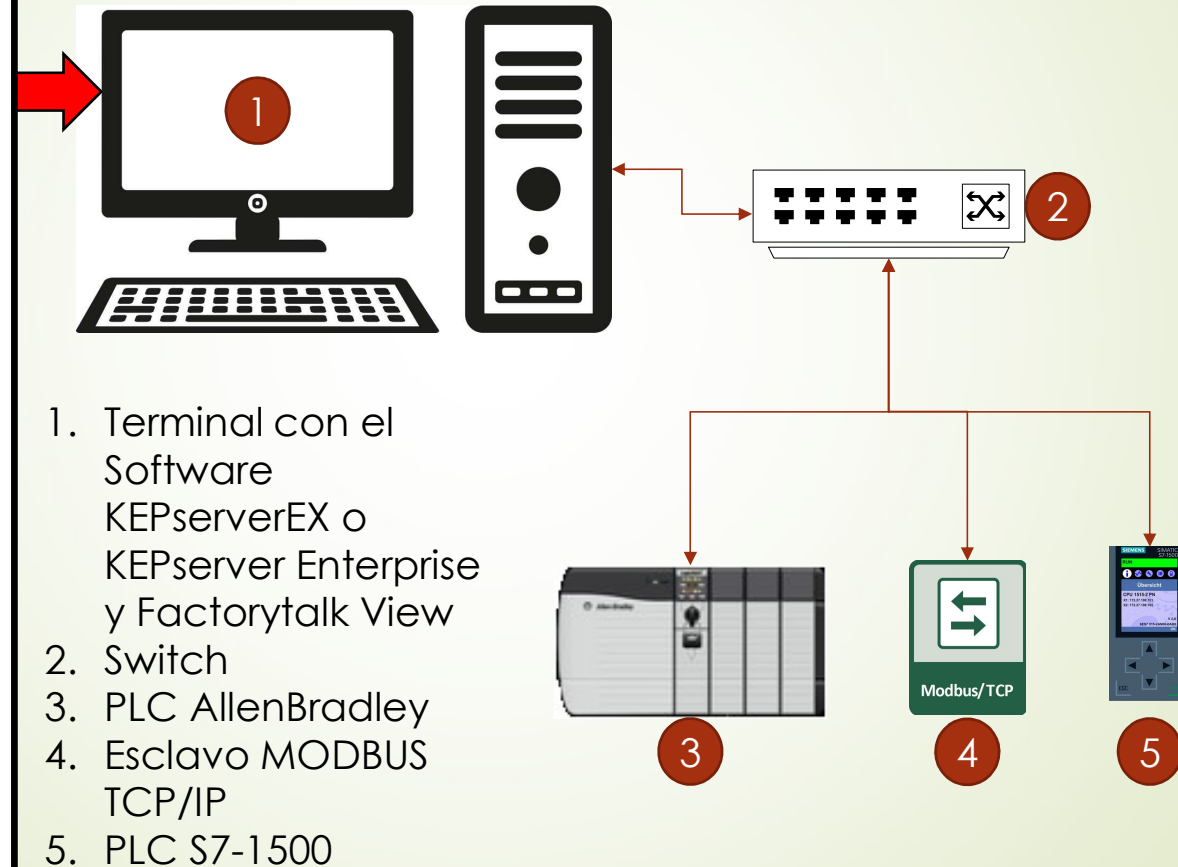
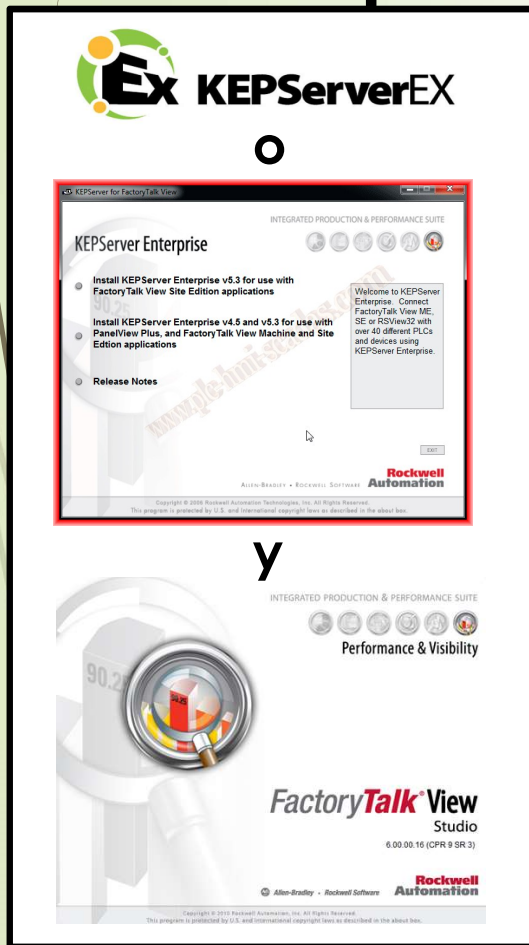


Servidor OPC UA con KepserverEX y Factorytalk view



Paso 1.

Arquitectura de red para la prueba



Paso 2.

PLC Siemens, Configuración



En los PLC Siemens S7 1500/1200/300, es necesario habilitar y deshabilitar ciertas opciones.

1. Se debe habilitar la seguridad en el PLC de la siguiente forma:

Properties>

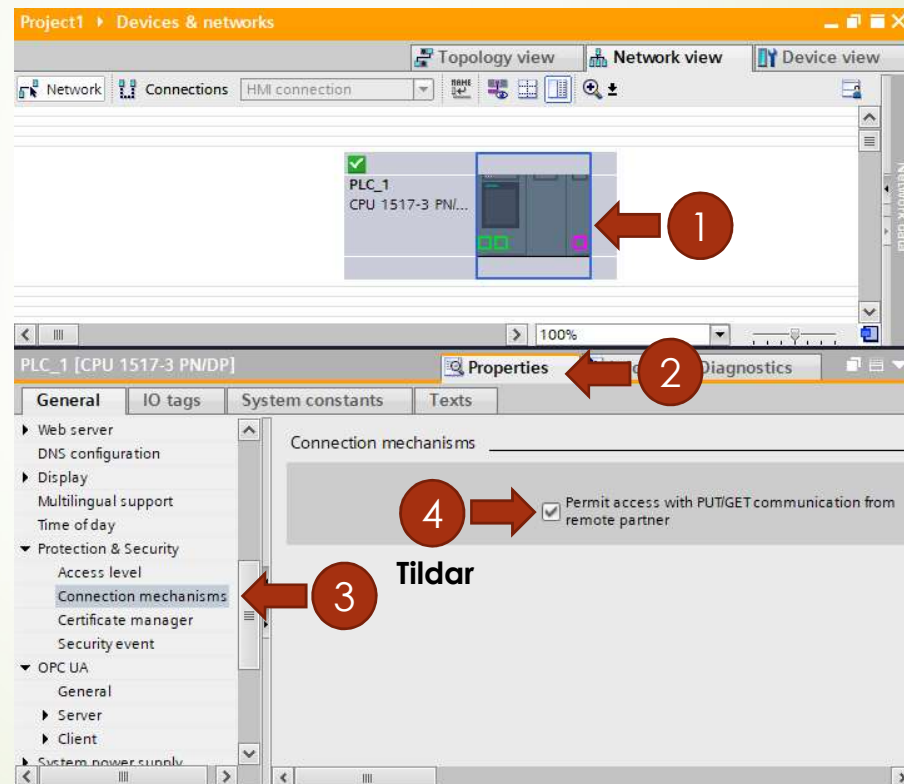
Protection & Security >

Connection Mechanism>



Permit access with PUT/GET communication from remote partner.

Paso 2. PLC Siemens, Configuración



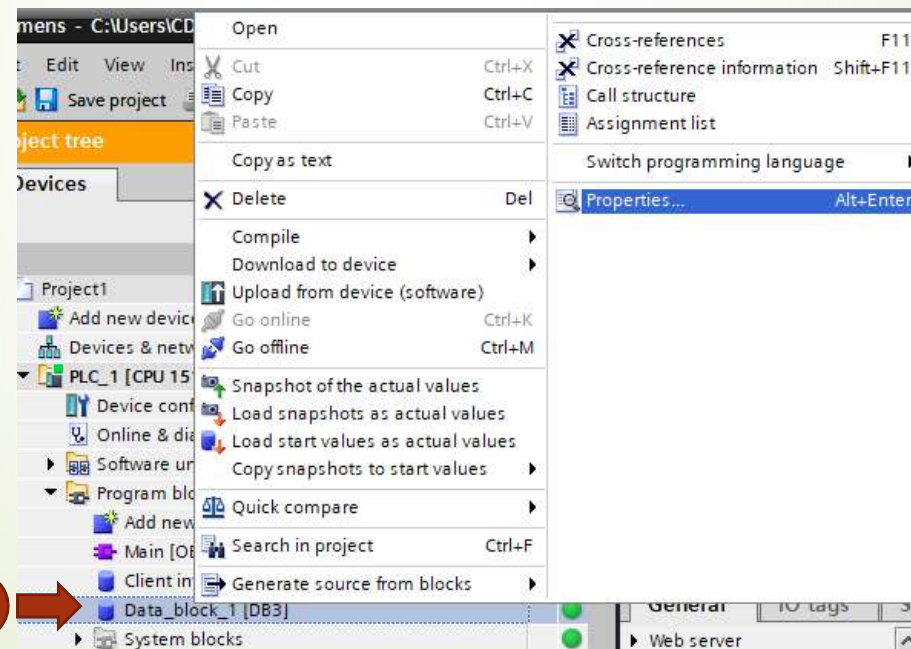
Paso 2. PLC Siemens, Configuración

1. Luego entrar en las propiedades del DB que contiene la variable y deshabilitar la opción de atributos.

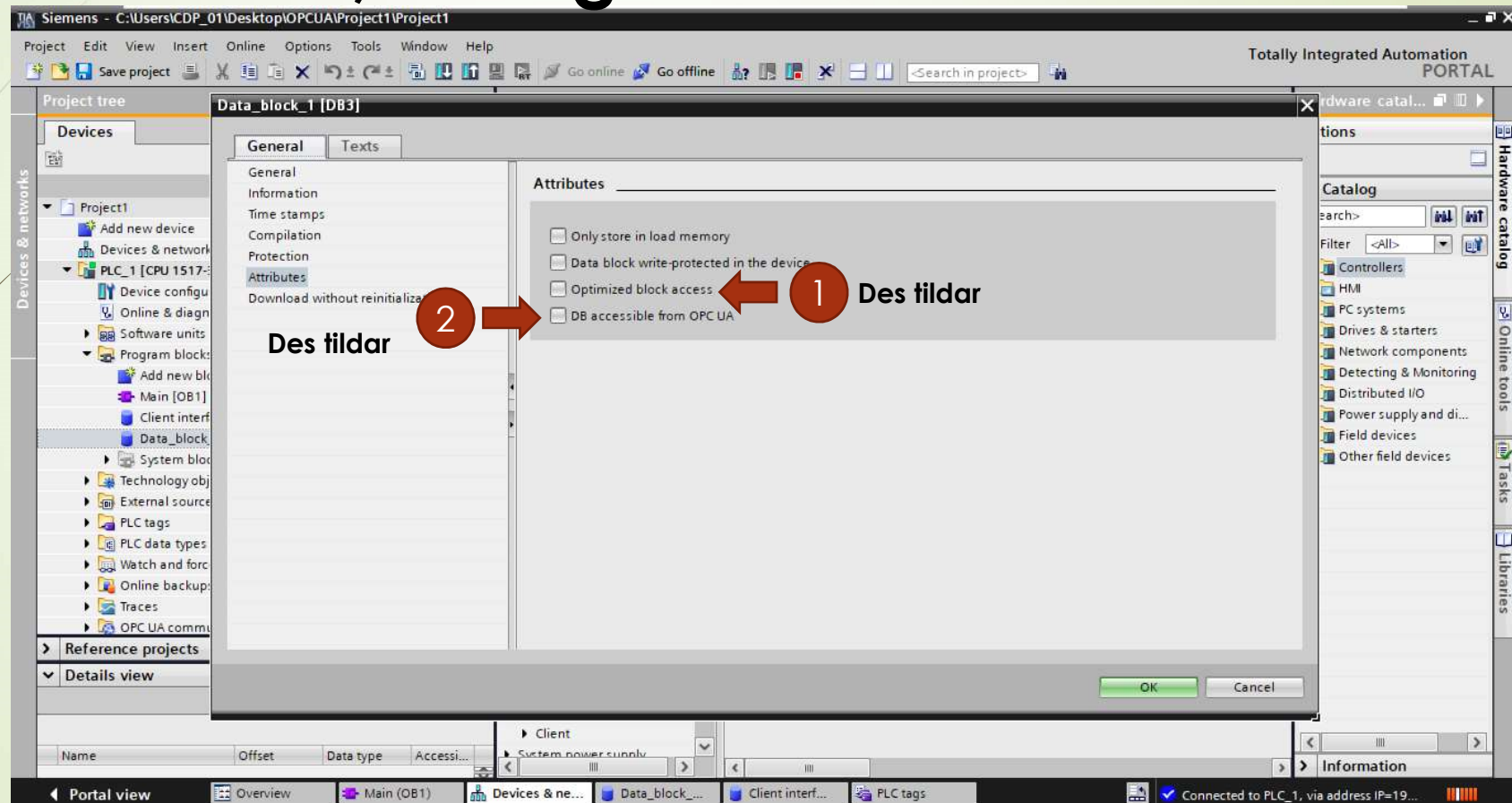
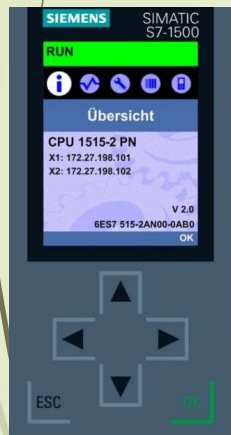
Properties> deshabilitar Optimized block access y DB accessible from OPC UA.



Click
derecho



Paso 2. PLC Siemens, Configuración



PLC Siemens y KEServerEX



Paso 3

KEPserverEX, Agregar canal Siemens TCP/IP



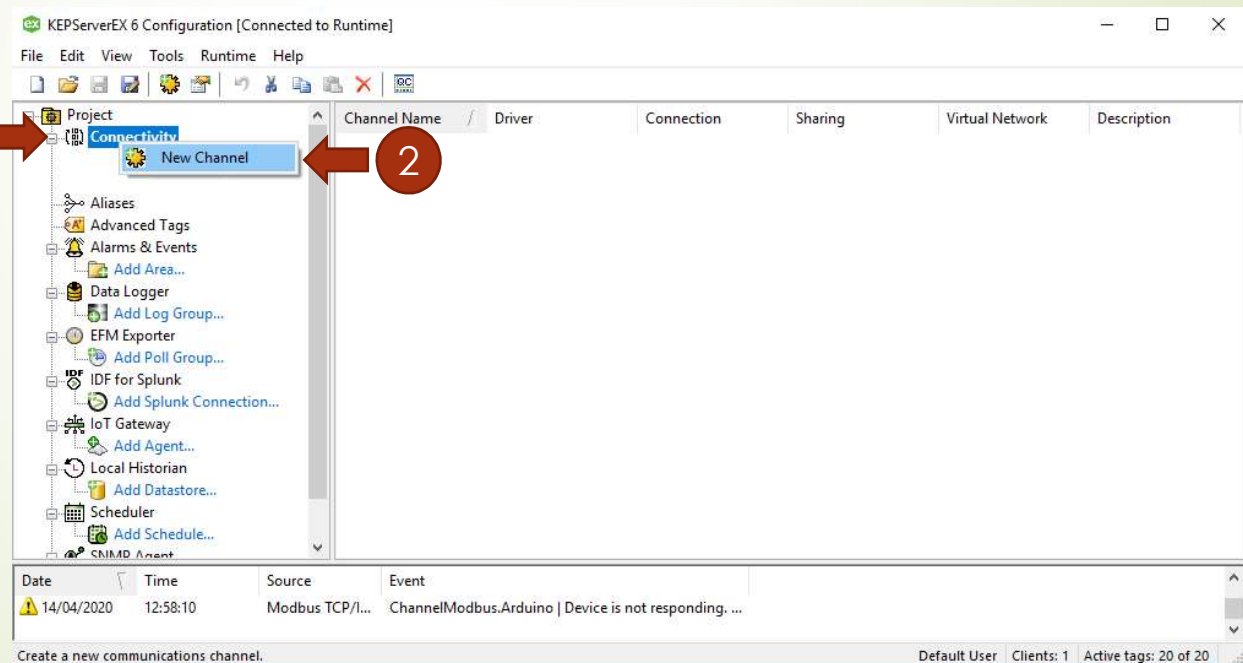
1. Primero añadimos un nuevo canal, y una vez creado el canal añadimos los dispositivos, siguiendo el asistente sería fácil de configurar.

Click
derecho

1

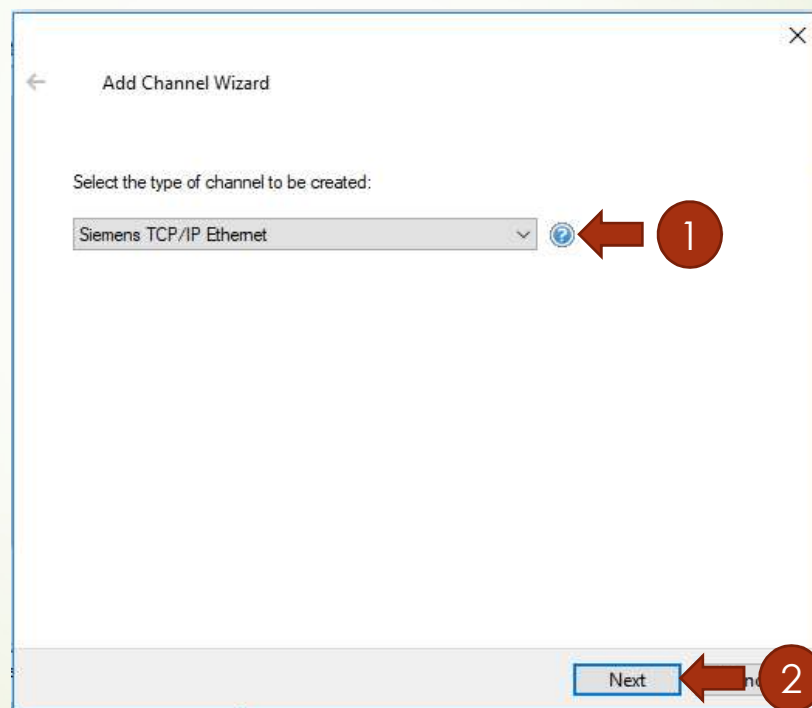


2



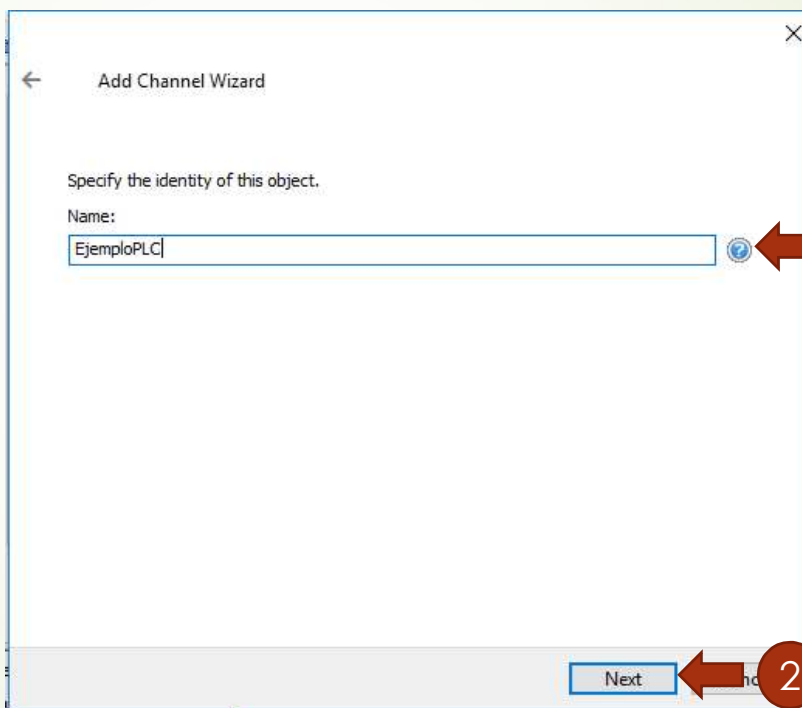
Paso 3

KEPserverEX, Agregar canal Siemens TCP/IP



Paso 3

KEPserverEX, Agregar canal Siemens TCP/IP

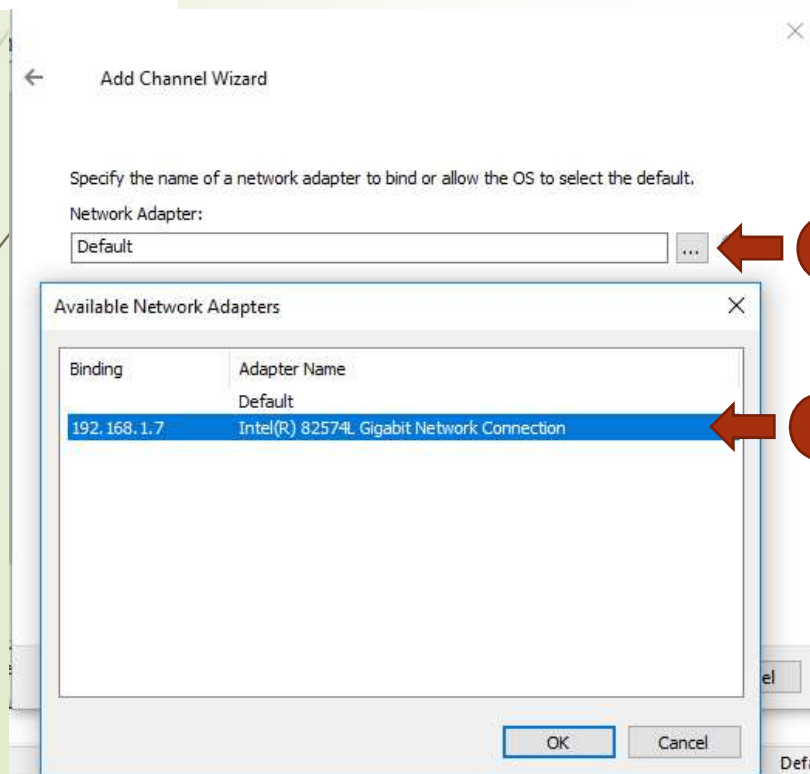
A screenshot of the 'Add Channel Wizard' dialog box. The title bar says 'Add Channel Wizard'. Inside, it says 'Specify the identity of this object.' followed by 'Name:'. Below this is a text input field containing 'EjemploPLC'. To the right of the input field is a help icon. At the bottom right, there is a 'Next' button. Red arrows with numbers 1 and 2 point to the help icon and the 'Next' button respectively.

1 Colocamos el nombre del canal

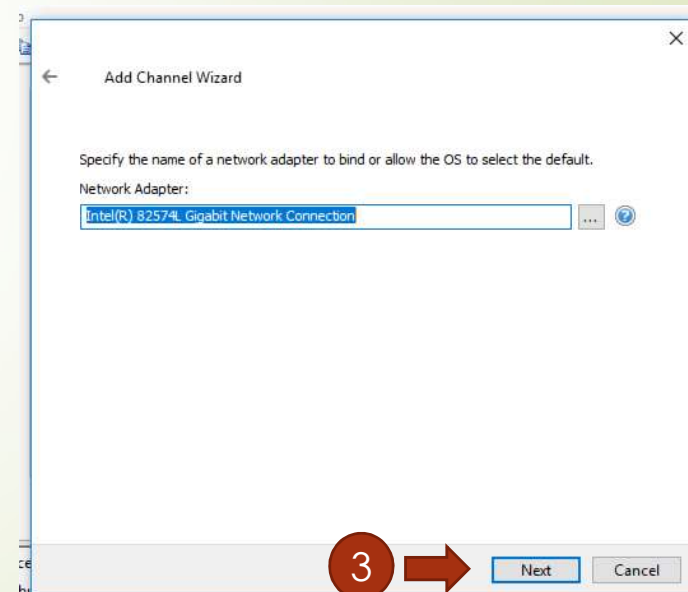
2

Paso 3

KEPserverEX, Agregar canal Siemens TCP/IP



Seleccionar la tarjeta física.



Paso 3

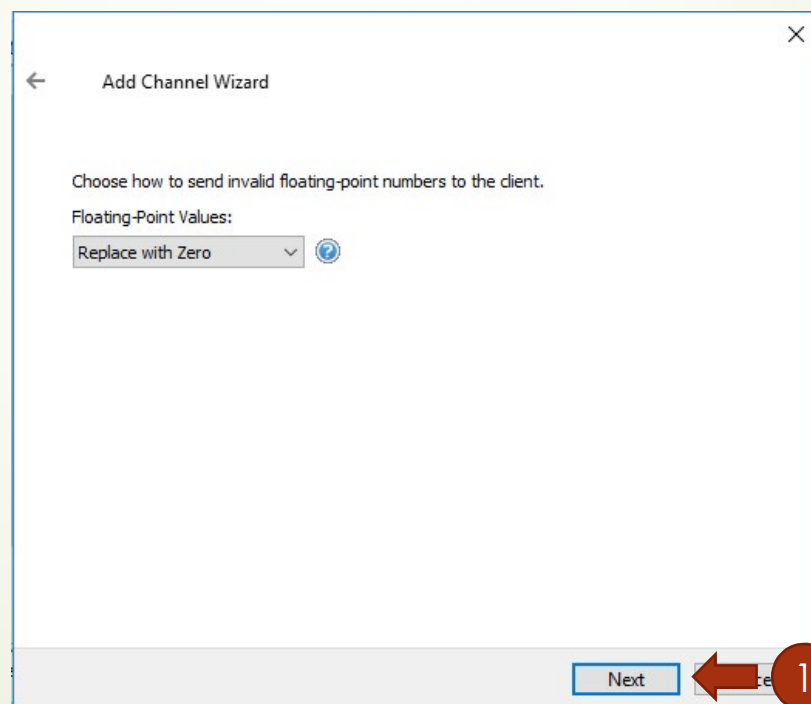
KEPserverEX, Agregar canal Siemens TCP/IP

A screenshot of the 'Add Channel Wizard' dialog box. The title bar says 'Add Channel Wizard' with a back arrow and a close button. The main text reads: 'Choose how write data is passed to the underlying communications driver when more than one write exists in the write queue.' Below this is the 'Optimization Method:' label and a dropdown menu showing 'Write Only Latest Value for All Tags' with a help icon. The next section says: 'Specify the ratio of write operations to read operations, based on one read per configurable number of writes.' Below this is the 'Duty Cycle:' label and a text input field containing '10' with a help icon. At the bottom right, there is a 'Next' button. A red circle with the number '1' and a red arrow points to the 'Next' button.

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 3

KEPserverEX, Agregar canal Siemens TCP/IP



Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 3

KEPserverEX, Agregar canal Siemens TCP/IP



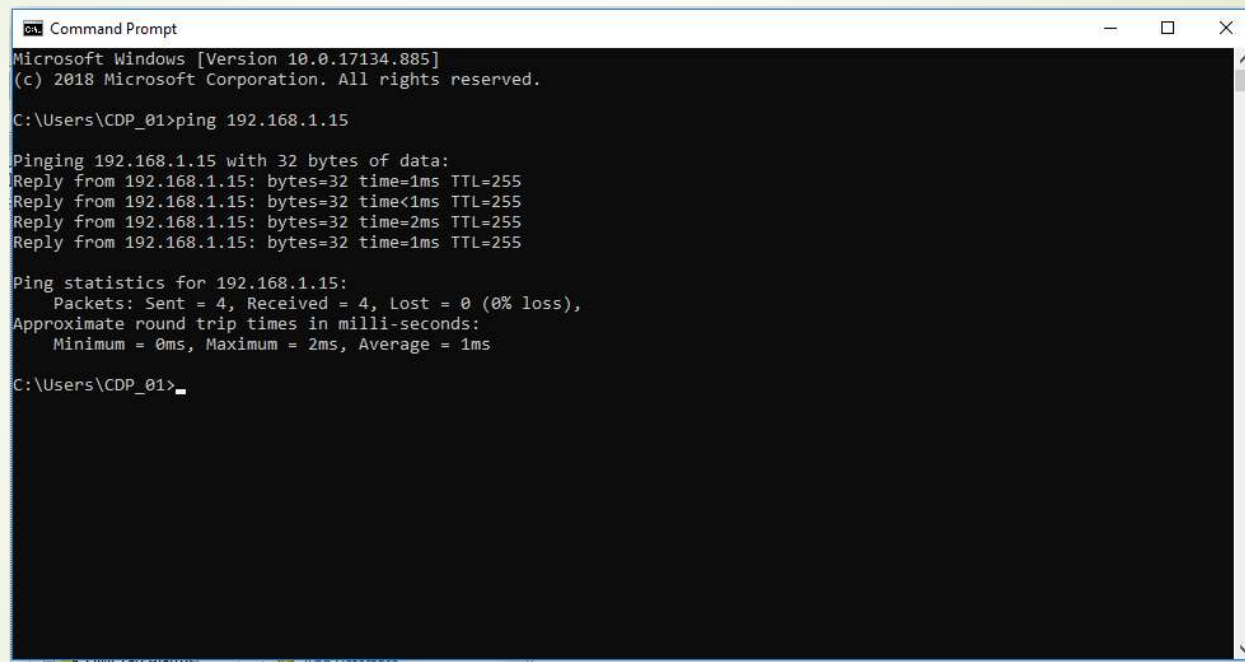
← Add Channel Wizard

Identification	
Name	EjemploPLC
Description	
Driver	Siemens TCP/IP Ethernet
Diagnostics	
Diagnostics Capture	Disable
Ethernet Settings	
Network Adapter	Intel(R) 82574L Gigabit Network Con...
Write Optimizations	
Optimization Method	Write Only Latest Value for All Tags
Duty Cycle	10
Non-Normalized Float Handling	
Floating-Point Values	Replace with Zero

Finish

Paso 4

KEPserverEX, Agregar canal Siemens TCP/IP



```
Command Prompt
Microsoft Windows [Version 10.0.17134.885]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\CDP_01>ping 192.168.1.15

Pinging 192.168.1.15 with 32 bytes of data:
Reply from 192.168.1.15: bytes=32 time=1ms TTL=255
Reply from 192.168.1.15: bytes=32 time<1ms TTL=255
Reply from 192.168.1.15: bytes=32 time=2ms TTL=255
Reply from 192.168.1.15: bytes=32 time=1ms TTL=255

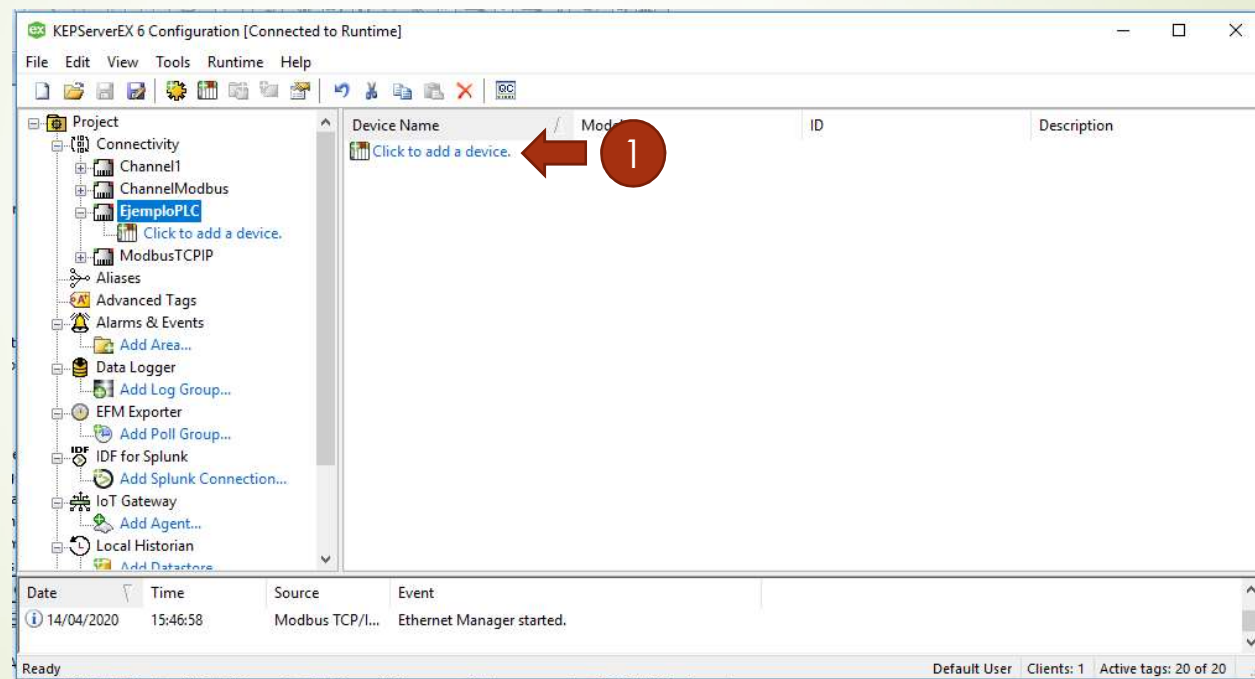
Ping statistics for 192.168.1.15:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 1ms

C:\Users\CDP_01>
```

Verificamos que el PLC este conectado a la red debemos tener su dirección IP, y desde la maquina donde esta el Kepserver, que dirección esclavo tiene, y estar en la misma red y poder hacerle PING, en nuestro ejemplo es el 192.168.1.15

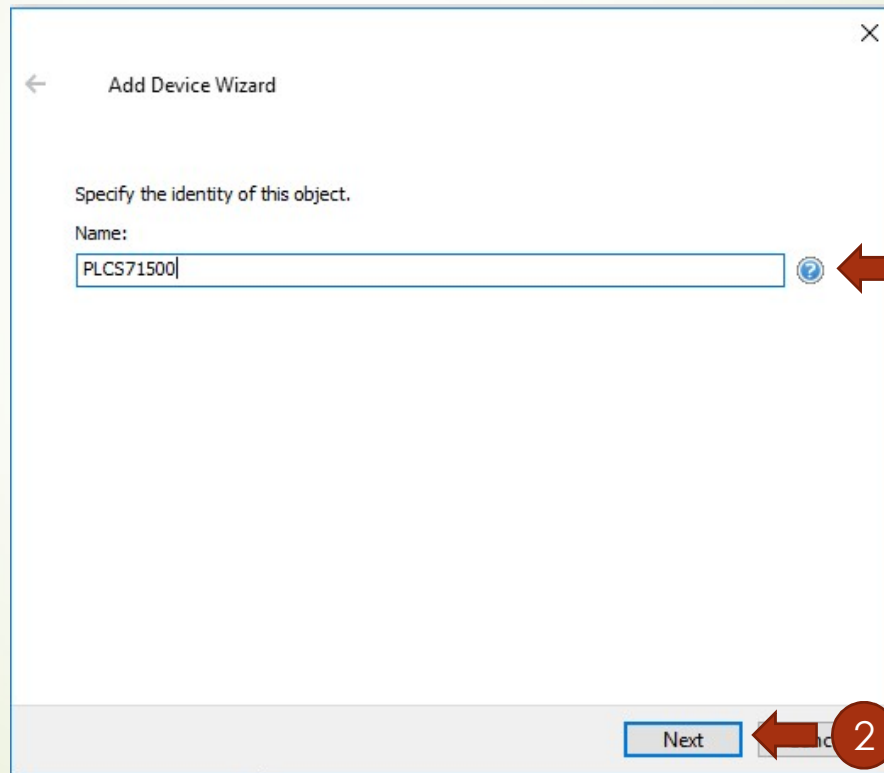
Paso 5

KEPserverEX, Agregar S7-1500



Paso 5

KEPserverEX, Agregar S7-1500

A screenshot of the 'Add Device Wizard' dialog box. The dialog has a title bar with a close button (X). Inside, there is a back arrow and the text 'Add Device Wizard'. Below that, it says 'Specify the identity of this object.' followed by 'Name:'. There is a text input field containing 'PLCS71500' and a help icon (question mark in a circle) to its right. At the bottom right, there is a 'Next' button and a partially visible 'Cancel' button.

← Add Device Wizard

Specify the identity of this object.

Name:

PLCS71500 ?

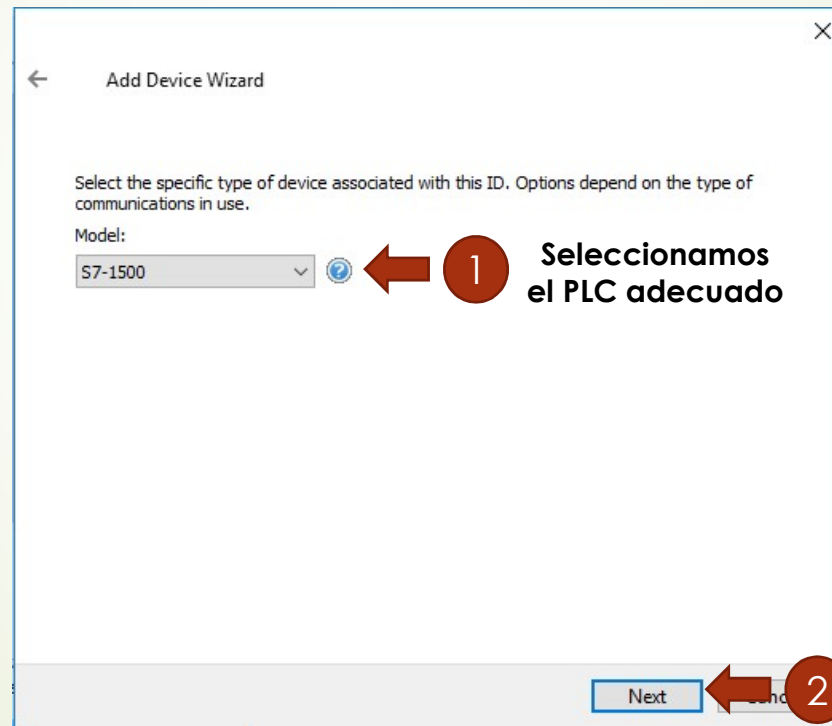
Next

1 Colocamos el nombre del dispositivo

2

Paso 5

KEPserverEX, Agregar S7-1500

A screenshot of the 'Add Device Wizard' dialog box. The title bar says 'Add Device Wizard' with a back arrow and a close button. The main text reads: 'Select the specific type of device associated with this ID. Options depend on the type of communications in use.' Below this, there is a 'Model:' label and a dropdown menu showing 'S7-1500'. To the right of the dropdown is a help icon (a blue circle with a question mark). A red arrow points from a red circle with the number '1' to the help icon. To the right of the arrow is the text 'Seleccionamos el PLC adecuado'. At the bottom right, there is a 'Next' button. A red arrow points from a red circle with the number '2' to the 'Next' button.

← Add Device Wizard

Select the specific type of device associated with this ID. Options depend on the type of communications in use.

Model:

S7-1500

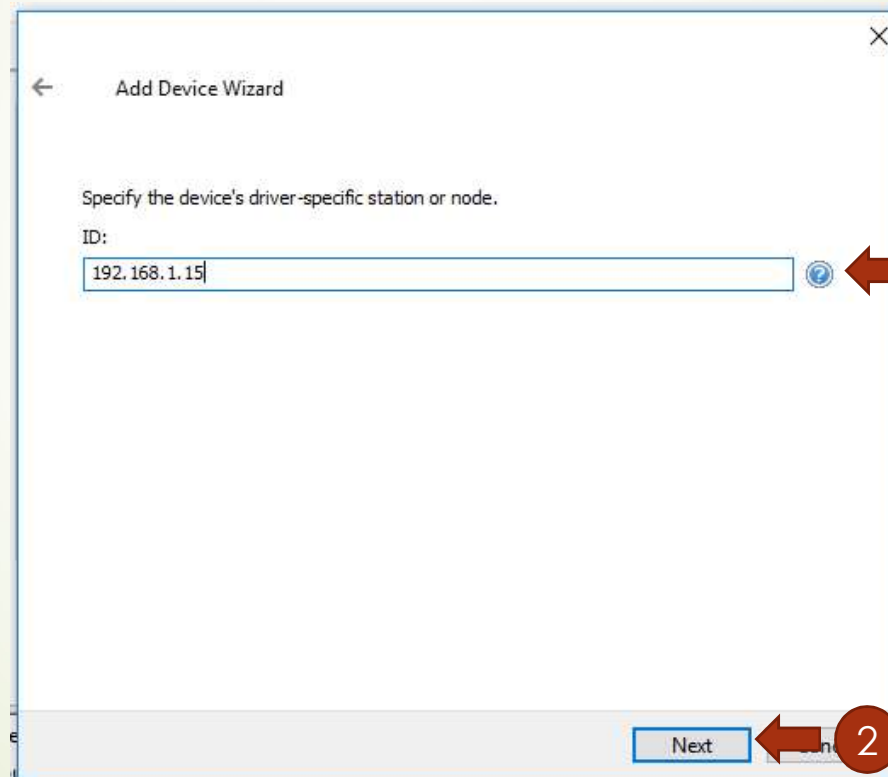
1 Seleccionamos el PLC adecuado

Next

2

Paso 5

KEPserverEX, Agregar S7-1500

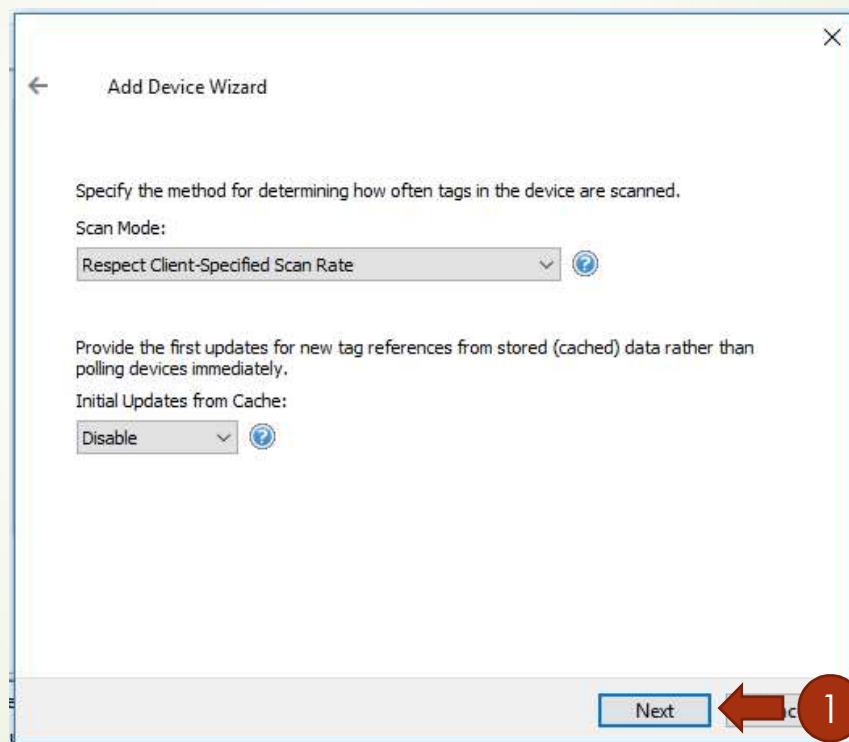
A screenshot of the 'Add Device Wizard' dialog box. The title bar says 'Add Device Wizard'. Below the title bar, it says 'Specify the device's driver-specific station or node.' followed by 'ID:'. There is a text input field containing '192.168.1.15'. To the right of the input field is a help icon (a question mark in a circle). At the bottom right of the dialog box is a 'Next' button. There are two red arrows with numbers pointing to the input field and the 'Next' button.

1 Colocamos la IP del PLC

2

Paso 5

KEPserverEX, Agregar S7-1500



Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 5

KEPserverEX, Agregar S7-1500



← Add Device Wizard ×

Define the maximum amount of time, in seconds, allowed to establish a connection to a remote device. Connection time is often longer than communication request time for a

Connect Timeout (s):

?

Specify an interval, in milliseconds, to determine how long the driver waits for a response from the target device to indicate completion.

Request Timeout (ms):

?

Indicate how many times the driver sends a communications request before considering the request to have failed and the device to be in error.

Retry Attempts:

?

Define how long, in milliseconds, the driver waits before sending the next request to the target device.

Inter-Request Delay (ms):

?

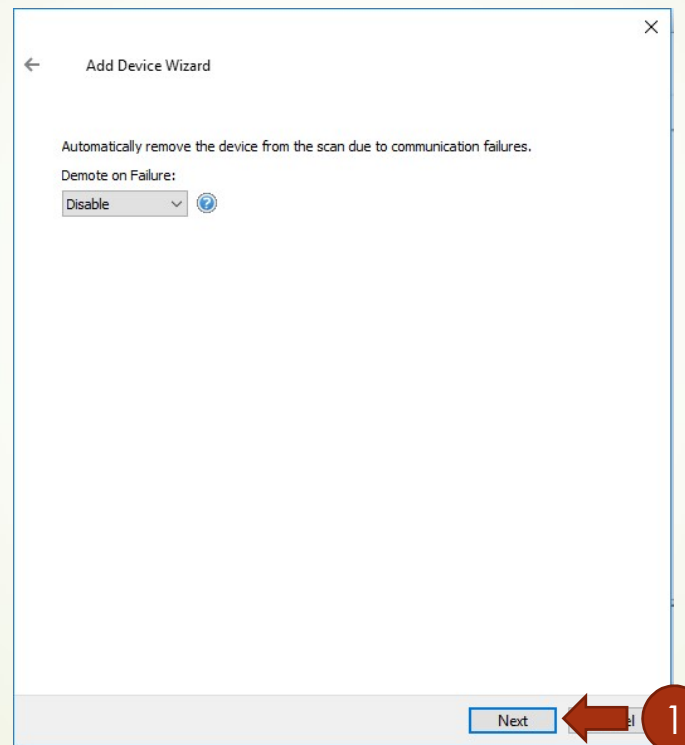
Next



Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 5

KEPserverEX, Agregar S7-1500



Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 5

KEPserverEX, Agregar S7-1500



← Add Device Wizard ×

Select the automatic tag generation action to be taken on device startup.

On Device Startup:
 ?

Indicate the preferred method of avoiding creation of duplicate tags.

On Duplicate Tag:
 ?

Indicate a tag group name for new generated tags. If empty, generated tags are added at the device level.

Parent Group:
 ?

Instruct the server to automatically create sub groups for automatically generated tags.

Allow Automatically Generated Subgroups:
 ?

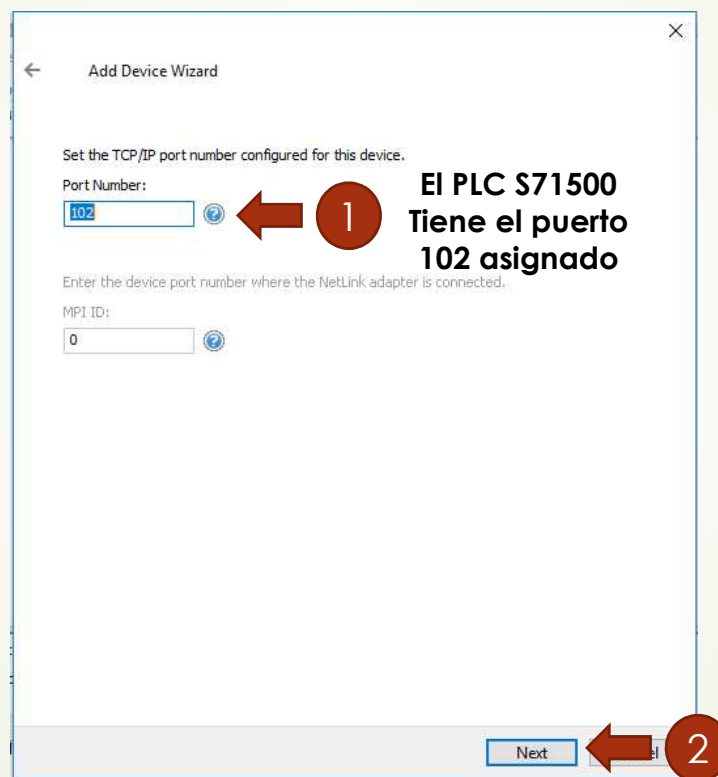
Next

1

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 5

KEPserverEX, Agregar S7-1500

A screenshot of the 'Add Device Wizard' dialog box. The title bar says 'Add Device Wizard'. The first section is titled 'Set the TCP/IP port number configured for this device.' and contains a 'Port Number:' label with a text box containing '102'. A red arrow points from a red circle with the number '1' to the '102' in the text box. To the right of this section, text reads 'El PLC S71500 Tiene el puerto 102 asignado'. The second section is titled 'Enter the device port number where the NetLink adapter is connected.' and contains an 'MPI ID:' label with a text box containing '0'. At the bottom right, there is a 'Next' button. A red arrow points from a red circle with the number '2' to the 'Next' button.

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 5

KEPserverEX, Agregar S7-1500



← Add Device Wizard

Specify the local (PC) unique address for this device connection in hexadecimal.
Local TSAP:

Specify the remote (device) unique address for this connection in hexadecimal.
Remote TSAP:

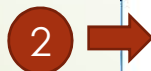
Select the type of connection link to be used in communications.
Link Type:

Enter the rack number where this CPU resides.
CPU Rack:

Enter the slot number where this CPU resides.
CPU Slot:

Next

Se selecciona el
slot del CPU



1

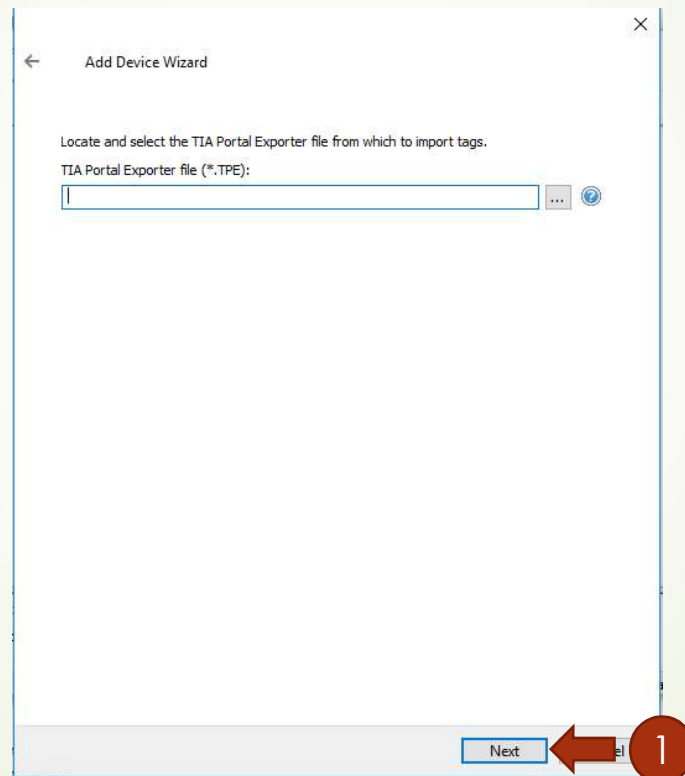
Si es una
arquitectura de
múltiples racks,
colocar el
adecuado

3

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 5

KEPserverEX, Agregar S7-1500



Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 5

KEPserverEX, Agregar S7-1500



Add Device Wizard

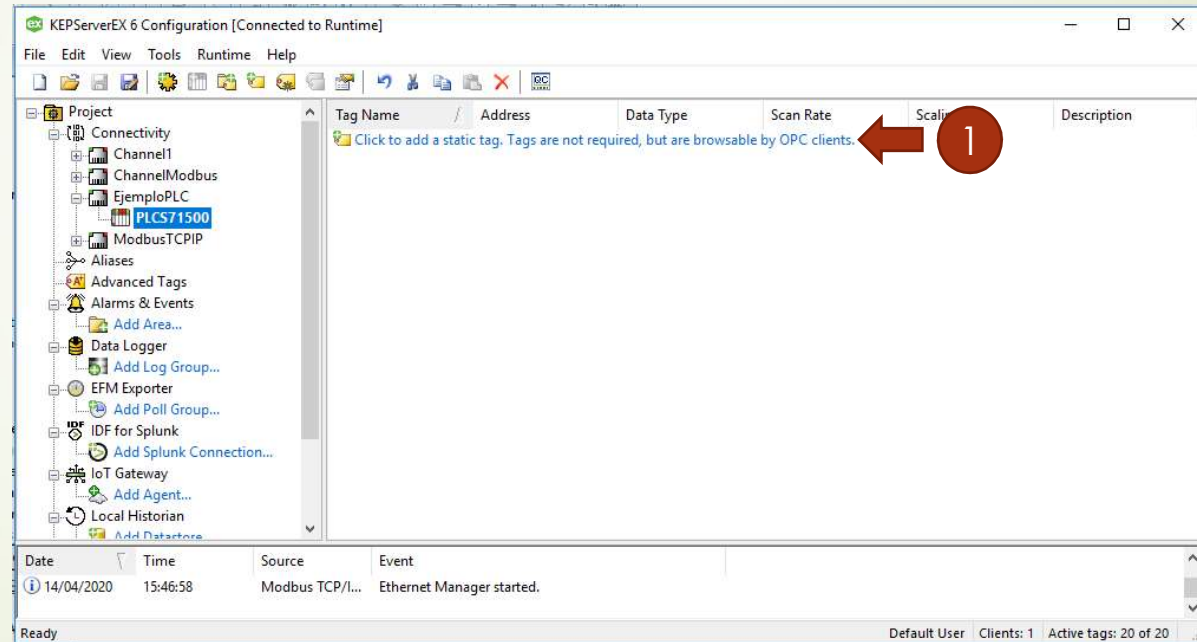
Identification	
Name	PLCS71500
Description	
Driver	Siemens TCP/IP Ethernet
Model	S7-1500
Channel Assignment	EjemploPLC
ID	192.168.1.15
Operating Mode	
Data Collection	Enable
Simulated	No
Scan Mode	
Scan Mode	Respect Client-Specified Scan Rate
Initial Updates from Cache	Disable
Communication Timeouts	
Connect Timeout (s)	3
Request Timeout (ms)	2000
Retry Attempts	2
Timing	
Inter-Request Delay (ms)	0
Auto-Demotion	
Demote on Failure	Disable
Tag Generation	
On Device Startup	Do Not Generate on Startup
On Duplicate Tag	Delete on Create
Parent Group	

Finish

1

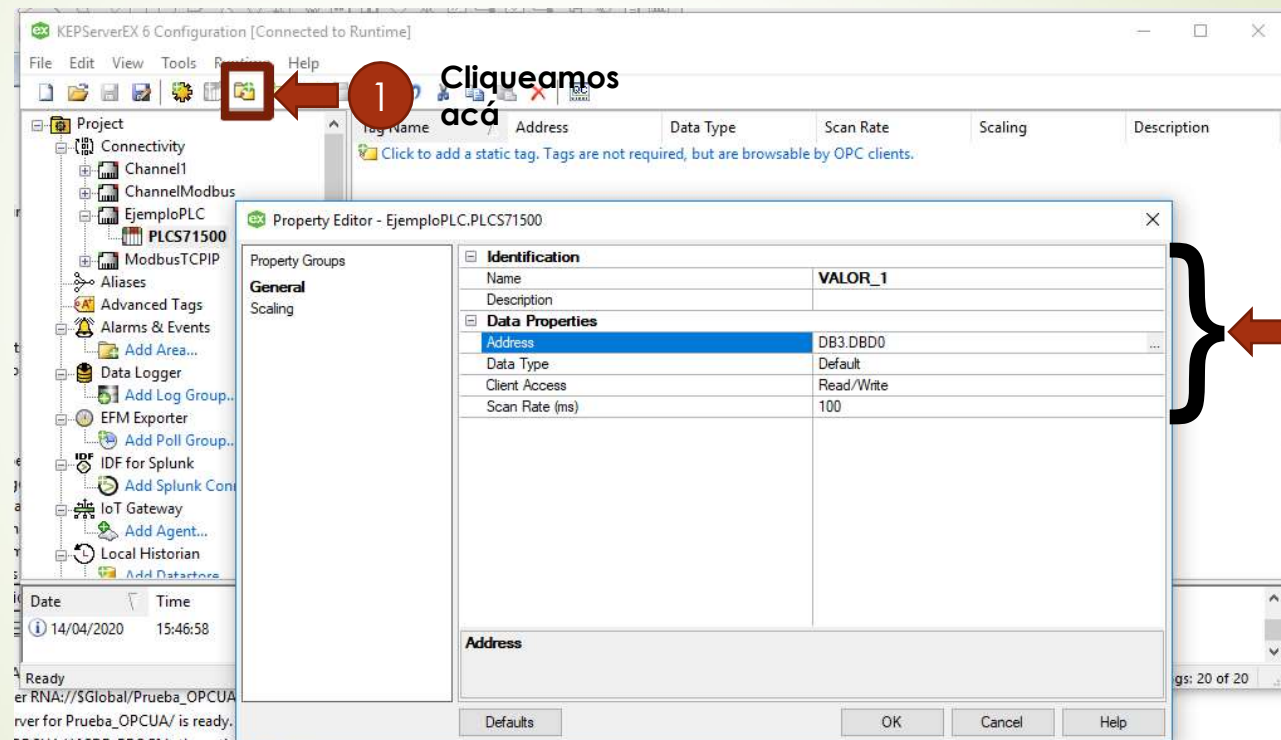
Paso 6

KEPserverEX, Agregar una variable



Paso 6

KEPserverEX, Agregar una variable



2. Address: es la dirección real del registro, en este caso es DB3.DB0, pero de ser Input, Output u otra cosa, se coloca la dirección y el tipo de dato (Datatype) en default

Paso 6

KEPserverEX, Agregar una variable

DB2: Se refiere a los Data Blocks, los cuales tienen números asignados, en este ejemplo seria el 2

DB2.DBX0.0: luego de apuntar a la DB con su numero, seguimos con DB mas el tipo, en este caso X es booleano, y el 0 es el bit correspondiente.

DB2.DBW2: luego de apuntar a la DB con su numero, seguimos con DB mas el tipo, en este caso W seria un dato tipo Word de 2 bytes (INTEGER).

DB2.DB4.0 luego de apuntar a la DB con su numero, seguimos con DB mas el tipo, en este caso D seria un dato tipo Double de 4 bytes (REAL).

IW: se refiere a una entrada periférica de 2 Bytes, en este caso W seria un dato tipo Word de 2 bytes (INTEGER), seria una entrada análoga.

I0.0 se refiere a una entrada periférica de 1 Bit, seria una entrada digital dirección 0.

Q0.0 se refiere a una salida periférica de 1 Bit, seria una salida digital dirección 0.

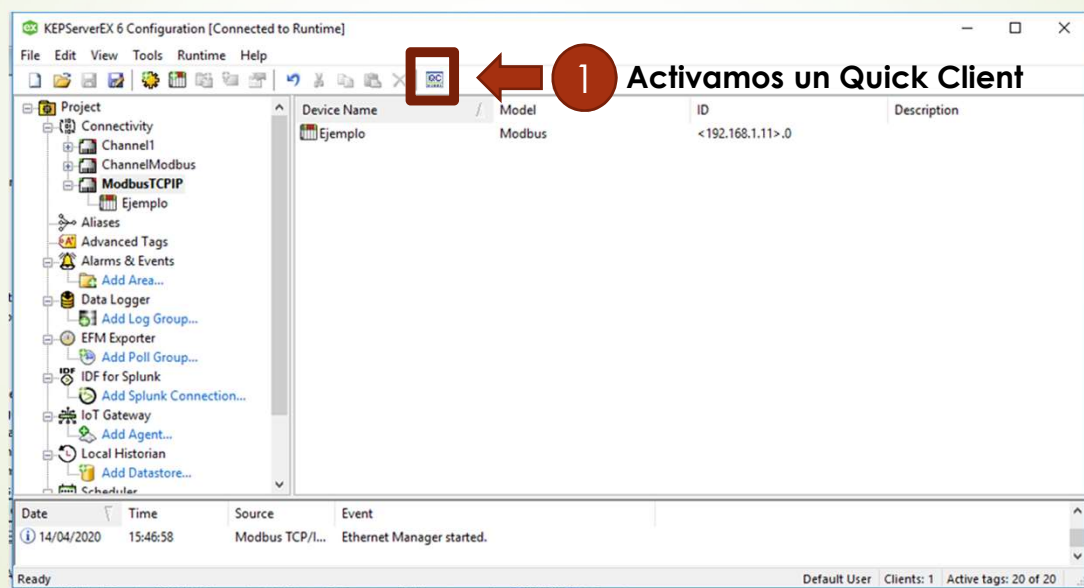
M0.0 se refiere a un registro de memoria de 1 Bit, dirección 0.

MW2 se refiere a un registro de memoria de 2 Bytes, dirección 2.

MD4 se refiere a un registro de memoria de 4 Bytes, dirección 4.

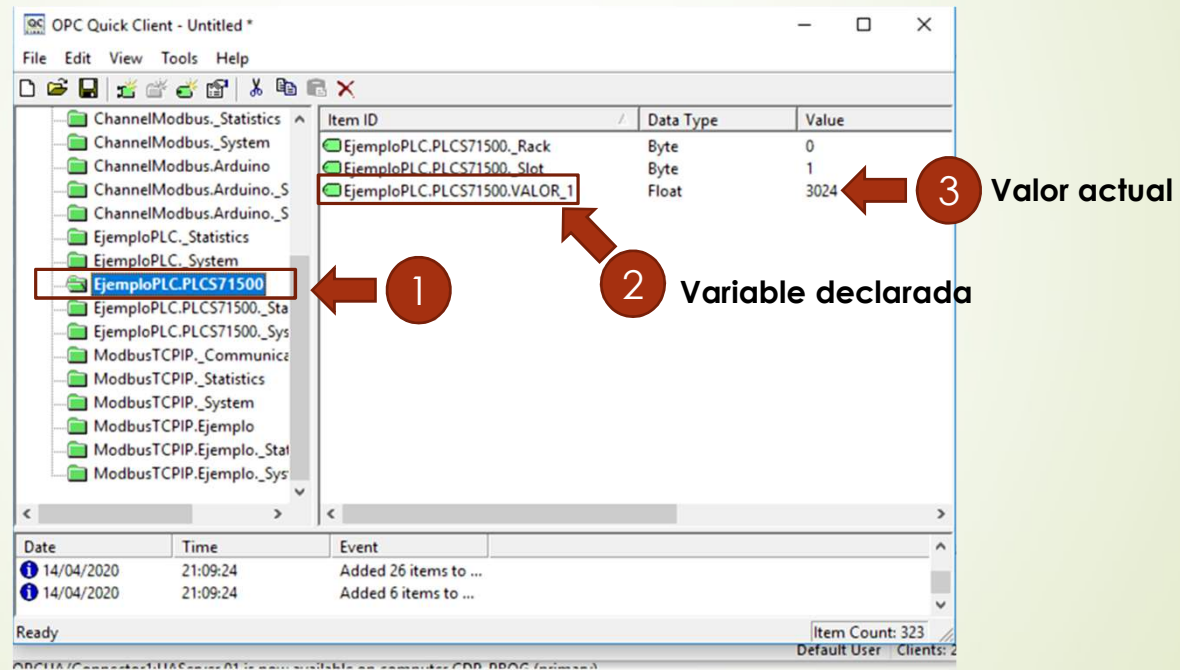
Paso 6

KEPserverEX, Agregar una variable



Paso 6

KEPserverEX, Agregar una variable



The screenshot shows the OPC Quick Client interface. On the left, a tree view lists various PLC channels. The 'EjemploPLC.PLC571500' folder is selected and highlighted with a red box and a red arrow labeled '1'. In the main pane, a table lists the variables under this folder. The variable 'EjemploPLC.PLC571500.VALOR_1' is highlighted with a red box and a red arrow labeled '2', with the text 'Variable declarada' next to it. The table also shows the 'Data Type' as 'Float' and the 'Value' as '3024', which is highlighted with a red box and a red arrow labeled '3', with the text 'Valor actual' next to it.

Item ID	Data Type	Value
EjemploPLC.PLC571500._Rack	Byte	0
EjemploPLC.PLC571500._Slot	Byte	1
EjemploPLC.PLC571500.VALOR_1	Float	3024

1

2 Variable declarada

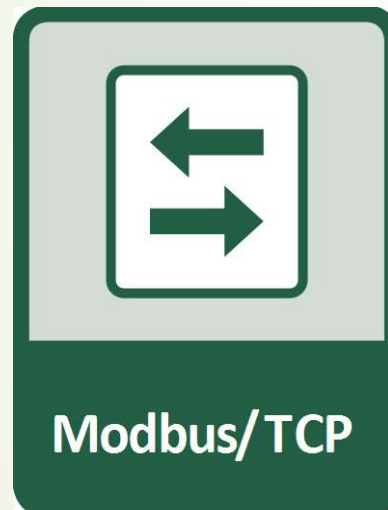
3 Valor actual

Ready

Item Count: 323

Default User Clients: 2

Esclavo MODBUS TCP/IP y KEServerEX



Paso 7

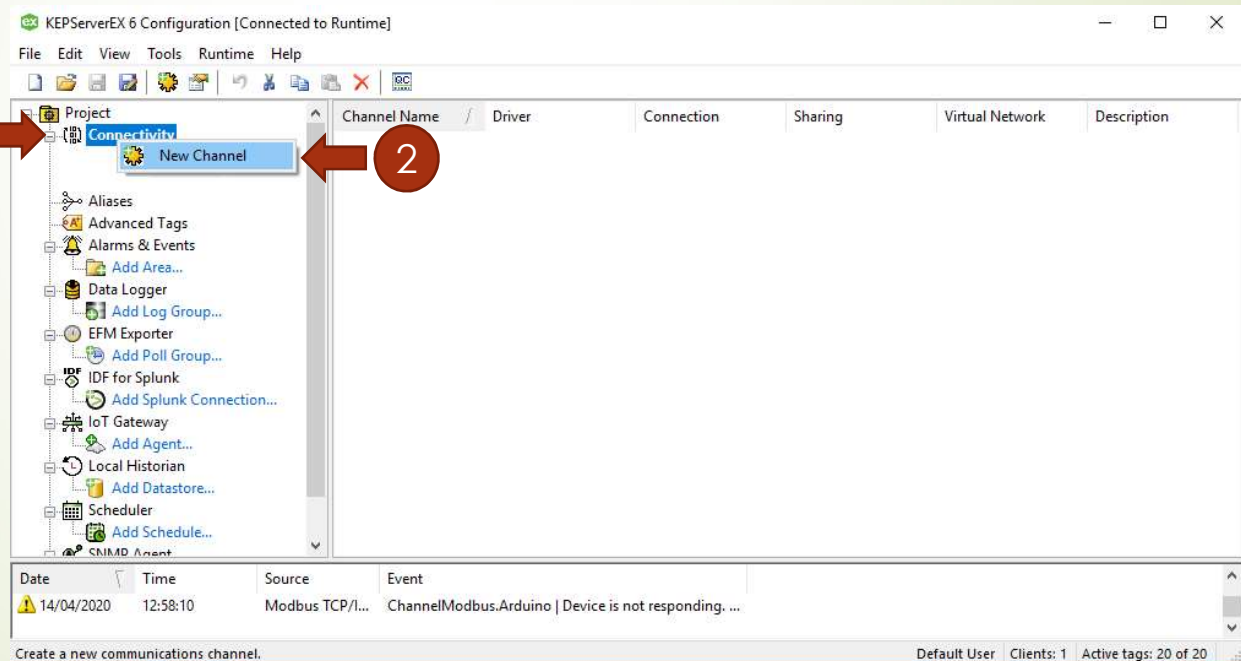
KEPserverEX, Creación de Canal MODBUS



1. Primero añadimos un nuevo canal, y una vez creado el canal añadimos los dispositivos, siguiendo el asistente sería fácil de configurar.

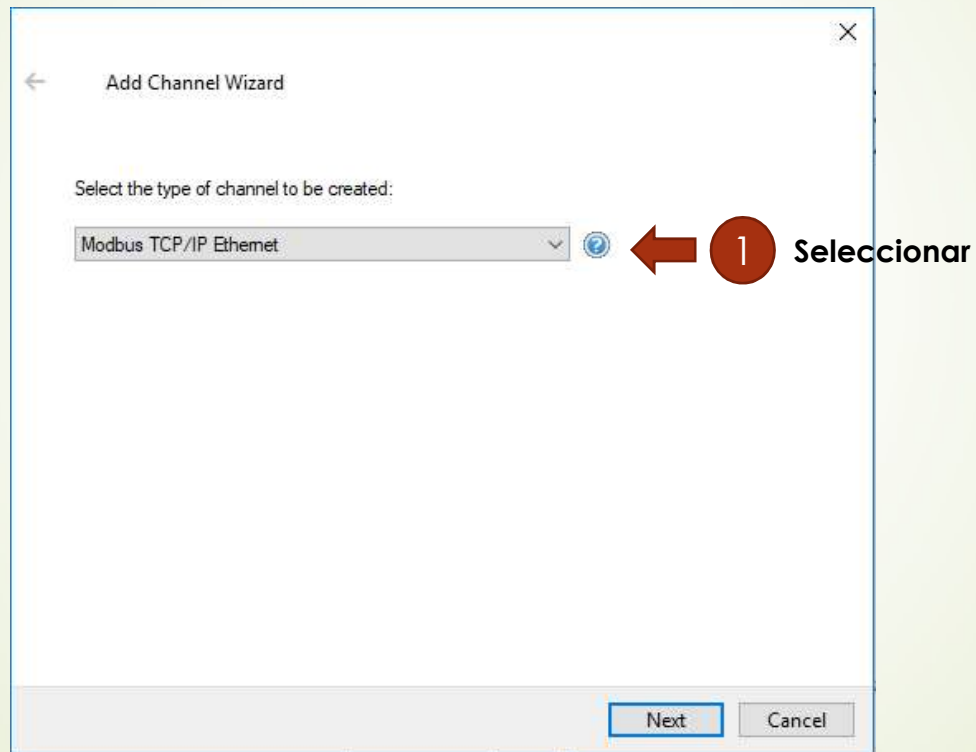
Click
derecho

1



Paso 7

KEPserverEX, Creación de Canal MODBUS



Paso 7

KEPserverEX, Creación de Canal MODBUS



← Add Channel Wizard ×

Specify the identity of this object.

Name:

ModbusTCP/IP

Next Cancel



1

Ingresar el nombre que se utilizara

Paso 7

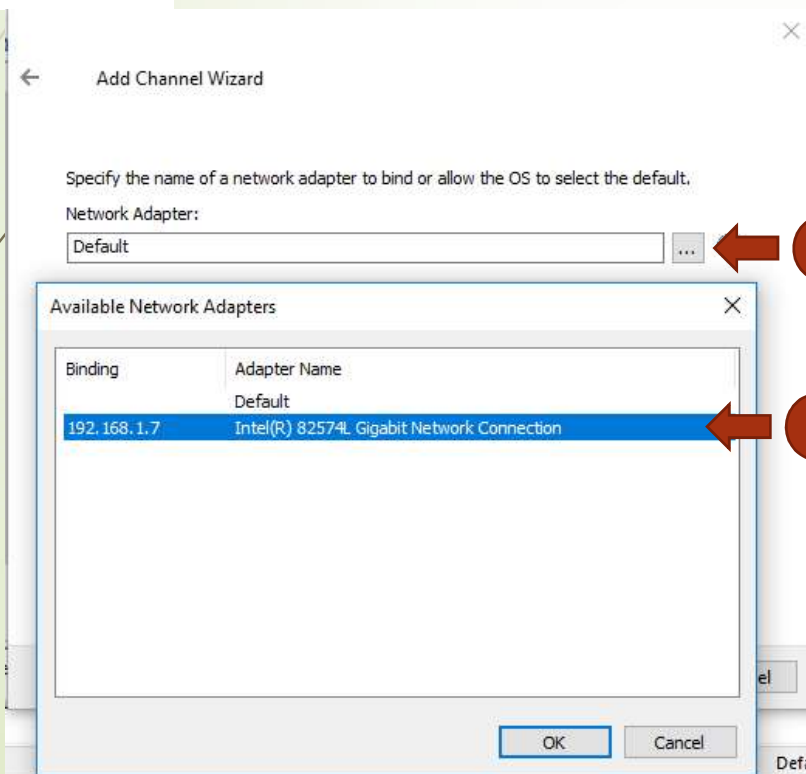
KEPserverEX, Creación de Canal MODBUS

A screenshot of the 'Add Channel Wizard' dialog box in the KEPserverEX software. The dialog has a title bar with a close button (X) and a back arrow. The main content area contains two sections: 'Limit data transmissions to one channel at a time by assigning this channel to a virtual network.' with a 'Virtual Network:' dropdown menu set to 'None' and a help icon; and 'Specify the number of transactions to perform when a channel is given permission to communicate.' with a 'Transactions per Cycle:' text box containing the value '1' and a help icon. At the bottom right, there is a 'Next' button and a red arrow pointing left towards a red circle with the number '1'.

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 7

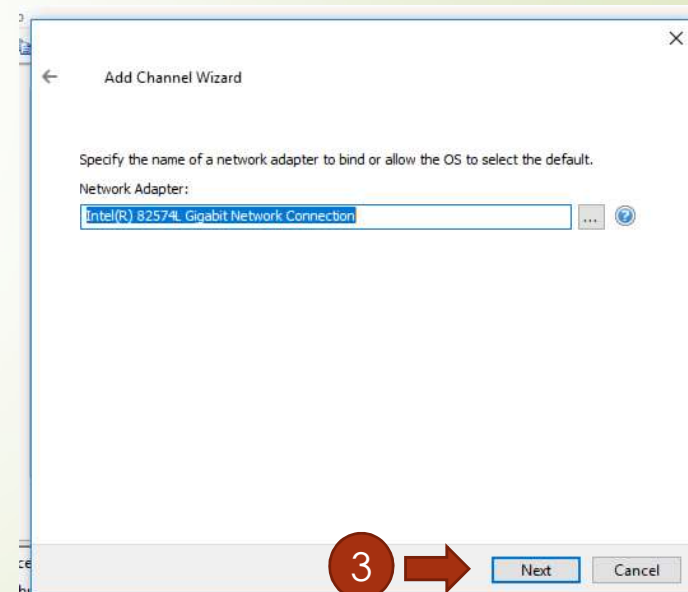
KEPserverEX, Creación de Canal MODBUS



1

2

Seleccionar la tarjeta física.



3

Paso 7

KEPserverEX, Creación de Canal MODBUS



← Add Channel Wizard

Choose how write data is passed to the underlying communications driver when more than one write exists in the write queue.

Optimization Method:
Write Only Latest Value for All Tags

Specify the ratio of write operations to read operations, based on one read per configurable number of writes.

Duty Cycle:
10

1 → Next Cancel

← Add Channel Wizard

Choose how to send invalid floating-point numbers to the client.

Floating-Point Values:
Replace with Zero

2 → Next Cancel

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 7

KEPserverEX, Creación de Canal MODBUS



← Add Channel Wizard ×

Specify One Socket per Channel for the driver to communicate with all devices through the same shared socket, closing and opening the socket for each device. One or More Sockets per Device disables sharing and devices use up to the specified number of private sockets independently maintained as active connections, improving performance.

Socket Utilization:

One or More Sockets per Device

Indicate the maximum number of sockets any device can use.

Max Sockets per Device:

1

Specify the port number the driver can use to listen for unsolicited requests.

Port:

502

Indicate the Ethernet protocol for the driver to use when listening for unsolicited requests.

IP Protocol:

TCP/IP

Next Cancel

El puerto por lo general es el 502, de ser otro, el fabricante lo debe especificar en el manual y acá se cambia

Paso 7

KEPserverEX, Creación de Canal MODBUS



← Add Channel Wizard ×

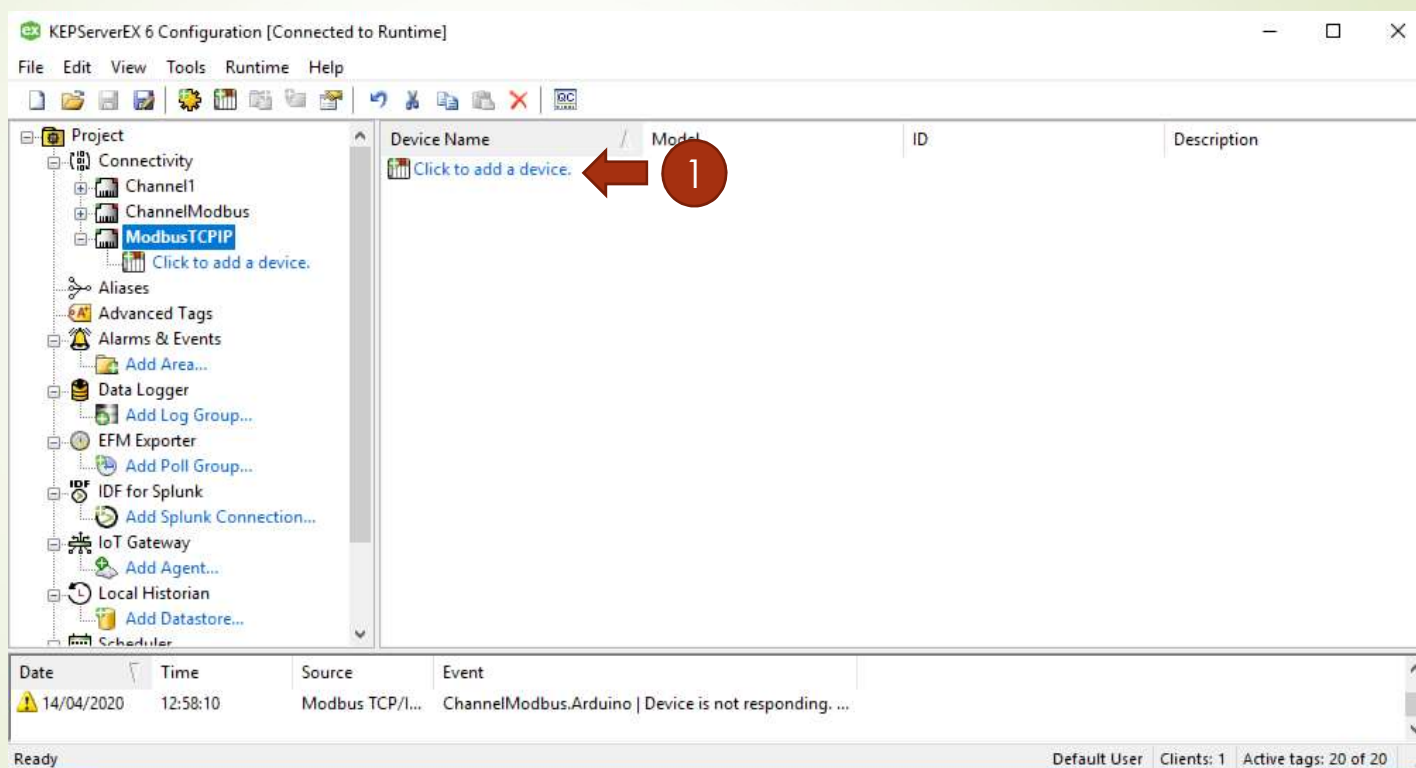
Identification	
Name	ModbusTCP/IP
Description	
Driver	Modbus TCP/IP Ethernet
Diagnostics	
Diagnostics Capture	Disable
Ethernet Settings	
Network Adapter	Intel(R) 82574L Gigabit Network Con...
Write Optimizations	
Optimization Method	Write Only Latest Value for All Tags
Duty Cycle	10
Non-Normalized Float Handling	
Floating-Point Values	Replace with Zero
Channel-Level Settings	
Virtual Network	None
Transactions per Cycle	1
Global Settings	
Network Mode	Load Balanced
Socket Usage	
Socket Utilization	One or More Sockets per Device
Max Sockets per Device	1
Unsolicted Settings	
Port	502
IP Protocol	TCP/IP

1 → Finish Cancel

Revisamos lo
ingresado

Paso 7

KEPserverEX, Creación de Canal MODBUS



Paso 8

Esclavo MODBUS TCP/IP



```
Command Prompt
Microsoft Windows [Version 10.0.17134.885]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\CDP_01>ping 192.168.1.11

Pinging 192.168.1.11 with 32 bytes of data:
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128
Reply from 192.168.1.11: bytes=32 time=1ms TTL=128
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128
Reply from 192.168.1.11: bytes=32 time=1ms TTL=128

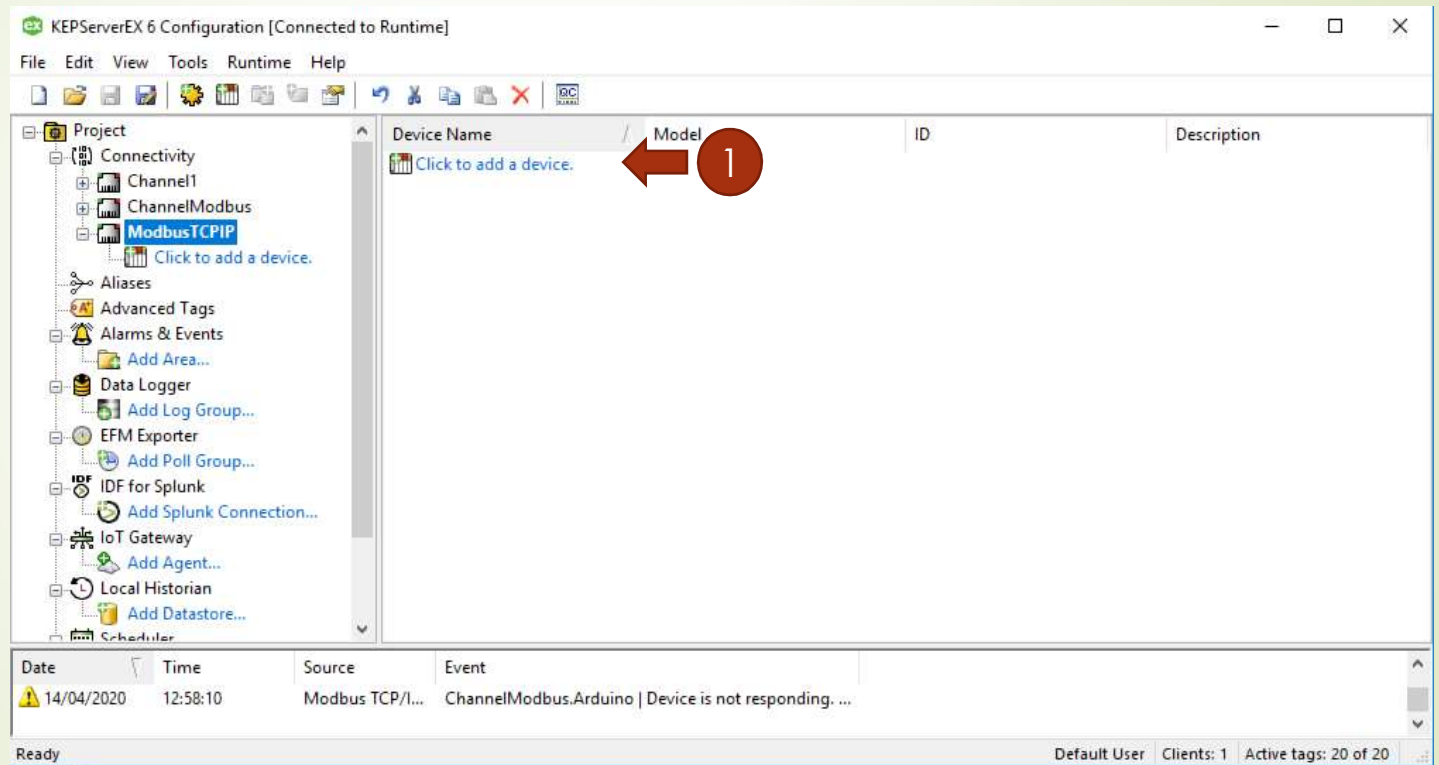
Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\CDP_01>
```

Verificamos que este conectado a la red el Esclavo Modbus/TCP
Debemos, tener su dirección IP, que puerto utiliza, que dirección esclavo
tiene, y estar en la misma red y poder hacerle PING, desde la maquina
donde esta el Kepserver, , en nuestro ejemplo es el 192.168.1.11/502.

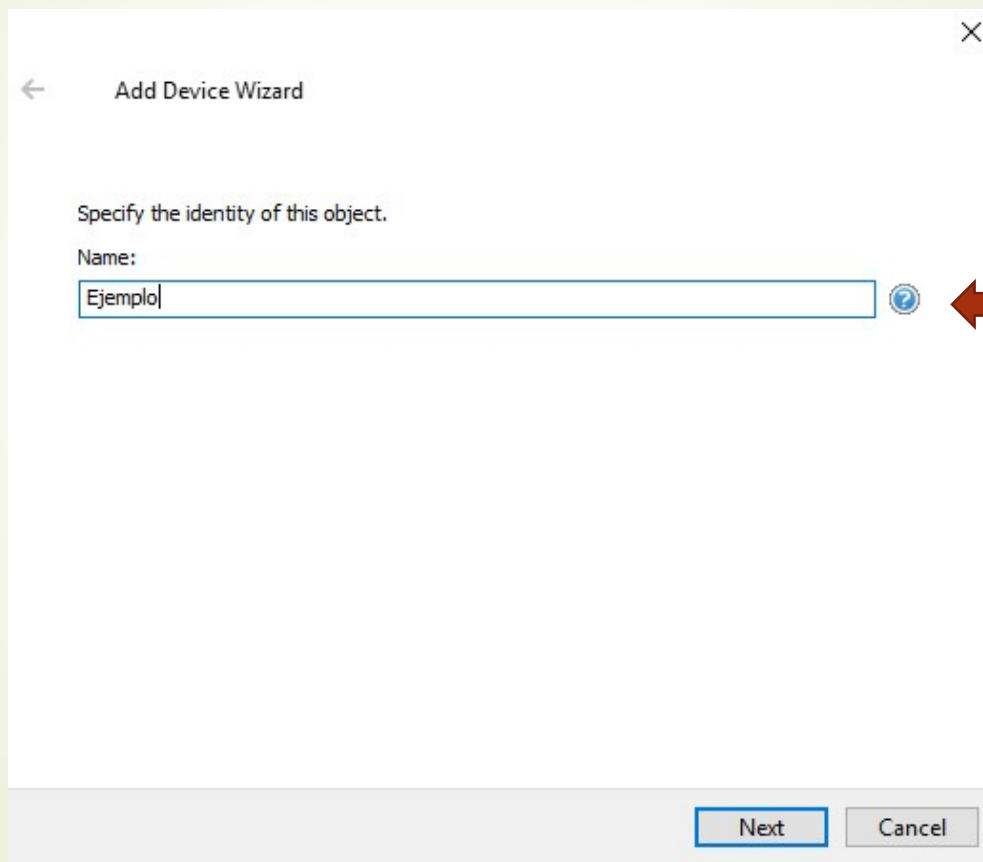
Paso 9

KEPserverEX, Creación de dispositivo MODBUS



Paso 9

KEPserverEX, Creación de dispositivo MODBUS

A screenshot of the 'Add Device Wizard' dialog box. The title bar says 'Add Device Wizard' with a back arrow and a close button. The main text says 'Specify the identity of this object.' Below this is a 'Name:' label followed by a text input field containing 'Ejemplo'. To the right of the input field is a help icon (a blue circle with a question mark). At the bottom right are 'Next' and 'Cancel' buttons.

← Add Device Wizard

Specify the identity of this object.

Name:

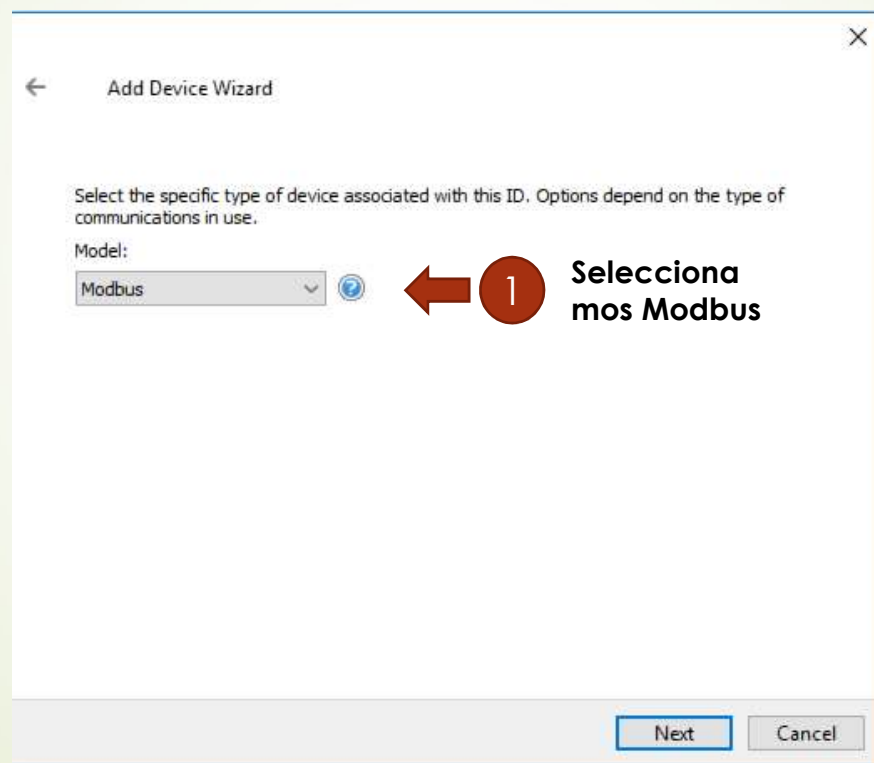
Ejemplo

Next Cancel

1 Le colocamos el nombre al dispositivo

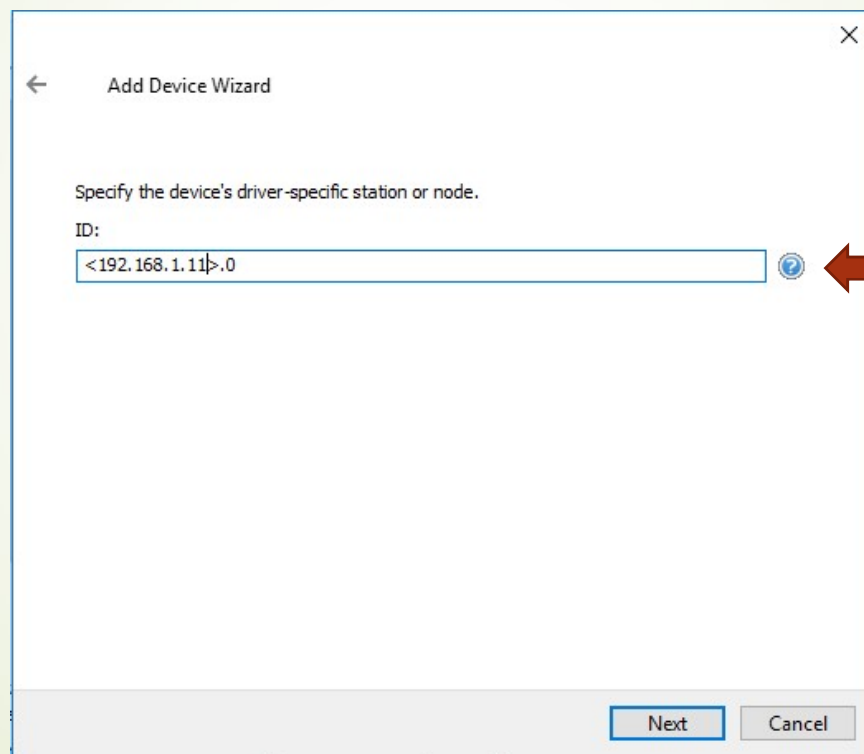
Paso 9

KEPserverEX, Creación de dispositivo MODBUS



Paso 9

KEPserverEX, Creación de dispositivo MODBUS

A screenshot of the 'Add Device Wizard' dialog box. The title bar says 'Add Device Wizard' with a back arrow and a close button. The main text says 'Specify the device's driver-specific station or node.' Below this, there is a label 'ID:' followed by a text input field containing '<192.168.1.11>.0'. To the right of the input field is a help icon (a question mark in a circle). At the bottom right, there are two buttons: 'Next' and 'Cancel'.

1 Colocamos la IP, y después del cero la dirección del esclavo

Paso 9

KEPserverEX, Creación de dispositivo MODBUS

A screenshot of the 'Add Device Wizard' dialog box. The title bar says 'Add Device Wizard' with a back arrow and a close button. The main text says 'Specify the method for determining how often tags in the device are scanned.' Below this, 'Scan Mode:' is followed by a dropdown menu set to 'Respect Client-Specified Scan Rate' and a help icon. The next section says 'Provide the first updates for new tag references from stored (cached) data rather than polling devices immediately.' Below this, 'Initial Updates from Cache:' is followed by a dropdown menu set to 'Disable' and a help icon. At the bottom right, there are 'Next' and 'Cancel' buttons. A red arrow points to the 'Next' button, which is also labeled with a red circle containing the number '1'.

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 9

KEPserverEX, Creación de dispositivo MODBUS



← Add Device Wizard

Define the maximum amount of time, in seconds, allowed to establish a connection to a remote device. Connection time is often longer than communication request time for a

Connect Timeout (s):

Specify an interval, in milliseconds, to determine how long the driver waits for a response from the target device to indicate completion.

Request Timeout (ms):

Indicate how many times the driver sends a communications request before considering the request to have failed and the device to be in error.

Retry Attempts:

Define how long, in milliseconds, the driver waits before sending the next request to the target device.

Inter-Request Delay (ms):

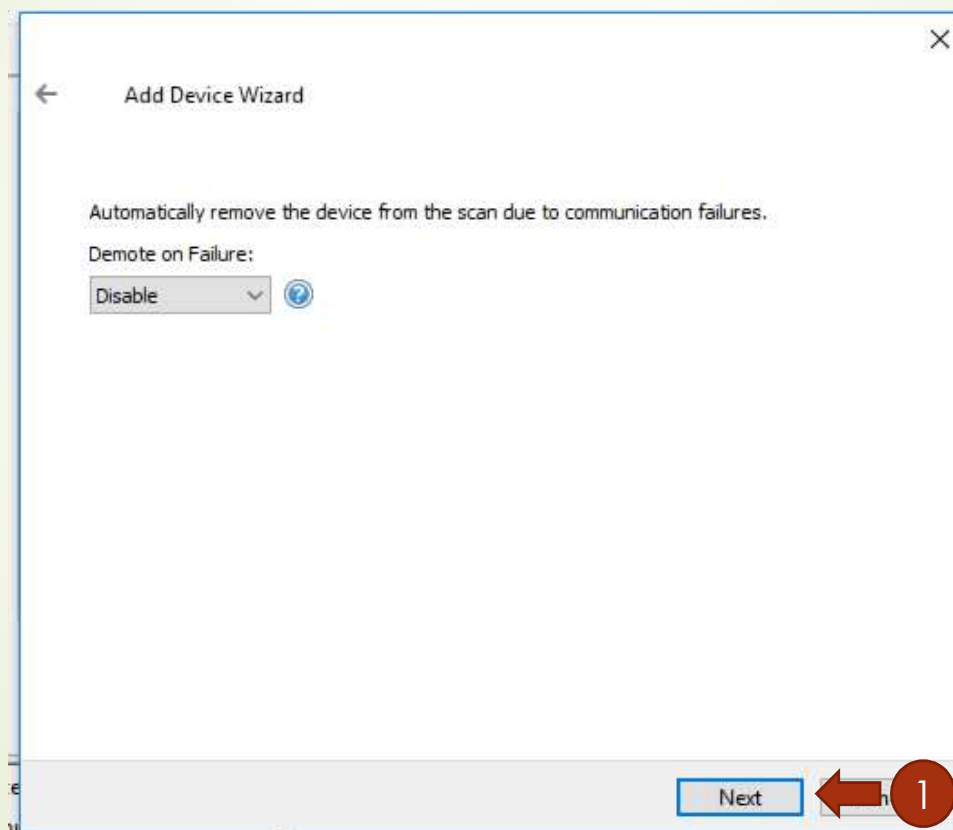
Next

1

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 9

KEPserverEX, Creación de dispositivo MODBUS



Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 9

KEPserverEX, Creación de dispositivo MODBUS

A screenshot of the 'Add Device Wizard' dialog box in the KEPserverEX software. The dialog has a title bar with a back arrow, the text 'Add Device Wizard', and a close button. It contains four sections of configuration options, each with a dropdown menu and a help icon (a blue circle with a question mark). The first section is 'Select the automatic tag generation action to be taken on device startup.' with the dropdown set to 'Do Not Generate on Startup'. The second section is 'Indicate the preferred method of avoiding creation of duplicate tags.' with the dropdown set to 'Delete on Create'. The third section is 'Indicate a tag group name for new generated tags. If empty, generated tags are added at the device level.' with an empty text field. The fourth section is 'Instruct the server to automatically create sub groups for automatically generated tags.' with the dropdown set to 'Enable'. At the bottom right, there is a 'Next' button. A red arrow points to the 'Next' button, and a red circle with the number '1' is next to it.

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 9

KEPserverEX, Creación de dispositivo MODBUS



← Add Device Wizard

Specify the port number that the remote device is configured to use for solicited requests. The Modbus Ethernet driver uses this port number when making solicited requests to a device.

Port: ?

1 Revisar que este en el puerto indicado

Indicate whether the driver should use User Datagram Protocol (UDP) or Transfer Control Protocol (TCP). The master and slave settings must match.

IP Protocol: ?

2 Revisar que este en TCP/IP

Enable the driver to close a TCP socket connection if a device does not respond within the timeout. If disabled, the same socket is used until an error occurs, the physical device closes the socket, or the driver shuts down.

Close Socket on Timeout: ?

Next

3

Paso 9

KEPserverEX, Creación de dispositivo MODBUS

A screenshot of the 'Add Device Wizard' dialog box in the KEPserverEX software. The dialog has a title bar with a back arrow, the text 'Add Device Wizard', and a close button. It contains five sections, each with a text description and a dropdown menu set to 'Enable'. The sections are: 1. Zero-Based Addressing: 'Specify if the address numbering convention for the device starts at zero or one. Addresses have one subtracted when frames are constructed to communicate with a Modbus device. If the device doesn't follow this convention, choose Disable.' 2. Zero-Based Bit Addressing: 'Specify if the first bit in a register address begins at zero or one for memory types that allow bits within words to be referenced as a Boolean.' 3. Holding Register Bit Writes: 'Enable if the device supports holding register bit access to manipulate only the bit of interest in a single command (as opposed to performing a Read/Modify/Write operation to manipulate a single bit).' 4. Modbus Function 06: 'Enable if the device can use Modbus functions 06 and 16 for single register writes. If the device only supports Modbus function 16, disable.' 5. Modbus Function 05: 'Enable if the device can use Modbus functions 05 and 15 for single coil writes. If the device only supports Modbus function 15, disable.' At the bottom right, there is a 'Next' button. A red arrow points to the 'Next' button, and a red circle with the number '1' is next to it.

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 9

KEPserverEX, Creación de dispositivo MODBUS

A screenshot of the 'Add Device Wizard' dialog box in the KEPserverEX software. The dialog box has a title bar with a back arrow and a close button. It contains several sections with instructions and dropdown menus. The 'Modbus Byte Order' is set to 'Enable'. The 'First Word Low' is set to 'Enable'. The 'First DWord Low' is set to 'Enable'. The 'Modicon Bit Order' is set to 'Disable'. The 'Treat Longs as Decimals' is set to 'Disable'. At the bottom right, there is a 'Next' button. A red arrow points to the 'Next' button, and a red circle with the number '1' is next to it.

← Add Device Wizard

Select Enable to use Modbus byte ordering for Modbus-compatible devices or Disable to use Intel byte ordering.

Modbus Byte Order:
Enable

Indicate if 32-bit data types use the convention of first word low, as in Modicon Modsoft programming software. If disabled, the first word is assumed high.

First Word Low:
Enable

Indicate if 64-bit data types use the convention of first DWord low. If disabled, the first DWord is assumed high.

First DWord Low:
Enable

Indicate if the bit order should be reversed on register reads and writes to follow Modicon Modsoft programming software convention. If enabled, the lowest bit becomes the Most Significant Bit (MSB).

Modicon Bit Order:
Disable

Encode/decode Long and DWORD data types as double-precision 64-bit unsigned decimal values. For values read above the specified range, behavior is undefined.

Treat Longs as Decimals:
Disable

Next

Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 9 KEPserverEX




Creación de dispositivo MODBUS


Revisar que tengamos la
cantidad de registros
necesarios.

← Add Device Wizard ×


Specify the number of coils (bits) in an output block. Higher block size reads more data points from the device in a single request. Block size can be reduced if data needs to be read from non-contiguous locations within the device.

Output Coils:  ← 1


Specify the number of coils (bits) in an input block. Higher block size reads more data points from the device in a single request. Block size can be reduced if data needs to be read from non-contiguous locations within the device.

Input Coils:  ← 2


Specify the block size for internal registers. From 1 to 120 standard Modbus registers (16 bit) can be read at a time.

Internal Registers:  ← 3

Specify the block size for holding registers. From 1 to 120 standard Modbus registers (16 bit) can be read at a time.

Holding Registers:  ← 4

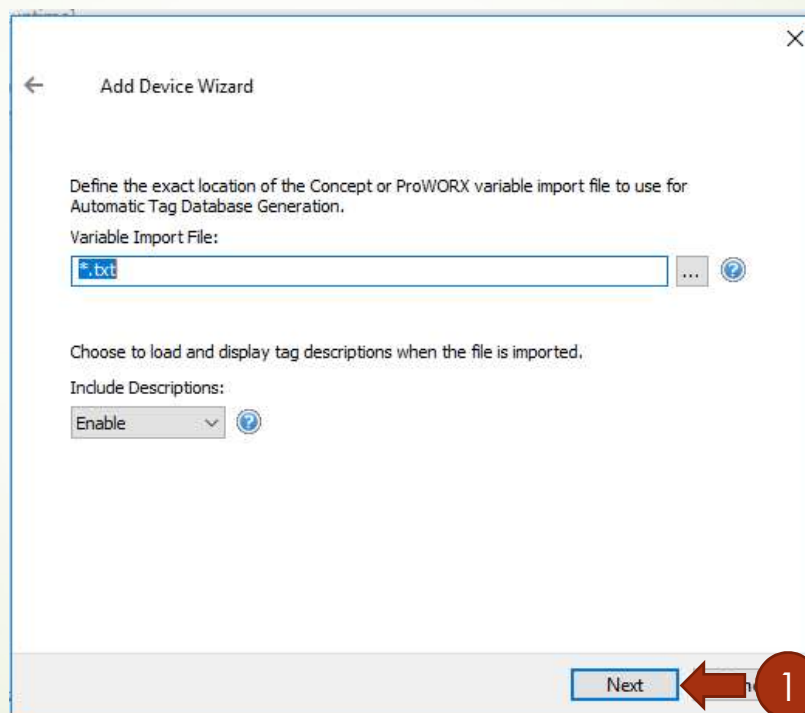
Specify if string tags should be read in blocks. Block reads can only be performed by the Modbus model. Disable to read string tags individually.

Block Read Strings: 

Next ← 1

Paso 9

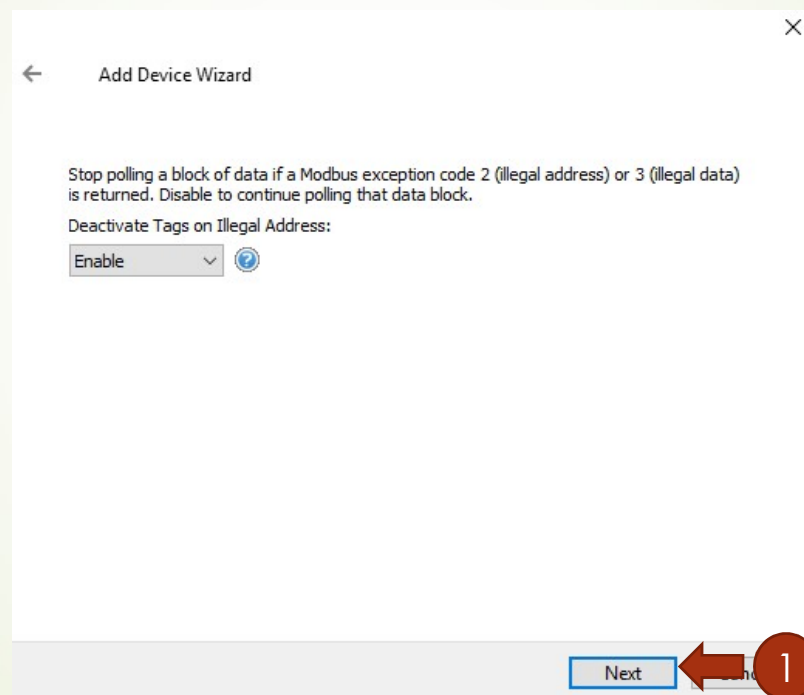
KEPserverEX, Creación de dispositivo MODBUS



Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 9

KEPserverEX, Creación de dispositivo MODBUS



Nota: Si no conocemos el parámetro, dejarlo por defecto, también funciona.

Paso 9

KEPserverEX, Creación de dispositivo MODBUS



← Add Device Wizard

Identification	
Name	Ejemplo
Description	
Driver	Modbus TCP/IP Ethernet
Model	Modbus
Channel Assignment	ModbusTCP/IP
ID	<192.168.1.11>.0
Operating Mode	
Data Collection	Enable
Simulated	No
Scan Mode	
Scan Mode	Respect Client-Specified Scan Rate
Initial Updates from Cache	Disable
Communication Timeouts	
Connect Timeout (s)	3
Request Timeout (ms)	1000
Retry Attempts	3
Timing	
Inter-Request Delay (ms)	0
Auto-Demotion	
Demote on Failure	Disable
Tag Generation	
On Device Startup	Do Not Generate on Startup
On Duplicate Tag	Delete on Create

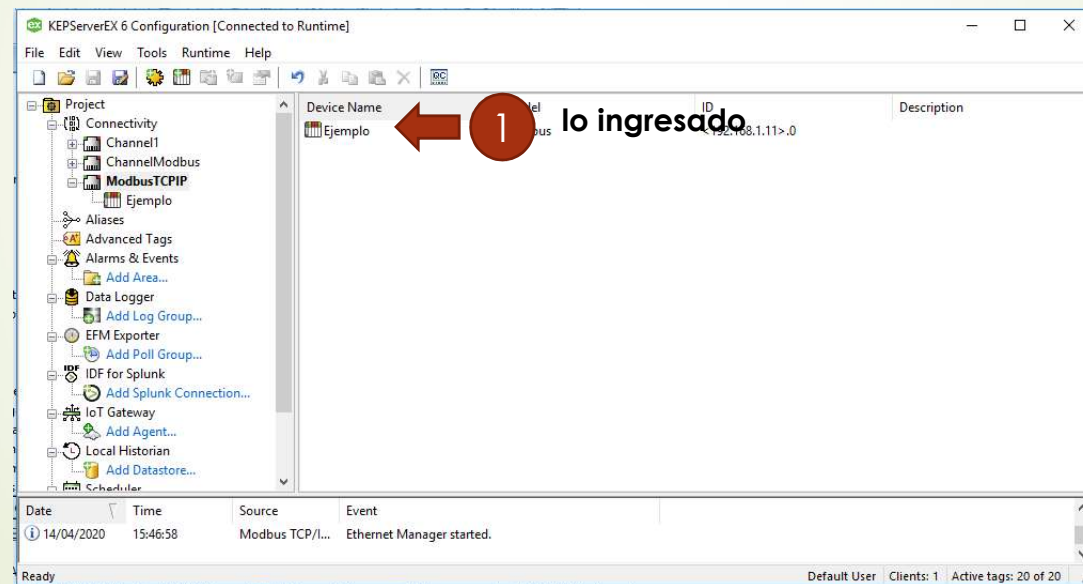
Finish

1 Revisamos lo ingresado

2

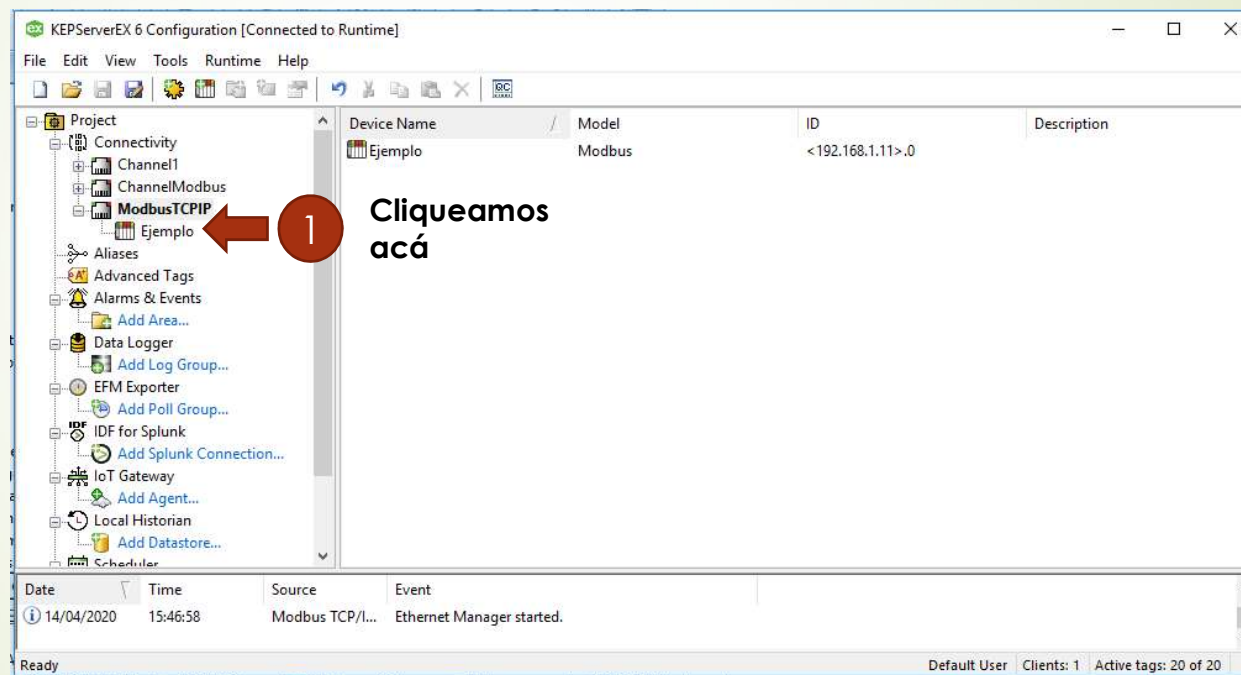
Paso 9

KEPserverEX, Creación de dispositivo MODBUS



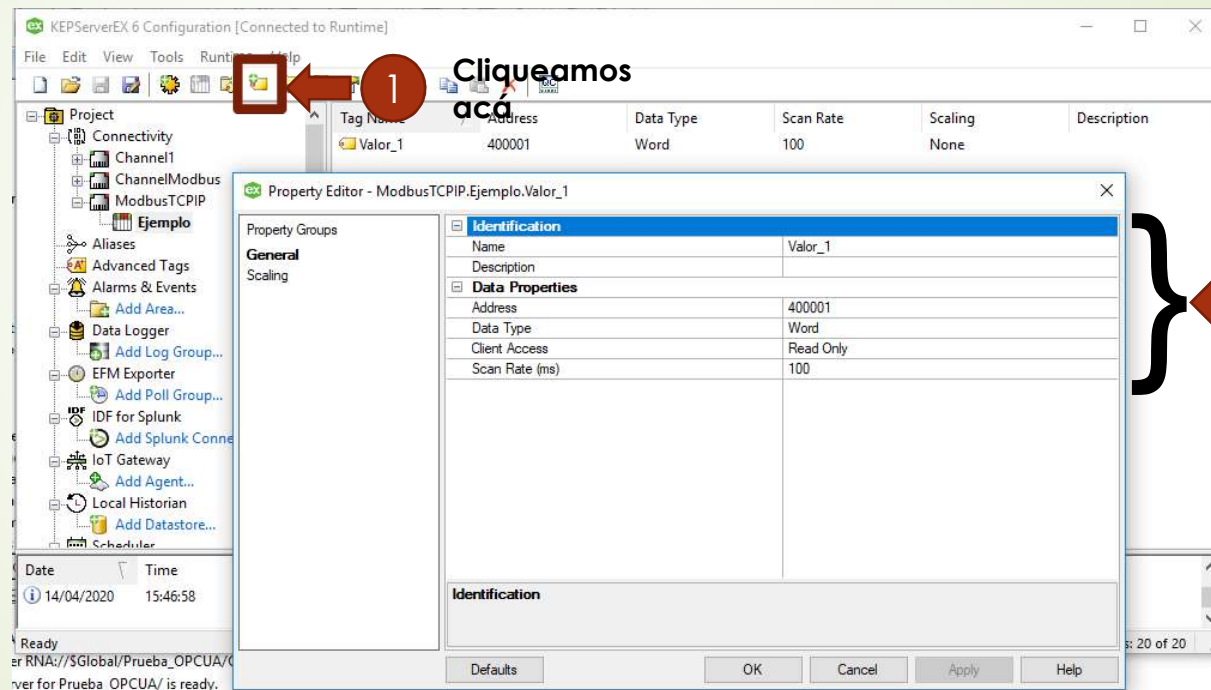
Paso 9

KEPserverEX, Creación de dispositivo MODBUS



Paso 10

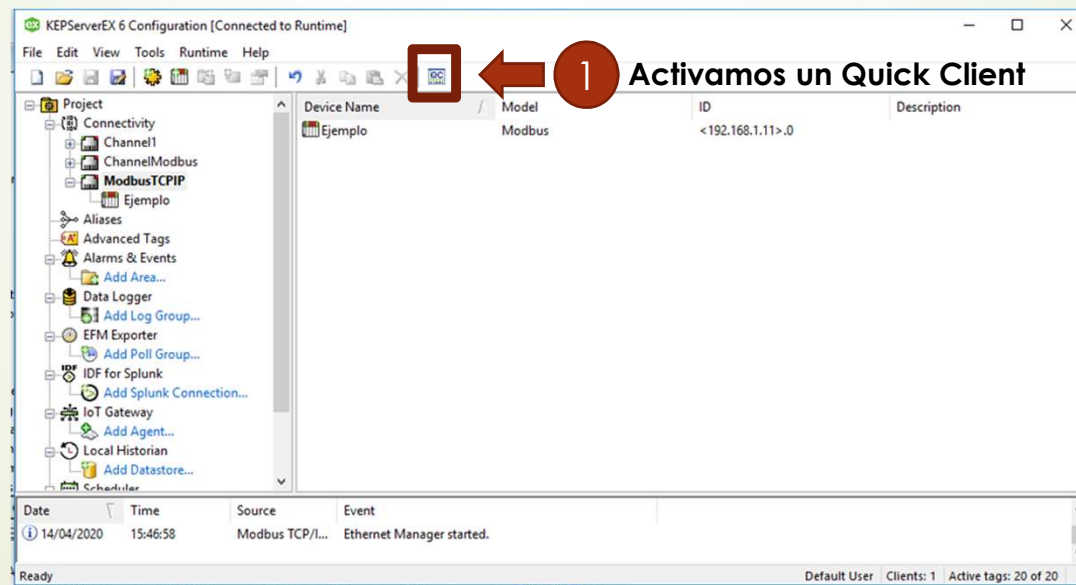
KEPserverEX, Verificar la conexión y la variable



2. Address: es la dirección real del registro, en este caso es Holding, pero de ser Input, Output u otra cosa, se coloca la dirección y el tipo de dato (Datatype) en default

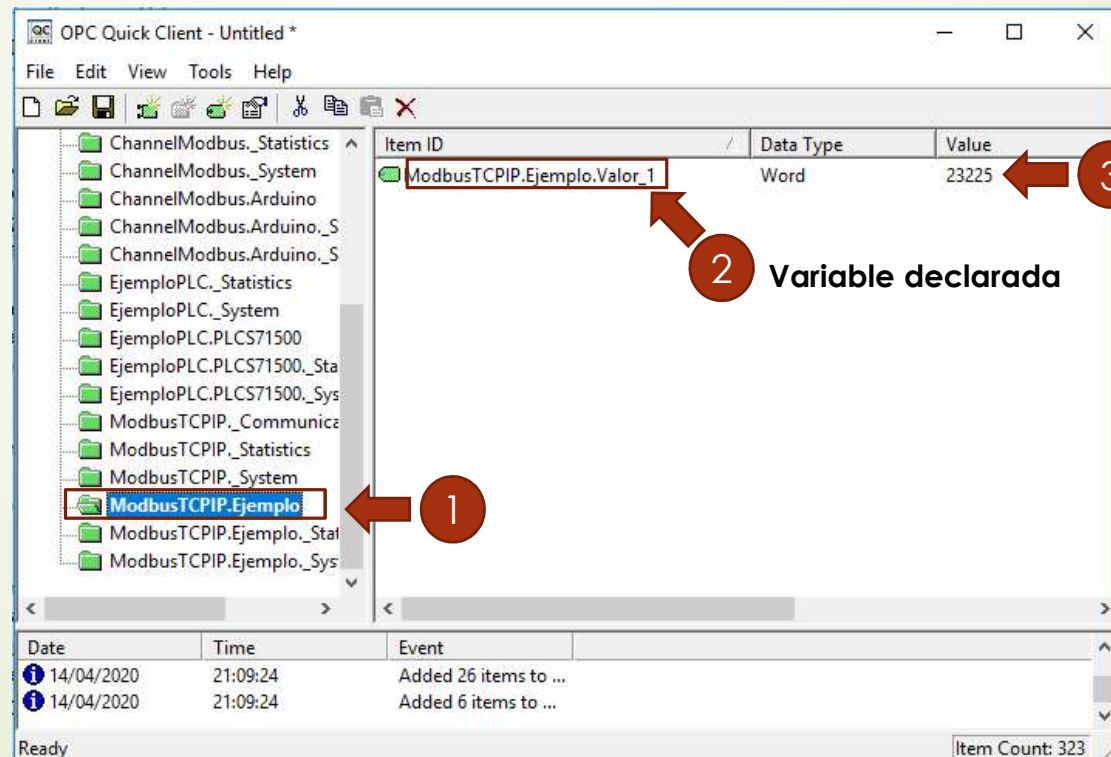
Paso 10

KEPserverEX, Verificar la conexión y la variable



Paso 10

KEPserverEX, Verificar la conexión y la variable



3 Valor actual

2 Variable declarada

1

Servidor OPC UA KEPServerEX



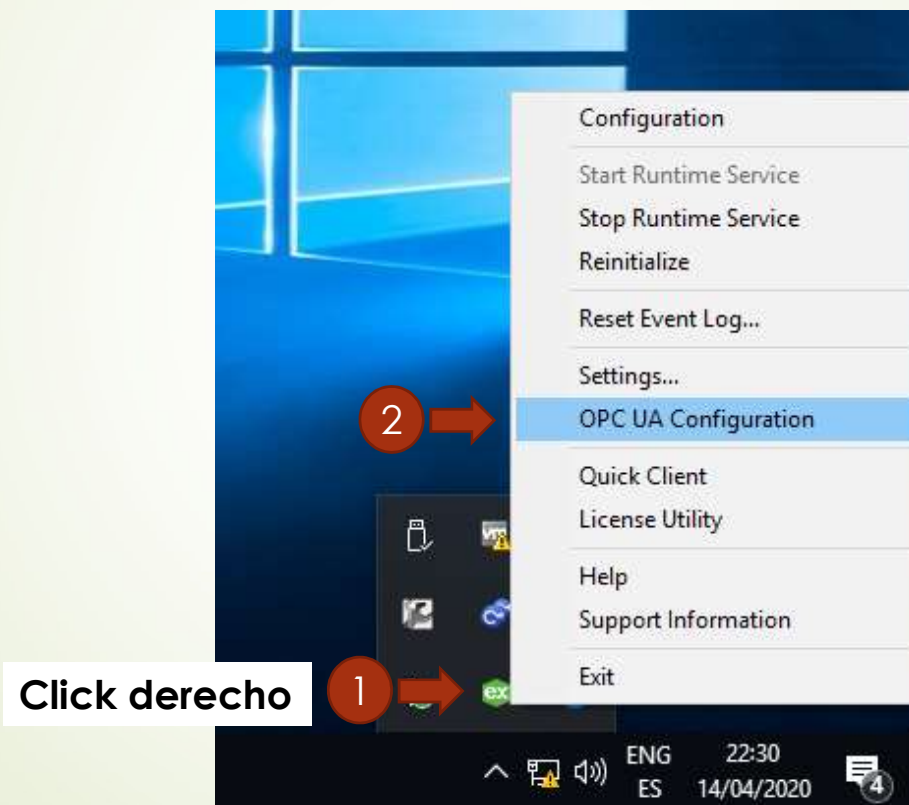
KEPServerEX

o



Paso 11

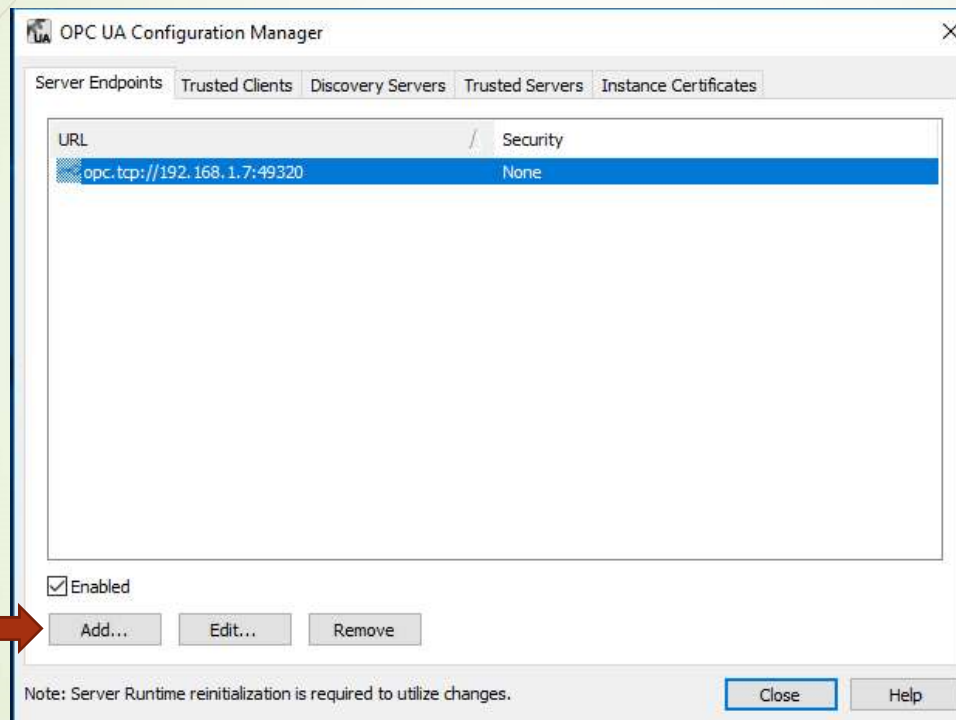
KEPserverEX, Verificar la dirección



Nota: EL server arranca con el Windows, en la barra de tareas esta como proceso en segundo plano.

Paso 11

KEPserverEX, Verificar la dirección

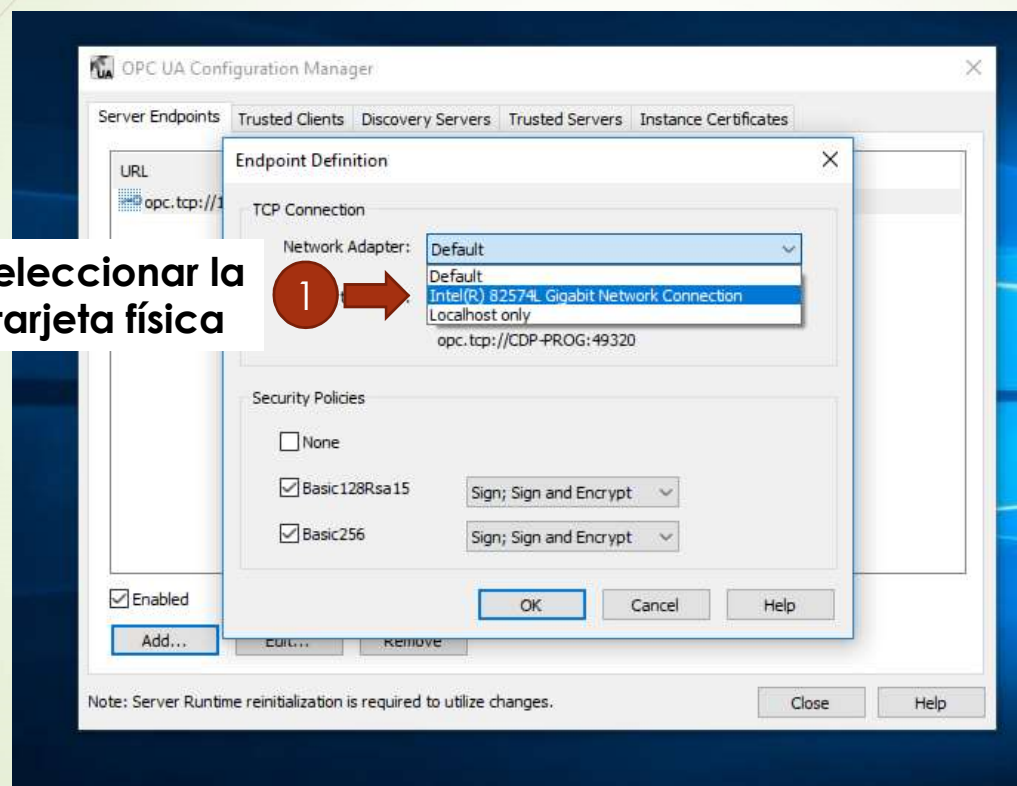


Nota: Por defecto salen dos servers, pero la idea es dejar solo uno, los borramos en “remove” (los dos) y agregamos uno mas en “add”

Paso 11

KEPserverEX, Verificar la dirección

Seleccionar la tarjeta física



Paso 11

KEPserverEX, Verificar la dirección

Dirección del
Server OPC UA

Endpoint Definition

TCP Connection

Network Adapter: Intel(R) 82574L Gigabit Network Connection

Port Number: 49320

1 → opc.tcp://192.168.1.7:49320

Security Policies

☒ None

☐ Basic128Rsa15 Sign

☐ Basic256 Sign

2 → {

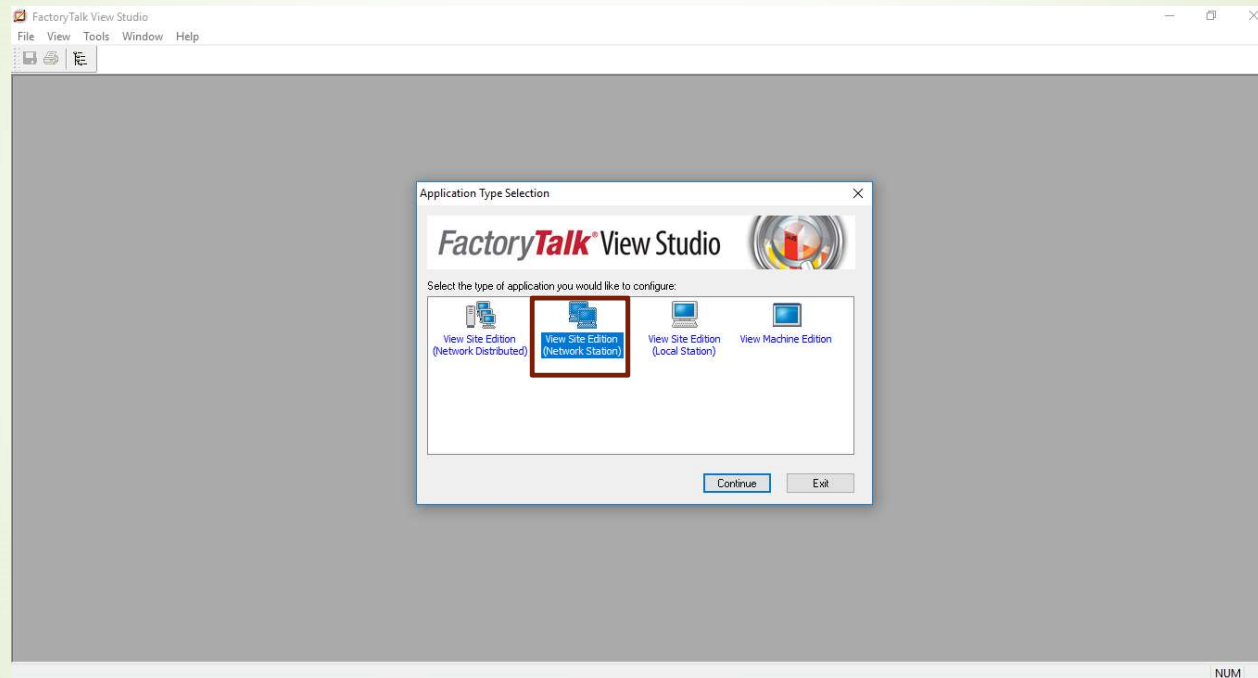
3 → OK Cancel Help

FactoryTalk View Studio



Paso 12

FactoryTalk View Studio



Nota: Hacemos un proyecto nuevo, View Site Edition (Network Station)

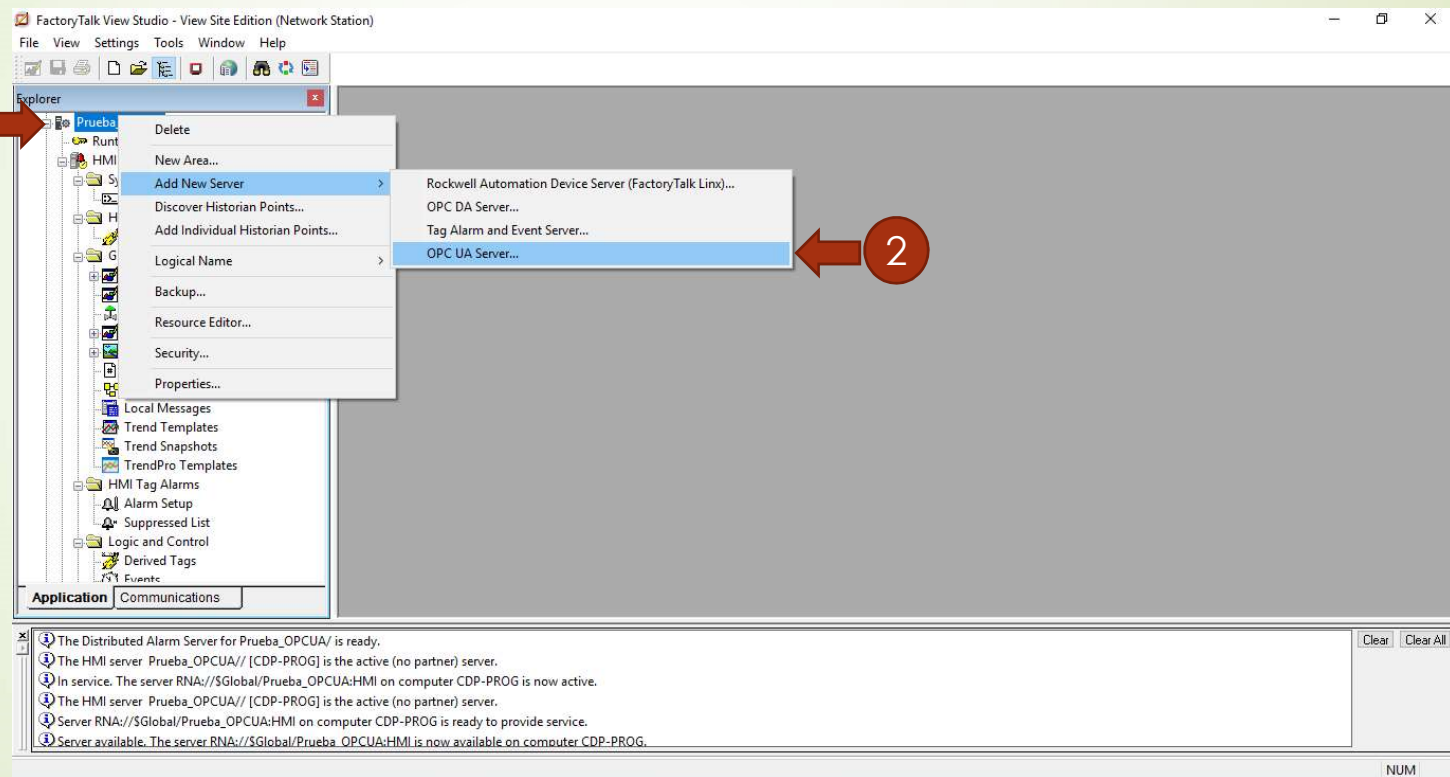
Paso 12

FactoryTalk View Studio

Click
derecho

1

Prueba OPCUA



Paso 12

FactoryTalk View Studio

FactoryTalk Linx OPC UA Connector

1 → **Connector Settings**
Configure client name and location

2 Colocar Nombre

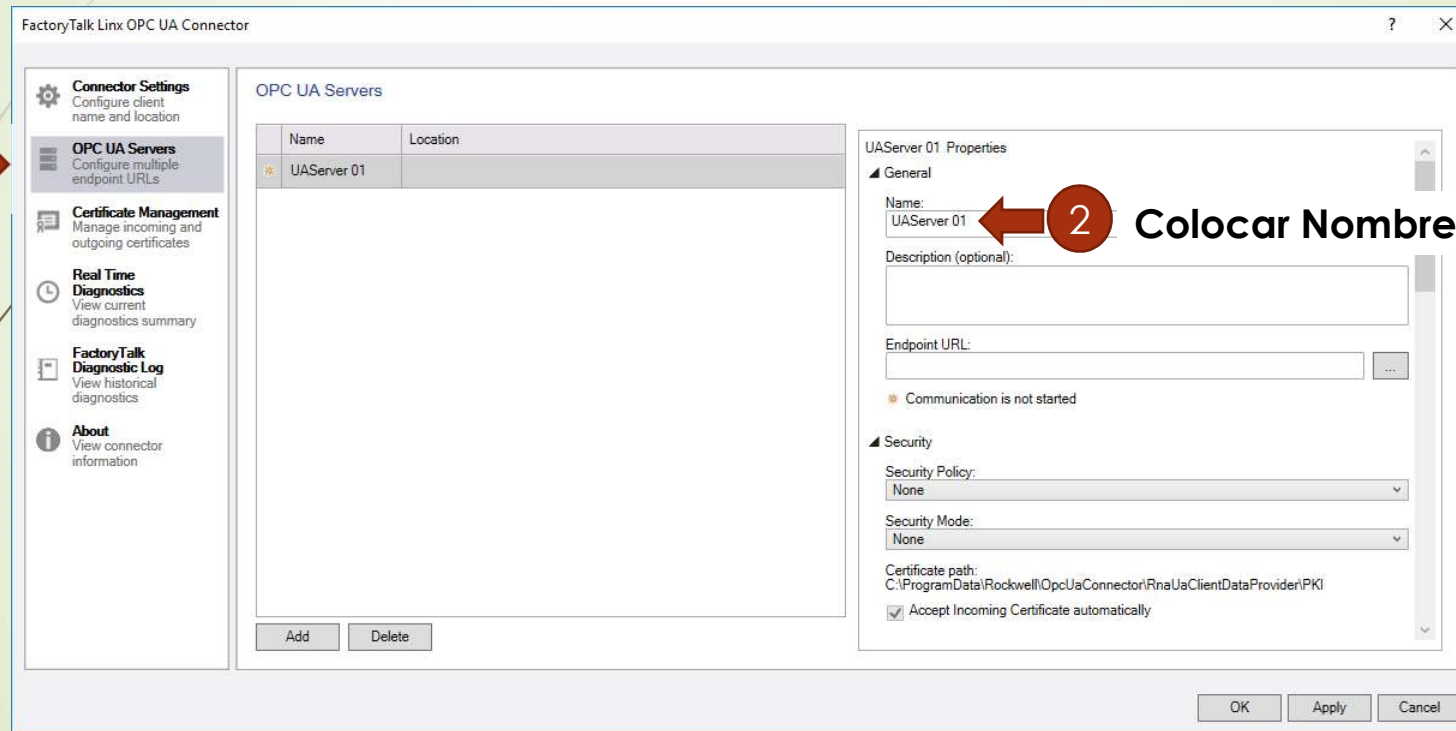
Name:
Connector1

Computer hosting the FactoryTalk Linx OPC UA Connector
CDP-PROG Browse...

OK Apply Cancel

Paso 12

FactoryTalk View Studio



Paso 12

FactoryTalk View Studio

FactoryTalk Linx OPC UA Connector

Connector Settings
Configure client name and location

OPC UA Servers
Configure multiple endpoint URLs

Certificate Management
Manage incoming and outgoing certificates

Real Time Diagnostics
View current diagnostics summary

FactoryTalk Diagnostic Log
View historical diagnostics

About
View connector information

OPC UA Servers

Name	Location
UAServer 01	opc.tcp://192.168.1.7:49320

Add Delete

UAServer 01 Properties

General

Name: UAServer 01

Description (optional):

Endpoint URL: **opc.tcp://192.168.1.7:49320**

Communication is not started

Security

Security Policy: None

Security Mode: None

Certificate path: C:\ProgramData\Rockwell\OpcUaConnector\RnaUaClientDataProvider\PKI

☒ Accept Incoming Certificate automatically

OK Apply

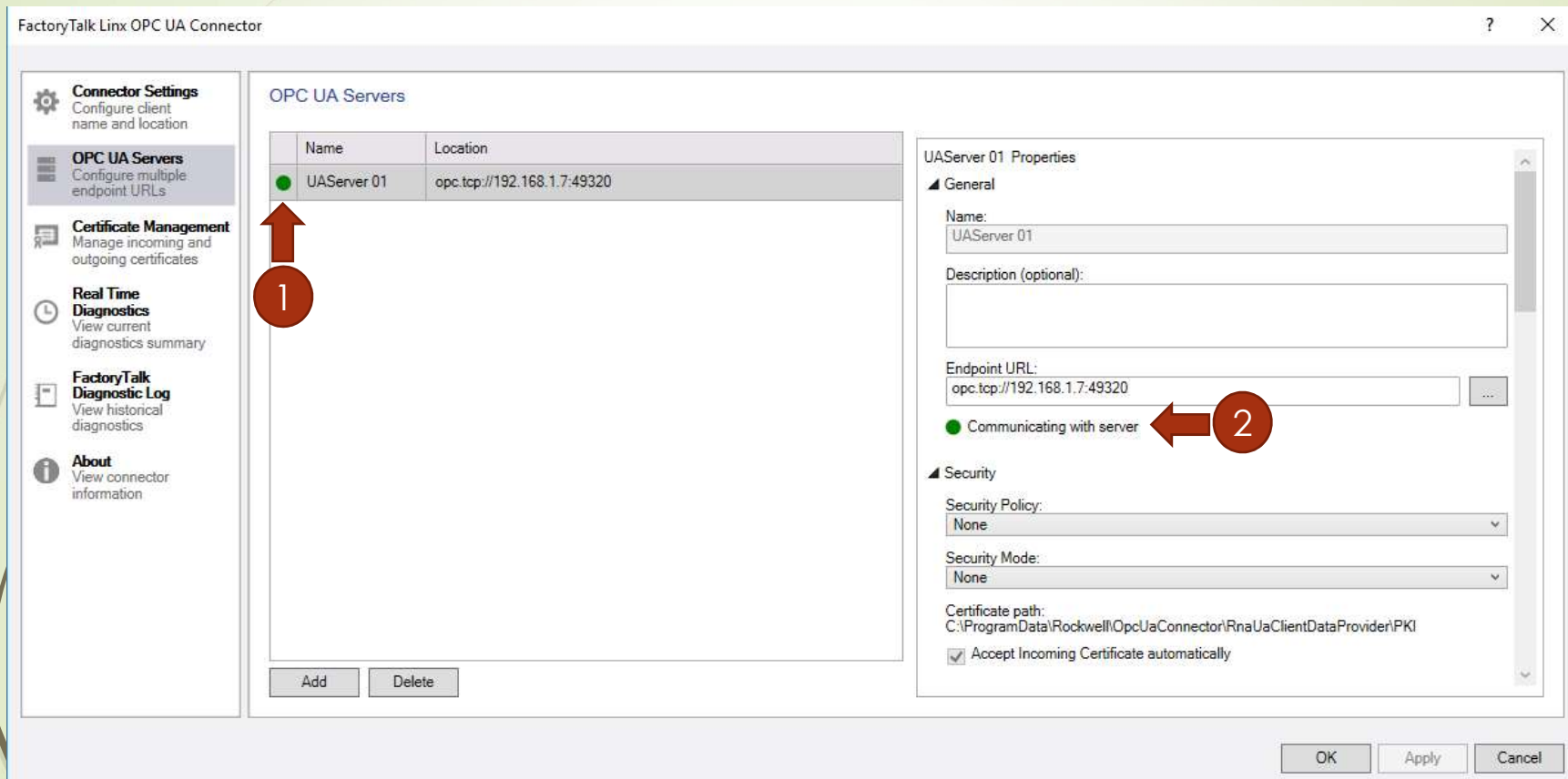
Colocar Dirección de OPC Server UA

1

2

Paso 12

FactoryTalk View Studio



Paso 13

Agregar Variable en un campo

FactoryTalk Linx OPC UA Connector

Connector Settings
Configure client name and location

OPC UA Servers
Configure multiple endpoint URLs

Certificate Management
Manage incoming and outgoing certificates

Real Time Diagnostics
View current diagnostics summary

FactoryTalk Diagnostic Log
View historical diagnostics

About
View connector information

OPC UA Servers

Name	Location
UAServer 01	opc.tcp://192.168.1.7:49320

Add Delete

UAServer 01 Properties

General

Name: UAServer 01

Description (optional):

Endpoint URL: opc.tcp://192.168.1.7:49320

Communicating with server

Security

Security Policy: None

Security Mode: None

Certificate path: C:\ProgramData\Rockwell\OpcUaConnector\RnaUaClientDataProvider\PKI

☒ Accept Incoming Certificate automatically

OK Apply Cancel

1

2

Paso 13

Agregar Variable en un campo

Numeric Display Properties

General Common

Expression

If... Logical... Relational... Arithmetic... Bitwise... Functions... Tags...

Check Syntax

Numeric

Format: Decimal Overflow: Show exponent

Field Length: 11

☒ Fixed decimal places 0

☐ Dynamic decimal places

Justification

☐ Left ☐ Center ☒ Right

Leading Character

☒ Blanks ☐ Zeroes

OK Cancel Apply Help

The Distributed Alarm Server for Prueba OPCUA/ is ready.
The HMI server Prueba OPCUA// [CDP-PROG] is the active (no partner) server.
In service. The server RNA://SGlobal/Prueba OPCUA:HMI on computer CDP-PROG is now active.
The HMI server Prueba OPCUA// [CDP-PROG] is the active (no partner) server.
Server RNA://SGlobal/Prueba OPCUA:HMI on computer CDP-PROG is ready to provide service.
Server available. The server RNA://SGlobal/Prueba OPCUA:HMI is now available on computer CDP-PROG.

Tag Browser

Select Tag

Folders

Prueba OPCUA

system

Connector1

[UAServer 01]

@Diagnostic Items

_AdvancedTags

_ConnectionSharing

_CustomAlarms

_DataLogger

_EFMExporter

_IDF_for_Splunk

_IoT_Gateway

_LocalHistorian

_Redundancy

_Scheduler

_SecurityPolicies

_SNMP Agent

_System

Channel1

_Statistics

_System

S71500

InternalTags

Contents of '/Connector1::[UAServer 01]/Channel1/S71500'

Name	Access Rights	Description
Valor_1	ReadWrite	
Valor_10	ReadWrite	
Valor_11	ReadWrite	
Valor_12	ReadWrite	
Valor_13	ReadWrite	
Valor_2	ReadWrite	
Valor_3	ReadWrite	
Valor_4	ReadWrite	
Valor_5	ReadWrite	
Valor_6	ReadWrite	
Valor_7	ReadWrite	
Valor_8	ReadWrite	
Valor_9	ReadWrite	

Refresh All Folders Tag filter: <None>

Selected Tag

/Connector1::[UAServer 01]Channel1\S71500

Home area: /

OK Cancel Help

Variables Declaradas