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Deltek Vision® 7.1

Document Management Installation Guide

June 27, 2013

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If You Need Assistance

If you need assistance installing, implementing, or using Vision, Deltek makes a wealth of information and expertise readily available to you.

Customer Services

For over 20 years, Deltek has maintained close relationships with client firms, helping with their problems, listening to their needs, and getting to know their individual business environments. A full range of customer services has grown out of this close contact, including the following:

- Extensive self-support options through the Customer Care Connect Web portal.
- Phone and email support from Customer Care analysts
- Technical services
- Consulting services
- Custom programming
- Classroom, on-site, and Web-based training

Find out more about these and other services from the Customer Care Connect site.

Customer Care Connect Site

The Deltek Customer Care Connect site is a support Web portal for Deltek customers who purchase an Ongoing Support Plan (OSP).

The following are some of the many options you have at the Customer Care Connect site:

- Download the latest versions of your Deltek products
- Search Deltek's knowledge base
- Ask questions, exchange ideas, and share knowledge with other Deltek customers through the Deltek Connect Customer Forums
- Display or download product information, such as release notes, user guides, technical information, and white papers
- Submit a support case and check on its progress
- Transfer requested files to a Customer Care analyst
- Use Quick Chat to submit a question to a Customer Care analyst online
- Subscribe to Deltek communications about your Deltek products and services
- Receive alerts of new Deltek releases and hot fixes

If you need assistance using the Customer Care Connect site, the online help available on the site provides answers for most questions.

Access Customer Care Connect

To access the Customer Care Connect site, complete the following steps:

1. Go to https://deltek.custhelp.com.
2. Enter your Customer Care Connect **Username** and **Password**.
3. Click **Log In.**

If you do not have a username and password for the Customer Care Connect site, contact your firm's Vision Administrator.

If you forget your username or password, you can click the **Account Assistance** button on the login screen for help.

Downloading Deltek Products using Deltek Software Manager

You can use Deltek Software Manager (DSM) to download complete Deltek products, hot fixes, and sub-releases. You can access DSM directly or through the Deltek Customer Care site.

When you access DSM directly, you will be prompted to log on before you can access the application. If you access DSM from within the Deltek Customer Care site, you do not have to log on since you are already logged into the Customer Care site.

Accessing DSM Directly

To access Deltek Software Manager directly, complete the following steps:

1. Launch Deltek Software Manager by taking one of the following actions:
   - Click here.
   - On your desktop, click **Start » Programs » Deltek » Vision » Deltek Software Manager**.
2. In the Deltek Software Manager logon dialog box, enter your Deltek Customer Care **User ID** and **Password**, and click **Logon**.
3. To select the folder where you want to download Deltek products, click **Settings** above the right pane of Deltek Software Manager.

   When you log on for the first time, Deltek Software Manager asks you to select a default folder where Deltek products are to be downloaded.

4. Use the Settings dialog box to specify the folder where you want to download Deltek products, and click **OK**.

   You can change this folder anytime in the Settings dialog box.

5. In the left pane of Deltek Software Manager, expand the Deltek product that you want to download, if it is not already expanded.

   If you clicked the link in step 1 to access DSM, the application automatically selects Vision for you.

6. Select the product type that you want to download. Your options are **Complete**, **HotFix**, and **Sub-Release**.
7. In the table, select the check box that corresponds to the Deltek product that you want to download. The right pane displays a message stating that the product has been added to the download queue.

   To view the items in the download queue, click **View Download Queue** at the bottom of the left pane.

8. Click **Download** at the bottom of the left pane. Deltek Software Manager downloads the product to the folder that you selected.

Accessing DSM from within Deltek Customer Care

To access Deltek Software Manager from within Deltek Customer Care, complete the following steps:

1. In your Web browser, go to https://deltek.custhelp.com.
2. Enter your Customer Care Connect **Username** and **Password**, and click **Log In.**
3. When the Customer Care site displays, click the Product Downloads tab.

   You are automatically logged in Deltek Software Manager.
4. To select the folder where you want to download Deltek products, click **Settings** above the right pane of Deltek Software Manager.

   When you log on for the first time, Deltek Software Manager asks you to select a default folder where Deltek products are to be downloaded.
5. Use the Settings dialog box to specify the folder where you want to download Deltek products, and click **OK**.

   You can change this folder anytime in the Settings dialog box.
6. In the left pane of Deltek Software Manager, expand the Deltek product that you want to download, if it is not already expanded.
7. Select the product type that you want to download. Your options are **Complete**, **HotFix**, and **Sub-Release**.
8. In the table, select the check box that corresponds to the Deltek product that you want to download. The right pane displays a message stating that the product has been added to the download queue.

   To view the items in the download queue, click **View Download Queue** at the bottom of the left pane.
9. Click **Download** at the bottom of the left pane. Deltek Software Manager downloads the product to the folder that you selected.

DSM Documentation and Troubleshooting

To view the online help for Deltek Software Manager, click here.

To view a tutorial on how to use Deltek Software Manager, click here.

To view more information on troubleshooting Deltek Software Manager, click here.

Important Information for Users of Previous Versions of Deltek Vision Document Management

If you are upgrading from an earlier version of Vision, particularly from a 5.x version, note the following important information. If this is a new installation of Vision Document Management skip ahead to "Before you Begin" for the software and infrastructure requirements of Vision Document Management.

Windows SharePoint Services (WSS) 2.0 Installations

Deltek Vision 5.x and earlier versions supported Windows SharePoint Services 2.0. Please note that this version of SharePoint is no longer supported with Vision 6.x and higher. If you have not yet upgraded your Windows SharePoint Services installation from WSS 2.0 to WSS 3.0 or SharePoint 2010, you must upgrade WSS as your first step.

You must upgrade WSS 2.0 before you install Deltek Vision 7.1.

In order to upgrade to WSS 3.0, see the *Deltek Vision 5.1 Document Management Upgrade Guide* for the necessary upgrade steps.

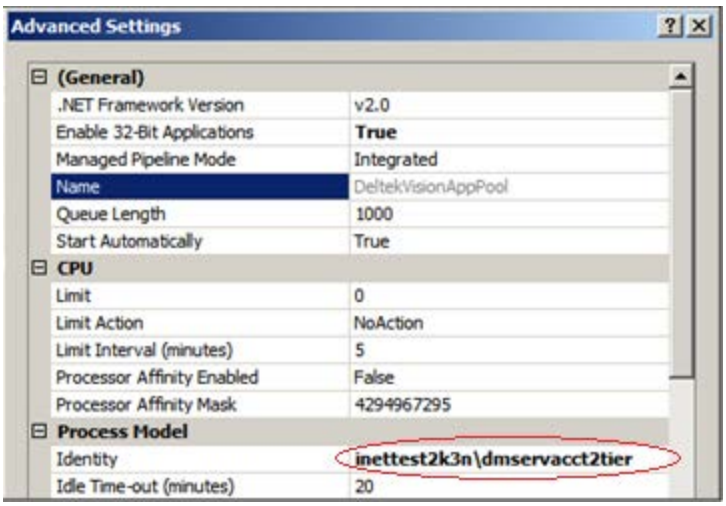
In order to upgrade to SharePoint 2010, refer to the following Microsoft Technet article: http://technet.microsoft.com/en-us/library/ee947140.aspx

Differences between Vision 5.1 and Vision 7.x Document Management

If you are upgrading from Vision 5.1 and have the Document Management module, please note the key differences between Vision 5.1 and Vision 7.x Document Management, as follows:

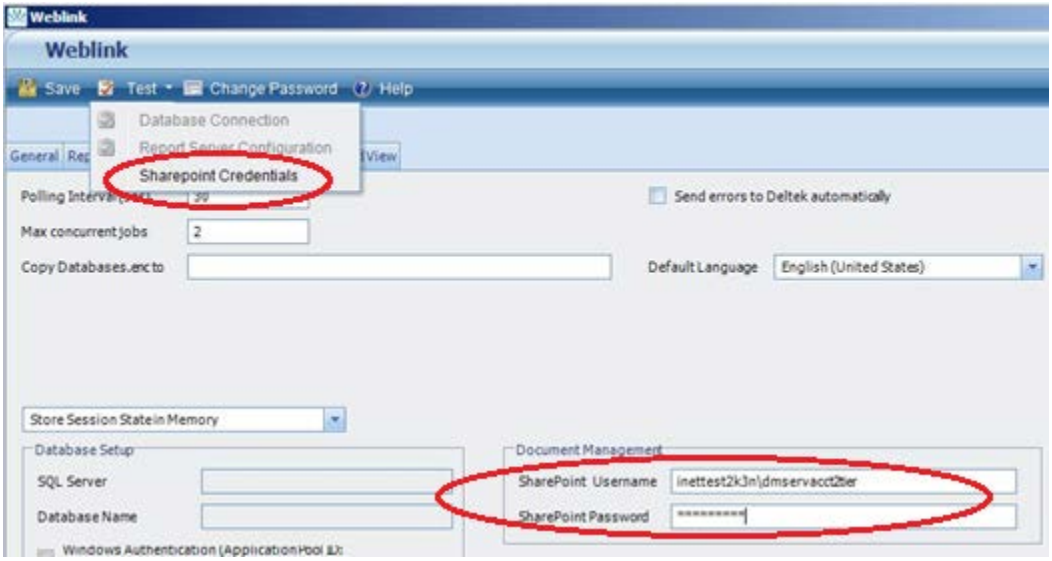
- Windows Server 2003 is no longer supported as an Operating System for Vision or Vision Document Management.
- As indicated above, WSS 2.0 is no longer supported for Vision Document Management.
- Unlike Vision 5.1 with Windows SharePoint Services (WSS) 3.0, you **cannot** install WSS 3.0 or SharePoint 2010 to the same Web site as Vision 7.1.
- With the Vision 5.1 Document Management installation, you had to configure the ASP .NET Impersonation Identity. This installation step is no longer necessary, because the Identity of the IIS Application Pool performs this function in Vision 7.1. The installation of Vision 7.1 creates the DeltekVisionAppPool with the local DeltekVision account as the Identity.

  The SharePoint service (Farm Administrator) account must be the Application Pool Identity for Vision 7.1 and a domain account, as shown in the following example dialog boxes.

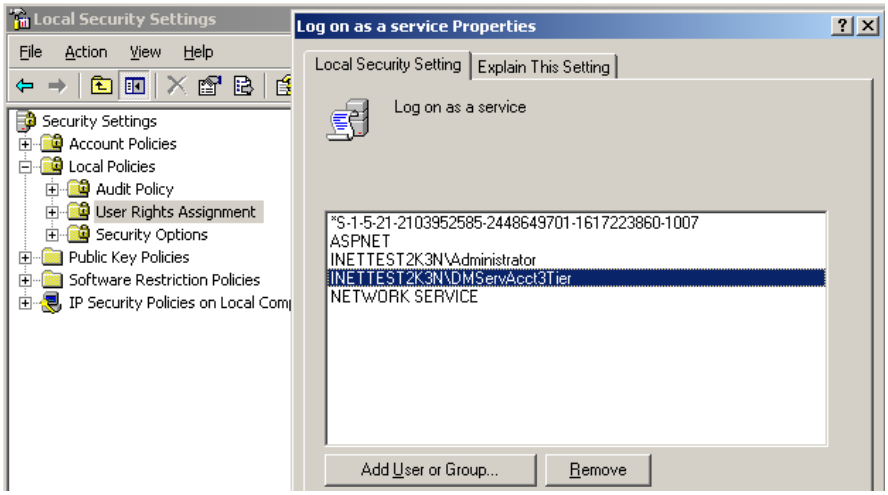


For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server.

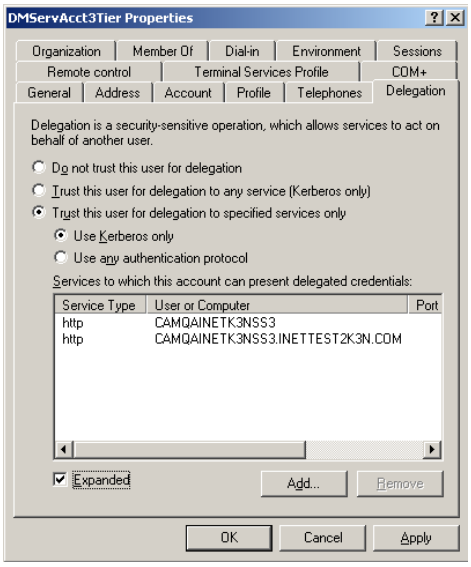
- The SharePoint Service account credentials must be specified in Weblink System Settings, as shown in the following example of the Weblink System Settings tab. Note as well that Weblink now includes a Test button that will allow you to validate the credentials entered are valid.



- The SharePoint Service account/Vision Application Pool Identity must be granted **Logon as a service** rights on the Vision 7.1 Web/Application Server for multi-tier Document Management installations, as shown in the following example of the Local Security Settings setup screens.



- The configuration of Service Principal Names and Delegation has changed with Vision 7.1. Specifically, a Service Principal Name (SPN) must be configured for the domain account chosen to be the Application Pool Identity / SharePoint Service account when deploying a multi-tier deployment of Vision Document Management. This account is also the account that will be configured for Delegation.
- In multi-tier installations of Vision Document Management, you must configure domain based delegation. This configuration has changed from Vision 5.1. It is now configured for this user account running the Vision 7.1 Application Pool being granted delegation rights to the WSS server. This configuration is shown in the following example of the Delegation tab of the Application Pool Identity Properties dialog box:



- There are three possible authentication configurations with IIS 7.0/7.5, only two of which require you to create an SPN for the Application Pool Identity. Refer to sections in each deployment titled “Configure Authentication for the Vision Website” and “Configure Service Principal Name (SPN) for Vision Application Pool Identity”. For single tier installations these steps are optional.

Upgrade Windows SharePoint Services 3.0 to SharePoint Foundation 2010

Existing installations of Windows SharePoint Services 3.0 will not be upgraded to SharePoint Foundation 2010 via the Document Management installation; however, existing Document Management customers can upgrade their installation of SharePoint by following the documentation available from Microsoft, which is included below:

- Hardware and Software Requirements (SharePoint Foundation 2010):

http://technet.microsoft.com/en-us/library/cc288751.aspx

- Upgrade and Migration for SharePoint Foundation 2010:

http://technet.microsoft.com/en-us/sharepoint/ee517215.aspx

If you plan to upgrade to SharePoint 2010, Deltek strongly recommends that you perform the upgrade of Windows SharePoint Services to SharePoint Foundation before installing Vision 7.1 Document Management and that any previous installations of Document Management be uninstalled (this will not uninstall SharePoint). Upgrading to SharePoint foundation after installing Vision 7.1 Document Management will break the Document Management functionality as the installation makes modifications differently based on which version of SharePoint is installed.

Upgrade Vision Document Management

Vision 5.1 to Vision 7.1 Document Management Upgrade

Please review the notes in the previous section titled “Differences between Vision 5.1 and Vision 7.x Document Management” as there are configuration changes required due to changes in technology.

To upgrade from Vision 5.1 Document Management to Vision 7.1 Document Management, complete the following steps:

1. Uninstall Deltek Vision 5.1 Document Management from Add/Remove Programs on your Deltek Vision Web server and also on any dedicated SharePoint servers.
2. Unregister the existing Deltek.Vision.WSS30.Server.dll from the GAC (Global Assembly Cache, c:\windows\assembly) via an administrative command prompt (change drive letter and path as appropriate for your installation):
   C:\\Program Files\Deltek\Vision\Support\Utilities\gacutil.exe /u C:\\Program Files\Deltek\Vision\Support\DM\30\ Deltek.Vision.wss30.dll
3. Delete the old Deltek.Vision.WSS30.dll from \inetpub\bin or inetpub\virtual directories\wss\<port>\bin.
4. Install Vision 7.1 Document Management following the New installation instructions for your tier configuration.
5. Run the installation on both your Vision and SharePoint servers if they are on different physical machines.

Vision 6.x to Vision 7.1 Document Management Upgrade

To upgrade from Vision 6.x Document Management to Vision 7.1 Document Management, whether using Windows SharePoint Services or SharePoint Foundation, complete the following steps:

1. Run the Deltek Vision 7.1 installation to upgrade your Vision servers to Deltek Vision 7.1.
2. Run the Deltek Vision 7.1 Document Management installation to upgrade your Document Management server(s) to Deltek Vision 7.1 Document Management.
3. Update the Deltek Vision Document Management .NET assembly (Deltek.Vision.WSS30.Server.dll) in your SharePoint site \bin directory with the updated assembly located in <drive>:\Program Files\Deltek\Vision\Support\DM\3.0 folder.

Before You Begin:

!!IMPORTANT!!

Vision Document Management is a complicated software component with many configuration steps after the Vision Document Management setup has completed, both with the Vision and SharePoint software as well as the various Domain level changes that may be required to support your installation. Please pay particular attention to the following software and Domain requirements as well as the step by step installation and configuration instructions for your chosen deployment.

Vision Document Management Requirements

The Vision Document Management installation for Vision 7.1 has the following requirements:

- The Vision Web/Application and Microsoft SharePoint Web server(s) must be running Windows Server 2008 (x86 or x64) or Windows Server 2008 R2 x64.

  NOTE: Windows Server 2003 is no longer supported with Vision 7.1.

- The Document Management installation will automatically download and install SharePoint for you if not already installed.
- As of Vision 7.0, SharePoint Foundation 2010 will be installed if the server is x64; otherwise WSS 3.0 will be installed.
- If installing Vision Document Management into an existing SharePoint installation, Vision Document Management must have its own top-level site. Vision Document Management **does not support** integrating with an existing SharePoint site collection.
- Vision Document Management supports Single Tier deployments (installing SharePoint to the same server as Vision) and also Multi-Tier deployments (installing SharePoint to its own physical server separate from Vision). Multi-Tier deployments require domain level configuration changes which are documented in the next section “Understanding Domain Configuration Changes”.
- Single-Tier installations are not supported with SharePoint “server:” installations (e.g. Microsoft Office SharePoint Server 2007 (MOSS) and SharePoint Server 2010).
- For Single Server installations, Vision and SharePoint cannot share the same website (e.g. they cannot both be installed to the Default Website).
- An Active Directory domain is required to use Vision Document Management and the Vision and SharePoint servers must be members of a domain.
- The domain functional level must support constrained delegation for multi-tier installations of Vision Document Management. Refer to Appendix A for how to identify your domain functional level (if applicable).
- Internet Information Services (IIS) must be configured for Integrated Windows Authentication on both the Vision Web/Application server(s) and the Microsoft SharePoint Web server(s). A standard deployment of Vision supports either Anonymous Access (Vision Security) or Integrated Windows Authentication (Domain security), so this may be a change if you already have Vision deployed. The use of Integrated Security in IIS does not prohibit the use of Vision Security login accounts (for example, you don’t have to configure all users in Vision for Integrated Security).

There are additional Microsoft licensing requirements necessary to support the use of Integrated Windows Authentication with IIS. Specifically, a CAL (Client Access License) is required for each user who will access the IIS server (Vision). Refer to your software license vendor for any questions regarding this requirement.

Understanding Domain Configuration Changes

The following information applies to multi-tier installations of Vision Document Management only. If Vision and SharePoint will be installed to the same physical server you can skip this section.

Delegation and Kerberos Authentication

Delegation is required for a multi-tier deployment of Vision Document Management. A multi-tier installation is where Vision and SharePoint exist on separate physical servers.

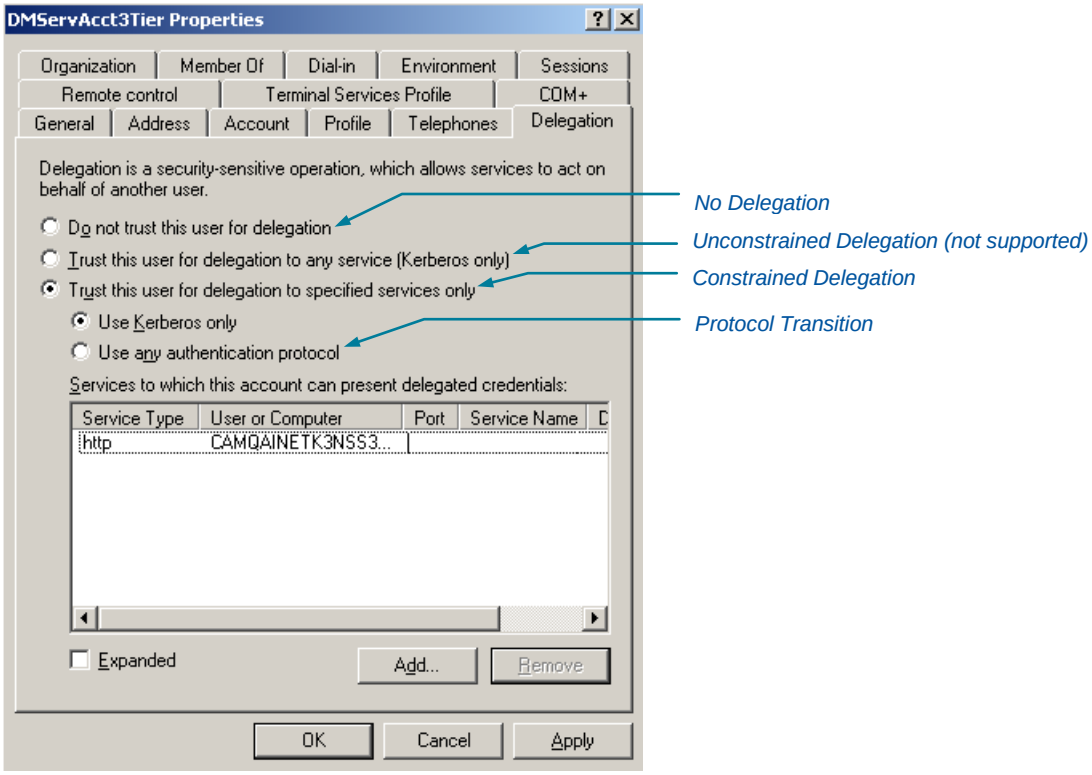
Delegation is the process of passing the credentials of the logged-in user from one server to another. In the case of Vision Document Management, the user's credentials are passed from the Vision Web/Application server to the SharePoint server. In Vision 7.1, delegation is configured by modifying the domain user account of the Vision Application Pool Identity to perform delegation.

Kerberos Authentication is a secure key-based authentication protocol necessary for delegation to be performed. The Vision Web server requests a key from the Key Distribution Center (KDC—a service which runs on domain controllers). The KDC authenticates the user and provides the key to the Vision Web Server for use in delegating the users' credentials to the SharePoint server.

Constrained Delegation, Unconstrained Delegation, and Protocol Transition

- **Unconstrained Delegation** —Delegation is allowed from one computer in the domain to any other User/Computer or Service on the domain with no restrictions. This is the only model available in domain models that support Windows 2000 domain controllers. Vision 7.1 does **not** support Unconstrained Delegation.
- **Constrained Delegation —** Delegation that can be performed by a user or computer in the domain is limited to a specific User/Computer or Service. This method of delegation is much more granular and secure and is only available in Server 2003 native domains.
- **Protocol Transition** — Use this option to transition the authentication protocol from the trusted server during the delegation. For Vision Document Management in an Internet deployment, we must transition the protocol from NTLM (as Kerberos is not available through the firewall) on the Vision Web server to Kerberos when communicating to the SharePoint server. This is necessary for Internet deployments because the client must negotiate the Kerberos ticket. This requires that Port 88 be open inbound through the firewall to the domain controller (not an advisable security configuration). The ticket is requested by the Vision Web server on the client's behalf and once granted, it is used to authenticate the user with Kerberos to the SharePoint server. This option is only available if the domain function level is Server 2003 native or higher.

The following screen shot is of the Vision Application Pool Identity/SharePoint Service Account in a Server 2003 native functional (or higher) domain that allows us to show all of the available Delegation and protocol transition configurations.



Service Principal Name (SPN)

In addition to the information provided in this document about the SPN needed for the Vision Application Pool Identity, below are some additional instances where SPNs may need to be configured for your Document Management deployment.

If you are using, or will be using, a Fully Qualified Domain Name (FQDN) as your SharePoint URL (for example, http://sharepoint.company.com, where "sharepoint" is a custom DNS record added to avoid using the actual machine name of the server) and your deployment model requires the configuration of Constrained Delegation, you will need to register the custom FQDN using the Service Principal Name utility (setspn.exe) so that it can be configured for Constrained Delegation or Protocol Transition.

Additionally, when deploying Microsoft Office SharePoint Server (MOSS) 2007, SharePoint Foundation 2010 and SharePoint Server 2010, the application pool identity for the SharePoint Web application defaults to a domain account. If your SharePoint Application Pool Identity is a domain account (as opposed to Network Service, which is the default for Windows SharePoint Services 3.0), you may need to create SPNs for this account as identified in the following Microsoft Support article (http://support.microsoft.com/?id=871179).

Where to Go from Here

Because of the many different deployment options available for Vision Document Management, please identify your deployment model (dependent on your chosen tier deployment and Operating System platform) from the list below and go to that section for complete step by step installation and configuration instructions.

Single Tier New Document Management Installations

SharePoint is NOT currently installed:

In this configuration, Vision and SharePoint will be installed to the same physical server and SharePoint is not yet installed. SharePoint will be installed by the Vision Document Management installation.

- x86 – go to page 15
  - This installation supports Windows SharePoint Services 3.0
- x64 – got to page 42
  - This installation supports Windows SharePoint Foundation 2010

SharePoint is already installed:

In this configuration, Vision and SharePoint will be installed to the same physical server and you already have an existing SharePoint installation that you wish to use with Vision Document Management.

- x86 – go to page 72
  - This installation supports Windows SharePoint Services 3.0
- x64 – got to page 86
  - This installation supports Windows SharePoint Services 3.0 or Windows SharePoint Foundation 2010

!!IMPORTANT!!

For Single Tier installations, Vision and SharePoint **cannot** be installed to the same web site. If SharePoint is already installed and you wish to install Vision you will need to create a new website in IIS to host Vision.

Multi-Tier New Document Management Installations

SharePoint is NOT currently installed:

In this configuration, Vision and SharePoint will be installed to different physical servers but SharePoint will be installed by the Vision Document Management installation.

- x86 – go to page 100
  - This installation supports Windows SharePoint Services 3.0
- x64 – go to page 134
  - This installation supports Windows SharePoint Foundation 2010

SharePoint is already installed:

In this configuration, Vision and SharePoint will be installed to different physical servers and you already have an existing SharePoint installation that you wish to use with Vision Document Management.

- **x86 –** go to page 173
    - This installation supports Windows SharePoint Services 3.0
- x64 – got to page 195
    - This installation supports Windows SharePoint Services 3.0 or Windows SharePoint Foundation 2010

Multi-Tier New Document Management Installations (SharePoint "Server" installations)

In these configurations, SharePoint "Server" is already installed and Vision and/or Vision Document Management will be installed after the fact.

- x86 – go to page 218
    - This installation supports Microsoft Office SharePoint Server (MOSS) 2007
- x64 – go to page 240
    - This installation supports Microsoft Office SharePoint Server (MOSS) 2007 or Windows SharePoint Server 2010

!! IMPORTANT INFORMATION FOR EXISTING SHAREPOINT INSTALLATIONS!!

If you already have SharePoint installed and plan to use that existing installation of SharePoint for your Vision Document Management deployment, note that Vision Document Management **does not** support integrating with an existing SharePoint site collection and requires a dedicated top-level site on your SharePoint server.

Single Tier New Installation and Configuration for x86 (32-bit) Servers – SharePoint is NOT Installed

!!IMPORTANT!!

Please note the following for this configuration:

1. In this configuration, Vision and SharePoint will be installed to the same physical server and SharePoint is **NOT** yet installed.
2. The Vision Document Management installation will install Windows SharePoint Services 3.0. SharePoint Foundation 2010 is **not** supported for this configuration.
3. The Operating System for the server is x86 (32-bit).

Prerequisites

- Install/upgrade your Vision installation to Vision 7.1 (if applicable).
- Change the Application Pool Identity for the DeltekVisionAppPool to be a domain user account (the Vision 7.1 installation sets this to be the local DeltekVision account).
- The domain service account used above will also be the SharePoint Service account.
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server.

Single Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Install Vision 7.1 Document Management and WSS 3.0
3.	Vision Web/Application Server	Optional: Configure Authentication for the Vision Website
4.	Vision Web/Application Server	Optional: Configure Service Principal Name (SPN) for Vision Application Pool Identity
5.	SharePoint Web /Application Server	Run the SharePoint Products and Technologies Configuration Wizard
6.	SharePoint Web /Application Server	Use SharePoint Central Administration to Complete the SharePoint Configuration
7.	SharePoint Web /Application Server	Optional: Configure SharePoint for a Custom URL

8.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
9.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
10.	Vision Web/Application Server	Configure Vision Document Management
11.	Domain	Configure Constrained Delegation – **Not Required**
12.	Domain	Optional: Configure Protocol Transition – **Not Required**

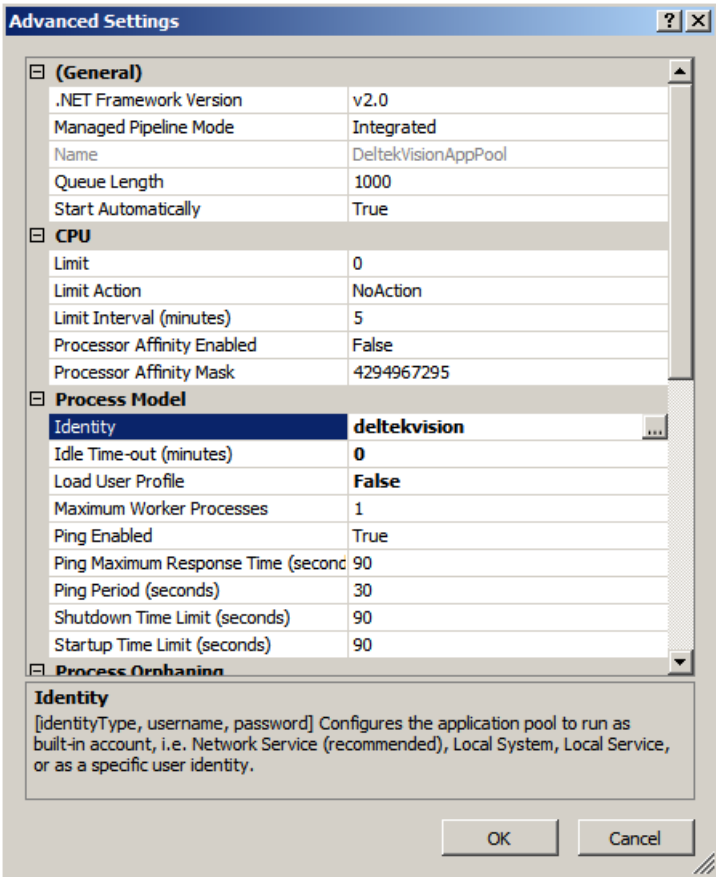
Configure Vision Application Pool Identity to be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

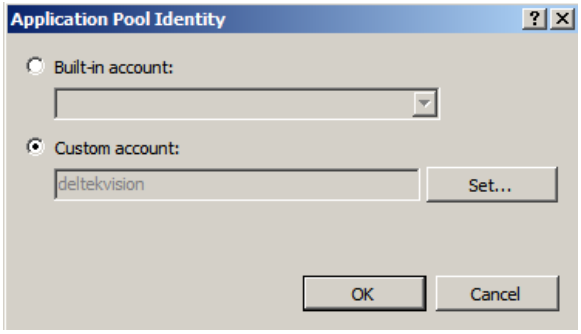
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server.

To change the Vision Application Pool Identity, complete the following steps:

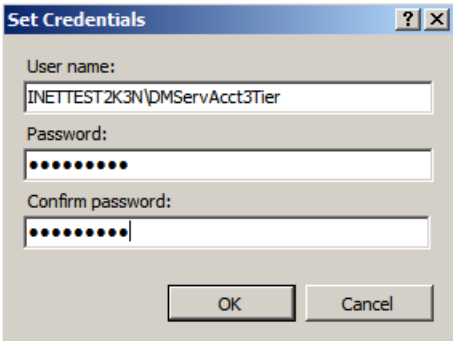
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side. The following displays:



6. Place your cursor in the **Identity** field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In the **User name** field, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In the **Password** and **Confirm password** fields, enter that user's password.
10. Click **OK** three times to set the identity.

Install and Configure Vision 7.1 Document Management and Windows SharePoint Services (WSS) 3.0

When you install Vision 7.1 Document Management WSS is automatically installed if your Operating System platform is x86 (32-bit). If you are upgrading from a previous version of Vision and/or already have WSS installed the changes made to your WSS installation are outlined below. The steps to configure WSS are outlined in this section.

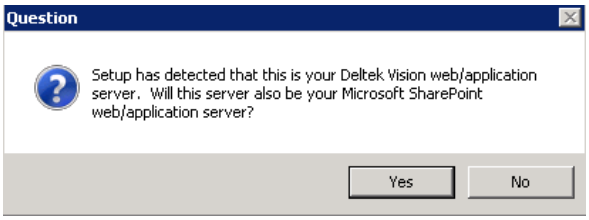
The Document Management installation does the following:

- Installs Web Service Extensions (WSE) 2.0 Sp3.
- Installs WSS 3.0, if it is not already installed.
- Copies Document Management files to the SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\12\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server dll into the Global Assembly Cache (GAC).

Install Vision Document Management and WSS 3.0

To install Vision Document Management and WSS 3.0, complete the following steps:

1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
3. On the first Document Management Installation Wizard page, click **Next**.
4. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
5. When this message displays, click **Yes** because this is a single-tier installation of Vision Document Management and this server will host both Vision and WSS 3.0.



6. On the Ready to Install the Program page, click **Install** to start the installation. The installation automatically downloads the version of Windows SharePoint Services 3.0, extracts the WSS 3.0 setup files, and installs Windows SharePoint Services.
7. When the "Files extracted successfully" message displays, click the **OK** button to continue the installation.
8. When the InstallShield Wizard Complete page displays, click **Finish**.

Optional: Configure Authentication for the Vision Website

This is an "Optional" step for single tier installations and only required if the default configuration does not work for your setup.

IIS Kernel Mode Authentication

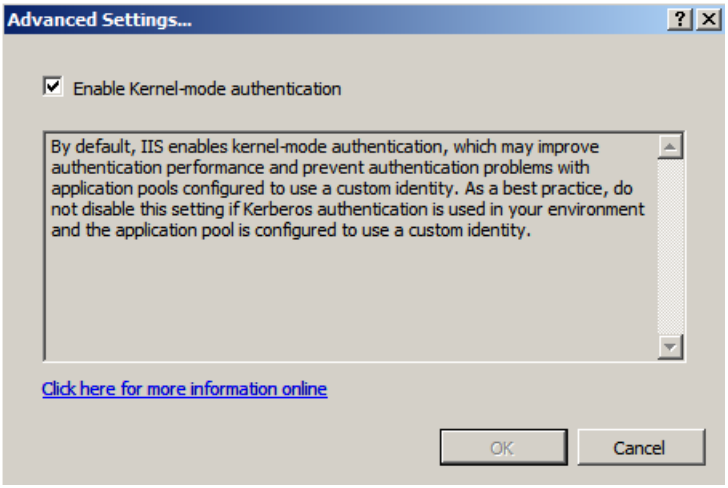
The default configuration of IIS when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because delegation is not required for single tier deployments of Vision Document Management, the additional configuration steps below are optional. However, if you do change the default of enabling Kernel Mode Authentication you will be required to create an SPN which is outlined in next section.

Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS, it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.
6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

   This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path="Default Web Site/Vision">

5. Locate the windowsAuthentication tag and add **useAppPoolCredentials="true"** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Optional: Configure Service Principal Name (SPN) for Vision Application Pool Identity

This is an "Optional" step for single tier installations and only required if the default configuration does not work for your setup.

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication and Vision Document Management will work just fine on single tier installations as delegation is not required.

However, if you opted to modify the default of enabling Kernel Mode Authentication for the Vision web site as described in the preceding section, it will be necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

See the following related Microsoft Knowledge Base article for more information:

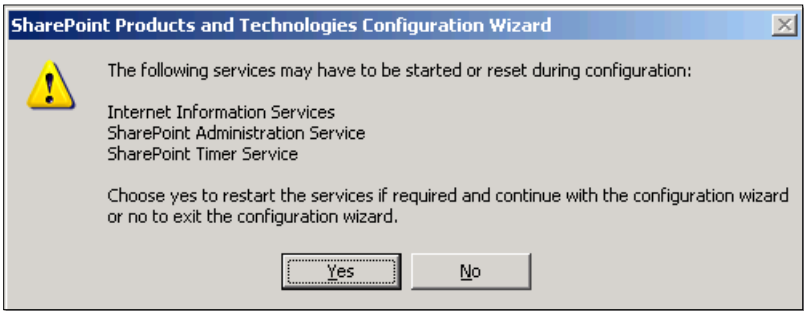
http://support.microsoft.com/?id=871179

Run the SharePoint Products and Technologies Configuration Wizard

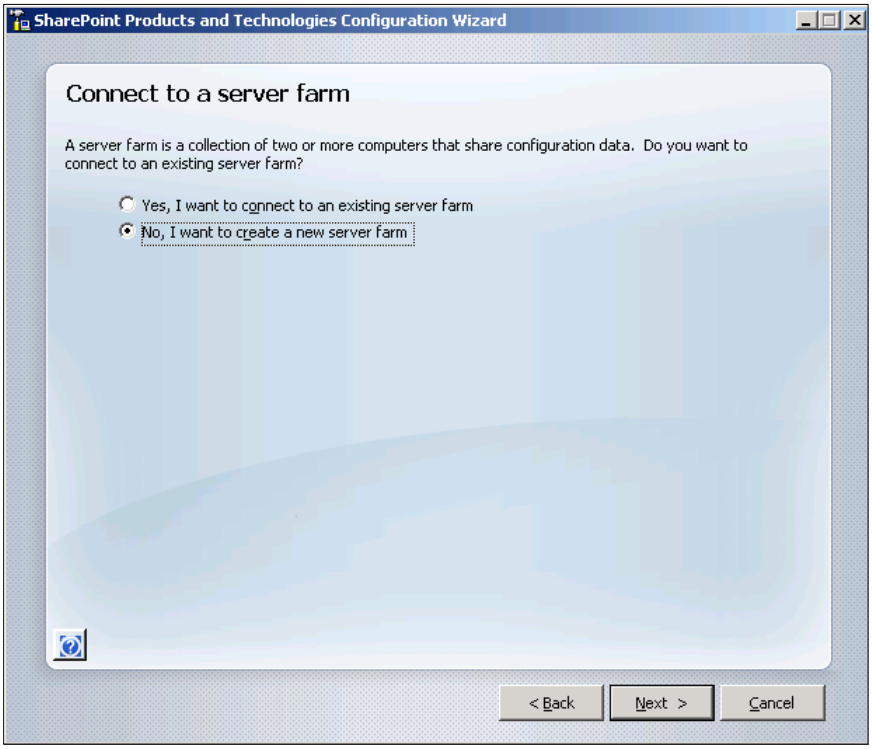
To run the SharePoint Products and Technologies Configuration wizard, complete the following steps:

1. Click **Start » Administrative Tools » SharePoint Products and Technologies Wizard**. The Welcome page displays.

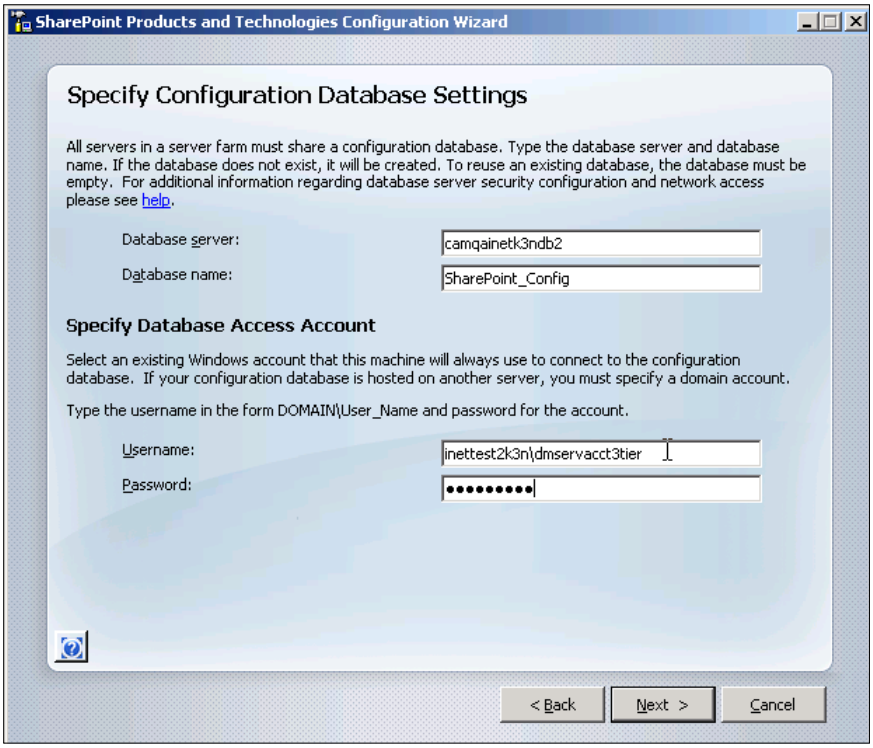
2. Click **Next**. The following dialog box displays.



3. Click **Yes**. The Connect to a server farm page displays.

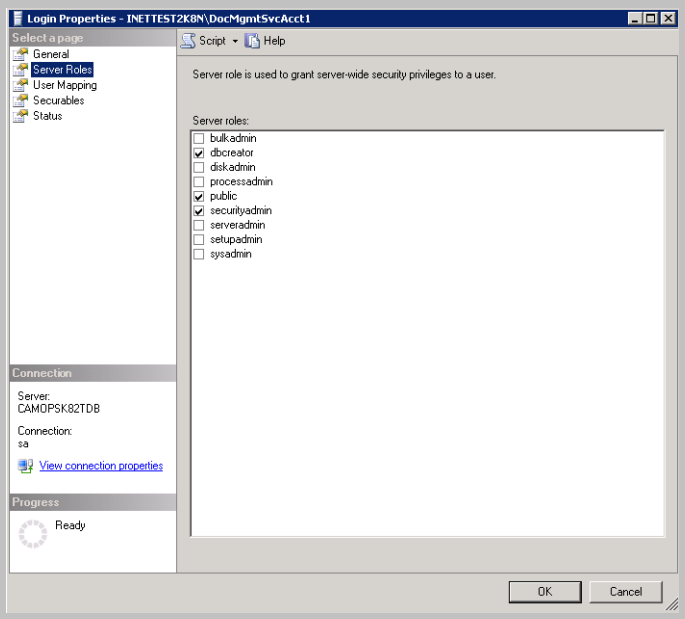


4. Select the **No, I want to create a new server farm** option and click **Next**. The Specify Configuration Database Settings page displays.



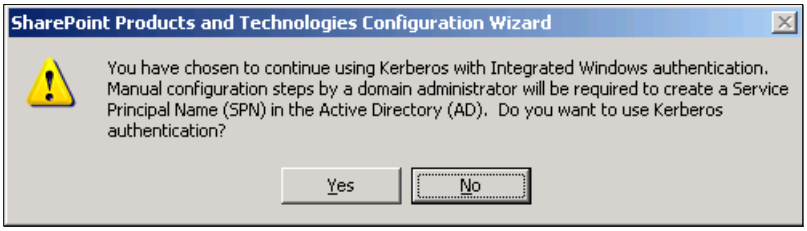
5. Enter the name of the database server to host the SharePoint configuration database and accept the default database name: SharePoint_Config.

Your SharePoint database access account will need to have the dbcreator and securityadmin SQL Server Roles. This is accomplished by adding the domain account as a SQL Server login and adding the roles as shown below:



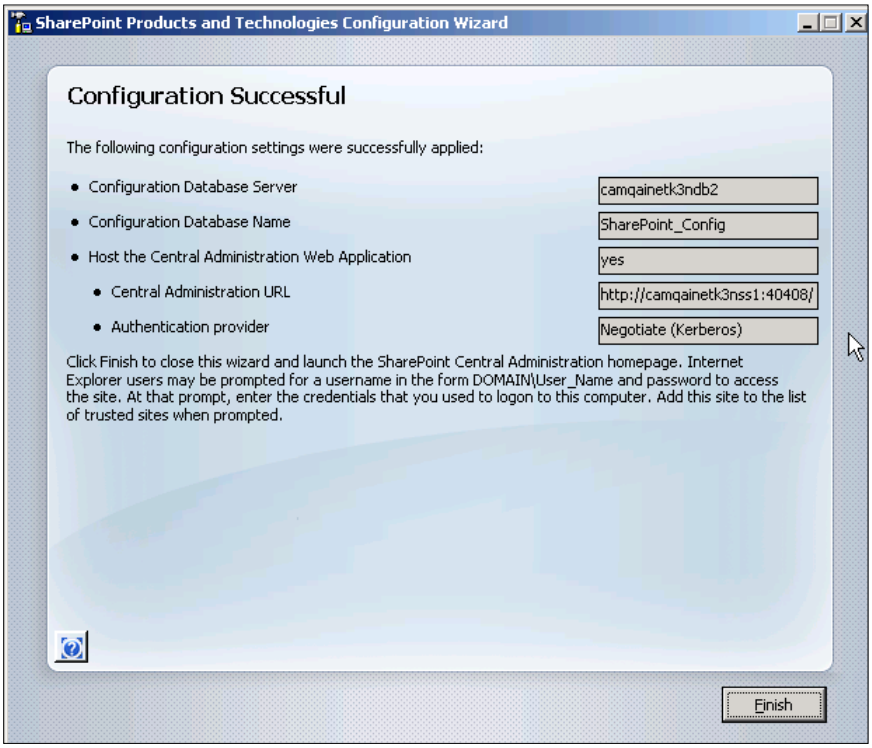
6. In **Username**, enter the domain and name of the Vision Application Pool Identity (as configured earlier) as the username for the SharePoint database access account, and enter the user's password in **Password**.
7. Click **Next**. The Configure SharePoint Central Administration Web Application page displays.

8. Specify the port to be used for the SharePoint Central Administration Web site and select **Negotiate (Kerberos)** for the authentication provider.
9. Click Next. The following dialog box displays.



10. Click **Yes** to continue using Kerberos with Windows Authentication. The Completing the SharePoint Products and Technologies Configuration Wizard page displays.

11. Click **Next** to begin the configuration. This process may take some time to complete. The Configuration Successful page displays when configuration is complete.

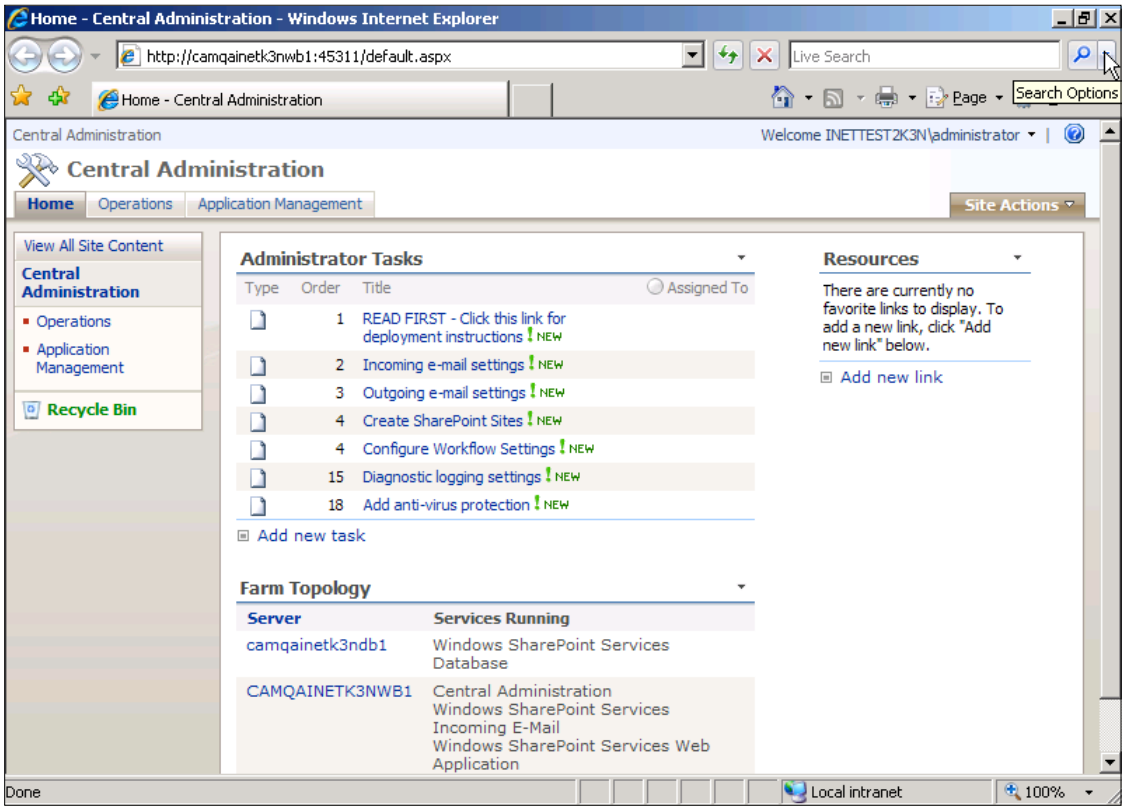


12. Click **Finish** to finish the configuration process. The SharePoint Central Administration page displays.

Use SharePoint Central Administration to Complete the SharePoint Configuration

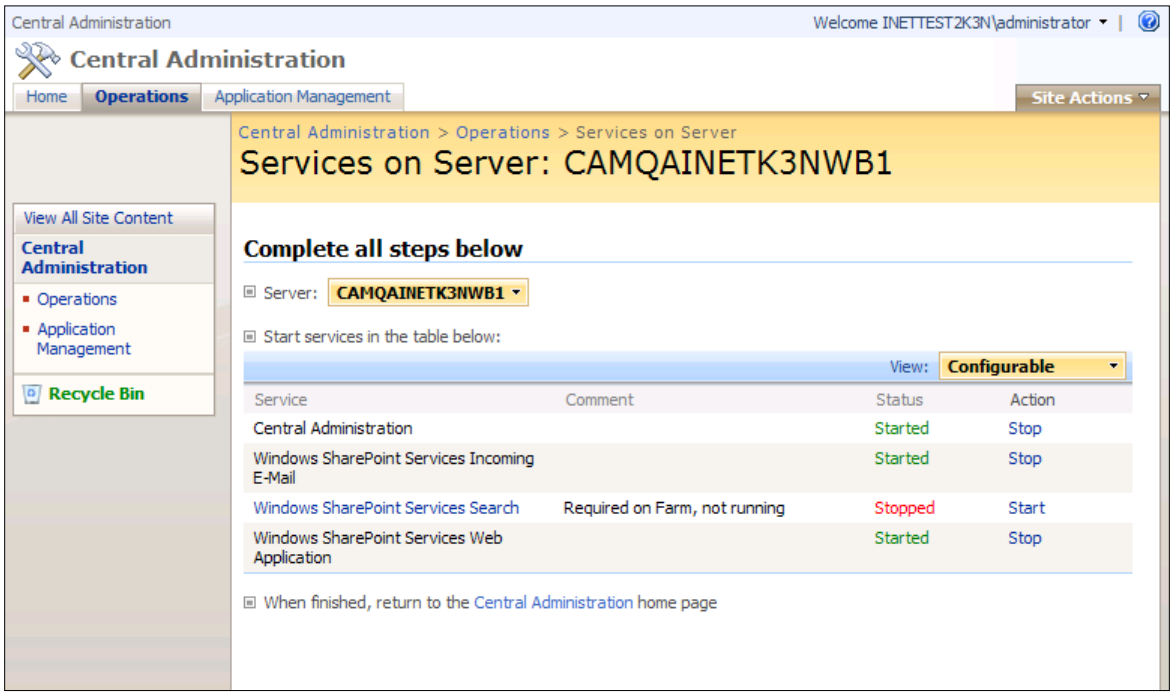
To complete the SharePoint Configuration, complete the following steps:

1. When you click **Finish** in the preceding procedure, SharePoint Central Administration is launched.

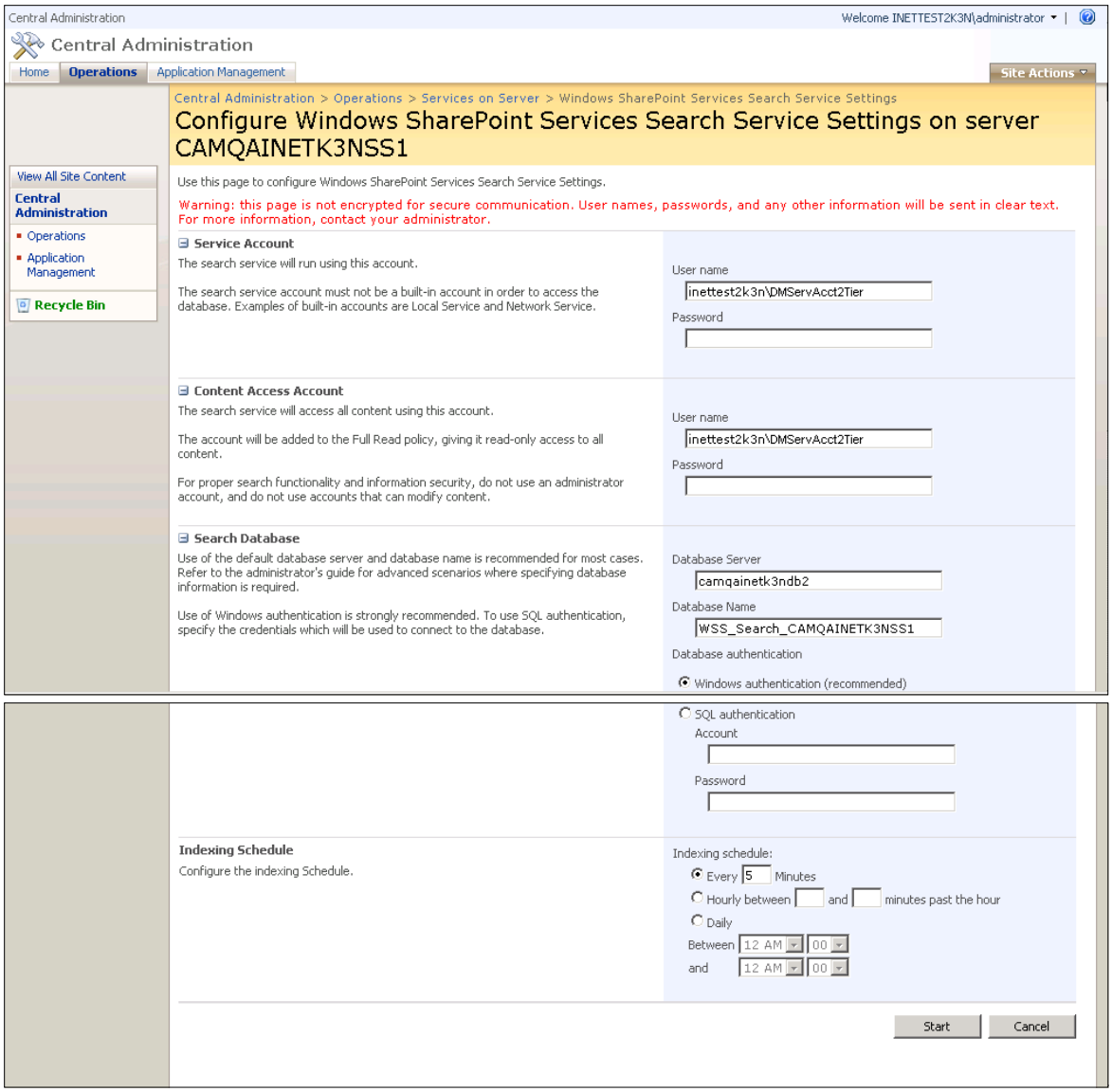


2. Click **Operations**. The Operations page displays.

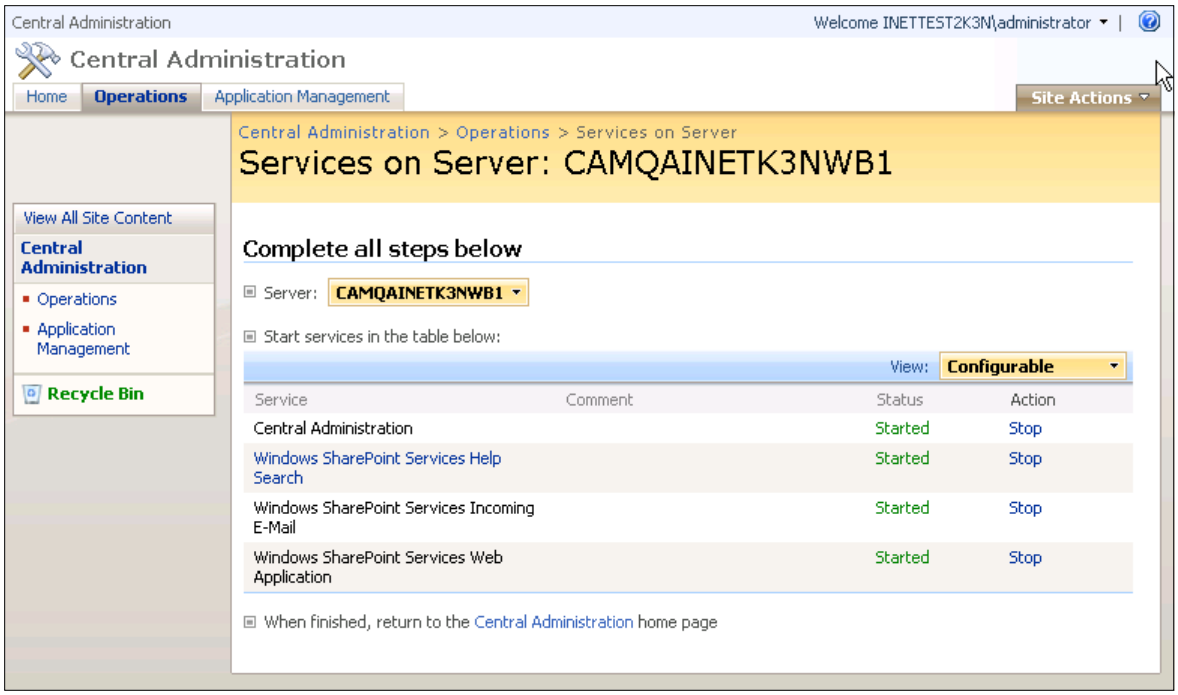
3. Click **Services on Server** under **Topology and Services** to configure the SharePoint Services search.



4. Locate the **Windows SharePoint Services Search** option and click **Start**.

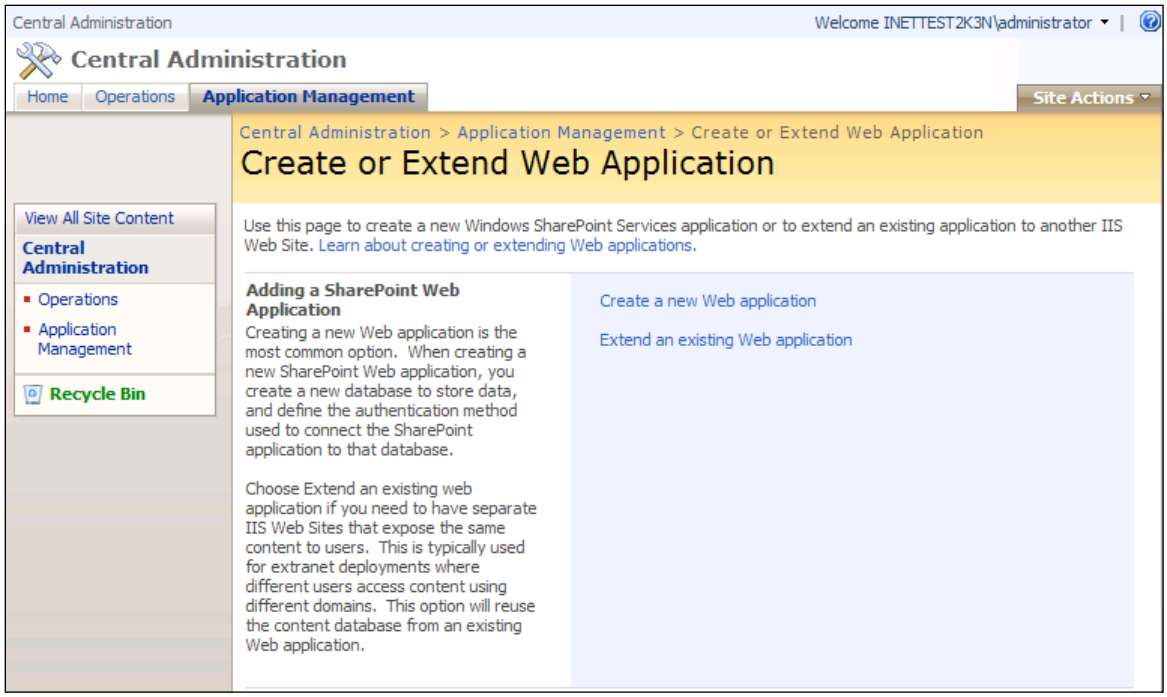


5. Configure the search service to include the Service account and Content Access account (use the same account information as your Vision Application Pool Identity).
6. Configure **Search Database** as shown above and click **Start**. After a minute or so, the service's status changes to **Started**.

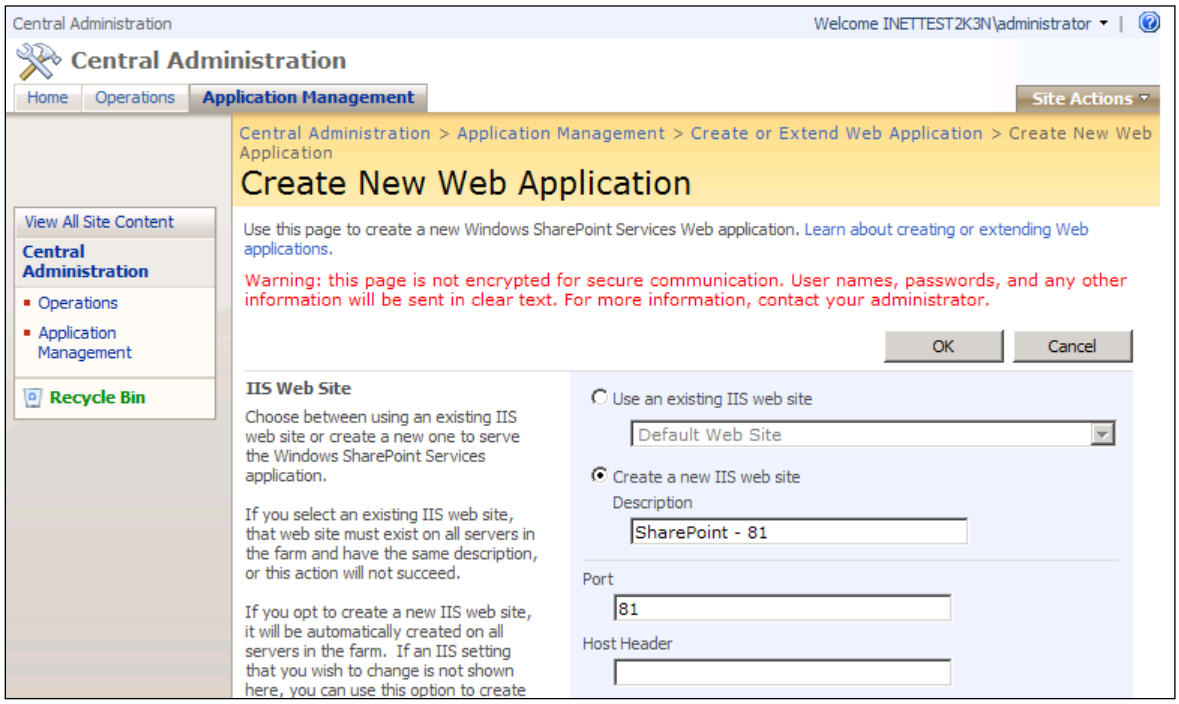


7. Click **Application Management** to configure the SharePoint Web Application.

8. Select the **Create or extend Web application** option. The Create or Extend Web Application page displays.



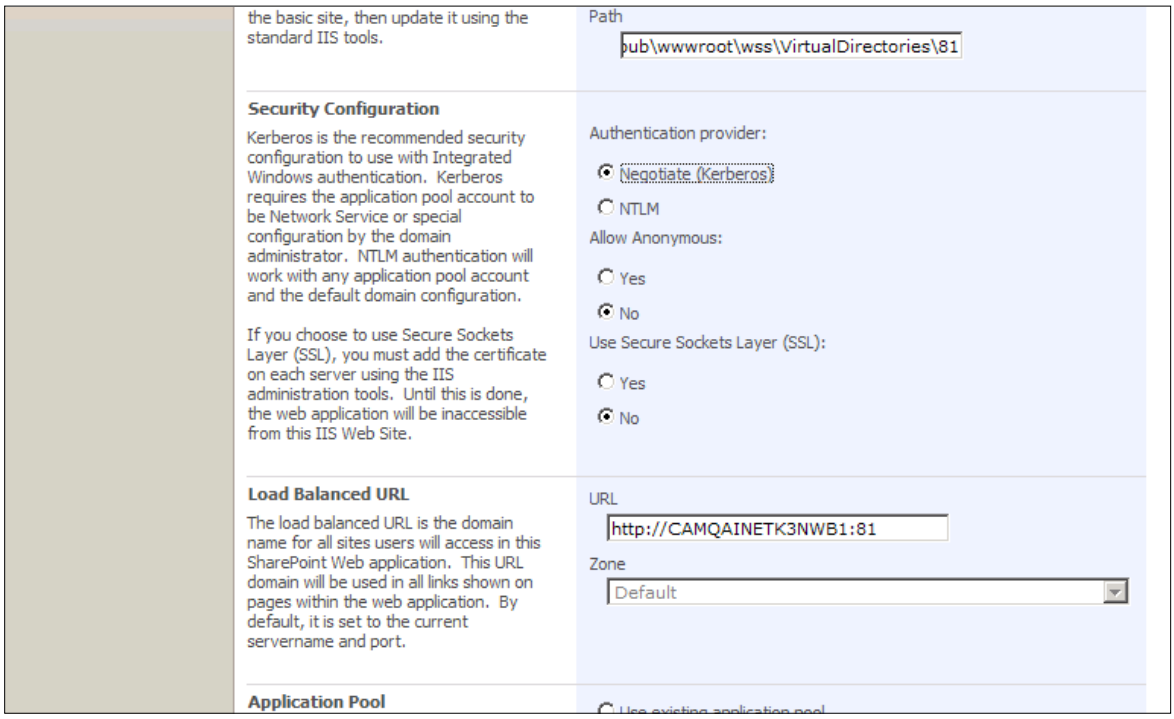
9. Click **Create a new Web application**. The Create a New Web Application page displays.



10. Select the **Create a new IIS web site** option. Enter a description for the Web site and specify a port different that that being used for the Vision web site in **Port**.

    SharePoint defaults to 'SharePoint – 80' and '80' as the site name and port, if you change the port to be 81 (as shown), the web site name changes automatically to 'SharePoint – 81'

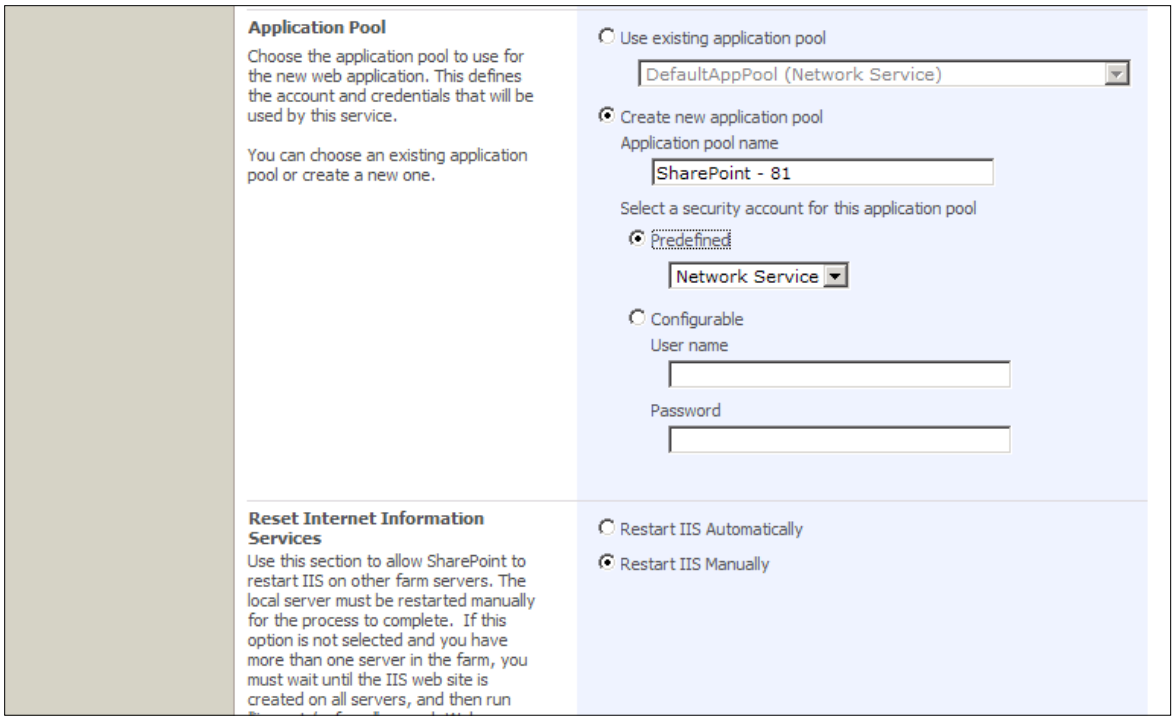
> **Warning!**
>
> Vision and SharePoint **cannot** be installed to the same website. Doing so will break the Vision application! .
>
> Alternatively, you can create a new Web site ahead of time using a different IP address or port and select the option to **Use an existing IIS web site**.



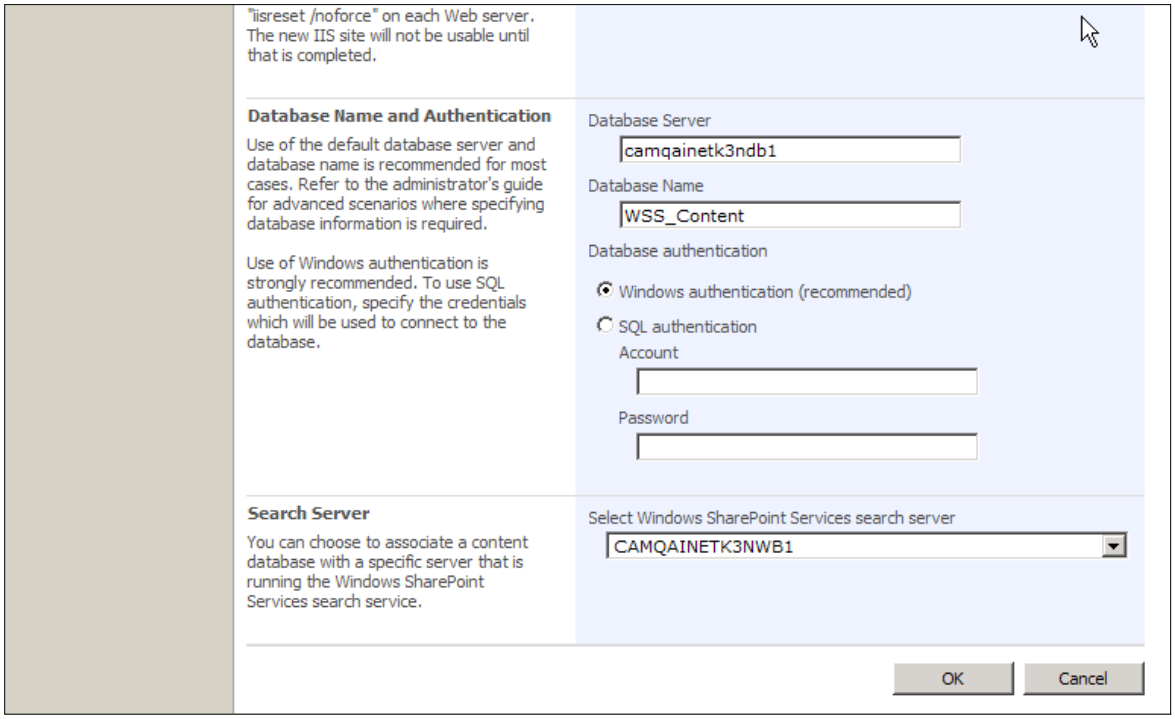
    Note the entry in **Path**, which by default is the root of your WSS Web site in a directory named after the port chosen under c:\inetpub\wwwroot\wss\virtualdirectories. This is the folder location where you will copy the Vision SharePoint assembly to later in this section.

11. Select **Negotiate (Kerberos)** under **Authentication provider**.

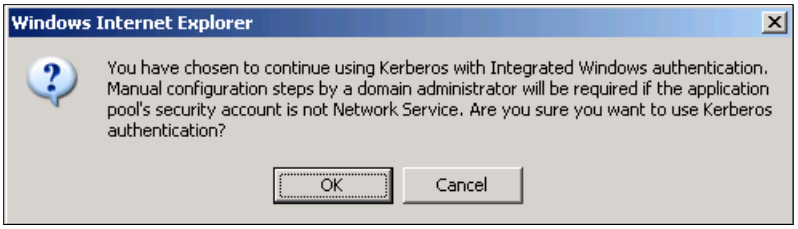
12. For the **Allow Anonymous** and **Use Secure Sockets Layer (SSL)** options, accept the default of **No**. If you want to use SSL with SharePoint, you can configure SSL later, but you must not configure SSL to be required as the web service calls from the Vision Web/Application server cannot use SSL.



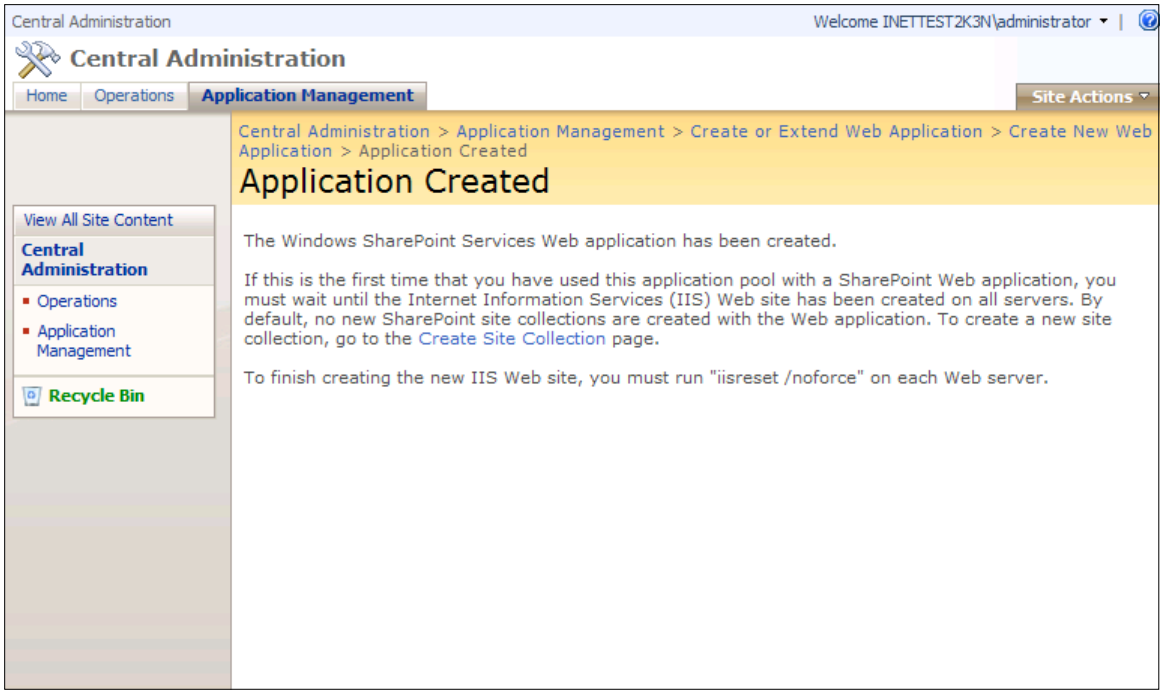
13. Select the **Create new application pool** option and provide a name (Deltek recommends using the same name as the Web site). NOTE: Since the SharePoint Application Pool will run as Network Service, no SPN is required.
14. Select **Predefined** and **Network Service** for the security account to be used for the application pool.
15. Select the **Restart IIS Manually** option for **Reset Internet Information Services**.



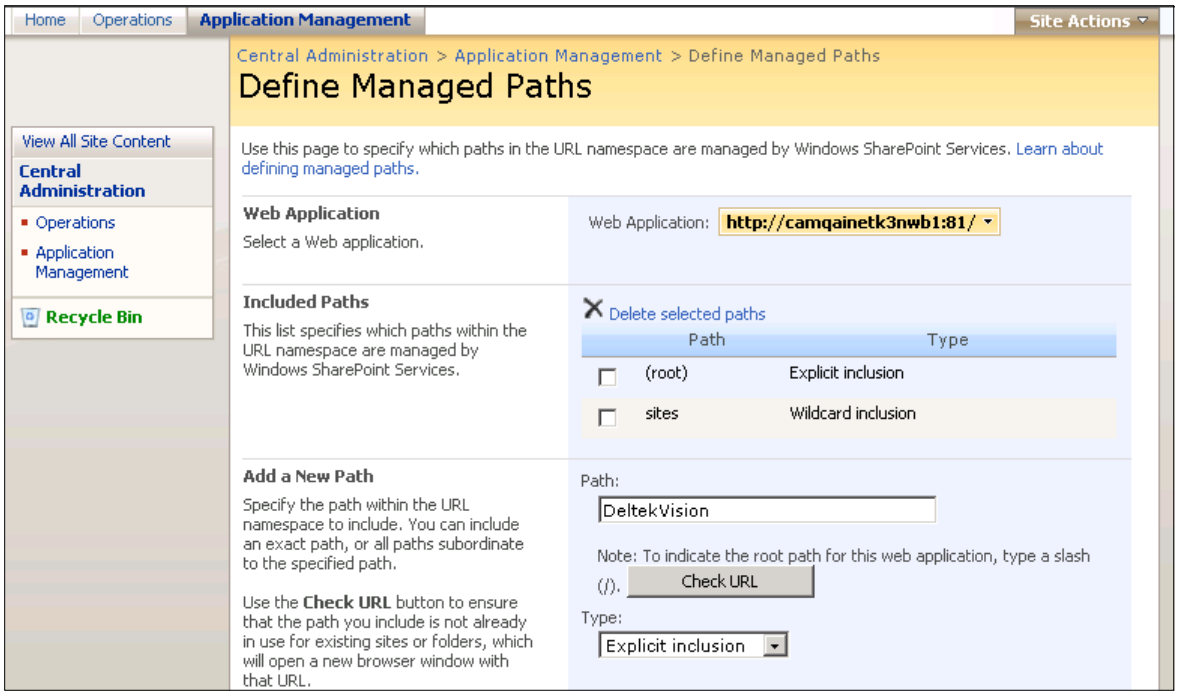
16. Verify the name of the server in **Database Server**. (It should be the same as that used for the SharePoint configuration database server.) Accept the default in **Database Name** for the content database.
17. Select **Windows authentication (recommended)** under **Database authentication**. (This will use the SharePoint service account and Vision Application Pool Identity configured previously).
18. Select the search server in **Select Windows SharePoint Services search server** and click **OK.** This is necessary for the document search in Vision to function correctly. The following dialog box displays.



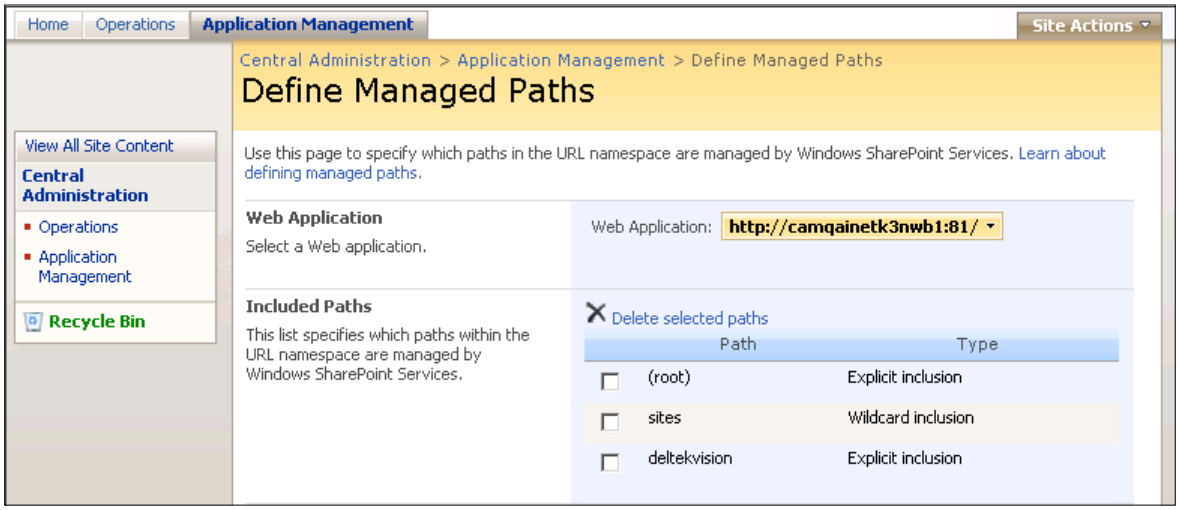
19. Click **OK** to use Kerberos for Windows Authentication. After a few minutes, the Application Created page displays. It indicates the status of the process to create a new Web application.



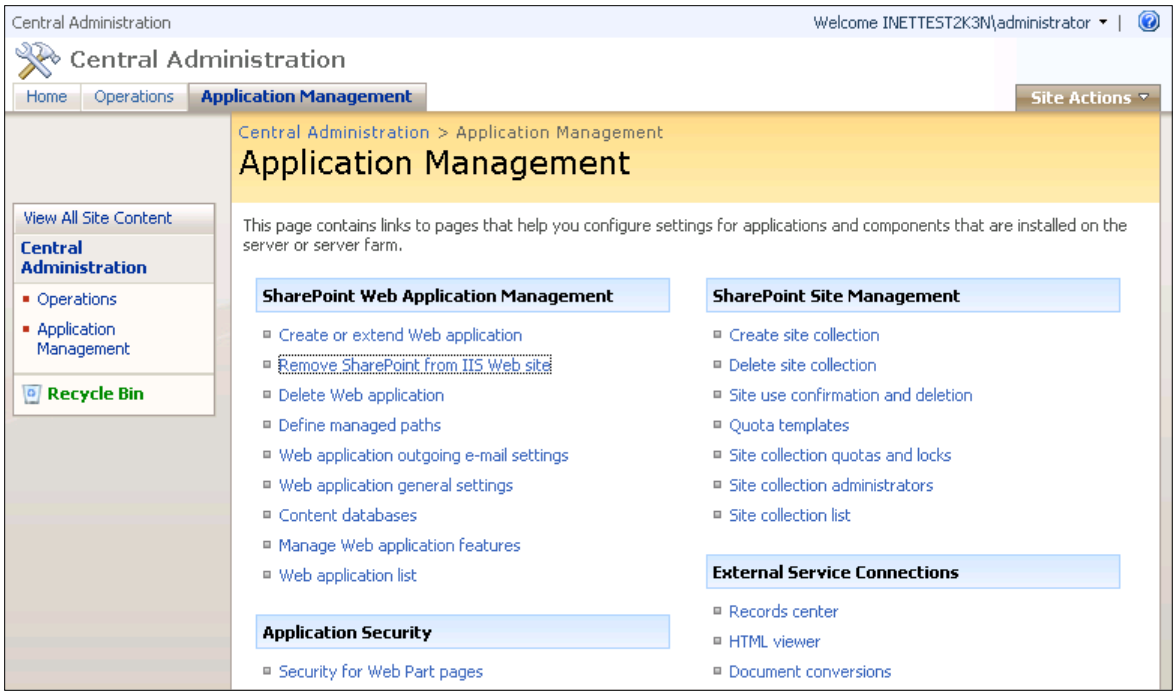
20. **Do not** click the **Create Site Collection** link at this time. It is still necessary to add DeltekVision as a managed path with explicit inclusion before you create the site collection.
21. Click **Application Management** and select the **Define Managed Paths** option.



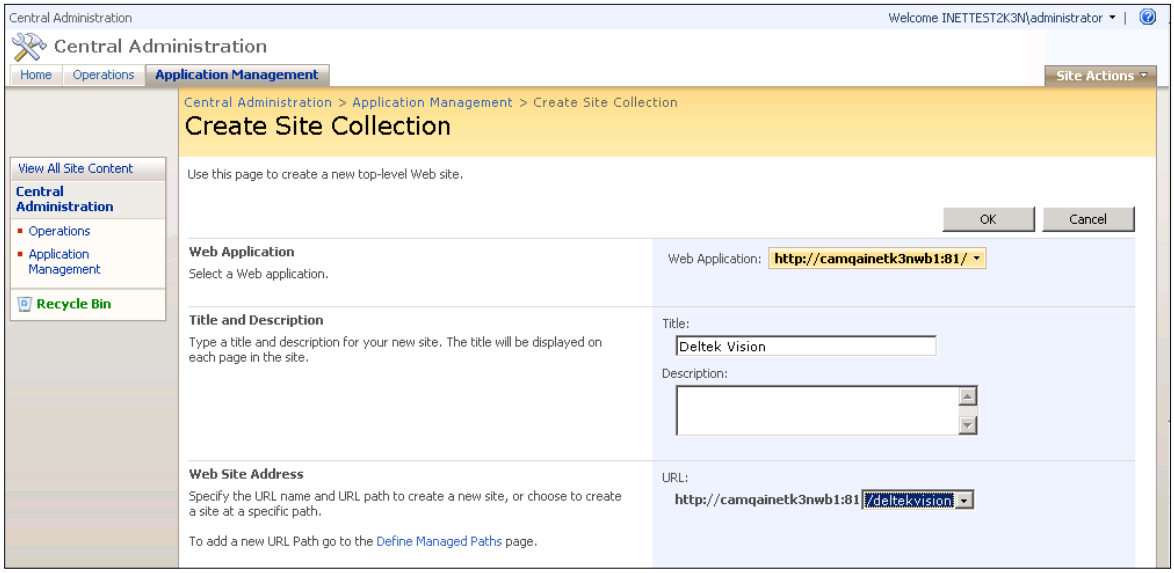
22. Enter **DeltekVision** in **Path** and select **Explicit inclusion** in **Type**.
23. Click **OK**.



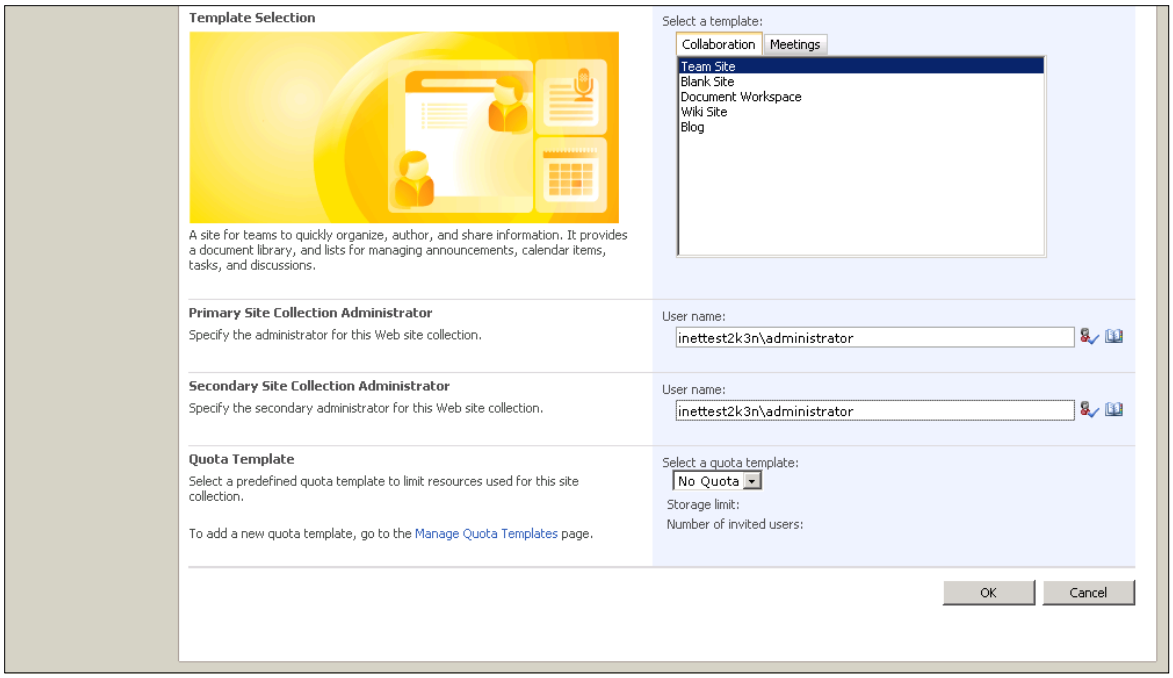
24. Click **Application Management** and select the **Create Site Collection** option under **SharePoint Site Management**.



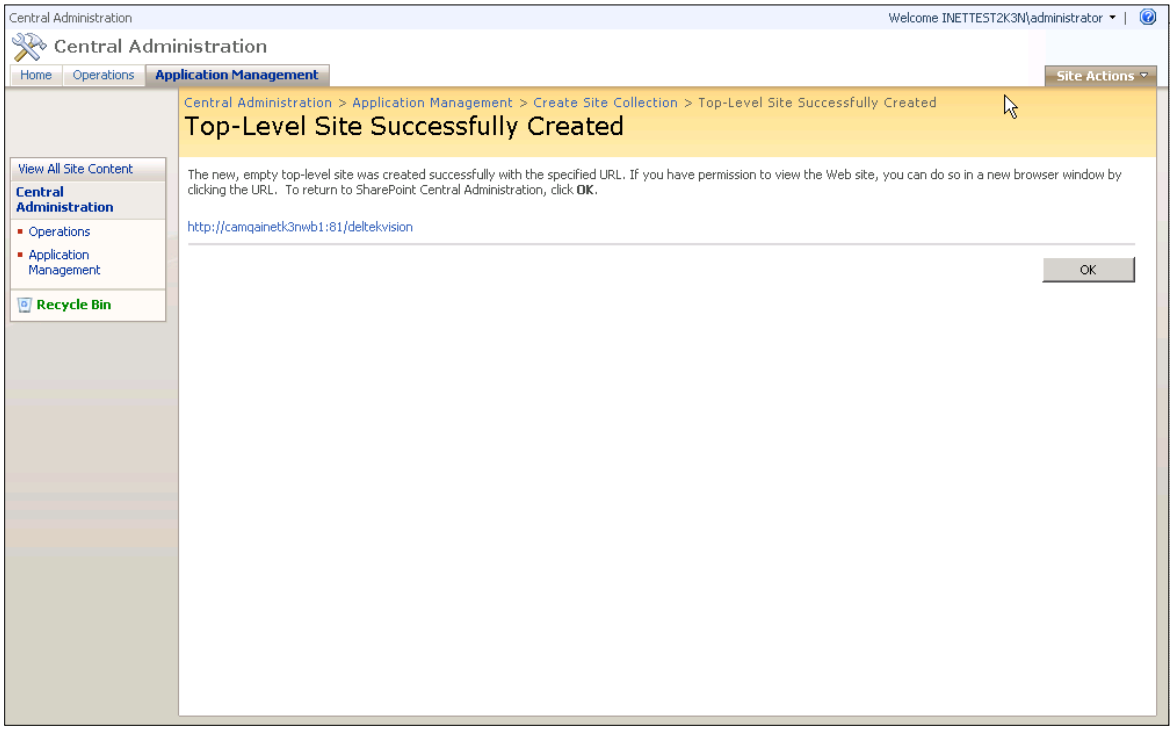
The Create Site Collection page displays.



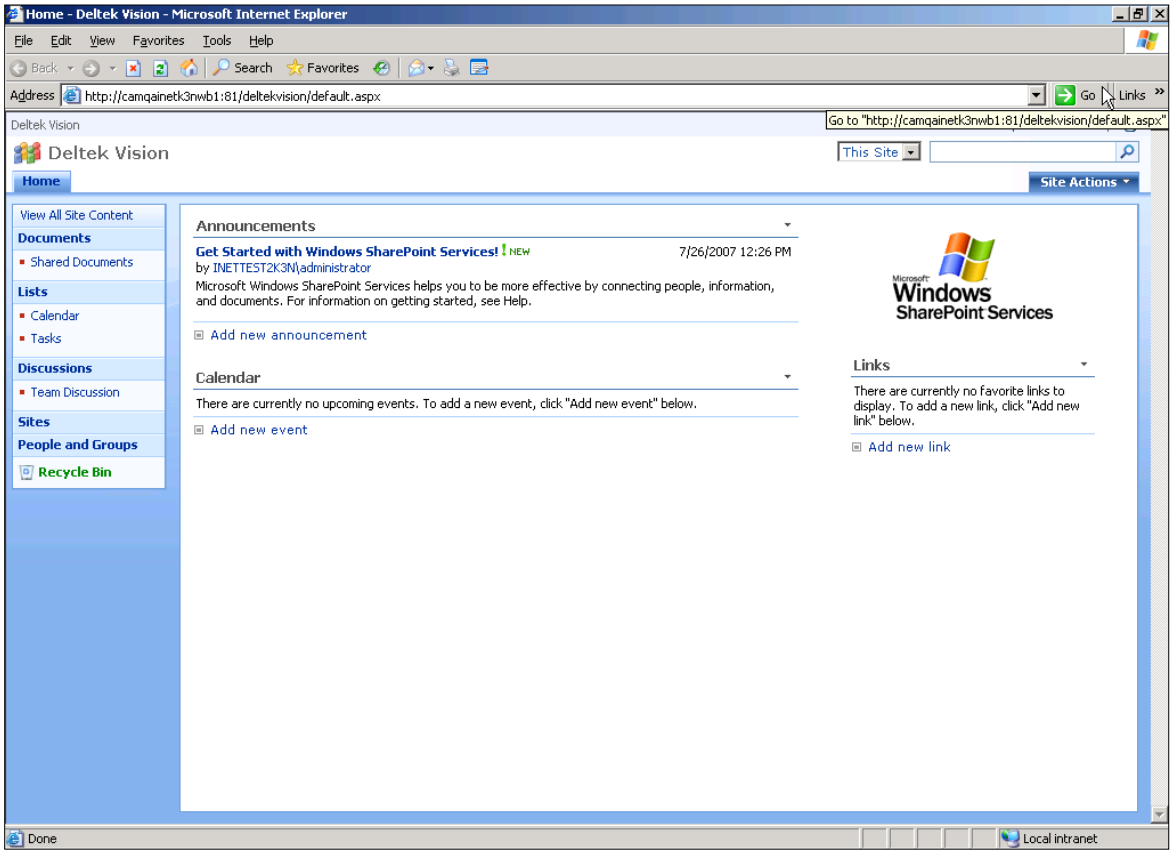
25. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
26. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root site for Vision Document Management.



27. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
28. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



29. Click the link for the top level site (in our example it is http://camqainetk3nwb1:81/deltekvision) to display the site.



30. The SharePoint configuration is complete. Close SharePoint Central Administration.

Optional: Configure SharePoint for a Custom URL

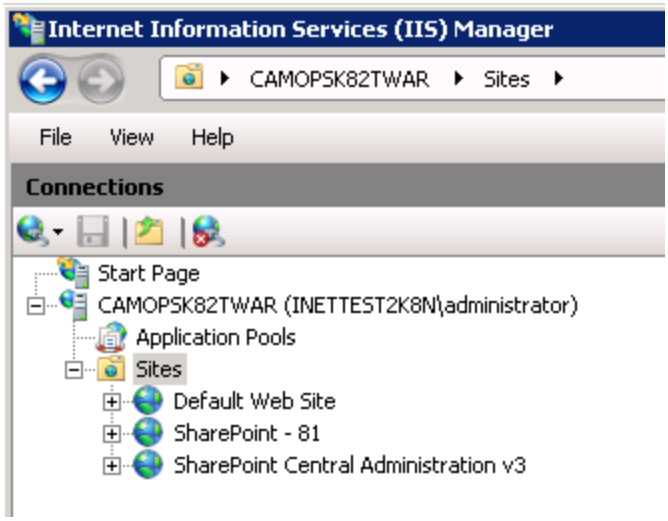
If you will be configuring your SharePoint server to use a custom DNS record for the URL (e.g. http://sharepoint.company.com instead of http://servername.company.com http://servername), then you must create additional SPNs and also create Alternate Access Mappings in SharePoint. It is recommended that this step be completed before Vision Document Management is configured in order to eliminate re-work.

See “Appendix B: ” for more information.

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

To verify IIS configuration, complete the following steps:

1. Use the steps that follow to open Internet Information Services to view these Web sites:
   - **Default Web Site** — This is your Vision Web Site
   - **SharePoint – 81** — This is your WSS 3.0 Web Site
   - **SharePoint Central Administration Web Site**



2. Copy the Vision Document Management .NET assembly to SharePoint site directory.

   Copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin

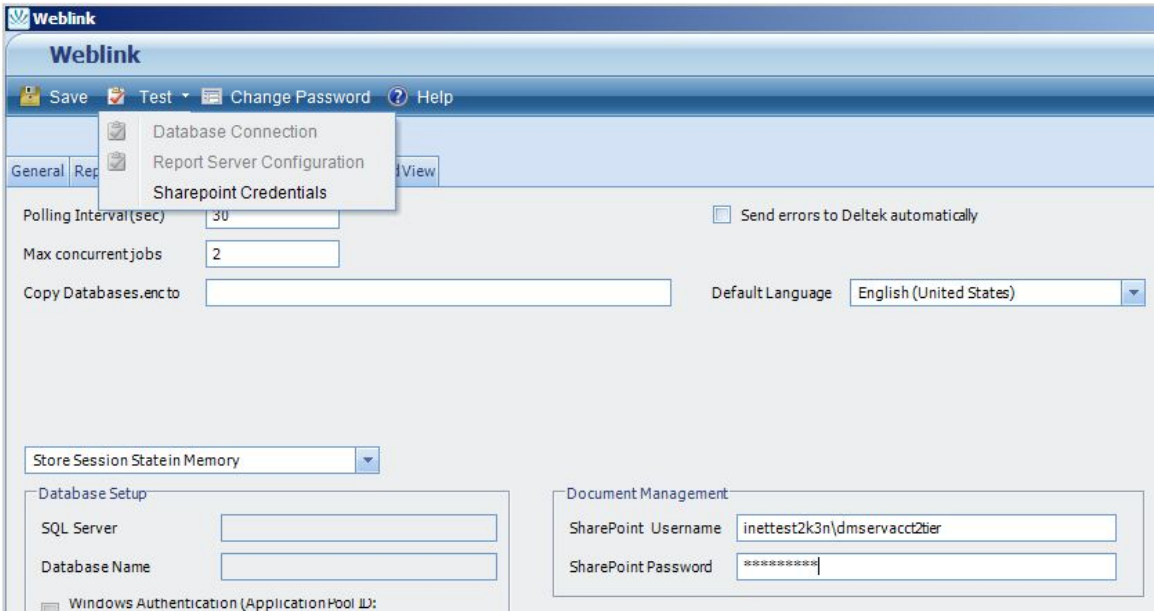
   By default, the <site> directory references the port chosen. In our example, the port is 81.

Configure Document Management Service Account in Weblink

You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the service account in Weblink, complete the following steps:

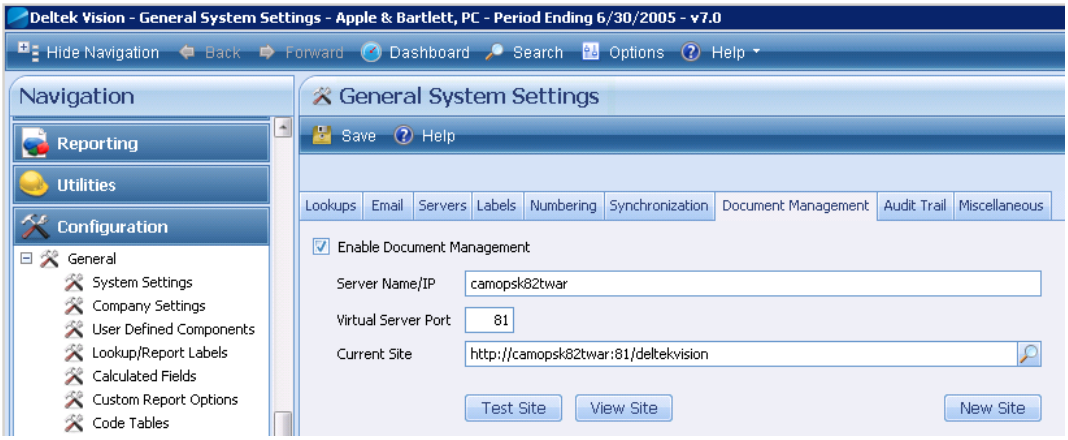
1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**
2. Enter the Weblink password when prompted.
3. Click the System Settings tab.
4. In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
5. Click the **Test** button and SharePoint Credentials to validate that the information entered is correct.



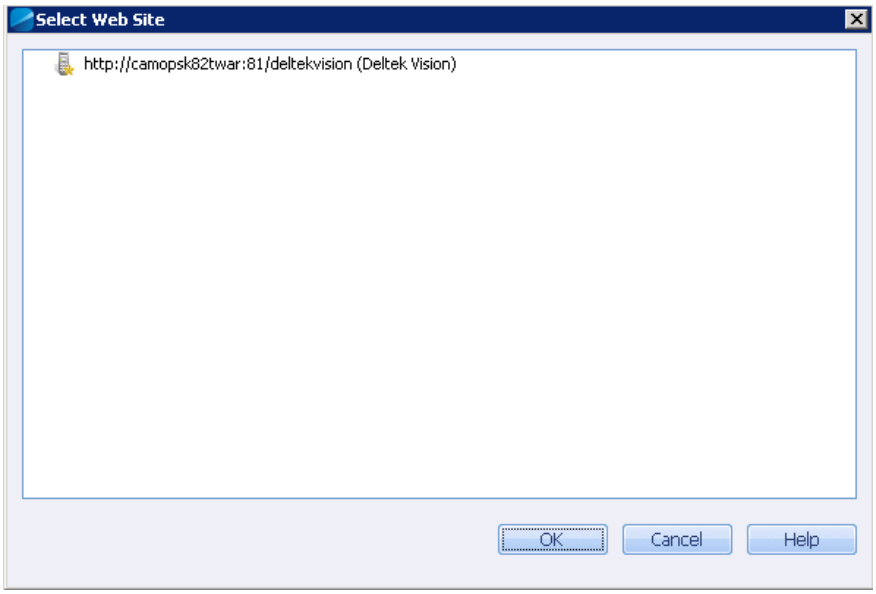
Configure Vision Document Management

To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.



3. Select the **Enable Document Management** check box.
4. Enter the name of the server hosting Document Management. This should be the server name only, FQDN's or custom DNS values are not needed here. Enter this value without the protocol prefix (for example, remove the http://). In the illustration above, the value is **camdevk82twar**
5. Enter the port in **Virtual Server Port**. In our example the port is 81.
6. Click the Lookup icon to select the current site.



7. The Select Web Site dialog box displays the available sites. Select a site and click **OK**.
8. Save your changes.

Configure Constrained Delegation

Constrained Delegation is not required for Single Server installations.

Optional: Configure Protocol Transition

Protocol Transition is not required for Single Server installations.

Single Tier New Installation and Configuration for x64 (64-bit) Servers – SharePoint is NOT Installed

!!IMPORTANT!!

Please note the following for this configuration:

1. In this configuration, Vision and SharePoint will be installed to the same physical server and SharePoint is **NOT** yet installed.
2. The Vision Document Management installation will install SharePoint Foundation 2010. Windows SharePoint Services is **not** supported for this configuration.
3. The Operating System for the server is x64 (64-bit).

Before you proceed:

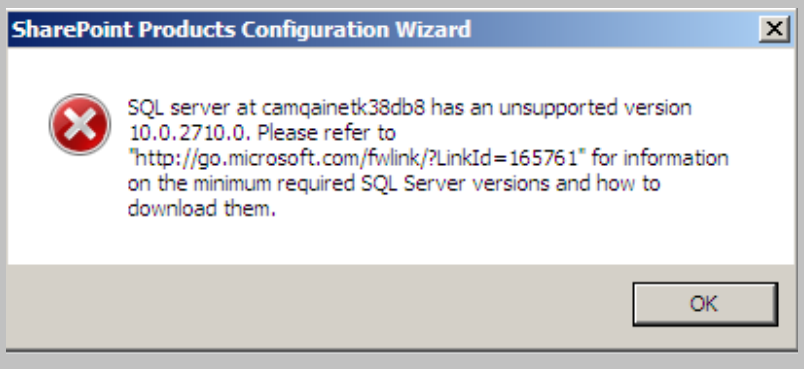
- Review the Hardware and Software Requirements for SharePoint Foundation 2010. See http://technet.microsoft.com/en-us/library/cc288751.aspx for more information.
- Make sure your SharePoint servers are current with all available Windows Updates. Deltek strongly recommends that you do this, to ensure that the SharePoint prerequisite installer completes successfully.

Specific database server requirements for SharePoint Foundation 2010 are as follows:

Environment	Minimum Requirement
Database server in a farm	One of the following: ▪ The 64-bit edition of Microsoft SQL Server 2008 R2. ▪ The 64-bit edition of Microsoft SQL Server 2008 with Service Pack 1 (SP1) and Cumulative Update 2. NOTE: Deltek recommends SQL 2008 Sp3 with Vision 7.1 ▪ The 64-bit edition of Microsoft SQL Server 2005 with Service Pack 3 (SP3). NOTE: Even though SQL 2005 is supported for SharePoint Foundation 2010, Deltek **does not** support SQL Server 2005 with Vision 7.1 if you will be using the same database server for Vision and SPF 2010. For more information about choosing a version of SQL Server, see SQL Server 2008 R2 and SharePoint 2010 Products: Better Together (white paper) (SharePoint Server 2010).

The Document Management installation does not check the edition, platform or version of your SharePoint database server but the SharePoint 2010 Products Configuration Wizard will and will fail to configure SharePoint until the database prerequisites have been met.

For example, you may see an error similar to the following:



Prerequisites

- Install/upgrade your Vision installation to Vision 7.1 (if applicable).
- Change the Application Pool Identity for the DeltekVisionAppPool to be a domain user account (the Vision 7.1 installation sets this to be the local DeltekVision account).
- The domain service account used above will also be the SharePoint Service account.
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server.

Single Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Install Vision 7.1 Document Management and SharePoint Foundation 2010
3.	Vision Web/Application Server	Optional: Configure Authentication for the Vision Website
4.	Vision Web/Application Server	Optional: Configure Service Principal Name (SPN) for Vision Application Pool Identity
5.	SharePoint Web /Application Server	Run the SharePoint 2010 Products Configuration Wizard
6.	SharePoint Web /Application Server	Use SharePoint Central Administration to Complete the SharePoint Configuration

7.	SharePoint Web /Application Server	Optional: Configure SharePoint for a Custom URL
8.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
9.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
10.	Vision Web/Application Server	Configure Vision Document Management
11.	Domain	Configure Constrained Delegation – **Not Required**
12.	Domain	Optional: Configure Protocol Transition – **Not Required**

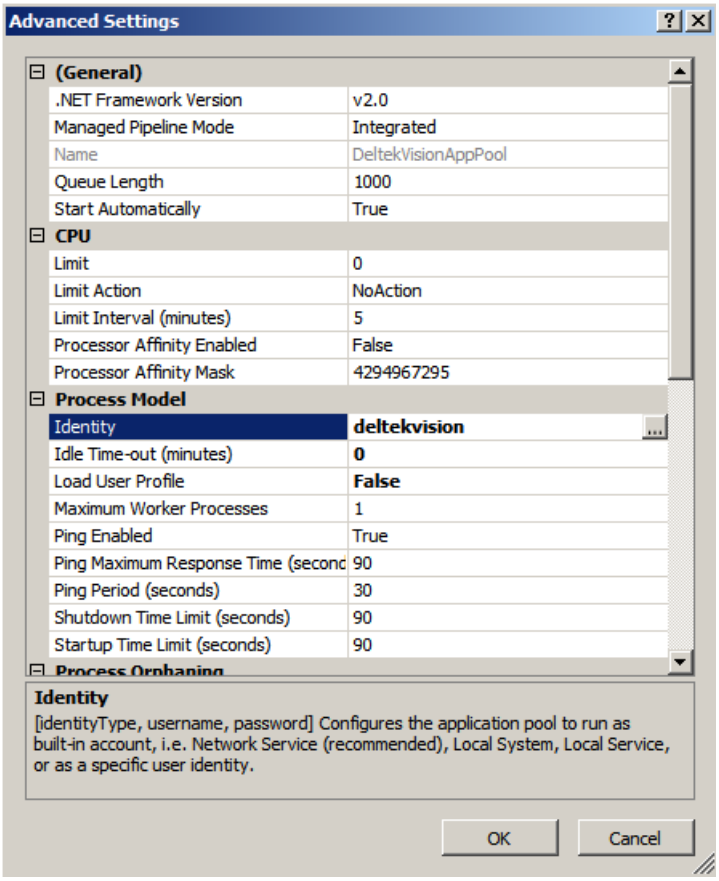
Configure Vision Application Pool Identity to Be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

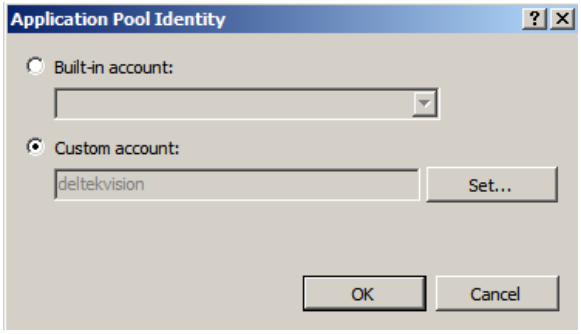
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server..

To change the Vision Application Pool Identity, complete the following steps:

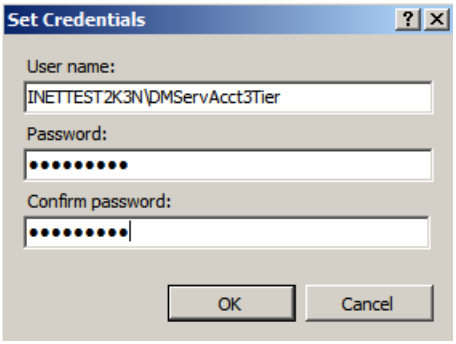
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side. The following displays:



6. Place your cursor in the **Identity** field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In the **User name** field, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In the **Password** and **Confirm password** fields, enter that user's password.
10. Click **OK** three times to set the identity.

Install and Configure Vision 7.1 Document Management and SharePoint Foundation (SPF) 2010

When you install Vision 7.1 Document Management SPF is automatically installed if your Operating System platform is x64 (64-bit). If you are upgrading from a previous version of Vision and/or already have SPF installed the changes made to your SPF installation are outlined below. The steps to configure SPF are outlined in this section.

The Document Management installation does the following:

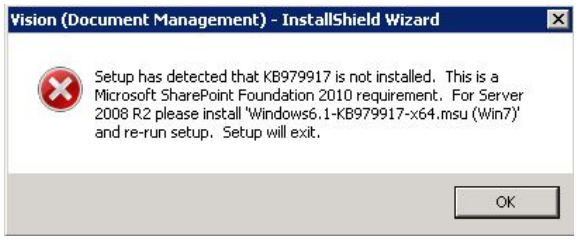
- Installs Web Service Extensions (WSE) 2.0 Sp3.
- Installs SPF 2010, if it is not already installed.
- Copies Document Management files to the SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\14\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server dll into the Global Assembly Cache (GAC).

Install Vision Document Management and SharePoint Foundation

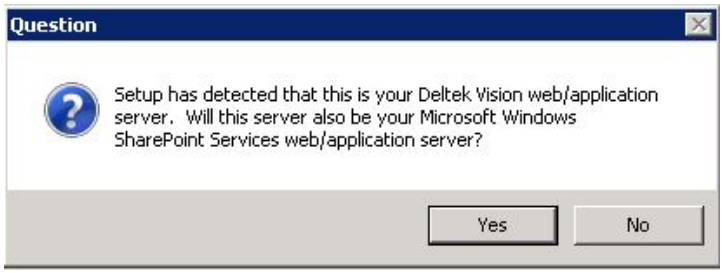
To install Vision Document Management and SPF 2010, complete the following steps:

1. As indicated at the beginning of this section, it is highly recommended that you install all available Windows Updates prior to proceeding with the installation.
2. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
3. The installation will check to ensure that the IIS Role service, Windows Authentication, is installed. If the Role Service is not installed, you are prompted to install it and the setup exits:

4. After installing the Windows Authentication IIS Role Service, re-run the Document Management installation. The installation checks to ensure that Hotfix KB979917 is installed (not applicable if you have Windows Server 2008 R2 Sp1 installed), which is a SPF 2010 Prerequisite not installed by the Prerequisite Installer. If it is not installed you are prompted to install it, the setup exits, and a browser window opens to display the download site. Make sure to choose the correct x64 version; Vista is Server 2008 and Win7 is Server 2008 R2.

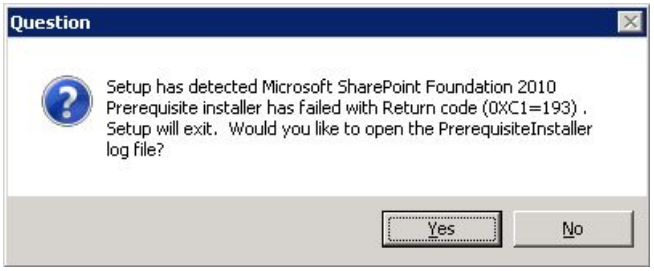


5. After installing the hotfix for KB979917 (if applicable), re-run the Document Management installation.
6. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
7. On the first Document Management Installation Wizard page, click **Next**.
8. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
9. When this message displays, click **Yes** because this is a single-tier installation of Vision Document Management and this server will host both Vision and SPF 2010.



10. On the Ready to Install the Program page, click **Install** to start the installation. The installation automatically downloads SharePoint Foundation 2010, extracts the setup files and installs SharePoint.
11. When the “Files extracted successfully” message displays, click the **OK** button to continue the installation.
12. The installation will launch the SharePoint Foundation Prerequisite Installer to install all prerequisite components.

If there are errors installing any of these components you will see a dialog indicating that the Prerequisite Installer failed and a link to open the log file and the installation will end. The following is an example:



The following is an excerpt from the Prerequisite Installer log file related to this error which indicates a problem installing the Microsoft Chart Controls for Microsoft .Net Framework 3.5:

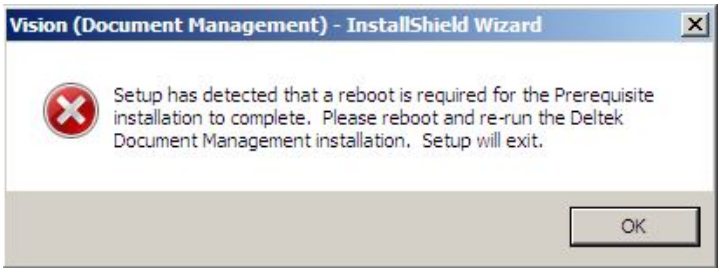
```
2010-08-26 08:58:54 - Beginning download of Microsoft Chart Controls for Microsoft .NET Framework 3.5
2010-08-26 08:58:54 - http://go.microsoft.com/fwlink/?LinkID=160383
2010-08-26 08:59:26 - Download timeout (0x80072EE2=-2147012894)
2010-08-26 08:59:26 - Retrying download from position (in bytes) (0x10B400=1094656)
2010-08-26 08:59:26 - Size of download of "Microsoft Chart Controls for Microsoft .NET Framework 3.5" in bytes is "1094656"
2010-08-26 08:59:26 - Download of "Microsoft Chart Controls for Microsoft .NET Framework 3.5" completed successfully
2010-08-26 08:59:26 - Installing Microsoft Chart Controls for Microsoft .NET Framework 3.5
2010-08-26 08:59:26 - "C:\Users\ADMINI~1.INE\AppData\Local\Temp\2\Cha2726.tmp.exe" /q /norestart
2010-08-26 08:59:26 - Error: Unable to install (0XC1=193)
2010-08-26 08:59:26 - Error: [In HRESULT format] (0x800700C1=-2147024703)
2010-08-26 08:59:26 - Last return code (0XC1=193)
2010-08-26 08:59:26 - Error: The tool was unable to install Microsoft Chart Controls for Microsoft .NET Framework 3.5.
2010-08-26 08:59:26 - Last return code (0XC1=193)
2010-08-26 08:59:26 - Options for further diagnostics: 1. Look up the return code value 2. Download the prerequisite manually and v
2010-08-26 08:59:26 - Cannot retry
```

To locate the Prerequisite Installer log file, check:

c:\users\<username>\appdata\local\temp\<numbered subdirectory>.

If there are errors installing any software prerequisites, download and install them manually and then re-run the Document Management installation. Links to all software prerequisites can be found at: http://technet.microsoft.com/en-us/library/cc288751.aspx.

If a reboot is necessary, a dialog box displays to indicate this and the installation ends. The following is an example:



13. After resolving all issues with the prerequisite installations and/or rebooting as required, start the Document Management installation again to complete the installation. You may need to run the installation several times to complete.
14. The installation then launches the SharePoint Foundation installation routine. If there are errors installing SharePoint, a dialog box displays with a link to open the log file.
15. After resolving any issues, start the Document Management installation again to complete the installation.
16. When the InstallShield Wizard Complete page displays, click **Finish**.

Optional: Configure Authentication for the Vision Website

This is an "Optional" step for single tier installations and only required if the default configuration does not work for your setup.

IIS Kernel Mode Authentication

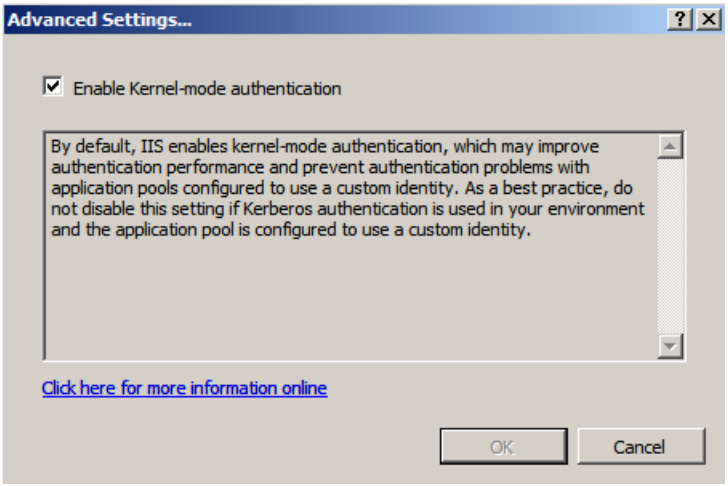
The default configuration of IIS when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because delegation is not required for single tier deployments of Vision Document Management, the additional configuration steps below are optional. However, if you do change the default of enabling Kernel Mode Authentication you will be required to create an SPN which is outlined in next section.

Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS, it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.
6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path=”Default Web Site/Vision”>

5. Locate the windowsAuthentication tag and add **useAppPoolCredentials=”true”** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Optional: Configure Service Principal Name (SPN) for Vision Application Pool Identity

This is an "Optional" step for single tier installations and only required if the default configuration does not work for your setup.

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication and Vision Document Management will work just fine on single tier installations as delegation is not required.

However, if you opted to modify the default of enabling Kernel Mode Authentication for the Vision web site as described in the preceding section, it will be necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

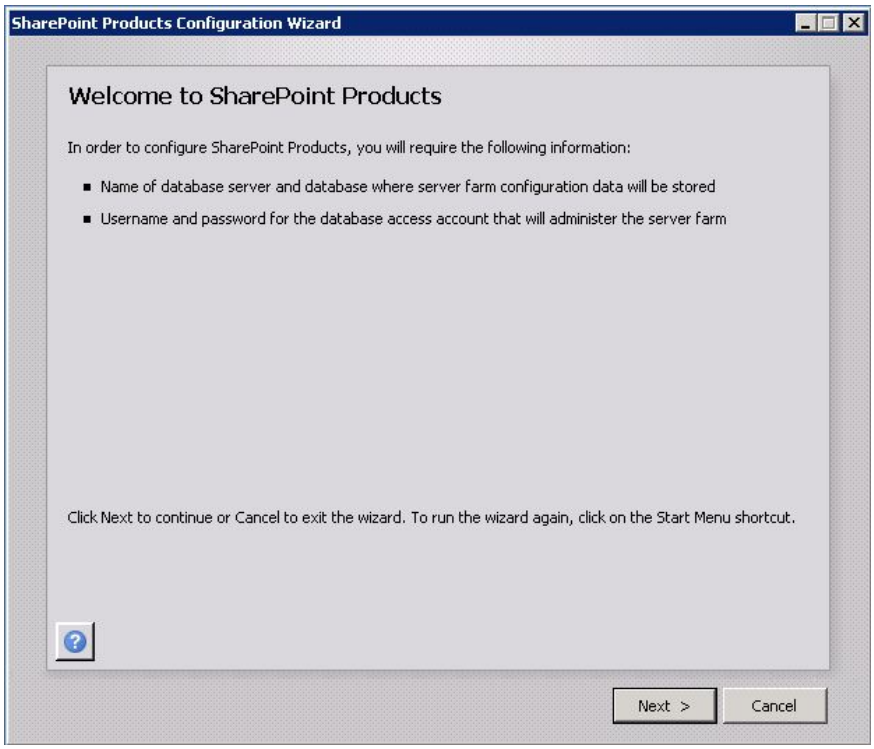
See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

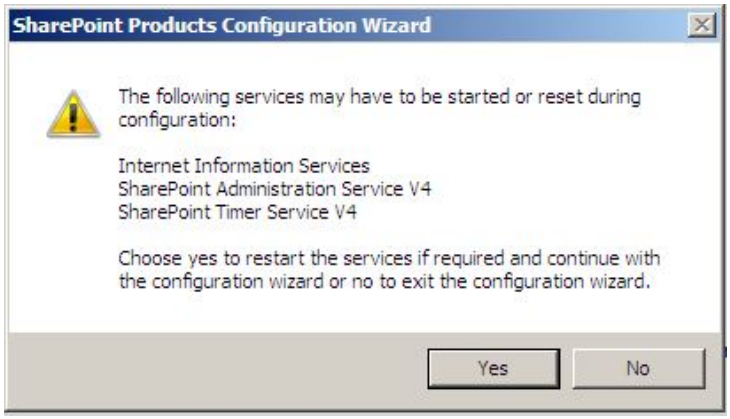
Run the SharePoint 2010 Products Configuration Wizard

To run the SharePoint 2010 Products Configuration Wizard, complete the following steps:

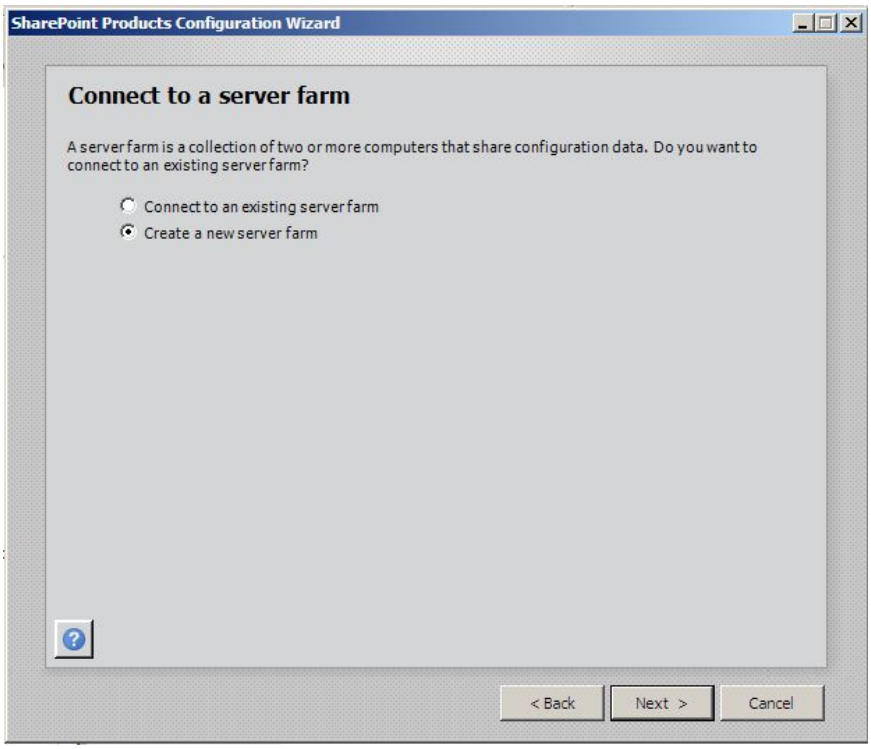
1. Click **Start » All Programs » Microsoft SharePoint 2010 Products » SharePoint 2010 Products Configuration Wizard**. The Welcome page displays.



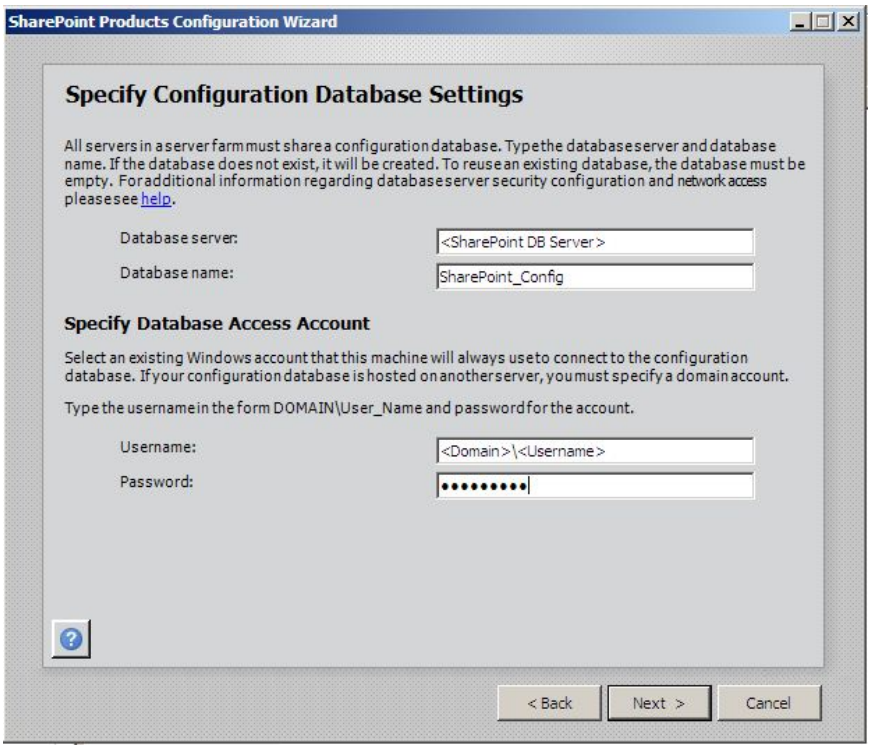
2. Click **Next**. The following dialog box displays.



3. Click **Yes**. The Connect to a server farm page displays.

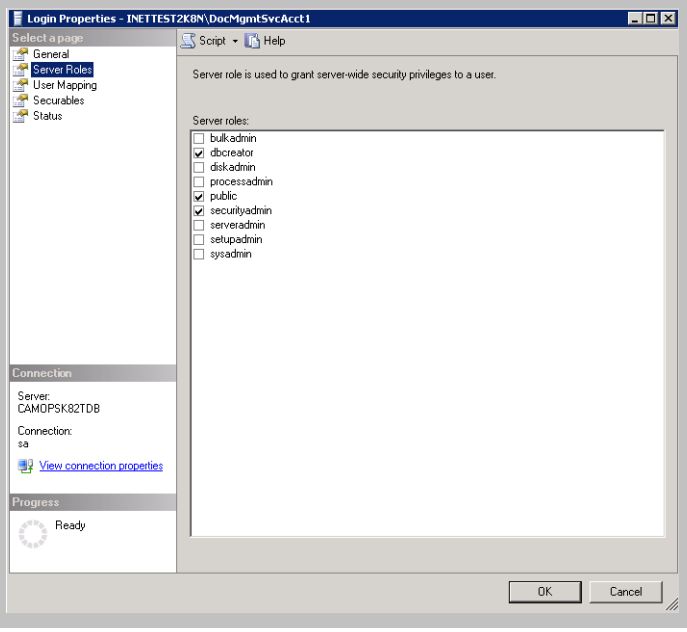


4. Select the C**reate a new server farm** option and click **Next**. The Specify Configuration Database Settings page displays.

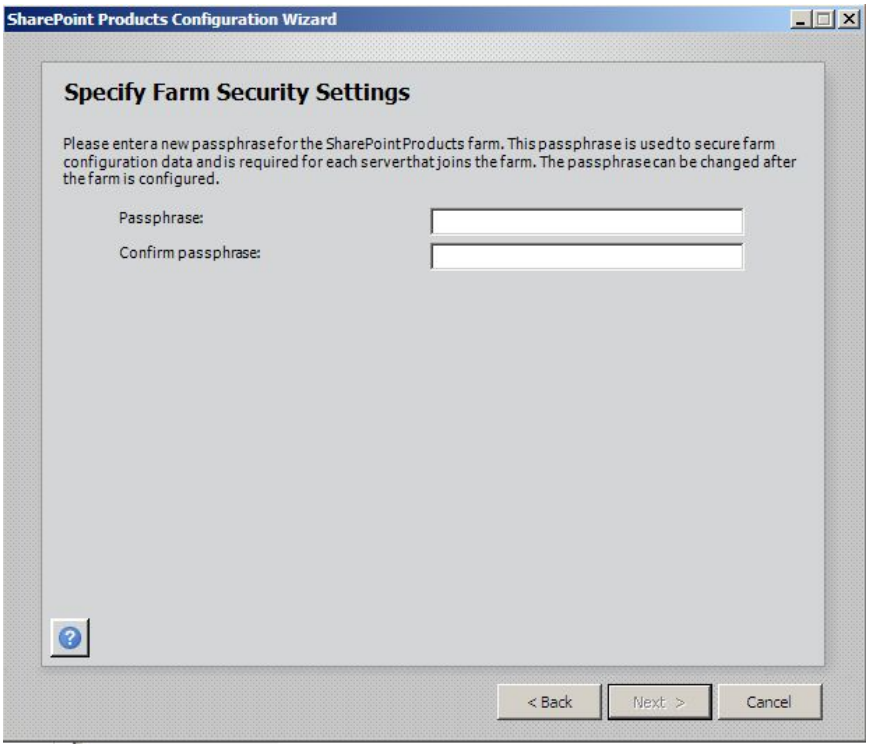


5. Enter the name of the database server to host the SharePoint configuration database and accept the default database name: SharePoint_Config.

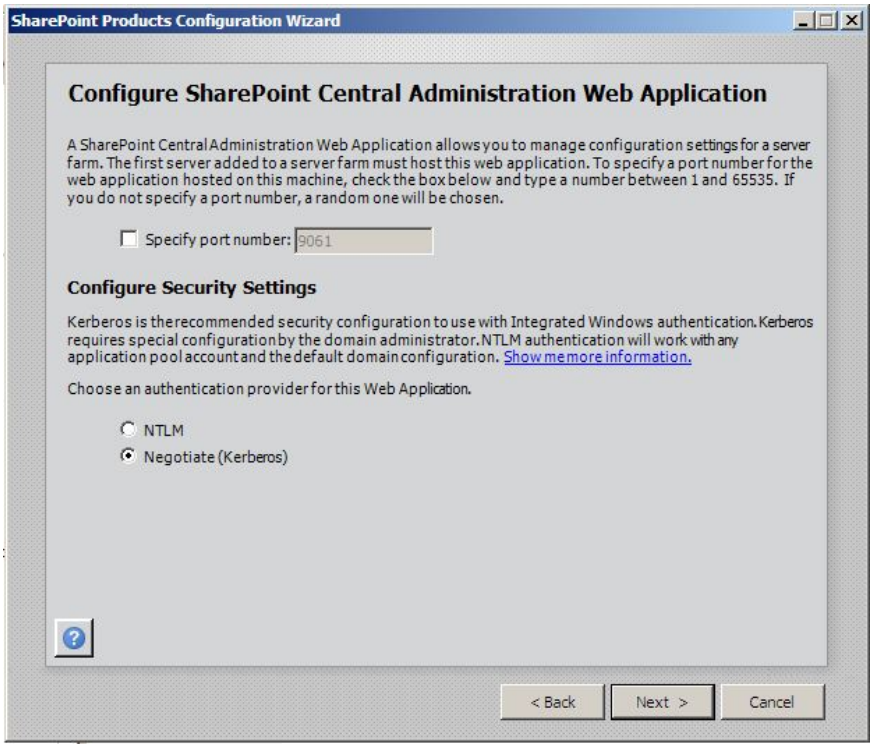
Your SharePoint database access account will need to have the dbcreator and securityadmin SQL Server Roles. This is accomplished by adding the domain account as a SQL Server login and adding the roles as shown below:



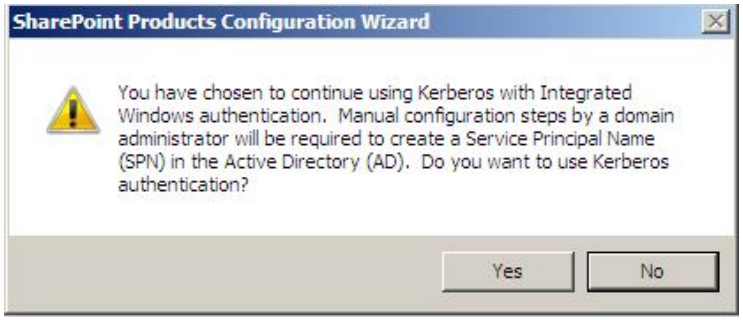
6. In **Username**, enter the domain and name of the Vision Application Pool Identity (as configured earlier) as the username for the SharePoint database access account, and enter the user's password in **Password**.
7. Click **Next**. The Specify Farm Security Settings page displays:



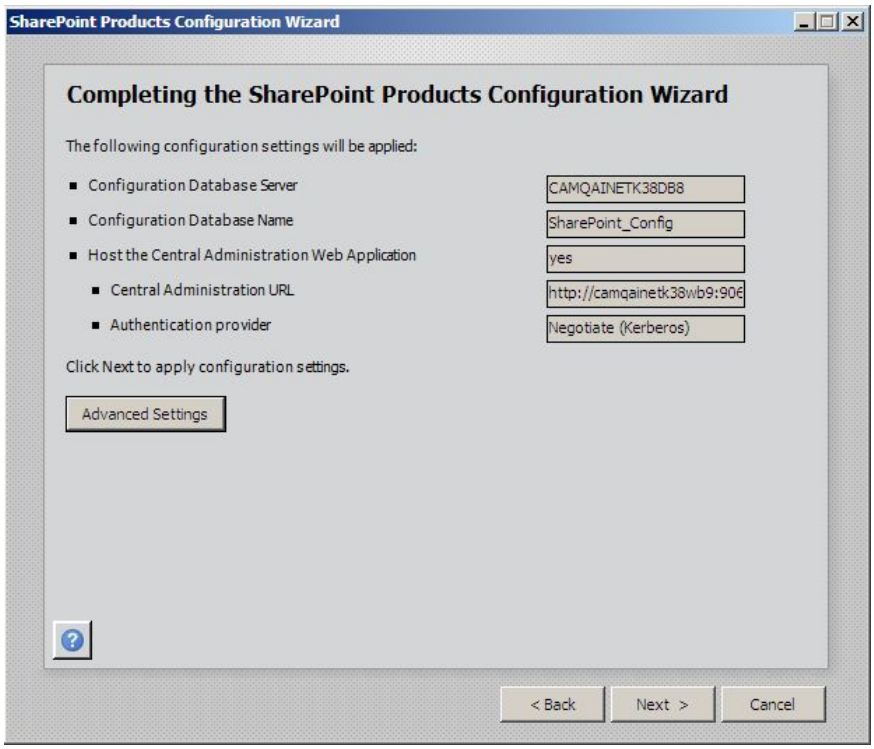
8. Enter a **Passphrase** for your Farm.
9. Click **Next**. The Configure SharePoint Central Administration Web Application page displays.



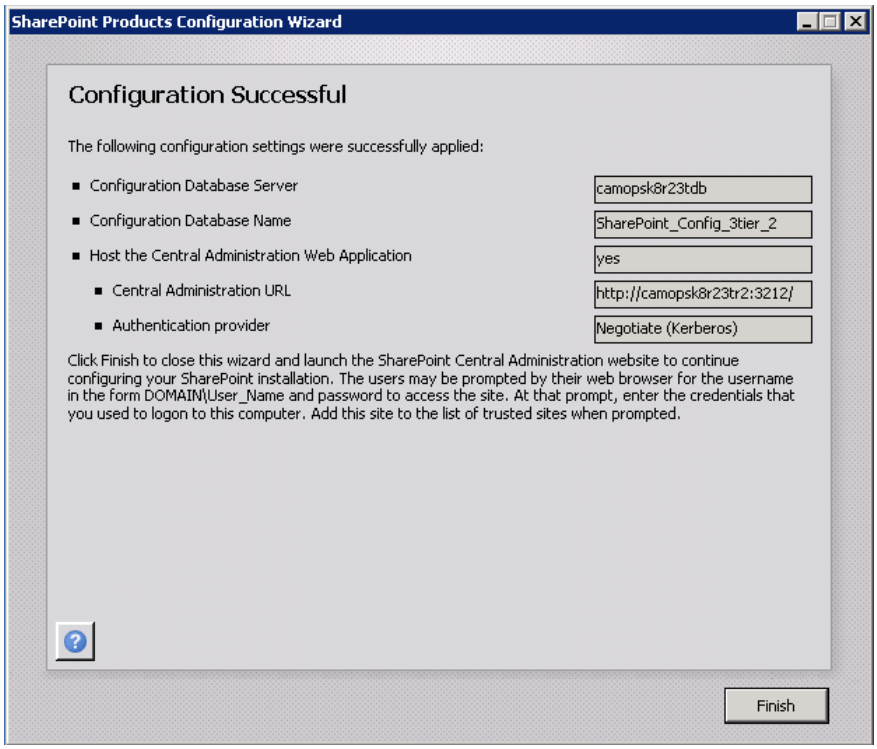
10. Select the **Specify port number** check box and enter the port to be used for the SharePoint Central Administration Web site and select the **Negotiate (Kerberos)** option for the Authentication provider to use.
11. Click **Next**. The following dialog box displays.



12. Click **Yes to continue using K**erberos with Windows Authentication. The Completing the SharePoint Products and Technologies Configuration Wizard page displays.



13. Click **Next** to begin the configuration. This process may take some time to complete. The Configuration Successful page displays when configuration is complete.

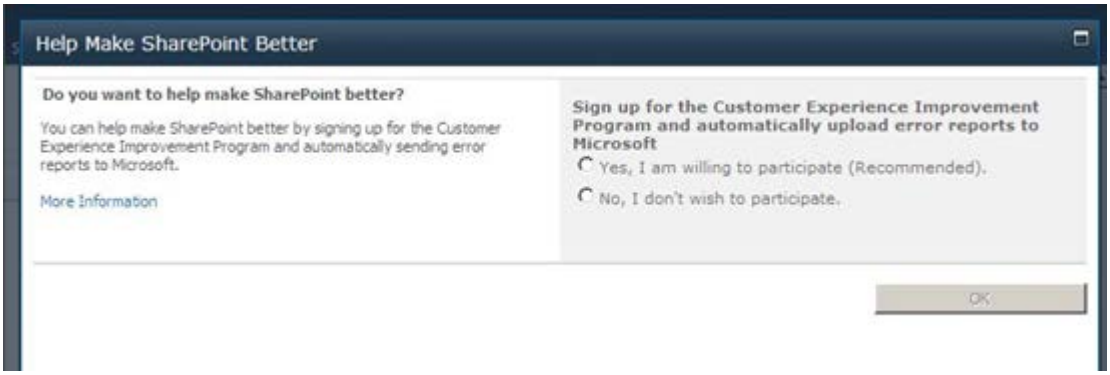


14. Click **Finish** to finish the configuration process. The SharePoint Central Administration page displays.

Use SharePoint Central Administration to Complete the SharePoint Configuration

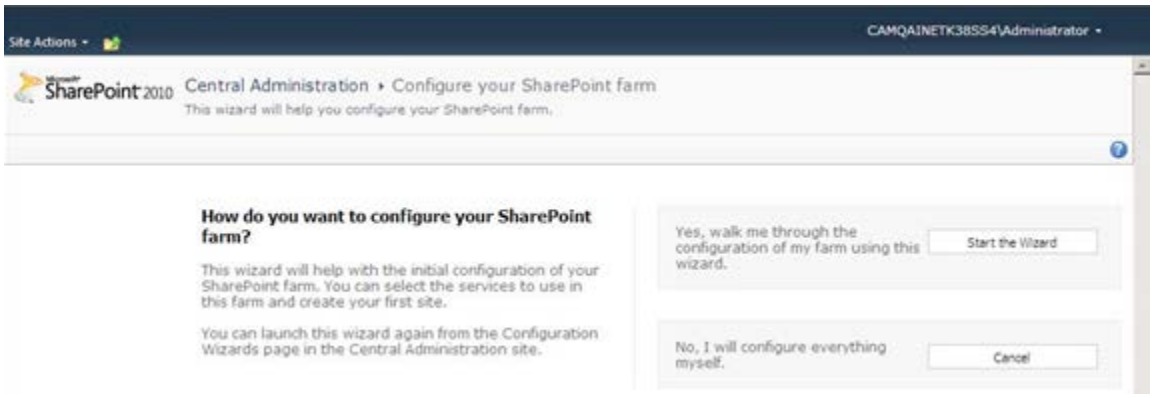
To finish the SharePoint Configuration, complete the following steps:

1. When you click **Finish** in the preceding procedure, SharePoint Central Administration is launched.

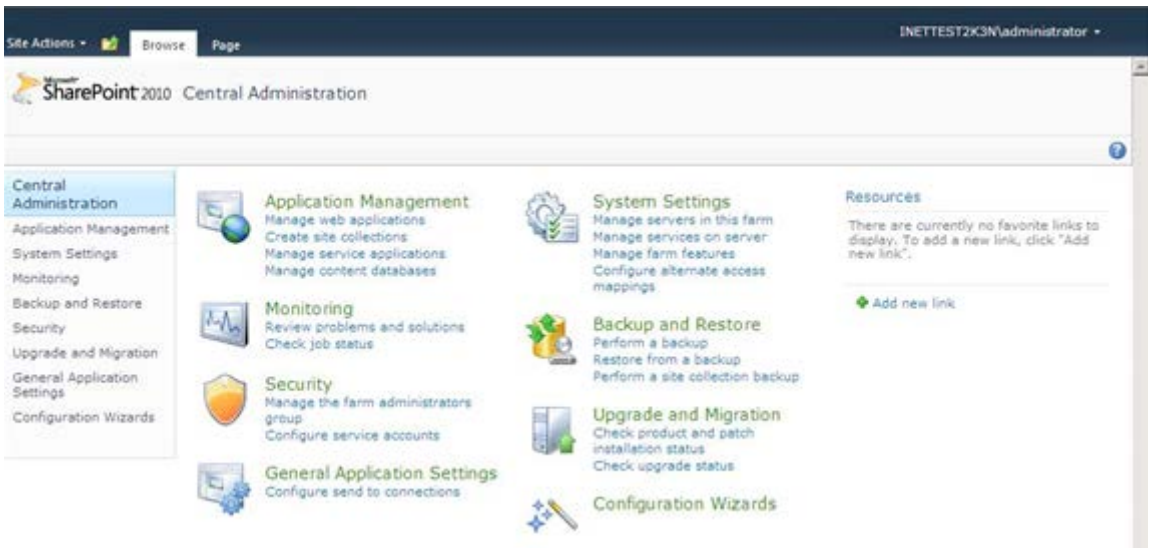


2. Decide whether to sign up for the SharePoint Customer Experience Program and click **OK**. The Configure your SharePoint Farm Wizard page displays.

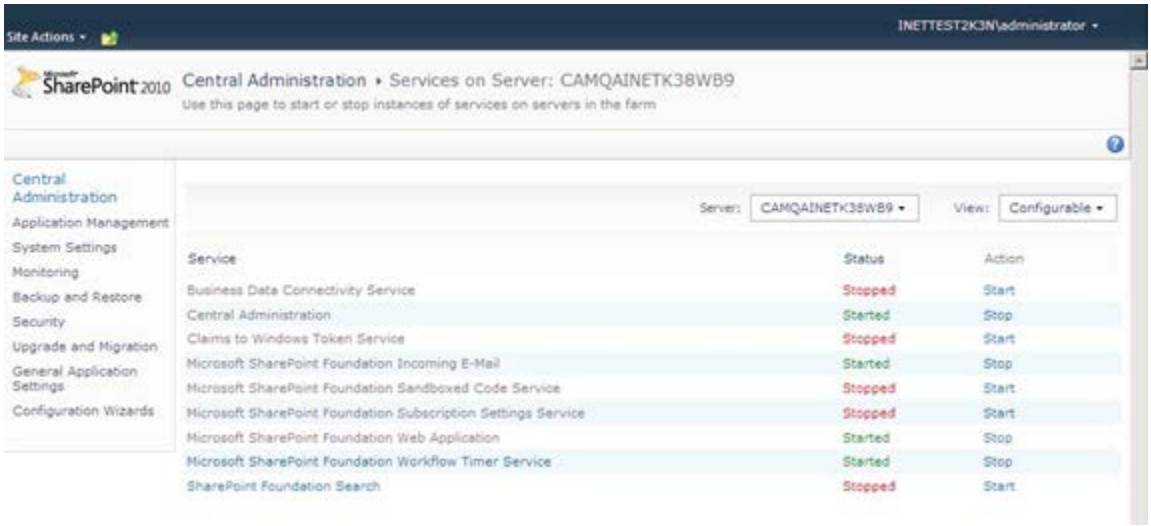
> **!!IMPORTANT!!**
>
> **Do not** use the SharePoint Farm Wizard. Doing so will cause Vision to stop functioning! Instead, choose the Cancel button "No, I will configure everything myself"



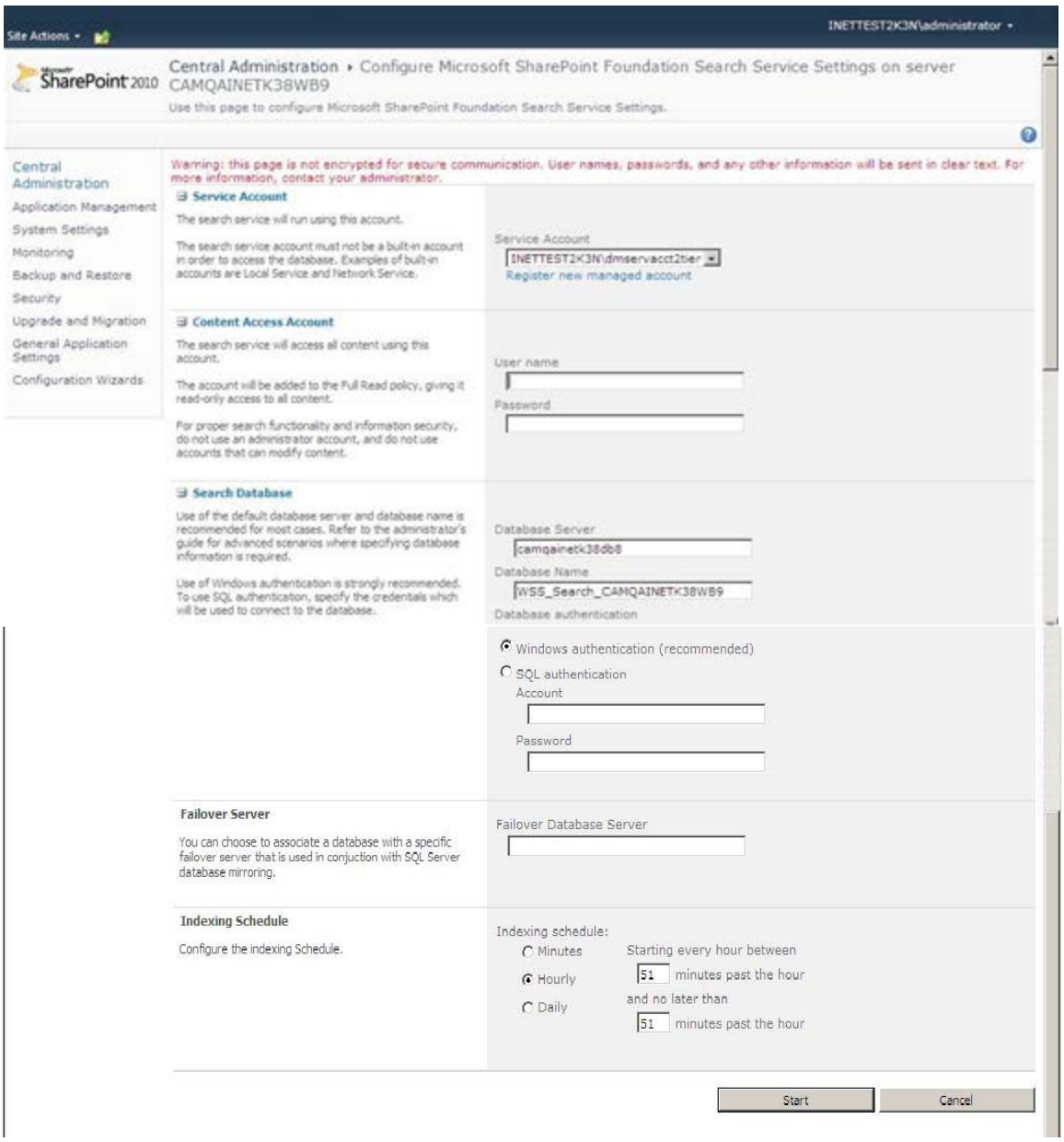
3. Click **Cancel** to configure everything yourself. The main Central Administration page displays.



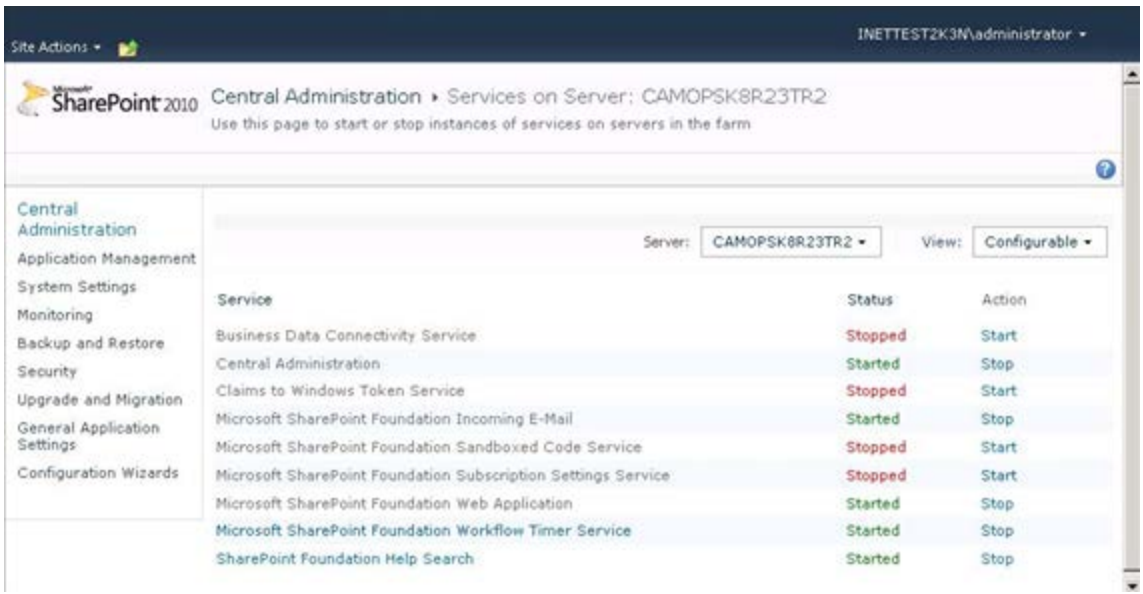
4. Under System Settings, select **Manage Services on Server**. The Services on Server page displays:



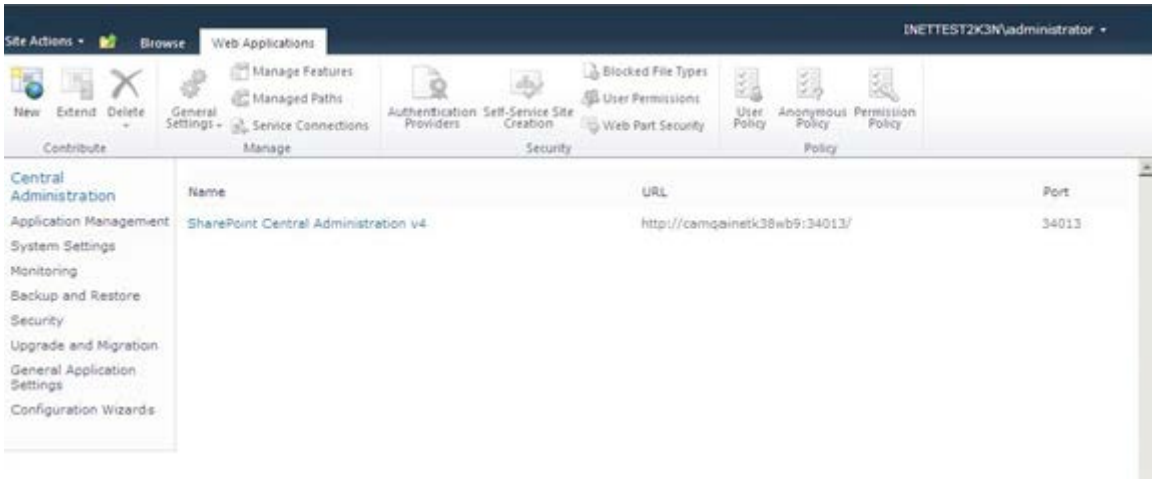
5. Locate SharePoint Foundation Search and click **Start**.



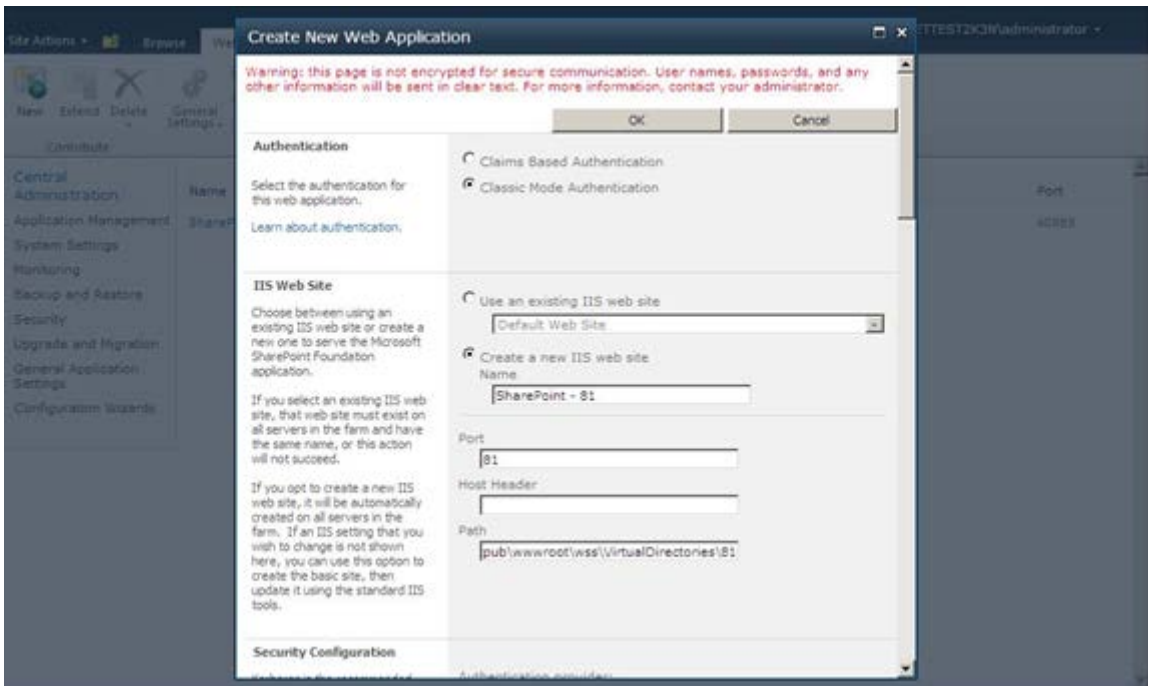
6. Configure the search service to include the Service account and Content Access account (use the same account information as your Vision Application Pool Identity).
7. Configure **Search Database** as shown above and click **Start**. After a minute or so, the service's status changes to **Started**.



8. Click **Application Management** and then **Manage Web Applications**. The Web Applications page displays.



9. Click the **New** button. The Create New Web Application page displays.

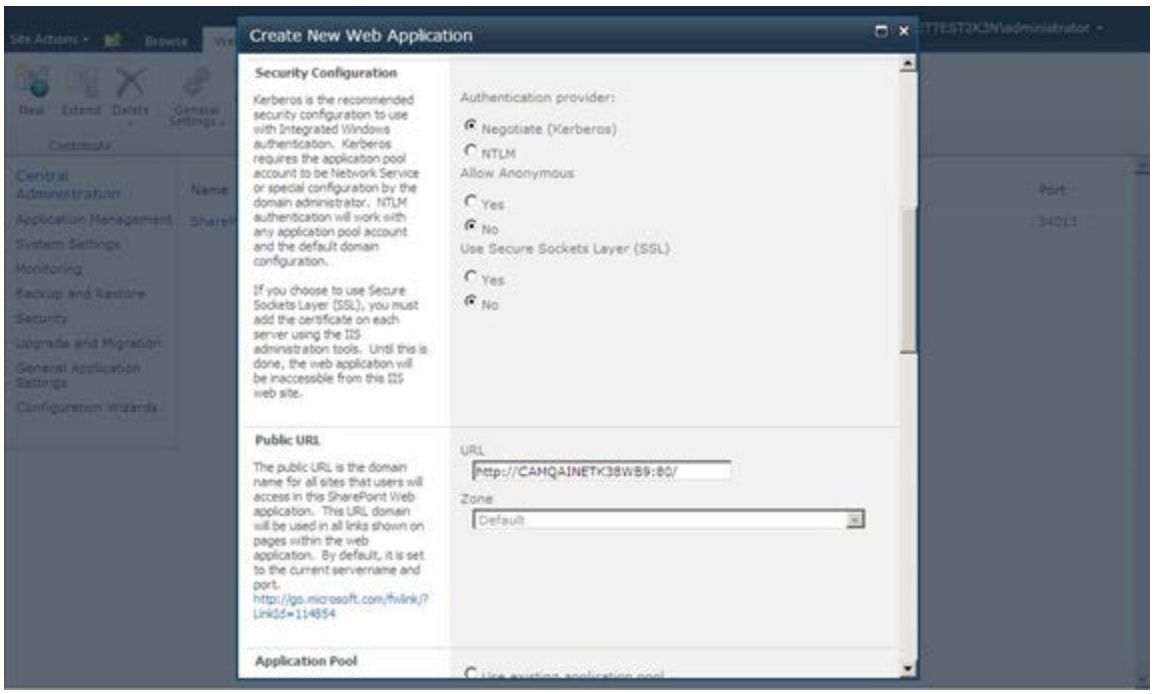


10. Select Classic Mode Authentication as the Authentication type.
11. Select the **Create a new IIS web site** option. Enter a description for the Web site and specify a port different that that being used for the Vision web site in **Port**.

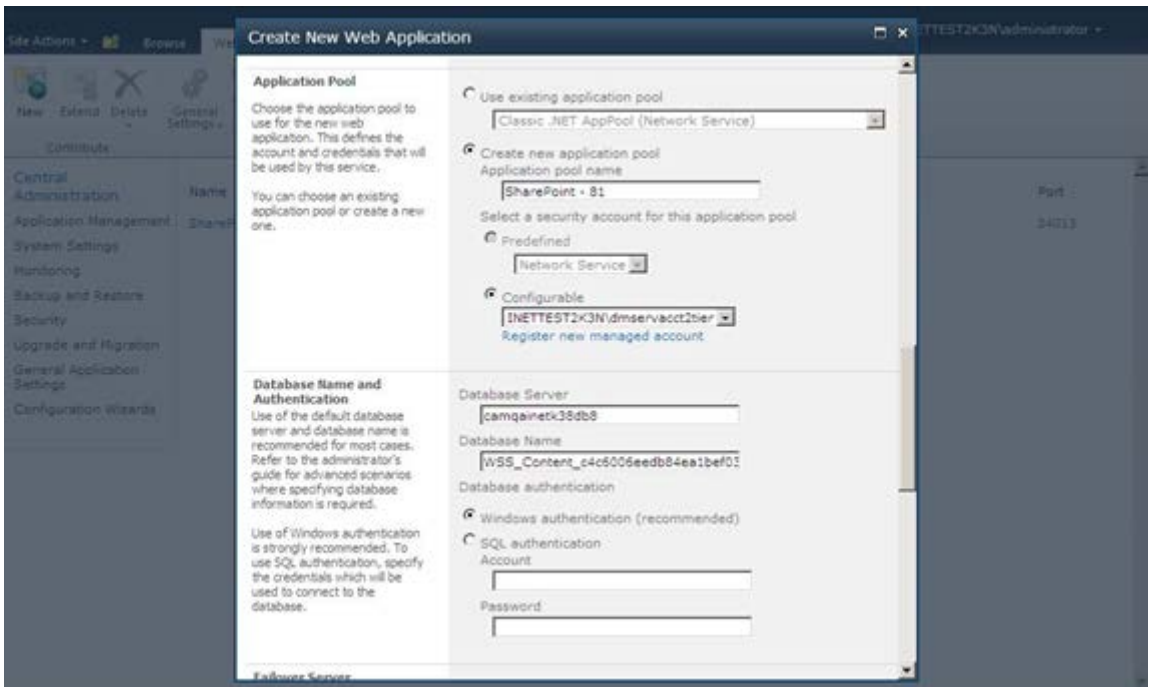
    SharePoint defaults to ‘SharePoint – 80’ and ‘80’ as the site name and port, if you change the port to be 81 (as shown), the web site name changes automatically to ‘SharePoint – 81’

> **Warning!**
>
> With SPF 2010, Vision and SharePoint ***cannot*** be installed to the same Web site. Choosing to install SPF to the same website as Vision will cause Vision to no longer function.
>
> Alternatively, you can create a new Web site (different from the website Vision is installed to) ahead of time using a different IP address or port and select the option to **Use an existing IIS web site**.

Note the entry in **Path**, which by default is the root of your WSS Web site in a directory named after the port chosen under c:\inetpub\wwwroot\wss\virtualdirectories.

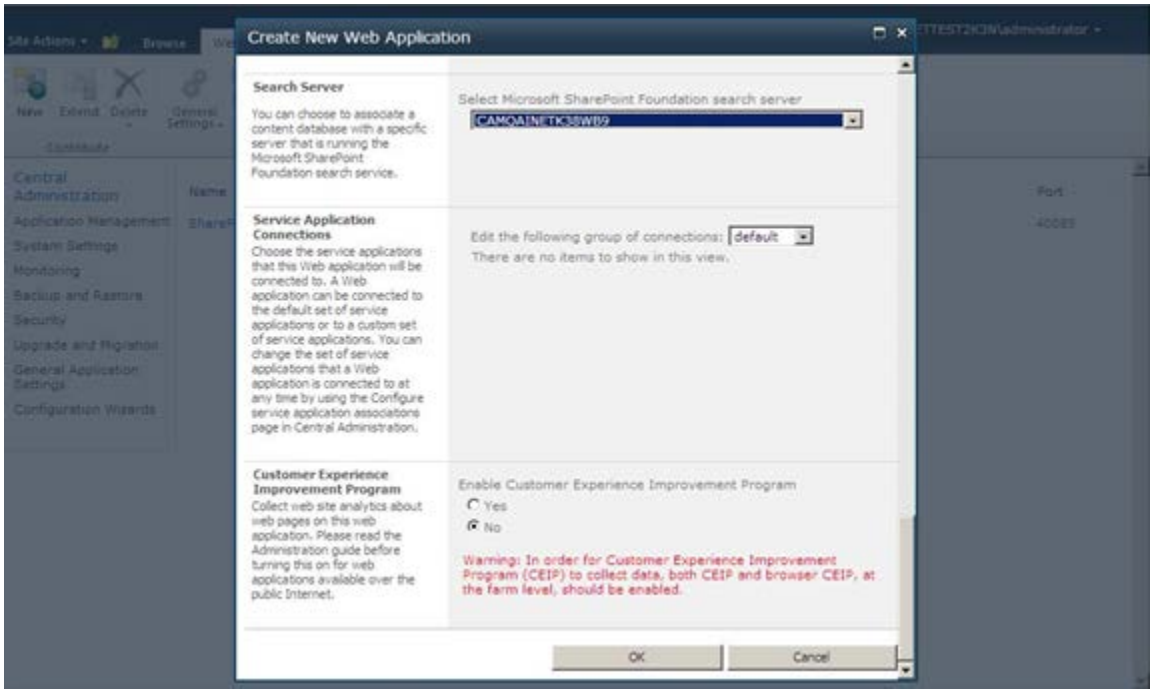


12. Select **Negotiate (Kerberos)** under **Authentication provider**.
13. For the **Allow Anonymous** and **Use Secure Sockets Layer (SSL)** options, accept the default of **No**. If you want to use SSL with SharePoint, you can configure SSL later, but you must not configure SSL to be required as the web service calls from the Vision Web/Application server cannot use SSL..

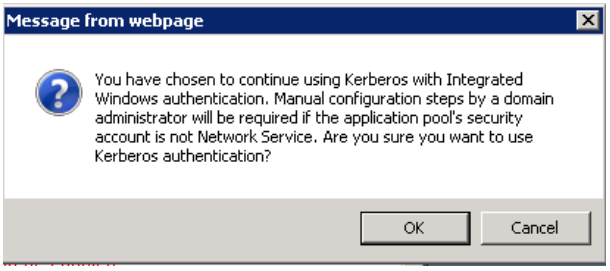


14. Select the **Create new application pool** option and provide a name (Deltek recommends using the same name as the Web site for consistence, for example, SharePoint - 81).

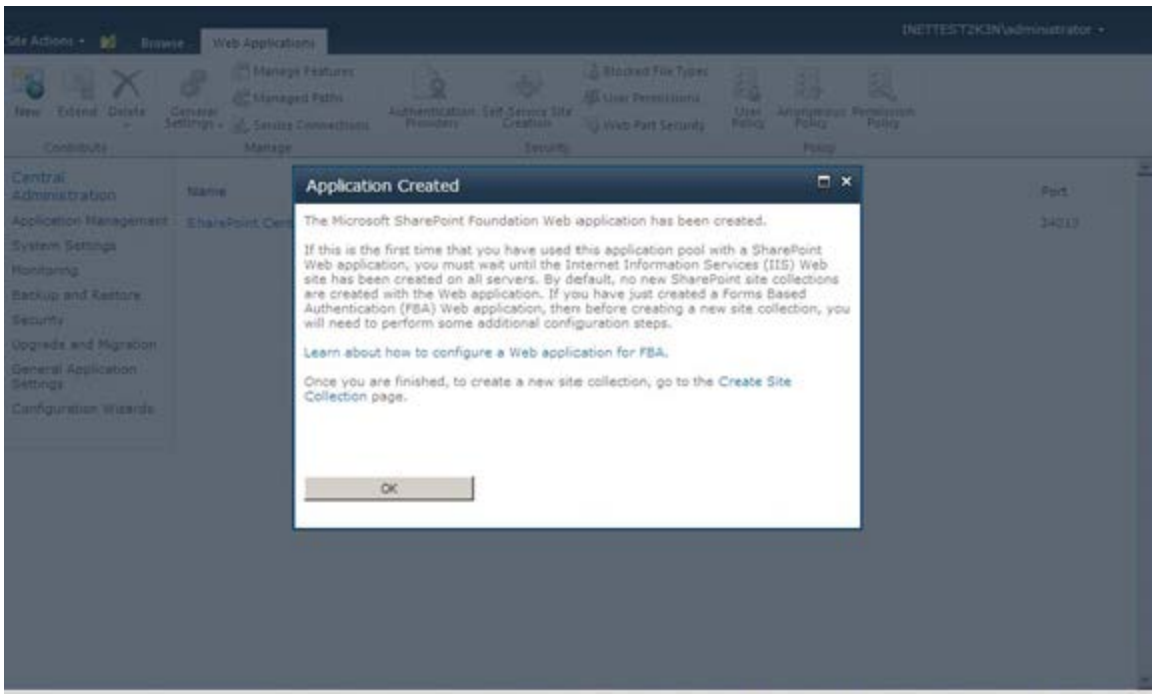
15. Using **Network Service** is not an option for SPF. Use the same account used for the Deltek Vision Application Pool. NOTE: Since the SharePoint Application Pool will run as a domain account, an SPN is required; however, since this application pool will run as the same account as the Deltek Vision Application Pool, and you have already created an SPN for that account, no additional SPN's are necessary.
16. Verify the name of the server in **Database Server**. (It should be the same as that used for the SharePoint configuration database server.) Accept the default in **Database Name** and it is recommended to modify the name of the Content database to something more recognizable (e.g. WSS_Content_SharePoint81).
17. Select **Windows authentication (recommended)** under **Database authentication**. (This will use the SharePoint service account and Vision Application Pool Identity configured previously.)



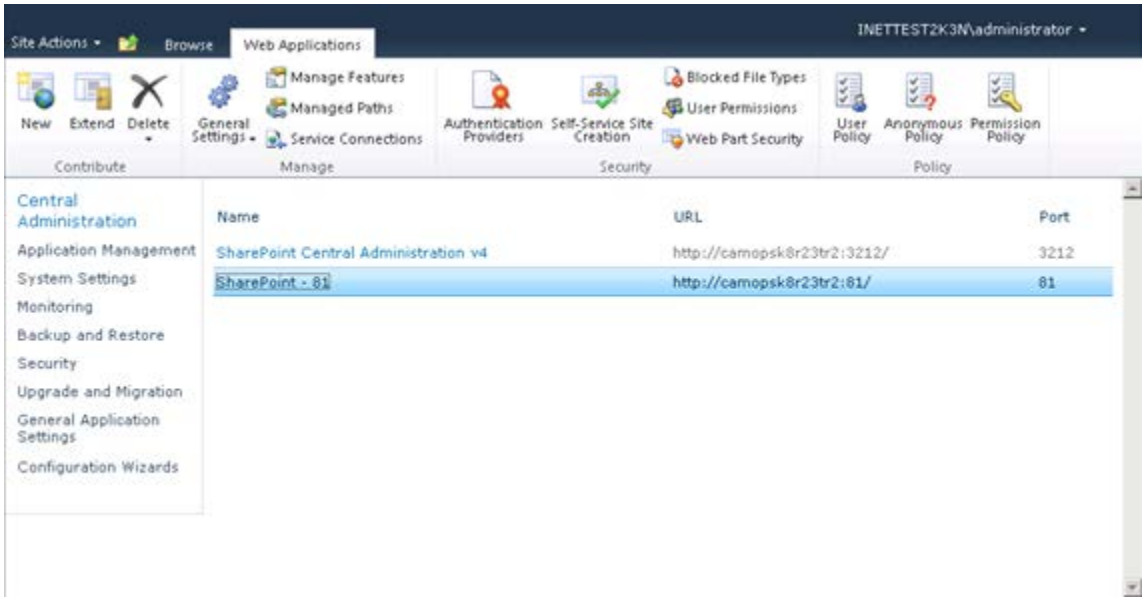
18. Select the search server in **Select Windows SharePoint Foundation search server** and click **OK**. The following dialog box displays.



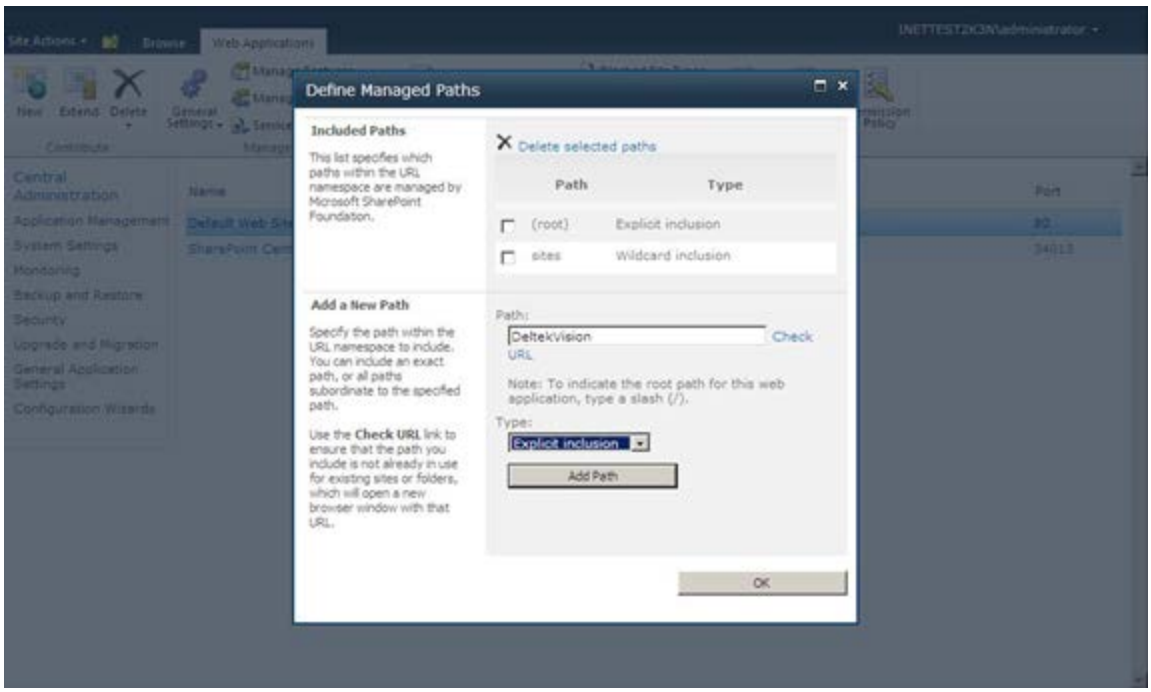
19. Click **OK** to use Kerberos for Windows Authentication. After a few minutes, the Application Created page displays. It indicates the status of the process to create a new Web application.



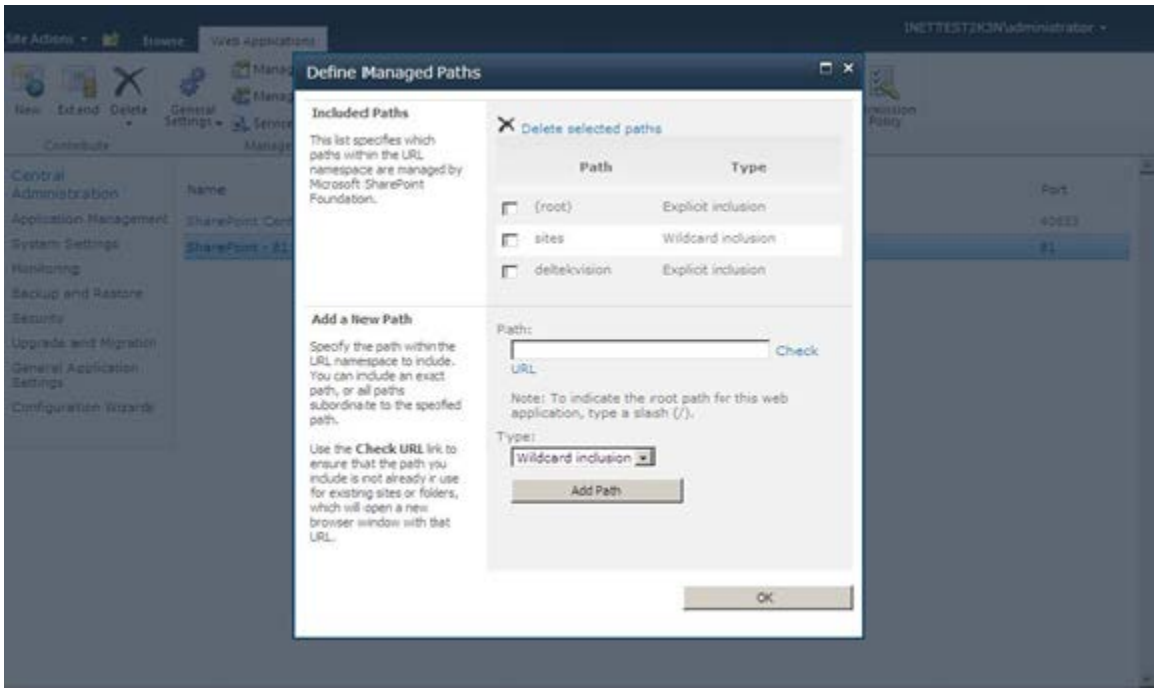
20. Do not click the link to **Create Site Collection** link at this time. It is still necessary to add DeltekVision as a managed path with explicit inclusion before you create the site collection.
21. Click **OK**, the Web Applications page displays.



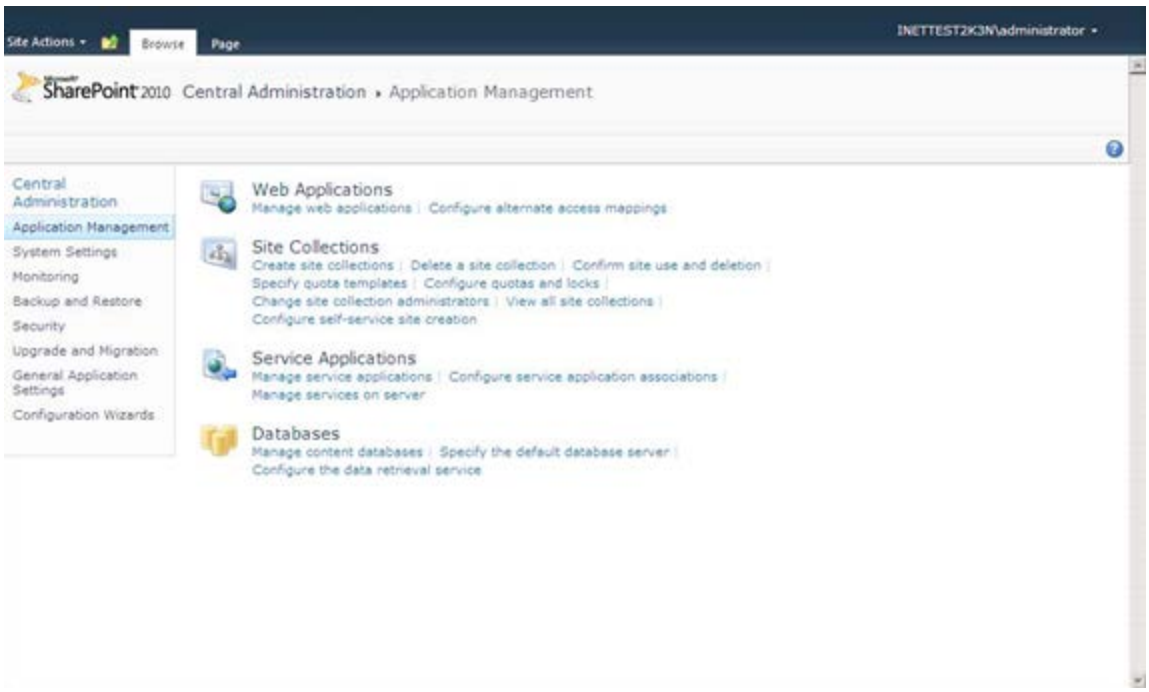
22. Select the SharePoint – 81 web application and click **Managed Paths.** The **Define Managed Paths** page displays.



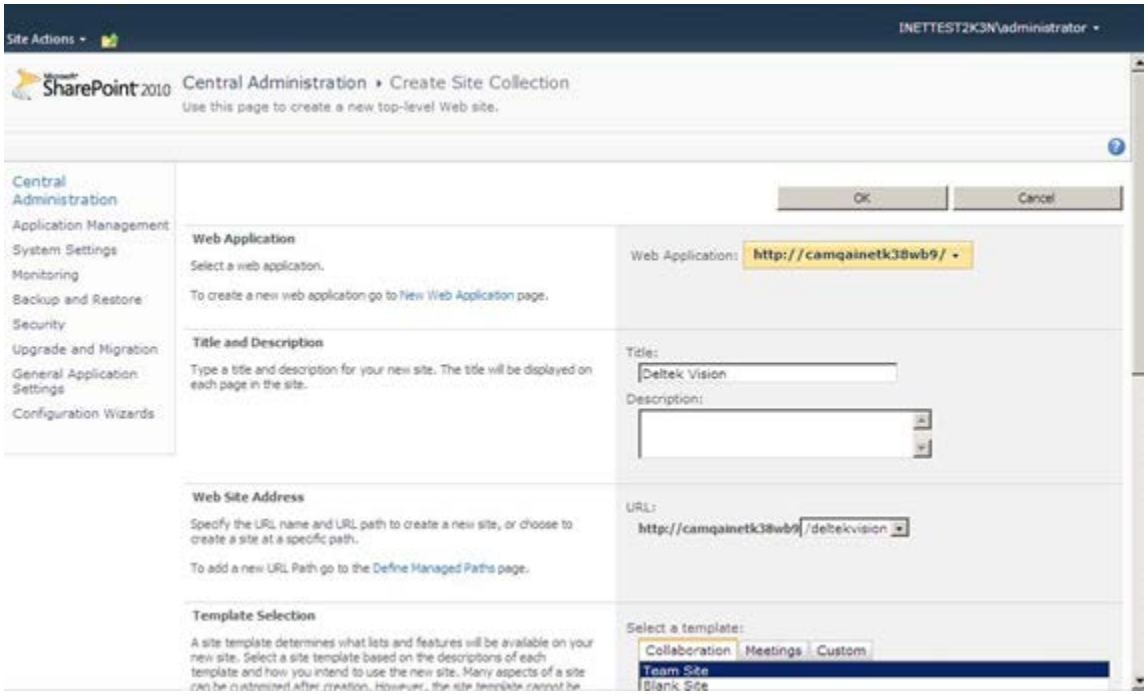
23. Enter **DeltekVision** in **Path** and select **Explicit inclusion** in **Type** and click **Add Path**.
24. Click **OK**. DeltekVision is now added as a Managed Path.



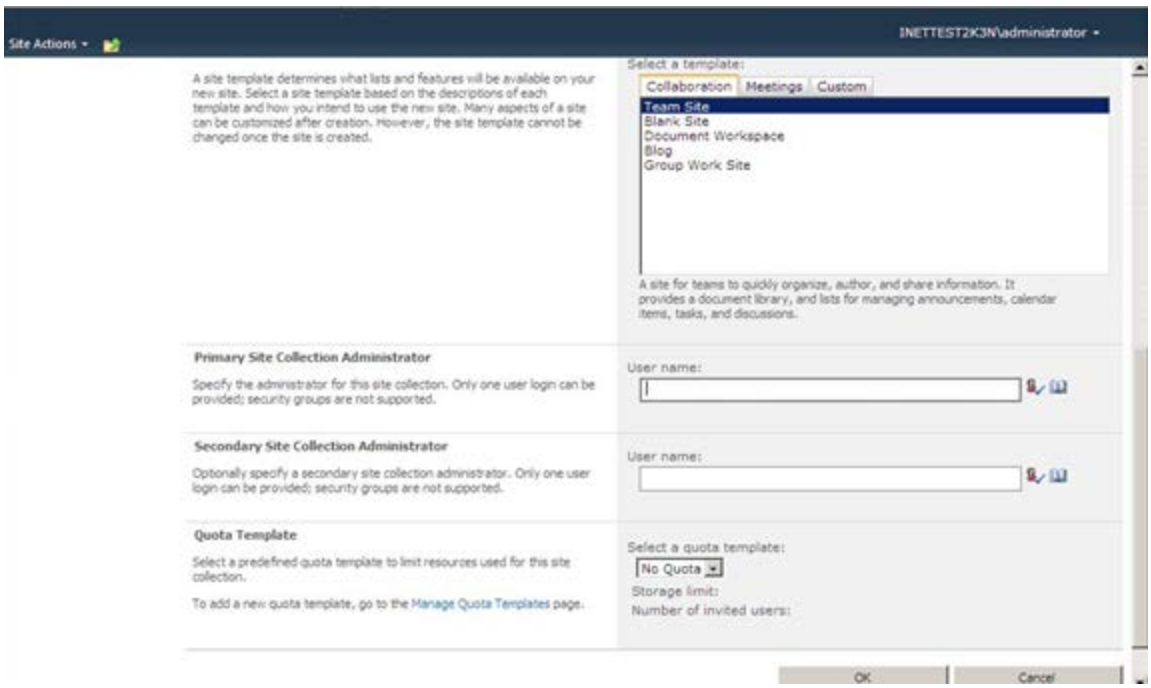
25. Click **Application Management** and select the **Create Site Collection** option under **Site Collections**.



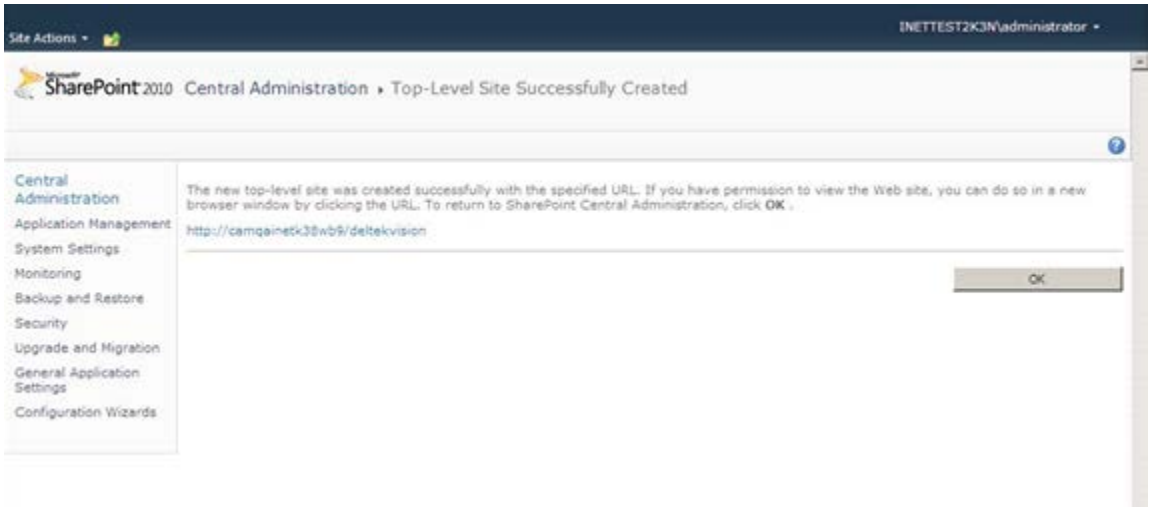
The Create Site Collection page displays.



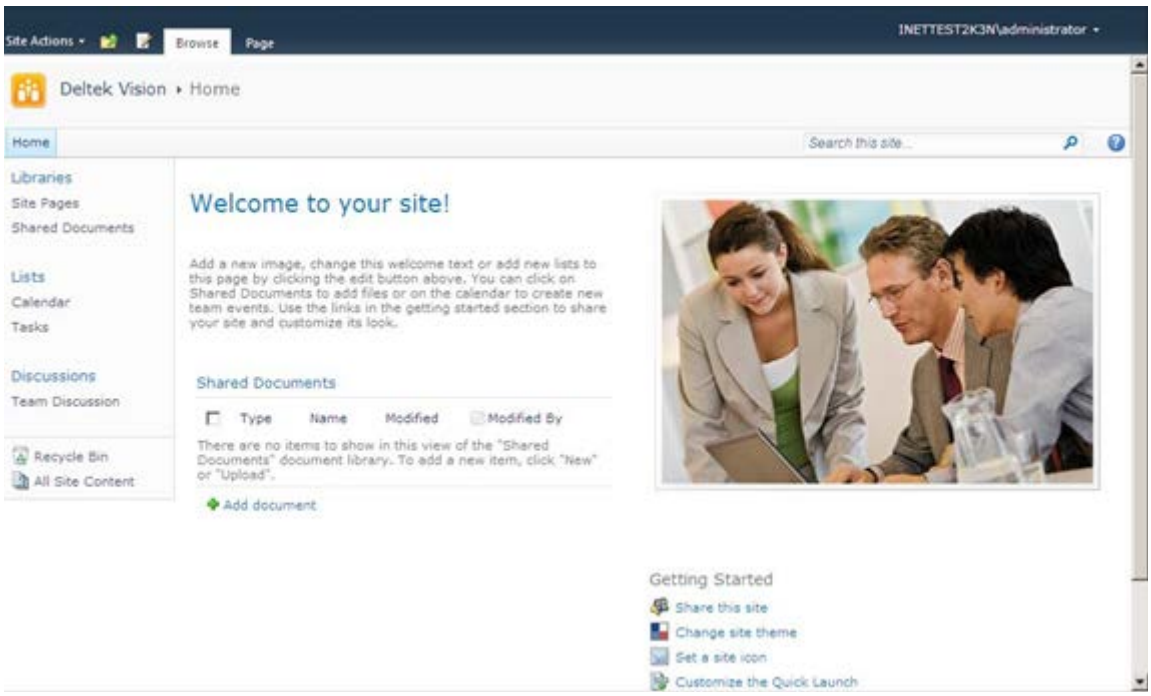
26. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
27. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root for Vision Document Management.



28. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
29. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



30. Click the link for the top level site (in our example it is http://camqainetk38wb9:81/deltekvision) to display the site.



31. The SharePoint configuration is complete. Close SharePoint Central Administration.

Optional: Configure SharePoint for a Custom URL

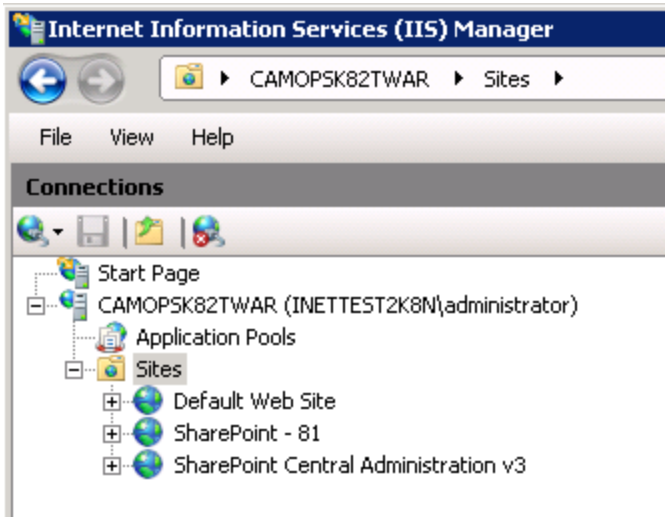
If you will be configuring your SharePoint server to use a custom DNS record for the URL (e.g. http://sharepoint.company.com instead of http://servername.company.com http://servername), then you must create additional SPNs and also create Alternate Access Mappings in SharePoint. It is recommended that this step be completed before Vision Document Management is configured in order to eliminate re-work.

See “Appendix B: Configure SharePoint for a Custom URL” for more information.

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

To verify IIS configuration, complete the following steps:

1. Use the directions that follow to open Internet Information Services to view these Web sites:
   - **Default Web Site** — This is your Vision Web Site
   - **SharePoint – 81** — This is your SPF 2010 Web Site
   - **SharePoint Central Administration Web Site**



2. Copy the Vision Document Management .NET assembly to SharePoint site directory.

   Copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to:

   c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin

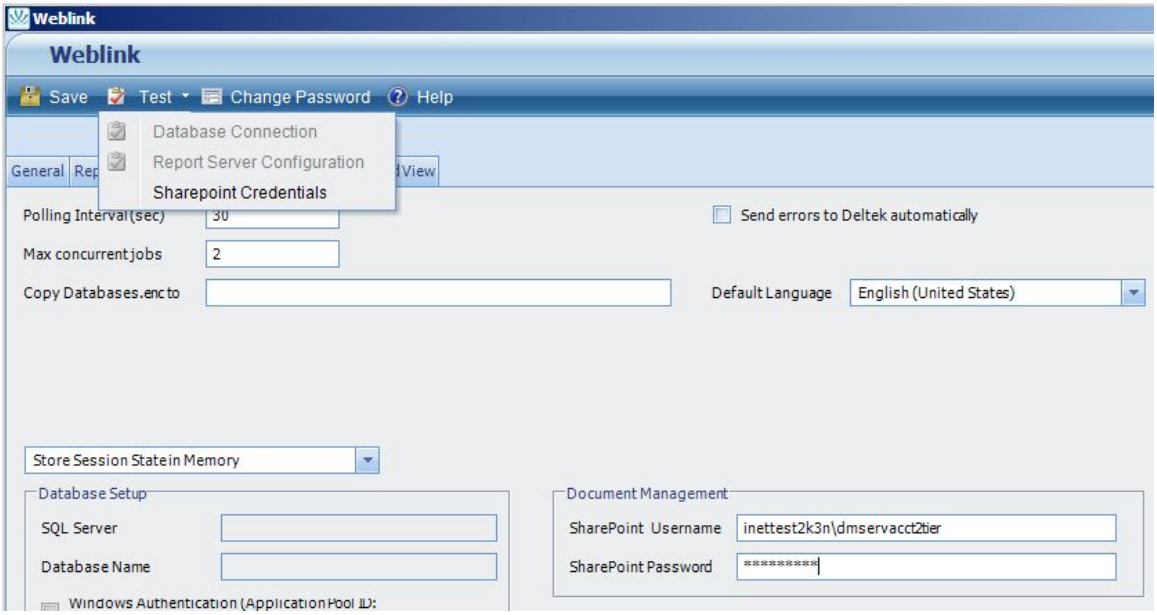
   By default, the <site> directory references the port chosen. In our example, the port is 81.

Configure Document Management Service Account in Weblink

You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the service account in Weblink, complete the following steps:

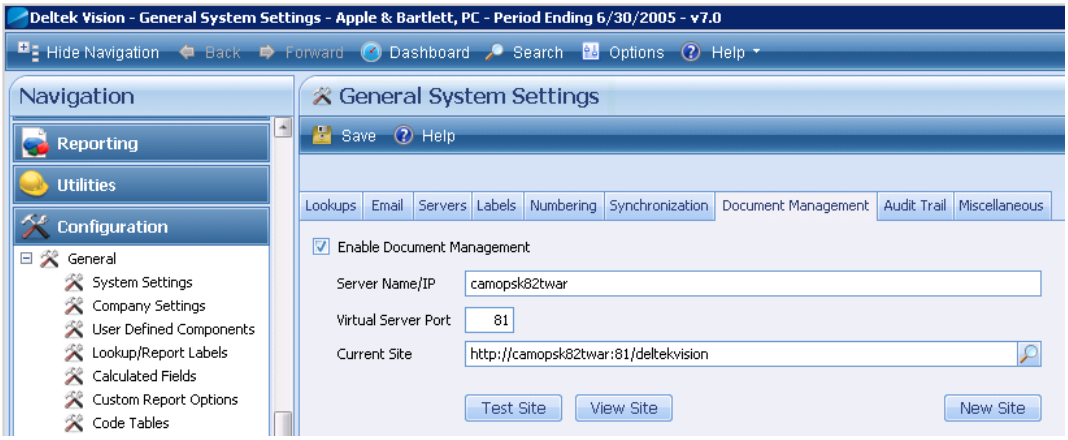
1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**
2. Enter the Weblink password when prompted.
3. Click the System Settings tab.
4. In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
5. Click the **Test** button and SharePoint Credentials to validate that the information entered is correct.



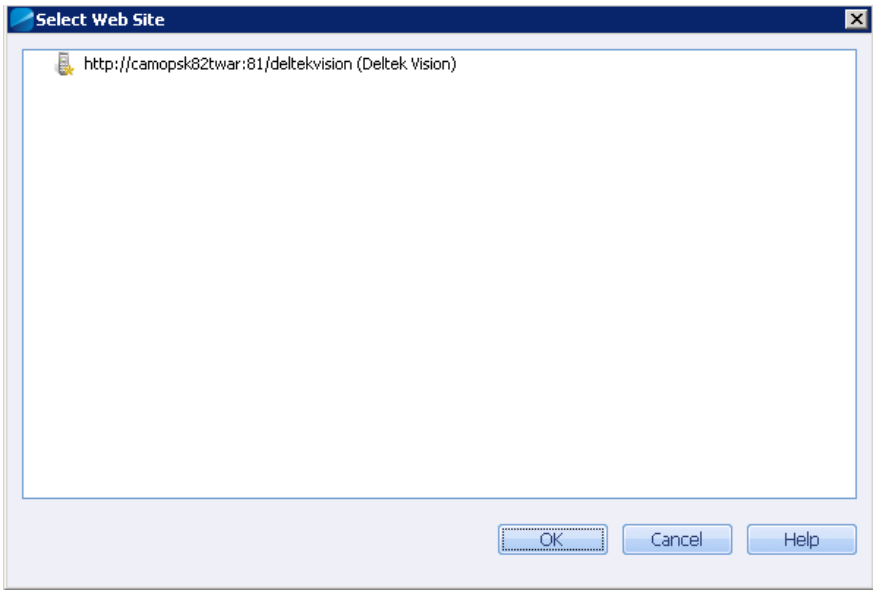
Configure Vision Document Management

To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.



3. Select the **Enable Document Management** check box.
4. Enter the name of the server hosting Document Management. This should be the server name only, FQDN's or custom DNS values are not needed here.. Enter this value without the protocol prefix (for example, remove the http://). In the illustration above, the value is **camopsk82twar**.
5. Enter the port in **Virtual Server Port**. In our example the port is 81.
6. Click the Lookup icon to select the current site.



7. The Select Web Site dialog box displays the available sites. Select a site and click **OK**.
8. Save your changes.

Configure Constrained Delegation

Constrained Delegation is not required for Single Server installations.

Optional: Configure Protocol Transition

Protocol Transition is not required for Single Server installations.

Single Tier Installation and Configuration for x86 (32-bit) Servers – SharePoint Already Installed

!!IMPORTANT!!

Please note the following for this configuration:

- In this configuration, Vision and SharePoint will be installed to the same physical server.
- SharePoint is already installed on the server so the Vision Document Management installation will NOT install SharePoint.
- The installation of SharePoint is WSS 3.0.
- Vision is installed to a different website than that being used for SharePoint as they are not compatible when installed to the same website.
- The Operating System for the server is x86 (32-bit).

Prerequisites

- Install/upgrade your Vision installation to Vision 7.1 (if applicable).
- Identify the domain user account being used for the SharePoint Farm Administrator account.
- Change the Application Pool Identity for the DeltekVisionAppPool to be the SharePoint Farm Administrator account above (the Vision 7.1 installation sets this to be the local DeltekVision account).
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server if not already done by the SharePoint installation.

Single Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Install Vision 7.1 Document Management
3.	Vision Web/Application Server	Optional: Configure Authentication for the Vision Website
4.	Vision Web/Application Server	Optional: Configure Service Principal Name (SPN) for Vision Application Pool Identity
5.	SharePoint Web /Application Server	Use SharePoint Central Administration to Complete the SharePoint Configuration

6.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
7.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
8.	Vision Web/Application Server	Configure Vision Document Management
9.	Domain	Configure Constrained Delegation – **Not Required**
10.	Domain	Optional: Configure Protocol Transition – **Not Required**

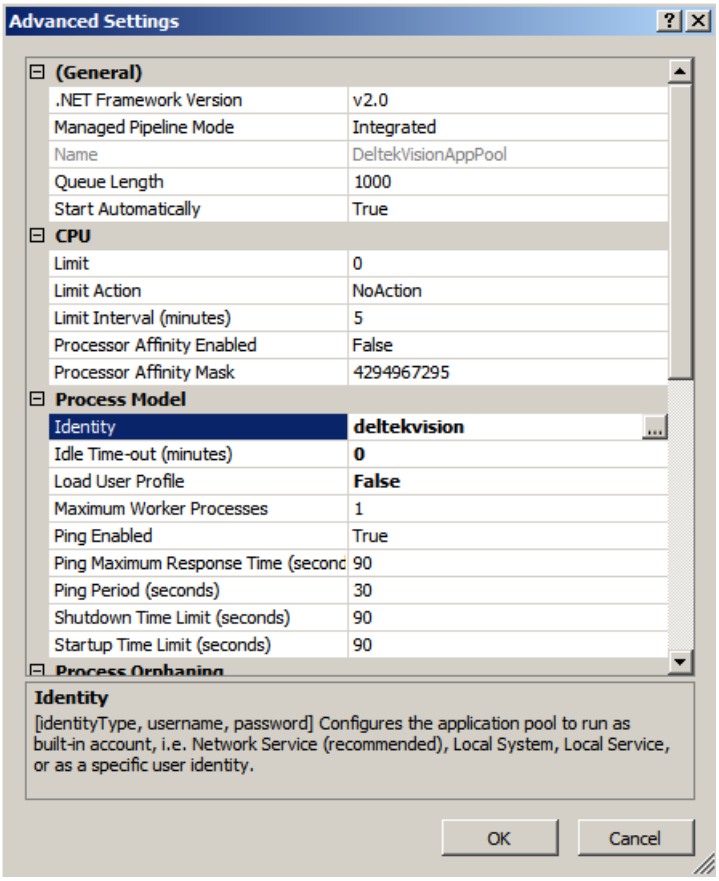
Configure Vision Application Pool Identity to be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

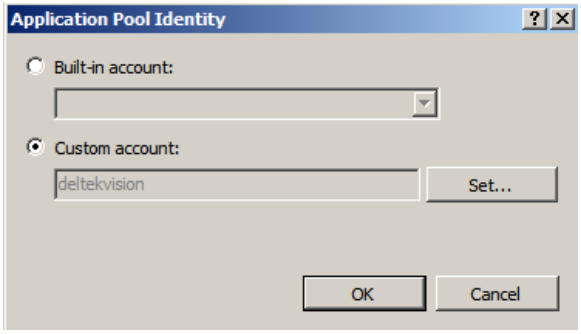
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server..

To change the Vision Application Pool Identity, complete the following steps:

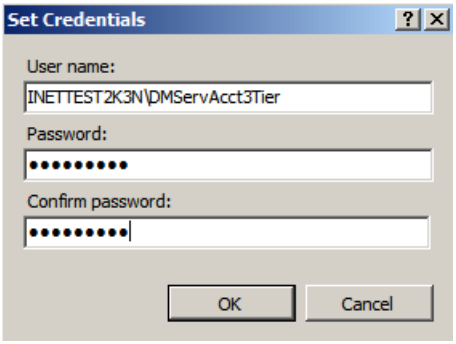
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side.



6. Place your cursor in the **Identity** field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In the **User name** field, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In the **Password** and **Confirm password** fields, enter that user's password.
10. Click **OK** three times to set the identity.

Install and Configure Vision 7.1 Document Management

When you install Vision 7.1 Document Management the changes made to your existing WSS installation are outlined below. The steps to configure WSS are outlined in this section.

If you would prefer not to run the Vision Document Management installation on an existing installation of SharePoint, refer to "Appendix C: Manual Installation of Document Management" for manual setup instructions.

The Document Management installation does the following:

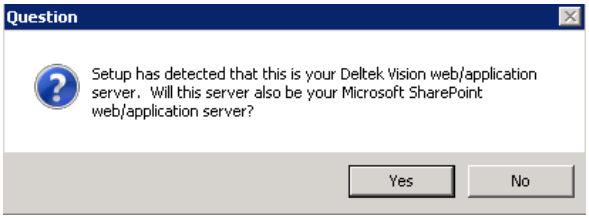
- Installs Web Service Extensions (WSE) 2.0 Sp3.
- Installs WSS 3.0, if it is not already installed.
- Copies Document Management files to the SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\12\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server dll into the Global Assembly Cache (GAC).

Install Vision Document Management

To install Vision Document Management, complete the following steps:

1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
3. On the first Document Management Installation Wizard page, click **Next**.
4. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.

5. When this message displays, click **Yes** because this is a single-tier installation of Vision Document Management and this server will host both Vision and WSS 3.0.



6. On the Ready to Install the Program page, click **Install** to start the installation.
7. When the InstallShield Wizard Complete page displays, click **Finish**.

Optional: Configure Authentication for the Vision Website

This is an "Optional" step for single tier installations and only required if the default configuration does not work for your setup.

IIS Kernel Mode Authentication

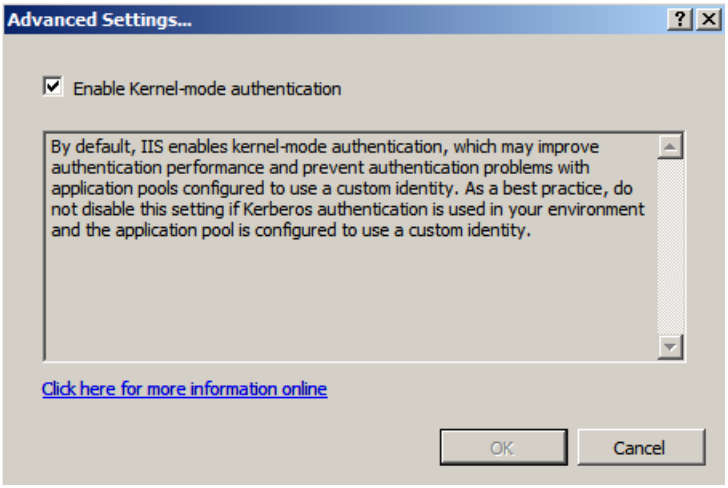
The default configuration of IIS when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because delegation is not required for single tier deployments of Vision Document Management, the additional configuration steps below are optional. However, if you do change the default of enabling Kernel Mode Authentication you will be required to create an SPN which is outlined in next section.

Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.
6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

   This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path=”Default Web Site/Vision”>

5. Locate the windowsAuthentication tag and add **useAppPoolCredentials="true"** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Optional: Configure Service Principal Name (SPN) for Vision Application Pool Identity

This is an "Optional" step for single tier installations and only required if the default configuration does not work for your setup.

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication and Vision Document Management will work just fine on single tier installations as delegation is not required.

However, if you opted to modify the default of enabling Kernel Mode Authentication for the Vision web site as described in the preceding section, it will be necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

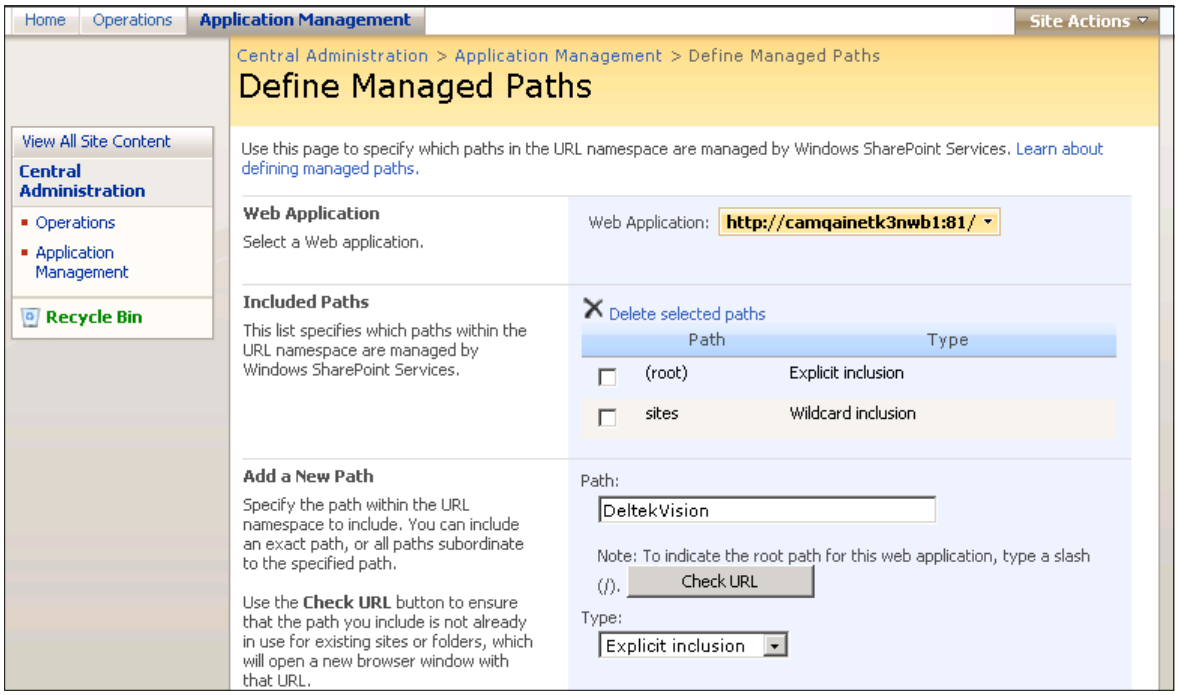
Use SharePoint Central Administration to Complete the SharePoint Configuration

!! IMPORTANT INFORMATION FOR EXISTING SHAREPOINT INSTALLATIONS!!

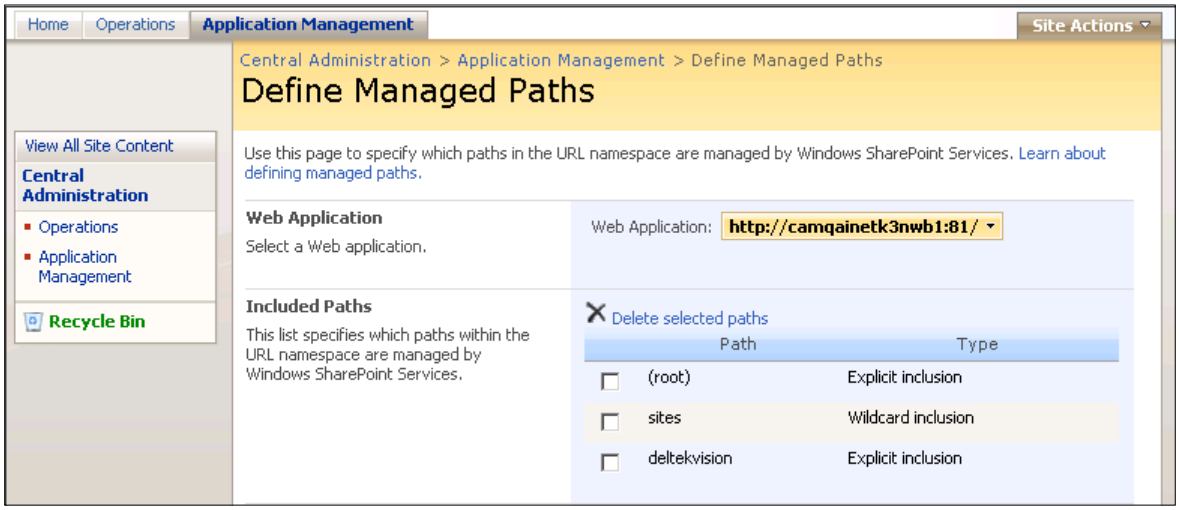
If you already have SharePoint installed and plan to use that existing installation of SharePoint for your Vision Document Management deployment, note that Vision Document Management **does not** support integrating with an existing SharePoint site collection and requires a dedicated top-level site on your SharePoint server.

To create the Document Management SharePoint site collection, complete the following steps:

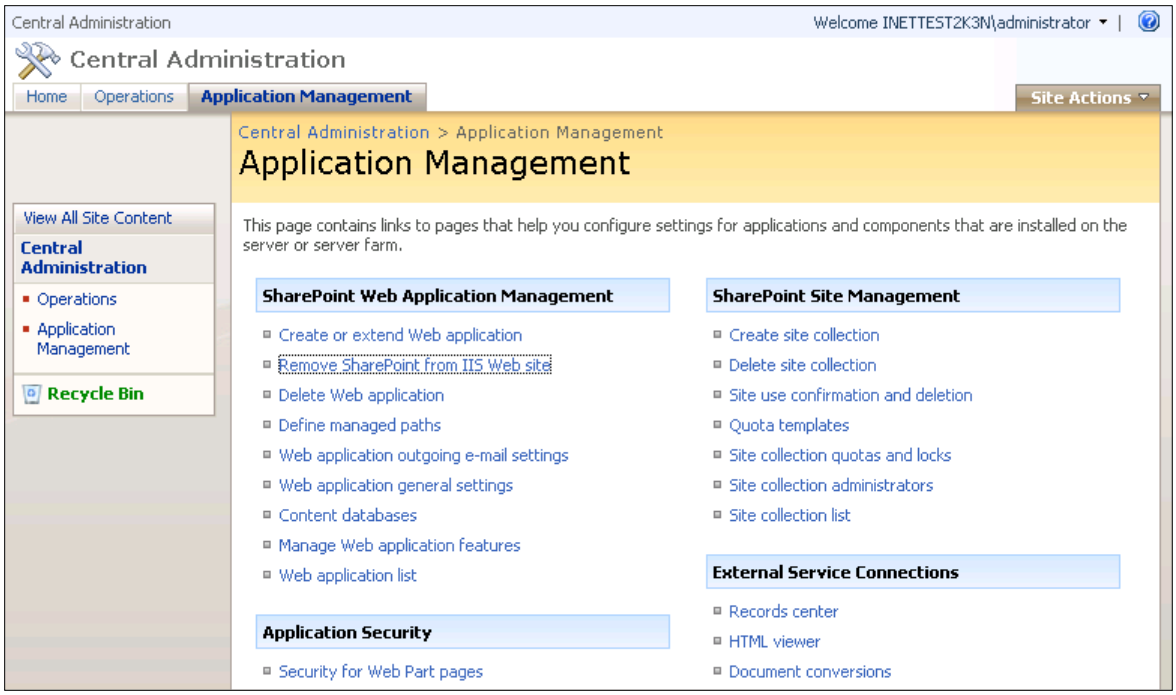
1. Launch the SharePoint Central Administration application
2. Click **Application Management** and select the **Define Managed Paths** option.



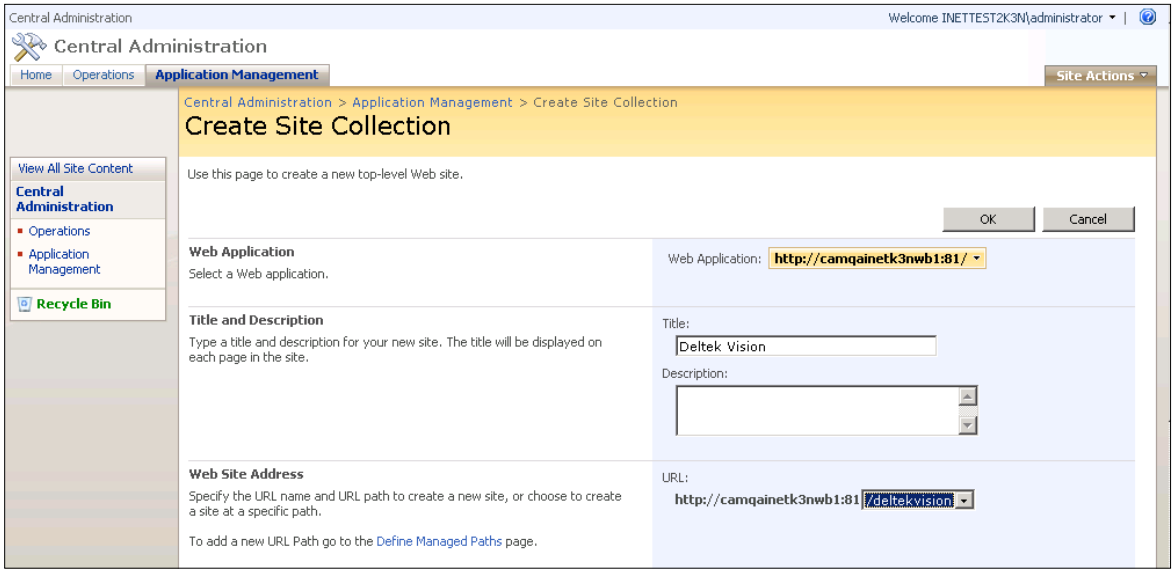
3. Enter **DeltekVision** in **Path** and select **Explicit inclusion** in **Type**.
4. Click **OK**.



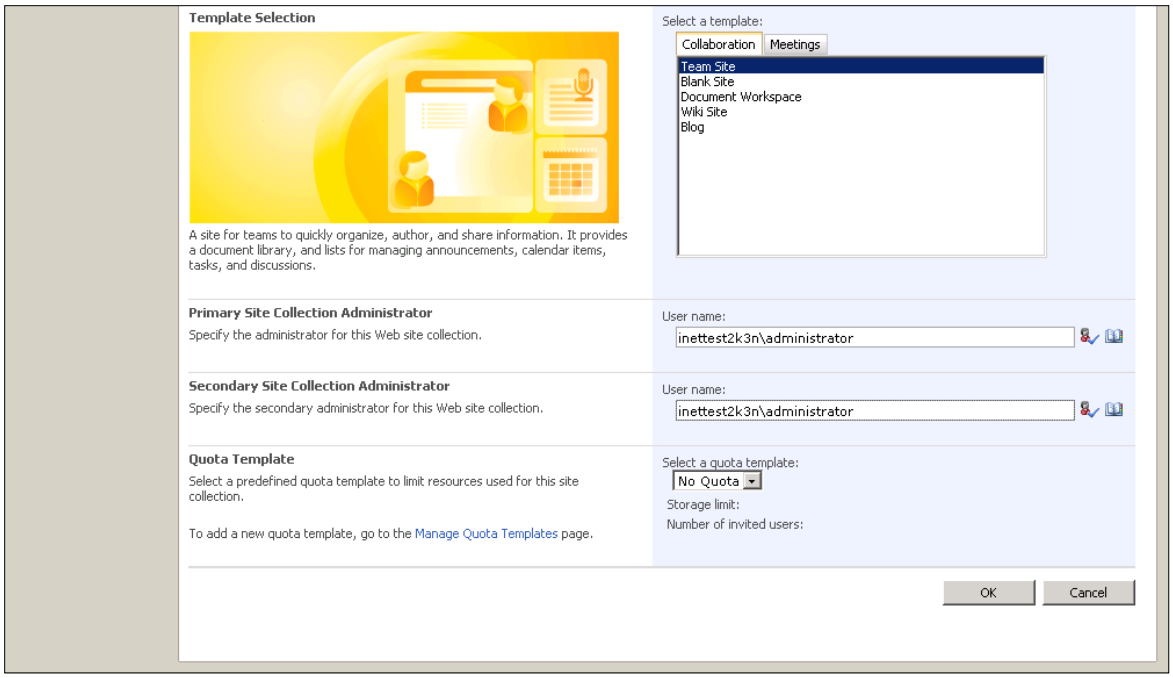
5. Click **Application Management** and select the **Create Site Collection** option under **SharePoint Site Management**.



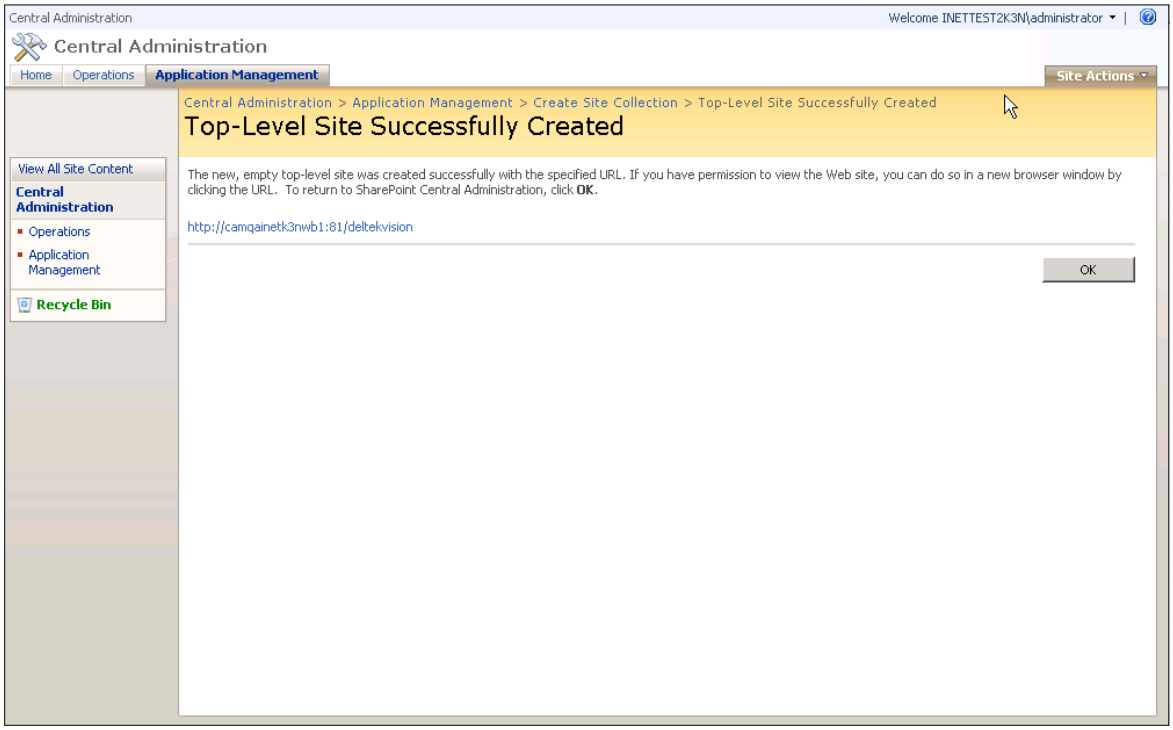
The Create Site Collection page displays.



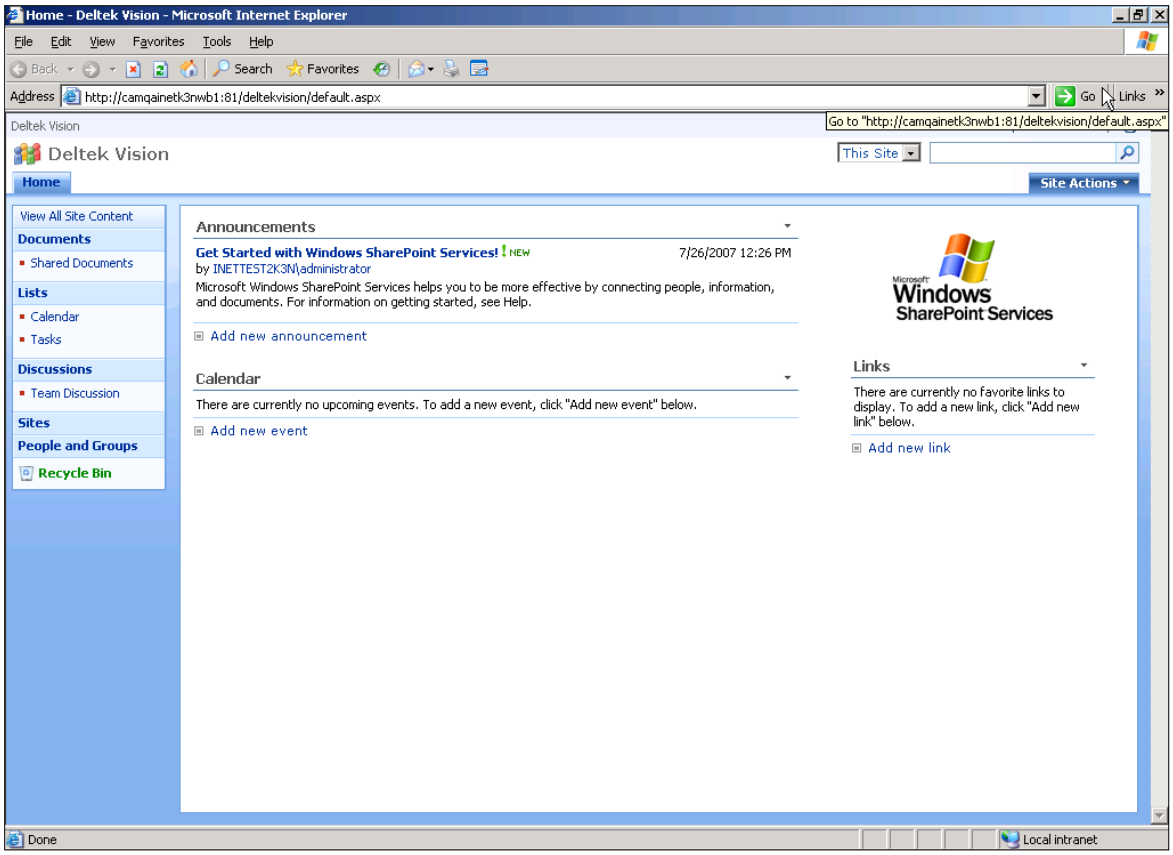
6. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
7. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root site for Vision Document Management.



8. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
9. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



10. Click the link for the top level site (in our example it is http://camqainetk3nwb1:81/deltekvision) to display the site.



11. The SharePoint configuration is complete. Close SharePoint Central Administration.

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

Copy **the Vision Document Management .NET assem**bly to SharePoint site directory.

Identify your IIS configuration to specifically identify which website and port SharePoint is using as well as which website and port Vision is using.

If SharePoint was extended to the Default Web Site then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\bin

If SharePoint was extended to its own named web site (e.g. SharePoint – 80) then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin

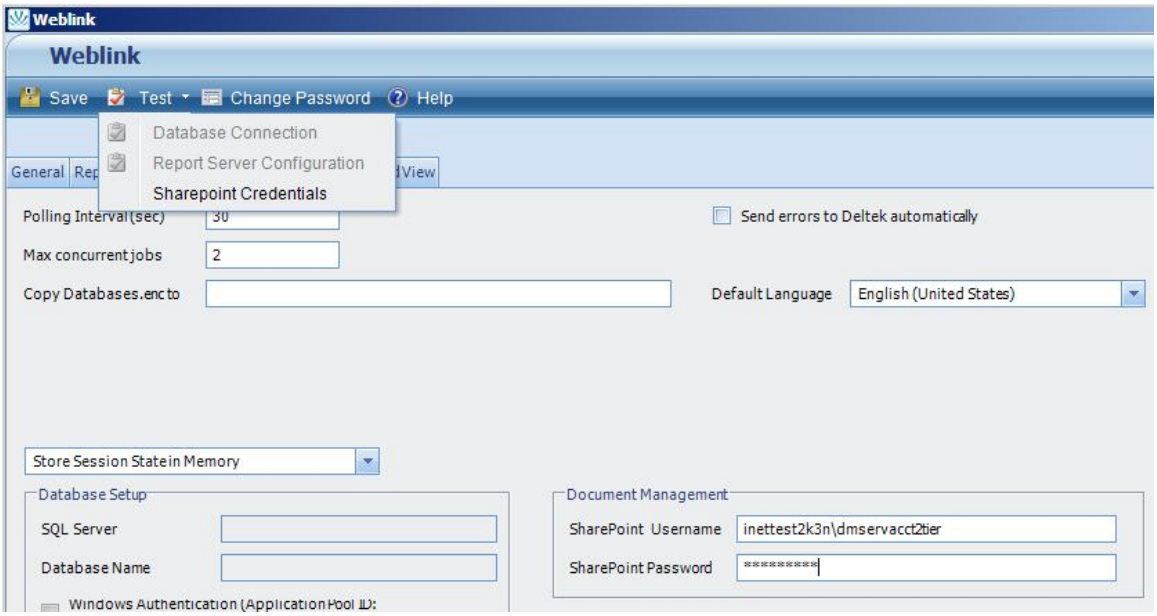
By default, the <site> directory references the port chosen. (e.g. 80, 81, etc.).

Configure Document Management Service Account in Weblink

You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the service account in Weblink, complete the following steps:

1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**
2. Enter the Weblink password when prompted.
3. Click the System Settings tab.
4. In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
5. Click the **Test** button and SharePoint Credentials to validate that the information entered is correct.

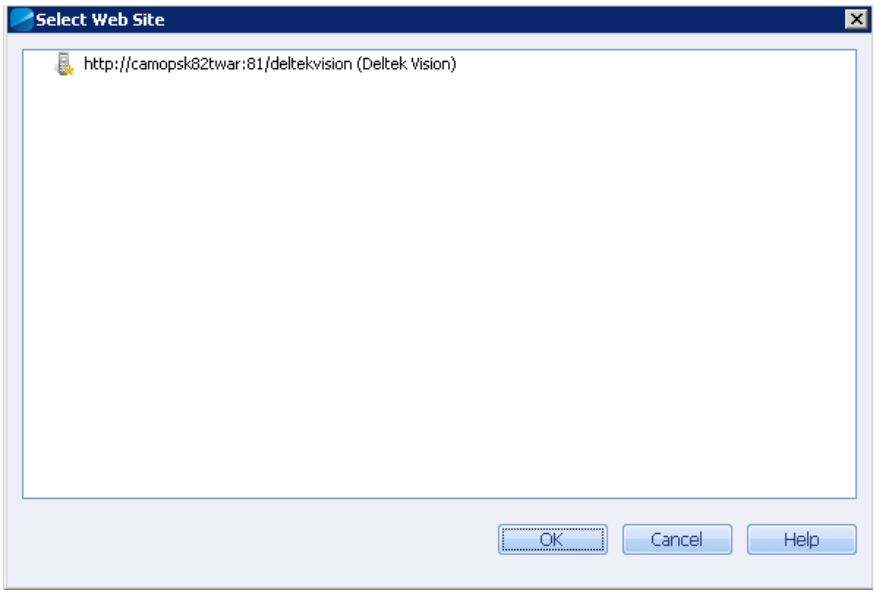


Configure Vision Document Management

To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.

3. Select the **Enable Document Management** check box.
4. Enter the name of the server hosting Document Management. This should be the server name only, FQDN's or custom DNS values are not needed here. Enter this value without the protocol prefix (for example, remove the http://). In the illustration above, the value is **camdevk82twar**
5. Enter the port in **Virtual Server Port**. In our example the port is 81.
6. Click the Lookup icon to select the current site.



7. The Select Web Site dialog box displays the available sites. Select a site and click **OK**.
8. Save your changes.

Configure Constrained Delegation

Constrained Delegation is not required for Single Server installations.

Optional: Configure Protocol Transition

Protocol Transition is not required for Single Server installations.

Single Tier New Installation and Configuration for x64 (64-bit) Servers – SharePoint Already Installed

!!IMPORTANT!!

Please note the following for this configuration:

- In this configuration, Vision and SharePoint will be installed to the same physical server.
- SharePoint is already installed so the Vision Document Management installation will not download or install SharePoint.
- The installation of SharePoint can be either WSS 3.0 x64 or SharePoint Foundation 2010.
- Vision is installed to a different website than that being used for SharePoint as they are not compatible when installed to the same website.
- The Operating System for the server is x64 (64-bit).

Prerequisites

- Install/upgrade your Vision installation to Vision 7.1 (if applicable).
- Identify the domain user account being used for the SharePoint Farm Administrator account.
- Change the Application Pool Identity for the DeltekVisionAppPool to be the SharePoint Farm Administrator account above (the Vision 7.1 installation sets this to be the local DeltekVision account).
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server.

Single Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Install Vision 7.1 Document Management
3.	Vision Web/Application Server	Optional: Configure Authentication for the Vision Website
4.	Vision Web/Application Server	Optional: Configure Service Principal Name (SPN) for Vision Application Pool Identity
5.	SharePoint Web /Application Server	Use SharePoint Central Administration to Complete the SharePoint Configuration

6.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
7.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
8.	Vision Web/Application Server	Configure Vision Document Management
9.	Domain	Configure Constrained Delegation – **Not Required**
10.	Domain	Optional: Configure Protocol Transition – **Not Required**

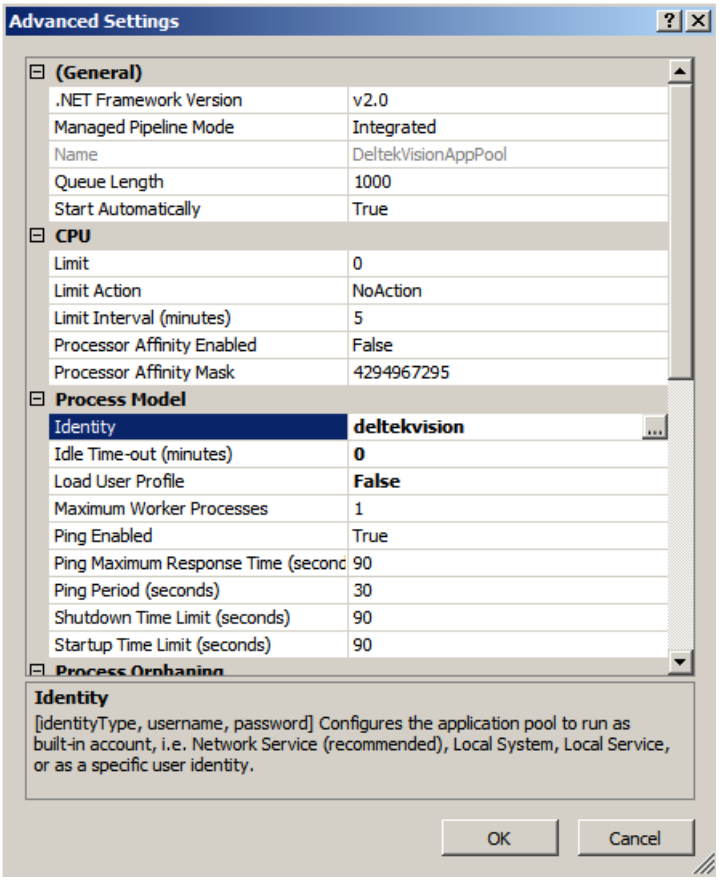
Configure Vision Application Pool Identity to Be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

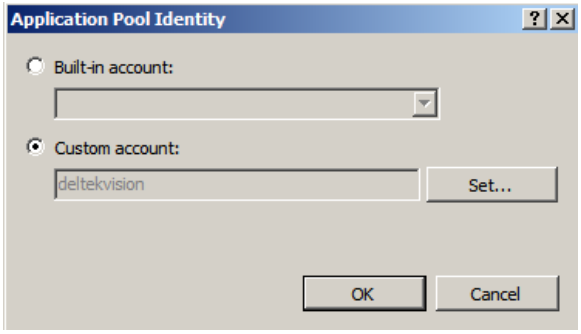
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server..

To change the Vision Application Pool Identity, complete the following steps:

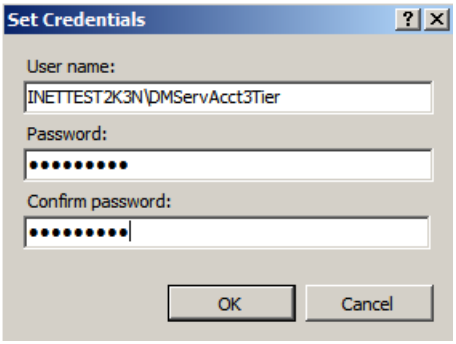
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side. The following displays:



6. Place your cursor in the **Identity** field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In the **User name** field, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In the **Password** and **Confirm password** fields, enter that user's password.
10. Click **OK** three times to set the identity.

Install and Configure Vision 7.1 Document Management

When you install Vision 7.1 Document Management the changes made to your SPF installation are outlined below. The steps to configure SharePoint are outlined in this section.

If you would prefer not to run the Vision Document Management installation on an existing installation of SharePoint, refer to "Appendix C: Manual Installation of Document Management" for manual setup instructions.

The Document Management installation does the following:

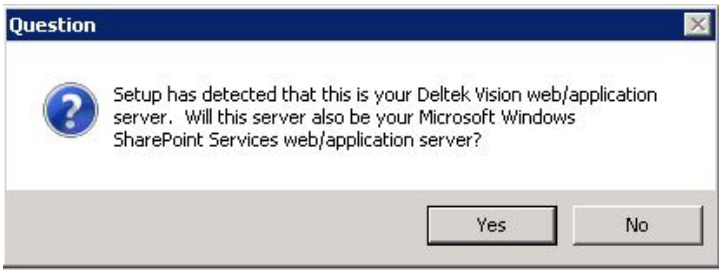
- Installs Web Service Extensions (WSE) 2.0 Sp3.
- Installs SPF 2010, if it is not already installed.
- Copies Document Management files to the SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\14\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server dll into the Global Assembly Cache (GAC).

Install Vision Document Management

To install Vision Document Management, complete the following steps:

1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
3. On the first Document Management Installation Wizard page, click **Next**.
4. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.

5. When this message displays, click **Yes** because this is a single-tier installation of Vision Document Management and this server will host both Vision and SPF 2010.



6. On the Ready to Install the Program page, click **Install** to start the installation.
7. Click **Install** to start the installation.
8. When the InstallShield Wizard Complete page displays, click **Finish**.

Optional: Configure Authentication for the Vision Website

This is an "Optional" step for single tier installations and only required if the default configuration does not work for your setup.

IIS Kernel Mode Authentication

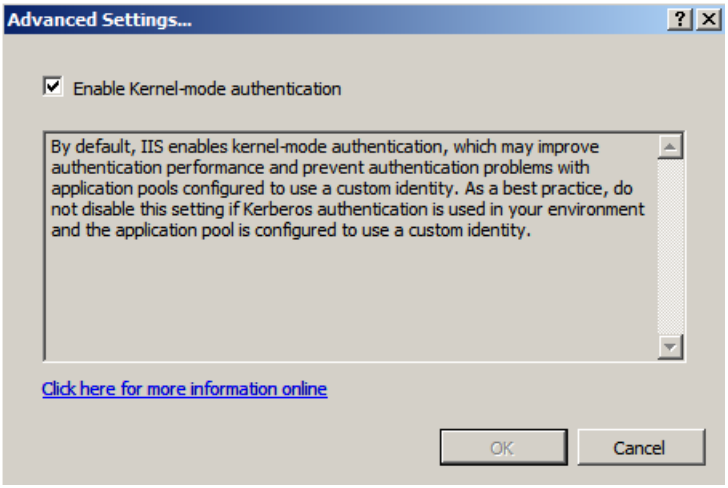
The default configuration of IIS when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because delegation is not required for single tier deployments of Vision Document Management, the additional configuration steps below are optional. However, if you do change the default of enabling Kernel Mode Authentication you will be required to create an SPN which is outlined in next section.

Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.
6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

   This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path=”Default Web Site/Vision”>

5. Locate the windowsAuthentication tag and add **useAppPoolCredentials="true"** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Optional: Configure Service Principal Name (SPN) for Vision Application Pool Identity

This is an "Optional" step for single tier installations and only required if the default configuration does not work for your setup.

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication and Vision Document Management will work just fine on single tier installations as delegation is not required.

However, if you opted to modify the default of enabling Kernel Mode Authentication for the Vision web site as described in the preceding section, it will be necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

Use SharePoint Central Administration to Complete the SharePoint Configuration

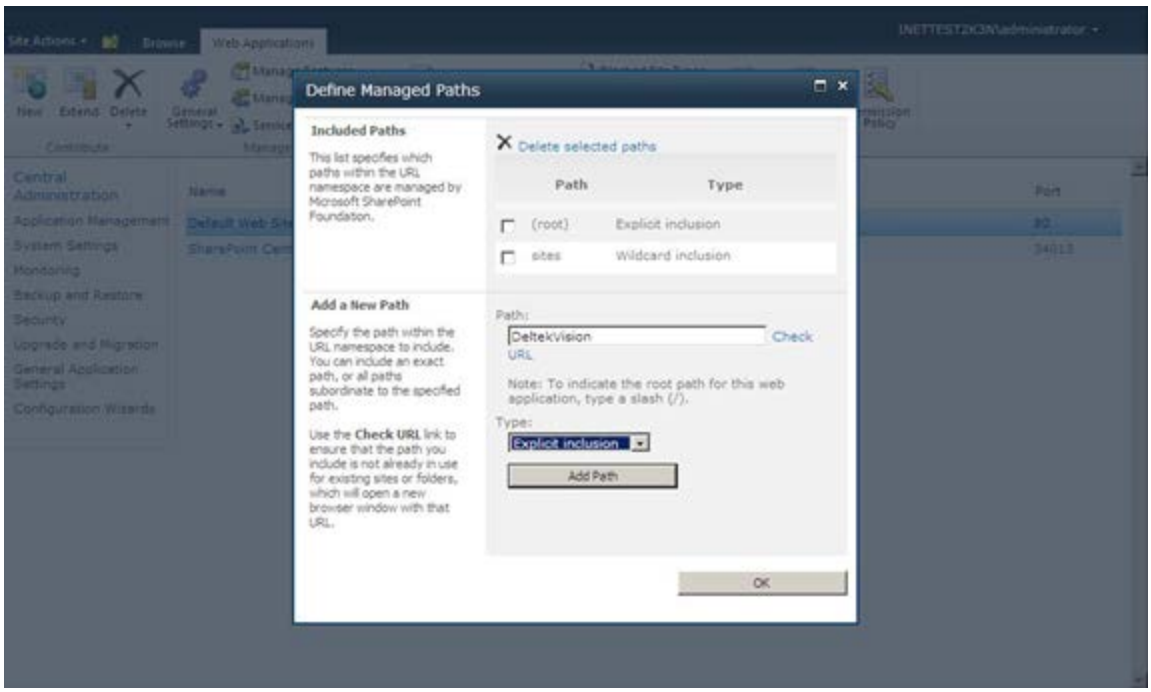
!! IMPORTANT INFORMATION FOR EXISTING SHAREPOINT INSTALLATIONS!!

If you already have SharePoint installed and plan to use that existing installation of SharePoint for your Vision Document Management deployment, note that Vision Document Management **does not** support integrating with an existing SharePoint site collection and requires a dedicated top-level site on your SharePoint server.

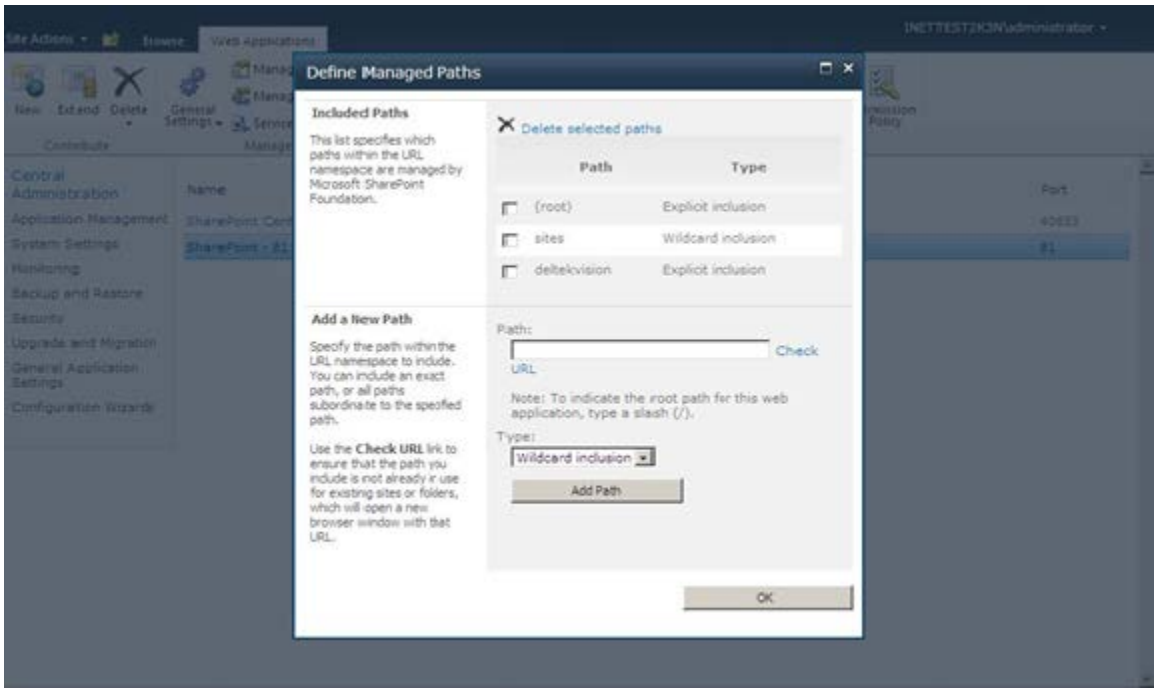
Create Document Management SharePoint Site Collection

The following instructions are for SharePoint Foundation 2010. If you have Windows SharePoint Services 3.0 x64 installed as your version of SharePoint, refer to page 110 for specific instructions for that platform.

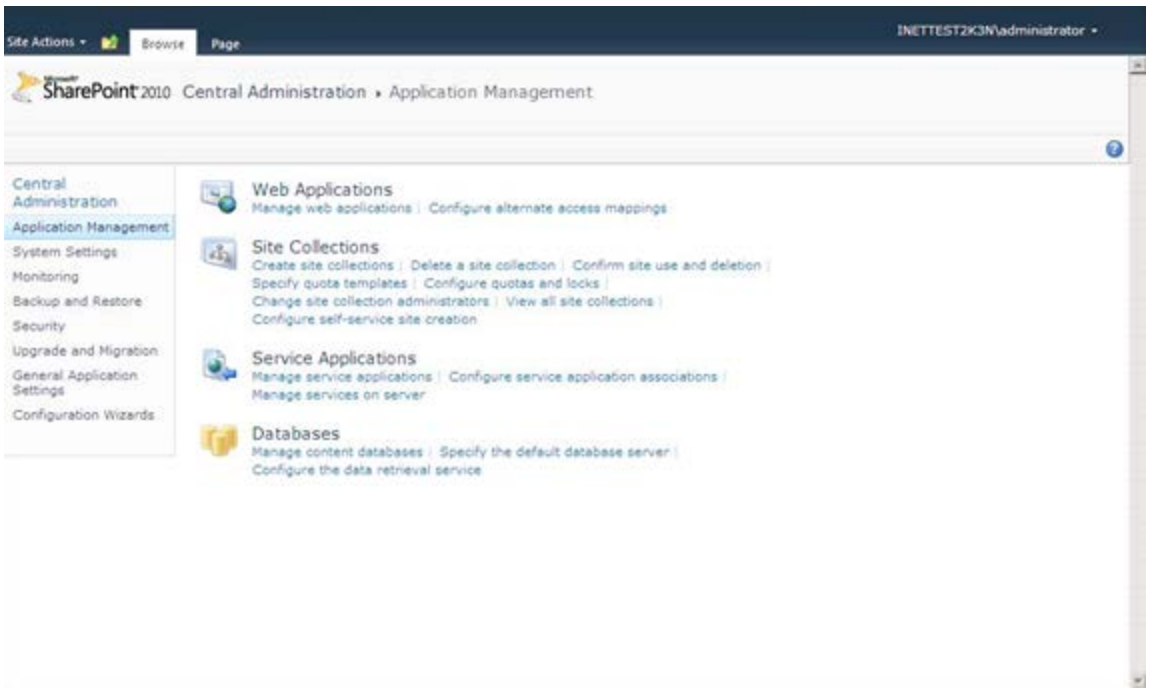
1. Launch the **SharePoint 2010 Central Administration** application
2. Click **Manage Web Applications** under **Application Management**.
3. Select your SharePoint web application and click **Managed Paths.** The **Define Managed Paths** page displays.



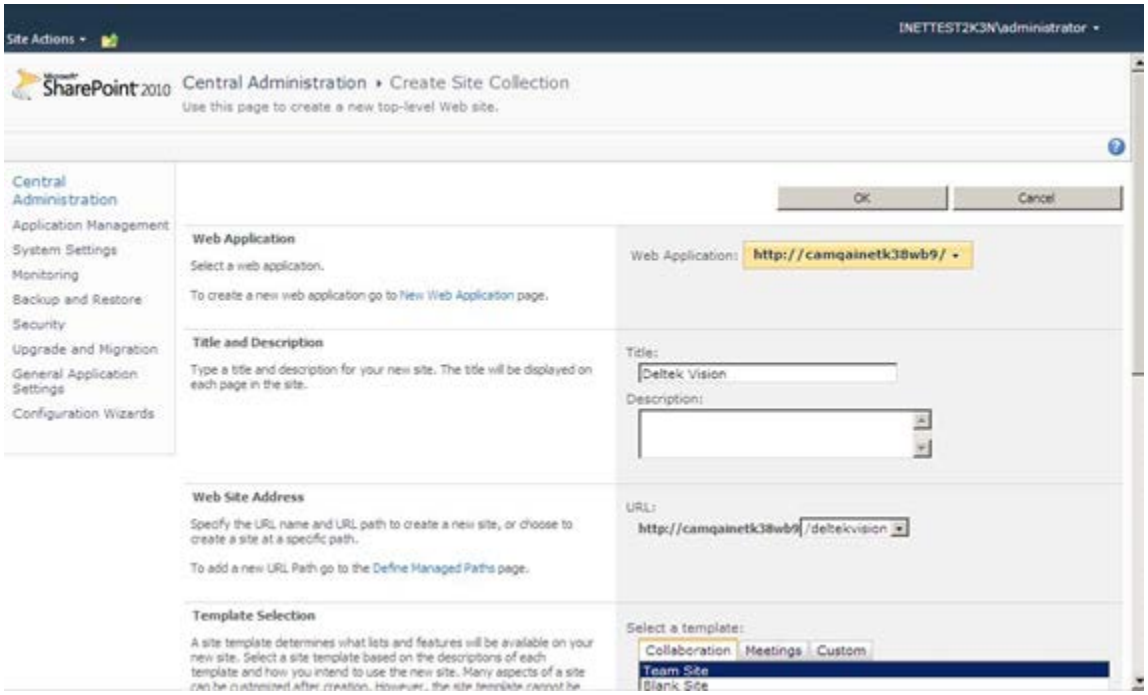
4. Enter **DeltekVision** in **Path** and select **Explicit inclusion** in **Type** and click **Add Path**.
5. Click **OK**. DeltekVision is now added as a Managed Path.



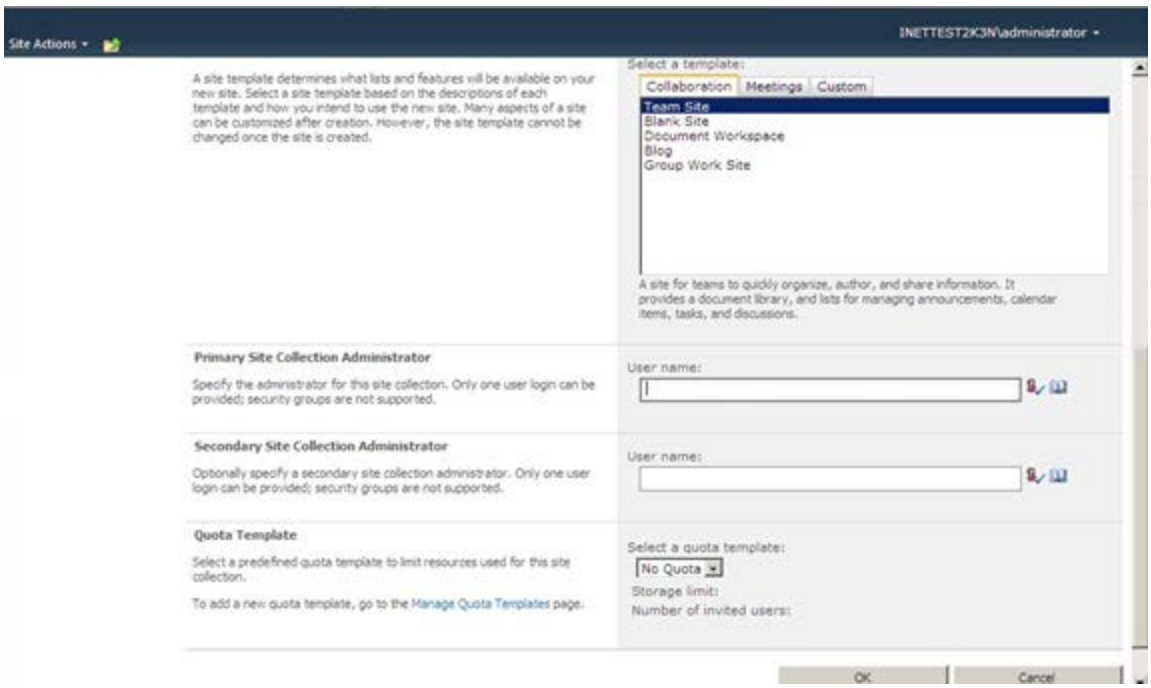
6. Click **Application Management** and select the **Create Site Collection** option under **Site Collections**.



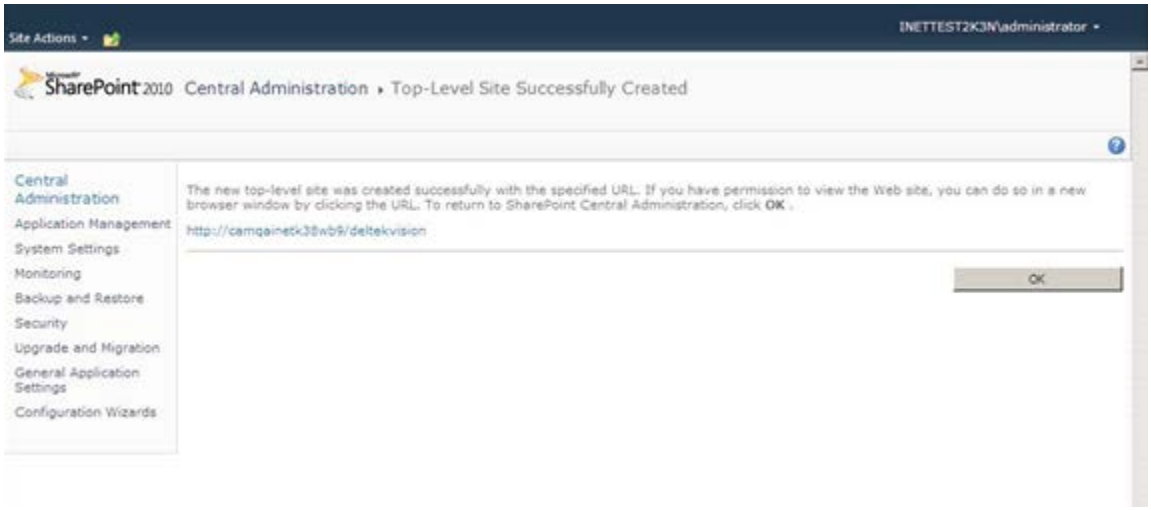
The Create Site Collection page displays.



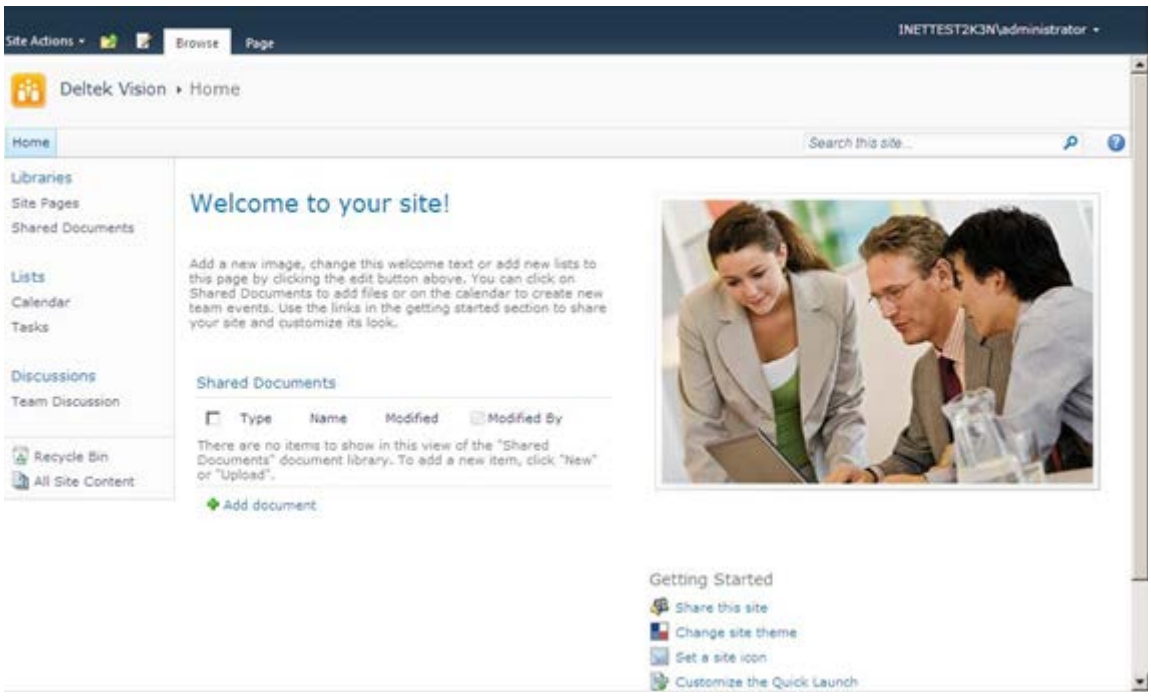
7. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
8. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root for Vision Document Management.



9. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
10. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



11. Click the link for the top level site (in our example it is http://camqainetk38wb9:81/deltekvision) to display the site.



12. The SharePoint configuration is complete. Close SharePoint Central Administration.

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

Copy the Vision Document Management .NET assembly to SharePoint site directory.

Identify your IIS configuration to specifically identify which website and port SharePoint is using as well as which website and port Vision is using.

If SharePoint was extended to the Default Web Site then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\bin

If SharePoint was extended to its own named web site (e.g. SharePoint – 80) then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin

By default, the <site> directory references the port chosen. (e.g. 80, 81, etc.).

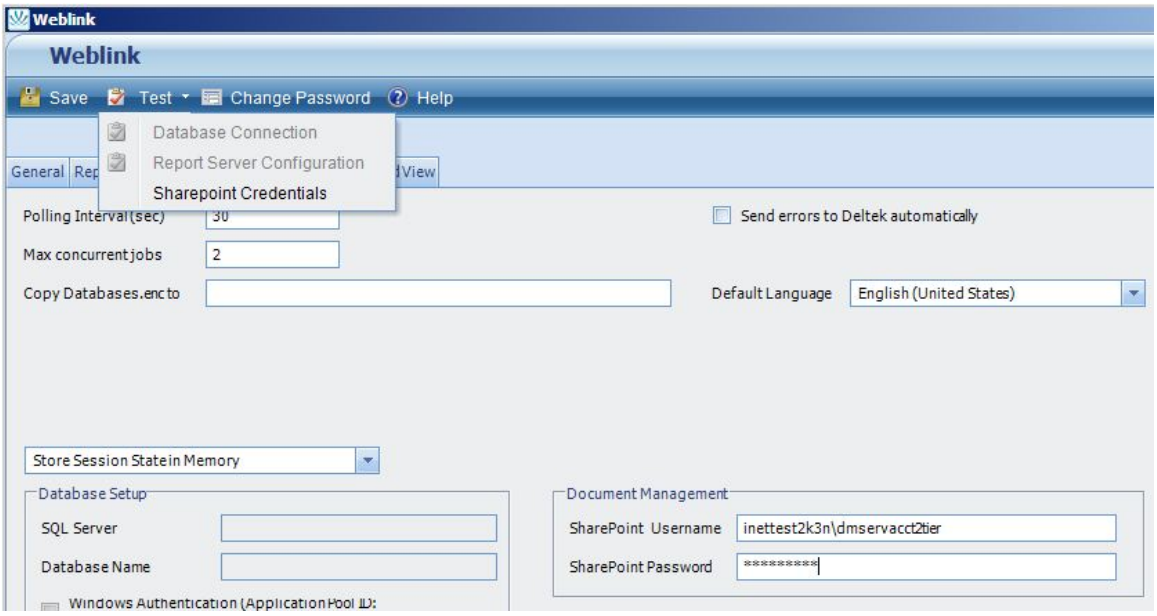
Configure Document Management Service Account in Weblink

You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the service account in Weblink, complete the following steps:

1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**
2. Enter the Weblink password when prompted.
3. Click the System Settings tab.

4. In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
5. Click the **Test** button and SharePoint Credentials to validate that the information entered is correct.



Configure Vision Document Management

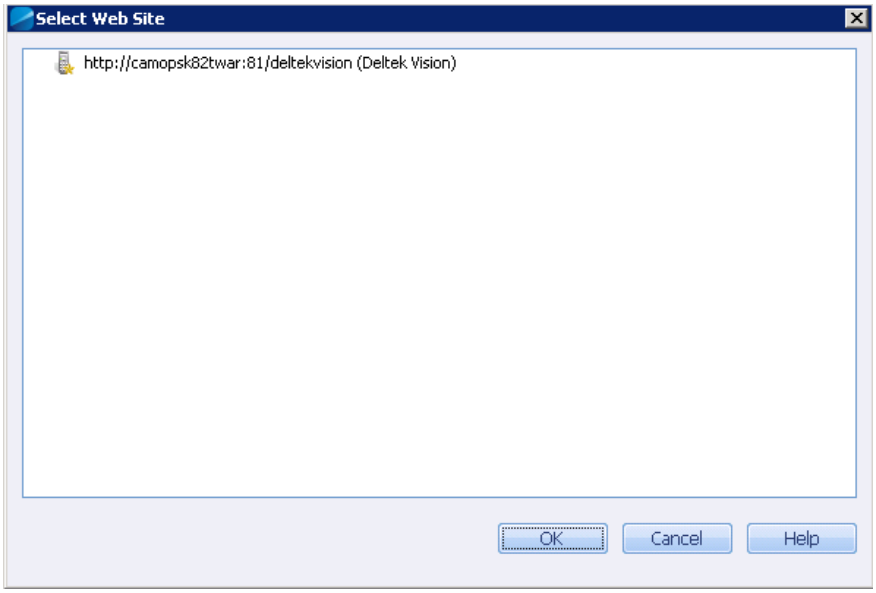
To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.

3. Select the **Enable Document Management** check box.
4. Enter the name of the server hosting Document Management. This should be the server name only, FQDN's or custom DNS values are not needed here.. Enter this value without

the protocol prefix (for example, remove the http://). In the illustration above, the value is **camopsk82twar**.

5. Enter the port in **Virtual Server Port**. In our example the port is 81.
6. Click the Lookup icon to select the current site.



7. The Select Web Site dialog box displays the available sites. Select a site and click **OK**.
8. Save your changes.

Configure Constrained Delegation

Constrained Delegation is not required for Single Server installations.

Optional: Configure Protocol Transition

Protocol Transition is not required for Single Server installations.

Multi Tier New Installation and Configuration for x86 (32-bit) Servers – SharePoint is NOT Installed

!!IMPORTANT!!

Please note the following for this configuration:

- In this configuration, Vision and SharePoint will be installed to separate physical server and SharePoint is **NOT** yet installed.
- The Vision Document Management installation will install Windows SharePoint Services 3.0. SharePoint Foundation 2010 is **not** supported for this configuration.
- The Operating System for the server is x86 (32-bit).

Prerequisites

- Install/upgrade your Vision installation to Vision 7.1 (if applicable).
- Change the Application Pool Identity for the DeltekVisionAppPool to be a domain user account (the Vision 7.1 installation sets this to be the local DeltekVision account).
- The domain service account used above will also be the SharePoint Service account.
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server.

Multi Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Grant Local Security Policy Rights to Vision Application Pool Identity
3.	Vision Web/Application Server	Install Vision 7.1 Document Management on the Vision Web Server
4.	Vision Web/Application Server	Configure Authentication for the Vision Website
5.	Vision Web/Application Server	Configure Service Principal Name (SPN) for Vision Application Pool Identity
6.	SharePoint Web /Application Server	Install Vision Document Management on the WSS Server
7.	SharePoint Web /Application Server	Run the SharePoint Products and Technologies Configuration Wizard

8.	SharePoint Web /Application Server	Use SharePoint Central Administration to Complete the SharePoint Configuration
9.	SharePoint Web /Application Server	Optional: Configure SharePoint for a Custom URL
10.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
11.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
12.	Vision Web/Application Server	Configure Vision Document Management
13.	Domain	Configure Constrained Delegation
14.	Domain	Optional: Configure Protocol Transition

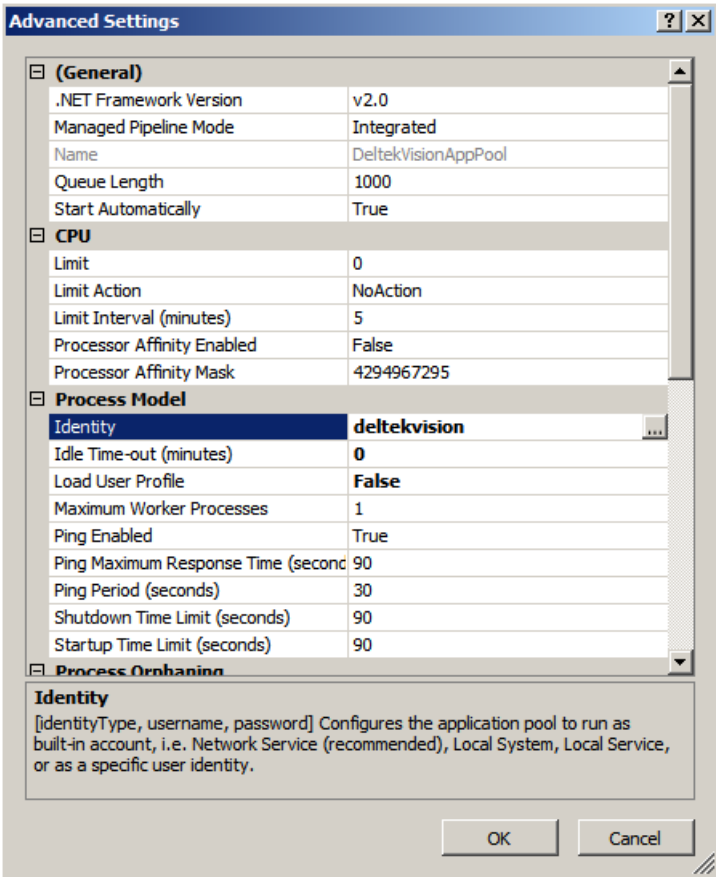
Configure Vision Application Pool Identity to Be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

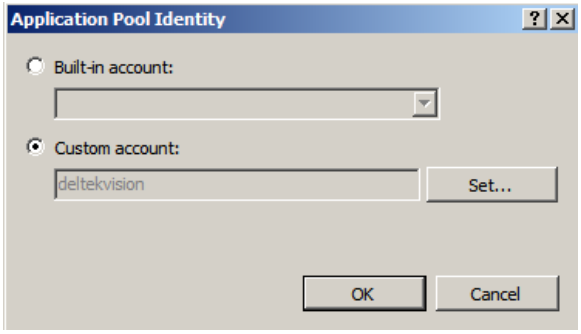
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server..

To change the Vision Application Pool Identity, complete the following steps:

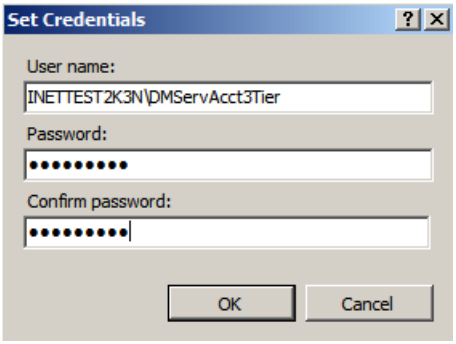
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side. The following displays:



6. Place your cursor in the **Identity** field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



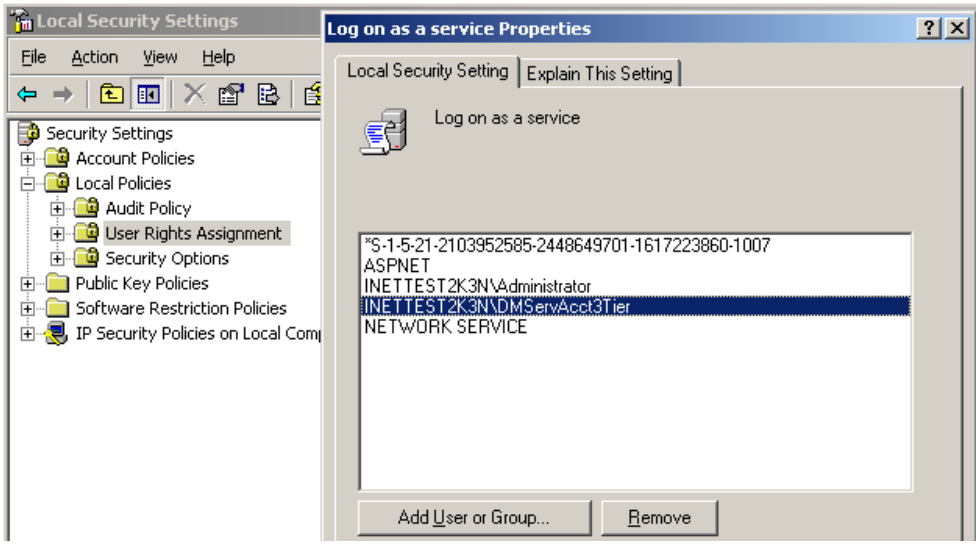
7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In the **User name** field, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In the **Password** and **Confirm password** fields, enter that user's password.
10. Click **OK** three times to set the identity.

Grant Local Security Policy Rights to Vision Application Pool Identity

The Vision Application Pool Identity/SharePoint Service Account must be granted **Logon as a service** rights on the Vision 7.1 Web/Application Server for multi-tier Document Management installations, as shown in the following example of the Local Security Settings setup screens.



Install and Configure Vision 7.1 Document Management and WSS 3.0

When you install Vision 7.1 Document Management WSS is automatically installed if your Operating System platform is x86 (32-bit). If you are upgrading from a previous version of Vision and/or already have WSS installed the changes made to your WSS installation are outlined below. The steps to configure WSS are outlined in this section.

If you would prefer not to run the Vision Document Management installation on an existing installation of SharePoint, refer to "Appendix C: Manual Installation of Document Management" for manual setup instructions.

The Document Management installation does the following:

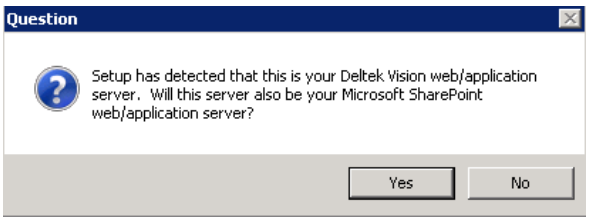
- Installs Web Service Extensions (WSE) 2.0 SP3.
- Installs WSS 3.0 when run on the SharePoint web server if it is not already installed.
- Copies Document Management files to the SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\12\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server.dll into the Global Assembly Cache (GAC).

Install Vision 7.1 Document Management on the Vision Web Server

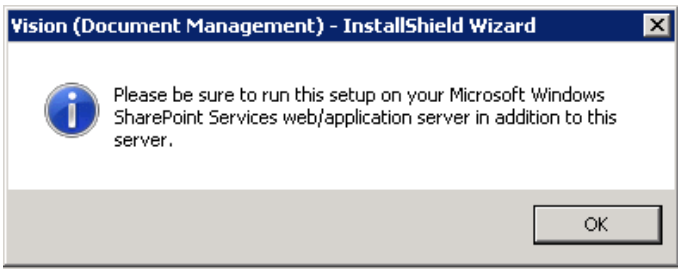
You must run the Document Management installer on both the Vision web server and the SharePoint web server.

To install Vision 7.1 Document Management on the Vision Web server, complete the following steps:

1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
3. On the first Document Management Installation Wizard page, click **Next**.
4. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
5. When the following message displays, click **No** because this is a multi-tier installation of Vision Document Management and your Vision Web server will not host WSS 3.0.



6. When the following message displays to remind you to run the setup on the WSS server, click **OK**.



7. On the Ready to Install the Program page, click **Install** to start the installation.

8. When the InstallShield Wizard Complete page displays, click **Finish**.

Configure Authentication for the Vision Website

IIS Kernel Mode Authentication

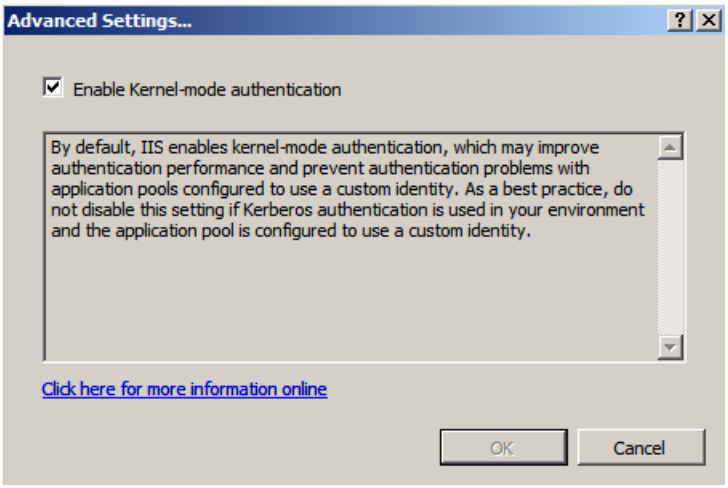
The default configuration of IIS when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because the Machine account cannot be used for delegation scenarios which are required for multi-tier deployments of Vision Document Management, the additional configuration steps below are necessary.

Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.
6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision

Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

   This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path="Default Web Site/Vision">

5. Locate the windowsAuthentication tag and add **useAppPoolCredentials="true"** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Configure Service Principal Name (SPN) for Vision Application Pool Identity

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication to work properly and creating an SPN for the Application Pool Identity in this configuration will result in a "duplicate SPN" issue, preventing Windows Integrated Security from authenticating anyone to the Web site.

However, For Multi Tier installations of Vision Document Management it is necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity (DeltekVisionAppPool) as this is the account used for delegation.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

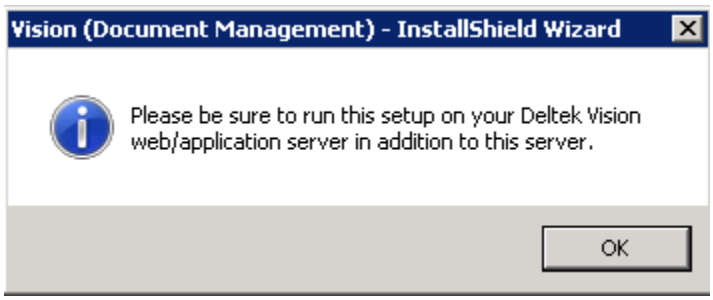
See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

Install Vision Document Management on the WSS Server

To install Vision Document Management on the WSS server, complete the following steps:

1. Download DeltekVision7.1DM.exe and run the setup on your WSS server.
2. On the first Document Management Installation Wizard page, click **Next**.
3. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
4. When the following message displays to remind you to run the setup on the Vision web/application server if you haven't already, click **OK**.

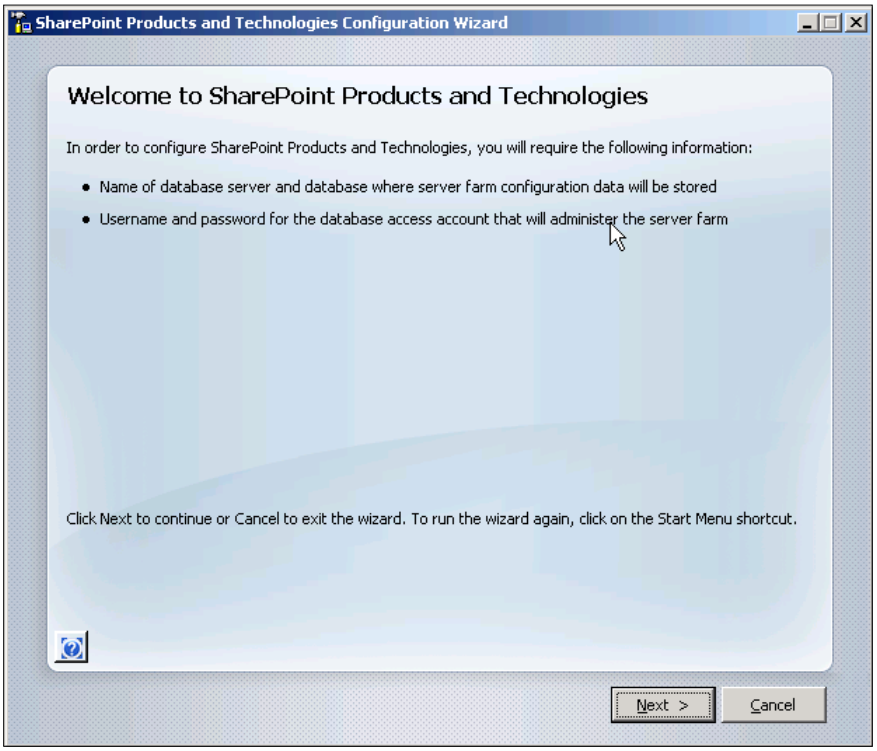


5. On the Ready to Install the Program page, click **Install** to start the installation. The installation automatically downloads Windows SharePoint Services 3.0, extracts the WSS 3.0 setup files, and installs Windows SharePoint Services.
6. When the “Files extracted successfully” message displays, click the **OK** button to continue the installation.
7. When the InstallShield Wizard Complete page displays, click **Finish**.

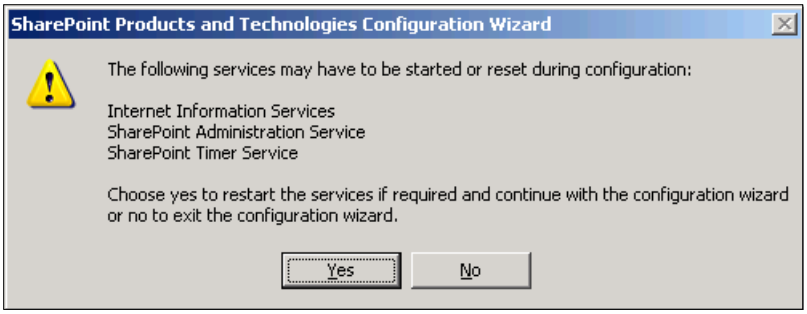
Run the SharePoint Products and Technologies Configuration Wizard

To run the SharePoint Products and Technologies Configuration wizard, complete the following steps:

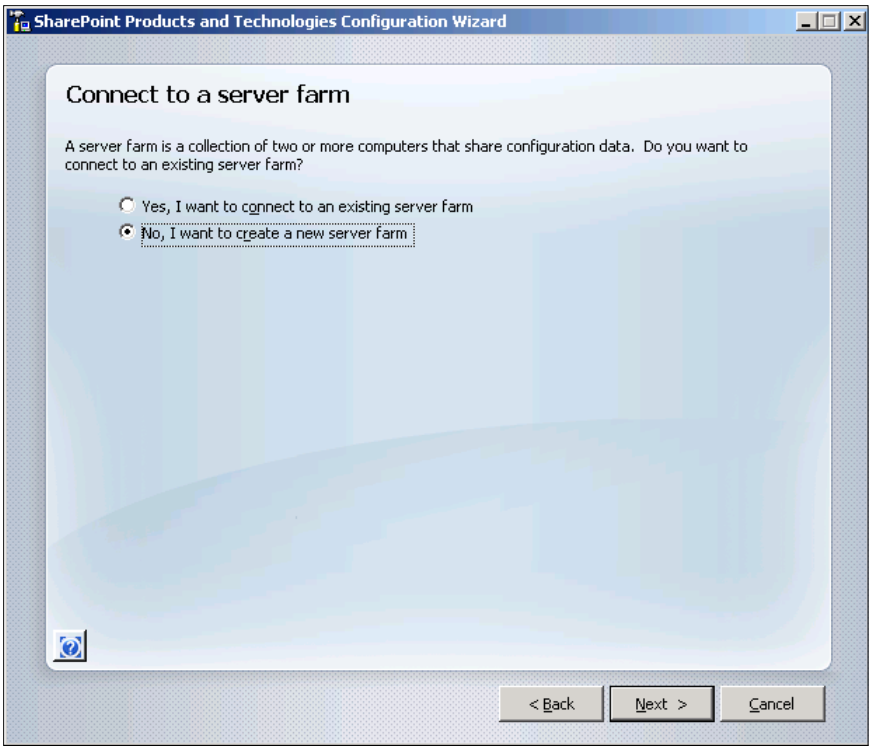
1. Click **Start » Administrative Tools » SharePoint Products and Technologies Wizard**. The Welcome page displays.



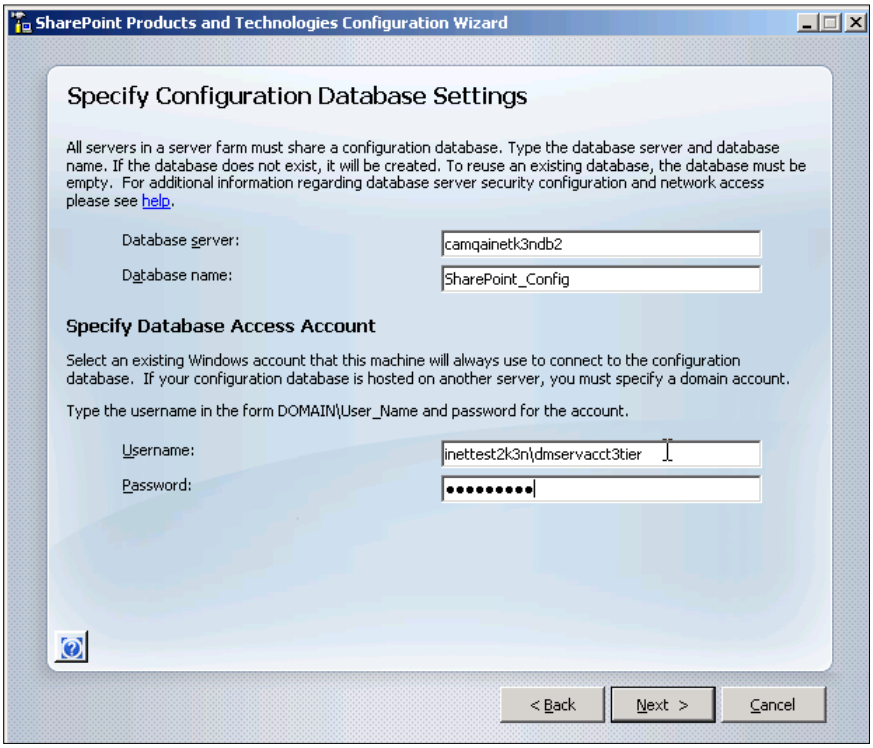
2. Click **Next**. The following dialog box displays.



3. Click **Yes**. The Connect to a server farm page displays.

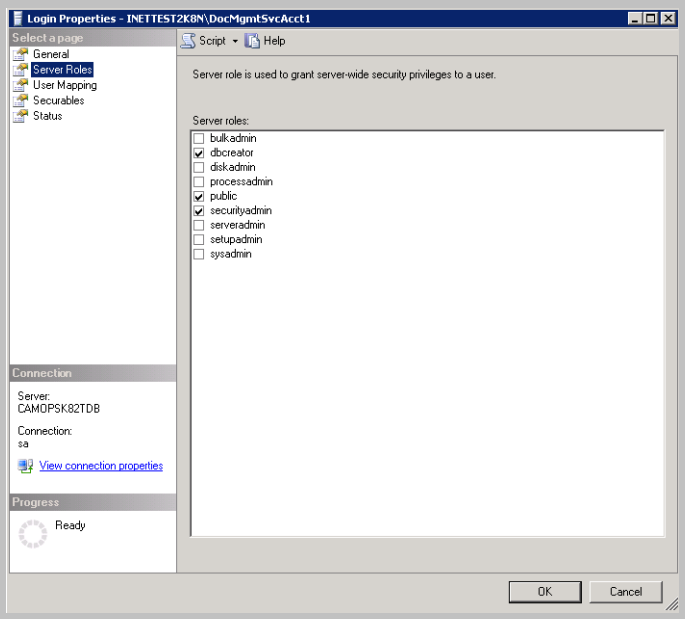


4. Select the **No, I want to create a new server farm** option and click **Next** to display the Specify Configuration Database Settings page.



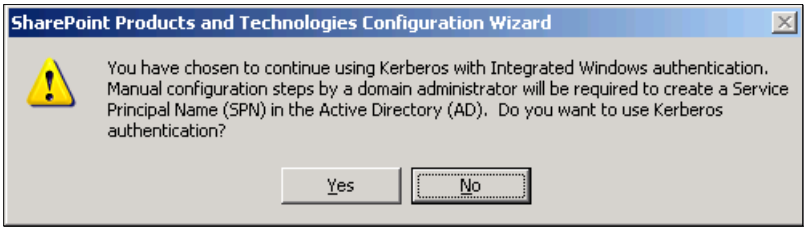
5. Enter the name of the database server to host the SharePoint configuration database and accept the default database name: SharePoint_Config.

Your SharePoint database access account will need to have the dbcreator and securityadmin SQL Server Roles. This is accomplished by adding the domain account as a SQL Server login and adding the roles as shown below:



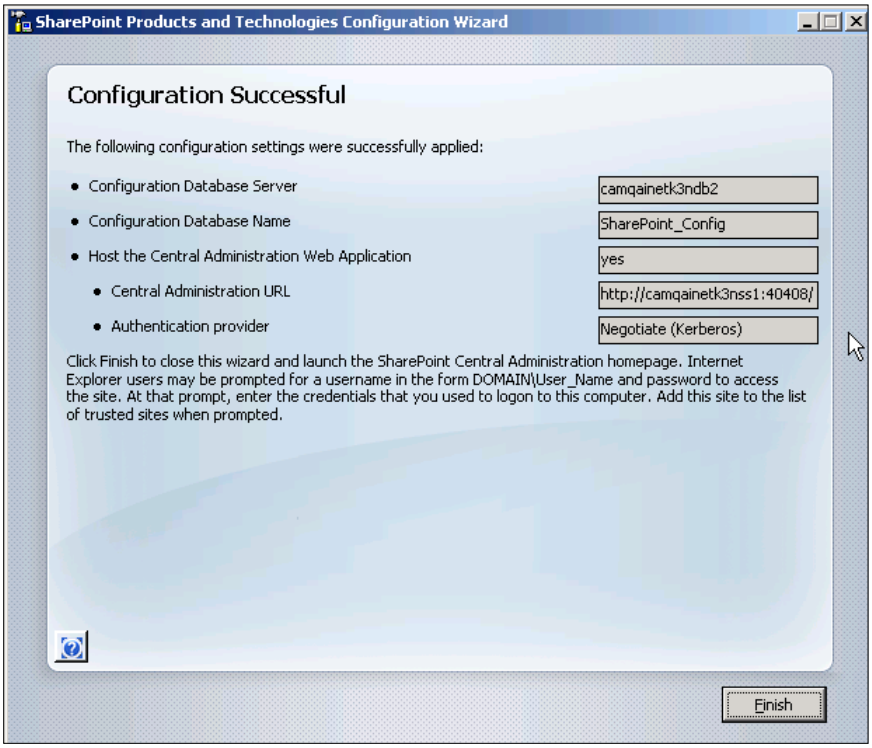
6. Enter the domain and name of the Vision Application Pool Identity (configured and added to the local administrator group on the WSS server) as the **Username** for the SharePoint database access account and enter that user's **Password**.
7. Click **Next**. The Configure SharePoint Central Administration Web Application page displays.

8. Specify the port to be used for the SharePoint Central Administration Web site and select **Negotiate (Kerberos)** for the authentication provider.
9. Click Next. The following dialog box displays.



10. Click **Yes** to continue using **Kerberos with Window**s Authentication. The Completing the SharePoint Products and Technologies Configuration Wizard page displays.

11. Click **Next** to begin the configuration. This process may take some time to complete. The Configuration Successful page displays when configuration is complete.

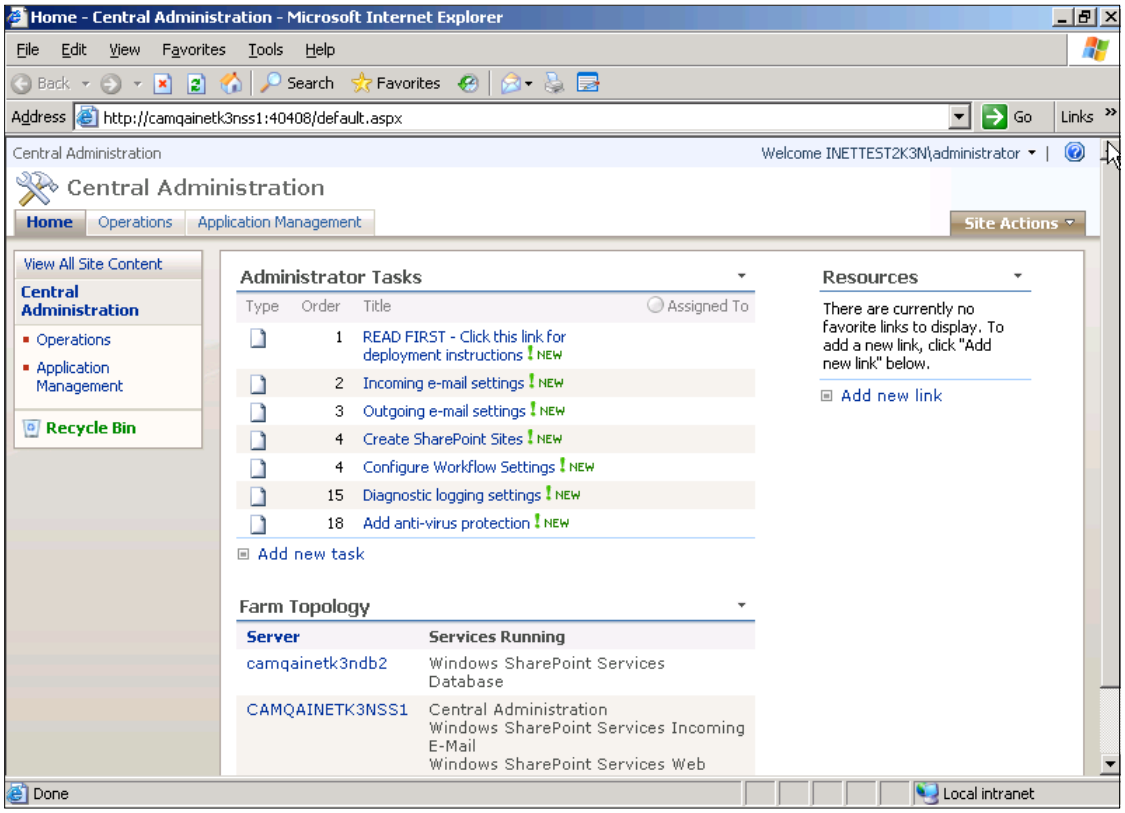


12. Click **Finish** to finish the configuration process. The SharePoint Central Administration page displays.

Use SharePoint Central Administration to Complete the SharePoint Configuration

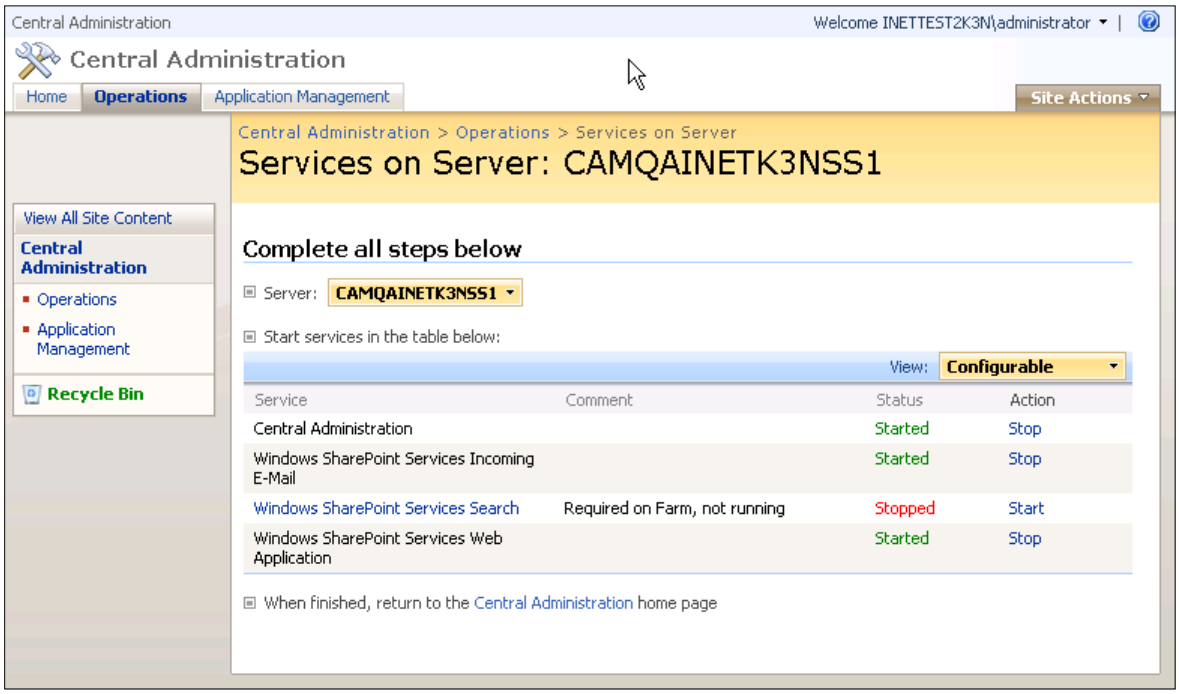
To complete the SharePoint configuration, complete the following steps:

1. When you click **Finish** in the preceding procedure, SharePoint Central Administration is launched.

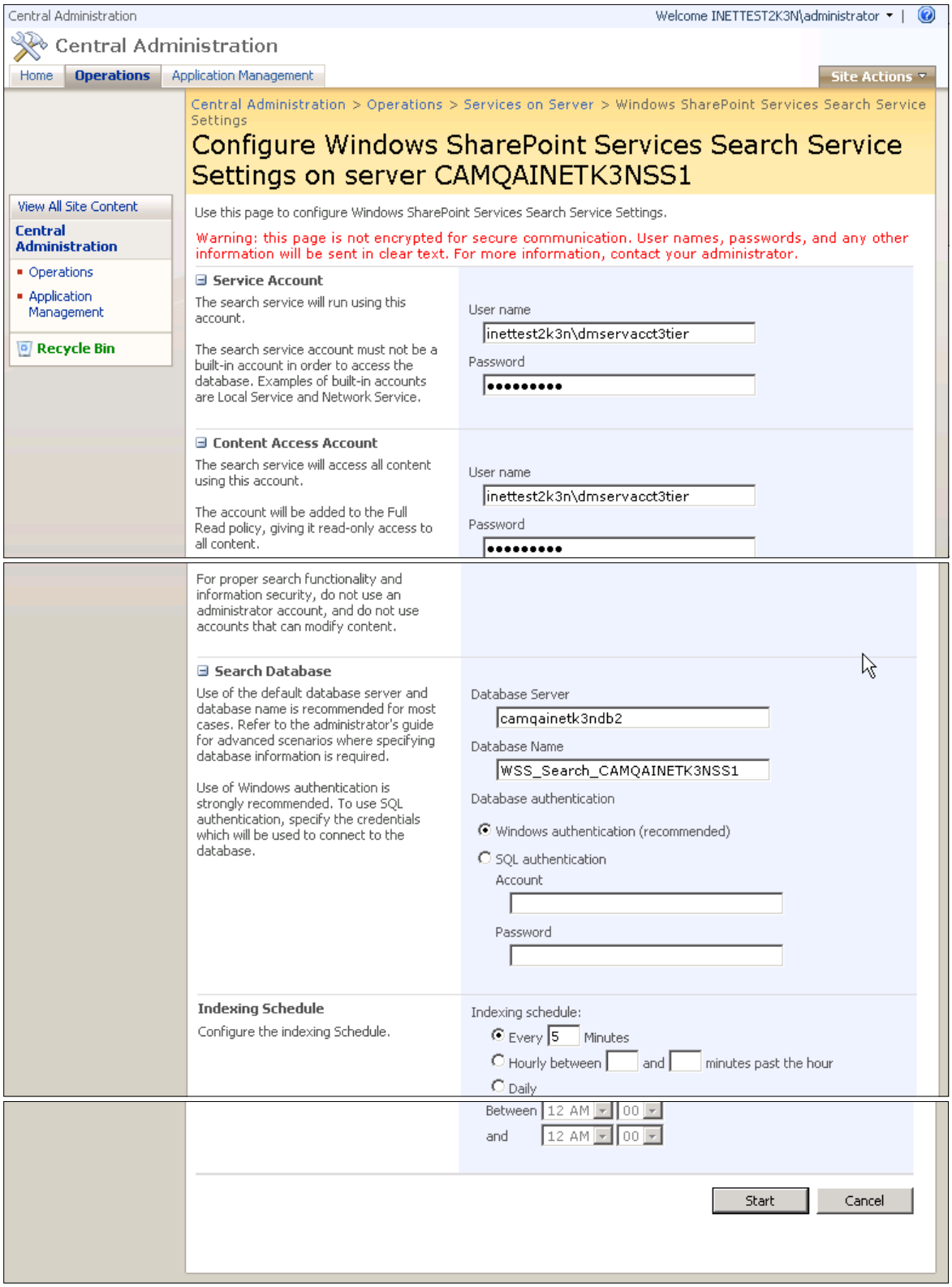


2. Click **Operations**. The Operations page displays.

3. Click **Services on Server** under **Topology and Services** to configure the SharePoint Services search.

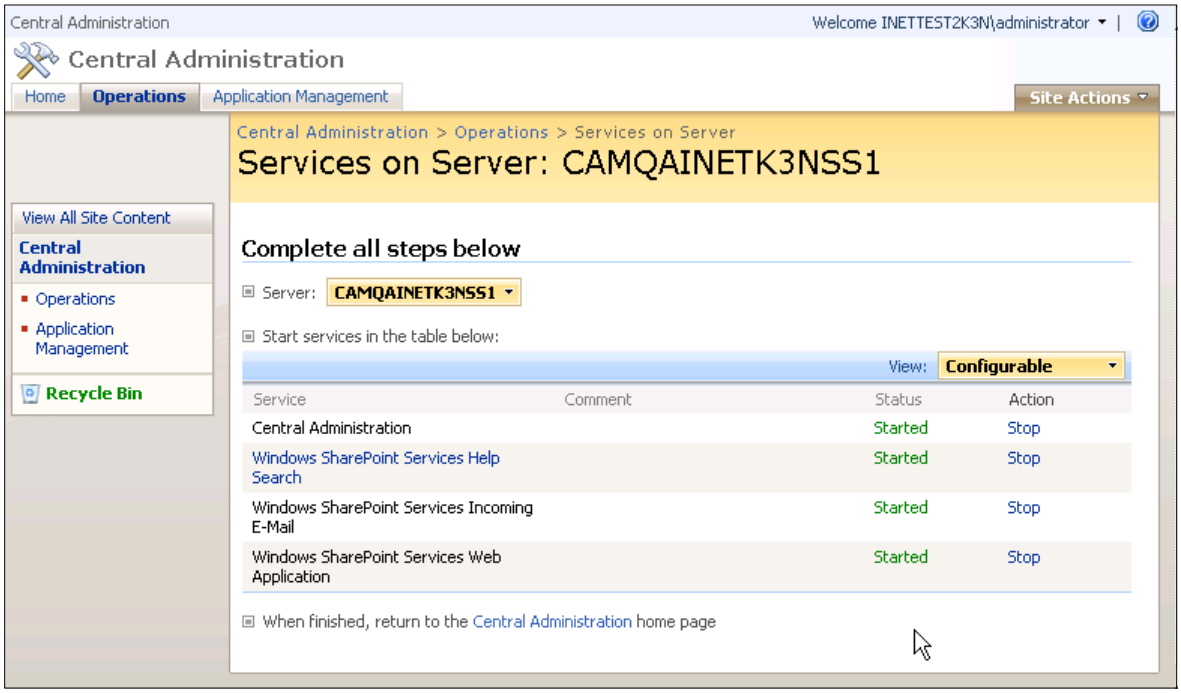


4. Locate the **Windows SharePoint Services Search** option and click **Start**.



5. Configure the search service to include the Service account and Content Access account (use the same account information as your Vision Application Pool Identity).

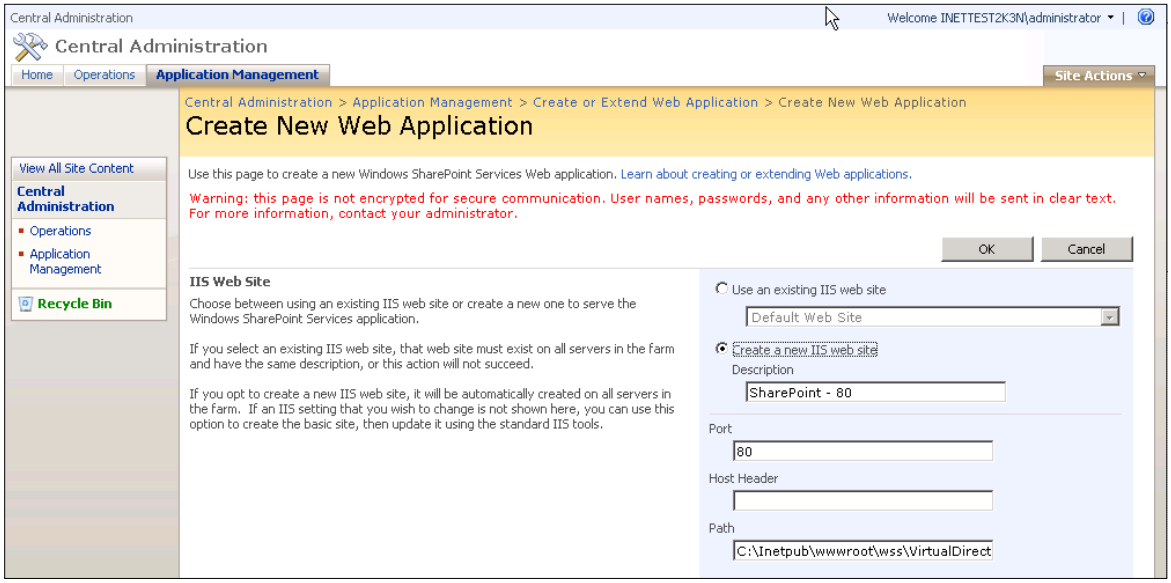
6. Configure **Search Database** as shown and click **Start**. After a minute or so, the service's status changes to **Started**.



7. Click **Application Management** to configure the SharePoint Web Application.

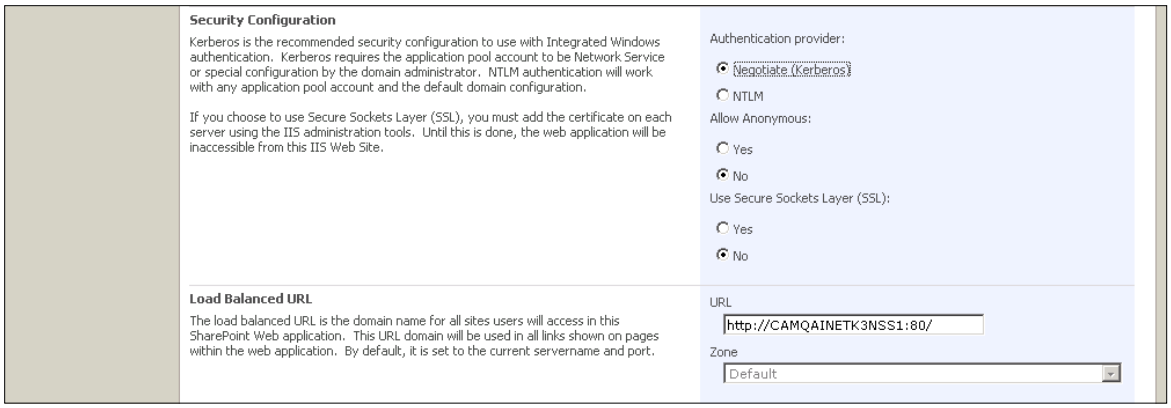
8. Select the **Create or extend Web application** option. The Create or Extend Web Application page displays.

9. Click **Create a new Web application**. The Create a New Web Application page displays.

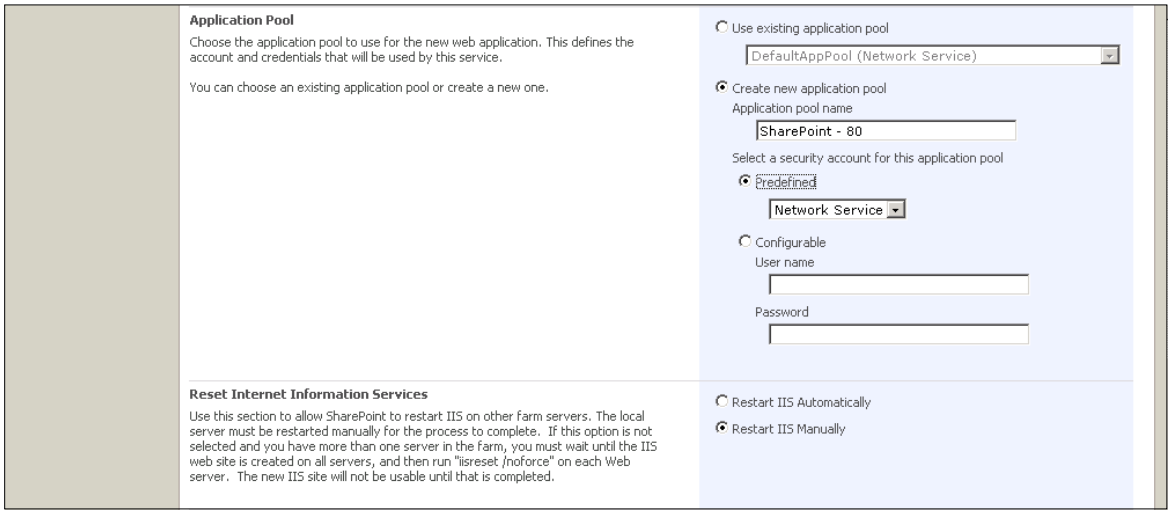


10. Select the **Create a new IIS web site** option. Enter a description for the Web site and specify a port in **Port**.

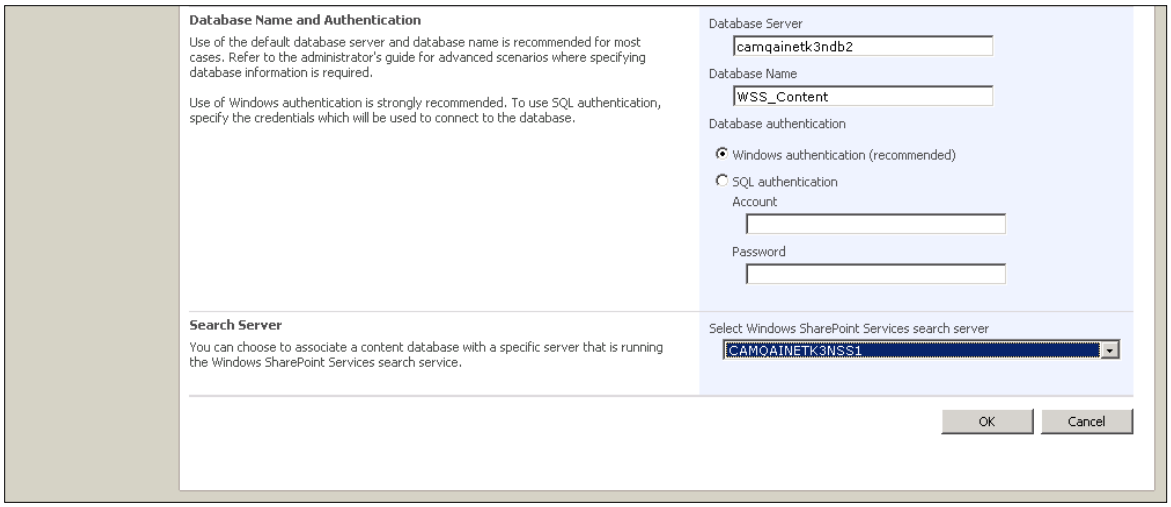
    Because WSS is installed on its own server, it can run on the Default Web Site and Port 80. To accomplish this, select the existing Web site (Default Web Site). Note the entry in **Path**, which by default is the root of your WSS Web site in a directory named after the port chosen under c:\inetpub\wwwroot\wss\virtualdirectories.



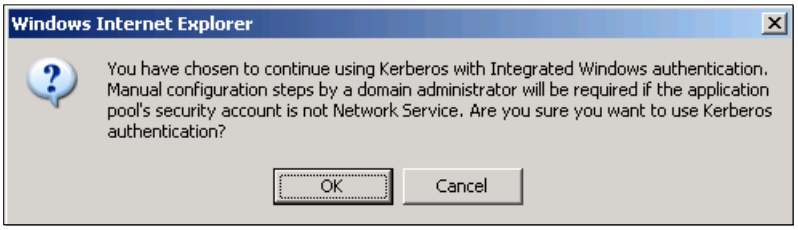
11. Select **Negotiate (Kerberos)** under **Authentication provider**.
12. For the **Allow Anonymous** and **Use Secure Sockets Layer (SSL)** options, accept the default of **No**. If you want to use SSL with SharePoint, you can configure SSL later but you must not configure SSL to be required as the web service calls from the Vision Web/Application server cannot use SSL..



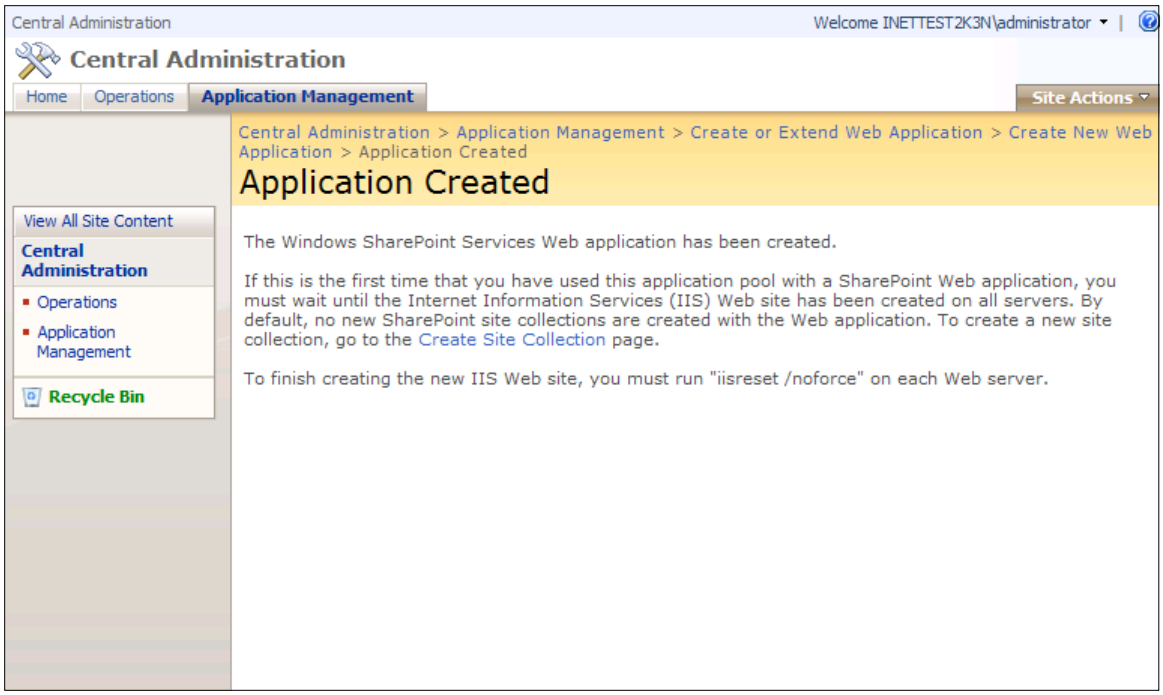
13. Select the **Create a new application pool** option and provide a name (Deltek recommends using the same name as the Web site). Note that if you are installing WSS to the Default Web Site, you can also choose to use the Default App Pool rather than creating a new application pool.
14. Select **Predefined** and **Network Service** for the security account to be used for the application pool. NOTE: Since the SharePoint Application Pool will run as Network Service, no SPN is required.
15. Select the **Restart IIS Manually** option for **Reset Internet Information Services**.



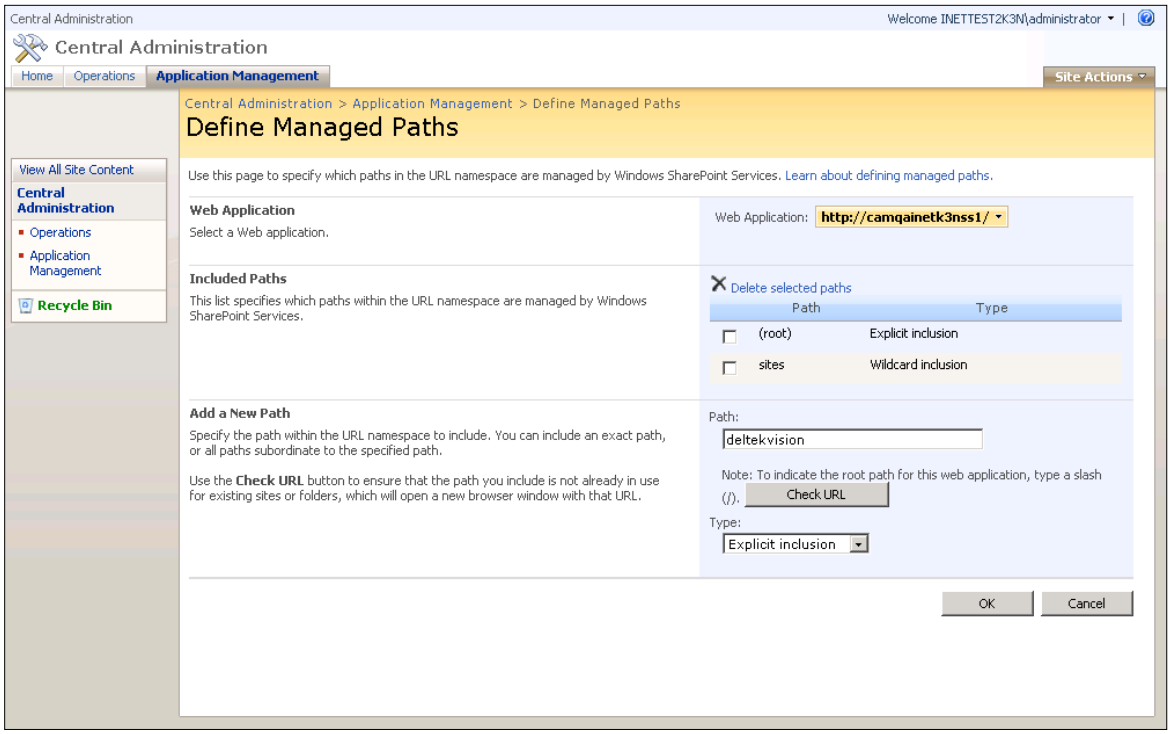
16. Verify the name of the server in **Database Server**. (It should be the same as that used for the SharePoint configuration database server.) Accept the default in **Database Name** for the content database.
17. Select **Windows authentication (recommended)** under **Database authentication**. (This will use the SharePoint service account and Vision Application Pool Identity configured previously.)
18. Select the search server in **Select Windows SharePoint Services search server** and click **OK**. The following dialog box displays.



19. Click **OK** to use Kerberos for Windows Authentication. After a few minutes, the Application Created page displays. It indicates the status of the process to create a new Web application.

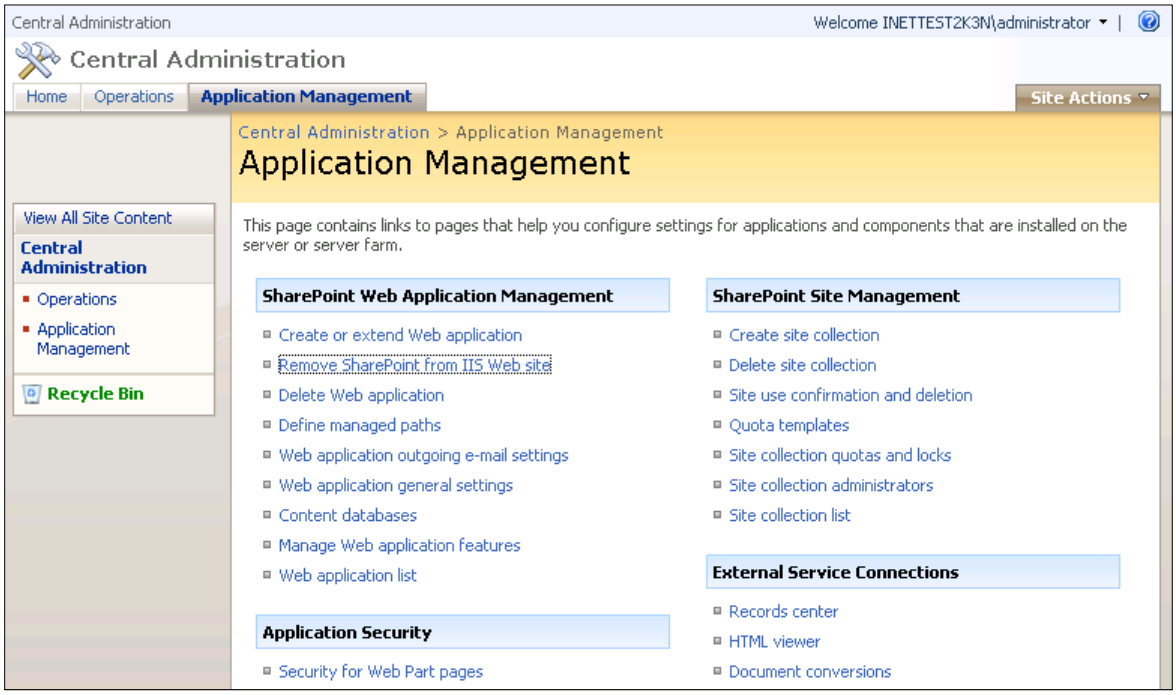


20. Do not click the **Create Site Collection** link at this time. It is still necessary to add DeltekVision as a managed path with explicit inclusion before you create the site collection.
21. Click **Application Management** and select the **Define Managed Paths** option.

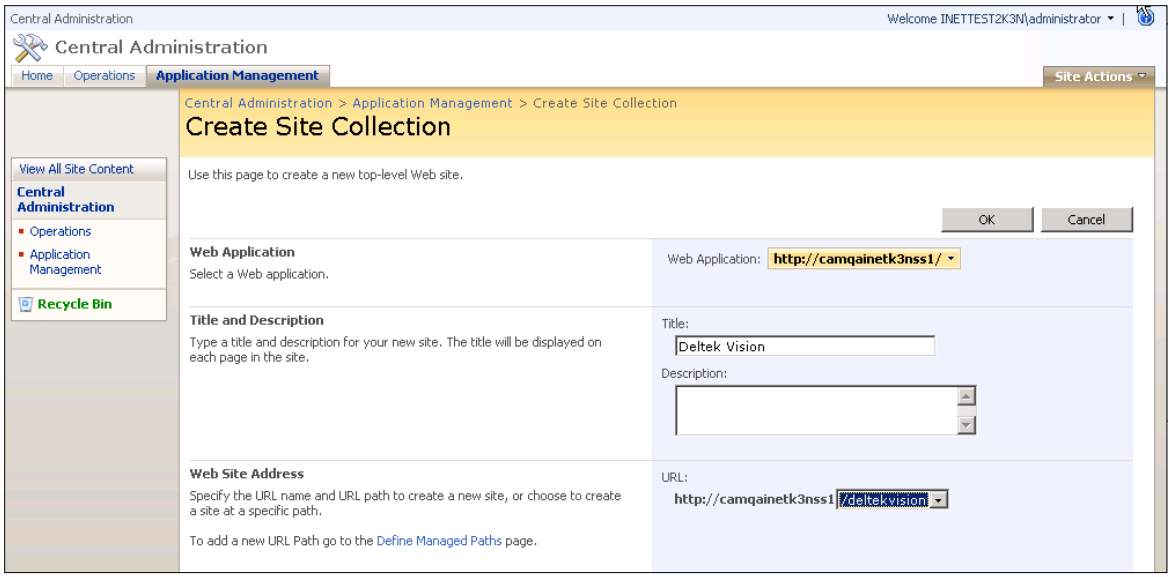


22. Enter **DeltekVision** in **Path** and select **Explicit inclusion** in **Type**.
23. Click **OK**.

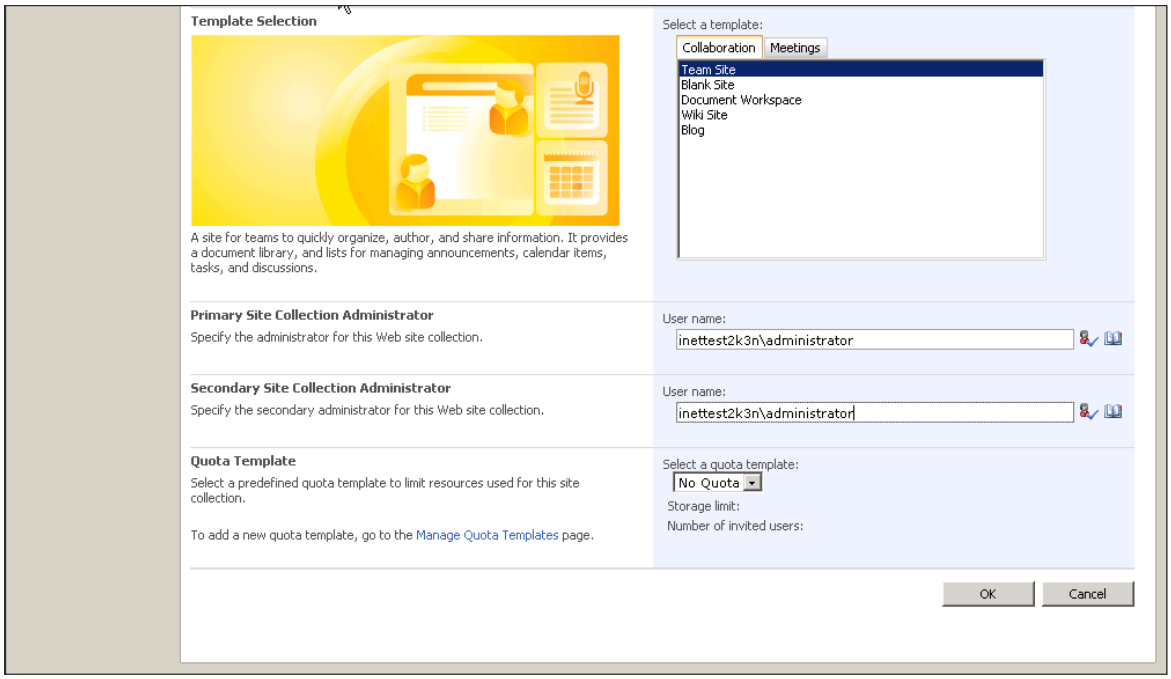
24. Click **Application Management** and select the **Create site collection** option under **SharePoint Site Management**.



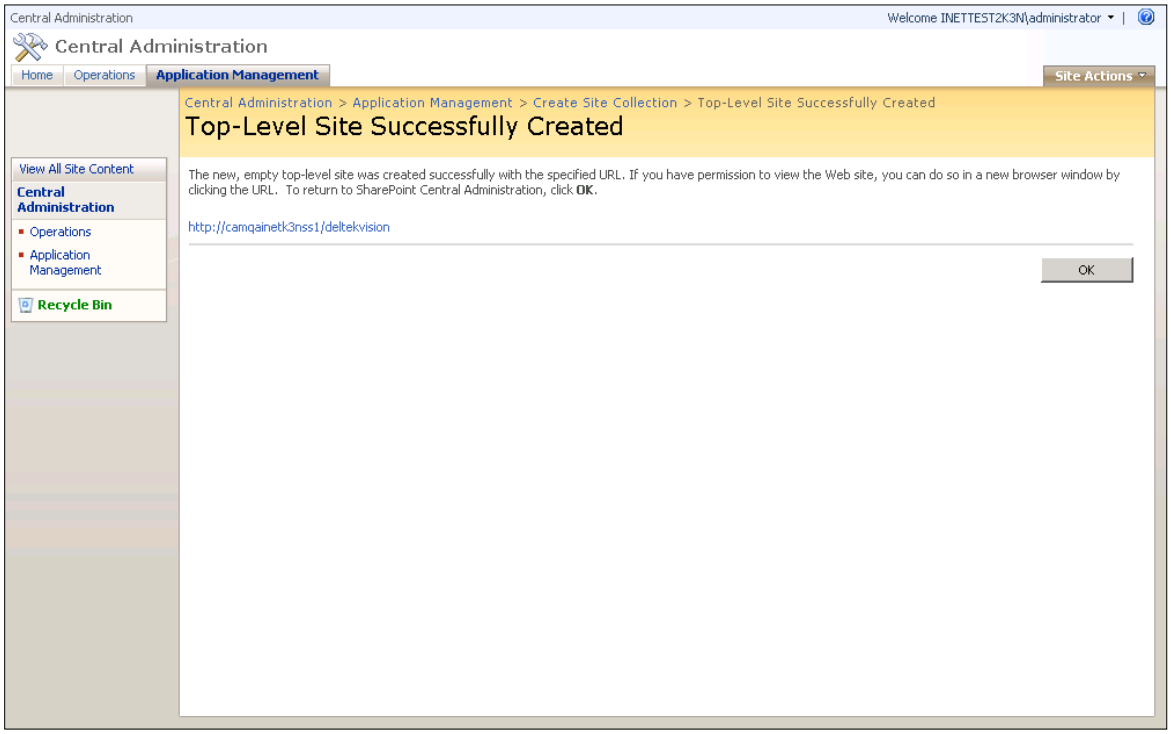
The Create Site Collection page displays.



25. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
26. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root for Vision Document Management.

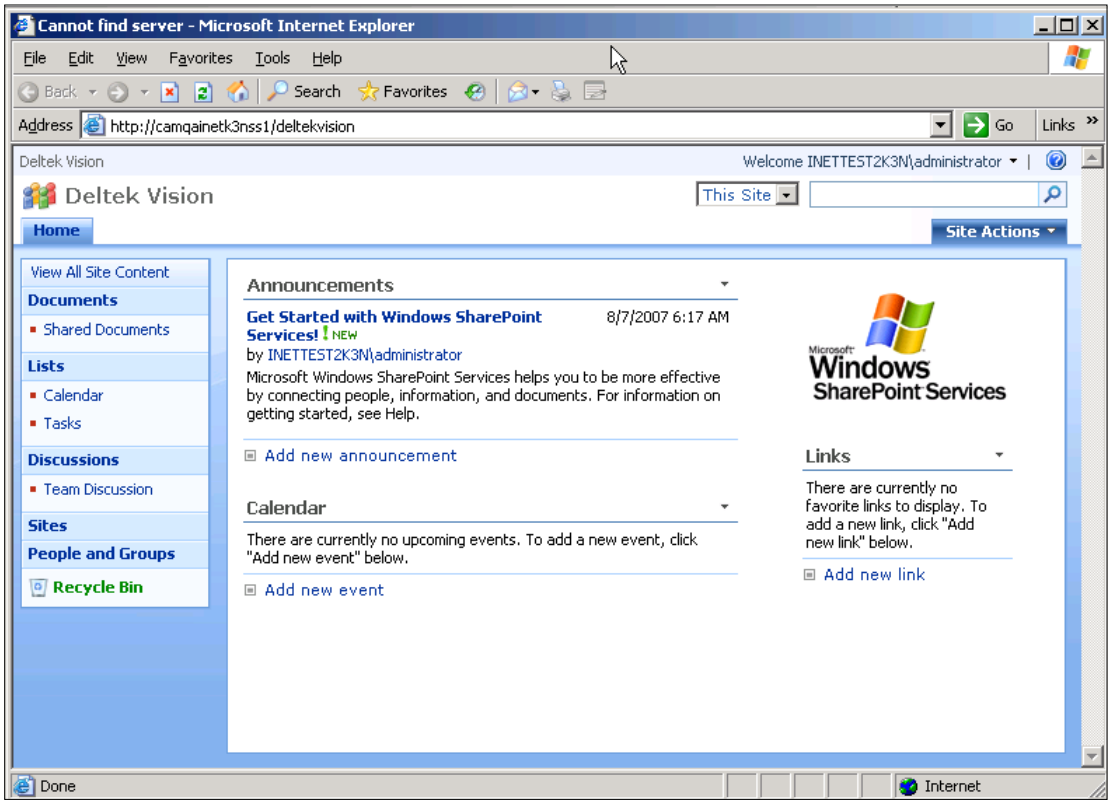


27. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
28. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



29. Click **Start** » **Run**, enter **iisreset /noforce,** and click **Enter**.

30. Click the link for the top level site (in our example it is http://camqainetk3nss1/deltekvision) to display the site.



31. The SharePoint configuration is complete. Close SharePoint Central Administration.

Optional: Configure SharePoint for a Custom URL

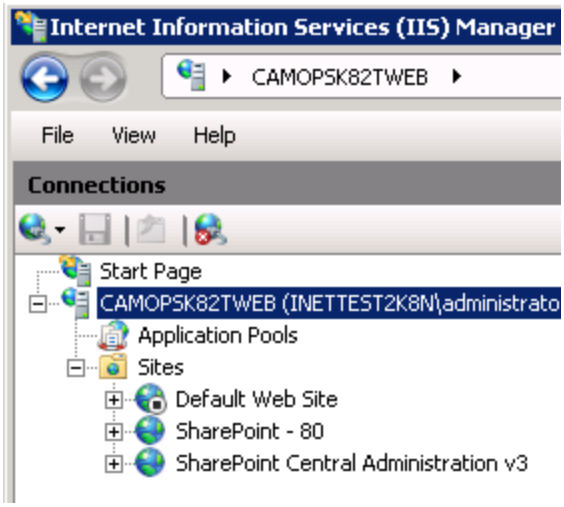
If you will be configuring your SharePoint server to use a custom DNS record for the URL (e.g. http://sharepoint.company.com instead of http://servername.company.com http://servername), then you must create additional SPNs and also create Alternate Access Mappings in SharePoint. It is recommended that this step be completed before Vision Document Management is configured in order to eliminate re-work.

See “Appendix B: Configure SharePoint for a Custom URL” for more information.

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

To verify IIS configuration, complete the following steps:

1. Use the directions that follow to open Internet Information Services to view these Web sites:
   - **Default Web Site** — Stopped.
   - **SharePoint – 80** — This is your WSS 3.0 Web site.
   - **SharePoint Central Administration Web Site**



2. Copy the Vision Document Management .NET assembly to SharePoint site directory.

   Copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to one of the following:

   - c:\inetpub\wwwroot\bin (if WSS was installed to the default web site)
   - c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin (if WSS was installed to another web site)

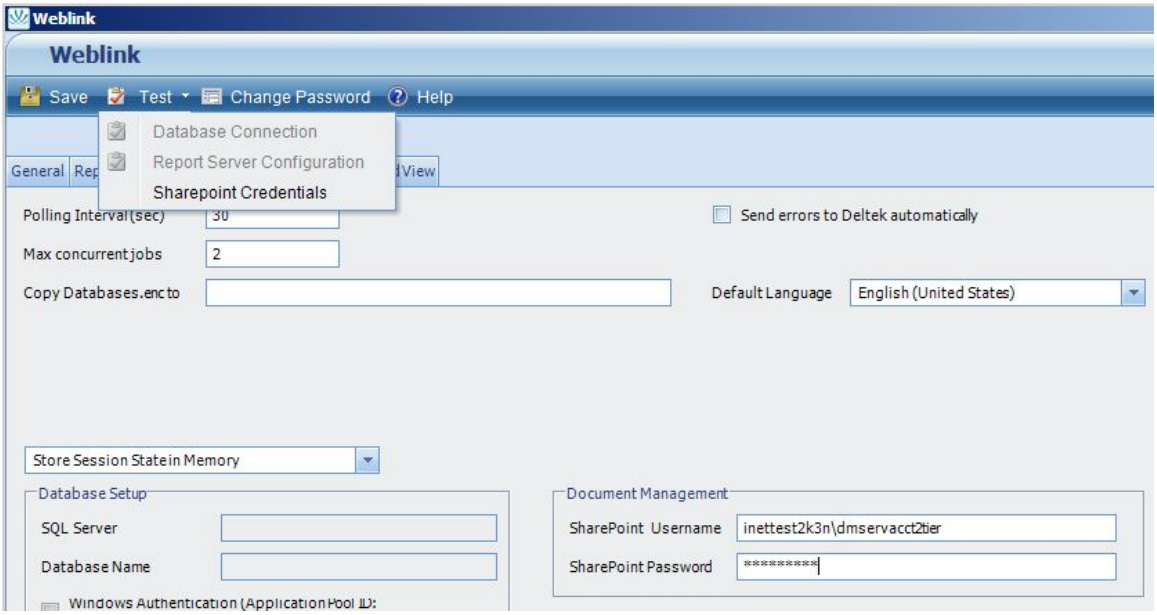
   By default, the <site> directory references the port chosen. In our example, the port is 80. If you extended WSS to the Default Web Site, the path will be c:\inetput\wwwroot\ bin.

Configure Document Management Service Account in Weblink

You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the service account in Weblink, complete the following steps:

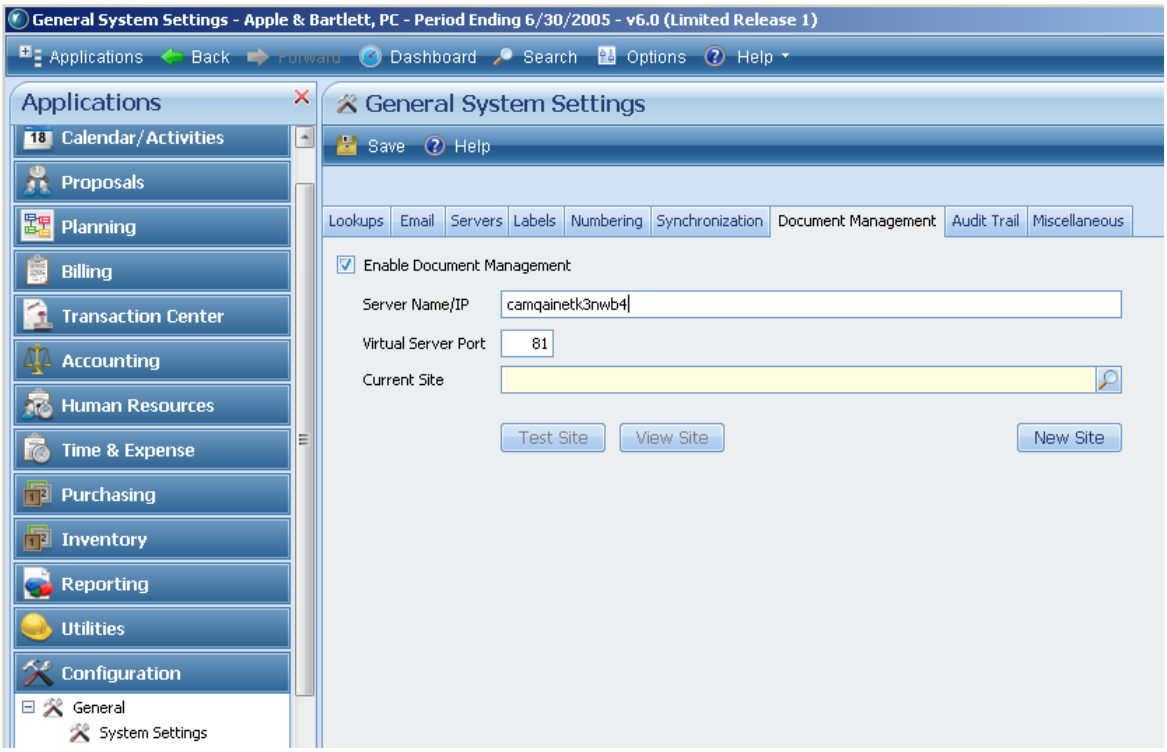
1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**
2. Enter the Weblink password when prompted.
3. Click the System Settings tab.
4. In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
5. Click the **Test** button and SharePoint Credentials to validate that the information entered is correct.



Configure Vision Document Management

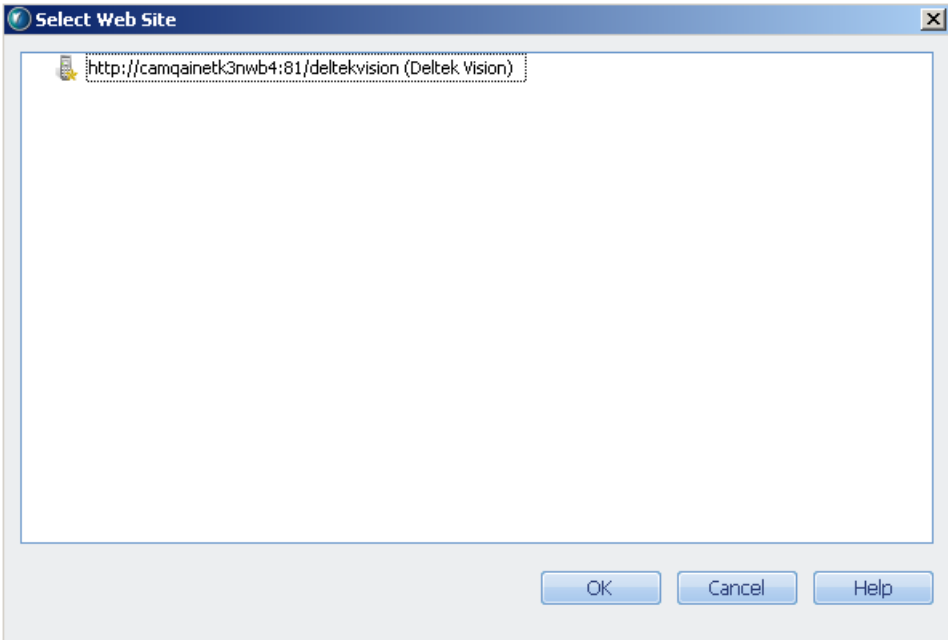
To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.



3. Select the **Enable Document Management** check box.

4. Enter the name of the server hosting Document Management. This should be the server name only, FQDN's or custom DNS values are not needed here. Enter this value without the protocol prefix (for example, remove the http://). In the illustration above, the value is **camqainetk3nwb4**.
5. Enter the **Virtual Server Port**. In the illustration above, the port is 81 but on a typical dedicated SharePoint installation the port will be 80 for the default web site.
6. Click the Lookup icon to select the current site.



7. The Select Web Site dialog box displays the available sites. Select a site, and click **OK**.
8. Save your changes.

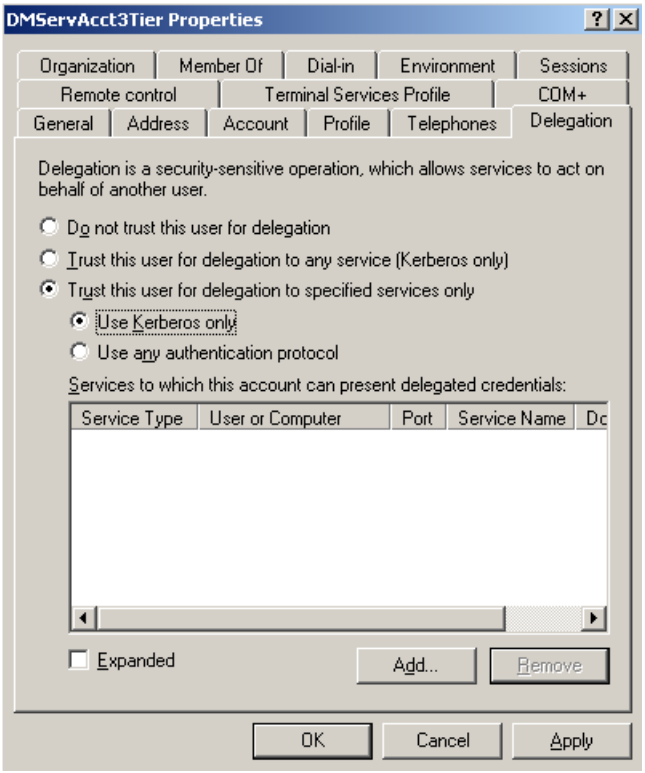
Configure Constrained Delegation

Because your WSS server is on a separate physical server and because the Vision Web server needs to pass the domain credentials of your Vision Document Management users on to the WSS server, you must configure Constrained Delegation.

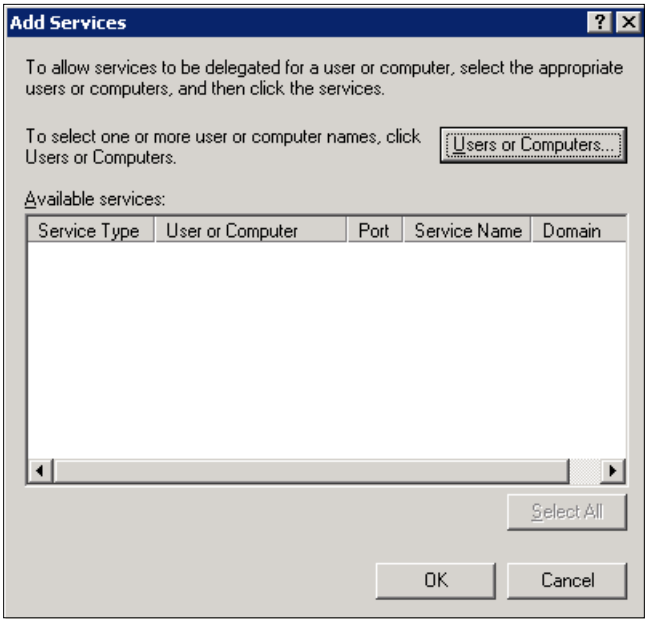
This assumes a non-Internet deployment of Vision Document Management using Kerberos authentication. If you are deploying Vision Document Management so that it is accessible over the Internet, you need to skip ahead to "Optional: Configure Protocol Transition" in the next section.

To configure Constrained Delegation, complete the following steps:

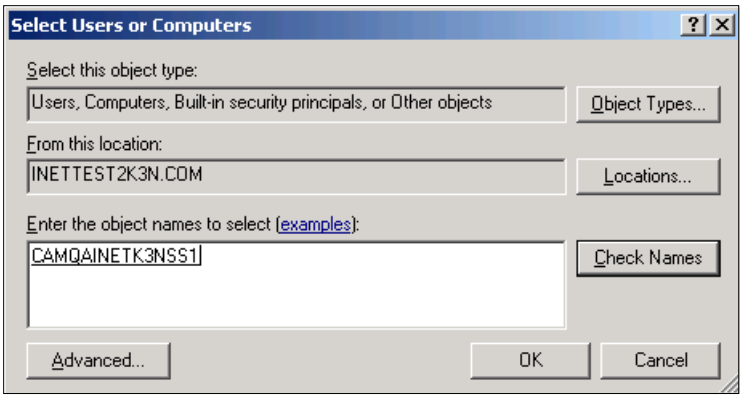
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (WSS Service account).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use Kerberos only** option.



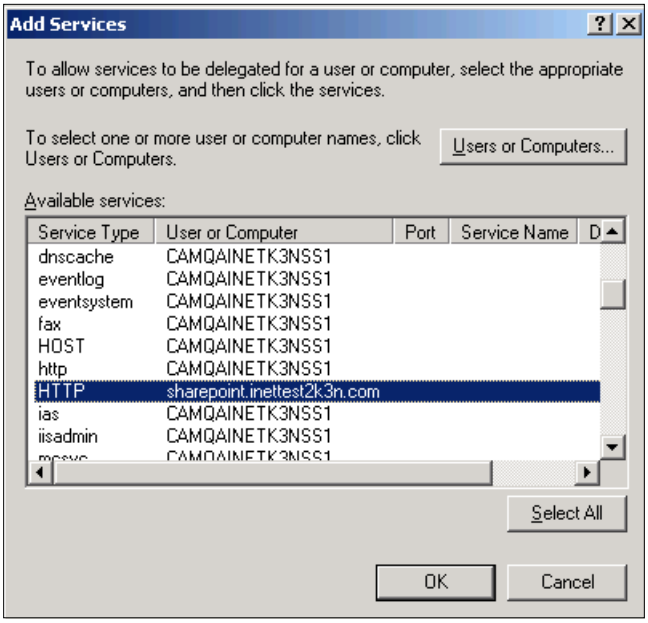
6. Click the **Add** button. The **Add Services** dialog box displays.



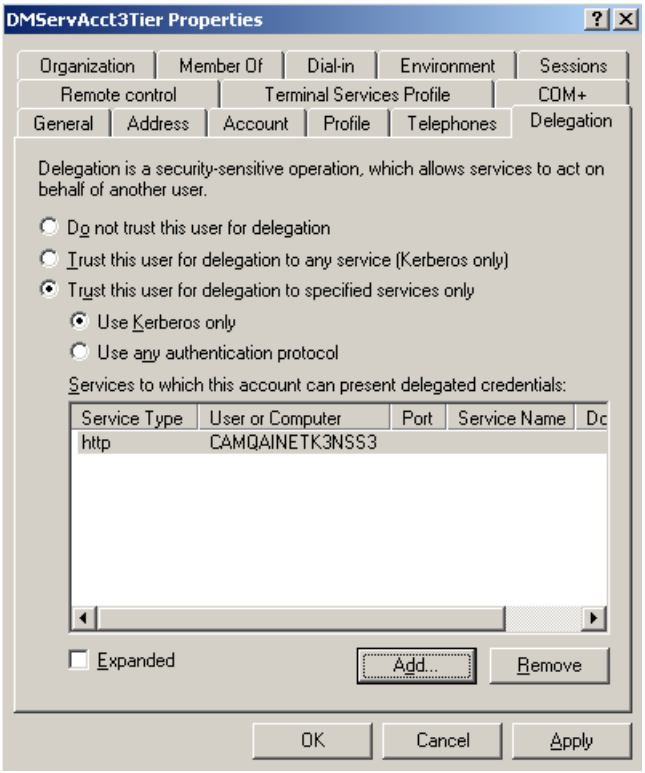
7. Click **Users or Computers**. The Select Users or Computers dialog box displays.



8. Locate the http service, select it, and click **OK**.



The Delegation tab should look like this:



Because we are explicitly specifying the http service and not all services on the SharePoint server, this is known as Constrained Delegation.

There are two http service types listed. These service types are known as Service Principal Names (SPNs). The SPN referencing CAMQAINETK3NSS1.inettest2k3n.com was created automatically when the server was added to the domain and the http service (IIS) was installed. The second SPN referencing sharepoint.inettest2k3n.com is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

Optional: Configure Protocol Transition

If Vision Document Management functionality is required over the Internet and you will be using a custom DNS/FQDN for the SharePoint URL (as in our example, vision1.inettest2k3n.com), then you need to configure a form of delegation referred to as Protocol Transition. If Document Management functionality is not required, you can skip this step.

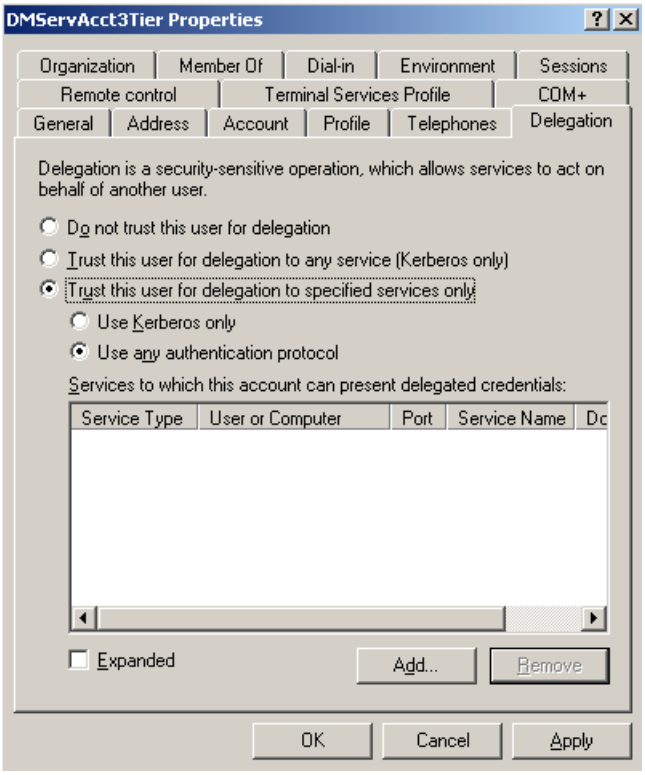
The Kerberos authentication protocol must be used to authenticate from the Vision Web server to the SharePoint server. However, if Vision is deployed in an Internet scenario and there are users outside of the firewall who need to access Document Management features, Kerberos authentication cannot be used to authenticate the client to the Web server. This is because the client needs to have the ability to negotiate a Kerberos ticket with the Key Distribution Center (KDC), which is a service running on a Domain Controller. This requires port 88 to be opened inbound on the firewall to the Domain Controller, which is not an advisable configuration.

To get around this, you must be running a Native Windows Server 2003 functional domain.

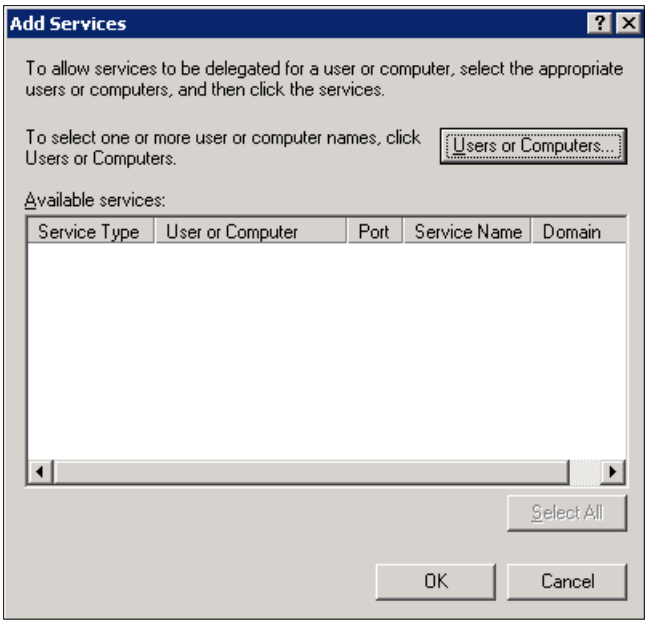
To configure Protocol Transition, select the **Use any authentication protocol** option instead of the **Use Kerberos only** option, which is used to configure Constrained Delegation. This allows the client to authenticate to the Vision Web server using NTLM instead of Kerberos, and that authentication is then “transitioned” over to Kerberos for Delegation to the SharePoint server.

To configure Protocol Transition, complete the following steps:

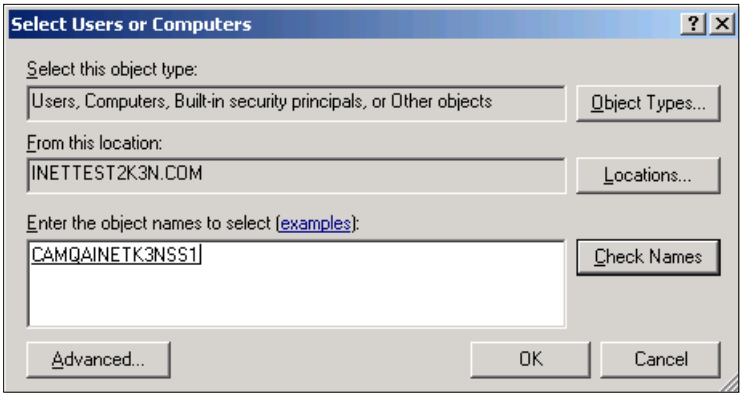
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (WSS Service account), which is most likely under the Computers Organizational Unit (OU).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use any authentication protocol** option.



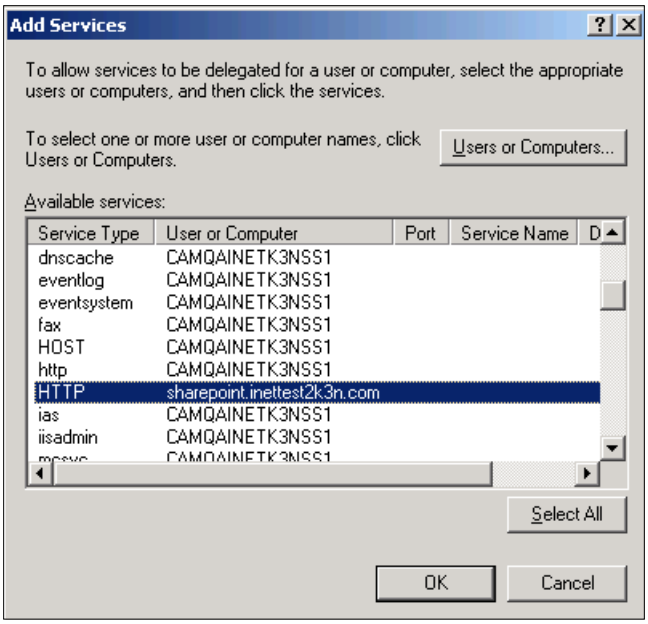
6. Click the **Add** button. The **Add Services** dialog box displays.



7. Click **Users or Computers**, search for the SharePoint server, and click **OK**.



8. Locate the http service for the SPN (FQDN) you created earlier (in our example, **sharepoint.inettest2k3n.com**), select it, and click **OK**.

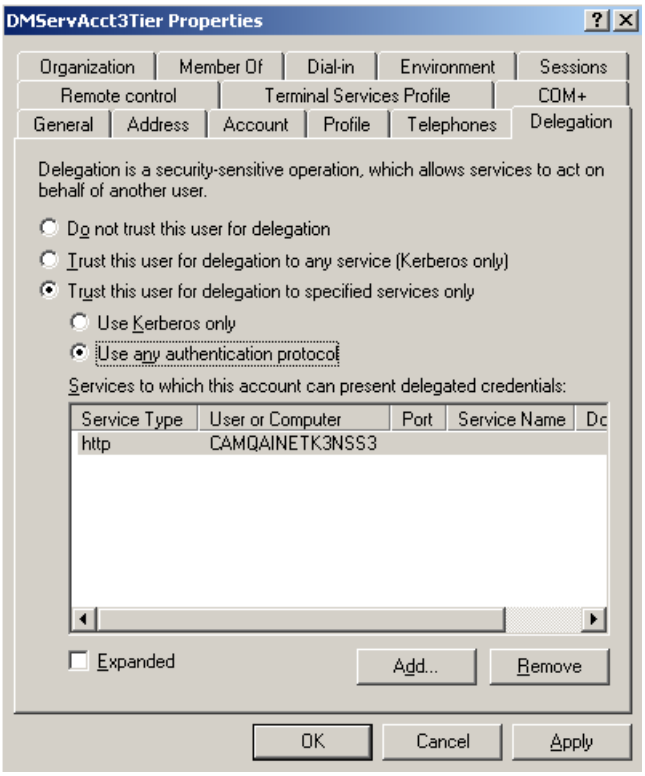


This illustration shows two http service types. Unless you have registered a custom FQDN using the setspn utility, only the server name displays. These service types are known as Service Principal Names (SPNs).

The SPN referencing **CAMQAINETK3NSS1.inettest2k3n.com** was created automatically when the server was added to the domain and the http service (IIS) was installed.

The second SPN referencing **sharepoint.inettest2k3n.com** is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

The Delegation tab should look like this:



Because you explicitly specified the http service and not all services on the SharePoint server and because you selected the **Use any authentication protocol** option and not Kerberos, this is known as Protocol Transition.

Multi Tier New Installation and Configuration for x64 (64-bit) Servers – SharePoint is NOT Installed

!!IMPORTANT!!

Please note the following for this configuration:

- In this configuration, Vision and SharePoint will be installed to the same physical server and SharePoint is **NOT** yet installed.
- The Vision Document Management installation will install SharePoint Foundation 2010. Windows SharePoint Services is **not** supported for this configuration.
- The Operating System for the server is x64 (64-bit).

Before you proceed:

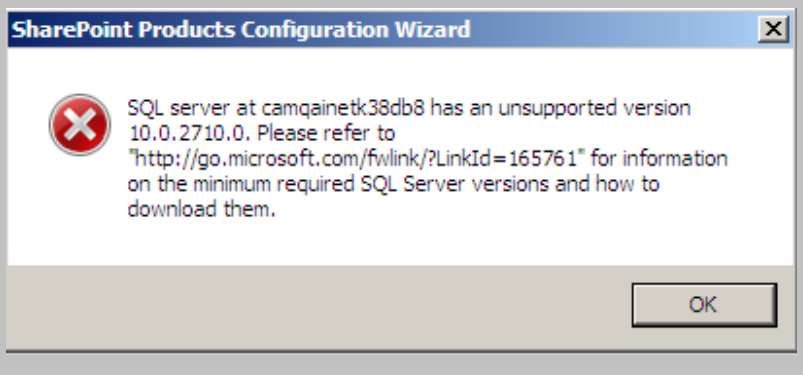
- Review the Hardware and Software Requirements for SharePoint Foundation 2010. See http://technet.microsoft.com/en-us/library/cc288751.aspx for more information.
- Make sure your SharePoint servers are current with all available Windows Updates. Deltek strongly recommends that you do this, to ensure that the SharePoint prerequisite installer completes successfully.

Specific database server requirements for SharePoint Foundation 2010 are as follows:

Environment	Minimum Requirement
Database server in a farm	One of the following: ▪ The 64-bit edition of Microsoft SQL Server 2008 R2. ▪ The 64-bit edition of Microsoft SQL Server 2008 with Service Pack 1 (SP1) and Cumulative Update 2. NOTE: Deltek recommends SQL 2008 Sp3 with Vision 7.1 ▪ The 64-bit edition of Microsoft SQL Server 2005 with Service Pack 3 (SP3). NOTE: Even though SQL 2005 is supported for SharePoint Foundation 2010, Deltek **does not** support SQL Server 2005 with Vision 7.1 if you will be using the same database server for Vision and SPF 2010. For more information about choosing a version of SQL Server, see SQL Server 2008 R2 and SharePoint 2010 Products: Better Together (white paper) (SharePoint Server 2010).

The Document Management installation does not check the edition, platform or version of your SharePoint database server but the SharePoint 2010 Products Configuration Wizard will and will fail to configure SharePoint until the database prerequisites have been met.

For example, you may see an error similar to the following:



Prerequisites

- Install/upgrade your Vision installation to Vision 7.1 (if applicable).
- Change the Application Pool Identity for the DeltekVisionAppPool to be a domain user account (the Vision 7.1 installation sets this to be the local DeltekVision account).
- The domain service account used above will also be the SharePoint Service account.
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server.

Multi Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Grant Local Security Policy Rights to Vision Application Pool Identity
3.	Vision Web/Application Server	Install Vision 7.1 Document Management on the Vision Web Server
4.	Vision Web/Application Server	Configure Authentication for the Vision Website
5.	Vision Web/Application Server	Configure Service Principal Name (SPN) for Vision Application Pool Identity
6.	SharePoint Web /Application Server	Install Vision Document Management on the SharePoint Foundation 2010 Server

7.	SharePoint Web /Application Server	Run the SharePoint 2010 Products Configuration Wizard
8.	SharePoint Web /Application Server	Use SharePoint Central Administration to Complete the SharePoint Configuration
9.	SharePoint Web /Application Server	Configure Service Principal Name (SPN) for SharePoint Application Pool Identity
10.	SharePoint Web /Application Server	Optional: Configure SharePoint for a Custom URL
11.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
12.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
13.	Vision Web/Application Server	Configure Vision Document Management
14.	Domain	Configure Constrained Delegation
15.	Domain	Optional: Configure Protocol Transition

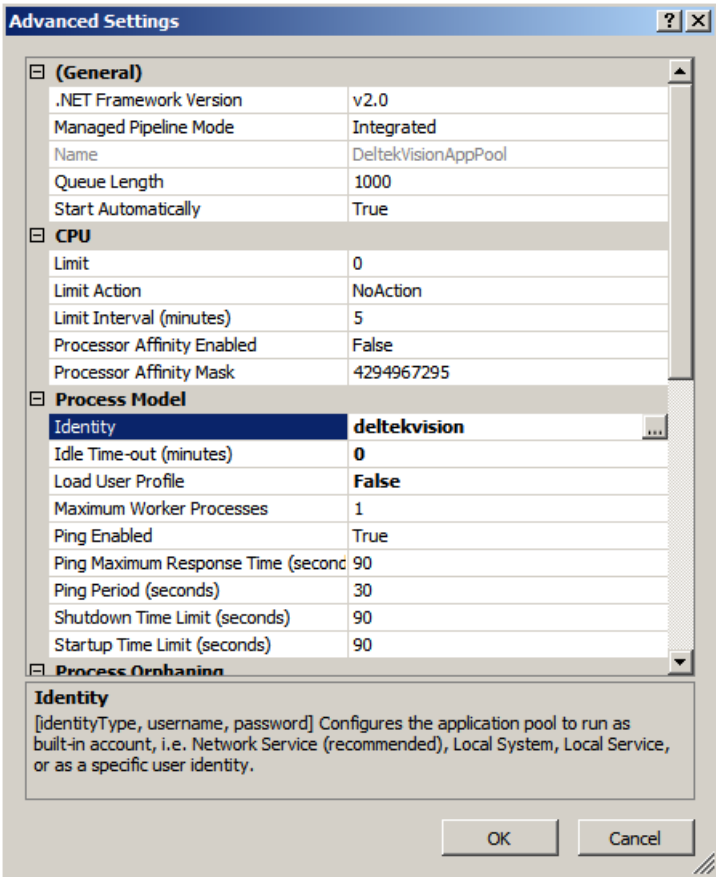
Configure Vision Application Pool Identity to be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

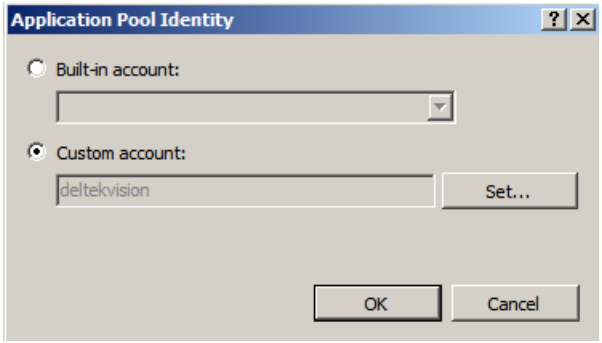
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server..

To change the Vision Application Pool Identity, complete the following steps:

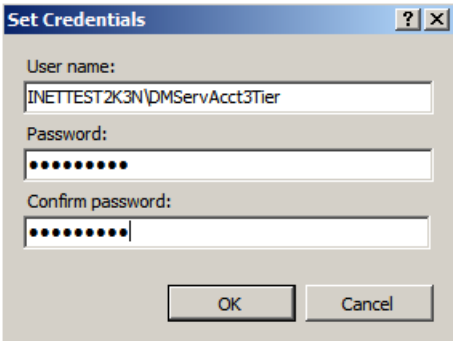
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side. The following displays:



6. Place your cursor in the Identity field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



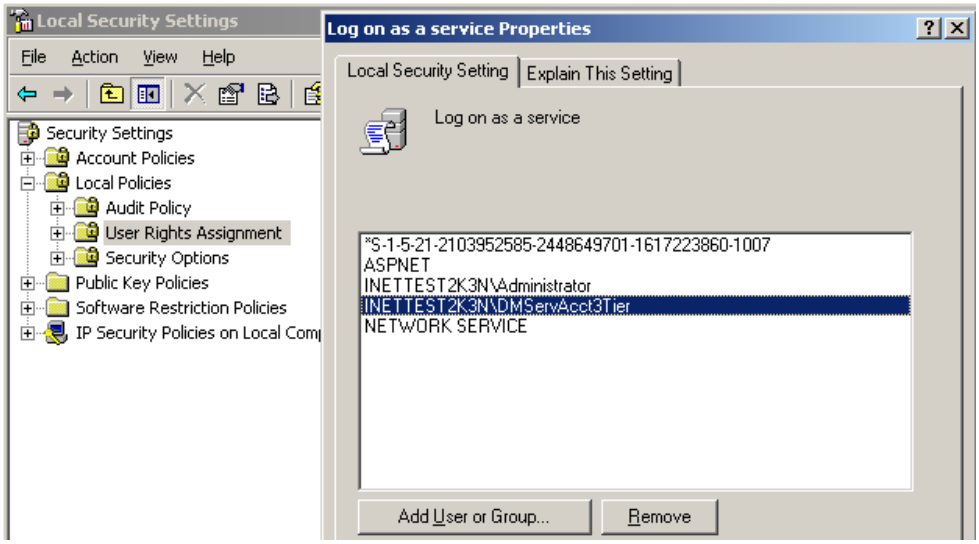
7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In **User name**, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In **Password** and **Confirm password**, enter that user's password.
10. Click **OK** three times to set the identity.

Grant Local Security Policy Rights to Vision Application Pool Identity

The Vision Application Pool Identity/SharePoint Service Account must be granted **Logon as a service** rights on the Vision 7.1 Web/Application Server for multi-tier Document Management installations, as shown in the following example of the Local Security Settings setup screens.



Install and Configure Vision 7.1 Document Management and SharePoint Foundation (SPF) 2010

When you install Vision 7.1 Document Management SPF is automatically installed if your Operating System platform is x64 (64-bit). If you are upgrading from a previous version of Vision and/or already have SPF installed the changes made to your SPF installation are outlined below. The steps to configure SPF are outlined in this section.

If you would prefer not to run the Vision Document Management installation on an existing installation of SharePoint, refer to "Appendix C: Manual Installation of Vision Document Management" for manual setup instructions.

The Document Management installation does the following:

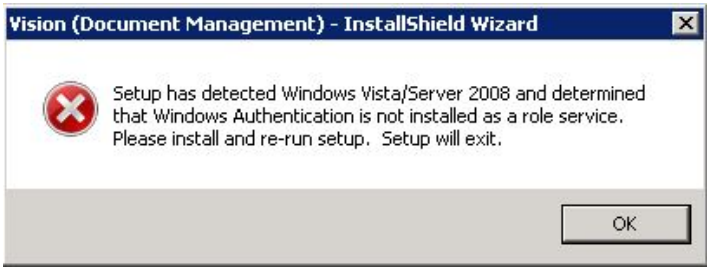
- Installs Web Service Extensions (WSE) 2.0 SP3.
- Installs SPF 2010 when run on the SharePoint web server, if it is not already installed.
- Copies Document Management files to the SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\14\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server.dll into the Global Assembly Cache (GAC).

Install Vision 7.1 Document Management on the Vision Web Server

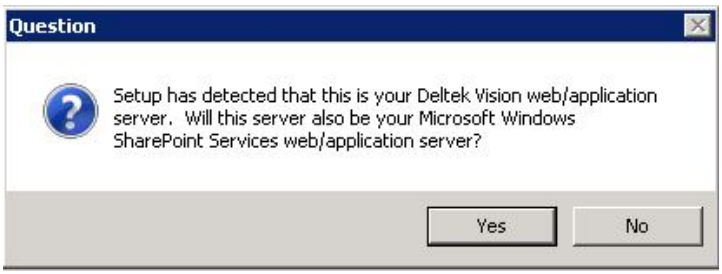
You must run the Document Management installer on both the Vision web server and the SharePoint web server.

To install Vision 7.1 Document Management, complete the following steps:

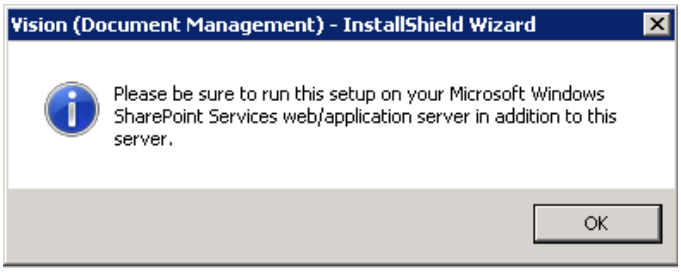
1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. The installation will check to ensure that the IIS Role service, Windows Authentication, is installed. If the Role Service is not installed you will be prompted to install it and the setup will exit:



3. After installing the Windows Authentication IIS Role Service, re-run the Document Management installation.
4. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
5. On the first Document Management Installation Wizard page, click **Next**.
6. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
7. When this message displays, click **No** because this is a multi-tier installation of Vision Document Management and your Vision Web server will not host SPF 2010.



8. When the following dialog box displays to remind you to run the setup on the SPF server, click **OK**.



9. On the Ready to Install the Program page, click **Install** to start the installation.
10. When the InstallShield Wizard Complete page displays, click **Finish**.

Configure Authentication for the Vision Website

IIS Kernel Mode Authentication

The default configuration of IIS when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because the Machine account cannot be used for delegation scenarios which are required for multi-tier deployments of Vision Document Management, the additional configuration steps below are necessary.

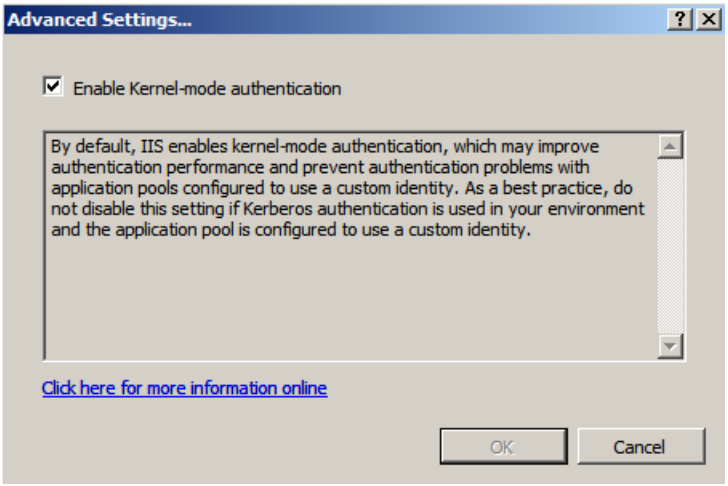
Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.

6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

> This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path=”Default Web Site/Vision”>
5. Locate the windowsAuthentication tag and add **useAppPoolCredentials=”true”** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Configure Service Principal Name (SPN) for Vision Application Pool Identity

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication to work properly and creating an SPN for the Application Pool Identity in this configuration will result in a “duplicate SPN” issue, preventing Windows Integrated Security from authenticating anyone to the Web site.

However, For Multi Tier installations of Vision Document Management it is necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity (DeltekVisionAppPool) as this is the account used for delegation.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

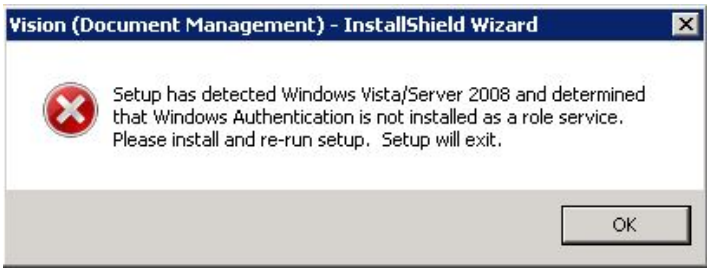
See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

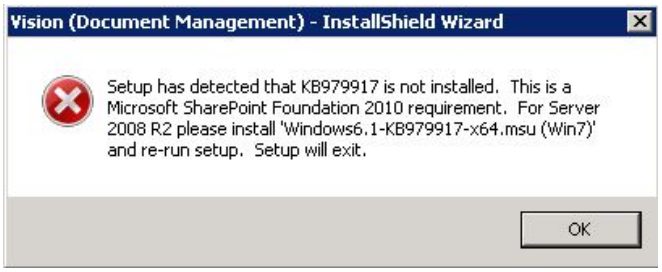
Install Vision Document Management on the SPF 2010 Server

To install Vision Document Management on the SPF 2010 server, complete the following steps:

1. As indicated at the beginning of this section, it is highly recommended that you install all available Windows Updates prior to proceeding with the installation.
2. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
3. The installation will check to ensure that the IIS Role service, Windows Authentication, is installed. If the Role Service is not installed you will be prompted to install it and the setup will exit:

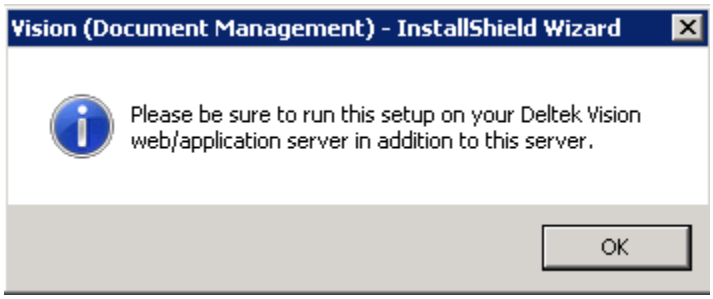


4. After installing the Windows Authentication IIS Role Service, re-run the Document Management installation. The installation will then check to ensure that Hotfix KB979917 is installed (not applicable if you have Windows Server 2008 R2 Sp1 installed), which is a SPF 2010 Prerequisite not installed by the Prerequisite Installer. If it is not installed you will be prompted to install it, the setup will exit and a browser windows will open displaying the download site. Be sure to choose the correct x64 version, Vista is Server 2008 and Win7 is Server 2008 R2:

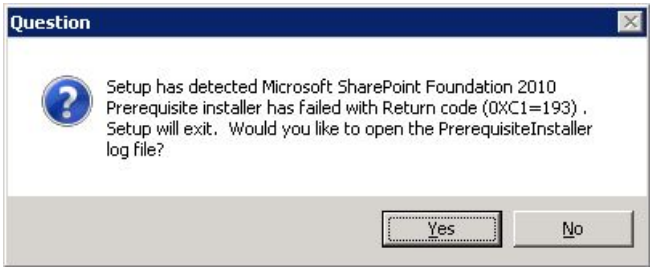


5. After installing the hotfix for KB979917 (if applicable), re-run the Document Management installation.
6. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
7. On the first Document Management Installation Wizard page, click **Next**.
8. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.

9. When the following message displays to remind you to run the setup on the Vision web/application server if you haven't already, click **OK**.



10. On the Ready to Install the Program page, click **Install** to start the installation. The installation automatically downloads SharePoint Foundation 2010, extracts the setup files and installs SharePoint Foundation 2010.
11. When the "Files extracted successfully" message displays, click the **OK** button to continue the installation.
12. The installation will launch the SharePoint Foundation Prerequisite Installer to install all prerequisite components. If there are errors installing any of these components you will see a dialog indicating that the Prerequisite Installer failed and a link to open the log file and the installation will end. The following is an example:



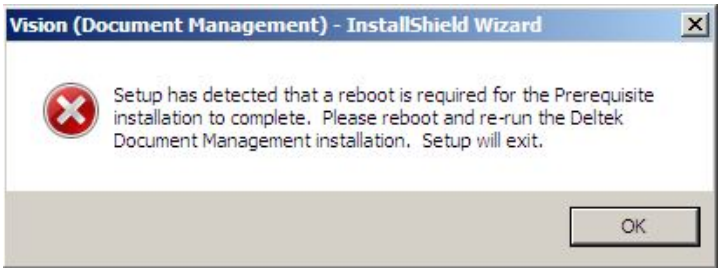
The following is an excerpt from the Prerequisite Installer log file related to this error, which indicates a problem installing the Microsoft Chart Controls for Microsoft .Net Framework 3.5:

```
2010-08-26 08:58:54 - Beginning download of Microsoft Chart Controls for Microsoft .NET Framework 3.5
2010-08-26 08:58:54 - http://go.microsoft.com/fwlink/?LinkID=160383
2010-08-26 08:59:26 - Download timeout (0x80072EE2=-2147012894)
2010-08-26 08:59:26 - Retrying download from position (in bytes) (0x10B400=1094656)
2010-08-26 08:59:26 - Size of download of "Microsoft Chart Controls for Microsoft .NET Framework 3.5" in bytes is "1094656"
2010-08-26 08:59:26 - Download of "Microsoft Chart Controls for Microsoft .NET Framework 3.5" completed successfully
2010-08-26 08:59:26 - Installing Microsoft Chart Controls for Microsoft .NET Framework 3.5
2010-08-26 08:59:26 - "C:\Users\ADMINI~1.INE\AppData\Local\Temp\2\Cha2726.tmp.exe" /q /norestart
2010-08-26 08:59:26 - Error: Unable to install (0xC1=193)
2010-08-26 08:59:26 - Error: [In HRESULT format] (0x800700C1=-2147024703)
2010-08-26 08:59:26 - Last return code (0xC1=193)
2010-08-26 08:59:26 - Error: The tool was unable to install Microsoft Chart Controls for Microsoft .NET Framework 3.5.
2010-08-26 08:59:26 - Last return code (0xC1=193)
2010-08-26 08:59:26 - Options for further diagnostics: 1. Look up the return code value 2. Download the prerequisite manually and v
2010-08-26 08:59:26 - Cannot retry
```

Should you need to locate the Prerequisite Installer log file, it can be found in c:\users\<username>\appdata\local\temp\<numbered subdirectory>.

NOTE: If there are errors installing any software prerequisites download and install them manually and then re-run the Document Management installation. Links to all software prerequisites can be found at the following URL, http://technet.microsoft.com/en-us/library/cc288751.aspx.

Additionally, if a reboot is necessary you will see a dialog indicating a reboot is required and the installation will end. The following is an example:

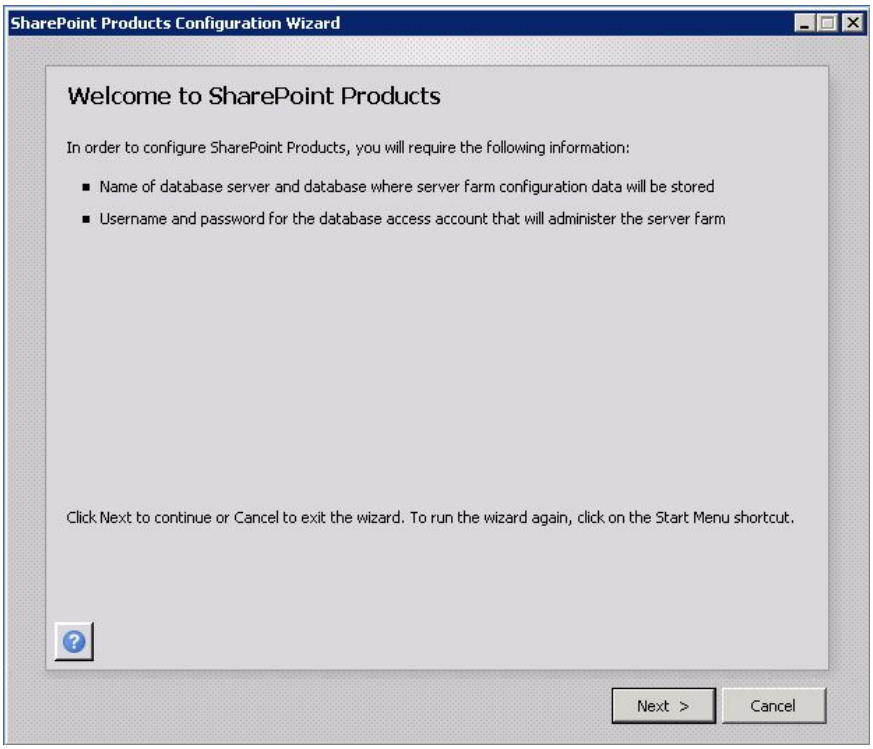


13. After resolving all issues with the prerequisite installations and/or rebooting as required, start the Document Management installation again to complete the installation. It may take running the installation several times to complete.
14. The installation will then launch the SharePoint Foundation installation routine. If there are errors installing SharePoint, a dialog will display with a link to open the log file.
15. After resolving any issues, start the Document Management installation again to complete the installation.
16. When the InstallShield Wizard Complete page displays, click **Finish**.

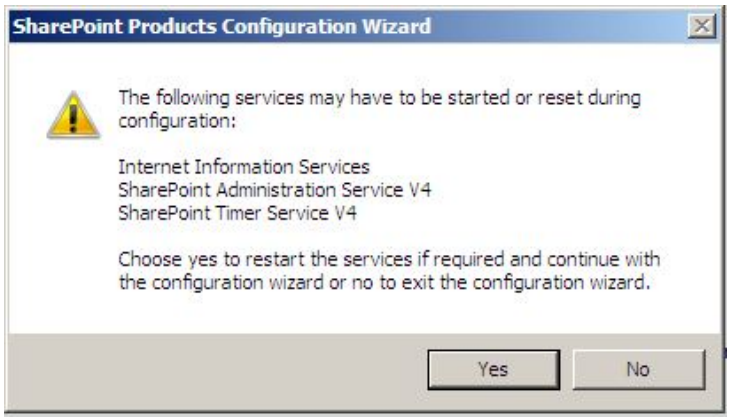
Run the SharePoint 2010 Products Configuration Wizard

To run the SharePoint 2010 Products Configuration Wizard, complete the following steps:

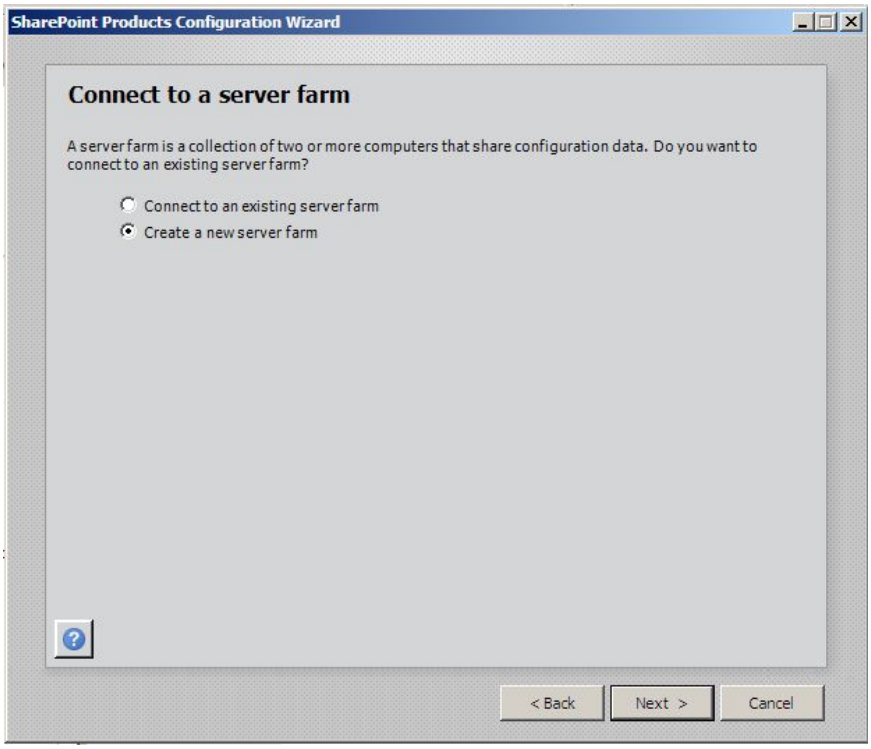
1. Click **Start » All Programs » Microsoft SharePoint 2010 Products » SharePoint 2010 Products Configuration Wizard**. The Welcome page displays.



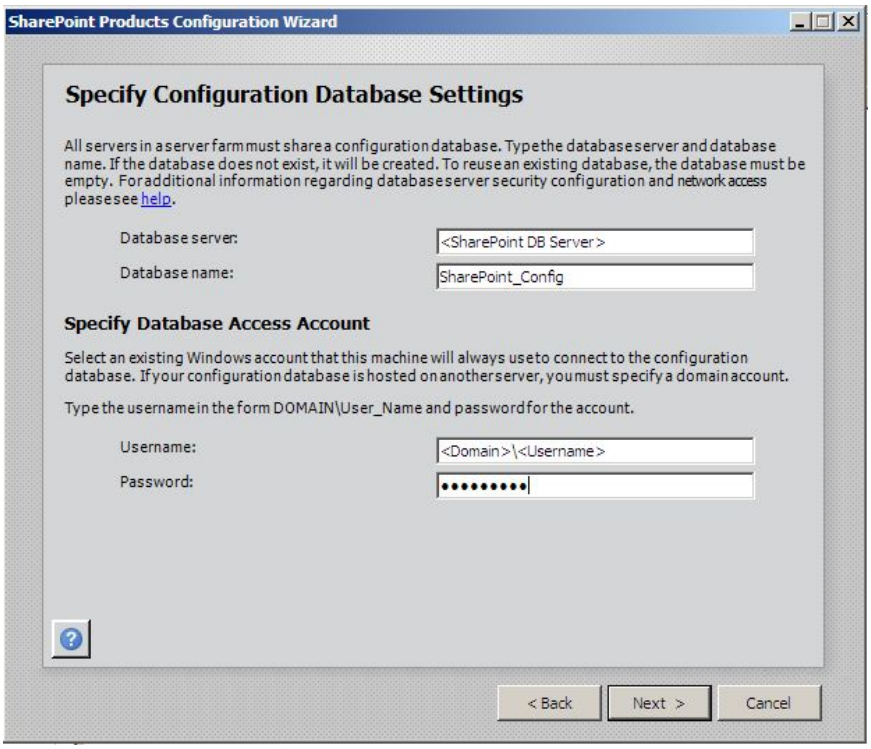
2. Click **Next**. The following dialog box displays.



3. Click **Yes**. The Connect to a server farm page displays.

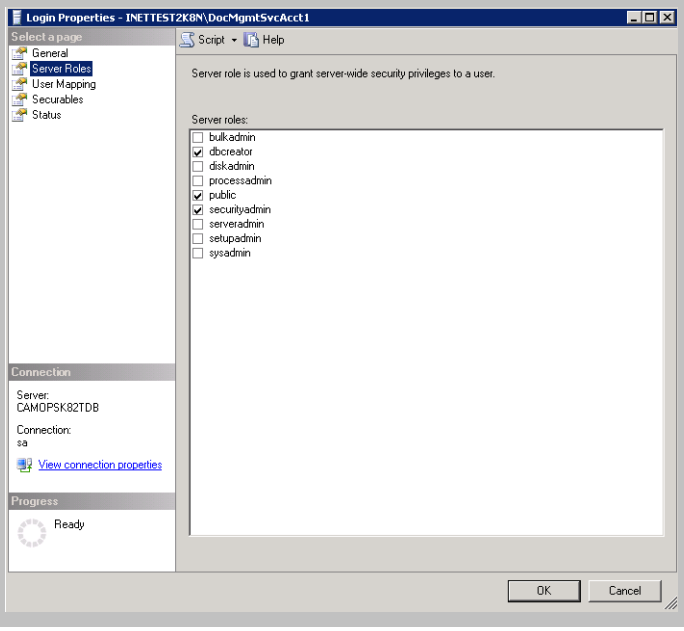


4. Select the C**reate a new server farm** option and click **Next**. The Specify Configuration Database Settings page displays.

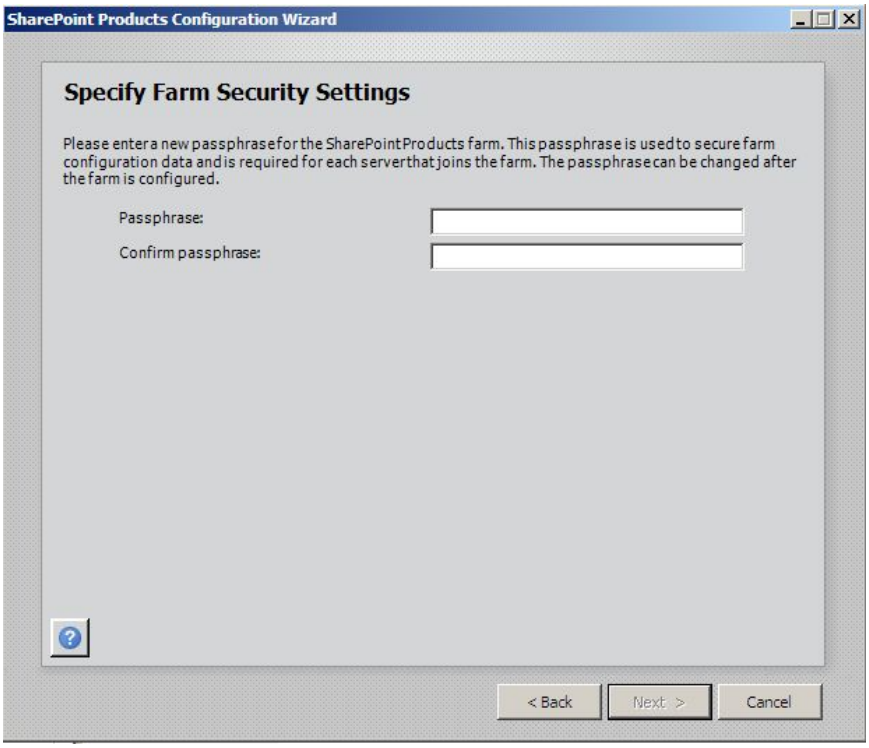


5. Enter the name of the database server to host the SharePoint configuration database and accept the default database name: SharePoint_Config.

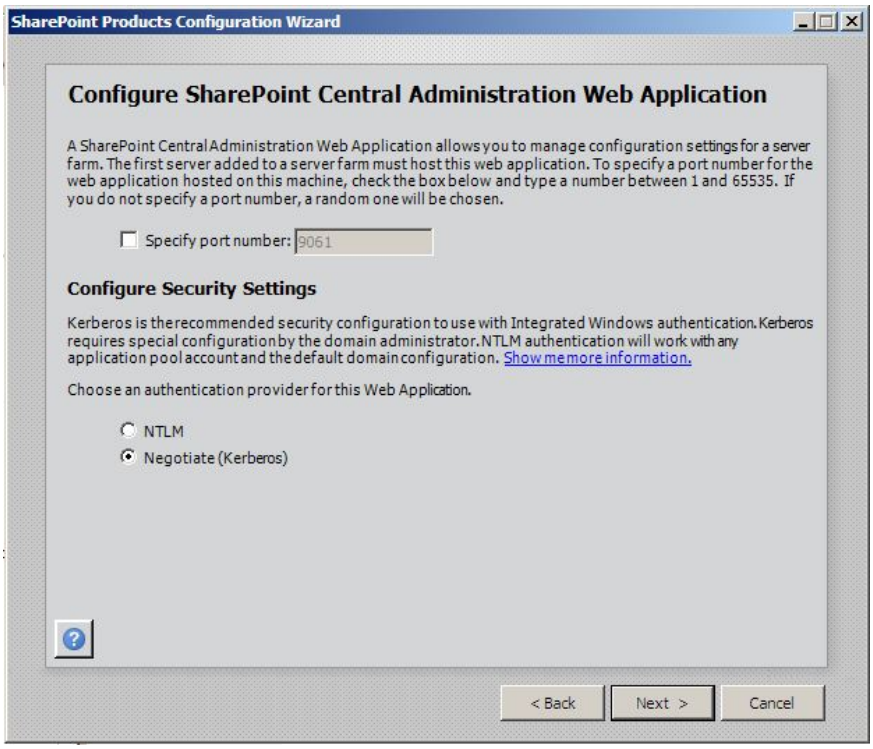
Your SharePoint database access account will need to have the dbcreator and securityadmin SQL Server Roles. This is accomplished by adding the domain account as a SQL Server login and adding the roles as shown below:



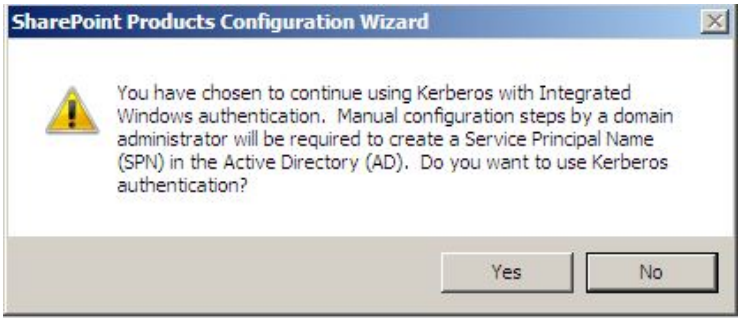
6. In the **Username** field, enter the domain and name of the Vision Application Pool Identity (as configured earlier) as the username for the SharePoint database access account, and enter the user's password in the **Password** field.
7. Click **Next**. The Specify Farm Security Settings page displays



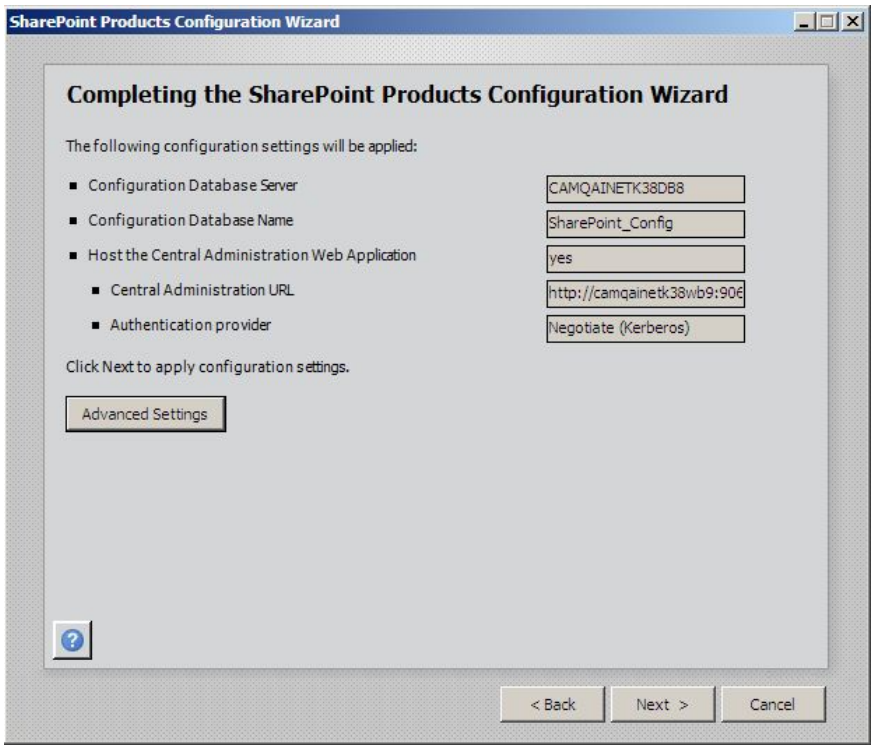
8. Enter a Passphrase for your Farm.
9. Click **Next**. The Configure SharePoint Central Administration Web Application page displays.



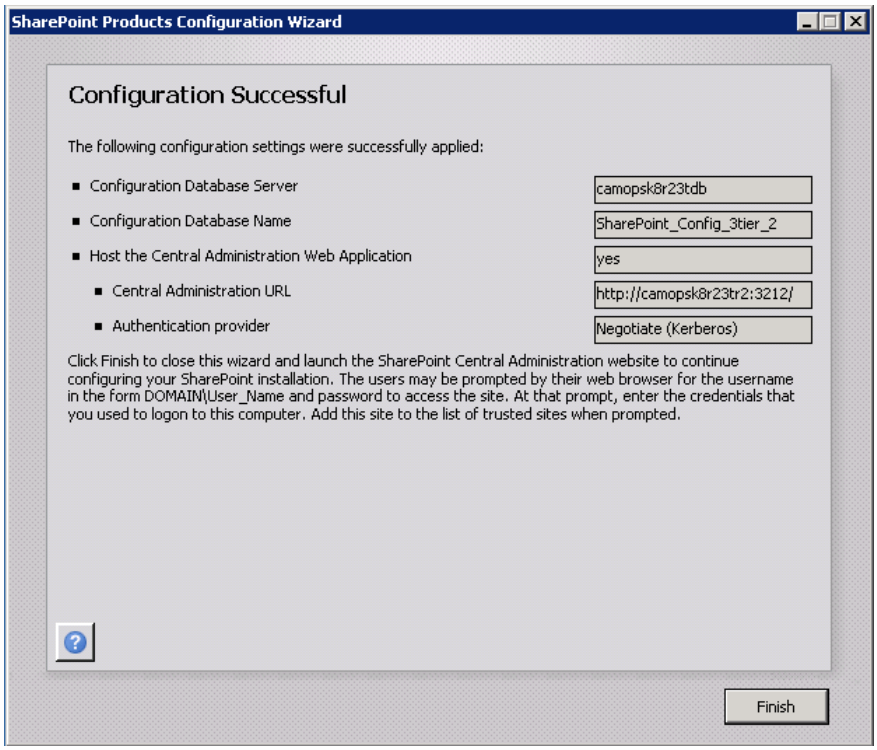
10. Select the **Specify port number** check box and enter the port to be used for the SharePoint Central Administration Web site and select the **Negotiate (Kerberos)** option for the Authentication provider to use.
11. Click **Next**. The following dialog box displays.



12. Click **Yes** to continue using **Kerberos with Windows** Authentication. The Completing the SharePoint Products and Technologies Configuration Wizard page displays.



13. Click **Next** to begin the configuration. This process may take some time to complete. The Configuration Successful page displays when configuration is complete.

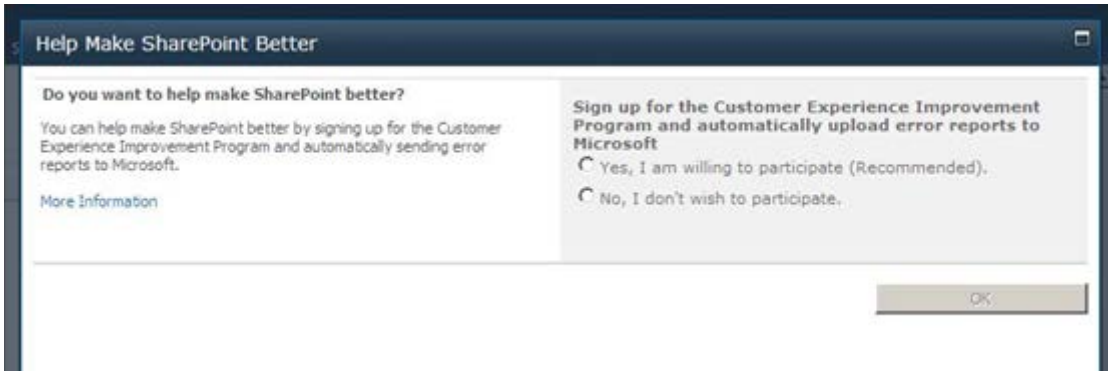


14. Click **Finish** to finish the configuration process. The SharePoint Central Administration page displays.

Use SharePoint Central Administration to Complete the SharePoint Configuration

To finish the SharePoint Configuration, complete the following steps:

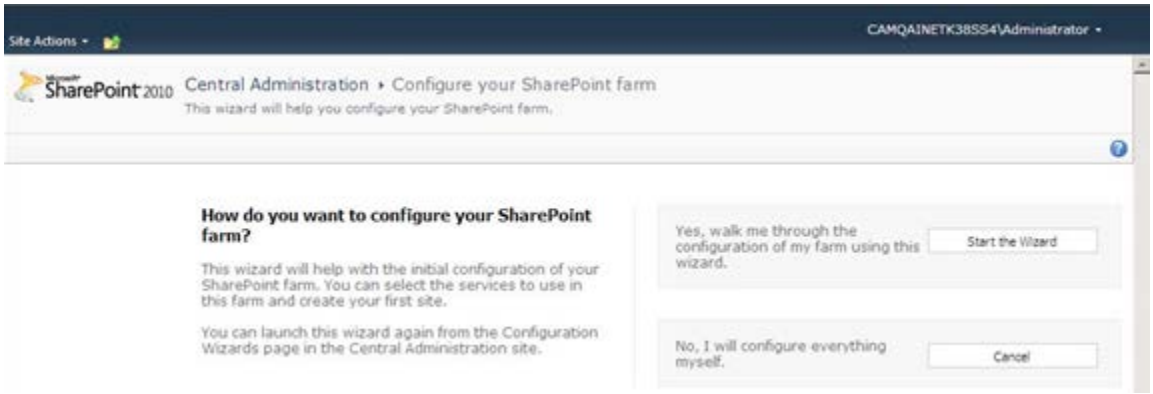
1. When you click **Finish** in the preceding procedure, SharePoint Central Administration is launched.



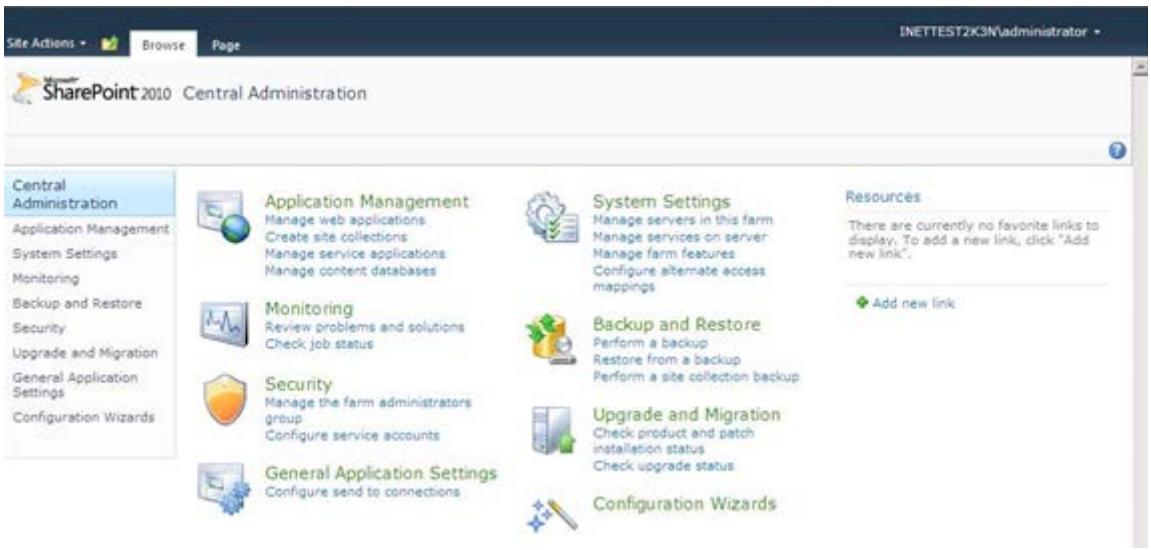
2. Decide whether to sign up for the SharePoint Customer Experience Program and click **OK**. The Configure your SharePoint Farm Wizard page displays.

!!IMPORTANT!!

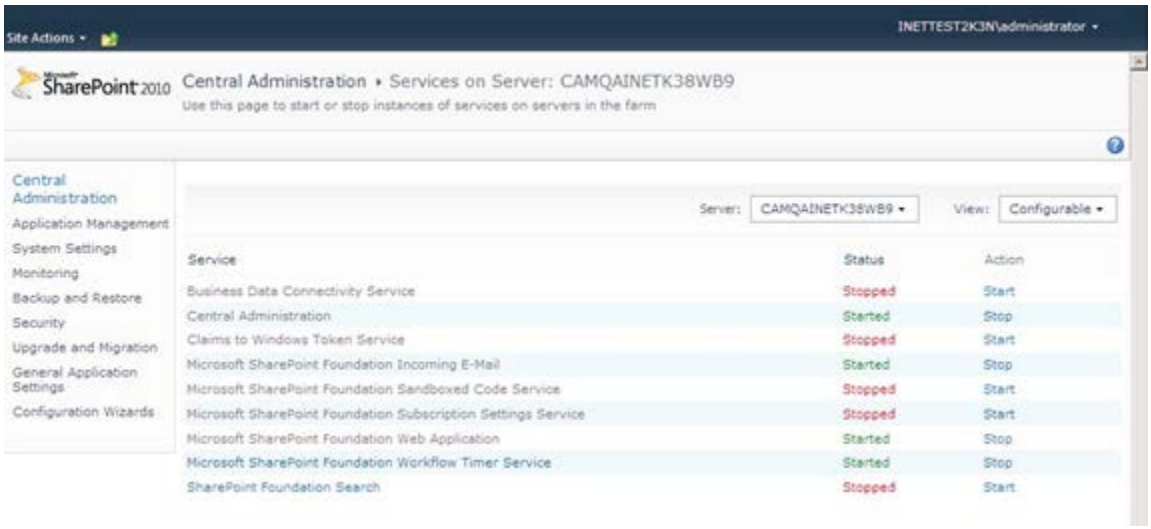
Do not use the SharePoint Farm Wizard. Doing so will cause Vision to stop functioning! Instead, choose the Cancel button "No, I will configure everything myself"



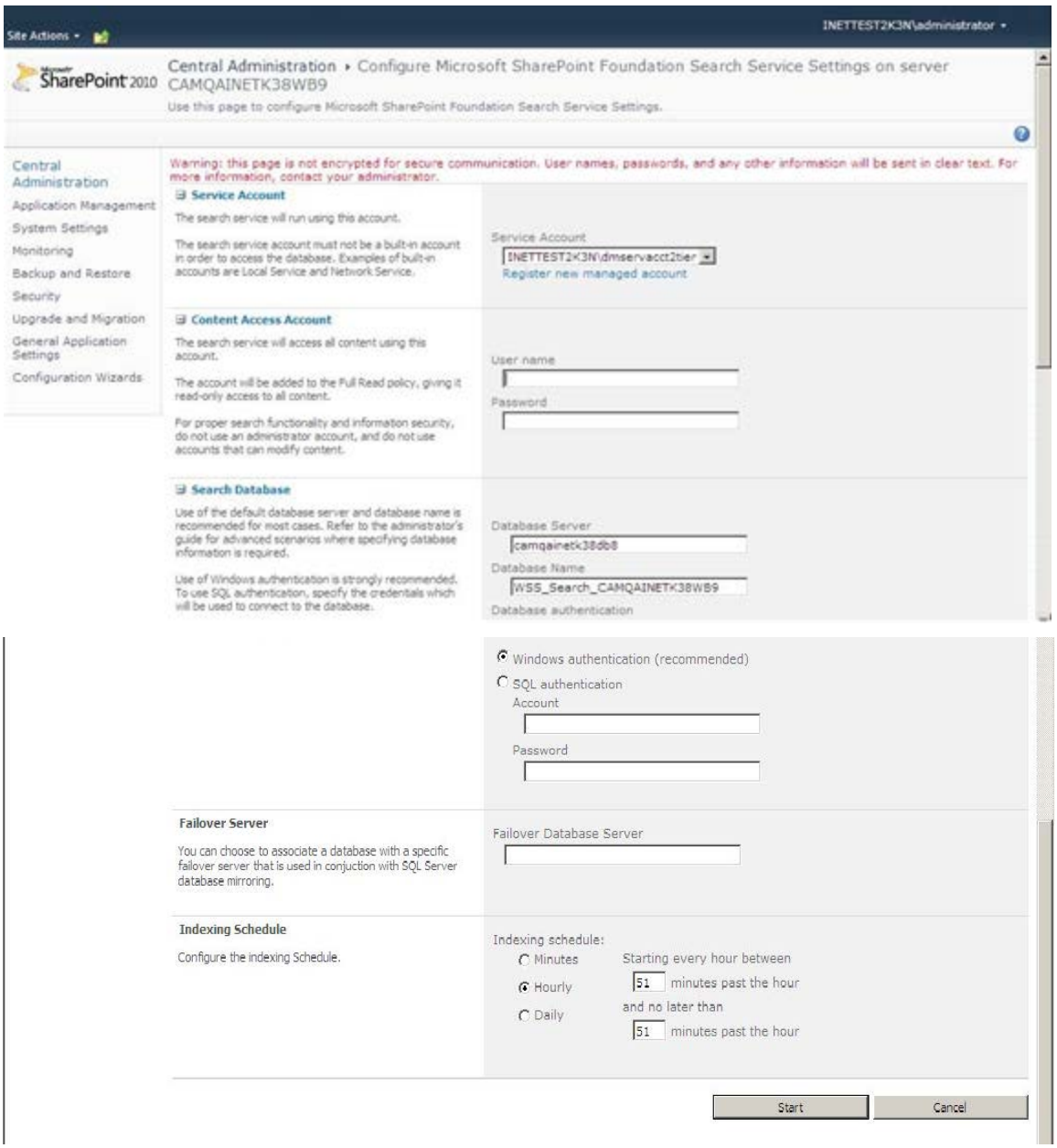
3. Click **Cancel** to configure everything yourself. The main Central Administration page displays.



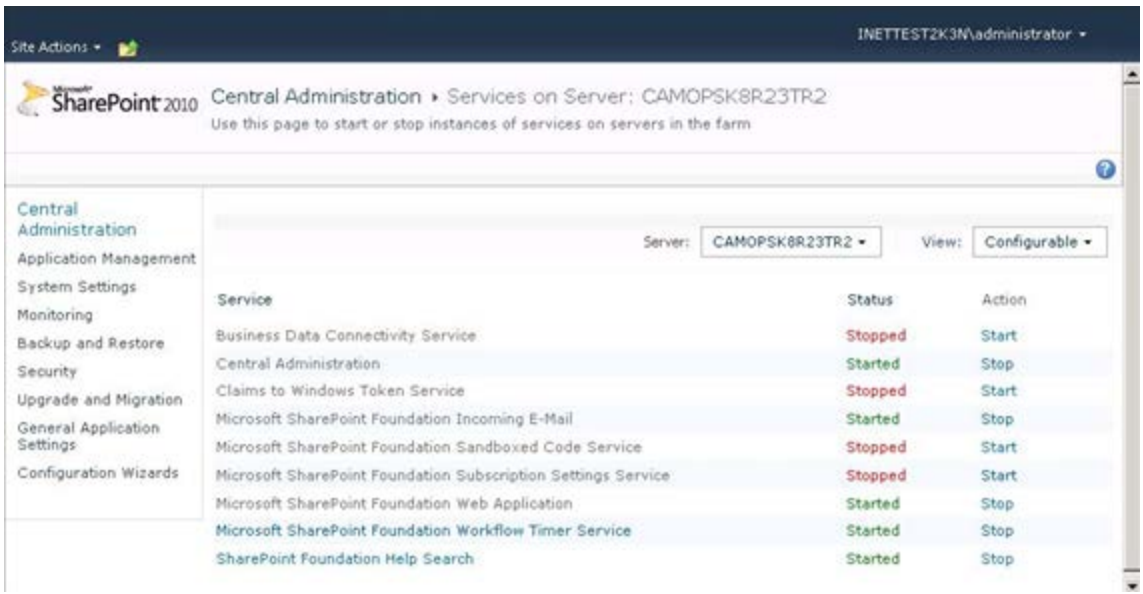
4. Select Manage Services on Server under System Settings. The Services on Server page displays:



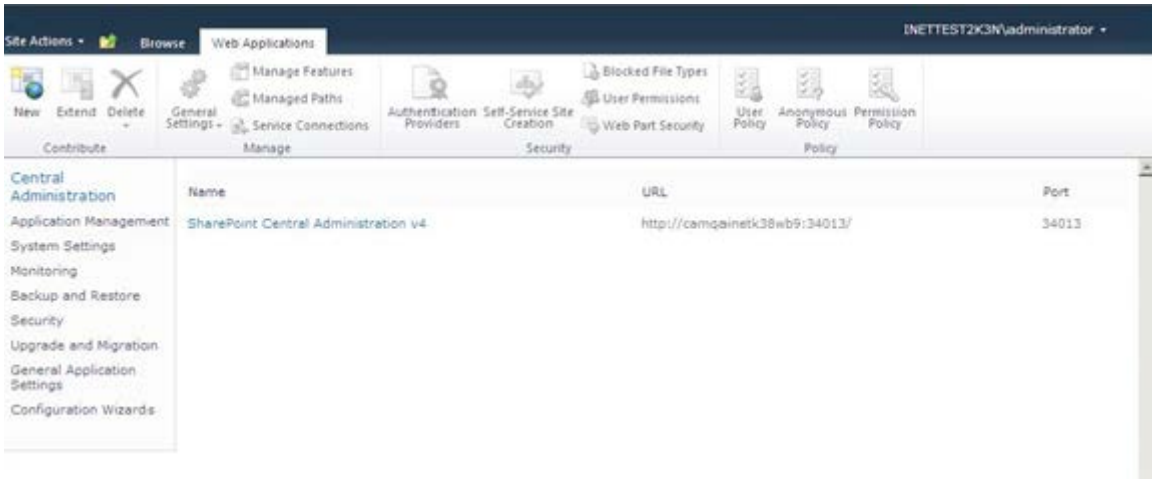
5. Locate SharePoint Foundation Search and click **Start**.



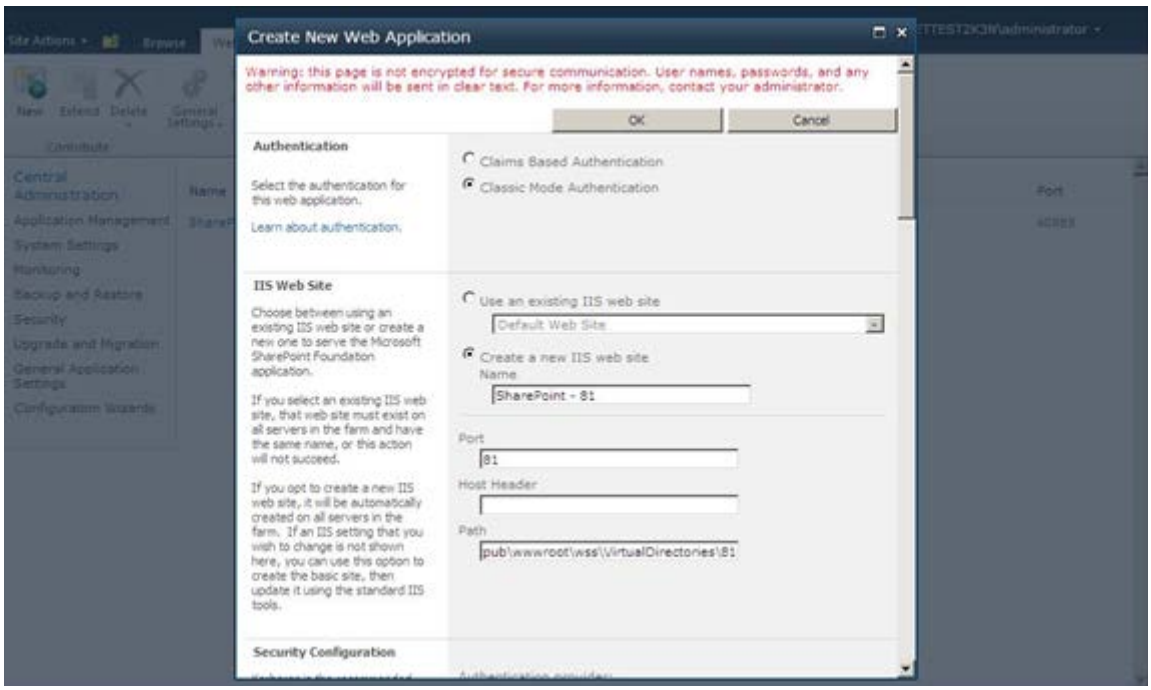
6. Configure the search service to include the Service account and Content Access account (use the same account information as your Vision Application Pool Identity).
7. Configure **Search Database** as shown above and click **Start**. After a minute or so, the service's status changes to **Started**.



8. Click **Application Management** and then **Manage Web Applications**. The Web Applications page displays.



9. Click the **New** button. The Create New Web Application page displays.

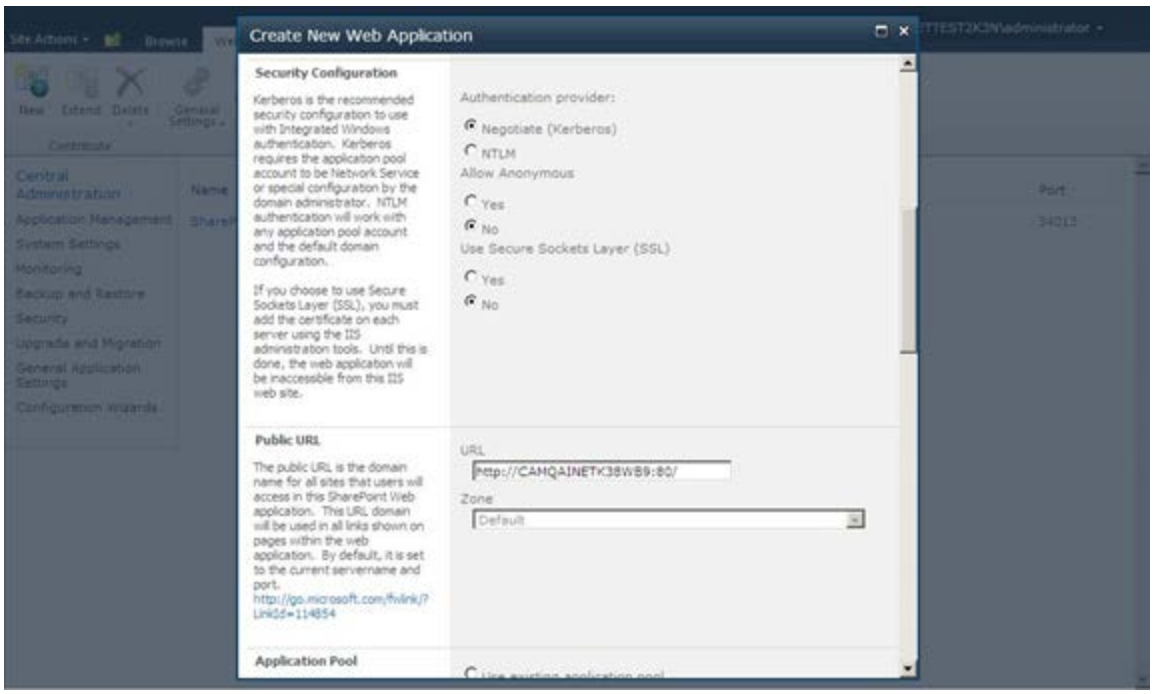


10. Select Classic Mode Authentication as the Authentication type.
11. Select the **Create a new IIS web site** option. Enter a description for the Web site and specify a port different that that being used for the Vision web site in **Port**.

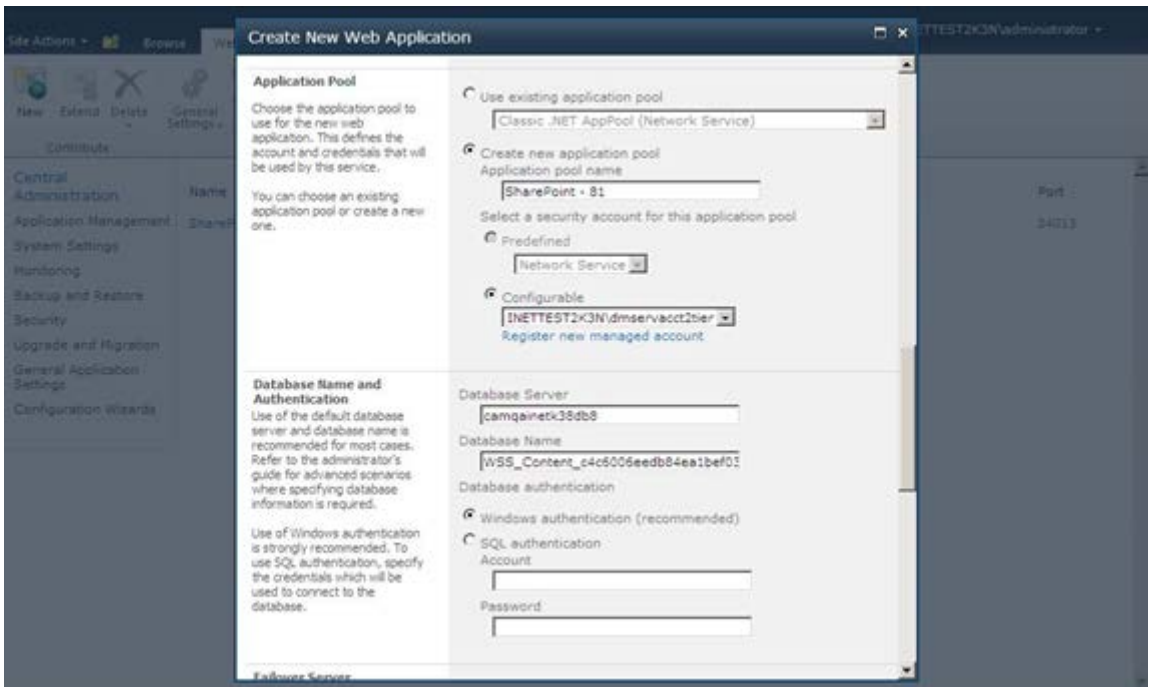
    SharePoint defaults to ‘SharePoint – 80’ and ‘80’ as the site name and port, if you change the port to be 81 (as shown), the web site name changes automatically to ‘SharePoint – 81’

> If no other web applications are installed on this server you may choose to install SPF into the Default Web Site.
>
> **WARNING! If other web applications are installed to the Default Web Site, SPF will render them unusable.**

Note the entry in **Path**, which by default is the root of your WSS Web site in a directory named after the port chosen under c:\inetpub\wwwroot\wss\virtualdirectories.

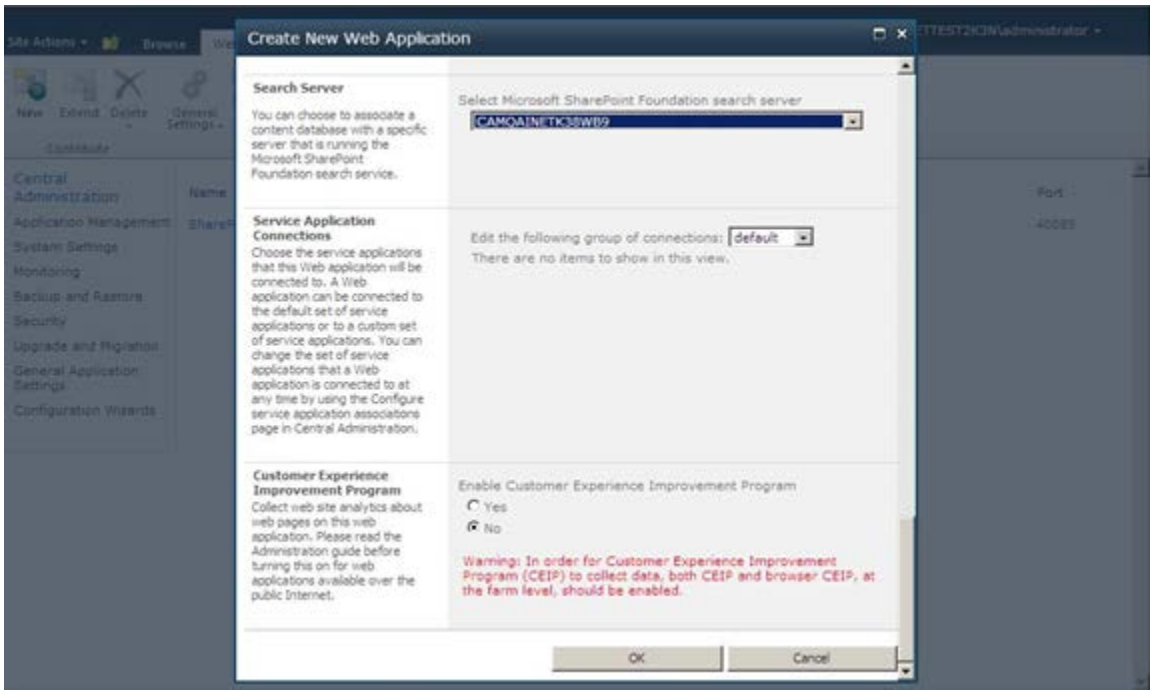


12. Select **Negotiate (Kerberos)** under **Authentication provider**.
13. For the **Allow Anonymous** and **Use Secure Sockets Layer (SSL)** options, accept the default of **No**. If you want to use SSL with SharePoint, then you can configure SSL later, but you must not configure SSL to be required as the web service calls from the Vision Web/Application server cannot use SSL..

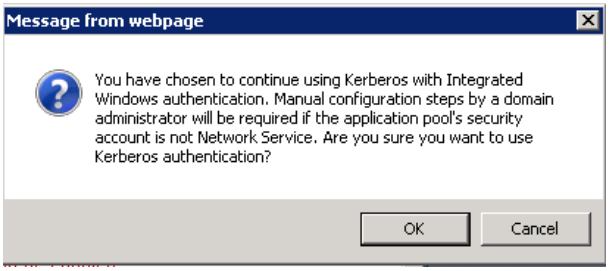


14. Select the **Create new application pool** option and provide a name (Deltek recommends using the same name as the Web site for consistence, for example, SharePoint - 81).

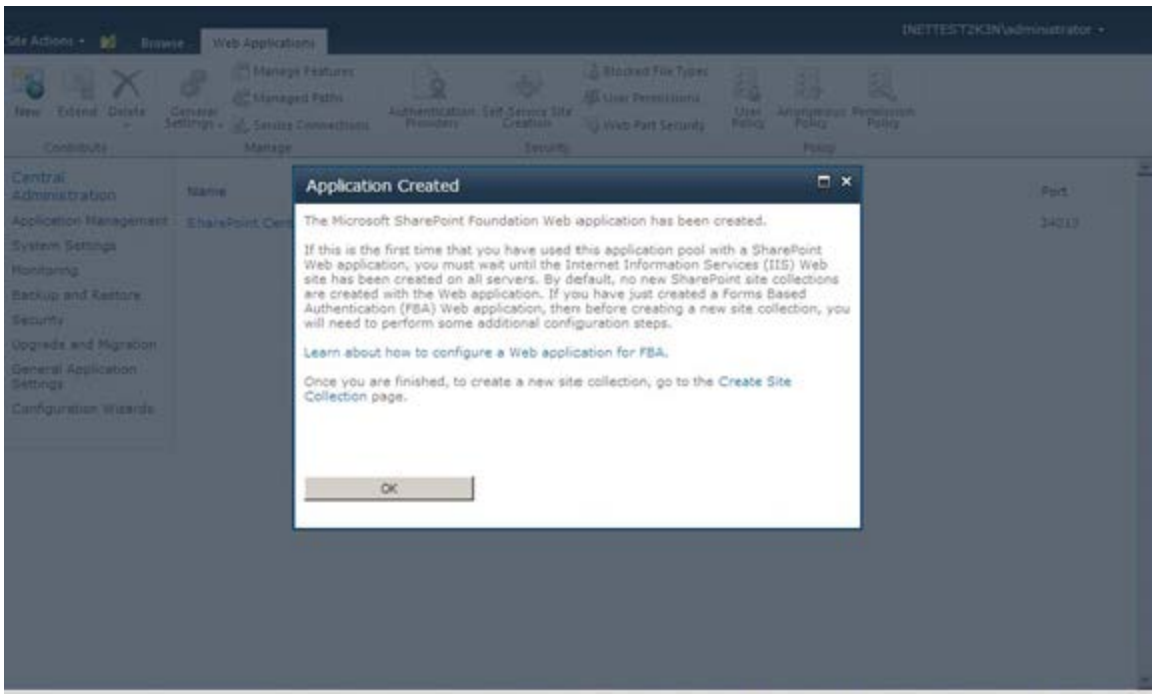
15. Using **Network Service** is not an option for SPF. Use the same account used for the Deltek Vision Application Pool. NOTE: Since the SharePoint Application Pool will run as a domain account, an SPN is required on the SharePoint server.
16. Verify the name of the server in **Database Server** (it should be the same as that used for the SharePoint configuration database server) Accept the default in **Database Name**. It is recommended that you modify the name of the Content database to something more recognizable (WSS_Content_SharePoint81, for example).
17. Select **Windows authentication (recommended)** under **Database authentication**. This will use the SharePoint service account and the Vision Application Pool Identity configured previously.



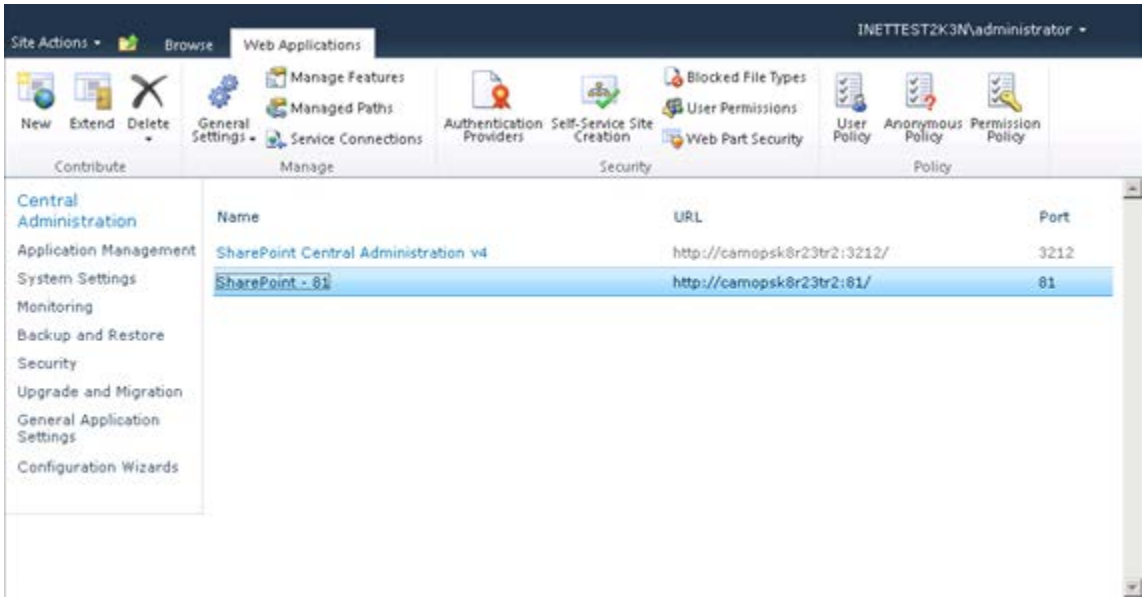
18. Select the search server in **Select Windows SharePoint Foundation search server** and click **OK**. The following dialog box displays.



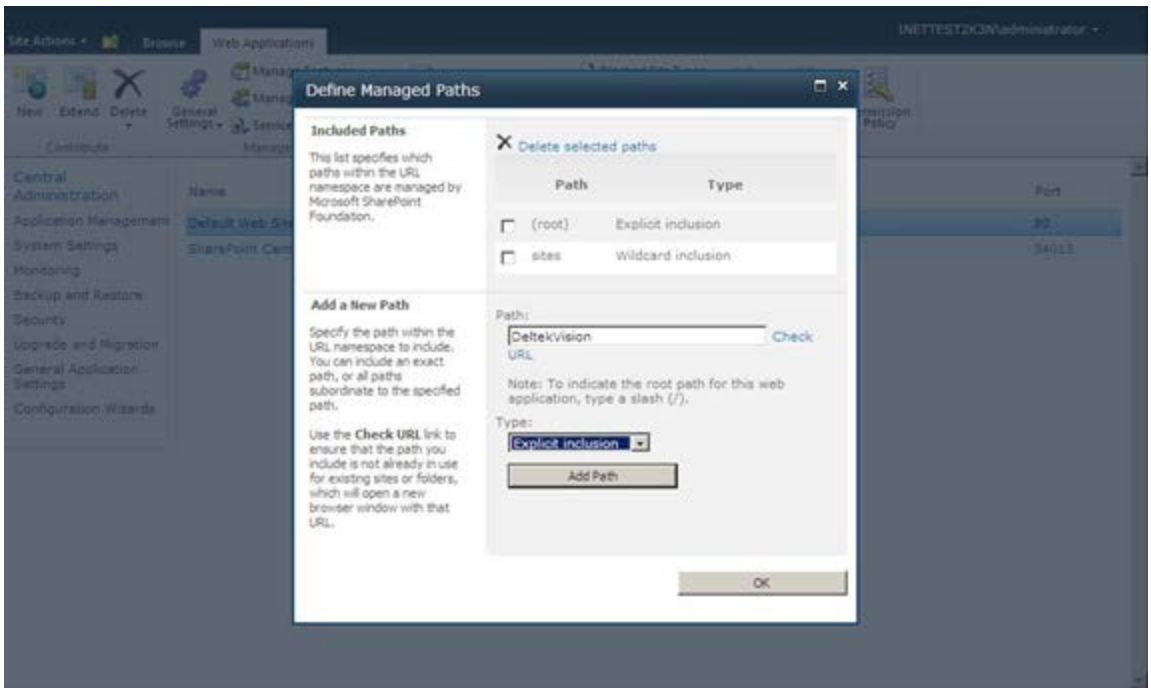
19. Click **OK** to use Kerberos for Windows Authentication. After a few minutes, the Application Created page displays. This page indicates the status of the process to create a new Web application.



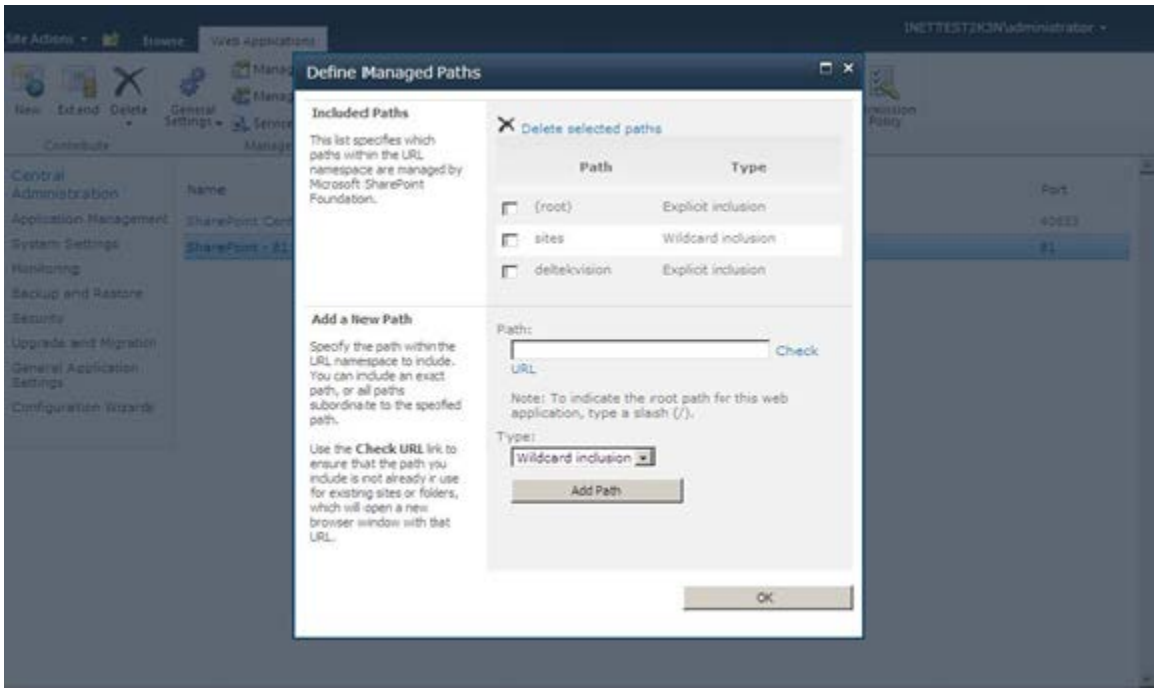
20. Do not click the link to **Create Site Collection** link at this time. It is still necessary to add DeltekVision as a managed path with explicit inclusion before you create the site collection. Click **OK**. The Web Applications page displays.



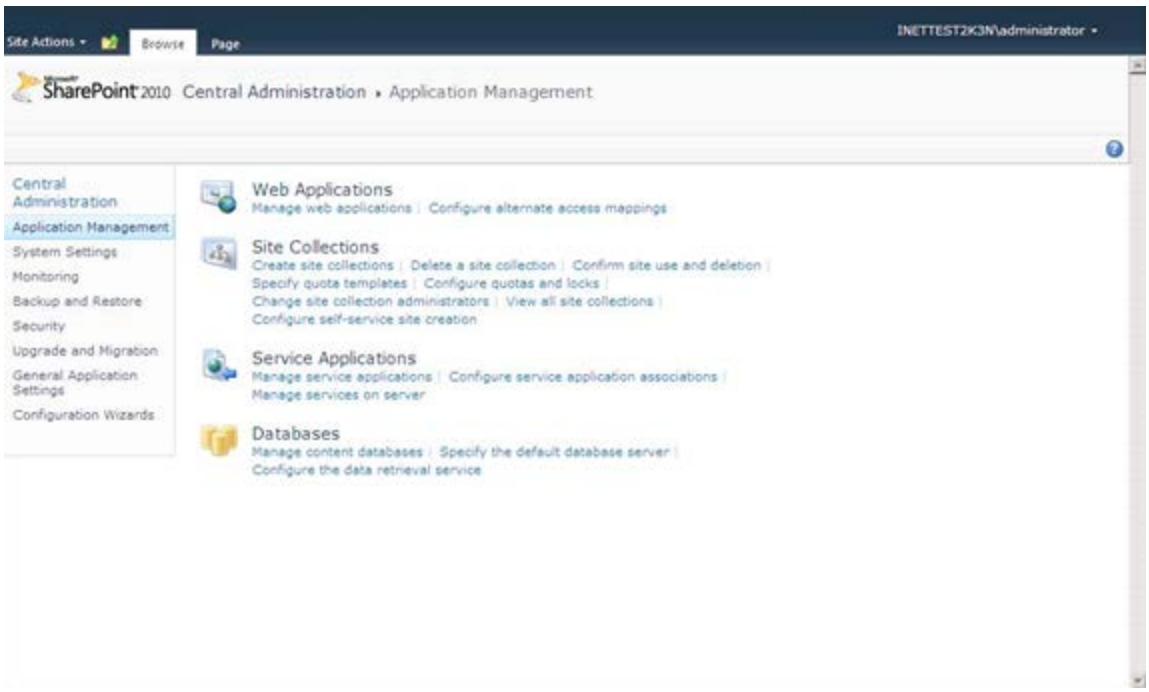
21. Select the SharePoint – 80 web application and click **Managed Paths.** The **Define Managed Paths** page displays.



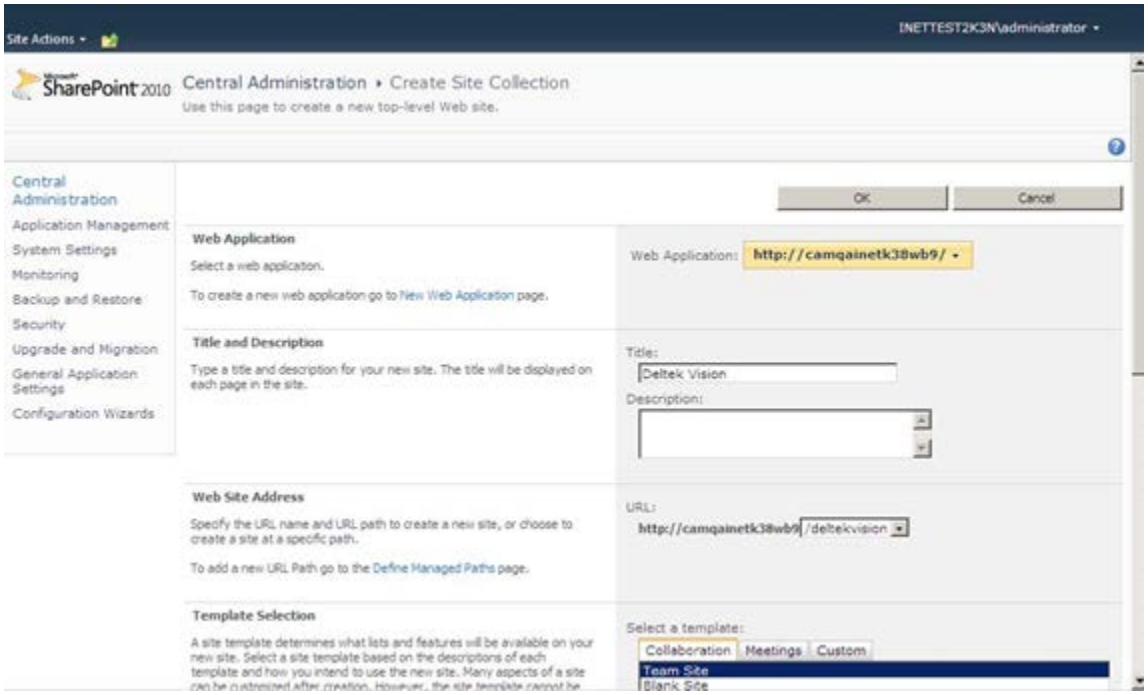
22. Enter **DeltekVision** in **Path** and select **Explicit inclusion** in **Type** and click Add Path.
23. Click **OK**. DeltekVision is now added as a Managed Path.



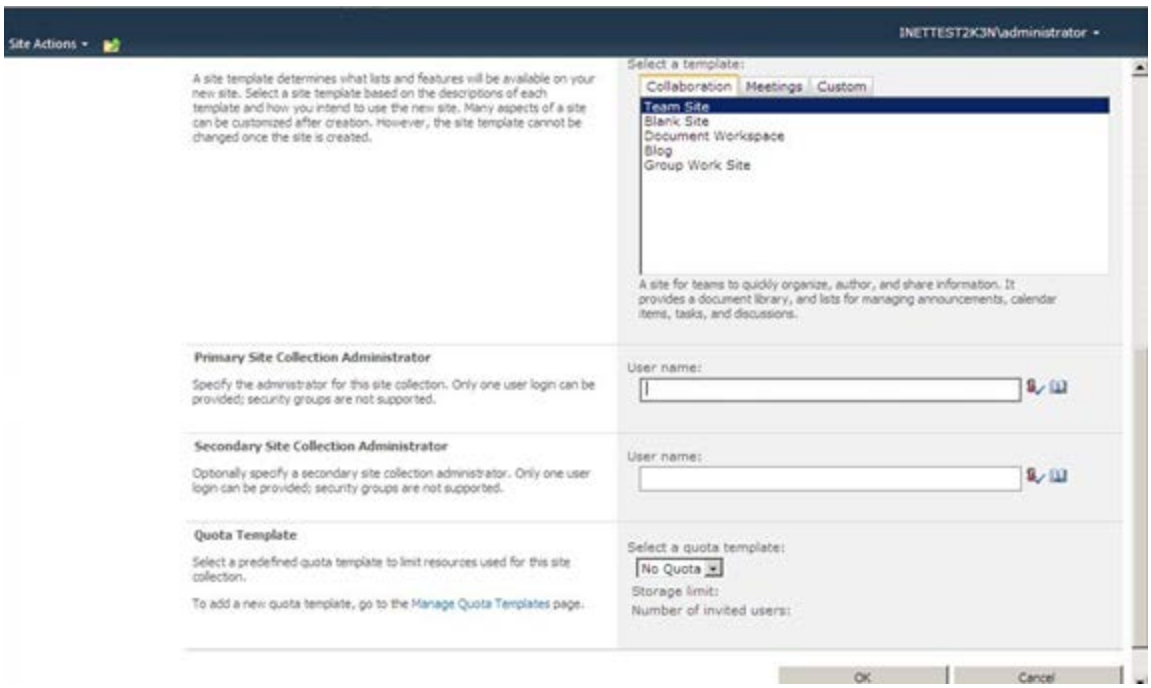
24. Click **Application Management** and select the **Create Site Collection** option under **Site Collections**.



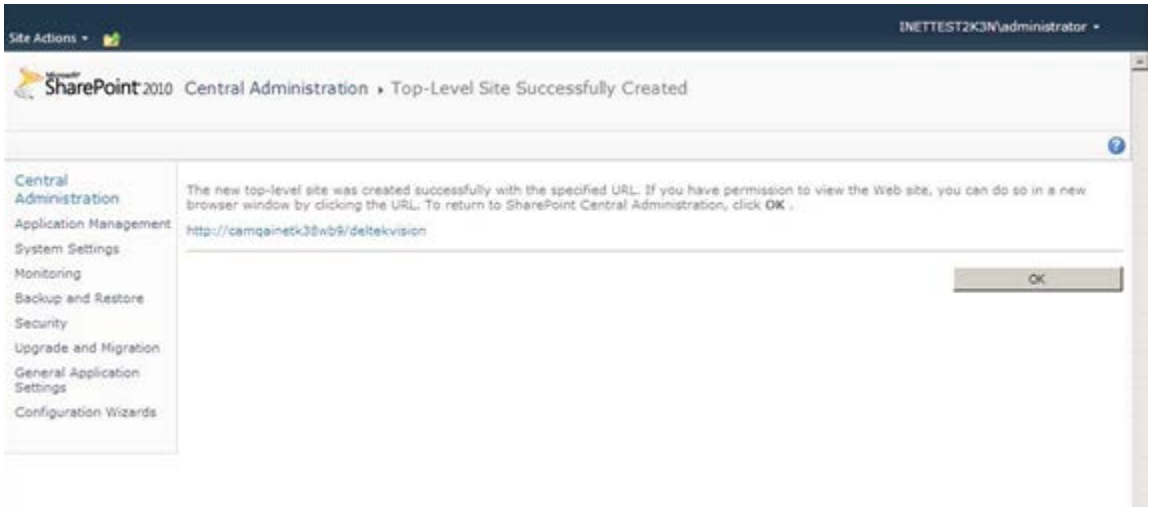
The Create Site Collection page displays.



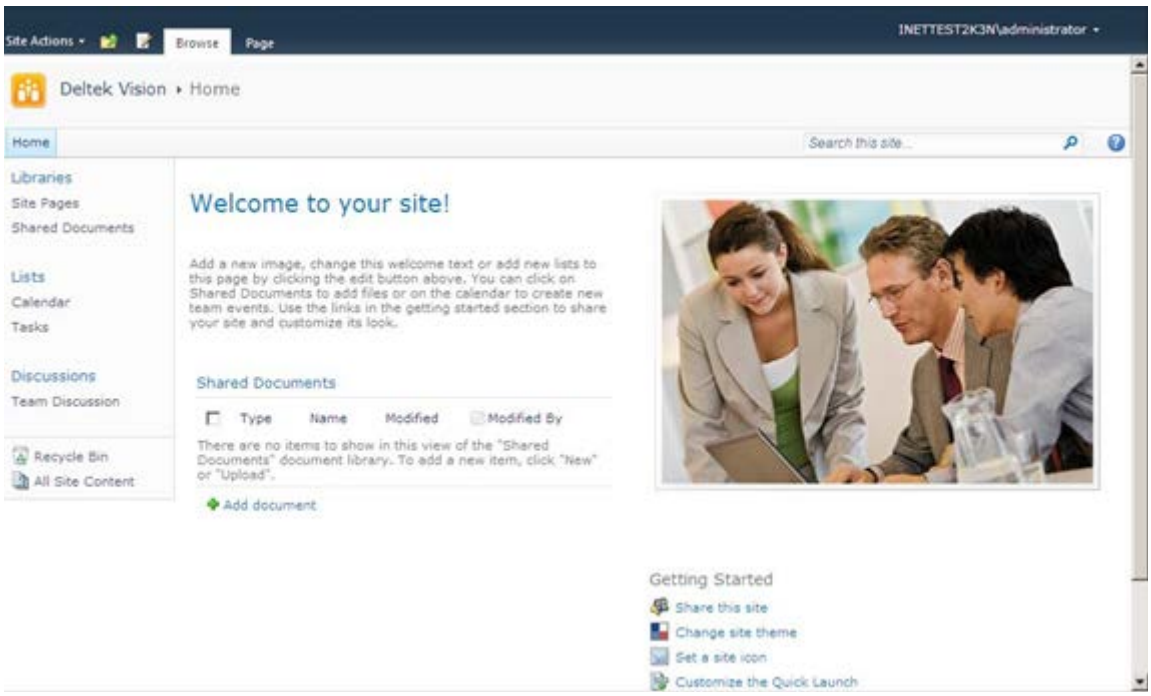
25. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
26. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root for Vision Document Management.



27. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
28. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



29. Click the link for the top level site (in our example it is http://camqainetk38wb9/deltekvision) to display the site.



30. The SharePoint configuration is complete. Close SharePoint Central Administration.

Configure Service Principal Name (SPN) for SharePoint Application Pool Identity

The default configuration of the SharePoint created Application Pool will be to have Kernel Mode Authentication disabled therefore, a Service Principal Name for the Application Pool Identity is required for Windows Authentication to work properly.

Domain rights are required to complete this step.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<SharePoint Web Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

Optional: Configure SharePoint for a Custom URL

If you will be configuring your SharePoint server to use a custom DNS record for the URL (e.g. http://sharepoint.company.com instead of http://servername.company.com http://servername), then you must create additional SPNs and also create Alternate Access Mappings in SharePoint.

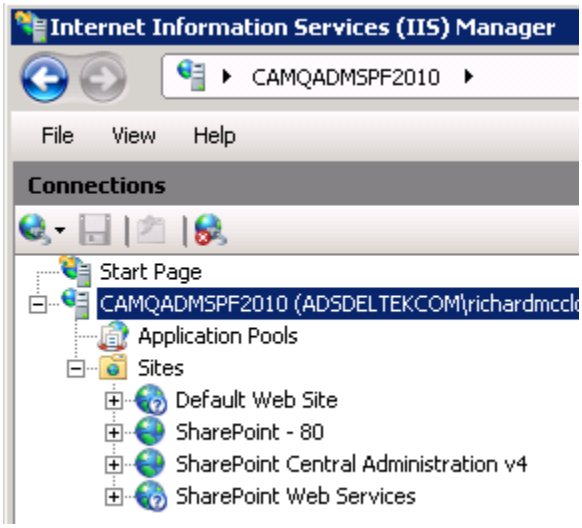
It is recommended that this step be completed before Vision Document Management is configured in order to eliminate re-work.

See “Appendix B: Configure SharePoint for a Custom URL” for more information.

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

To verify IIS configuration, complete the following steps:

1. Use the directions that follow to open Internet Information Services to view these Web sites:
   - **Default Web Site** — This is your Vision Web Site
   - **SharePoint – 80** — This is your SPF 2010 Web Site
   - **SharePoint Central Administration Web Site**



2. Copy the Vision Document Management .NET assembly to SharePoint site directory.

   Copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to one of the following:

   - c:\inetpub\wwwroot\bin (if WSS was installed to the default web site)
   - c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin (if SPF 2010 was installed to another web site)

   By default, the <site> directory references the port chosen. In our example, the port is 80. If you extended WSS to the Default Web Site, the path will be c:\inetput\wwwroot\ bin.

Configure Document Management Service Account in Weblink

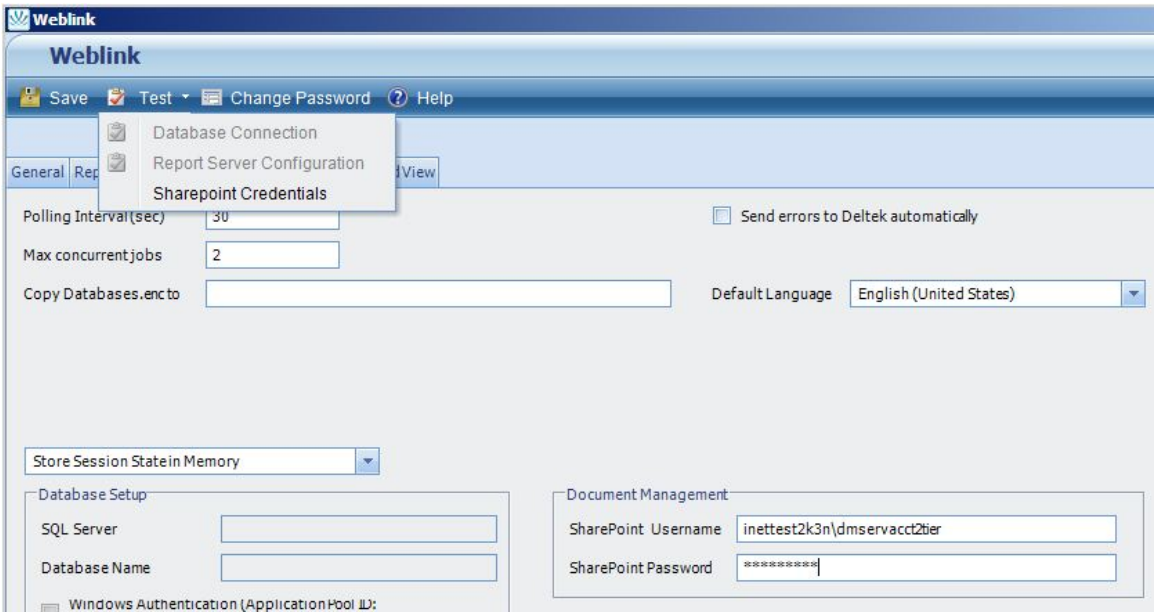
You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the account in Weblink, complete the following steps:

1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**

2. Enter the Weblink password when prompted.
3. Click the System Settings tab.

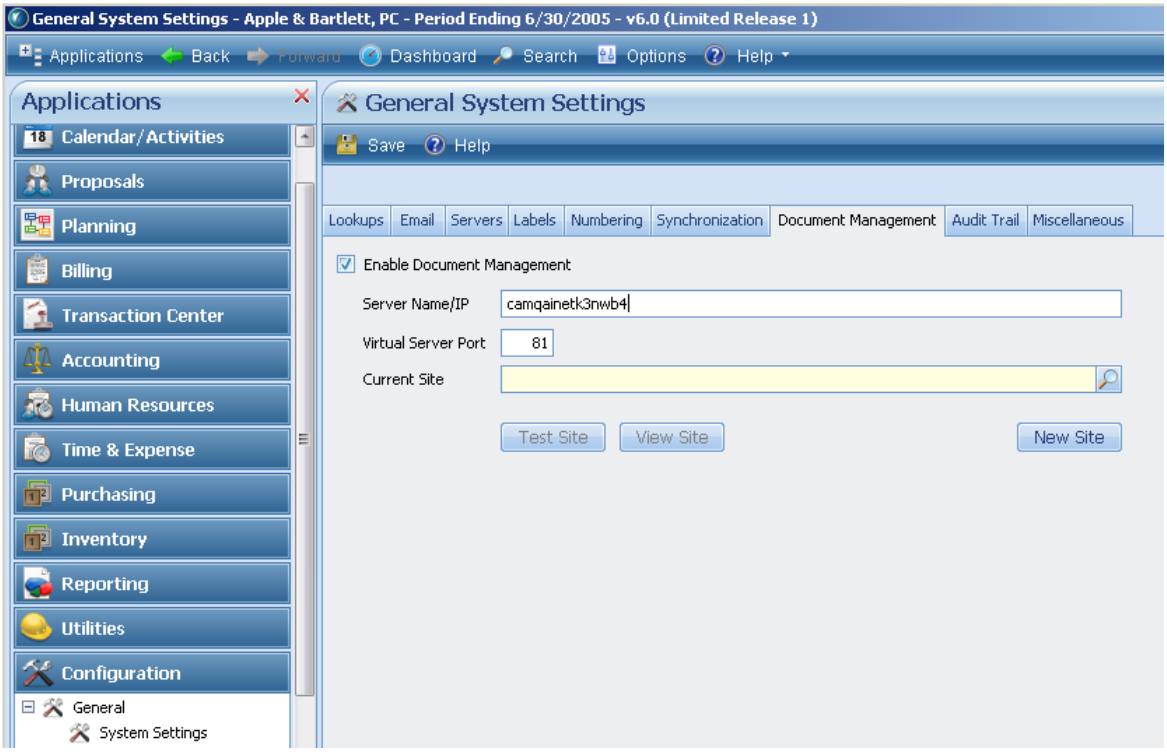
   In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
4. Click **Test** and **SharePoint Credentials** to validate that the information entered is correct.



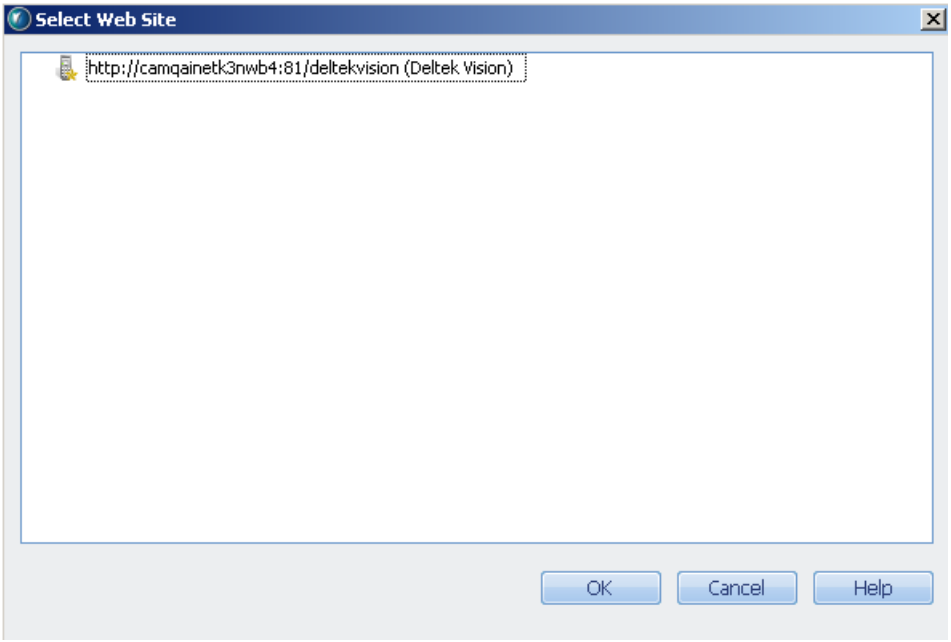
Configure Vision Document Management

To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.



3. Select the **Enable Document Management** check box.
4. Enter the name of the server hosting Document Management. This should be the server name only, FQDN's or custom DNS values are not needed here.. Enter this value without the protocol prefix (for example, remove the http://). In the illustration above, the value is **camqainetk3nwb4**.
5. Enter the **Virtual Server Port**. In the illustration above, the port is 81 but on a typical dedicated SharePoint installation the port will be 80 for the default web site.
6. Click the **Lookup icon to sele**ct the current site.



7. The Select Web Site dialog box displays the available sites. Select a site, and click **OK**.
8. Save your changes.

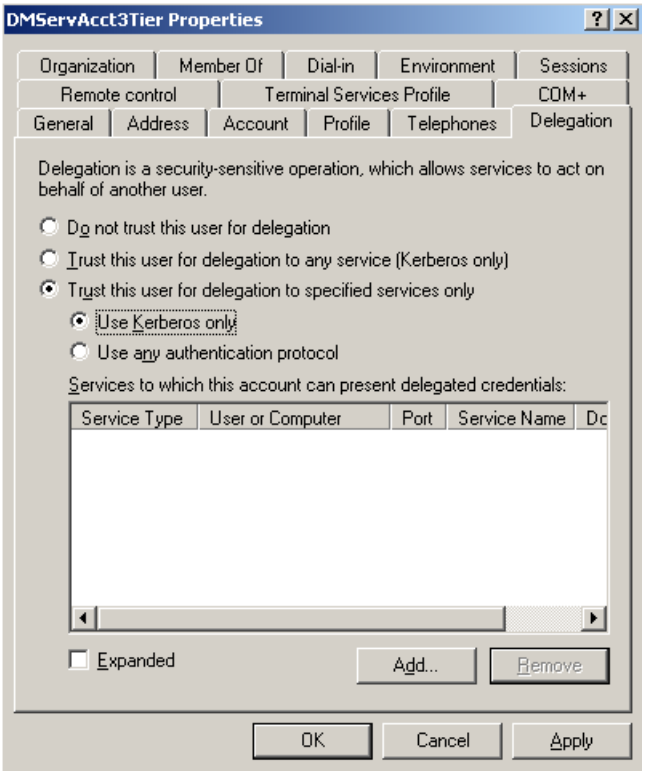
Configure Constrained Delegation

Because your SPF server is on a separate physical server and because the Vision Web server needs to pass the domain credentials of your Vision Document Management users on to the SPF server, you must configure Constrained Delegation.

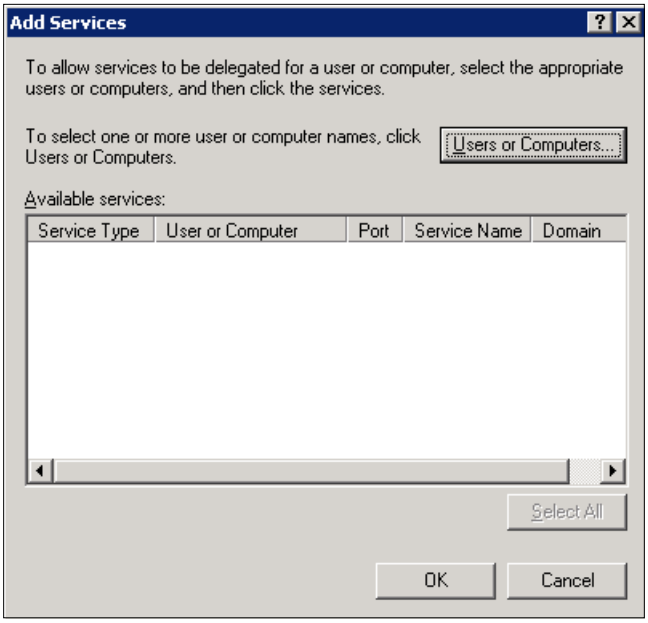
This assumes a non-Internet deployment of Vision Document Management using Kerberos authentication. If you are deploying Vision Document Management so that it is accessible over the Internet, you need to skip ahead to “Optional: Configure Protocol Transition” in the next section.

To configure Constrained Delegation, complete the following steps:

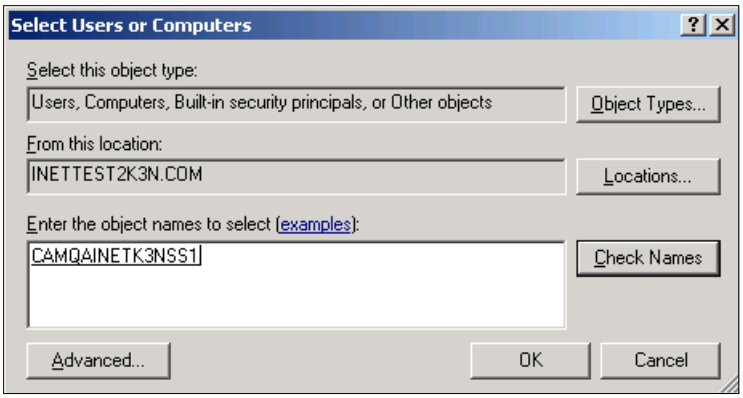
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (SPF Service account).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use Kerberos only** option.



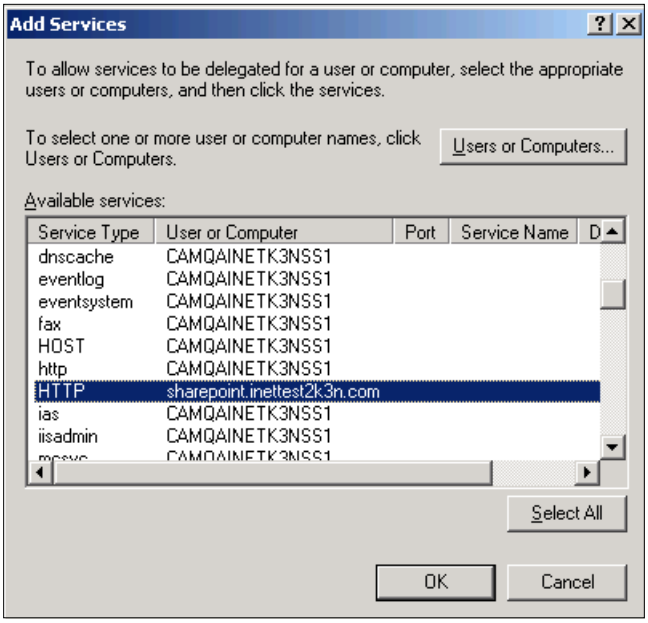
6. Click the **Add** button. The **Add Services** dialog box displays.



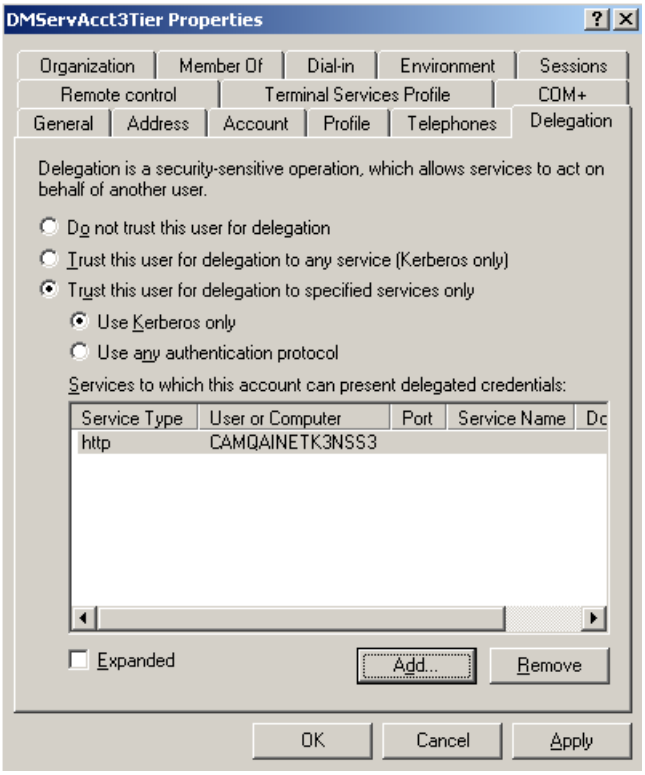
7. Click **Users or Computers**. The Select Users or Computers dialog box displays.



8. Locate the http service, select it, and click **OK**.



The Delegation tab should look like this:



Because we are explicitly specifying the http service and not all services on the SharePoint server, this is known as Constrained Delegation.

There are two http service types listed. These service types are known as Service Principal Names (SPNs). The SPN referencing CAMQAINETK3NSS1.inettest2k3n.com was created automatically when the server was added to the domain and the http service (IIS) was installed. The second SPN referencing sharepoint.inettest2k3n.com is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

Optional: Configure Protocol Transition

If Vision Document Management functionality is required over the Internet and you will be using a custom DNS/FQDN for the SharePoint URL (as in our example, vision1.inettest2k3n.com), then you need to configure a form of delegation referred to as Protocol Transition. If Document Management functionality is not required, you can skip this step.

The Kerberos authentication protocol must be used to authenticate from the Vision Web server to the SharePoint server. However, if Vision is deployed in an Internet scenario and there are users outside of the firewall who need to access Document Management features, Kerberos authentication cannot be used to authenticate the client to the Web server. This is because the client needs to have the ability to negotiate a Kerberos ticket with the Key Distribution Center (KDC), which is a service running on a Domain Controller. This requires port 88 to be opened inbound on the firewall to the Domain Controller, which is not an advisable configuration.

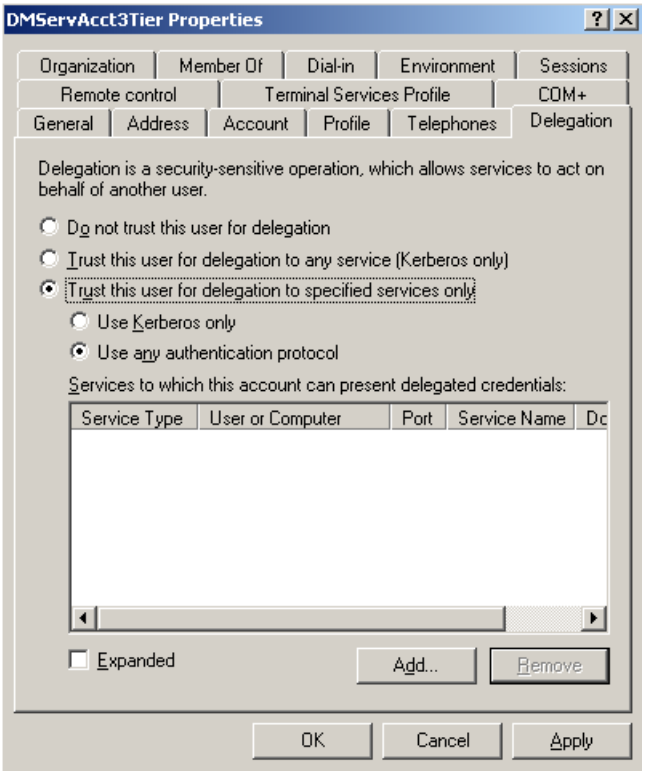
To get around this, you must be running a Native Windows Server 2003 functional domain.

Protocol Transition is configured by selecting the **Use any authentication protocol** option instead of the **Use Kerberos only** option, which is used to configure Constrained Delegation. This allows the client to authenticate to the Vision Web server using NTLM instead of Kerberos,

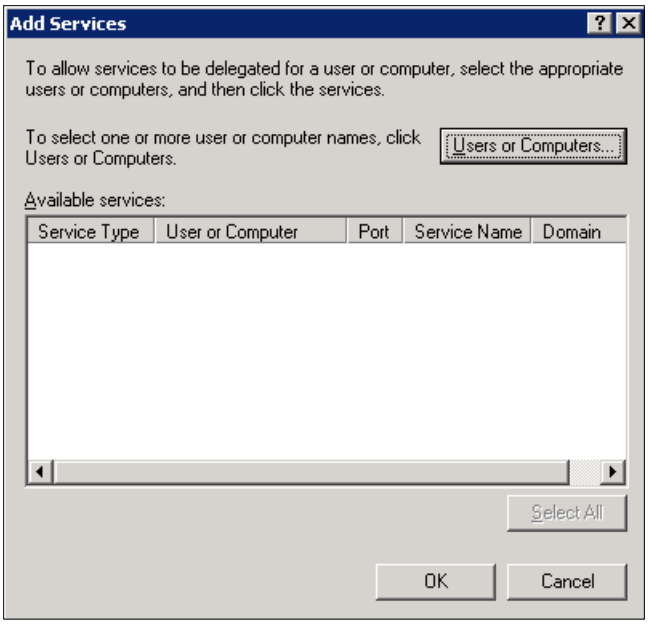
and that authentication is then “transitioned” over to Kerberos for Delegation to the SharePoint server.

To configure Protocol Transition, complete the following steps:

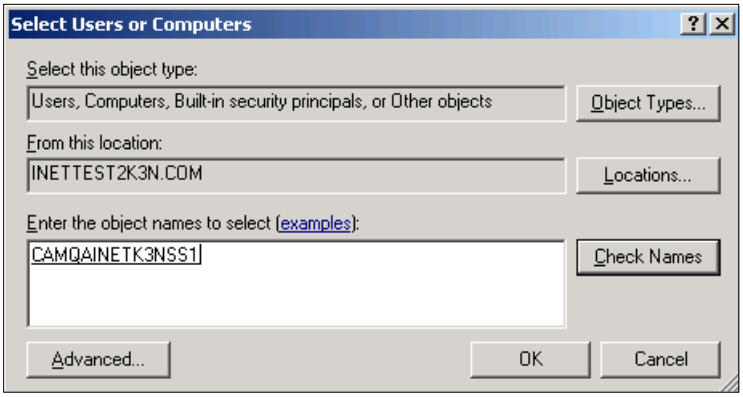
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (WSS Service account), which is most likely under the Computers Organizational Unit (OU).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use any authentication protocol** option.



6. Click **Add**. The **Add Services** dialog box displays.



7. Click **Users or Computers**, search for the SharePoint server, and click **OK**.



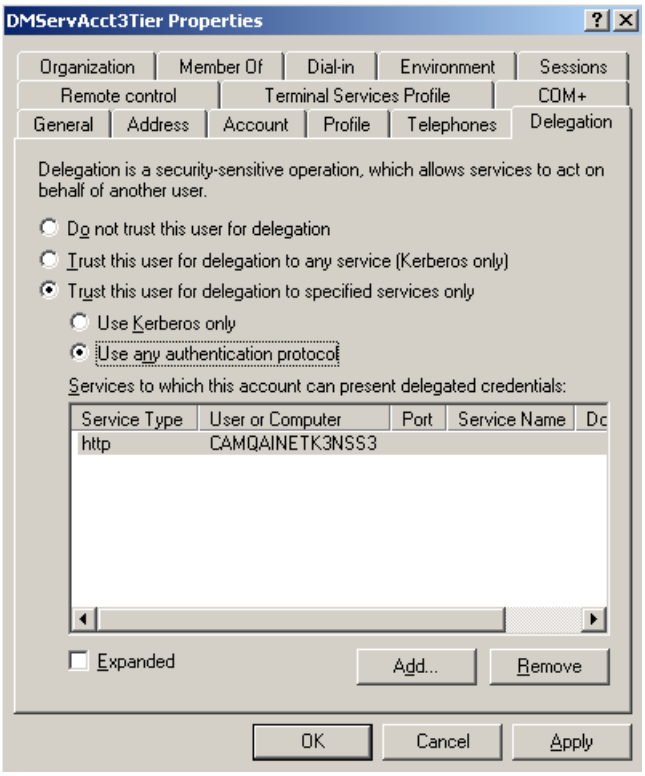
8. Locate the http service for the SPN (FQDN) you created earlier (in our example, **sharepoint.inettest2k3n.com**), select it, and click **OK**.

   This illustration shows two http service types. Unless you have registered a custom FQDN using the setspn utility, only the server name displays. These service types are known as Service Principal Names (SPNs).

   The SPN referencing **CAMQAINETK3NSS1.inettest2k3n.com** was created automatically when the server was added to the domain and the http service (IIS) was installed.

   The second SPN referencing **sharepoint.inettest2k3n.com** is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

The Delegation tab should look like this:



Because you explicitly specified the http service and not all services on the SharePoint server and because you selected the **Use any authentication protocol** option and not Kerberos, this is known as Protocol Transition.

Multi Tier New Installation and Configuration for x86 (32-bit) Servers – SharePoint Already Installed

!!IMPORTANT!!

Please note the following for this configuration:

- In this configuration, Vision and SharePoint are installed on separate physical servers.
- SharePoint is already installed on the SharePoint server so the Vision Document Management installation will NOT install SharePoint.
- The installation of SharePoint is WSS 3.0.
- The Operating System for the server is x86 (32-bit).

Prerequisites

- Install/upgrade your Vision installation to Vision 7.1 (if applicable).
- Identify the domain user account being used for the SharePoint Farm Administrator account.
- Change the Application Pool Identity for the DeltekVisionAppPool to be the SharePoint Farm Administrator account above (the Vision 7.1 installation sets this to be the local DeltekVision account).
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server if not already done by the SharePoint installation.

Multi Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Grant Local Security Policy Rights to Vision Application Pool Identity
3.	Vision Web/Application Server	Install Vision 7.1 Document Management on the Vision Web Server
4.	Vision Web/Application Server	Configure Authentication for the Vision Website
5.	Vision Web/Application Server	Configure Service Principal Name (SPN) for Vision Application Pool Identity
6.	SharePoint Web /Application Server	Install Vision Document Management on the WSS Server

7.	SharePoint Web /Application Server	Use SharePoint Central Administration to Complete the SharePoint Configuration
8.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
9.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
10.	Vision Web/Application Server	Configure Vision Document Management
11.	Domain	Configure Constrained Delegation
12.	Domain	Optional: Configure Protocol Transition

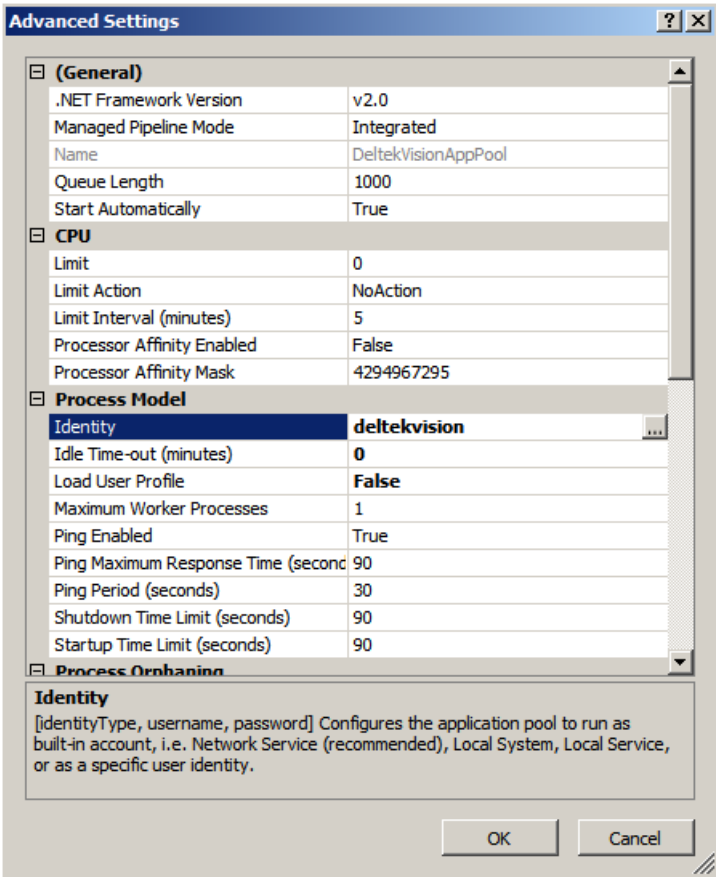
Configure Vision Application Pool Identity to Be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

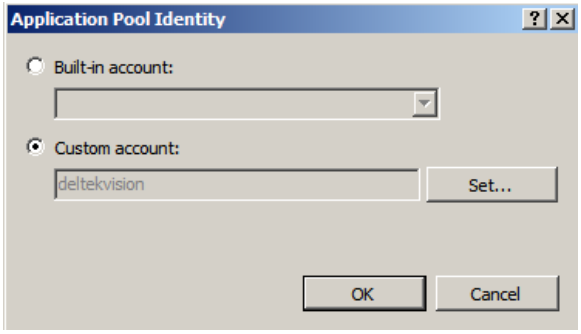
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server..

To change the Vision Application Pool Identity, complete the following steps:

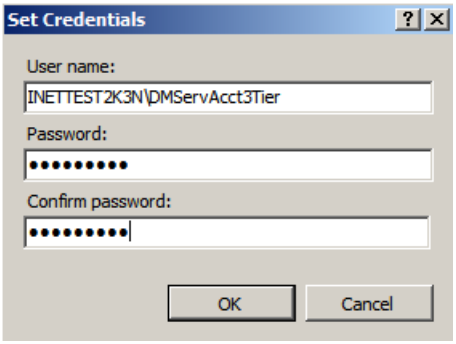
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side. The following displays:



6. Place your cursor in the **Identity** field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



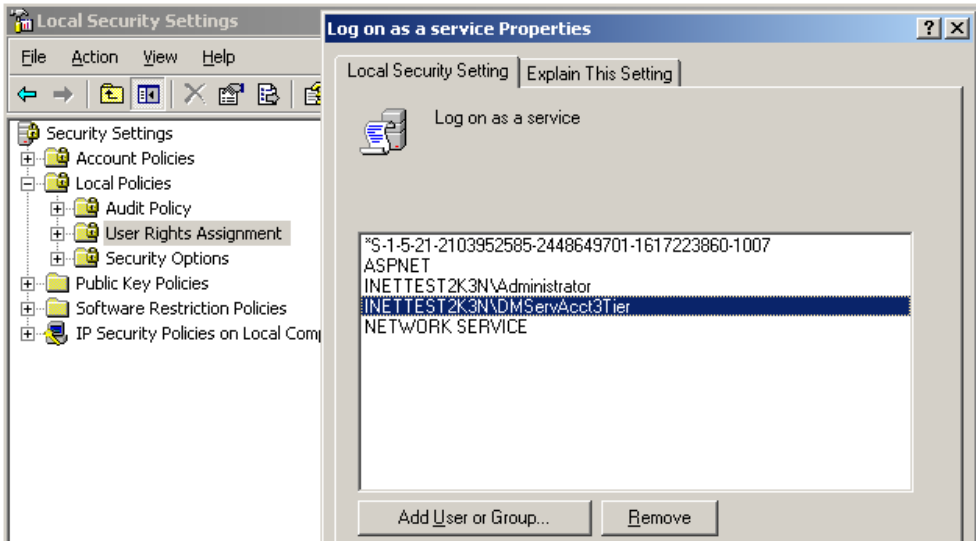
7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In the **User name** field, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In the **Password** and **Confirm password** fields, enter that user's password.
10. Click **OK** three times to set the identity.

Grant Local Security Policy Rights to Vision Application Pool Identity

The Vision Application Pool Identity/SharePoint Service Account must be granted **Logon as a service** rights on the Vision 7.1 Web/Application Server for multi-tier Document Management installations, as shown in the following example of the Local Security Settings setup screens.



Install and Configure Vision 7.1 Document Management

When you install Vision 7.1 Document Management the changes made to your WSS installation are outlined below. The steps to configure WSS are outlined in this section.

> If you would prefer not to run the Vision Document Management installation on an existing installation of SharePoint, refer to "Appendix C: Manual Installation of Vision Document Management" for manual setup instructions.

The Document Management installation does the following:

- Installs Web Service Extensions (WSE) 2.0 SP3.

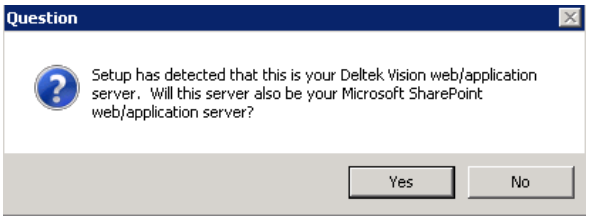
- Installs WSS 3.0 when run on the SharePoint web server if it is not already installed.
- Copies Document Management files to the SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\12\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server.dll into the Global Assembly Cache (GAC).

Install Vision 7.1 Document Management on the Vision Web Server

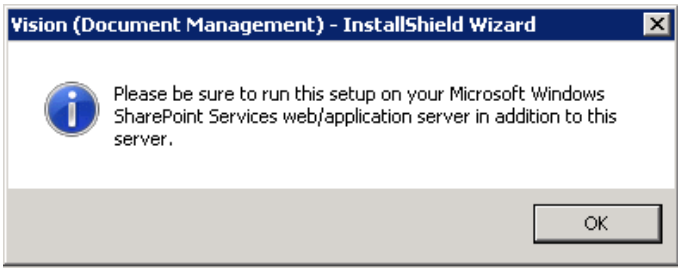
You must run the Document Management installer on both the Vision web server and the SharePoint web server.

To install Vision 7.1 Document Management on the Vision Web server, complete the following steps:

1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
3. On the first Document Management Installation Wizard page, click **Next**.
4. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
5. When this message displays, click **No** because this is a multi-tier installation of Vision Document Management and your Vision Web server will not host WSS 3.0.



6. When the following dialog box displays to remind you to run the setup on the WSS server, click **OK**.



7. On the Ready to Install the Program page, click **Install** to start the installation.
8. When the InstallShield Wizard Complete page displays, click **Finish**.

Configure Authentication for the Vision Website

IIS Kernel Mode Authentication

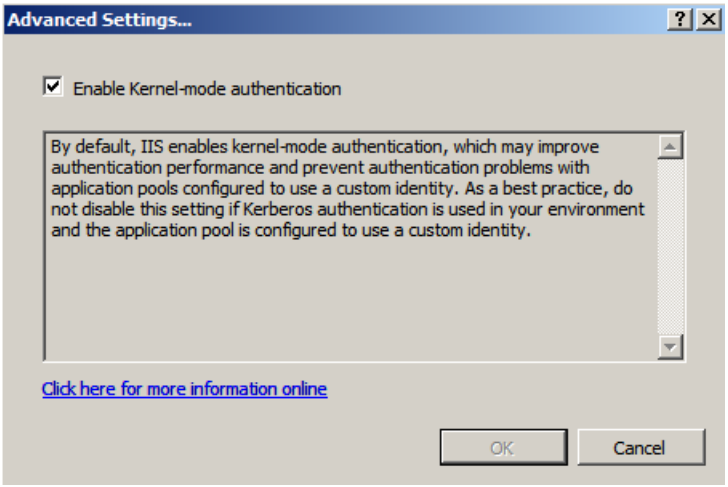
The default configuration of IIS when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because the Machine account cannot be used for delegation scenarios which are required for multi-tier deployments of Vision Document Management, the additional configuration steps below are necessary.

Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.
6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path="Default Web Site/Vision">

5. Locate the windowsAuthentication tag and add **useAppPoolCredentials="true"** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Configure Service Principal Name (SPN) for Vision Application Pool Identity

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication to work properly and creating an SPN for the Application Pool Identity in this configuration will result in a "duplicate SPN" issue, preventing Windows Integrated Security from authenticating anyone to the Web site.

However, For Multi Tier installations of Vision Document Management it is necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity (DeltekVisionAppPool) as this is the account used for delegation.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

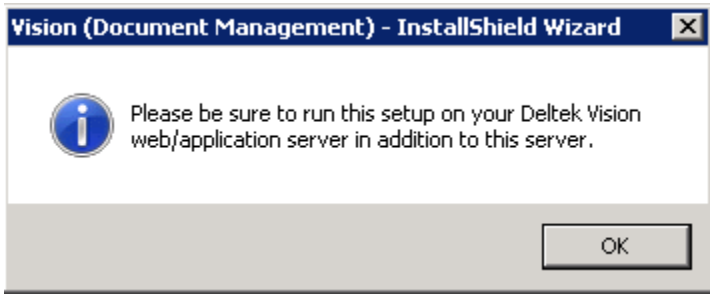
See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

Install Vision Document Management on the WSS Server

To install Vision Document Management on the WSS server, complete the following steps:

1. Download DeltekVision71DM.exe and run the setup on your WSS server.
2. On the first Document Management Installation Wizard page, click **Next**.
3. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
4. Accept the license agreement and click **Next**. The following dialog displays reminding you to run the setup on the Vision web/application server if you haven't already.



5. On the Ready to Install the Program page, click **Install** to start the installation.

6. When the InstallShield Wizard Complete page displays, click **Finish**.

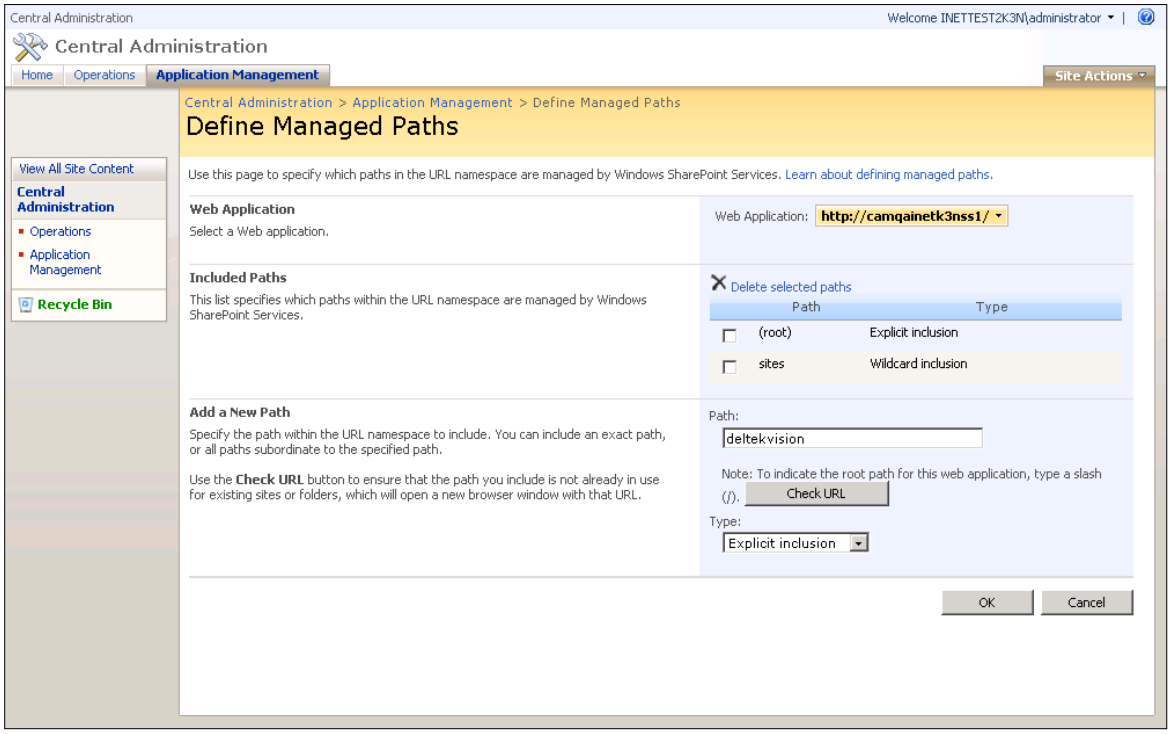
Use SharePoint Central Administration to Complete the SharePoint Configuration

!! IMPORTANT INFORMATION FOR EXISTING SHAREPOINT INSTALLATIONS!!

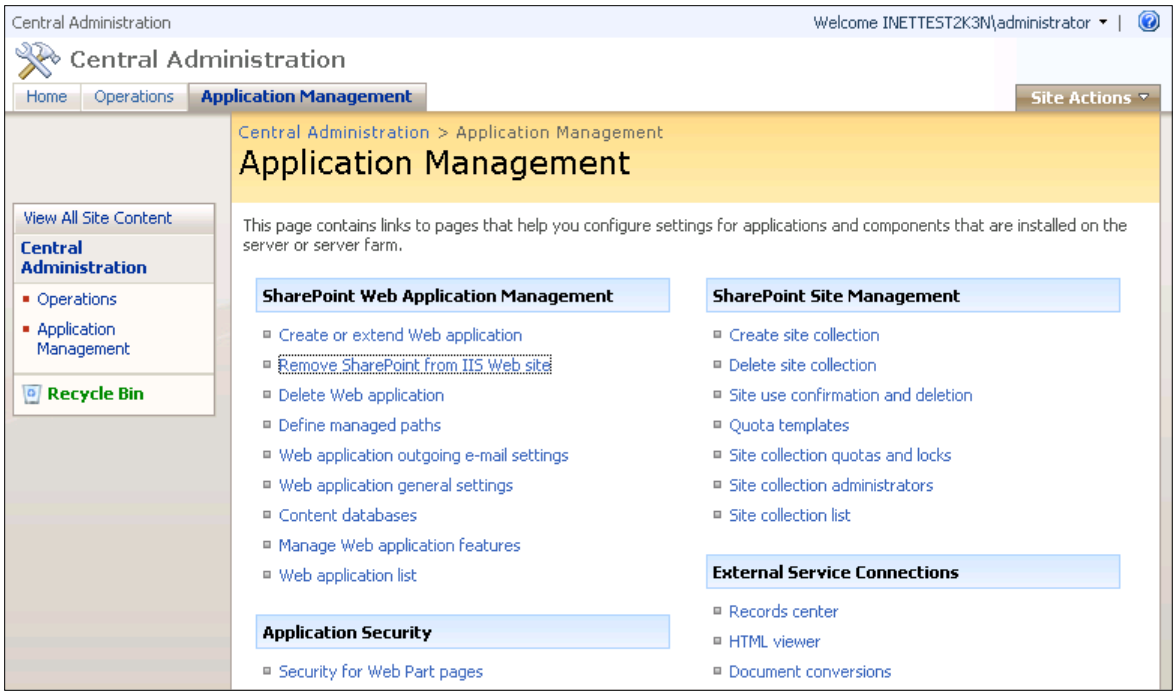
If you already have SharePoint installed and plan to use that existing installation of SharePoint for your Vision Document Management deployment, note that Vision Document Management **does not** support integrating with an existing SharePoint site collection and requires a dedicated top-level site on your SharePoint server.

To create the Document Management SharePoint site collection, complete the following steps:

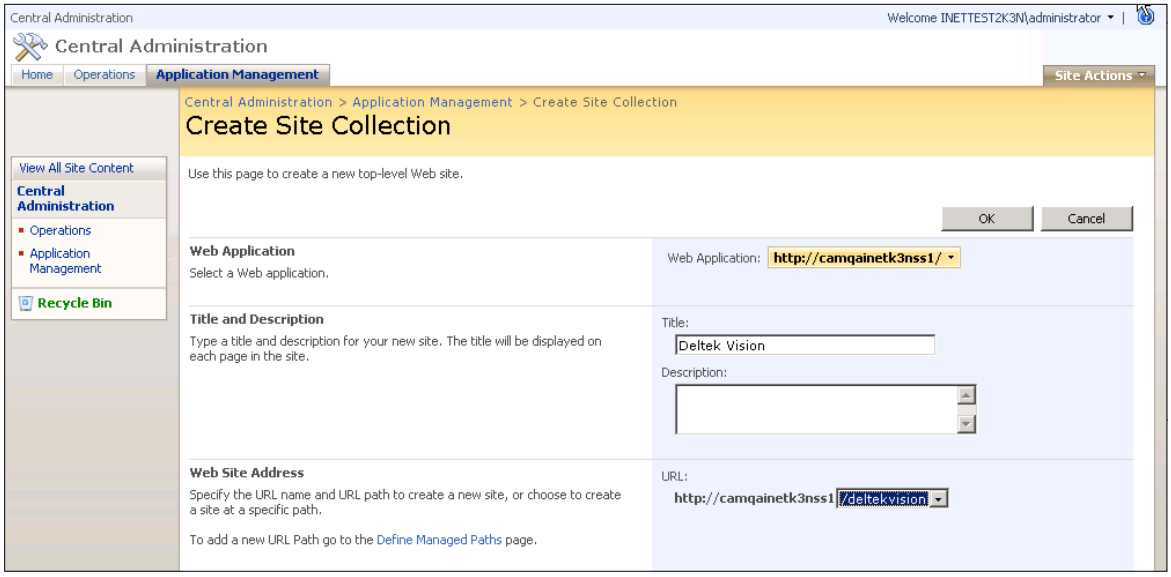
1. Launch the SharePoint Central Administration application
2. Click **Application Management** and select the **Define Managed Paths** option.



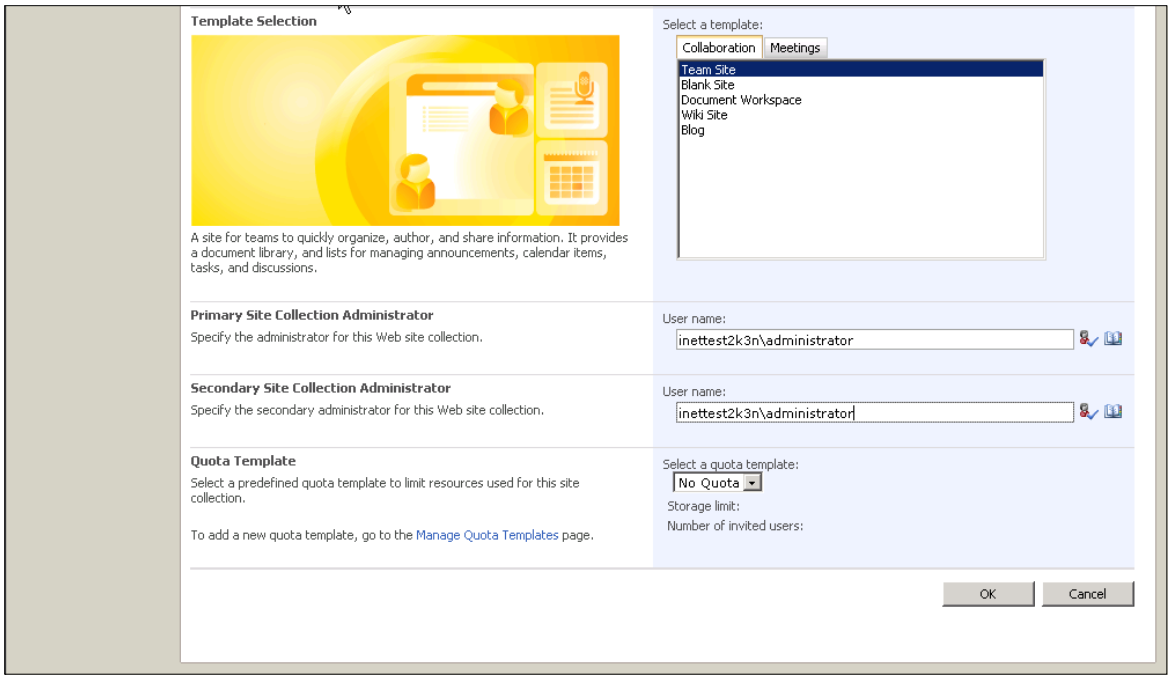
3. Enter **DeltekVision** in **Path** and select **Explicit inclusion** in **Type**.
4. Click **OK**.
5. Click **Application Management** and select the **Create site collection** option under **SharePoint Site Management**.



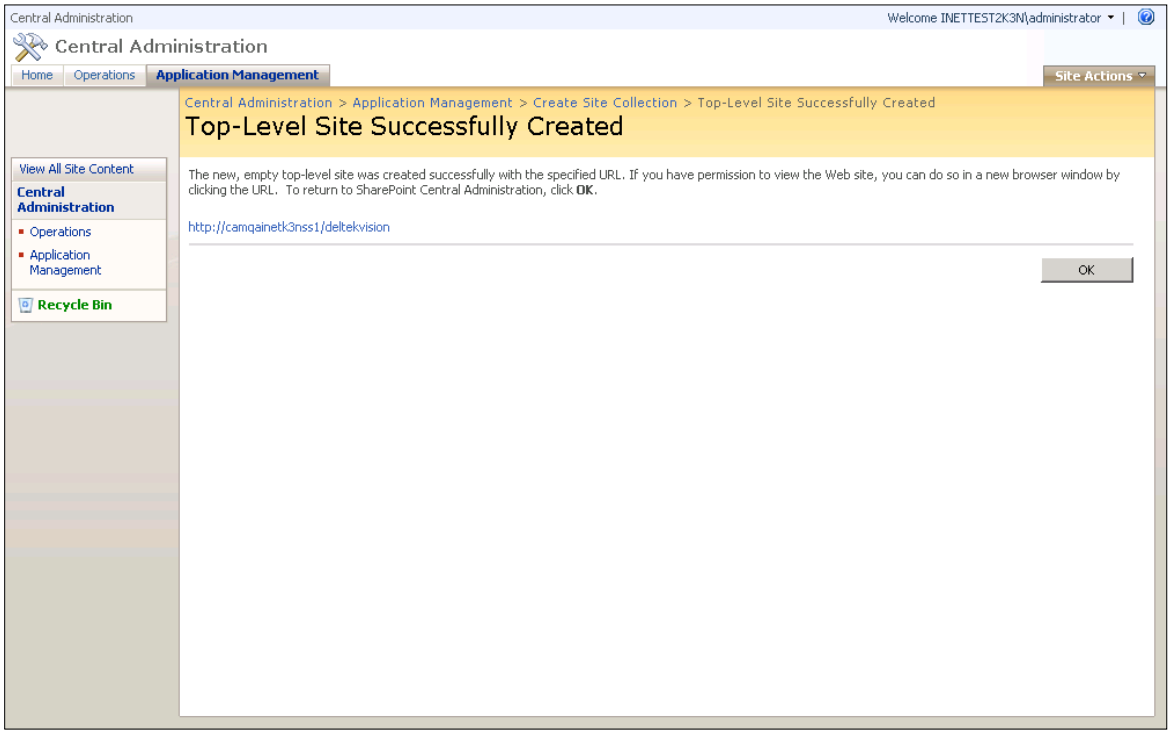
The Create Site Collection page displays.



6. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
7. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root for Vision Document Management.

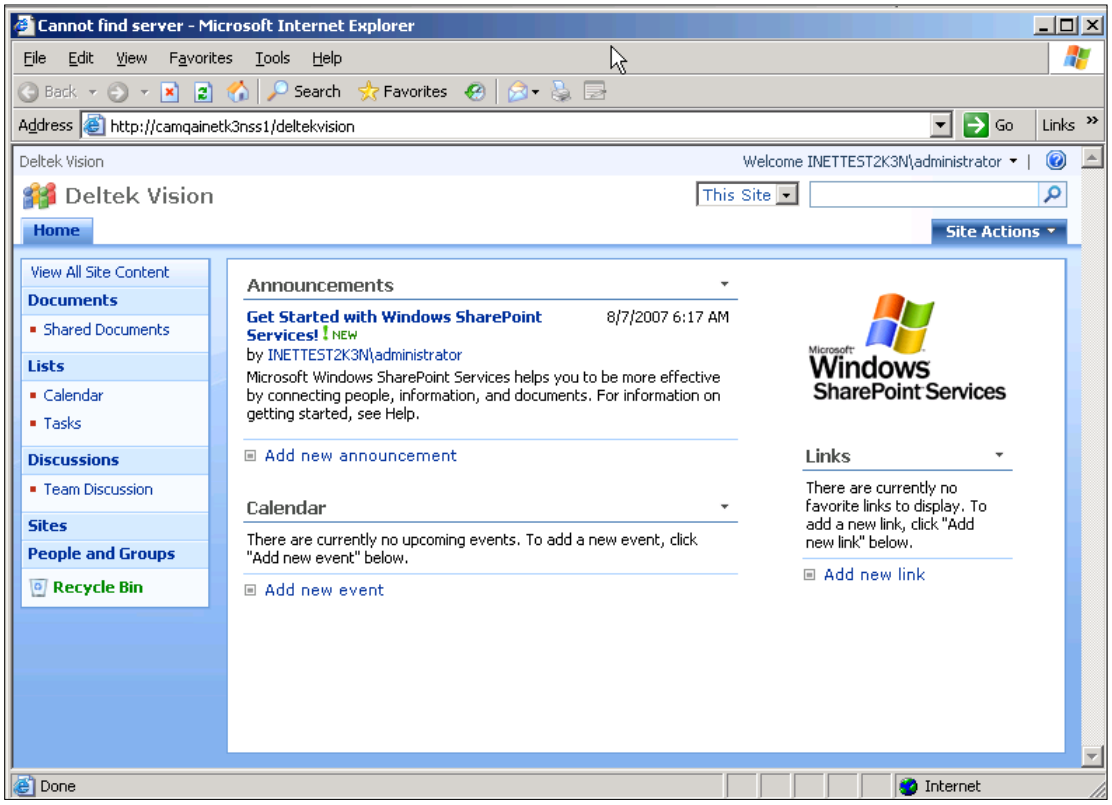


8. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
9. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



10. Click **Start** » **Run**, enter **iisreset /noforce,** and click **Enter**.

11. Click the link for the top level site (in our example it is http://camqainetk3nss1/deltekvision) to display the site.



12. The SharePoint configuration is complete. Close SharePoint Central Administration.

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

Copy the Vision Document Management .NET assembly to SharePoint site directory.

Identify your IIS configuration to specifically identify which website and port SharePoint is using as well as which website and port Vision is using.

If SharePoint was extended to the Default Web Site then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\bin

If SharePoint was extended to its own named web site (e.g. SharePoint – 80) then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin

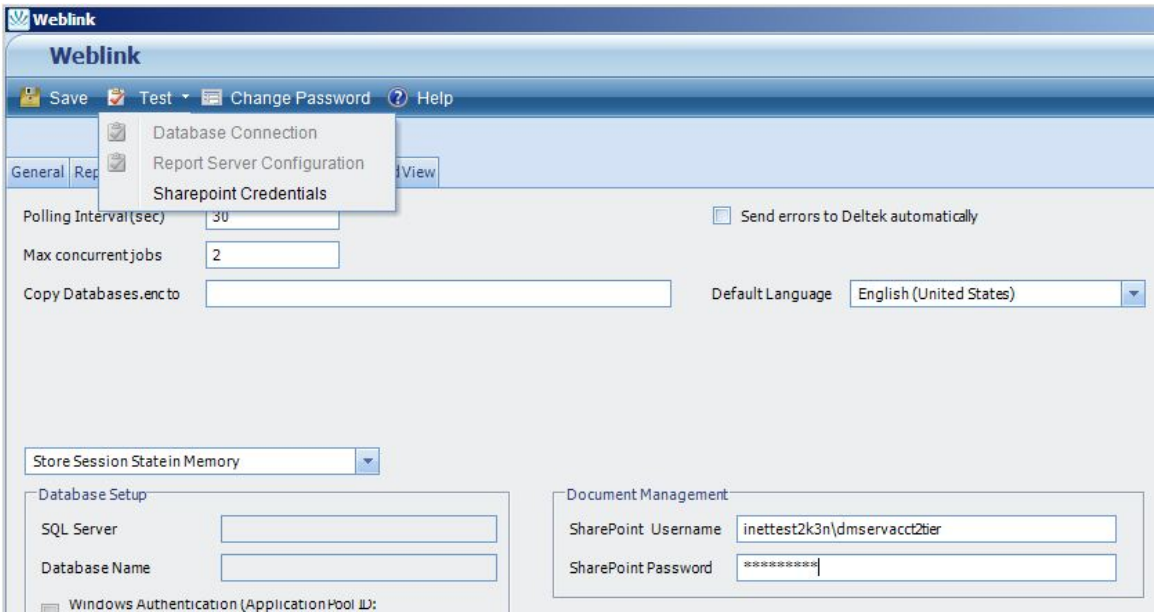
By default, the <site> directory references the port chosen. (e.g. 80, 81, etc.).

Configure Document Management Service Account in Weblink

You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the service account in Weblink, complete the following steps:

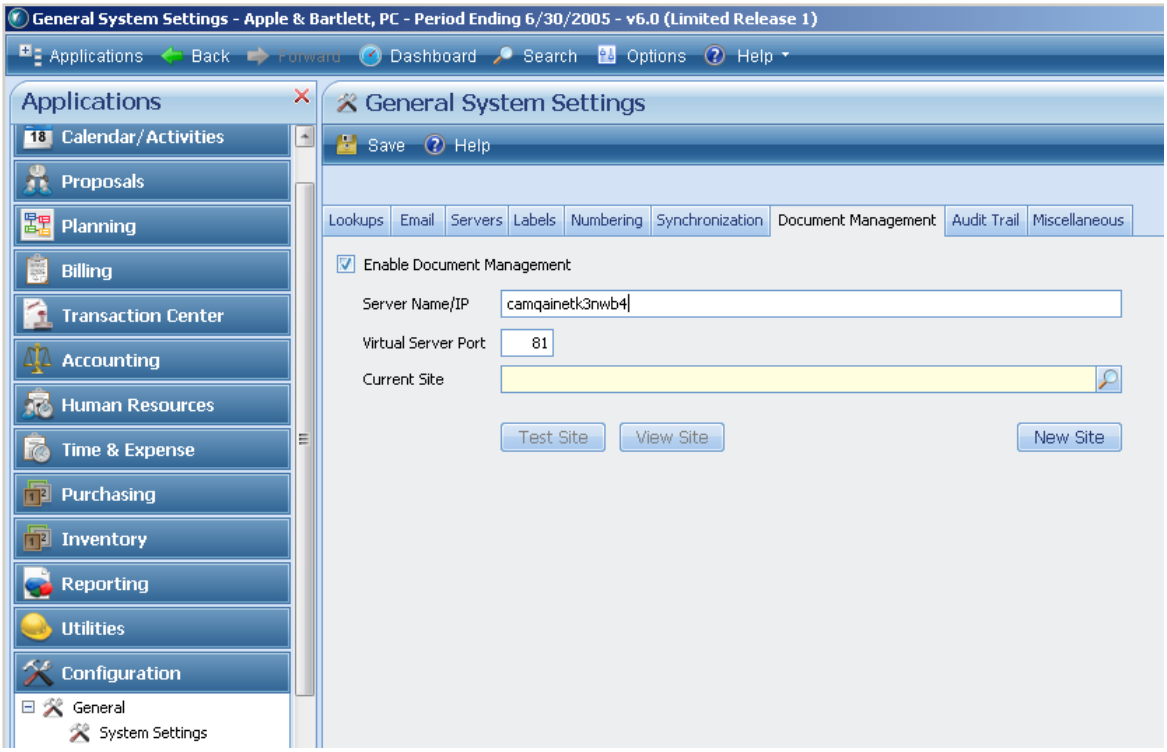
1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**
2. Enter the Weblink password when prompted.
3. Click the System Settings tab.
4. In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
5. Click the **Test** button and SharePoint Credentials to validate that the information entered is correct.



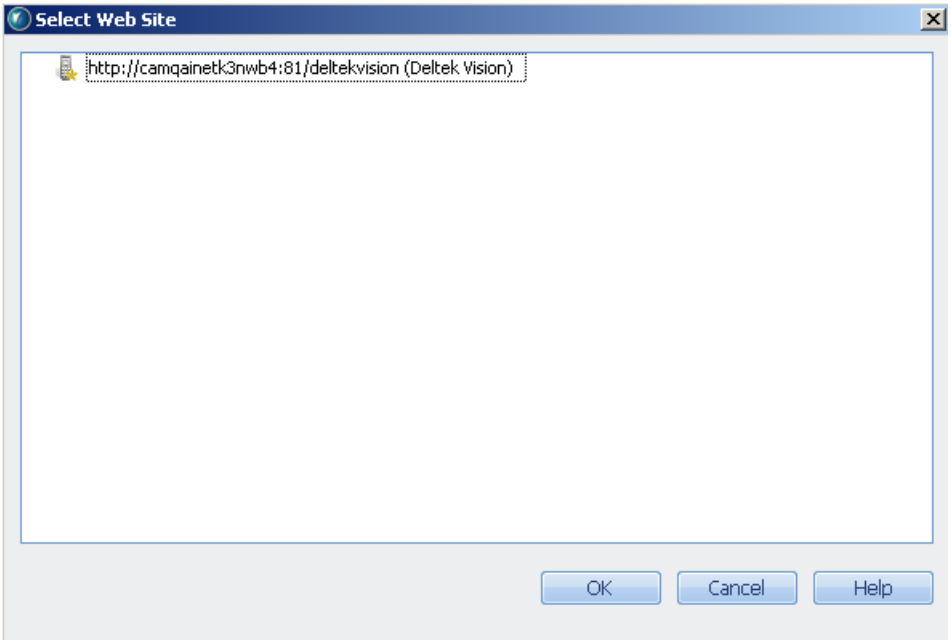
Configure Vision Document Management

To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.



3. Select the **Enable Document Management** check box.
4. Enter the name of the server hosting Document Management. This should be the server name only, FQDN's or custom DNS values are not needed here. Enter this value without the protocol prefix (for example, remove the http://). In the illustration above, the value is **camqainetk3nwb4**.
5. Enter the **Virtual Server Port**. In the illustration above, the port is 81 but on a typical dedicated SharePoint installation the port will be 80 for the default web site.
6. Click the Lookup icon to select the current site.



7. The Select Web Site dialog box displays the available sites. Select a site, and click **OK**.
8. Save your changes.

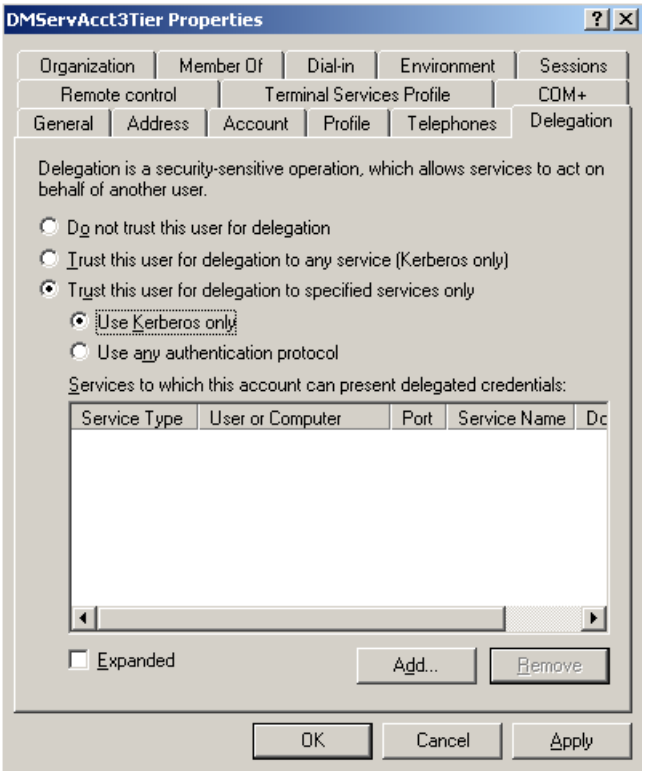
Configure Constrained Delegation

Because your WSS server is on a separate physical server and because the Vision Web server needs to pass the domain credentials of your Vision Document Management users on to the WSS server, you must configure Constrained Delegation.

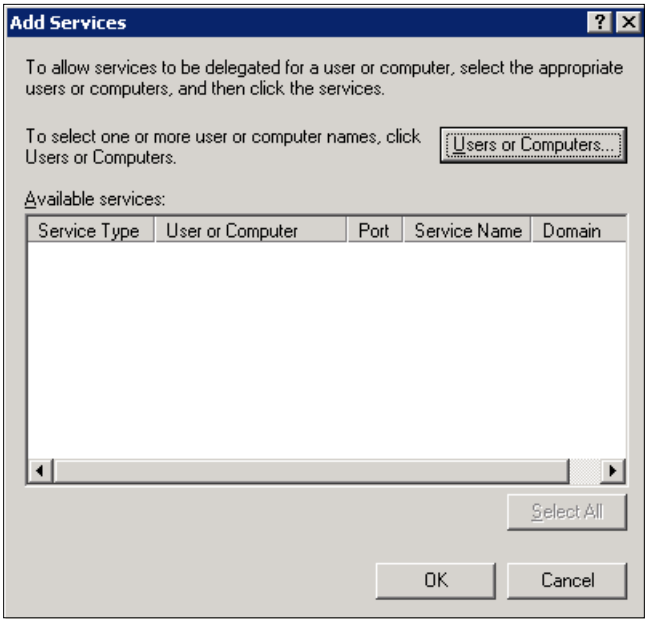
This assumes a non-Internet deployment of Vision Document Management using Kerberos authentication. If you are deploying Vision Document Management so that it is accessible over the Internet, you need to skip ahead to “Optional: Configure Protocol Transition” in the next section.

To configure Constrained Delegation, complete the following steps:

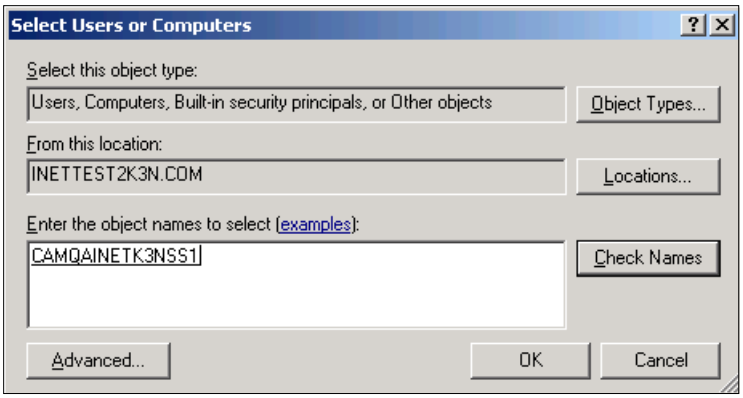
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (WSS Service account).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use Kerberos only** option.



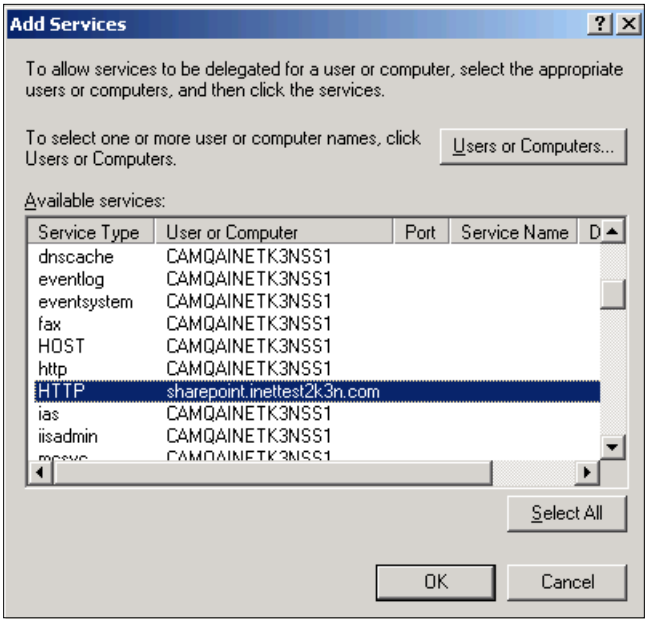
6. Click the **Add** button. The **Add Services** dialog box displays.



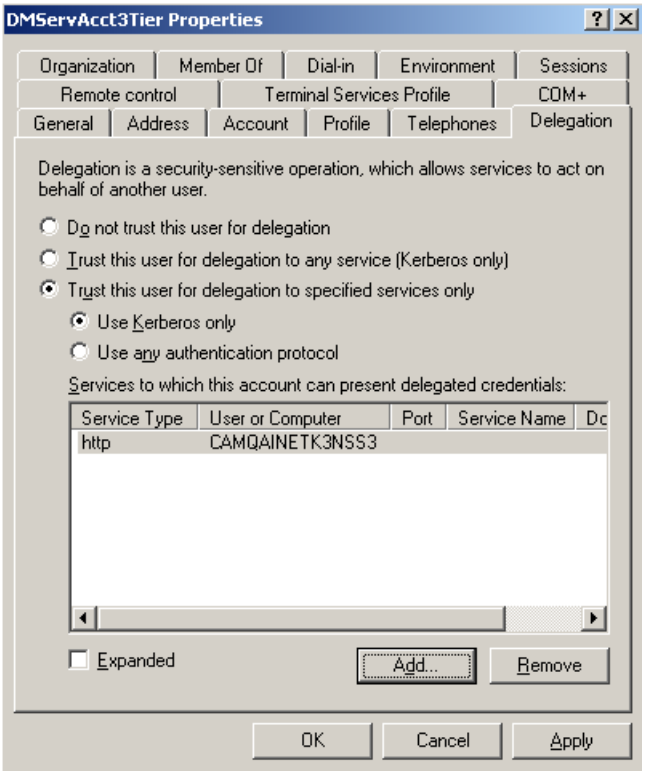
7. Click **Users or Computers**. The Select Users or Computers dialog box displays.



8. Locate the http service, select it, and click **OK**.



The Delegation tab should look like this:



Because we are explicitly specifying the http service and not all services on the SharePoint server, this is known as Constrained Delegation.

There are two http service types listed. These service types are known as Service Principal Names (SPNs). The SPN referencing CAMQAINETK3NSS1.inettest2k3n.com was created automatically when the server was added to the domain and the http service (IIS) was installed. The second SPN referencing sharepoint.inettest2k3n.com is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

Optional: Configure Protocol Transition

If Vision Document Management functionality is required over the Internet and you will be using a custom DNS/FQDN for the SharePoint URL (as in our example, vision1.inettest2k3n.com), then you need to configure a form of delegation referred to as Protocol Transition. If Document Management functionality is not required, you can skip this step.

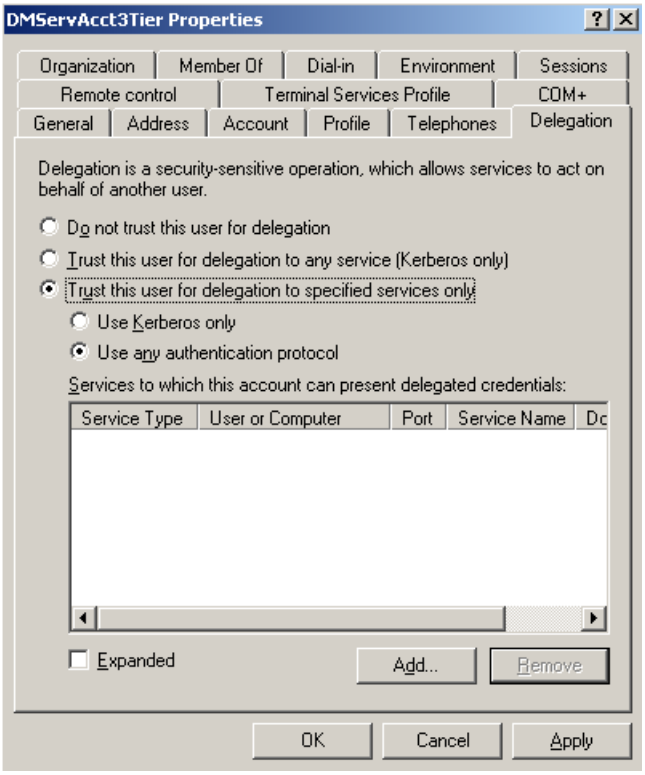
The Kerberos authentication protocol must be used to authenticate from the Vision Web server to the SharePoint server. However, if Vision is deployed in an Internet scenario and there are users outside of the firewall who need to access Document Management features, Kerberos authentication cannot be used to authenticate the client to the Web server. This is because the client needs to have the ability to negotiate a Kerberos ticket with the Key Distribution Center (KDC), which is a service running on a Domain Controller. This requires port 88 to be opened inbound on the firewall to the Domain Controller, which is not an advisable configuration.

To get around this, you must be running a Native Windows Server 2003 functional domain.

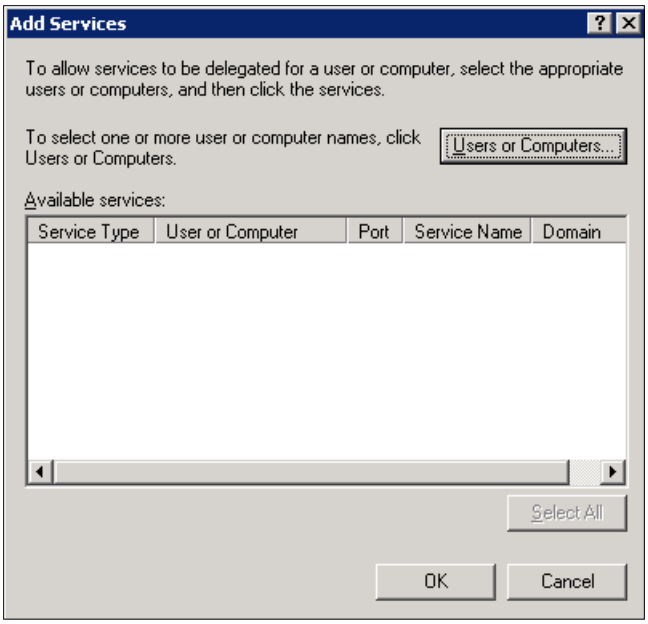
To configure Protocol Transition, select the **Use any authentication protocol** option instead of the **Use Kerberos only** option, which is used to configure Constrained Delegation. This allows the client to authenticate to the Vision Web server using NTLM instead of Kerberos, and that authentication is then “transitioned” over to Kerberos for Delegation to the SharePoint server.

To configure Protocol Transition, complete the following steps:

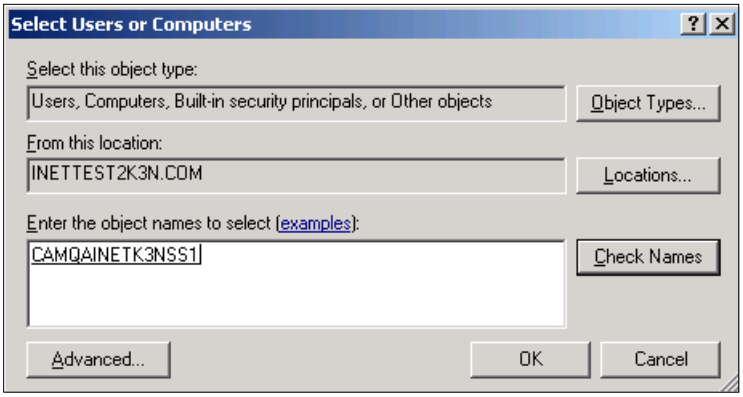
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (WSS Service account), which is most likely under the Computers Organizational Unit (OU).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use any authentication protocol** option.



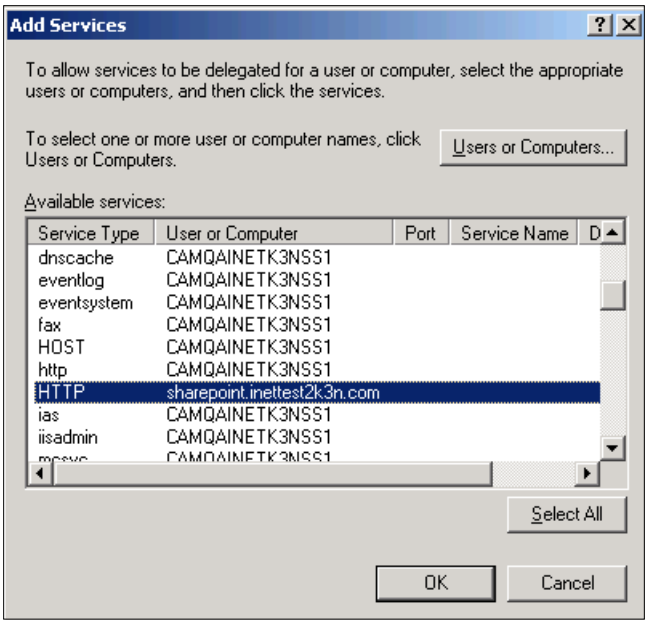
6. Click the **Add** button. The **Add Services** dialog box displays.



7. Click **Users or Computers**, search for the SharePoint server, and click **OK**.



8. Locate the http service for the SPN (FQDN) you created earlier (in our example, **sharepoint.inettest2k3n.com**), select it, and click **OK**.

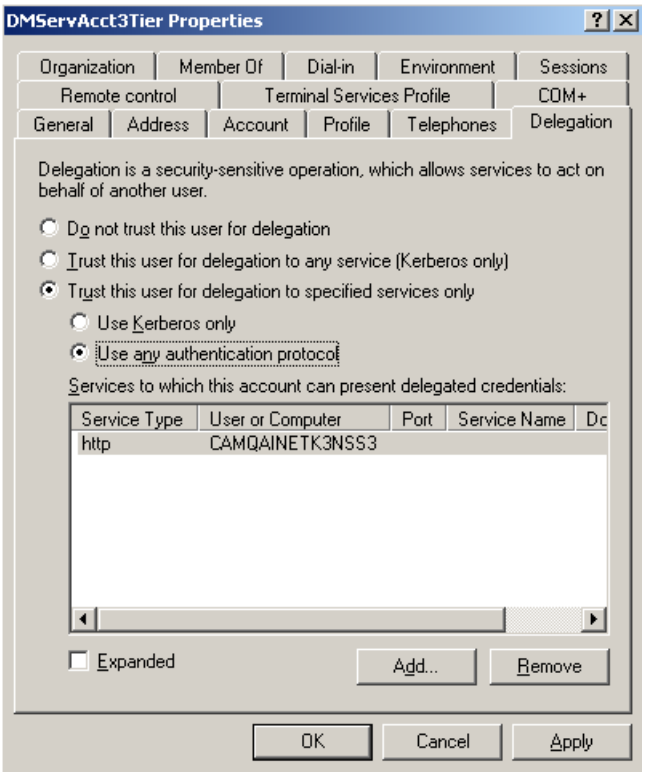


This illustration shows two http service types. Unless you have registered a custom FQDN using the setspn utility, only the server name displays. These service types are known as Service Principal Names (SPNs).

The SPN referencing **CAMQAINETK3NSS1.inettest2k3n.com** was created automatically when the server was added to the domain and the http service (IIS) was installed.

The second SPN referencing **sharepoint.inettest2k3n.com** is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

The Delegation tab should look like this:



Because you explicitly specified the http service and not all services on the SharePoint server and because you selected the **Use any authentication protocol** option and not Kerberos, this is known as Protocol Transition.

Multi Tier New Installation and Configuration for x64 (64-bit) Servers – SharePoint Already Installed

!!IMPORTANT!!

Please note the following for this configuration:

- In this configuration, Vision and SharePoint are installed on separate physical servers.
- SharePoint is already installed on the SharePoint server so the Vision Document Management installation will NOT install SharePoint.
- The installation of SharePoint is SPF 2010.
- The Operating System for the server is x64 (64-bit).

Prerequisites

- Install/upgrade your Vision installation to Vision 7.1 (if applicable).
- Identify the domain user account being used for the SharePoint Farm Administrator account.
- Change the Application Pool Identity for the DeltekVisionAppPool to be the SharePoint Farm Administrator account above (the Vision 7.1 installation sets this to be the local DeltekVision account).
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server if not already done by the SharePoint installation.

Multi Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Grant Local Security Policy Rights to Vision Application Pool Identity
3.	Vision Web/Application Server	Install Vision 7.1 Document Management on the Vision Web Server
4.	Vision Web/Application Server	Configure Authentication for the Vision Website
5.	Vision Web/Application Server	Configure Service Principal Name (SPN) for Vision Application Pool Identity
6.	SharePoint Web /Application Server	Install Vision Document Management on the SharePoint Foundation 2010 Server

7.	SharePoint Web /Application Server	Use SharePoint Central Administration to Complete the SharePoint Configuration
8.	SharePoint Web /Application Server	Configure Service Principal Name (SPN) for SharePoint Application Pool Identity
9.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
10.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
11.	Vision Web/Application Server	Configure Vision Document Management
12.	Domain	Configure Constrained Delegation
13.	Domain	Optional: Configure Protocol Transition

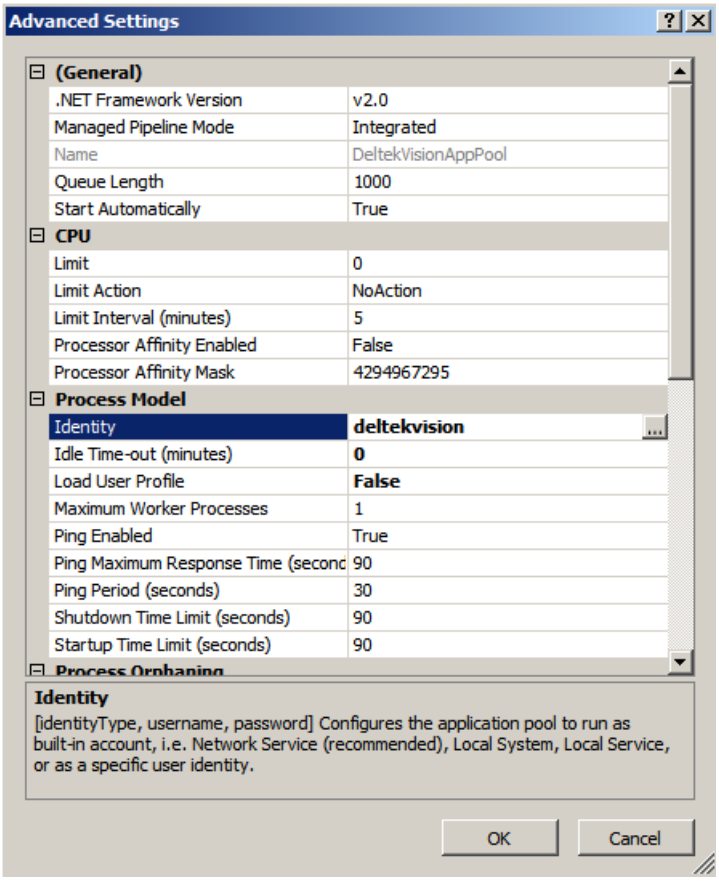
Configure Vision Application Pool Identity to be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

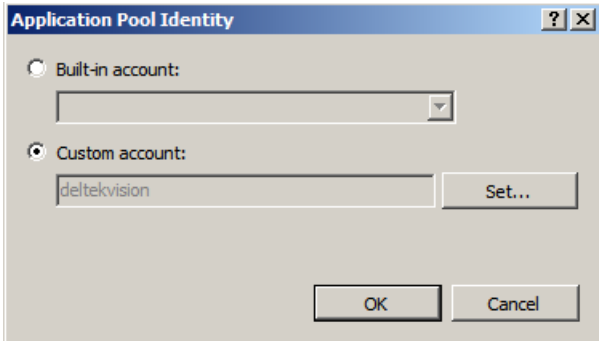
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server.

To change the Vision Application Pool Identity, complete the following steps:

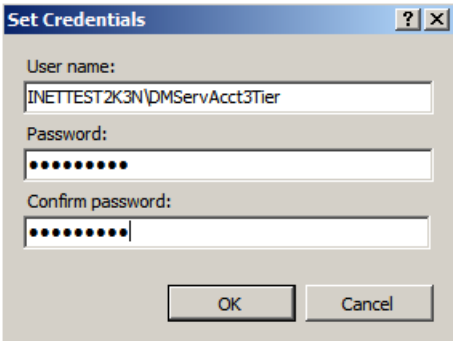
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side. The following displays:



6. Place your cursor in the Identity field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



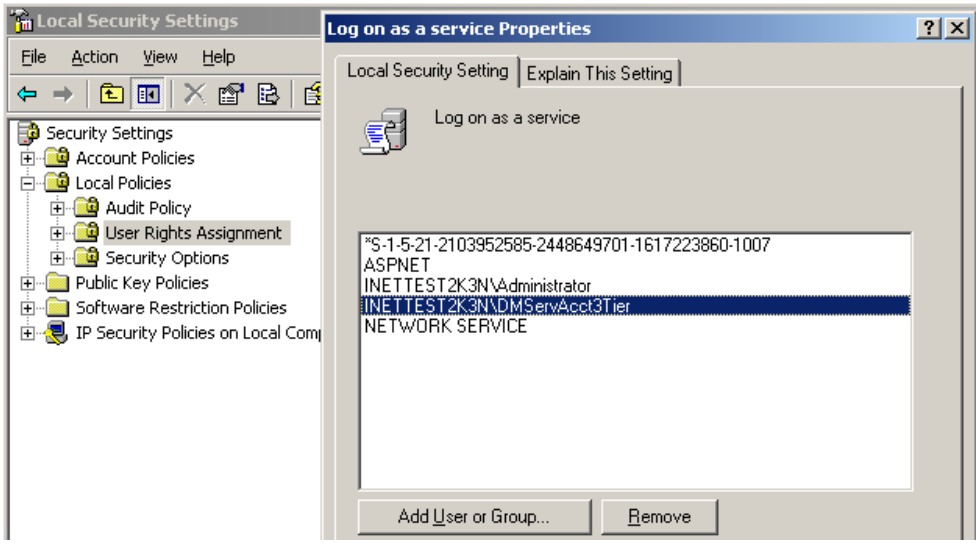
7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In **User name**, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In **Password** and **Confirm password**, enter that user's password.
10. Click **OK** three times to set the identity.

Grant Local Security Policy Rights to Vision Application Pool Identity

The Vision Application Pool Identity/SharePoint Service Account must be granted **Logon as a service** rights on the Vision 7.1 Web/Application Server for multi-tier Document Management installations, as shown in the following example of the Local Security Settings setup screens.



Install and Configure Vision 7.1 Document Management

When you install Vision 7.1 Document Management the changes made to your existing SPF installation are outlined below. The steps to configure SPF are outlined in this section.

> If you would prefer not to run the Vision Document Management installation on an existing installation of SharePoint, refer to "Appendix C: Manual Installation of Vision Document Management" for manual setup instructions.

The Document Management installation does the following:

- Installs Web Service Extensions (WSE) 2.0 SP3.

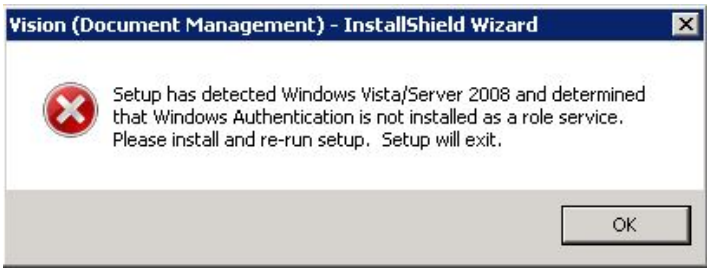
- Installs SPF 2010 when run on the SharePoint web server, if it is not already installed.
- Copies Document Management files to the SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\14\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server.dll into the Global Assembly Cache (GAC).

Install Vision 7.1 Document Management on the Vision Web Server

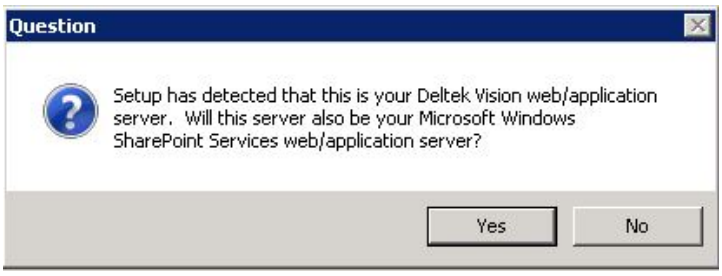
You must run the Document Management installer on both the Vision web server and the SharePoint web server.

To install Vision 7.1 Document Management, complete the following steps:

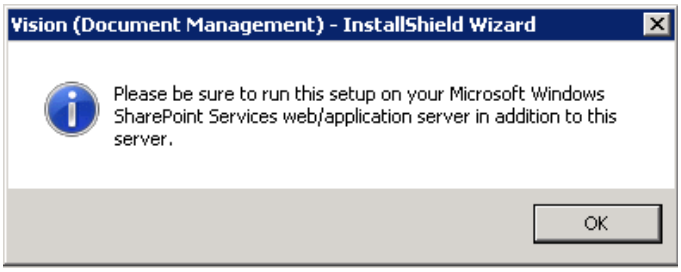
1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. The installation will check to ensure that the IIS Role service, Windows Authentication, is installed. If the Role Service is not installed you will be prompted to install it and the setup will exit:



3. After installing the Windows Authentication IIS Role Service, re-run the Document Management installation.
4. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
5. On the first Document Management Installation Wizard page, click **Next**.
6. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
7. When this message displays, click **No** because this is a multi-tier installation of Vision Document Management and your Vision Web server will not host SPF 2010.



8. When the following dialog box displays to remind you to run the setup on the SPF server, click **OK**.



9. On the Ready to Install the Program page, click **Install** to start the installation.
10. When the InstallShield Wizard Complete page displays, click **Finish**.

Configure Authentication for the Vision Website

IIS Kernel Mode Authentication

The default configuration of IIS when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because the Machine account cannot be used for delegation scenarios which are required for multi-tier deployments of Vision Document Management, the additional configuration steps below are necessary.

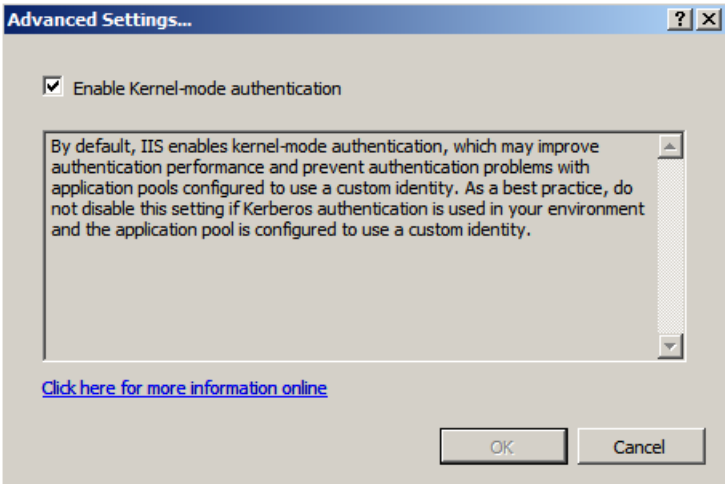
Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.

6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

> This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path=”Default Web Site/Vision”>
5. Locate the windowsAuthentication tag and add **useAppPoolCredentials=”true”** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Configure Service Principal Name (SPN) for Vision Application Pool Identity

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication to work properly and creating an SPN for the Application Pool Identity in this configuration will result in a “duplicate SPN” issue, preventing Windows Integrated Security from authenticating anyone to the Web site.

However, For Multi Tier installations of Vision Document Management it is necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity (DeltekVisionAppPool) as this is the account used for delegation.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

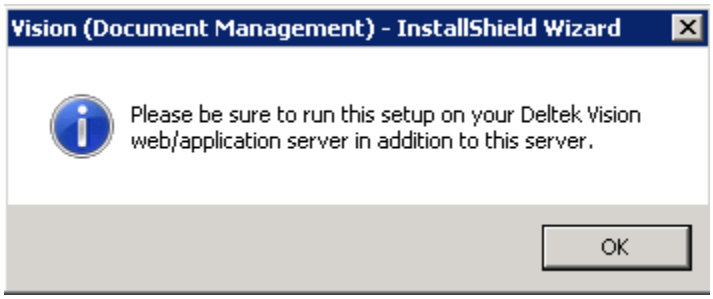
See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

Install Vision Document Management on the SPF 2010 Server

To install Vision Document Management on the SPF 2010 server, complete the following steps:

1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
3. On the first Document Management Installation Wizard page, click **Next**.
4. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
5. When the following message displays to remind you to run the setup on the Vision web/application server if you haven't already, click **OK**.



6. On the Ready to Install the Program page, click **Install** to start the installation.
7. When the InstallShield Wizard Complete page displays, click **Finish**.

Use SharePoint Central Administration to Complete the SharePoint Configuration

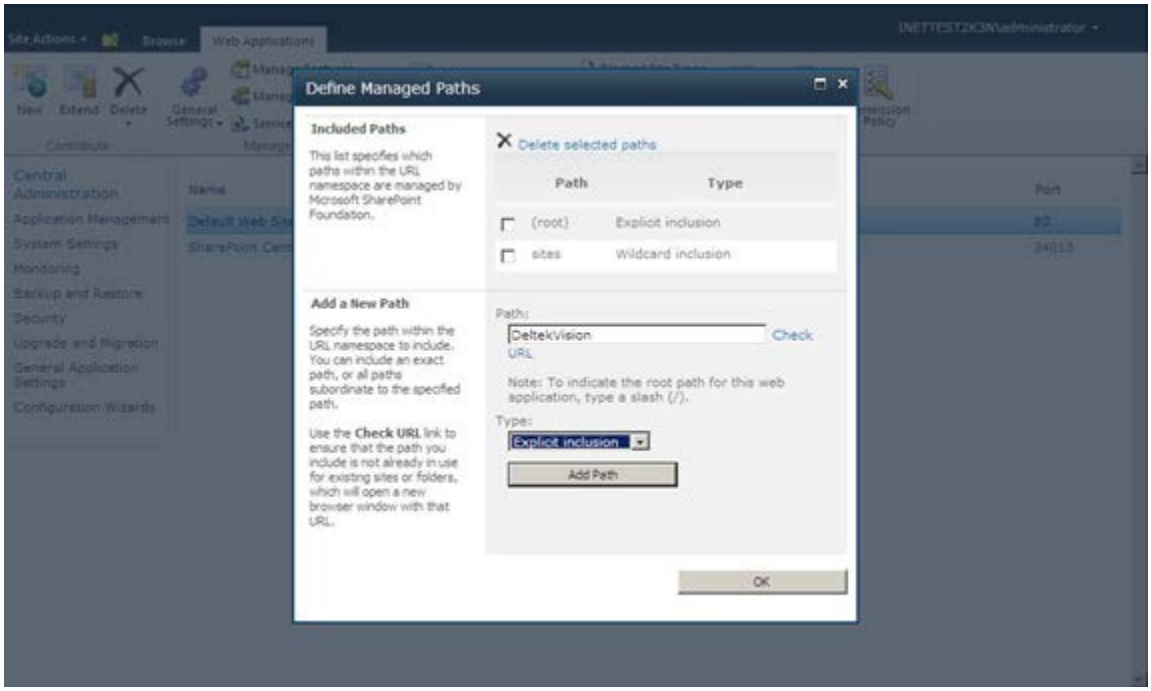
!! IMPORTANT INFORMATION FOR EXISTING SHAREPOINT INSTALLATIONS!!

If you already have SharePoint installed and plan to use that existing installation of SharePoint for your Vision Document Management deployment, note that Vision Document Management **does not** support integrating with an existing SharePoint site collection and requires a dedicated top-level site on your SharePoint server.

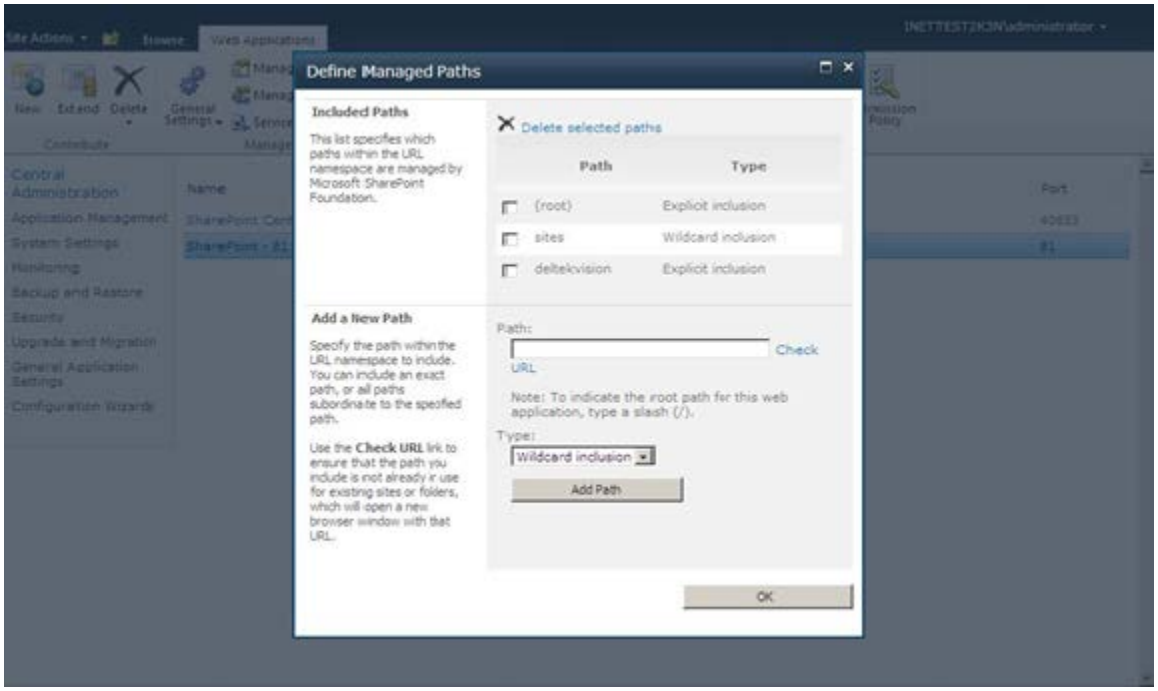
Create Document Management SharePoint Site Collection

The following instructions are for SharePoint Foundation 2010. If you have Windows SharePoint Services 3.0 x64 installed as your version of SharePoint, refer to page 110 for specific instructions for that platform.

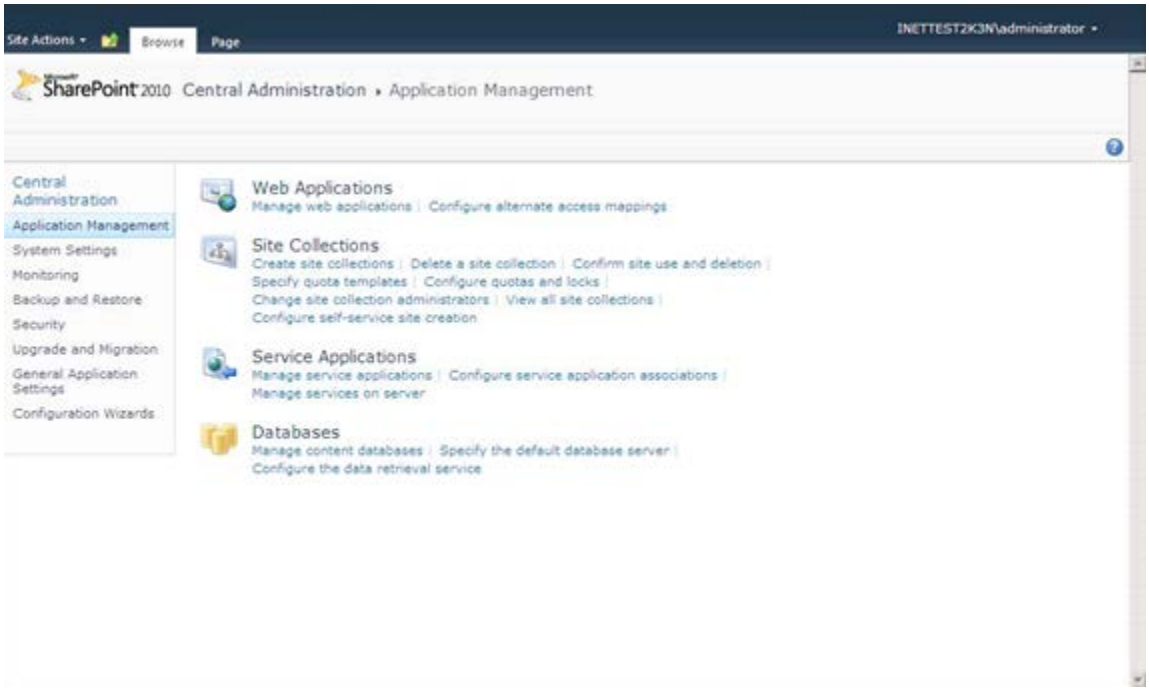
1. Launch the **SharePoint 2010 Central Administration** application
2. Click **Manage Web Applications** under **Application Management**.
3. Select your SharePoint web application and click **Managed Paths.** The **Define Managed Paths** page displays.



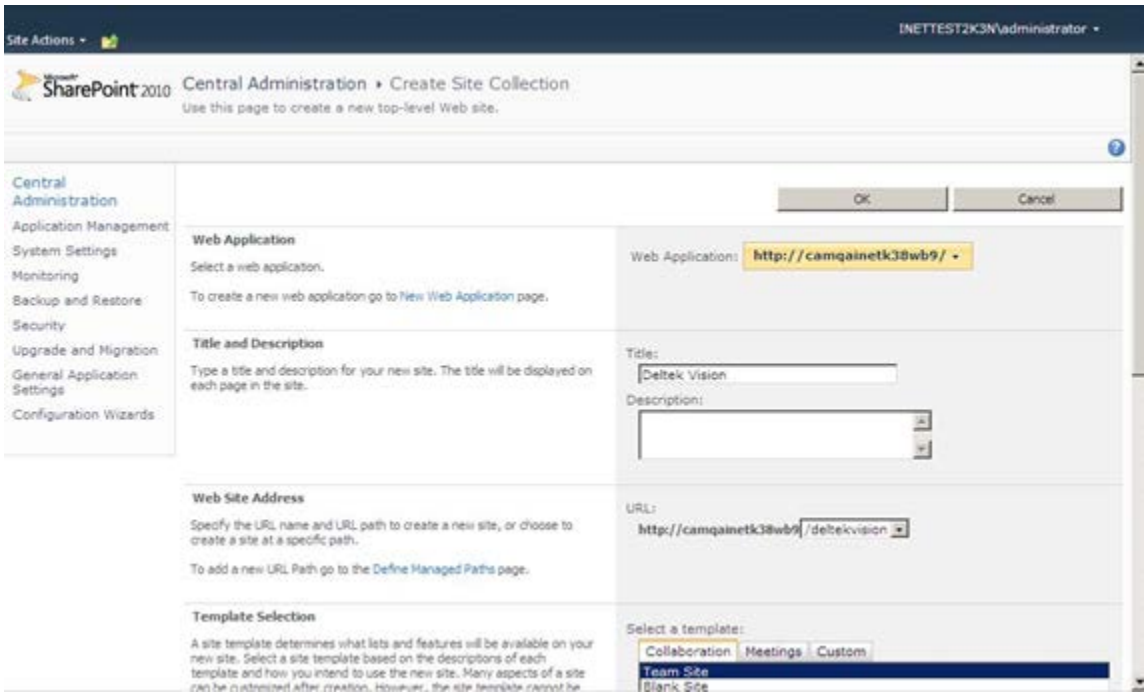
4. Enter **DeltekVision** in **Path** and select **Explicit inclusion** in **Type** and click Add Path.
5. Click **OK**.



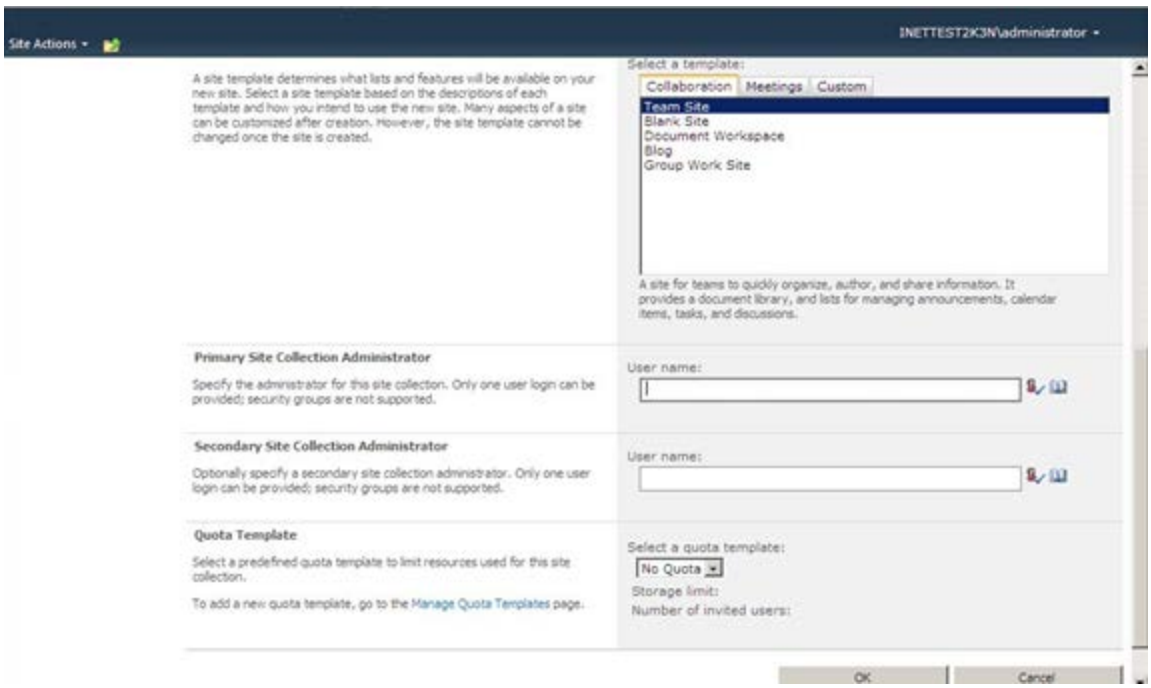
6. Click **Application Management** and select the **Create Site Collection** option under **Site Collections**.



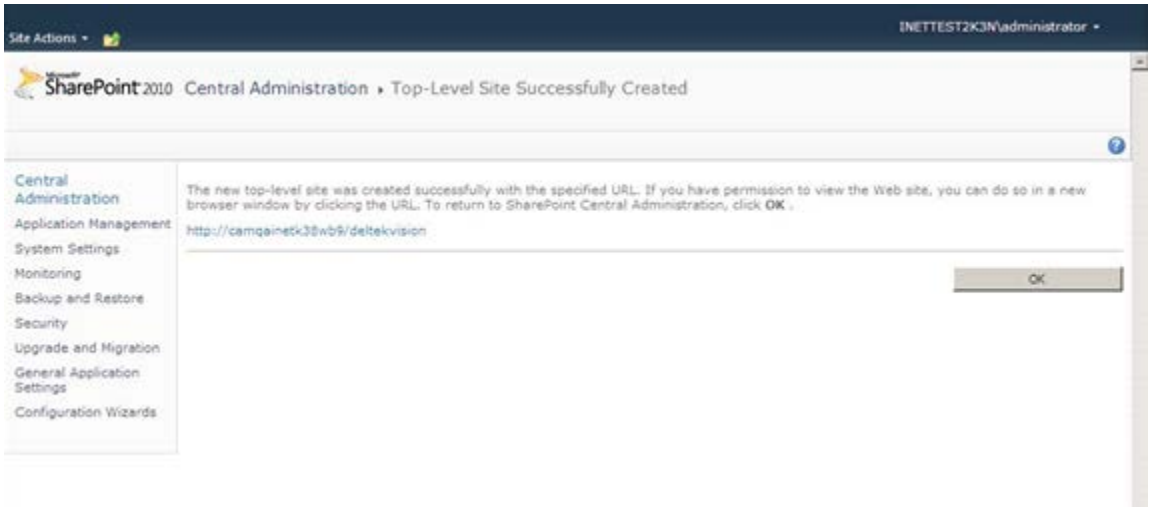
The Create Site Collection page displays.



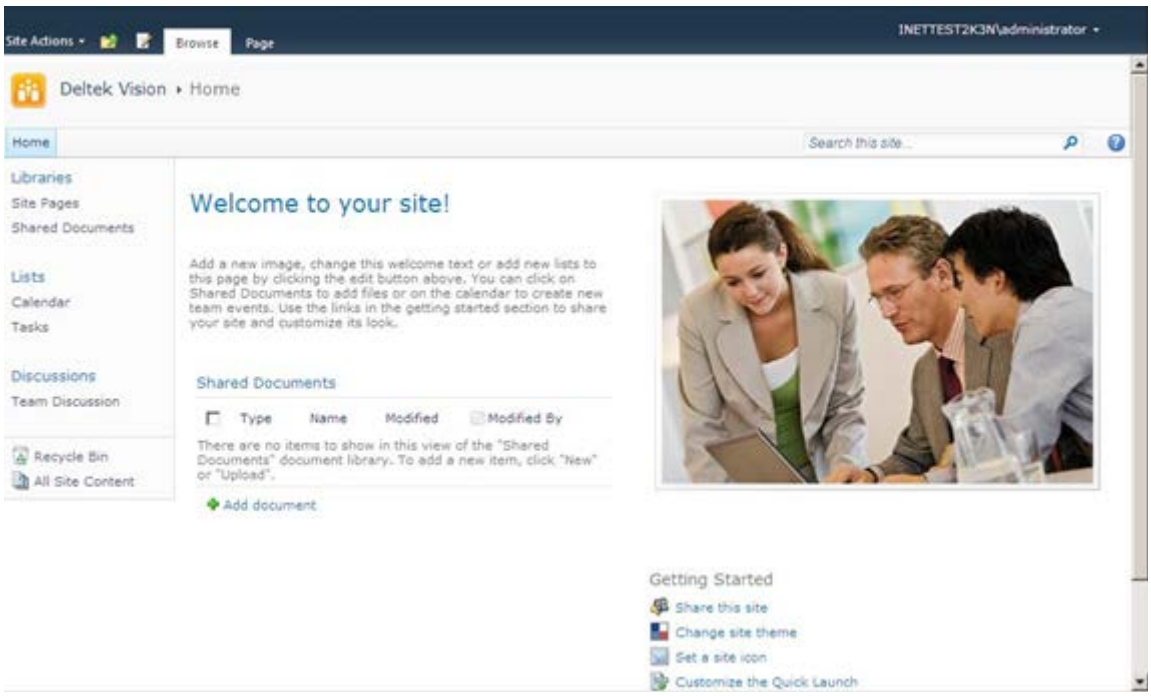
7. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
8. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root for Vision Document Management.



9. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
10. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



11. Click the link for the top level site (in our example it is http://camqainetk38wb9/deltekvision) to display the site.



12. The SharePoint configuration is complete. Close SharePoint Central Administration.

Configure Service Principal Name (SPN) for SharePoint Application Pool Identity

The default configuration of the SharePoint created Application Pool will be to have Kernel Mode Authentication disabled therefore, a Service Principal Name for the Application Pool Identity is required for Windows Authentication to work properly.

Domain rights are required to complete this step.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<SharePoint Web Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

Copy the Vision Document Management .NET assembly to SharePoint site directory.

Identify your IIS configuration to specifically identify which website and port SharePoint is using as well as which website and port Vision is using.

If SharePoint was extended to the Default Web Site then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\bin

If SharePoint was extended to its own named web site (e.g. SharePoint – 80) then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin

By default, the <site> directory references the port chosen. (e.g. 80, 81, etc.).

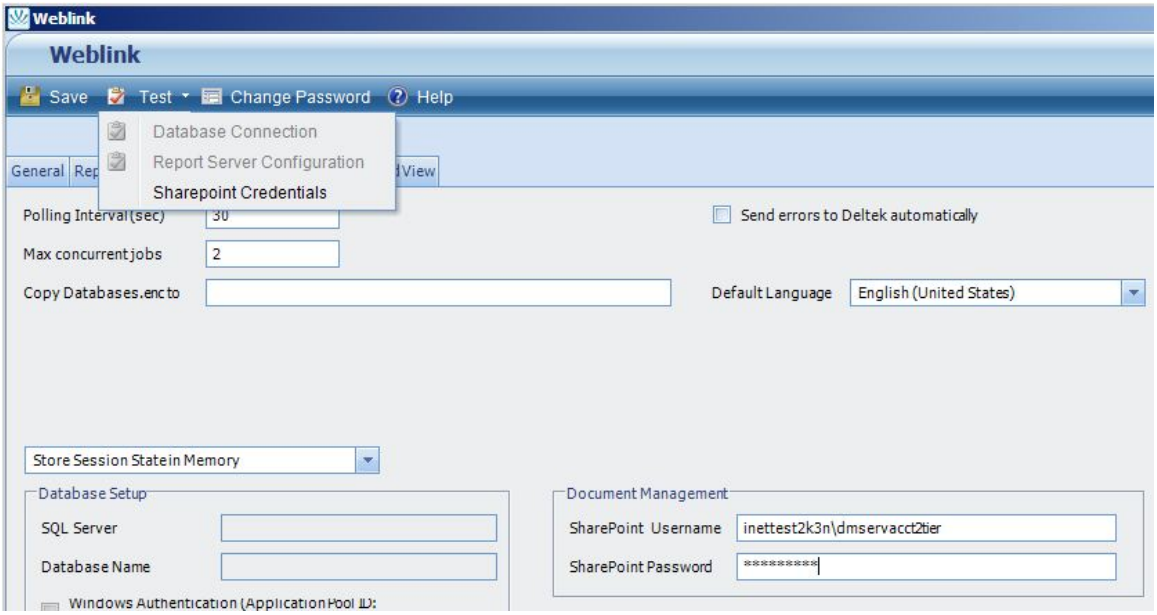
Configure Document Management Service Account in Weblink

You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the account in Weblink, complete the following steps:

1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**
2. Enter the Weblink password when prompted.
3. Click the System Settings tab.

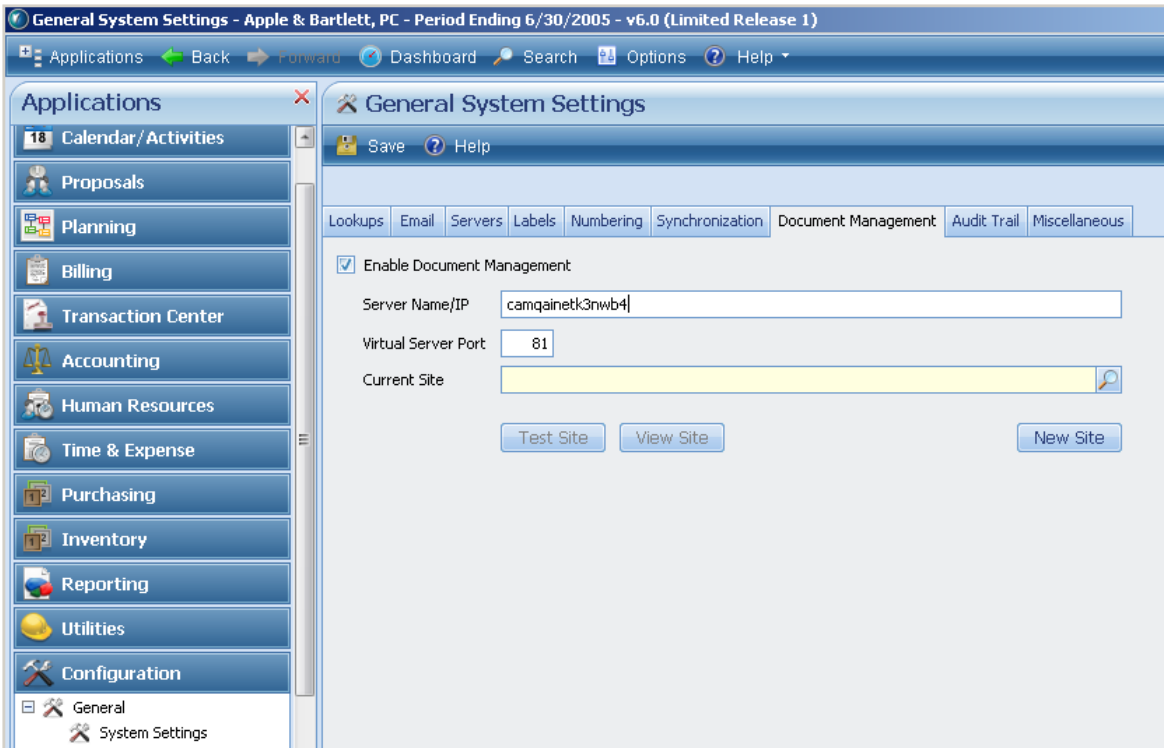
   In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
4. Click **Test** and **SharePoint Credentials** to validate that the information entered is correct.



Configure Vision Document Management

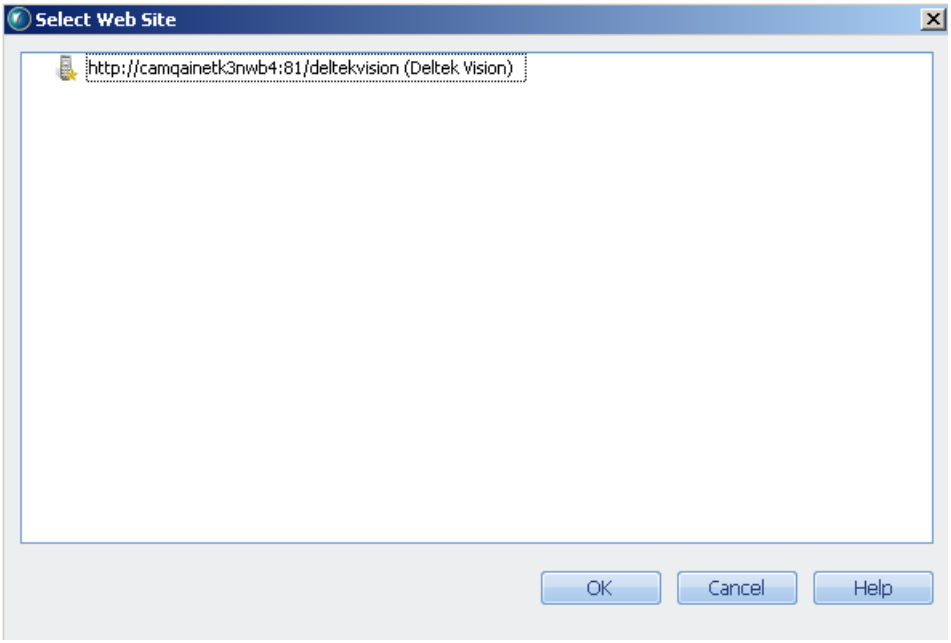
To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.



3. Select the **Enable Document Management** check box.

4. Enter the name of the server hosting Document Management. This should be the server name only, FQDN's or custom DNS values are not needed here.. Enter this value without the protocol prefix (for example, remove the http://). In the illustration above, the value is **camqainetk3nwb4**.
5. Enter the **Virtual Server Port**. In the illustration above, the port is 81 but on a typical dedicated SharePoint installation the port will be 80 for the default web site.
6. Click the **Lookup icon to sele**ct the current site.



7. The Select Web Site dialog box displays the available sites. Select a site, and click **OK**.
8. Save your changes.

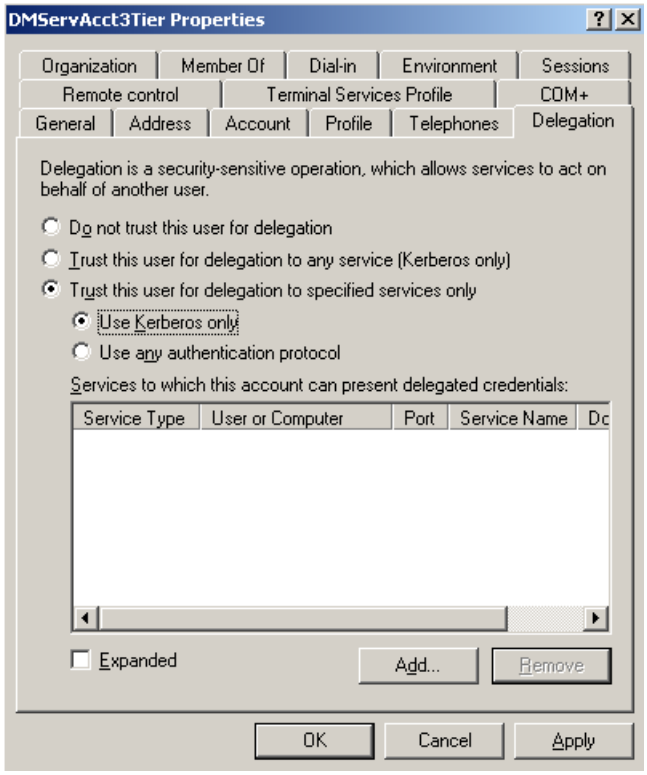
Configure Constrained Delegation

Because your SPF server is on a separate physical server and because the Vision Web server needs to pass the domain credentials of your Vision Document Management users on to the SPF server, you must configure Constrained Delegation.

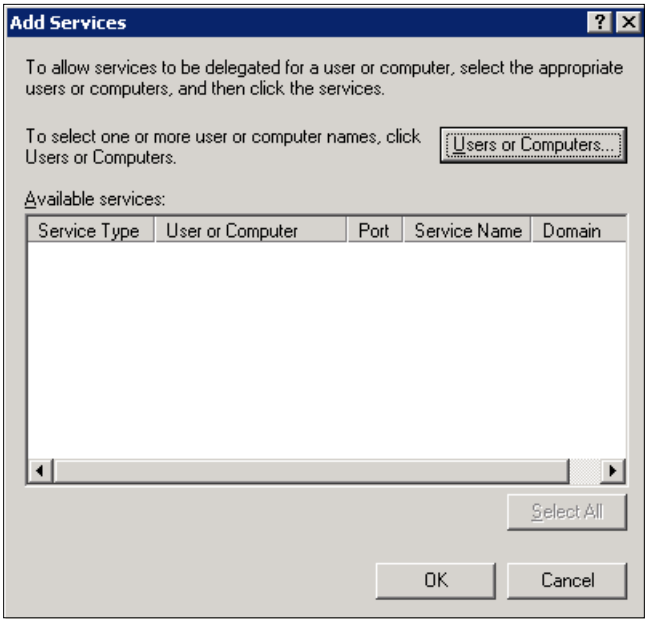
This assumes a non-Internet deployment of Vision Document Management using Kerberos authentication. If you are deploying Vision Document Management so that it is accessible over the Internet, you need to skip ahead to "Optional: Configure Protocol Transition" in the next section..

To configure Constrained Delegation, complete the following steps:

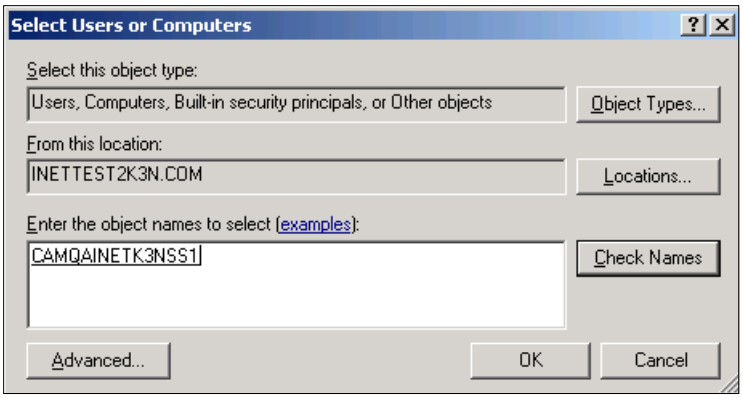
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (SPF Service account).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use Kerberos only** option.



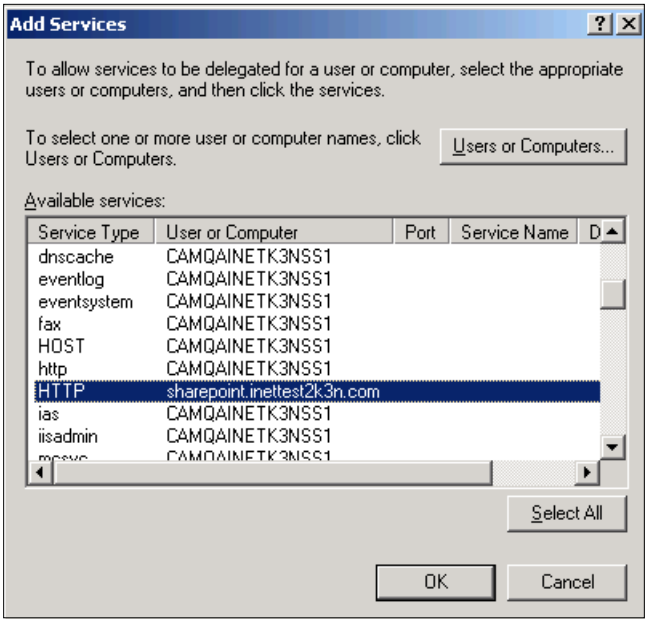
6. Click the **Add** button. The **Add Services** dialog box displays.



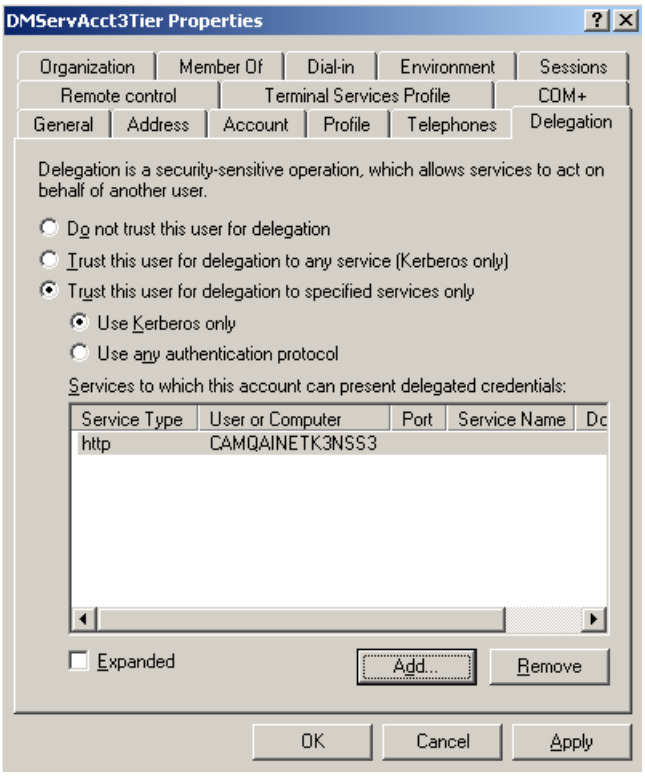
7. Click **Users or Computers**. The Select Users or Computers dialog box displays.



8. Locate the http service, select it, and click **OK**.



The Delegation tab should look like this:



Because we are explicitly specifying the http service and not all services on the SharePoint server, this is known as Constrained Delegation.

There are two http service types listed. These service types are known as Service Principal Names (SPNs). The SPN referencing CAMQAINETK3NSS1.inettest2k3n.com was created automatically when the server was added to the domain and the http service (IIS) was installed. The second SPN referencing sharepoint.inettest2k3n.com is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

Optional: Configure Protocol Transition

If Vision Document Management functionality is required over the Internet and you will be using a custom DNS/FQDN for the SharePoint URL (as in our example, vision1.inettest2k3n.com), then you need to configure a form of delegation referred to as Protocol Transition. If Document Management functionality is not required, you can skip this step.

The Kerberos authentication protocol must be used to authenticate from the Vision Web server to the SharePoint server. However, if Vision is deployed in an Internet scenario and there are users outside of the firewall who need to access Document Management features, Kerberos authentication cannot be used to authenticate the client to the Web server. This is because the client needs to have the ability to negotiate a Kerberos ticket with the Key Distribution Center (KDC), which is a service running on a Domain Controller. This requires port 88 to be opened inbound on the firewall to the Domain Controller, which is not an advisable configuration.

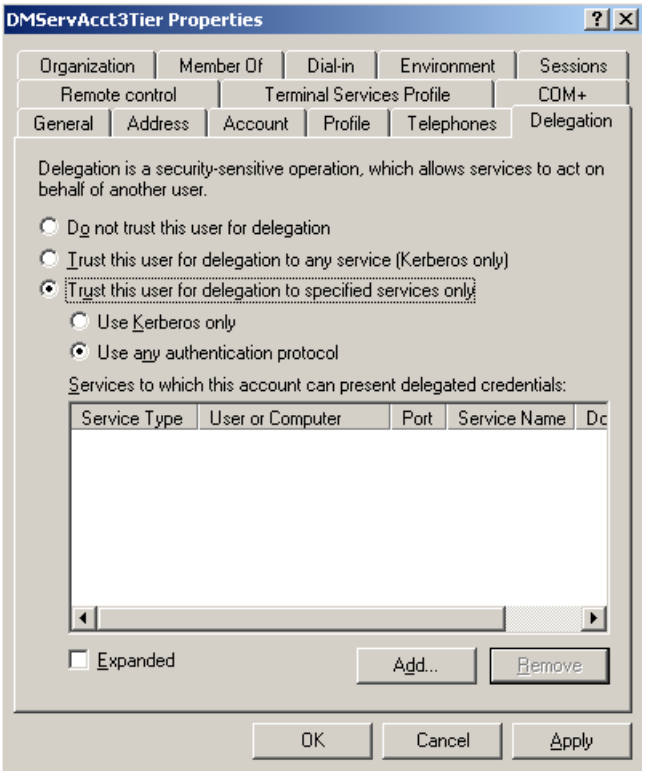
To get around this, you must be running a Native Windows Server 2003 functional domain.

Protocol Transition is configured by selecting the **Use any authentication protocol** option instead of the **Use Kerberos only** option, which is used to configure Constrained Delegation. This allows the client to authenticate to the Vision Web server using NTLM instead of Kerberos,

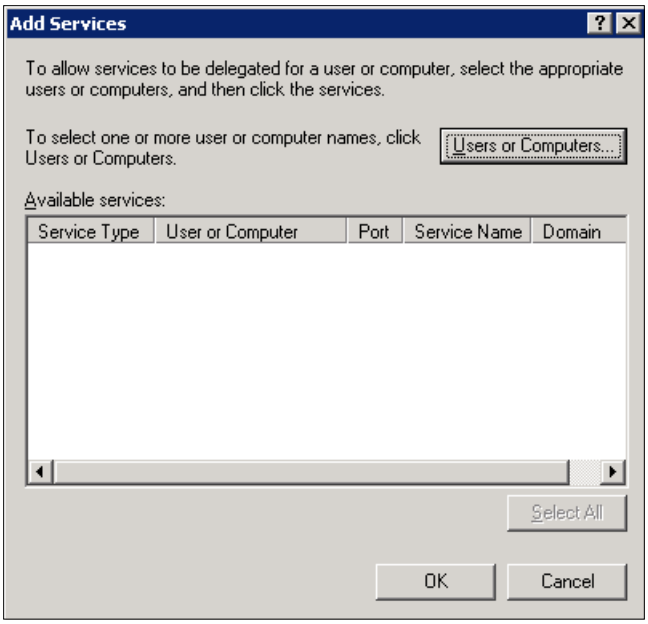
and that authentication is then “transitioned” over to Kerberos for Delegation to the SharePoint server.

To configure Protocol Transition, complete the following steps:

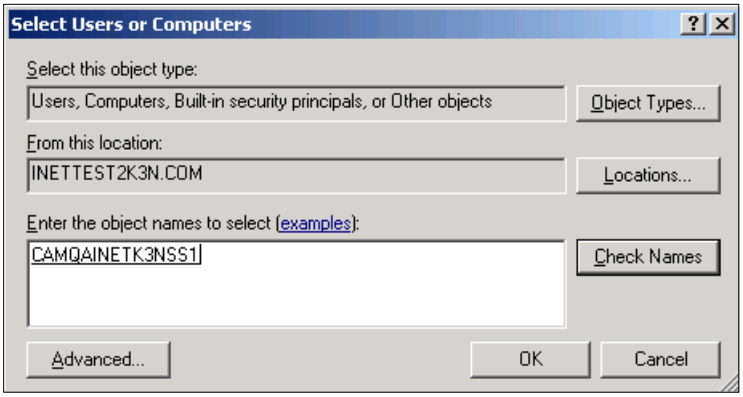
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (WSS Service account), which is most likely under the Computers Organizational Unit (OU).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use any authentication protocol** option.



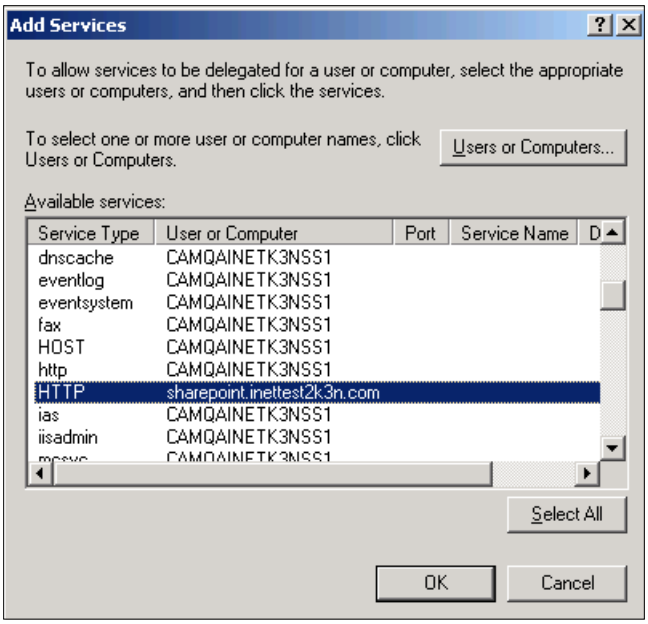
6. Click **Add**. The **Add Services** dialog box displays.



7. Click **Users or Computers**, search for the SharePoint server, and click **OK**.



8. Locate the http service for the SPN (FQDN) you created earlier (in our example, **sharepoint.inettest2k3n.com**), select it, and click **OK**.

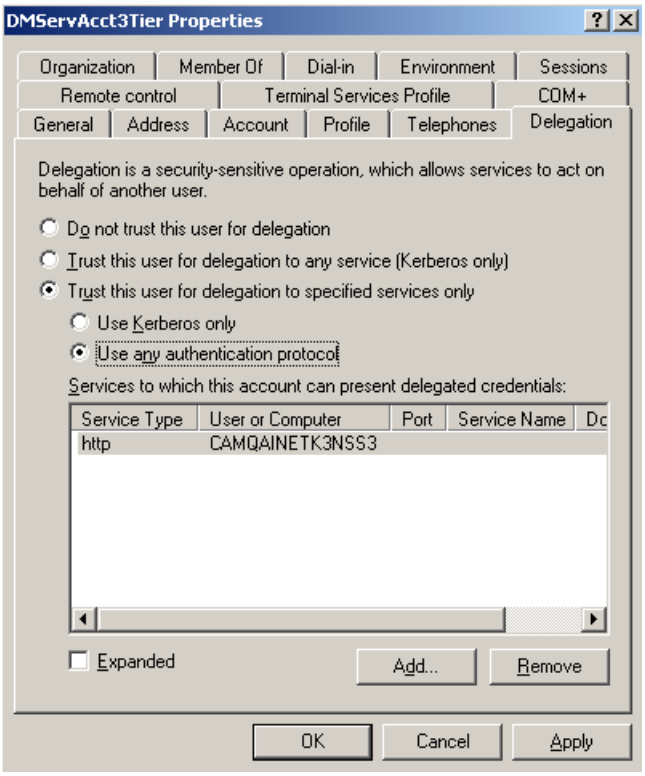


This illustration shows two http service types. Unless you have registered a custom FQDN using the setspn utility, only the server name displays. These service types are known as Service Principal Names (SPNs).

The SPN referencing **CAMQAINETK3NSS1.inettest2k3n.com** was created automatically when the server was added to the domain and the http service (IIS) was installed.

The second SPN referencing **sharepoint.inettest2k3n.com** is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

The Delegation tab should look like this:



Because you explicitly specified the http service and not all services on the SharePoint server and because you selected the **Use any authentication protocol** option and not Kerberos, this is known as Protocol Transition.

Multi Tier—New Installation of Document Management 7.1 with MOSS 2007

!!IMPORTANT!!

Please note the following for this configuration:

- Vision and SharePoint will exist on separate physical Web servers (Vision and MOSS 2007 are not supported on the same physical server).
- Vision Document Management is being installed against an existing installation of Microsoft Office SharePoint Server (MOSS) 2007.
- Vision Document Management requires its own top-level site and cannot integrate into an existing MOSS 2007 site collection.
- The Operating System for the SharePoint server is x86 (32-bit) or x64 (64-bit).

Prerequisites

- MOSS 2007 is already installed and configured.
- Install/upgrade your Vision installation to Vision 7.1.
- Change the Application Pool Identity for the DeltekVisionAppPool to be a domain user account (the Vision 7.1 installation sets this to be the local DeltekVision account).
- The domain service account used above will also be the SharePoint Service account.
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server.

Multi Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Grant Local Security Policy Rights to Vision Application Pool Identity
3.	Vision Web/Application Server	Install Vision 7.1 Document Management on the Vision Web Server
4.	Vision Web/Application Server	Configure Authentication for the Vision Website
5.	Vision Web/Application Server	Configure Service Principal Name (SPN) for Vision Application Pool Identity

6.	SharePoint Web /Application Server	Install Vision Document Management on the MOSS 2007 Server
7.	SharePoint Web /Application Server	Use SharePoint Central Administration to Create the Vision Document Management Site Collection
8.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
9.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
10.	Vision Web/Application Server	Configure Vision Document Management
11.	Domain	Configure Constrained Delegation
12.	Domain	Optional: Configure Protocol Transition

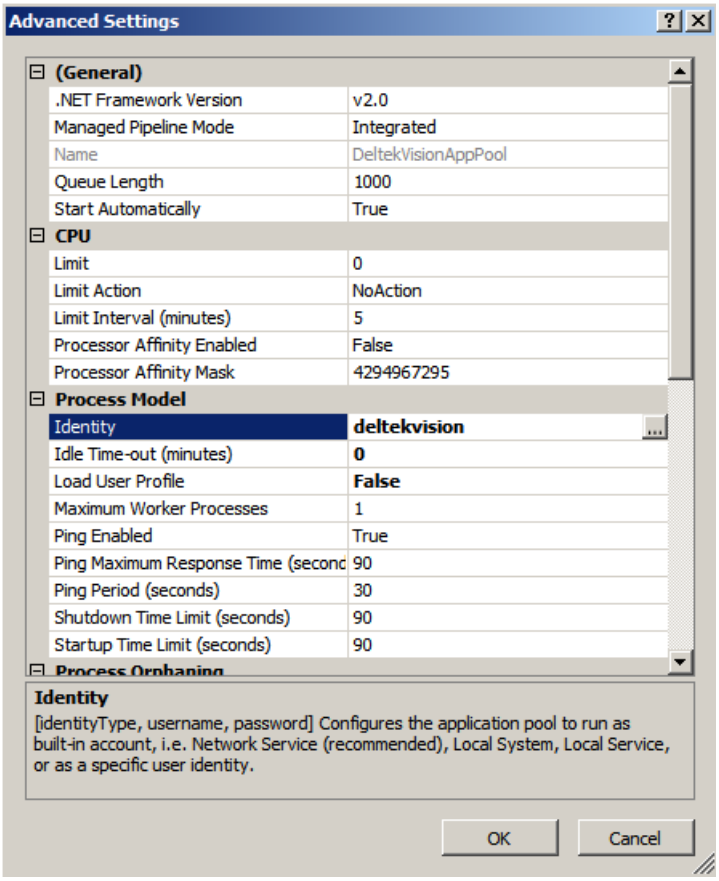
Configure Vision Application Pool Identity to Be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

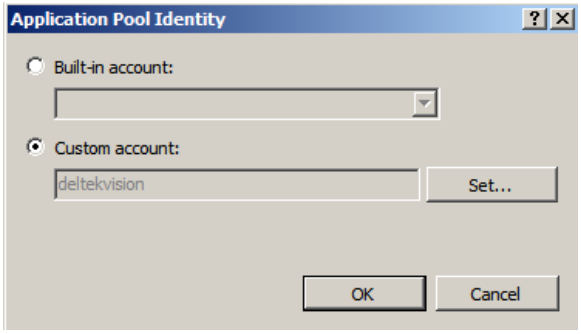
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server..

To change the Vision Application Pool Identity, complete the following steps:

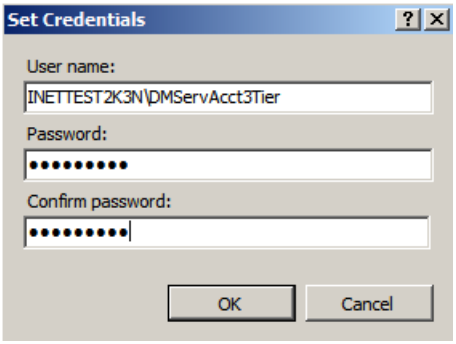
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side. The following displays:



6. Place your cursor in the **Identity** field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



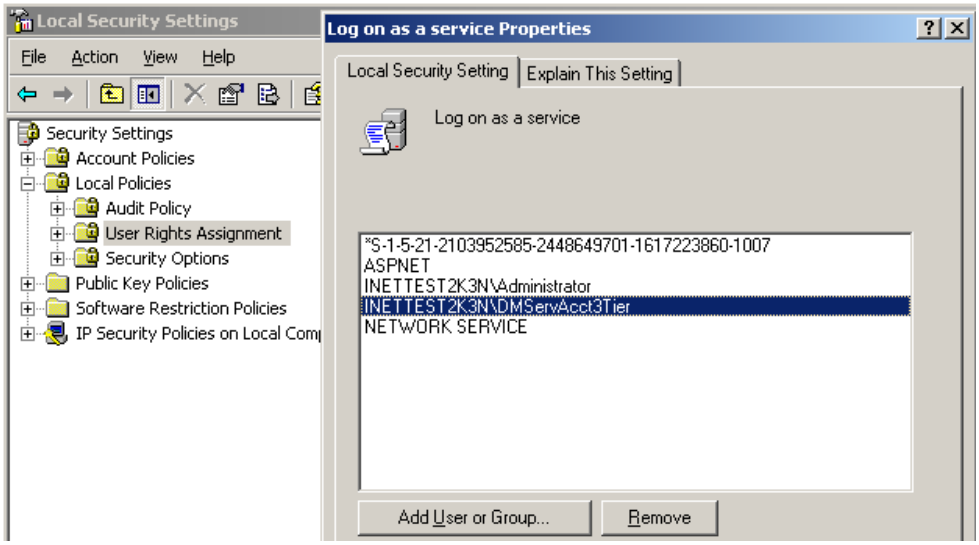
7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In the **User name** field, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In the **Password** and **Confirm password** fields, enter that user's password.
10. Click **OK** three times to set the identity.

Grant Local Security Policy Rights to Vision Application Pool Identity

The Vision Application Pool Identity/SharePoint Service Account must be granted **Logon as a service** rights on the Vision 7.1 Web/Application Server for multi-tier Document Management installations, as shown in the following example of the Local Security Settings setup screens.



Install and Configure Vision 7.1 Document Management and the MOSS 2007 Site Collection

When you install Vision 7.1 Document Management the changes made to your existing MOSS 2007 installation are outlined below . The steps to configure MOSS 2007 are outlined in this section.

If you would prefer not to run the Vision Document Management installation on an existing installation of SharePoint, refer to "Appendix C: Manual Installation of Vision Document Management" for manual setup instructions.

The Document Management installation performs the following:

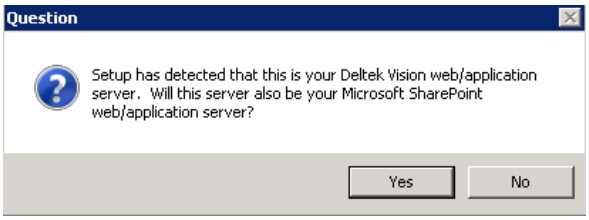
- Installs Web Service Extensions (WSE) 2.0 Sp3.
- Copies Document Management files to SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\12\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server.dll into the Global Assembly Cache (GAC).

Install Vision 7.1 Document Management on the Vision Web Server

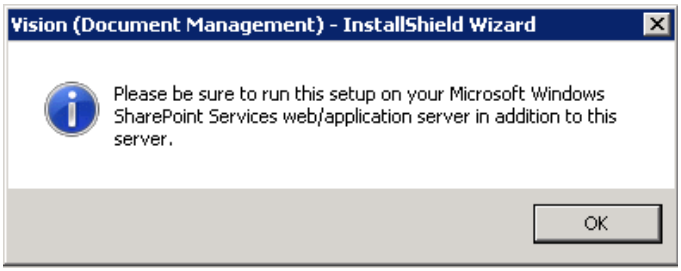
You must run the Document Management installer on both the Vision web server and the SharePoint web server.

To install Vision 7.1 Document Management on the Vision Web server, complete the following steps:

1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
3. On the first Document Management Installation Wizard page, click **Next**.
4. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
5. When this message displays, click **No** because this is a multi-tier installation of Vision Document Management and your Vision Web server will not host SharePoint.



6. When the following message displays to remind you to run the setup on the MOSS 2007 server, click **OK**.



7. On the Ready to Install the Program page, click **Install** to start the installation.
8. When the InstallShield Wizard Complete page displays, click **Finish**.

Configure Authentication for the Vision Website

IIS Kernel Mode Authentication

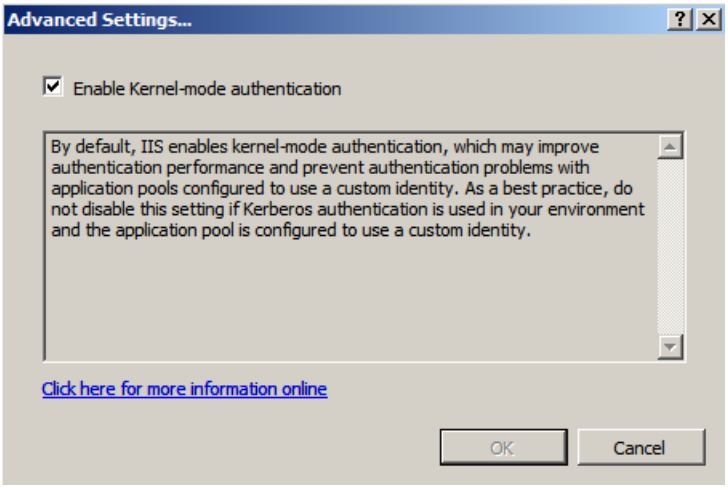
The default configuration of when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because the Machine account cannot be used for delegation scenarios which are required for multi-tier deployments of Vision Document Management, the additional configuration steps below are necessary.

Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.
6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

   This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path="Default Web Site/Vision">

5. Locate the windowsAuthentication tag and add **useAppPoolCredentials="true"** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Configure Service Principal Name (SPN) for Vision Application Pool Identity

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication to work properly and creating an SPN for the Application Pool Identity in this configuration will result in a "duplicate SPN" issue, preventing Windows Integrated Security from authenticating anyone to the Web site.

However, For Multi Tier installations of Vision Document Management it is necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity (DeltekVisionAppPool) as this is the account used for delegation.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

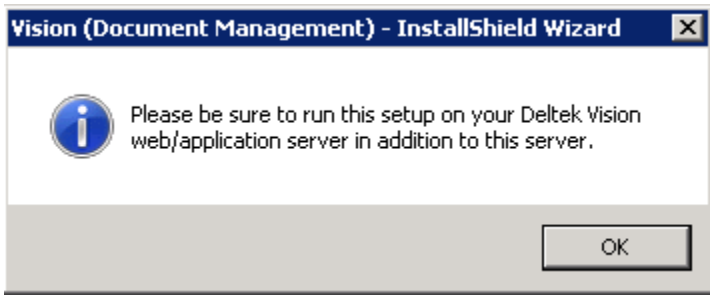
See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

Install Vision Document Management on the MOSS 2007 Server

To install Vision Document Management on the WSS server, complete the following steps:

1. Download DeltekVision71DM.exe and run the setup on your WSS server.
2. On the first Document Management Installation Wizard page, click **Next**.
3. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
4. When the following message displays to remind you to run the setup on the Vision web/application server if you haven't already, click **OK**.



5. On the Ready to Install the Program page, click **Install** to start the installation.

6. When the InstallShield Wizard Complete page displays, click **Finish**.

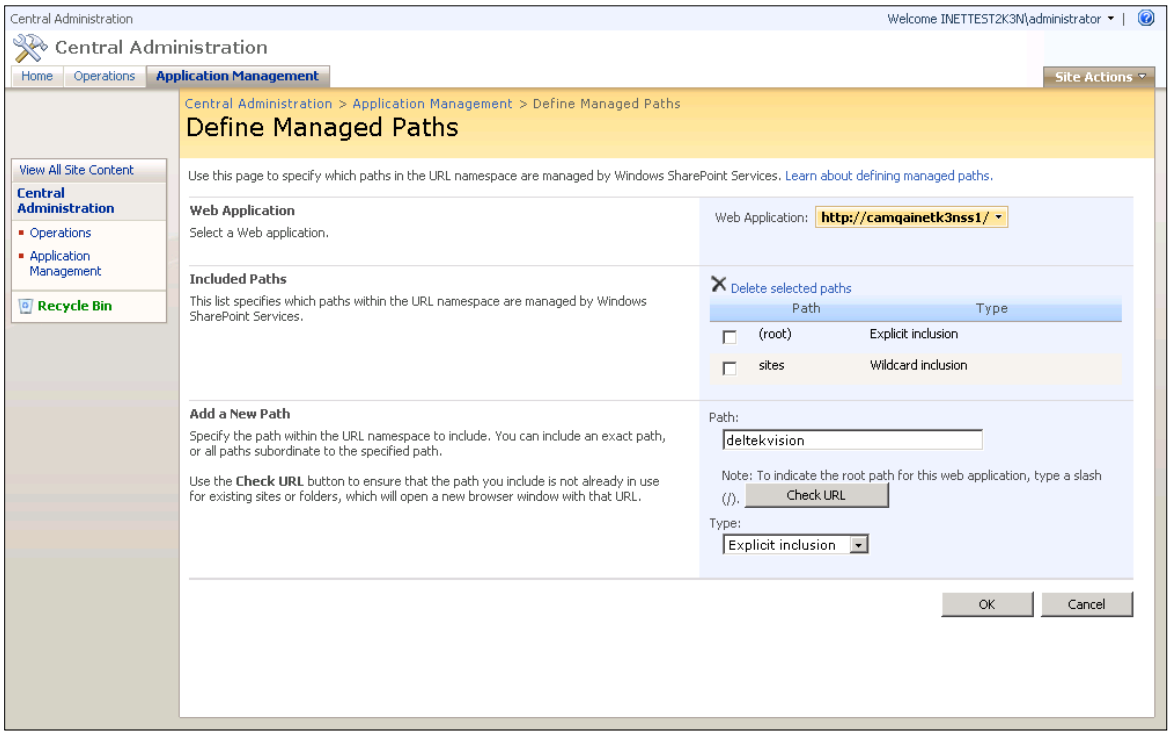
Use SharePoint Central Administration to Create the Vision Document Management Site Collection

!! IMPORTANT INFORMATION FOR EXISTING SHAREPOINT INSTALLATIONS!!

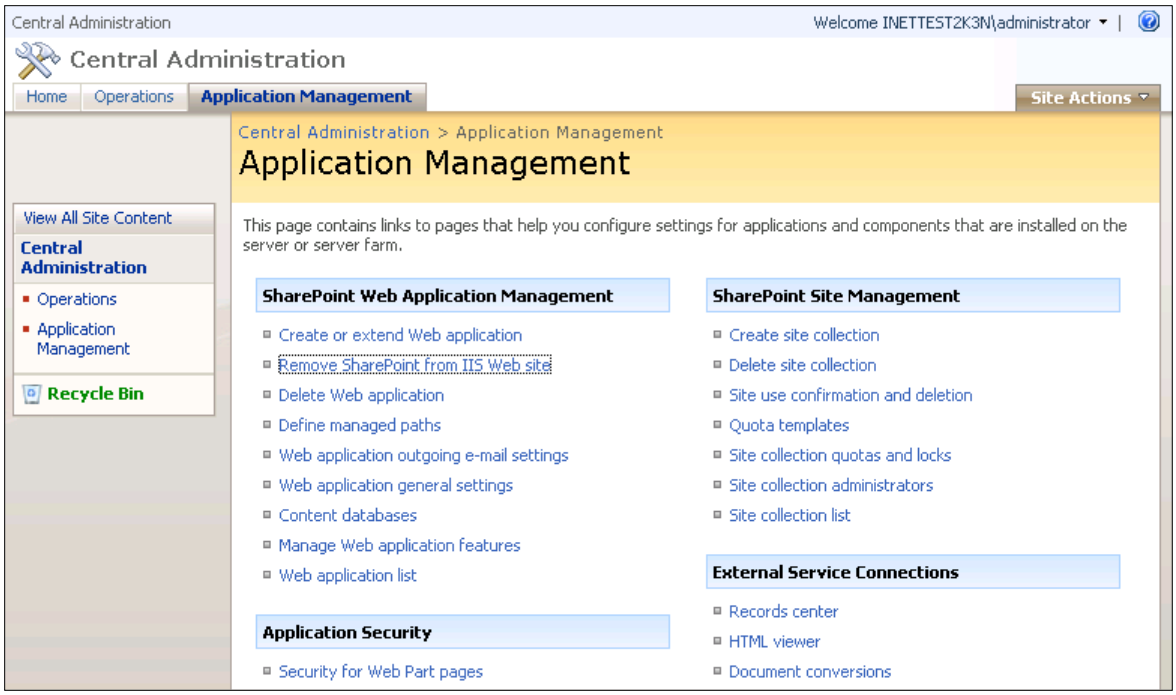
If you already have SharePoint installed and plan to use that existing installation of SharePoint for your Vision Document Management deployment, note that Vision Document Management **does not** support integrating with an existing SharePoint site collection and requires a dedicated top-level site on your SharePoint server.

To complete the SharePoint configuration, complete the following steps:

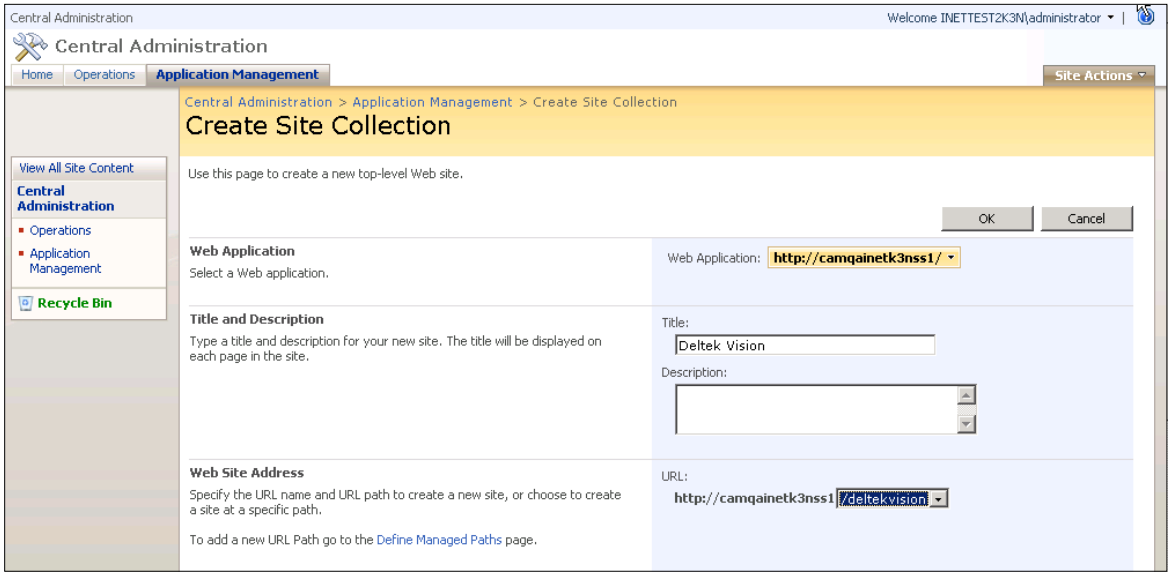
1. In SharePoint Central Administration, click **Application Management** and select the **Define Managed Paths** option. This will create a specific URL for your Vision Document Management site collection (for example, http://MOSSServer/DeltekVision).



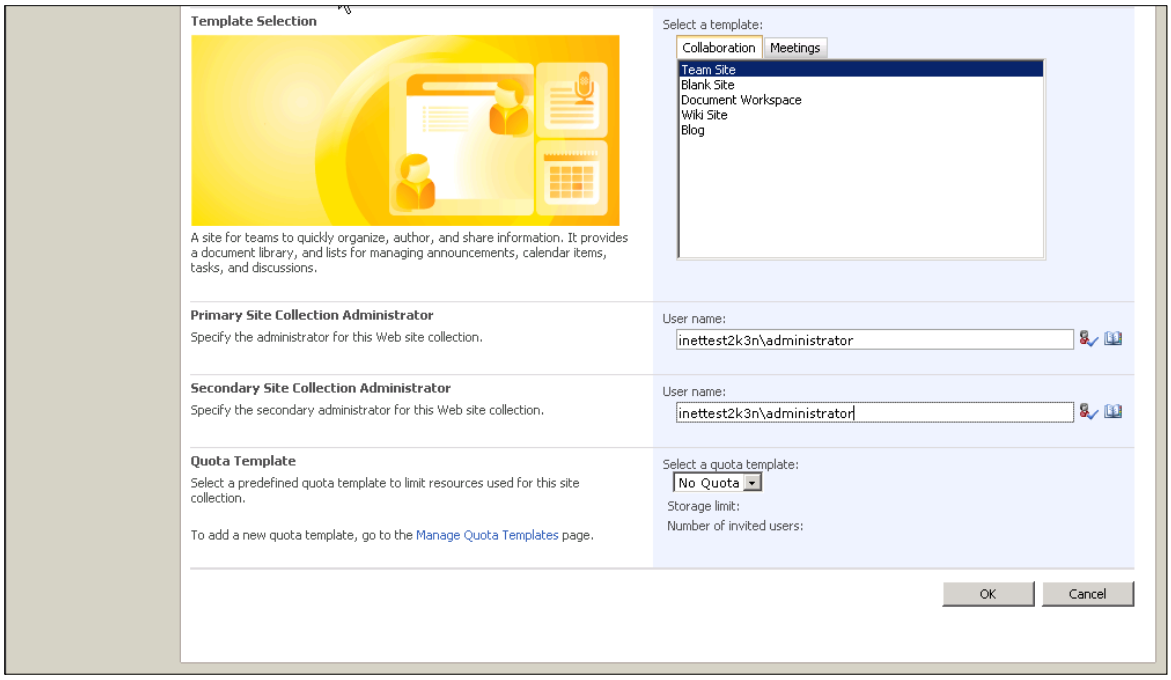
2. Enter **DeltekVision** in **Path** and select **Explicit inclusion** from the **Type** drop-down list.
3. Click **OK**.
4. Click **Application Management** and select the **Create site collection** option under **SharePoint Site Management**.



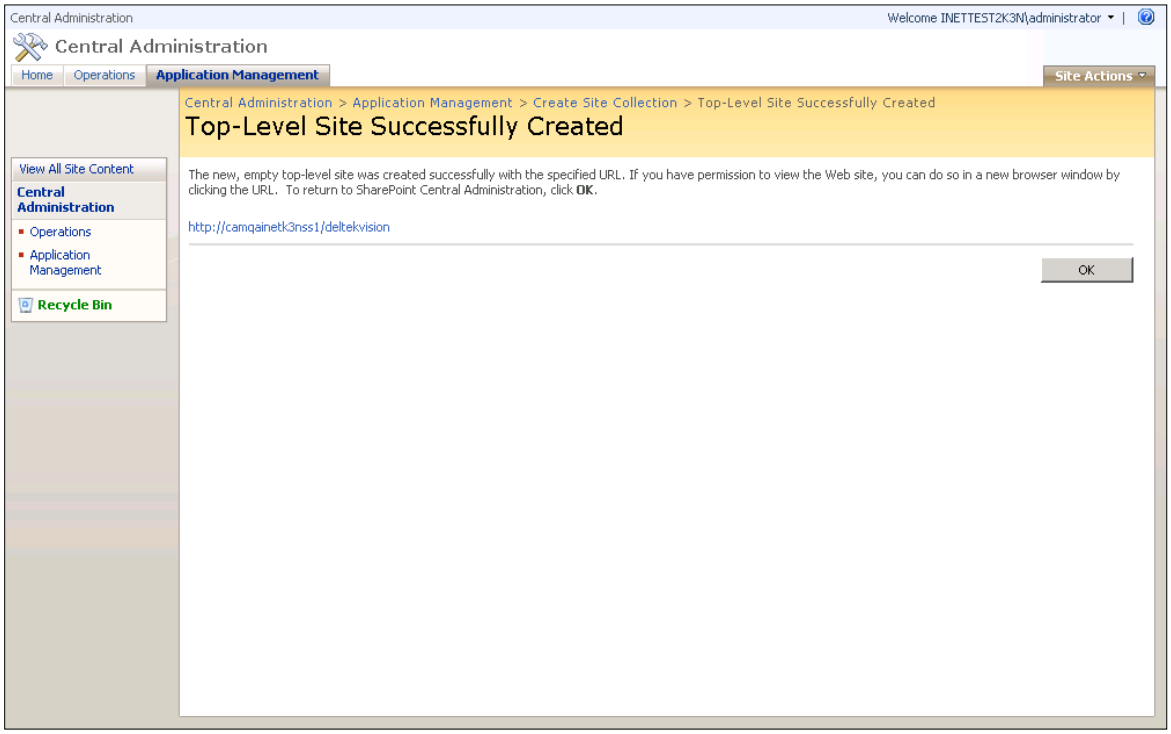
The Create Site Collection page displays.



5. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
6. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root for Vision Document Management.

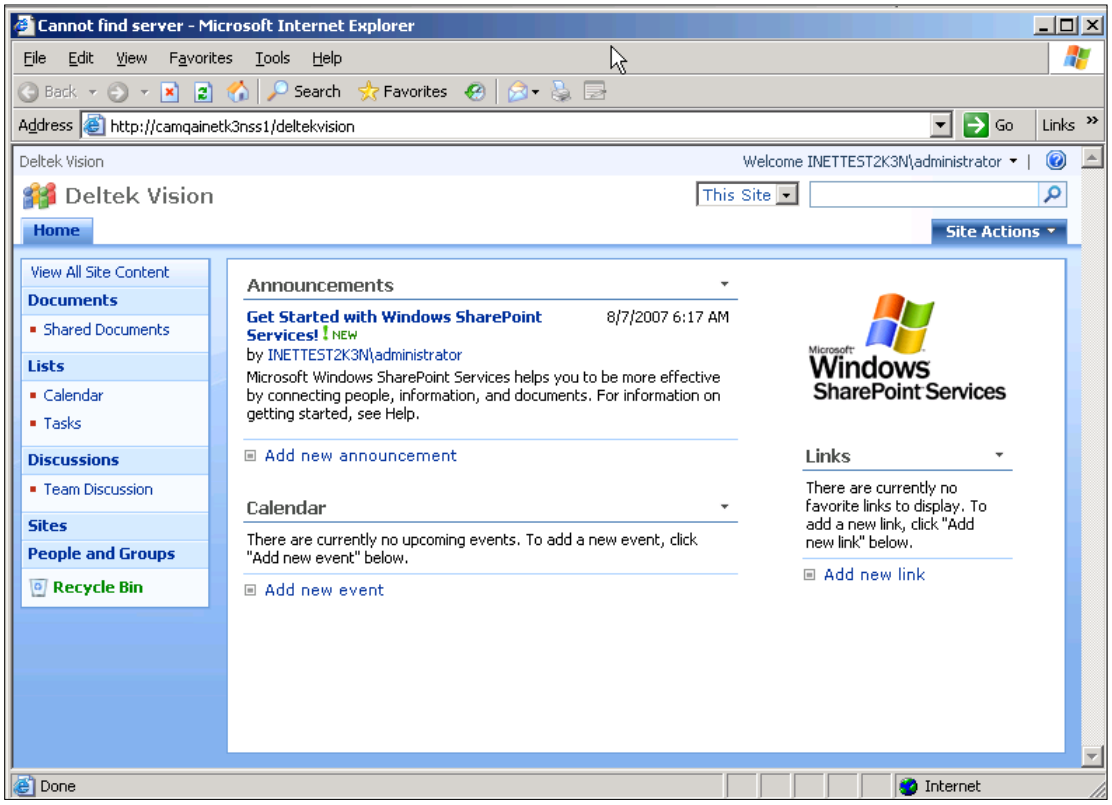


7. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
8. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



9. Click **Start** » **Run**, enter **iisreset /noforce,** and click **Enter**.

10. Click the link for the top level site (in our example it is http://camqainetk3nss1/deltekvision) to display the site.



11. The SharePoint configuration is complete. Close SharePoint Central Administration.

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

Copy the Vision Document Management .NET assembly to SharePoint site directory:

- Identify your IIS configuration to specifically identify which website and port SharePoint is using as well as which website and port Vision is using.
- If SharePoint was extended to the Default Web Site then c**opy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\bin**
- If SharePoint was extended to its own named web site (e.g. SharePoint – 80) then c**opy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin**

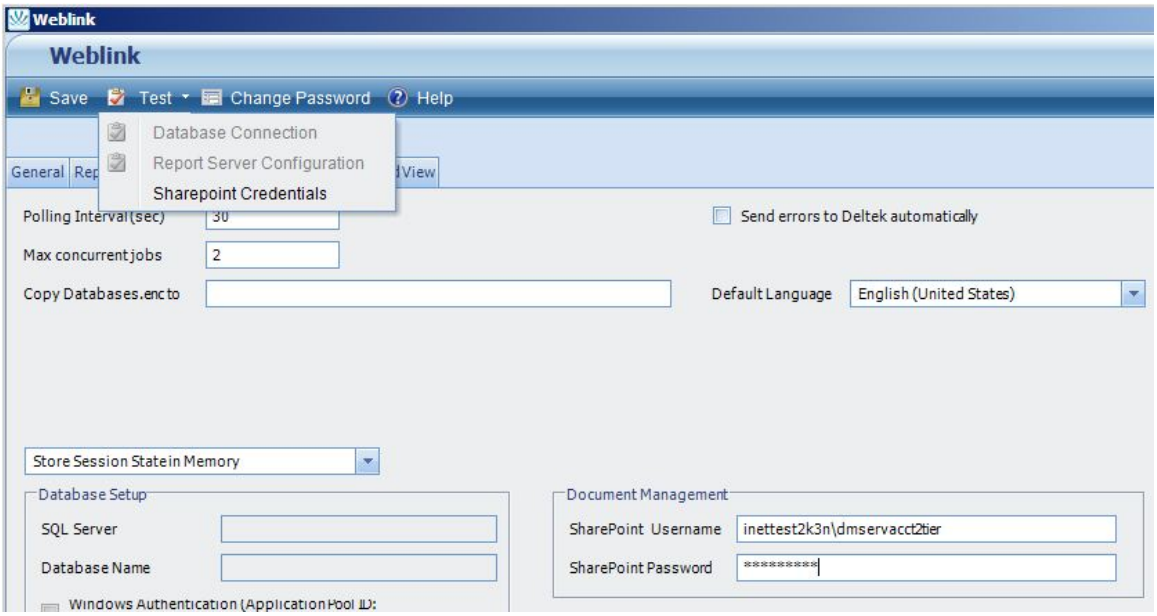
> By default, the <site> directory references the port chosen. (e.g. 80, 81, etc.).

Configure Document Management Service Account in Weblink

You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the service account in Weblink, complete the following steps:

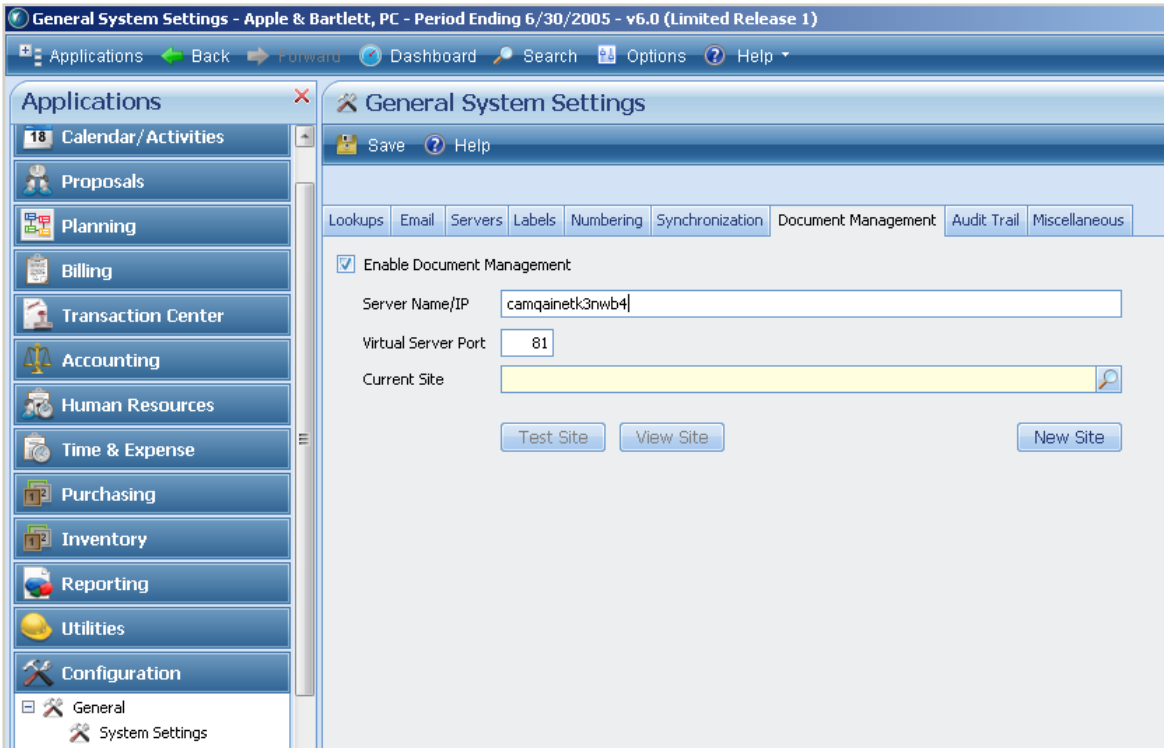
1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**
2. Enter the Weblink password when prompted.
3. Click the System Settings tab.
4. In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
5. Click the **Test** button and SharePoint Credentials to validate that the information entered is correct.



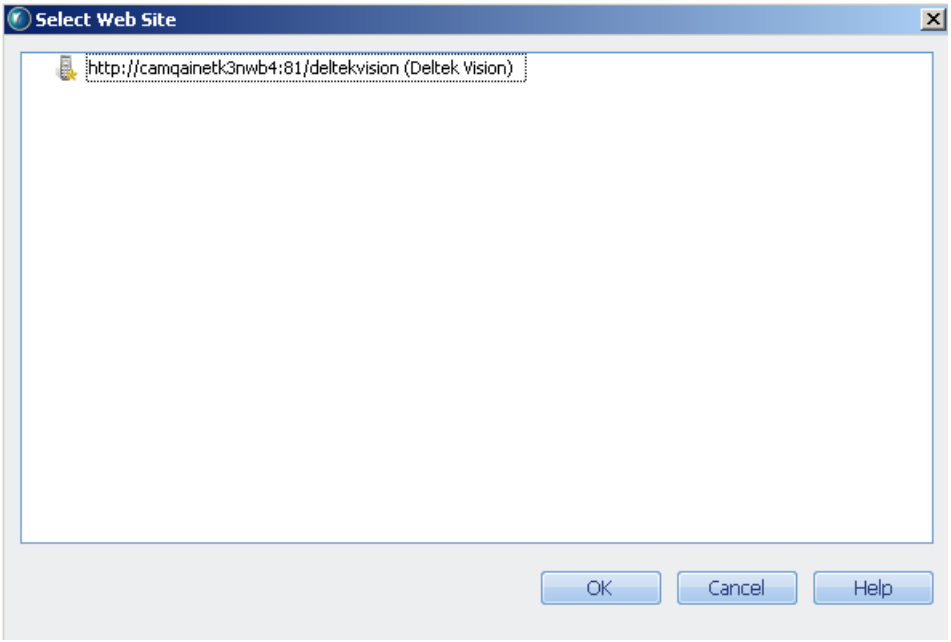
Configure Vision Document Management

To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.



3. Select the **Enable Document Management** option.
4. Enter the name of the server hosting document management. This should be the server name only, FQDN's or custom DNS values are not needed here.. Enter this value without the protocol prefix (for example, remove the http://). In the illustration above, the value is **camqainetk3nwb4**.
5. Enter the **Virtual Server Port**. In our example the port is 81 but on a typical dedicated SharePoint installation the port will be 80 for the default web site..
6. Click the Lookup icon to select the current site.



7. The Select Web Site dialog box displays the available sites. Select a site, and click **OK**.
8. Save your changes.

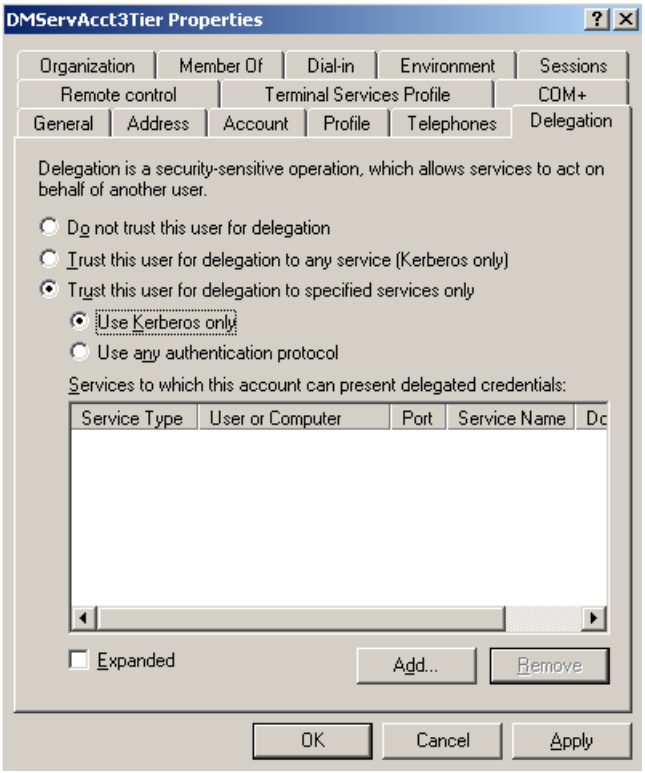
Configure Constrained Delegation

Because your MOSS server is on a separate physical server and because the Vision Web server needs to pass the domain credentials of your Vision Document Management users on to the MOSS server, you must configure Constrained Delegation.

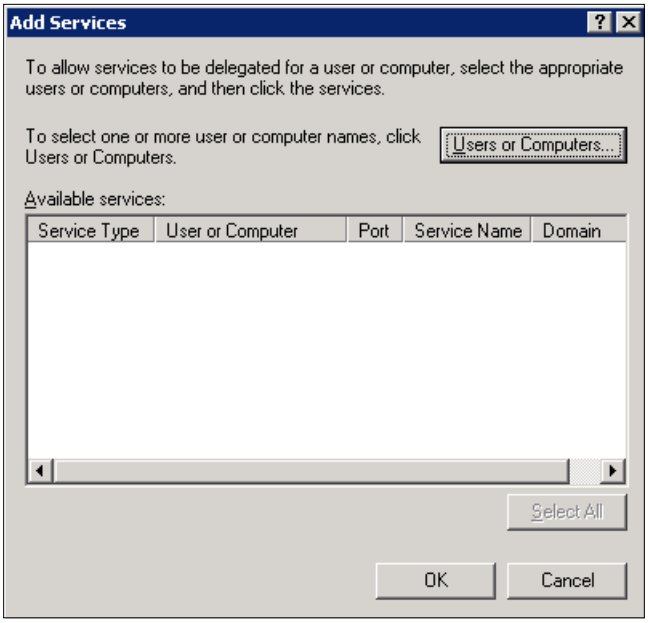
This assumes a non-Internet deployment of Vision Document Management using Kerberos authentication. If you are deploying Vision Document Management so that it is accessible over the Internet, you need to skip ahead to “Optional: Configure Protocol Transition” in the next section.

To configure Constrained Delegation, complete the following steps:

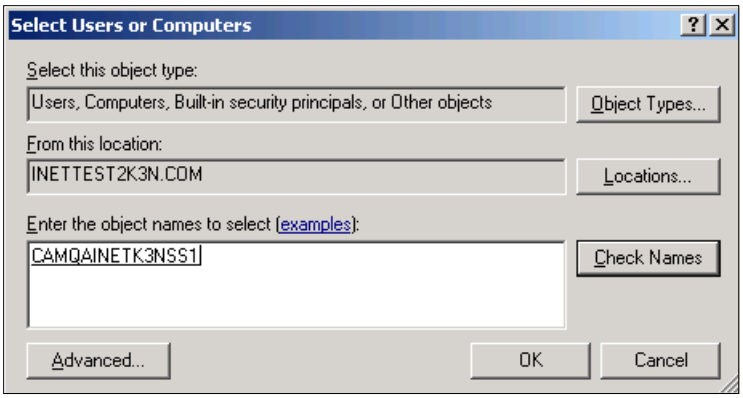
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (MOSS Service account), which is most likely under the Computers Organizational Unit (OU).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use Kerberos only** option.



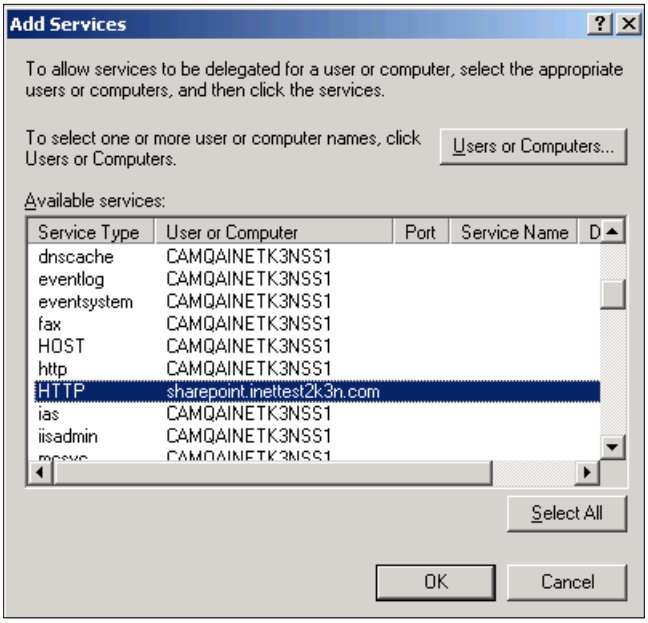
6. Click the **Add** button. The **Add Services** dialog box displays.



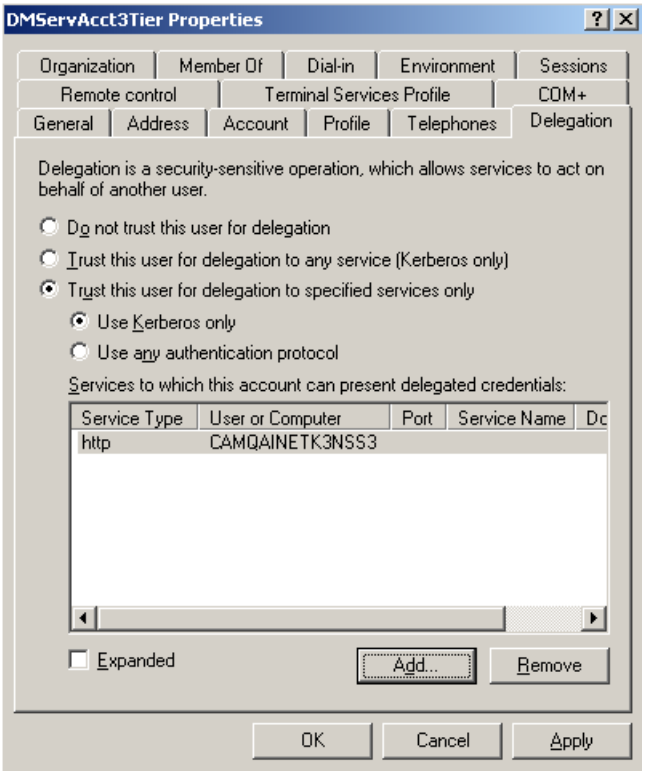
7. Click **Users or Computers**. The Select Users or Computers dialog box displays.



8. Locate the http service, select it, and click **OK**.



9. The Delegation tab should look like this:



Because we are explicitly specifying the http service and not all services on the SharePoint server, this is known as Constrained Delegation.

There are two http service types listed. These service types are known as Service Principal Names (SPNs). The SPN referencing CAMQAINETK3NSS1.inettest2k3n.com was created automatically when the server was added to the domain and the http service (IIS) was installed. The second SPN referencing sharepoint.inettest2k3n.com is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

Optional: Configure Protocol Transition

If Vision Document Management functionality is required over the Internet and you will be using a custom DNS/FQDN for the SharePoint URL (as in our example, vision1.inettest2k3n.com), then you need to configure a form of delegation referred to as Protocol Transition. If Document Management functionality is not required, you can skip this step.

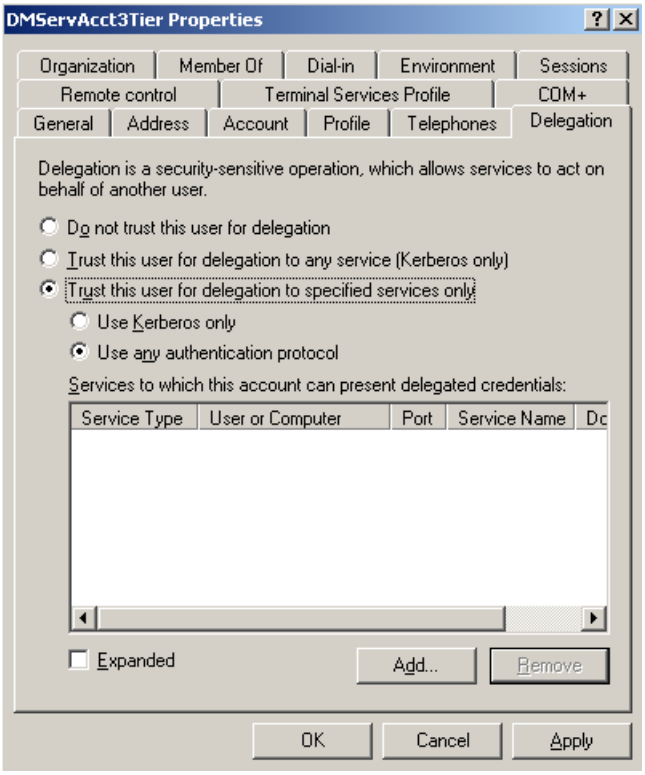
The Kerberos authentication protocol must be used to authenticate from the Vision Web server to the SharePoint server. However, if Vision is deployed in an Internet scenario and there are users outside of the firewall who need to access Document Management features, Kerberos authentication cannot be used to authenticate the client to the Web server. This is because the client needs to have the ability to negotiate a Kerberos ticket with the Key Distribution Center (KDC), which is a service running on a Domain Controller. This requires port 88 to be opened inbound on the firewall to the Domain Controller, which is not an advisable configuration.

To get around this, you must be running a Native Windows Server 2003 functional domain.

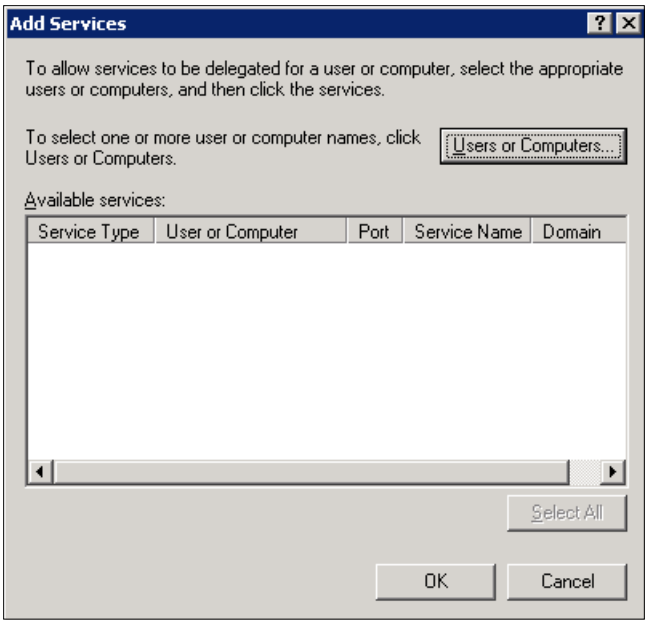
To configure Protocol Transition, select the **Use any authentication protocol** option instead of the **Use Kerberos only** option, which is used to configure Constrained Delegation. This allows the client to authenticate to the Vision Web server using NTLM instead of Kerberos, and that authentication is then “transitioned” over to Kerberos for Delegation to the SharePoint server.

To configure Protocol Transition, complete the following steps:

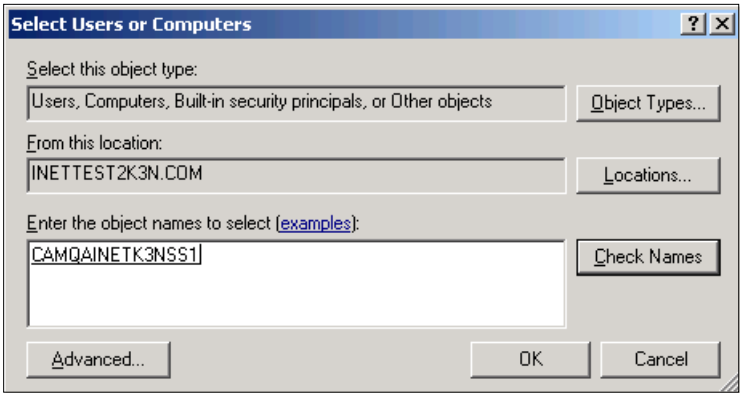
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (MOSS Service account), which is most likely under the Computers Organizational Unit (OU).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for Delegation to specified services only** option.
5. Select the **Use any authentication protocol** option.



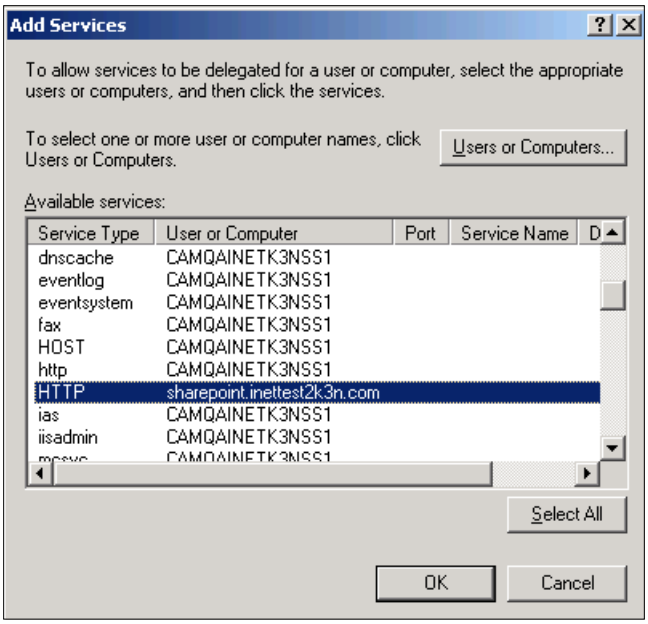
6. Click the **Add** button. The **Add Services** dialog box displays.



7. Click **Users or Computers**, search for the SharePoint server, and click **OK**.



8. Locate the http service for the SPN (FQDN) you created earlier (in our example, **sharepoint.inettest2k3n.com**) select it, and click **OK**.

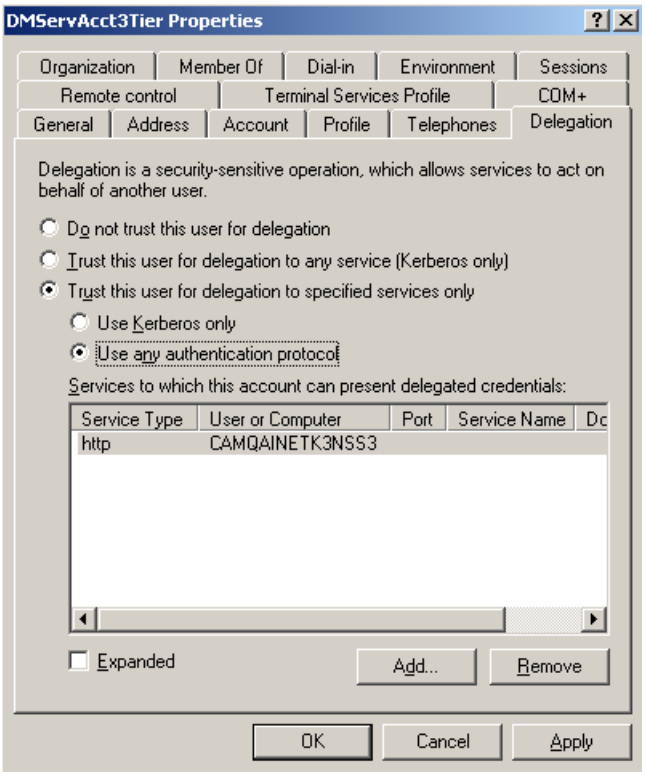


This illustration shows two http service types. Unless you have registered a custom FQDN using the setspn utility, only the server name displays. These service types are known as Service Principal Names (SPNs).

The SPN referencing **CAMQAINETK3NSS1.inettest2k3n.com** was created automatically when the server was added to the domain and the http service (IIS) was installed.

The second SPN referencing **sharepoint.inettest2k3n.com** is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

The Delegation tab should look like this:



Because we are explicitly specifying the http service and not all services on the SharePoint server and because we are using the **Use any authentication protocol** option and not Kerberos, this is known as Protocol Transition.

Multi-Tier New Installation of Document Management 7.1 with SharePoint Server 2010

!!IMPORTANT!!

Please note the following for this configuration:

- Vision and SharePoint will exist on separate physical Web servers (Vision and SharePoint Server 2010 are not supported on the same physical server).
- Vision Document Management is being installed against an existing installation of SharePoint Server 2010.
- Vision Document Management requires its own top-level site and cannot integrate into an existing SharePoint Server 2010 site collection.
- The Operating System for the SharePoint server is x64 (64-bit).

Prerequisites

- SharePoint Server 2010 is already installed and configured.
- Install/upgrade your Vision installation to Vision 7.1.
- Change the Application Pool Identity for the DeltekVisionAppPool to be a domain user account (the Vision 7.1 installation sets this to be the local DeltekVision account).
- The domain service account used above will also be the SharePoint Service account.
- Add this domain user to the local Administrators and IIS_IUSRS group on the Vision server.

Multi Tier Installation and Configuration Steps

Step	Where to Perform	Description
1.	Vision Web/Application Server	Configure Vision Application Pool Identity to Be a Domain Account
2.	Vision Web/Application Server	Grant Local Security Policy Rights to Vision Application Pool Identity
3.	Vision Web/Application Server	Install Vision 7.1 Document Management on the Vision Web Server
4.	Vision Web/Application Server	Configure Authentication for the Vision Website
5.	Vision Web/Application Server	Configure Service Principal Name (SPN) for Vision Application Pool Identity

6.	SharePoint Web /Application Server	Install Vision Document Management on SharePoint Server 2010
7.	SharePoint Web /Application Server	Use SharePoint Central Administration to Create the Vision Document Management Site Collection
8.	SharePoint Web /Application Server	Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly
9.	Vision Web/Application Server	Configure Document Management Service Account in Weblink
10.	Vision Web/Application Server	Configure Vision Document Management
11.	Domain	Configure Constrained Delegation
12.	Domain	Optional: Configure Protocol Transition

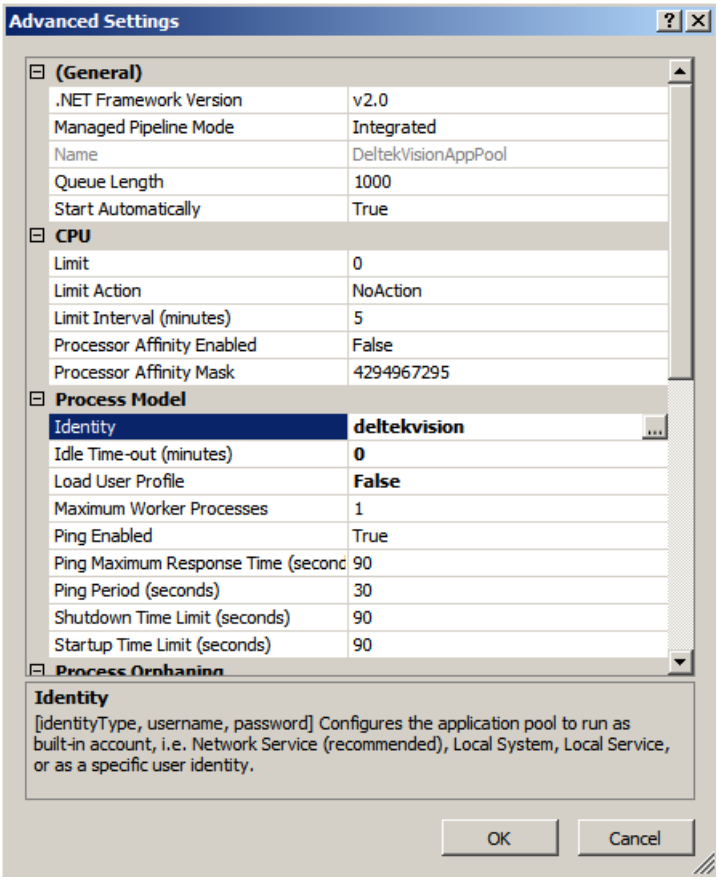
Configure Vision Application Pool Identity to Be a Domain Account

You must change the Vision Application Pool Identity to be a domain account. The default is for Vision to use a local DeltekVision user created during the Vision installation. This change is necessary because of the local account's inability to work with Active Directory.

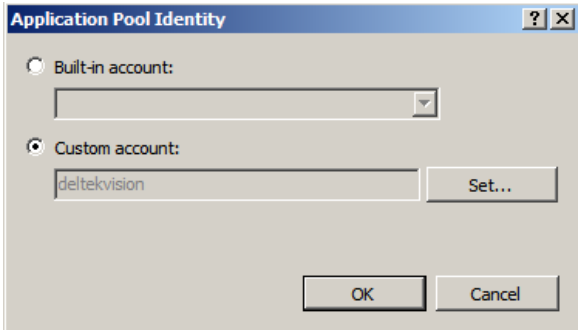
For this account to be the Application Pool Identity it must be a member of the IIS_IUSRS group in addition to being a member of the local administrators group on the local server..

To change the Vision Application Pool Identity, complete the following steps:

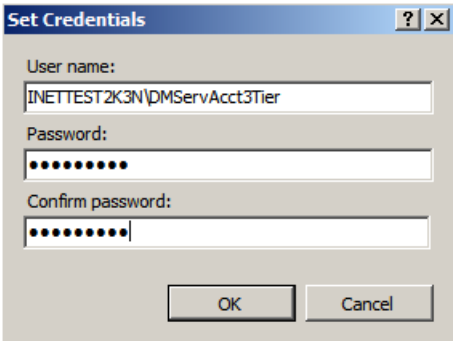
1. Create a domain user account. This account must also be your SPF Service account. No domain Admin rights are needed for this account.
2. Log on to the domain on the Vision Web/application server using an Administrator account.
3. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
4. Expand the Server name and then click **Application Pools**.
5. Select the **DeltekVisionAppPool** and select **Advanced Settings** from the Action pane on the right hand side. The following displays:



6. Place your cursor in the **Identity** field and then click the ellipses button to set the identity. The Application Pool Identify dialog box displays:



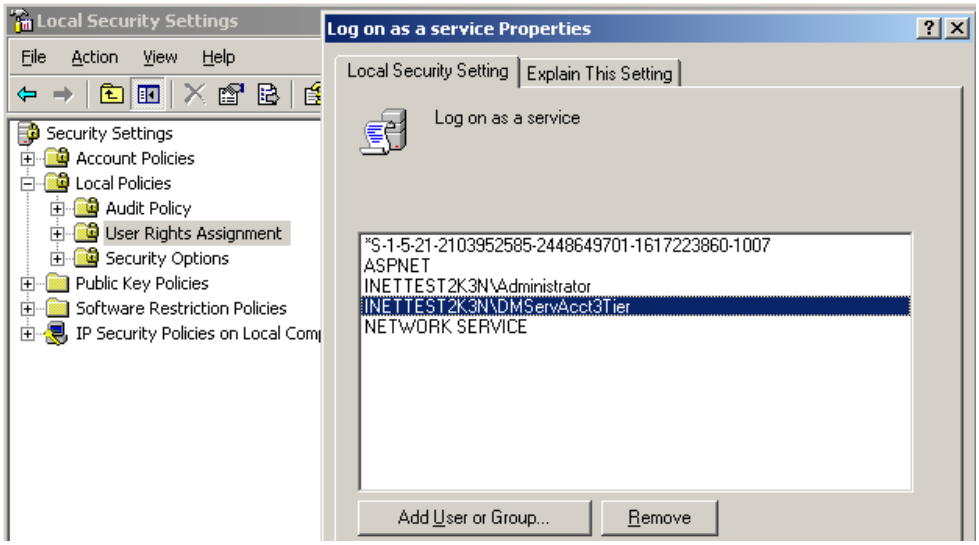
7. Select the **Custom account** option and click **Set**. The Set Credentials dialog box displays.



8. In the **User name** field, enter the Application Pool Identity in the form <Domain>\<Username>.
9. In the **Password** and **Confirm password** fields, enter that user's password.
10. Click **OK** three times to set the identity.

Grant Local Security Policy Rights to Vision Application Pool Identity

The Vision Application Pool Identity/SharePoint Service Account must be granted **Logon as a service** rights on the Vision 7.1 Web/Application Server for multi-tier Document Management installations, as shown in the following example of the Local Security Settings setup screens.



Install and Configure Vision 7.1 Document Management and the SharePoint Server 2010 Site Collection

When you install Vision 7.1 Document Management the changes made to your existing SharePoint Server installation are outlined below. The steps out configure SharePoint are outlined in this section.

If you would prefer not to run the Vision Document Management installation on an existing installation of SharePoint, refer to "Appendix C: Manual Installation of Vision Document Management" for manual setup instructions.

The Document Management installation does the following:

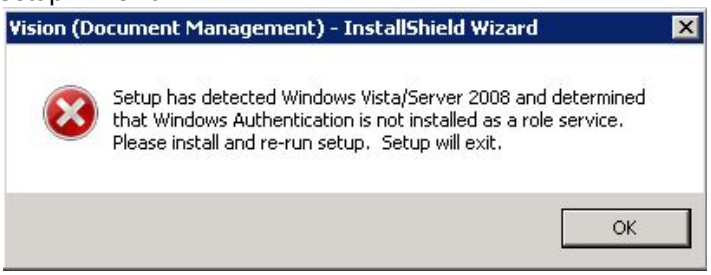
- Installs Web Service Extensions (WSE) 2.0 SP3.
- Copies Document Management files to the SharePoint ISAPI folder (c:\program files\common files\microsoft shared\web service extensions\14\isapi).
- Copies Document Management files to the Vision Support folder (\program files\deltek\vision\support\DM\30).
- Modifies the SharePoint Web.config file in the ISAPI directory to work with Vision Document Management.
- Installs Deltek.Vision.WSS30.Server.dll into the Global Assembly Cache (GAC).

Install Vision 7.1 Document Management on the Vision Web Server

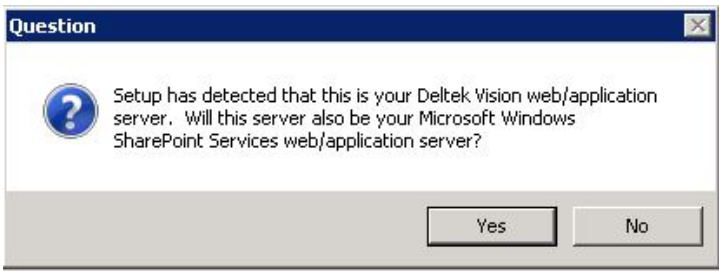
NOTE: You must run the Document Management installer on both the Vision web server and the SharePoint web server.

To install Vision 7.1 Document Management, complete the following steps:

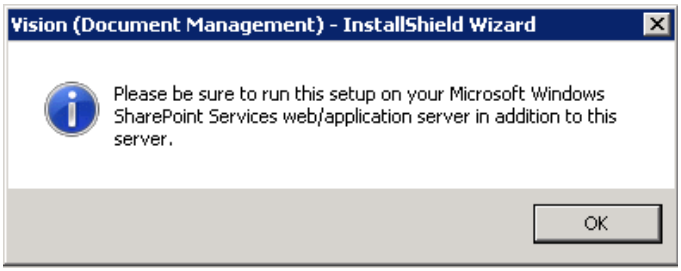
1. Download the DeltekVision71DM.exe file and run the setup on your Vision Web server.
2. The installation will check to ensure that the IIS Role service, Windows Authentication, is installed. If the Role Service is not installed you will be prompted to install it and the setup will exit:



3. After installing the Windows Authentication IIS Role Service, re-run the Document Management installation.
4. When a dialog box displays to indicate the IIS licensing requirements for the use of Windows Integrated Authentication (required to use Vision Document Management), click **OK**.
5. On the first Document Management Installation Wizard page, click **Next**.
6. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
7. When the following message displays, click **No** because this is a multi-tier installation of Vision Document Management and your Vision Web server will not host SharePoint..



8. When the following message displays to remind you to run the setup on the SharePoint server, click **OK**.



9. On the Ready to Install the Program page, click **Install** to start the installation.
10. When the InstallShield Wizard Complete page displays, click **Finish**.

Configure Authentication for the Vision Website

IIS Kernel Mode Authentication

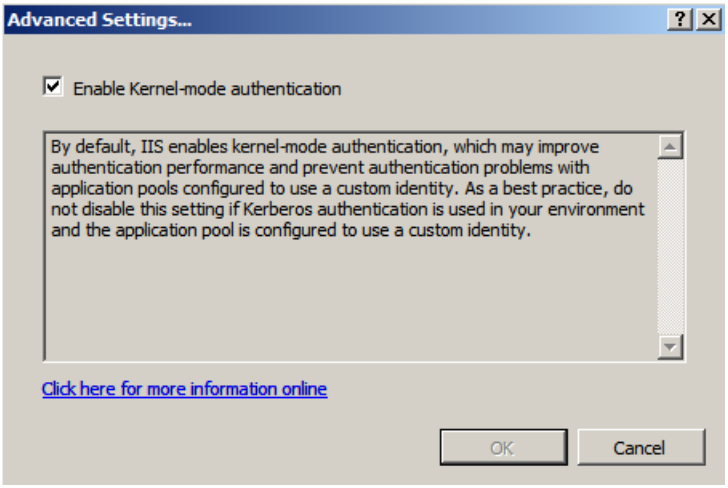
The default configuration of IIS when using Windows Integrated Authentication (required for Vision Document Management) is to use Kernel Mode Authentication. Under this configuration, the application pool runs under the Machine account whether or not an identity has been established. Because the Machine account cannot be used for delegation scenarios which are required for multi-tier deployments of Vision Document Management, the additional configuration steps below are necessary.

Identify if Kernel Mode Authentication Is Enabled

Follow the steps below to identify if Kernel Mode Authentication is enabled. (In a default configuration of IIS it will be enabled.)

To identify the authentication status, complete the following steps:

1. Log on to the domain on the Vision Web/application server using an Administrator account.
2. Open Internet Information Services: **Start » All Programs » Administrative Tools » Internet Information Services (IIS) Manager**.
3. Expand the server name, expand **Sites**, and expand **Default Web Site** or whichever site Vision is installed to.
4. Select the Vision virtual directory and then double click **Authentication** in the Features view.
5. Select **Windows Authentication** and verify that the status is Enabled (Anonymous Access should be Disabled). If it is not, select **Enable** from the Actions menu.
6. With **Windows Authentication** still selected, click **Advanced settings** on the Action menu. The Advanced Settings dialog box displays:



Kernel Mode Authentication Implementation

As mentioned above, under this default configuration, Vision Document Management will not be able to delegate credentials to a WSS 3.0 server separate from the Vision Web/application server. Two possible configurations allow Document Management to function properly:

- **Disable Kernel Mode Authentication.** In order to Disable Kernel Mode Authentication, simply uncheck the Enable Kernel Mode Authentication option under the Advanced Settings of the Windows Authentication feature for the Vision virtual directory.
- **Modify the ApplicationHost.config file to force the use of the Application Pool Identity.** In order to continue to use Kernel Mode Authentication but force the Application Pool to run under its Identity rather than the Machine account, it is necessary to modify the ApplicationHost.config file, the steps of which are outlined below:

1. Click **Start » All Programs » Accessories**.
2. Right-click **Notepad**, click **Run as**, and select the Administrator account.

   This is necessary in order to save the changes we need to make to the ApplicationHost.config file, which is protected under UAC (User Account Control) on Windows Server 2008.

3. Click **Open** on the File menu and locate the ApplicationHost.config file from c:\windows\system32\inetsrv\config.
4. Click Find on the Edit menu in Notepad and search for the following:

   <location path=”Default Web Site/Vision”>

5. Locate the windowsAuthentication tag and add **useAppPoolCredentials=”true”** as shown in the following:

```
<location path="Default Web Site/Vision">
    <system.webServer>
        <defaultDocument enabled="true">
            <files>
                <remove value="index.htm" />
                <add value="index.htm" />
            </files>
        </defaultDocument>
        <security>
            <authentication>
                <windowsAuthentication enabled="true" useAppPoolCredentials="true" />
                <anonymousAuthentication enabled="false" />
                <digestAuthentication enabled="false" />
                <basicAuthentication enabled="false" />
            </authentication>
        </security>
        <staticContent>
            <clientCache cacheControlMode="NoControl" />
        </staticContent>
    </system.webServer>
</location>
```

6. Once the edits are complete, save your changes and restart IIS to make the changes effective.

Both of these configuration options require that a Service Principal Name be established for the Application Pool Identity. The following section provides more information on creating the SPN.

Configure Service Principal Name (SPN) for Vision Application Pool Identity

Under the default configuration with Kernel Mode Authentication enabled, it is not necessary to create a Service Principal Name for the Application Pool Identity for Windows Authentication to work properly and creating an SPN for the Application Pool Identity in this configuration will result in a “duplicate SPN” issue, preventing Windows Integrated Security from authenticating anyone to the Web site.

However, For Multi Tier installations of Vision Document Management it is necessary to create a Service Principal Name (SPN) for the domain user running the Vision Application Pool Identity (DeltekVisionAppPool) as this is the account used for delegation.

Domain rights are required to complete this step.

After you establish one of the above Kernel Mode configuration changes, use the steps below to create a Service Principal Name for the Application Pool Identity of the DeltekVisionAppPool.

The setspn utility is installed by default on Windows Server 2008. It is not necessary to download and install it separately.

To create a service principal name, complete the following steps:

1. Open a command prompt and enter:

   setspn –A http/<Vision Web/App Server name> <domain app pool identity>

   For example: setspn –A http/camqainetk3nwb5 inettest2k3n\dmservacct3tier

2. Repeat for the FQDN of the server.

   For example: setspn –A http/camqainetk3nwb5.inettest2k3n.com inettest2k3n\dmservacct3tier

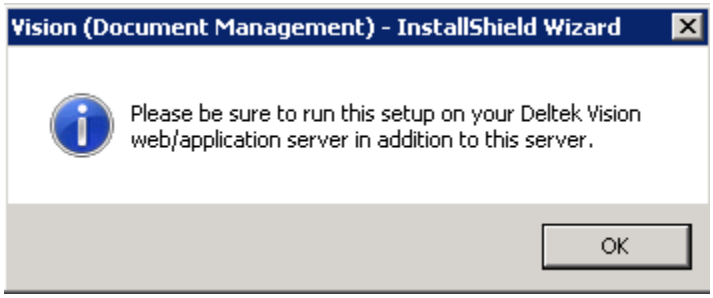
See the following related Microsoft Knowledge Base article for more information:

http://support.microsoft.com/?id=871179

Install Vision Document Management on the SharePoint 2010 Server

To install Vision Document Management on the SharePoint server, complete the following steps:

1. Download the DeltekVision71DM.exe file and run the setup on your SharePoint Web server.
2. On the first Document Management Installation Wizard page, click **Next**.
3. On the License Agreement page, select **I accept the terms of the license agreement** and click **Next**.
4. When the following message displays to remind you to run the setup on the Vision web/application server if you haven't already, click **OK**.



5. On the Ready to Install the Program page, click **Install** to start the installation.
6. When the InstallShield Wizard Complete page displays, click **Finish**.

Use SharePoint Central Administration to Create the Vision Document Management Site Collection

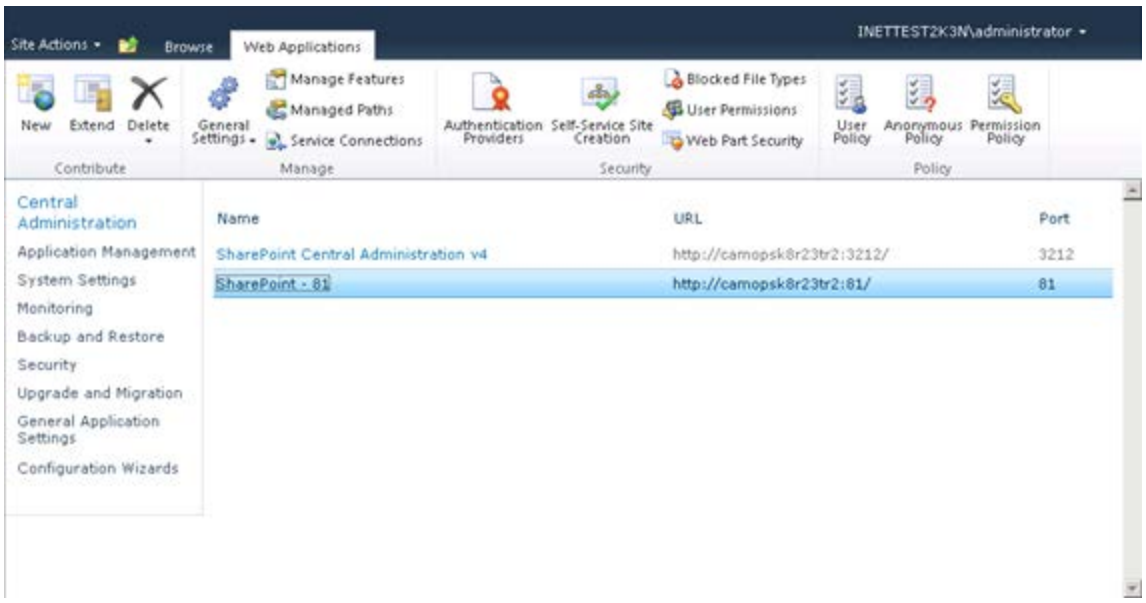
!! IMPORTANT INFORMATION FOR EXISTING SHAREPOINT INSTALLATIONS!!

If you already have SharePoint installed and plan to use that existing installation of SharePoint for your Vision Document Management deployment, note that Vision Document Management **does not** support integrating with an existing SharePoint site collection and requires a dedicated top-level site on your SharePoint server.

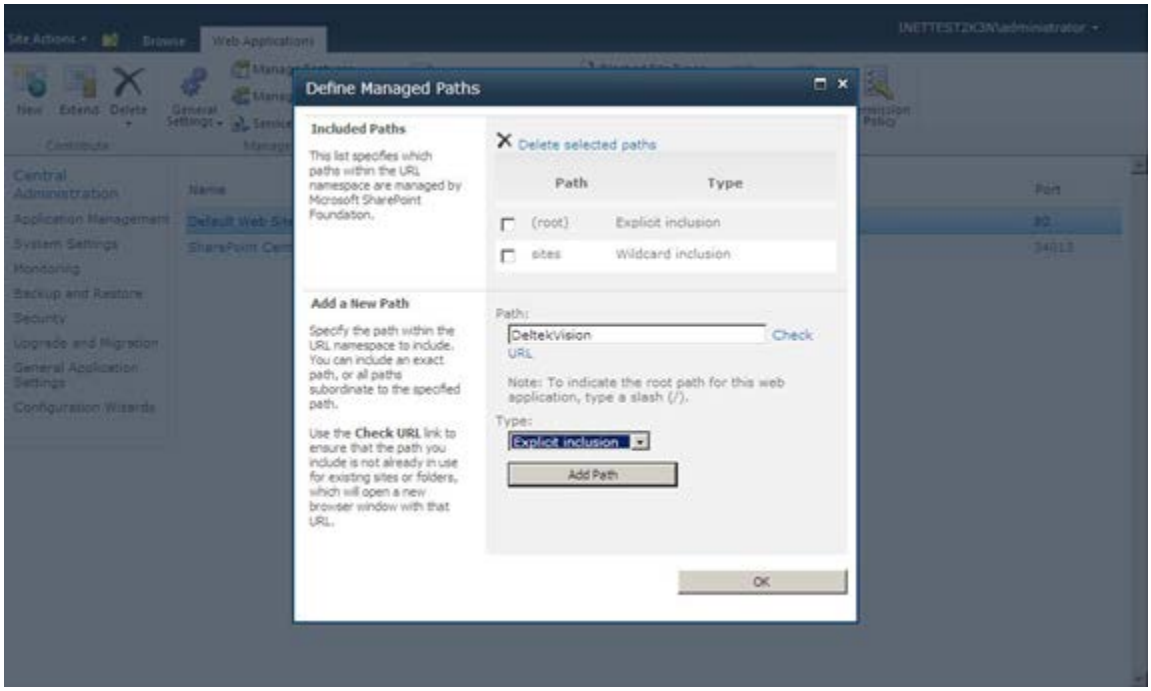
Create the Vision Document Management site using SharePoint Central Administration.

To finish the SharePoint configuration, complete the following steps:

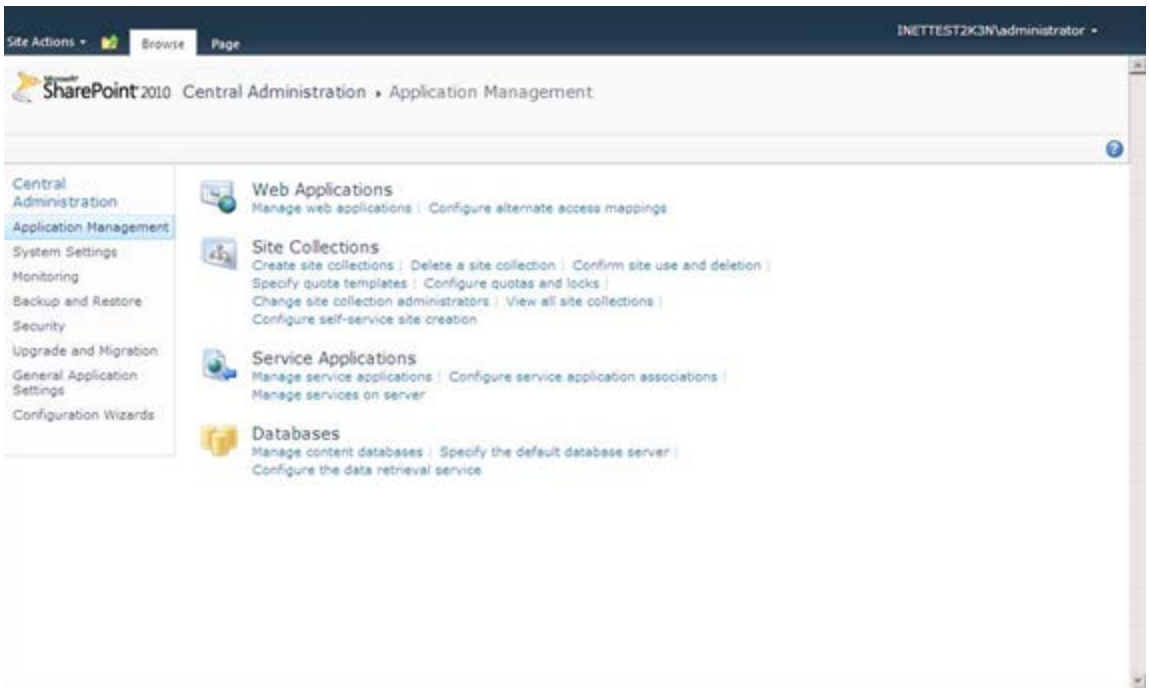
1. In SharePoint Central Administration, select **Application Management** and **Manage Web Applications**.



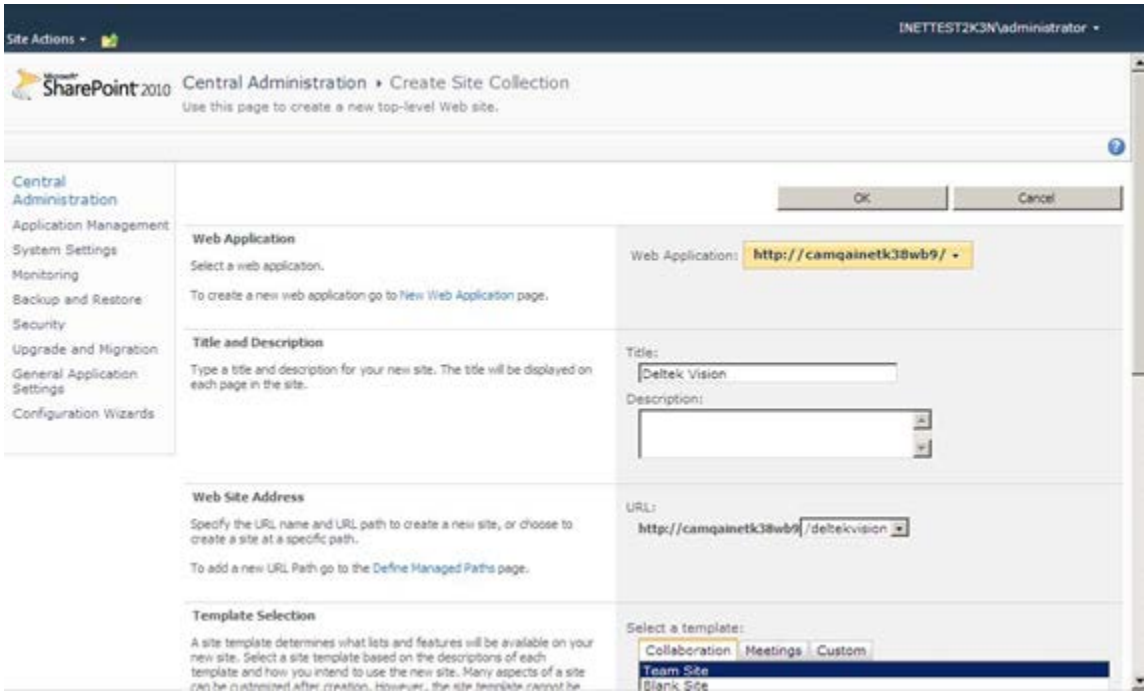
2. Select the web application that you would like to create the Deltek Vision site collection in and then select **Managed Paths** option. This will create a specific URL for your Vision Document Management site collection (for example, http://SharePoinServer/DeltekVision).



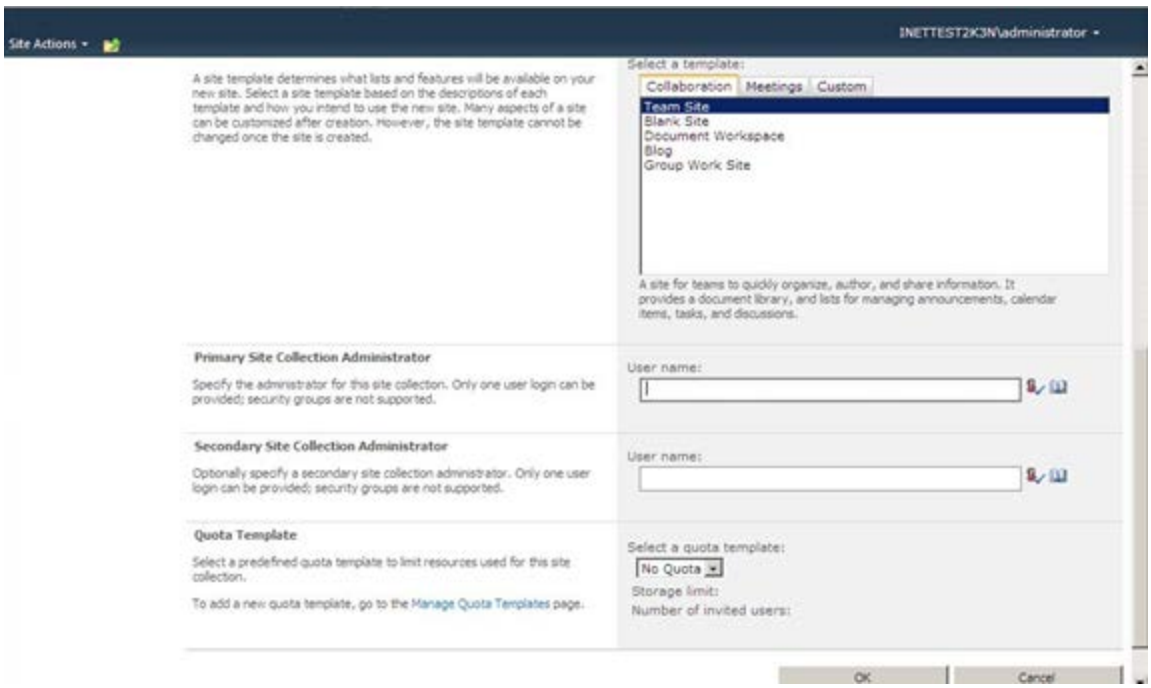
3. Enter **DeltekVision** in **Path** and select **Explicit inclusion** from the **Type** drop-down list and click **Add Path**.
4. Click **OK**.
5. Click **Application Management** and select the **Create Site Collection** option under **Site Collections**.



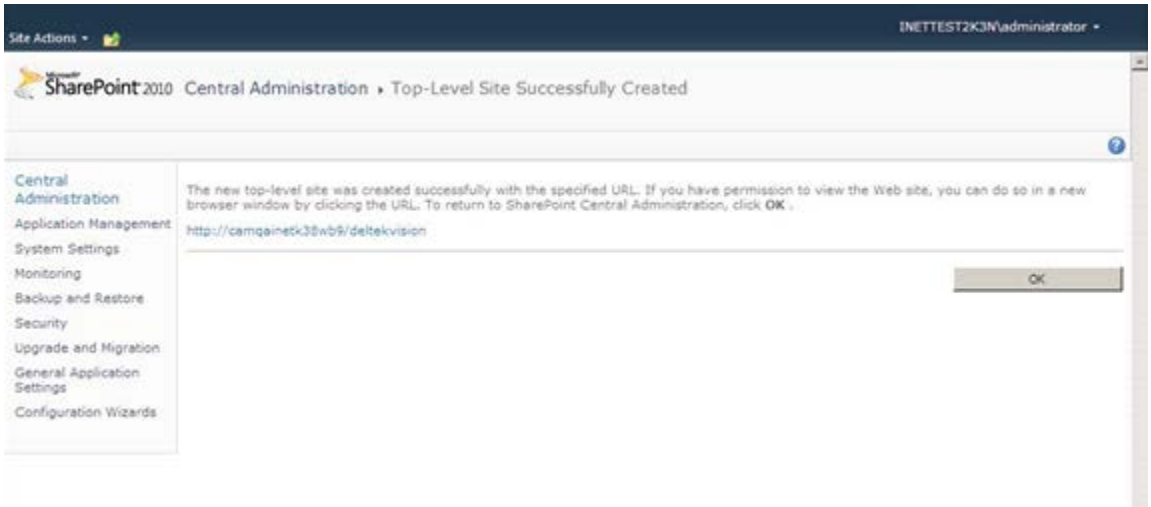
The Create Site Collection page displays.



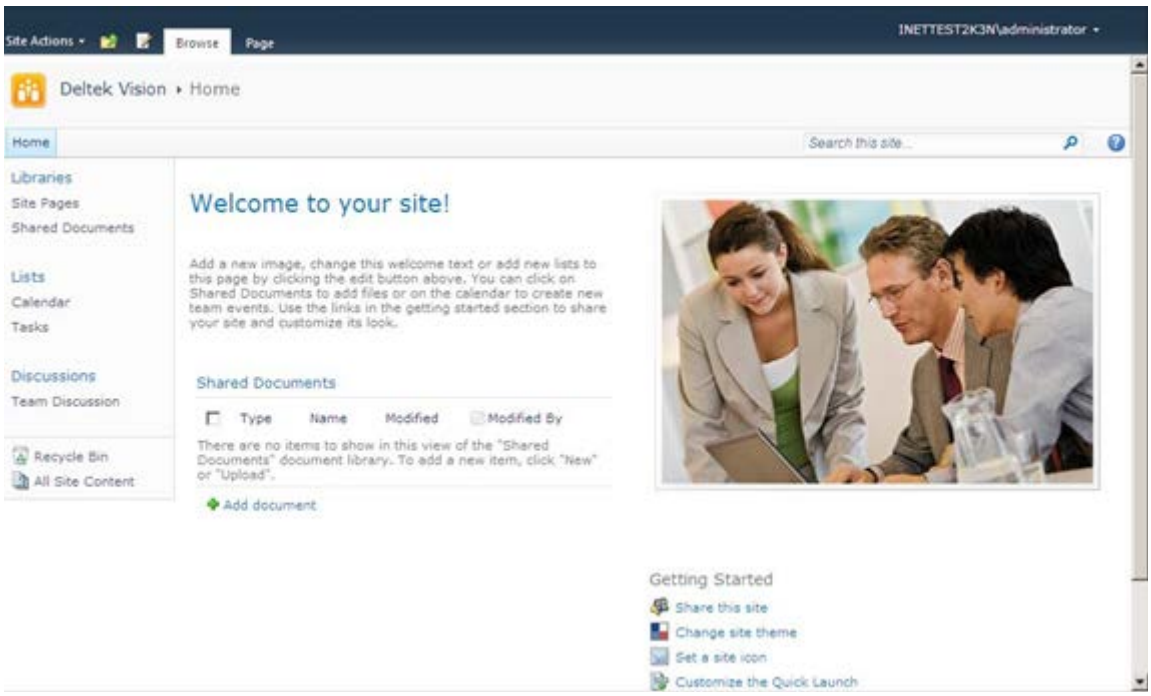
6. Enter **Deltek Vision** in **Title** and enter a description, if appropriate.
7. From the **URL** drop-down list, select **/deltekvision**. This will be the top level root for Vision Document Management.



8. Under **Select a template**, accept the default of **Team Site** for the template to be used and enter a username in each of the **User name** fields for the primary and secondary site collection administrators. One of these needs to be the Vision Application Pool identity.
9. Select **No Quota** in **Select a quota template** and click **OK**. The Top-Level Site Successfully Created page displays.



10. Click the link for the top level site (in our example it is http://camgainetk38wb9/deltekvision) to display the site.



11. The SharePoint configuration is complete. Close SharePoint Central Administration.

Verify IIS Configuration and Configure Deltek Vision Document Management .NET Assembly

Cop**y the Vision Document Management .NET assem**bly to SharePoint site directory.

Identify your IIS configuration to specifically identify which website and port SharePoint is using as well as which website and port Vision is using.

If SharePoint was extended to the Default Web Site then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\bin

If SharePoint was extended to its own named web site (e.g. SharePoint – 80) then copy Deltek.Vision.WSS30.Server.dll from <Vision Installation Directory>\Support\DM\30 to c:\inetput\wwwroot\wss\Virtual Directories\<site>\bin

By default, the <site> directory references the port chosen. (e.g. 80, 81, etc.).

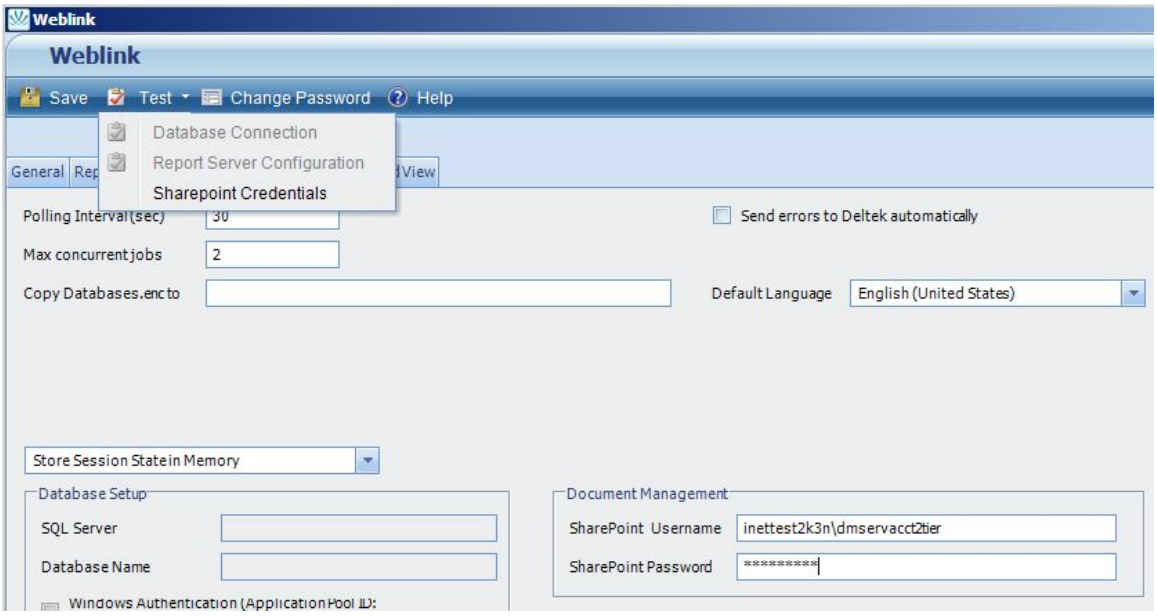
Configure Document Management Service Account in Weblink

You must configure the Document Management service account (username/password) on the System Settings tab of the Deltek Vision Weblink utility.

To configure the account in Weblink, complete the following steps:

1. On the Vision Web server, launch Weblink from **Start » Programs » Deltek Vision**
2. Enter the Weblink password when prompted.
3. Click the System Settings tab.

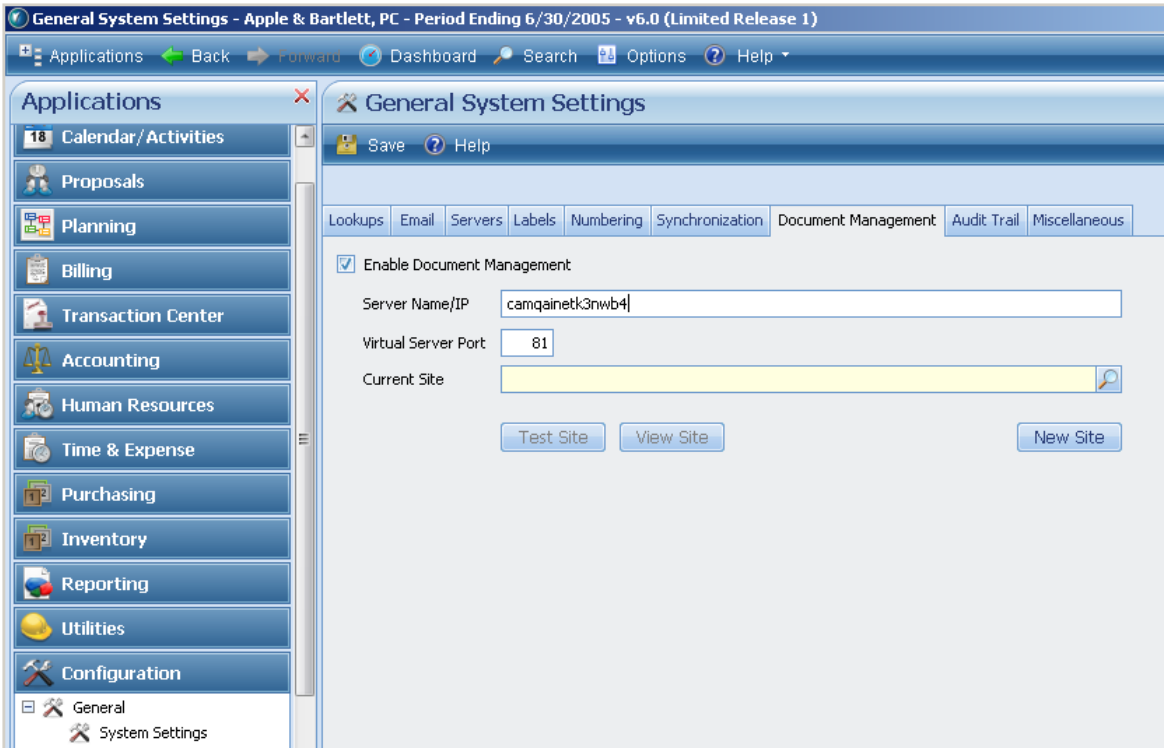
4. In the **Document Management** group box, enter your SharePoint username and password. This account is your SharePoint Service account/Deltek Vision Application Pool Identity.
5. Click **Test** and **SharePoint Credentials** to validate that the information entered is correct.



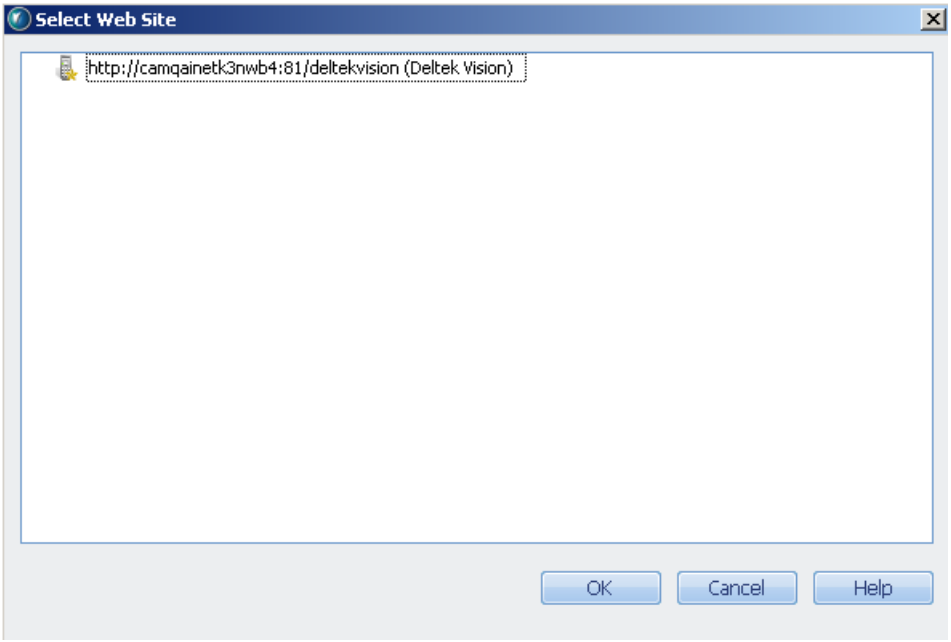
Configure Vision Document Management

To configure Vision Document Management, complete the following steps:

1. Log in to Vision using an account that has access to the Configuration menus.
2. Click **Configuration » General » System Settings** and select the Document Management tab.



3. Select the **Enable Document Management** check box.
4. Enter the name of the server hosting Document Management. Depending on how/if you have configured Alternate Access Mappings, the name used here may be the server name only, FQDN's or custom DNS value.. Enter this value without the protocol prefix (for example, remove the http://). In the illustration above, the value is **camqainetk3nwb4**.
5. Enter the **Virtual Server Port**. In our example the port is 81 but on a typical dedicated SharePoint installation the port will be 80 for the default web site..
6. Click the Lookup icon to select the current site.



7. The Select Web Site dialog box displays the available sites. Select a site and click **OK**.
8. Save your changes.

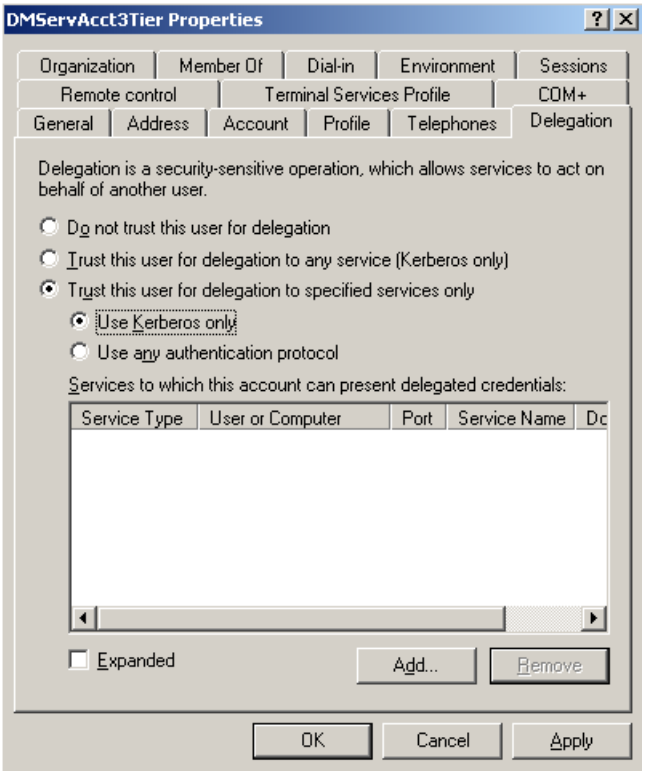
Configure Constrained Delegation

Because your SharePoint server is on a separate physical server and because the Vision Web server needs to pass the domain credentials of your Vision Document Management users on to the SharePoint server, you must configure Constrained Delegation.

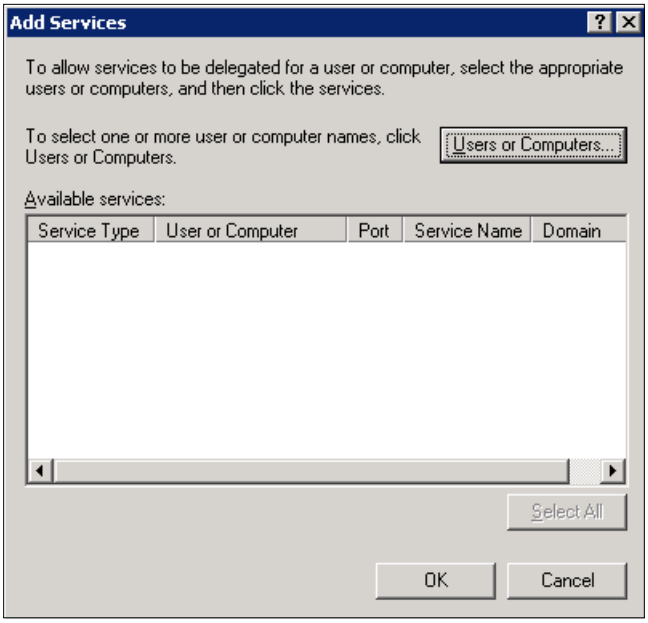
This assumes a non-Internet deployment of Vision Document Management using Kerberos authentication. If you are deploying Vision Document Management so that it is accessible over the Internet, then you need to skip ahead to “Optional: Configure Protocol Transition” in the next section.

To configure Constrained Delegation, complete the following steps:

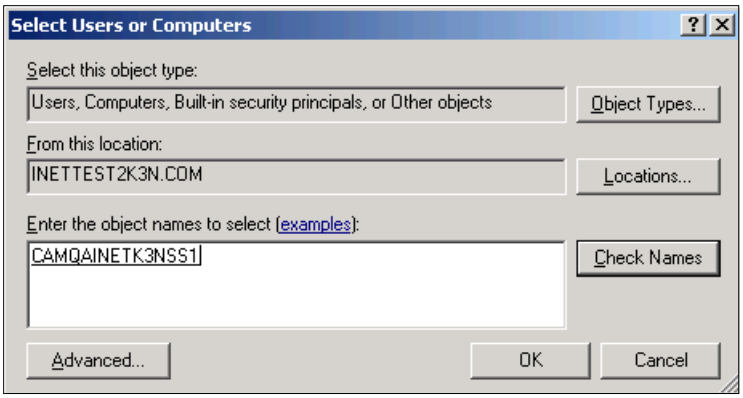
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (MOSS Service account), which is most likely under the Computers Organizational Unit (OU).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for delegation to specified services only** option.
5. Select the **Use Kerberos only** option.



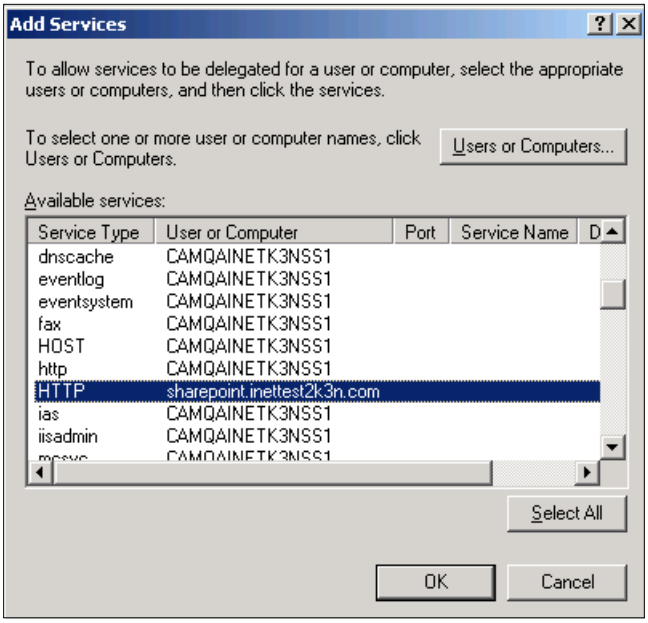
6. Click **Add**. The **Add Services** dialog box displays.



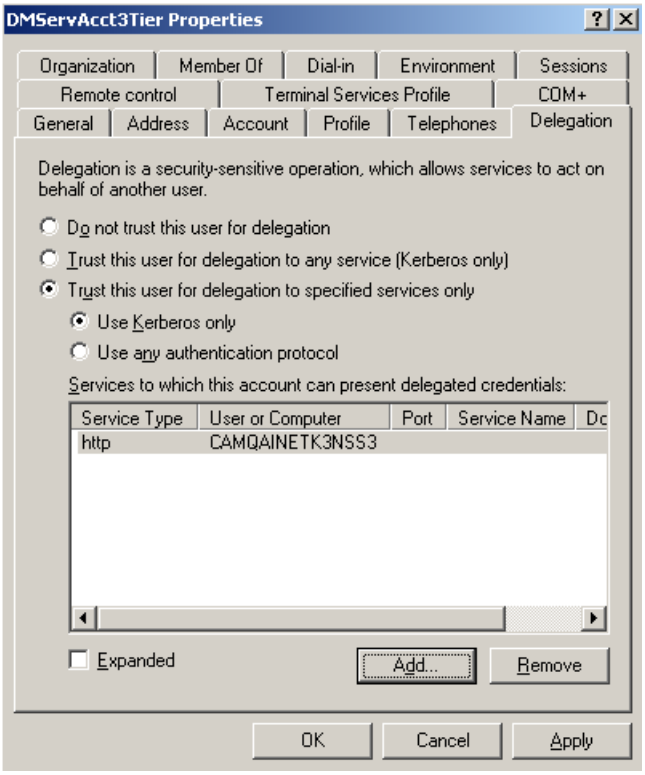
7. Click **Users or Computers**. The Select Users or Computers dialog box displays.



8. Locate the http service, select it, and click **OK**.



9. The Delegation tab should look like this:



Because we are explicitly specifying the http service and not all services on the SharePoint server, this is known as Constrained Delegation.

There are two http service types listed. These service types are known as Service Principal Names (SPNs). The SPN referencing CAMQAINETK3NSS1.inettest2k3n.com was created automatically when the server was added to the domain and the http service (IIS) was installed. The second SPN referencing sharepoint.inettest2k3n.com is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

Optional: Configure Protocol Transition

If Vision Document Management functionality is required over the Internet and you will be using a custom DNS/FQDN for the SharePoint URL (as in our example, vision1.inettest2k3n.com), then you need to configure a form of delegation referred to as Protocol Transition. If Document Management functionality is not required, you can skip this step.

The Kerberos authentication protocol must be used to authenticate from the Vision Web server to the SharePoint server. However, if Vision is deployed in an Internet scenario and there are users outside of the firewall who need to access Document Management features, then Kerberos authentication cannot be used to authenticate the client to the Web server. This is because the client needs to have the ability to negotiate a Kerberos ticket with the Key Distribution Center (KDC), which is a service running on a Domain Controller. This requires port 88 to be opened inbound on the firewall to the Domain Controller, which is not an advisable configuration.

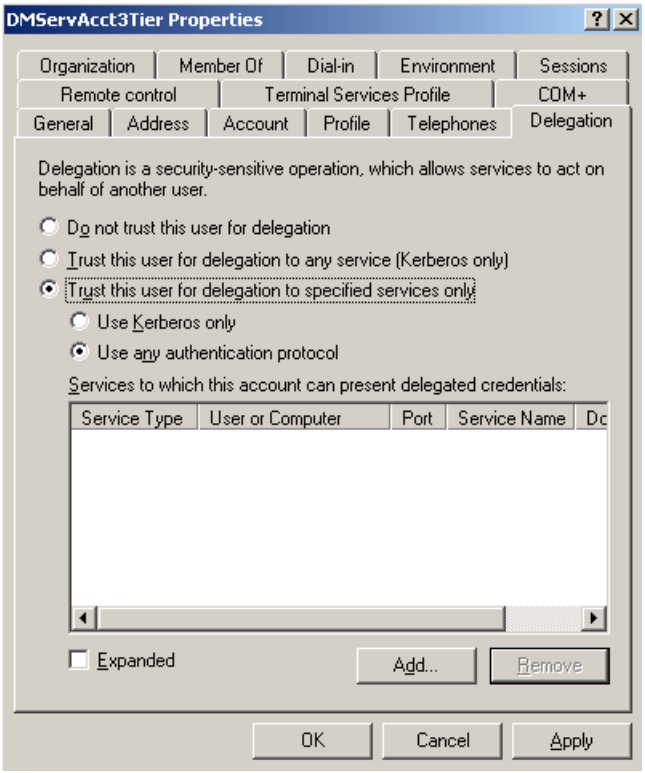
To get around this, you must be running a Native Windows Server 2003 functional domain.

Protocol Transition is configured by selecting the **Use any authentication protocol** option instead of the **Use Kerberos only** option, which is used to configure Constrained Delegation. This allows the client to authenticate to the Vision Web server using NTLM instead of Kerberos,

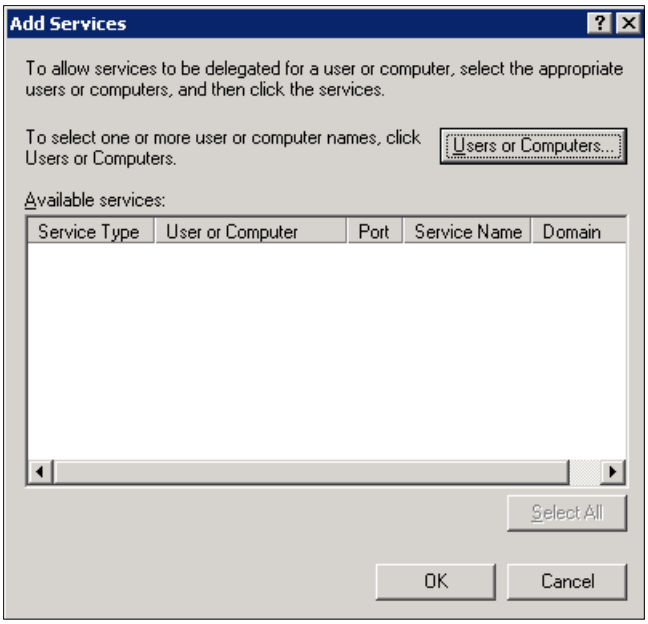
and that authentication is then “transitioned” over to Kerberos for Delegation to the SharePoint server.

To configure Protocol Transition, complete the following steps:

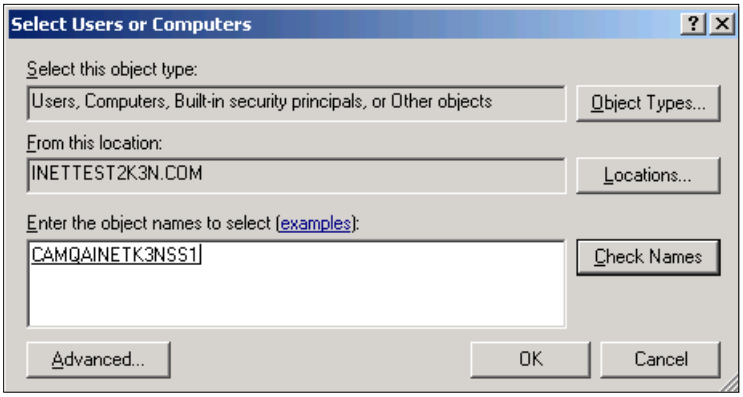
1. Open the Active Directory Users and Computers MMC on a Domain Controller.
2. Locate the User account for the Vision Application Pool Identity (MOSS Service account), which is most likely under the Computers Organizational Unit (OU).
3. Right-click and select **Properties**.
4. On the Delegation tab, select the **Trust this user for Delegation to specified services only** option.
5. Select the **Use any authentication protocol** option.



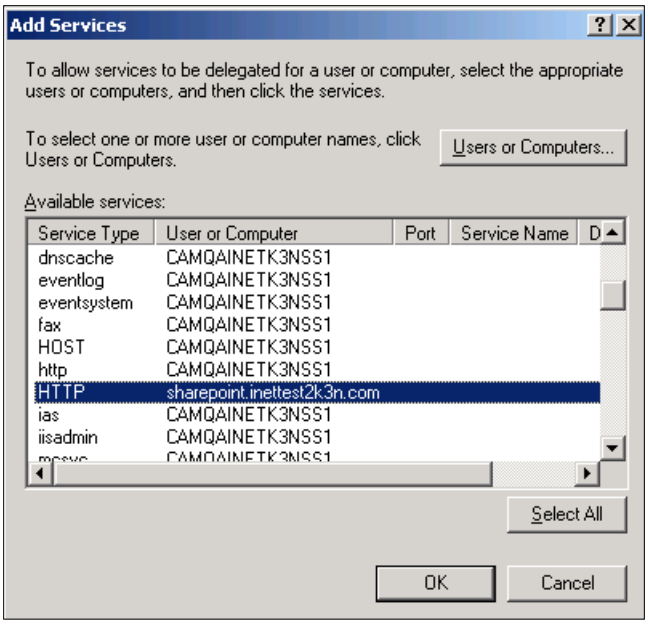
6. Click **Add**. The **Add Services** dialog box displays.



7. Click **Users or Computers**, search for the SharePoint server, and click **OK**.



8. Locate the http service for the SPN (FQDN) you created earlier (in our example, **sharepoint.inettest2k3n.com**), select it, and click **OK**.

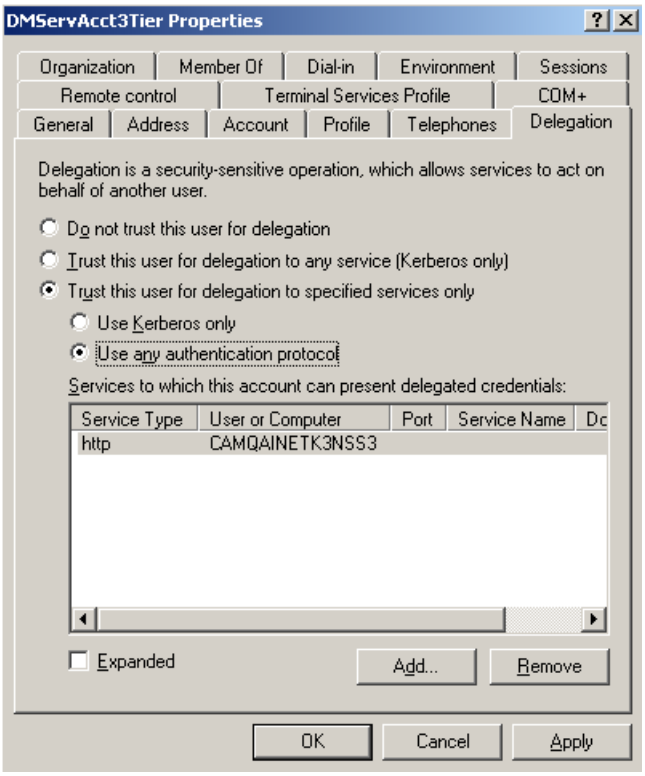


This illustration shows two http service types. Unless you have registered a custom FQDN using the setspn utility, only the server name displays. These service types are known as Service Principal Names (SPNs).

The SPN referencing **CAMQAINETK3NSS1.inettest2k3n.com** was created automatically when the server was added to the domain and the http service (IIS) was installed.

The second SPN referencing **sharepoint.inettest2k3n.com** is a new SPN that was created using the setspn utility that allows us to register the custom FQDN of the server, which provides more meaning than the actual machine name.

The Delegation tab should look like this:



Because we are explicitly specifying the http service and not all services on the SharePoint server, and because we are using the **Use any authentication protocol** option and not Kerberos, this is known as Protocol Transition.

Appendix A: Active Directory Domain Functional Level

Active Directory Domain Functional Levels

There possible active directory functional levels are listed below:

- **Windows 2000 Native** — All domain controllers are Windows 2000
- **Windows 2000 Mixed** — Server 2003 domain with support for Windows 2000 domain controllers
- **Windows Server 2003** — “Native” where all domain controllers are Server 2003
- **Windows Server 2008**
- **Windows Server 2008 R2**

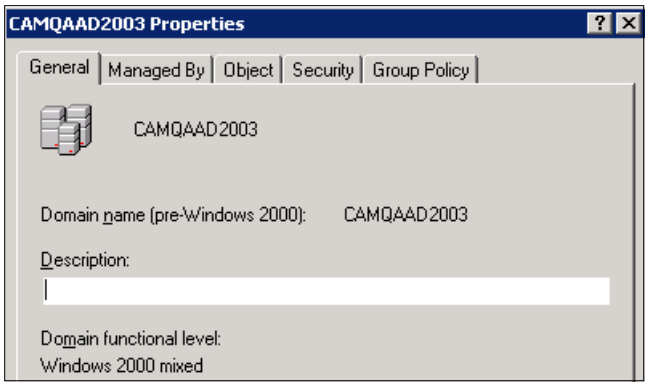
However, only the Windows Server 2003 and above domain functional levels are supported for Vision 7.1 Document Management.

The domain configuration for the first two is effectively the same as far as Document Management is concerned and are not supported for Vision 7.1 Document Management because your only option is to configure what is called Unconstrained Delegation. The remaining three domain functional levels can be configured for Unconstrained Delegation; however, Constrained Delegation is much more secure and required for Vision Document Management. Another benefit of a native Server 2003 and above domains is that it supports Protocol Transition, which is necessary to support Internet deployments of Vision where Document Management functionality is required.

Identify the Domain Functional Level

To check the functional level of the domain, open the Active Directory Users and Computers tool on the Domain Controller:

Right-click the domain, and select **Properties**.



If you need to raise the domain functional level to that supported by Vision 7.1 Document Management, see the steps in the next section, “How to Raise the Domain Functional Level.”

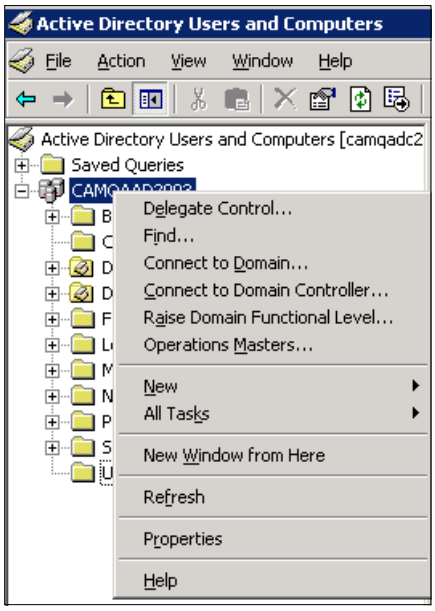
How to Raise the Domain Functional Level

To raise the domain functional level, all Domain Controllers in the domain must be running Windows Server 2003.

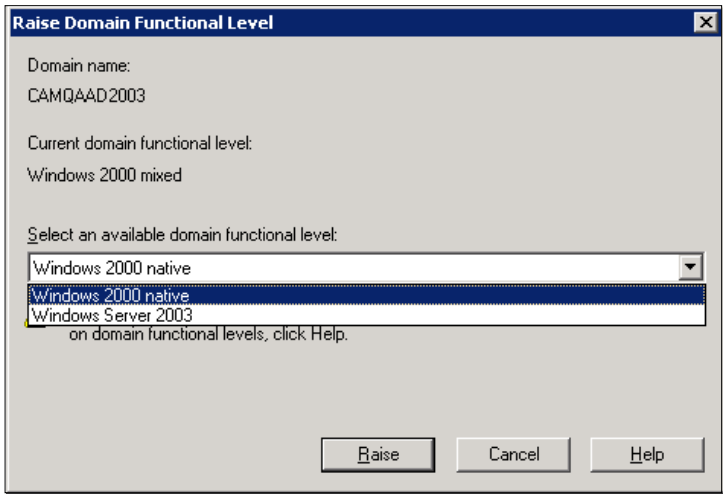
This action cannot be reversed. Be sure that you want to raise the domain function level before you proceed.

To raise the domain functional level, complete the following steps:

1. Open the Active Directory Users and Computers MMC on your Domain Controller.
2. Right-click the domain**,** and select **Raise Domain Functional Level** on the shortcut menu.



Select Windows Server 2003 from the Select an available domain functional level drop-down list, and click the **Raise** button


Raise Domain Functional Level
Domain name:
CAMQAAD2003
Current domain functional level:
Windows 2000 mixed
Select an available domain functional level:
Windows 2000 native
Windows 2000 native
Windows Server 2003
on domain functional levels, click Help.
Raise
Cancel
Help

Appendix B: Configure SharePoint for a Custom URL

Several SPN's will likely have been created in your configuration for the Vision and/or SharePoint Application Pool identity referencing the server name and FQDN of the respective servers. These SPN's are required for Windows Authentication and delegation to work properly.

By default, your SharePoint server will correctly resolve both the servername url (http://serveraname) and also the FQDN URL(http://servername.company.com) . However, If you will configure your SharePoint server to use a custom DNS record for the URL (e.g. http://sharepoint.company.com you must create additional SPNs and also create Alternate Access Mappings in SharePoint.

Configure SPN and Alternate Access Mappings for Custom URL for SharePoint Web Server

Consider the following:

- If the URL you want to use for your users to access SharePoint will be a custom DNS entry (for example, sharepoint.company.com), you will need to create a Service Principal Name (SPN) for this URL if your Application Pool Identity requires it.
- An SPN will not be required if the SharePoint Application Pool runs as Network Service or if your deployment is a single tier installation and Kernel Mode Authentication is enabled.
- For Multi-tier deployments where Constrained Delegation or Protocol Transition needs to be configured, you must also create an SPN for the SharePoint server (in addition to the Application Pool Identity mentioned above).
- If you use a custom DNS entry, you must also configure an Alternate Access Mapping (AAM) in SharePoint for the this. (Creation of an AAM is not necessary for an FQDN based on the server name).

For more information on SPNs, refer to the following Microsoft support article: http://support.microsoft.com/?id=871179.

Add SPNs for a Custom DNS Name

As indicated above, there are potentially two SPNs needed here. The first will be for the Custom DNS name being used when the SharePoint Application Pool Identity requires it and the second will be for the SharePoint server name in order to properly configure delegation.

To add an SPN for a custom DNS name for the SharePoint Application Pool Identity, complete the following steps:

- Open an administrative command prompt (using 'Run as Administrator') and run the following command:

  Setspn -A HTTP/*CustomDNSName Domain*\<*SharePoint Application Pool ID*>

  Where *CustomDNSName* is the fully qualified custom DNS name of the server (for example, Vision.company.com) and ***Domain*\<*SharePoint Application Pool ID*>** is the actual netbios computer name of the server (for example, Server01).

To add an SPN for a custom DNS name for delegation purposes, complete the following steps:

- Open an administrative command prompt (using 'Run as Administrator') and run the following command:

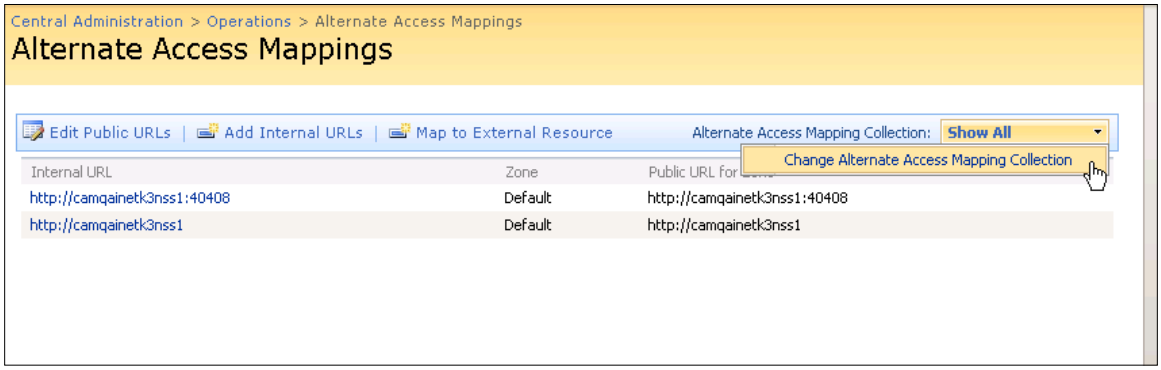
  Setspn -A HTTP/*CustomDNSName WebServerNetbiosName*

  Where *CustomDNSName* is the fully qualified domain name of the server (for example, Vision.company.com) and *WebServerNetbiosName* is the actual netbios computer name of the server (for example, Server01).

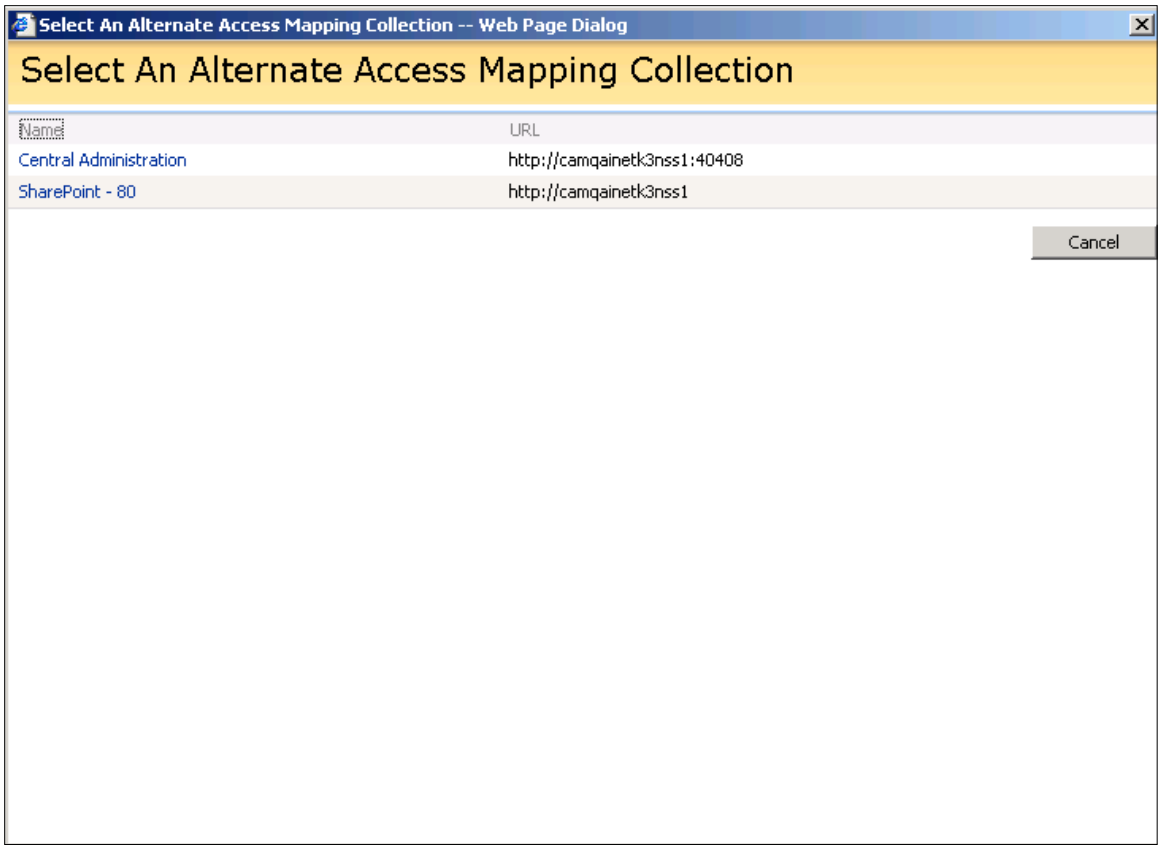
Create or Modify Alternate Access Mappings WSS 3.0 / MOSS 2007

To create or modify alternate access mappings, complete the following steps:

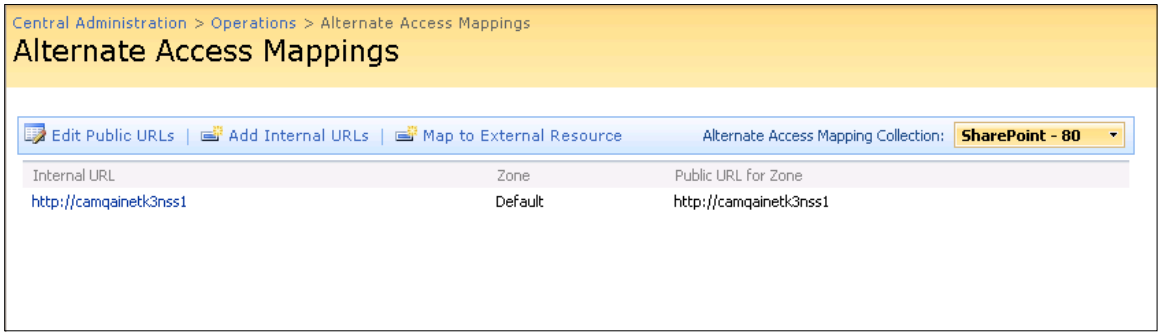
1. On the SharePoint server, open **SharePoint 3.0 Central Administration** via **Start » Administrative Tools.**
2. Click **Operations » Alternate Access Mappings**.



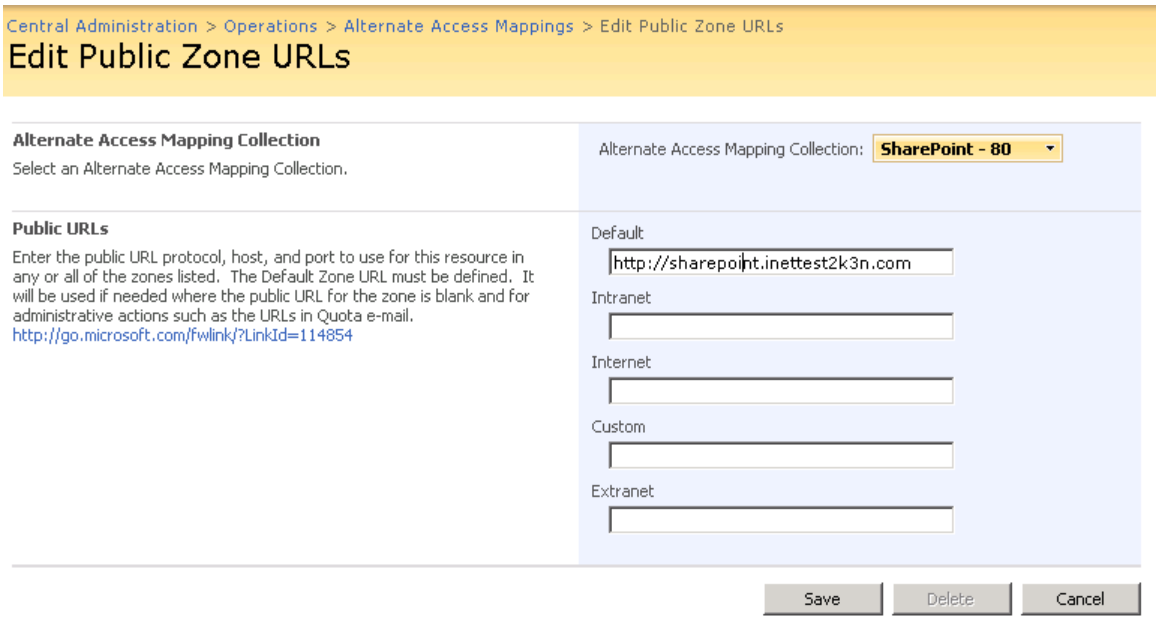
3. Click **Show All** and select **Change Alternate Access Mapping Collection**. The Select an Alternate Access Mapping Collection page displays.



4. Select the link for the new SharePoint web application you created. In the above illustration, it is **SharePoint – 80**. This will filter the list to only show the mappings for this application. The Alternate Access Mapping page displays.



5. Click the **Edit Public URLs** button. The following page displays.



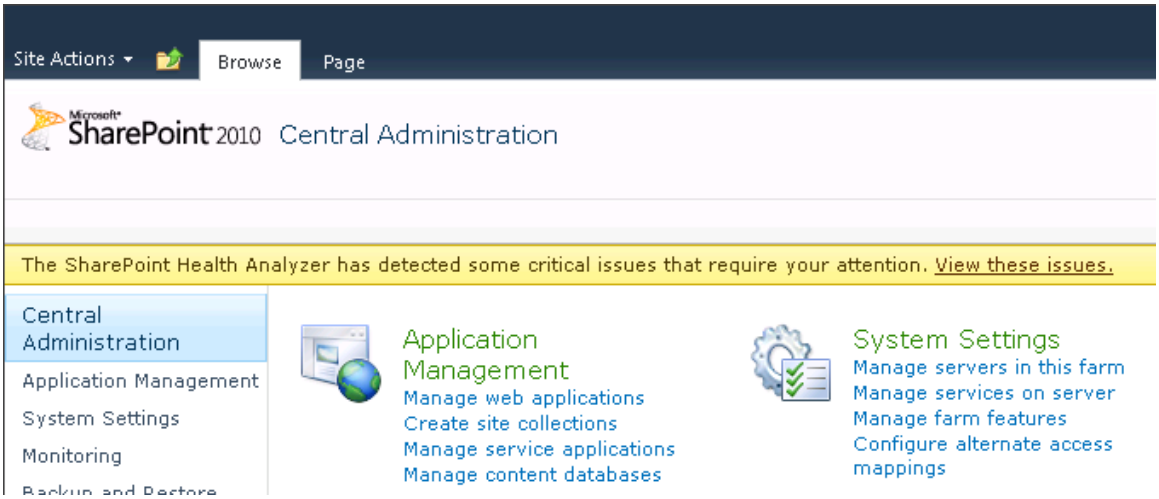
6. Modify the Default URL to specify the custom DNS name or enter the custom DNS name in another zone field and click **Save**. If a port is specified, do not remove it.

Create or Modify Alternate Access Mappings SPF / SharePoint Server 2010

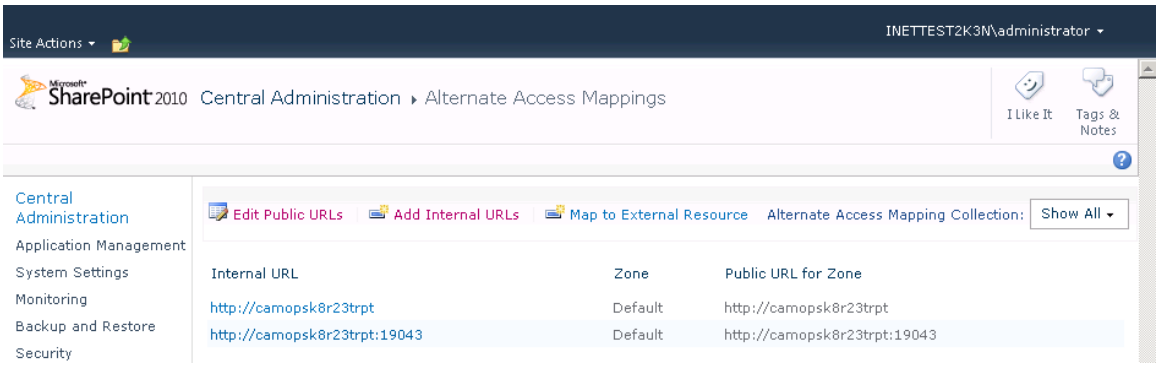
To create or modify alternate access mappings, complete the following steps:

To [insert procedure], complete the following steps:

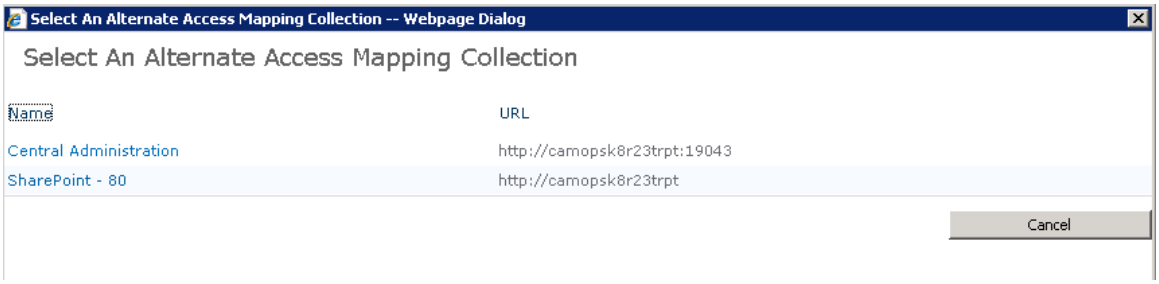
1. On the SharePoint server, click **Start » Microsoft SharePoint 2010 Products » SharePoint 2010 Central Administration**.



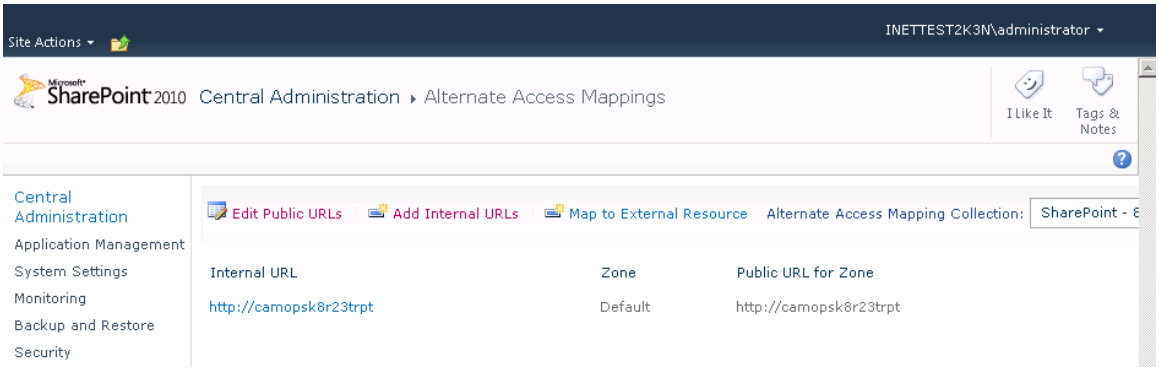
2. Click **Configure Alternate Access Mappings under System Settings**.



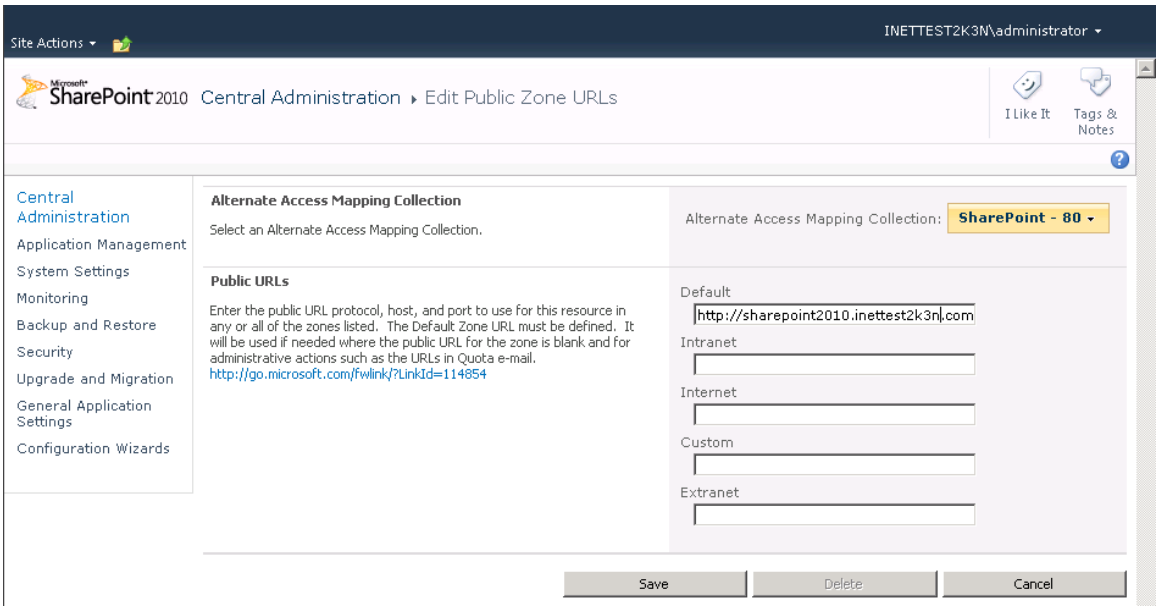
3. Click **Show All** and select **Change Alternate Access Mapping Collection**. The Select an Alternate Access Mapping Collection page displays



4. Select the link for the new SharePoint web application you created. In the above illustration, it is **SharePoint – 80**. This will filter the list to only show the mappings for this application. The Alternate Access Mapping page displays.



5. Click the **Edit Public URLs** button. The following page displays.

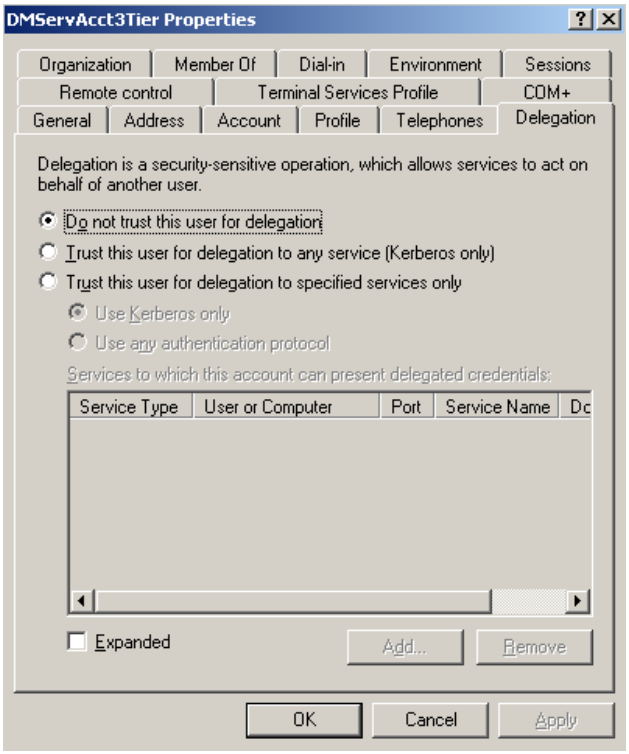


6. Modify the Default URL to specify the custom DNS name or enter the custom DNS name in another zone field and click **Save**. If a port is specified, do not remove it.

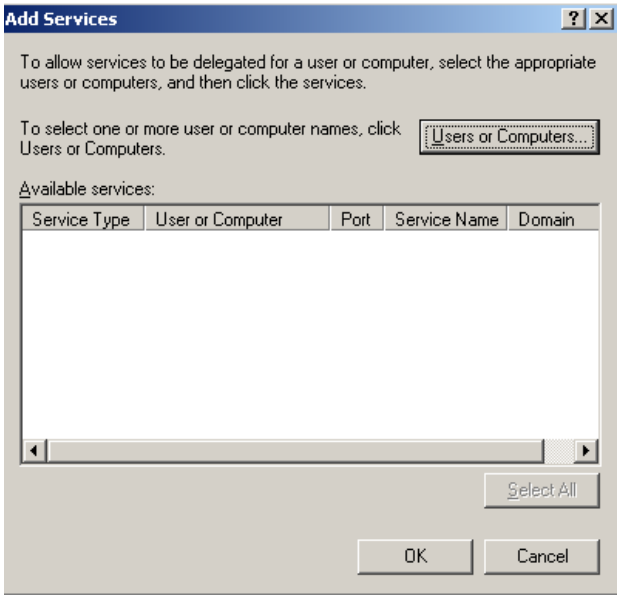
Configure Constrained Delegation or Protocol Transition When Using a Custom DNS Record

To configure delegation when using a custom DNS record for SharePoint and a domain account as the Vision Application Pool Identity complete the following steps:

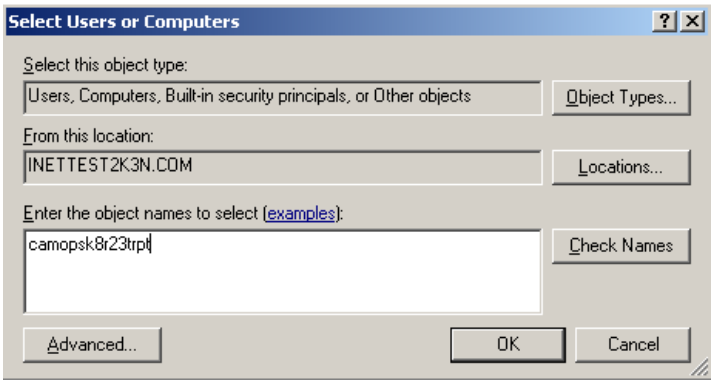
1. Open the Active Directory Users and Computers MMC,
2. Locate the domain account for the Vision Application Pool Identity.
3. Right-click and select **Properties**.
4. Click the Delegation tab:



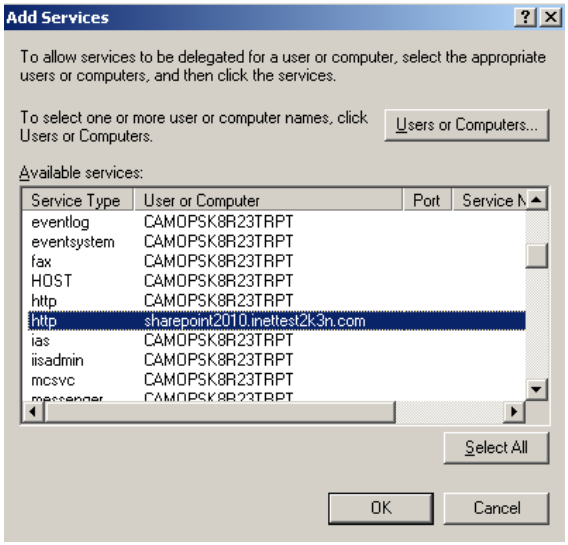
5. Select the “Trust this user for delegation to specified services only” and if configuring Constrained Delegation select “Use Kerberos only” or “Use any authentication protocol” for Protocol Transition. Click **Add**



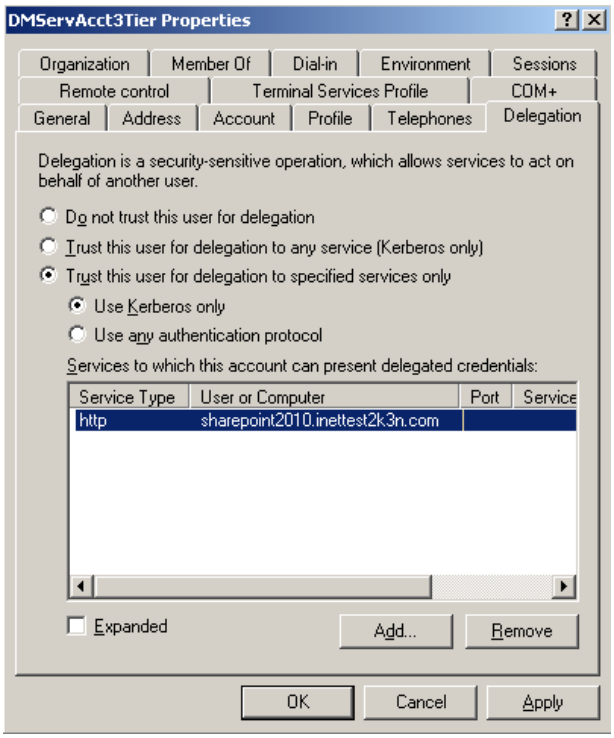
6. In the **Add Services** dialog box, click the **Users or Computers button** and enter the SharePoint netbios server name, (not the custom DNS name as that will not be a valid AD object). Click OK.



7. Select the http SPN for the custom DNS name of the SharePoint server (**e.g. sharepoint.company.com**):



8. Click **OK**. The De**le**gation tab should look like this when you have completed this procedure:



Appendix C: Manual Installation of Vision Document Management

If you have an existing installation of SharePoint and would prefer not to run the Vision Document Management installation on that server, follow the steps below to manually configure the necessary components:

To set up Document Management manually for an existing SharePoint installation, complete the following steps:

1. Extract the document management setup using the following command:

   <Path to Deltek DM Setup>:\<DM .exe> /extract_all:<Path to folder to extract contents>

   For example:

   C:\Users\administrator.INETTEST2K3N\Downloads\DeltekVision71DM.exe /extract_all:C:\Users\administrator.INETTEST2K3N\Downloads\DMExtract

2. Install WSE 2.0 SP3 from <Path to Extracted DM Files>\Disk1\Support\Patches\WSE20\WSE20SP3Runtime.msi

3. Copy the following files from <Path to Extracted DM Files>\Disk1\Support\DM\30 to the SharePoint ISAPI directory (C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\<version>\ISAPI) where <version> is 12 for WSS 3.0/MOSS 2007 and 14 is for SPF 2010 or SharePoint 2010 Server.

   WSSVision.asmx
   WSSVision.disco
   WSSVision.wsdl
   wssvisiondisco.aspx
   wssvisionwsdl.aspx

   These are the document management web service files.

4. Modify the SharePoint web.config file in the ISAPI directory (specified above) as follows:

   NOTE: Be sure to make a backup of the web.config file before you proceed as incorrectly modifying this file will render your SharePoint installation unusable.

   ADD the highlighted sections below:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<configuration>
  <configSections>
    <section name="microsoft.web.services2"
type="Microsoft.Web.Services2.Configuration.WebServicesConfiguration,
Microsoft.Web.Services2, Version=2.0.0.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" />
  </configSections>
  <system.web>
    <webServices>
      <protocols>
        <remove name="HttpGet" />
        <remove name="HttpPost" />
        <remove name="HttpPostLocalhost" />
        <add name="Documentation" />
```

```
      </protocols>
      <soapExtensionTypes>
        <add type="Microsoft.Web.Services2.WebServicesExtension,
Microsoft.Web.Services2,Version=2.0.0.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" priority="1" group="0" />
      </soapExtensionTypes>
    </webServices>
    <customErrors mode="On" />
    <httpRuntime maxRequestLength="128000" executionTimeout="900" />
  </system.web>
.
.
.
  <microsoft.web.services2>
    <messaging>
      <maxRequestLength>128000</maxRequestLength>
    </messaging>
  </microsoft.web.services2>
</configuration>
```

5. Register the Deltek .NET Assembly into the Global Assembly Cache via an Administrative command prompt (via 'Run as Administrator'):

   "<path to extracted folder>\Disk1\Support\Utilities\"gacutil /i "<path to extracted folder>\Disk1\Support\DM\30\Deltek.Vision.WSS30.Server.dll"

   For example:

   C:\Users\administrator.INETTEST2K3N\Downloads\DMExtract\Disk1\Support\Utilities\gacutil.exe /i "C:\Users\administrator.INETTEST2K3N\Downloads\DMExtract\Disk1\Support\DM\30\Deltek.Vision.WSS30.Server.dll"

6. Copy the Deltek .NET Assembly to the SharePoint web application \bin folder (e.g. c:\inetpub\wwwroot\wss\virtual directories\<port>\bin). If SharePoint was installed to the default website then the path will be c:\inetpub\wwwroot\bin.

7. Complete the remainder of the configuration as described in the installation and configuration instructions for your deployment.

Appendix D: Troubleshooting

Vision Document Management is a very complicated software component, especially with regard to many of the domain specific functions including SPN's, Kerberos and Delegation. The following information will help in troubleshooting issues that may likely arise during the configuration of Vision Document Management.

Domain rights are required to perform most of the troubleshooting steps identified in this appendix.

SPN Troubleshooting

Setspn.exe

Setspn.exe is a command line executable that has a variety of switches that can be used to list existing SPN's for a specific domain object (computer or user account) as well as to check for the existence of duplicate SPN's. Run setspn /? from a command prompt to see syntax and usage examples.

SPNQuery.vbs

This visual basic script is available for download from Microsoft via the following url: http://support.microsoft.com/kb/321044)

When executing this script, the following will dump all http specific SPN's to a text file so you can search for duplicates:

```
cscript spnquery.vbs http/* >SPNCheck.txt
```

Kerberos Troubleshooting

Kliste.exe

Klist is a command line tool included with Windows 7 and Server 2008/R2 that allows you to see Kerberos tickets granted to a specific user account. This is replacement to the Windows 2000 support tool Kerbtray.

Fiddler
http://www.fiddlertool.com

Fiddler is an http debugging proxy that allows you to see details of individual http requests including authentication headers.

Deleg Config Tool
http://blogs.iis.net/brian-murphy-booth/archive/2009/04/22/delegconfig-v2-beta.aspx

This tool is an ASP.net application that may be helpful to validate your SPN, Kerberos and Delegation configuration. The tools has been known to have issues so it may or may not work in your specific environment.

Kerberos Event Logging

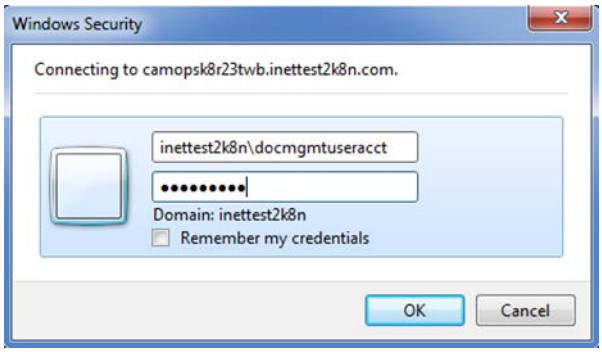
http://support.microsoft.com/kb/262177

Kerberos event logging can be enabled via a registry setting that will write Kerberos specific error conditions to the Windows event logs.

Internet Access, Authentication Prompts and Windows Credential Manager

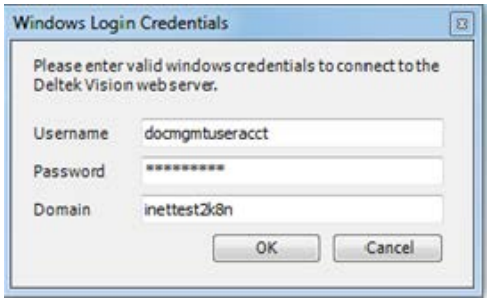
If Vision Document Management will be accessible via the Internet, there are a variety of authentication prompts that the user will have to traverse to access the application. These prompts are shown and discussed below as well as a potential work-around.

1. When the user first accesses the Vision virtual directory via (http://server/vision) they will be challenged by IIS and the Internet Explorer browser will present the following authentication dialog as they are not yet authenticated to your domain.



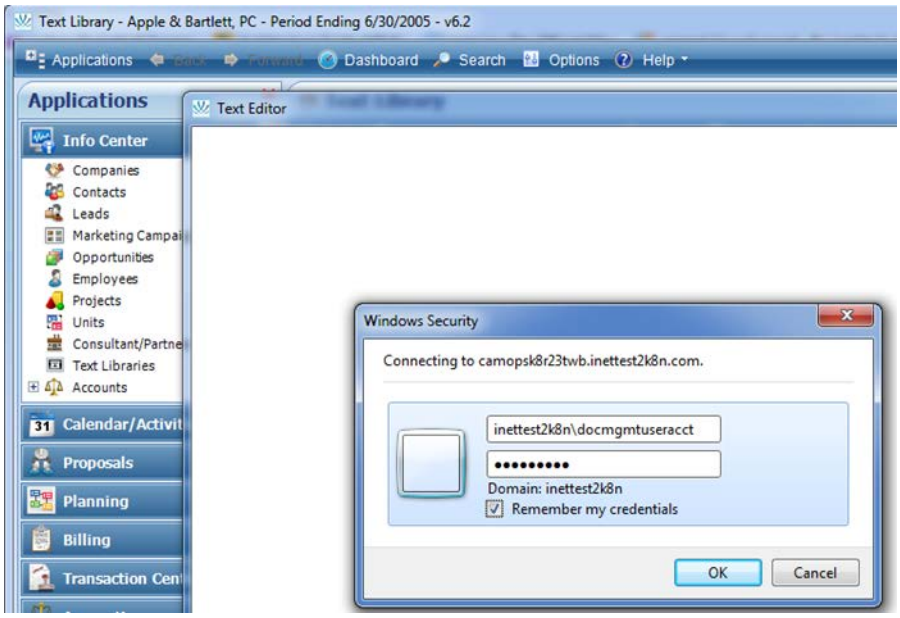
2. They will need to enter their domain credentials as shown above.

3. At this point the ClickOnce application will be downloaded and initialized at which point they will receive the next prompt from asking for the same domain credentials. The reason for this second prompt is that the browser cannot “pass” the credentials to the winform client application.



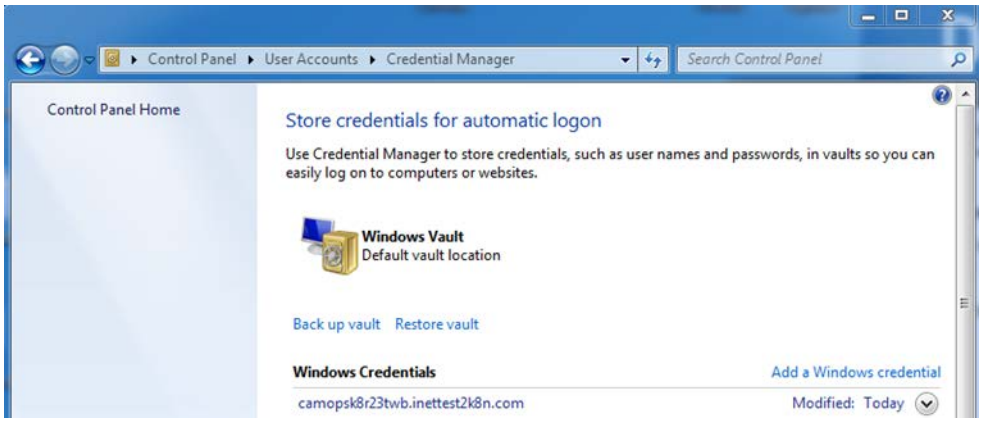
4. Once these credentials are entered you will be able to login to Vision.

5. The final prompt will occur the first time the user attempts to edit any text editor field. These fields are identified by a pencil icon will present the user with another IIS/browser based prompt as this is a call to an ASP.net page on the web server but the request is coming from the winform client application, not the browser so the previously entered credentials cannot be used.



6. At either of the browser based prompts if the user checks the box on the login screen to "Remember my credentials" they will no longer be prompted to authenticate. Checking that box stores the users entered credentials and associates them with the url used to access the application so all future requests are automatically authenticated.

   The credentials are stored by the operating system in the Credential Manger in Windows 7 and the Stored User Names and Passwords in Windows XP.



It is possible that this functionality has been disabled by the system administrator via domain Group Policy. In that case the users will need to enter their credentials as shown above but will only need to enter them once per login session.

Appendix E: Use a Site Collection SharePoint Account instead of Farm Administrator Account

The default configuration steps for Document Management advise you to use the SharePoint Farm Administrator account as the Deltek Vision Application Pool Identity and SharePoint Service Account. Due to security limitations this may not always be possible. The following steps provide a work-around that will allow the use of a Site Collection Administrator instead of using the more privileged Farm Administrator.

1. First, configure Deltek Vision Document Management as per the installation/configuration instructions using the SharePoint Farm Administrator account throughout the process up to and including configuring Document Management in Deltek Vision Configuration->System Settings->Document Management tab.

2. Thoroughly test to ensure that all Document Management functionality is working, especially uploading a document from within Deltek Vision

3. Once Document Management functionality has been validated, identify a Site Collection Administrator account for the Deltek Vision site collection in SharePoint and reconfigure the following Deltek Vision configuration using this new account.

   - Deltek Vision Web/Application server local security (Administrator and IIS_IUSRS local groups and Logon as a Service, Local Security Policy right)
   - Deltek Vision Application Pool Identity
   - Deltek Vision SharePoint Service Account in Weblink (System Settings tab)
   - Domain Service Principal Name configuration
   - Domain Delegation/Protocol Transition configuration

4. Once the above re-configuration has been completed and all Document Management functionality has been re-validated, remove the SharePoint Farm Administrator account from the Deltek Vision web/application server configuration as well as removing the account from Domain SPN's and Delegation configuration.

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