

Active OPC Server Lite User's Manual

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Active OPC Server Lite User's Manual

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Introduction

Moxa's Active OPC Server Lite is a software package that operates as an OPC driver of an HMI or SCADA system. It offers a seamless connection from Moxa's I/O products to SCADA systems, including Wonderware, Citect, and iFix. Active OPC Server Lite meets the latest standard of OPC DA3.0 that allows connections to various kinds of devices and host OPC machines.

Specifications

| Hardware Requirements | |
|----------------------------------|--|
| CPU | Intel Pentium 4 and above |
| RAM | 512 MB (1024 MB recommended) |
| Network Interface | 10/100 Mb Ethernet |
| Software Requirements | |
| Operating System | Microsoft Windows 2000, XP or later |
| Editor (not required) | Microsoft Office 2003 (Access 2003) or later |
| OPC Server Specifications | |
| OPC Data Access | 1.0a, 2.0, 2.05a, 3.0 |
| Max. No. of Tags | 5000 (V1.12 or later) |

NOTE Active OPC Server Lite does not limit the number of the connected I/O devices; the connection limitation depends on the virtual memory resource of Windows Operating System.

Installation and Configuration

Installing Active OPC Server Lite

Active OPC Server Lite can be downloaded from the Moxa Website.

After downloading the file, unzip it and run **Install.exe**. The installation program will guide you through the installation process and install the Active OPC Server Lite utility.

Installing OPC Core Components

OPC Core Components provide the connection library needed by Active OPC Server Lite. This package must be installed on the computer that is running Active OPC Server Lite.

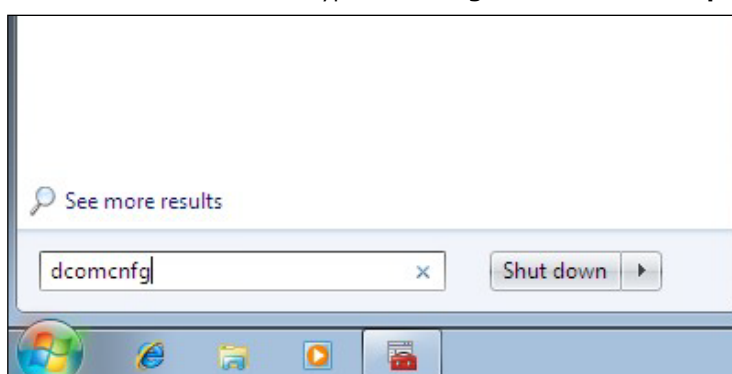
For first time installation, a pop-up message will appear asking if you would like to install the OPC Core Components. You may skip this step if the package has already been installed.

Configuring DCOM Settings

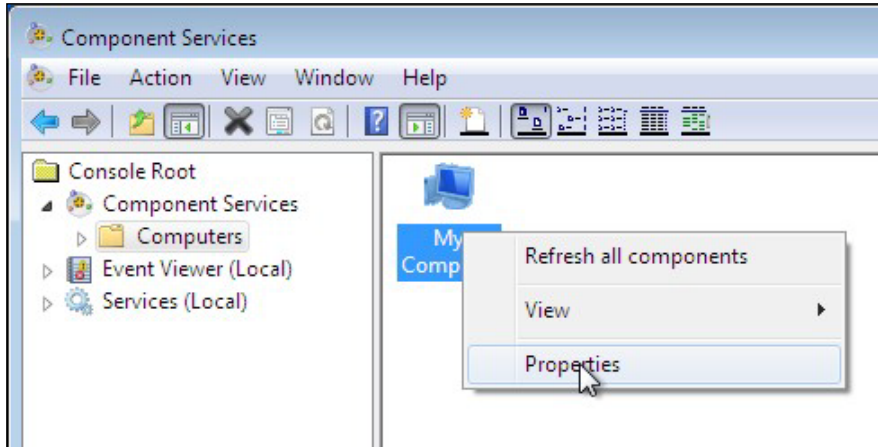
Before launching Active OPC Server Lite, configure the DCOM settings for your security policy.

NOTE If the OPC Client and Server software are installed on different servers, the DCOM, WORKGROUP, System Account, and Password settings should be the same.

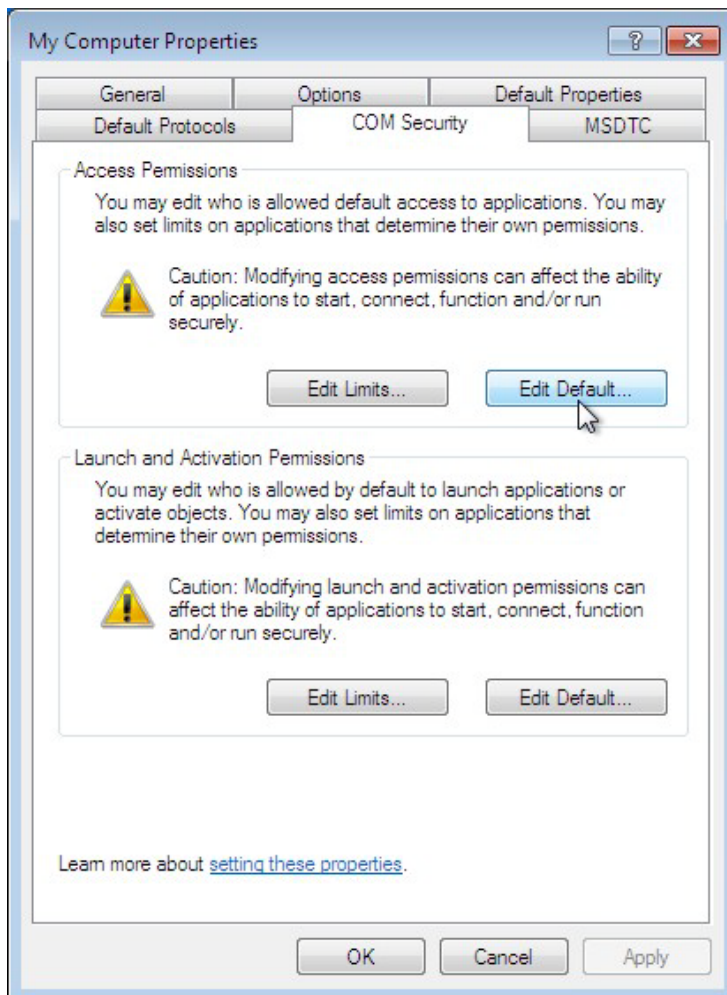
1. Go to the **START** menu and type **dcomcnfg** to activate the **Component Services** dialog box.



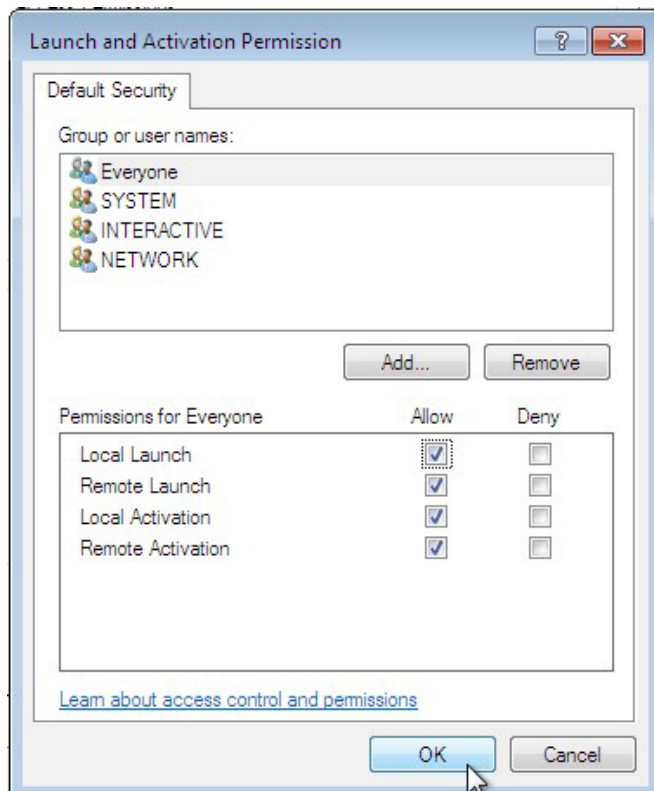
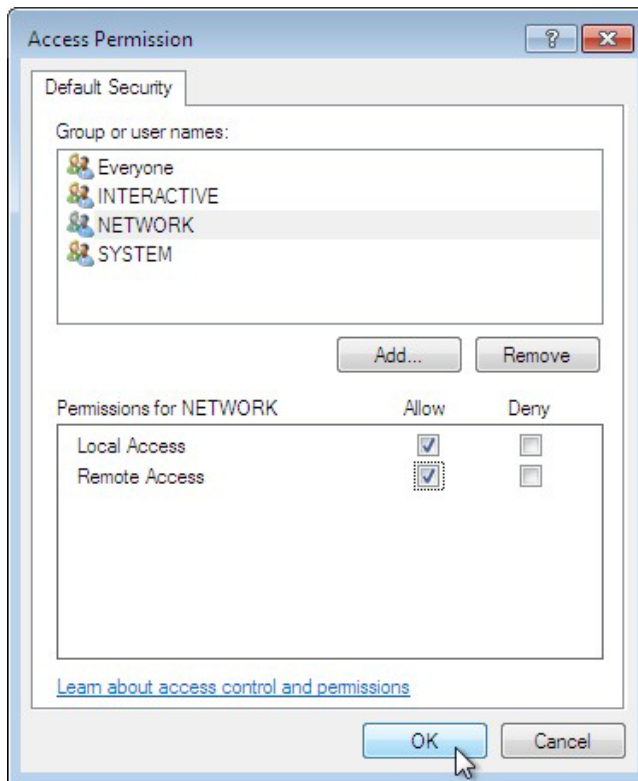
2. Right click **My Computer** under **Console Root** → **Component Services** → **Computers**, and click **Properties** to activate the **My Computer Properties** dialog box.



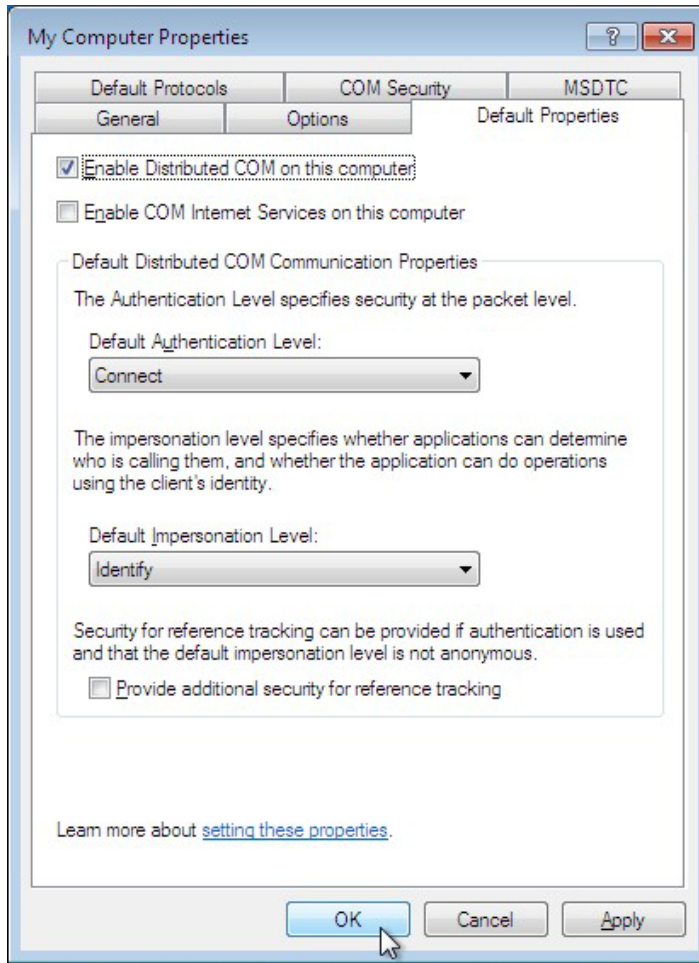
3. Click the **COM Security** tab and edit who is allowed by default to access, launch, or activate the applications or objects.



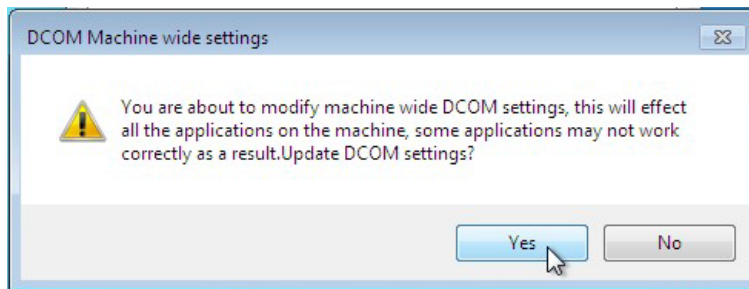
4. Add **Everyone**, **INTERACTIVE**, **NETWORK**, and **SYSTEM**, and set **Allow** permission to all of these groups.



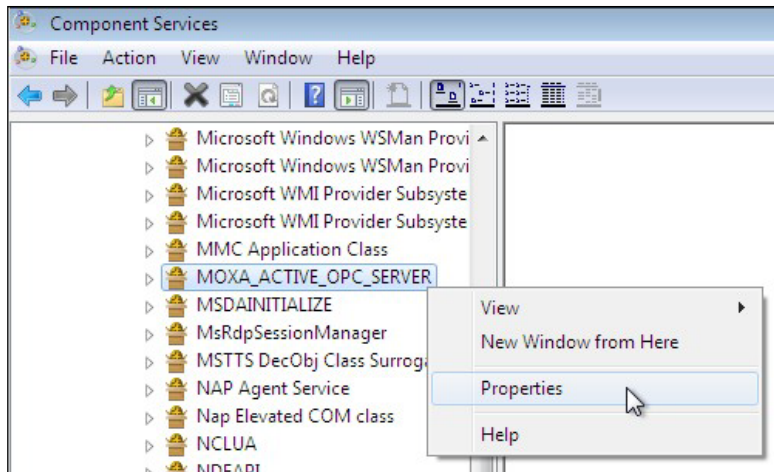
5. Click the **Default Properties** tab and check if the settings are the same as shown in the screenshot below.



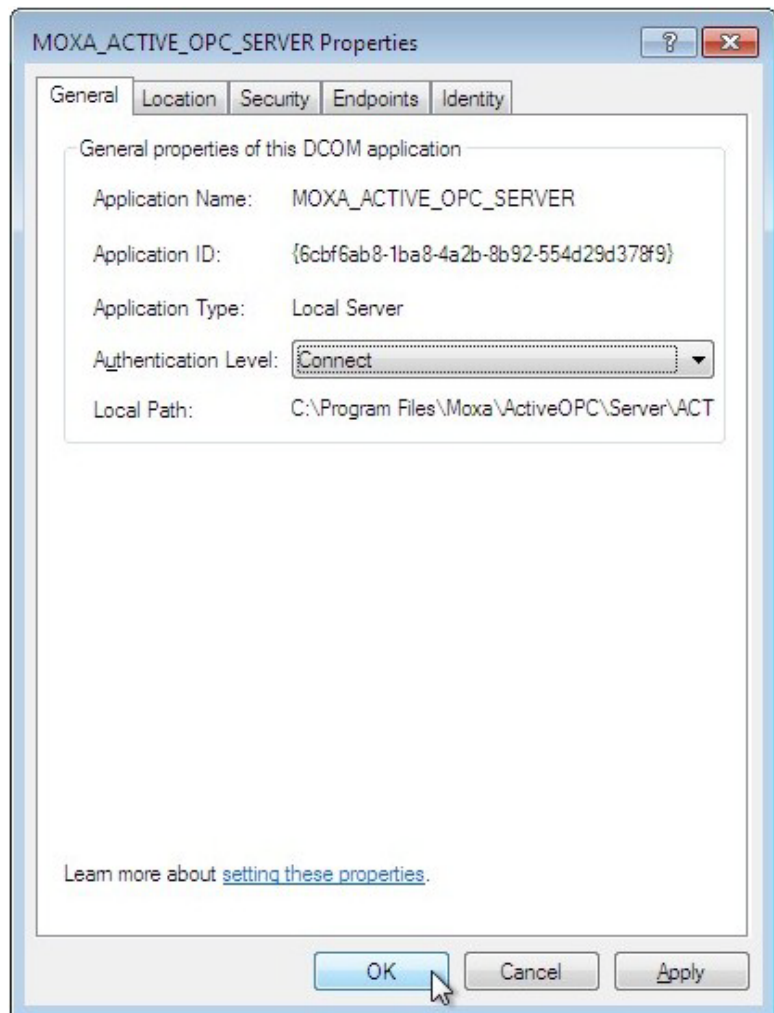
6. Click **Yes** when the following warning message appears.



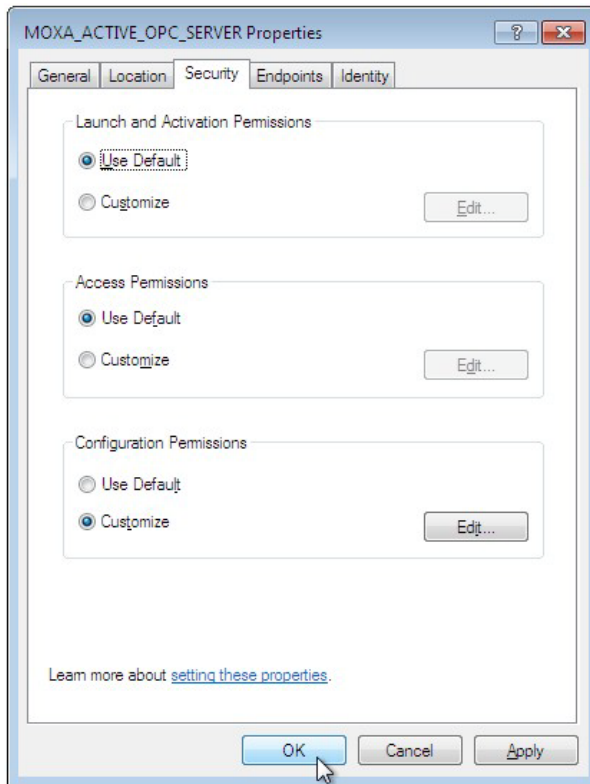
7. Go back to the **Component Services** dialog box, and right click **MOXA_ACTIVE_OPC_SERVER** under **Console Root** → **Component Services** → **Computers** → **My Computer** → **DCOM Config**, and then click **Properties**.



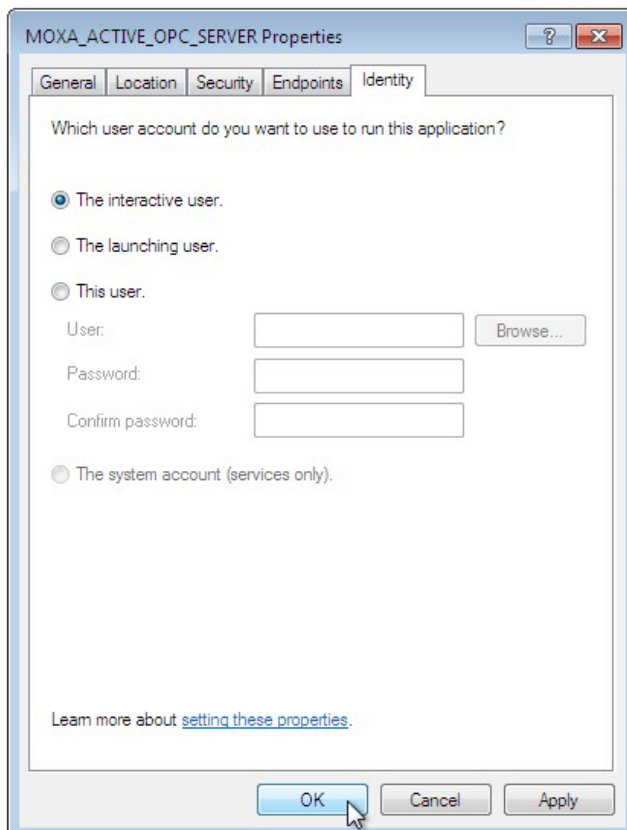
8. Click the **General** tab, and set the **Authentication Level** to **Connect**.



- Click the **Security** tab. You may either apply the default settings of Access, Launch, and Activation Permissions to the Active OPC Server or customize the permission settings. If you would like to customize the settings, make sure that **Everyone, INTERACTIVE, NETWORK**, and **SYSTEM** are added, and that the permission for these groups is set to **Allow**.



- Click the **Identity** tab and make sure **The interactive user** is selected. If the Active OPS Server is running as a Windows service, **The system account** is selected. Now DCOM is ready to accept all incoming connections.



Run Active OPC Server Lite

After the installation is finished, run Active OPC Server Lite from the Windows Start menu: **Start** → **Program** → **Files** → **MOXA** → **IO Server** → **ActiveOPC** → **ActiveOPC**.

NOTE We recommend turning off Windows Firewall to check if the Active OPC Server Lite is running correctly at the first time. If yes, turn on Windows Firewall and check it again. If Active OPC Server does not receive any tag after you turn on Windows Firewall, add ActiveOPC.exe and OPCEnum.exe in the Firewall Inbound Rules, and set them to Allow for Private, Public, and Domain network profiles.

Main Screen Overview

Active OPC Server Lite's main screen displays a figure of the mapped I/O device with the status of every I/O tag. Note that configuration and tags are not available until the device creates the tags.

| Tag Name | Description | Value | Status | Channel | Quality | R/W | Unit | Type | Active Tag |
|----------|-------------|-------|--------|---------|---------|------------|---------|-------------|------------|
| AI-00 | AI | 0.001 | | 0 | GOOD | Read Only | +/-10V | double | Y |
| AI-01 | AI | 0.001 | | 1 | GOOD | Read Only | +/-10V | double | Y |
| AI-02 | AI | 0.001 | | 2 | GOOD | Read Only | +/-10V | double | Y |
| AI-03 | AI | 0.000 | | 3 | GOOD | Read Only | +/-10V | double | Y |
| DI-00 | DI | 0 | OFF | 0 | GOOD | Read Only | ON/OFF | boolean-bit | Y |
| DI-01 | DI | 0 | OFF | 1 | GOOD | Read Only | ON/OFF | boolean-bit | Y |
| DI-02 | DI | 0 | OFF | 2 | GOOD | Read Only | ON/OFF | boolean-bit | Y |
| DI-03 | DI | 0 | OFF | 3 | GOOD | Read Only | ON/OFF | boolean-bit | Y |
| DI-04 | DI | 0 | OFF | 4 | GOOD | Read Only | ON/OFF | boolean-bit | Y |
| DI-05 | DI | 0 | OFF | 5 | GOOD | Read Only | ON/OFF | boolean-bit | Y |
| DI-06 | DI | 0 | OFF | 6 | BAD | Read Only | Disable | boolean-bit | Y |
| DI-07 | DI | 0 | OFF | 7 | BAD | Read Only | Disable | boolean-bit | Y |
| DI-08 | DI | 0 | OFF | 8 | BAD | Read Only | Disable | boolean-bit | Y |
| DI-09 | DI | 0 | OFF | 9 | BAD | Read Only | Disable | boolean-bit | Y |
| DI-10 | DI | 0 | OFF | 10 | BAD | Read Only | Disable | boolean-bit | Y |
| DI-11 | DI | 0 | OFF | 11 | BAD | Read Only | Disable | boolean-bit | Y |
| DO-00 | DO | 0 | OFF | 0 | BAD | Read/Write | Disable | boolean-bit | Y |
| DO-01 | DO | 0 | OFF | 1 | BAD | Read/Write | Disable | boolean-bit | Y |
| DO-02 | DO | 0 | OFF | 2 | BAD | Read/Write | Disable | boolean-bit | Y |
| DO-03 | DO | 0 | OFF | 3 | BAD | Read/Write | Disable | boolean-bit | Y |
| DO-04 | DO | 0 | OFF | 4 | BAD | Read/Write | Disable | boolean-bit | Y |

Active OPC Server initialize successfully : 2011/05/30 17:30:56

Clear Log Save Log

Device Count :1 9500 Connection: 1 Client Count :0 Start Listen Port:9900 2011/05/30 17:33:08

Active OPC Server Lite Main Screen

1. Title

2. Menu bar

3. Quick link

4. Navigation panel

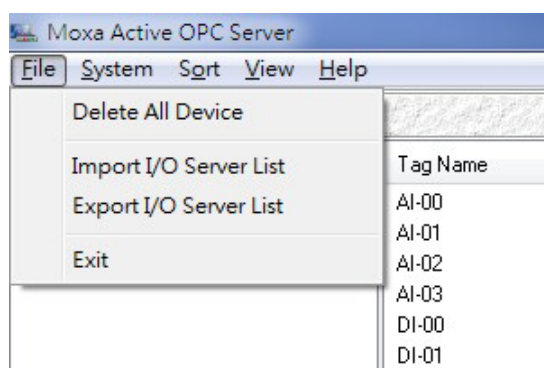
5. Tag Window

6. Log Monitor

7. Status bar

File

From the **File** menu, you can export the list of devices that are currently displayed in the navigation panel. You also can import a list into the Active OPC Server Lite.

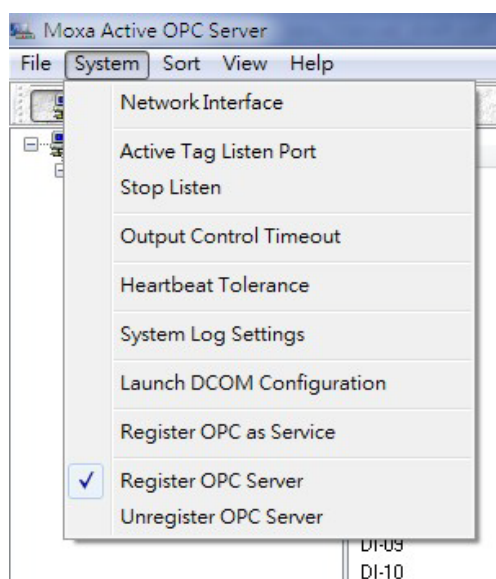


The file will have the .mdb extension, and can be opened using Microsoft Office Access. The server list includes the current tag information of the mapped device.

NOTE We recommend saving the configuration when exiting the Active OPC Server.

System

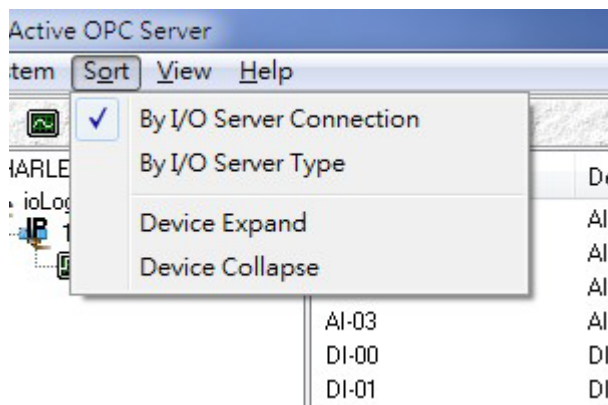
The operations listed below can be accessed from the System menu.



- **Network Interface** allows you to select a network interface on the Active OPC Server for receiving connections from the remote devices.
- **Active Tag Listen Port** allows you to define the preferred TCP socket port for receiving active tags from the remote devices.
- **Stop Listen** allows you to stop receiving active tags and I/O status updates.
- **Output Control Timeout** allows you to define the socket timeout interval for controlling output channels on remote devices.
- **Heartbeat Tolerance** allows you to define an additional timeout interval to wait for a heartbeat signal from remote devices.
- **System Log Settings** allows you to enable or disable the Active OPC Server system log function.
- **Launch DCOM Configuration** allows you to launch the Windows DCOM configuration utility.
- **Register OPC as Service** allows you to set the Active OPC Server program to run as a Windows system service.
- **Register OPC Server** allows you to register the DCOM components to the Windows system.
- **Unregister OPC Server** allows you to cancel the registration of the DCOM components from the Windows system.

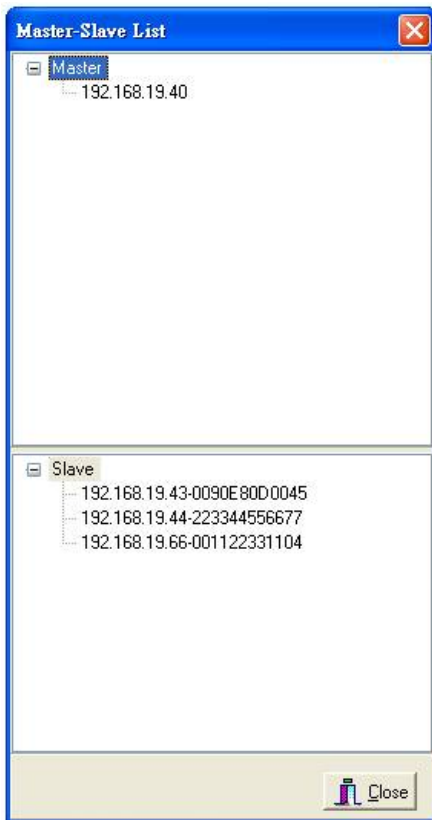
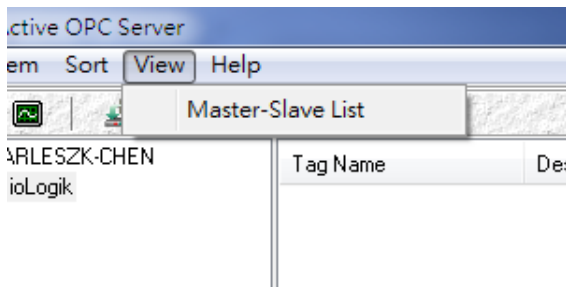
Sort

The Sort menu allows the server list in the navigation panel to be sorted by connection or type (model).



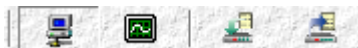
View





The View menu shows the Master and Slave devices that are currently connected with the Active OPC Server. The Master list shows the IP address of the Master device, which will send commands to the Slave devices. The Slave list shows the IP address and MAC address of the I/O devices at the remote sites.



Quick Links

Quick links are provided to sort the server list and import/export configuration.



-  Sort by connection
-  Sort by server type
-  Import configuration
-  Export configuration

6

Tag Generation

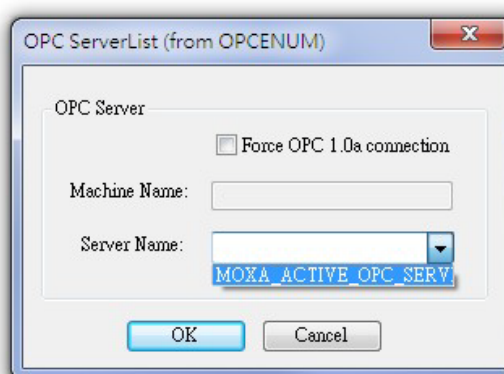
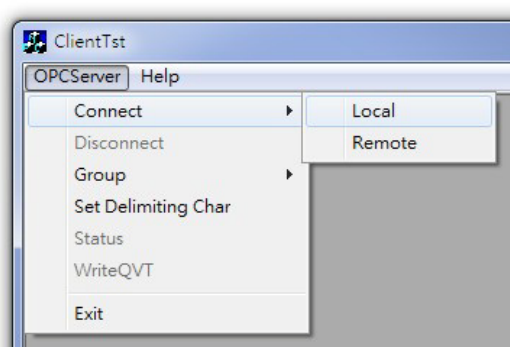
Active OPC Server will automatically receive active tags from remote devices once the tags are created. Refer to I/O device user's manual to learn how to create active tags with the configuration utility.

Save the configuration of Active OPC Server Lite when exiting the program.

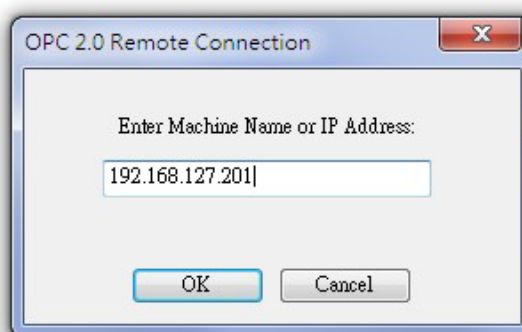
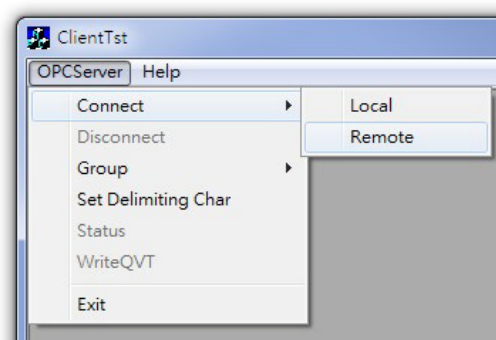
OPC Test Client

An OPC client software is included in the Active OPC Server Lite package for test purposes. After configuring the tags on the Active OPC Server Lite, this **ClientTest** can be launched from the Windows Start menu: **Start** → **Program Files** → **MOXA** → **IO Server** → **ActiveOPC** → **ClientTest**.

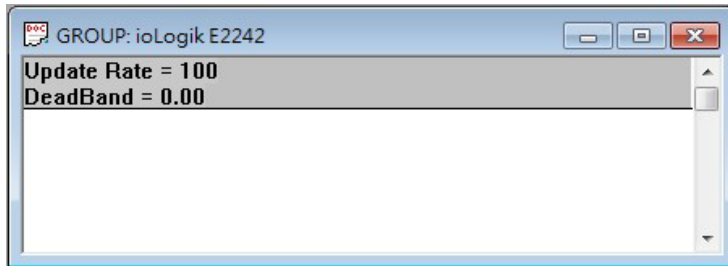
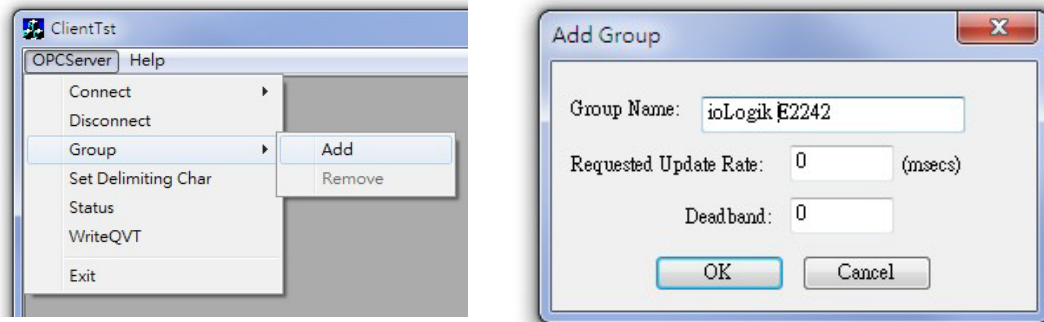
If Active OPC Server Lite is installed locally on the same PC, select **Connect** → **Local** from the menu bar, and then type the name of the **MOXA ACTIVE OPC SERVER** in the **Server Name** column.



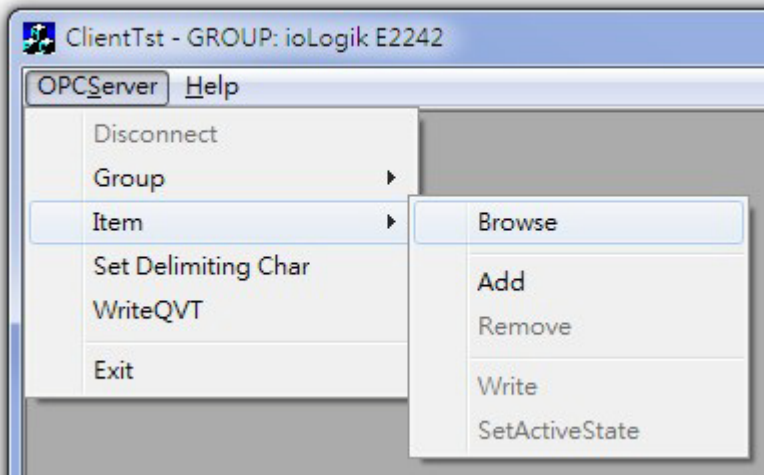
If the Active OPC Server Lite is installed on a remote PC, select **Connect** → **Remote** from the menu bar. Input the host name (i.e. Moxa_Client) or IP address and specify **MOXA ACTIVE OPC SERVER** in the **Server Name** column.

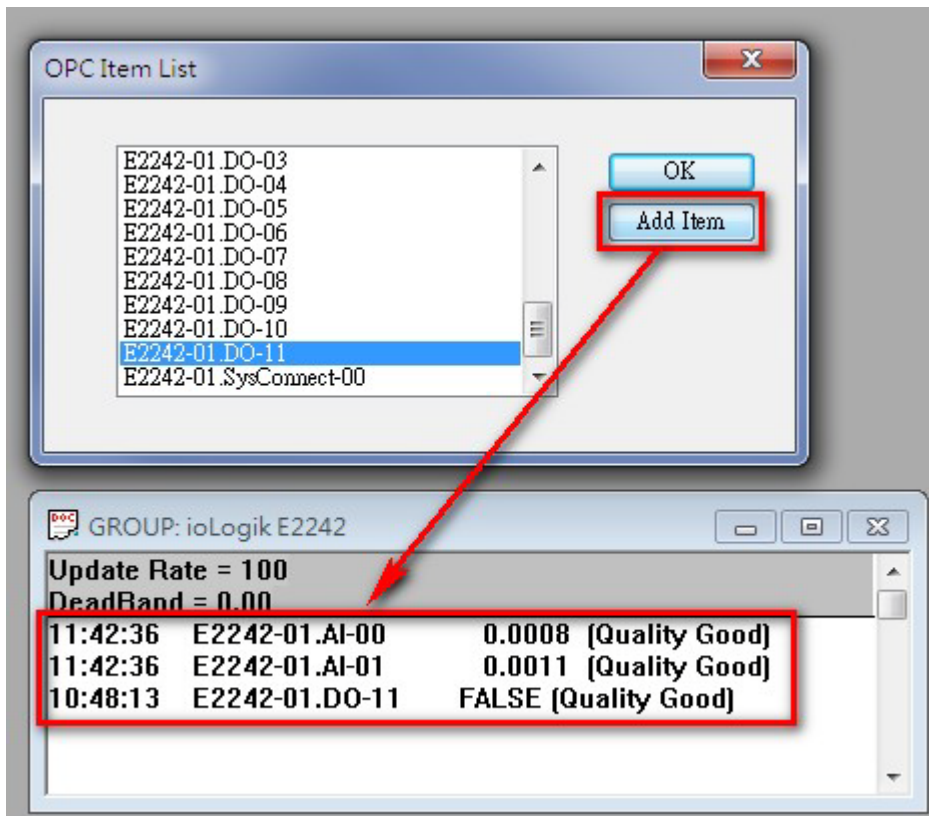


Click on **Group** → **Add** and specify the **Group Name** (user-defined). A blank tag monitoring screen will open.



Click **Item** → **Browse** and select the channel that needs to be monitored.





To write to the output channel, specify an output channel, and then select **Item** → **Write** from the menu bar.

