

How do I setup and use an OPC device?

OPC stands for Open Process Control (previously stood for Object Linking and Embedding for Production Control, but the OLE technology has been replaced by Active X). An OPC server is a software interface standard that allows Windows programs to communicate with industrial hardware devices. OPC is implemented in server/client pairs. The OPC server is a software program that converts the hardware communication protocol used by a PLC (Programmable Logic Controller) into the OPC protocol. The OPC client software is any program that needs to connect to the hardware, such as an HMI (Human-Machine Interface). The OPC client uses the OPC server to get data from or send commands to the hardware.

Setting up an OPC server device in WinSPC involves selecting the OPC server device type and setting up the device's connection. (Note: This article assumes that the OPC Server has already been installed and configured. DCOM may need to be configured to communicate with the OPC Server, and is outside the scope of this knowledge base article.) Use the following steps to setup an OPC Server device:

Selecting the OPC Server device type

Login to WinSPC using the Admin account or an account that has administrator privileges. Double-click the Device you want to set up as an OPC Server device from within the Contents pane of the Administrator screen. This causes the Device Setup dialog box to appear with the Connection tab selected. If the device has not yet been created, then complete the Creating a Device procedure by clicking on the following link: [How do I create a Device in WinSPC](#) Select OPC Server from the Device Type dropdown box. The Connection tab changes to content appropriate for the OPC Server device. (See Figure 1)

Setup the device's connection

Click the Browse button to select the Server Name. This will bring up the OPC Server Browser setup screen. Select the Machine Name that the OPC Server is located on, from the OPC Server Browser window. To do this, use the following steps: (Figure 2) Select your OPC server version from the OPC Servers To Scan For box (located near the lower left hand corner). This is just the method that the browser will use to scan for OPC server, and is not necessarily the type of the OPC server. If you are not sure of the version of your OPC server, then select the highest version and work your way down to the lowest until you find a compatible version. If the OPC server is located on the same machine as the WinSPC client (and has the same WinSPC name as the machine), then select the WinSPC client name from the list in the left hand window with a single left-mouse click. This causes WinSPC to scan the WinSPC client computer for an OPC server. When scanning is complete, select the desired OPC server name from the right hand window with a single left mouse click. NOTE: By selecting the local client name from the list, other WinSPC clients may not be able to access the OPC Server device EXCEPT for the local WinSPC client. If more than one WinSPC client needs access to this device, then skip this step and proceed to the next step. If the OPC server is located on the network, Terminal Services or Web Client, then in the left hand window, expand the tree and locate the machine name that has the OPC server installed. Select the machine name with a single left-mouse click. This causes WinSPC to scan the networked computer for an OPC server. When scanning is complete, select the desired OPC server name from the right hand window with a single left mouse click. Click the OK button. This causes the OPC Server Browser to close and the Machine Name and Server Name fields on the Device Setup dialog to be populated, respectively, with the name of the computer on which the OPC server is installed and the name of the OPC server itself. In At Group Name dialog box, enter the group name that you require on the OPC server that has been setup by the OPC Administrator. If no Group name is entered, WinSPC will display the entire OPC server group tree in the Collection Plan configuration. (OPC Groups provide a way to organize data for clients. For example, the group might represent items in a particular

operator display or report.) Check the User Data Advise check box if you want WinSPC to record the data every time the OPC Server sends a new reading. If you elect not to check this check box, you will be able to define a key combination (or use Timed Data Collection) in the collection plan configuration that will prompt the OPC server for data. NOTE: OPC Servers can send new readings several times a second. The massive amount of incoming data has the potential to increase the WinSPC database size large enough to fill up all the available hard-disk space on your database server. OPC Server Type, select the highest data access interface supported by the OPC server from the dropdown box. There are three data access interfaces: 1.0, 2.0, and 3.0 to choose from. WinSPC supports all three of these interfaces. Click the OK button to save and exit the device setup screen. The OPC server device is now setup and collection plans can be configured to use it.

Events Tab

The Events tab in Device Setup allows you to view all the events for the device. For example if a setting on the connection tab was changed, an event will appear in the Events tab

The actual events will be displayed in this window along with date/time, user, station and event category information. The events which are recorded are affected by the 'Enable System Audit Trail' option in the 'System Settings'. For more information on enabling the system audit trail, click on the following link: [How can I see the changes or events that have occurred for a specific WinSPC item?](https://knowledgebase.winspc.com/questions/205/)

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