

PSO2020 如何配置 OPC UA Client

问题描述:

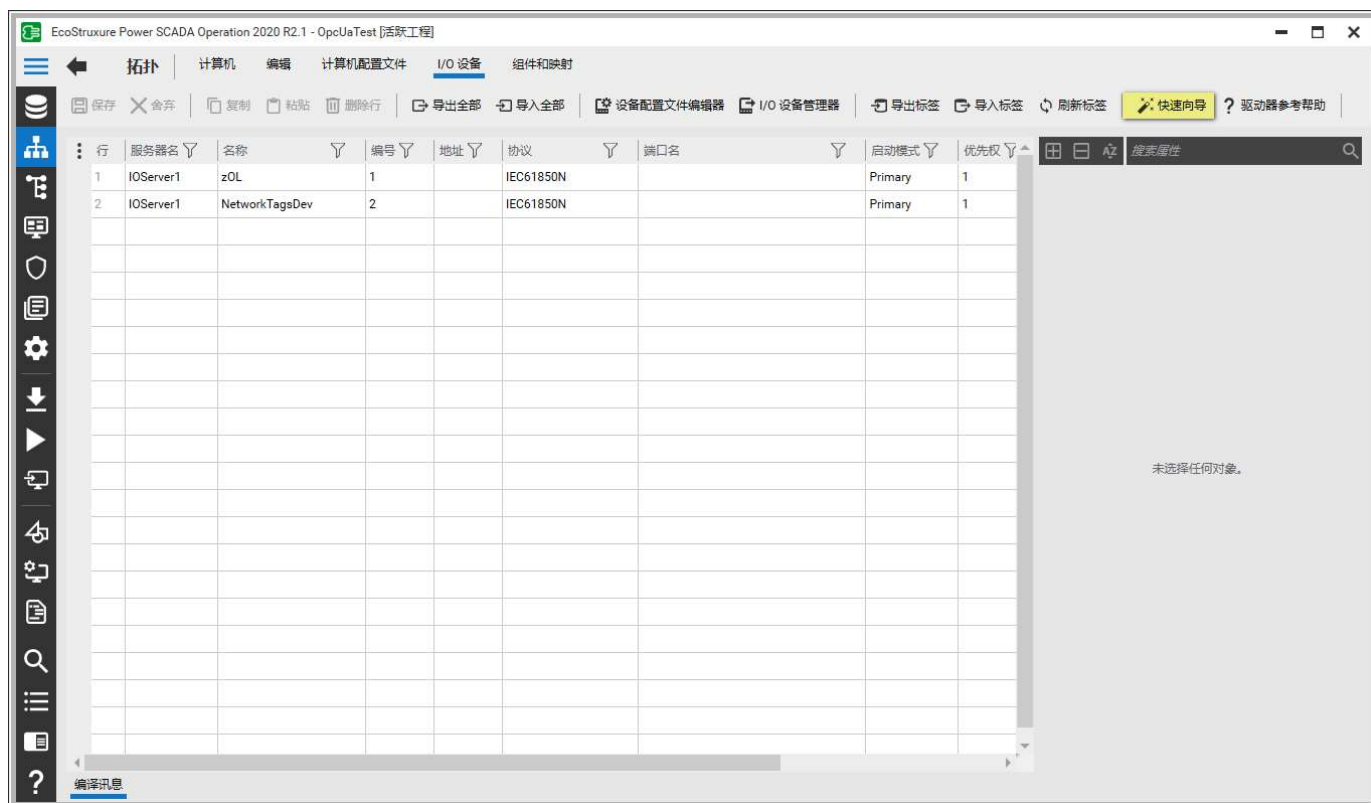
如何配置 OPC UA Client

解决方案:

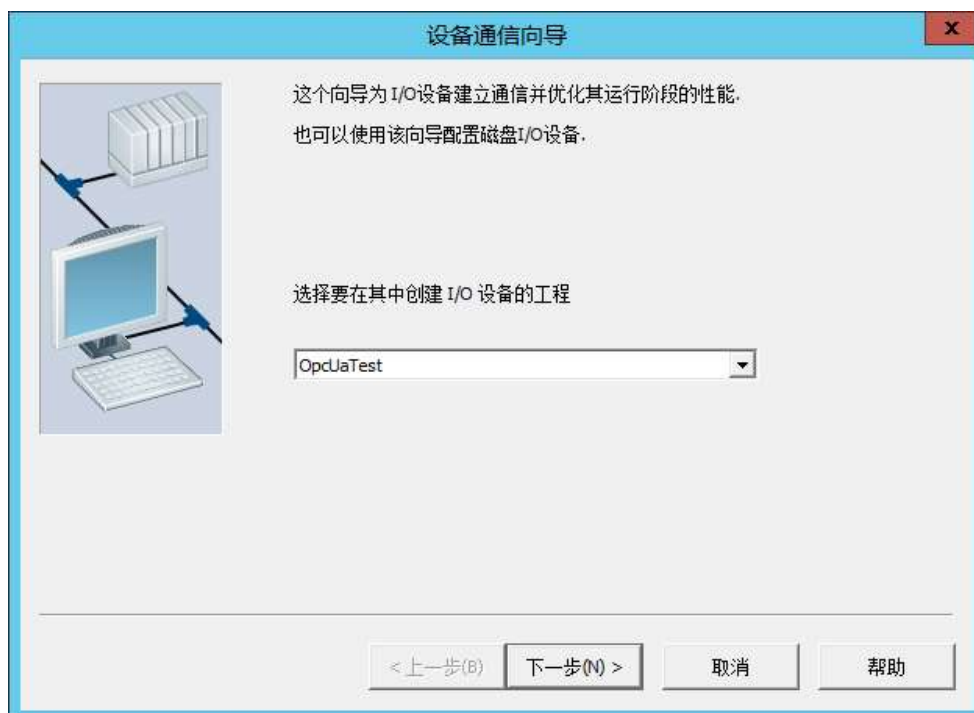
步骤如下:

测试 OPCUA 驱动版本: 3.4.6.0

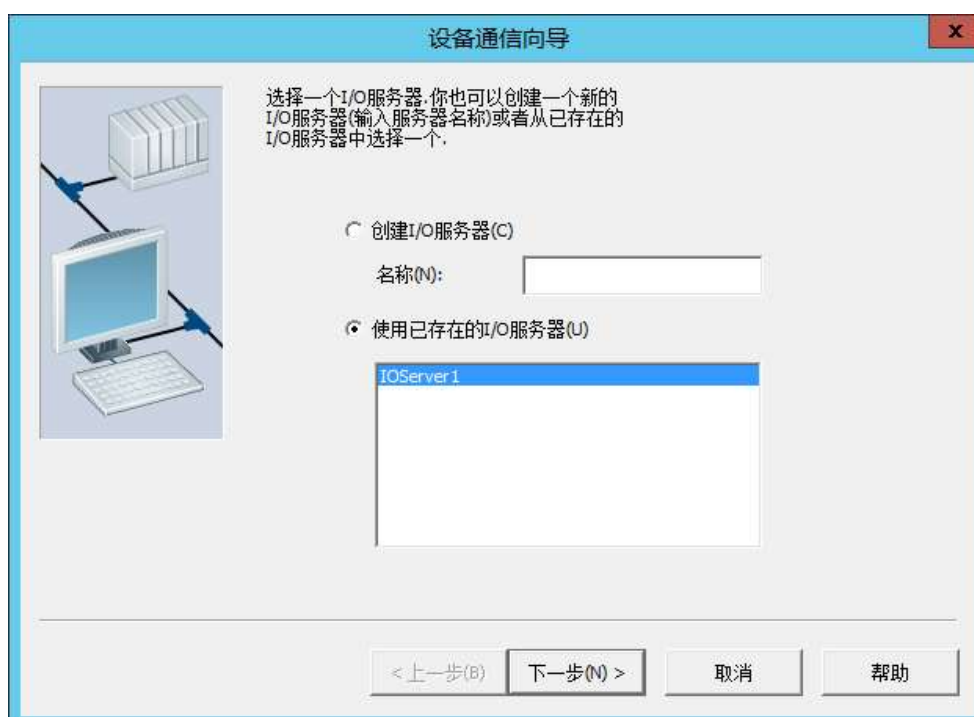
1. 进入 PSO Studio - 拓扑 - I/O 设备 - 快速向导



2. 选择工程



3. 选择 IO 服务器



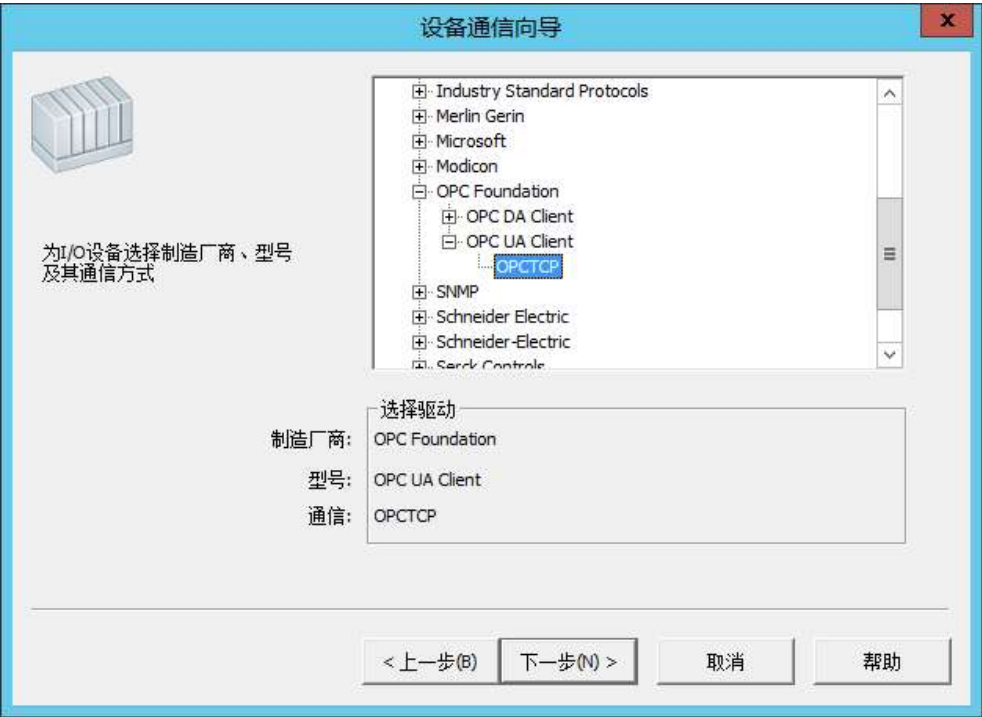
4. 命名 I/O 设备



5. 选择 I/O 设备类型，选择外部 I/O 设备



6. 通讯方式选择 OPC UA Client 下的 OPCTCP



7. 输入 OPC UA Client 的地址（本例在本地服务器使用 KEPServerEX 6 模拟 Client，具体查看本文末的 OPC UA Client 模拟器配置）



8. 下一步

设备通信向导



如果你想将I/O设备连接到一个外部标签数据库，
请选择该项。

☐ **连接I/O设备至外部标签数据库**

数据库类型：
Unity SpeedLink to OFS

外部标签数据库：
 浏览(B)...

连接字符串：

☐ 添加前缀给外部标签

标签前缀：

☒ 自动刷新标签

☐ 实时更新

< 上一步(B)
下一步(N) >
取消
帮助

9. 完成

设备通信向导



通信向导将把变化保存到工程 'OpcUaTest'.

使用I/O服务器 'IOServer1'.

使用主板设置:

- + 内存地址: 0
- + I/O地址:
- + Interrupt:

使用端口设置:

- + 波特率:
- + 数据位:
- + 停止位:
- + 奇偶校验:
- + 连接端口:
- + 特殊选项:

按完成按钮保存设置.

打印(P)

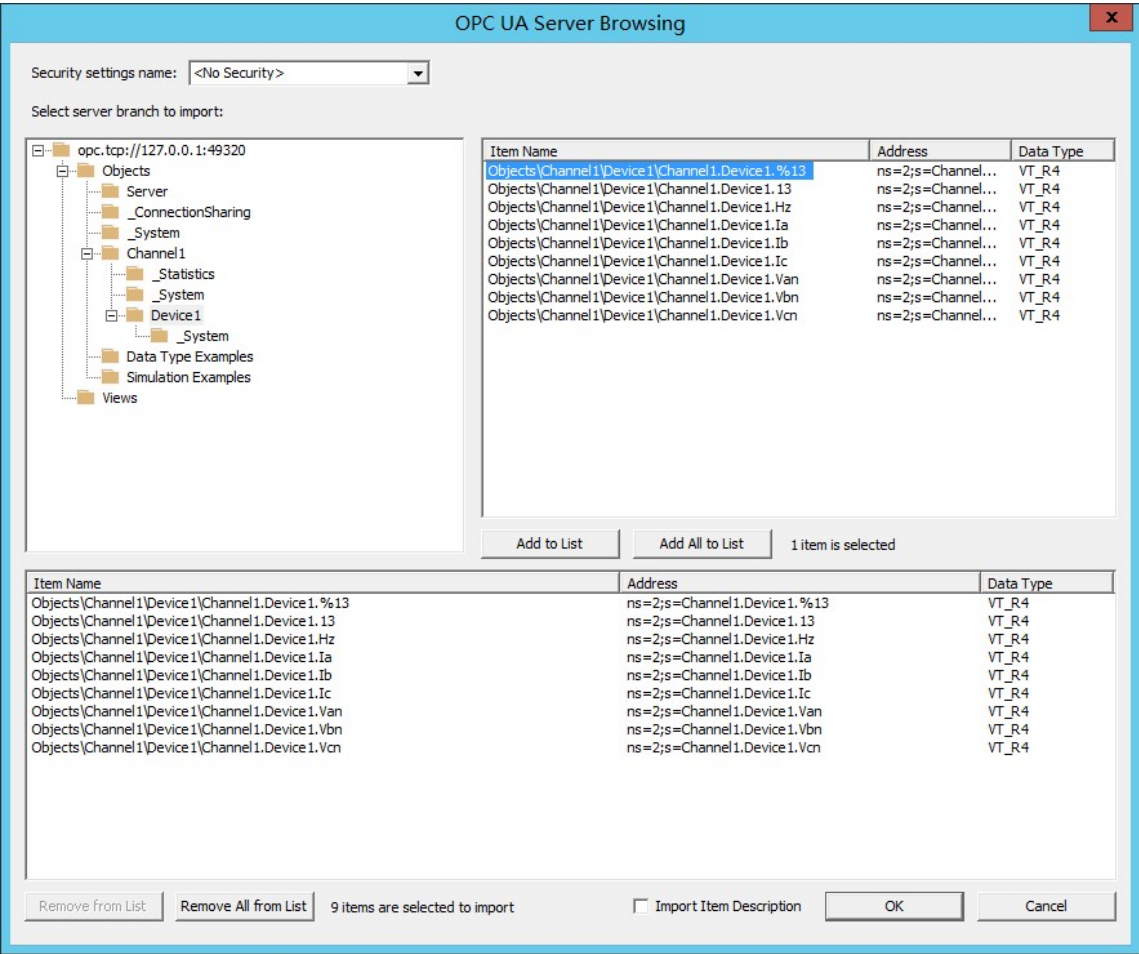
< 上一步(B)
完成
取消
帮助



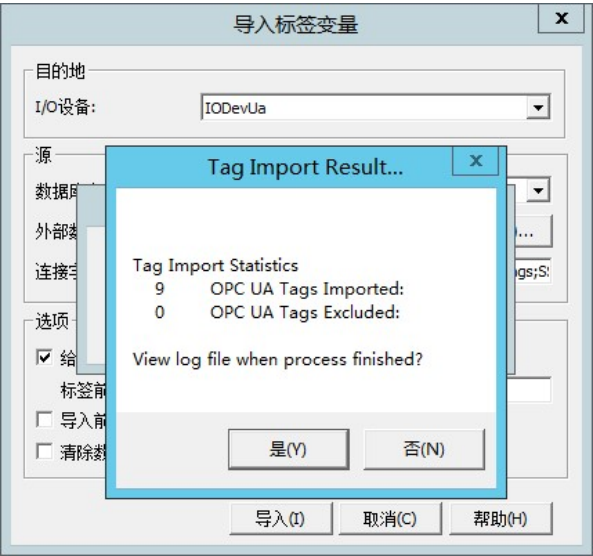
10. 进入 PS0 Studio - 拓扑 - I/O 设备 - 导入标签，选择 I/O 设备，数据库类型，浏览外部数据库



11. 查看设备 Item 并添加到列表



12. 导入



13. 编译、运行测试

SingleLinesOverview

EcoStruxure Power SCADA Operation

HOME GRAPHICS ONE-LINE ALARMS/EVENTS ANALYSIS

PowerSCADA Expert
Single Lines

This is a sample single line. To customize this page for your project, you need to edit this placeholder page, called SingleLineOverview. You can create additional single lines as needed.

For detailed instructions, see the following link in the PowerSCADA Expert help file:

Hz	50.00
Ia	947.20
Ib	949.50
Ic	950.33
Van	412.00
Vbn	392.25
Vcn	406.17
%13	11.33

TagDebug

23 kV Substation
Bus A

注意： 本示例 OPCUA 驱动版本为 3.4.6.0 不支持数据类型 DOUBLE

Configuring Variable Tags

Variable tags are addressed using the OPC UA NodeId configured in the OPC UA server.

NodeId consists of a namespace index and a unique identifier which can be a numeric value(i=), a string(s=), a globally unique identifier (g=), or an opaque v=.

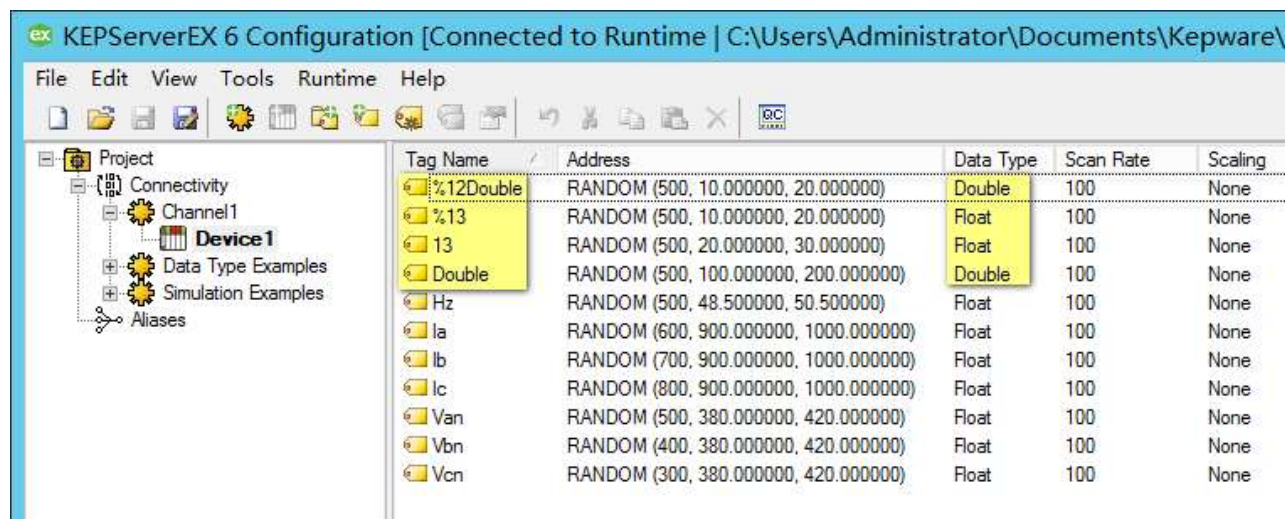
Examples of NodeIds: "ns=2; i=12345" or "ns=3; s=SoftwareRevision".

The following table demonstrates the variable tag address formats you can use to read and write values.

Address format	OPC UA data type	Citect data type	Example
<Node ID>	BOOLEAN	DIGITAL	FALSE or TRUE
<Node ID>	SBYTE	INT, LONG	-128 to 127
<Node ID>	BYTE	NT, UINT, LONG, ULONG	0 to 255
<Node ID>	INT16	INT, LONG	-32768 to 32767
<Node ID>	UINT16	UINT, LONG, ULONG	0 to 65535
<Node ID>	INT32	LONG	-2147483648 to +2147483647
<Node ID>	UINT32	ULONG	0 to 4294967295
<Node ID>	INT64	<NOT SUPPORTED>	
<Node ID>	UINT64	<NOT SUPPORTED>	
<Node ID>	FLOAT	REAL	-3.4E38 to 3.4E38
<Node ID>	DOUBLE	<NOT SUPPORTED>	
<Node ID>	STRING	STRING	ASCII string (0 to 254 characters)
<Node ID>	DATETIME	STRING	1990-01-01-00:00:00.000 to 2089-12-31-23:59:59.999
<Node ID>	GUID	<NOT SUPPORTED>	
<Node ID>	XMLElement	<NOT SUPPORTED>	
<Node ID>	NodeId	<NOT SUPPORTED>	
<Node ID>	Expanded NodeId	<NOT SUPPORTED>	
<Node ID>	Qualified Name	STRING	Update the Qualified Name as string in the tag value
<Node ID>	Localized Text	STRING	Update the text in English Locale in the tag value
<Node ID>	Status Code	LONG	Update the Integer code in the tag value
<Node ID>	ByteString	<NOT SUPPORTED>	Array of Bytes
<Node ID>	Enumeration	LONG	
<Node ID>	Variant	<NOT SUPPORTED>	
<Node ID>	Structure	<NOT SUPPORTED>	
<Node ID>	Number	<NOT SUPPORTED>	This is a Variant, which can have Value as FLOAT or DOUBLE
<Node ID>	Integer	<NOT SUPPORTED>	This is a Variant, which can have Value as SBYTE or INT16 or INT32 or INT64
<Node ID>	UInteger	<NOT SUPPORTED>	This is a Variant, which can have Value as BYTE or UINT16 or UINT32 or UINT64
<Node ID>	DiagnosticInfo	<NOT SUPPORTED>	

OPC UA Client 模拟器配置

a. 添加设备和标签，配置地址、数据类型、扫描周期：



b. 在 Windows 隐藏的图标中右键 KEPServerEX 6 图标，选择 OPC UA Configuration 进行配置如下

