

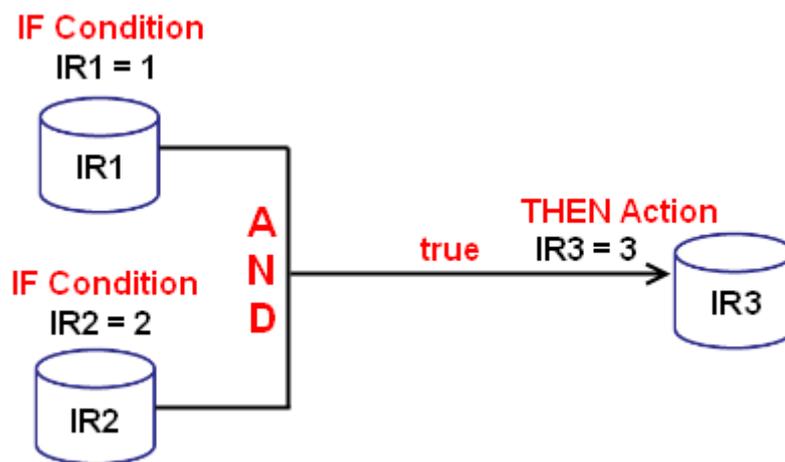
WISE Internal Register

Application Example



- **Scenario :**

In general, Internal Register (IR) mainly provides temporary variable to read/write data when performing IF-THEN-ELSE Rule evaluations and operations on a WISE controller. It also allows users to read/write data from remote SCADA via Modbus_TCP Protocol. Assume there is a WISE controller performing the following operations: when IR1 = 1 and IR2 = 2, then IR3 will be rewritten as 3.



- **Steps :**

1. Open the WISE WEB page, and get into the Advanced Setting.
2. Get into the Internal Register Setting page, click IR1, IR2,IR3 and assign IR1's initial value as 1, IR2's initial value as 2. Click "Save" button to complete the setting.

Internal Register Setting Page

Enable	<input checked="" type="checkbox"/> No.01	<input checked="" type="checkbox"/> No.02	<input checked="" type="checkbox"/> No.03	<input type="checkbox"/> No.04	<input type="checkbox"/> No.05	<input type="checkbox"/> No.06
Nickname	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Initial Value	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Enable	<input type="checkbox"/> No.07	<input type="checkbox"/> No.08	<input type="checkbox"/> No.09	<input type="checkbox"/> No.10	<input type="checkbox"/> No.11	<input type="checkbox"/> No.12
Nickname	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Initial Value	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Enable	<input type="checkbox"/> No.13	<input type="checkbox"/> No.14	<input type="checkbox"/> No.15	<input type="checkbox"/> No.16	<input type="checkbox"/> No.17	<input type="checkbox"/> No.18
Nickname	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Initial Value	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Enable	<input type="checkbox"/> No.19	<input type="checkbox"/> No.20	<input type="checkbox"/> No.21	<input type="checkbox"/> No.22	<input type="checkbox"/> No.23	<input type="checkbox"/> No.24
Nickname	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Initial Value	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Enable	<input type="checkbox"/> No.25	<input type="checkbox"/> No.26	<input type="checkbox"/> No.27	<input type="checkbox"/> No.28	<input type="checkbox"/> No.29	<input type="checkbox"/> No.30
Nickname	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Initial Value	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Enable	<input type="checkbox"/> No.31	<input type="checkbox"/> No.32	<input type="checkbox"/> No.33	<input type="checkbox"/> No.34	<input type="checkbox"/> No.35	<input type="checkbox"/> No.36
Nickname	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Initial Value	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Enable	<input type="checkbox"/> No.37	<input type="checkbox"/> No.38	<input type="checkbox"/> No.39	<input type="checkbox"/> No.40	<input type="checkbox"/> No.41	<input type="checkbox"/> No.42
Nickname	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Initial Value	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Enable	<input type="checkbox"/> No.43	<input type="checkbox"/> No.44	<input type="checkbox"/> No.45	<input type="checkbox"/> No.46	<input type="checkbox"/> No.47	<input type="checkbox"/> No.48
Nickname	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Initial Value	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

Save

- Get into the Rule Setting WEB page, assume there is no rule existed in the Rule Overview section.



- Check the "Rule 1" checkbox to enable "Rule 1", then click "Rule 1" Edit button for "Rule 1" editing.

Enable	No.	Edit	Status
<input checked="" type="checkbox"/>	Rule 1	<input type="button" value="Edit"/>	
<input type="checkbox"/>	Rule 2	<input type="button" value="Edit"/>	
<input type="checkbox"/>	Rule 3	<input type="button" value="Edit"/>	
<input type="checkbox"/>	Rule 4	<input type="button" value="Edit"/>	
<input type="checkbox"/>	Rule 5	<input type="button" value="Edit"/>	

- Select Internal Register as first IF Condition for "Rule 1", and then click on the right side  button to edit detail information.

Rules Setting Page

Rule 1

Description:

	IF		THEN		ELSE
Condition1	None	<input type="checkbox"/>	Action1	None	Action1: None
Condition2	None	<input type="checkbox"/>	Action2	None	Action2: None
Condition3	DI	<input type="checkbox"/>	Action3	None	Action3: None
Operator	Timer				

Clear Save

6. Complete “IR1 = 1” condition setting, then click “Save” button to save the settings and return to Rule 1 Setting Page.

Internal Register Condition Setting

Index	Operator	Value
1	=	Assign Value as 1

Save

7. Select AND in Operator field.

Rules Setting Page

Rule 1

Description:

	IF		THEN		ELSE
Condition1	Internal Register	<input type="checkbox"/>	Action1	None	Action1: None
Condition2	None	<input type="checkbox"/>	Action2	None	Action2: None
Condition3	None	<input type="checkbox"/>	Action3	None	Action3: None
Operator	AND				

Clear Save

8. Select Internal Register as second IF Condition for “Rule 1”, and then click on the right side button to edit detail information.

Rules Setting Page

Rule 1

Description:

	IF		THEN		ELSE
Condition1	Internal Register	<input type="checkbox"/>	Action1	None	Action1: None
Condition2	None	<input type="checkbox"/>	Action2	None	Action2: None
Condition3	DI	<input type="checkbox"/>	Action3	None	Action3: None
Operator	Internal Register				

Clear Save

9. Complete “IR2= 2” condition setting, then click “Save” button to save the settings and return to Rule 1 Setting Page.

Internal Register Condition Setting

Index	Operator	Value
2	=	Assign Value as 2

10. Select Internal Register as THEN ACTION for “Rule 1”, and then click on the right side  button for you to edit detail information.

Rules Setting Page

Rule 1

Description:

	IF	THEN	ELSE
Condition1	Internal Register	None	None
Condition2	Internal Register	None	None
Condition3	None	None	None
Operator	AND		

11. Complete “IR3 = 3” action setting, then click “Save” button to save the settings and return to Rule 1 Setting Page.

Internal Register Action Setting

Index	Operator	Value
3	=	Assign Value as 3

12. Confirm settings for Rule 1 and then Click “Save” button to save the settings and return to Rules Setting Page.

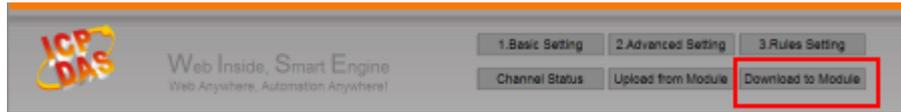
Rules Setting Page

Rule1

Description:

	IF	THEN	ELSE
Condition1	Internal Register	Internal Register	None
Condition2	Internal Register	None	None
Condition3	None	None	None
Operator	AND		

13. After finishing the Rule editing, click the “Download to Module” button to download edited rules from Web UI to WISE controller.



14. After WISE finishing the execution of the rule, on the WISE Channel Status WEB page, you can find the IR3 value being modified from 0 to 3

Channel Status Page						
DI Channel						
Channel	Channel0			Channel1		
Nickname						
Value	OFF			OFF		
Counter	0			0		
DO Channel						
Channel	Channel0			Channel1		
Nickname						
Value	OFF			OFF		
Counter	0			0		
AI Channel						
Channel	Channel0	Channel1	Channel2	Channel3	Channel4	Channel5
Nickname						
Value	-9.6	-0.9	500	-30.6	-0.9	-0.5
AO Channel						
Channel	Channel0			Channel1		
Nickname						
Value	0			0		
Internal Register						
Index	No.01	No.02	No.03	No.04	No.05	No.06
Nickname						
Value	1	2	3	0	0	0
Index	No.07	No.08	No.09	No.10	No.11	No.12
Nickname						
Value	0	0	0	0	0	0
Index	No.13	No.14	No.15	No.16	No.17	No.18
Nickname						
Value	0	0	0	0	0	0
Index	No.19	No.20	No.21	No.22	No.23	No.24
Nickname						
Value	0	0	0	0	0	0
Index	No.25	No.26	No.27	No.28	No.29	No.30
Nickname						
Value	0	0	0	0	0	0
Index	No.31	No.32	No.33	No.34	No.35	No.36
Nickname						
Value	0	0	0	0	0	0
Index	No.37	No.38	No.39	No.40	No.41	No.42
Nickname						
Value	0	0	0	0	0	0
Index	No.43	No.44	No.45	No.46	No.47	No.48
Nickname						
Value	0	0	0	0	0	0

● Rule Overview :

Rule Overview

Rule1(Enable)

Description:

< IF >

Internal Register1 = 1 (AND)

Internal Register2 = 2

< THEN >

Internal Register3 = 3 (One Time)