SIEMENS

SIMATIC

SIMATIC Automation Tool user guide

Application Manual

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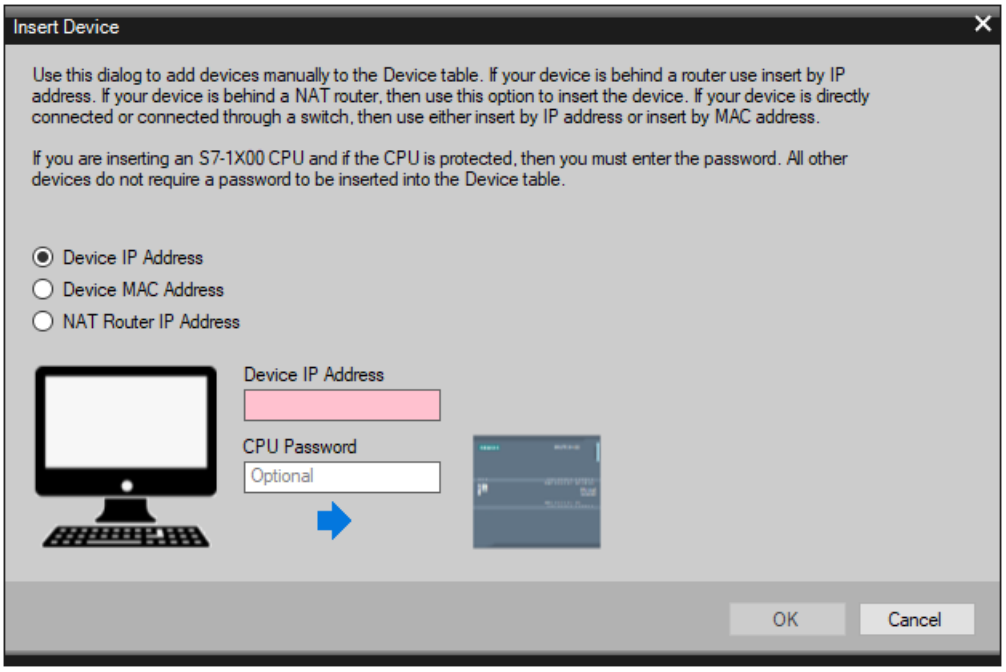
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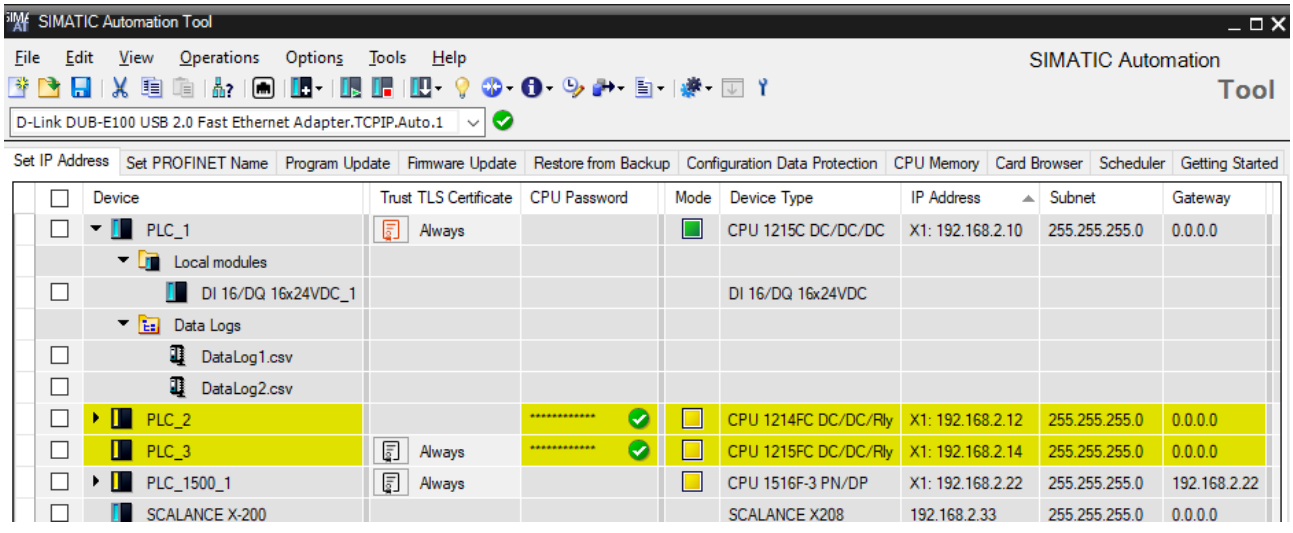


Working with the Device table

The Device table shows the connected devices. The SIMATIC Automation Tool displays columns of data about each device. To perform an operation, select the device by clicking the checkbox on the left. Then, use the toolbar or main menu to select the operation you wish to perform. You can select multiple devices and SIMATIC Automation Tool performs the operation to all the devices that you selected.

If a CPU is protected, enter a CPU password for the device. Most operations within the SIMATIC Automation Tool require read and write privileges for the CPU.

Advanced topics: Sorting, Filtering, Configuring columns (Page 128), Supported devices (Page 128)



Locate a device by flashing LEDs or HMI screens

You can use the Identify operation in RUN mode and STOP mode. To identify devices, follow these steps:

1. Select one or more devices to include in the operation. You can use the Devices check box at the top of the Device table to select or deselect all devices. Alternatively, you can use the "View > Select" menu command to access the "Select Row(s)" and "Deselect Row(s)" commands.
2. Select the "Operations > Identify" menu command or click the toolbar button for identifying selected devices.

CPUs, SCALANCE, and other devices flash their LEDs to show their location. HMI devices perform a screen flash.

Identifying unsupported devices

The Identify operation is a MAC address-based operation that uses DCP (Discovery and Configuration Protocol). The SIMATIC Automation Tool can use the DCP-MAC address operations for all directly-connected network devices.

Unsupported devices might not flash LEDs or HMI screens based on the hardware configuration of the device.

By default, the SIMATIC Automation Tool displays unsupported devices. You can disable this option in the General settings (Page 84).

4.6 Showing device diagnostics

CPU diagnostics contain an entry for each diagnostic event. Each entry includes the date and time the event occurred, an event category, and an event description. The entries are in chronological order with the most recent event at the top. When the log is full, a new event replaces the oldest event in the log. When power is lost, the events are saved.

To show CPU diagnostics, follow these steps:

1. Select one or more CPUs in the Device table. If you want to deselect all devices first, you can deselect the Devices check box at the top of the Device table. Alternatively, you can also use the right-click shortcut menu or the "View > Select" menu to access the "Deselect Row(s)" command.
2. For each selected CPU, enter a password, if used, in the "CPU Password" column that provides read access.
3. Select the "Operations > Diagnostics > Show Diagnostics" menu command. Alternatively, click the "Show device diagnostics" toolbar button and select "Show Diagnostics" from the button drop-down menu.

The SIMATIC Automation Tool then displays a dialog that includes the diagnostics of the selected CPUs. You can select a CPU from the device list to see the diagnostics for that CPU.

NOTE

The SIMATIC Automation Tool displays the diagnostic events in the order they occurred, regardless of the date and time of the event. Setting the CPU time to a time in the past has no effect on the event order.

Setting the IP address on supported devices

To set the IP address for a device, follow these steps:

1. Click the "Set IP Address" tab.
2. Select one or more devices to include in the operation. You can use the Devices check box at the top of the Device table to select or deselect all devices. Alternatively, you can use the right-click shortcut menu or the "View > Select" menu command to access the "Select Row(s)" and "Deselect Row(s)" commands.
3. Enter values in the "New IP Address", "New Subnet", and "New Gateway" columns. Note that you do not enter a communication interface such as "X1" or "X2" when you enter the New IP Address.

IP Address	Subnet	Gateway	New IP Address	New Subnet	New Gateway
X1: 192.168.2.10	255.255.255.0	0.0.0.0	192.168.2.11	255.255.255.0	0.0.0.0
X1: 192.168.2.12	255.255.255.0	0.0.0.0	192.168.2.15	255.255.255.0	0.0.0.0

   If you enter invalid syntax, the SIMATIC Automation Tool displays the field in red. Correct any errors if necessary.
4. Select Update from the Operations menu or click the Update button on the toolbar and select "Set IP address" from the drop-down menu.

The Update operation sets the IP, subnet, and gateway addresses in the selected devices.
The Event Log below the Device table shows the results of this operation.

Duplicate IP addresses

When two or more devices have the same IP address, the IP Address cells appear in red as shown in the following image:

Device	Trust TLS Certificate	CPU Password	MAC Address	IP Address
S7-1200			28:63:36:80:7F:15	192.168.2.13
S7-1200			28:63:36:85:22:C1	192.168.2.13

You can select devices with duplicate IP addresses, update the IP addresses, and correct the network problem. Only the following operations on devices with duplicate IP addresses are possible:

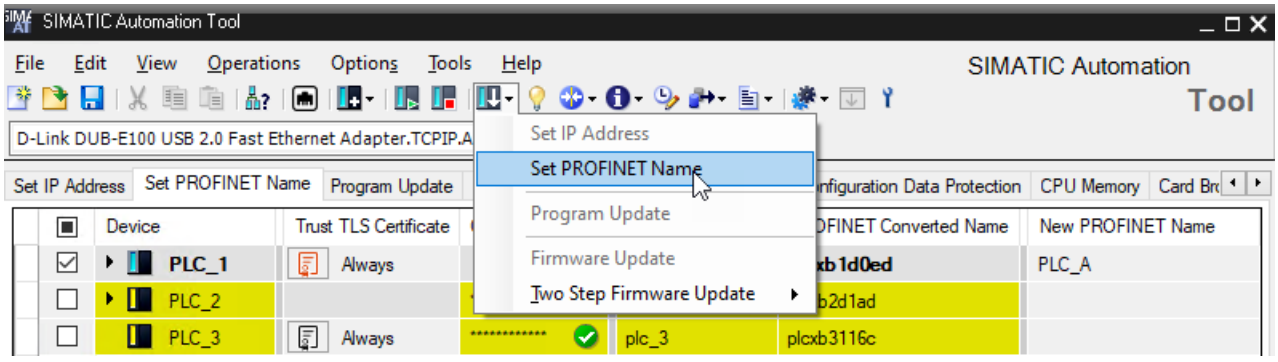
- Delete
- Set IP address
- Set PROFINET name
- Identify devices
- Reset communication parameters

No other device operations are possible for devices that have duplicate IP addresses.

Setting the IP address on unsupported devices

Setting the IP address is a MAC address-based operation that uses DCP (Discovery and Configuration Protocol). The SIMATIC Automation Tool can use the DCP-MAC address operations for all directly-connected network devices, for both Siemens and non-Siemens devices.
Unsupported devices might not accept a change based on the hardware configuration of the device.
By default, the SIMATIC Automation Tool displays unsupported devices. You can disable this option in the General settings (Page 84)

3. Enter a new PROFINET name in the "New PROFINET Name" column.
4. Select Update from the Operations menu or click the Update button on the toolbar and select "PROFINET Name" from the button drop-down menu.

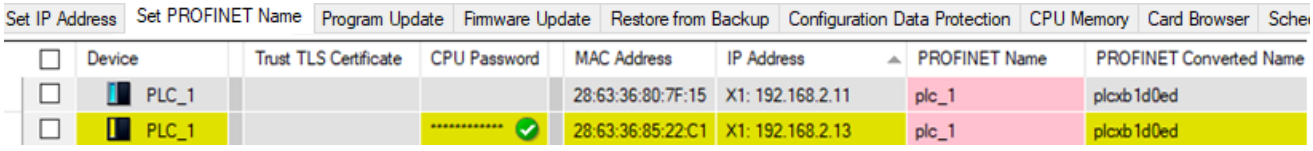


The Update operation sets new PROFINET names in the selected devices. If you enter an invalid PROFINET name according to the PROFINET name rules, the SIMATIC Automation Tool corrects the name to a valid name. The column "PROFINET Converted Name" shows the converted name.

The Event Log below the Device table shows the results of this operation.

Duplicate PROFINET names

When two or more devices have duplicate PROFINET names, the SIMATIC Automation Tool indicates the duplicates with red cells. The SIMATIC Automation Tool supports full functionality for these devices and displays all other information:



Setting the PROFINET name on unsupported devices

MAC address-based operations use the DCP (Discovery and Configuration Protocol). DCP is an Ethernet standard. The SIMATIC Automation Tool can use the DCP-MAC address operations Scan Entire Network, Identify, Update IP address, and Update PROFINET name for all directly-connected network devices (CPUs, HMIs, decentralized I/O, and other devices).

Select the unsupported device row, enter new data in the appropriate column, and update unsupported device PROFINET names in the same way that you update supported devices.

Unsupported devices might not accept a change based on the hardware configuration of the device.

By default, the SIMATIC Automation Tool displays unsupported devices. You can disable this option in the General settings (Page 84).

Supported devices

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7.1 Device catalog

You can display the device catalog from the "Help > View Device Catalog" menu command of the SIMATIC Automation Tool. The device catalog shows the supported Siemens devices and supported SIMATIC Automation Tool operations.

The device catalog file is a Microsoft Excel file. You must have at least Version 2010 of Microsoft Excel to view the device catalog properly and to use functions such as sorting and filtering. The device catalog file is read-only. You cannot modify the file to enable features for a device.

The device catalog has columns that display a check mark in a cell for a TRUE condition and a blank for a FALSE condition. If the "SAT Support" column contains a check mark for a device, the device is supported by the SIMATIC Automation Tool. If the SAT Support cell is blank, the SIMATIC Automation Tool does not support the device. The SAT Support cell overrides check marks that indicate support for other functions, for example, Failsafe.

Unsupported devices

The SIMATIC Automation Tool handles unsupported devices as follows:

- Displays the device in a Device table row with partial information
- Displays the unsupported device question mark icon in the row
- Supports only the following DCP operations when the device is connected to the same subnet as the programming device that is running the SIMATIC Automation Tool:
  - Identify
  - Update IP address
  - Update PROFINET name
  - Reset communication parameters

Unsupported firmware

You might have a device on your network that has a newer firmware version than the latest firmware version that the SIMATIC Automation Tool supports. You can only perform device operations for the latest firmware version listed in the device catalog for the device.

7.2 Fail-Safe CPU support

The following table shows all fail-safe CPUs and firmware versions that the SIMATIC Automation Tool supports:

Article number	Type descriptor	Firmware version	First SIMATIC Automation Tool version to support
6AG1 214-1AF40-5XB0	CPU 1214FC DC/DC/DC SIPLUS	V4.1	V4.0 SP3
6AG1 214-1AF40-5XB0	CPU 1214FC DC/DC/DC SIPLUS	V4.2	V4.0 SP3
6AG1 214-1AF40-5XB0	CPU 1214FC DC/DC/DC SIPLUS	V4.3	V4.0 SP3
6AG1 214-1AF40-5XB0	CPU 1214FC DC/DC/DC SIPLUS	V4.4	V4.0 SP3
6AG1 214-1AF40-5XB0	CPU 1214FC DC/DC/DC SIPLUS	V4.5	V4.0 SP3
6AG1 214-1AF40-5XB0	CPU 1214FC DC/DC/DC SIPLUS	V4.6	V5.0
6AG1 214-1HF40-5XB0	CPU 1214FC DC/DC/Rly SIPLUS	V4.1	V4.0 SP3
6AG1 214-1HF40-5XB0	CPU 1214FC DC/DC/Rly SIPLUS	V4.2	V4.0 SP3
6AG1 214-1HF40-5XB0	CPU 1214FC DC/DC/Rly SIPLUS	V4.3	V4.0 SP3
6AG1 214-1HF40-5XB0	CPU 1214FC DC/DC/Rly SIPLUS	V4.4	V4.0 SP3
6AG1 214-1HF40-5XB0	CPU 1214FC DC/DC/Rly SIPLUS	V4.5	V4.0 SP3
6AG1 214-1HF40-5XB0	CPU 1214FC DC/DC/Rly SIPLUS	V4.6	V5.0
6AG1 215-1AF40-5XB0	CPU 1215FC DC/DC/DC SIPLUS	V4.3	V4.0 SP3
6AG1 215-1AF40-5XB0	CPU 1215FC DC/DC/DC SIPLUS	V4.4	V4.0 SP3
6AG1 215-1AF40-5XB0	CPU 1215FC DC/DC/DC SIPLUS	V4.5	V4.0 SP3
6AG1 215-1AF40-5XB0	CPU 1215FC DC/DC/DC SIPLUS	V4.6	V5.0
6AG1 510-1SJ01-2AB0	CPU 1510SP F-1 PN SIPLUS	V1.8	V4.0 SP3
6AG1 510-1SJ01-2AB0	CPU 1510SP F-1 PN SIPLUS	V2.0	V4.0 SP3
6AG1 510-1SJ01-2AB0	CPU 1510SP F-1 PN SIPLUS	V2.1	V4.0 SP3
6AG1 510-1SJ01-2AB0	CPU 1510SP F-1 PN SIPLUS	V2.5	V4.0 SP3
6AG1 510-1SJ01-2AB0	CPU 1510SP F-1 PN SIPLUS	V2.6	V4.0 SP3
6AG1 510-1SJ01-2AB0	CPU 1510SP F-1 PN SIPLUS	V2.8	V4.0 SP3
6AG1 510-1SJ01-2AB0	CPU 1510SP F-1 PN SIPLUS	V2.9	V4.0 SP3

Article number	Type descriptor	Firmware version	First SIMATIC Automation Tool version to support
6ES7 512-1SK00-0AB0	CPU 1512SP F-1 PN	V1.7	V3.1
6ES7 512-1SK00-0AB0	CPU 1512SP F-1 PN	V1.8	V3.1
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V1.8	V3.1
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.0	V3.1
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.1	V3.1
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.5	V3.1 SP1
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.6	V3.1 SP2
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.8	V3.1 SP4
6ES7 512-1SK01-0AB0	CPU 1512SP F-1 PN	V2.9	V4.0 SP3
6ES7 512-1SM03-0AB0	CPU 1512SP F-1 PN	V3.0	V5.0
6ES7 513-1FL00-0AB0	CPU 1513F-1 PN	V1.7	V3.1
6ES7 513-1FL00-0AB0	CPU 1513F-1 PN	V1.8	V3.1
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V1.8	V3.1
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.0	V3.1
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.1	V3.1
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.5	V3.1 SP1
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.6	V3.1 SP2
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.8	V3.1 SP4
6ES7 513-1FL01-0AB0	CPU 1513F-1 PN	V2.9	V4.0 SP3
6ES7 513-1FL02-0AB0	CPU 1513F-1 PN	V2.5	V3.1 SP1
6ES7 513-1FL02-0AB0	CPU 1513F-1 PN	V2.6	V3.1 SP2
6ES7 513-1FL02-0AB0	CPU 1513F-1 PN	V2.8	V3.1 SP4
6ES7 513-1FL02-0AB0	CPU 1513F-1 PN	V2.9	V4.0 SP3
6ES7 513-1FM03-0AB0	CPU 1513F-1 PN	V3.0	V5.0
6ES7 513-2GL00-0AB0	CPU 1513pro F-2 PN	V2.8	V3.1 SP4
6ES7 513-2GL00-0AB0	CPU 1513pro F-2 PN	V2.9	V4.0 SP3
6ES7 514-2SN03-0AB0	CPU 1514SP F-2 PN	V3.0	V5.0
6ES7 514-2WN03-0AB0	CPU 1514SP TF-2 PN	V3.0	V5.0
6ES7 515-2FM00-0AB0	CPU 1515F-2 PN	V1.6	V3.1
6ES7 515-2FM00-0AB0	CPU 1515F-2 PN	V1.7	V3.1
6ES7 515-2FM00-0AB0	CPU 1515F-2 PN	V1.8	V3.1
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V1.8	V3.1
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.0	V3.1
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.1	V3.1
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.5	V3.1 SP1
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.6	V3.1 SP2
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.8	V3.1 SP4
6ES7 515-2FM01-0AB0	CPU 1515F-2 PN	V2.9	V4.0 SP3

Filtering unsupported devices

The SIMATIC Automation Tool displays unsupported devices in gray. You can perform only the following operations on unsupported devices:

- Set IP address
- Set PROFINET name
- Identify device
- Reset communication parameters

10.2 Copying and pasting to multiple Device table cells

The SIMATIC Automation Tool makes it easy for you to copy the contents of a cell into many cells in the same column. For example, if you want to update the firmware (Page 42) in many devices of the same type, you can select the New Firmware Version file once and use a drag and drop technique to copy the selection to the New Firmware Version cell for the other devices.

This rapid copy and paste function works as one editing operation within a column. You do not have to copy repeatedly into multiple cells. Just like in Microsoft Excel, you can multi-select cells for pasting by dragging the mouse pointer through a selection of cells. The SIMATIC Automation Tool recognizes which cells are valid for the paste operation and which cells are not. The SIMATIC Automation Tool only pastes the copied content into cells that are valid.

The rapid copy and paste function is available for any of the user-entry columns in the Device table.