

# Extentrix Web Services — Application Edition

## Integration with Microsoft SharePoint 2007



extentrix

White Paper

## Notice

Extentrix Systems, FZE makes no representations or warranties with respect to the contents or use of this publication. Extentrix specifically disclaims any express or implied warranties, merchantability, or fitness for any particular purpose. Extentrix reserves the right to make any changes in specifications and other information contained in this publication without prior notice and without obligation to notify any person or entity of such revisions or changes.

© Copyright 2007-2009 All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or information and retrieval systems, for any purpose other than the purchase's personal use, without express written permission of:

Extentrix Systems, FZE  
P.O.Box 4404  
Dubai, UAE  
<http://www.extentrix.com>

The following marks are service marks, trademarks or registered trademarks of their respective owners:

Mark	Owner
Citrix®, ICA®, Presentation Server 4.0®, Web Interface®, WinFrame®, Program Neighborhood®, Citrix Developer Network™, Citrix Alliance Partners™	Citrix Systems, Inc.
Microsoft®, Windows®, Windows NT®, ActiveX®, Windows CE®, Internet Explorer™	Microsoft Corporation

## Table of Contents

<b>INTRODUCTION .....</b>	<b>3</b>
<b>HOW TO BUILD A SHAREPOINT WEB PART THAT CONSUMES EXTENTRIX WEB SERVICES APPLICATION EDITION.....</b>	<b>4</b>
HOW TO CALL EXTENTRIX WEB SERVICES APPLICATION EDITION API IN WEB PART.....	7
<b>HOW TO DEPLOY EXTENTRIX SMART ACCESS WEB PART TO SHAREPOINT SITE.....</b>	<b>9</b>
<b>CONCLUSION .....</b>	<b>15</b>
<b>ABOUT EXTENTRIX .....</b>	<b>16</b>

## Introduction

There are several methods currently available from Citrix Systems to access a published application for the Citrix Presentation Server product family:

- Program Neighborhood
- Program Neighborhood Agent
- Web Interface

Extentrix currently offers an additional set of utilities to access published applications:

- [Extentrix Widget for Citrix Presentation Server](#)
- [Extentrix Gadget for Citrix Presentation Server](#)

However, these two sets of utilities still don't allow developers to launch published applications from within their own applications or portals. Extentrix has resolved this issue and opened the Citrix platform to the development community with [Extentrix Web Services Application Edition](#). This new product from Extentrix is built on the open standard SOAP protocol allowing all web service consuming applications to easily access Citrix farms for published application access.

**This white paper details the steps required to build a SharePoint web part that consumes Extentrix Web Services Application Edition and acts as a web interface for the SharePoint sites.**

## How to build a SharePoint Web Part that consumes Extentrix Web Services Application Edition.

Before discuss how to build web part, let us explain what web part is.

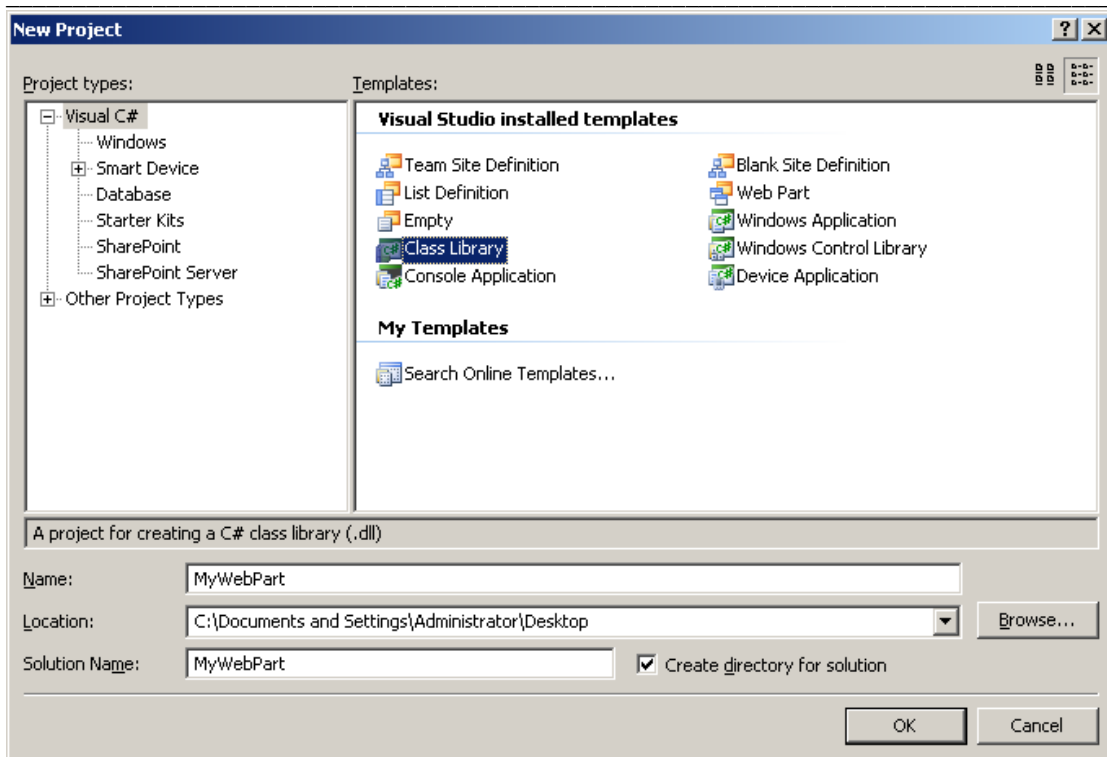
We can define the web part as a basic component for SharePoint sites and we can easily add it to any page in SharePoint sites, so it is interesting to learn how to build a SharePoint web part.

### Important notes:

- Web Parts are now based on the ASP.Net 2.0 Framework and they become part of the '*System.Web.UI.WebControls*' namespace. This means that the '*Microsoft.SharePoint.WebPartPages.WebPart*' has become '*System.Web.UI.WebControls.WebParts.WebPart*'.
- In the Web Part class, the '*override void RenderWebPart (HtmlTextWriter output)*' method will naturally change to '*override void Render (HtmlTextWriter output)*'.

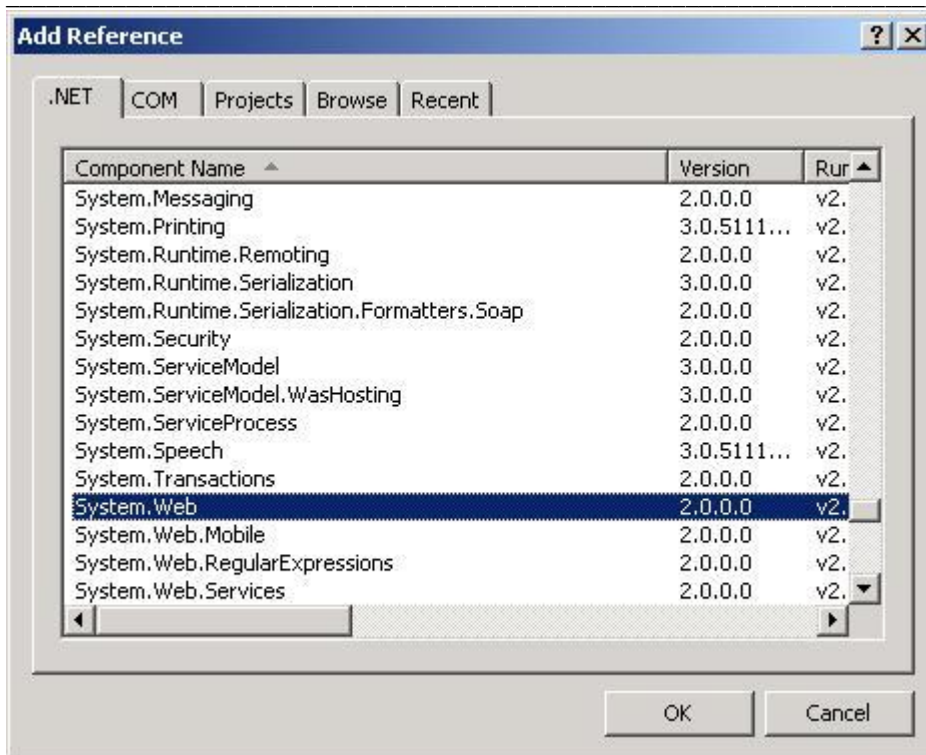
### Development of Web Part in VS 2005:

- Start VS.Net 2005 and create a new C# project. Select Class Library as Project Type and name it as *ExtentrixSmartAccess*.



- Add a reference to the System.Web from .Net components into the project. The System.Web dll contains the required namespace of **System.Web.UI.WebControls.WebParts**.

From the solution explorer, right click on the references and click add reference then the window below will appear, select System. Web and then click OK.



In The Project explorer view rename the Class1.cs with SmartAccess.cs to be consistent with this example; this will result in renaming the Class name as well. With the help of “using” keyword include the namespaces.

- Inherit the class with ‘System.Web.UI.WebControls.WebParts.WebPart’. Implement the ‘protected override void RenderControl (HtmlTextWriter writer)’ method. Implement ‘protected override void CreateChildControls()’ method.

*See the code below:*

```
using System;
using System.Collections.Generic;
using System.Text;

using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;

namespace SmartAccess
{
    public class SmartAccess : WebPart
    {
        Button testButt = new Button();

        protected override void CreateChildControls()
        {
            Controls.Add(testButt);
        }
    }
}
```

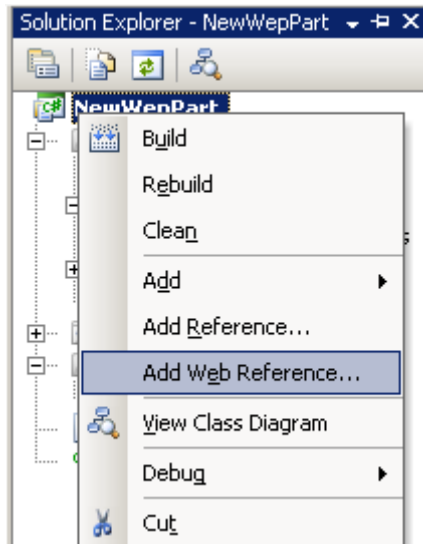
```
public override void RenderControl(HtmlTextWriter writer)
{
    RenderChildren(writer);
}
}
```

Now as you see in the code above you can add any control to your web part to be displayed in the share point site.

## How to Call Extentrix Web Services Application Edition API in Web Part

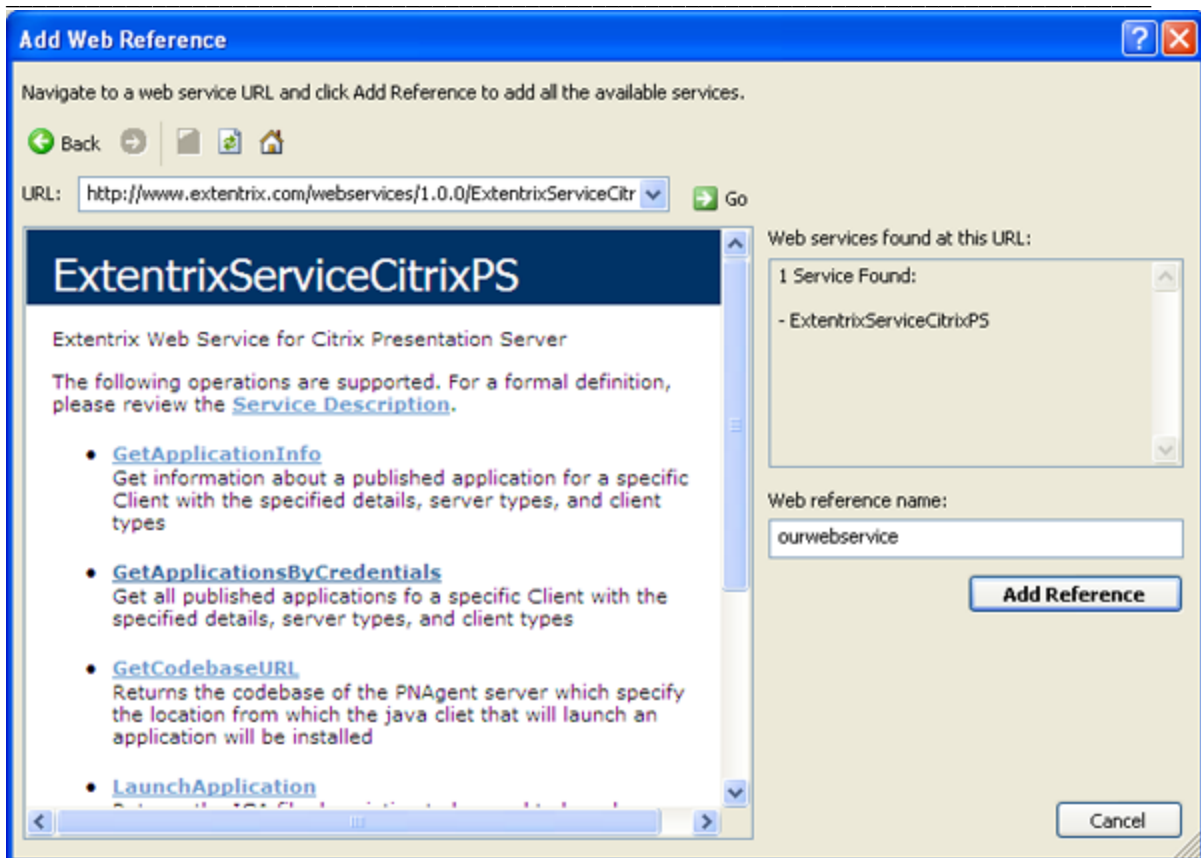
- You need to add a web reference to Extentrix Web Services Application Edition by following these steps:

a. Right click your project node and select **Add Web Reference** as in Figure below.



b. A window named “**Add Web Reference**” will appear. Add the **URL** of your Extentrix Web Services Application Edition in URL field and click **GO**. You can use our published web service URL for test purposes:

<http://www.extentrix.com/webservices/2.0.0/ExtentrixServiceCitrixPS.asmx>.



c. In **Web reference name** field, give a suitable name for the web reference and click **Add Reference**.

1. You need to add the following Using statements to invoke the web services:

```
using ExtentrixSmatrtAccess. Ourwebservice;
```

**Ourwebservice: the name of the web reference.**

2. You need to create an object from the created web service reference.

```
ExtentrixWebServicesForCPS service = new  
ExtentrixWebServicesForCPS ();
```

3. Create Credential object, and set its members. In our example, we are querying them from the user.

```
Credentials cred = new Credentials ();  
cred.UserName = "citrixdesktop";  
cred.Password = "demo";  
cred.Domain = "testdrive";  
cred.DomainType = 0;  
cred.PasswordEncryptionMethod = 0;
```

4. Invoke the web service.

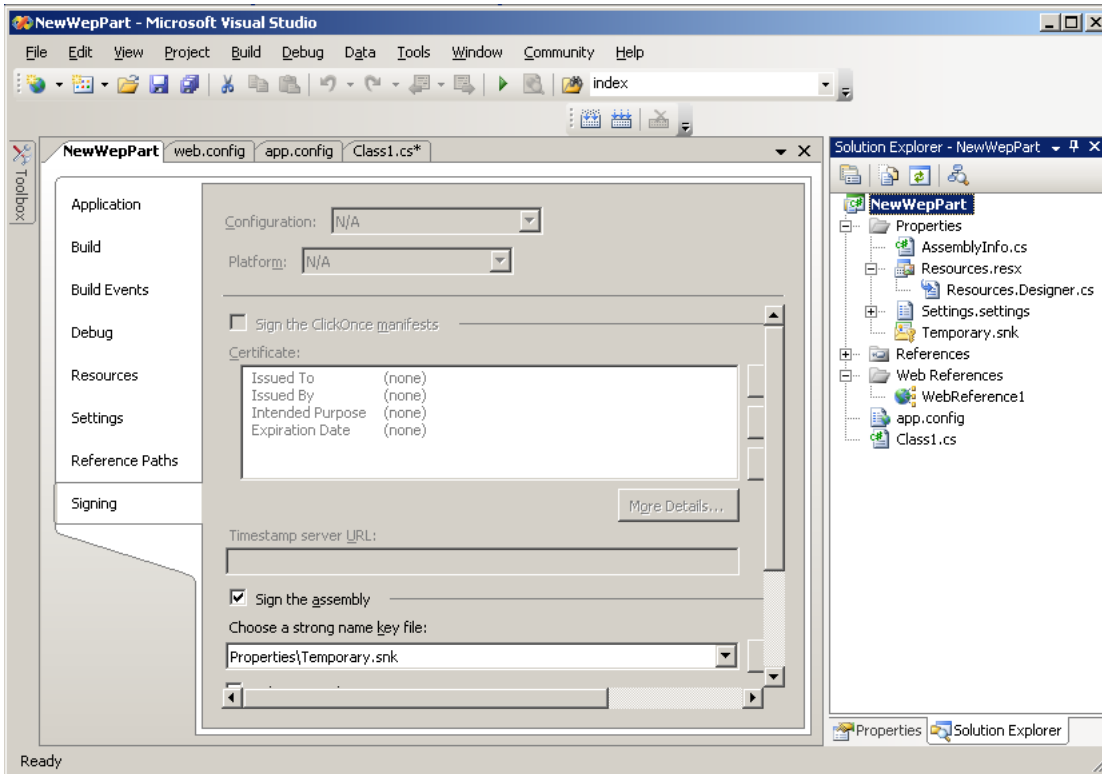
```
ApplicationItem[] Apps = service.GetApplicationsByCredentials(cred,
"w2kserver", "172.19.7.100", new string[] { "defaults", "icon" },
new string[] { "all" }, new string[] { "all" });
```

Now, the web part is ready. So Build the project and you are ready to deploy the Web Part to the Portal Site.

## How to Deploy Extentrix Smart Access Web Part to SharePoint Site

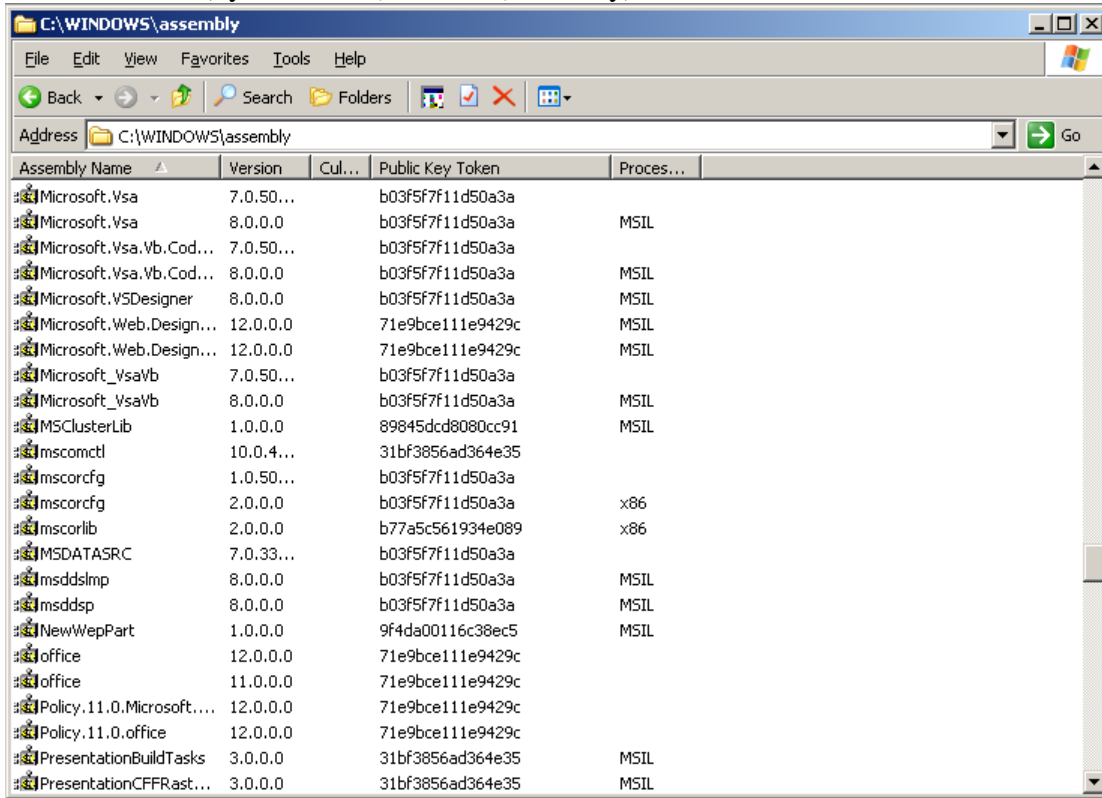
### Putting Assembly in GAC Folder:

- Open the project properties in solution explorer and go to the ‘signing’ section then create a new key. Now, build the project

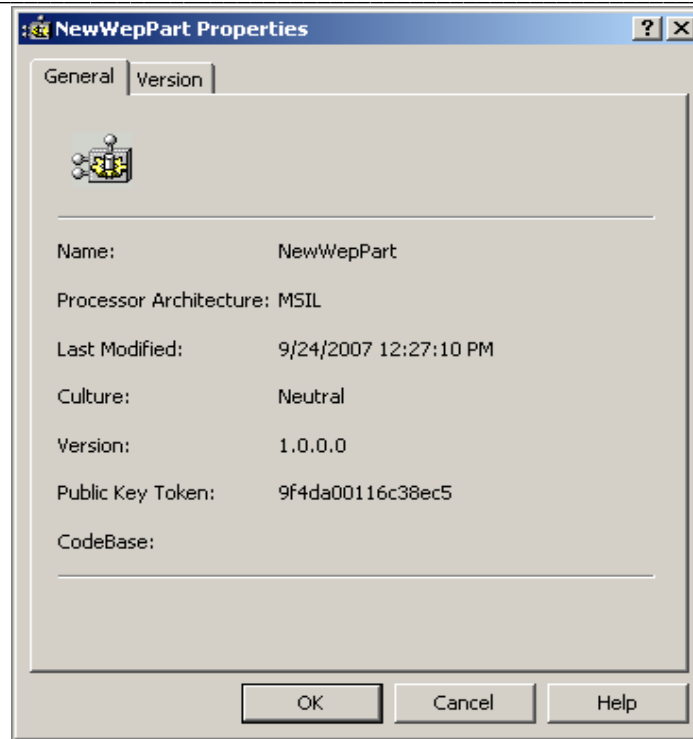


- To let SharePoint know that the assembly is safe, we have to add it to the safe control list in the web.config of the SharePoint web. We need the public key token from the DLL for this.

- i. First drag and drop the compiled assembly (.DLL files in \bin\debug folder) into the GAC (by default c:\windows\assembly).



- ii. Open the properties of the dll to get the public key token.

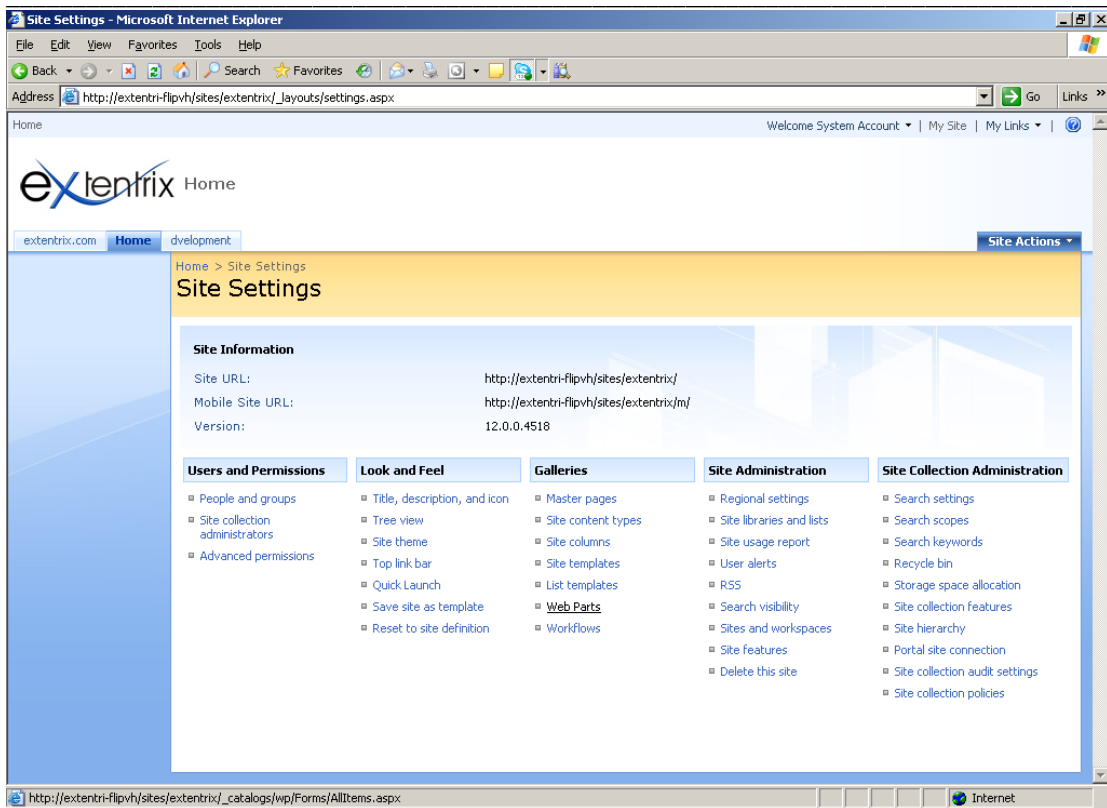


- iii. Fill the key in the code below, copy this code and past it in web.config file (by default in C:\Inetpub\wwwroot\wss\VirtualDirectories\MyPortSite).

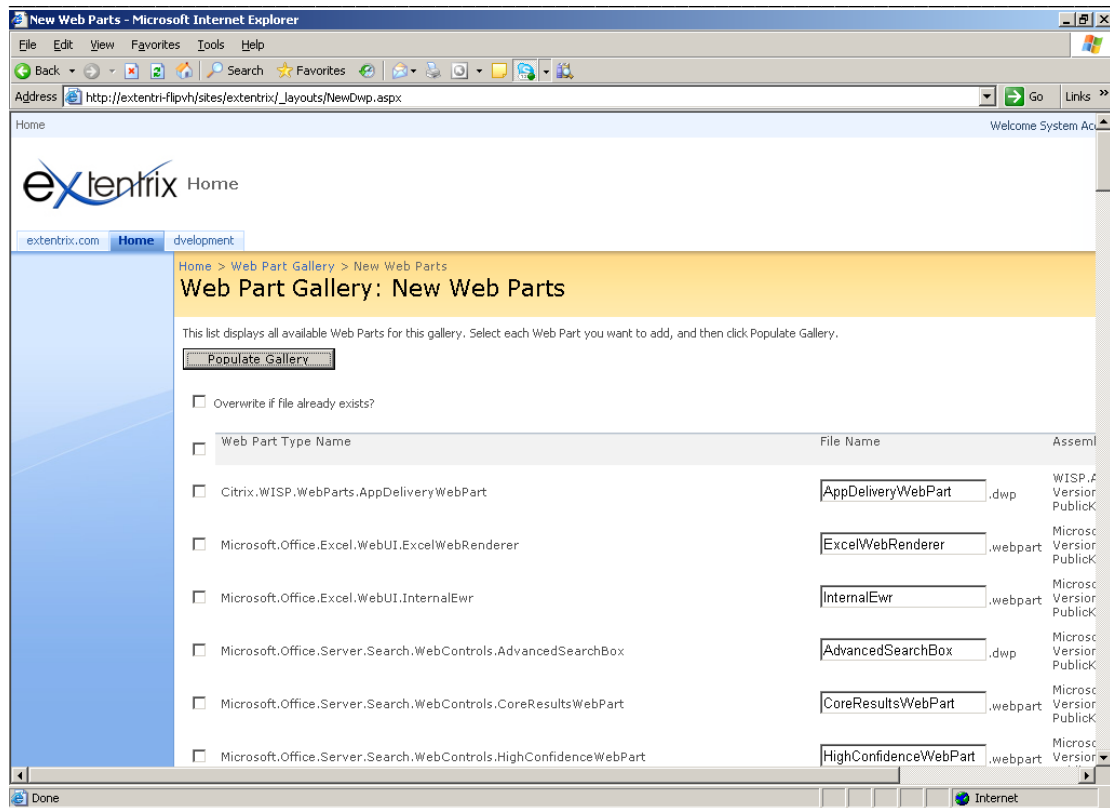
```
<SafeControl Assembly="ExtentrixSmartAccess, Version=1.0.0.0, Culture=neutral, PublicKeyToken=74e5f216d6256126" Namespace="ExtentrixSmartAccess" TypeName="*" Safe="True" />
```

Now the safe control is registered in the web.config.

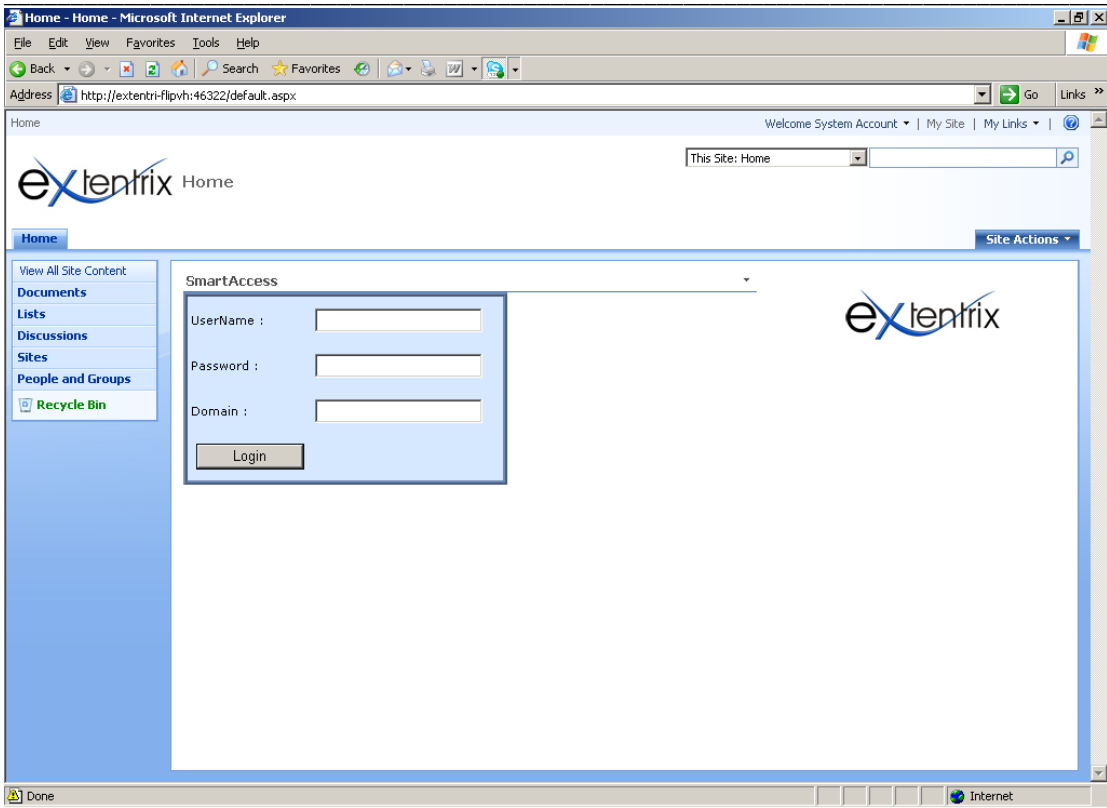
- Now in SharePoint 2007 once a dll is registered in the web.config, SharePoint can automatically detect web parts from those dll's. With the site settings page, we can now automatically populate the web part gallery.
  - i. In SharePoint site, click '**Site Actions**', '**Site Settings**' and then Under '**Galleries**', click '**Web Parts**'. Then click '**New**'.



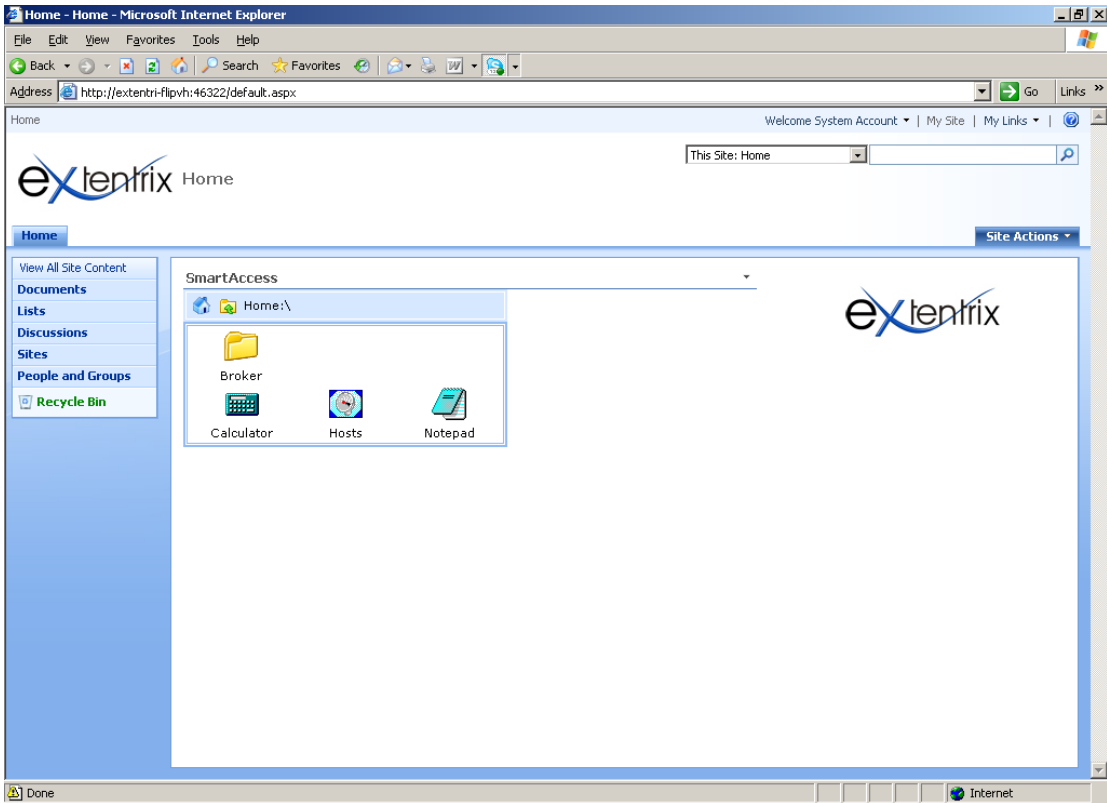
- ii. Now, the Extentrix Smart Access web part will appear in the list. If not, try an IISRESET and refresh the page.
- iii. Select the web part we've just created and click '**Populate Gallery**'.



- Now, we can go to the page in SharePoint where we want to add the web part.
  - i. On the SharePoint site, click 'Site Actions' and the 'Edit Page'.
  - ii. Click on 'Add a Web Part' in the zone you want to add the webpart.
  - iii. Select the webpart to add, and click 'Add'.
  - iv. If everything goes well, the webpart is loaded.
  - v. The window will be shown to you first. Enter the proper credentials to logon.



vi. After logging in, you will see the list of published applications assigned to you.



## Conclusion

This document has demonstrated the technique involved in leveraging the Extentrix Web Services Application Edition with Microsoft SharePoint 2007. For more information about the product including pricing and support, please refer to the [developers section on Extentrix](#).

## About Extentrix

Founded in 2006, Extentrix Systems is a leading software development company specializing in virtualization and developing custom software solutions for Microsoft and Citrix customers. Established by former software engineers at Citrix, Extentrix have developed access solutions that simplify and speed users' access to Terminal Services and Citrix platforms.

Extentrix Systems is privately held with company headquarters in RAK, UAE. For more information, please visit the company's Web site at [www.extentrix.com](http://www.extentrix.com) or call +971-4-211-5490.



Extentrix Systems  
P.O.Box 43659  
Dubai, UAE  
Tel: +971 4 211 5490  
Fax: +971 4 211 5101  
[info@extentrix.com](mailto:info@extentrix.com)

To learn more please refer to the following resources:

### [Learn More](#)

Extentrix Web Services Application Edition Home Page

### [Developers](#)

Visit Extentrix Web Services Application Edition developers' section.