PortalWorX
Training Manual

Version 9.11

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PortalWorX Getting Started 1

1.1 Objectives

After completing this chapter, you should know how to:

- Set up your system for PortalWorX installation.
- Install and configure Microsoft SharePoint Services 3.0.
- Install PortalWorX.

1.2 Introduction to PortalWorX

Looking for a collaboration platform to easily create and manage custom manufacturing and business intelligence portals and visualization dashboards that provide single sign-on and collaboration for optimization of key performance indicators (KPIs)? Look no further than **PortalWorX™**. Built on the standard Microsoft® SharePoint™ Services and .NET technologies, PortalWorX provides everything you need to create a manufacturing or business portal for your real-time, historical plant and business information. PortalWorX is easy to configure and delivers data to those who need it, when they need it.

Features of PortalWorX include:

- Customizable dashboard built with "Web Part" blocks designed for manufacturing
- Single sign-on services for all applications
- Fully distributed architecture using web services for scalability
- Improved communication and collaboration between team members
- Ability to create personalized views per user
- Simple drag-and-drop configuration

PortalWorX includes the following basic components for creating and configuring customized portal sites:

- PortalWorX Central Administration Interface
- PortalWorX Web Parts
- PortalWorX Layout Editor
- PortalWorX Site Deployment Utility
- PortalWorX Single Sign-on Master Key Backup Utility

These components are described in detail throughout the PortalWorX Help documentation.

1.3 System Requirements

To use this software, you must have the following *minimum* system requirements:

- 2.0 GHz processor with 512 MB - 1 GB RAM.

  NOTE: It is recommended that your total system paging file size be set to at least four times the size of physical RAM. The above requirements assume that ONLY PortalWorX is running on the PC (with Microsoft SQL Server or MSDE). If other applications will be running, then additional resources must be allocated.

- At least 100 MB of free hard disk space is required to install PortalWorX (this does not include space required for prerequisite components or the Microsoft .NET Framework). The actual amount of space required may increase as the size of your portals increases.
- DVD Drive for installation
- SVGA Video Card; 256 or more colors for best results
- Microsoft Windows® Server 2003 and Windows Server 2008 with latest service packs

  NOTE: PortalWorX, Unified Web Interface, and MobileHMI will be installed in 32-bit compatibility mode on the 64-bit versions of these operating systems, and due to limitations in Internet Information Services (IIS) 5.1 and 6.0, they may not be capable of running side-by-side with 64-bit applications such as GENESIS64 or other 3rd party applications.

- Microsoft® Internet Information Services (IIS) 5.0 or later (requires approximately 20 MB disk space).

  NOTE: If IIS is installed after Microsoft .NET Framework is installed, you must run the **aspnet_regiis.exe** file with the "-i" argument in the **Microsoft.NET\Framework\v2.0.50727** directory in the Windows folder for your operating system. For example, on Windows 2000, this file is located in the "[Windows Path]\Microsoft.NET\Framework\v2.0.50727" directory.

- Microsoft .NET Framework Version 3.0 (requires approximately 280 MB of disk space).

  NOTE: If Microsoft .NET Framework is not detected on your machine during PortalWorX installation, it will be installed.

- Microsoft® SQL Server® 2000, MSDE 2000, SQL Express 2005, or SQL Server 2005 with latest service packs.

  NOTE: If Microsoft SQL Server is not detected on your machine during the PortalWorX installation, you have three options: you can cancel the installation at this point and install SQL Server locally yourself; you can allow MSDE 2000 to be automatically installed from the BizViz DVD; or you can designate a remote instance of SQL Server, in which case you will not be forced to install MSDE locally.

- The ICONICS WebHMI product must be installed before you can use PortalWorX. If you do not have WebHMI installed, the PortalWorX installation process will install it for you automatically. You can also install it manually from the BizViz product DVD. For more information about the WebHMI installation, please refer to the WebHMI help documentation on the BizViz product DVD.
- ICONICS PortalWorX license. In order to run PortalWorX, you need a PortalWorX license. Please see the ICONICS Software Licensing documentation for information about how to authorize an ICONICS software license. You can also register for a license online at www.iconics.com/support/licenseproduct.asp.

1.4 Installing Microsoft SharePoint Services

Before you install PortalWorX from the ICONICS BizViz DVD, you must first install Microsoft SharePoint Services. You can install SharePoint Services 2.0, SharePoint Services 3.0, or SharePoint Server 2007.

If you wish to use SharePoint Services 2.0 and you are running with Windows Server 2003 R2, you can install it from your Control Panel's Add/Remove Window Services. Users with other operating systems will need to download Windows SharePoint Services from Microsoft before they can install it.

Due to the many language versions available for SharePoint, it is impossible for us to include them all on the BizViz DVD. As of this publishing, the latest version of SharePoint Services is 3.0 with SP1 and you can find a download of it here:

http://www.microsoft.com/downloads/details.aspx?familyid=EF93E453-75F1-45DF-8C6F-4565E8549C2A&displaylang=en

The download is approximately 104 MB; therefore, we recommend saving it to disk rather than opening it directly from the website.

1.4.1 SharePoint 2.0 for Windows Server 2003 R2 Users

This section details how to install Windows SharePoint Services for users with Windows Server 2003 R2. If you are not yet using R2, please skip ahead to the next section titled, "Installing SharePoint Services for Windows Server 2003 Pre-R2".

1. Open the Control Panel from Start → Settings → Control Panel.
2. Click on Add or Remove Programs.
3. Click on Add/Remove Windows Components.
4. Scroll down until you see Windows SharePoint Services, and check the check box beside it.
5. Click **Next** to start the installation.
6. Insert the Windows Server 2003 R2 CD when prompted.
7. Follow the on-screen instructions to finish the installation.

   NOTE: If the installation prompts a message mentioning FrontPage Server Extensions**,** click **Cancel** and do 8-11 to uninstall FrontPage Server Extensions. Once done, you can try to install the SharePoint Service again.

8. Open **Control Panel → Add or Remove Programs → Add/Remove Windows Components**.
9. Select **Application Server** and click Details.
10. Select **IIS**, click **Details** and uncheck **FrontPage 2002 Server Extensions**.
11. Click **Next** to uninstall FrontPage2002 Server Extensions.
12. Restart the SharePoint Installation after uninstall is complete.

1.4.2 Installing SharePoint Services 3.0

Run the file Sharepoint.exe from the location where you saved it on your hard drive to launch the SharePoint Services installation. The installation will check for some prerequisites, including Internet Information Services and ASP.NET. If any of those prerequisites are not found, you will be asked to install them before you can continue with the SharePoint Services installation.

If you are missing ASP.NET, a message will appear as shown in Figure 1.1. To install the most recent version of ASP.NET, follow the directions in the error message.

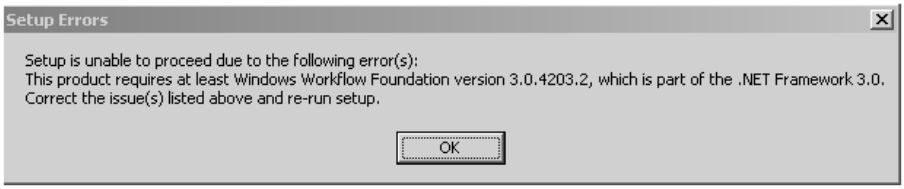


Figure 1.1 - ASP.NET Error Dialog

If all of the prerequisites are properly detected, the initial SharePoint Services setup screen will appear, as shown in Figure 1.2. Check the box that says, "I accept the terms in the License Agreement," and then click **Next** to continue.

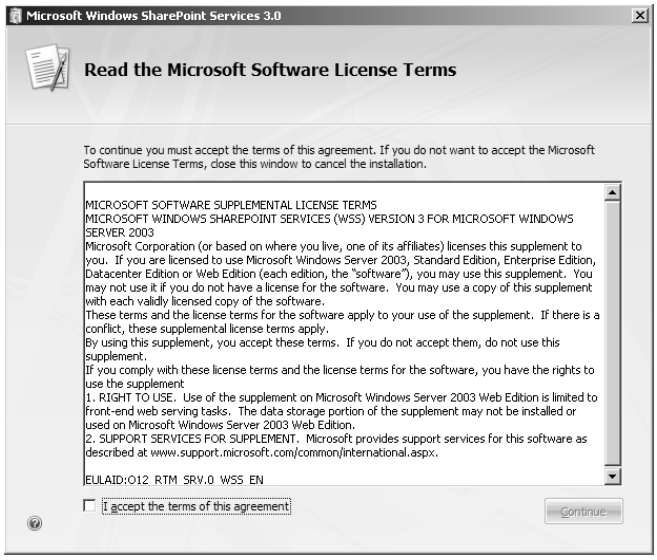


Figure 1.2 - Initial SharePoint Services License Agreement

When prompted to choose between **Basic** and **Advanced** installation**,** as shown in Figure 1.3, you should choose to create a **Server Farm** and use an existing copy of either local or remote SQL Server. The **Basic** installation assumes you do not have SQL Server, and will install WMSDE (SQL Server 'lite'). WMSDE does not scale as well as SQL Server, hence it is not recommended for use with PortalWorX. The **Basic** Installation would also extend your Default Web Site during the installation, which would most likely break other ICONICS applications such as WebHMI or the Unified Web Interface.



Figure 1.3 - Choosing Installation

On the next dialog, click Web Front End to start the installation, as shown in Figure 1.4. This option allows you to add servers to form a SharePoint Farm.



Figure 1.4 - Choosing Server Type

Once you click on the Install Now button, it will install SharePoint Services 3.0 for you. When it finishes installing successful, you will get a dialog as shown in Figure 1.5. Be sure to check the box next to "Run the SharePoint Products and Technologies Configuration Wizard now," before clicking the **Close** button.



Figure 1.5 - Finished SharePoint Installation Screen

1.5 Configuring Microsoft SharePoint Services

After you have installed SharePoint Services, the next step is to configure your SharePoint Services. If you checked the option to run the **SharePoint Products and Technologies Configuration Wizard**, it will appear after you close the installation dialog, as shown in Figure 1.6. If you have closed the installation dialog without checking the option to open the Configuration Wizard, you can open it by going into Administrative Tools and launching it there. Click on **Next** to start the configuration.



Figure 1.6 - SharePoint Products and Technologies Configuration Wizard

The ensuing dialog will prompt you that Internet Information Services (IIS), SharePoint Administration Service, and SharePoint Timer Service may have to be started or reset during the configuration, as shown in Figure 1.7. Click **Yes** to restarted the required services if necessary.

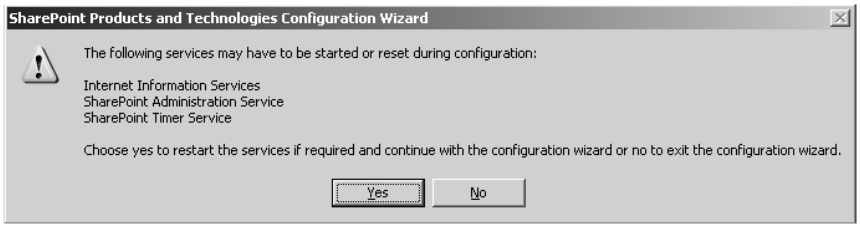


Figure 1.7 - Restart or Reset Required Services

The next dialog will ask you if you want to connect to an existing server farm. Select **No, I want to create a new server farm** radio button as shown in Figure 1.8 and then click the **Next** button.

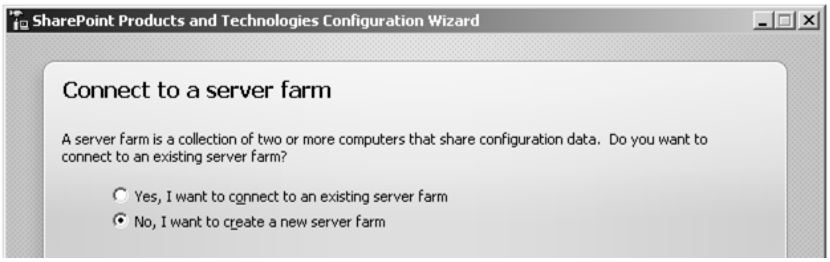


Figure 1.8 - Connect to a Server Farm

The **Specify Configuration Database Settings** dialog will appear, as shown in Figure 1.9. Here you must enter the Database server, Database name, Username and Password. Note that the user name must start with a Domain Name. If your machine is not on a Domain, you can use your local computer name instead. Once all the fields are filled in, click on the **Next** button.

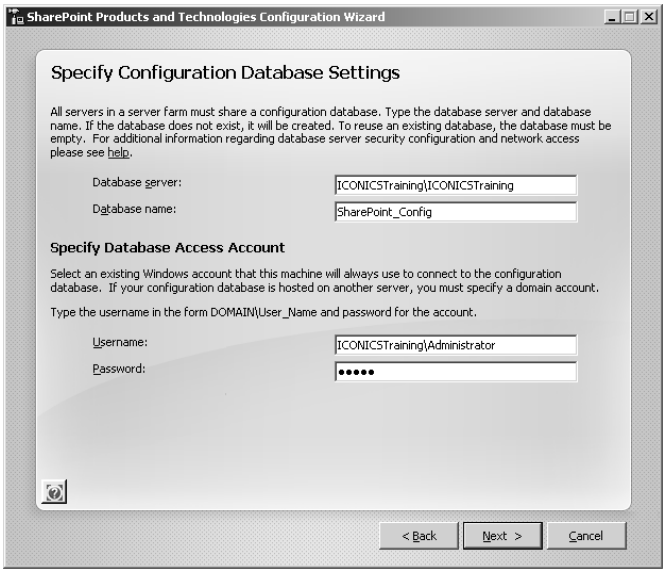


Figure 1.9 - Specify Configuration Database

On the **Configure SharePoint Central Administration Web Application** dialog, you can leave the port number as default or specify a port number if you wish. Make sure **NTLM** is the selected security, as shown in Figure 1.10. Then click the **Next** button.



Figure 1.10 - Configure SharePoint Central Administration Web Application

The next dialog that appears is the **Completing the SharePoint Products and Technologies Configuration Wizard**, which displays the current configuration settings. Click on the **Next** button to continue.

The **Configuring SharePoint Products and Technologies** dialog appears. This will perform nine configuration tasks. If any of these tasks fails, you must go back and restart the configuration process from the beginning. If all tasks complete with no error, you will receive a successful configuration dialog at the end. Click on the **Finish** button to close the dialog box.

This will launch the Internet Explorer web browser to your new SharePoint Central Administration portal. If you receive an error similar to the one shown in Figure 1.11, you may need to add the Network Service account to your SQL Server logins.

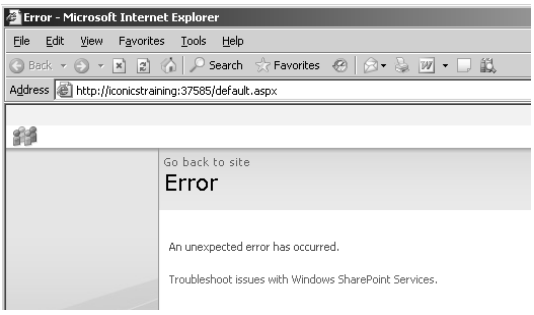


Figure 1.11 - An Error Opening the SharePoint Central Administration Page

To correct this problem, open your SQL Server Enterprise Manager. Then, expand the tree control until you get to your Security Logins, as shown in Figure 1.12.

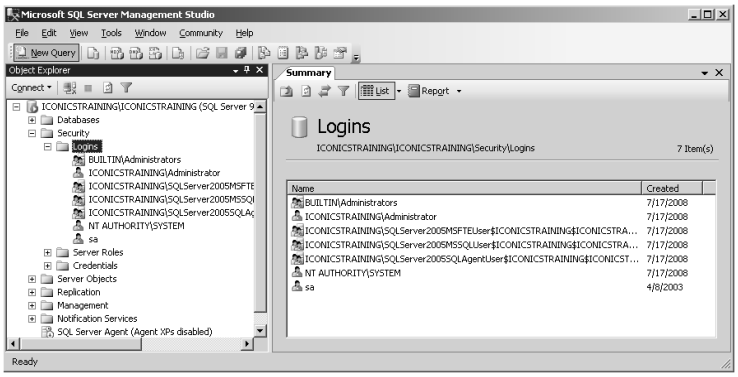


Figure 1.12 - SQL Server Security Logins

Right-click on Logins and select **New Login…** to add the NETWORK SERVICE account if it is not already present in the list. You can type "NT AUTHORITY\NETWORK SERVICE" into the **Name** field. If the user already exists, right-click on it and select Properties to edit the permissions.

On the **Server Roles** page, check all the boxes, as shown in Figure 1.13. Click on **OK** to exit the user properties dialog.

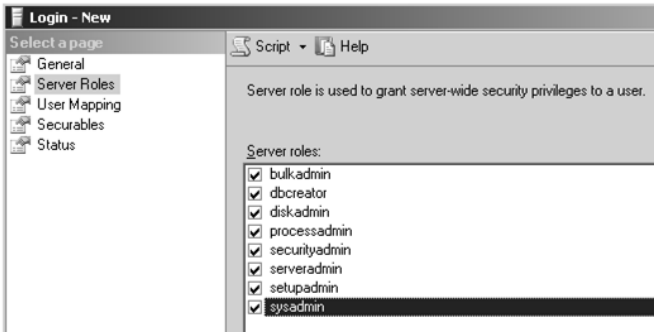


Figure 1.13 - Server Roles for the Network Service Account

> **NOTE:** If you wish to limit the permission this account has, it is recommended that you enable all permissions first. Once you get the administration page working, you can come back into the properties to limit the roles.

Switch back to your Internet Explorer (SharePoint Central Administration) page, and click on the **Refresh** button to try again. The web browser should now display the **SharePoint Central Administration** page, as shown in Figure 1.14. If you have made it this far, you have successfully configured Windows SharePoint Services. Now you are ready to install PortalWorX.

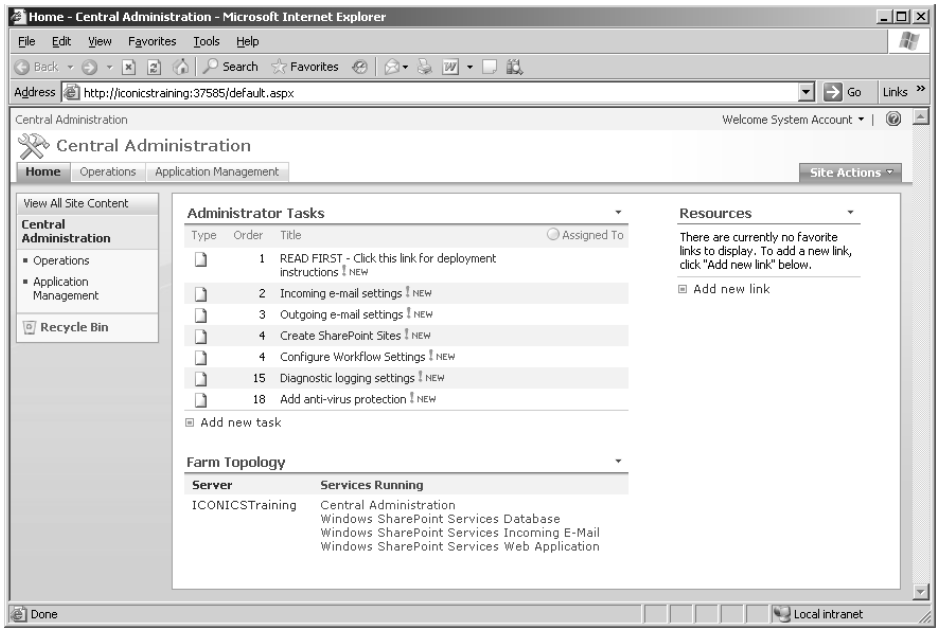


Figure 1.14 - SharePoint Central Administration Page

1.6 Installing PortalWorX

This section describes the system requirements and steps for installing PortalWorX. Be sure to save and close all other applications before installing PortalWorX.

To install PortalWorX, insert the BizViz product DVD and select the **PortalWorX** installation from the software selection menu. The PortalWorX Setup dialog box appears, as shown in Figure 1.15. Click the **Next** button to continue.

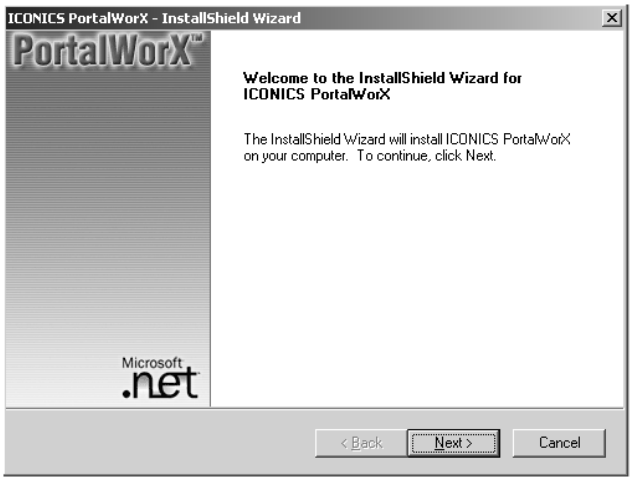


Figure 1.15 - PortalWorX Setup

The License Agreement dialog box appears, as shown in Figure 1.16. Select I accept the terms of the license agreement. Click the Next button to continue.

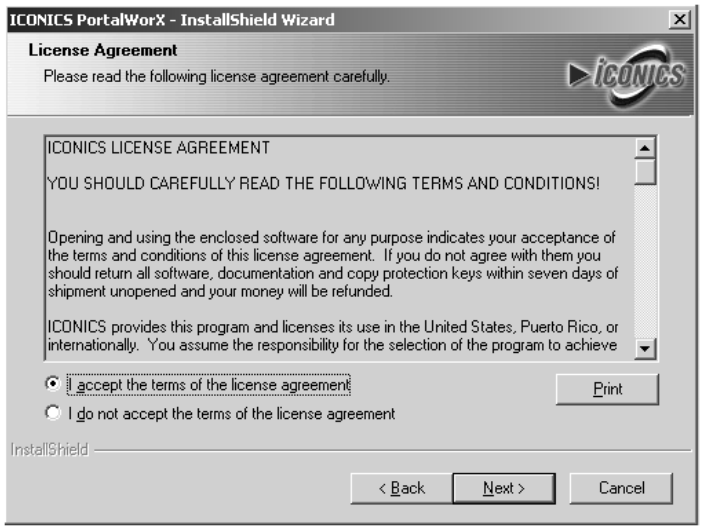


Figure 1.16 - License Agreement

The **Choose Destination Location** dialog box appears, as show in Figure 1.17. Click the **Browse** button to choose a new location, otherwise leave it as default and click the **Next** button to continue.

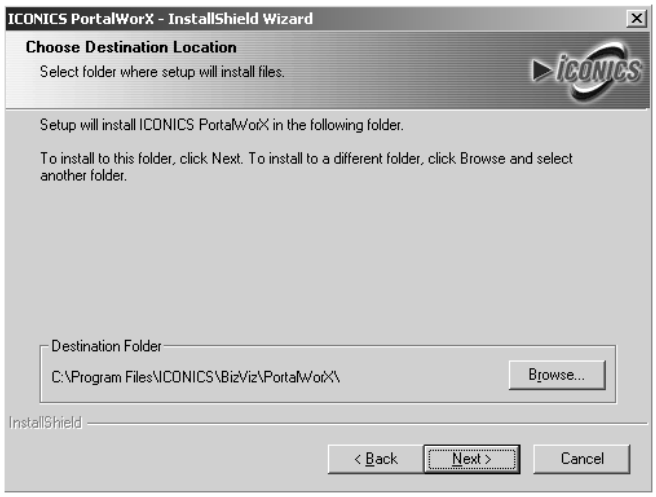


Figure 1.17 - Destination Location

The **Ready to Install the Program** dialog box appears. When you click on the **Install** button to install PortalWorX, the **User Configuration Wizard** appears. Continue the installation by clicking on the **Next** button.

The **Create/Select PortalWorX User** dialog box appears, as shown in Figure 1.18. You can create a new user or select and existing user and then click the **Next**

button to continue. If you have already installed other BizViz product and running it under a single user, it is recommended that you select that user. This way, one user runs all of your BizViz services, which can eliminate some communication issues between products.

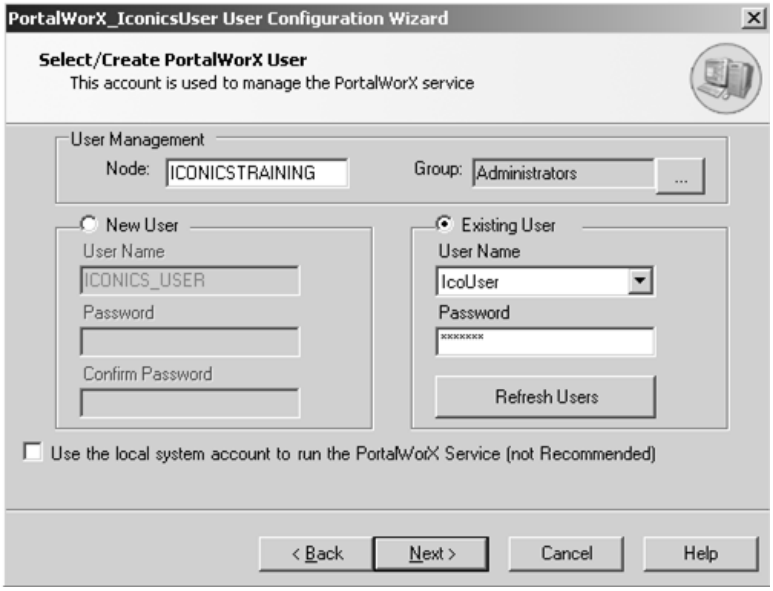


Figure 1.18 - Select/Create a User Account to Run PortalWorX

Select the location of your SQL Server: either on your local machine or on a remote one, as shown in Figure 1.19. Click the **Next** button to continue.

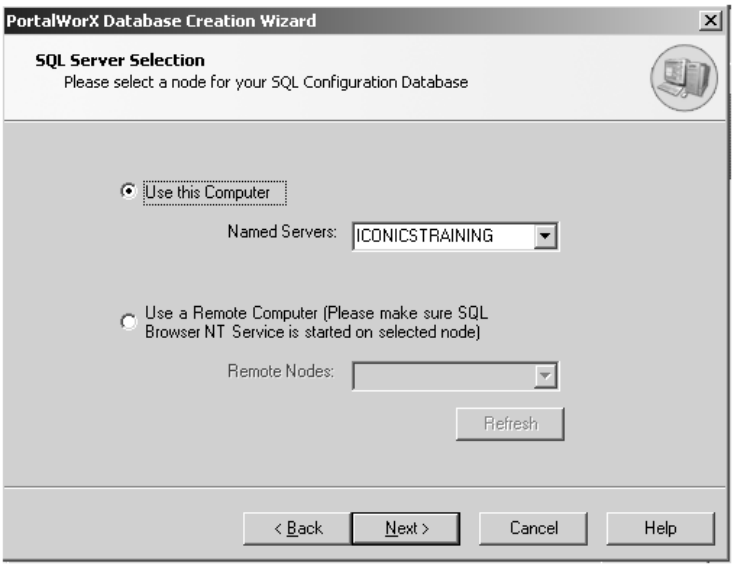


Figure 1.19 - PortalWorX SQL Server Selection

Select the proper authentication mode to log into your SQL Server and then click on the **Next** button to continue. Note that if your SQL server is remote, you must use a specific database user name and password to connect.

In the Database Deployment Options dialog, you have two options for creating your new database, as shown in Figure 1.20. You can either create a new Microsoft SQL Server database, or you can add the PortalWorX configuration database structure to an existing Microsoft SQL Server database. Here we will assume that you will choose the first option (to create a new database). Select **I want to create a new Microsoft SQL Server database,** and then click the **Next** button to continue.

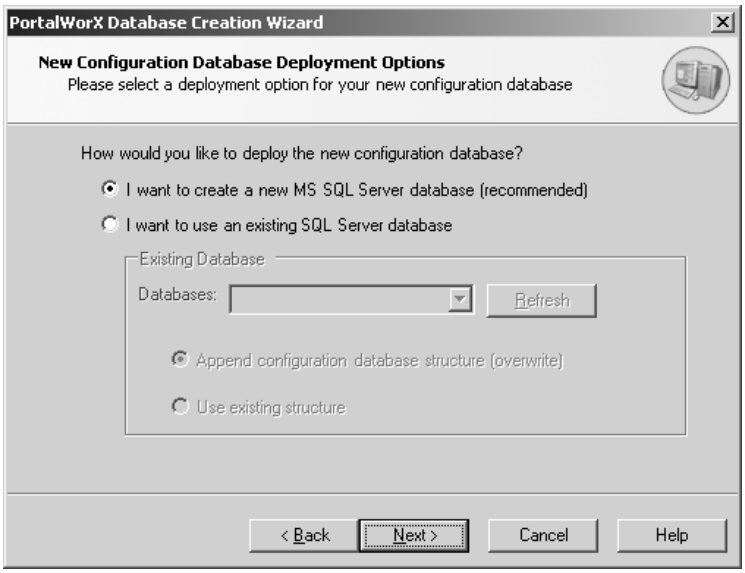


Figure 1.20 - Creating a New MS SQL Database

Choose the settings for the SQL Server database parameters, as shown in Figure 1.21. Type a name for the database in the **Database Name** field. In the **Database Path** field, you can choose a directory path for the new database. You can browse for a directory by clicking the **…** button to the right of this field or you can use the default database file path.

Under the **Database File Properties** section, you can specify an initial size for the database, which should be as large as possible. You can also specify a **Database Growth** option (in megabytes) or as a percentage of the total size. MSDE servers are capable of increasing the database size on the fly to store more data. However, if this operation is performed frequently, the overall system performance may decrease. Choosing an initially large database size and a corresponding database growth option can drastically improve system

performance. To shrink the size of the new database, check the **Auto Shrink** check box.

Under the **Log File Properties** section, you can also modify the settings for the database transaction log file. Specify a **Log File Growth** option (in megabytes) or as a percentage of the total size. Again, a sufficient initial size setting can greatly improve performance. The default options should be adequate for most applications with a small to medium size load.

Click on the **Next** button to create the new SQL Server database.

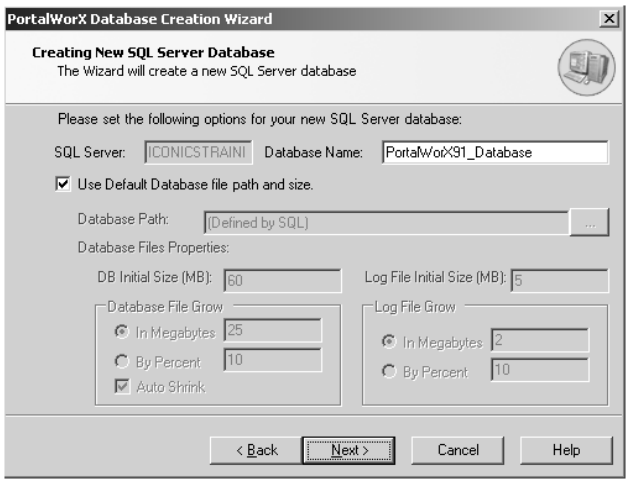


Figure 1.21 - SQL Database Parameters

The Wizard creates the new SQL Server database, as shown in Figure 1.22. When it is finished, it will tell you if the operation has completed successfully.

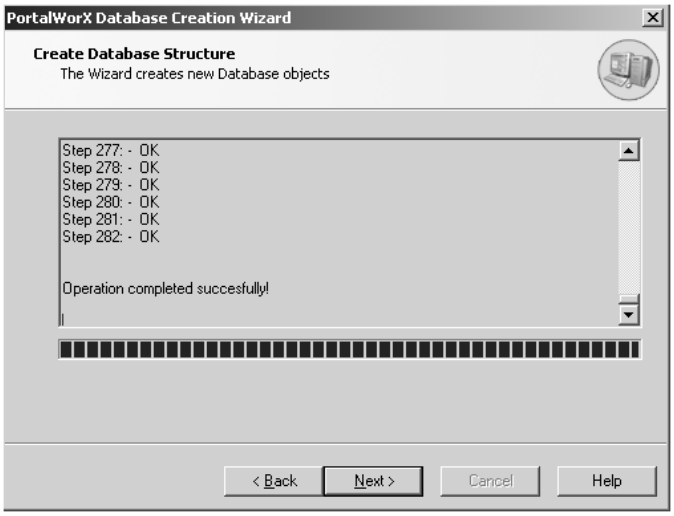


Figure 1.22 - Database Creation Status

Once the database has been created successfully, the next dialog displays a summary of the creation, as shown in Figure 1.23. Click on the **Finish** button to complete the database creation.



Figure 1.23 - PortalWorX Database Creation

The PortalWorX installation will continue, as shown in Figure 1.24.

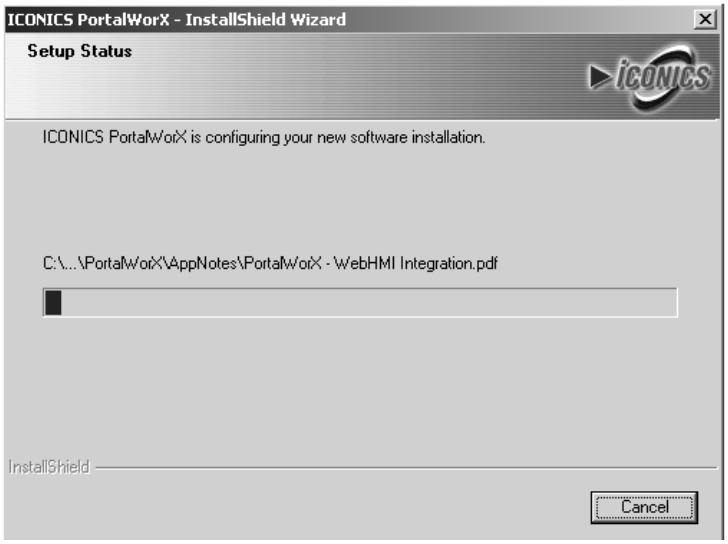


Figure 1.24 - PortalWorX Installation Continues

During this installation, the **PortalWorX Setup** dialog appears, as shown in Figure 1.25. This dialog allows you to choose the web site to install PortalWorX. In general, we will install on the Default Web Site. However, if there is another site you would like to install ReportWorX, you can use that instead. Note that this is not your portal site and you should choose sites that have not been extended by SharePoint.

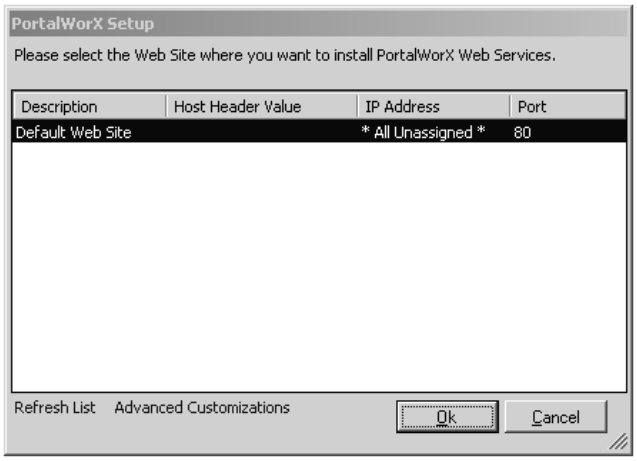


Figure 1.25 - Web Site Selection

Once you have chosen a site to install PortalWorX on to, click on OK to continue the installation. When the installation completes, choose the option to restart your computer and click on the **Finish** button, as shown in Figure 1.26.

Now you are ready to create a new web site and a new portal using the PortalWorX Administration Panel. For more information, please see **Chapter 2.**

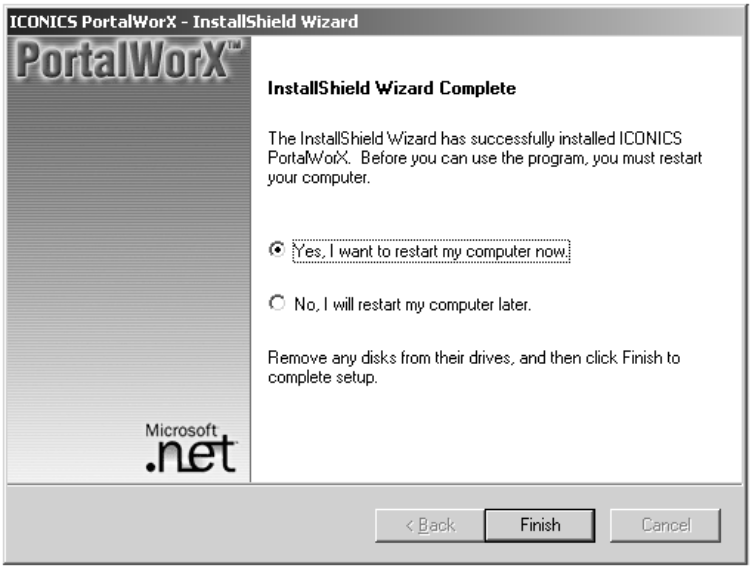


Figure 1.26 - Installation Completed

Lab: Overview of PortalWorX Examples 1

1.1 Quick Lab Overview

This Quick Lab introduces you to the PortalWorX examples that you will create throughout this training class. In our examples, we will use a hypothetical pharmaceutical company, called Acmeseutical, to explore how such a company would build a PortalWorX application.

1.1.1 Task Checklist

In this Quick Lab, you will complete the following tasks:

- Look at the existing examples on www.portalworx.com or on the local machines sample portal.
- Look at the completed version of the Acmeseutical Portal.

1.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

1.2 Viewing the PortalWorX Examples

First, your instructor will open www.portalworx.com to show you an example of how PortalWorX is being used within ICONICS. Figure L1.1 contains an example of what you will see.

You can bring up this portal if there is an internet connection on your workstation, otherwise, you can bring up the sample portal created on the local machine. Feel free to click around the portal to get a feel of what is available and what you are going to accomplish by the end of the course.



Figure L1.1 - PortalWorX.com

Figure L1.2 shows what your Acmeseutical Portal should look like by the end of the training class.

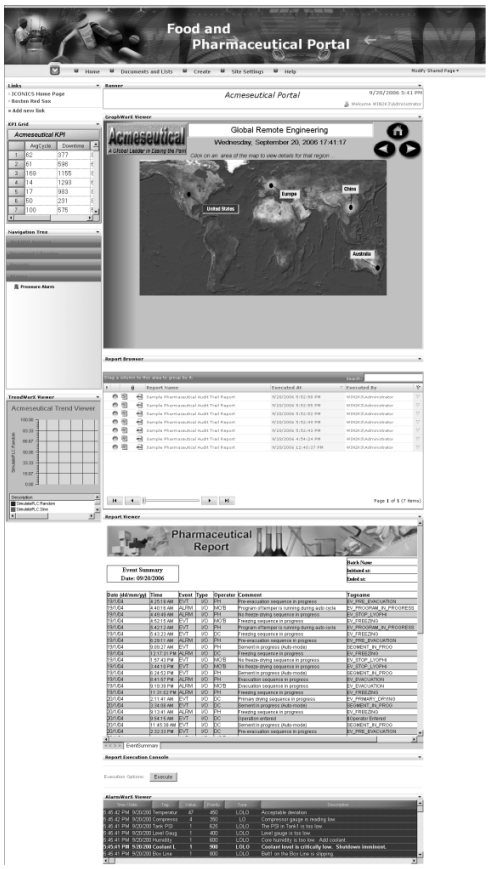


Figure L1.2 - Completed Acmeseutical Portal

This completes Lab 1. In the next chapter, you will create a new Web site in Internet Information Services (IIS), on which to host your Acmeseutical portal.

SharePoint Portal 2

2.1 Objectives

After completing this chapter, you should know how to:

- Create a web through the SharePoint Central Administration Page
- Extend a web site using the SharePoint Central Administration page
- Create a site collection for your portal
- Restart IIS
- Distinguish between shared mode and personal mode.

2.2 Creating a New SharePoint Portal

Before you can start using ICONICS web parts, you must first create a SharePoint-based portal on which to host those web parts. You can create a basic SharePoint portal from the SharePoint Central Administration page.

Launch the Central Administration page by going to Start → Control Panel → Administrative Tools → SharePoint 3.0 Central Administration. This launches the main page of the SharePoint Central Administration. Click on the **Application Management** tab as shown in Figure 2.1, and then click on the **Create or extend Web application** link to continue.

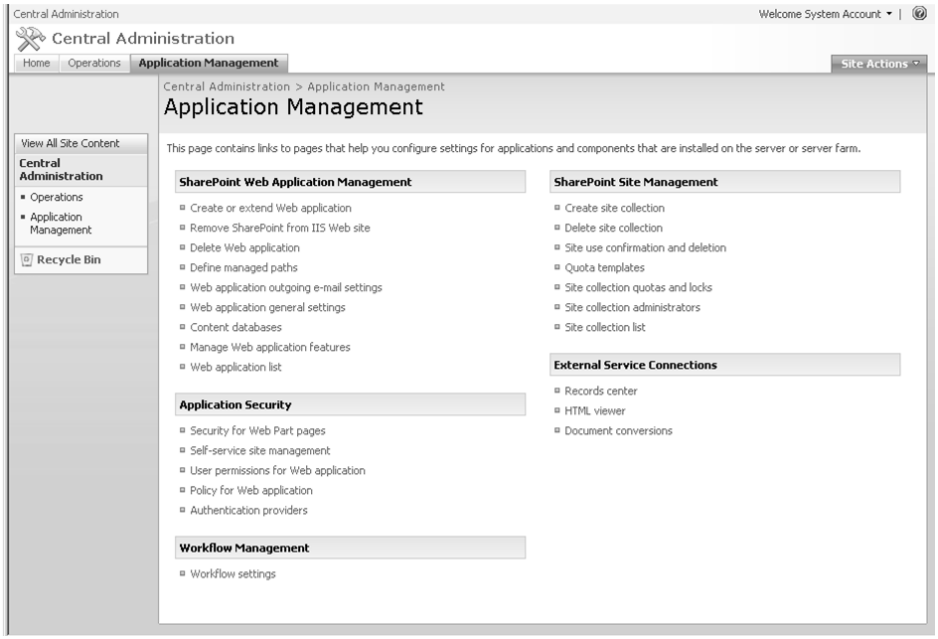


Figure 2.1 - SharePoint Central Administration: Application Management

This will bring you to the **Create or Extend Web Application** page, as shown in Figure 2.2. Then click on the Create a new Web application link to continue.

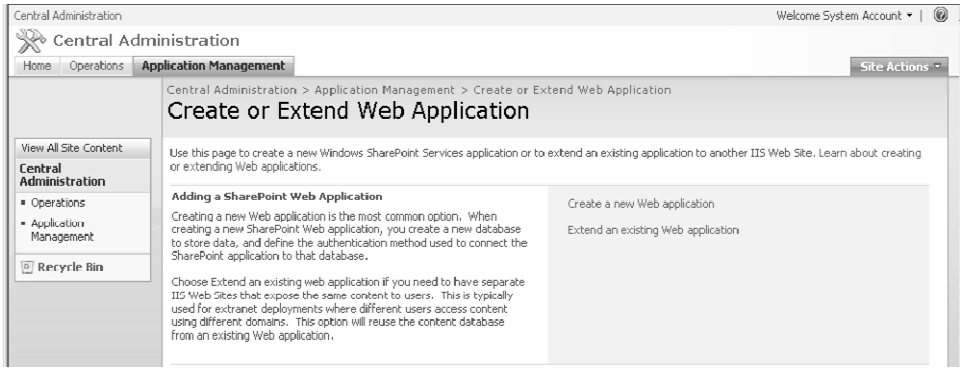


Figure 2.2 - Create or Extend Web Application

On the Create New Web Application page, we will need to fill in several fields to properly setup our new portal. Start in the IIS Web Site section by selecting the **Create a new IIS web site** and enter the name of the new website in the description field. Then, enter a port number in the **Port** field. Try to avoid well known ports and enter a port number you know is not in use. Generally, ports above 2000 can be a safer choice.

Next, we will enter a **path** to store files for this web site. The location where you store files for the web site should be one that has internet access permissions. A good place is the **Inetpub** directory on the root of our computer. In this example,

we used "C:\InetPub\TestPortal", which will create a new folder called **TestPortal** in this directory.

For the Security Configuration section, select **NTLM** for the Authentication provider if it's not already select. Select **No** for **Allow Anonymous**, and **No** for **Use Secure Sockets Layer (SSL)**. At this point, the portal configuration should look similar to Figure 2.3.

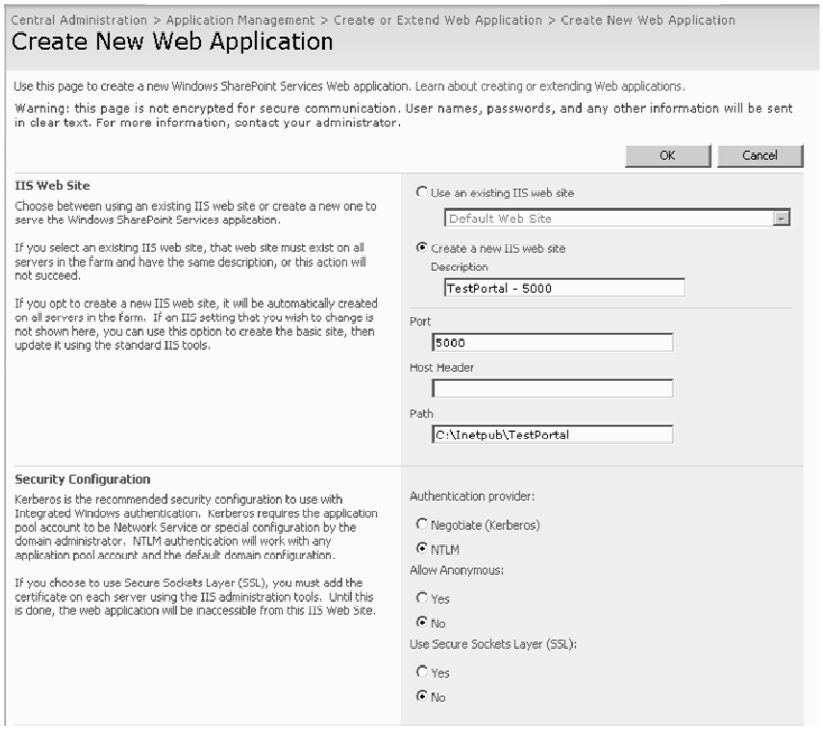


Figure 2.3 - Create a New Web Application

We will leave the Load Balance URL section alone, as it already fills in the proper URL and Zone for us.

In the **Application Pool** section, we will start by selecting the **Create a new application pool** radio button and enter a new pool name. Then, select the Predefined radio button and select Network Service for the security account for this application pool. The Network Service account will be running your portal.

In the **Reset Internet Information Services** section, select to **Restart IIS Automatically**. You can leave it as Restart IIS Manually, but you must remember to restart IIS at the end of your portal creation when prompted.

For the **Database Name and Authentication** section, we want to leave the Database Server field alone with the default name. Change the Database Name so that it still contains WWS_Content, but with a more personalized name added on

such as WWS_Content_TestPortal. Leave the Database Authentication method to **Windows Authentication (recommended)**. The page should now look similar to Figure 2.4. Click the OK button at the bottom of the page to create the portal.

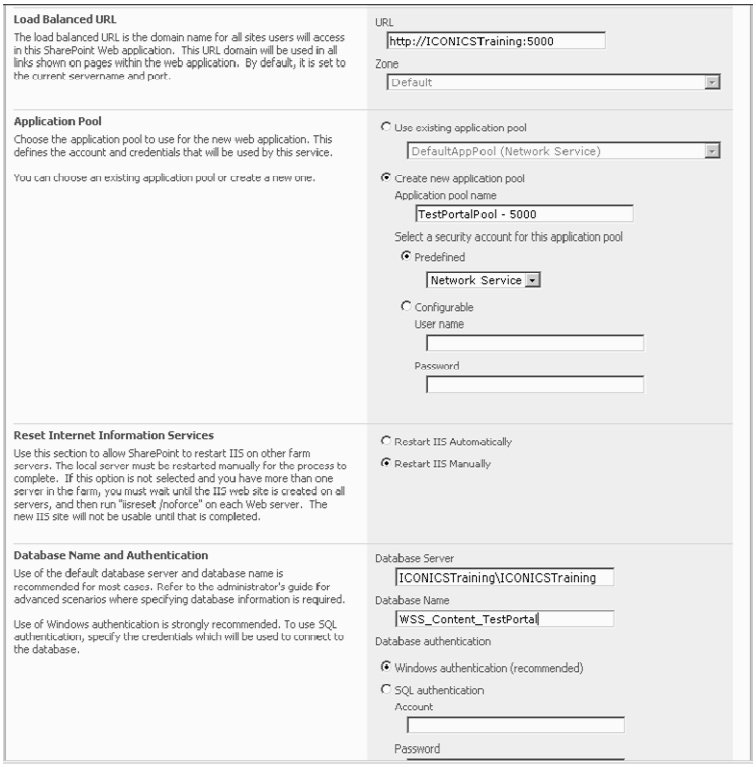


Figure 2.4 - Create a New Web Application Continued

This will bring you to the **Application Created** page. Click on the Create Site Collection link on the page to continue. It is extremely important that you click on this link. This is your only chance to configure your site collection. You will not be able come back to this page or gain access to the site collection link once you leave. Without creating a site collection, your portal will not function properly.

On the Create Site Collection page, you will need to give your new site a Title, which will be displayed in the web browser when the page is launched. You may fill in the optional description as well.

Select a template for your portal. This dictates how your portal will look. This is the only chance where you can select a template. Once you have selected a template, it is the template for the portal. You will not be able to change this template.

You will then need to enter the **Primary Site Collection Administrator**. This will be in the format of "Domain\UserName". If your computer is not in a

domain, enter your local computer name instead. In this example it will be "ICONICSTraining\Administrator". Once you enter the user name, click on the Check Name button to make sure that you have enter an acceptable name.

The other options can remain as default and the page should look similar to Figure 2.5. You may click on OK to continue.

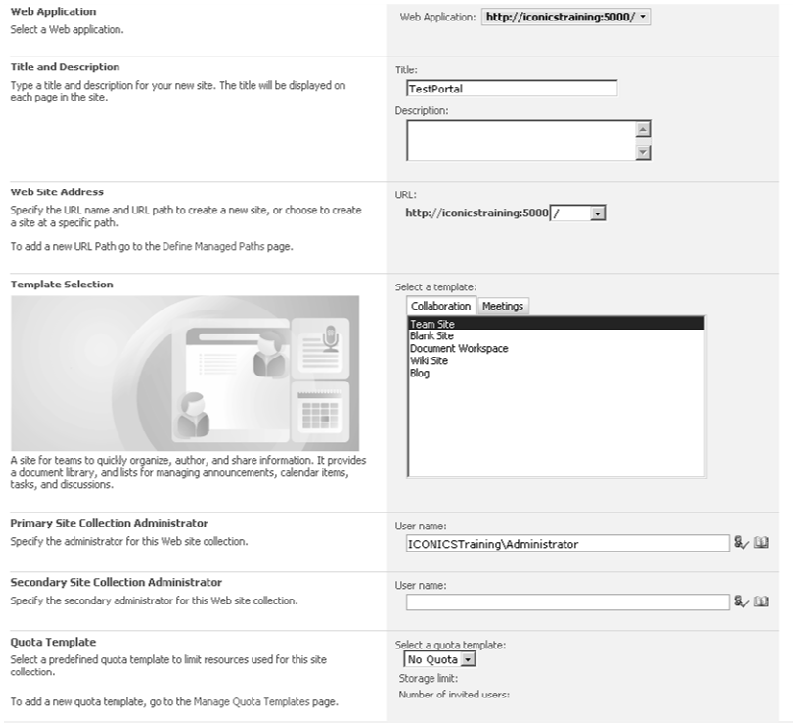


Figure 2.5 - Site Collection

You will be brought to the top-Level Site Successfully Created page. If you have selected to restart IIS automatically, simply click on the link to view your portal or just click on OK to go to your portal's administration page. Otherwise, you must restart IIS manually before clicking the link to your new site.

To restart IIS, go to Start → run and enter "iisreset" and hit enter to restart IIS as shown in Figure 2.6.

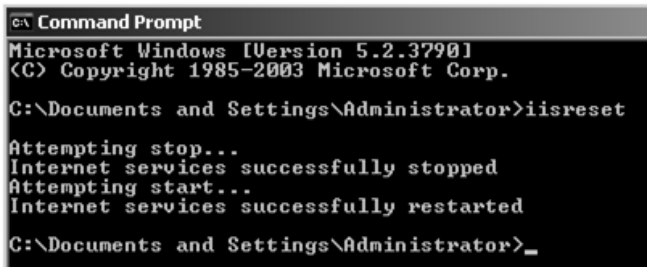


Figure 2.6 - Restarting IIS

Now, you may click the link to your new site. After a few seconds, the newly created portal page will be displayed, as shown in Figure 2.7. It will not have much on it; you are now ready to add ICONICS Web parts to the portal.

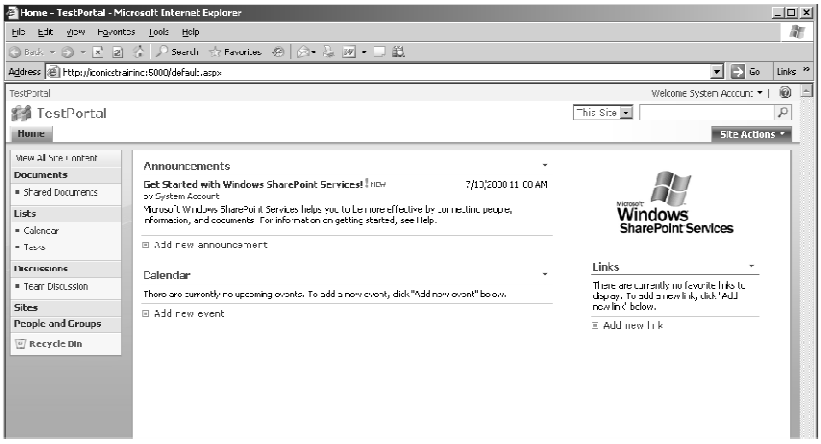


Figure 2.7 - Home Page of the New Portal

2.3 Shared Mode vs. Personal Mode

SharePoint support **personalized views** for users. This means that each page can be customized, web parts can be added or removed, and properties can be changed for each user individually. The **shared view**, on the other hand, is the view of the page that applies to all users, and that is what users see when they first browse to the portal (prior to any customization). To switch between shared view and personal view (if the proper access rights are granted), click on the Welcome System Account link on the top right side of the page, as shown in Figure 2.8, and select the desired view.

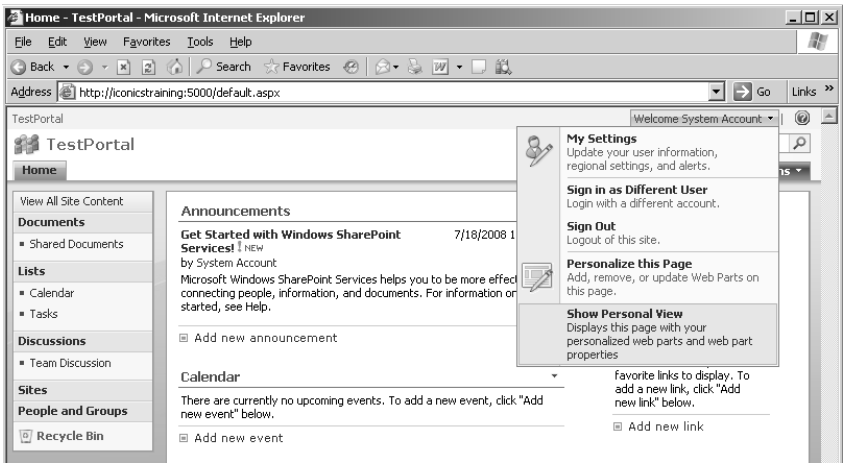


Figure 2.8 - Switching between Shared and Personal Views

Lab: Creating a New SharePoint Portal 2

2.1 Quick Lab Overview

In this Lab, you will create a new SharePoint Portal. This will be the foundation of your Acmeseutical portal.

2.1.1 Task Checklist

In this Quick Lab, you will create a new SharePoint Portal.

2.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

2.2 Creating a SharePoint Portal

1. Open the SharePoint Central Admistration by clicking on Start → Administrative Tools → SharePoint 3.0 Central Administration.
2. Go to the Application Management tab and click the link to Create or extend Web application.
3. This will open the Create or Extend Web Application page where you will click the link to **Create a new Web application.**
4. This brings up the **Create New Web Application** page. Here you will start by creating a new IIS web site called **Acmeseuitcal Portal - 2000**.
5. The Port number for this new portal will be **2000**.
6. Change the path for this new portal to **C:\Inetpub\AcmeseuticalPortal**.

7. You will leave the security configurations as they are: **NTLM** as the Authentication provider, **No** to allow anonymous, and **No** to Use Secure Sockets Layer (SSL). At this point, your page should like Figure L2.1.

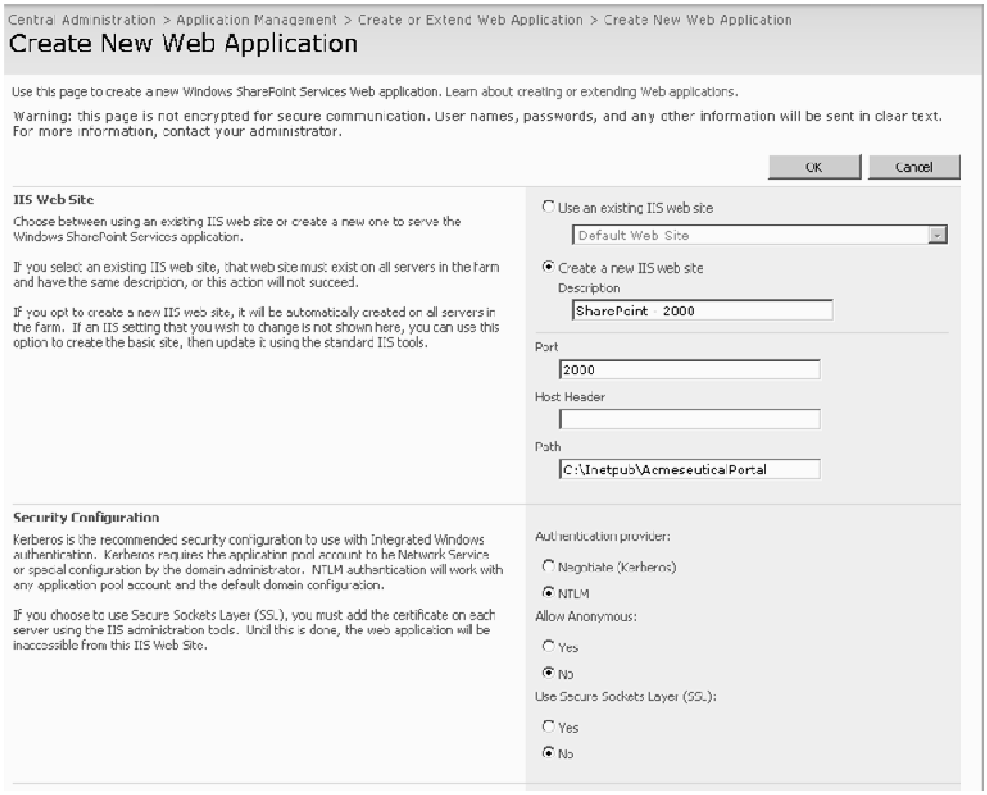


Figure L2.1 - Creating a New Web Application

8. The Load Balance URL will be left the same as it is and the zone is **Default.**

9. In the Application Pool settings we will create a new application pool and name it **AcmeseuticalPortal - 2000**.

10. Change the security account for this application pool to predefined **Network Service.**

11. You can leave the Reset Internet Information Services as is with **Restart IIS Manually**.

12. In the Database Name and Authentication section, we want to leave the Database Server as default. The Database name we will modify to **WWS_Content_Acmeseutical.** Leave the Database Authentication as **Windows authentication (recommended)**. The rest of the page should now look like Figure L2.2.

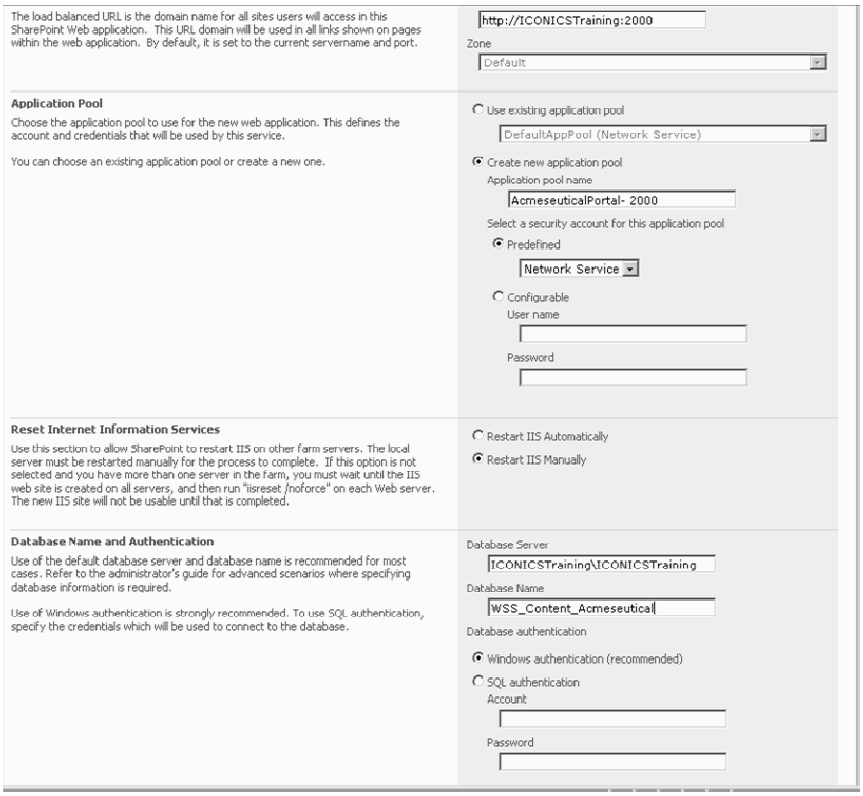


Figure L2.2 - Web Application Configurations Continued

13. Click on the **OK** button to continue.

14. When the Application Created page is launched, click the **Create Site Collection** link, which will open the Create Site Collection page.

15. In the **Title** field, enter **Acmeseutical Portal**, and then add a description if you like.

16. Select the **Team Site** template under the Collaboration tab in the Template Selection section.

17. Next, we need to enter a Primary Site Collection Administrator. Enter **ICOTraining\IcoUser** in the user name field and click the button to the right to check the validity of the name. It will become underlined if correct.

18. Your Create Site Collection page should look like Figure L2.3. Leaving everything else as it is, we can now click on the **OK** button to continue.

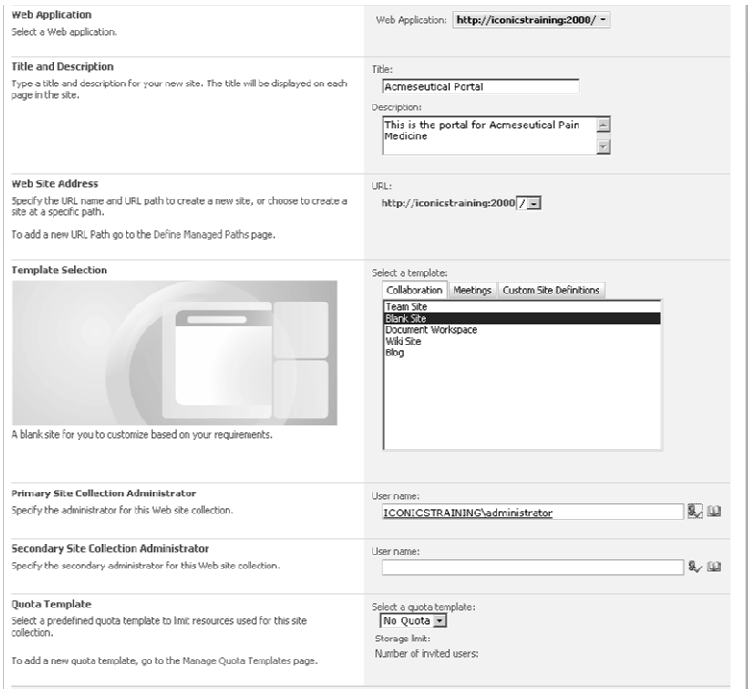


Figure L2.3 - Create Site Collection

19. The Top-Level Site Successfully Created page will appear. Before clicking the link to our new site, we must first reset IIS. Go to **Start → Run** and type in **iisreset** and hit enter to run the command as shown in **Figure L2.4**.

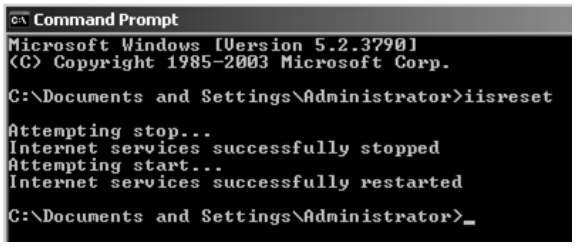


Figure L2.4 - Restart IIS

20. Now you may click the **http://icotraining:2000** link on the Top-Level Site Successfully Created page.

21. Your new Acmeseutical Portal page will now appear.

That completes Lab 2. In the next chapter, you will learn about the PortalWorX Administration Interface and how to use it to create new portals. Then in the lab following Chapter 3, you will use PortalWorX to create a new portal based on our Acmeseutical Portal Web site.

PortalWorX Administration 3

3.1 Objectives

After completing this chapter, you should know how to:

- Install and remove ICONICS Web Parts on a portal.
- Install ICONICS sample portals.
- View a list of existing portals.
- Switch between portal languages.
- Choose a Security Provider for your portal.

3.2 Introduction to PortalWorX Administration

Once you have created a new web site and new SharePoint portal, you can use the PortalWorX Administration Interface to manage all of your PortalWorX SharePoint portals. To open the PortalWorX Administration Interface, you can click on Start → Programs → ICONICS BizViz → PortalWorX → Central Administration.

This launches the main page of the PortalWorX Administration Interface, as shown in Figure 3.1. From this page, you can access the following PortalWorX Administrative tools:

- Add Remove Components
- Portals Management
- WebHMI
- Single Sign
- Administration Tools

In this chapter, we will talk about "Add or Remove Components" and "Portals Management". The following chapters will explain the other tools.

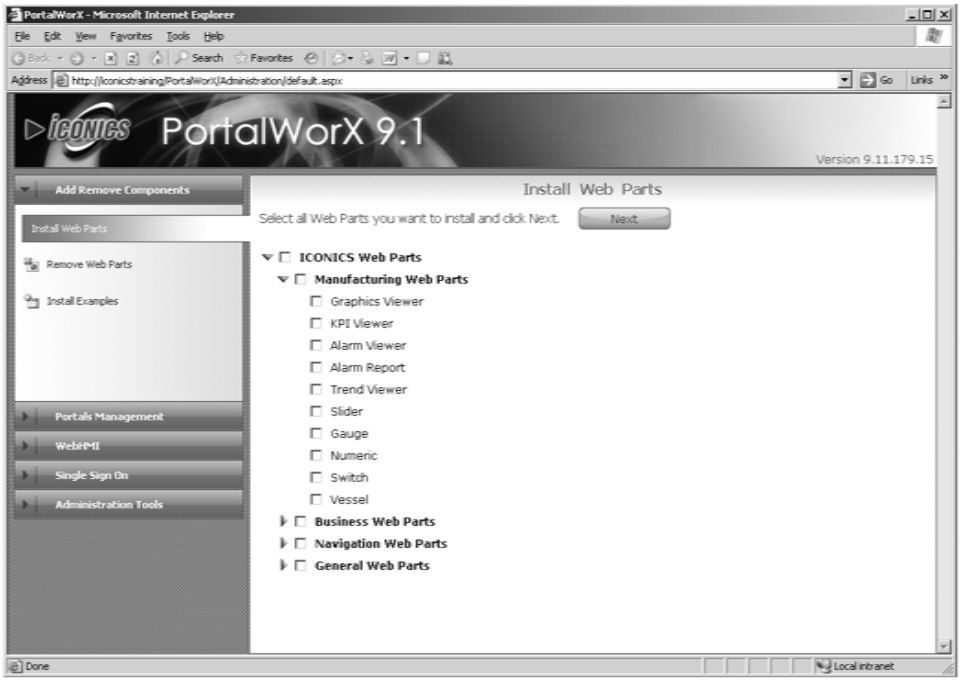


Figure 3.1 - PortalWorX Central Administration Interface

3.3 Add Remove Components

The Add or Remove Components section of the PortalWorX Administration Interface, shown in Figure 3.1, enables you to:

- Install Web parts
- Remove Web parts
- Install examples

3.3.1 Installing Web Parts

Once you have created a basic SharePoint portal site, you can use the PortalWorX Administration Interface to add ICONICS Web parts to that portal. First, open the PortalWorX Administration Interface by clicking Start → Programs → ICONICS BizViz → PortalWorX → Central Administration.

The page loads to the Install Web Parts page by default. If you are on another page, you can click on the **Install Web Parts** link under Add or Remove Components. Check all the web parts that you want to install, and then click **Next.**

Select the portal Web sites on which you would like to install these web parts, as shown in Figure 3.2. You can select multiple web sites by holding down the

control key and click on the each site to select. Click on **Install** to start the web parts installation process.

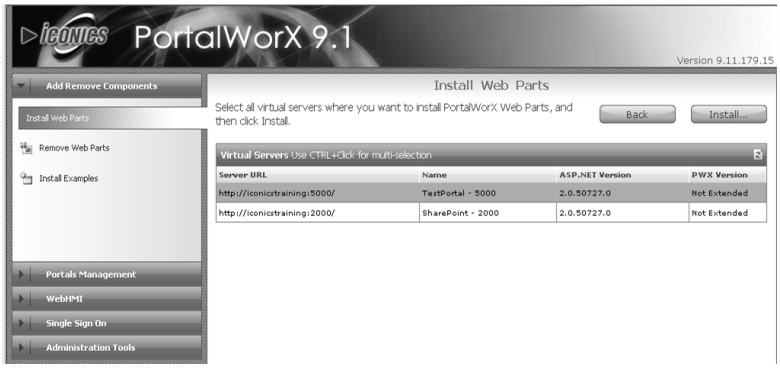


Figure 3.2 - Selecting Web Sites to Install Web Parts

If your virtual server is not running ASP.NET 2.0, it will automatically be upgraded to ASP.NET 2.0, as shown in Figure 3.3. Click on **OK** to continue with the upgrade.

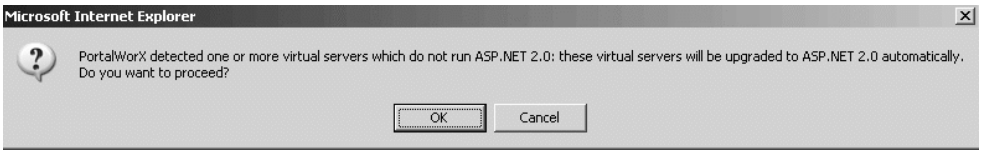


Figure 3.3 - ASP.NET Upgrade Notice

The installation process will complete and at the end, you will see a report of the success or failure of each web part's installation, as shown in Figure 3.3.

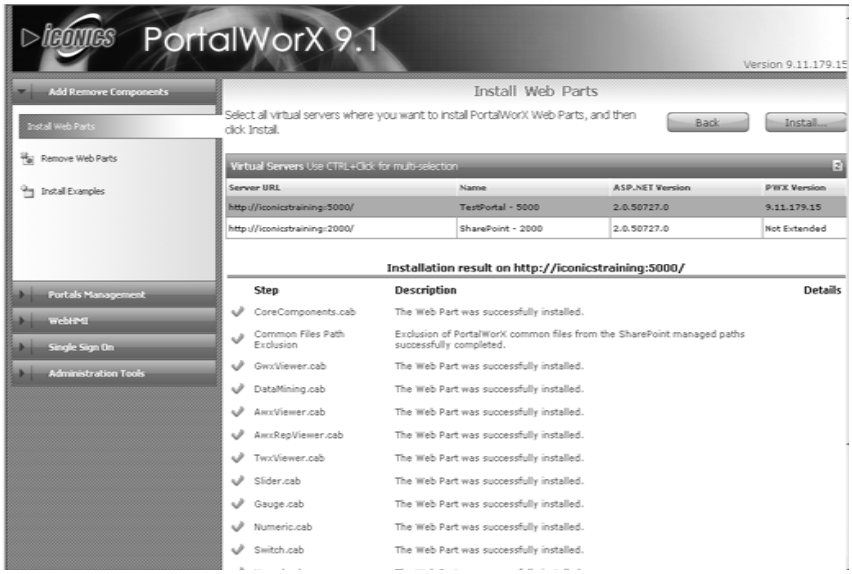


Figure 3.1: Web Parts Installed Successfully

To verify that the Web parts have been successfully installed, open your portal site and then click on **Site Actions → Edit Page.**

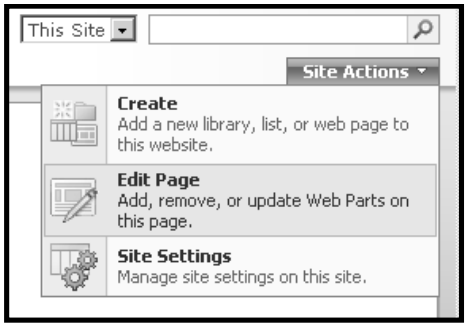


Figure 3.4 - Browsing for Web Parts

The page changes to display in Edit Mode. While in Edit Mode, select the **Add a Web Part** button from the desired area on the page. The **Add Web Parts** dialog appears where you should see a section called **All Web Parts** with a list of the available web parts in it, as shown in Figure 3.5. Selecting a single or multiple web part by checking the desired ones and clicking the **Add** button will add them to your page.

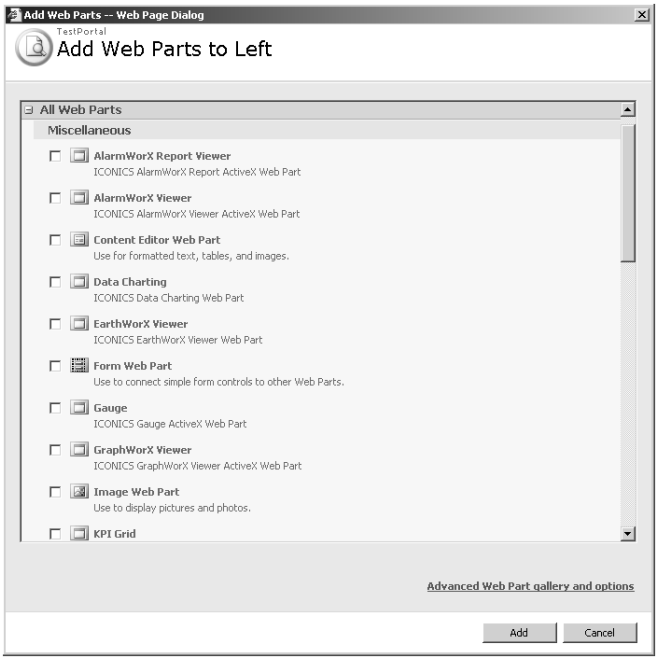


Figure 3.5 - Adding a Web Part

NOTE: For additional information about creating and configuring Web parts, please refer to the PortalWorX Web Parts help documentation.

3.3.2 Removing Web Parts

You can remove web parts from the PortalWorX Administration Interface under the Add/Remove Components as well. Once you are in the PortalWorX Administration Interface, click on the **Remove Web Parts** link under **Add or Remove Components**, as shown in Figure 3.6. Select the portal sites from which you would like to remove the Web parts. Again, you can hold down the control key then select the sites to select multiple sites at the same time and then click on **Next** to start the un-installation process.



Figure 3.6 - Remove Web Parts

Check all the web parts that you want to remove as shown in Figure 3.7 and then click on the **Remove** button. The un-installation process will complete and at the end, you will see a report of the success or failure of each web part's removal.

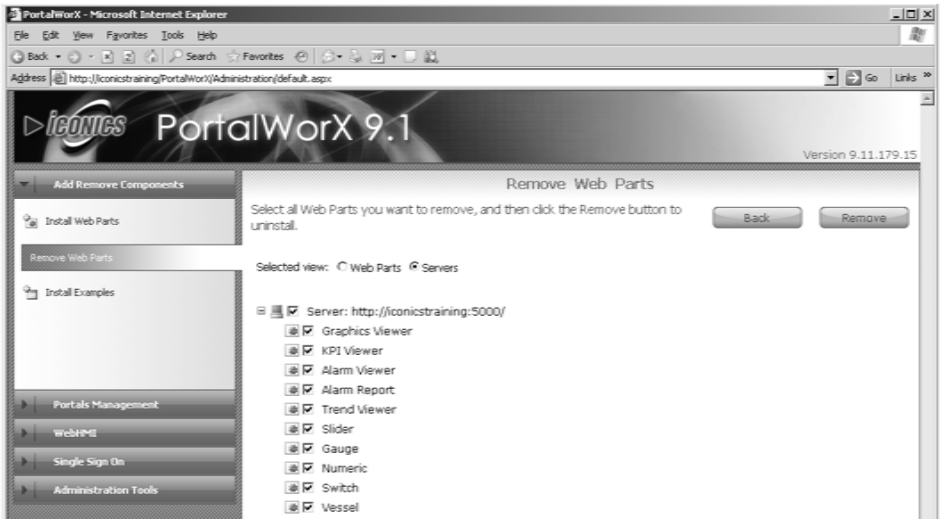


Figure 3.7 - Selecting Web Parts to Remove

3.3.3 Installing Examples

The PortalWorX Administration Interface includes examples that you can add to your portals. While in the Administration Interface, click on the **Install Examples** link under **Add or Remove Components,** as shown in Figure 3.8. Check the examples that you want to install, and then click on **Next**.

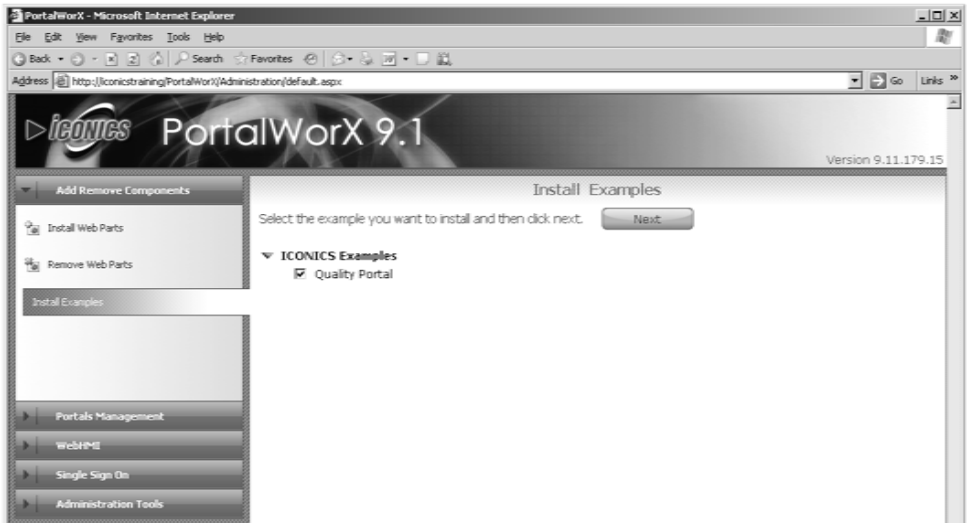


Figure 3.8 - Installing PortalWorX Examples

Select the portal sites on which you would like to install these examples, and then click on **Install.** The installation will overwrite the selected portal, creating example portal sites and documents.

3.4 Portals Management

The **Portals Management** section of the PortalWorX Administration Interface, shown in Figure 3.9, enables you to: view web sites, choose languages for virtual servers, and set up virtual server security.

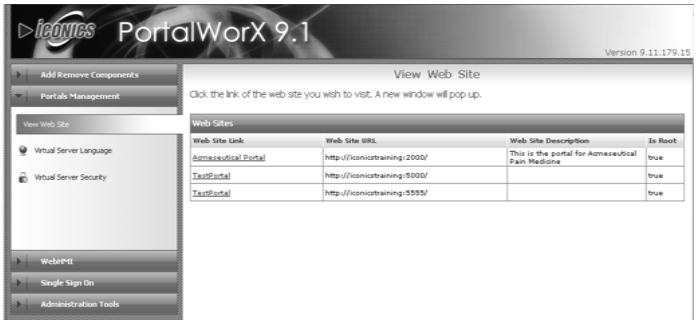


Figure 3.9 - Portal Management

3.4.1 View Web Sites

Once you have created SharePoint portal sites, you can use the PortalWorX Administration Interface to view those sites. In the PortalWorX Administration Interface, you can click on the **View Web Site** link under **Portals Management**. A list of available PortalWorX portal shows up. You can click on the portal site you wish to visit. This launches the site in a new Internet Explorer window.

3.4.2 Virtual Server Language

You can change the language of your portal site. To specify the languages for your portal, go to the **Virtual Server Language** link under Portals Management, as shown in Figure 3.10, and then click on the **Edit Language** link for the specified site.

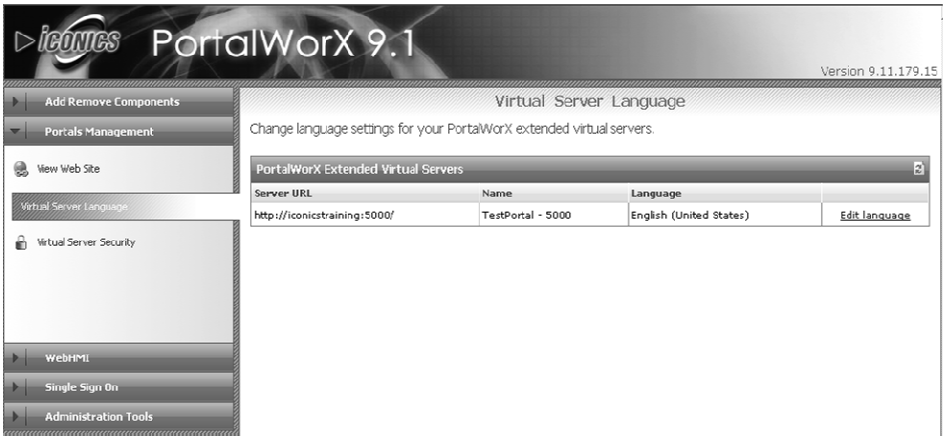


Figure 3.10 - Virtual Server Language

Select a language from the drop-down list and click on the **Update** link to complete the change. Note that SharePoint also comes with different language packs. If you are trying to switch to a language where there the corresponding SharePoint language pack doesn't exit, you will get an error. There is no need to be alarmed with this error, the message simply say that your portal site's language has not been changed due to the lack of the specific SharePoint language pack. However, your ICONICS web parts will be showing in the selected language.

3.4.3 Virtual Server Security

If you have a security application that you would like to use for your portal, you can do this by going into the **Server Security** link under Portals Management, as shown in Figure 3.11. Click on the **Edit Security** link for the specified site.

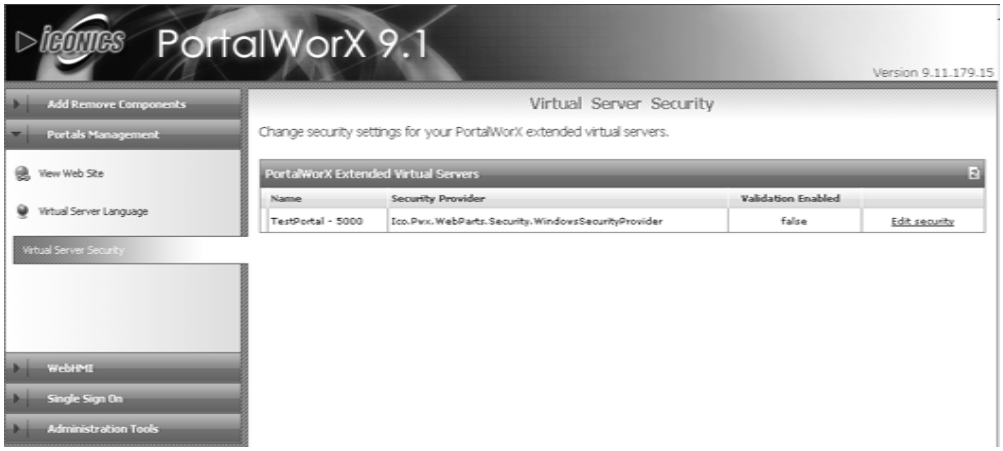


Figure 3.11 - Virtual Server Security

Select a security provider from the dropdown list. Note that if you do not have a security provider installed, the dropdown list is empty. Once you have selected the desired security provider, click on the **Update** link to complete the change.

Lab: Installing Web Parts 3

3.1 Quick Lab Overview

In the last Quick Lab we created a new Portal using the SharePoint Central Administration. Now we will install web parts to be used in our Acmeseutical Portal.

3.1.1 Task Checklist

In this lab, you will complete the following tasks:

- Install PortalWorX Web Parts using PortalWorX Central Administration

3.1.2 Support Files

You do not need any support file to complete this lab.

3.2 Installing PortalWorX Web Parts

1. Now open the PortalWorX Central Administration by going to **Start → Programs → ICONICS BizViz → PortalWorX → Central Administration**.
2. Click on the **Install Web Parts** menu, and select all the Web Parts from the right pane, as shown in Figure L3.1, and then click on the **Next** button.



Figure L3.1 - Insert Web Parts

3. Select the Acmeseutical Portal from the list and click on **Install**.

4. Once the installation completes, click on the **View Web Site** link in the **Portal management** tab, and then select your **Acmeseutical Portal** from the list.

5. Once the page loads, click on Site Actions → Edit Page, as shown in Figure L3.2.

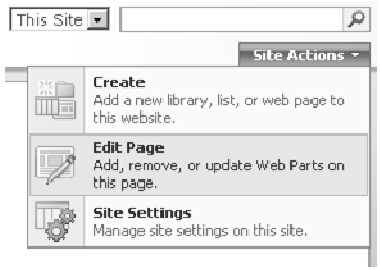


Figure L3.2 - Acmeseutical Portal in Design Mode

6. From here click on one of the two **Add Web Parts** buttons on the page to launch the Add Web Parts dialog.

7. This dialog should now contain a sub section of All Web Parts, called **Miscellaneous** which contains all of the web parts we just installed, as shown in **Figure L3.3**

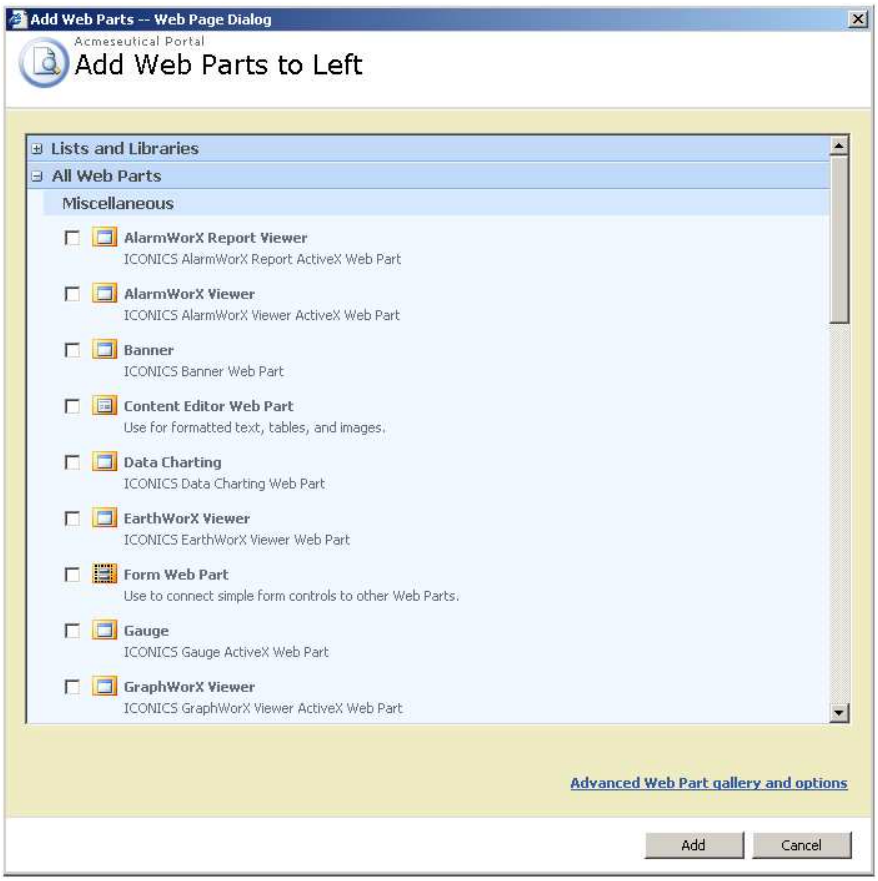


Figure L3.3 - Add Web Parts Dialog

This completes Lab 3. In the next chapter you will learn how to configure the WebHMI settings, and in the lab following that we will create a new WebHMI configuration.

WebHMI Settings 4

4.1 Objectives

After completing this chapter, you should know how to:

- Create a WebHMI configuration using the PortalWorX Administration Interface
- Configure WebHMI settings using the PortalWorX Administration Interface.
- Manage WebHMI Servers.

4.2 Introduction to WebHMI Configurations

The **WebHMI Configurations** section of the PortalWorX Administration Panel main page, shown in Figure 4.1, enables you to create and edit WebHMI configuration settings.

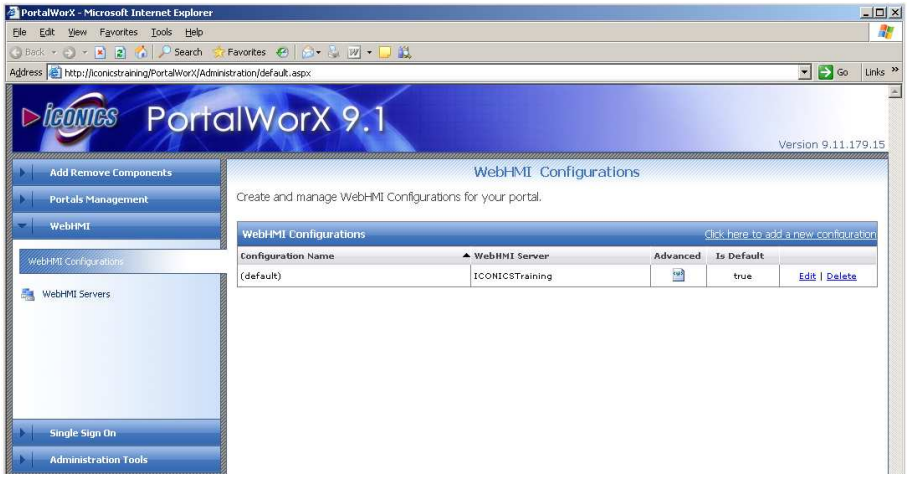


Figure 4.1 - PortalWorX Administration Panel

4.2.1 Creating a WebHMI Configuration

You can create different WebHMI configuration to use in different web parts. One useful scenario is that you may want the security for some web parts to come from a different serve. In this case, you can set the web part to use a different WebHMI configuration that asks for security from a different server machine. To create or edit a WebHMI configuration, you can go to the PortalWorX Administration Interface and click on the **WebHMI Configurations** link under WebHMI, as shown in Figure 4.2.

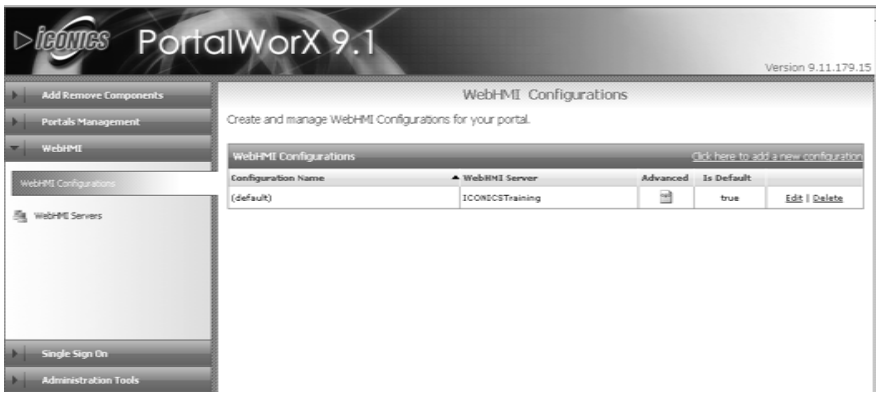


Figure 4.2 - WebHMI Configuration

This page lists the available WebHMI configurations. You can create a new configuration by clicking on the **Click here to add a new configuration** link. This will add a configuration for you. You can then specify the name of the configuration and the WebHMI Server, as well as designate the WebHMI configuration as the default one by checking the **Is Default** column.

You can edit any WebHMI configuration by clicking on the **Edit** link in a configuration. This enables you to change the Configuration Name, the WebHMI Server (IP address or node) name, and the default configuration.

To view the WebHMI Configuration properties page, click on the button in the **Advanced** column. This displays the GenBroker configuration settings, as shown in Figure 4.3. You can edit the settings and click the **Submit** button to apply your changes.

> **NOTE:** For more information about GenBroker configuration settings, please see the GenBroker help documentation

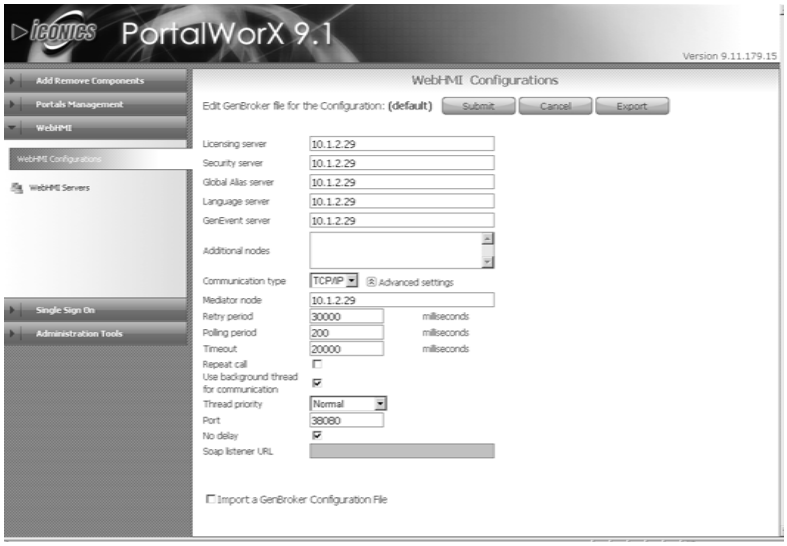


Figure 4.3 - WebHMI (GenBroker) Configuration Settings

Configuration options in the WebHMI Configuration properties page include:

- **GENESIS32 Servers:** You can assign a node name or IP address to a remote server. Your system will then know where to get information about **Security** and **Licensing**, as well as **Language Aliasing**, **Global Aliasing**, and **Events**.
- **Additional Nodes:** This section enables you to specify which Internet/intranet nodes (remote computers) that clients users will be able browse from the PortalWorX Tag Explorer Web part. To add a node to the list, type in the node name or IP address.
- **Communication Type:** Choose a communication protocol (TCP/IP, SOAP/XML, etc.)
- **Mediator Node:** Specifies the name of a mediator computer (if applicable) through which communications are routed.
- **Retry Period:** In case the connection between the GenClient and the remote GenBroker server fails, you can set the connection retry period, which is the time (in seconds) between successive connection trials.
- **Polling Period:** Number of milliseconds during which GenClient periodically flushes internal request queues.
- **Timeout:** The maximum time (in seconds) that the client will wait for a response from the server.
- **Repeat Call:** When this box is checked, the client keeps requesting data from the server until all data from the server have been sent to the client. Subsequent calls are made at the specified **Polling Period** interval.

- **Use Background Thread for Communication:** When this option is checked, GenClient uses another thread to transmit data.
- **Thread Priority:** Performance-tuning parameter. Select from Lowest, Below Normal, Normal, Above Normal, and Highest.
- **Port:** The TCP/IP port number that GenClient tries in order to establish communication with the GenBroker server. The port number is **38080**.
- **No Delay:** This check box allows you to control a delay before a short packet of data is sent. **No Delay** is checked by default to ensure the smoothest data interface exchange between clients and the GenBroker Server.
- **SOAP Listener URL:** The SOAP/XML channel allows you to send data using the SOAP communication protocol. The channel's properties are similar to the TCP/IP and DCOM channel properties. The primary difference is that you must specify the listener for the SOAP/XML channel in the URL address to which you want to connect. Any SOAP server application must have a **listener**.

4.2.2 Managing WebHMI Servers

To manage WebHMI servers go into the PortalWorX Administration Interface and click on the **WebHMI Servers** link under WebHMI, as shown in Figure 4.4. This page lists information about the available WebHMI servers. Clicking on the **Edit** link enables you to change the WebHMI Server (IP address or node) name and specify a **Friendly Name** for the WebHMI server.

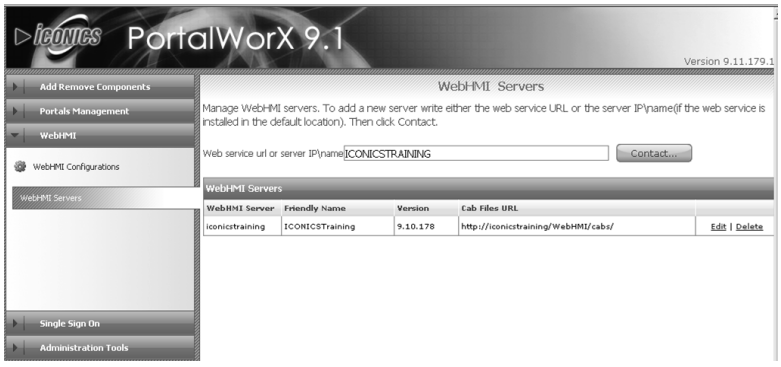


Figure 4.4 - WebHMI Server Settings

To add a new WebHMI server, type a new Web service URL or the IP address or node name of the server (if the Web service is installed in the default location). Then click the **Contact** button to create the WebHMI server. Note that you can only have one WebHMI server at a time. In order to add a new WebHMI server, you must first delete the default one listed.

Lab: Configuring WebHMI 4

4.1 Quick Lab Overview

In this Lab, you will learn how to modify the WebHMI settings through the PortalWorX Administration Interface. These settings will instruct the PortalWorX server which nodes or IP addresses to check for various administrative services, such as Licensing, Security, Global Aliasing, etc.

4.1.1 Task Checklist

- In this Quick Lab, you will complete the following tasks:
- Create a new WebHMI configuration.
- Familiarize yourself with all of the possible settings.
- Familiarize yourself with the WebHMI server settings

4.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

4.2 Configuring WebHMI Settings in PortalWorX

1. Open the PortalWorX Administration Interface by going to **Start → Programs → ICONICS BizViz → PortalWorX → Central Administration**.
2. Click on the WebHMI Configurations link in the WebHMI tab, as shown in **Error! Reference source not found.**.
3. There is a configuration called **(default)**, which assumes that the PortalWorX server is also the provider of all other necessary ICONICS services. See Figure L4.1 for an example of this configuration.

4. If you were viewing the **PortalWorX_Default** configuration, click the **Back** button to go back to the **WebHMI Configuration** main page. Now we will create our own brand new configuration.

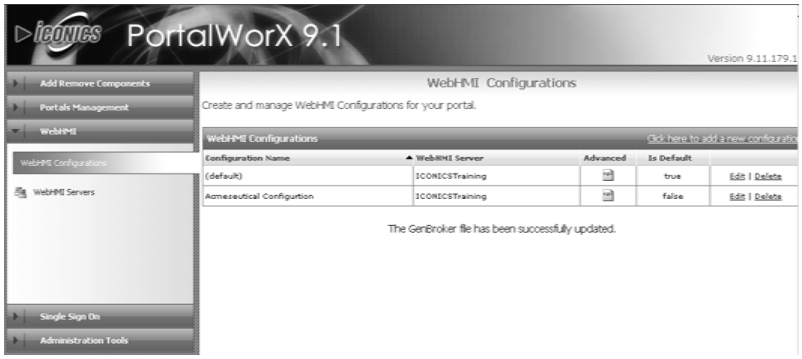


Figure L4.1 - PortalWorX Default WebHMI Configuration

5. Click the "Click here to add a new configuration" link; a similar form will load. For the Configuration Name specify Acmeseutical Configuration.

6. Specify the WebHMI Server you want to use (usually the local Host)

7. Leave the default configuration check box blank. We don't need to do this because the default configuration is perfectly acceptable.

8. Simply click **Insert** and the WebHMI configuration will be created, but not activated.

9. The WebHMI server is automatically used for all services. To specify different servers for each service click on the "**Advanced**" button after the insertion. This helps you avoid having to enter the server name or IP address in each of those fields.

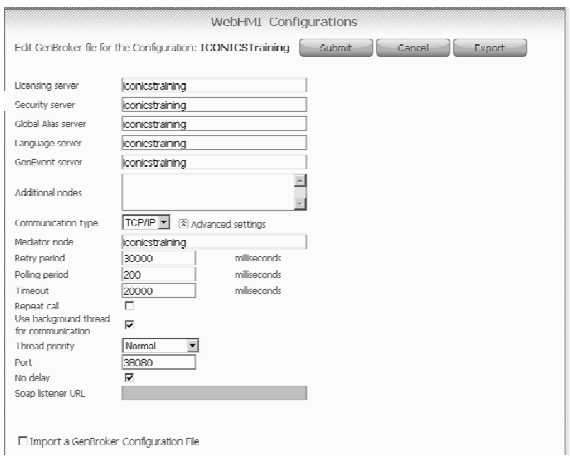


Figure L4.2 - Advanced WebHMI Configuration

4.2.1 Adding New WebHMI Servers

1. Click on the **WebHMI Servers** link in the **WebHMI** tab.
2. To add a new server write the **web service URL** or the server **IP\name** (if the web service is installed in the default location). Then click "**Contact**".
3. Once the new server is added, click the "**Edit**" link to modify the server **Friendly Name** or the server **Name**
4. Now it is possible to select the new server among the Servers list in the WebHMI configuration.

   NOTE: You can only have one instance of the WebHMI server connecting locally (no duplicate servers). You will need to delete the default WebHMI server listed for a successful connection. Otherwise, leaving it to use the default WebHMI server is fine.

That completes Lab 4. In the next chapter you will learn about Single Sign-on, and in the lab following Chapter 5, you will learn how to configure it.

Single Sign-on Configuration 5

5.1 Objectives

After completing this chapter, you should know how to:

- Create a Single Sign-on (SSO) configuration using the PortalWorX Administration Panel.
- Configure SSO general settings.
- Create an SSO user profile.
- Create an SSO group profile.

5.2 Introduction to Single Sign-on (SSO)

PortalWorX Single Sign-on (SSO) is a credentials repository that allows you to store user identities for different applications with different security settings. With SSO configured, it would be unnecessary for you to log on each time to applications with different security settings. For example, if you are signed-on as UserA to the portal, most of your web parts will use credentials for UserA. However, a web part (e.g. ReportWorX) may only have permissions for UserB and UserA lacks access permissions. We can now configure SSO in such a way that, when UserA is signed-on, the particular web part coded with SSO can allow access for UserA using UserB's permission.

5.2.1 PortalWorX Single Sign-on Administration

The **Single Sign-on** section of the PortalWorX Administration Interface, shown in Figure 5.1, enables you to:

- Create and manage single sign-on applications for your portal.
- Create and manage accounts for your portal applications.
- View single sign-on log entries.



Figure 5.1 - PortalWorX Single Sign-on: Manage Applications

5.2.2 Manage Applications

In the Manage Applications section, you will be able to add or remove applications that take advantage of single sign-on. To add applications or configure application settings for Single Sign-on, click on the **Manage Applications** link under **Single Sign-on**. This page contains a list of applications, such as BridgeWorX and ReportWorX, which includes web parts that are coded to take advantage of Single Sign-on.

You can also configure additional applications for Single Sign-on. Click on the **Application** button on the command bar and select **New,** as shown in Figure 5.2.



Figure 5.2 - Creating a New SSO Application

NOTE: In order for your application to take advantage of SSO, your web parts must first be coded to communicate to the SSO configuration database. If you are interested in building web parts that integrate with ICONICS' Single Sign-

on capabilities, please contact ICONICS to learn more about the Web Part Toolkit.

In the configuration field on the right side, specify the **Application name** and a **Friendly name**, which will appear in the list of application names. You can also add application fields to your application configuration by clicking on the **Click here to add a new field** link. In the example shown in Figure 5.3, the application fields are **Username** and **Password.** The Username is required, and the Password is both required and masked (i.e. the password characters will show up as asterisks).

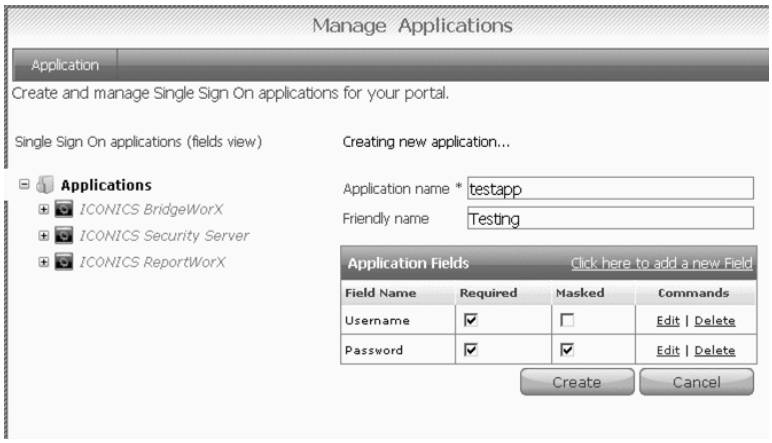


Figure 5.3 - New SSO Application Fields

Click on the **Create** button to complete your application configuration. The application is added to the list of applications, as shown in Figure 5.4.



Figure 5.4 - New SSO Application Added

5.2.3 Manage Users

The Manage Users section allows you to great permissions for a user to access an application. To create and/or modify user credentials for the Single Sign-on (SSO) configuration, you must use the PortalWorX Administration Interface. Click on the **Manage Users** link under Single Sign-on, as shown in Figure 5.5. This page enables you to import and manage user accounts for your portal applications. The Single Sign-on applications are listed.



Figure 5.5 - Manage Users

You can import user and group accounts from local machine accounts or network domain accounts. For example, click on **Import Accounts** and select **Machine Accounts**, as shown in Figure 5.6.

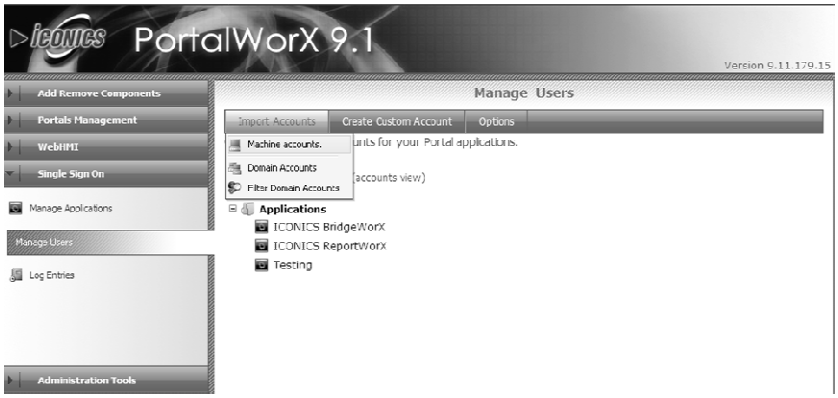


Figure 5.6 - Importing Accounts

A list of already configured users and groups for the machine is displayed on the right side, as shown in Figure 5.7. Check the users or groups that you want to add to the selected application, and then click the **Add** button.

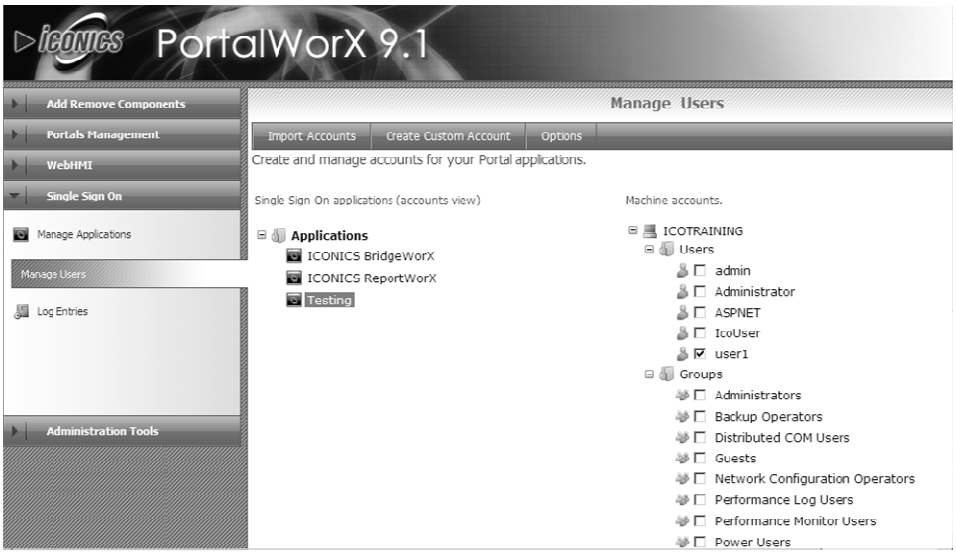


Figure 5.7 - Importing Local Machine Accounts

The users or groups appear under the application, as shown in Figure 5.8.

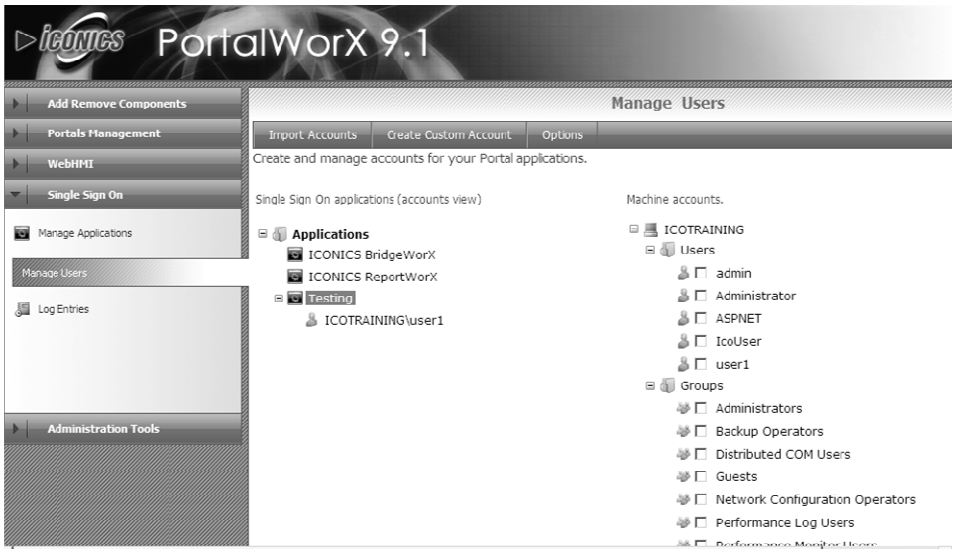


Figure 5.8 - Added User to Application

To edit SSO credentials for the user or group, right-click on the user or group and select **Edit Fields**, as shown in Figure 5.9.

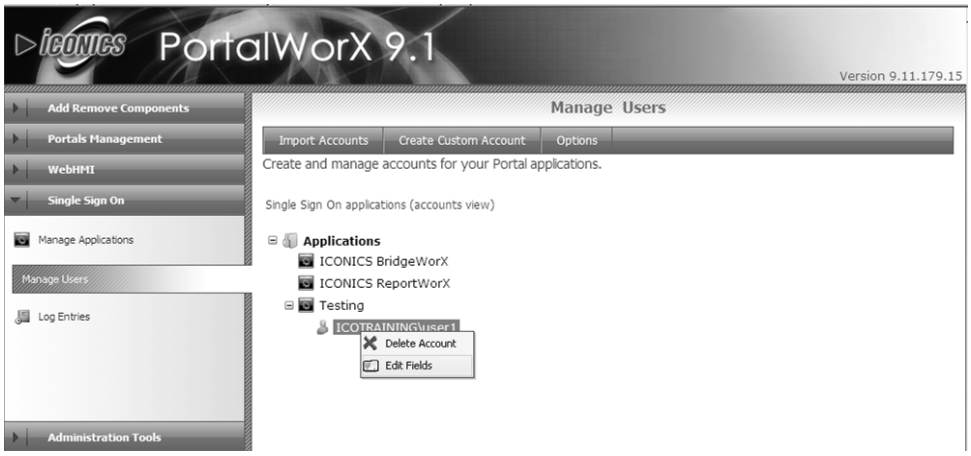


Figure 5.9 - Editing SSO User Credentials

Specify the user or group SSO credentials, as shown in Figure 5.10.

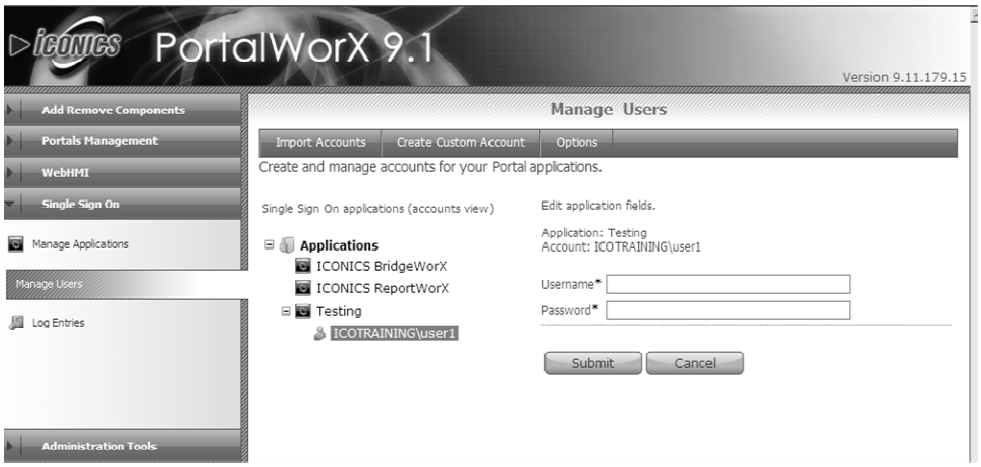


Figure 5.10 - SSO User Credentials

If you are importing users or groups from a network domain account, click the **Options** button and select **Set Domain Credentials**, as shown in Figure 5.11. Specify the domain name, the login name, and the password and then click on the **Submit** button to save the changes.

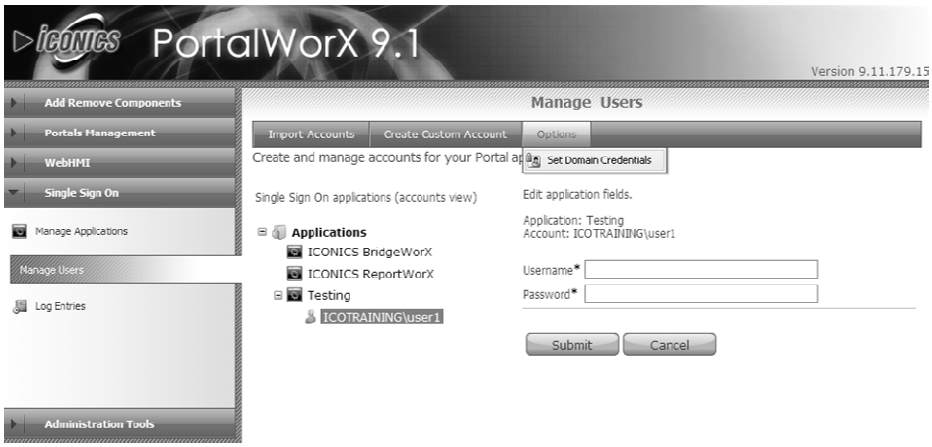


Figure 5.11 - Set Domain Credentials

Once you have specified the domain credentials, you can search the domain for specific users or groups. Click on the **Import Accounts** and select **Filter Domain Accounts**, as shown in Figure 5.12. Now you can search domain accounts by name. Specify the filters, and then click the **Search** button.

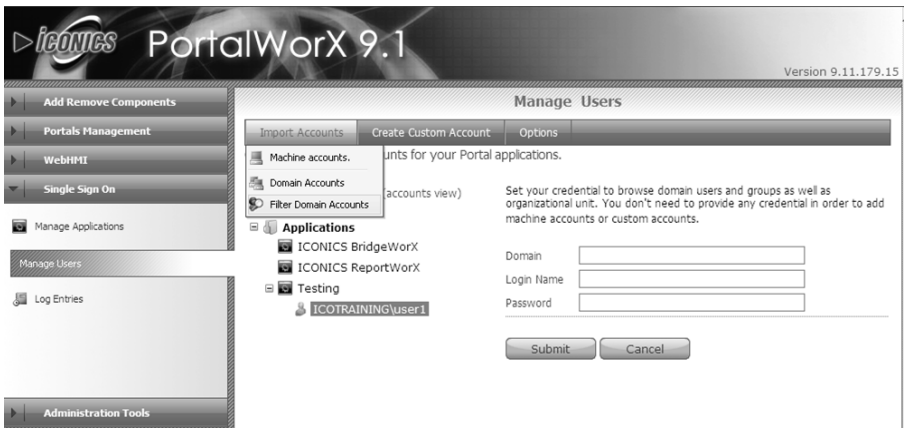


Figure 5.12 - Filtering Domain Accounts

If you know the name of a preconfigured user or group account that you want to use for an SSO application, you can simply click on **Create Custom Account**. Specify the exact user or group account name and then click on the **Add** button to add the account to the selected application, as shown in **Error! Reference source not found.**.

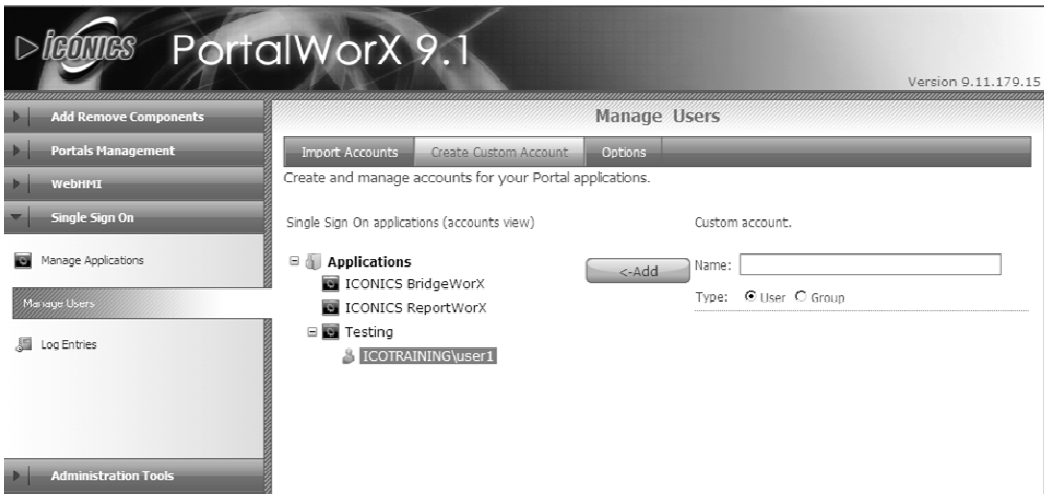


Figure 5.13 - Creating Custom Account

5.2.4 Log Entries

As with any system with security, there is a log to record users that logged into an application. This allows an administrator to review daily logon activity. In case there are users without permissions tries to log in, the administrator can follow up on it. To view log entries for Single Sign-on, click on the **Log Entries** link under Single Sign-on, as shown in Figure 5.14. This page enables you to specify filters for viewing Single Sign-on log entries.

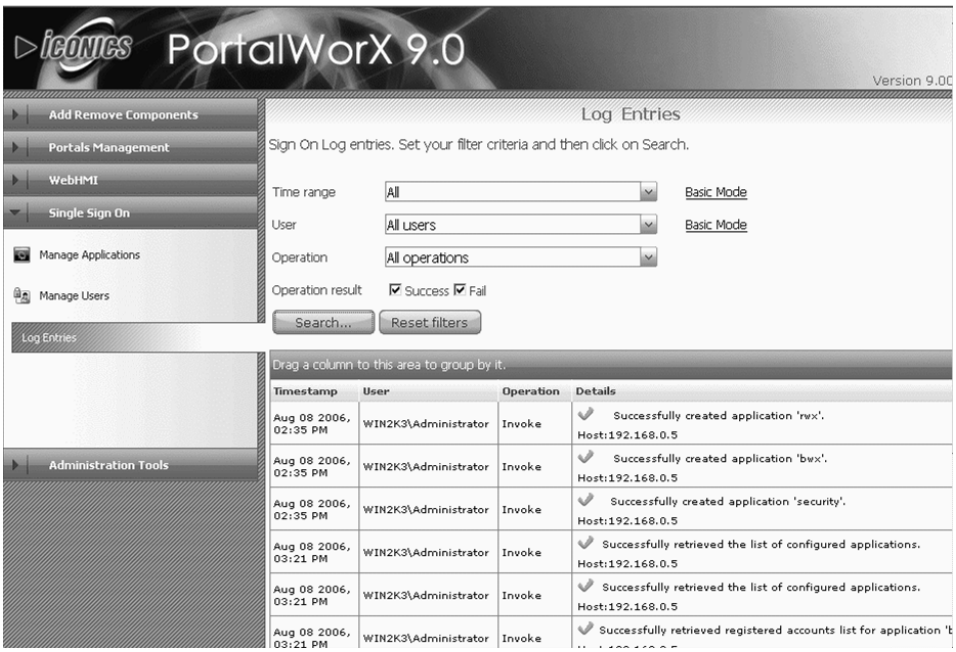


Figure 5.14 - SSO Log Entries

You can select filters for Time Range (all times, last hour, last day, last week, or last month), User, Operation, and Operation Result (green check mark for success or red X for failure). You can also switch to advanced mode for the Time Range filter to specify and exact date range. If you switch to advanced more for the Users filter, you can specify a user and use wildcard characters. To clear the filters, click the **Reset Filters** button.

After you have set your filters, click on the **Search** button to generate the log entry report. The report appears below the filter field, as shown in Figure 5.15.

You can drag the column header into the command bar to sort a column. If the report contains multiple pages, you can use the arrows and slider bar at the bottom of the page to navigate the pages.

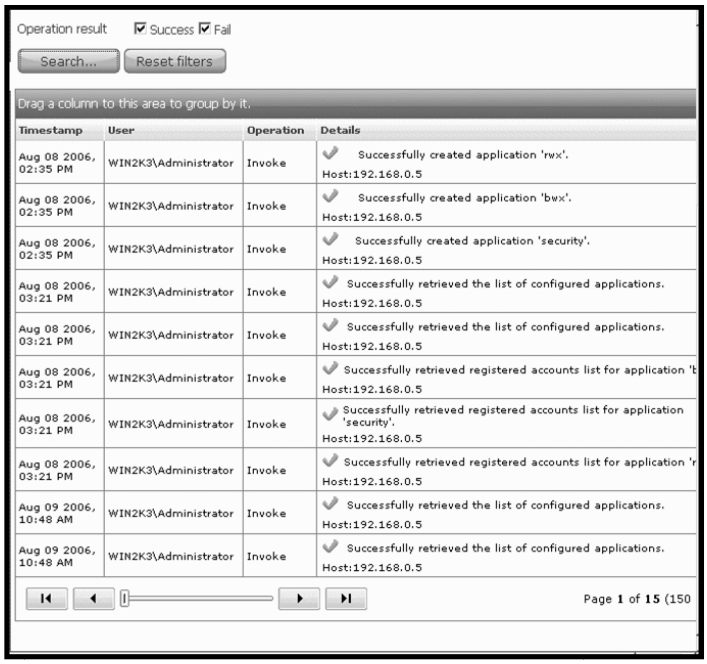


Figure 5.15 - SSO Log Entries

Lab: Single Sign-on Configuration 5

5.1 Quick Lab Overview

In this Lab, you will configure Single Sign-on settings for a user.

5.1.1 Task Checklist

- In this Quick Lab, you will complete the following tasks:
- Create a new user and group.
- Import users from the local machine into the SSO database.
- Associate the user credentials with another one.

5.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

5.2 Configuring Single Sign-on Settings

1. First, we are going to create a new user and a group from the Computer Management window. Create the new user using "**SSOUser_1**" as the user name, and choose a password, as shown in Figure L5.1.

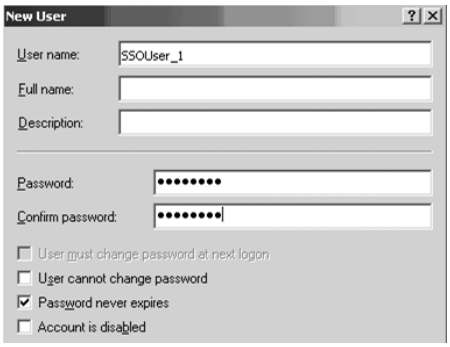


Figure L5.1 - Creating a New Windows User

2. Then, create a new group called "**SSOUserGroup**," and associate the newly created user to this group, as shown in Figure L5.2. You can click on the **Add…** button, and select **Advanced.** Then choose **Find Now** to retrieve all the users.

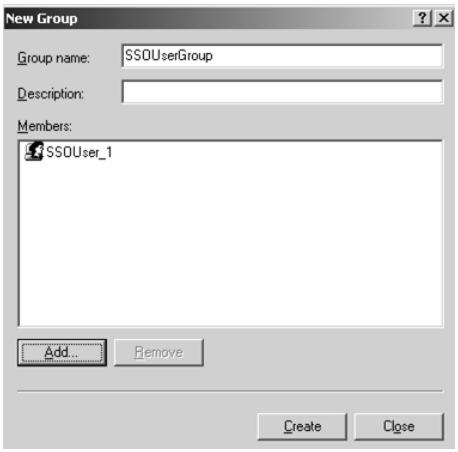


Figure L5.2 - Creating a New Group with One Member

3. Open the PortalWorX Central Administration page.

4. We don't need to modify the **Manage Applications** at this time; we'll jump right into the **Manage Users** section, as shown in Figure L5.3.

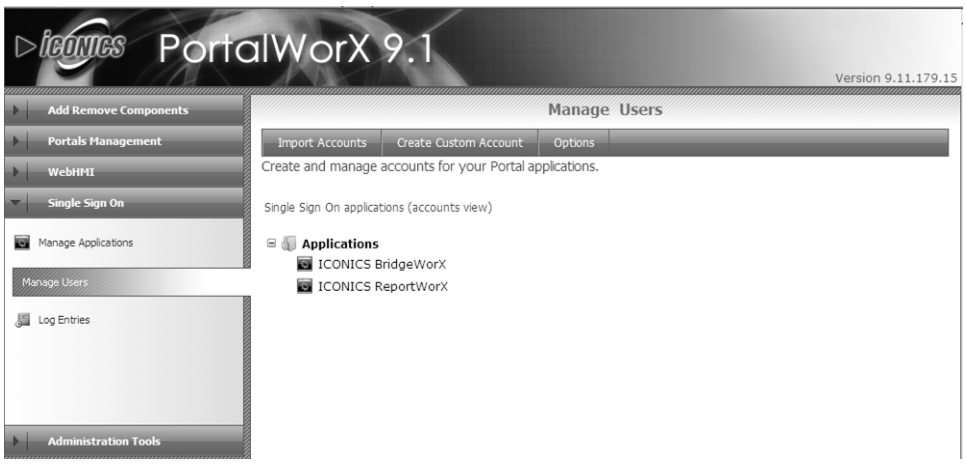


Figure L5.3 - Single Sign-on Manage Users

5. Select **Import Accounts** from the menu bar, and then choose **Machine Accounts** from the drop-down menu that will appear.

6. Highlight **ReportWorX** under the **Applications** tree. On the right side, select the user you usually use, i.e. **Administrator.** Click on **Add** to associate your user with the **ReportWorX** application.

7. After the page has reloaded, right-click on the user you just added to the ReportWorX sub-tree and select **Edit Fields.**

8. Fill the fields on the right side, using the credentials of the user you have created in step 1 (SSOUser_1). You should see something similar to Figure L5.4.

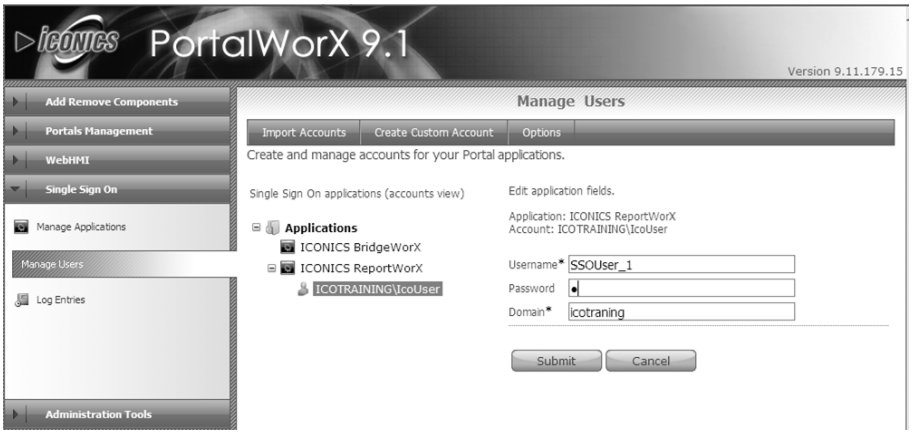


Figure L5.4 - Setting Credentials for a User

9. Click on **Submit** to finalize your changes.

That completes Lab 5. What you have done in this lab is to associate the credentials of SSOUser_1 with Administrator, for the ReportWorX application. This means that if you will enable SSO on the ReportWorX Web parts on your PortalWorX web site, you will be able to have the Administrator act if it were the SSOUser_1. In this way, the Administrator will be able to do whatever the SSOUser_1 can do on the available reports.

In Chapter 6, you will learn how to use PortalWorX Administration Tools, to modify Administration Language, and to manage tracing. In the lab following that chapter, you will use those tools to modify some settings.

PortalWorX Administration Tools 6

6.1 Objectives

After completing this chapter, you should know how to:

- Edit the PortalWorX Central Database connection settings.
- Modify language settings for the PortalWorX Administration Interface.
- Use tracing for virtual servers and Web Services.

6.2 Database Connection

The **Database Connection** page of the PortalWorX Administration Interface, shown in Figure 6.1, enables you to modify the connection to the PortalWorX configuration database, which stores global settings for Single Sign-on and PortalWorX Administration.

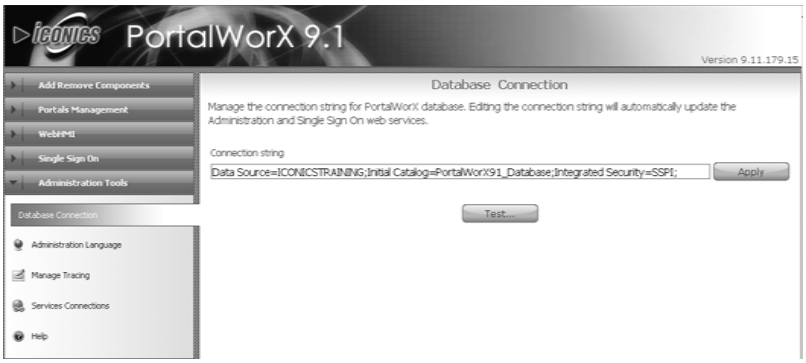


Figure 6.1 - PortalWorX Database Connection

To edit the PortalWorX central database connection settings, click on the **Database Connection** link under Administration in the PortalWorX Central Administration interface. You can edit the database connection string directly, and then click the **Test** button to test the connection. Click the **Apply** button to confirm your changes to the connection string. Editing the connection string automatically updates the Administration and Single Sign-on Web services.

6.3 Administration Language

The **Administration Language** page of the PortalWorX Administration Interface, shown in Figure 6.2, enables you to specify regional language settings for the PortalWorX Administration Interface.

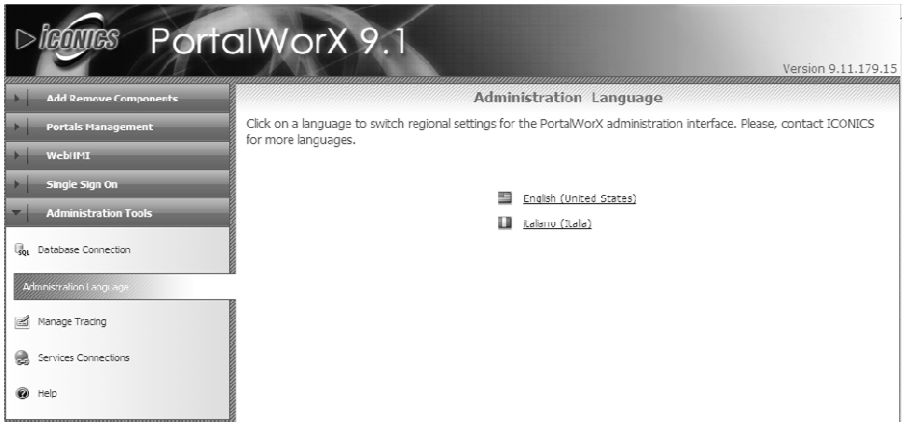


Figure 6.2 - PortalWorX Administration Language

To edit the PortalWorX administration language settings, open the PortalWorX Administration Interface and click on the **Administration Language** link under **Administration Tools**. Click on a language to switch select it for the PortalWorX Administration Interface.

6.4 Manage Tracing

The **Manage Tracing** page of the PortalWorX Administration Interface, shown in Figure 6.3, allows you to enable or disable tracing for specific portals.

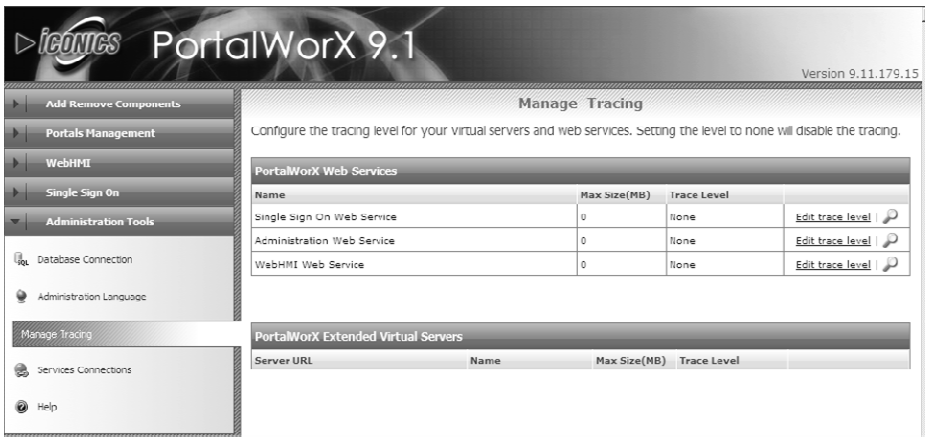


Figure 6.3 - PortalWorX Trace Mechanism

Trace files are used to identify problems with web parts or to troubleshoot performance-related problems. You can get to the trace page by going to the PortalWorX Central Administration Interface, and click on the **Manage Tracing** link under Administration Tools. The **Manage Tracing** page lists PortalWorX Web services (i.e. SSO Web Service, Administration Web Service, and WebHMI Web Service) and extended virtual servers (portals), as shown in Figure 6.3.

To enable tracing for a web service or portal, click the **Edit trace level** link. Select the trace level (i.e. Error, Warning, Normal, Debug, etc.) from the **Trace Level** drop-down list, as shown in Figure 6.4. You can also specify the Maximum Size (in MB) of the trace file.



Figure 6.4 - Manage Trace for PortalWorX

> **NOTE:** Enabling tracing may decrease application performance. If you detect a performance change after turning on tracing, consider using a different trace level that logs less data.

Once you have enabled tracing for a portal, a log file is created and runtime activity based on the trace level selected for that module is logged to the file. To view the trace log file, click on the magnifying glass icon, as shown in Figure 6.4.

This opens the **Visualize Trace File** page, as shown in Figure 6.5. The trace log file consists of a table with multiple columns listing runtime data for the selected module, including the portal site, time, date, trace level, activity message, and source (e.g. which Web part).

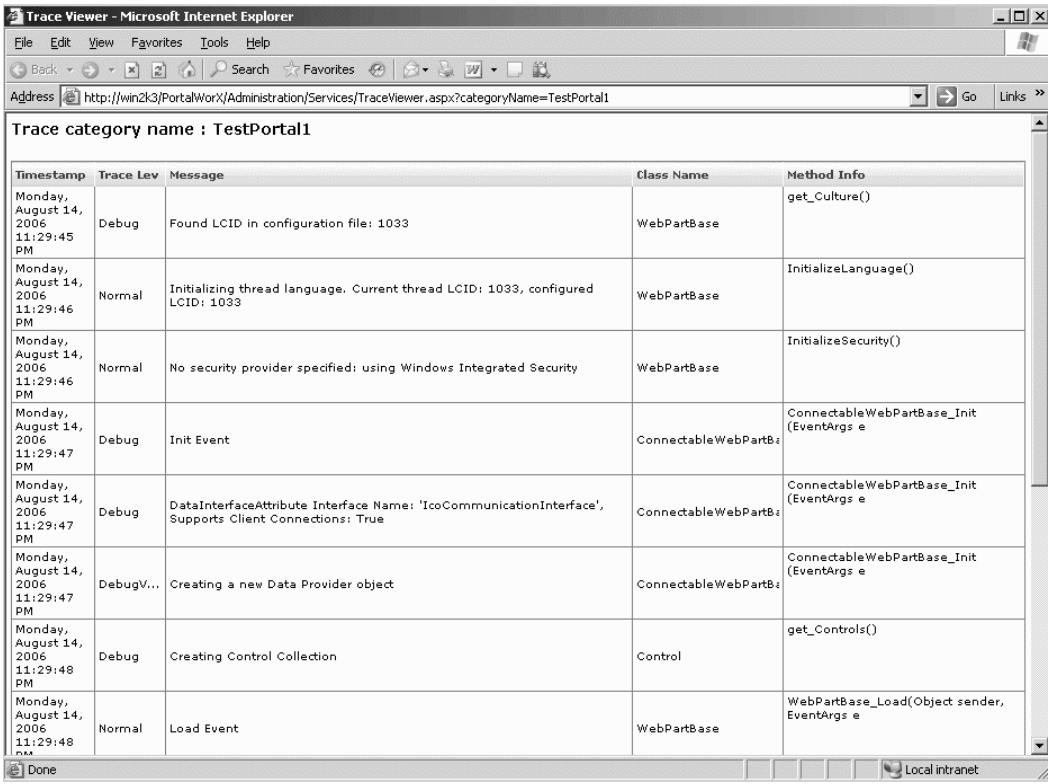


Figure 6.5 - Sample Trace File

Lab: PortalWorX Administration Tools 6

6.1 Quick Lab Overview

In this Lab, you will learn about the PortalWorX Administration Tools page, including how to manage the PortalWorX Configuration Database Connection, Administration Language, and Tracing Configuration.

6.1.1 Task Checklist

In this Quick Lab, you will complete the following tasks:

- View the PortalWorX Database Connection settings.
- View the Administration Language settings.
- Manage Tracing configuration for the Acmeseutical Portal.

6.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

6.2 Configuring PortalWorX Administration Tools

1. To view the PortalWorX Configuration Database Connection settings, open the PortalWorX Administration Interface, click on **Administration Tools** and then click on the **Database Connection** link. You should see something similar to Figure L6.1.

2. From this dialog, you can change certain things about the database connection string. This is mostly useful if your authentication mode has changed, or if you wish to point to an existing PortalWorX database on another server.

3. Since we do not need to make any changes, we do not need to perform any other action.

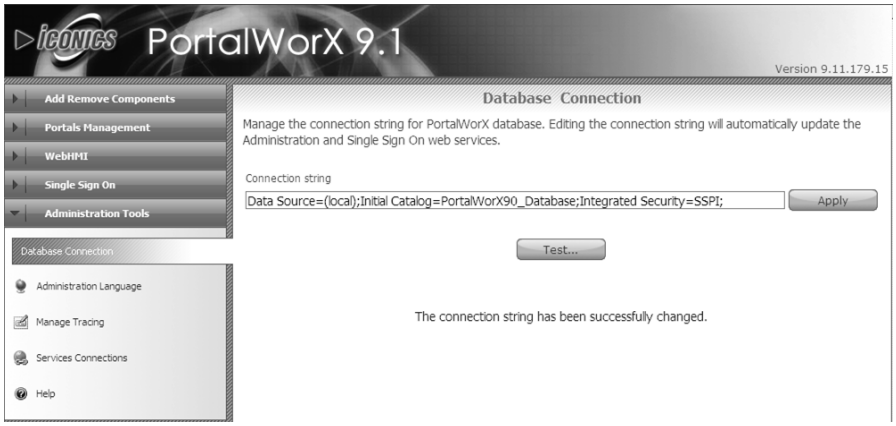


Figure L6.1 - PortalWorX Configuration Database Connection String

4. We can now click on **Administration Language** link in the left part of the page. This will bring you to a page that contains English and Italian. You can click on the language to change the PortalWorX Administration language.

   NOTE: Please contact ICONICS if there is another language that you would perfer to use in the PortalWorX Central Administration Interface.

5. Finally, let us look at the Tracing Configuration. Click on the **Manage Tracing** section. You should see something similar to Figure L6.2, but with a different Extended Virtual Server list.

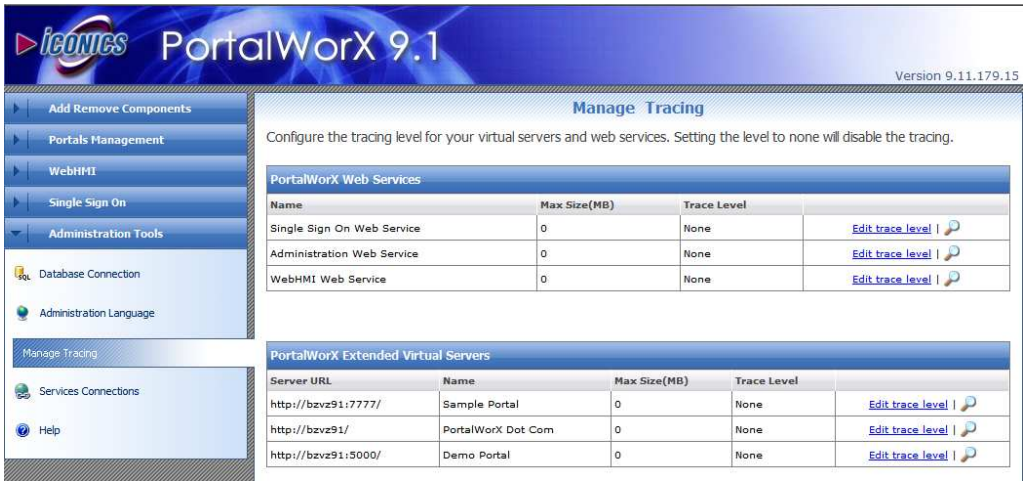


Figure L6.2 - Manage Tracing

6. If there is a problem inside your portal and you cannot understand what is happening, tracing will allow you to extract more verbose error messages from your application.

7. You can click on the **Edit trace level** link to view or change the current tracing settings. Do so now for the **Acmeseutical Portal**.

8. There are different tracing levels, as you can see in Figure L6.3.

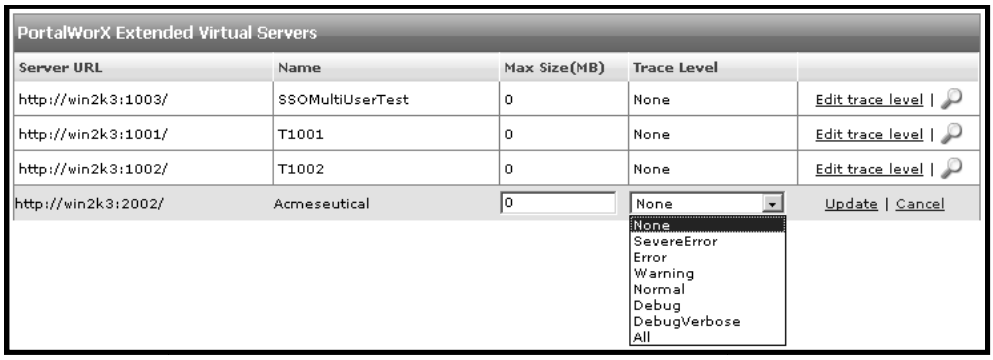


Figure L6.3 - Tracing Levels

9. The **None** level is default; it means that nothing is traced. **Severe Error** means that only major errors are reported. The options are ordered from the least verbose to the most verbose. If you select **All**, the most amount of information will be recorded. Try setting it to **Debug**, and press the **Update** link to save your changes.

10. Now you can try to open your Acmeseutical Portal and perform some activities. For example, you can modify some options, drag a random web part then delete it. After this, you can come back to this page, and click on the icon on the right of Acmeseutical Portal to visualize the debug information that was generated while you were using the portal. You will notice that a great amount of data is already there, even after doing few operations. For this reason, you are free to choose the tracing level that best fits your tracing needs at any time.

That completes Lab 6. In the next chapter, you will learn about web parts in general, and in the Lab following Chapter 7, you will have a chance to work with some of their generic properties. In Chapters 8, 9, 10 and 11 you will learn about the specific PortalWorX web parts and their various uses.

PortalWorX Web Parts 7

7.1 Objectives

After completing this chapter, you should know how to:

- Distinguish between the four main categories of PortalWorX web parts.
- Add, remove, and configure web parts.
- Distinguish between different types of web part galleries.
- Connect and disconnect different web parts.
- Import and export Web parts

7.2 Introduction to PortalWorX Web Parts

PortalWorX includes a rich set of web parts that can be used to customize web site content with ICONICS modules. ICONICS web parts are divided into four main categories:

- **Manufacturing Web Parts** are ideal for embedding OPC data and ICONICS visualization modules (such as graphics, trends, alarms, etc.) inside the portal framework. Manufacturing web parts allow you to interact with real-time visualization displays, analyze KPIs (Key Performance Indicators), receive alerts and critical events, and trend important information.
- **Business Web Parts** are specifically designed to work with the other products in the ICONICS Business Visualization (BizViz™) Suite (i.e. ReportWorX and BridgeWorX). Business web parts enable you to integrate reports, 3-D charts, data bridging, and more into your SharePoint portal.
- **Navigation Web Parts** include the Navigation Tree Web Part, the Navigation Menu Web Part, and the EarthWorX Web part. The first two web parts allow you to browse different sources, such as document libraries and WebHMI servers, and customize your content. The

EarthWorX web part allows you to map your assets, visualize OPC data related to those assets, and to manipulate other web parts on the portal using a geographical view.

- **General Web Parts** are intended for general use, and include the Banner Web Part, the Slide Show Web Part, and the Page Viewer Web Part.

The following sections describe the general configuration of web parts. Configuration of the individual PortalWorX web parts is covered in great detail in later chapters.

> **NOTE:** For additional information about Web parts, please refer to the Microsoft Windows SharePoint Services online help documentation.

7.3 Configuring Web Parts

You can easily and quickly reposition web parts on a web page any time (unless the site administrator locks down their positions). To change a web part's position, you can click on the **Site Actions** link and then select **Edit Page** from the drop-down menu, as shown in Figure 7.1.

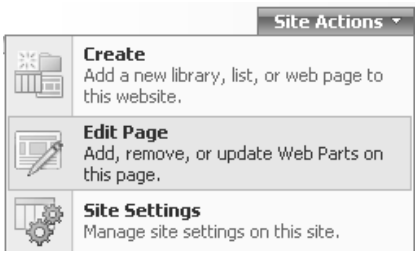


Figure 7.1 - Entering Design Mode

The page switches to **Design Mode.** In design mode, the **Web Part Zones** of the page are visible, showing the actual layout of the page. Web part zones are special areas where you can insert web parts and configured them. To change the position of a web part, simply click on the title bar and drag it into another web part zone.

> **NOTE:** For additional information about creating and configuring web parts, please refer to the Microsoft Windows SharePoint Services online help documentation.

7.4 Adding Web Parts to a Web Page

You can add a web part to your portal at any time by doing clicking on the **Site Actions → Edit Page** link, and then click the **Add a Web Part** button.

The **Add Web Parts** dialog box appears, as shown in Figure 7.2. Here you can browse for web parts. Choose a web part from the **Add Web Parts** dialog box**,** and then click the **Add** button to add the selected web part(s) to the zone of the page where you originally clicked the Add a Web Part button.



Figure 7.2 - Add Web Part Dialog

NOTE: For additional information about creating and configuring Web parts, please refer to the Microsoft Windows SharePoint Services online help documentation.

7.5 Removing Web Parts from a Web Page

Once you have web parts on your page, you can remove them by either closing or deleting them. The difference is that if you close a web part, it will still be in your Closed Web Part gallery. You can bring the web part back later by going into this gallery and dragging the web part back onto the page. All of the settings configured for the web parts are saved. If you delete the web part, however, you will not be able to retain the configured settings for the web part. You can add it back from the Add Web Parts dialog, but it will have the default settings.

7.5.1 Closing a Web Part

To close a web part, click on the web part menu (the down arrow in the upper right-hand corner) and select **Close,** as shown in Figure 7.3.

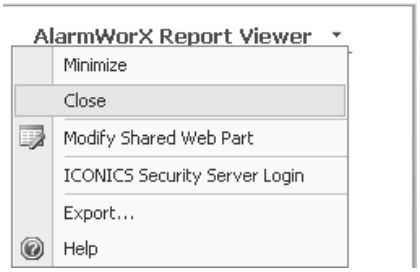


Figure 7.3 - Closing a Web Part

7.5.2 Deleting a Web Part

To delete a Web part, first switch to design mode, and then click on the web part menu and select **Delete,** as shown in Figure 7.4.

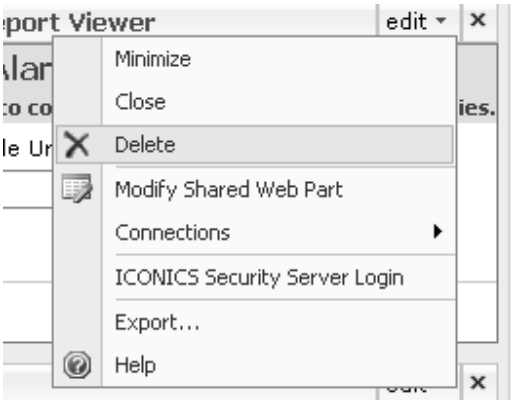


Figure 7.4 - Deleting a Web Part

NOTE: For additional information about creating and configuring Web parts, please refer to the Microsoft Windows SharePoint Services online help documentation.

7.6 Web Part Galleries

A **Web Part Gallery** is a central "warehouse" of web parts that you can use to locate a specific web part when you are creating a web part page. Depending on how the site administrator has configured your site, you may have up to three different web part galleries available to you through the **Web Parts Browser**,

shown in Figure 7.5, which enables you to browse for web parts in the following galleries:

- Closed Web Parts
- Site Gallery
- Server gallery



Figure 7.5 - Web Part Browser: Web Part Galleries

7.6.1 Closed Web Parts

The **Closed Web Parts** is a collection of web parts that are available to a specific web part page but are not visible on the page, whether you are browsing or designing the page. Each web part page has its own Closed Web Parts gallery. Through this gallery, a web part page author can, for example, create a pool of recommended web parts for users to add to the web part page.

The Closed Web Parts gallery contains web parts that were on the page at one time, but have since been closed by a user. Web parts can be closed by a user in personal view, or by the web part page author in shared view. Closing a web part visibly removes it from the web part page and stores it in the Closed Web Parts gallery. A closed web part is technically still on the web part page and can be added back at any time, as long as you have the appropriate permission.

7.6.2 Site Gallery

The **Site Web Part Gallery** is often the most central web part gallery for your work group. Typically, your server administrator, who decides which web parts are available and safe, manages this web part gallery. By default, the gallery name is the name of your site. In Figure 7.5, the site is called **TestPortal**, thus, the Web Part Gallery name is **TestPortal Gallery**. There is only one Site Web Part Gallery for each site and any sub-sites under it.

7.6.3 Server Gallery

If your enterprise is large, has many sites, and has decided to conveniently install the same set of web parts on many sites, then these web parts may be stored in a **Virtual Server Web Part Gallery**.

The Virtual Server Gallery contains all of the PortalWorX web parts. Those web parts are imported into the Virtual Server Gallery when you add the ICONICS web parts to the portal site through the PortalWorX Central Administration interface. To add a web part to the page, simply click on the web part name in the Web Part List and drag it to a Web Part Zone on the page.

> **NOTE:** For additional information about web parts, please refer to the Microsoft Windows SharePoint Services online help documentation.

7.7 Web Part Connections

You can pass data (such as OPC Data Source) from one web part to another by connecting the web parts. This allows you to synchronize the behavior of the different web parts and manage the data displayed in a dynamic and interesting ways. You can also, for example, present data from two web parts in alternate views, perform related calculations between two web parts, and filter a web part using values from another web part all on one web part page.

Web part connection can be summarized with the following statements:

- A web part connection is a way to pass data from one web part to another.
- One web part provides the data.
- Data can be lists, rows, cells, or parameter values.
- Another web part receives the data and displays it accordingly

You can make the web part connection from a web part by using the connection type submenu from the **Connections** command on the web part menu. For example, if one web part's connection type submenu command says **Provide Row To**, the other web part's connection type submenu command will have the corresponding option of **Get Row From.**

> **NOTE:** Not only can you make web part connections on the same web part page, you can also make connections between web parts on two different web part pages in the same top-level site by using a Microsoft Windows SharePoint Services compatible HTML editor, such as Microsoft Office FrontPage 2003.

7.7.1 Connecting Web Parts

To connect two web parts, go to design mode by clicking on the **Site Actions** link and selecting **Edit Page** from the drop-down menu. Then, from the web part that you want to make a connection (to or from), click on the **Edit** menu in the top-right hand corner of the web part, and select **Connections → [action] → [target web part]**, as shown in Figure 7.6. The page will refresh briefly and the connection will be established.

Depending on the web part, you will have different actions (i.e. Provide Row To, Provide Data To, etc) and depending on the web parts on the page, you will have different target web parts available in the list.

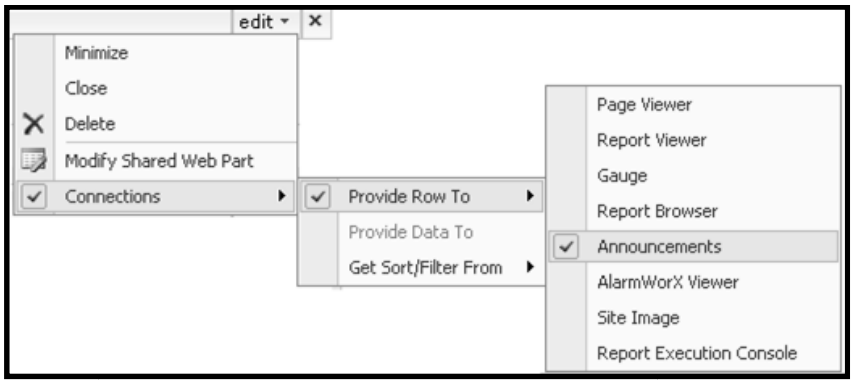


Figure 7.6 - Connecting Web Parts

7.7.2 Disconnecting Web Parts

To disconnect two connected web parts, go to a connected web part and select **Connections → [action] → [target web part]** from the web part menu. Notice that there is a check mark indicating that the connection has already been made, as shown in Figure 7.6. Clicking on the web parts with a check mark removes the connection (as well as the checkmark). You will be asked to confirm the disconnection. After the page refreshes, the web parts are disconnected. You can verify to make sure that the target web part no longer has a check mark next to it in the web part menu.

> **NOTE:** For additional information about connecting web parts, please refer to the Microsoft Windows SharePoint Services online help documentation.

7.8 Modifying Web Part Properties

To modify web parts in your web page, click on the **Site Actions** link and select **Edit Page** from the drop-down menu. Then click on the **Edit** button of the web part you want to edit and select **Modify Shared Web Part** link, as shown in Figure 7.7.

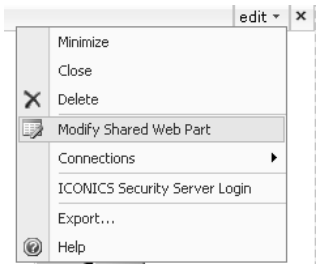


Figure 7.7 - Modifying Web Parts

The configuration properties for the web part appear, as shown in Figure 7.8. Each Web part has its own unique configuration properties. Click on the arrows to expand the different property sections.



Figure 7.8 - Gauge Web Part Properties

7.9 Common Web Part Properties

Although each PortalWorX web part has its own unique configuration property pages, all web parts have the following generic configuration properties, as shown in Figure 7.9:

- Appearance
- Layout
- Advanced

Click on the plus/minus signs to expand/contract the tree control. User permissions may be required to modify certain settings.



Figure 7.9 - Common Web Part Properties

NOTE: User permissions may be required to modify certain settings. Please refer to the Microsoft Windows SharePoint Services online help documentation for complete information about common web part properties.

7.9.1 Appearance

The **Appearance** section configures general default settings for how the web part displays in the web part zone (frame).

- **Title:** Specifies the text that is displayed in the title bar of the web part.
- **Height:** When **No** is selected, the web part automatically resizes the height to fit inside the perimeter of the web part zone. To fix the height of a web part on the page, select **Yes**. The web part frame height can be expressed in pixels, centimeters, inches, millimeters, points, or picas.
- **Width:** This property is similar to the Height properties and has the same options, except this property controls the Width of the web part.
- **Frame State:** Specifies how the web part is displayed in the web part zone. Choose **Normal** (full display) or **Minimized** (collapsed display showing the web part's title bar only).
- **Frame Style:** This specifies which web part elements are displayed. Choose a frame style from the drop-down list: default style, none (content only), title bar, and border (title bar, content, and frame), or title bar only (title bar and content).

7.9.2 Layout

The **Layout** section configures the layout of the web part on the web page.

- **Visible on Page:** Hides/shows the web part on the page.
- **Direction:** Determines the direction of the web part text. Select an option from the drop-down list: default (automatically determined by language setting), right to left text direction, or left to right text direction).
- **Zone:** Specifies the web part zone (with multiple available zones) where the Web part is displayed. Select a position (zone) for the web part from the drop-down list (i.e. top, right, or left).
- **Part Order:** If the web part zone contains more than one web part, you must specify a positive integer for each web part to specify the order in which the web parts are displayed in the zone.

7.9.3 Advanced

- **Allow Minimize:** When checked, enables users to minimize the web part so that only the title bar is displayed.
- **Allow Close:** When checked, enables users to remove the web part from the page.
- **Allow Zone Change:** When checked, enables users to move the web part to different zones.
- **Allow Export Sensitive Properties:** When checked, enables users to export web part property values. Please refer to the Microsoft Windows SharePoint Services online help documentation for details.
- **Detail Link:** Hyperlink (URL) to a file that contains information about the web part.
- **Description:** Specifies the ToolTip text that appears when the mouse is hovered over the Web part.
- **Help Link:** Hyperlink (URL) to a help file for the web part that is displayed when **Help** is selected from the web part menu.
- **Icon File (Large):** File pathway for large web part icon image files.
- **Icon File (Small):** Not supported by Microsoft.
- **Missing Assembly Error:** Specifies a warning message that appears if there is a problem with the Web part.

NOTE: For additional information about common Web part properties, please refer to the Microsoft Windows SharePoint Services online help documentation.

7.10 Importing and Exporting Web Parts

In SharePoint, it is possible to export a web part from one portal site and import the web part into another portal site.

7.10.1 Exporting a Web Part

To export a web part from a portal site, click on the web part menu and select **Export**, as shown in Figure 7.10.

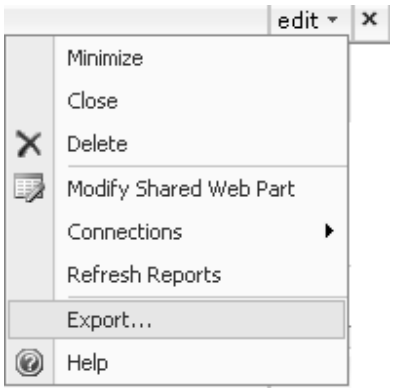


Figure 7.10 - Exporting a Web Part

In the File Download dialog box, click the Save button, as shown in Figure 7.11.

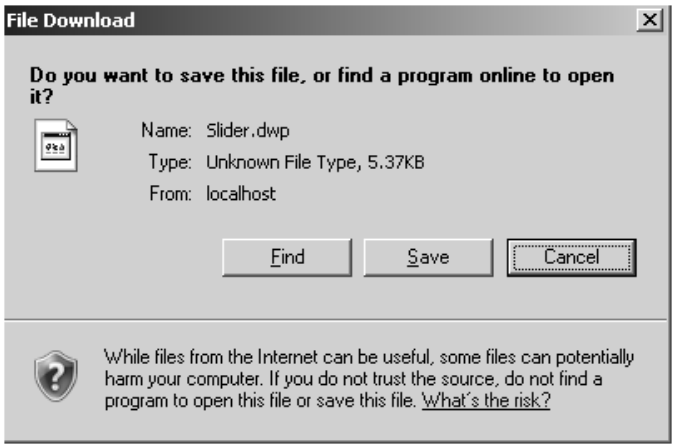


Figure 7.11 - Saving Exported Web Part

In the **Save As** dialog box, select the export directory, enter the file name for the .dwp file, and then click the **Save** button.

7.10.2 Importing a Web Part

To import a web part into a portal site, select **Site Actions → Edit Page**. Then, click on an **Add a Web Part** button and when the **Add Web Parts** dialog box appears, click on the link to the **Advanced Web Part gallery and options**, as shown in Figure 7.12.

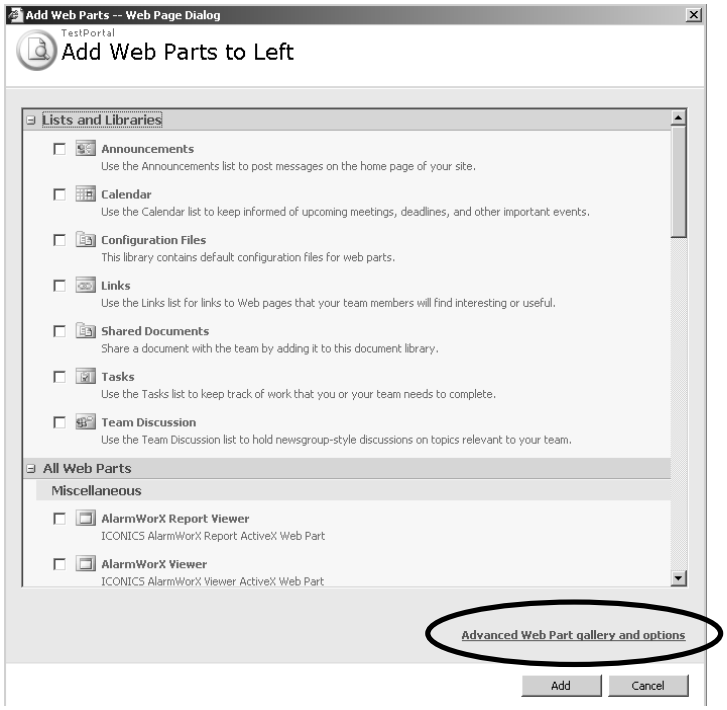


Figure 7.12 - Importing a Web Part

This will launch the side bar web part interface. From here, you can click on the down arrow on the **Browse** section near the top and select **Import**. Then, click on the **Browse** button to select a .dwp web part file. Finally, click on the **Upload** button, as shown in Figure 7.13. The imported web part appears. Now you can drag the Web part into your portal page.



Figure 7.13 - Browsing for Web Part File

Lab: Introduction to Web Parts 7

7.1 Quick Lab Overview

In this Lab, you will familiarize yourself with web parts in general, using some of the default web parts within SharePoint Services as a learning tool.

7.1.1 Task Checklist

In this Quick Lab, you will complete the following tasks:

- Familiarize yourself with the Web Part Galleries.
- Add and configure one of the standard SharePoint Web parts in your portal.

7.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

7.2 Adding and Modifying Web Parts

It is possible to browse to your portal by manually typing the URL directly into an Internet Explorer window, but another way to navigate to your portal is through the **PortalWorX Administration Interface**. You should open that now.

1. Click on the **View web site** link in the **Portal management** tab, and then select your **Acmeseutical Portal** from the list.

2. In this introduction to web parts, we will use a web part known as **Links**. This Web Part must be created at first, click on **Cancel** and go to the next step**.**

3. Click on the **Site Actions** link and select **Create**. After your page refreshes, it should looks similar to Figure L7.1.

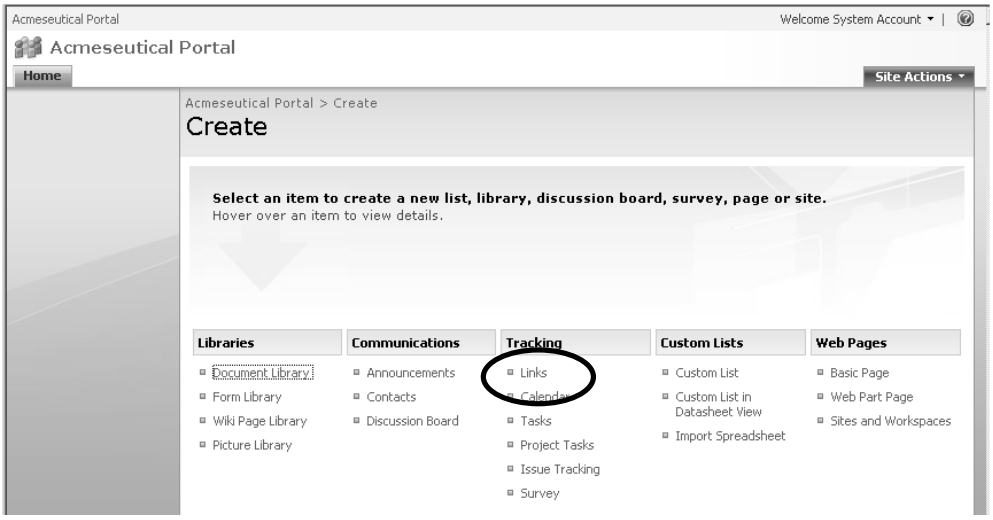


Figure L7.1 - Create Page

4. From here click on the **Links** link under the **Tracking** section
5. In the Name field, enter **Links** and you may enter an optional description.
6. Lastly, select **Yes** to displaying the list on the Quick Launch. Your configuration for this new Link web part should similar to Figure L7.2.

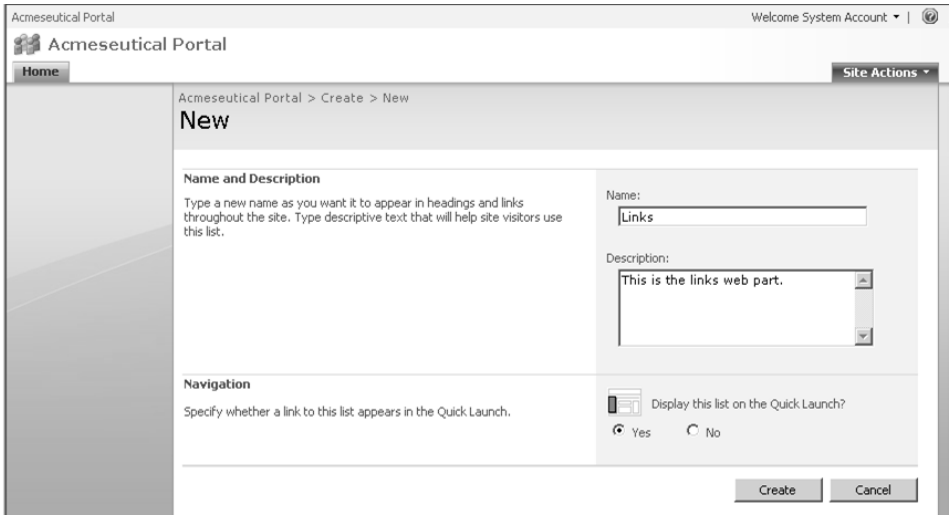


Figure L7.2 - New Links Configuration Page

7. Click on the **Create** button to complete the Link Web Part creation.
8. Next, we will add links to this web part. Start by selecting **New → New Item** from the drop-down menu, as shown in Figure L7.3

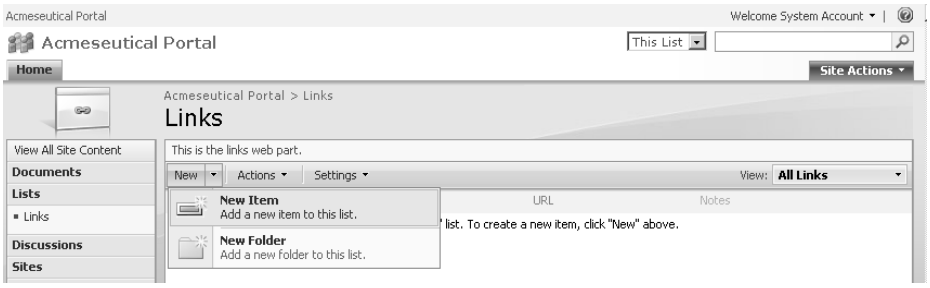


Figure L7.3 - Adding New Links

9. When the page refreshes, you will see you are now able to enter the URL path for the link and a description. Enter **http://www.iconics.com** as the URL path and **ICONICS Home Page** for the description. Your page should now look like Figure L7.4.

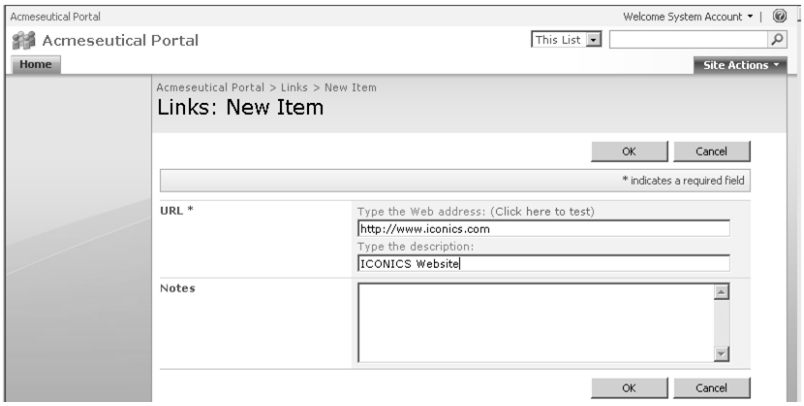


Figure L7.4 - Configuring a New Link

10. Click on the **OK** button to continue.

11. You will now see that the ICONICS Home Page link is added to our list of links.

12. Now we will have to add this **Links** web part to our page. We will start by clicking the **Home** button to bring us back to the main page.

13. Next click on **Site Actions → Edit Page**.

14. Click on the **Add a Web Part** button in the Right zone above the Microsoft SharePoint Services logo.

15. You will now see a **Links** web part under the Lists and Libraries section. Check the box next to it and click the **Add** button, as shown in Figure L7.5.

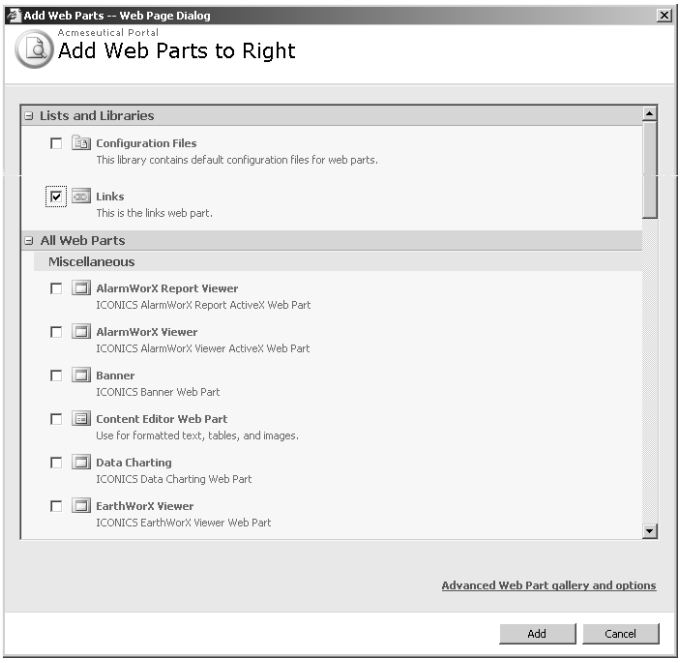


Figure L7.5 - Adding Links Web Part

16. You will now see the Links web part added to above the Microsoft SharePoint Services logo on the right. Now that the web part is there, you can easily add more links to the list.

17. To do that now, click the **Add new link** button and the **Links: New Item** dialog will appear.

18. Now, add one more link of your own, possibly to your company's home page or to one of your favorite web sites.

19. Your Acmeseutical Portal should now look similar to Figure L7.6.

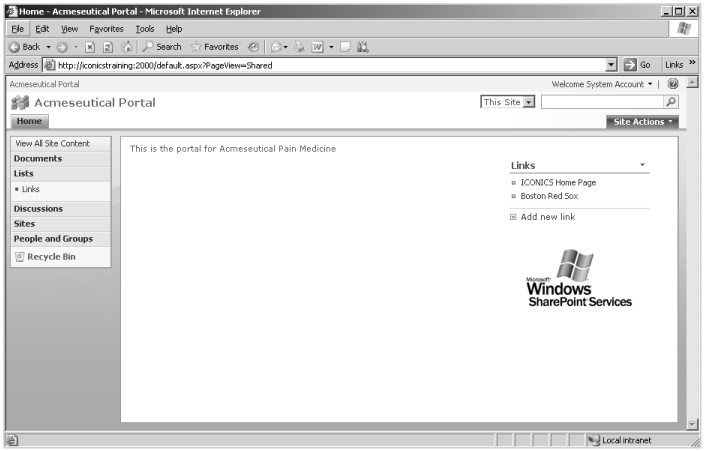


Figure L7.6 - Acmeseutical Portal

20. Congratulations, you have just configured your first web part!

21. Of course, there are more options that you can configure for each Web part, and to learn more about these, you can simply click the small down arrow button on the right side of each Web part's title bar.

22. Click on this button, and a submenu will appear. The items in this submenu are generally the same, but can change slightly from web part to web part. Figure L7.7 shows you the menu items for the **Links** web part.



Figure L7.7 - Submenu for Links Web Part

23. Click on the **Modify Shared Web Part** item to open the properties dialog for this Web part.

24. There are two basic properties for the **Links** web part in the List Views Section and they include **Selected View** and **Toolbar Type**. To understand what these properties do, you can either try using the **Help** link from the submenu, or you can take an experimental approach by just changing some of the values and then clicking on **Apply** to observe the effects.

25. For example, change the **Toolbar Type** from **Summary Toolbar** to **Full Toolbar**, and then click the **Apply** button. It should be obvious what has just happened.

26. If you are happy with this change you can click **OK** to return to runtime, or you can modify the properties some more. We will do the latter.

27. In Figure L7.8, notice that there are three more sections underneath the two basic properties of the Links web part: **Appearance, Layout,** and **Advanced**. EVERY Web part has these property categories (some also have an additional **Miscellaneous** section), so it is important to understand how they work.

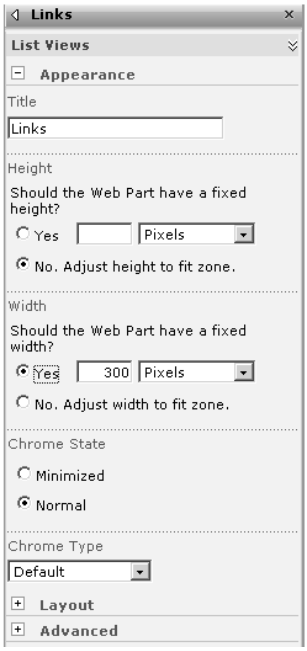


Figure L7.8 - Common Web Part Properties

28. The **Appearance** section is for changing things about the web part like the title shown in the title bar, the amount of space that it occupies on the screen, etc.

29. The **Layout** section is used to specify which orientation the web part will have (left to right / right to left), and also it can be used to switch the web part to a different zone, although this is usually just as easily accomplished through drag and drop.

30. To try this, drag the **Links** web part (by the title bar) from the **Right** zone to the **Left** zone, and then release it. Now drag it back to the **Right** zone again.

31. Finally, the **Advanced** section contains many options and settings that typically don't need to be modified but, for example, if the Administrator wants to disable a web part from being minimized or closed, he or she can uncheck the appropriate boxes and those actions will be prohibited immediately after the **Apply** button is clicked. This section also includes some fields that are used to link to help files, description text, custom error pages, etc. Refer to the PortalWorX documentation for complete help on these options.

That completes Lab 7. In the next chapter you will learn about the PortalWorX Manufacturing Web parts, and in the lab following Chapter 9, you will insert some of those Web parts into your Acmeseutical Portal.

Manufacturing Web Parts 8

8.1 Objectives

After completing this chapter, you should know how to:

- Distinguish between the different types of manufacturing Web parts.
- Configure settings for each of the manufacturing Web parts.

8.2 Manufacturing Web Parts

Manufacturing Web Parts are ideal for embedding OPC data and ICONICS visualization modules (such as graphics, trends, alarms, etc.) inside the portal framework. PortalWorX provides the following manufacturing web parts:

- GraphWorX Viewer Web Part
- AlarmWorX Viewer Web Part
- TrendWorX Viewer Web Part
- AlarmWorX Reports Web Part
- Gauge Web Part
- Numeric Web Part
- Slider Web Part
- Switch Web Part
- Vessel Web Part
- KPI Grid Web Part

8.3 GraphWorX Viewer Web Part

The PortalWorX **GraphWorX Viewer Web Part** allows you to visualize important operations data in an interactive, real-time display. Figure 8.1 shows a boiler display in the GraphWorX Viewer web part.

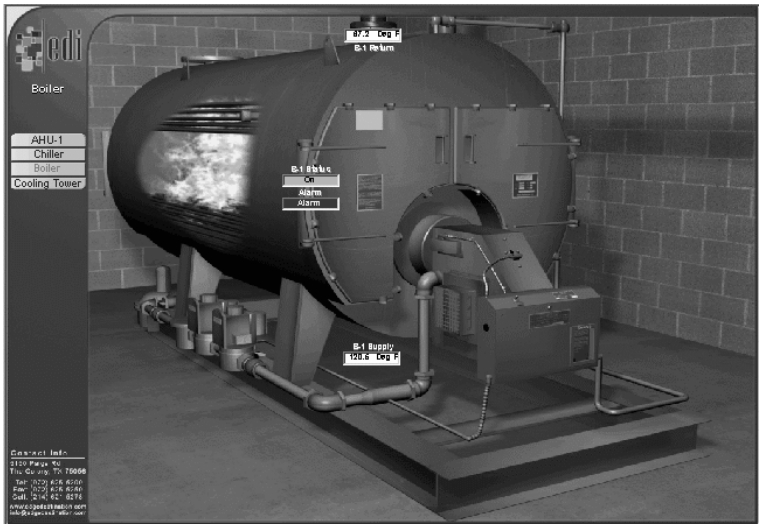


Figure 8.1 - GraphWorX Viewer Web Part

8.3.1 GraphWorX Viewer Web Part Configuration

When first added to the page, the GraphWorX Viewer Web Part prompts you to select a GraphWorX32 (.gdf) display file, as shown in Figure 8.2. Click on the drop down menu to browse for a display file. Select a display file, and then click on **Apply**.

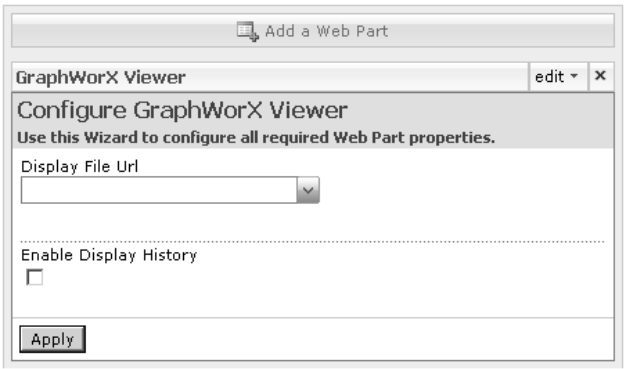


Figure 8.2 - GraphWorX Viewer Web Part

8.3.2 GraphWorX Viewer Properties

The GraphWorX Viewer Web Part properties include the categories as shown in Figure 8.3. You can click on the arrows to expand the property pages to edit the particular properties.

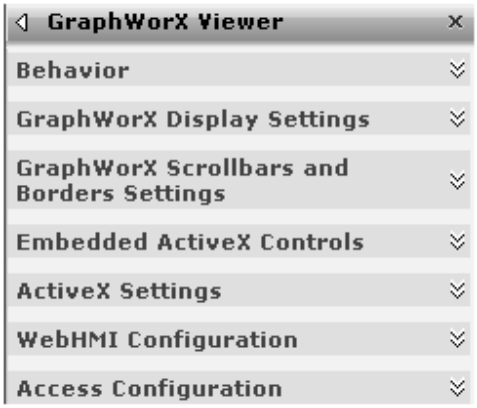


Figure 8.3 - GraphWorX Viewer Web Part Properties

8.3.2.1 Behavior

Settings in the behavior section allow you to control how the web part behaves when the web part page is in runtime mode.

- **EnableTheming**: When checked, enables the web part to participate in ASP.NET themes.
- **SkinID**: Allows you to enter an ID for the skin theme you want to use on the web part.

8.3.2.2 GraphWorX Display Settings

In the GraphWorX Display Settings section, you have the following options

- **Display File URL**: The path (either a URL or a local path on the server) to the display file.
- **Enable Display History**: Allows GraphWorX to remember the sequence of the loaded displays.
- **Enable Carousel**: When checked, enables the carousel mode (only if connected to the Navigation Tree Web part).

8.3.2.3 GraphWorX Scroll Bars and Borders Settings

This section allows you to configure preferences for scroll bars and borders. Your options are:

- **3-D Border**: Enables/disables a 3-D border.
- **Show Border**: Hides/shows the border. If a 3-D border is used, the border is always visible.
- **Override Display Scrollbar Settings**: When this option is checked, the control overrides the scrollbar visibility settings of the display currently

loaded in the control. When it is not checked, the control will use the scrollbar settings defined in the currently loaded display.

- **Vertical Scrollbar**: When this option is checked, the vertical scrollbar of the control's window is visible. When it is not checked, the vertical scrollbar is hidden. This property is ignored if Override Scrollbar Settings is not checked.
- **Horizontal Scrollbar**: When this option is checked, the horizontal scrollbar of the control's window is visible. When it is not checked, the horizontal scrollbar is hidden. This property is ignored if Override Scrollbar Settings is not checked.

8.3.2.4 Embedded ActiveX Controls

Your GraphWorX32 display may already includes other ActiveX (i.e. Alarm Viewer, Trend Viewer, etc). In this case, you should check the proper embedded ActiveX control in this section so that ActiveX within the GraphWorX32 display are downloaded for viewing. The possible ActiveX are:

- **TrendWorX**: Check this box if the TrendWorX Viewer is embedded in the GraphWorX display shown in the web part.
- **AlarmWorX**: Check this box if the AlarmWorX Viewer is embedded in the GraphWorX display shown in the web part.
- **AlarmWorX Report**: Check this box if the AlarmWorX Report is embedded in the GraphWorX display shown in the web part.
- **AlarmWorX Indicator**: Check this box if the Alarm Indicator is embedded in the GraphWorX display shown in the web part.
- **Data Mine**: Check this box if the Data Mining control is embedded in the GraphWorX display shown in the web part.
- **Gauge**: Check this box if the Gauge is embedded in the GraphWorX display shown in the web part.
- **Switch**: Check this box if the Switch is embedded in the GraphWorX display shown in the web part.
- **Slider**: Check this box if the Slider is embedded in the GraphWorX display shown in the web part.
- **Vessel**: Check this box if the Vessel is embedded in the GraphWorX display shown in the web part.
- **Numeric**: Check this box if the Numeric is embedded in the GraphWorX display shown in the web part.
- **Tree Explorer:** Check this box if the Tree Explorer is embedded in the GraphWorX display shown in the web part.

- **Recipe:** Check this box if the Recipe Manager is embedded in the GraphWorX display shown in the web part.
- **DBOPC Manipulator:** Check this box if the DBOPC Manipulator is embedded in the GraphWorX display shown in the web part.

8.3.2.5 ActiveX Settings

You can configure some ActiveX settings in this section. The setting allows for smooth scrolling of real-time data inside the web part.

8.3.2.6 WebHMI Configuration

In this section, you can apply a group of WebHMI settings to the current Web page. Select a WebHMI Page Configuration from the drop-down list. After you make your selection, click the Apply button. Configuration is applied on a per-page basis.

8.3.2.7 Access Configuration

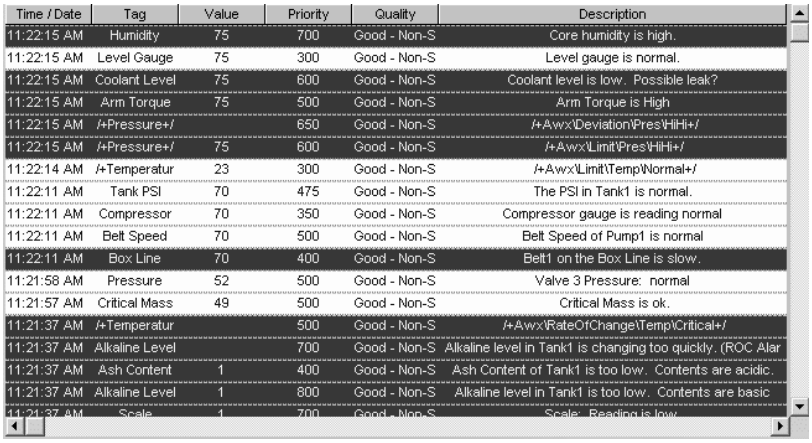
In this section, you can configure users that have permissions to the web part. Your options are:

- **Allowed Users**: Enter the Windows users/groups that will have access to this web part. Separate users/groups with semicolons.
- **Denied Users**: Enter the Windows users/groups that will be denied access to this web part. Separate users/groups with semicolons.

NOTE: Some of the properties are common to many web parts. Once we have described such a property in one web part, we will not repeat it in the upcoming web parts with these properties.

8.4 AlarmWorX Viewer Web Part

The **AlarmWorX Viewer Web Part**, shown in Figure 8.4, allows you to monitor alarms remotely within a portal. You can drop this web part into any portal and view real-time alarms in a scrollable view.



Time / Date	Tag	Value	Priority	Quality	Description
11:22:15 AM	Humidity	75	700	Good - Non-S	Core humidity is high.
11:22:15 AM	Level Gauge	75	300	Good - Non-S	Level gauge is normal.
11:22:15 AM	Coolant Level	75	600	Good - Non-S	Coolant level is low. Possible leak?
11:22:15 AM	Arm Torque	75	500	Good - Non-S	Arm Torque is High
11:22:15 AM	/+Pressure+/		650	Good - Non-S	/+Awx\Deviation\Pres\HiHi+/
11:22:15 AM	/+Pressure+/	75	600	Good - Non-S	/+Awx\Limit\Pres\HiHi+/
11:22:14 AM	/+Temperatur	23	300	Good - Non-S	/+Awx\Limit\Temp\Normal+/
11:22:11 AM	Tank PSI	70	475	Good - Non-S	The PSI in Tank1 is normal.
11:22:11 AM	Compressor	70	350	Good - Non-S	Compressor gauge is reading normal
11:22:11 AM	Belt Speed	70	500	Good - Non-S	Belt Speed of Pump1 is normal
11:22:11 AM	Box Line	70	400	Good - Non-S	Belt1 on the Box Line is slow.
11:21:58 AM	Pressure	52	500	Good - Non-S	Valve 3 Pressure: normal
11:21:57 AM	Critical Mass	49	500	Good - Non-S	Critical Mass is ok.
11:21:37 AM	/+Temperatur		500	Good - Non-S	/+Awx\RateOfChange\Temp\Critical+/
11:21:37 AM	Alkaline Level		700	Good - Non-S	Alkaline level in Tank1 is changing too quickly. (ROC Alar
11:21:37 AM	Ash Content	1	400	Good - Non-S	Ash Content of Tank1 is too low. Contents are acidic.
11:21:37 AM	Alkaline Level	1	800	Good - Non-S	Alkaline level in Tank1 is too low. Contents are basic
11:21:37 AM	Scale	1	700	Good - Non-S	Scale: Reading is low

Figure 8.4 - AlarmWorX Viewer Web Part

8.4.1 AlarmWorX Viewer Web Part Configuration

When first added to the page, the AlarmWorX Viewer Web Part prompts you to select an AlarmWorX32 Viewer (.awv) display file, as shown in Figure 8.5. Click on the drop-down menu to browse for a file. Select a display file, and then click on **Apply**.

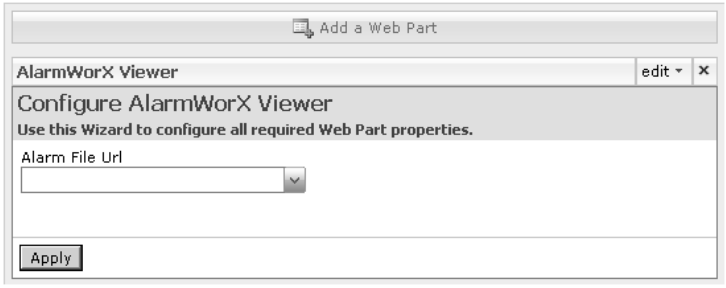


Figure 8.5 - Initially Inserted AlarmWorX Viewer Web Part

8.4.2 AlarmWorX Viewer Properties

The AlarmWorX Viewer Settings include items as shown in Figure 8.6. The only property that's different in this web part is the AlarmWorX Display Settings. In here, you can specify an Alarm File URL path (either a URL or a local path on the server) to the alarm file you wish to use.

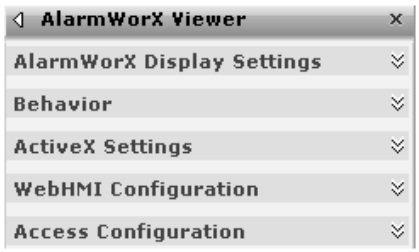


Figure 8.6 - AlarmWorX Viewer Web Part Properties

8.5 TrendWorX Viewer Web Part

The PortalWorX **TrendWorX Viewer Web Part**, shown in Figure 8.7, gives you the power to plot both live data and historical data in the same trend window at the same time. You can easily compare last week's data with current information or trend production numbers with a target. Plot types include the standard time-based chart, XY chart, logarithmic chart, bar graph, strip chart, and circular chart.

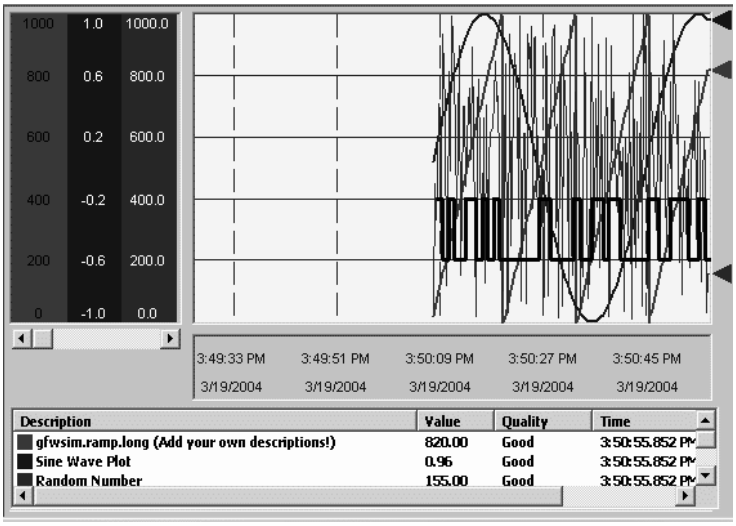


Figure 8.7 - TrendWorX Viewer Web Part

8.5.1 TrendWorX Viewer Web Part Configuration

When first added to the page, the TrendWorX Viewer Web Part prompts you to select a TrendWorX32 Viewer (.v32) display file, as shown in Figure 8.8. Click on the drop down menu to browse for a file. Select a display file, and then click on **Apply**.

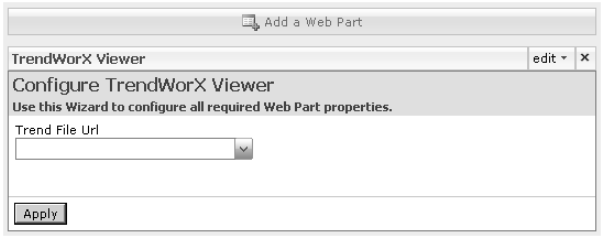


Figure 8.8 - Initial TrendWorX Viewer Configuration

8.5.2 TrendWorX Viewer Properties

The TrendWorX Viewer Settings include the items as shown in Figure 8.9.

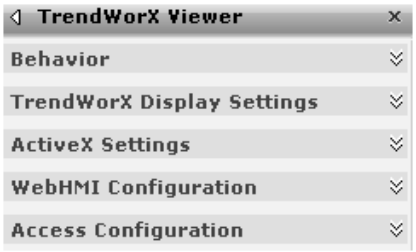


Figure 8.9 - TrendWorX Viewer Web Part Properties

8.5.2.1 TrendWorX Display Settings

In the TrendWorX Display Settings, you can configure the following:

- **Trend File URL**: The path (either a URL or a local path on the server) to the display file to be displayed by the Web part.
- **3-D Border**: Enables/disables a 3-D border.
- **Show Border**: Hides/shows the border. If a 3-D border is used, the border is always visible.

8.6 AlarmWorX Report Web Part

The **AlarmWorX Report Web Part**, shown in Figure 8.10, enables you to view your alarms and events and easily create filtered reports, pie charts, bar plots, and export to custom Crystal Reports. At the click of a button, you can find out which alarm is occurring most often and see if there are certain "trouble spots."

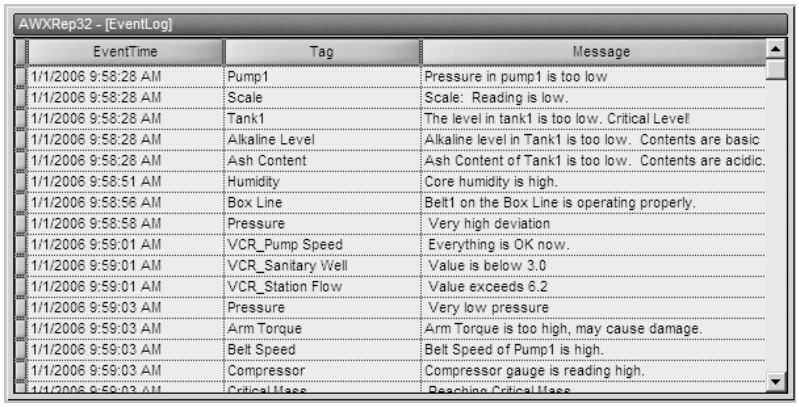


Figure 8.10 - AlarmWorX Report Web Part

8.6.1 AlarmWorX Report Web Part Configuration

When first added to the page, the AlarmWorX Report Web Part prompts you to select an AlarmWorX32 Report (.awr) display file, as shown in Figure 8.11. Click on the drop-down menu to browse for a file. Select a display file, and then click on **Apply.**

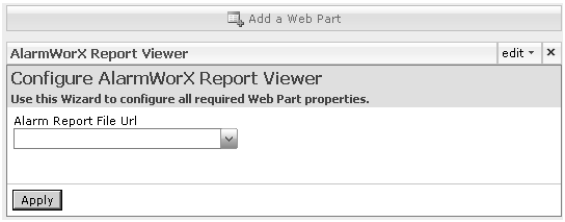


Figure 8.11 - Initial AlarmWorX Report Viewer

8.6.2 AlarmWorX Report Properties

The AlarmWorX Report Settings include items as shown in Figure 8.12:

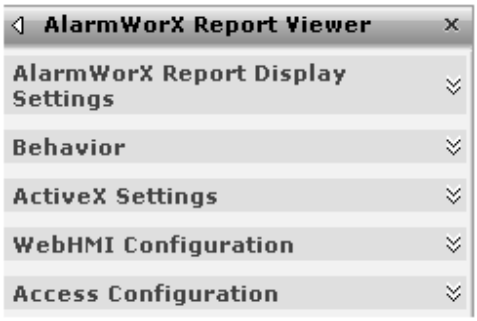


Figure 8.12 - AlarmWorX Report Web Part Properties

The only setting we have not mentioned thus far is the AlarmWorX Report Display Settings. In here, you can specify an **AlarmWorX Report File URL** (either a URL or a local path on the server) to the alarm file to be displayed by the web part.

8.7 Gauge Web Part

The PortalWorX **Gauge Web Part**, shown in Figure 8.13, is a multi-purpose graphical KPI viewer that can be customized to emulate a vertical, horizontal, or circular gauge.

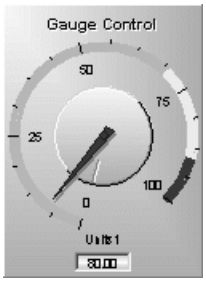


Figure 8.13 - Gauge Web Part

8.7.1 Gauge Properties

The Gauge Web Part properties include the categories as shown in Figure 8.14.



Figure 8.14 - Gauge Web Part Properties

8.7.1.1 Gauge Data Source

The **Gauge Data Source** section displays the name of the tag that will be the data source for the gauge:

8.7.1.2 Gauge General Settings

The Gauge General Settings section specifies the following gauge settings:

- **Gauge Type**: Specifies the type of gauge that will be displayed. The gauge can be vertical, horizontal or circular.

  NOTE: Changing the **Gauge Type** affects some other configuration options. It is recommended that you apply the changes (by clicking the **Apply** button) before changing any other configuration settings.

- The **Start Angle** and **End Angle** fields are only valid when dealing with a circular gauge, and they determine where in the display the gauge will begin and end. The default is set to begin at 225 degrees and end at 315 degrees.
- **Preserve Aspect Ratio**: When checked, the gauge will always maintain its proper aspect ratio when it is resized.
- **Length Factor**: The relative length of the gauge compared with its default length when **Preserve Aspect Ratio** is selected.
- **Data Update Rate**: Determines how fast the system will update the data being displayed through the gauge. The fastest update rate is 50 milliseconds; the faster the update rate, the more fluid the motion of the gauge.
- **Override Range**: When checked, this overrides the ranges associated with their selected tag or data source by forcing the value bar (or needle) to be bounded by the values specified in the **Low Range** and **High Range** fields.
  - **High Range**: Specifies a high range for the bar or needle if **Override Range** is selected.
  - **Low Range**: Specifies a low range for the bar or needle if **Override Range** is selected.

8.7.1.3 Gauge Caption

The Gauge Caption section specifies the caption that appears on the gauge, as well as the text for the gauge ToolTip that appears when the mouse pointer is over the object:

- **Show Caption**: Hides/shows the gauge caption.

- **Caption Text**: Specifies the text for the gauge's main caption.
- **Text Color**: The caption text's color. Choose a color from the color palette.
- **Show Text Shadow**: Enables/disables the shadow for the caption.
- **Shadow Color**: The caption text's shadow color. Choose a color from the color palette.
- **Gauge ToolTip**: Specifies the text (word, phrase, or message) to appear as a ToolTip when the mouse pointer is over the gauge.

8.7.1.4 Gauge Background

The Gauge Background section configures the appearance of the gauge within the web page:

- **Show Background**: If selected, the container web part page's background color will be used to fill the web part's background surrounding the gauge.
- **Fill Background**: Sets the background color used to fill the web part's background surrounding the gauge. Choose a color from the color palette.
- **Fill Color**: The gauge's background fill color. Choose a color from the color palette.
- **Use Gradient**: When checked, a gradient will be used to enhance the gauge control rendering.
- **Edge Style**: The base plate's edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Edge Line Color**: The base plate's edge color. Choose a color from the color palette.

8.7.1.5 Gauge Slider/Dial

The Gauge Slider/Dial section configures the appearance of the slider (in horizontal and vertical gauges) or the dial (in circular gauges). Slider-specific properties only appear when the gauge is not circular:

- **Show Slider/Dial**: Hides/shows the slider/dial.
- **Track Current Value**: Indicates whether you can change the value of the data source by dragging/dropping the knob.
- **Continuous Update**: Indicates whether the position of the knob moves according to the value of the data source.
- **Number of Detents**: Number of fixed increments the slider or dial can move (0 = freely slide anywhere, infinite detents).
- **Fill Track**: Enables/disables the fill color.

- **Track Fill Color**: The slider track's fill color. Choose a color from the color palette.
- **Track Edge Style**: The slider track's edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Track Edge Line Color**: The slider track's edge color. Choose a color from the color palette.
- **Knob Fill Color**: The knob track's fill color. Choose a color from the color palette.
- **Knob Edge Style**: The knob track's edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Knob Edge Line Color**: The knob track's edge color. Choose a color from the color palette.

8.7.1.6 Gauge Value Box

The Gauge Value Box section refers to the text box at the bottom of the gauge where the tag value is displayed:

- **Show Value Box**: Hides/shows the gauge value box.
- **Allow Data Entry**: When checked, this enables users to enter a new value during runtime.
- **Value Format**: Defines the numeric forms in which the data can be displayed (e.g. digits and decimal places).
- **Fill Value Box**: Enables/disables the fill color.
- **Fill Color**: The fill color of the text box. Choose a color from the color palette.
- **Text Color**: The color of the text displayed in the text box. Choose a color from the color palette.
- **Edge Style**: The style of the gauge borders (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line)

8.7.1.7 Scale One

The Scale One section configures the appearance of the interior, left, or bottom scale on the gauge:

- **Show Scale**: Hides/shows the scale.
- **Unit Label**: The text to display as units for Scale One.
- **High Range**: Scale One's high range.
- **Low Range**: Scale One's low range.
- **Major Ticks Divisions**: Number of "Major" tick lines.
- **Minor Ticks Divisions**: Number of "Minor" tick lines.

- **Ticks Style**: The style of the tick lines (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Ticks Color**: The color of the tick lines. Choose a color from the color palette.
- **Ticks Label Format**: The format of the tick's labels (digits and decimal places).
- **Ticks Label Frequency**: Specifies the interval at which labels will be displayed on the gauge's ticks.
- **Ticks Label Text Color**: The tick's label text color. Choose a color from the color palette.

8.7.1.8 Scale Two

The Scale Two section configures the appearance of the interior, left, or bottom scale on the gauge. It has the exact same property fields as Scale One.

8.7.1.9 Gauge Bar

The Gauge Bar section configures the appearance of the bar (in horizontal and vertical gauges):

- **Show Bar**: Hides/shows the bar.
- **Fill Color**: The gauge's bar fill color. Choose a color from the color palette.
- **Fill Background**: Enables/disables the background fill color.
- **Background Color**: The bar's background color. Choose a color from the color palette.
- **Edge Style**: The edge's style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Edge Line Color**: The gauge's bar edge color. Choose a color from the color palette.
- **Bias Bar**: If enabled, causes the bar's starting point to be in the middle rather than at the bottom or left (horizontal or vertical gauge only).

8.7.1.10 Gauge Needle

The Gauge Needle section configures the appearance of the needle (in circular gauges):

- **Show Needle**: Hides/shows the needle.
- **Needle Width**: Specifies the width of the needle as small, medium, or large.

- **Needle Length**: Specifies the length of the needle as small, medium, or large.
- **Fill Color**: The gauge's needle fill color. Choose a color from the color palette.
- **Show Needle Shadow**: Hides/shows the needle shadow.
- **Shadow Color**: The needle shadow's color. Choose a color from the color palette.
- **Edge Style**: The edge's style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Edge Line Color**: The gauge's needle edge color. Choose a color from the color palette.

8.7.1.11 Gauge Zones

The Gauge Zones section configures the color and the percentage for each warning zone:

- **Show Zone X**: Shows/hides gauge zone X.
- **Start Value**: The value (percentage) where Zone X starts.
- **End Value**: The value (percentage) where Zone X ends.
- **Fill Color**: The color used to fill Zone X. Choose a color from the color palette.

8.8 Numeric Web Part

The PortalWorX **Numeric Web Part,** shown in Figure 8.15, is optimal for displaying analog or digital values. It provides powerful control of the sizes, widths, and colors. You may specify the total number of display digits and the number of decimal places, among other properties.



Figure 8.15 - Numeric Web Part

8.8.1 Numeric Properties

The Numeric Web Part properties include the categories, as shown in Figure 8.16.



Figure 8.16 - Numeric Web Part Properties

8.8.1.1 Numeric Data Source

The Numeric Data Source section displays the name of the tag that will be the data source for the numeric:

8.8.1.2 Numeric General Settings

The Numeric General Settings section specifies the following numeric settings:

- **Numeric System**: The numeric system to be used to display the value (decimal, binary, octal or hexadecimal). Select one from the drop-down list.
- **Show Sign**: Turns the sign on and off.
- **Show Separator**: Turns the separator on and off.
- **Preserve Aspect Ratio**: When checked, the control will always maintain its proper aspect ratio when it is resized.
- **Data Update Rate**: Determines how fast the system will update the data being displayed through the control. The fastest update rate is 50 milliseconds; the faster the update rate, the more fluid the motion of the control will be.

8.8.1.3 Numeric Caption

The Numeric Caption section specifies the caption that appears on the control, as well as the text for the ToolTip that appears when the mouse pointer is over the object:

- **Show Caption**: Turns the caption on and off.

- **Caption Text**: Specifies the text for the control's main caption.
- **Text Color**: The caption text's color. Choose a color from the color palette.
- **Show Text Shadow**: Enables/disables the shadow for the caption.
- **Shadow Color**: The caption text's shadow color. Choose a color from the color palette.
- **Numeric ToolTip**: Specifies the text (word, phrase, or message) to appear as a ToolTip when the mouse pointer is over the control.

8.8.1.4 Numeric Background

The Numeric Background section configures the appearance of the control within the Web page:

- **Show Background**: Hides/shows the numeric background.
- **Fill Background**: Enables the background fill color.
- **Fill Color**: The background fill color. Choose a color from the color palette.
- **Use Gradient**: When checked, gradients will be used to enhance the control rendering.
- **Edge Style**: The background edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Integer Digits Edge Style**: The edge style for the integers (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Edge Line Color**: The background edge color. Choose a color from the color palette.
- **Decimal Digits Edge Style**: The edge style for the decimals (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).

8.8.1.5 Numeric Spin Buttons

The Numeric Spin Buttons section enables you to change the displayed data value in runtime mode. Arrow buttons that allow you to increase or decrease the digit value will accompany each digit field in the numeric web part:

- **Spin Buttons**: Turns the buttons on and off.
- **Background Color**: The background color for the buttons. Choose a color from the color palette.
- **Arrows Color**: The color for the arrows. Choose a color from the color palette.
- **Edge Style (Buttons)**: Edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line) of buttons (if shown).

- **Edge Line Color (Buttons)**: Edge color of buttons (if shown). Choose a color from the color palette.

8.8.1.6 Numeric Digits

The Numeric Digits section independently configures the number and appearance of integer figures and decimal figures in the numeric control:

- **Number of Integer Digits**: The number of digits for integer values.
- **Integer Digits Text Color**: The text color for the integers. Choose a color from the color palette.
- **Show Integer Digits Background**: Hides/shows integer digits background.
- **Integer Digits Background Color**: The background color for the integers. Choose a color from the color palette.
- **Integer Digits Edge Line Color**: The edge color for the integers. Choose a color from the color palette.
- **Show Decimal Digits**: When checked, decimal places will be displayed in the Numeric Web part.
- **Number of Decimal Digits**: The number of digits for decimal values
- **Decimal Digits Text Color**: The text color for the decimals. Choose a color from the color palette.
- **Show Decimal Digits Background**: Hides/shows decimal digits background.
- **Decimal Digits Background Color**: The fill color for the decimals. Choose a color from the color palette.
- **Decimal Digits Edge Line Color**: The edge color for the decimals. Choose a color from the color palette.

8.9 Slider Web Part

The PortalWorX **Slider Web Part,** shown in Figure 8.17, graphically displays tags in a highly customizable slider format.

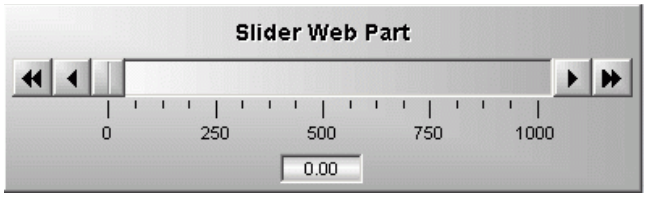


Figure 8.17 - Slider Web Part

8.9.1 Slider Properties

The Slider Web Part properties include the categories, as shown in Figure 8.18.

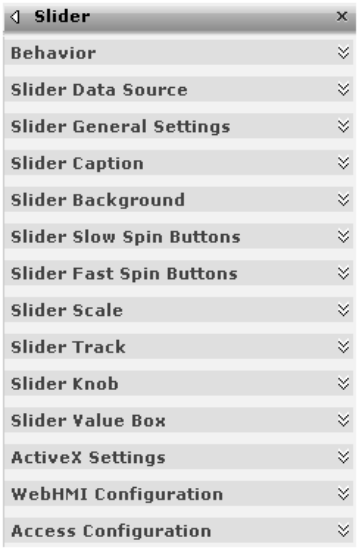


Figure 8.18 - Slider Web Part Properties

8.9.1.1 Slider Data Source

The **Slider Data Source** section displays the name of the tag that will be the data source for the slider:

8.9.1.2 Slider General Settings

The **Slider General Settings** section specifies the following slider settings:

- **Slider Orientation:** Specifies the type of slider that will be displayed. The slider can be either vertical or horizontal.
- **Preserve Aspect Ratio:** When checked, the control will always maintain its proper aspect ratio when it is resized.
- **Length Factor:** Determines the relative length (vertical or horizontal) of the slider.
- **Data Update Rate:** Determines how fast the system will update the data being displayed through the control. The fastest update rate is 50 milliseconds; the faster the update rate, the more fluid the motion of the control will be.
- **Override Range:** When checked, this overrides the ranges associated with their selected tag or data source by forcing the value bar (or needle) to be bounded by the values specified in the **Low Range** and **High Range** fields.

- **High Range:** Specifies a high range for the bar if **Override Range** is selected.
- **Low Range:** Specifies a low range for the bar if **Override Range** is selected.

8.9.1.3 Slider Caption

The **Slider Caption** section specifies the caption that appears on the control, as well as the text for the ToolTip that appears when the mouse pointer is over the object:

- **Show Caption:** Turns the caption on and off.
- **Caption Text:** Specifies the text for the control's main caption.
- **Text Color:** The caption text's color. Choose a color from the color palette.
- **Show Text Shadow:** Enables/disables the shadow for the caption.
- **Shadow Color:** The caption text's shadow color. Choose a color from the color palette.
- **Position:** Specifies the position of the caption (e.g. left, right, top, or bottom).
- **Slider ToolTip:** Specifies the text (word, phrase, or message) to appear as a ToolTip when the mouse pointer is over the control.

8.9.1.4 Slider Background

The **Slider Background** section configures the appearance of the control within the Web page:

- **Show Background:** Hides/shows the slider background.
- **Fill Background:** Enables the background fill color.
- **Fill Color:** The background fill color. Choose a color from the color palette.
- **Use Gradient:** When checked, a gradient will be used to enhance the control rendering.
- **Edge Style:** The background edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Edge Line Color:** The background edge color. Choose a color from the color palette.

8.9.1.5 Slider Slow Spin Buttons

The **Slider Slow Spin Buttons** section configures the appearance and behavior of the slider control's slow spin buttons:

- **Show Buttons:** Turns the slow spin buttons on and off.
- **Position:** Determines the location of the slow spin button relative to the slider (e.g. group left, group right, surround).
- **Fill Color:** The slow spin button's fill color. Choose a color from the color palette.
- **Arrow Color:** The slow spin button's arrows color. Choose a color from the color palette.
- **Increment:** Defines the amount by which the value of the process variable is increased or decreased when clicking on a spin button.
- **Repeat Rate:** The delay (in milliseconds) between slider movements when the user holds the mouse down on the slow spin button.
- **Use Acceleration:** When checked, enables acceleration capabilities for the slow spin button. Acceleration means that when you keep a spin button pressed, after the specified **Acceleration Delay,** the process value will be increased or decreased by the **Acceleration Increment.**
- **Acceleration Increment:** After the specified **Acceleration Delay,** the process value will be increased or decreased by the **Acceleration Increment.**
- **Acceleration Delay:** The delay (in milliseconds) after which the acceleration of values will occur.

8.9.1.6 Slider Fast Spin Buttons

The **Slider Fast Spin Buttons** section configures the appearance and behavior of the slider control's fast spin buttons:

- **Show Buttons:** Turns the fast spin buttons on and off.
- **Position:** Determines the location of the fast spin button relative to the slider (e.g. group left, group right, surround).
- **Fill Color:** The fast spin button's fill color. Choose a color from the color palette.
- **Arrow Color:** The fast spin button's arrows color. Choose a color from the color palette.
- **Increment:** Defines the amount by which the value of the process variable is increased or decreased when clicking on a fast spin button.
- **Repeat Rate:** The delay (in milliseconds) between slider movements when the user holds the mouse down on the fast spin button.

- **Use Acceleration:** When checked, enables acceleration capabilities for the fast spin button. Acceleration means that when you keep a spin button pressed, after the specified **Acceleration Delay,** the process value will be increased or decreased by the **Acceleration Increment.**
- **Acceleration Increment:** After the specified **Acceleration Delay,** the process value will be increased or decreased by the **Acceleration Increment.**
- **Acceleration Delay:** The delay (in milliseconds) after which the acceleration of values will occur.

8.9.1.7 Slider Scale

The **Slider Scale** section configures the appearance of the slider scale:

- **Show Scale:** Turns the scale on and off.
- **Position:** Defines the location (bottom or top) of the scale relative to the slider track.
- **Unit Label:** The text to display as units for the scale.
- **High Range:** Scale's high range.
- **Low Range:** Scale's low range.
- **Major Ticks Divisions:** Number of "Major" tick lines.
- **Minor Ticks Divisions:** Number of "Minor" tick lines.
- **Ticks Style:** The style of the tick lines (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Ticks Color:** The color of the tick lines. Choose a color from the color palette.
- **Ticks Label Format:** The format of the tick’s labels (digits and decimal places).
- **Ticks Label Frequency:** Specifies the interval at which labels will be displayed on the slider's ticks.
- **Ticks Label Text Color:** The tick’s label text color. Choose a color from the color palette.

8.9.1.8 Slider Track

The **Slider Track** section configures the appearance and behavior of the slider track:

- **Track Current Value:** Indicates whether you can change the value of the data source by dragging/dropping the slider knob.
- **Continuous Update:** Indicates whether the position of the knob moves according to the value of the data source.

- **Number of Detents:** Number of fixed increments the slider or dial can move (0 = freely slide anywhere, infinite detents).
- **Track Control:** Determines the behavior when you click on the slider track. Choices for track control are: move to next detent, move to detent nearest the mouse pointer, move to mouse pointer position, move by fast spin increment, move by slow spin increment, and no action.
- **Wide Track:** Enables/disables the wide track.
- **Fill Track:** Enables the slider track fill.
- **Fill Color:** The slider track's fill color. Choose a color from the color palette.
- **Edge Style:** The slider track's edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Edge Line Color:** The slider track's edge color. Choose a color from the color palette.

8.9.1.9 Slider Knob

The **Slider Knob** section configures the appearance and behavior of the slider knob:

- **Fill Color:** The slider knob's fill color. Choose a color from the color palette.
- **Edge Style:** The slider knob's edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Edge Line Color:** The slider knob's edge color. Choose a color from the color palette.

8.9.1.10 Slider Value Box

The **Slider Value Box** section refers to the text box at the bottom of the slider where the tag value is displayed:

- **Show Value Box:** Turns the values on and off.
- **Allow Data Entry:** When checked, this enables users to enter a new value during runtime.
- **Value Format:** Defines the numeric forms in which the data can be displayed (e.g. digits and decimal places).
- **Fill Value Box:** Enables the value box fill.
- **Fill Color:** The fill color of the value box. Choose a color from the color palette.
- **Text Color:** The color of the text displayed in the value box. Choose a color from the color palette.

- **Edge Style:** The style of the value box (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).

8.10 Switch Web Part

The PortalWorX **Switch Web Part,** shown in Figure 8.19, is a digital or Boolean indicator, including preconfigured views for true/false, yes/no, and on/off options.

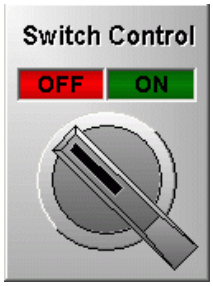


Figure 8.19 - Switch Web Part

8.10.1 Switch Properties

The Switch Web Part properties include the categories as shown in Figure 8.20.

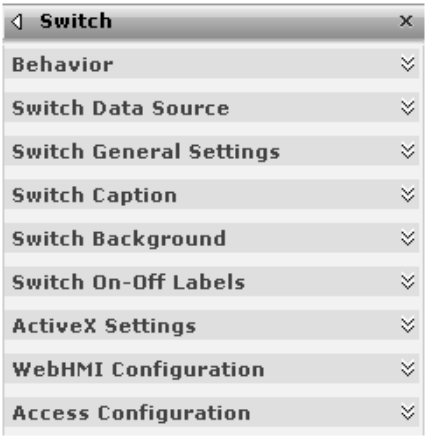


Figure 8.20 - Switch Web Part Properties

8.10.1.1 Switch Data Source

The **Switch Data Source** section displays the name of the tag that will be the data source for the switch:

8.10.1.2 Switch General Settings

The **Switch General Settings** section specifies the following switch settings:

- **Switch Type:** Specifies the type of switch that will be displayed (Vertical Rocker, Vertical Slider, Vertical Toggle 1, Vertical Toggle 2, Horizontal Rocker, Horizontal Slider, Horizontal Toggle 1, Horizontal Toggle 2, Dial, or In/Out).
- **Preserve Aspect Ratio:** When checked, the control will always maintain its proper aspect ratio when it is resized.
- **Data Update Rate:** Determines how fast the system will update the data being displayed through the control. The fastest update rate is 50 milliseconds; the faster the update rate, the more fluid the motion of the control will be.
- **Use Reverse Value:** Reverses the default on/off position of the switch (like installing a switch upside-down).
- **Override Colors When Reverse Values:** Specifies the on and off switch colors. Choose a color from the color palette.

8.10.1.3 Switch Caption

The **Switch Caption** section specifies the caption that appears on the control, as well as the text for the ToolTip that appears when the mouse pointer is over the object:

- **Show Caption:** When checked, the switch caption will be displayed on the switch control.
- **Caption Text:** Specifies the text for the control's main caption.
- **Show Text Shadow:** Enables/disables the shadow for the caption.
- **Shadow Color:** The caption text’s shadow color. Choose a color from the color palette.
- **Switch ToolTip:** Specifies the text (word, phrase, or message) to appear as a ToolTip when the mouse pointer is over the switch.

8.10.1.4 Switch Background

The **Switch Background** section configures the appearance of the control within the Web page:

- **Show Background:** If selected, the container Web part page’s background color will be used to fill the Web part’s background surrounding the switch.

- **Fill Color:** The switch's background fill color. Choose a color from the color palette.
- **Use Gradient:** When checked, a gradient will be used to enhance the switch control rendering.
- **Edge Style:** The base plate's edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).

8.10.1.5 Switch On/Off Labels

In this section, you can configure some properties for the lables.

- **Show On/Off Labels (Advanced):** When checked, the switch labels will be displayed on the switch control.
- **Labels Edge Style:** The label edge style (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).
- **Label 'On' Text:** The label for the On state.
- **On Label - Text Color:** The text color for the On label.
- **On Label - Fill Color When On:** The text color for the On label when the switch is in the On position. Choose a color from the color palette.
- **On Label - Fill Color When Off:** The text color for the On label when the switch is in the Off position. Choose a color from the color palette.
- **Label 'Off' Text:** The label for the Off state.
- **Off Label - Text Color:** The text color for the Off label. Choose a color from the color palette.
- **Off Label - Fill Color When On:** The text color for the Off label when the switch is in the On position. Choose a color from the color palette.
- **Off Label - Fill Color When Off:** The text color for the Off label when the switch is in the Off position. Choose a color from the color palette.

8.11 Vessel Web Part

The PortalWorX **Vessel Web Part**, shown in Figure 8.21, can be used to connect to any KPI data source and offers the ability to use various tanks, such as storage, barrels, elevated tanks, and custom tanks.

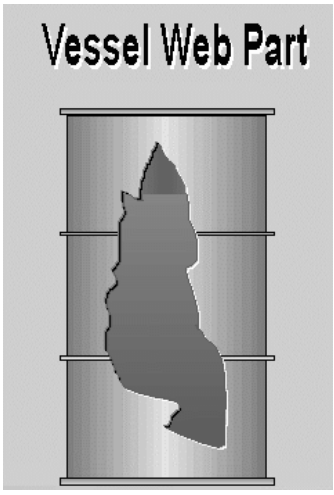


Figure 8.21 - Vessel Web Part

8.11.1 Vessel Properties

The Vessel Web Part properties include the categories as shown in Figure 8.22.



Figure 8.22 - Vessel Web Part Properties

8.11.1.1 Vessel Data Source

The **Vessel Data Source** section displays the name of the tag that will be the data source for the vessel:

8.11.1.2 Vessel General Settings

The **Vessel General Settings** section specifies the following vessel settings:

- **Preserve Aspect Ratio:** When checked, the control will always maintain its proper aspect ratio when it is resized.
- **Data Update Rate:** Determines how fast the system will update the data being displayed through the control. The fastest update rate is 50 milliseconds; the faster the update rate, the more fluid the motion of the control will be.
- **Override Range:** When checked, this overrides the ranges associated with their selected tag or data source by forcing the value bar (or needle) to be bounded by the values specified in the **Low Range** and **High Range** fields.
- **High Range:** Specifies a high range for the vessel if **Override Range** is selected.
- **Low Range:** Specifies a low range for the vessel if **Override Range** is selected.

8.11.1.3 Vessel Caption

The **Vessel Caption** section specifies the caption that appears on the control, as well as the text for the ToolTip that appears when the mouse pointer is over the object:

- **Show Caption:** When checked, the vessel caption will be displayed on the vessel control.
- **Caption Text:** Specifies the text for the control's main caption.
- **Text Color:** The caption text's color. Choose a color from the color palette.
- **Show Text Shadow:** Enables/disables the shadow for the caption.
- **Shadow Color:** The caption text's shadow color. Choose a color from the color palette.
- **Vessel ToolTip:** Specifies the text (word, phrase, or message) to appear as a ToolTip when the mouse pointer is over the control.

8.11.1.4 Vessel Tank

The **Vessel Tank** section Specifies the type of tank that will be displayed (Tank 1, Tank 2, Tank 3, Tank 4, Barrel, Elevated Tank 1, Elevated Tank 2, Elevated Tank 3, or Storage Facility).

8.11.1.5 Vessel Cut Away

The **Vessel Cut Away** section configures the appearance of the vessel cut-away portion.

- **Cut Away Shape:** Specifies a cut-away style (Fancy, Triangular, Odometer, Elliptical, Rectangle, Window, Jagged, Freeform 1, or Freeform 2).
- **Edge Style:** Specifies a cut-away border type (e.g. thin line, medium line, thick line, etched, bump, raised, sunken, no line).

8.11.1.6 Vessel Fluid

The **Vessel Fluid** section configures the appearance of the vessel cut-away portion.

- **Fluid Color:** Determines the first color for the fluid gradient. Choose a color from the color palette.
- **Enable Fluid Color 2:** Enables/disables fluid color 2.
- **Fluid Color 2:** Determines the second color for the fluid gradient. Choose a color from the color palette.
- **Fluid Gradient Direction:** Determines the gradient direction (horizontal or vertical) of the cut-away portion.
- **Fluid Gradient Offset:** The location of the start of the fluid rendering (relative to the bottom or left of the cut-away portion). The gradient **Offset** property should be clamped to the range -100 to 100.
- **Fluid Details Level:** Specifies the size and the location of the vessel (default or custom) as a percentage of the vessel size.

8.12 KPI Web Part

The PortalWorX **KPI (Key Performance Indicator) Web Part**, shown in Figure 8.23, provides the ability to view whole tables, rows or columns from any open database. Single-click connectivity to the Charting Web Part allows you to visually analyze data and drill down for detailed views.



Figure 8.23 - KPI Web Part

You can link the KPI Viewer Web Part to the Data Charting Web Part by selecting **Connections → Provide Data To → Data Charting**, as shown in Figure 8.24. This enables you to display connected data sources from the KPI grid inside a customized data chart.

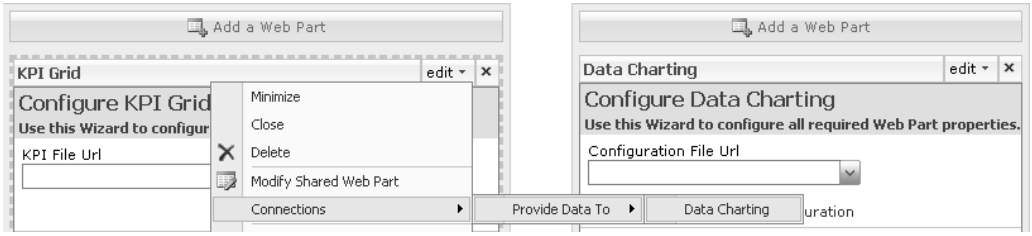


Figure 8.24 - Connecting the KPI Web Part to the Data Charting Web Part

8.12.1 KPI Viewer Web Part Configuration Wizard

When first added to the page, the Data Mining Web Part prompts you to select a Data Mining (.dbm) display file, as shown in Figure 8.25. Click on the drop down menu to browse for a file. Select a display file, and then click on **Apply.**

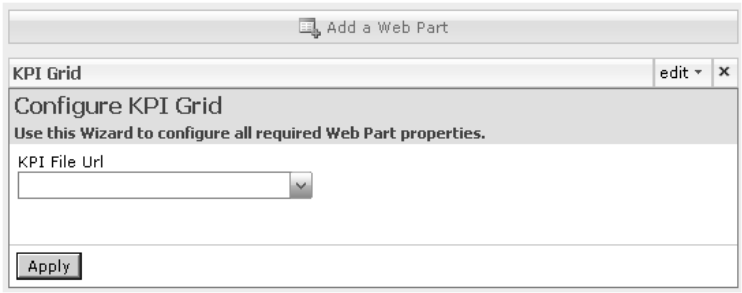


Figure 8.25 - Initial KPI Web Part Configuration

8.12.2 KPI Viewer Properties

The KPI Viewer Settings include the items as shown in **Error! Reference source not found.**:

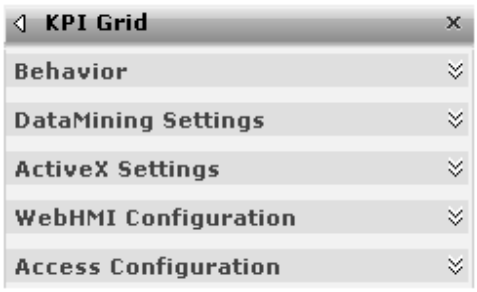


Figure 8.26 - KPI Web Part Properties

8.12.2.1 Data Mining Settings

The **Data Mining Settings** section specifies the following KPI Viewer settings:

- **Data Mining File URL:** The path (either a URL or a local path on the server) to the display file to be displayed by the Web part.
- **Hide Grid Pop-up Menu:** When checked, disables the pop-up menu in the grid.
- **Auto-Fit Columns:** When checked, columns in the grid will be automatically resized to fit within the grid borders.
- **Disable Multi-Select:** When checked, disables the selection of multiple rows in the grid.
- **Disable Resize:** When checked, disables resizing of rows in the grid.
- **Enable Hyperlink Parsing:** If your data grid contains hyperlinks, the HTML code tag syntax for the hyperlinks is automatically displayed inside the grid along with the hyperlink text. If this check box is checked, you will see only the text of the hyperlinks (the HTML tags will be hidden).
- **Number of Available Columns for Connection**: Specifies the number of grid columns that will be available when connecting to the Charting Web Part.

Lab: Manufacturing Web Parts 8

8.1 Quick Lab Overview

In this Lab, you will add four of the PortalWorX Manufacturing web parts to your Acmeseutical Portal in order to become more familiar with them. As well as upload some necessary files to the portal.

8.1.1 Task Checklist

In this Quick Lab, you will complete the following tasks:

- Upload Acmeseutical graphics to the Acmeseutical Portal
- Add a GraphWorX Viewer web part
- Add an AlarmWorX Viewer web part in order to view current alarms
- Add a TrendWorX Viewer web part to view real time trends
- Add a KPI Grid Web Part

8.1.2 Support Files

To complete this Quick Lab, you will need the following support files:

- AcmeseuticalAlarms.awv
- AcmeseuticalTrends.v32
- AcmeseuticalDataMining.dbm
- PainReliefEuropeMap.gdf
- PainReliefUSMap.gdf
- PainReliefWorldMap.gdf
- RecipeManager.gdf
- PainReliefDetailsUSA_FOX_Bottle1.gdf
- PainReliefDetailsUSA_FOX_Bottle2.gdf
- PainReliefDetailsUSA_FOX_Mach1.gdf
- PainReliefDetailsUSA_FOX_Mach2.gdf

8.2 Working With Manufacturing Web Parts

1. The first thing to do is to make sure you have the correct configuration loaded in the **Simulator OPC Server.**

2. Open the Simulator by clicking on **Start → Programs → ICONICS Tools → Simulator OPC Server**.

3. If the file name in the title bar at the top is not **Acmeseutical_Simulator.sim**, as shown in Figure L8.1, you will need to manually load the file.

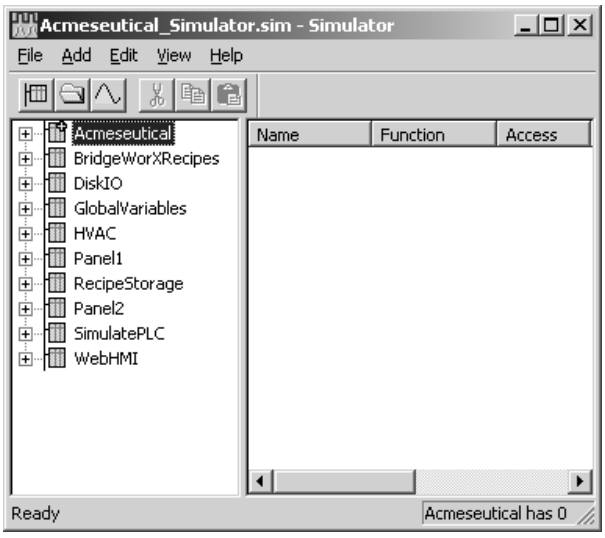


Figure L8.1 - ICONICS Simulated OPC Server

4. Click on **File → Open**, and browse to the directory where you saved the support files.

5. Select the **Acmeseutical_Simulator.sim** file, and then click **Open.**

6. Your Simulator should now look like Figure L8.1. Click **File → Save** to activate the configuration and then close the Simulator.

7. The next thing we need to do is upload all of our visualization files to our Acmeseutical Portal so that they will be visible to other clients on the Web.

8. Browse to your Acmeseutical Portal through the PortalWorX Administration Interface page by clicking on **View Web Site** in the Portal Management tab.

9. When you get to your Acmeseutical home page, click on the **Documents** link on the left side of the page, as shown in Figure L8.2

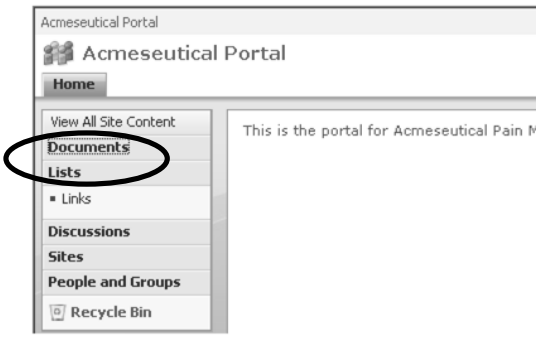


Figure L8.2 - Documents and Lists

10. Note that there are two basic methods of making your visualization screens (GraphWorX displays) available to your PortalWorX clients: uploading them to a SharePoint document library, or publishing them to a WebHMI server. The advantage of using WebHMI is that your WebHMI server can be separate from your PortalWorX server, and therefore it fits well in a distributed architecture. However, publishing on Windows Server 2003 is not always a trivial thing to set up, while uploading your displays to a SharePoint document library is extremely point-and-click, therefore, that is the method we will use in this training class.

11. Your **All Site Content** page should resemble the one in Figure L8.3 Click on the Configuration Files library.



Figure L8.3 - Samples Configuration File Library

12. This library already houses a number of built-in examples, some of which your instructor may have touched upon in this training class. We will create a new folder to separate our Acmeseutical files from the rest of the examples.

13. Click the **New → New Folder** link on the toolbar near the top, and then specify a name of **Acmeseutical Files.**

14. Click **OK** to create the folder. You should see your new folder in the list now.

15. Click on your new **Acmeseutical Files** folder to "open" it. This is where we will upload all of our files.

16. Click the Upload → Upload Multiple Files link on your toolbar to open the dialog that you see in Figure L8.4.

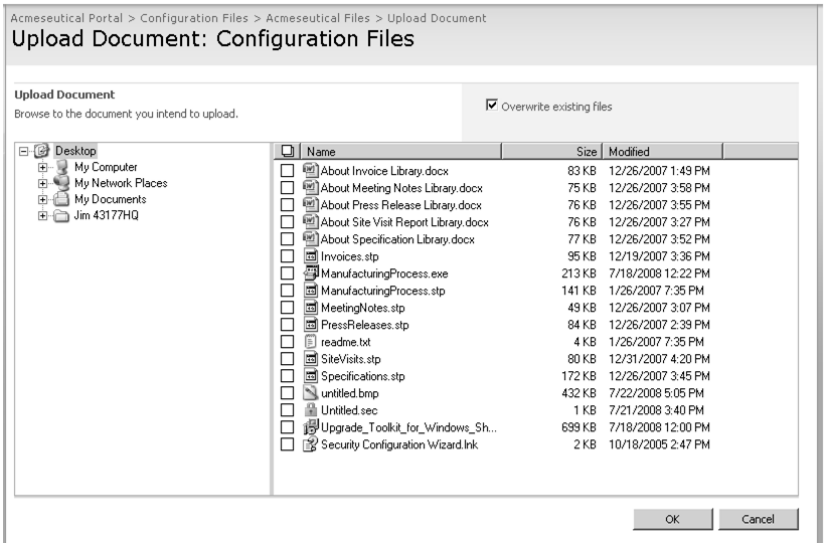


Figure L8.4 - Upload Mulitple Files

17. Navigate to the directory where you saved the support files and then select all of the **.gdf** files, the **AcmeseuticalAlarms.awv** file, the **AcmeseuticalTrends.v32** file, and the **AcmeseuitcalDataMining.dbm** file. It may be easier to click on the check box next to the **Name** field, which will do a **Select All.** After that, you can simply uncheck the files that you don't need, such as the Acmeseutical_Simulator file.

18. Once you have selected all the files, click **OK** to start the upload process. You will be asked to confirm the upload. This should only take a few seconds, and then your page will refresh inside the Acmeseutical Files folder with all of your new files.

19. Click the **Home** link in the top left corner to return to your **Acmeseutical Portal** home page.

20. Now we will add a GraphWorX Viewer Web part.

21. Click on the **Site Actions → Edit Page** link from the top right of the home page**.**

22. In the Left zone of the page, click the **Add a Web Part** button to launch the Add Web Parts to Left dialog.

23. Locate the **GraphWorX Viewer** in the list, and click the **Add** button to add it to the page.

24. Your page will refresh with the dialog you see in Figure L8.5. This dialog tells you that you have not yet associated your GraphWorX Viewer with a display. We will do that next.

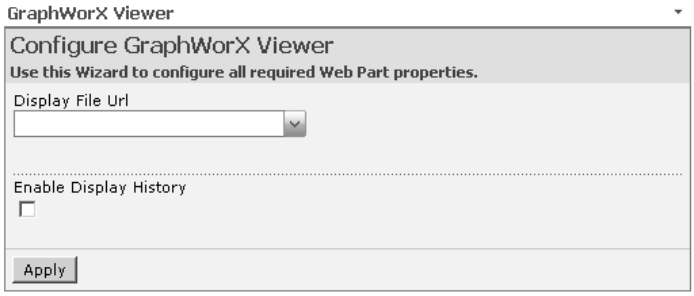


Figure L8.5 - Inital GraphWorX Viewer Configuration

25. Click on the **Text Field Arrow** to browse your document libraries. Remember, we uploaded our displays to the **Sample Configuration Files** library, we'll click on that section to expand it.

26. Next, click on the **Acmeseutical Files** folder to view our displays.

27. Select the display titled PainReliefWorldMap.gdf and click on **Apply**.

28. Your page should refresh with that display in just a few seconds. We will view everything in runtime mode once we have added the other two Web parts.

29. Probably it's necessary to set manually the height of the GraphWorX display. All the details about this operation are explained in the previous chapter (Quick Lab. 7: Introduction to Web Parts). Set the display height to 600 pixels.

30. While still in Edit Mode, click the **Add Web Part** button in the Left zone, where the GraphWorX display is now visible. Select the **AlarmWorX Viewer** web part and then click the **Add** button to place it on our page.

31. Similar to the GraphWorX Viewer Web part, you are asked to specify a configuration file first.

32. Click again on the **Combo Box** and expand the **Configuration Files** and the **Acmeseutical Files** folders. Then select the **AcmeseuticalAlarms.awv** file.

33. Click the AlarmWorX Viewer title bar, and drag the viewer below the GraphWorX Viewer.

34. Finally, let's add a **TrendWorX Viewer** web part to our Acmeseutical Portal.

35. While in Edit Mode, click the **Add a Web Part** button in the right zone where the links are located. Select the **TrendWorX Viewer** web part and then click the **Add** button to place it on our page.

36. Drag the **TrendWorX Viewer** web part and place it below the existing **Links** web part, as shown in Figure L8.6.

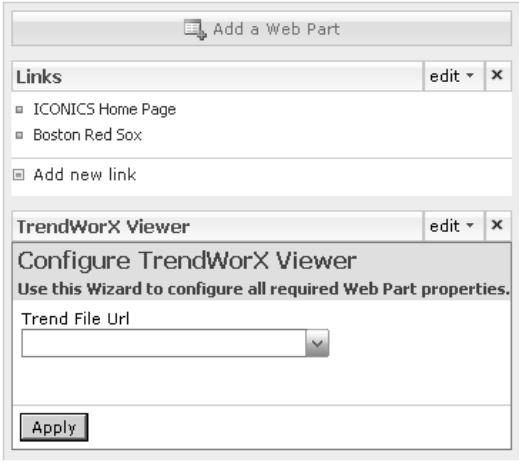


Figure L8.6 - ICONICS TrendWorX Viewer Web Part

37. Click on the **Combo Box** once again to browse for an appropriate configuration file. Expand Sample Configuration Files, and Acmeseutical Files.

38. Select the file called **AcmeseuticalTrends.v32**, and click on **Apply**.

39. Click the **Add a Web Part** button on the right zone and select the **KPI Grid** web part. Then, click on the **Add** button to place it on our page.

40. Click and drag the **KPI Grid** web part and place it below the **Links** web part

41. Click on the "**KPI File Url**" dropdown list, expand "**Configuration Files**" and "**Acmeseutical Files**" folders.

42. Select "**AcmeseuticalDataMining.dbm**" file and click on **Apply**.

43. Lastly, we will delete the Microsoft SharePoint Logo from our page. To do this we will enter Edit Mode. Then click the down arrow on the logo and click the **Delete** button.

44. Click the **Home** link near the top of your Acmeseutical Portal. Your portal should look similar to the one in Figure L8.7.

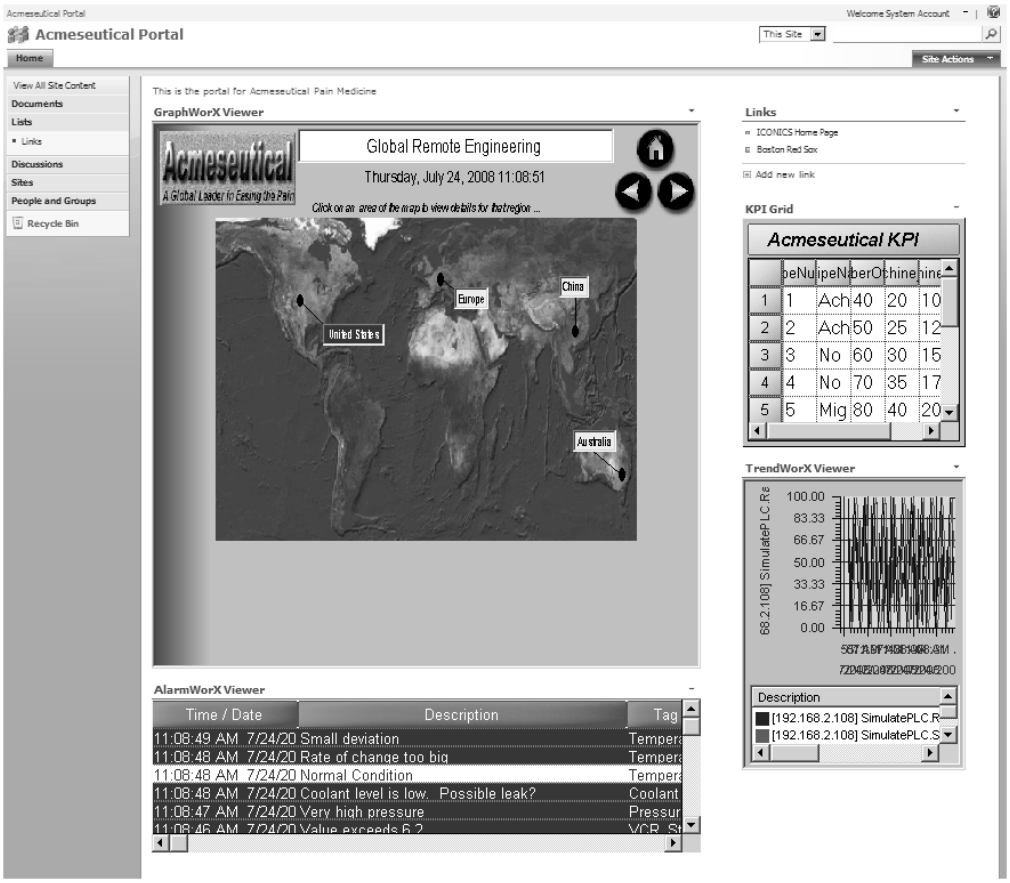


Figure L8.7 - Acmeseutical Portal with Manufacturing Web Parts

That completes Lab 8. In the next Chapter, you will learn about the ICONICS Business web parts. Then in the Lab following Chapter 9, you will configure some of those Business Web parts.

Business Web Parts 9

9.1 Objectives

After completing this chapter, you should know how to:

- Distinguish between the different types of business Web parts.
- Configure settings for each of the business Web parts.

9.2 Business Web Parts

Business Web Parts are specifically designed to tie with the Business Visualization (BizViz™) suite of products from ICONICS. PortalWorX provides the following business Web parts:

- Data Charting Web Part
- Report Browser Web Part
- Report Execution Console Web Part
- Report Manager Web Part
- Report Viewer Web Part
- Transaction Browser Web Part
- Transaction Execution Console Web Part
- Transaction Manager Web Part

9.3 Data Charting Web Part

The **Data Charting Web Part,** shown in Figure 9.1, enables you to create visually stunning charts with ease and supports a wide variety of chart types, including Bar, Pie, Doughnut, Area, Line, Bubble, Financial, Radar, and Composite.

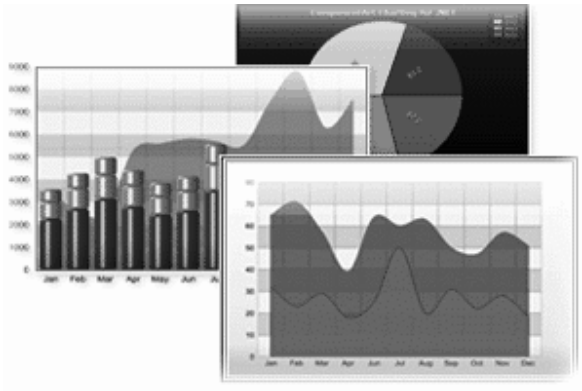


Figure 9.1 - Data Charting Web Part

9.3.1 Data Charting Web Part Configuration

When first added to the page, the Data Charting Web Part prompts you to specify the URL for the data charting configuration file, as shown in Figure 9.2. Click on the drop down menu to browse for a folder. Select a configuration file, and then click on **Apply**. If you do not already have a configuration file, you can create one by clicking on the **Create a new Charting Configuration** link. We will discuss how to create a configuration file through this link later in this chapter.

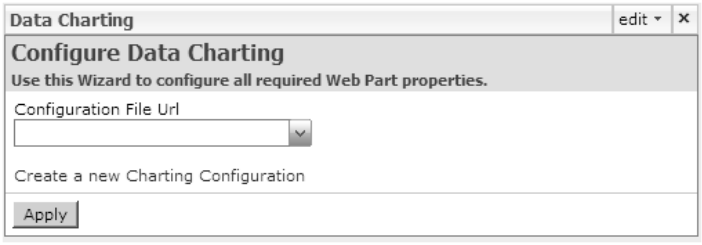


Figure 9.2 - Initial Data Charting Configuration

9.3.2 Data Charting Properties

The Data Charting Web Part properties include the categories as shown in Figure 9.3.

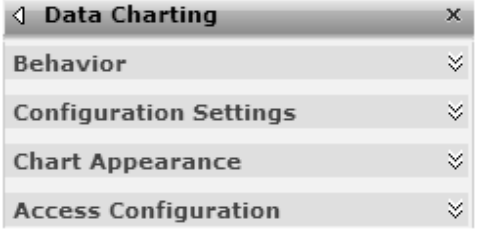


Figure 9.3 - Data Charting Web Part Properties

9.3.2.1 Configuration Settings

In this section, you can configure some general settings for the Data Charting web part:

- **Configuration File URL:** Specifies the URL for the data analysis configuration file.
- **Image Cache:** Specifies the amount of time (in minutes) the data chart will be cached. Once the chart is generated, caching avoids re-execution of the connected data sources, thereby increasing the rendering speed. Set to "0" to disable image caching.
- **Enable Language Switch:** When checked, enables loading of a localized configuration file.

9.3.2.2 Chart Appearance

- **Chart Width:** Specifies the width of the data chart (in pixels).
- **Chart Height:** Specifies the height of the Navigation Tree (in pixels).
- **Auto Refresh Interval:** Specifies how often (in seconds) the chart refreshes itself by executing the connected data source again. Set to "0" to disable auto refresh.
- **Show Parameter Selection:** Shows/hides the parameter input selection.
- **Show Refresh Chart Menu:** Shows/hides the Refresh Chart Menu in the Web part's menu.
- **Show Edit/New Chart Configuration:** Shows/hides the New and Edit Chart configuration menus in the Web part's menu.

9.3.3 Customizing the Data Charting Web Part Configuration

Clicking the **Create a New Charting Configuration** link on the Data Charting Web Part menu allows you to configure the content of your data charts, as shown in the Figure 9.4. The data chart configuration is stored in an XML configuration file. The Data Charting Configurator enables you to create your own XML configuration files.



Figure 9.4 - Creating a new Charting Web Part Configuration

In the Configurator, shown in Figure 9.5, the left pane contains the following configuration properties tabs, which enable you to specify your configuration settings:

- Series
- Data Sources
- Axis Databind
- 3D Options
- Coordinate System
- Other

These tabs are described in the sections below. The right pane shows a preview of the data chart based on your configuration settings. You can click on the **Preview** button to update your configuration changes in the preview pane.

When you have completed your configuration, click the **Finish** button under the preview pane to save your XML configuration to the portal document libraries. To save your XML configuration file to your local machine, click the **Export** button.

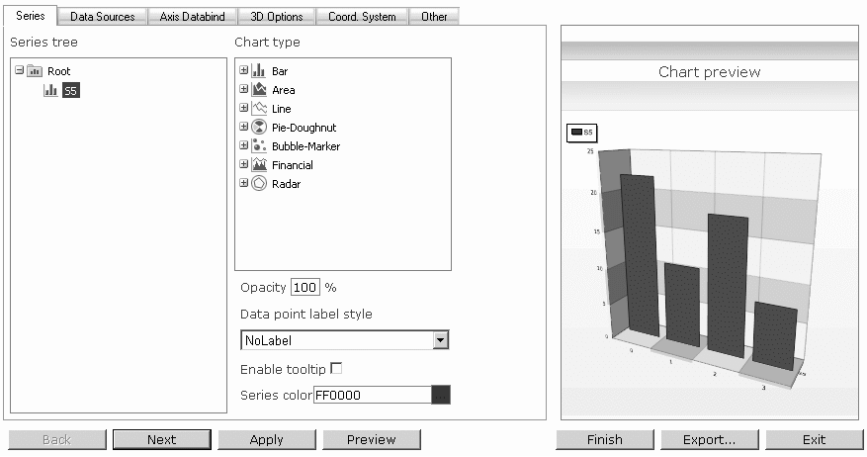


Figure 9.5 - Data Charting Web Part Configurator

9.3.3.1 Series

The **Series** tab in the Data Charting Configurator, shown in Figure 9.6, defines data series and chart type that will be contained in the data chart.

A series is a collection of data that will be added to the chart. You can have individual series and composite (multiple) series displayed in the data chart. To create a series in the **Series Tree**, right-click on the **Root** and select **Add Series**,

as shown in Figure 9.6. For each composite series, you can select a **Composition Kind** (e.g. merged, sections, concentric, etc.)

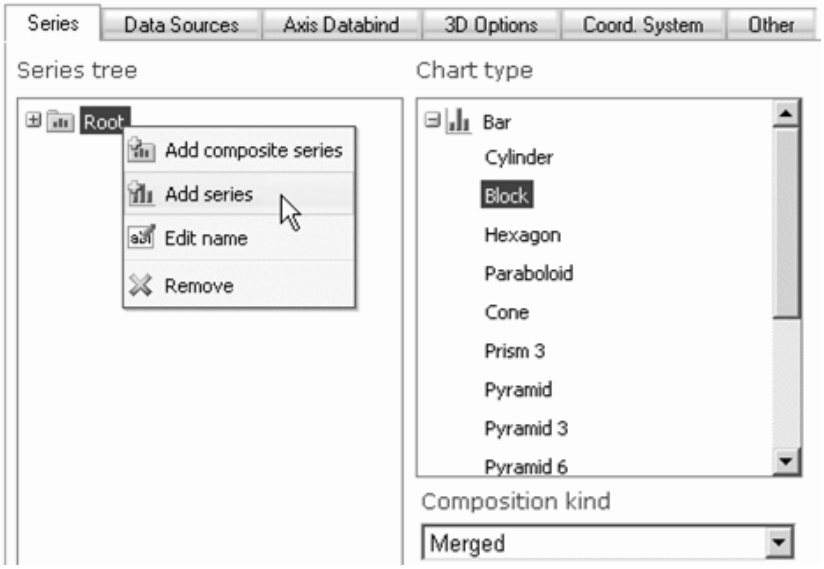


Figure 9.6 - Data Charting Configurator: Series Tab

For each series, you can select a chart type (i.e. bar, area, line, pie-doughnut, bubble marker, financial, or radar) and specify the following settings:

- **Opacity:** Specifies the degree of opacity for the selected series in the chart. This is useful if you are using multiple series in a single chart so you can see the series in the background.
- **Data Point Label Style:** Specifies the location (e.g. top horizontal, below horizontal, etc.) of the data source value labels in the data chart.
- **Enable ToolTip:** When checked, ToolTips will show specific values for the data point when the user hovers their mouse pointer over the label.
- **Series Color:** Specifies a display color for the selected data series in the chart. Choose a color from the color palette.

9.3.3.2 Data Sources

The **Data Sources** tab in the Data Charting Configurator, shown in Figure 9.7, specifies which ReportWorX data sources will be displayed in the data chart. The **ReportWorX Database Connection String** field contains the default ReportWorX configuration database connection. If you have a configuration database named other than ReportWorX90_Database, you will need to change the database connection string in order to use the correct configuration.

The **Data Sources Tree** lists the configured report templates in the configuration database. To add a data source to your data chart, right-click on the data source and select **Include Data Source in Chart,** as shown in Figure 9.7.

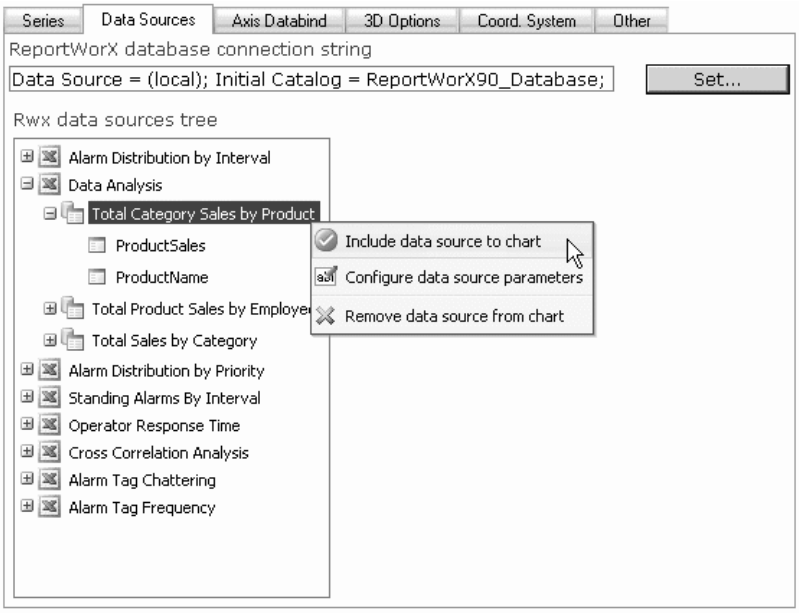


Figure 9.7 - Data Charting Configurator: Data Sources Tab

Selecting **Configure Data Source Parameters** allows you to specify a display name, description, and a default value for the data source that will be displayed in the chart, as shown in Figure 9.8.

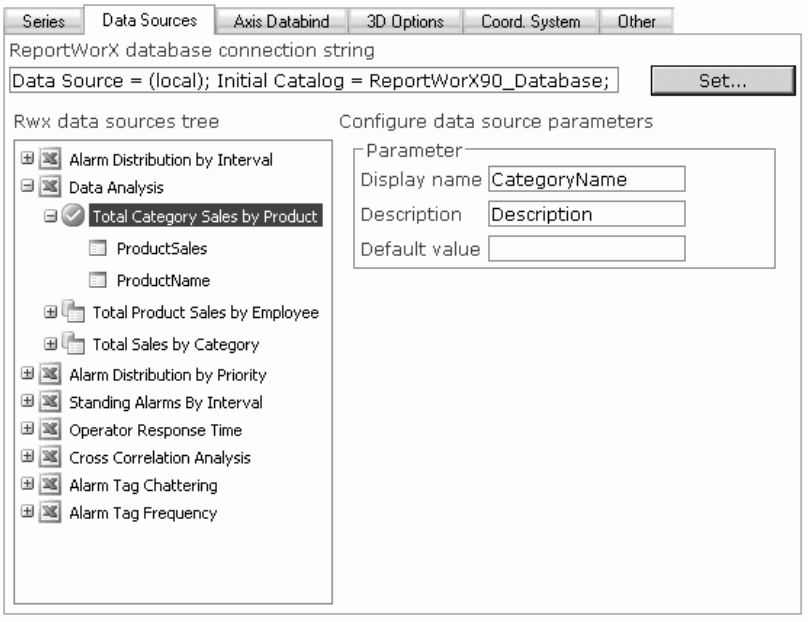


Figure 9.8 - Data Charting Configuration: Data Source Parameters

9.3.3.3 Axis Databind

The **Axis Databind** tab in the Data Charting Configurator, shown in Figure 9.9, allows you to bind the columns in your connected data sources to axis in the data chart.

The drop down lists for the X-axis and the Y-axis contain the columns from the data source included in the data chart. You can bind one column of the data source to each axis, as shown in Figure 9.9.

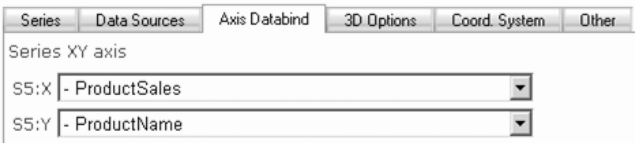


Figure 9.9 - Data Charging Configurator: Axis Databind Tab

9.3.3.4 3D Options

The **3D Options** tab in the Data Charting Configurator, shown in Figure 9.10, allows you to customize the visual characteristics of the data chart, including the projection type and spatial orientation.

- **Projection Kind**: Select a data chart projection type (i.e. parallel, isometric, central, or two dimensional) from the drop-down list.
- **Orientation**: Specifies the spatial orientation (i.e. horizontal, ZYX, YZX, etc.) of the axes in the data chart.
- **Rendering Precision**: Specifies the quality of the chart graphics. The low value limit is 0.1 for fine detail (high quality, slow rendering), and the high limit value is 0.8 (low quality, fast rendering).
- **Perspective:** Rotates the viewing angle of the chart by the specified percentage.
- **Viewing Direction:** Specifies 3D vector settings to determine the relative position of the X, Y, and Z-axis in space.
- **Lights in 2D:** Enables/disables the light source when you select **Two Dimensional** as the chart projection type.

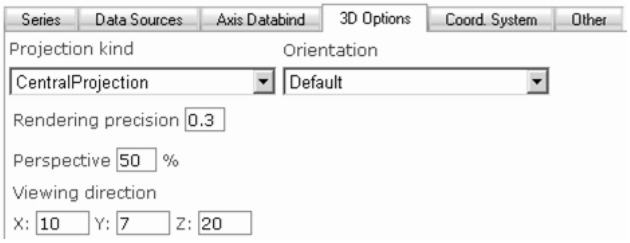


Figure 9.10 - Data Charting Configurator: 3D Options Tab

9.3.3.5 Coordinate System

The **Coordinate System** tab in the Data Charting Configurator, shown Figure 9.11, determines the appearance of the data chart axes.

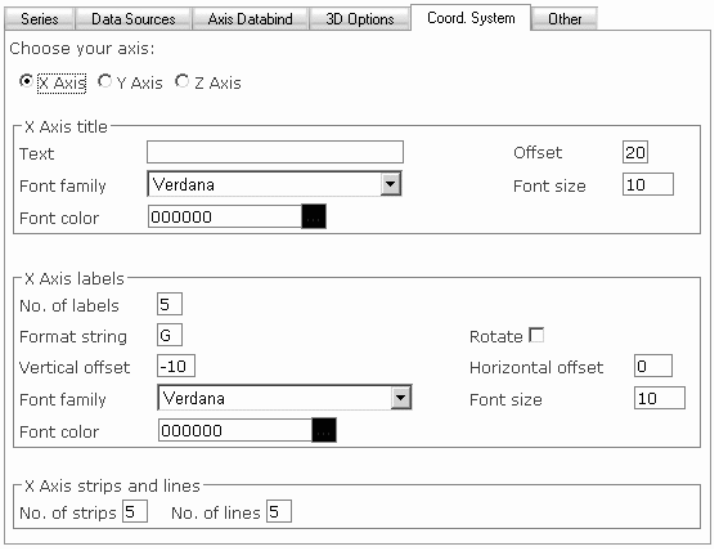


Figure 9.11 - Data Charging Configurator: Coordinate System Tab

Choose the axis you want to edit, and then configure the following settings (note that the configuration options are limited for the Z-axis) for the axis title, labels, strips, and lines.

In the Axis Title section you can configured:

- **Text:** Specifies the name of the axis
- **Font Family:** Select a font style from the drop down list.
- **Font Color:** Specifies a display color for the axis title. Choose a color from the color palette.
- **Offset:** Determines the distance (in pixels) of the title text from the axis.
- **Font Size:** Specifies the point size of the title text.

In the Axis Labels section, you can configure:

- **Number of Labels:** Specifies the number of labels on the axis. If the value is set to "0" the labels will be disabled.
- **Vertical Offset:** Determines the vertical distance (in pixels) of the label relative the axis. A negative value moves the labels down, while a positive value moves the labels up.
- **Font Family:** Select a font style from the drop-down list.

- **Font Color:** Specifies a display color for the axis labels. Choose a color from the color palette.
- **Rotate:** Rotates the label text 90 degrees counterclockwise.
- **Horizontal Offset:** Determines the horizontal distance (in pixels) of the label relative to the axis.
- **Font Size:** Specifies the point size of the label text.
- **Format String:** Specifies a format for the label. For more information, go to the links below:
  - *Standard date/time formatting strings:* http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cpguide/html/cpconstandarddatetimeformatstrings.asp
  - *Custom date/time formatting strings:* http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cpguide/html/cpconcustomdatetimeformatstrings.asp
  - *Standard numeric format strings:* http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cpguide/html/cpconstandardnumericformatstrings.asp
  - *Custom numeric format strings:* http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cpguide/html/cpconcustomnumericformatstrings.asp

In the Axis Strips and Lines section, you can configure:

- **Number of Strips:** Specifies the number of strips displayed on the axis.
- **Number of Lines:** Specifies the number of lines displayed on the axis.

9.3.3.6 Other

The **Other** tab in the Data Charting Configurator, shown in Figure 9.12, specifies the settings for the chart legend, title, and margins.

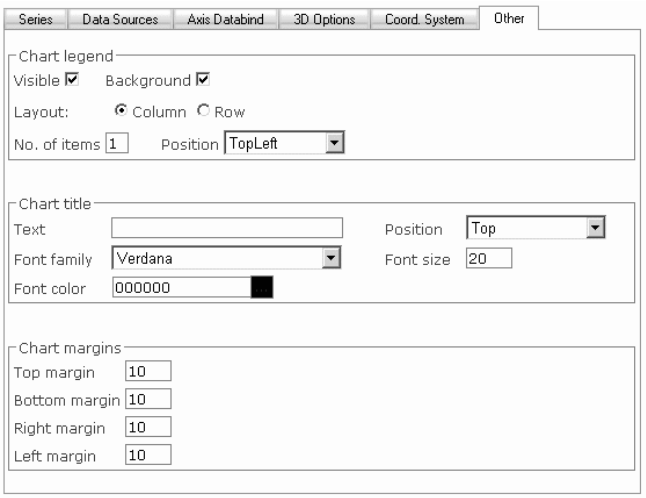


Figure 9.12 - Data Charting Configuration: Other Tab

In the Chart Legend section, you can configure:

- **Visible:** When checked, the legend (key) is displayed in the data chart.
- **Background:** When checked, the legend background is displayed in the data chart.
- **Layout:** Groups the items in the legend by column or row.
- **Number of Items:** Specifies the number of items that will appear in the legend.
- **Position:** Determines the position (e.g. top left, bottom right, etc.) of the legend in the chart.

In the Chart Title section, you can configure:

- **Text:** Specifies the name of the chart title.
- **Font Family:** Select a font style from the drop-down list.
- **Font Color:** Specifies a display color for the chart title. Choose a color from the color palette.
- **Position:** Determines the position (e.g. top left, bottom right, etc.) of the title in the chart.
- **Font Size:** Specifies the point size of the title text.

In the Chart Margins section, you can

- **Top Margin:** Specifies the amount of space (in pixels) between the top of the chart and the top border of the frame that surrounds the chart.
- **Bottom Margin:** Specifies the amount of space (in pixels) between the bottom of the chart and the bottom border of the frame that surrounds the chart.
- **Right Margin:** Specifies the amount of space (in pixels) between the right side of the chart and the right border of the frame that surrounds the chart.
- **Left Margin:** Specifies the amount of space (in pixels) between the left side of the chart and the left border of the frame that surrounds the chart.

9.4 Report Browser Web Part

The **Report Browser Web Part**, shown in Figure 9.13, allows you to interact with one or more ReportWorX servers by visualizing the executed reports on each server.



Figure 9.13 - Report Browser Web Part

9.4.1 Report Browser Web Part Configuration

When first added to the page, the Report Browser Web Part prompts you to select a report folder, as shown in Figure 9.14. Click on the drop down menu to browse for a folder. Select a folder, and then click on **Apply.**

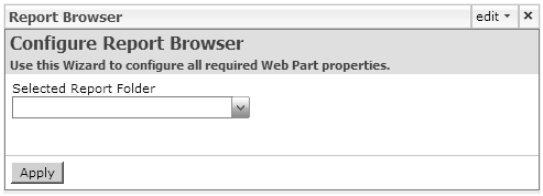


Figure 9.14 - Initial Report Browser Configuration

9.4.2 Report Browser Properties

The Report Browser Web Part properties include the categories as shown in Figure 9.15.

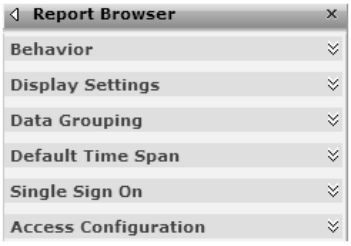


Figure 9.15 - Report Browser Web Part Properties

9.4.2.1 Display Settings

- **Selected Report Folder:** The report data are organized into folders as defined in the active report configuration. Each folder can be opened or collapsed to show the reports in the folder. Select a report folder to display in the Web part from the drop-down list.
- **Show Time Range:** Shows/hides the time range configuration for the Web part.
- **Show Report Folder Name In:** Specifies whether or where to show the report folder (e.g. in the title, the body, or both).
- **Custom Report Folder Name Text:** Replaces the default folder name with this custom text. This applies only if the "Show Report Folder Name In" setting is not set to "Don't Show."
- **Exclude Reports With No Files:** Hides all the executed reports that do not have a report file associated with them.
- **Number of Rows Per Page:** Specifies the number of rows to display in the grid at the same time.
- **Auto Refresh Interval:** Specifies the Web part's auto refresh interval (in milliseconds). Set to "0" to disable auto refresh.

9.4.2.2 Data Grouping

- **Group by Column:** Specifies the name of the data column used for grouping.
- **Sorting Expression:** Specifies a sorting expression to apply to the data grid.

9.4.2.3 Default Time Span

This setting allows you set the default time span of the Reports to view for the last minute, hour, day, week, month, trimester, quarter, semester, year or even a custom range.

9.4.2.4 Single Sign-on

Each user can only have one set of user credentials per application (i.e. ReportWorX) even if the user accesses multiple web parts for that application. When **Enable Single Sign-on** is checked, the user will need to enter the user name, password, and domain to access for the ReportWorX web parts.

> **NOTE:** For more information about executing, visualizing, and managing reports, please refer to the Unified Web Interface help documentation.

9.5 Report Execution Console Web Part

The **Report Execution Console Web Part,** shown in **Error! Reference source not found.,** provides a secure interface to ReportWorX by allowing users to execute customizable reports using Windows integrated security and Single Sign-on.

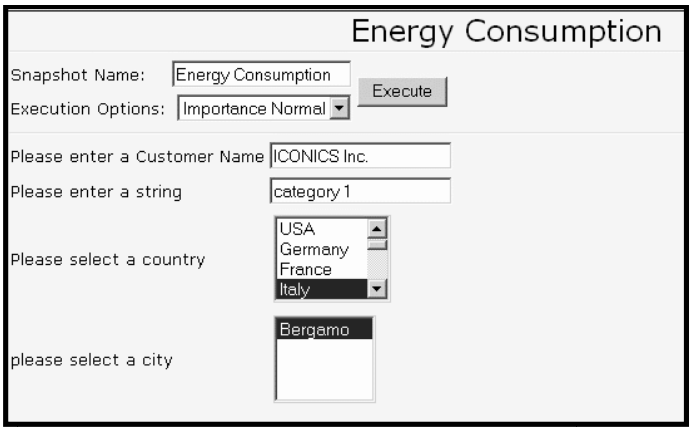


Figure 9.16 - Report Execution Console Web Part

9.5.1 Report Execution Console Web Part Configuration

When first added to the page, the Report Execution Console Web Part prompts you to select a report, as shown in Figure 9.17. Click on the drop down menu to browse for a report. Select a report, and then click on **Apply**.

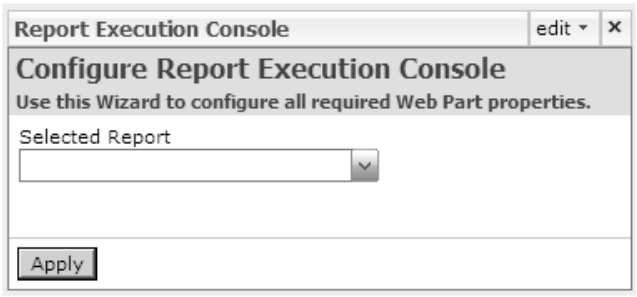


Figure 9.17 - Initial Report Execution Console Configuration

9.5.2 Report Execution Console Properties

The Report Execution Console Web Part properties are shown in Figure 9.18.

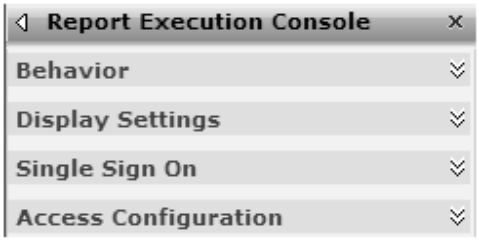


Figure 9.18 - Report Execution Console Web Part Properties

9.5.2.1 Display Settings

- **Selected Report:** Select a report to display in the Web part from the drop-down list.
- **Show Report Name In:** Specifies whether or where to show the report (e.g. in the title, the body, or both).
- **Custom Report Name Text:** Replaces the default report name with this custom text. This applies only if the "Show Report Name In" setting is not set to "Don't Show."
- **Execution Options Location:** Specifies the position (e.g. above parameters or below parameters) of the execution options panel with respect to the parameter selection controls.
- **Enable Report Language Selection:** Enables/disables selection of the report language.
- **Enable Report Snapshot Name:** Enables/disables the report snapshot name. When enabled, it is possible to associate a custom name with the specific report execution.
- **Enable Report Importance:** Enables/disables the report importance. When enabled, it is possible to associate a custom importance level with the specific report execution.
- **Wait Until Report Completes:** When checked, the Web part waits until the scheduled report finishes its execution.

9.6 Report Manager Web Part

The **Report Manager Web Part,** shown in Figure 9.19, allows you to manage your configured reports on any ReportWorX server.

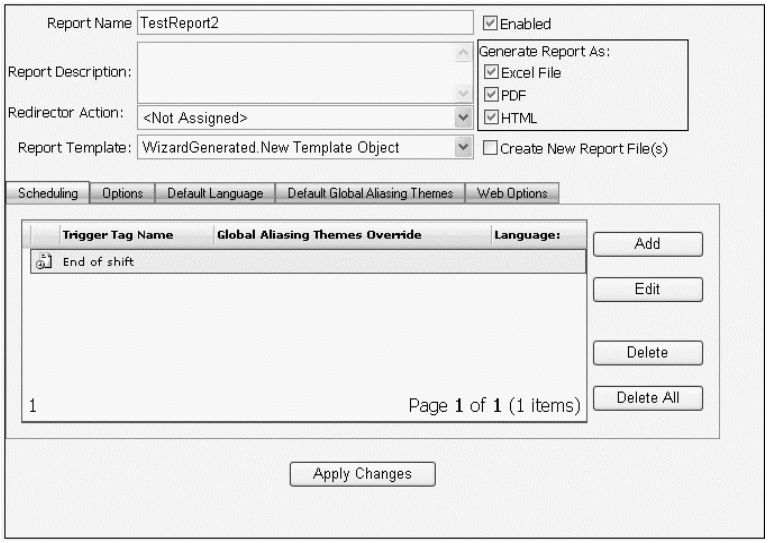


Figure 9.19 - Report Manager Web Part

9.6.1 Report Manager Web Part Configuration

When first added to the page, the Report Manager Web Part prompts you to select a report, as shown in Figure 9.20. Click on the drop down menu to browse for a report. Select a report, and then click on **Apply**.

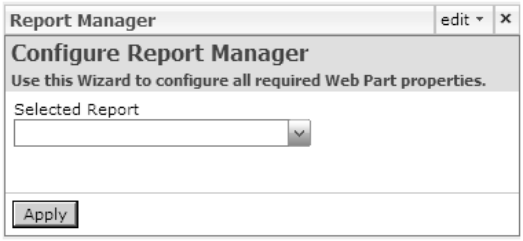


Figure 9.20 - Initial Report Manager Configuration

9.6.2 Report Manager Properties

The Report Manager Web Part properties are shown in Figure 9.21.



Figure 9.21 - Report Manager Web Part Properties

9.6.2.1 Display Settings

In the display settings, you can select a report to display in the web part from the drop down list.

9.7 Report Viewer Web Part

The **Report Viewer Web Part,** shown in Figure 9.22, displays reports that are launched from the Report Browser Web Part.

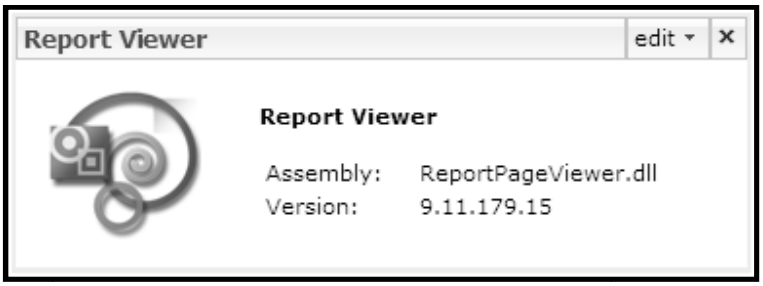


Figure 9.22 - Report Viewer Web Part: Edit Mode

To use the Report Viewer Web Part to view reports, you must link the Report Viewer Web Part to the Report Brower Web Part by selecting **Connections → Receive Report From → Report Browser**, as shown in Figure 9.23. When you open a report in the Report Browser Web Part, the report will be displayed in the Report Viewer Web Part.

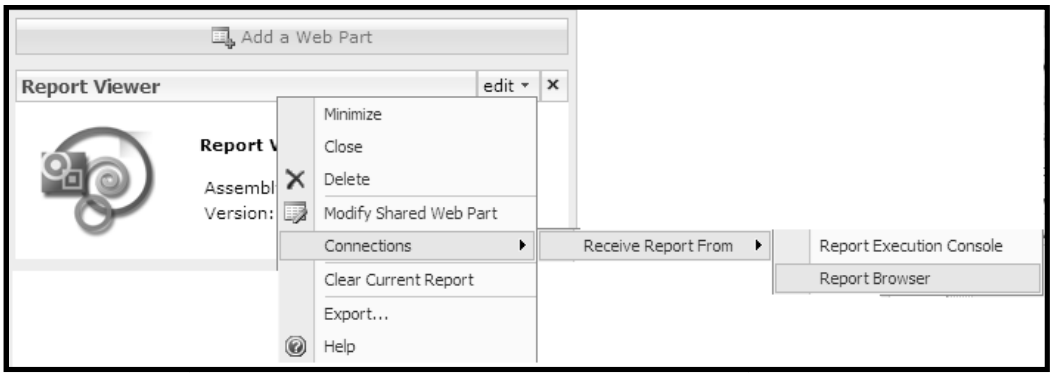


Figure 9.23 - Connecting the Report Viewer to the Report Browser

9.7.1 Report Viewer Properties

The Report Viewer Web Part properties are shown in **Error! Reference source not found.**.

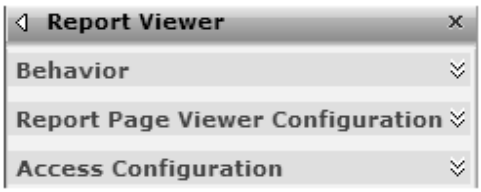


Figure 9.24 - Report Viewer Web Part Properties

9.7.1.1 Report Page Viewer Configuration

In this section, you can choose to display the previously selected report when the Report Viewer loads inside the web page.

9.8 Transaction Browser Web Part

The **Transaction Browser Web Part**, shown in Figure 9.25, allows you to interact with one or more BridgeWorX servers by visualizing the executed transactions on each server.

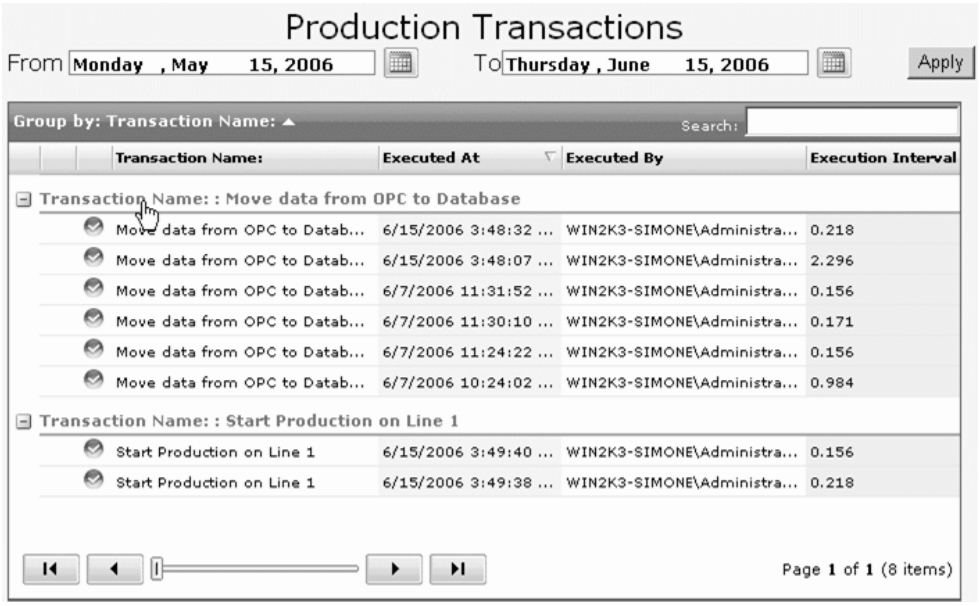


Figure 9.25 - Transaction Browser Web Part

9.8.1 Transaction Browser Web Part Configuration

When first added to the page, the Transaction Browser Web Part prompts you to select a transaction folder, as shown in Figure 9.26. Click on the drop down menu to browse for a folder. Select a folder, and then click on **Apply**.

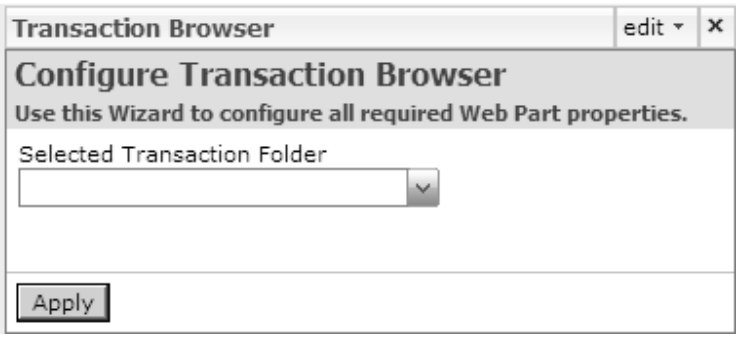


Figure 9.26 - Initial Transaction Browser Configuration

9.8.2 Transaction Browser Properties

The Transaction Browser Web Part properties include the categories as shown Figure 9.27.

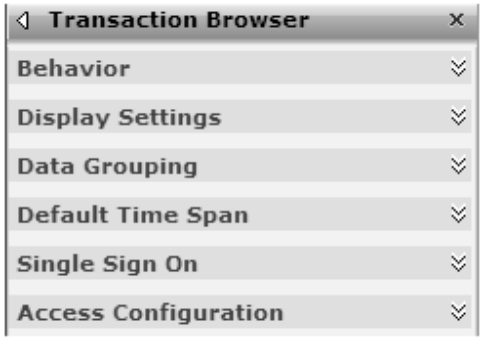


Figure 9.27 - Transaction Browser Web Part Properties

9.8.2.1 Display Settings

- **Selected Transaction Folder:** The transaction data are organized into folders as defined in the active transaction configuration. Each folder can be opened or collapsed to show the transactions in the folder. Select a transaction folder to display in the Web part from the drop down list.
- **Show Time Range:** Shows/hides the time range configuration for the Web part.
- **Show Transaction Folder Name In:** Specifies whether or where to show the transaction folder (e.g. in the title, the body, or both).
- **Custom Transaction Folder Name Text:** Replaces the default folder name with this custom text. This applies only if the "Show Transaction Folder Name In" setting is not set to "Don't Show."
- **Number of Rows Per Page:** Specifies the number of rows to display in the grid at the same time.

9.8.2.2 Data Grouping

- **Group by Column:** Specifies the name of the data column used for grouping.
- **Sorting Expression:** Specifies a sorting expression to apply to the data grid.

9.8.2.3 Default Time Span

This setting allows you set the default time span of the Reports to view for the last minute, hour, day, week, month, trimester, quarter, semester, year or even a custom range.

> **NOTE:** For more information about executing, visualizing, and managing transactions, please refer to the Unified Web Interface help documentation.

9.9 Transaction Execution Console Web Part

The **Transaction Execution Console Web Part,** shown in Figure 9.28, provides a secure interface to BridgeWorX by allowing users to execute customizable transactions using Windows integrated security and Single Sign-on.



Figure 9.28 - Transaction Execution Console Web Part

9.9.1 Transaction Execution Console Web Part Configuration

When first added to the page, the Transaction Execution Console Web Part prompts you to select a transaction, as shown in Figure 9.29. Click on the drop down menu to browse for a transaction. Select a transaction, and then click on **Apply**.

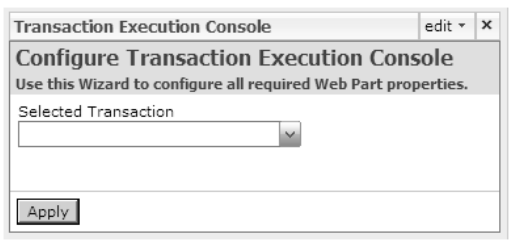


Figure 9.29 - Initial Transaction Execution Console Configuration

9.9.2 Transaction Execution Console Properties

The Transaction Execution Console Web Part properties include the categories as shown in Figure 9.30.

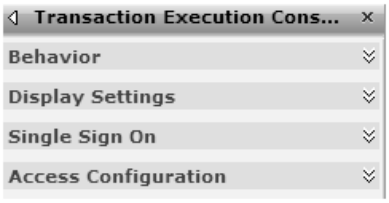


Figure 9.30 - Transaction Execution Console Web Part Properties

9.9.2.1 Display Settings

- **Selected Transaction:** Select a transaction to display in the Web part from the drop-down list.
- **Show Transaction Name In:** Specifies whether or where to show the transaction (e.g. in the title, the body, or both).
- **Custom Transaction Name Text:** Replaces the default transaction name with this custom text. This applies only if the "Show Transaction Name In" setting is not set to "Don't Show."

9.10 Transaction Manager Web Part

The **Transaction Manager Web Part,** shown in Figure 9.31, allows you to manage your configured transactions on any BridgeWorX server.

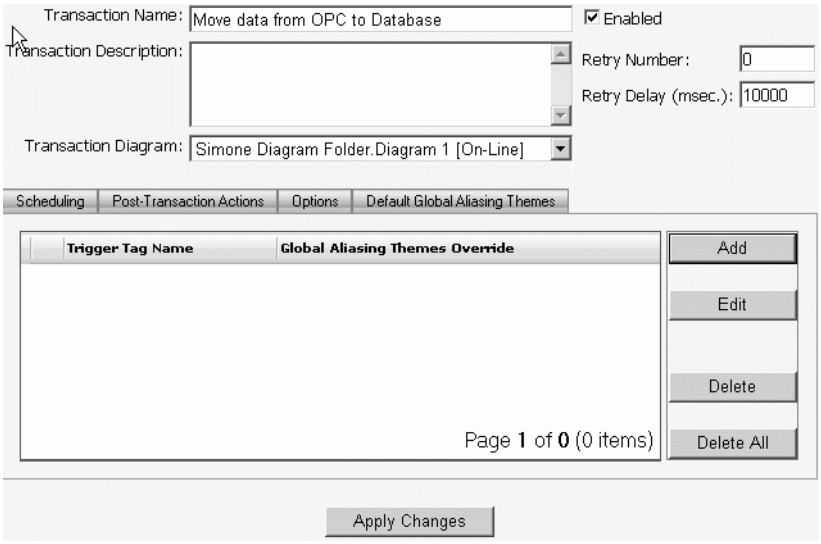


Figure 9.31 - Transaction Manager Web Part

9.10.1 Transaction Manager Web Part Configuration

When first added to the page, the Transaction Manager Web Part prompts you to select a transaction, as shown in Figure 9.32. Click on the drop down menu to browse for a transaction. Select a transaction, and then click on **Apply**.

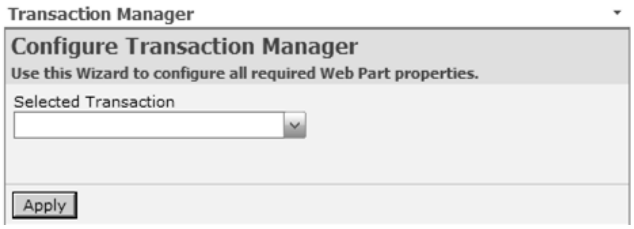


Figure 9.32 - Initial Transaction Manager Configuration

9.10.2 Transaction Manager Properties

The Transaction Manager Web Part properties include the categories as shown in Figure 9.33.

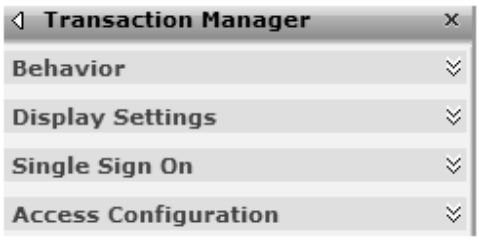


Figure 9.33 - Transaction Manager Web Part Properties

9.10.2.1 Display Settings

In the display settings, you can select a transaction to display in the Web part from the drop down list.

Lab: Business Web Parts 9

9.1 Quick Lab Overview

In this Lab, you will add two of the ICONICS Business Web parts to your Acmeseutical Portal in order to become more familiar with them.

9.1.2 Task Checklist

In this Quick Lab, you will complete the following tasks:

- Add a Report Browser, Report Viewer and Report Execution Web parts to the portal.
- Connect and configure these Web Parts to show, execute and view reports
- Learn how to use both of these Web parts in runtime.

9.1.3 Support Files

To complete this Quick Lab:

- BridgeWorX and ReportWorX must have been installed before PortalWorX.
- ReportWorX engine must be running, and some of the sample reports must be executed.

Ask your instructor if you need help on this.

9.2 Adding a Report Browser Web Part

1. First, we will add a Report Browser Web part, which will allow us to visualize all of our previously executed reports:
2. Click on **Site Actions → Edit** page.

3. Click on the **Add a Web Part** button in the **Left zone.**

4. From the **Add Web Part to Left** dialog that appears, locate the **Report Browser** web part in the list and check the box next to it. Then click the **Add** button to add it to the page.

5. Then click and drag the **Report Browser** just above the Alarm Viewer web part, as shown in Figure L9.1.

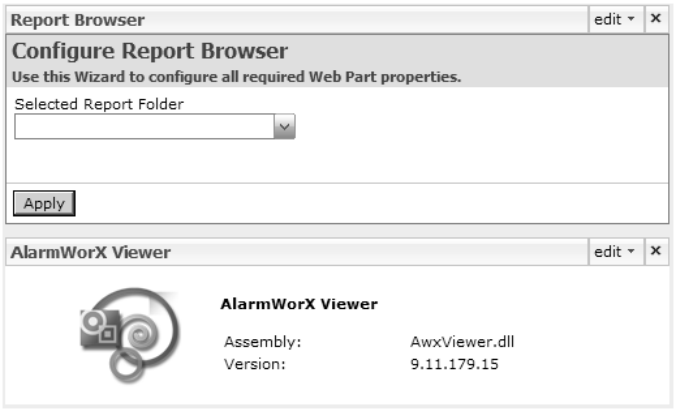


Figure L9.1 - Adding the Report Browser Web Part

6. From the **Selected Report Folder** drop down list, select the **Sample Reports** folder and then click on **Apply** to save your change.

7. Switch your portal back to runtime mode, and in your **Report Browser** web part, any reports that you had executed prior to this point will be shown. Note that this Web part bears a striking resemblance to the **Visualize** page of the Unified Web Interface. The behavior is also identical.

8. See Figure L9.2 for an example of the **Report Browser** web part in action. If you would like to view any of the reports, simply click on the appropriate icon as you would in the Unified Web Interface.



Figure L9.2 - Report Browser Web Part in Runtime Mode

9.3 Adding a Report Viewer Web Part

Next, we will add a **Report Viewer** web part to visualize reports from within your Acmeseutical Portal.

1. Click on **Site Actions → Edit Page**, and then click on the **Add a Web Part** button in the **Left** zone.

2. When the **Add Web Parts to Left** dialog appears, check the box next to the **Report Viewer** web part from the list and click the **Add** button.

3. Drag your **Report Execution Console** web part just above the **AlarmWorX Viewer** web part, as shown in Figure L9.3.

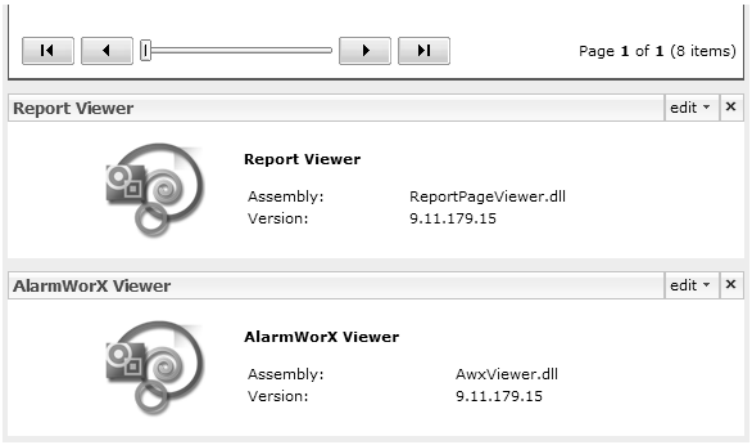


Figure L9.3 - Adding Report Viewer Web Part

4. Click on the small down arrow button on the right side of web part's title bar, and select **Connections → Receive Report From → Report Browser**, as shown in Figure L9.4.

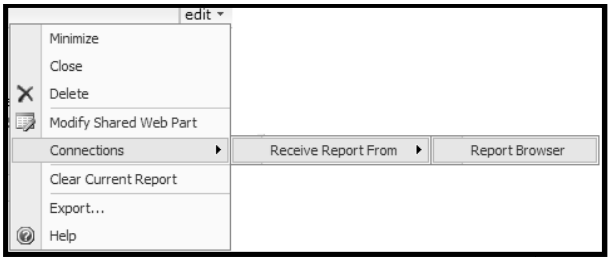


Figure L9.4 - Connect the Report Viewer to the Report Browser

5. Click on the **Home** link to go in runtime mode.

6. In the **Report Browser**, right-click on the Excel icon of some executed report and select **View MS Excel report**, as shown in Figure L9.5.

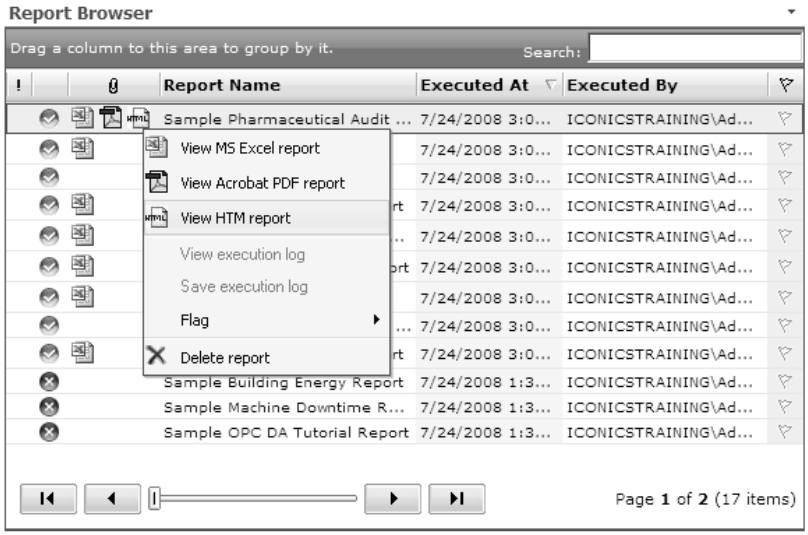


Figure L9.5 - Sending Data to Report Viewer Web Part

7. The Report will be visualized in the **Report Viewer** wWb Part.

9.4 Adding a Report Execution Console Web Part

Next, we will add a **Report Execution Console** web part for you to execute some of your ReportWorX reports from within your Acmeseutical Portal.

1. Click on **Site Actions → Edit Page**, and then click on the **Add a Web Part** button in the right zone.

2. When the **Add Web Parts to Right** dialog appears, check the box next to the R**eport Execution Console** web part from the list and click the **Add** button.

3. Drag your **Report Execution Console** web part just below the **TrendWorX Viewer** web part, as shown in Figure L9.6.

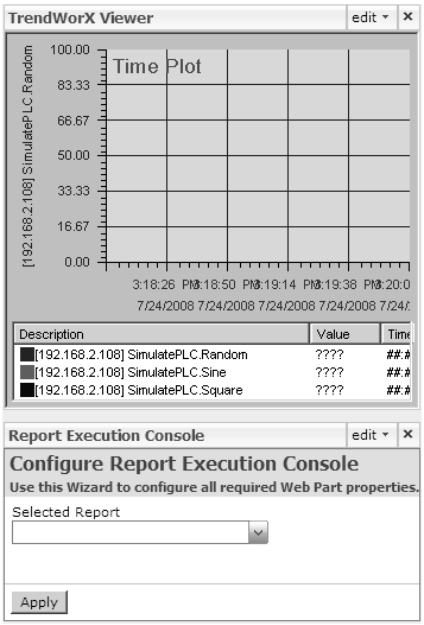


Figure L9.6 - Adding the Report Execution Console

4. Click on the drop down menu and expand the **Sample Reports** Folder.

5. Select some report and click **Apply** (this report has to be enabled).

6. Your portal will switch in runtime mode and an "**Execute**" button will appear in the web part.

7. Click on **Execute**. The web part will generate a new report as shown in Figure L9.7.



Figure L9.7 - Executing a Report

8. Click on the **Home** link to go into runtime mode. The new report will be available in the Report Browser web part. If for some reason you cannot see your list of reports, please alert your instructor for assistance.

9. The BridgeWorX and ReportWorX Web parts are extremely similar and for that reason, we have only added ReportWorX Web Parts to our Acmeseutical

Portal in this quick lab. However, if you wish to add the BridgeWorX Web Parts to your portal, feel free to do so for extra practice.

Suggested Exercise 1: You can also add **Report Manager** and **Navigation Tree Menu** Web Parts to your Portal, connect with other Report Web Parts and create your own Unified Web Interface for ReportWorX.

Suggested Exercise 2 (advanced users): You can try to create some new reports whose permission to read and execute is only given to the SSO User that you created in Quick Lab 5. After this, you can enable the Single Sign-on for the ReportWorX web parts and try to understand the differences between having SSO and not, and which are the advantages you can have using it. Refer to Chapter 5 and ask your instructor for help if needed.

That completes Lab 9. In the next chapter, you will learn about the ICONICS Navigation web parts. Then in the lab following Chapter 10, you will configure one of them.

Navigation Web Parts 10

10.1 Objectives

After completing this chapter, you should know how to:

- Distinguish between the different types of Navigation web parts.
- Configure settings for each of the Navigation web parts.

10.2 Navigation Web Parts

Navigation Web Parts enable you to browse for items within SharePoint portals, including Document Libraries and WebHMI Servers and custom content.

PortalWorX includes the following Navigation web parts:

- Navigation Tree Web Part
- Navigation Menu Web Part
- EarthWorX Viewer Web Part

10.3 Navigation Tree Web Part

The PortalWorX **Navigation Tree Web Part**, shown in Figure 10.1, is a multi-purpose tabbed web tree. You can use the Navigation Tree Web Part to browse different sources, such as Document Libraries and WebHMI Servers, or customize the tree completely using the Custom XML Provider.

The Navigation Tree Web Part enables you to browse for files and folders using providers. There many different providers, which we will discuss later in the chapter, for now, you can consider providers to be a link to a directory or data that you need. You can organize these providers into Tabs and Groups. A tab can have many groups, and in each group, you can add multiple providers that allow you to browse for different items. You can have multiple tabs within the Navigation Tree

Web Part as well. Under each tab, you can select any group, and the currently selected group is expanded to show its contents. You can change the tab selection view by simply clicking on a different tab.

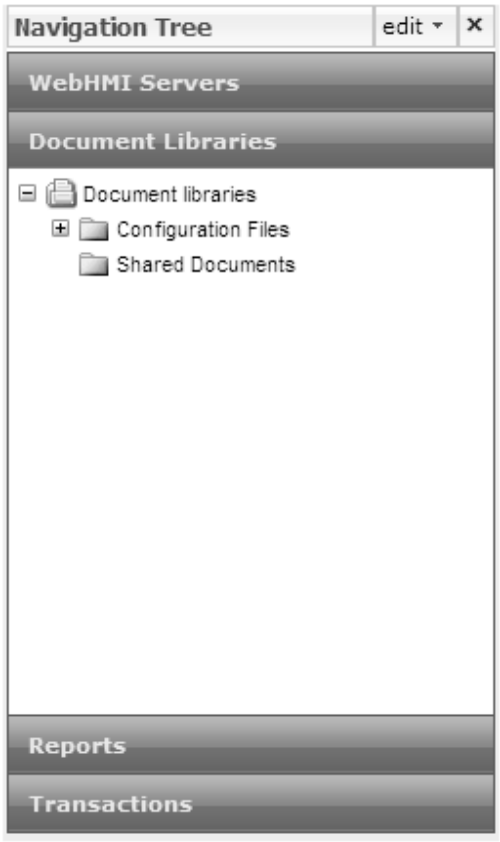


Figure 10.1 - Navigation Tree Web Part

NOTE: There is no tab in Figure 10.1. The blue bands with WebHMI Servers, Document Libraries, etc are what we called tabs.

The Navigation Tree Web Part can also be connected to other PortalWorX web parts to create powerful navigation mechanisms. For example, you can connect the Navigation Tree Web Part to the Page Viewer Web Part by switching to design mode and selecting **Connections → Connect To → Page Viewer**, as shown in Figure 10.2.

Once the Navigation Tree is connected to the targeted web part, clicking on a file in the Navigation Tree displays the file in the appropriate connected web part. You can also open files without making a web part connection; simply drag the files from the Navigation Tree to the visualization web part.

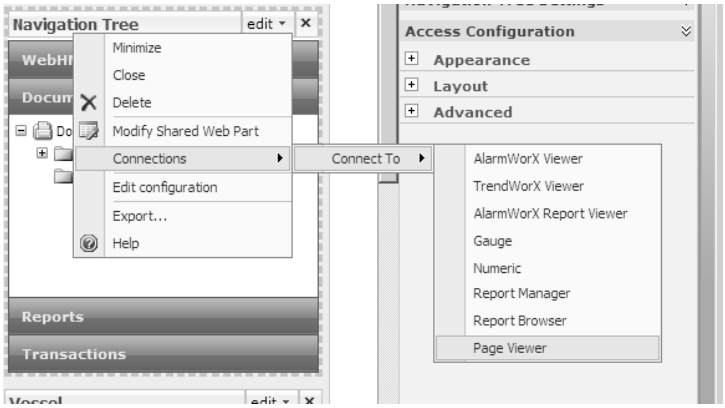


Figure 10.2 - Connecting the Navigation Tree to the Page Viewer

10.3.1 Navigation Tree Properties

The Navigation Tree Web Part properties include the categories as shown in Figure 10.3.

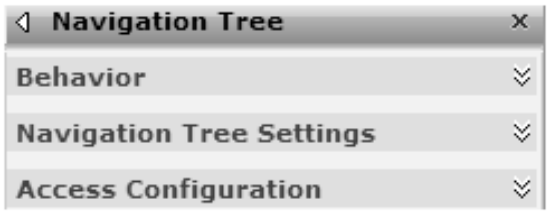


Figure 10.3 - Navigation Tree Web Part Properties

NOTE: Since we've talked about many of the common settings in previous chapters, in here, we will only go over those settings that have not been mentioned. For those common settings, please refer to a prior chapter.

10.3.1.1 Navigation Tree Settings

- **Configuration File:** Specifies the XML configuration file for the Navigation Tree.
- **Communication on Node Double Click:** Checking this check box enables communication when a tree node is double-clicked. Otherwise the communication will be fired when the node is selected.
- **Enable Language Switch:** When checked, enables loading of a localized configuration file.
- **Height:** Specifies the height of the Navigation Tree (in pixels).
- **Width:** Specifies the width of the Navigation Tree (in pixels).

10.3.2 Customizing the Navigation Tree Web Part

Choosing **Edit Configuration** from the Navigation Tree Web Part menu, as shown in Figure 10.4, allows you to configure the content of the Navigation Tree. The Navigation Tree configuration is stored in an XML configuration file. The Navigation Tree Configurator enables you to create your own XML configuration files.

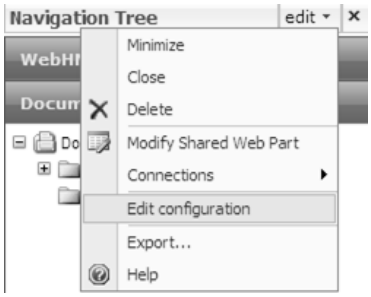


Figure 10.4 - Editing the Navigation Tree Web Part Configuration

In the Configurator, shown in Figure 10.5, the left hand pane shows the Navigation Tree configuration preview. In the **Properties** tab, you can specify the width and height of the Navigation Tree (in pixels). Click on the **Apply Properties** button to view the changes.

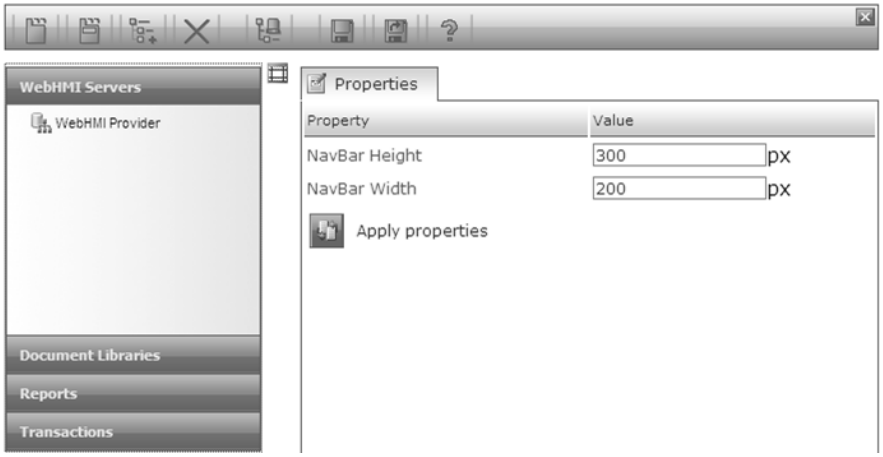


Figure 10.5 - Navigation Tree Web Part Configurator

10.3.2.1 Navigation Tree Configurator Toolbar

The Configurator toolbar, shown in Figure 10.6, allows you to customize the content of the Navigation Tree:

- **Add a Tab:** Adds a tab to the Navigation Tree.
- **Add a Group:** Adds a group within a tab in the Navigation Tree.

- **Add a Provider:** Adds a plug-in to a group in the Navigation Tree.
- **Remove Items from the Configuration:** Deletes the selected items from the Navigation Tree configuration.
- **Alarms Configuration File:** Adds an alarm configuration file to the Navigation Tree, enabling the association of alarms with custom nodes in the Navigation Tree.
- **Save Subscription Configuration**: Saves your Navigation Tree configuration to a file uploaded to the portal.
- **Export Subscription Configuration**: Exports your Navigation Tree configuration to your local computer hard drive.
- **Help**: Opens help documentation for the Navigation Tool Bar



Figure 10.6 - Navigation Tree Configuration Toolbar

10.3.2.2 Adding a Tab

In the Navigation Tree Configurator, you can add tabs to the Navigation Tree by clicking on the **Add Tab** button on the toolbar. The new tab appears in the Navigation Tree configuration, as shown in Figure 10.7.

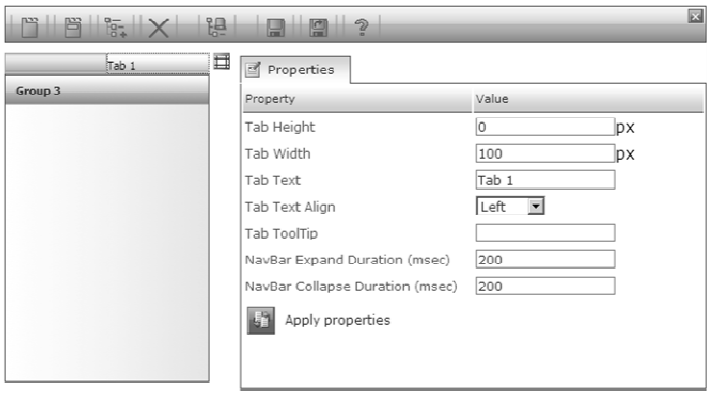


Figure 10.7 - Navigation Tree: Tab Configuration

You can configure the following settings:

- **Tab Height:** Specifies the height of the tab (in pixels).
- **Tab Width:** Specifies the width of the tab (in pixels).
- **Tab Text:** Specifies the text label for the tab.
- **Tab Text Align:** Specifies the alignment of the text label (centered, left, or right).

- **Tab ToolTip:** Specifies the tooltip text that will be displayed when a user hovers the mouse pointer over the tab.
- **NavBar Expand Duration:** You can click on a collapsed group within a tab to expand the group and reveal the group's contents. The **NavBar Expand Duration** specifies the amount of time (in milliseconds) it takes to expand a collapsed group after the group has been clicked.
- **NavBar Collapse Duration:** You can click on an expanded group within a tab to collapse the group and hide the group's contents. The **NavBar Collapse Duration** specifies the amount of time (in milliseconds) it takes to collapse an expanded group after the group has been clicked.

Click on the **Apply Properties** button to view the changes.

10.3.2.3 Adding a Group

In the Navigation Tree Configurator, you can add groups within tabs in the Navigation Tree. Select a tab and click the **Add Group** button on the toolbar. The new group appears in the selected group configuration, as shown in Figure 10.8.

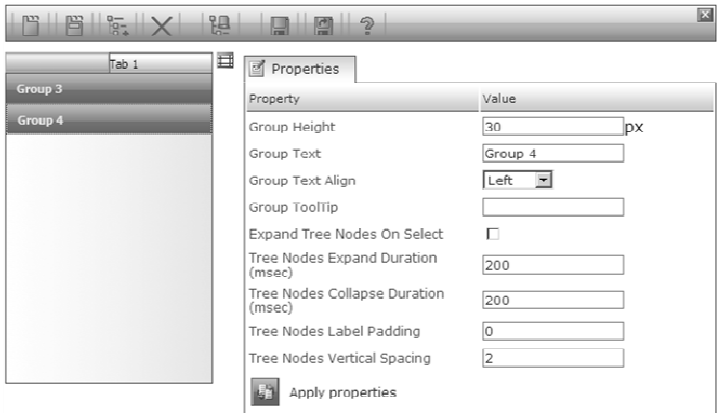


Figure 10.8 - Navigation Tree: Group Configuration

You can configure the following settings:

- **Group Height:** Specifies the height of the group (in pixels).
- **Group Text:** Specifies the text label for the group.
- **Group Text Align:** Specifies the alignment of the group label (centered, left, or right).
- **Group ToolTip:** Specifies the tooltip text that will be displayed when a user hovers the mouse pointer over the group.
- **Expand Tree Nodes on Select:** A group may contain one or more plug-ins, or tree nodes. When the **Expand Tree Nodes on Select** check box is

checked, each node selected during runtime mode will automatically be expanded to reveal all of the node's contents. If not checked, you must manually click on the each item in the node to reveal the node's contents.

- **Tree Nodes Expand Duration:** You can click on a collapsed node within a group to expand the node and reveal the node's contents. The **Tree Nodes Expand Duration** specifies the amount of time (in milliseconds) it takes to expand a collapsed node after the node has been clicked.
- **Tree Nodes Collapse Duration:** You can click on an expanded node within a group to collapse the node and hide the node's contents. The **Tree Nodes Collapse Duration** specifies the amount of time (in milliseconds) it takes to collapse an expanded node after the node has been clicked.
- **Tree Nodes Label Padding:** Specifies the amount of space (in pixels) between a node's icon and the node's text label.
- **Tree Nodes Vertical Spacing:** Specifies the amount of space (in pixels) between two different nodes within a group.

Once you are done with the configuration, click on the **Apply Properties** button to view the changes.

10.3.2.4 Adding a Provider

In the Navigation Tree Configurator, you can add providers to groups in the Navigation Tree. Select a group and click on the **Add Provider** button on the toolbar. A dropdown list appears as shown in Figure 10.9. Choose the provider type that you want to add to the selected group, and then click the arrow button.



Figure 10.9 - Selecting a Provider

The new provider appears in the selected provider configuration. Each provider has its own specific configuration settings. For the Navigation Tree, you can use the following providers:

- WebHMI Provider
- Document Libraries Provider
- OPC Tags Provider
- BridgeWorX Provider
- ReportWorX Provider
- Custom XML Provider

10.3.2.5 WebHMI Provider

The WebHMI provider allows you to make a connection to your server's Web HMI directory (generally \Program Files\Common Files\ICONICS\WebHMI). If you choose the WebHMI Provider, you can configure the following settings for it, as shown in Figure 10.10:

- **WebHMI service URL:** Specifies the URL address of the WebHMI Web Service.
- **Root node text:** Specifies the starting node for browsing files and folders in the Navigation Tree.
- **Relative root folder:** Specifies the relative root folder to be displayed in the group.
- **Files Filter:** Specifies the file types that will be retrieved from WebHMI Web Service and displayed in the Navigation Tree.
- **Use Load on Demand:** If this check box is not checked, all information will be downloaded automatically into the Navigation Tree. If checked, information is loaded on an item-by-item basis. This reduces the load on the server because the information for each specific item is downloaded as needed.

When you are done configuring, click on the **Apply Properties** button to view the changes.

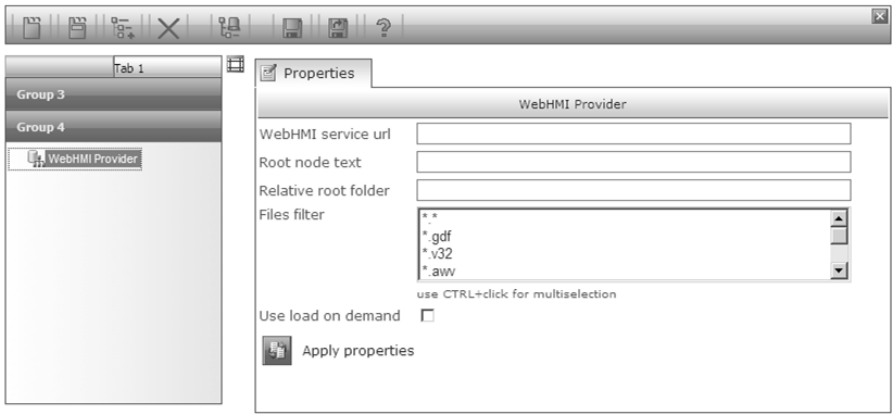


Figure 10.10 - Navigation Tree: WebHMI Provider Configuration

10.3.2.6 Document Libraries Provider

The Document Libraries Provider allow you to make a connection to any document directory on a portal. The web site URL specifies the directory of connection. You can configure the following settings for the Document Libraries provider, as shown in Figure 10.11:

- **Web Site URL:** Specifies the URL address of the Document Libraries in the SharePoint portal
- **Document Libraries Types:** Specifies the type of portal Document Libraries (i.e. Generic List, Document Library, Survey, etc.) to browse
- **Files Filter:** Specifies the file types that will be retrieved from the portal and displayed in the Navigation Tree

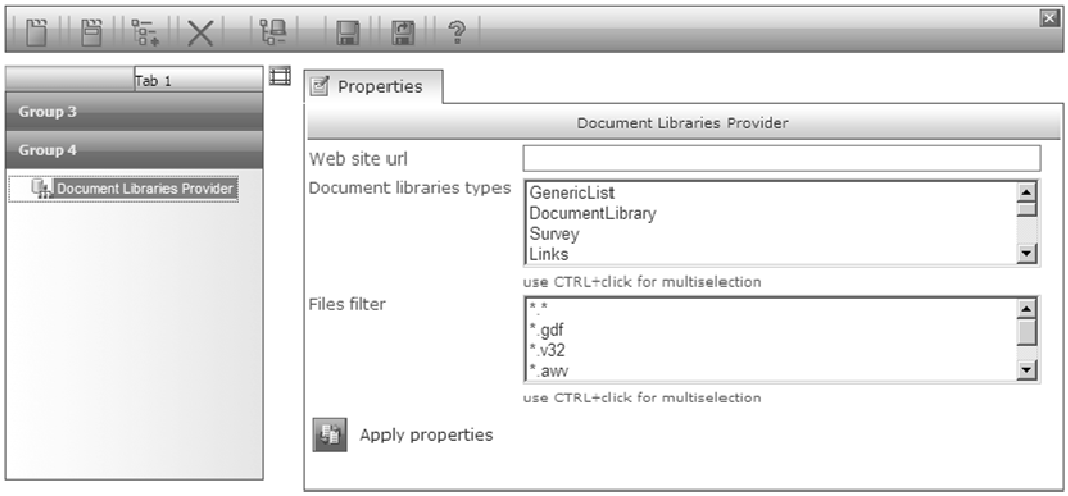


Figure 10.11 - Navigation Tree: Document Libraries Provider Configuration

10.3.2.7 OPC Tags Provider

In the settings for the OPC Tags provider, specify the URL of the XML file that describes your OPC tags, as shown in Figure 10.12. There is a default OPC tag XML configuration that comes with the installation. The file is located in the configuration directory of the documents library. You can create your own XML file modeled after the installed example.

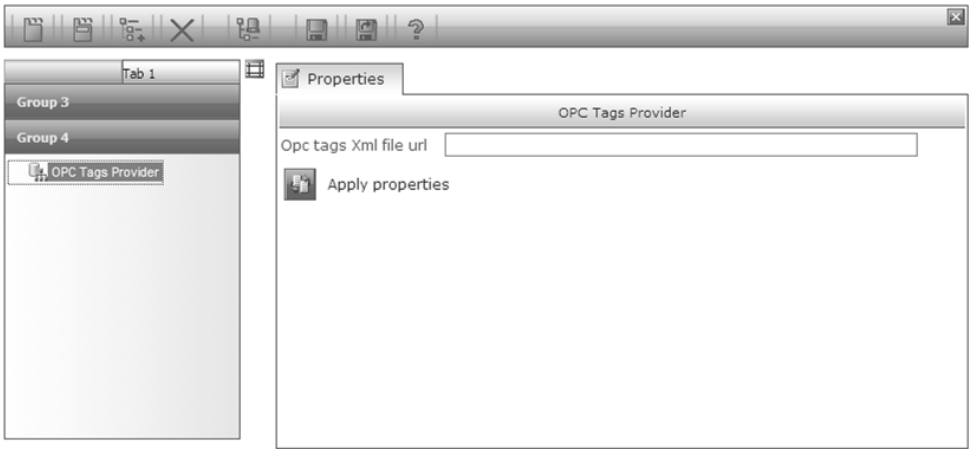


Figure 10.12 - Navigation Tree: OPC Tag Provider Configuration

10.3.2.8 BridgeWorX Provider

The BridgeWorX Provider allows you to connect to the BridgeWorX service to list your available transitions. You can configure the following settings for the BridgeWorX provider, as shown in Figure 10.13

- **Web Service URL:** Specifies the URL address of the BridgeWorX Web Service. The address in general is: http://*ComputerName*/BwxWebService/BwxWebService.asmx
- **Web Service Access Key:** Enter the password needed to access the BridgeWorX Web Service. The key in general is: bwxwebservicekey
- **Root Node Text:** Specifies the text label for root node. If you leave it as blank, the default root node label is BridgeWorX
- **Load Information on Demand:** If this check box is not checked, all transaction information will be downloaded automatically into the BridgeWorX provider in the Navigation Tree. If checked, transaction information is loaded on an item-by-item basis. This reduces the load on the server because the information for each specific item is downloaded as needed.
- **Browse Web Service:** Launches the specified web service URL in a new browser window.
- **Test Engine Connection:** Tests the connection to the web service.

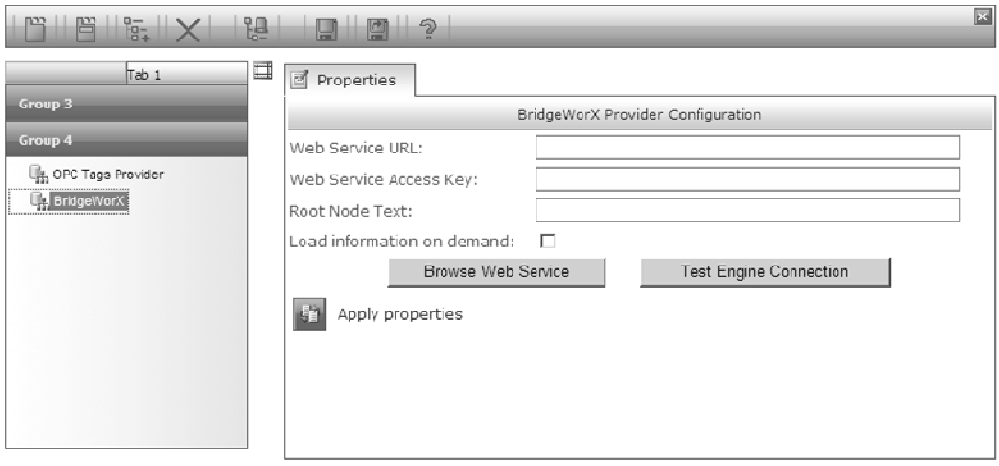


Figure 10.13 - Navigation Tree: BridgeWorX Provider Configuration

10.3.2.9 ReportWorX Provider

The ReportWorX Provider allows you to connect to your ReportWorX service. You can configure the following settings for the ReportWorX provider, as shown in Figure 10.14:

- **Web Service URL:** Specifies the URL address of the ReportWorX Web Service. The address is generally: http://*ComputerName*/RwxWebService/RwxWebService.asmx
- **Web Service Access Key:** Enter the password needed to access the ReportWorX Web Service. The key in generally is: rwxwebservicekey
- **Root Node Text:** Specifies the text label for root node of the provider. If left blank, the default is ReportWorX
- **Load Information on Demand:** If this check box is not checked, all report information will be downloaded automatically into the ReportWorX plug-in in the Navigation Bar. If checked, report information is loaded on an item-by-item basis. This reduces the load on the server because the information for each specific item is downloaded as needed.
- **Browse Web Service:** Launches the specified web service URL in a new browser window.
- **Test Engine Connection:** Tests the connection to the web service.

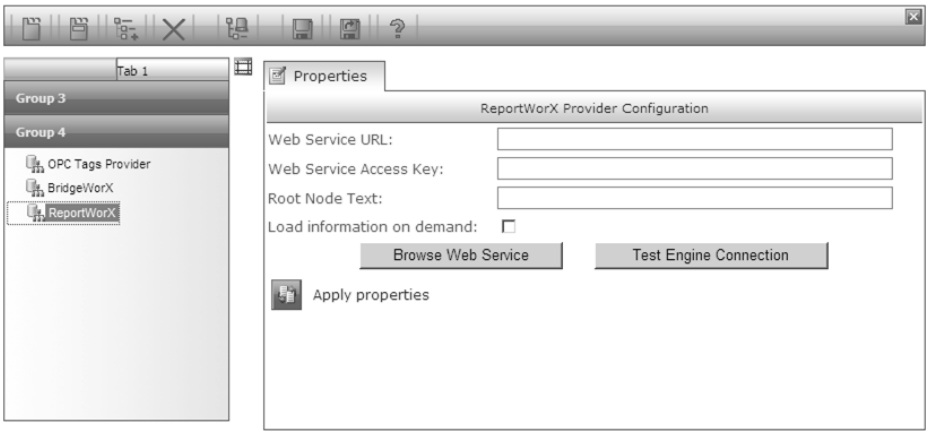


Figure 10.14 - Navigation Tree: ReportWorX Provider Configuration

10.3.2.10 Custom XML Provider

The **Custom XML** provider in the Navigation Tree enables you to customize the nodes in the tree entirely. With this provider, you can add virtually any kind of content and determine how it is managed within the Navigation Tree. You can also use it to insert a list of files inside the Navigation Tree, such as ICONICS displays, Microsoft Word documents, Excel spreadsheets, and PDFs.

For the Custom XML provider under **File URL,** specify the URL address of the XML file, as shown in Figure 10.15.

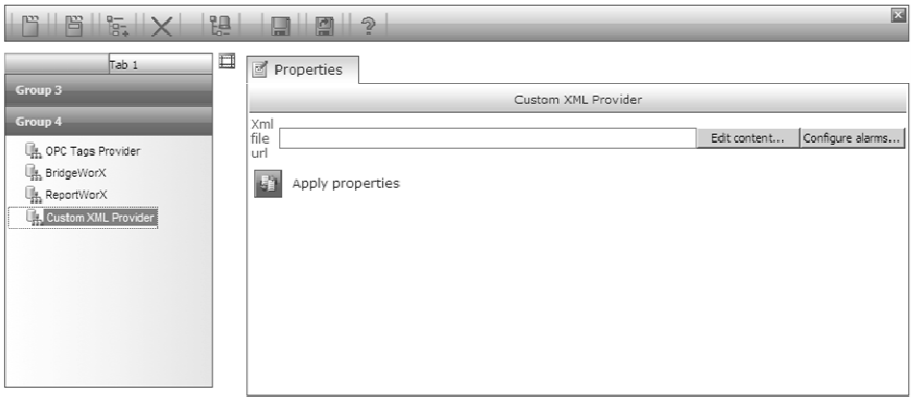


Figure 10.15 - Navigation Tree: Customer XML Provider Configuration

Click the **Edit Content** button to open the Custom XML provider configurator, which allows you to customize the nodes and files in the Navigation Tree, as shown in Figure 10.16.

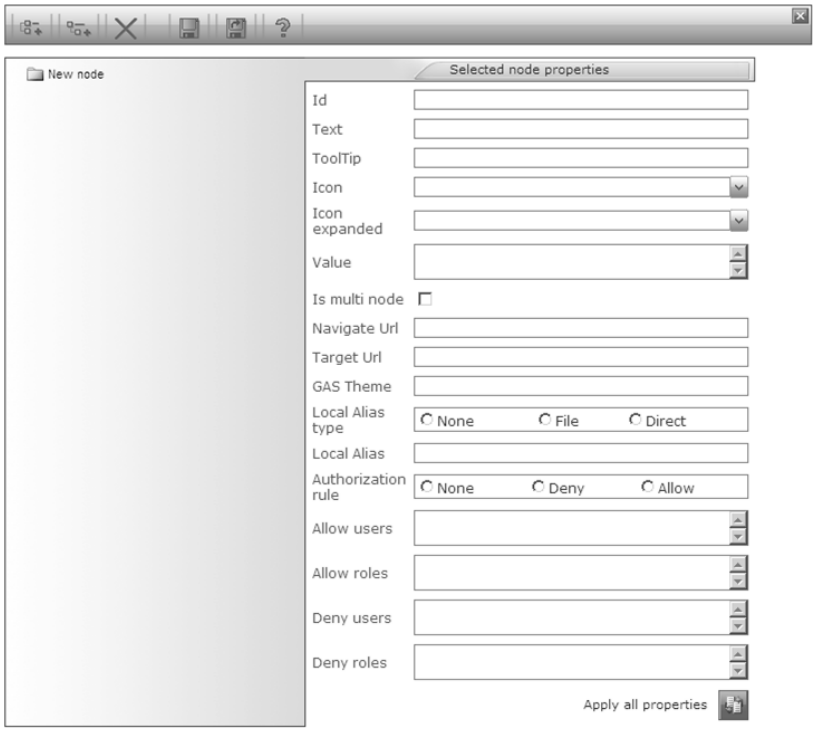


Figure 10.16 - Navigation Tree: Customer XML Configurator

10.3.2.11 Custom XML Configurator Toolbar

The Custom XML Configurator toolbar, shown in Figure 10.17, allows you to customize the content of the Navigation Tree nodes:

- **Add a Sibling Node:** Adds a sibling node, a node on the same level, to the Navigation Tree.
- **Add Child Node:** Adds a child node, a node that's one level below the current level, to the selected node.
- **Delete Selected Node:** Removes the selected node from the tree.
- **Save Current Configuration:** Saves your configuration to a file in the portal's documents library.
- **Export Current Configuration:** Exports your configuration to an XML file on your local machine's hard disk.
- **Help:** Opens the help documentation for the Custom XML toolbar.



Figure 10.17 - Custom XML Configurator Toolbar

10.3.2.12 Custom XML Configuration Node Settings

You can configure the following settings for each node that you create:

- **ID:** Specifies the identifier for the selected node.
- **Text:** Specifies the name that will appear in the node label.
- **ToolTip:** Specifies the text for the ToolTip that will appear when the mouse pointer is hovered over the node.
- **Icon:** Select an image (e.g. a closed folder) to display next to the node when the node is collapsed within the Navigation Tree.
- **Icon Expanded:** Select an image (e.g. an open folder) to display next to the node when the node is expanded within the Navigation Tree.
- **Value:** Specifies a value, such as a file URL, with a node in the tree.
- **Is Multi-node:** Allows you to store multiple files in the same node. When this check box is checked, multiple lines are enabled in the **Value** field, allowing you to enter multiple values. In the **Value** field, you must separate each value with ## (double pound signs).
- **Navigate URL:** Associates the selected node with a URL such that when the node is clicked, it opens the web page to the URL.
- **Target URL:** Specifies a URL that enables cross-page communication between different web pages that contain the Navigation Tree Web Part. In order to communicate with one another, both web pages must have the same Navigation Tree using the same XML configuration file.
- **GAS Theme:** Specifies a global aliasing theme for an ICONICS application (e.g. GraphWorX32).

- **Local Alias Type:** Enables you to use a local alias (e.g. used in GraphWorX) for the node.
- **Local Alias:** Specifies the name of the local alias.
- **Authorization Rule:** Allows you to add security to the selected node. See the "Web Navigation Tree Security" section for details.

10.3.2.13 Web Navigation Tree Security

The Web Navigation Tree Security determines whether an identity should be granted access to a specific resource (i.e. a GraphWorX32 display, a report, a transaction, etc.), and follows the Microsoft standard for ASP.NET Authorization.

http://msdn2.microsoft.com/en-us/library/wce3kxhd(VS.80).aspx

Using this mechanism, you can explicitly allow or deny access to a particular node of the tree by user name or role. To do so, you specify a list of users or roles in the allow or deny Attributes of the node.

The permissions established for a node also apply to its child node, unless security configuration in a sub-node overrides them.

The following shows the syntax for the **authorization**:

```
 <Node AllowRoles="Administrator,Guest"
DenyUsers="NT1\UserName"/>
```

You must specify either the **AllowUsers** or the **AllowRoles** or the **DenyUsers** or the **DenyRoles** attribute. All of them can be included, but no one of them is required.

The default authorization rule is **<AllowUsers="*"/>**. Thus, by default, access is granted to everyone, unless configured otherwise.

The security module grants or denies access to a resource depending on whether the first access rule found is an **allow** or a **deny** rule.

The following two examples show how the order of the aforementioned attributes can modify the space of authorized users.

Example 1: First Access Rule Is an Allow

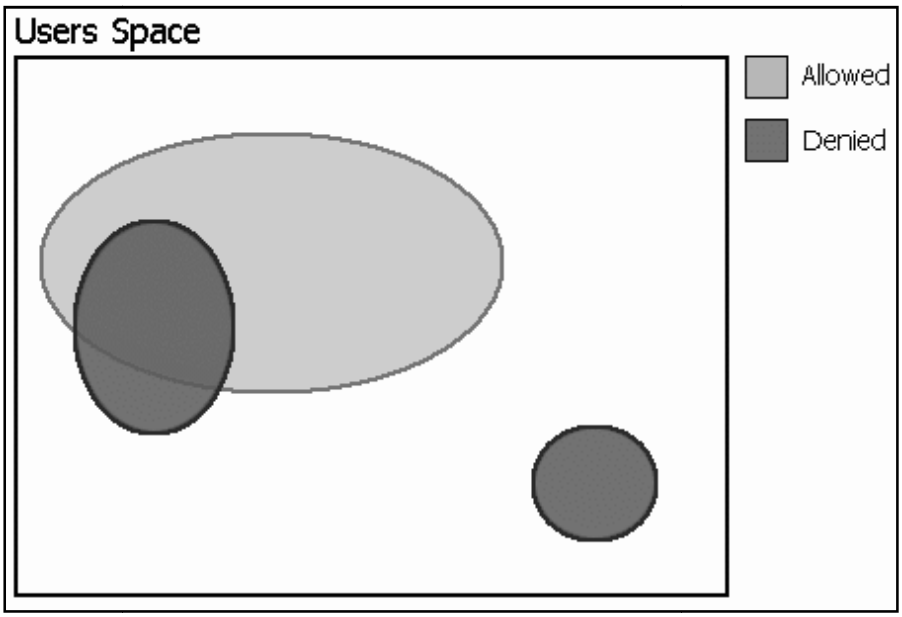


Figure 10.18 - Allow and Then Deny Users

All users authorized to access the resource are those with allowed permissions, as shown in the Figure 10.19.

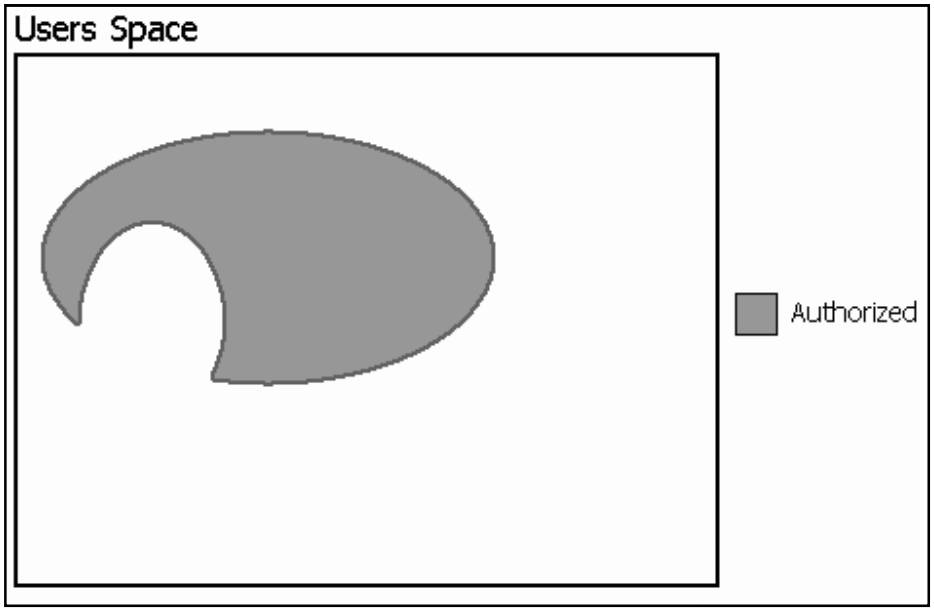


Figure 10.19 - Users with Allow Access Permissions

Example 2: First Access Rule Is a Deny

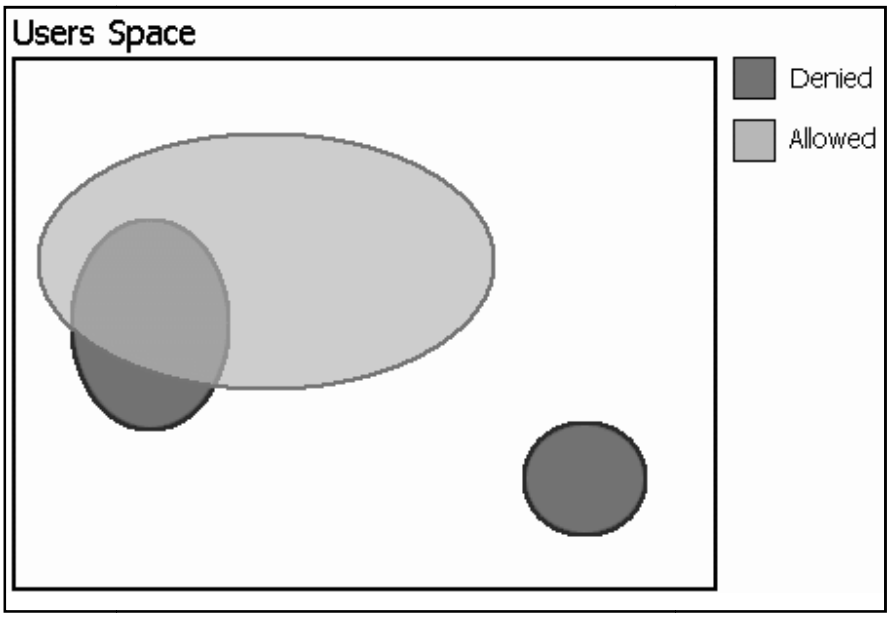


Figure 10.20 – Deny and then allow Users

In this case, the users authorized to access the resource are everyone except those who were specifically denied access, as shown in Figure 10.21.

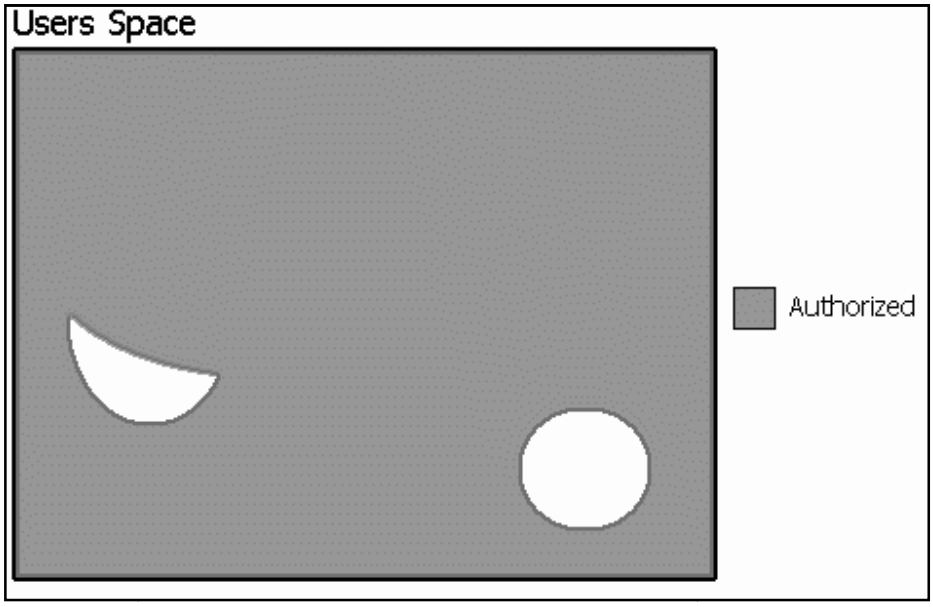


Figure 10.21 - Actual User Permission

10.3.2.14 Security Options

The security also supports two fetching modes: **Standard** and **Deep**. In the **Standard** mode, if a node is not accessible, then none of the child nodes will be accessible. Child nodes cannot override the parent node security configuration. In the **Deep** mode, child nodes can override the parent node security configuration such that child nodes can be accessible even though the parent node is not accessible. The view of the tree in runtime depends on this option.

10.3.2.15 Adding an Alarm Configuration File

In the Navigation Tree Configurator, you can add an alarm configuration file to the Navigation Tree, enabling the association of alarms with custom nodes in the Navigation Tree. Each node that contains an alarm will blink or flash when the alarm occurs. The alarm configuration is stored in a separate XML file. Click on the **Alarms Configuration File** button on the toolbar.

You can specify the URL of the alarm configuration XML file, as shown in Figure 10.22.

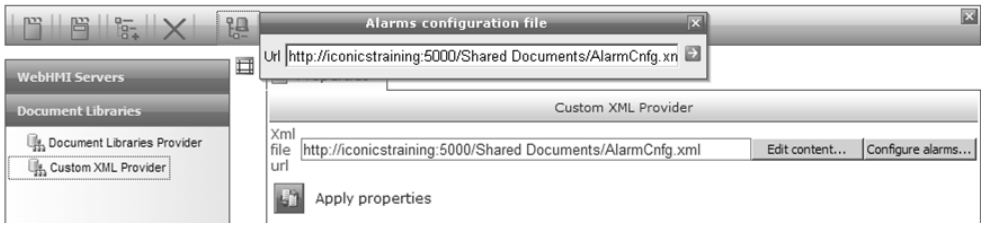


Figure 10.22 - Navigation Tree: Alarm Configuration

The Alarm Configurator can be launched from the Custom XML provider in the Navigation Tree configurator, by clicking on the **Configure Alarms** button. This opens the alarm configurator.

The Alarm Configurator consists of two separate tree controls. On the left side is the **Custom XML Provider Tree** that you created using the Custom XML provider configurator. On the right side is the **Alarms Configuration Tree**. You can drag nodes from the Provider Tree and drop it into the Alarms Configuration Tree. This enables the association of alarms with the custom nodes in the Provider Tree.

Using the toolbar, you can add alarms and states to each node that you added to the Alarms Configuration Tree. As you can see in Figure 10.23, alarms are added under the **Alarm List** node, and states are added to the **State List** node. Each with an alarm under it will blink or flash when an alarm occurs.

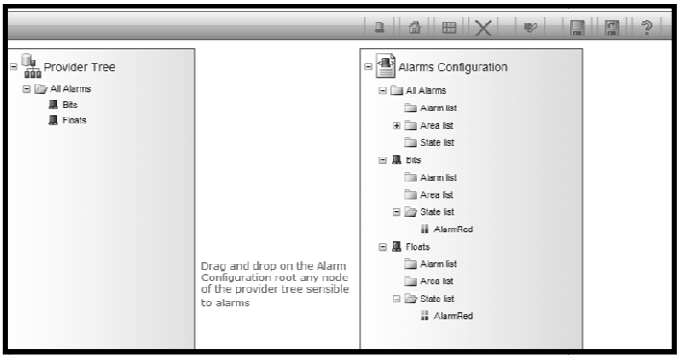


Figure 10.23 - Navigation Tree: Alarms Configurator

10.3.2.16 Alarm Configurator Toolbar

The Alarm Configurator toolbar, shown in Figure 10.24, allows you to customize the content of the Alarm Configuration Tree nodes:

- **Add Alarm:** Adds an alarm to the selected node in the Alarms Configuration Tree.
- **Add Area**: Adds an alarm area to the selected node in the alarm configuration. If any alarm in the area is triggered, the indication will show up. In order to use this option, you must add the area attribute to your alarm subscription.
- **Add State Condition and Look:** Adds a state field (e.g. a severity range or color) to the selected node in the Alarms Configuration Tree.
- **Remove the Selected Item:** Removes the selected item from the tree Alarms Configuration Tree.
- **Edit Alarm Server Subscription:** Opens the AlarmWorX Viewer **Subscription Properties** dialog box, which allows you to create your alarm subscriptions. You must configure an alarm subscription in order to connect the Alarms Configuration Tree to the Alarm Server. For more information, please refer to the AlarmWorX32 documentation.
- **Save Current Alarms Configuration:** Saves your configuration to a document on the portal.
- **Export Current Configuration:** Exports your configuration to an XML file to your local machine's hard disk.
- **Help:** Opens the help documentation for the Alarms Configurator toolbar.

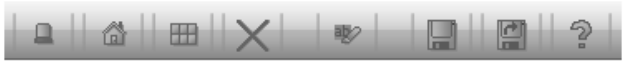


Figure 10.24 - Alarm Configurator Toolbar

10.3.2.17 Removing Items from the Navigation Tree Configuration

In the Navigation Tree Configurator, you can delete items from the Navigation Tree configuration. Select the item you want to delete and then click the **Remove Selected Item** button on the toolbar. Click on **OK** at the prompt to remove the selected item.

10.3.2.18 Saving the Configuration

In the Navigation Tree Configurator, you can save your Navigation Tree configuration. Click the **Save Current Configuration** button on the toolbar.

10.3.2.19 Exporting Subscription Configuration

In the Navigation Tree Configurator, you can export your Navigation Tree configuration to an XML file. Click the **Export Current Configuration** button on the toolbar.

The **File Download** dialog allows you to export your custom Navigation Tree configuration settings to an XML file. Click the **Open** button to review your configuration, or click the **Save** button to export a local copy of your configuration. Once you have exported your configuration to an XML file, you can edit the file manually in any text editor and use the configuration for the Navigation Tree.

10.4 Navigation Menu Web Part

The PortalWorX **Navigation Menu Web Part,** shown in Figure 10.25, is a flexible web menu for navigating SharePoint content. You can use the Navigation Menu Web Part to organize Document Libraries, web site hierarchies, and custom content. It also provides helpful tools for printing the current page or adding it to your favorites.

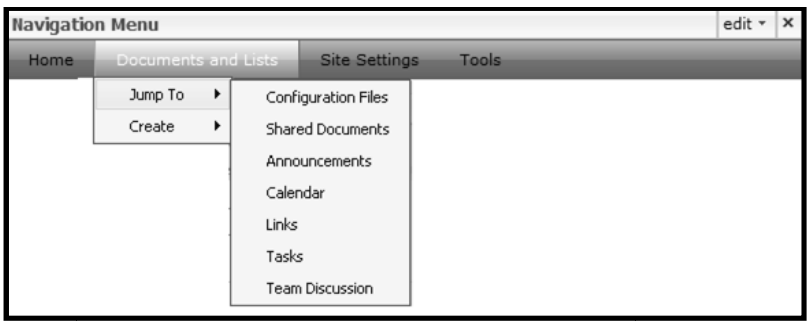


Figure 10.25 - Navigation Menu Web Part

10.4.1 Navigation Menu Properties

The Navigation Menu Web Part properties include the categories as shown in Figure 10.26

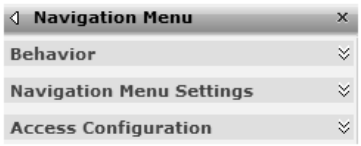


Figure 10.26 - Navigation Menu Web Part Properties

The only new setting here is the Navigation Menu Settings, which include:

- **Configuration File:** Specifies the XML configuration file for the Navigation Menu. The Navigation Menu configuration is stored in an XML configuration file. You can create your own custom XML configuration files.
- **Show Tools: Hides/shows** Tools menu, which enables you to perform common tasks such as "print page" and "e-mail page."

10.5 EarthWorX Viewer Web Part

The PortalWorX **EarthWorX Viewer Web Part**, shown in Figure 10.27, provides real-time visualization to widely dispersed assets such as factories, facilities, oil fields, etc. The mapping function provides a drill down capability to view alarm conditions and status for any location around the world. EarthWorX integrates with Microsoft's Virtual Earth for you to view your assets as symbols on different types of maps. You can assign custom icons and configure them with fully customizable pop-up information boxes. If you need to track movable assets during transportation, you can monitor their motion via GPS coordinates.



Figure 10.27 - EarthWorX Viewer Web Part

10.5.1 EarthWorX Viewer Properties

The EarthWorX Viewer Web Part properties include the categories as shown in Figure 10.28.

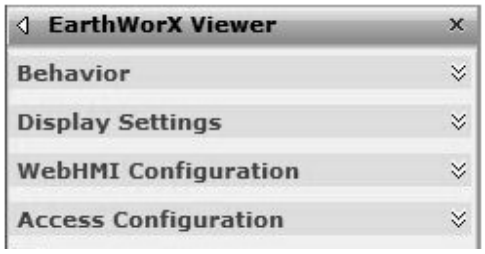


Figure 10.28 - EarthWorX Viewer Web Part Properties

Again, the only new property in here is the Display Settings. You can configure the following in this section:

- **Configuration File:** Specifies the XML configuration file for the EarthWorX Viewer.
- **Show Control Maps:** Checking this check box enables Control maps panel on the viewer.

10.5.2 Map Navigation

The map navigation is easy and intuitive. You can drag the map around, and use your mouse wheel to zoom-in and zoom-out. You can zoom-in even by double-clicking on the map. To switch between map modes, you can use the upper left menu, by clicking on the Road, Aerial or Hybrid view.

All of these commands are also available through your keyboard as well. Here are some options:

- To **pan** the map: Use the arrow keys to pan the map
- To **zoom** in and out: Use the + key and - key to zoom-in and zoom-out, respectively.
- To **switch** between different map modes: Use the **r** key, **a** key, and **h** keys to switch between the different map modes: Road, Aerial, and Hybrid view.

In some specific areas, you will also be able to browse the map in a so-called "**Bird's Eye View**". This is an oblique view of the world, taken by low-flying planes.

10.5.3 EarthWorX Shapes

In EarthWorX, a shape is an object you can put on the map, associating some useful information. There are several shapes you can add to a map, including:

- **Pushpins**: A pushpin is a simple customizable icon, which identifies a specific asset.
- **Textpins**: Similar to a pushpin, the textpin uses a text box rather than an icon to identify assets.
- **SmartPins**: SmartPins are a multi-component object composed of Smart Icons. Each cell in a SmartPin can be assigned a color (and other properties) to identify the status of a specific asset on that location.

10.5.3.1 Adding a Shape

To add a new shape to your map you have to be in **Edit Mode**. Once you are in Edit mode, right-click on the map where your asset will be located, the Shape context menu appears as shown in Figure 10.29.

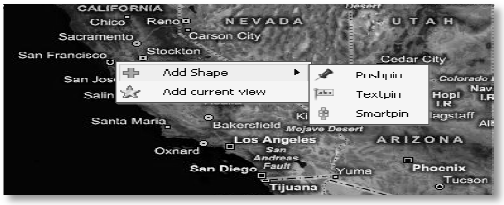


Figure 10.29 - A Pushpin Context Menu

Click on the **Add Shape** command and select the **type of shape** you wish to create from the submenu. A Shape Properties dialog box appears, as shown for the Pushpin shape type in Figure 10.30.

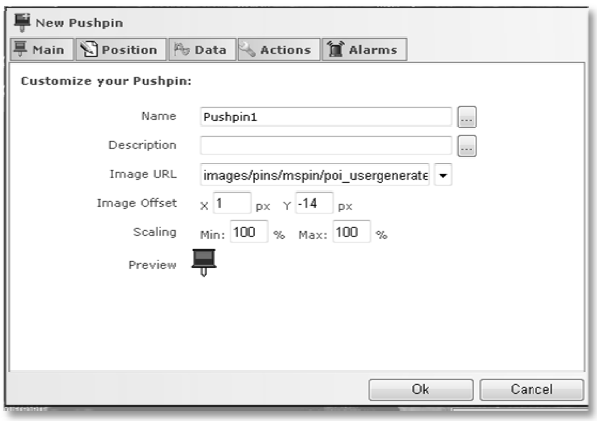


Figure 10.30 - New Pushpin Dialog

Fill in the attributes you want the shape to have; then click on the **OK** button. The pushpin appears on the map as shown below in Figure 10.31.



Figure 10.31 - New Pushpin on the Map

10.5.3.2 Working with Objects

Once you have shares on your map, you can do a few things with it. You can right-click on the shape and select the command from the context menu, as shown in Figure 10.32.

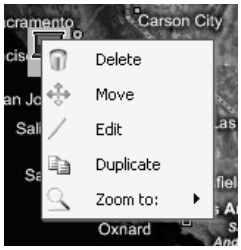


Figure 10.32 - Shape Context Menu

The context menu provide the following functions:

- **Delete**: This command removes this shape from the map.
- **Move**: This command will change the cursor to a target icon. Move the cursor to where you want the shape to go and then click at that location.
- **Edit**: This command opens the properties dialog box used to configure the shape, to let you alter any value.
- **Duplicate**: The Duplicate command changes the cursor to the same cursor used by the Move command. When you click on the new location, a duplicate shape appears there.
- **Zoom to**: This command lets you zoom quickly to a predefined set of zoom levels and centers the map over the shape. You may still use your mouse wheel, or other UI elements to zoom.

10.5.3.3 Connecting Shapes to OPC Data

For a shape to be useful, it must be connected to a data source. This is done on the **Data tab** of the shape's Properties dialog box. You can have the shape display OPC data, or assign a shape to an alarm source. If you are creating a new shape, then click on the Data tab to make the assignment. If the shape already exists, right-click on the shape, select the Edit command, and then click on the Data tab.

Once you are in the properties dialog's Data tab, click on the **Add new Data Source** link to open the Data Browser. Select the data source you want to add from the browser and click on the **OK** button. To change the default name of the data source to something more meaningful, click on the name and **edit** it, as shown in Figure 10.33.

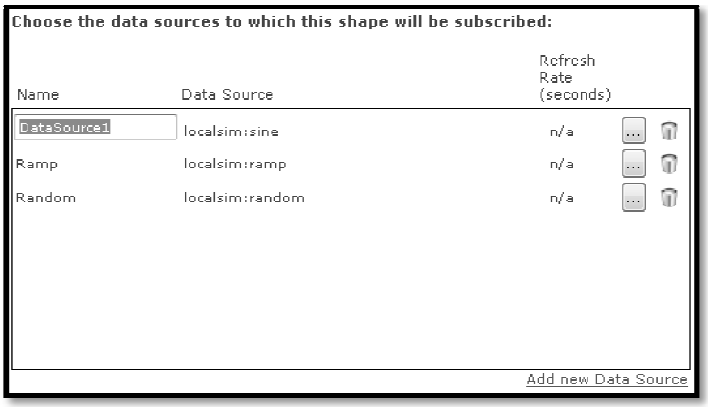


Figure 10.33 - Editing a Data Source

Click on the **OK** button to end the configuration and exit Edit Mode. Figure 10.34 shows a data driven pushpin. The numbers are updated constantly with data from the server. Data can be static, real time, or historical.

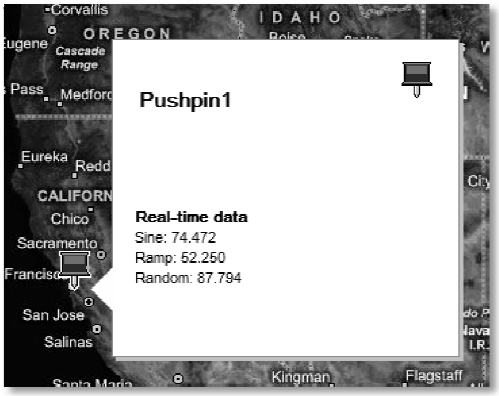


Figure 10.34 - Pushpin Controlled by Data Source

10.5.3.4 Mapping Alarm Conditions

It is particularly useful to be able to assign an alarm to a shape and use the shape to monitor items of interest. The Alarms tab let you configure alarm subscriptions that are associated with this shape. To highlight an alarm condition, you can create an alternative shape state that will appear when an alarm triggers. You may choose to use a different icon. When the alarm triggers, your pushpin will switch to the other icon. This provides a visual symbol that instantly signals the user that there is an alarm.

Not all shapes support the idea of alarm states. SmartPins cannot switch icons. As an alternative, the SmartPin symbol allows an alarm to change the color of its fill or line, and/or blink.

To configure an alarm subscription, click on **Alarm Server Subscription** link as shown in Figure 10.35 and select your Alarm Server.

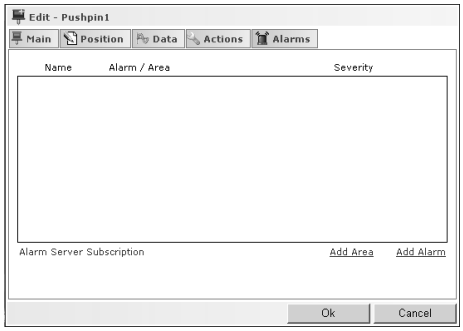


Figure 10.35 - Actions Tab of the Shapes Properties Dialog

Click on **Add Area** link or on **Add Alarm** link to select alarm data source you want from the browser and click the **OK** button.

The subscription can be edited, deleted, or have a state assigned to it (from left to right) using a set of buttons that now appear to the right of the subscription listing in the Alarm Tab, as shown in Figure 10.36. Click on the action button that you wish to perform.

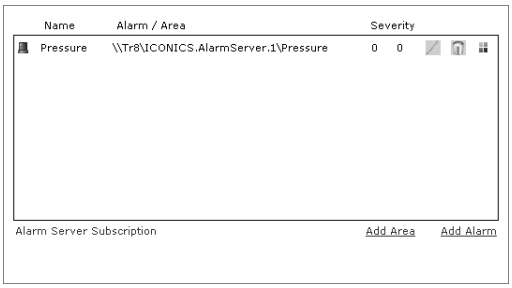


Figure 10.36 - Alarm Subscription

To edit the **Alarm State**, click on the State button and complete the Edit State for Alarm dialog box shown in Figure 10.37.

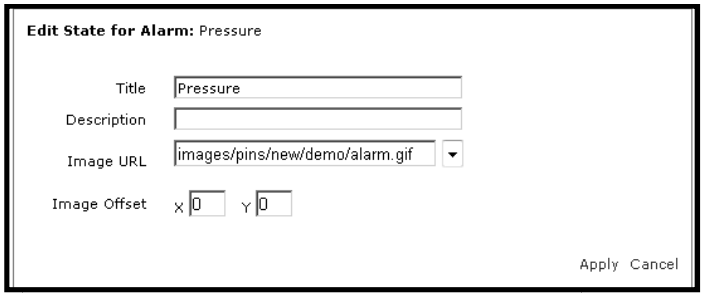


Figure 10.37 - Alarm State

When done setting the alarm Title, Image and Offsets click on **Apply** and close the Properties dialog box.

You should see your shape respond to alarm conditions during runtime by displaying the image you selected. It is particularly useful to use alarms with SmartPins, as you can view multiple alarms inside the same shape in a pattern that is meaningful to your operators.

The range of dynamic data that can be the data source for an EarthWorX shape is very large. Among the connections that you can establish are those to SNMP data, which supplies vital statistics for network discoverable devices. You could create a SmartPin shape for a computer system that offered the operator information about system up time, disk conditions, thermal states, etc. SNMP data is exposed in the Data Browser inside the SNMP tab. When you browse SNMP, you can subscribe to any SNMP tag that has been exposed by the Network Explorer from within the SNMP Explorer. You can also expose database data obtained by queries from SQL databases with Data Mining OPC server.

> **NOTE:** For more information on SNMP and the Data Mining OPC Server, please refer to the respective help documents in the GENESIS32 product suite.

10.5.3.5 Using GPS Data

The Position tab, shown in Figure 10.38, allows you to configure position-related settings. The tab also lets you control the EarthWorX de-cluttering feature, which makes it easier to view and work with a complex and densely populated map.

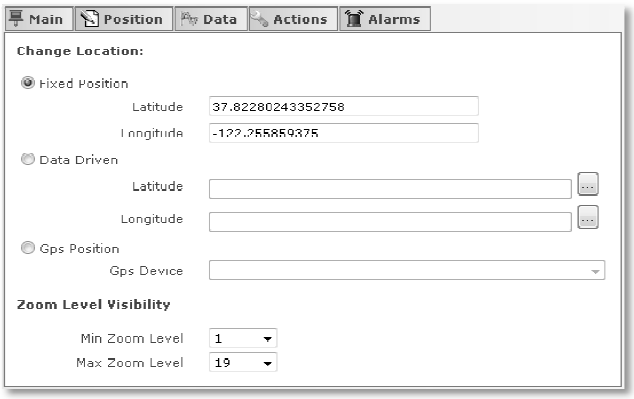


Figure 10.38 - Position Tab of the Shapes Property Dialog

The Position tab allows you to control your shape's location in four different ways:

- **Fixed Position**: You can control the exact location of the shape's point by entering the Latitude and Longitude in the text boxes of this section. If you are satisfied with the location of your shape, then you don't need to change these settings.
- **Data Driven**: To allow data sources to provide the position for your shape you would select this radio button and then set the external data sources that control the position. Data sources can be a tag, a value in a database, or other static and dynamic data. The shape moves on the map in response to the values of the data sources you selected.
- **GPS Position**: You may also select a GPS Device, if available. This can be useful if you have a GPS device like a mobile phone. When you install the appropriate client application, a smart phone with the EarthWorX GPS Web Service can notify the EarthWorX server about its updated position. The dropdown menu for the GPS Device contains the list of the available devices.
- **Zoom Level Visibility**: If you want to hide a shape when the map is zoomed to a certain range, you can use the Zoom Level Visibility to suppress its display. For example, in a cluttered display of a city street where each house is labeled, you might want to suppress house markers when looking at the map at the state level or even the neighborhood level in order to make the map readable. This feature is often referred to as a *de-clutter* option. EarthWorX allows zoom levels of from 1 to 19 based on the Virtual Earth mapping engine. Level 1 is the world view, while zoom level 19 is a detailed view down to meters or yards.

10.5.3.6 Push Pins

The pushpin is the simplest shape you can put on the map. You can use pushpins when you have a specific asset located at a position you want to identify. The popup, which appears when you move the mouse over the pushpin, can be customized to show real-time data coming from any data source available in GENESIS32.

For example, you have ten facilities on a map, and you want to know the overall productivity level. You might also want to display a couple of other KPIs. A KPI stands for Key Performance Index or an overall measure of your process' efficiency. You can do that using ten different Pushpins, connected to the appropriate data sources, coming from those facilities. You can better identify each of those plants by using some custom icons, which may also be different from one another.

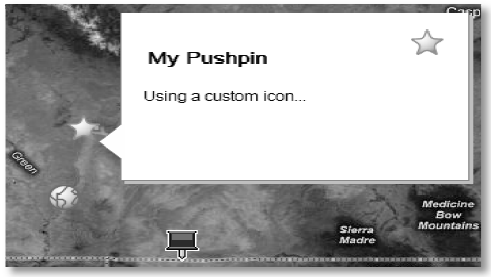


Figure 10.39 - Sample Pushpin

Pushpins can be created using different shapes and colors, which makes it easier to find the one you want, and to customize the map. Custom information you add to the pushpin appears in the popup when hovering over a shape with your mouse, as shown Figure 10.39.

10.5.3.7 Textpins

A Textpin is conceptually similar to a pushpin; however, its appearance is slightly different. Instead of using an icon to identify an asset, a textbox is used for textpins. When you use textpins, the information is very easy to view and quick to access. The drawback to using Textpins instead of pushpins is that the textpins use up more space on the map when they are displayed. For a map with many assets, the smaller size pushpins offer the advantage of a less cluttered map. Figure 10.41 illustrates the textpins on a map.



Figure 10.40 - Textpin

10.5.3.8 Information Box

An EarthWorX shape can display information as either static values or variables. The data can be OPC data, time dependent, or any expression that you construct that is syntactically correct from the Data Browser. To have your data appear open the Edit dialog box for a shape and on the Main tab, fill in the information for the various fields.

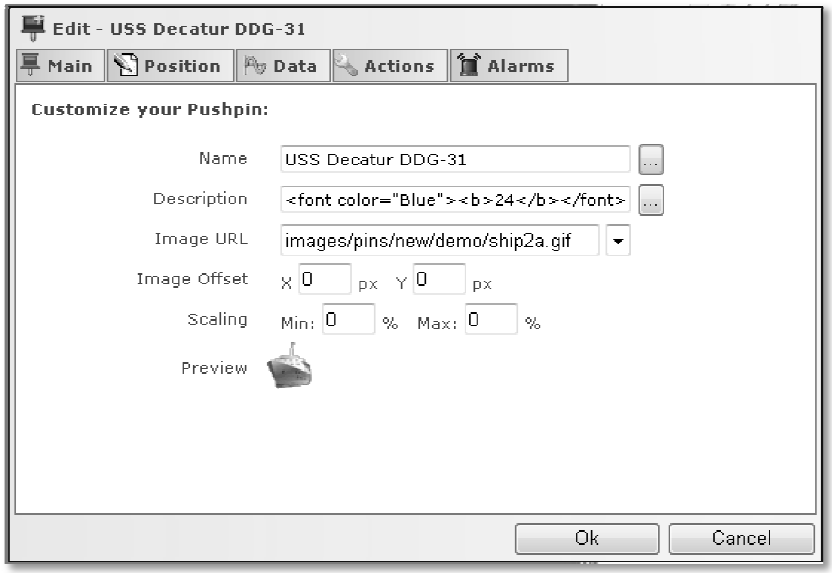


Figure 10.41 - Information for a Shape

Figure 10.41, shows an example of a ship symbol. The Name is a static value and the Description is the expression:

```
Destination: <font color="Blue"><b>Boston</b></font><br />Heading: <font
color="Blue"><b>243° 22' 10"</b></font><br />Speed: <font
color="Blue"><b>19.7 knots</b></font><br />Arrival Time: <font
color="Blue"><b>2007.06.29 12.33 PM</b></font><br />Tonnage: <font
color="Blue"><b>19,434 T</b></font><br />Crew Number: <font
color="Blue"><b>24</b></font>
```

The above expression evaluates to a static value. However, you could have the various components of the Description refer to GPS data and update at various intervals. You can see a preview of the image file used for the shape at the bottom of the dialog. Note that you can set an image offset in such a way that the image doesn't cover up the actual location, as well as scale the image on the display.

The utility of the information you enter into the Main tab is evident at runtime. It appears in two places, as you can see in Figure 10.42. You see the information as a pop-up text box when your mouse over the shape in runtime, as well as displaying the information inside the Shape Information section of the EarthWorX Pad in Configuration mode.

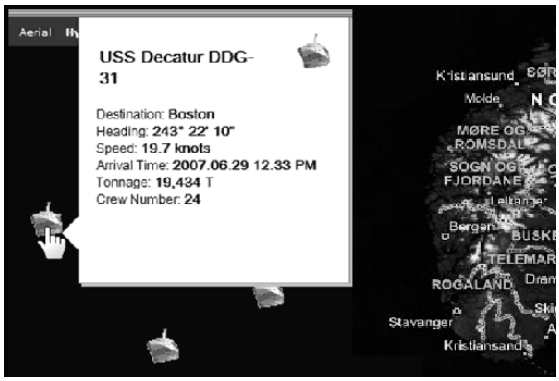


Figure 10.42 - Shape Information at Runtime

10.5.3.9 Smart Pins

A SmartPin is a multi-valued data symbol that is in a form of pictograph. Each cell in a SmartPin represents a data value and show status using colors. SmartPins can be used to show the status of different characteristics of an object such as sensors in a vehicle or monitors on a patient. You have fine control over the number and distribution of cells, how they are connected to data, and how each cell or icon behaves.

SmartPins are completely customizable and come in a variety of shapes. They are used to quickly visualize the performance of an asset by the color of the pin. Green can indicate all systems are OK, yellow a potential problem, and red an alarm Condition that requires immediate attention. SmartPins are a valuable tool when you need to quickly identify a large number of geographically dispersed assets.

Figure 10.43 shows a SmartPin with its information box displayed.

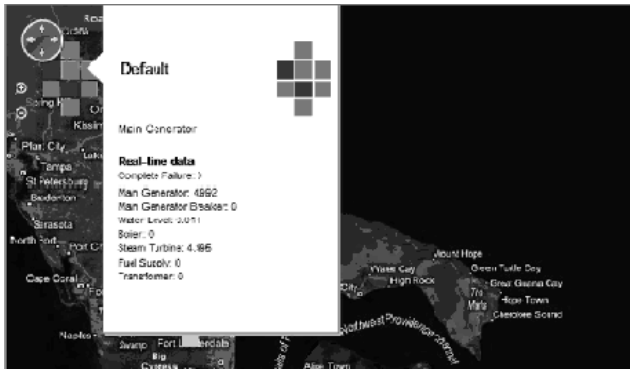


Figure 10.43 - SmartPin

You can create SmartPins that are very different from one another. It is possible to give the SmartPin various shapes and different numbers of cells, in order to create a meaningful object. The shape of the SmartPin could mimic the shape of the asset, or simply be a well-known shape meant to represent a specific set of information. Each Smart Icon (cell) is associated to a data source that provides a value used to define the color code associated to the Smart Icon.

In Figure 10.44, you can see what happens when a value goes out of the normal range, which indicates a problem. When there is a problem, the warning is made immediately visible by switching the color of Smart Icon or cell that's associated to the problematic area. You should consider using a SmartPin when you want to visualize a set of information for each specific geographically dispersed asset.

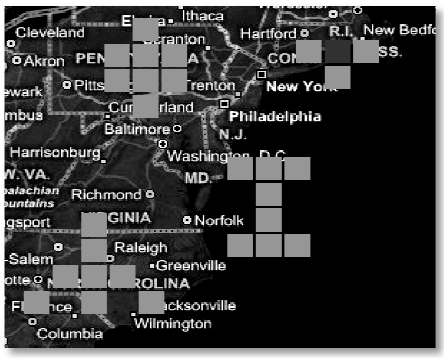


Figure 10.44 - SmartPin with Warning Condition

Lab: Navigation Web Parts *10*

10.1 Quick Lab Overview

In this Lab, you will add one of the ICONICS Navigation web parts to your Acmeseutical Portal. That's the Navigation Tree web part used to provide data to other web parts, to organize and display some critical alarms, and many other applications.

10.1.1 Task Checklist

In this Quick Lab, you will complete the following task:

- Add a Navigation Tree web part.
- Customize the Navigation Tree web part.
- Add an Alarm to the Navigation Tree Web Part.
- Customize the Alarms.

10.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

10.2 Adding a Navigation Tree Web Part

First, we will add a **Navigation Tree** web part to our Acmeseutical Portal:

1. Click on Site **Actions → Edit Page**.
2. Click on the **Add a Web** Part button in the right Zone.
3. When the **Add Web Parts to Right** dialog opens, check the box next to the **Navigation Tree** web part and then click on the **Add** button to add it to the page.

4. Drag the **Navigation Tree** web part and place it below the Links web part, as shown in Figure L10.1.



Figure L10.1 - Adding the Navigation Tree Web Part

10.3 Customize the Navigation Tree Web Part

1. Click on the **Edit** button with the down arrow, and then select **Edit Configuration** from the list.

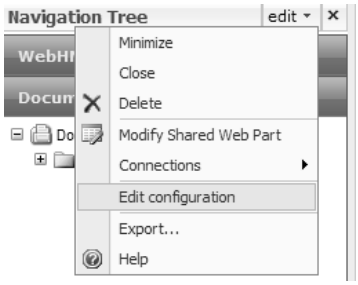


Figure L10.2 - Edit Navigation Tree Configuration

2. This will open the Navigation Tree Configurator.

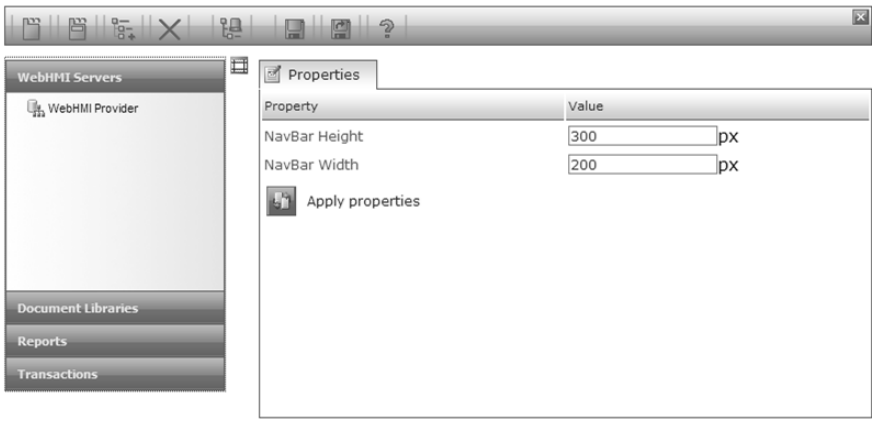


Figure L10.3 - Navigation Tree Configurator

3. Now, just for example, we will remove a group from the Navigation Tree. Click on the **Transaction** group and click on the **X** button in the toolbar. This will delete the Transaction group.

4. Click on the **Add Group** button; it's the second leftmost button in the top bar.

5. Write **Alarms** in the **Group Text** text field and click on **Apply Properties**.

6. Click on the **Add Provider** button; it's the third button from the left in the toolbar.

7. Select the **Custom XML Provider**, as shown in Figure L10.4and click on the green arrow.

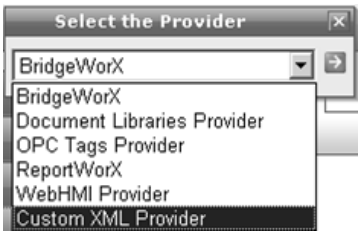


Figure L10.4 - Selecting a Provider

8. Click on the **Edit Content** button to open the Custom XML Configurator

9. Once the page loads, click on the **New node** item, in the left panel. Some text fields are already filled.

10. Leave the default value in the **Id** field.

11. Write **Pressure alarm** in the **Text** field.

12. Select the **AlarmWorX** icon for both the **Icon** and **Icon expanded** fields, as shown in Figure L10.5. Click on **Apply all properties**.

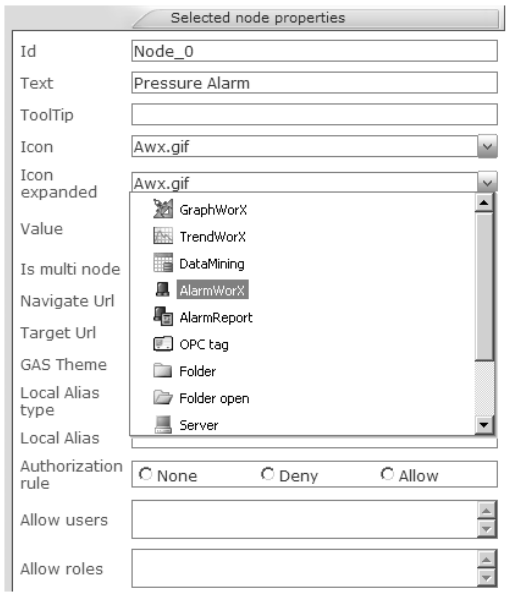


Figure L10.5 - Configuring Provider

13. Click on the "**Save current configuration**" button in the top bar. It's the button with the floppy disk image. This will open a dialog window. Expand **Configuration Files** folder and select **Acmeseutical Folder**.

14. Write **AcmeTreeConfiguration.xml** in the **File Name** field and click on **Save**. This will automatically save your configuration in the Acmeseutical folder of the Acmeseutical portal.

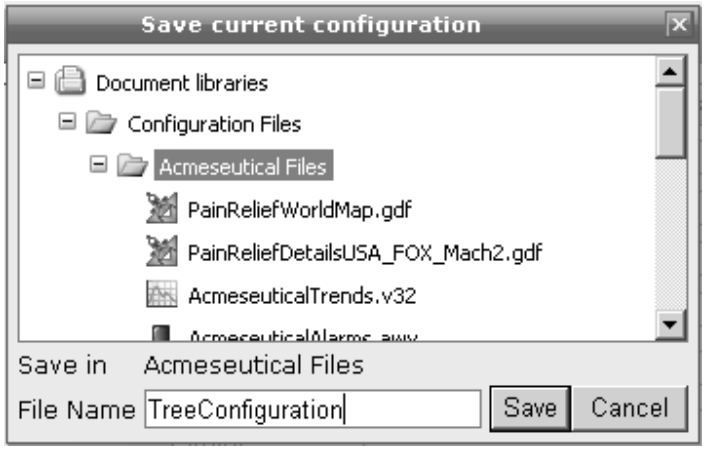


Figure L10.6 - Saving the Configuration

15. Click on the **Apply properties** in the main Navigation Tree Configurator screen.

16. Click on **Configure Alarms**.

17. Connect the Navigation Tree to an alarm server by clicking on "**Click here to subscribe to the alarm server** link.

18. Through the subscription properties, add a new subscription by clicking on **Add** and selecting the ICONICS.Alarmserver.1 in Unified Data Browser. Click on **OK** twice and return to the Alarm Configurator.

19. Drag and drop the **Pressure Alarm** item on the left over the **Alarms Configuration** item on the right. This will create a "Pressure Alarm" item in the "Alarms configuration" containing three folders: **Alarm list**, **Area list**, **State list**.

20. Click on **Add Alarm**, the leftmost button in the toolbar. Select the **ICONICS.AlarmServer.1 → Plant Area A → Sub Area A → Pressure** tag in the Unified Data Browser. The alarm will be added automatically to the Alarm list folder.

21. Click on **Add state condition and look** button. A new state is added to the state list.

22. Select **AlarmBlue** from the **Look** drop down list and click on the green arrow to apply the configuration.

23. Click on **Save current alarms configuration**, the button with the Floppy Disk icon. A selection dialog will appear. Expand the **Configuration Files** and the **Acmeseutical Files** and write **AcmeAlarmsConf.xml** in the **File Name** field.

24. Click on **Save** and return to the main Navigation Tree Configurator screen.

25. Click on **Apply Properties**.

26. Click on the **Alarms Configuration file** button, in the middle of the toolbar. The Alarms Configuration file in the text box should be the **AcmeAlarmsConf.xml** you just created. Click the green arrow.

27. Click on the **Apply Properties** link again

28. Click on the **Save current configuration** button; it's the Floppy Disk icon in the toolbar. Click on **OK** in the confirmation dialog.

29. Close the Navigator Tree Configurator by clicking on the **X** icon in the upper right corner, and then click **OK** in the confirmation dialog.

30. In the Acmeseutical Portal, the Navigation Tree is changed, and in the Alarms group the Pressure Level will flash when the Alarm is triggered.



Figure L10.7 - The New Navigation Tree

This completes Lab 10. In the next Chapter, you will learn about the General ICONICS web parts. Then in the lab following Chapter 10, you will configure one of them.

General Web Parts 11

11.1 Objectives

After completing this chapter, you should know how to:

- Distinguish between the different types of general web parts.
- Configure settings for each of the general web parts.

11.2 General Web Parts

General Web Parts are web parts that have a wide use regardless of the industry or the portal type (manufacturing or business). These web parts include:

- Banner Web Part
- Page Viewer Web Part
- Slide Show Web Part

11.3 Banner Web Part

The PortalWorX **Banner Web Part**, shown in Figure 11.1, allows you to create customized portal banners. It also displays information about the currently logged-on user and can communicate with the Navigation Tree Web Part to provide status information.



Figure 11.1 - Banner Web Part

11.3.1 Banner Properties

The Banner Web Part properties include the categories as shown Figure 11.2.



Figure 11.2 - Banner Web Part Properties

11.3.1.1 Banner General Settings

In the General Settings of the banner, you can configure the following:

- **Title**: Specifies the banner title
- **Title Position**: Specifies where the title is located inside the banner (i.e. top center, bottom right, etc.).
- **Title Font**: Specifies the font, style, and text point size of the banner title.
- **Title Color**: The banner title's text color. Choose a color from the color palette.
- **Border Style**: Specifies the style, thickness, and color of the banner border.
- **Background Image**: Select an image to use for the background of the banner.
- **Background Image Repeat**: Enables horizontal or vertical repeat of the banner background image.
- **Background Color**: The banner background's color. Choose a color from the color palette.

11.3.1.2 Login Name Settings

In the Login Name settings, you can configure how the login user name displays with the following properties:

- **Enable Login Name:** Hides/shows the name of the currently logged user inside the banner.
- **Format Login Name:** Specifies the format of the string used to display the name of the currently logged user. The special string {0} is a placeholder for the user name.

- **Login Name Position:** Specifies where the name of the currently logged user is located inside the banner (i.e., top center, bottom right, etc.).
- **Enable Contact Card:** Hides/shows the contact card of the currently logged user inside the banner.
- **Contact Card Picture:** Select an image to use for the contact card of the currently logged user inside the banner.

11.3.1.3 Selected Tree Node Settings

The Navigation Tree Web Part can communicate to the Banner Web Part when they are connected. If they are connected, the Banner Web Part can show the last clicked node on the Navigation Tree Web Part. Here are the settings you can configure for this functionality:

- **Selected Node Label Position:** Specifies where the label for the selected node is located inside the banner (i.e. top center, bottom right, etc.).
- **Selected Node Start Value:** Specifies the starting value for the selected tree node.
- **Selected Node Label Font:** Specifies the font, style, and text point size of the label for the selected tree node.
- **Selected Node Label Color:** Specifies the color for the selected tree node. Choose a color from the color palette.
- **Use Node Depth:** Check this box to display the text of the node at the given depth. Otherwise the text of the selected node will be displayed.
- **Depth of the Node:** Specifies the depth of the node to display in the banner. When this options is checked, if you go pass the desired depth, the banner will show the last available parent node.

11.3.1.4 Clock Settings

You can include a clock in the banner. Here are some settings for the clock if you include it:

- **Enable Clock:** Hides/shows the clock inside the banner.
- **Clock Position:** Specifies where the clock is located inside the banner (i.e., top center, bottom right, etc.).
- **Date Time Format:** Specifies the format (i.e. ShortDate, LongDate, etc.) in which the date and time are displayed in the clock.
- **Refresh Interval:** Specifies update interval (in milliseconds) for the banner clock.

11.3.1.5 Zones Settings

The **Zones Settings** section determines the amount padding (space) in the margins surrounding the banner. You can specify the margins spacing (in pixels) for the top-left, top-center, top-right, middle-left, middle-center, middle-right, bottom-left, bottom-center, and bottom-right.

11.4 Page Viewer Web Part

The PortalWorX **Page Viewer Web Part**, shown in the Figure 11.3, is a multi-purpose component that provides a viewing area for a variety of document types. You can drag and drop Excel files, PDF files, HTML files, or hyperlinks from the Navigation Tree Web Part to dynamically switch between content.

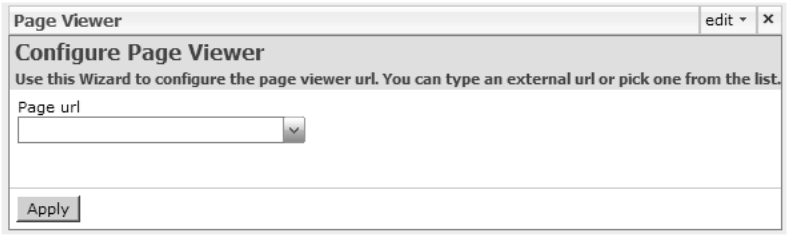


Figure 11.3 - Page Viewer Web Part

11.4.1 Page Viewer Properties

The Page Viewer Web Part properties include the categories as shown in Figure 11.4

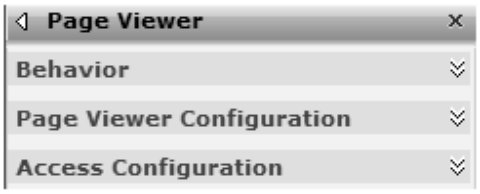


Figure 11.4 - Page Viewer Web Part Properties

The only property we have not discuss thus far in the Page Viewer properties is the **Page Viewer Configuration**. In here, you can specifies the **Page URL** path (either a URL or a local path on the server) to the file to be displayed by the web part.

11.5 Slide Show Web Part

The PortalWorX **Slide Show Web Part**, shown in Figure 11.5, enables you to quickly and easily create dynamic slide shows of Document Libraries and Picture Libraries. Use this Web part to create an animated banner or a compelling presentation.

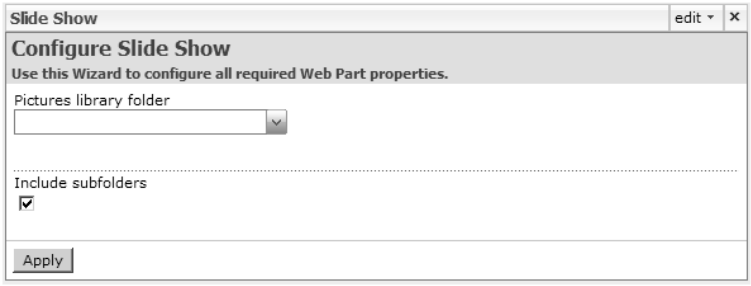


Figure 11.5 - Slide Show Web Part

11.5.1 Slide Show Properties

The Slide Show Web Part properties include the categories as shown in Figure 11.6.

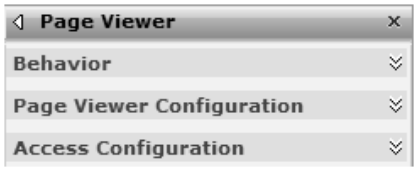


Figure 11.6 - Slide Show Web Part Properties

11.5.1.1 Slide Show Configuration

In the General Slide Show configuration, you have the following options:

- **Pictures Library Folder:** Select the folder in which the files you want to use for the slide show are located.
- **Include Subfolders:** When checked, files within subfolders of the selected folder will also be displayed in the slide show.
- **Filter:** Allows you to select a specific image file type to use for the slide show (i.e. GIF, BMP, JPG, or PNG).
- **Preserve Image Aspect Ratio:** When checked, the slide show will always maintain proper aspect ratio of the displayed images.
- **Show Title:** Hides/shows the title in the slide show.
- **Show Description:** Hides/shows the description in the slide show.

11.5.1.2 Slide Show Effects

In this section, you can configure some advanced settings such as transitions and effects for your slide show. You have the following options:

- **Transition Effect:** Specifies a visual effect (e.g. fade, dissolve, gradient, or pixilate) to use to switch between files displayed in the slide show sequence.
- **Transition Effect Duration:** Specifies the duration (in milliseconds) of the selected transition effect.
- **Hide Effect:** Specifies a visual effect (e.g. fade, dissolve, gradient, or pixelate) to use if a file in the slide show is hidden.
- **Hide Effect Duration:** Specifies the duration (in milliseconds) of the selected hide effect.
- **Effect:** Specifies a visual effect (e.g. content scroll, random slide, slide show, or smooth scroll) to use for viewing files displayed in the sequence.
- **Slide Pause:** Specifies the duration (in milliseconds) that each file (slide) will be displayed before switching to the next file in the sequence.
- **Pause on Mouse Over:** When checked, the currently displayed file in the slide show will continue to be shown if the mouse pointer hovers over the display.

Lab: General Web Parts *11*

11.1 Quick Lab Overview

In this Lab, you will add one of the ICONICS General Web parts to your Acmeseutical Portal. That's the Banner web part used to add useful information to your portal.

11.1.1 Task Checklist

In this Quick Lab, you will complete the following task:

- Add a Banner web part.

11.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

11.2 Adding a Banner Web Part

1. First, we will add a **Banner** Web part to our Acmeseutical Portal. Click on **Site Actions → Edit Page**
2. Then click on the **Add a Web Part** button in the Left zone of the page. Check the box next to the **Banner** web part and then click the **Add** button to add it to the page, as shown in Figure L11.1.



Figure L11.1 - Adding the Banner Web Part

3. Click on the **Edit** button, and then select **Modify Shared Web Part** from the list.

4. In the **Banner General Settings** menu set the title to "**Acmeseutical Portal**" and the title color to "**87CEEB**" as shown in Figure L11.2.

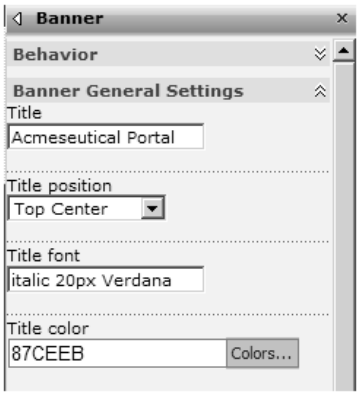


Figure L11.2 - Banner General Settings

5. In the **Clock settings** select **ShortDateShortTime** for the Data Time Format, and click OK.

6. Click on the **Home** link to return in runtime mode, and your Banner web part should now resemble Figure L11.3.

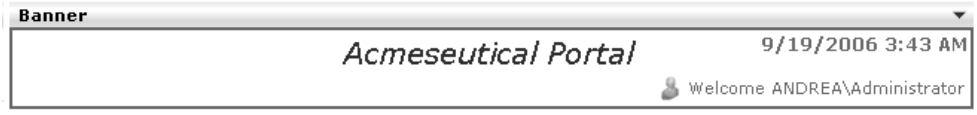


Figure L11.3 - Acmeseutical Banner

This completes Lab 11, and it completes the development of the sample portal. In the next chapter, you will learn about the Site Deployment Utility. Then in the lab following Chapter 12, you will use that Utility.

In Figure L11.4, you can see the final version of the portal you have created.

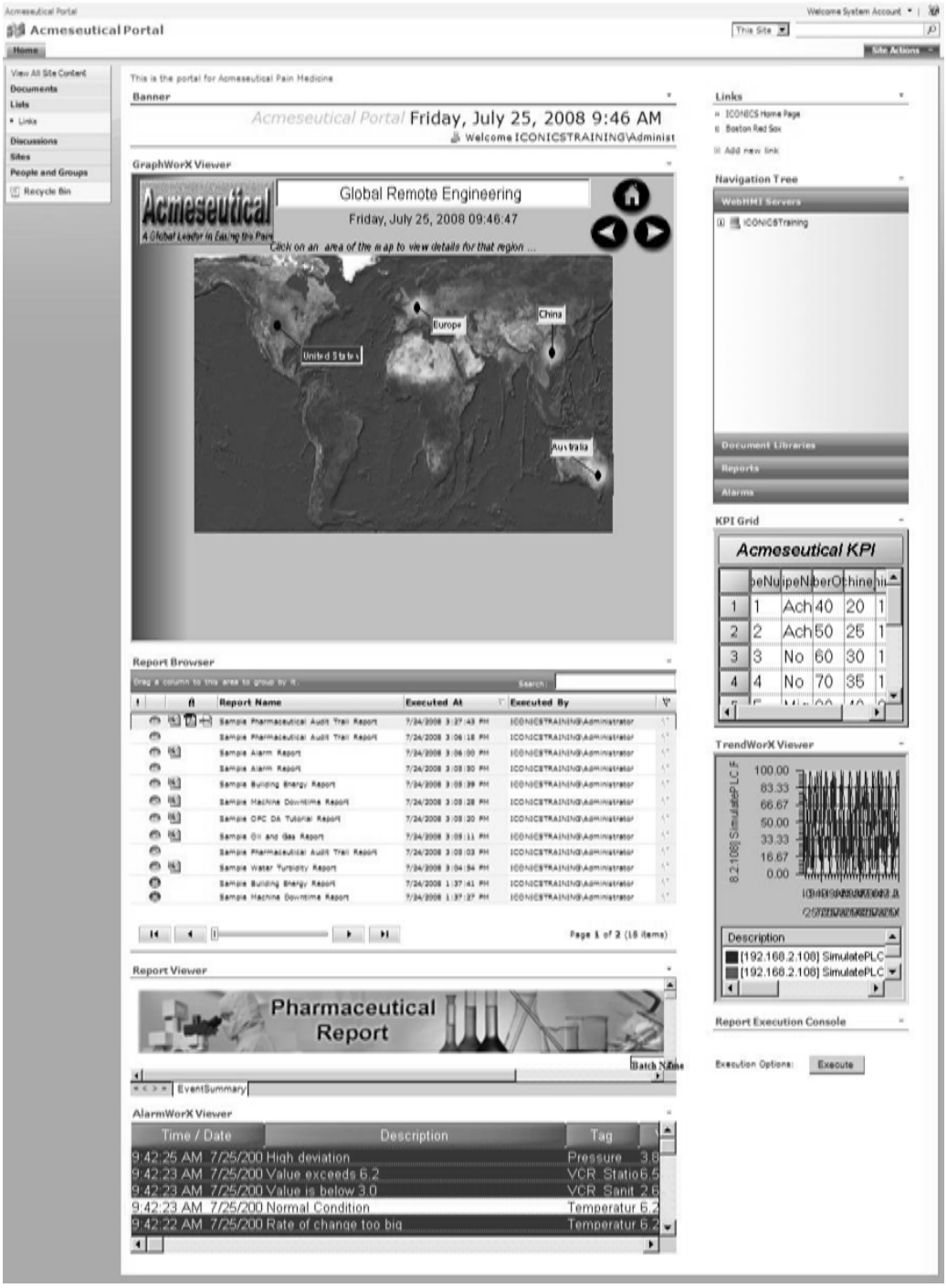


Figure L11.4 - The Completed Acmeseutical Portal

Site Deployment Utility 12

12.1 Objectives

After completing this chapter, you should know how to:

- Pack a Virtual Server or a Portal Site extended by Microsoft SharePoint and unpack it on a different machine.

12.2 Introduction

The PortalWorX Site Deployment Utility, shown in Figure 12.1, enables you to pack virtual servers or portal sites that have been extended by Microsoft SharePoint on one server machine and unpack them to a different server machine. To launch the PortalWorX Site Deployment Utility, select **Start → Programs → ICONICS BizViz → PortalWorX → Site Deployment Utility**.

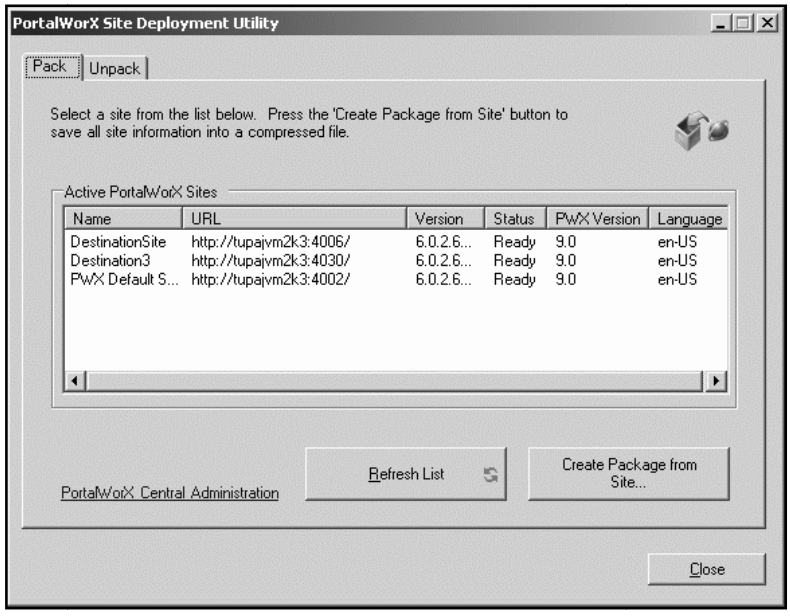


Figure 12.1 - PortalWorX Site Deployment Utility

12.3 Packing Portals

The **Pack** tab in the **PortalWorX Site Deployment Utility**, shown in Figure 12.1, enables you to pack virtual servers or portal sites that have been extended by Microsoft SharePoint and have at least one PortalWorX Web part installed.

The list displays all the PortalWorX sites that can be packed. You can select the site(s) that you want to pack, and then click on the **Create Package From Site** button. Specify a file name for the PLX file in which the site will be stored. When the packing operation is complete, you will see the **Pack Results** dialog box, as shown in Figure 12.2.

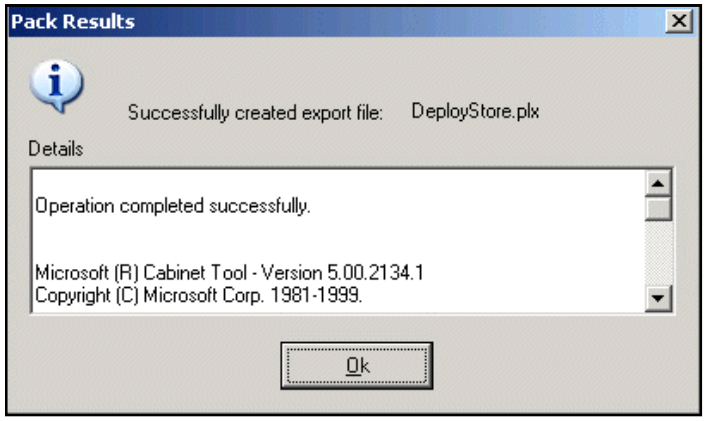


Figure 12.2 - Pack Result

12.4 Unpacking Portal Sites

The **Unpack** tab in the **PortalWorX Site Deployment Utility**, shown in Figure 12.3, enables you to unpack previously packed portal sites to a different server machine. In order to unpack a web site, the site must already have been extended by Microsoft SharePoint.

In the Unpack tab, it displays all the sites that a portal can be unpacked to; select the site(s) that you want to unpack in the list.

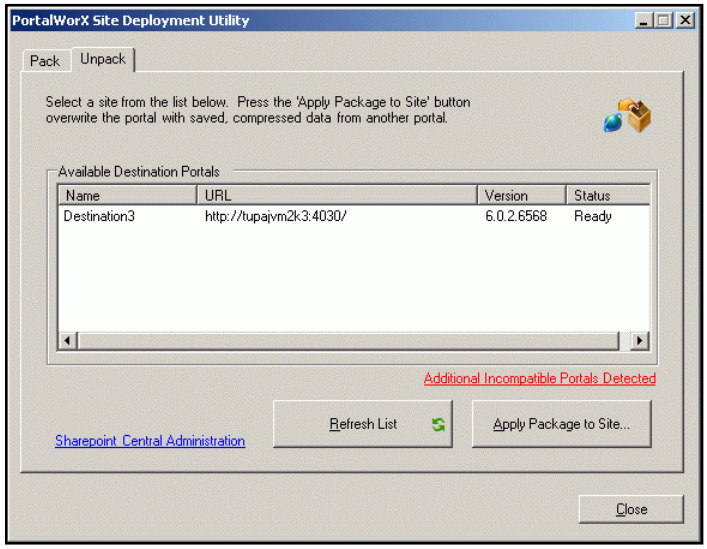


Figure 12.3 - Unpack Portal Sites

If you don't see the site you want to unpack your portal to, it could be because it's incompatible. To view these portals, click on the **Additional Incompatible Portals Detected** link. This opens the **Incompatible Portals** dialog box, shown in Figure 12.4, which lists portals that use ASP.NET versions that are incompatible with PortalWorX. The dialog also includes tips for making your sites compatible with PortalWorX.

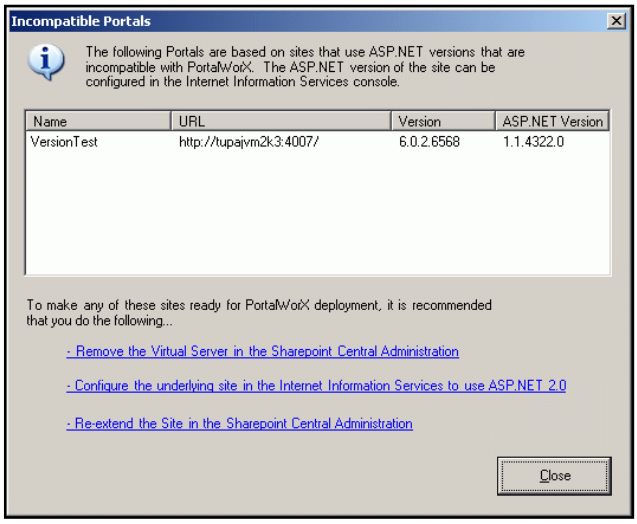


Figure 12.4 - Incompatible Portals

Once you have selected the site to unpack to, click on the **Apply Package to Site** button and specify a PLX file to unpack.

The deployment utility is generally smart enough to detect the computer name and port changes. However, you can specify your own link if you wish in the **Search and Replace Adjustments** dialog box, as shown in Figure 12.5. In the left pane, check the items that you want to search, and then specify the new server name in the **Replacement Value** field. You will need to first check the User Cofnigurable option to enable this field. When you are done, click on **Apply** to continue the unpack process.

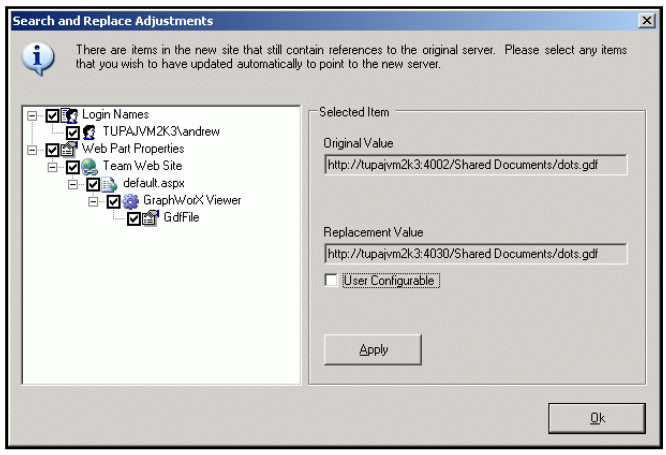


Figure 12.5 - Search and Replace Adjustment

When the unpacking operation is complete, you will see the **Unpack Results** dialog box, as shown in Figure 12.6. You will also find a DeployResults text file in the same location of your plx file. This file contains the detail portal deployment results.

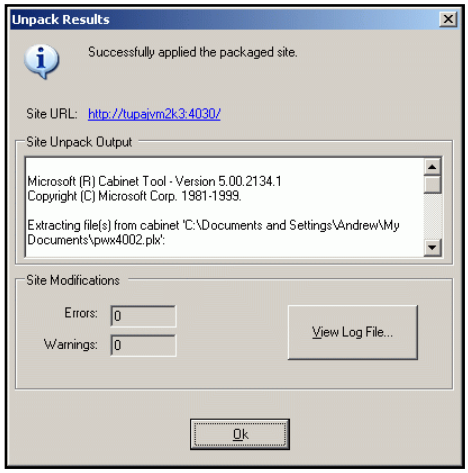


Figure 12.6 - Unpack Result

Lab: Site Deployment Utility *12*

12.1 Quick Lab Overview

This Quick Lab will help you in exporting your Virtual Web Site or your Portals extended by Microsoft SharePoint.

12.1.1 Task Checklist

In this Quick Lab, you will complete the following tasks:

- Export the Acmeseutical Portal.
- Import the Acmeseutical Portal to another Virtual Server.

12.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

12.2 Packing the Portal

1. Launch the PortalWorX Site Deployment Utility by going to **Start → Programs → ICONICS BizViz → PortalWorX → Site Deployment Utility**.

2. Select the Acmeseutical Portal and click on **Create Package from Site.**

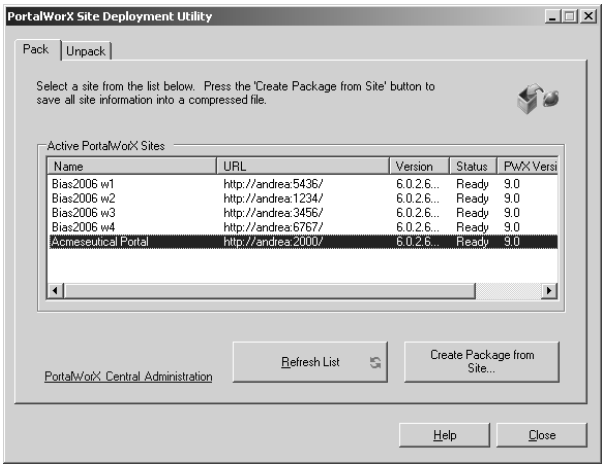


Figure L12.1 - Site Deployment Utility

3. Name the destination file **Acmeseutical Portal** and wait until the operation is completed. At the end, a message box will notify that the packing operation was successful.

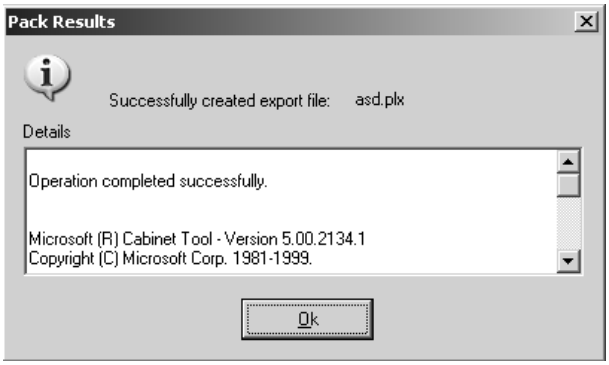


Figure L12.2 - Pack Results: Successful

12.3 Unpacking the portal

1. Create a new Virtual Server following the instructions in Chapter 1, but set the port to 3700. Extend this portal with SharePoint, but do NOT install PortalWorX web parts to the site.
2. Launch the PortalWorX Site Deployment Utility if you closed it from before.
3. Go to the **Unpack** tab.
4. Select the Virtual Web Site you just created on the port 3700 and click on **Apply Package to Site.**

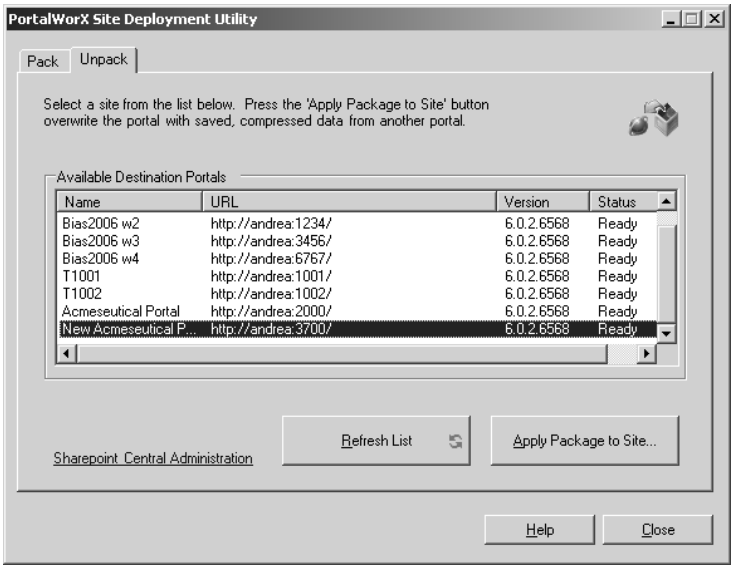


Figure L12.3 - Unpacking the Portal

5. You will be asked for a **Package File**. Select the Package created in the previous section and click on **OK**. Importing the Package will overwrite the SharePoint site and a message box alerts you about this.

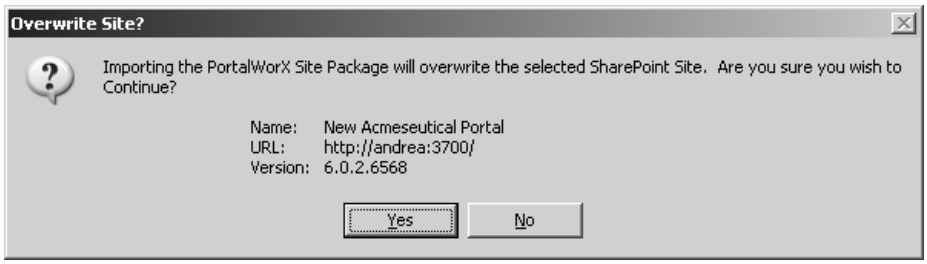


Figure L12.4 - Confirmation Message Box

6. Use the **Search and Replace** tool to change the references to the old Virtual Server. It's really easy; original and replacement values are automatically detected, however the user can manually configure them. Just compare all the values to verify that everything is correct.

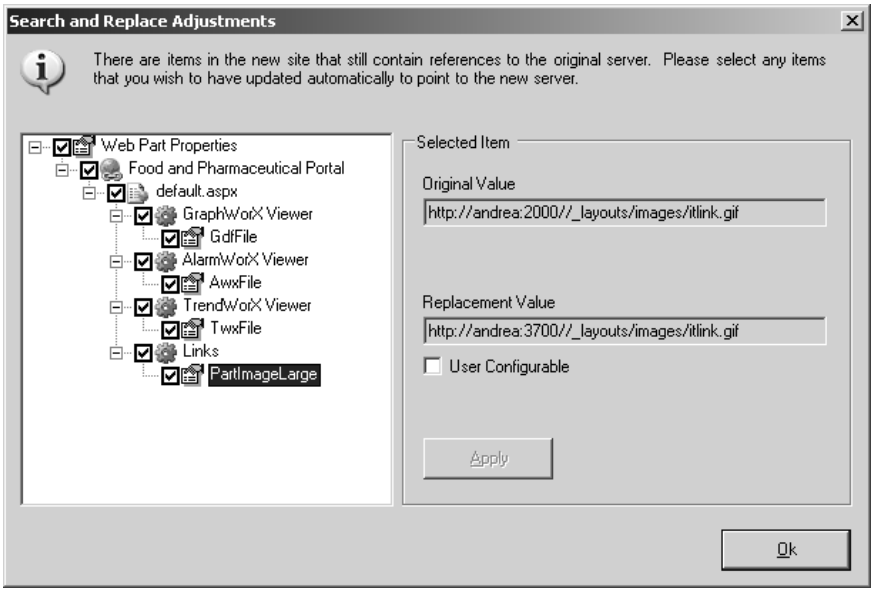


Figure L12.5 - Search and Replacement Tool

7. After this operation, a message box will confirm the success of the operation.

8. Now you can visit the imported site. Browse to it in **PortalWorX Central Administration → Portal Management** tab and **View web site** link. Then click on the imported site to load it.

SSO Backup and Restore Utility 13

13.1 Objectives

After completing this chapter, you should know how to:

- Export the Master Key generated to encrypt all the Single Sign-on credentials stored in the PortalWorX database.

13.2 Introduction

When PortalWorX is installed, a secure Master Key is randomly generated to encrypt all the Single Sign-on credentials stored in the PortalWorX database. Since this key changes during each installation, it is impossible to use it to access the credentials stored in the previously created Single Sign-on database. To overcome this problem, you can export the master key to an XML file using the **PortalWorX SSO Master Key Backup and Restore Utility**, shown in Figure 13.1.

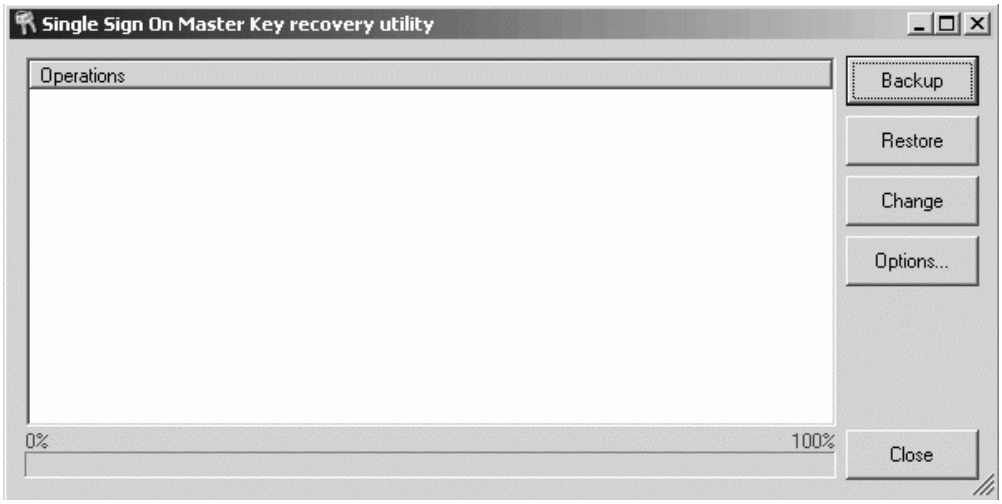


Figure 13.1 - PortalWorX SSO Master Key Backup and Restore Utility

To launch the PortalWorX SSO Master Key Backup and Restore Utility, select **Start → Programs → ICONICS BizViz → PortalWorX → SSO Master Key Backup and Restore**.

13.3 Backing up the SSO Master Key

To export a master key to an XML file, click on the **Backup** button in the utility. Specify a file name for the XML file in which the SSO Master Key will be stored.

Specify an encryption password for the SSO master key, as shown in Figure 13.2. Click on **OK**. The XML file is saved to the specified directory. This exported file can be used later for another installation to import the master key. In this way, all the credentials previously created can be accessed again from an existing database.



Figure 13.2 - SSO Password Encryption

13.4 Restoring the SSO Master Key

To import a previously backed up master key from an XML file, click on the **Restore** button in the utility. Select the SSO Master Key XML file that you want to import. It will then ask for the password used when you created the backup file. Enter the encryption password for the SSO master key, as shown in Figure 13.3. Click on **OK** to continue the restoring process.

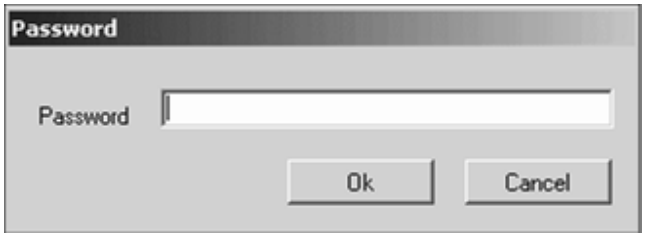


Figure 13.3 - Restoring SSO Master Key Password Prompt

13.5 Changing the SSO Master Key

There may be times that you want to change the master key. You can do this by clicking on the **Change** button of the utility. The PortalWorX SSO Master Key Backup and Restore Utility encrypts the master key, creates a new master key, and re-encrypts the existing SSO data with the new master key.

13.6 SSO Master Key Options

To view the PortalWorX SSO Master Key Backup and Restore Utility options, click on the **Options** button in the utility. The **Options** dialog box contains two tabs: the Web Service tab and the General tab

13.6.1 Web Service Tab

The **Web Service** tab of the **Options** dialog box specifies the web site where the SSO web service is installed. The **Virtual Path** field specifies the location of the **web.config** file of the SSO Web service.

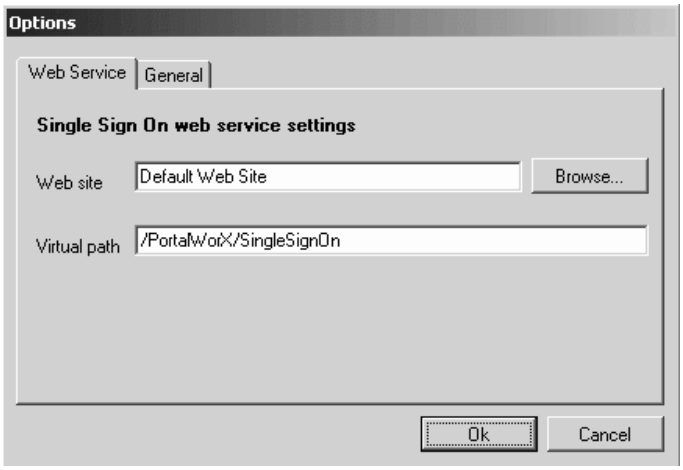


Figure 13.4 - PortalWorX Master Key Option: Web Service Tab

13.6.2 General Tab

When you restore or change the SSO master key and the **Backup web configuration file** check box on the **General** tab of the **Options** dialog box is checked, the **web.config** file of the SSO web service will automatically be backed

up to the specified location. Click on the **Browse** button to select the backup location.

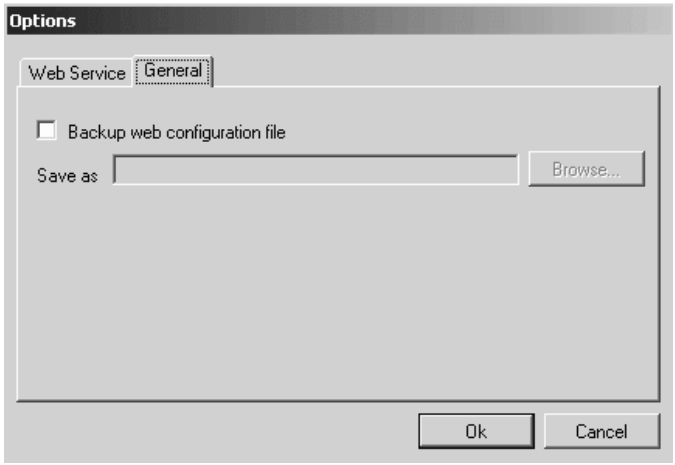


Figure 13.5 - PortalWorX SSO Master Key Options: General Tab

Lab: SSO Master Key Backup and Restore 13

13.1 Quick Lab Overview

In this Lab, you will learn about the SSO Master Key Backup and Restore Utility. This utility will help you move your SSO credentials to a different BizViz installation. SSO credentials stored in the database are encrypted with a Master Key, that is generated during the installation process. If you intend to use the same credentials from another installation, you cannot simply access that database, because you would not be able to decrypt data, due to a different generated Master Key. To do that, you will need the original Master Key. Thanks to this utility, you can export, import, or change it.

13.1.1 Task Checklist

In this Quick Lab, you will complete the following tasks:

- Familiarize with the SSO Master Key Backup and Restore Utility.
- Export the currently used Master Key.
- Restore the previously saved Master Key.
- View the options.

13.1.2 Support Files

To complete this Quick Lab, you do not need any additional files.

13.2 The SSO Master Key Backup and Restore Utility

1. Launch the SSO Master Key Backup and Restore Utility by going to **Start → Programs → ICONICS BizViz → PortalWorX → SSO Master Key Backup & Restore**.

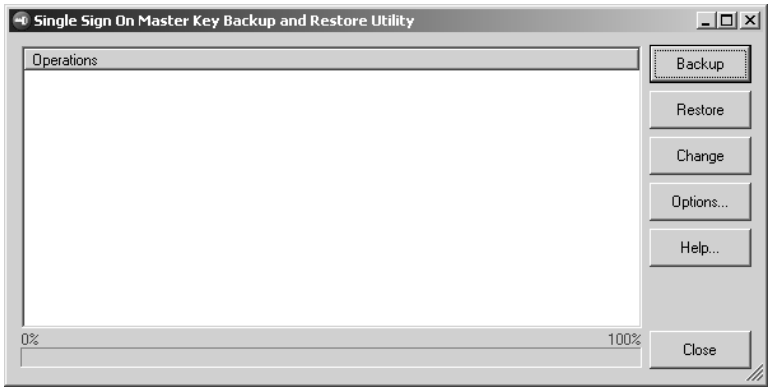


Figure L13.1 - SSO Master Key Backup and Restore Utility

2. To back up the current Master Key, please select **Backup**. You will be asked to specify a file name, where to save the Key, and a password to encrypt it. You will need this password when you restore this Master Key. After completing this, you should see something similar to Figure L13.2. This means you have successfully backed up your Master Key.

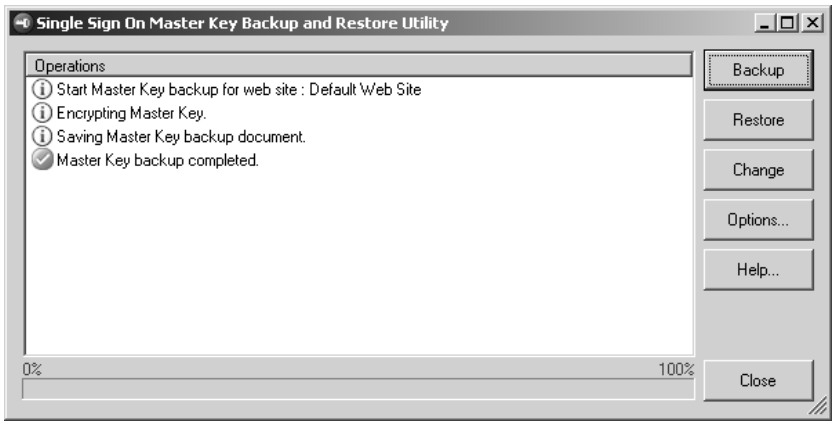


Figure L13.2 - Master Key Successfully Backed-up

3. We will now restore the saved Master Key. This process is unnecessary at this point because the Master Key is the same. However, we will do this to familiarize ourselves with this Utility. Press the **Restore** button, choose the file saved in the previous step, and provide the password you previously used to Export the Master Key. When the key is restored, you should see a screen similar to Figure L13.3.

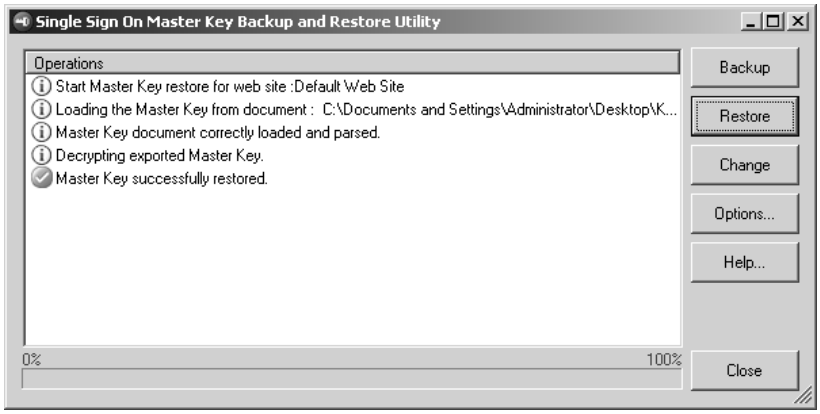


Figure L13.3 - Master Key Successfully Restored

4. Now click on **Options** and take a look at the various options available. We do not need to modify them now, therefore, do not change anything. All of these options are explained in the previous chapter.

This completes Lab 13 and the PortalWorX Training Manual. If you have any outstanding questions, feel free to discuss them with your instructor or use the PortalWorX Help files as an additional reference.