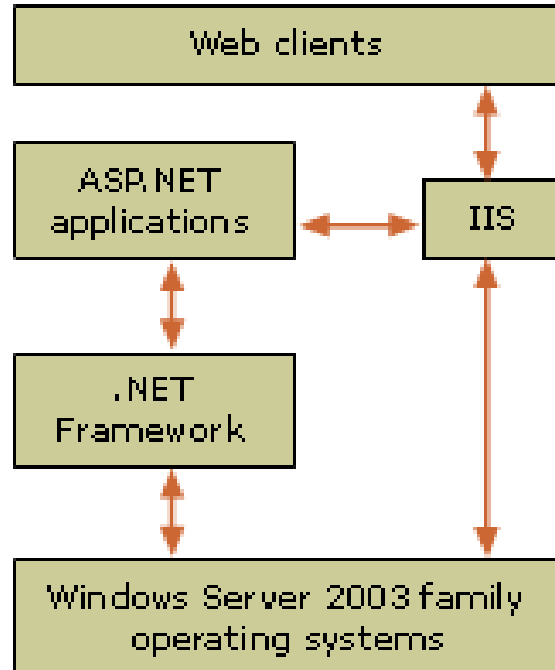


ASP.NET Security

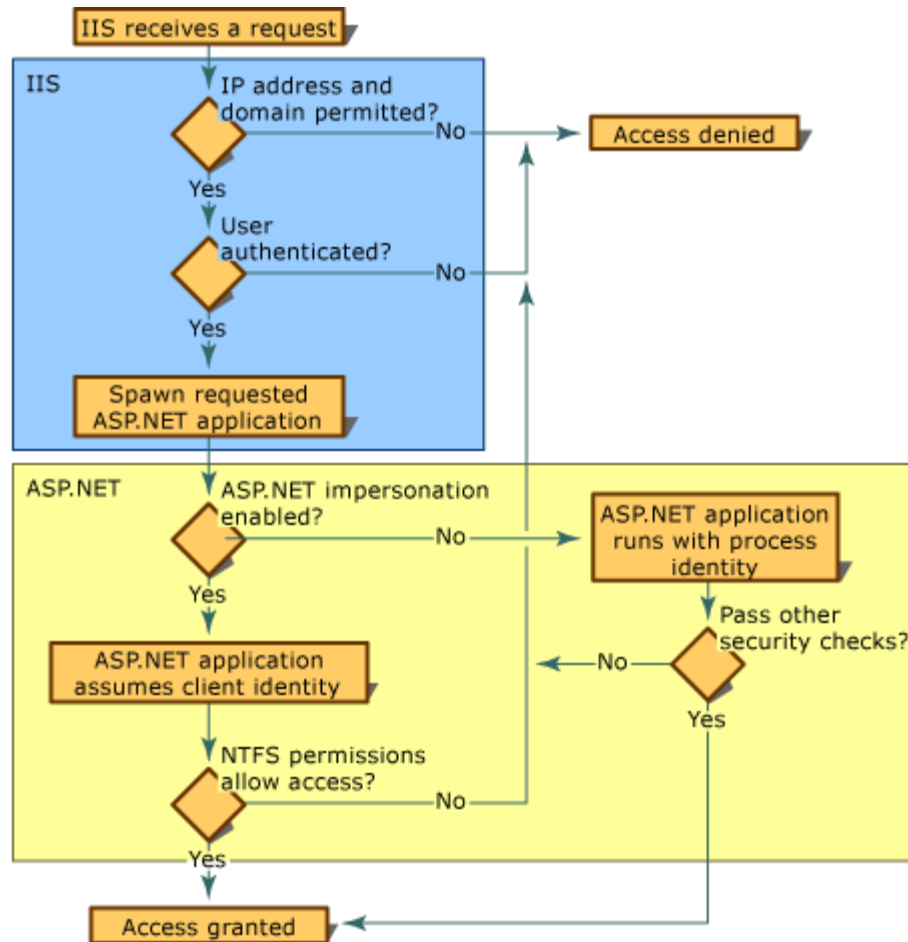
ASP.NET Security Architecture



Security Types

- IIS security
 - Not ASP.NET specific
 - Requires Windows accounts (NTFS file system)
 - Protects all files
- ASP.NET forms based security
 - Authentication does not require Windows accounts
 - Protects only ASP.NET files
 - ASP.NET Identity classes provide user management

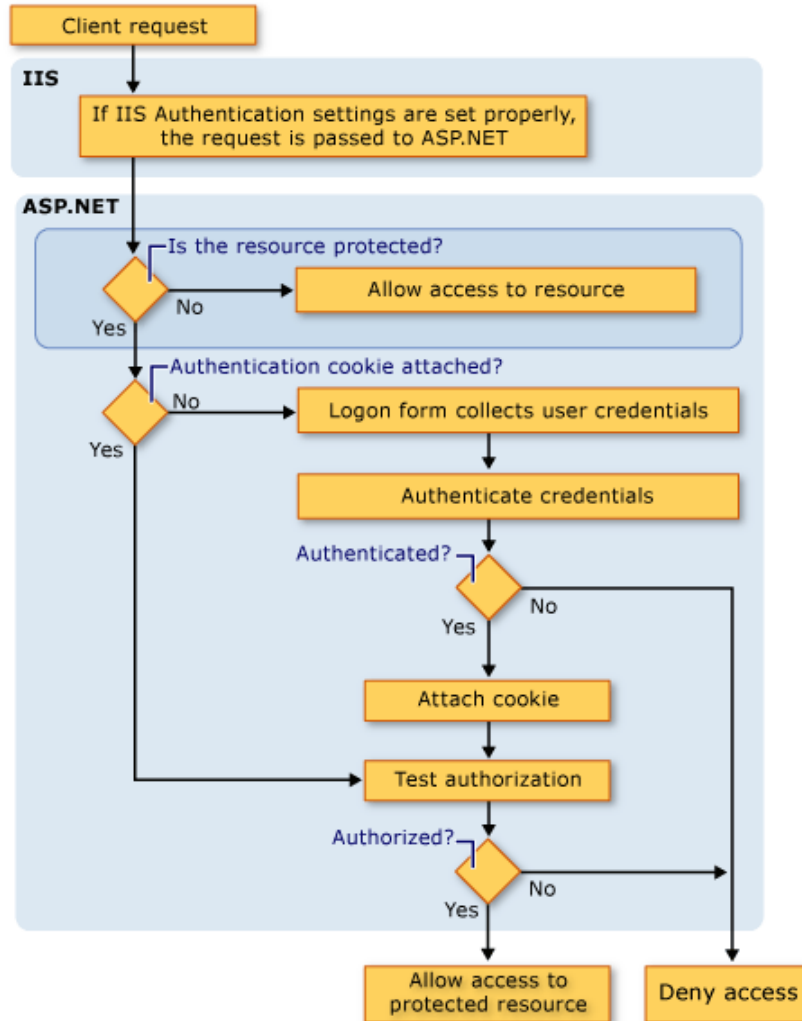
IIS Security



IIS Security

- Types
 - Basic (user/password in the clear)
 - Digest (not used very often – domain based)
 - Windows (only works with Windows systems)
 - Client Certificate
- Windows account credentials
- NTFS file permissions need to be set
- Anonymous access uses special account
- Demo

ASP.NET Forms Based Security



Forms Based

1. Create public pages in root folder
2. Create private pages in new folder
3. Create login page in root folder
4. Add code to authenticate
5. Add authentication section to web.config file in root folder
6. Add user credentials to web.config
7. Add "deny" tag to web.config in private folder

Public page

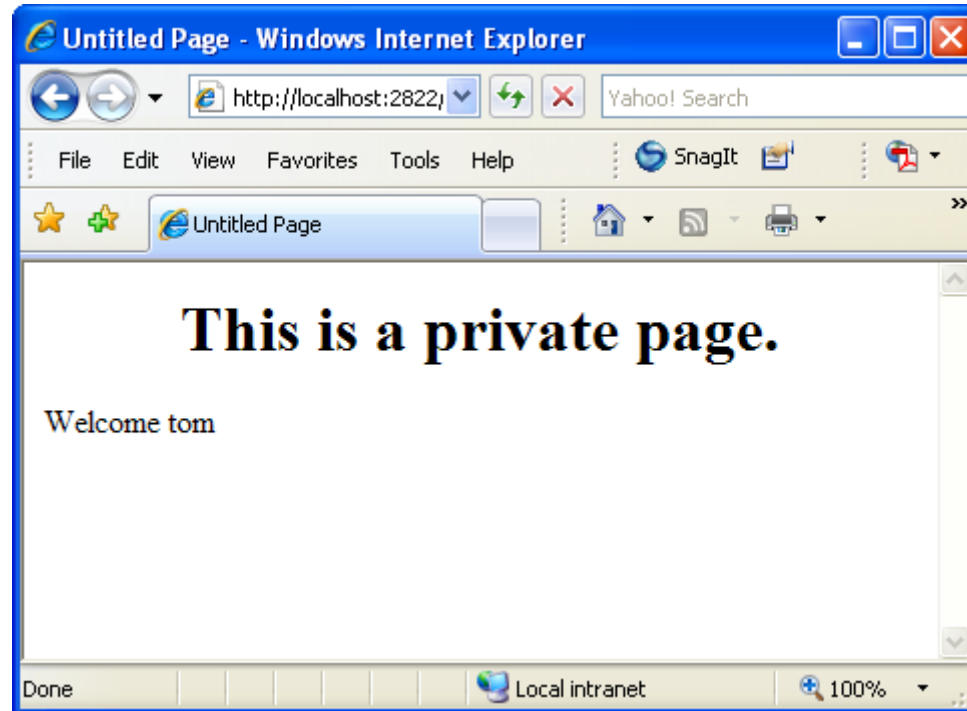



```
<%@ Page Language="C#" AutoEventWireup="true" CodeFile="Default.aspx.cs" Inherits="_Default" %>
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

```
<html xmlns="http://www.w3.org/1999/xhtml">  
<head runat="server">  
  <title>Untitled Page</title>  
</head>  
<body>  
  <h1 style="text-align: center">  
    This is a public page.</h1>  
  <p style="text-align: center">  
    <br />  
    <a href="private">Private Page</a><br />  
    <br />  
  </p>  
  <form id="form1" runat="server">  
    <div>  
  
    </div>  
  </form>  
</body>  
</html>
```

Private Page



```

<%@ Page Language="C#" AutoEventWireup="true"
CodeFile="Default.aspx.cs" Inherits="private_Default" %>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0
Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-
transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
  <title>Untitled Page</title>
</head>
<body>
  <form id="form1" runat="server">
    <div>

      <h1 style="text-align: center">
        This is a private page.</h1>
      <p style="text-align: left">
        Welcome
        <asp:Label ID="user" runat="server"
Text="Label"></asp:Label>
      </p>

    </div>
  </form>
<p>
  &nbsp;</p>

</body>
</html>

```

Code Behind

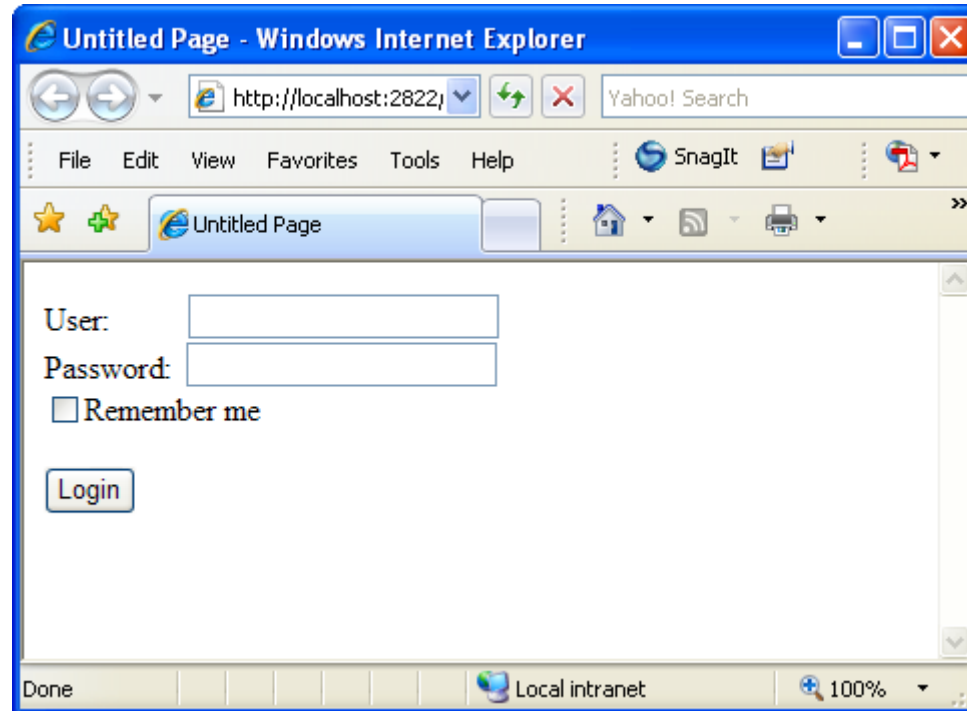
```
using System;
using System.Collections;
using System.Configuration;
using System.Data;
using System.Linq;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.HtmlControls;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;

public partial class private_Default : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        user.Text = User.Identity.Name;
    }
}
```



Add

Login Page



```

using System;
using System.Collections;
using System.Configuration;
using System.Data;
using System.Linq;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.HtmlControls;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;
//Add following
using System.Web.Security;

public partial class login : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {

    }

    protected void Button1_Click(object sender, EventArgs e)
    {
        if (FormsAuthentication.Authenticate(user.Text, pass.Text))
            FormsAuthentication.RedirectFromLoginPage(user.Text,
remember.Checked);
        else
            Msg.Text = "Login failed. Please check your user name
and password and try again.";
    }
}

```

Code Behind

```
<deleted lines>
//Add following
using System.Web.Security;

public partial class login : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {

    }
    protected void Button1_Click(object sender, EventArgs e)
    {
        if (FormsAuthentication.Authenticate(user.Text, pass.Text))
            FormsAuthentication.RedirectFromLoginPage(user.Text, remember.Checked);
        else
            Msg.Text = "Login failed. Please check your user name and password and try again.";
    }
}
```



Controls
cookie

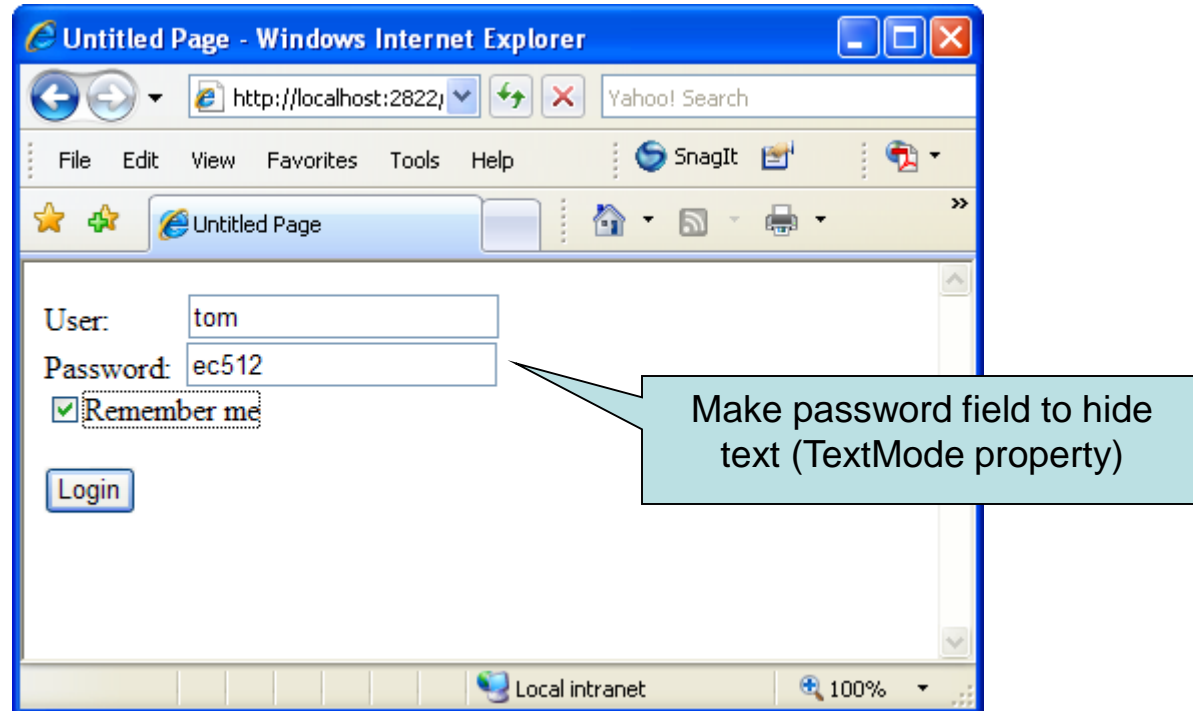
Authentication Section in web.config

```
<authentication mode="Forms">  
  <forms loginUrl="login.aspx">  
    <credentials passwordFormat="Clear">  
      <user name="Tom"  
        password = "ec512" />  
    </credentials>  
  </forms>  
</authentication>
```


Deny in web.config in private folder

```
<authorization>  
  <deny users="?" />  
</authorization>
```

Login



Cookie to save credentials

