Cyberlogic Knowledge Base

KB2009-03:   OPC XML DATA ACCESS SUPPORT

Cyberlogic's OPC servers include support for OPC XML Data Access 1.0 (XML DA), but this is an optional feature that is not part of the default installation. If you want to install XML DA, this article will assist you in determining what features and settings are required for your system.

Applies To:

All installations of the Cyberlogic OPC Suites at revision level 7.0 + Update 20090403 or later that include support for XML Data Access.

Objective:

Install all necessary software and configure all settings as required for the particular installation.

Issues:

The installation and operation of XML DA requires certain Windows components that may not already be installed on your system. In addition, in some systems, the necessary configuration may be incompatible with other software running on the system. In this case, the user must choose which will run and which will be disabled.

Resolution:

This article explains how to install XML DA support, configure it, and connect a client to the server.

Overview of the Procedure

You will first install Windows Internet Information Services (IIS), with certain required components. After that, you will install the OPC XML DA component of the Cyberlogic OPC server and verify its security settings. Depending on your operating system, you may then need to select an operating mode for ASP.NET. Finally, you will connect an OPC XML DA client to the server.

Some of the procedures will vary, depending on the specific Windows operating system you are installing under. These variations will be identified so you can follow the procedure that applies to your system.
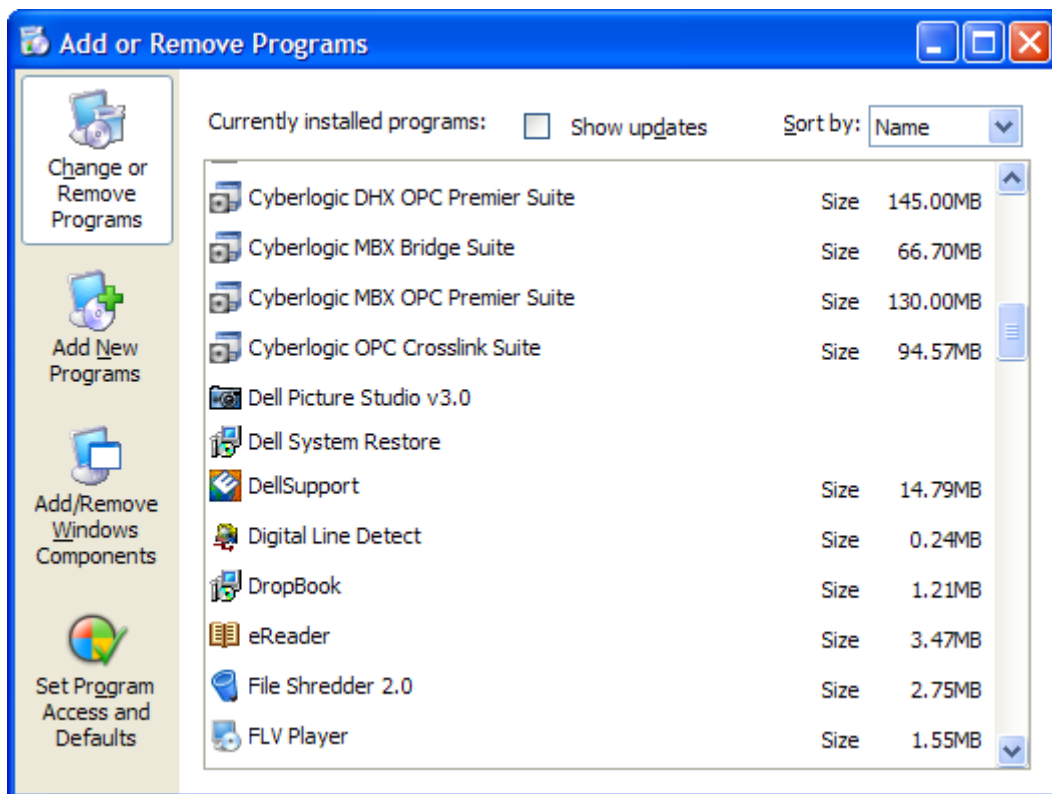
Install Windows Internet Information Services

This is a Windows component, and therefore may require your Windows installation CD.

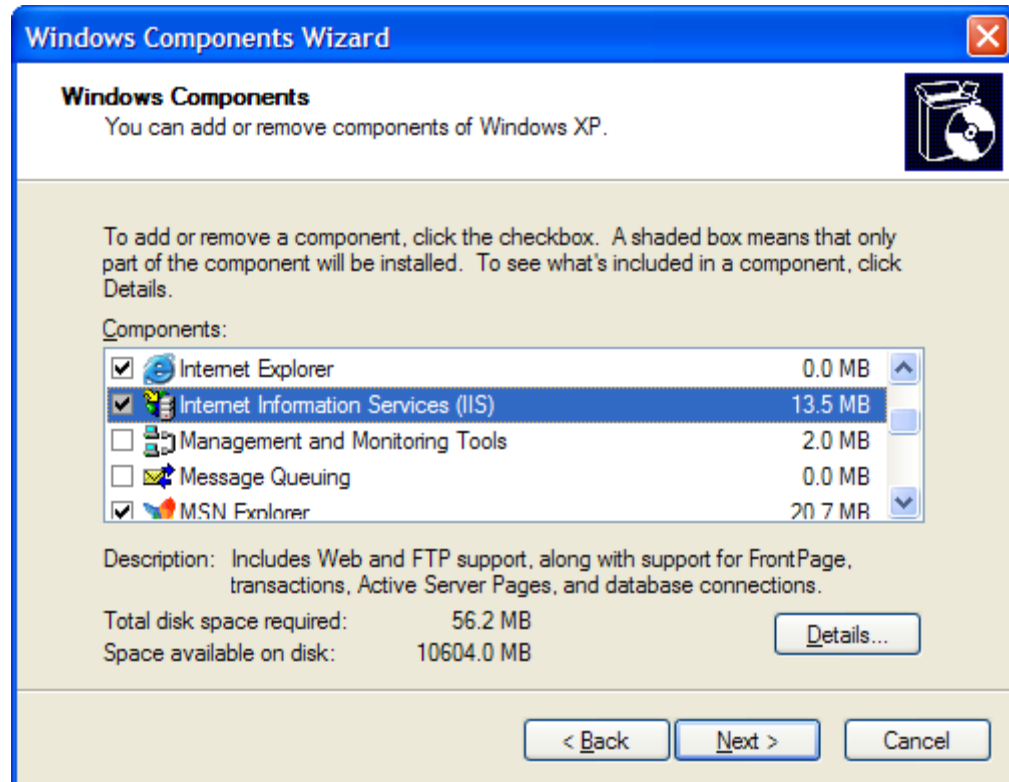There are four procedures for installing IIS, depending on your operating system:

- Windows XP and 2000
- Windows Server 2003
- Windows Vista / Windows 7
- Windows Server 2008 / Windows Server 2008 R2

Windows XP and 2000

1. Open the *Start* menu and navigate to *Control Panel*.
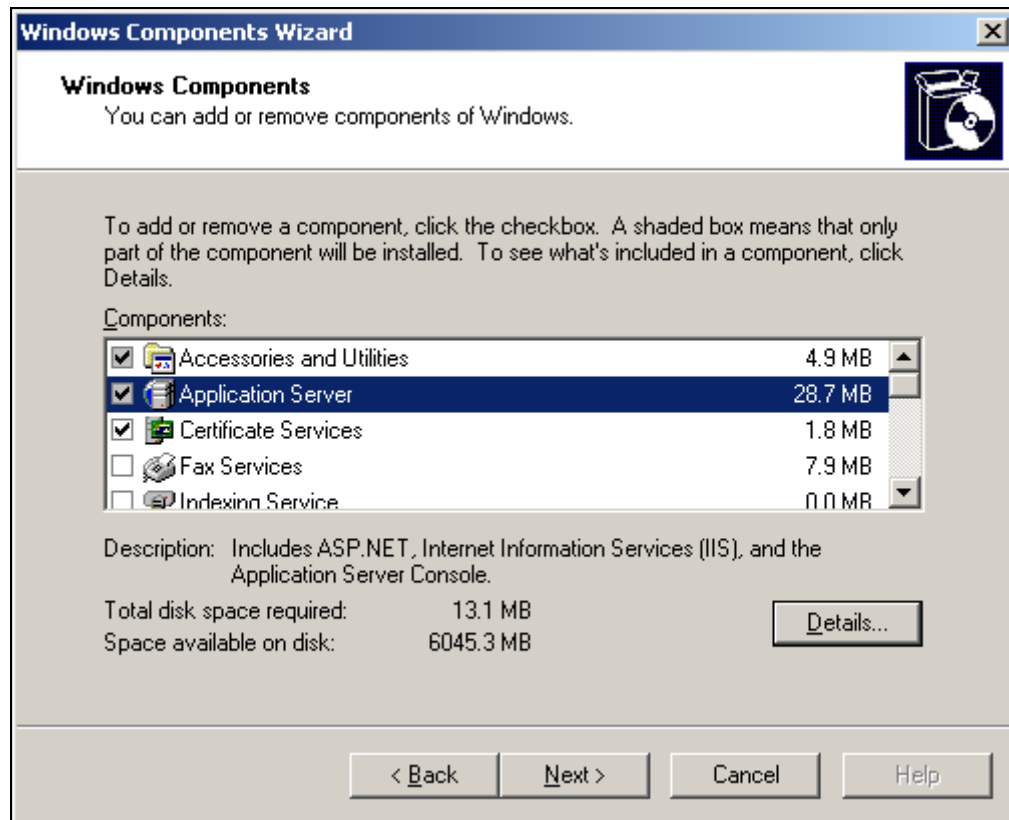
2. Open *Add or Remove Programs*.

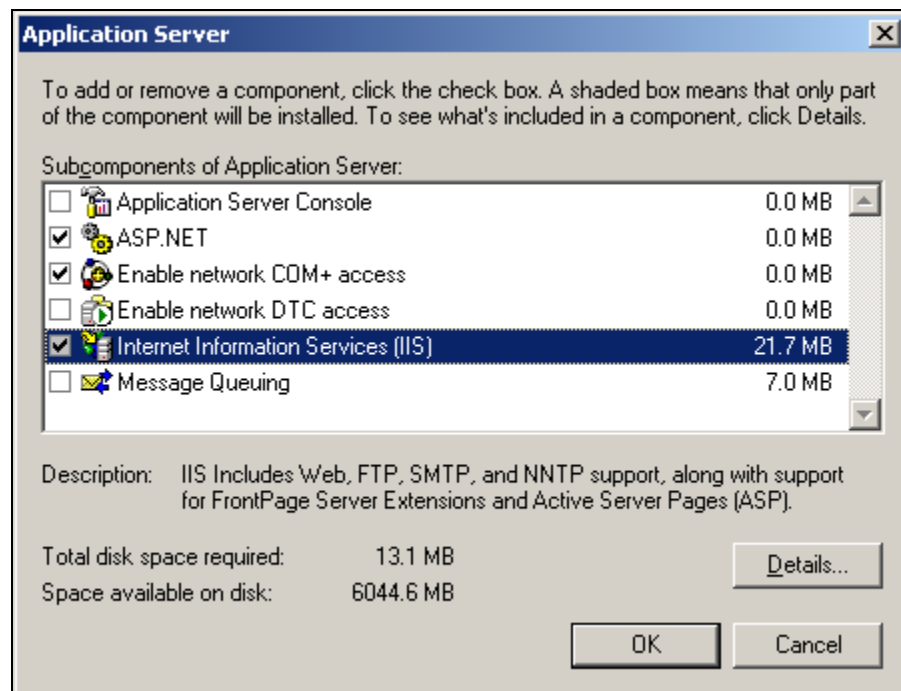3. Click *Add/Remove Windows Components*.

4. Select **Internet Information Services (IIS)**.

5. Click **Next** and then follow the prompts to complete the installation.

6. When you are finished with the IIS installation, continue with Install the Cyberlogic OPC Server XML Data Access Support.

Windows Server 2003

1. Open the **Start** menu and navigate to **Control Panel**.

2. Open **Add or Remove Programs**, and then **Add/Remove Windows Components**.

3.   Select **Application Server** and click **Details…** .

4.   Check the boxes for **ASP.NET** and **Internet Information Services (IIS)**.

5. Click **OK**.

6. Click **Next** and then follow the prompts to complete the installation.

7. When you are finished with the IIS installation, continue with Install the Cyberlogic OPC Server XML Data Access Support

Windows Vista / Windows 7

1. Open the **Start** menu and navigate to **Control Panel**.

2. Open **Programs and Features**, and then **Turn Windows features on or off**.
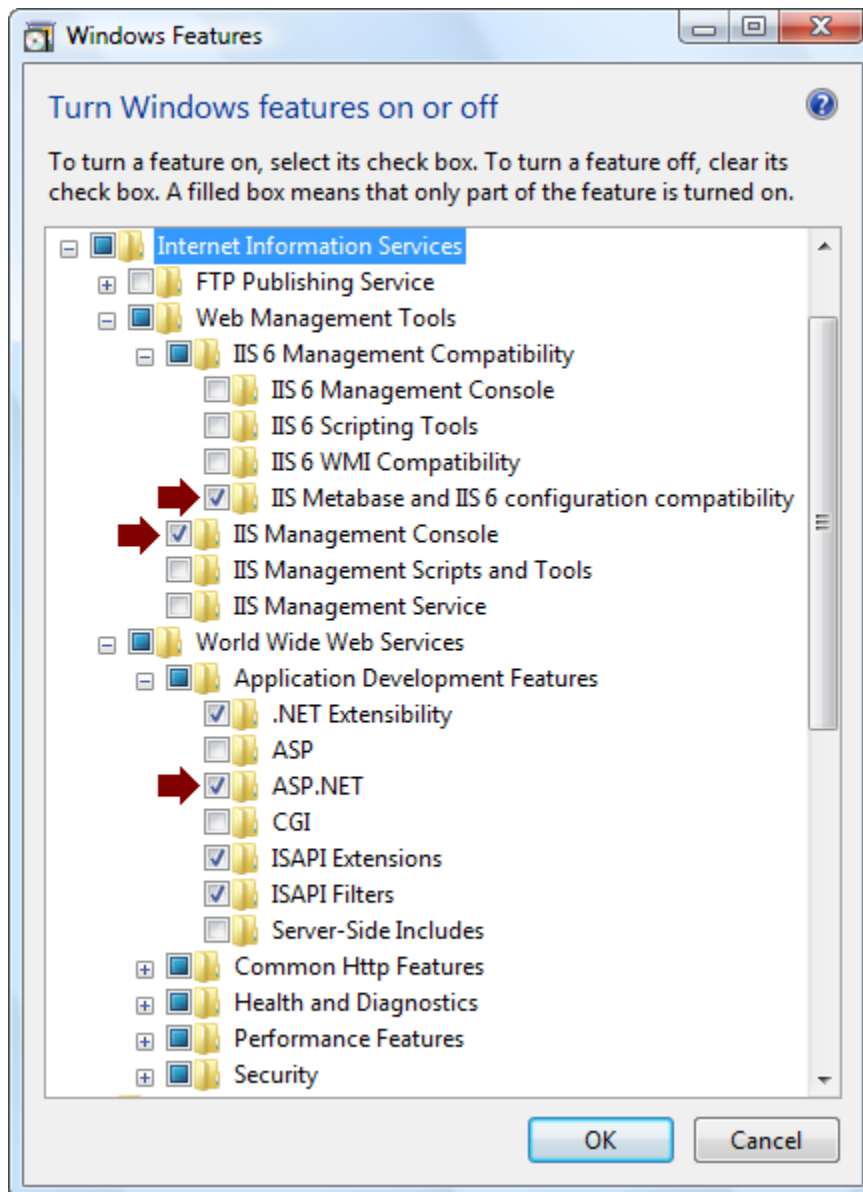
3. Expand the **Internet Information Services** branch.

4. Check the boxes for **IIS Metabase and IIS 6 configuration compatibility, IIS Management Console** and **ASP.NET**, as shown in the figure above.

5. Click **OK** and then follow the prompts to complete the installation.

6. When you are finished with the IIS installation, skip to Install the Cyberlogic OPC Server XML Data Access Support.

Windows Server 2008 / Windows Server 2008 R2

1. Open the **Start** menu, go to **Administrative Tools** and select **Server Manager**.
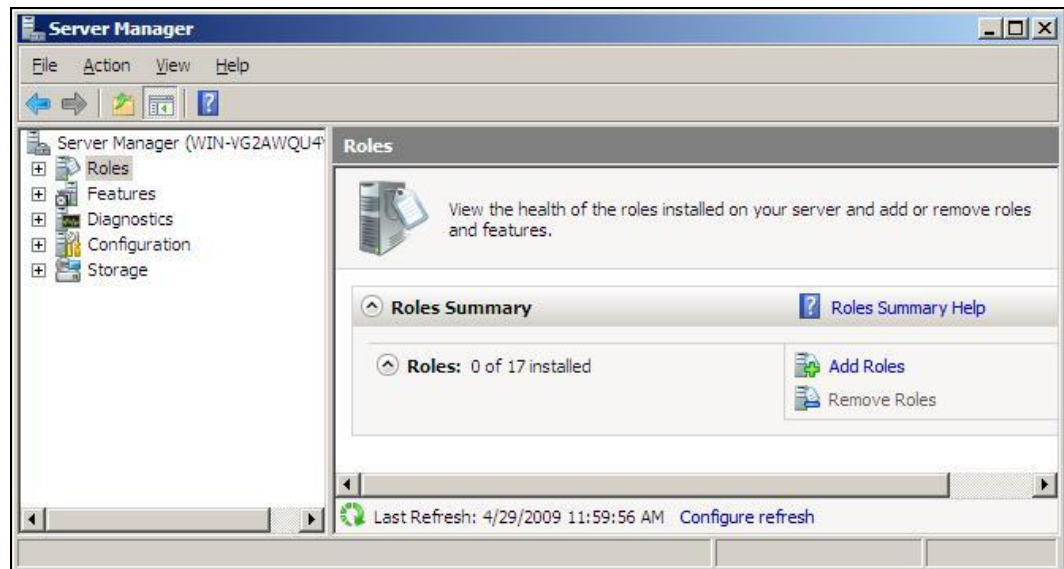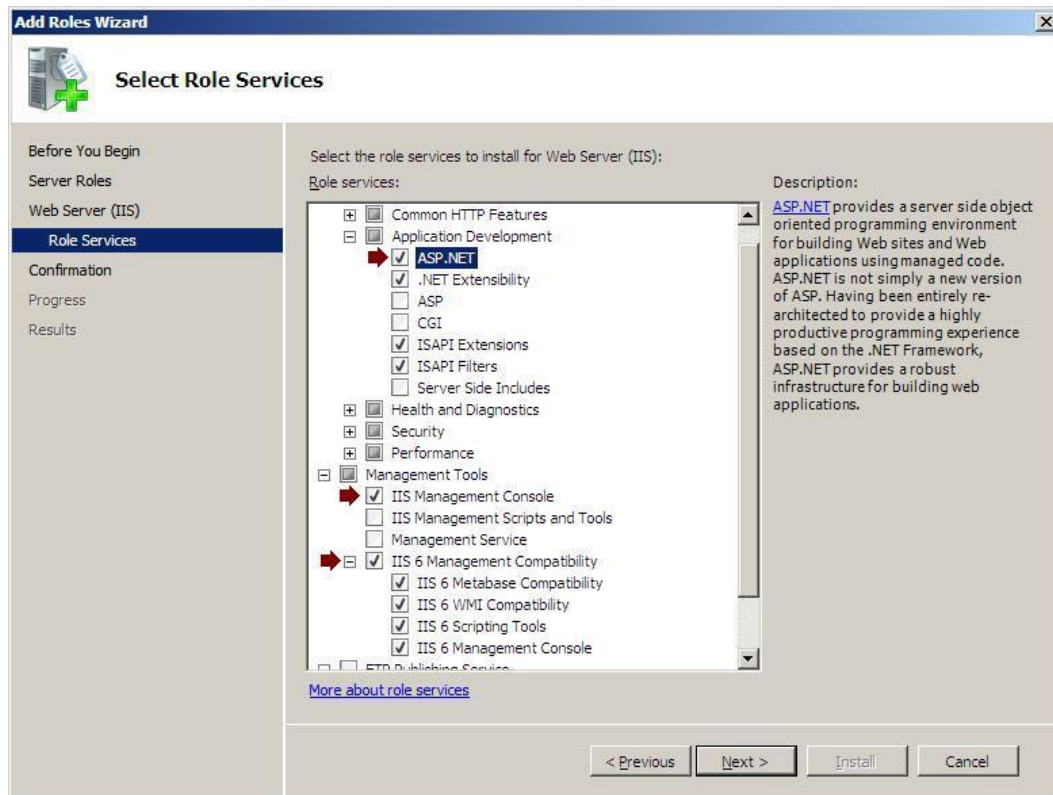

2. Select the **Roles** branch and then click **Add Roles**.
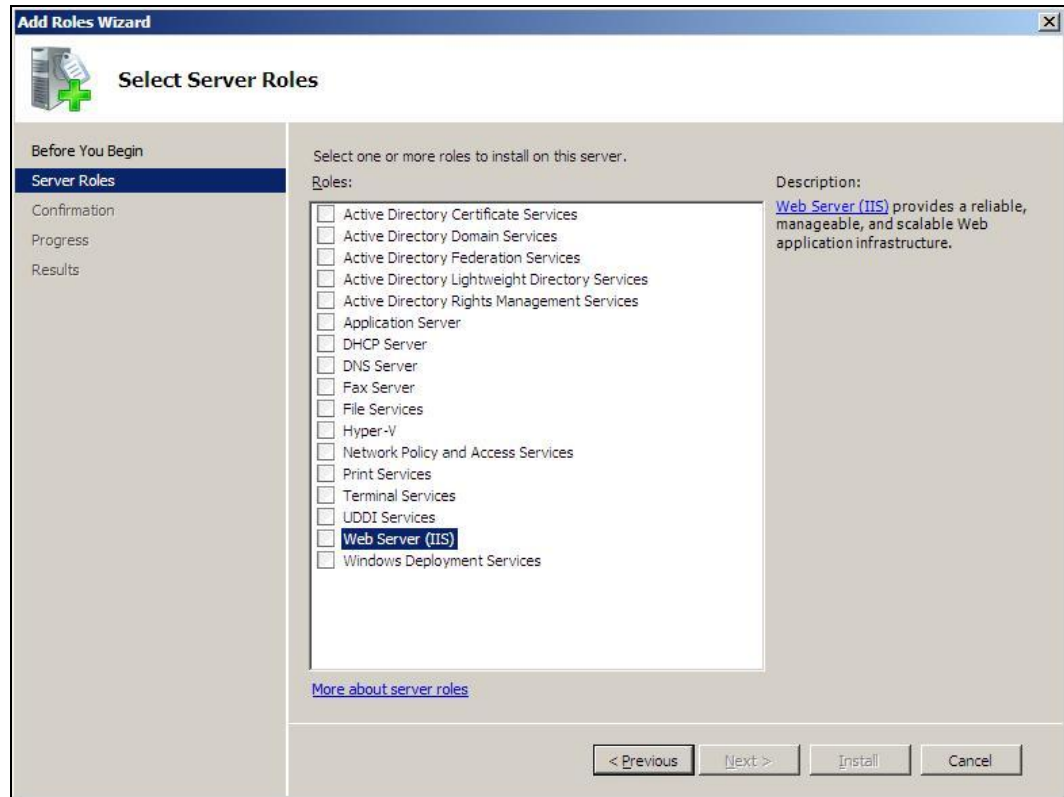
3. Select **Web Server (IIS)**.

4. Click **Next**.

5. On the Select Role Services screen, check **ASP.NET, IIS Management Console** and **IIS 6 Management Compatibility**.

6. Click Next, and then follow the prompts to complete the installation.

7. When you are finished with the IIS installation, continue with Install the Cyberlogic OPC Server XML Data Access Support.

Install the Cyberlogic OPC Server XML Data Access Support

This procedure is the same for all operating systems, however there are small differences between version 7 and version 8.

Version 7

1. Run the **Cyberlogic OPC Server Suite installation program** from the disk or download.

2. If you have already installed the OPC server and wish to add XML DA support, select the option to **Modify** the installation.

3. When you are presented with the tree showing the components to install, open the **DHX OPC Server** or **MBX OPC Server** branch.
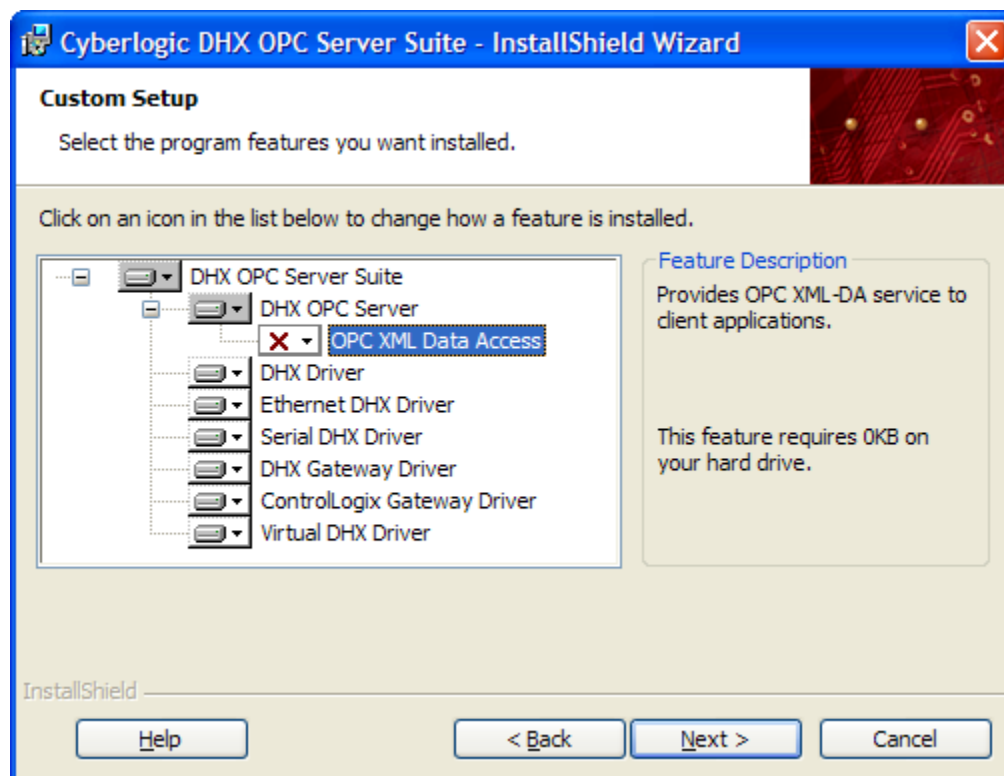
4. Select **OPC XML Data Access** for installation.

5. Click **Next**, and then follow the prompts to complete the installation.

6. To continue with the setup, go to Adding a User Account to the Cyberlogic OPC Users Group.

Version 8

1. Run the **Cyberlogic OPC Server Suite installation program** from the disk or download.

2. If you have already installed the OPC server and wish to add XML DA support, select the option to **Modify** the installation.

3. If you are presented with the tree showing the components to install, click **Next**.

4. You will then be asked if you would like to install the OPC XML Data Access component. Select **Yes**.
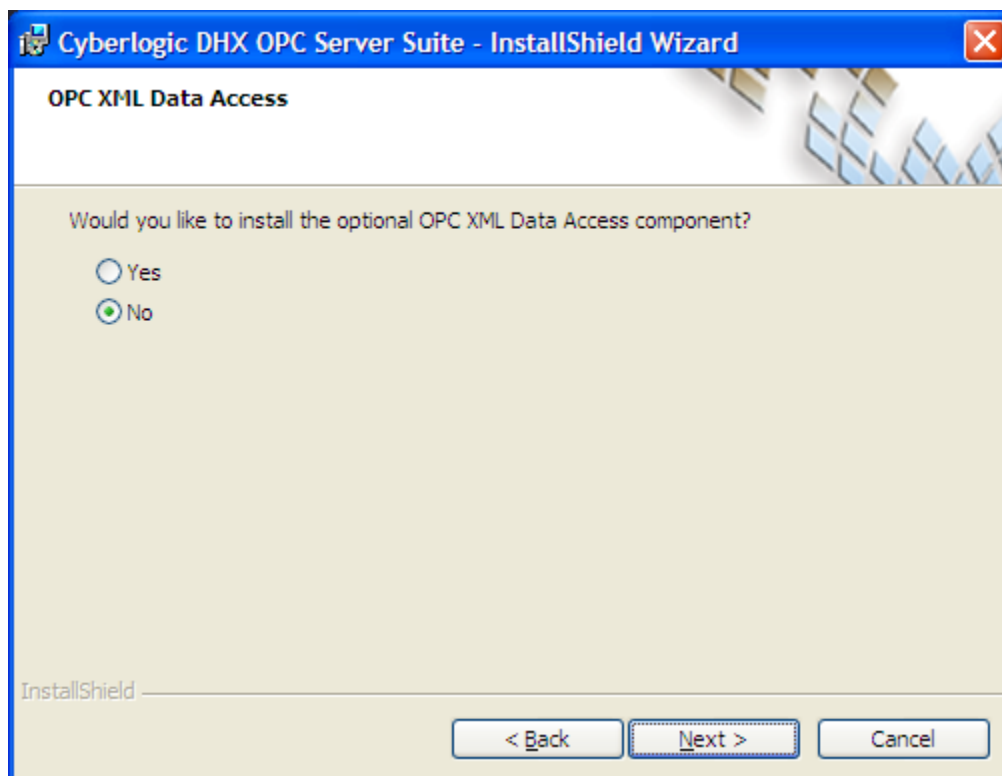
5. Click **Next**, and then follow the prompts to complete the installation.

6. To continue with the setup, go to Adding a User Account to the Cyberlogic OPC Users Group.

Adding a User Account to the Cyberlogic OPC Users Group

The installation software will add default user accounts required by IIS to the Cyberlogic OPC Users group. This group is given the permissions necessary to run the Cyberlogic OPC software. The accounts added by the installation software will depend on the operating system and the IIS revision level.

In some installations, IIS may be configured for a different account than its default. If that is the case on your system, you must manually add this account to the group. The following procedure shows how to determine if IIS is using a different account, and how to add that account to the Cyberlogic OPC Users group.

This procedure may not be necessary, depending on your operating system and its configuration. Once again, the procedure will vary with the operating system you are using:

- Windows XP (32-bit) and 2000

- Windows XP (64-bit) and Server 2003

- Windows Vista/Windows 7/Windows Server 2008/Windows Server 2008 R2

Windows XP (32-bit) and 2000

The version of IIS provided with these operating systems uses only the default accounts, so no additional configuration is needed.
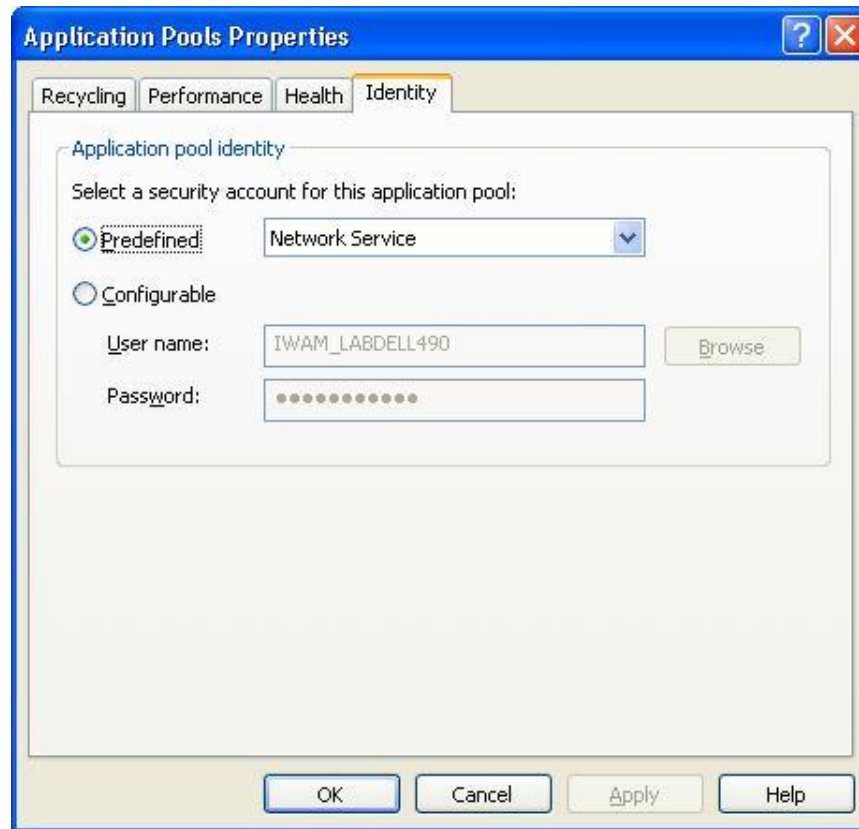
Proceed directly to Connecting an XML DA Client.

Windows XP (64-bit) and Server 2003

1. Right-click on your desktop's **My Computer** icon and select **Manage**.
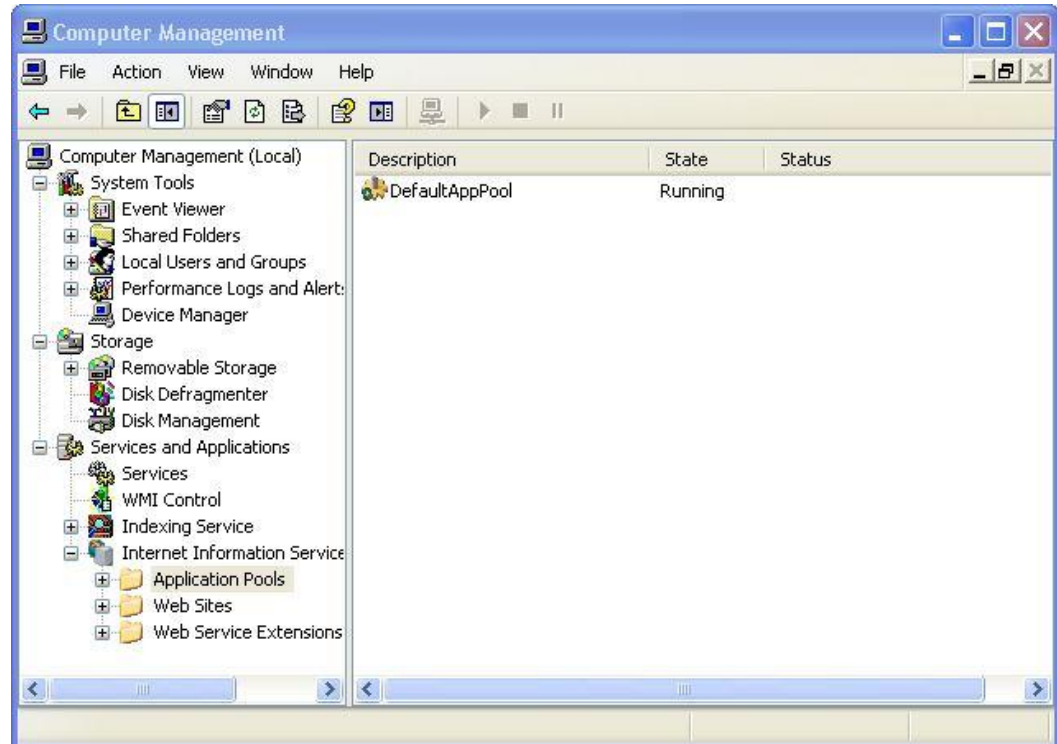
2. Open the **Services and Applications** branch, and then the **Internet Information Services** sub-branch.

3. Right-click on **Application Pools** and select **Properties**.

4. Check the *Identity* tab to find which user account is specified and make a note of it.

5. Open the Windows *Start* menu, then go to *Programs* and navigate to the sub-menu for the Cyberlogic OPC product you have installed. From there, open the *Configuration* menu and select *Cyberlogic Control Panel*.
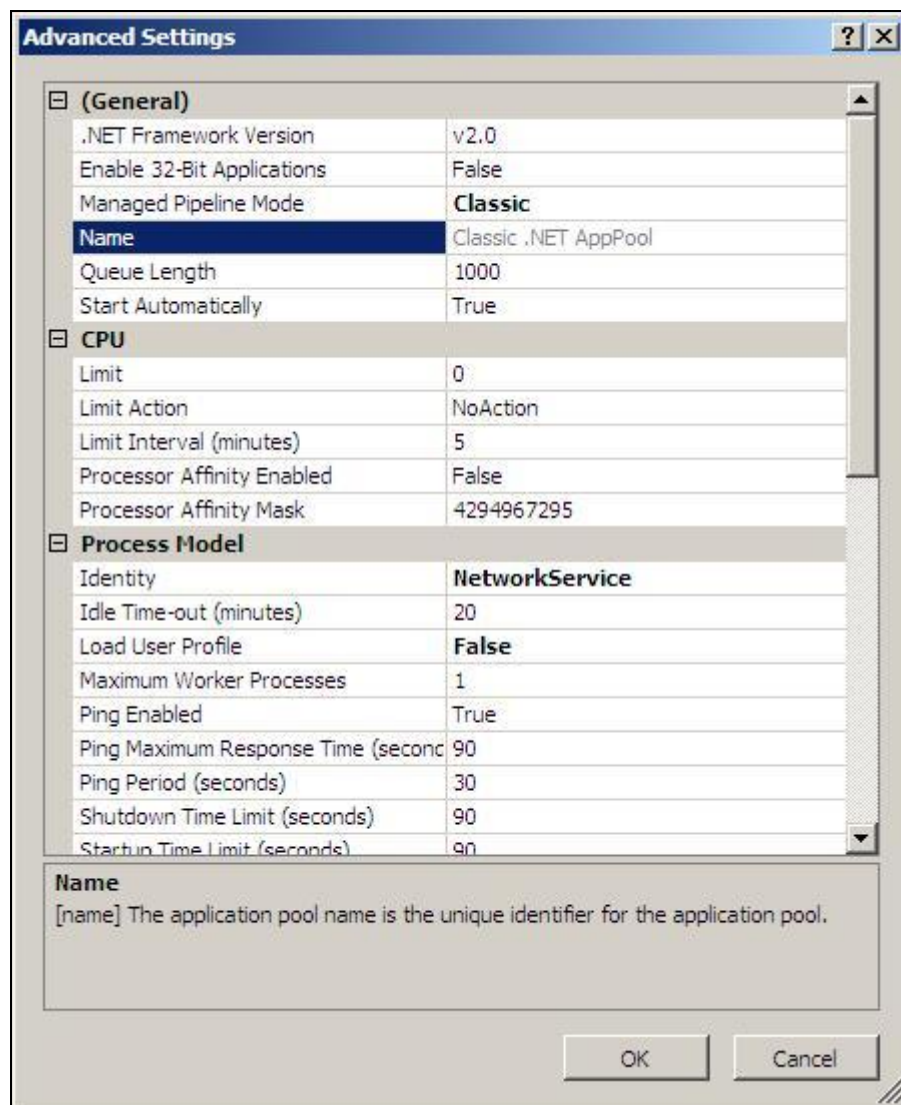
6. In the Cyberlogic Control Panel, select **Cyberlogic OPC Users**.

7. Verify that the IIS user account is shown. If it is not, click **Add...** to add it to the group.

8. When you have finished:

   If you are running with 64-bit Windows XP, go to Selecting the ASP.NET Setting.

   If you are running with Windows Server 2003, go to Connecting an XML DA Client.

Windows Vista/Windows 7/Windows Server 2008/Windows Server 2008 R2

1. Open the **Start** menu and go to the **Windows Control Panel**.

2. From there, open **Administrative Tools** and select **Internet Information Services (IIS) Manager**.
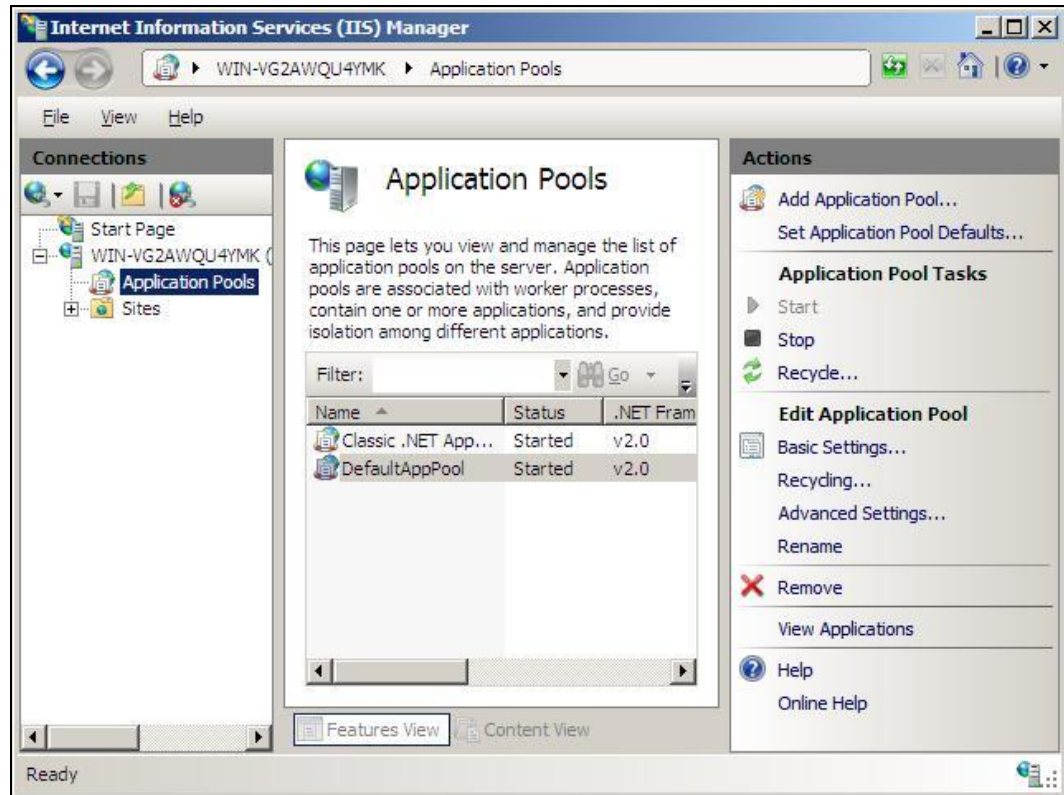
3. In the left pane, select **Application Pools**.

4. In the center pane, select an application pool, and then click **Advanced Settings...** in the right pane.

5. Look under **Process Model** for the value of **Identity**, and make a note of this user account.

6. Cancel this operation and close the IIS Manager.

7. Open the Windows **Start** menu, then go to **Programs** and navigate to the sub-menu for the Cyberlogic OPC product you have installed. From there, open the **Configuration** menu and select **Cyberlogic Control Panel**.

8. In the Cyberlogic Control Panel, select **Cyberlogic OPC Users**.

9. Verify that the IIS user account is shown. If it is not, click **Add...** to add it to the group.

10. When you have finished, go to Connecting an XML DA Client.

Selecting the ASP.NET Setting

This is a concern for 64-bit Windows XP systems only. For all other operating systems, skip this section and go to Connecting an XML DA Client.

Within 64-bit Windows XP, ASP.NET can be configured for 32-bit or 64-bit support. Cyberlogic's software requires 32-bit support, and you can select this mode through the Cyberlogic Control Panel.

> **Caution!** When you select 32-bit support, you will disable support for any web service that requires 64-bit ASP.NET support. Similarly, if you select 64-bit support, you will disable support for the Cyberlogic OPC XML Data Access as well as any other web service that requires 32-bit ASP.NET support. It is not possible to support both modes at the same time.

1. If you don't already have the Cyberlogic Control Panel open, then open the Windows **Start** menu, go to **Programs**, and navigate to the sub-menu for the Cyberlogic OPC

product you have installed. From there, open the **_Configuration_** menu and select **_Cyberlogic Control Panel_**.
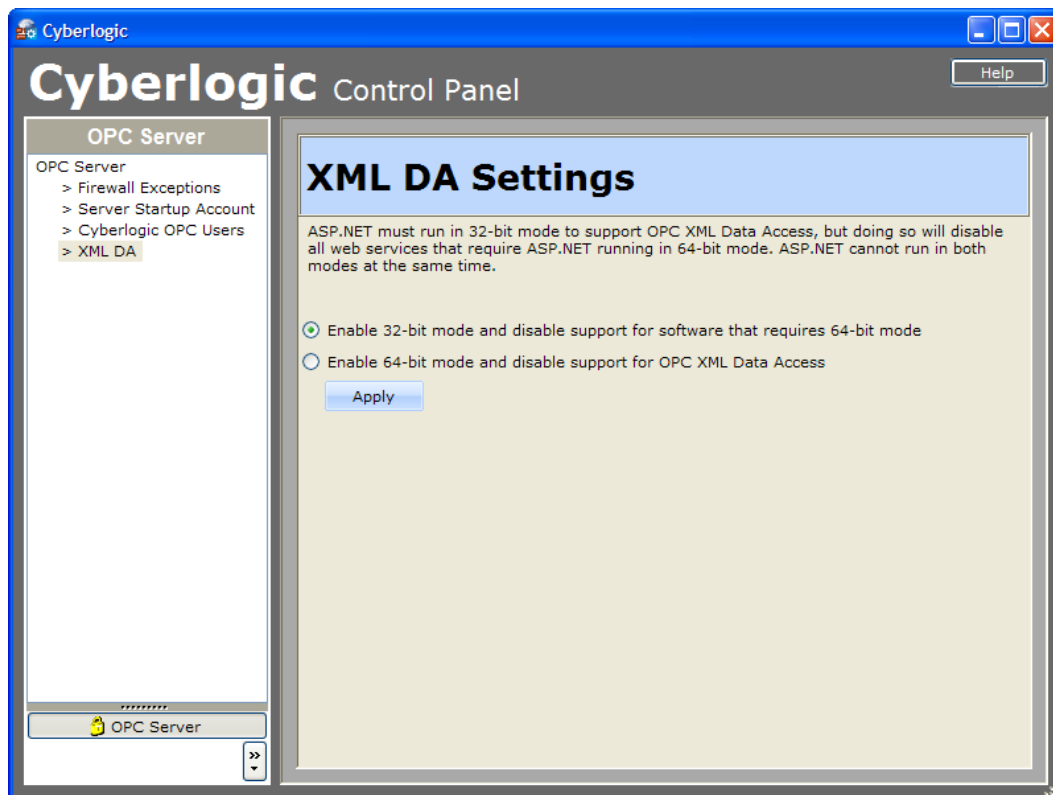
2. In the left pane, select **_XML DA_**.

3. In the radio selection in the right pane, select **_Enable 32-bit Support_**.

4. Click **_Apply_**.

Connecting an XML DA Client

When you open an OPC XML Data Access client application, you must specify the location of the server you want to connect to. The client may ask for an Endpoint, a Server URL or simply for a Server. The prompt will vary from one client to another. In any case, the form of the information you must enter is:

   http://localhost/CybOPCXML/Cyberlogic.OPCServerDA.asmx

This is the exact form you would use if the client and server were on the same system. Otherwise, you must replace localhost with the IP address, computer name or web address of the server.

Technical Support:

If you have any questions or problems with these procedures, please contact Cyberlogic's Technical Support group by emailing techsupport@cyberlogic.com or by calling 248-631-2288.