Modbus TCP/IP Ethernet 通讯案例

KEPServerEX 提供的 Modbus TCP/IP Ethernet 驱动能够为用户提供一个 OPC Server 接口,将

Modbus TCP/IP Ethernet 设备连接到 OPC Client 应用程序中,简单,可靠。

下面以 Modbus slave 软件为例,说明如何建立 KEPServerEX (在此例中做主站)和 Modbus TCP 的连接。

设置 KEPServerEX

建立 KEPServerEX 的工程主要分为以下几项:新建通道:New Channel,新建设备:New Device, 新建标签组: New Tag Group (可选),新建标签: New Tag。

| File Edit Vie | w Tools Ru | ntime Help | | | and the second | |
|--|---|---|--|---|------------------------------|------------------|
| | 2 😳 🔄 | ₩ <u>%</u> 12 12 × | | | | |
| Project | ectivity ick to add a chann s aced Tags s & Events idd Area .ogger dd Log Group Exporter dd Poll Group Fxporter dd Poll Group r Splunk dd Splunk Connect ateway dd Agent Historian dd Datastore fuler id Schedule 2 Agent dd Agent | hel 記記 記述 記述 記述 記述 記述 記述 記述 記述 記述 記述 記述 記述 | / Driver annel. 详细信息视 | Connection | Sharing | Virtual |
| Date 7 | Time | Source | Event | | | |
| (i) 2016/12/20 (i) 2016/12/20 | 13:10:06 13:12:08 | KEPServerEX\Runtime KEPServerEX\Runtime | Stopping Siem Created backu | ens TCP/IP Ethemet device dri up of project 'D:\KEPSeverEX v | ver. 6\Kepware\KEPServerf | EX\\V6\default.o |
| 2016/12/20 2016/12/20 2016/12/20 016/12/20 | 13:12:08 13:12:08 13:12:08 | KEPServerEX\Runtime KEPServerEX\Runtime KEPServerEX\Runtime | Advanced Tag Data Logger P Alarma & Even | gs Plug-in V6.0.2107.0 Plug-in V6.0.2107.0 te Plug-in V6.0.2107.0 | 日志视图 | |

新建通道: New Channel

 打开"KEPSeverEX V6"软件,点击"File"->"New",或者工具栏上的"New Project",建立 一个新的工程。



 KEPServerEX 6 Configuration [Connected to Runtime]

 File
 Edit
 View
 Tools
 Runtime
 Help

 Project
 Project
 Channel Name
 Driver
 Connectivity

 Click to add a channel.
 Click to add a channel.
 Click to add a channel.

 Advanced Tags
 Marea & Eventse

2. 单击 "Click to add a channel" 或者工具栏上的 "new channel", 建立一个新通道。

| Eile Edit View Tools Runtime | Help | | |
|---|-----------------------|------------|---------|
| 🗀 😂 🗟 🔂 😽 🕾 🗠 🕯 | 1 🕰 🗶 🗙 📗 | | |
| Project Connectivity Cick to add a channel. | Channel Name / Driver | Connection | Sharing |
| Advanced Tags | | | |

- 3. 选择需要分配给本通道的设备驱动"Device driver",在下拉选项中选择"Modbus TCP/IP Ethernet",
 - 单击"下一步"。

| Add Channel Wizard | |
|---|-----------|
| Select the type of channel to be created: | |
| Modbus TCP/IP Ethemet | • |
| | |
| | |
| | |
| | |
| | 下一步(N) 取消 |

注意:如果用户在下拉列表里没有找到所要连接的设备驱动,可能是没有进行完全安装,用户应该 对 KEPSeverEX 进行修改安装 (Modify),用户在安装可根据需要的安装所要用的设备驱动或者全部

安装。

 修改通道名称 "Channel name", 修改为想要的名称,这里我们改为 "Modbus TCP/IP Ethernet", 单击 "下一步"。

| Add Channel Wizard | |
|--------------------------------------|------------|
| | |
| Specify the identity of this object. | |
| Name: | |
| Modbus TCP/IP Ethernet | (2) |
| | |
| | |
| | |
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5. 设置 Virtual Network, 默认即可,点击"下一步"。

| Limit data | transmissions to one channel at a time by assigning this |
|------------------|--|
| channel to | a virtual network. |
| Virtual Net | work: |
| None | ▼ |
| Transaction | is per Cycle: |
| Transaction | s per Cycle: |
| Transaction 1 | s per Cycle: |



 6. 设置 Network Adapter,选择网络适配器,点击"..."选择需要应用的网络适配器,选择完成后 单击"下一步"

| Specify the name of a network adap | pter to bind or allow the OS to select |
|------------------------------------|--|
| the default. Notwork Adortor: | |
| Default | |
| | |
| | |

| Binding | Adapter Name |
|---------------|--------------|
| | Default |
| 192.100.0.100 | |
| | |

7. 设置优化,这里我们保持默认,单击"下一步"

| Choose how | write data is passed to the underlying communications driver |
|--|---|
| when more | than one write exists in the write queue. |
| Write Onl | v Latart Value for All Tegr |
| Specify th read per | ne ratio of write operations to read operations, based on one configurable number of writes. |
| Specify th read per o Duty Cyclo | ne ratio of write operations to read operations, based on one configurable number of writes. :: |
| Specify t) read per o Duty Cyclo 10 | ne ratio of write operations to read operations, based on one configurable number of writes. a: @ |
| Specify t) read per d Duty Cyclo 10 | ne ratio of write operations to read operations, based on one configurable number of writes. e: () () |
| Specify t) read per o Duty Cyclo 10 | ne ratio of write operations to read operations, based on one configurable number of writes. e: |

8. 设置浮点型数据,这里我们保持默认,单击"下一步"

| Choose how Floating-Po | to send invali vint Values: | d floating-point num | bers to the client. | |
|---------------------------|--------------------------------|----------------------|---------------------|--|
| Replace wi | th Zero 🔻 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



9. 设置 Socket Utilization,保持默认选项,单击"下一步"

| Specify Or devices th for each o devices us maintaineo | ne Socket per Channel for the driver to communicate with all mrough the same shared socket, closing and opening the socket device. One or More Sockets per Device disables sharing and se up to the specified number of private sockets independently d as active connections, improving performance. | |
|--|---|------|
| Socket Uti | lization: | |
| Une or Mo | re Sockets per Device 🔻 🎯 | |
| | | - 11 |
| Indicate (| the maximum number of sockets any device can use. | |
| Indicate (Max Socke) | the maximum number of sockets any device can use. ts per Device: | |

10. 设置总结,单击"完成"。至此,我们的通道设置就完成了,在这里可以对之前的设置进行修改

| Ξ | Identification | | |
|---|----------------------------|--------------------------------------|-----|
| | Name | Modbus TCP/IP Ethernet | |
| | Description | | |
| | Driver | Modbus TCP/IP Ethemet | |
| Ξ | Diagnostics | | |
| | Diagnostics Capture | Disable | - 3 |
| | Ethernet Settings | | |
| | Network Adapter | Default | |
| Ξ | Write Optimizations | die | |
| | Optimization Method | Write Only Latest Value for All Tags | |
| | Duty Cycle | 10 | |
| | Non-Normalized Float Handl | ing | |



用户可以右键单击通道名称选择"Properties..."或者双击通道名称来修改通道参数

| 🔯 KEPServerEX 6 Configurati | ion [Untitled *] | | |
|--|---------------------------|--|------------|
| File Edit View Tools R | untime Help | | |
| 0 🐸 🖬 🛃 🐯 🛅 | 🔁 🔁 😤 🤊 🔏 🗈 🖎 | × | |
| Project | Device Name | / Model ID D | escription |
| Connectivity | Click to add a device | e. | |
| | lew Device | | |
| Aliases | Cut Ctrl+X | | |
| Advanced Ta | Copy Ctrl+C | | |
| Add Area. 🗙 D | Delete Del | | |
| Data Logger | | | |
| | hagnostics | | |
| Add Pol C | roperties | | |
| DF for Spluk | | | |
| Add Splunk Conne | ection | | |
| Add Agent | * | | |
| * <u> </u> | • | III | ۲ |
| Date 🗸 Time | Source | Event | • |
| 13:32:55 | KEPServerEX\Runtime | Scheduler Plug-in V6.0.2107.0 | |
| 13:32:55 | KEPServerEX\Runtime | IoT Gateway V6.0.2107.0 | |
| 13:32:55 | KEPServerEX\Runtime | Configuration session started by SC as Default User (R/W). | |
| 13:33:21 | KEPServerEX\Configuration | Closing project. Project = 'C:\Users\SC\Documents\Kepware\KEPServerEX\V6\RTU.opf'. | |
| 15:55:13 | KEPServerEX\Runtime | Configuration session assigned to SC as Default User has ended. | - |
| < | | m | • |
| View/edit the properties of the select | cted object. | Off | line di |

| Property Groups | | | | | |
|-----------------------------|-------------------------------------|-------------|------------|--------------|-------|
| General | Name | | Modbus TCF | /IP Ethernet | |
| Ethemet Communications | Description | | | | |
| Write Optimizations | Driver | | Modbus TCF | /IP Ethernet | |
| Advanced | Diagnostics | | | | |
| Communication Serialization | Diagnostics Capture | e | Disable | | |
| | | | | | |
| | Name Specify the identity of the | his object. | | | |
| | | OK | Canaal | Acchi | 11=1= |

新建设备: New Device

1. 单击软件界面中的"Click to add a device"或者工具栏上的"New Device",进行设备设置



2. 修改设备名称 "name", 修改为需要的名称, 这里我们改为 "Modbus", 然后单击 "下一步"

| 0 | Add Device Wizard | × |
|---|---|----|
| | Specify the identity of this object. Name: | |
| | Modbus | 0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | 下一步(N) | 取消 |

3. 设置 Device modle—设备模型,这里我们选择 Modbus

| Add Device Wizard | | |
|---------------------------|---------------------------|------------------|
| | | |
| | | |
| Select the specific type | of device associated with | this ID. Options |
| depend on the type of com | munications in use. | |
| Model: | | |
| Modbus 👻 | | |
| | | |
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4. 填写设备 ID 和节点号,这里指的是所要连接的 Modbus TCP/IP 设备的 IP 地址和节点号,例如 IP 地址为 192.168.0.10,节点 1,则填写<192.168.0.10>.1,单击"下一步"

| node. |
|-------|
| node. |
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5. 选择扫描方式 "Scan Mode",保持默认,单击"下一步"

| 7.54.45.8 | |
|---|---|
| Add Device Wizard | |
| Specify the method for determining how often tags in the device are scanned. Scan Mode: | |
| Respect Client-Specified Scan Rate 🔹 📀 | |
| Provide the first updates for new tag references from stored (cached) data rather than polling devices immediately. Initial Updates from Cache: Disable Image: Comparison of the state of the | |
| 下一步(N) 取 | 消 |

6. 设置通信的时间参数"Timing",保持默认值不变,单击"下一步"

| Add Devi | ice Wizard | |
|--|---|------|
| | | |
| Define the m connection t communicatio | aximum amount of time, in seconds, allowed to establish a o a remote device. Connection time is often longer than in request time for a device. | ſ |
| Connect Time | eout (s): | |
| | | |
| 3 | | |
| 3 | | |
| 3 | | 2005 |
| Specify an i waits for a | Image: Second state of the second state second state second state second state second state second state state second state second state st | |
| Specify an i waits for a Request Time | Image: Image: Second | |
| Specify an i waits for a Request Time 1000 | nterval, in milliseconds, to determine how long the driver response from the target device to indicate completion. out (ms): | |
| Specify an i waits for a Request Time 1000 Indicate how considering | Interval, in milliseconds, to determine how long the driver response from the target device to indicate completion. (ms): Image: Second seco | |

7. 设置失败降级"Demote on Failure",保持默认设置不变,单击"下一步"

| G | Add Device Wizard | |
|---|--|----|
| | Automatically remove the device from the scan due to communication | |
| | failures. | |
| | Demote on Failure: | |
| | Ulisable 👻 🕖 | |
| | | |
| | | |
| | | |
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| | | |
| | | |
| | | |
| | | |
| | 下—步(N) | 取消 |

8. 自动生成标签设置,这里我们保持默认设置,单击"下一步"

| | Select the automatic tag generation action to be taken on device startup. On Device Startup: | ŕ |
|--|---|---|
| | Do Not Generate on Startup 👻 🕢 | |
| | Indicate the preferred method of avoiding creation of duplicate tags. On Duplicate Tag: Delete on Create | |
| 10 | Delete on treate | |
| 10 10 10 10 10 10 10 10 10 10 10 10 10 1 | Indicate a tag group name for new generated tags. If empty, generated tags are added at the device level. Parent Group: | |
| 13 | energen en e | |

注意: 如要自动生成 Tag, 需选择 "always generate on start up"

9. 设置端口,我们保持默认参数,单击"下一步"

| 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. | |
| 502 0 | |
| Indicate whether the driver should use User Datagram Protocol (VDP) or Transfer Control Protocol (TCP). The master and slave settings must IP Protocol: | |
| 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 | |

10. 设置"Addressing",我们保持默认设置,单击"下一步"

| Specify if | the address numbering convention for the device starts a | t zero 🔺 |
|--|---|-----------------|
| or one. Ad communicat convention | dresses have one subtracted when frames are constructed t e with a Modbus device. If the device doesn't follow this , choose Disable. | |
| Zero-Based | Addressing: | |
| Enable | • 0 | E |
| Zero-Based Enable | Bit Addressing: | |
| Enable if only the b | the device supports holding register bit access to manipu it of interest in a single command (as opposed to perform | late ing a _ |

11. 设置 Modbus 字节顺序,这里保持默认设置单击"下一步"

| To have the Allowing of the second se | |
|--|---|
| 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: | |
| | |
| | |
| | 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 Enable First Word Low: Enable Indicate if 64-bit data types use the convention of first Word low. If disabled, the first DWord is assumed high. First DWord Low: |

12. 选择输入输出数据块的大小,这里我们保持默认设置,单击"下一步"

| Specify the reads more d can be reduc within the d | number of coils (bits) in an output block. Higher block size ata points from the device in a single request. Block size ed if data needs to be read from non-contiguous locations evice. | - |
|---|---|---|
| Output Coils | 1 | - |
| 32 | | - |
| within the d Input Coils: | evice. | |
| 32 | | |
| | | - |

13. 选择工程文件,可以不做选择,这里我们直接单击"下一步"

| Add Device | Wizard | |
|----------------------------------|--|---|
| Define the exa to use for Aut | ct location of the Concep omatic Tag Database Gener | t or ProWORX variable import file ation. |
| Variable Impor | t File: | |
| *. txt | 9997993, 9999795) | |
| Enable | • (2) | |
| | | |

点击"...",即可选择需要导入的文件

| 打开 | | |
|--|---------------------------|-----------------|
| 🚱 🕞 🖉 🕌 « Projects 🕨 UCON Modbus Examples | 4→ 搜索 UCC | N Modbus Exam 👂 |
| 组织 ▼ 新建文件夹 | | = • 🔟 🔞 |
| ▲ 名称 ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ | 修改日期 | 类型 |
| 課 计算机 益 本地磁盘 (C:) 급 本地磁盘 (D:) 360Download 360安全浏览器 KEPSeverEX v KEPSererEX v Program Files STEP7 应用软件 | | |
| ← 本地磁曲 (F:) ▼ | | + |
| 文件名(<u>N</u>): *.txt | ▼ All Files (*.* 打开(O) | y) ▼ 取消 |



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注意: Kepserver 支持从工程文件中自动生成 tag ,选择相应的路径,并在 tag generation 中选择

"always generate on start up"

14. 设置"Error Handing"错误处理,保持默认设置,单击"下一步"

| 7. 5. 4. 40 9 1 | |
|---|----|
| Add Device Wizard | |
| | |
| Stop polling a block of data if a Modbus exception code 2 (illegal | |
| address) or 3 (illegal data) is returned. Disable to continue polling that data block. | |
| Deactivate Tags on Illegal Address: | |
| Enable 🗸 🕡 | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| 下一步(N) | 取消 |

15. 设置总结,单击"完成"。在这里可以对之前的设置进行修改

| | Identification | Line and the second sec | |
|---|--------------------|--|---|
| | Name | Modbus | - |
| | Description | | |
| | Channel Assignment | Modbus TCP/IP Ethemet | |
| | Driver | Modbus TCP/IP Ethemet | |
| | Model | Modbus | |
| | ID | <192.168.0.10>.1 | |
| | Operating Mode | | |
| | Data Collection | Enable | |
| | Simulated | No | |
| Ξ | Scan Mode | | |
| | Scan Mode | Respect Client-Specified Scan Rate | - |

| Property Groups | Identification | |
|--|--|--|
| General Scan Mode Timing Auto-Demotion Tag Generation Variable Import Settings Unsolicited Error Handling Ethemet Settings Block Sizes Redundancy | Name Description Channel Assignment Driver Model ID Operating Mode Data Collection Simulated | Modbus Modbus TCP/IP Ethemet Modbus <192.168.0.10>.1 Enable No |
| | Name Specify the identity of this object. | |

用户可以右键单击设备名称选择 "Properties" 或者双击设备名称来修改设备参数

新建标签: New Tag

1. 单击软件界面中的"Click to add a static tag",或者工具栏中的"New Tag"新增标签



如果有需要建立标签组,也可以在新建标签之前先建立 New Tag Group,单击工具栏"New Tag Group"

| KEPServerEX 6 Configuration [Untit | ed *] | The Party number of the Pa | the local data and the local data |
|--|-------------------------------|--|-----------------------------------|
| File Edit View Tools Runtime | Help | | |
| 0 💕 🖬 🖬 🏶 🕅 🐯 🙋 🤅 | 🚽 🗇 🚰 🛛 🛩 🕻 🖬 1 | 🗈 🗙 🖾 | |
| | Tag Name | / Address | Data Type |
| Connectivity Modbus TCP/IP Ethemet Modbus Modbus Aliases Advanced Tags Alarms & Events Advanced Tags Advanced Tags Advanced Tags Advanced Tags | Click to add a static tag. Ta | igs are not required, but are browsable by O | PC clients. |



2. 设置 Tag 属性

| Property Groups | Identification | |
|-----------------|-----------------|------------|
| General | Name | |
| Scaling | Description | |
| Joanny | Data Properties | |
| | Address | |
| | Data Type | Default |
| | Client Access | Read/Write |
| | Scan Rate (ms) | 100 |
| | | |
| | Address | |

此处的 Tag 地址应参照帮助文件的地址格式来填写。如何查看 tag 的 Address 填写规则,点击上图 Address 后面的"…",弹出"Hints"界面,如下

| 0001#01-065521#01 000001#1 | 6-065521#16 Wo | rd 🔒 | OK |
|---|------------------|--------|--------|
| 0001-065536 [r][c] Boolean | | - A | UN |
| 0001-065536 Boolean | | E | Cancel |
| 0001#01-165521#01100001#1 | 6-165521#16 Wo | rd 🗌 | Carlos |
| 0001-165536 [r][c] Boolean | | | Help |
| 0001-160006 Boolean 0001-0.365536-0 - 300001-15-36 | 5536 15 Boolean | | |
| 0001 2H-365536 2H 300001 24 | 0H-365536 240H | String | |
| 0001.2L-365536.2L300001.240 | L-365536.240L St | ring | |
| 0001-365533 [r][c] Double | | | |
| and correct a | | | |
| 0001-365533 Double | | | |
| and correct p | | | |

点击"Help"按钮,可查看地址填写规则如下:



- 0 ×

| <mark>子 Modbus</mark> 記 頭 隐藏 査: | s Ethernet 了 校上一步 | Driver c〉 (前进 打 | j印 |
|---------------------------------------|--|---|---|
| | Rel 1 Rel 2 Rel 2 Rel 2 Setup a Automatic Data Type Address I Optimizin: Data Type Address I Priver P Functi Image: Statistics Statistics Event Log Statistics | 搜索 (S) rnet Driver arted Tag Datab g Modbus E es Description System Ta on Codes D on Codes D on Codes D on Address uantum remium Addressing a Addressing ta Addressing Hessages | ase Gen thernet C on s g Addres Descriptic sing ng ng |
| • | m | | • |

Modbus Addressing

For this driver, the terms Slave and Unsolicited are used interchangeably.

5-Digit Addressing vs. 6-Digit Addressing

In Modbus addressing, the first digit of the address specifies the primary table. The remaining digits represent the device's data item. The maximum value of the data item is a two-byte unsigned integer (65,535). Internally, this driver requires six digits to represent the entire address table and item. It is important to note that many Modbus devices may not support the full range of the data item. To avoid confusion when entering an address for such a device, this driver "pads" the address (adds a digit) according to what was entered in the address field. If a primary table type is followed by up to 4 digits (example: 4x, 4xx, 4xx or 4xxxx), the address stays at or pads, with extra zeroes, to five (5) digits. If a primary table type is followed by five (5) digits (example: 4xxxxx), the address does not change. Internally, addresses entered as 41, 401, 4001, 40001 or 400001 are all equivalent representations of an address specifying primary table type 4 and data item 1.

| Primary Table | Description | |
|---------------|--------------------|--|
| 0 | Output Coils | |
| 1 | Input Coils | |
| 3 | Internal Registers | |
| 4 | Holding Registers | |

Modbus Addressing in Decimal Format

The Function Codes are displayed in decimal. For more information, refer to Function Codes Description.

| Address Type | Range | Data Type | Access* | Function Codes |
|--------------------|--------------------------------|--|------------------------|----------------|
| Output Coils | 000001-065536 | Boolean | Read/Write | 01, 05, 15 |
| Input Coils | 100001-165536 | Boolean | Read Only | 02 |
| Internal Registers | 300001-365536 300001-365535 | Word, Short, BCD Float, DWord, Long, LBCD | Read Only Read Only | 04 04 |

此例中,用到3号功能码,地址格式如下

| Holding Registers | 400001-465536 400001-465535 400001-465533 | Word, Short, BCD Float, DWord, Long, LBCD Double | Read/Write Read/Write Read/Write | 03, 06, 16 03, 06, 16 03, 06, 16 |
|-------------------|---|--|--|--|
| | xxxxx=1-65536 bb=0/1-15/16* | Boolean | Read/Write | 03, 06, 16, 22 |
| | 400001.2H-465536.240H*** | String | Read/Write | 03, 16 |
| | 400001.2L-465536.240L*** | String | Read/Write | 03, 16 |

要访问寄存器地址 40001,则该填入的地址应该是: 400000+1=400001

这里我们做如下设置:

Name:----test1

Address:----400001

Data Type:----Word

Client Access:----R/W

Description:----描述可以任意填写

| Property Groups | Identification | | | | | |
|--------------------|---|------------|--|--|--|--|
| General Scaling | Name | test 1 | | | | |
| | Description | | | | | |
| | Data Properties | | | | | |
| | Address | 400001 | | | | |
| | Data Type | Word | | | | |
| | Client Access | Read/Write | | | | |
| | Scan Rate (ms) | 100 | | | | |
| | Name Specify the identity of this object | | | | | |

注意:填写 Address (地址)时,必须确保填写的内容是硬件设备内部允许访问的地址。

Scaling 设置:这里我们保持默认值。

| Property Groups | Scaling | | | | |
|--------------------|---------|------|--|--|--|
| General Scaling | Туре | None | | | |
| | | | | | |
| | | | | | |
| | | ,I | | | |



| 建立好乙后,我们的 KEPServerEX 服务器端设置完成 | 建立好之后, |
|--------------------------------|--------|
|--------------------------------|--------|

| S KEPServerEX 6 Configuration [Co | onnected to Runtime C | :\Users\SC\Documents\Kepware | e\KEPServerEX\V6\TCP.opf] | |
|-------------------------------------|-------------------------|------------------------------------|--|---------------------|
| <u>File Edit View Tools Runtime</u> | e <u>H</u> elp | | | |
| | 1 🐼 🗇 🖉 4 X | | | |
| Project | Tag Name | / Address | Data Type | Scan Rate |
| E-(iii) Connectivity | test 1 | 400001 | Word | 100 |
| | 🕢 test2 | 400002 | Word | 100 |
| Aliases | 🚾 test 3 | 400003 | Word | 100 |
| | 🚾 test4 | 400004 | Word | 100 |
| Alarms & Events | _ 🚾 test 5 | 400005 | Word | 100 |
| Add Area | | | | |
| 🖻 📲 Data Logger | | | | |
| Add Log Group | | | | |
| Add Poll Group | | | | |
| DE for Solunk | | | | |
| Add Splunk Connection | | | | |
| 🖃 📲 loT Gateway | | | | |
| Add Agent | | | | |
| | * • [| III | | F. |
| Date 🗸 Time | Source | Event | | * |
| i) 2017/1/5 16:23:57 | KEPServerEX\Runtime | Scheduler Plug-in V6.0.2107.0 | | |
| 16:23:57 | KEPServerEX\Runtime | IoT Gateway V6.0.2107.0 | | S |
| (1) 2017/1/5 16:23:57 | Modbus TCP/IP Ethemet | Modbus TCP/IP Ethemet Starting u | unsolicited communication. Protocol = 'TCP', P | ort = 502. |
| 0 2017/1/5 16:40:43 | Modbus TCP/IP Ethemet | Ethemet Manager started. | | - |
| < | | | | • |
| Ready | | | Default User Clients: 0 A | Active tags: 0 of 0 |

对设置完成的 KEPServerEX 服务器进行测试

点击已设置完成的 KEPSeverEX 工具栏中的 "QC", 或者点击界面中的 "Tools→Launch OPC Quick

Client"进行测试

| Configuration [C | Connected to Runtime C | :\Users\SC\Documents\Kepware\ | KEPServerEX\V6\TCP.opf] | |
|---|--|---|--|---------------------------------|
| File Edit View Tools Runtim | ne Help | \frown | | |
| 🗋 😂 🗟 🛃 📕 Event Log | • | | | |
| Project RC Launch O | PC Quick Client | / Address | Data Type | Scan Rate |
| - (m) Connective Mode Options Mode Options Adiases Advanced Tags Adams & Events Data Logger Add Alog Group EFM Exporter Data Logger Data Logger | E test3 C test4 E test5 | 400001 400002 400003 400004 400005 | Word Word Word Word Word | 100 100 100 100 100 |
| Add Agent | + | m | | • |
| Date 7 Time | Source | Event | | - |
| (1) 2017/1/5 16:23:57 (1) 2017/1/5 16:23:57 (1) 2017/1/5 16:23:57 (1) 2017/1/5 16:23:57 (1) 2017/1/5 16:40:43 ✓ | KEPServerEX\Runtime KEPServerEX\Runtime Modbus TCP/IP Ethemet Modbus TCP/IP Ethemet | Scheduler Plug-in V6.0.2107.0 IoT Gateway V6.0.2107.0 Modbus TCP/IP Ethemet Starting un Ethemet Manager started. | nsolicited communication. Protocol = 'TCP' | , Port = 502 |
| Launch the OPC Quick Client. | | | Default User Clients: 0 | Active tags: 0 of 0 |



调试界面如下:

| OPC Quick Cl | ient - 无标题 * | | 100 C | | Contraction of the local division of the loc | A COLUMN TWO IS NOT | | × |
|----------------|-------------------------|---------------------------------------|-----------|-------|--|---------------------|--------------|---|
| File Edit Viev | v Tools Help | | | | | | | |
| D 🗳 日 🛫 | 🍏 💣 😭 👗 🖻 | e × | | | | | ` | |
| E Kepware.KE | PServerEX.V6 | Item ID / | Data Type | Value | Timestamp | Quality | Update Count | |
| DataLo | gger | Modbus TCP/IP Ethemet.Modbus.test1 | Word | 111 | 17:00:45.670 | Good | 1 | |
| | | Modbus TCP/IP Ethemet.Modbus.test2 | Word | 0 | 17:00:45.670 | Good | 1 | |
| Modbus | TCP/IP EthemetCommu | In Modbus TCP/IP Ethemet.Modbus.test3 | Word | 96 | 17:00:45.670 | Good | 1 | |
| Modbus | TCP/IP EthemetStatistic | Modbus TCP/IP Ethemet.Modbus.test4 | Word | 0 | 17:00:45.670 | Good | 1 | |
| | TCP/IP EthemetSystem | Modbus TCP/IP Ethemet.Modbus.test5 | Word | 1234 | 17:00:45.670 | Good | 1 | |
| Modbus | TCP/IP Ethemet.Modbus | | | | | | | |
| Date | Time | Event | | | | | | |
| 0 2017/1/5 | 17:00:45 | Added group 'Modbu | | | | | | |
| 2017/1/5 | 17:00:45 | Added 5 items to gro | | | | | | |
| 2017/1/5 | 17:00:45 | Added group 'Modbu | | | | | | |

如上图所示,当 Quick Client 界面中 Quality 项显示 "Good"时表示 KEPSeverEX 与 Modbus TCP/IP 从站之间的连接已建立,在 "Value"中显示的就是读取到的数据

