Codesys PLC Handler Importer

Explanation on how to import tags from Codesys PLC Handler.

Reference **Solution** **Designer** **Settings and Tools** **Import Tags** Codesys

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The Import Tag Wizard facilitates importing Codesys PLC Handler tags into solutions developed on the software platform. Users configure Codesys PLC Handler connection parameters by specifying the IP address, port, version, and authentication parameters. To use it, go to Solution/Import Tags on the Designer workspace, double-click on the Codesys PLC Handler import wizard, or click to select the Codesys PLC Handler and press the Execute button to open the configuration dialog.

Instructions
- Wizard Startup
- Initial Configuration
- Sync Device Node
- Prefix Option (Optional)
- Refresh
- Import

Tutorial

Instructions

Wizard Startup

Go to Solution Import Tags on the Designer workspace and select "Import Codesys PLC Handler configuration." Double-click on the selected wizard or press the "Execute" button to open the initial configuration popup.

Initial Configuration

In the initial configuration dialog, enter the following information:

- **Node station parameter**: description and explanation for each connection configuration item.
- **PLC Address**: Specifies the address of the PLC (Programmable Logic Controller) to which the connection is made. Users enter the device's network address or hostname.
- **PLC Port**: Defines the communication port used to connect to the PLC. Users enter the specific port number that the PLC uses for data communication.
- **Protocol**: Specifies the communication protocol for the connection. Options include:

  TCP/IP (Level 2 Route): Routes messages over TCP/IP using Level 2 protocol, allowing routing through intermediate devices. Used for complex network topologies.

  TCP/IP (Level 2): Uses TCP/IP with Level 2 protocol, providing basic communication without routing through intermediate devices. Suited for direct connections.

  TCP/IP (Level 4): Implements Level 4 protocol over TCP/IP, which offers more advanced error checking and control features. Used for robust connections with higher reliability.

  Serial (RS232): Communicates over a serial RS232 connection, commonly used for direct, point-to-point communication between devices.

  Simulator: Uses the built-in software PLC, with no controller, gateway or network. Available from FrameworX 10.1.6. Enter `sim://5x10` or `sim://large` in PLC Address to size the simulated catalog, or leave it blank for the default catalog. See Codesys PLC Handler Connector.

- **Motorola ByteOrder**: Indicates whether the system uses Motorola (big-endian) byte order. Users check this box if the connected device uses this byte order format.
- **Gateway DeviceProtocol**: Defines the communication protocol between the Gateway and the PLC Handler. Options include:

  TCP/IP: Uses TCP/IP protocol for communication, suitable for network-based connections.

  SharedMemory: Uses shared memory for communication, allowing direct memory access between processes on the same machine for high-speed data transfer.

  NamedSharedMemory: Similar to SharedMemory, but uses named memory spaces, enabling multiple applications to access specific shared memory segments.

- **Gateway Address**: Specifies the address of the Gateway device, typically set to "localhost" if the Gateway runs on the same machine as the client.
- **Gateway Port**: Defines the communication port used by the Gateway device. Users enter the specific port number that the Gateway uses for its operations.
- **Gateway Password**: Stores the password required for authentication with the Gateway, if applicable. Users enter this to secure the connection to the Gateway device.
- **Logon UserName**: Provides the username for authentication when establishing the connection with the PLC. Users enter the username required for access to the target device.

Logon Password: Stores the password associated with the username. Users enter this password to authenticate and gain access to the target PLC device.

Info

The PLC Handler protocol (and therefore its Import Tags functionality) uses the PLC Handler API provided by CoDeSys. This protocol and its API require the CoDeSys tags to be exposed inside the PLC using the **SymbolConfiguration** method instead of the **SymbolSet** method. The latter will not work with this specific instance of CoDeSys communication because **SymbolSet** exposure is only available via OPC UA. To communicate with a CoDeSys device using **SymbolSet**, use our OPC UA protocol.

Sync Device Node

The "Sync Device Node" dialog will appear. Here, you have the following import option:

- From a file: Provide the path of your stored file.

Prefix Option (Optional)

Select "Add NodeName as Prefix" option to automatically add the PLC's name as a prefix to all imported tags. It improves organization, especially in solutions with multiple PLCs.

Refresh

Click "Refresh" to display a preview of available tags.

Import

Finally, press "Ok" to start the import process.

Tutorial

The tutorial in the image below shows how to import tags from Codesys PLC Handler.

In this section...
