



## **Setup/Configuration Document**

Insurance Agent Portal, "Pomegranate"

This document describes how to setup and configure the exemplar code-named "Pomegranate". This application is a SharePoint (ASP.Net) web portal for use by Insurance Agents to manage customer's policies and claims.

**Todd Snyder**  
**11/07/2008**

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## Introduction

This document defines the steps required to setup and configure the Pomegranate Exemplar to run under SharePoint. It is not attend to be an in-depth overview of how to deploy and configure SharePoint. See the [Microsoft TechNet Center for SharePoint](#) for additional details on setting up and configuring SharePoint.

One of the biggest challenges with working with SharePoint is finding good guidance on how to properly configure and deploy a custom solution. In this document we have chosen to go over each step required to setup the exemplar. For a “real world” production solution you should use SharePoint solution files and/or a custom MSI files instead of the manual steps outlined in this document.

Using SharePoint Solution Files:

- [Introduction on how to use SharePoint solution files](#)
- [MSDN help for SharePoint solution files](#)

## SharePoint Configuration

One of the critical first decision you need to make when building a SharePoint solution is to decide if you are going to use Windows Share Point Services (WSS) or Microsoft Office SharePoint Server (MOSS). WSS is a free add-on to Windows 2003/2008 and is web applications framework. While, MOSS is a full blown enterprise platform that includes advanced features for content management, search, and form based solutions.

To minimize the effort associated with consuming the exemplar we have limited the focus of the exemplar to only features available in WSS 3.0. Because MOSS is built on top of WSS you will have no problem running the exemplar on MOSS if that is your preference.

## Deployment Model

One of the key decisions with working with SharePoint is determine the proper server topology for the production environment. For the exemplar’s online host (<http://sharepoint.infragistics.com>) we have chosen to go with a single server installation. This approach works great for a development environment and small user base. But, for solutions that have a higher number of concurrent users you should consider one of the other server farm topologies. For more details about the different server topologies see [SharePoint Deployment](#).

### Single Server Installation



Figure 1: Pomegranate Online Server Topology

## 12 Hive

All the key components of SharePoint exist under the 12 Hive. The hive contains all the features, themes, master pages, etc... used by SharePoint. The hive is located under “%Program Files%\Common Files\Microsoft Shared\web server extensions\12” on each of the SharePoint web servers. When deploying a custom solution you must make sure each component of the solution is properly setup in the 12 hive on each SharePoint web server.

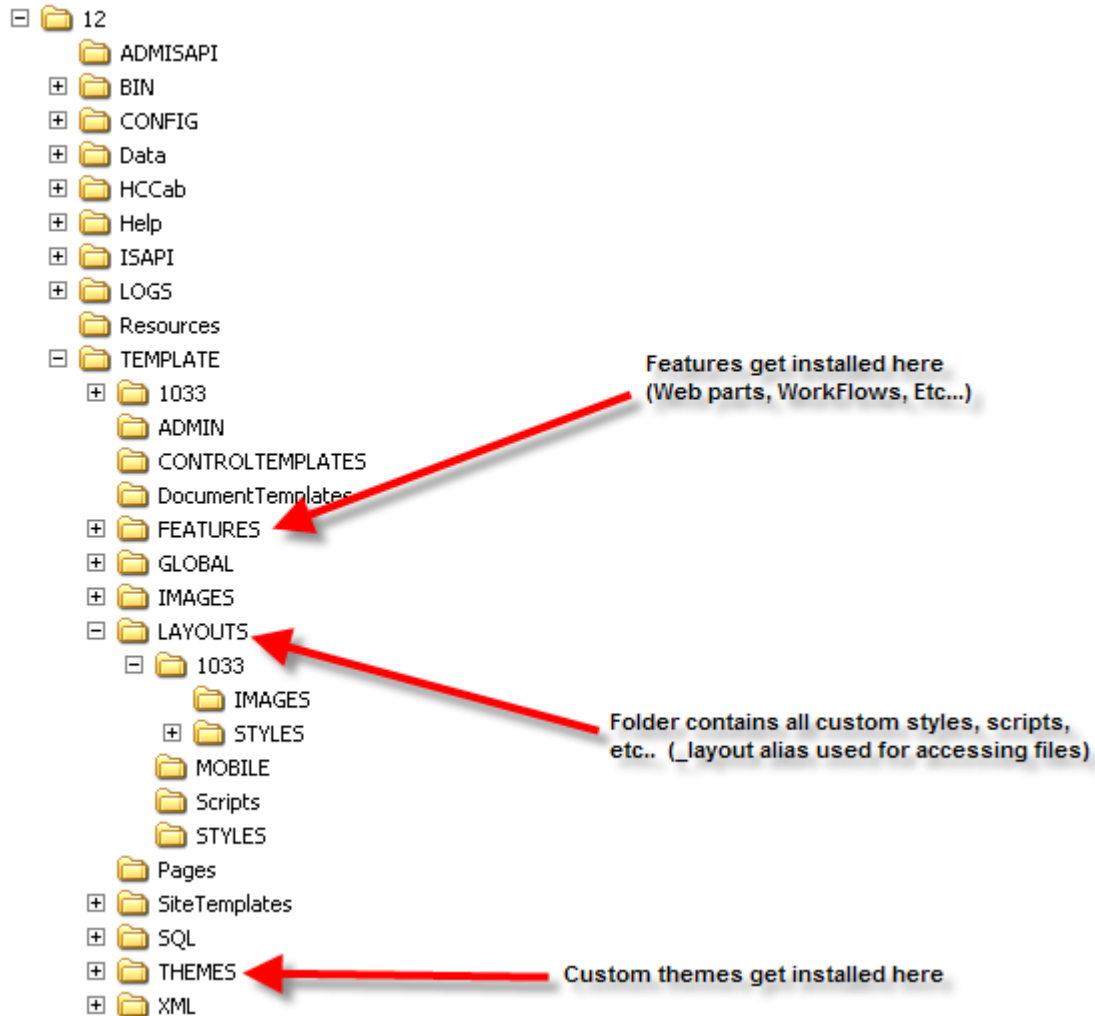


Figure 2: SharePoint 12 Hive

## Setting up SharePoint and your Environment

This section defines the steps you must follow to setup the Pomegranate Exemplar to run under SharePoint. You must complete each step before the solution will run properly under SharePoint.

### Prerequisite

The following software must be installed prior to setting up Pomegranate.

- Windows Server 2003 or 2008 – [Link](#)
- Windows Share Point Services 3.0 (SP1) – [Link](#)
- Visual Studio 2008 – [Link](#)
- .Net 3.0 runtime – [Link](#)
- ASP.NET AJAX Extensions 1.0 – [Link](#)
- Latest version of Net Advantage for ASP.Net (Note: You must use the APTC version) – [Link](#)

## Setup a Site in SharePoint

The following is a brief overview of how to create a new Share Point web application and its corresponding site collection. For a more detailed overview see the [How to create or extend a web application](#) .

### Step 1: Create a Web Application

Using the SharePoint Central administration web site; create or extend a web application. After filling in the necessary fields for the new web application click ok for SharePoint to create the new web application.

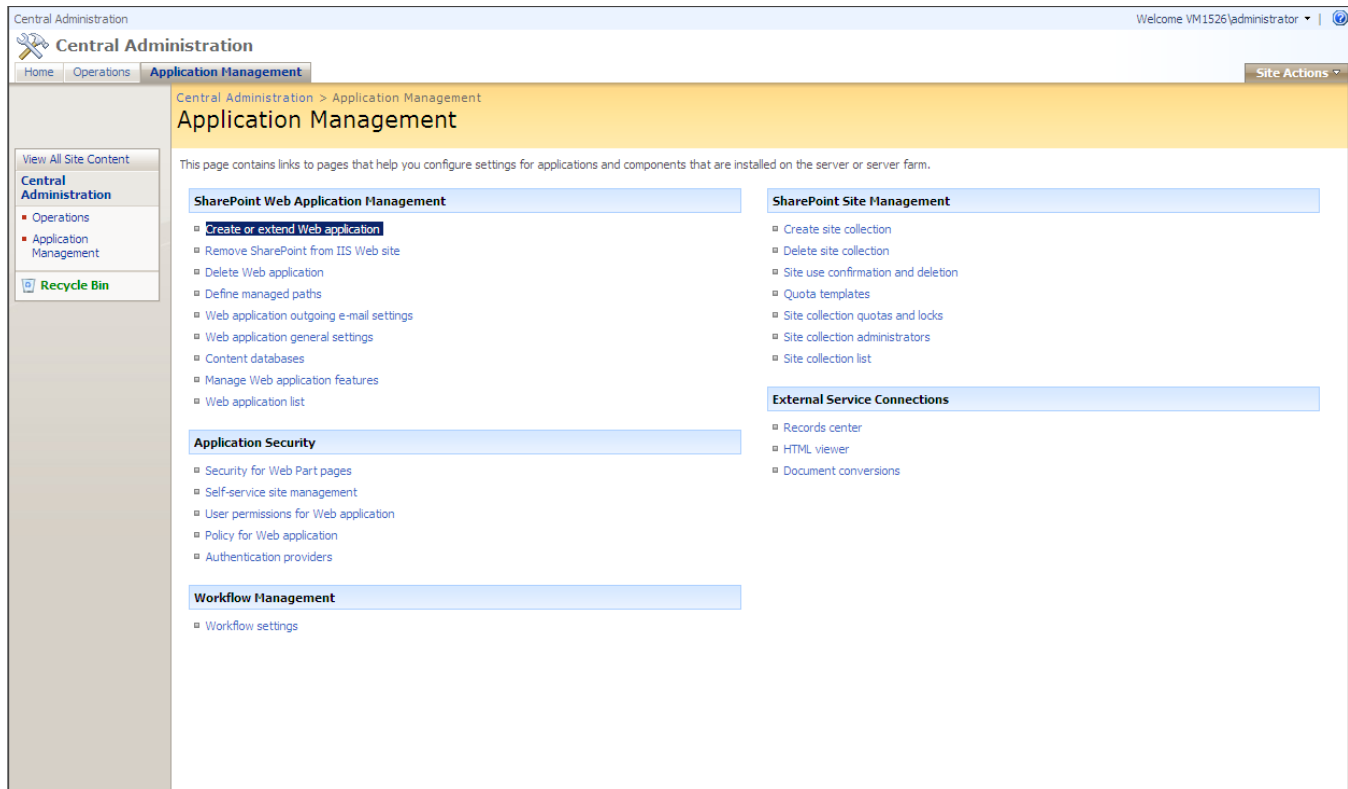


Figure 3: Using SharePoint Central Administration create a new web application

Central Administration > Application Management > Create or Extend Web Application > Create New Web Application

## Create New Web Application

Use this page to create a new Windows SharePoint Services Web application. [Learn about creating or extending Web applications.](#)

**Warning:** this page is not encrypted for secure communication. User names, passwords, and any other information will be sent in clear text. For more information, contact your administrator.

OK

Cancel

**IIS Web Site**

Choose between using an existing IIS web site or create a new one to serve the Windows SharePoint Services application.

If you select an existing IIS web site, that web site must exist on all servers in the farm and have the same description, or this action will not succeed.

If you opt to create a new IIS web site, it will be automatically created on all servers in the farm. If an IIS setting that you wish to change is not shown here, you can use this option to create the basic site, then update it using the standard IIS tools.

**Security Configuration**

Kerberos is the recommended security configuration to use with Integrated Windows authentication. Kerberos requires the application pool account to be Network Service or special configuration by the domain administrator. NTLM authentication will work with any application pool account and the default domain configuration.

If you choose to use Secure Sockets Layer (SSL), you must add the certificate on each server using the IIS administration tools. Until this is done, the web application will be inaccessible from this IIS Web Site.

☐ Use an existing IIS web site

Default Web Site

☒ Create a new IIS web site

Description

SharePoint - 46361

Port

46361

Host Header

Path

C:\Inetpub\wwwroot\wss\VirtualDirect

Authentication provider:

☐ Negotiate (Kerberos)

☒ NTLM

Allow Anonymous:

☐ Yes

☒ No

Use Secure Sockets Layer (SSL):

☐ Yes

☒ No

Figure 4: Create new web application form

## Step 2: Create a site collection

For the new web application create its site collection using the create site collection form.

The screenshot shows the 'Create Site Collection' form in the Central Administration interface. The breadcrumb trail is 'Central Administration > Application Management > Create Site Collection'. The form is titled 'Create Site Collection' and includes a 'Site Actions' button. The form is divided into several sections:

- Web Application:** A dropdown menu showing 'http://vm1526/'.
- Title and Description:** Fields for 'Title' and 'Description'.
- Web Site Address:** A field for 'URL' showing 'http://vm1526/sites/'.
- Template Selection:** A section with a visual representation of a site template and a list of templates: 'Team Site', 'Blank Site', 'Document Workspace', 'Wiki Site', and 'Blog'.

The 'Team Site' template is selected. The form also includes 'OK' and 'Cancel' buttons.

Figure 5: Create site collection form



### Step 3: View standard SharePoint site.

After creating a web application and its corresponding site collection you will now have access to the top level site of the web application (e.g. <http://localhost/mywebsite>). Once the basic SharePoint site is up and running you can now customize it to run Pomegranate.

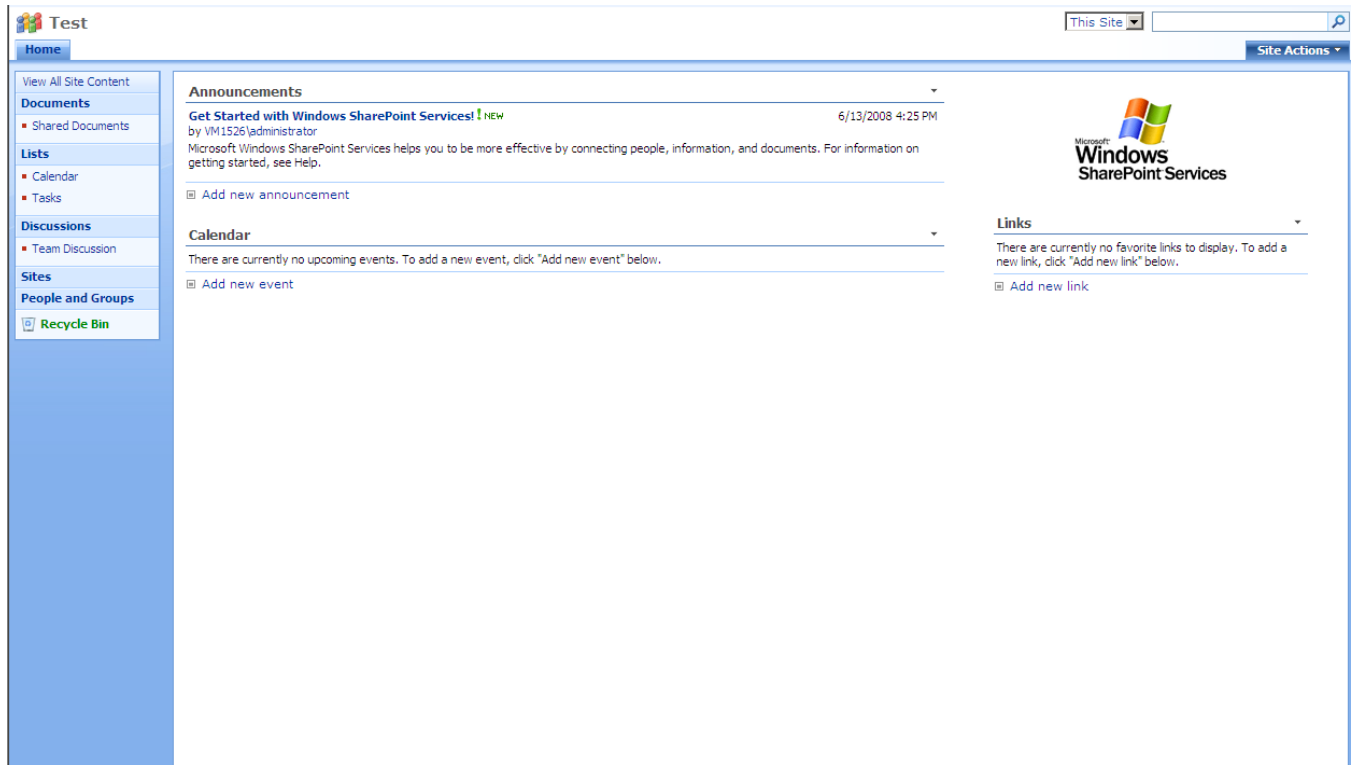


Figure 6: A basic SharePoint team site.

## Setting up and Configure Pomegranate

After installing the prerequisite software and setting a new web application inside of SharePoint. You are now ready to setup the Pomegranate exemplar. The setup for the exemplar is divided into two sections: deploying the solution and setting up the custom branding.

### Deploying the Solution

The following section outlines the steps you must follow to get the exemplar properly setup to work with SharePoint. All the custom files (CSS, Master Pages, web.config, etc...) used by the exemplar can be found in the Infragistics.Guidance.Web.Portal.Web project file. In most cases, you can just copy the files directly from this folder to the proper SharePoint location. But, for the web.config entries we recommend you update the web application's web.config that SharePoint created instead of overriding it with the file include with the exemplar.

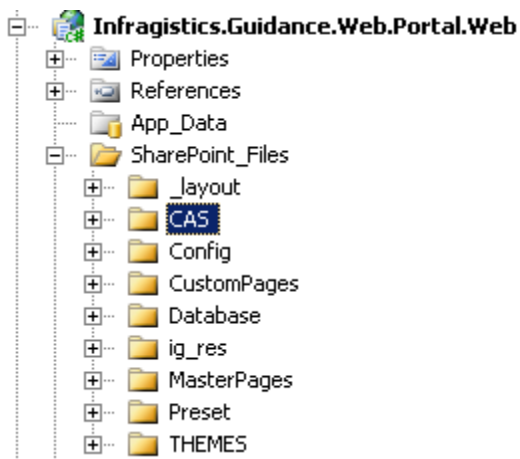


Figure 7: Custom files can be found in the Infragistics.Guidance.Web.Portal.Web project file

### Step 1: Web Configuration Settings

The following changes must be made to the web application's web.config file. A version of the customized web.config file is included with this solution (SharePoint\_Files\config folder).

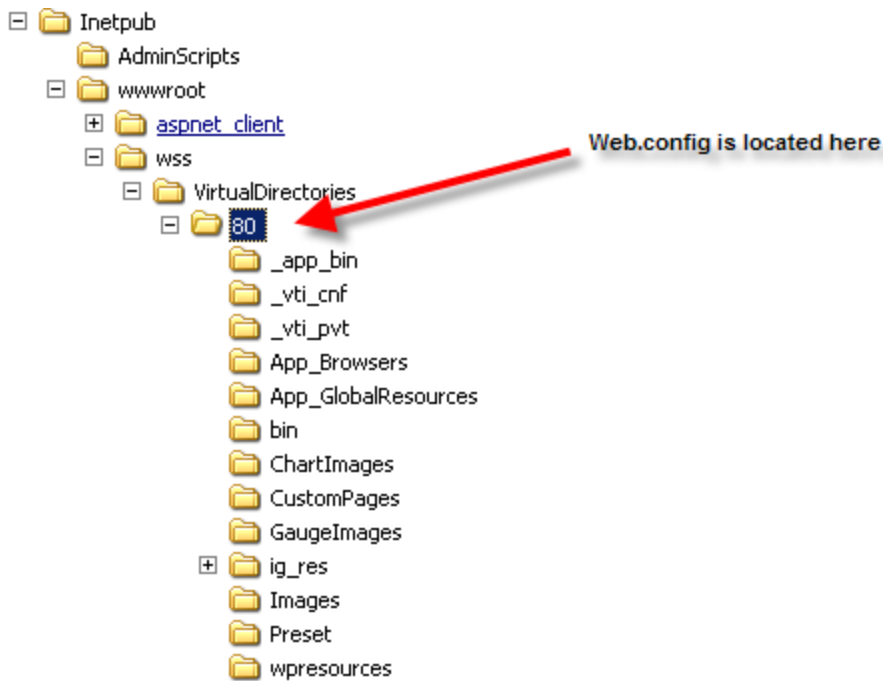


Figure 8: Location of the SharePoint – Web Application’s web.config file

### **Step 1-1: Setup AJAX configuration**

In order for Pomegranate to work properly the ASP.NET AJAX Extensions 1.0 must be installed and configured in the web applications web.config. See the following links for details about setting the AJAX web.config entries.

How to configure AJAX extensions

- [Configuring ASP.NET AJAX](#)
- [Setting up AJAX to run in SharePoint.](#)

### **Step 1-2: Setup custom configuration entries**

The following custom entries must be added to the web applications web.config in order for Pomegranate to work properly. You can copy these entries from the custom web.config entry for the exemplar.

#### **New Configuration Sections**

The exemplar requires two custom config sections that must be added to the config section element of the web applications’ web.config file.

- Infragistics.web: Used to enable application styling
- Pomegranate.PortalSetting: Used to define the exemplar’s custom data provider.

```
<section name="infragistics.web"
  type="System.Configuration.SingleTagSectionHandler, System,
  Version=1.0.3300.0, Culture=neutral, PublicKeyToken=b77a5c561934e089" />
<section name="Pomegranate.PortalSettings"
  type="Infragistics.Guidance.Web.Portal.Providers.PortalConfigurationSection,
  Infragistics.Guidance.Web.Portal.Providers, version=1.0.0.0, Culture=neutral,
  PublicKeyToken= 68d63b80b824b45f" />
```

Figure 9: Custom exemplar config sections

```
<infragistics.web enableAppStyling="true"
  styleSetName="Default" styleSetPath="~/ig_res/StyleLibraries/" />

<Pomegranate.PortalSettings PortalProvider="PortalDataProvider">
  <providers>
    <add name="PortalDataProvider"
      type="Infragistics.Guidance.Web.Portal.Providers.DefaultPortalProvider,
      Infragistics.Guidance.Web.Portal.Providers" />
  </providers>
</Pomegranate.PortalSettings>
```

Figure 10: Custom exemplar setting

### SharePoint – SafeControl Entries

In order for custom web parts to work under SharePoint they must be added to the SafeControl sub config section. All the custom web parts are stored in the Infragistics.Guidance.Web.Portal.WebControls assembly. This assembly must be signed and allow partially trusted callers.

```
<SafeControl Assembly="Infragistics.Guidance.Web.Portal.WebControls,
  Version=1.0.0.0, Culture=neutral, PublicKeyToken=68d63b80b824b45f"
  Namespace="Infragistics.Guidance.Web.Portal.WebControls.WebParts"
  TypeName="*" Safe="True" />
```

Figure 11: Safe Control Config Entry

### SharePoint – CAS Security

SharePoint uses .Net code access security (CAS) policies files to restrict permissions of running .Net code. The main reason for these restrictions is that SharePoint supports a shared application environment and it's a best practice to limited the impact one application has on the other applications installed in SharePoint.

In most cases you should use the default WSS\_Minimal CAS policy and only create a custom CAS policy file when your application requires it. For Pomegranate that default CAS policy did not work and we had to create a custom CAS policy file. The custom policy file is located under the SharePoint\_Files\CAS folder inside of the Infragistics.Guidance.Web.Portal.Web project file. In order to setup SharePoint to use the custom CAS file you need to deploy the file to the 12 Hive config folder and update the web application's web.config to use the CAS file.

```
<securityPolicy>
  <trustLevel name="WSS_Pomegranate"
    policyFile="C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\12\config\wss_pomegranate.config" />
  <trustLevel name="WSS_Medium"
    policyFile="C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\12\config\wss_mediumtrust.config" />
  <trustLevel name="WSS_Minimal"
    policyFile="C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\12\config\wss_minimaltrust.config" />
</securityPolicy>
```

Figure 12: The custom CAS file must be register in the security policy config element

```
<trust level="WSS_Pomegranate" originUrl="" />
```

Figure 13: Setup the system.web trust level config entry to use the custom CAS setting

### SharePoint – Session State

The Net Advantage for ASP.Net WebGauge control requires session state to be enabled to generate the images used by the gauge. Because SharePoint disables session state by default you need to update the web application's web.config to include an entry under HttpModules to enabled session state.

```
<httpModules>
  <clear />
  <add name="SPRequest" type="Microsoft.SharePoint.ApplicationRuntime.SPRequestModule,
    Microsoft.SharePoint, Version=12.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c" />
  <add name="OutputCache" type="System.Web.Caching.OutputCacheModule" />
  <add name="FormsAuthentication" type="System.Web.Security.FormsAuthenticationModule" />
  <add name="UrlAuthorization" type="System.Web.Security.UrlAuthorizationModule" />
  <add name="WindowsAuthentication" type="System.Web.Security.WindowsAuthenticationModule" />
  <add name="RoleManager" type="System.Web.Security.RoleManagerModule" />
  <!-- Turned on for Gauge -->
  <add name="Session" type="System.Web.SessionState.SessionStateModule" />
  <!-- ASP.Net AJAX -->
  <add name="ScriptModule" type="System.Web.Handlers.ScriptModule, System.Web.Extensions, Version=1.0.61025.0,
    Culture=neutral, PublicKeyToken=31bf3856ad364e35" />
  <!-- ASP.Net AJAX -->
</httpModules>
```

Figure 14: HttpModule setting for ASP.NET session state

## Step 2: Compile and Deploy the Exemplar

Open the Visual Studio project file for the Pomegranate exemplar (Infragistics.Guidance.Web.Portal.sln) in Visual Studio 2008. Before you can compile the solution you need to add references to the Net Advantage for ASP.NET assemblies (See List Below). Add each assembly listed to the Infragistics.Guidance.Web.Portal.WebControls project file. Once the assemblies have been added compile the solution.

After the solution has compiled successfully copy all the files located in the debug\bin folder to the SharePoint web applications bin folder. If you prefer you can add the assemblies to the Global Assembly Cache (GAC) but, it recommend that custom web parts store their assemblies in a web application BIN folder instead of the GAC. This is recommended because assemblies installed in the GAC have full trust by default.

Required Net Advantage for ASP.NET Assemblies, because of the security model used by SharePoint make sure you use the “Signed” Allow Partially Trusted Caller (APTC) version of the assemblies listed below:

- Infragistics2.Web.v8.3 (All version support APTC)
- Infragistics2.WebUI.Misc.v8.3
- Infragistics2.WebUI.Shared.v8.3
- Infragistics2.WebUI.UltraWebChart.v8.3
- Infragistics2.WebUI.UltraWebGauge.v8.3
- Infragistics2.WebUI.UltraWebGrid.v8.3

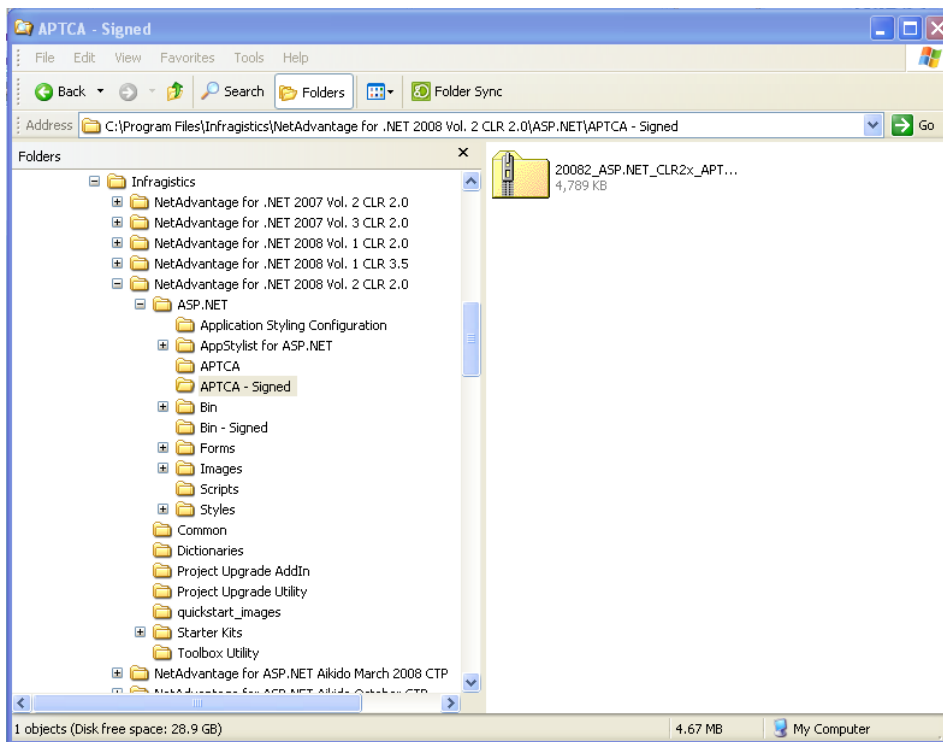


Figure 15: Localization of the APTC version of Net Advantage for ASP.Net

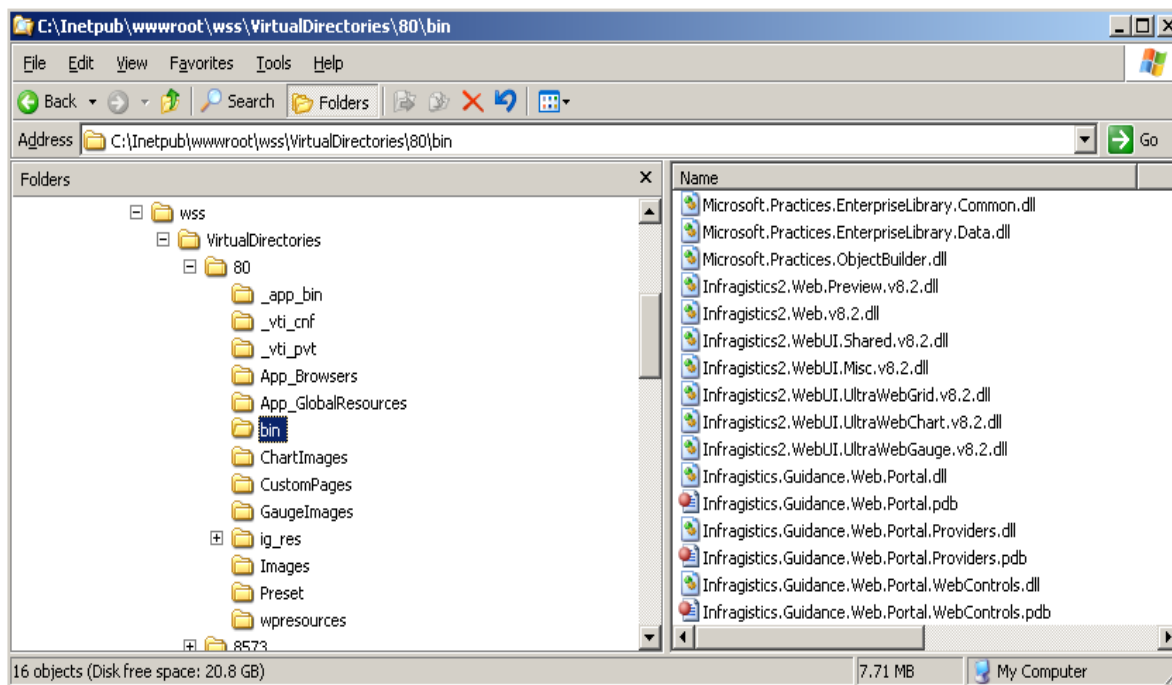


Figure 16: SharePoint web application's BIN Folder.

### Step 3: Setup Dependences

The Pomegranate exemplar has several file and directory dependences that must be setup under SharePoint. You can find the file and/or directory dependences that need to be created in the SharePoint\_File directory of the Infragistics.Guidance.Web.Portal.Web project file.

#### Step 3-1: Web Application Folder

The following folders and files need to be created and copied to the SharePoint web application's root directory. The SharePoint\_Files folder in the exemplar's solution contains the files that need to be copied to the preset and app styling folders.

- Chart Image Cache – Cache used by the WebChart Control. The ASP.NET worker process user must have read/write permissions on this folder.
- Gauge Image Cache – Cache used by the Web Gauge Control. The ASP.NET worker process user must have read/write permissions on this folder.
- Preset Folder – Stores preset files used by the custom web parts. The ASP.NET worker process user must have read permissions on this folder.
- IG\_RES (App Styling Folder) – Stores CSS & images files used by app styling. The ASP.NET worker process user must have read permissions on this folder.
- CustomPages – Stores the customerdetail.aspx page used to display customer details.

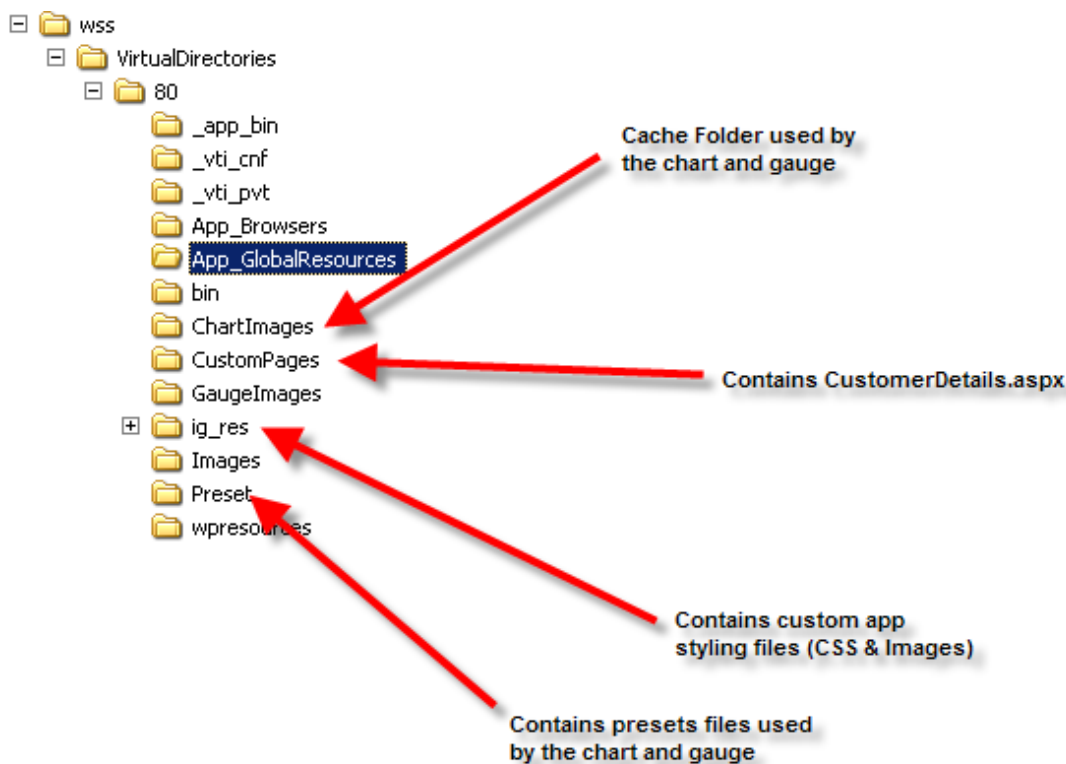


Figure 17: Required web application custom folders



### Step 3-1: 12 Hive Folder

The following folders and files need to be created and copied to the SharePoint 12 hive. The SharePoint\_Files folder in the exemplar's solution contains the files that need to be copied.

- Pomegranate.js – Contains custom JavaScript used by the exemplar. Must be copied to the \_layout/ Scripts folder
- Pomegranate Style Folder – Contains custom images and CSS files used by the exemplar. Must be copied to the \_layout/ styles folder.

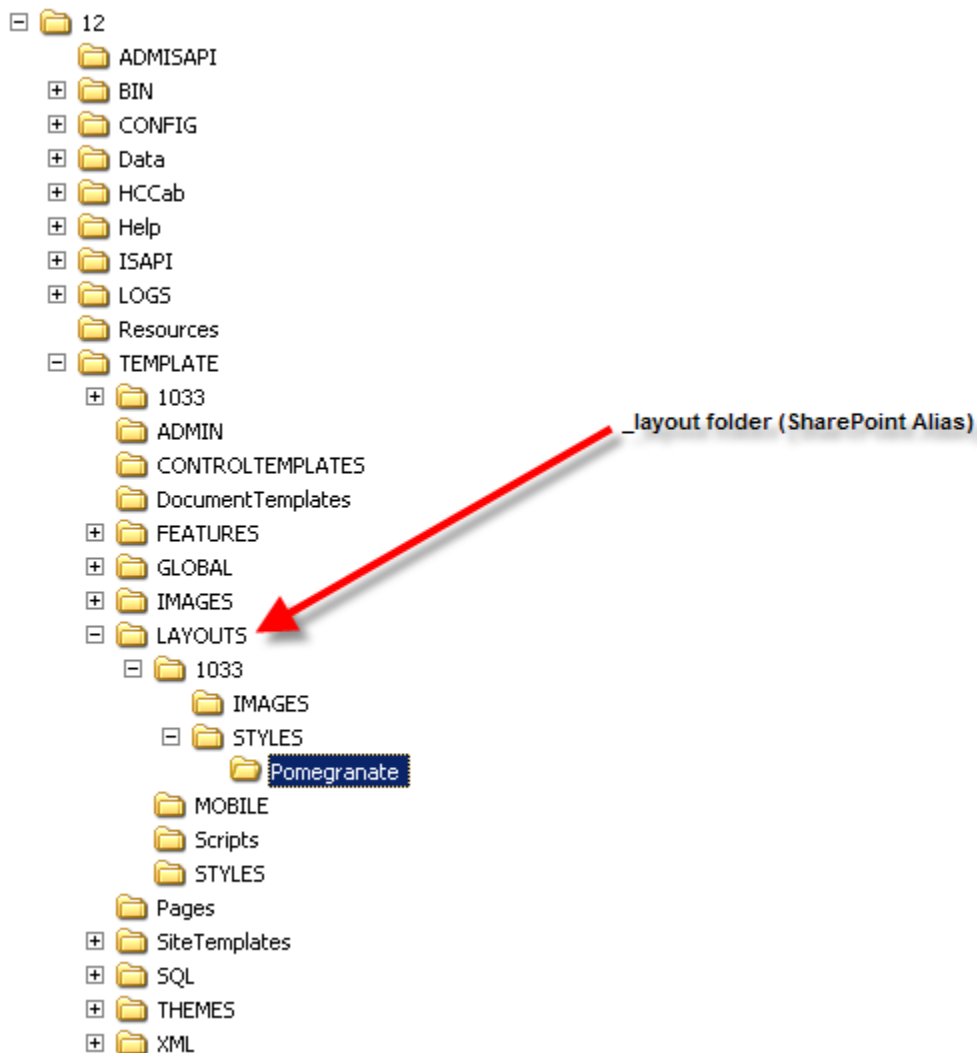


Figure 18: 12 Hive \_layout folder

#### Step 4: Install Master Page

The Pomegranate exemplar includes a custom default.master page that must be installed into SharePoint. The update default.master page includes custom styling used by the exemplar and an entry for the ASP.NET Script Manager control. To update the master page used by SharePoint go to the master page gallery list and select upload master page. Select the master page included with the exemplar (Located in the SharePoint\_Folder) and make sure to choose override existing file.

The screenshot shows the 'Upload Master Page: Master Page Gallery' dialog box in SharePoint. The breadcrumb path at the top is 'IGSURANCE > Master Page Gallery > Upload Document'. The dialog is divided into two main sections: 'Upload Document' and 'Version Comments'. The 'Upload Document' section includes a text area for browsing to the document, a 'Name:' field with a 'Browse...' button, a link for 'Upload Multiple Files...', and a checked checkbox for 'Add as a new version to existing files'. The 'Version Comments' section includes a text area for describing changes. At the bottom right are 'OK' and 'Cancel' buttons.

IGSURANCE > Master Page Gallery > Upload Document	
<b>Upload Master Page: Master Page Gallery</b>	
<b>Upload Document</b> Browse to the document you intend to upload.	Name: <input type="text"/> <input type="button" value="Browse..."/> <a href="#">Upload Multiple Files...</a> <input checked="" type="checkbox"/> Add as a new version to existing files
<b>Version Comments</b> Type comments describing what has changed in this version.	Version Comments: <div></div>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

Figure 19: Upload master page into SharePoint

### Step 5: Setup Database

The Pomegranate exemplar includes a backup of a SQL Express database (Pomegranate.bak). The database contains the data that is used by the custom web parts. Once you have restored the database make sure to create a SQL login for the database and update the web.config connection string to use the correct database location and login information.

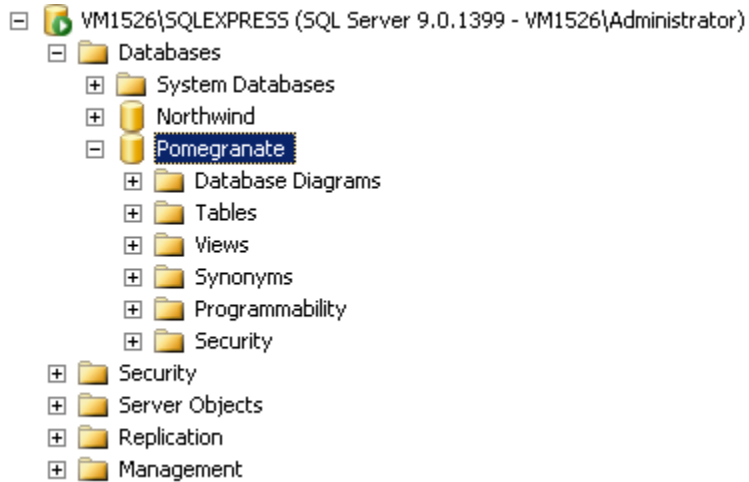


Figure 20: SQL Server database used by the exemplar

## Step 6: Configure Web Parts

Once the exemplar's assemblies and database files have been setup you need to configure SharePoint to use the custom web parts included in the exemplar. To add custom web parts go to the site's web part gallery and select new. This will load the new web part list screen. Select the custom web parts included in the exemplar and then select populate gallery and they will be added the web part catalog for this site.

Custom Web Parts:

- AgentSummaryWebPart – Display Summary KPI(s) for an agent
- CompanyNewsWebPart – Display company news
- NewPolicyWebPart – Displays new policies for each current and last two fiscal years
- PendingQuoteWebPart – Display the list of pending quotes
- PolicyTypeWebPart – Display a chart of policies by different types
- QuoteToBindWebPart – Display the quote to bind ratio gauge

IGSURANCE > Web Part Gallery > New Web Parts  
Web Part Gallery: New Web Parts

This list displays all available Web Parts for this gallery. Select each Web Part you want to add, and then click Populate Gallery.

**Populate Gallery**

☐ Overwrite if file already exists?

<input type="checkbox"/>	Web Part Type Name	File Name	Assembly Name
<input type="checkbox"/>	Infragistics.Guidance.Web.Portal.WebControls.WebParts.AgentSummaryWebPart	AgentSummaryWebPart.webpart	Infragistics.Guidance.Web.Portal.WebControls, Version=1.0.0.0, Culture=neutral, PublicKeyToken=68d63b80b824b45f
<input type="checkbox"/>	Infragistics.Guidance.Web.Portal.WebControls.WebParts.BaseWebPart	BaseWebPart.webpart	Infragistics.Guidance.Web.Portal.WebControls, Version=1.0.0.0, Culture=neutral, PublicKeyToken=68d63b80b824b45f
<input type="checkbox"/>	Infragistics.Guidance.Web.Portal.WebControls.WebParts.CompanyNewsWebPart	CompanyNewsWebPart.webpart	Infragistics.Guidance.Web.Portal.WebControls, Version=1.0.0.0, Culture=neutral, PublicKeyToken=68d63b80b824b45f

Figure 21: Add web part to SharePoint

### Step 7: Setup Dashboard Screen.

Now that all the files (Assemblies, CSS, Themes, Scripts, etc...) for the exemplar have been configured to work under SharePoint we are ready to setup the home page. To do this edit the page in SharePoint and click on the add web part button(s). When the Add new web page dialog appears select one or more of the exemplars custom web parts to add. For the best results follow the layout shown below.

Note: In order to get the custom AJAX web parts to work correctly you need to have at least one of the default SharePoint web parts on the screen. If you prefer the web part can be marked as hidden. If you do not add one of the default web parts then AJAX will not work correctly and instead will cause a full page postback.

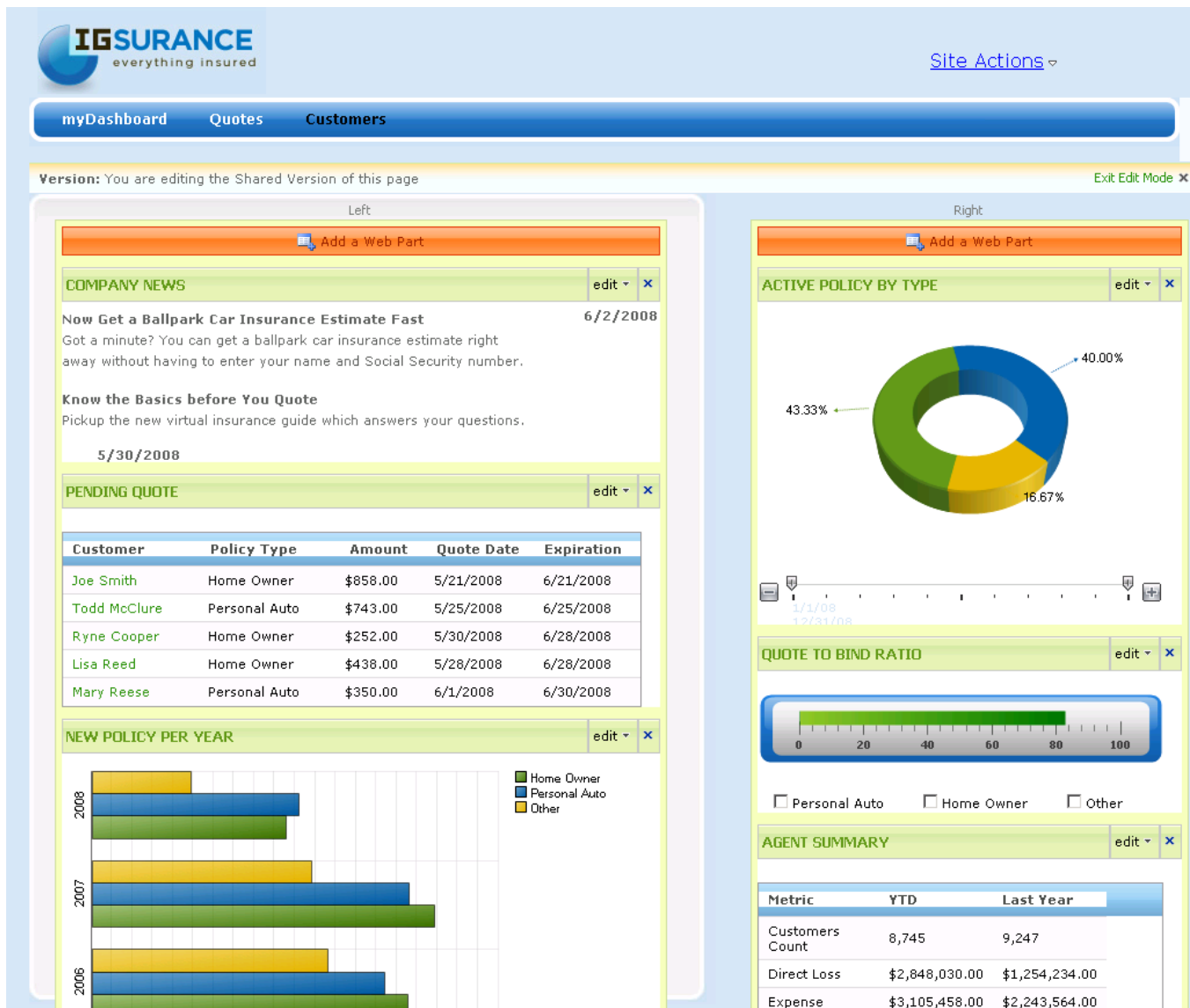


Figure 22: Add web part to SharePoint

## Setting up Custom Branding

This section defines the steps you need to follow to get the custom branding of the exemplar to work under SharePoint. Any customer files you need for branding can be found under the `Infragistics.Guidance.Web.Portal.Web` project file.

### Deploying the Custom Theme

To deploy the custom branding theme you need to copy the custom Pomegranate theme folder (located in the `...\SharePoint_Files\Themes` folder) to the 12 Hive's theme folder. After copying the theme you need to update the SharePoint theme configuration file `SPTthemes.xml` to include an entry for the custom theme. To switch the site to use the custom themes go to site settings and select site theme. When the site theme page appears select Pomegranate and click apply. Now the site will be using the custom theme for the exemplar.

Note: If you make any changes to the theme files (CSS, Images, etc...) you will need to reapply the theme. To do this go back to the site theme folder and select a different theme, click apply, and then switch back to the Pomegranate theme to see your changes. This is necessary because SharePoint caches out the theme directory and changes do not get propagated until the theme is reapplied.

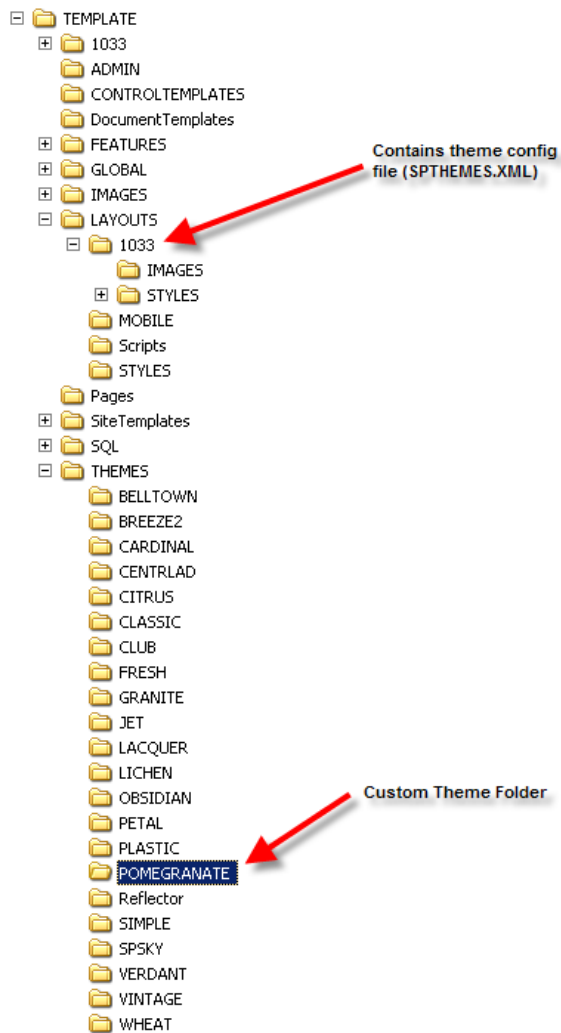


Figure 23: 12 Hive location to copy custom themes

```
<Templates>
  <TemplateID>Pomegranate</TemplateID>
  <DisplayName>Pomegranate</DisplayName>
  <Description>Themse for Pomegranate Exemplar</Description>
  <Thumbnail>images/thwheat.gif</Thumbnail>
  <Preview>images/thwheat.gif</Preview>
</Templates>
```

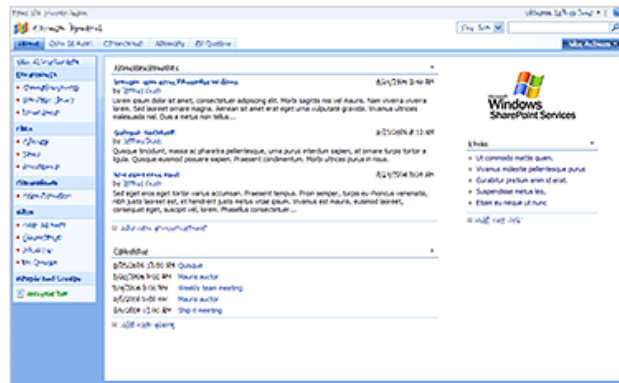
Figure 24: Theme Entry that needs to be added to SPThemes.xml

## IGSURANCE > Site Settings > Site Theme

### Site Theme

Use this page to change the fonts and color scheme for your site. Applying a theme does not affect your site's layout, and will not change any pages that have been individually themed.

#### Select a Theme



Preview

Belltown  
 Breeze  
 Cardinal  
 Citrus  
 Classic  
**Default Theme**  
 Granite  
 Jet  
 Lacquer  
 Lichen  
 Obsidian  
 Petal  
 Plastic  
 Pomegranate  
 Reflector  
 Simple  
 Verdant  
 Vintage  
 Wheat

Figure 25: Site theme page allows you to switch a site's theme.



### Setup custom default page.

In order to get all the custom styling for the exemplar to work we had to make a customized version of the page using SharePoint Designer (SPD). When you use SPD to change a page it will make a customized version of the page that will be stored in the SharePoint database. Because the page is now stored in a SQL Server database there is no easy way to update the page.

If you want to get all the custom CSS styles for the exemplar to work; you will need to use SharePoint designer (SPD). Open SPD and check out the default.aspx page for the exemplar's web site. Open the page in code view and copy the contents of the customized default page (Located in the ...\\SharePoint\_Files\\CustomPages folder) and then check in the customized page.

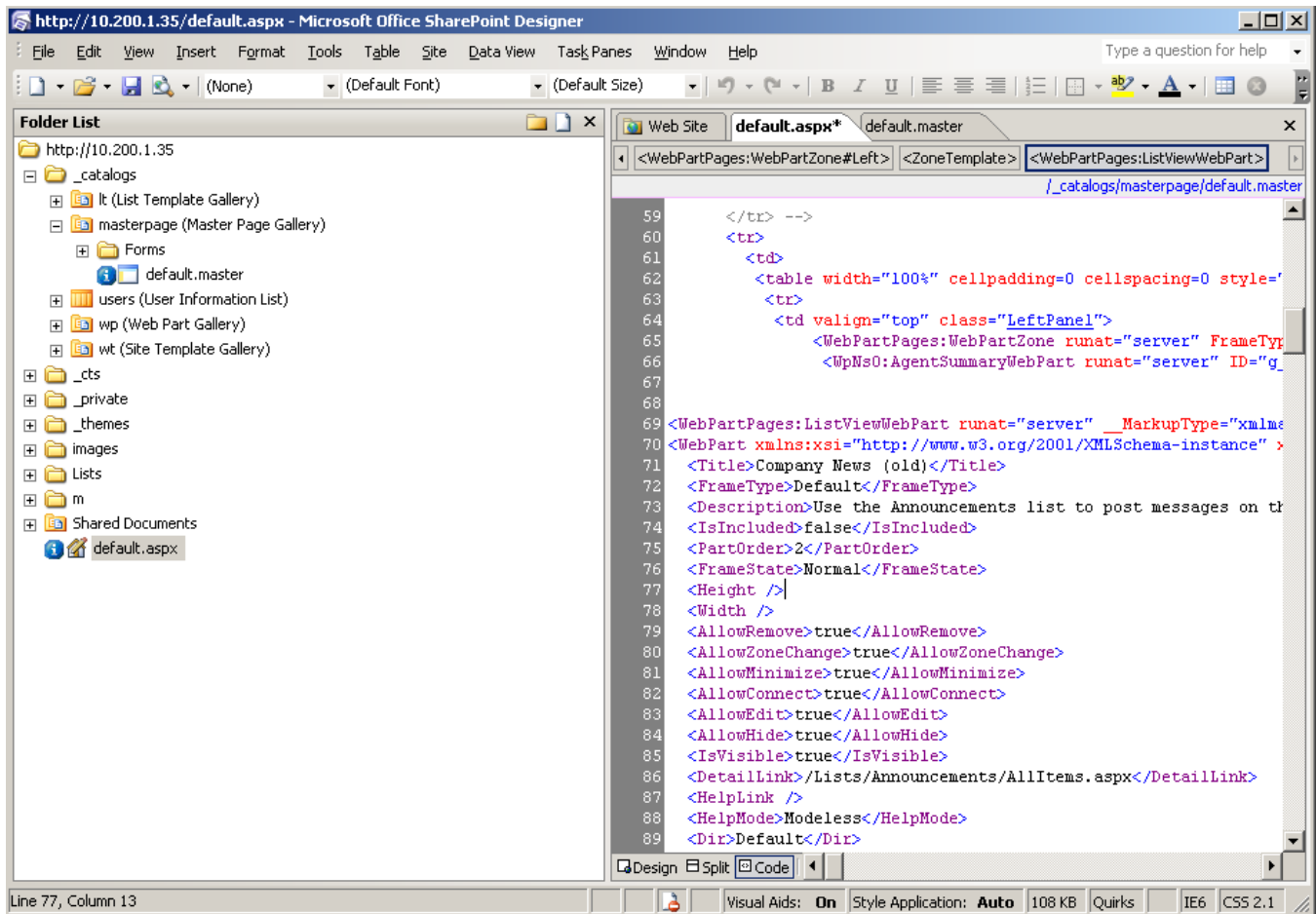


Figure 26: Use SPD to customized the home page

## Summary

Working with SharePoint can be a challenging as well as rewards experience. In the document we focused on how to setup the Pomegranate exemplar. While it may have seemed a little involved don't worry. Once you get the handle of how SharePoint works you can build some interesting and powerful solutions.