M262实现通过OPC通讯传输数组流程

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硬件平台：2个TM262M控制器
软件平台：Machine Expert 2.0.2
基本配置步骤：
1.以TM262M35为服务器，建立通讯区
2.以TM262M25为客户端，调用OpcUaHandling 库
3.通过建立的变量测试读写效果

打开软件machine expert，新建一个TM262M35项目，作为服务器，在GVL中创建数组变量，新建POU中调用数组变量,新建Symbol Configuration,并勾选需要读写的数组变量

MyController | SR_Main | GVL

```
1  {attribute 'qualified_only'}
2  VAR_GLOBAL
3
4  r32_act_vel: ARRAY[1..500] OF  REAL;
5  r32_set_vel: ARRAY[1..500] OF  REAL;
6
7
8
9
10
11
12
13
14 END_VAR
```

Step 1

SR_Main

```
1  PROGRAM SR_Main
2  VAR
3
4  il6_a :INT;
5  END_VAR
```

```
1
2  FOR il6_a:=1  TO 500
3
4  DO
5
6  gvl.r32_act_vel[il6_a]:=gvl.r32_set_vel[il6_a]*2;
7
8  END_FOR
```

Step 2

SR_Main | Symbol Configuration

View | Build | Settings | Tools

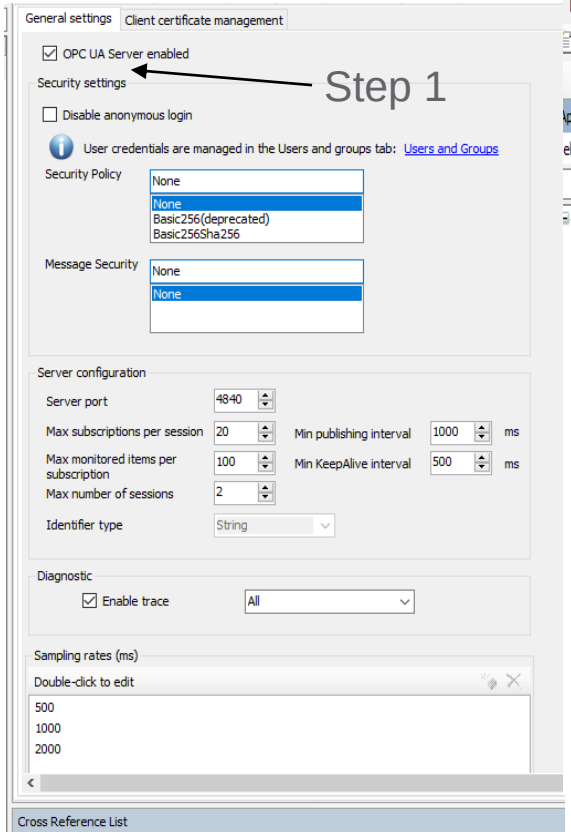
Execute "Build" command to be able to select variables (you need an error-free build). Build | Details...

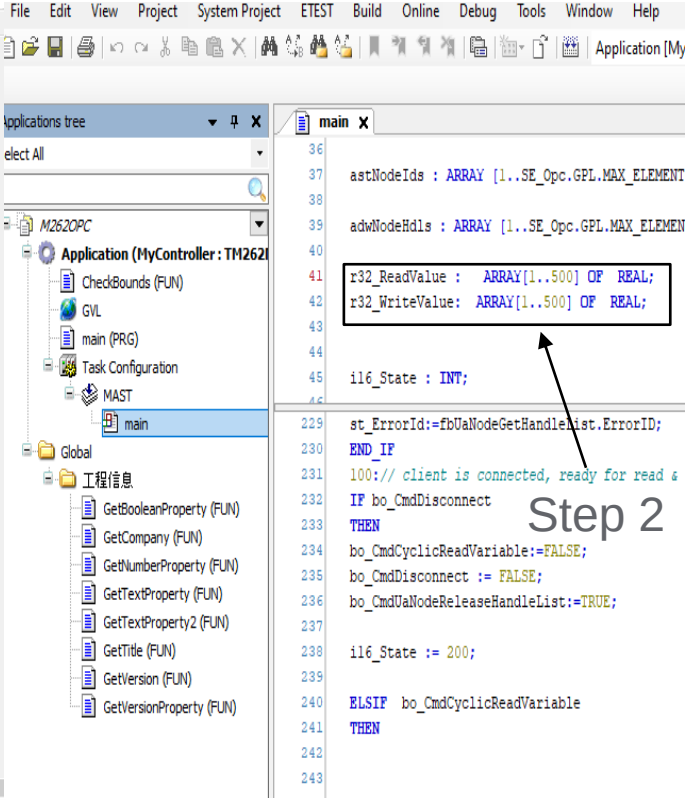
Changed symbol configuration will be transferred with the next download or online change

Symbols	Access Rights	Maximal	Attribute	Type	Members	Comment
GVL						
r32_act_vel				ARRAY [1..500] OF REAL		
r32_set_vel				ARRAY [1..500] OF REAL		

Step 3

打开machine expert,新建TM262M25作为OPC客户端，激活OPC UA Server enable,创建主程序main，并建立圈中的读写数组变量,编写读写数组程序






```
astNodeAddInfos_Write[1].AttributeID := SE_Opc.UAAttributeID.UAAI_Value;
astNodeAddInfos_Write[1].IndexRangeCount := 1;
astNodeAddInfos_Write[1].IndexRange[1].StartIndex:=0;
astNodeAddInfos_Write[1].IndexRange[1].EndIndex:=499;

astVariables_Write[1].etNodeDataType := SE_Opc.ET_VarType.UATypeFloat;
astVariables_Write[1].pbyBuffer := ADR(r32_WriteValue);
astVariables_Write[1].udiBufferSize :=SIZEOF(r32_WriteValue);
```

Step 3

```
astNodeAddInfos_Read[1].AttributeID := SE_Opc.UAAttributeID.UAAI_Value;
astNodeAddInfos_Read[1].IndexRangeCount := 1;
astNodeAddInfos_Read[1].IndexRange[1].StartIndex:=0;
astNodeAddInfos_Read[1].IndexRange[1].EndIndex:=499;

astVariables_Read[1].etNodeDataType := SE_Opc.ET_VarType.UATypeFloat;
astVariables_Read[1].pbyBuffer := ADR(r32_ReadValue);
astVariables_Read[1].udiBufferSize := SIZEOF(r32_ReadValue);
```

Step 4

下载程序后，执行opc通讯并监控数组变量数值的变化

main.r32_ReadValue	ARRAY [1..500] OF REAL	
main.r32_WriteValue	ARRAY [1..500] OF REAL	
r32_WriteValue[1]	REAL	0
r32_WriteValue[2]	REAL	1
r32_WriteValue[3]	REAL	2
r32_WriteValue[4]	REAL	3
r32_WriteValue[5]	REAL	4
r32_WriteValue[6]	REAL	5
r32_WriteValue[7]	REAL	6
r32_WriteValue[8]	REAL	7
r32_WriteValue[9]	REAL	8
r32_WriteValue[10]	REAL	9
r32_WriteValue[11]	REAL	10
r32_WriteValue[12]	REAL	11
r32_WriteValue[13]	REAL	12
r32_WriteValue[14]	REAL	13
r32_WriteValue[15]	REAL	14
r32_WriteValue[16]	REAL	15
r32_WriteValue[17]	REAL	16
r32_WriteValue[18]	REAL	17
r32_WriteValue[19]	REAL	18
r32_WriteValue[20]	REAL	19

客户端发送变量

Expression	Type	Value
r32_act_vel	ARRAY [1..500] OF REAL	
r32_set_vel	ARRAY [1..500] OF REAL	
r32_set_vel[1]	REAL	0
r32_set_vel[2]	REAL	1
r32_set_vel[3]	REAL	2
r32_set_vel[4]	REAL	3
r32_set_vel[5]	REAL	4
r32_set_vel[6]	REAL	5
r32_set_vel[7]	REAL	6
r32_set_vel[8]	REAL	7
r32_set_vel[9]	REAL	8
r32_set_vel[10]	REAL	9
r32_set_vel[11]	REAL	10
r32_set_vel[12]	REAL	11
r32_set_vel[13]	REAL	12
r32_set_vel[14]	REAL	13
r32_set_vel[15]	REAL	14
r32_set_vel[16]	REAL	15
r32_set_vel[17]	REAL	16
r32_set_vel[18]	REAL	17
r32_set_vel[19]	REAL	18
r32_set_vel[20]	REAL	19

服务器接受变量