “**stsadm -o activatefeature -filename HOLLibrary\feature.xml -url http://hol.litwareinc.com/SiteDirectory/HOLFeature**”
6. The HOL Library Feature has been successfully installed. To verify this, refresh the All Content page of the “**HOL Feature**” site. Click on the “**HOL Library**” document library and then click the **down arrow** beside **New**. You should have a new document type called “**HOL Document**”.

### Exercise 7 Review the different elements that compose the HOLSimpleFormToolBar Feature

In this exercise we will review a feature that installs “Custom Actions” for the standard Announcements list that navigates to a custom web part page also installed by this feature.

* Review the Feature

1. Open “**C:\HOL\Features\HOLSimpleFormToolbar**” directory and review the files included in this feature.
2. Open “**C:\HOL\Features\HOLSimpleFormToolbar\feature.xml**”. The “feature.xml” file content is listed below:
3. **Notice** the ElementManifest that points to the next important files for parsing elements.xml and ElementFile. The ElementFile points to our custom web part page sampleurl.aspx.

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?>  <!-- \_lcid="1033" \_version="12.0.0.4407" \_dal="1" -->  <!-- \_LocalBinding -->  <Feature Id="72A67618-42FA-4dbb-A6F8-566EF1393F18"  Title="New Simple Form ToolBar Button"  Scope="Web"  xmlns="http://schemas.microsoft.com/sharepoint/">  <ElementManifests>  <**ElementManifest** Location="**elements.xml**" />  <**ElementFile** Location="**sampleurl.aspx**" />  </ElementManifests>  </Feature> |

1. Open “**C:\HOL\Features\HOLSimpleFormToolbar\elements.xml**”. The contents are shown below.

**Notice** the CustomAction tags that create two toolbar buttons and an admin page link that point to our custom page sampleurl.aspx. Additionally, notice that the Module section is used to provision our custom web part page at the root of the site.

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?>  <!-- \_lcid="1033" \_version="12.0.0.4407" \_dal="1" -->  <!-- \_LocalBinding -->  <Elements xmlns="http://schemas.microsoft.com/sharepoint/">  <**CustomAction** Title="Simple (Display)"  Id="Simple Toolbar (Display)"  Sequence="100"  RegistrationType="List"  RegistrationId="104"  Location="DisplayFormToolbar">  <UrlAction Url="**sampleurl.aspx?id={ItemId}**" />  </CustomAction>  <**CustomAction** Title="Simple (Edit)"  Id="Simple Toolbar (Edit)"  Sequence="110"  RegistrationType="List"  RegistrationId="104"  Location="EditFormToolbar">  <UrlAction Url="**sampleurl.aspx**" />  </CustomAction>  <**CustomAction** Title="Simple Page"  Id="Simple Settings Page"  Sequence="50"  GroupId="SiteAdministration"  Location="Microsoft.SharePoint.SiteSettings"  Rights="ManageLists">  <UrlAction Url="**sampleurl.aspx**" />  </CustomAction>  <**Module** Name="SamplePage" Url="" Path="">  <File Url="**sampleurl.aspx**" />  </Module>  </Elements> |

1. Open “**C:\HOL\Features\HOLSimpleFormToolbar\sampleurl.aspx**”. The “samplerurl.aspx” file content is listed below:

**Notice** that the <script> block which simply renders our Announcements list in a list box. Additionally, notice the asp:Content tags that are used to layout our page utilizing the ASP.NET 2.0 Master Pages functionality.

|  |
| --- |
| <%@ Page language="C#" MasterPageFile="~masterurl/default.master" Inherits="Microsoft.SharePoint.WebPartPages.WebPartPage,Microsoft.SharePoint,Version=12.0.0.0,Culture=neutral,PublicKeyToken=71e9bce111e9429c" %>  <%@ Register Tagprefix="SharePoint" Namespace="Microsoft.SharePoint.WebControls" Assembly="Microsoft.SharePoint, Version=12.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c" %>  <%@ Register Tagprefix="Utilities" Namespace="Microsoft.SharePoint.Utilities" Assembly="Microsoft.SharePoint, Version=12.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c" %>  <%@ Import Namespace="Microsoft.SharePoint" %>  <asp:Content ContentPlaceHolderId="PlaceHolderPageTitle" runat="server"></asp:Content>  <asp:Content ContentPlaceHolderId="PlaceHolderAdditionalPageHead" runat="server"></asp:Content>  <asp:Content ContentPlaceHolderId="PlaceHolderPageImage" runat="server"></asp:Content>  <asp:Content ContentPlaceHolderId="PlaceHolderPageTitleInTitleArea" runat="server">  Announcements List via Code  </asp:Content>  <asp:Content ContentPlaceHolderId="PlaceHolderPageDescription" runat="server"></asp:Content>  <asp:Content ContentPlaceHolderId="PlaceHolderMain" runat="server">  <asp:ListBox ID="AnnouncementsList" runat="server" />  <script language="C#" runat=server>  protected override void OnLoad(EventArgs e)  {  if (!this.IsPostBack)  {  // Get the announcements list  SPWeb web = SPContext.GetContext(this.Context).Web;  SPList list = web.GetListFromUrl("Lists/Announcements/AllItems.aspx");  // populate the list box with values from it  SPDataSource dataSource = new SPDataSource();  dataSource.List = list;  this.AnnouncementsList.DataSource = dataSource;  this.AnnouncementsList.DataTextField = "Title";  this.AnnouncementsList.DataValueField = "Title";  this.AnnouncementsList.DataBind();  }  base.OnLoad(e);  }  </script>  </asp:Content> |

### Exercise 8 Install the HOLSimpleFormToolBar feature

In this exercise you will install the HOLSimpleFormToolBar feature. This feature adds a button at three different locations a) on the announcement itself b) the “Announcement” list and c) in the “Site Administration” section.

* Install the HOLSimpleFormToolBar feature

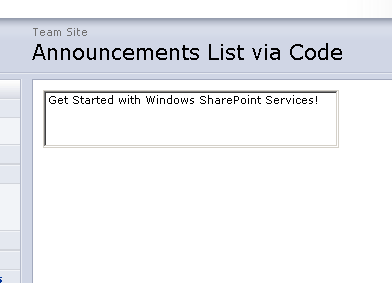
1. **Open** an “Office 12 Command Prompt”, if not already opened, by double-clicking the shortcut found on the desktop.
2. **Navigate** to the Feature directory by issuing the following command “**cd \HOL\Features**”
3. **Copy** the HOLLibrary feature to the server with the following command: “**xcopy HOLSimpleFormToolBar "C:\Program Files\Common Files\Microsoft Shared\web server extensions\12\TEMPLATE\FEATURES\HOLSimpleFormToolBar\" /s /y**”
4. **Install** the feature to the server with the following command: “**stsadm -o installfeature -filename HOLSimpleFormToolBar\feature.xml**”
5. **Activate** the feature for the Feature team site with the following command: “**stsadm -o activatefeature -filename HOLSimpleFormToolBar\feature.xml -url http://hol.litwareinc.com/siteDirectory/HOLFeature**”
6. The HOLSimpleFormToolBar Feature has been successfully installed. To verify this installation, Open IE and **navigate** to the “**HOL Feature**” site at “**http://hol.litwareinc.com/sitedirectory/HOLFeature**” and click the “Get Started with Windows SharePoint Services!” link under Announcements



1. Note the Simple (Display) button on the toolbar. Click the “**Simple(Display)**” link



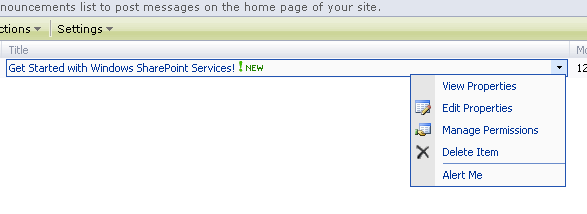
**Notice** that you are taken to the sample page included in your HOLSimpleFormToolBar feature. This page displays all the announcements in the site in a multi-select form field.



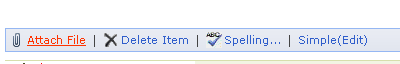
1. **Return** to the “**HOL Feature**” site home page.
2. **Click** on the “**Annoucements**” link



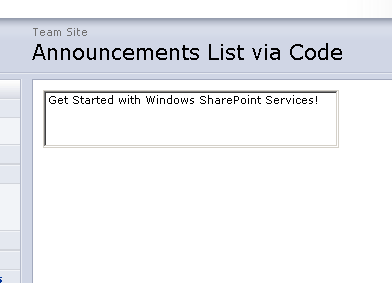
1. **Mouse over** the accouncement and **click** the down arrow and select “**Edit Item**” from the “Get Started with Windows SharePoint Services!” action menu.



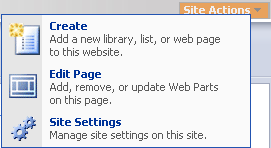
1. **Notice** the Simple (Edit) button on the toolbar. Click that link.



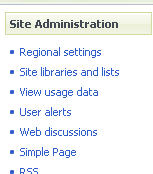
Note that you are again taken to the same sample page included in our feature.



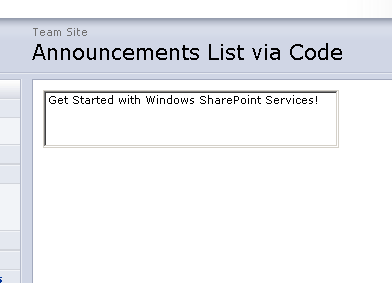
1. Return to the “**HOL Feature**” site home page.
2. Go to the site settings page by clicking on “**Site Settings**” from the “**Site Actions**” menu.



1. Notice the “**Simple Page**” link in the “**Site Administration**” section. Click that link



1. You are again taken to the same sample page included in our feature.



1. Return to the “**HOL Feature**” site home page.

You have now installed and tested three powerful customizations addressing specific needs of site Administrators and content contributors.

### Exercise 9 Deactivate a Feature

In this exercise you will deactivate (remove) the toolbar buttons and Site Administration option.

* Deactivate feature

1. Open an “Office 12 Command Prompt”, if not already opened, by double-clicking the shortcut found on the desktop.
2. Navigate to the Feature directory by issuing the following command “**cd \HOL\Features**”

You do not need to uninstall the feature for it to no longer be avaialble to the site. The deactivatefeature command remove all components of the feature. Issue the following command and check if the buttons and option under the Site Administration are still available. They should not be!

1. **Deactivate the feature** for the HOLFeature team site with the following command: “**stsadm -o deactivatefeature -filename HOLSimpleFormToolBar\feature.xml -url** [**http://hol.litwareinc.com/siteDirectory/HOLFeature**](http://hol.litwareinc.com/siteDirectory/HOLFeature)”
2. **Verify** that all buttons are no longer available and that the Site Administration “**Simple Page**” was removed.

Lab Completed!