

DIAView

User script

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Outline

- User script overview
- Condition script
- Time script
- Global function

Purpose

In this chapter, you will learn

- ... Configuration and use of conditional programs
- ... The configuration and use of time program
- ... Configuration, management and calling of global functions

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- User script overview
- Condition script
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User script overview

➤ What is User script?

- The user script is a script with special functions written by the user, which can perfect and expand the functions of the DIAView configuration software to achieve complex logic control, thereby improving and optimizing the system workflow and execution efficiency.

- User script support list:
 - ① Condition script
 - ② Time script
 - ③ Custom global function
 - ④ Script encryption

StartPage					GlobalFunctionModule x		
Condition Script x					+ Add ▼ Insert ✖ Delete		
Name	IsEnable	Expression	Trigger Mode	Trigger	Name	Method Type	Script Content
1 ConditionScript	✓	Var.Variable	Value change		1 Method	Function	Function Method()
2 ConditionScript1	✓	Var.Variable2	While true		2 Method1	Sub	Sub Method1()
3 ConditionScript2	✓	Var.Variable3	While false				
4 ConditionScript3	✓	Var.Variable4	On true				
5 ConditionScript4	✓	Var.Variable5	On false				

StartPage							Time Script x	
+ Add ▼ Insert ✖ Delete								
Name	IsEnable	Trigger Mode	Configuration	Script Content	Description			
1 TimeScript	✓	Start	N/A	Sub TimeScript_Tick()				
2 TimeScript1	✓	Stop	N/A	Sub TimeScript1_Tick()				
3 TimeScript2	✓	One time	3/31/2020 12:00:00 AM	Sub TimeScript2_Tick()				
4 TimeScript3	✓	Continue	12:00:00 AM	Sub TimeScript3_Tick()				
5 TimeScript4	✓	Weekly	12:00:00 AM	Sub TimeScript4_Tick()				
6 TimeScript5	✓	Monthly	12:00:00 AM	Sub TimeScript5_Tick()				

User script overview

➤ What is User script?

- **Condition script:** support Condition expression trigger script function
- **Time script:** support time trigger script function, commonly used in time scheduling mode
- The Condition script and the time script are executed as two default groups in parallel on separate threads and will not affect each other.
- Condition scripts, time scripts, and screen scripts are separated from the main thread of the user interface and will not cause UI stalls
- **Global function:** Package the repeated script code into a function for other functions to avoid the code being too scattered, reducing maintenance cost and debugging difficulty

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Condition script

➤ Condition script

- Condition programs are custom programs executed by the system when the set conditions are met in the project.

Trigger mode	
Value change	Trigger script execution when expression value changes
While true	Trigger script execution when expression value changes to true
While false	Trigger script execution when expression value changes to false
On true	Script execution is triggered when the expression value remains true
On false	Trigger script execution when expression value remains false

Condition Script						
Add Insert Delete						
	Name	IsEnable	Expression	Trigger Mode	Time Interval (ms)	Script Content
1	ConditionScript	✓	Var.Variable	Value change	N/A	Sub ConditionScript
2	ConditionScript1	✓	Var.Variable2	While true	N/A	Sub ConditionScript
3	ConditionScript2	✓	Var.Variable3	While false	N/A	Sub ConditionScript
4	ConditionScript3	✓	Var.Variable4	On true	1000	Sub ConditionScript
5	ConditionScript4	✓	Var.Variable5	On false	1000	Sub ConditionScript

✗Refer to the section "16.2 Condition script" in user manual.

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➤ Time script

- The time program is a user-defined program executed by the system when the project is started, during operation, or when stopped.

Trigger mode	
Start	Trigger script execution at startup
Stop	Trigger script execution when stopped
One time	Trigger execution of a script program at a fixed time
Continue	Execute the script program continuously according to the set time interval
Weekly	Execute the script program continuously every week according to the set time interval
Monthly	Execute the script program continuously every month according to the set time interval

Time Script x					
+ Add ▼ Insert ✕ Delete					
	Name	IsEnable	Trigger Mode	Configuration	Script Content
1	TimeScript	✓	Start	N/A	Sub TimeScript_Tick()
2	TimeScript1	✓	Stop	N/A	Sub TimeScript1_Tick()
3	TimeScript2	✓	One time	3/31/2020 12:00:00 AM	Sub TimeScript2_Tick()
4	TimeScript3	✓	Continue	12:00:00 AM	Sub TimeScript3_Tick()
5	TimeScript4	✓	Weekly	12:00:00 AM	Sub TimeScript4_Tick()
6	TimeScript5	✓	Monthly	12:00:00 AM	Sub TimeScript5_Tick()

✕Refer to the section "16.3 time script" in user manual.

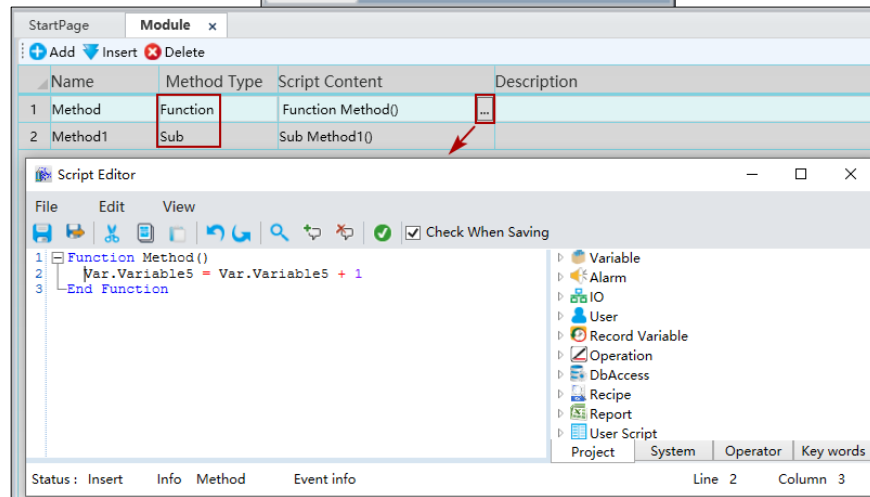
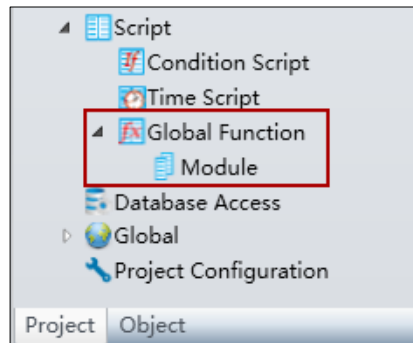
Outline

- User script overview
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- Time script
- **Global function**

Global function

➤ Global function overview:

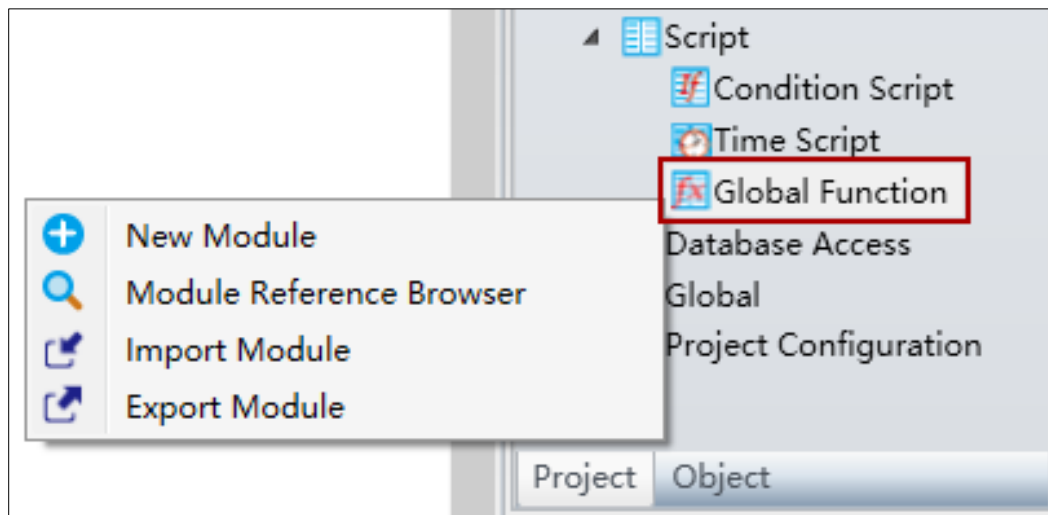
- The main purpose of the global function is to encapsulate the repeated script code into a function for other functions to avoid the code being too scattered, reducing maintenance costs and debugging difficulty.
- Global functions are composed of modules.
- Modules are a collection of functions.
Functions between different modules can call each other.
 - **Module:** The module consists of a series of functions;
 - **Function:** The function has a return value
 - **Sub:** The function without return value



Global function

➤ Global function management

- **New Module:** add a global function module
- **Module Reference Browser:** Global function reference browsing
- **Import Module:** Import global function module
- **Export Module:** Export global function module

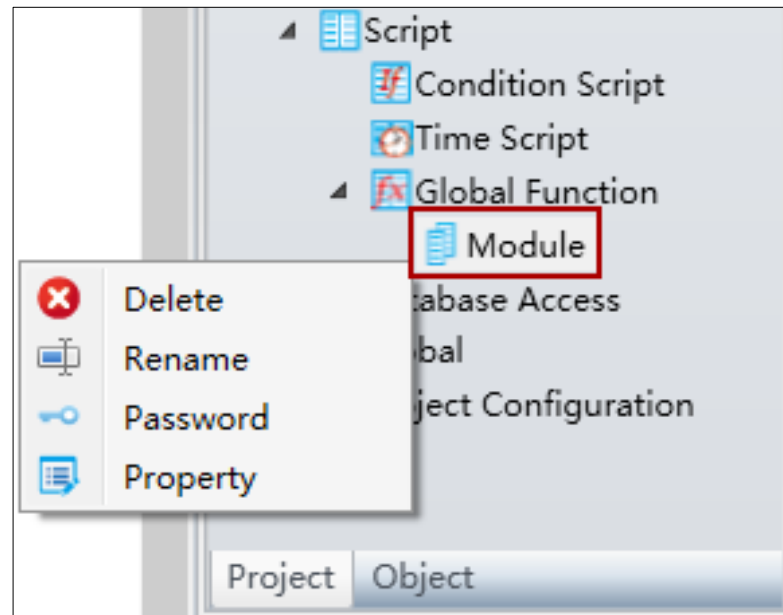


※Refer to the section "16.4 Global function" in user manual.

Global function

➤ Module management

- **Delete:** delete the global function module
- **Rename:** Rename the module
- **Password:** encrypt the module
- **Property:** Modify module properties



※Refer to the section "16.4 Global function" in user manual.

➤ Call global functions flexibly

- Users configure trigger conditions, write programs to call global functions, and implement new functions through logic control;
- Support conditional programs and time programs to call global functions

Conditional programs call global functions

Name	IsEnable	Expression	Trigger Mode	Time Interval (ms)	Script Content
1 ConditionScript	✓	Var.Variable	Value change	N/A	Sub ConditionScript_DataChangedOrTimeout()
2 ConditionScript1	✓	Var.Variable2	While true		N/A Sub ConditionScript1_DataChangedOrTimeout()
3 ConditionScript2	✓	Var.Variable3	While false		N/A Sub ConditionScript2_DataChangedOrTimeout()
4 ConditionScript3	✓	Var.Variable4	On true	1000	Sub ConditionScript3_DataChangedOrTimeout()
5 ConditionScript4	✓	Var.Variable5	On false	1000	Sub ConditionScript4_DataChangedOrTimeout()

Script Editor

```

1 Sub ConditionScript_DataChangedOrTimeout()
2   Var.VariableGroup0.Variable1 = Calculator.Gs_Sum(Var.VariableGroup0.Variable1, 2)
3 End Sub
  
```

Variable

- Alarm
- IO
- User
- Record Variable
- Operation
- DbAccess
- Recipe
- Report
- User Script
- Historical Group
- Global Function

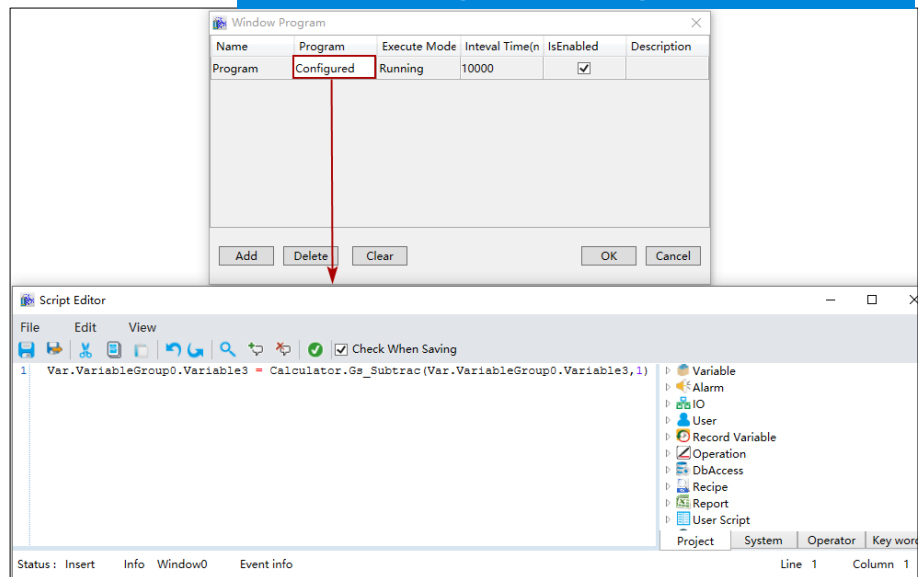
Status: Insert Info ConditionScript Event info DataChangedOrTimeout Line 2 Column 2

Global function

Windows program calls global functions

➤ Call global functions flexibly

- Support windows program to call global function
- Support window control events to call global functions



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