

Description: Guide to set up IIS 7 and DCOM to properly run OPC XML-DA Servers

OS Requirement: Windows Server 2003 x64/Vista x64/ Server 2008 x64/Windows 7 x64/ Server 2008 R2 x64

General Requirement: .NET Framework v1.1 with SP1 installed

Introduction

Due to the major changes in IIS 7 (introduced with Windows v6 operating systems – Windows 7 and Windows 2008 Server), user has to manually set its properties and settings to be able to connect to an OPC XML-DA Server from any client. They are also required to set up DCOM manually. This application note aims to help you set up IIS 7 and DCOM to run OPC XML-DA Servers to provide OPC data to clients.

Requirement

Microsoft .NET Framework v1.1 with SP1 needs to be installed on Windows 7 or Windows 2008 where you want to have XML-DA Server running. Please refer to the Microsoft Download Center to download installation packages.

Installation/Configuration

To properly run OPC XML-DA Server on the newer operating systems (Windows 7, Windows Server 2008), you have to do the following steps in the following order:

1. Install Web Server (IIS) + IIS 6 Management Compatibility Tool from Management Tools as shown on Figure 1.

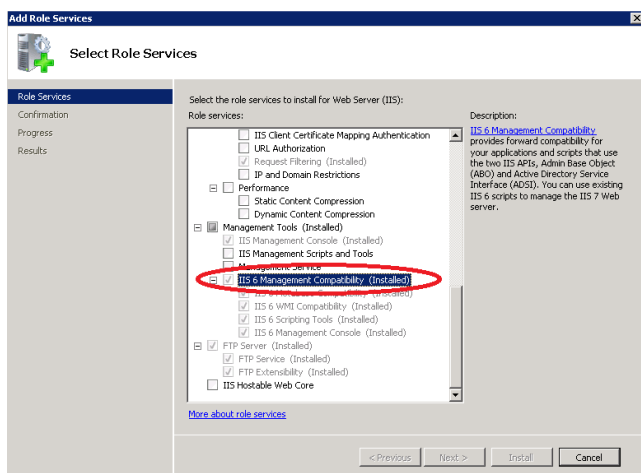


Figure 1 - Installing IIS 7 + IIS 6 Management Compatibility Tool

2. Install .NET Framework v1.1 and update it with SP1 (download package “NDP1.1sp1-KB867460-X86” from Microsoft Download Center).

3. Install an OPC Server with enabled XML-DA support (e.g. ICONICS Simulator v3.12, ICONICS Modbus Ethernet OPC Server, etc.).

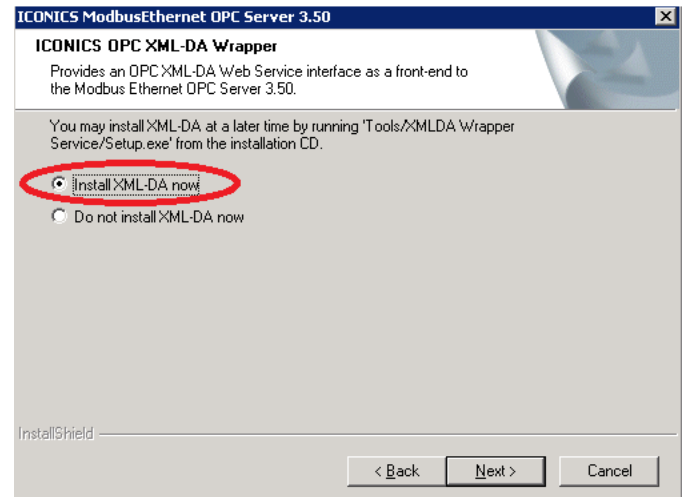


Figure 2 - Enabling OPC XML-DA support

4. Reconfigure IIS 7 (see details below).
5. Properly set up DCOM permissions for OPC Server (see details below).

Reconfiguring IIS 7

After successful installation of .NET Framework v1.1 + SP1 and XML-DA enabled OPC Server follow the steps below to reconfigure IIS7.

1. Open the IIS 7 console by pressing WIN+R buttons and running command ‘inetmgr’.
2. Go to the very top level in the tree control on the left-hand side.
3. Open ‘ISAPI and CGI Restrictions’ in IIS Area.
4. Allow ASP.NET v1.1.4322 by double-clicking a row and in the opened dialog window by checking ‘Allow extension path to execute’ checkbox as shown on Figure 3.

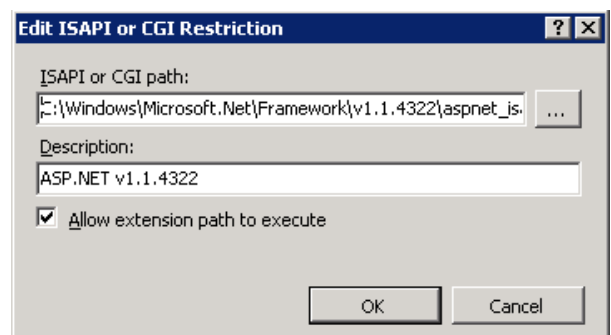


Figure 3 – Allowing ASP.NET v1.1 under ISAPI and CGI Restrictions

5. Go back to the very top level of the left-side tree again and open 'ISAPI Filters' in IIS Area.
6. Add new ISAPI Filter there, name it 'ASP.NET 1.1' and as executable enter
'C:\Windows\Microsoft.NET\Framework\v1.1.4322\aspnet_filter.dll'
7. Now expand Sites → Default Web Site in the tree control and select your XML-DA Server (e.g. Simulator-XML-DA, ModbusEthernet-XML-DA).
8. Open Basic Settings by clicking the option in the Action pane on the right-hand side.
9. In the dialog window, click on the 'Select...' button for the Application Pool and change it to ASP.NET 1.1. Confirm all changes.
10. Go back to the level of your XML-DA Server and select Authentication.
11. Enable 'Anonymous Authentication'.
12. Press WIN+R to bring up the run command dialog and restart IIS by running the 'iisreset' command (without quotes).

- *ModbusEthernet-XML-DA* = Name of the Application which is created in IIS.
- *ICONICS.ModbusEthernetDA* = OPC Server ProgID.

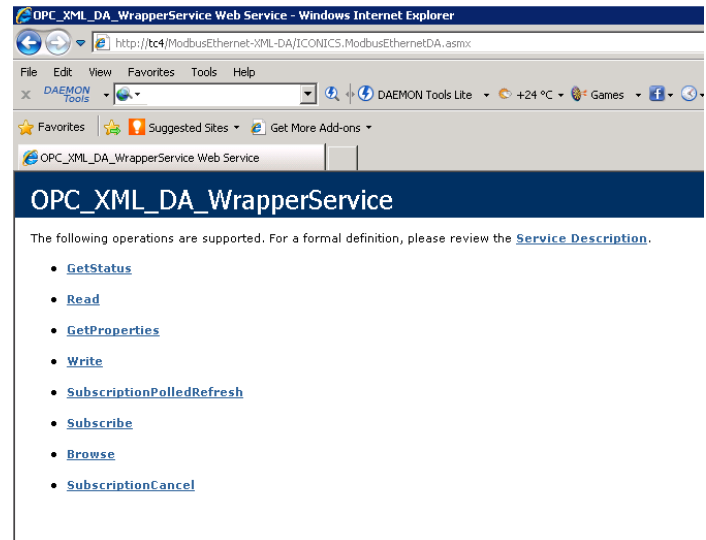


Figure 4 – Testing OPC XML-DA Server in Internet Browser

Setting up DCOM Permissions

To ensure that the server starts automatically when an OPC client application requests data from the OPC XML-DA server you have to set lower restrictions level in default DCOM setting. To properly set up DCOM, please refer to the application notes *GENESIS32 - DCOM on Windows XP and Server 2003 in a Domain* and *GENESIS32 - DCOM on Windows XP and Server 2003 in a Workgroup*, where the setting are similar to those in the newer operating systems.

NOTE: There's a bug in IIS 7 that does not save all settings sometimes. After the restart please try to connect any client to the XML-DA server. If it does not connect, please check all IIS 7 and DCOM settings again. Also do not forget to properly set up the firewall.

Testing OPC XML-DA in Internet Browser

If you followed all the steps above correctly you should be able to test if OPC XML-DA Server responds via web. Follow these steps:

1. Run Internet Explorer from Start → All Programs → Internet Explorer.
2. Enter the following url in the address bar in IE and press enter. You should see output similar to Figure 4.

Example:

`http://servername/ModbusEthernet-XML-DA/ICONICS.ModbusEthernetDA.asmx`

where:

- *Servername* = Computer where OPC XML-DA Server is installed.

This application note described how to install / configure XML-DA Server. If you want to connect to your XML-DA Server from GENESIS64 please refer to application note *GENESIS64 - OPC XML DA Support*.