

# Redundancy Enhanced Modbus ID

Revision Date	Revision	Description	Author
Mar/2017	V1.0	Initial release	Samuel Yang

# AGENDA

- **Introduction of Redundancy Enhanced Modbus ID (REMI)**
  - **Concept and Architecture**
  - **Principle**
  - **Benefit**
  - **Configuration of REMI**





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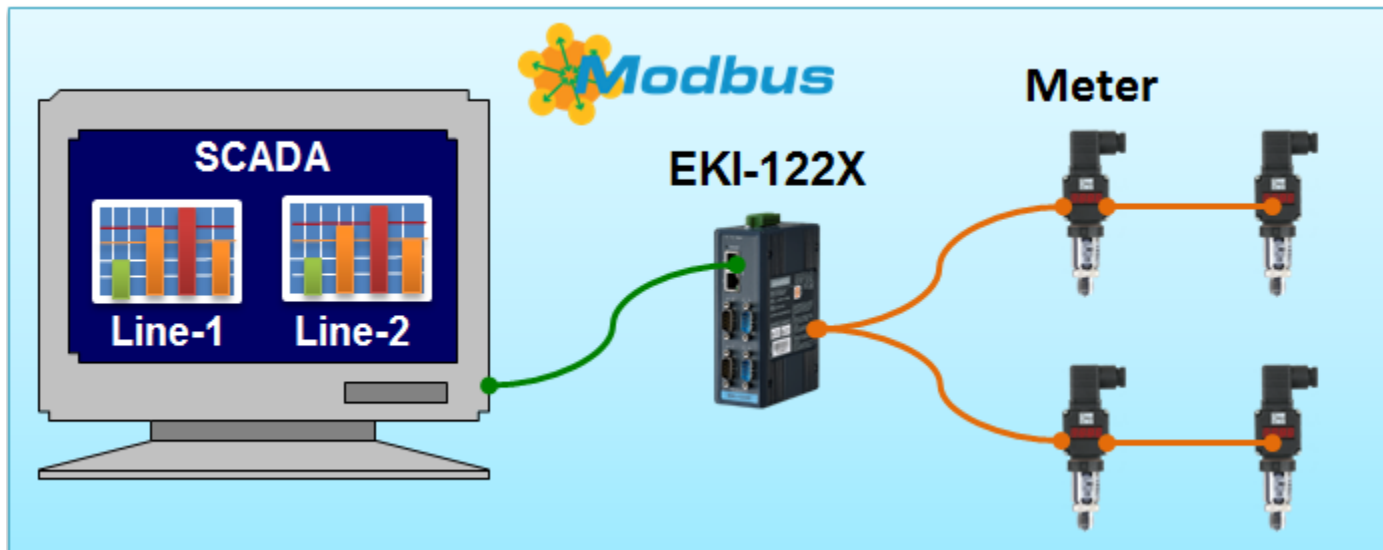
# Concept and Architecture

# Redundancy

Ethernet  
Serial  
Fiber



- **Why is Redundancy important?**
  - A solid solution will have multiple layers of Redundancy to ensure that your data is safe and to maximize your uptime.
- **How to do the redundancy for serial device?**
  - For the serial device, user will be able to implement pair (or upper) devices if first one communicate failed. However, customer still needs to modify the program of SCADA to poll data after first device failed.





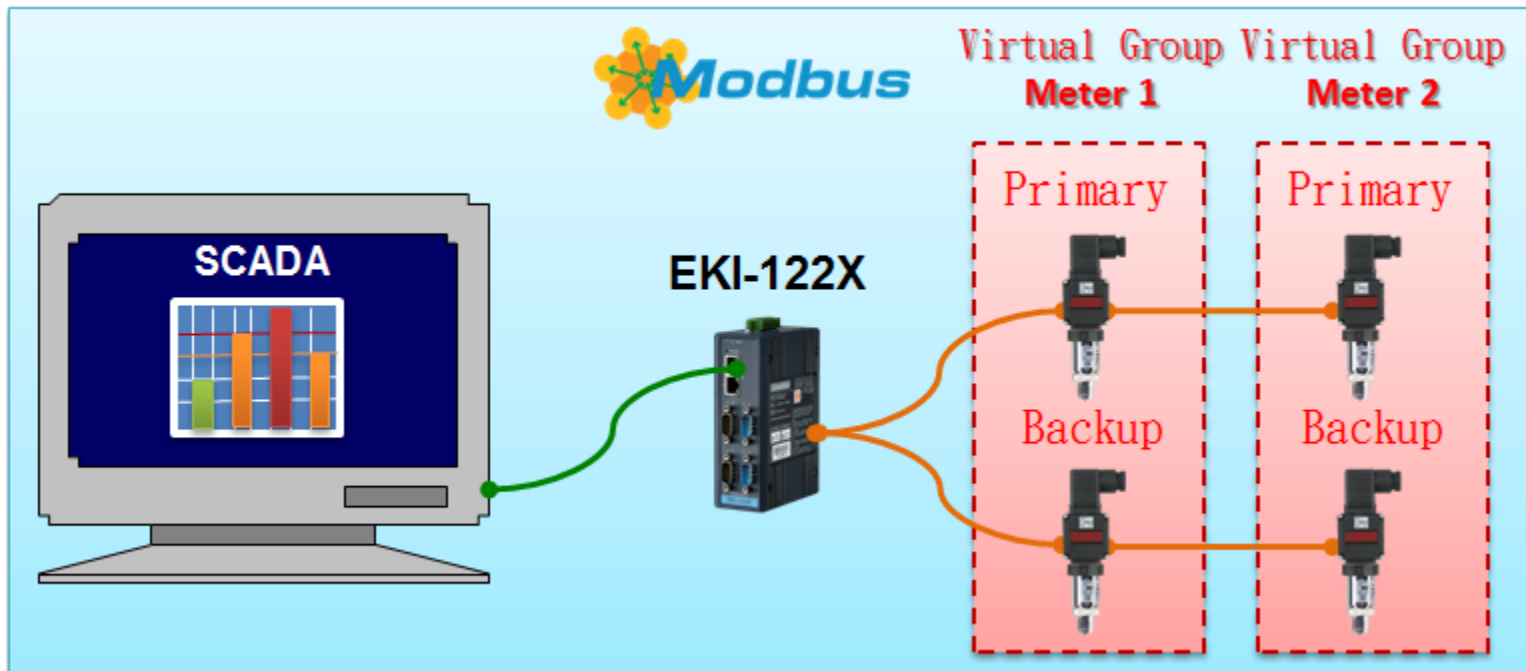
# Principle

# What is the “REMI”?

Ethernet  
Serial  
Fiber



- Redundancy Enhanced Modbus ID
- EKI can **mapping two devices as a group**, and allows SCADA to access this group **by one virtual slave ID**.





# Benefit

# What the benefit of REMI brings to you?

- **Easy to Implement**

- You will have a redundancy, and SCADA software doesn't need to change anything.

- **Easy to Maintain**

- If primary device failed. Just replace it, and will not have any side effect.

- **Easy to Configure**

- 2 Steps to complete the REMI configuration.



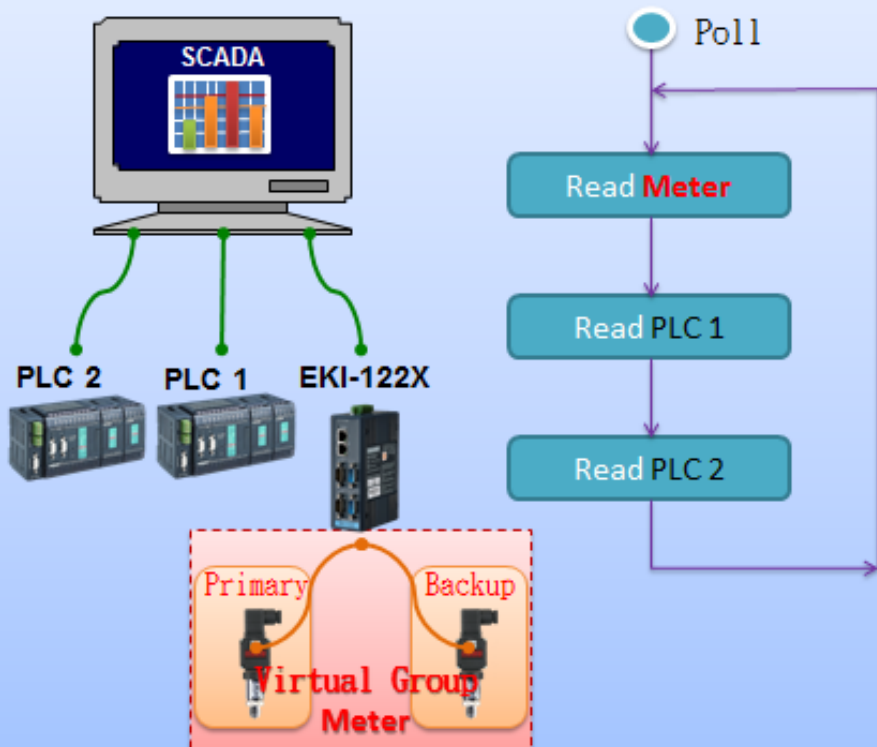
# Easy to Implement

- To simplify the SCADA software by REMI

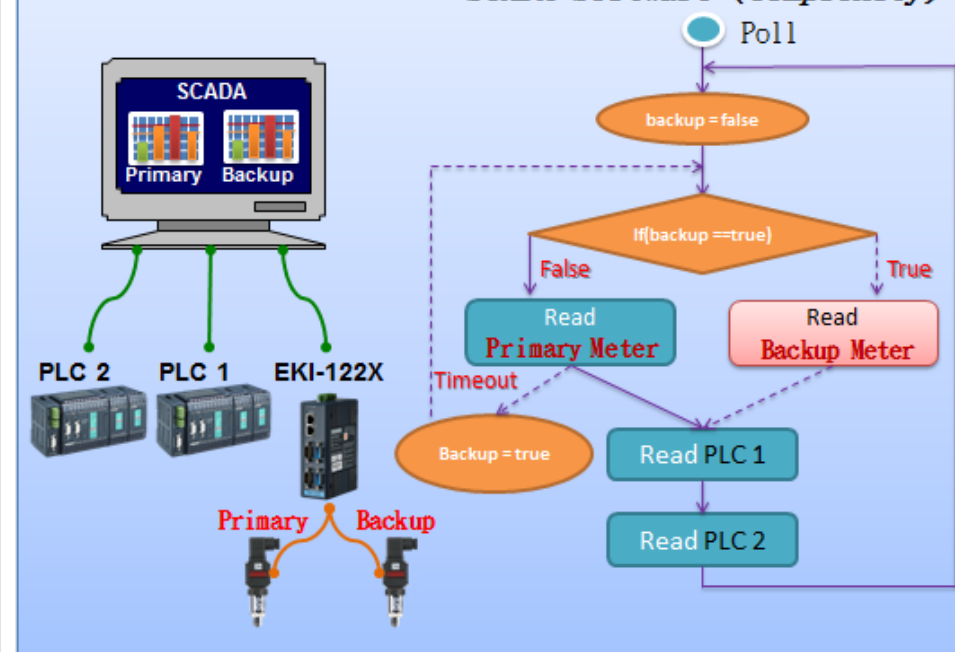
**O** With REMI Solution

**X** Without REMI Solution

SCADA Software (*Simple*)

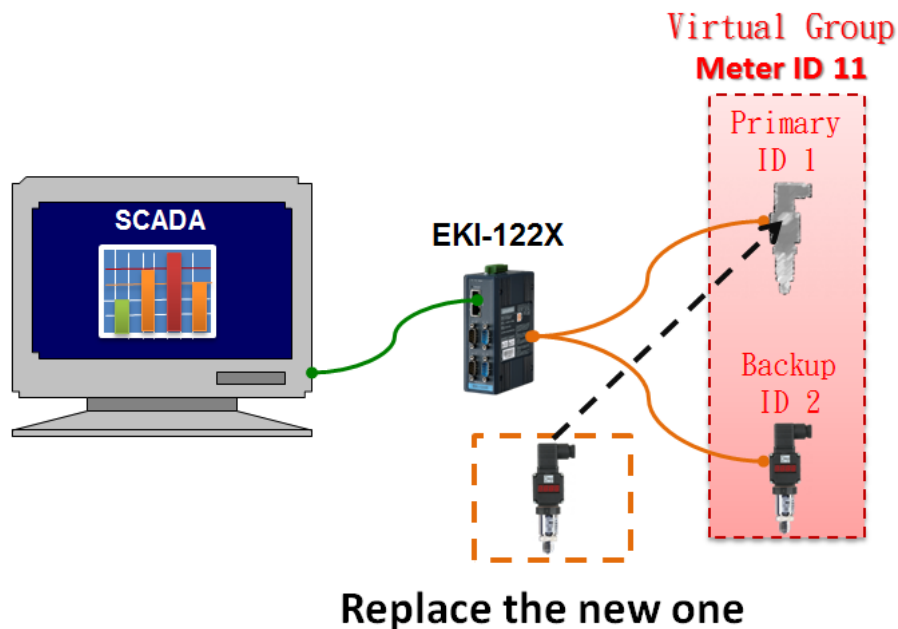


SCADA Software (*Complexity*)



# Easy to Maintain

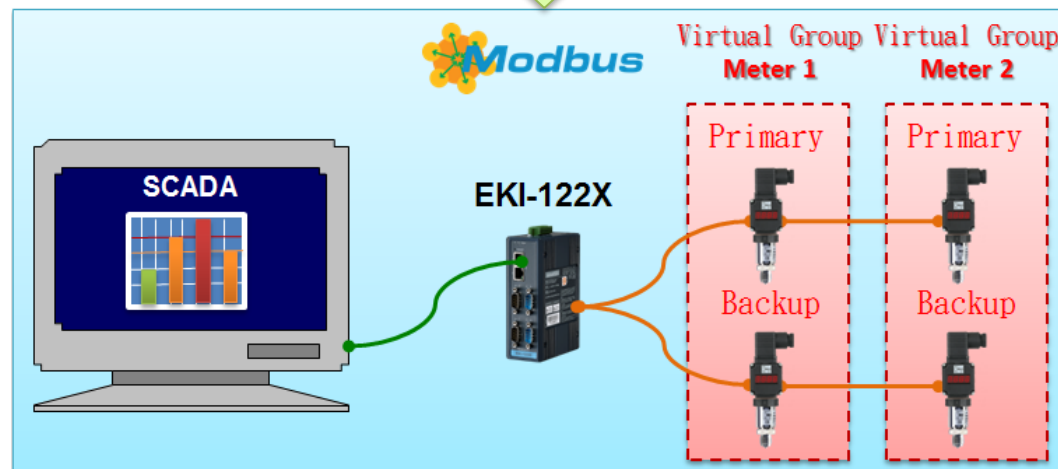
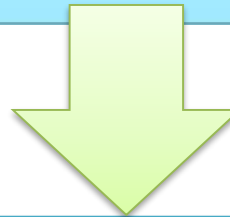
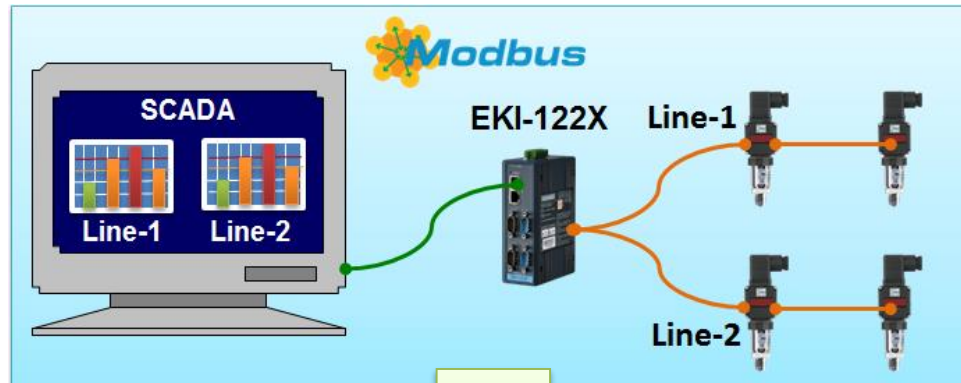
- Replacing damaged device and recovering by clicking “Resume” button on EKI’s WebGUI, and no need to restart SCADA software.



System Configuration	
Firmware version:	1.67
Revision number	5044
Device Name	ENABLE_JIT_DIAG
Device Description	
Telnet	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
SNMP	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Local Time	2017 / 3 / 9 6 : 1 : 6 <a href="#">Modify</a>
Time Server	tock.stdtime.gov.tw
Modbus Settings	
Listen Port for Slave Mode	502
Redundant ID for Slave Mode	1 ▼
1 Redundant ID 11	Primary Path 1 Secondary Path 2 <a href="#">Resume</a>
<a href="#">Save</a>	

# Topology change with “REMI”

Ethernet  
Serial  
Fiber



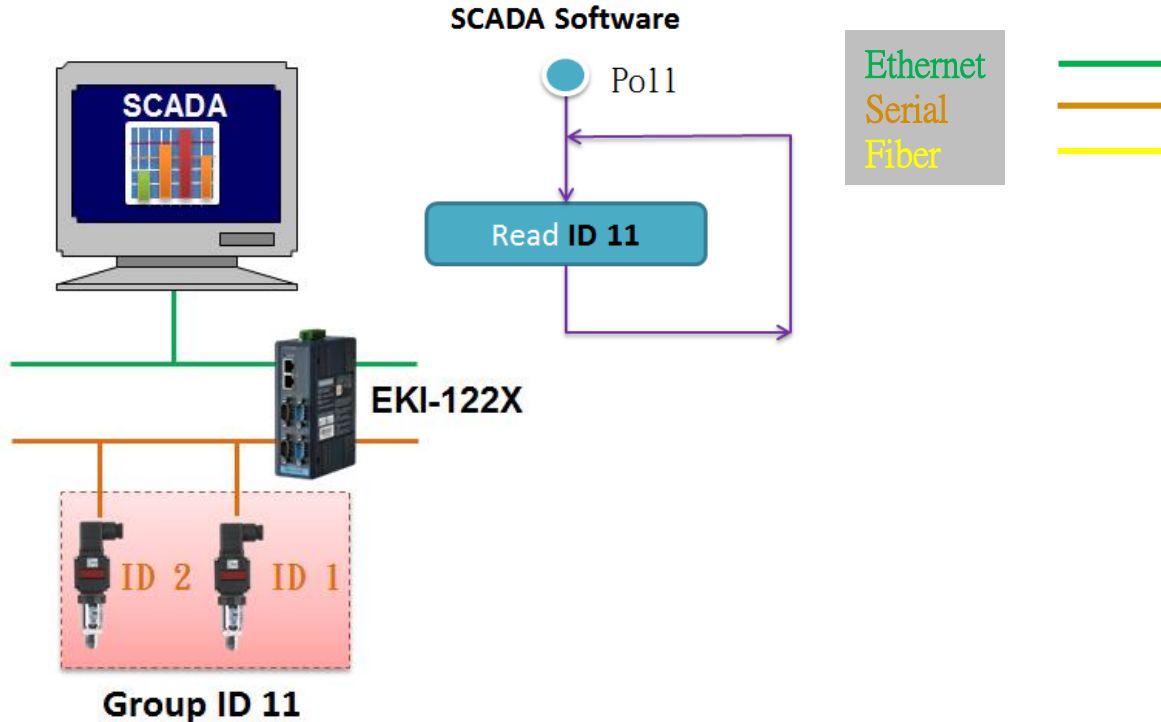


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# Configuration of REMI

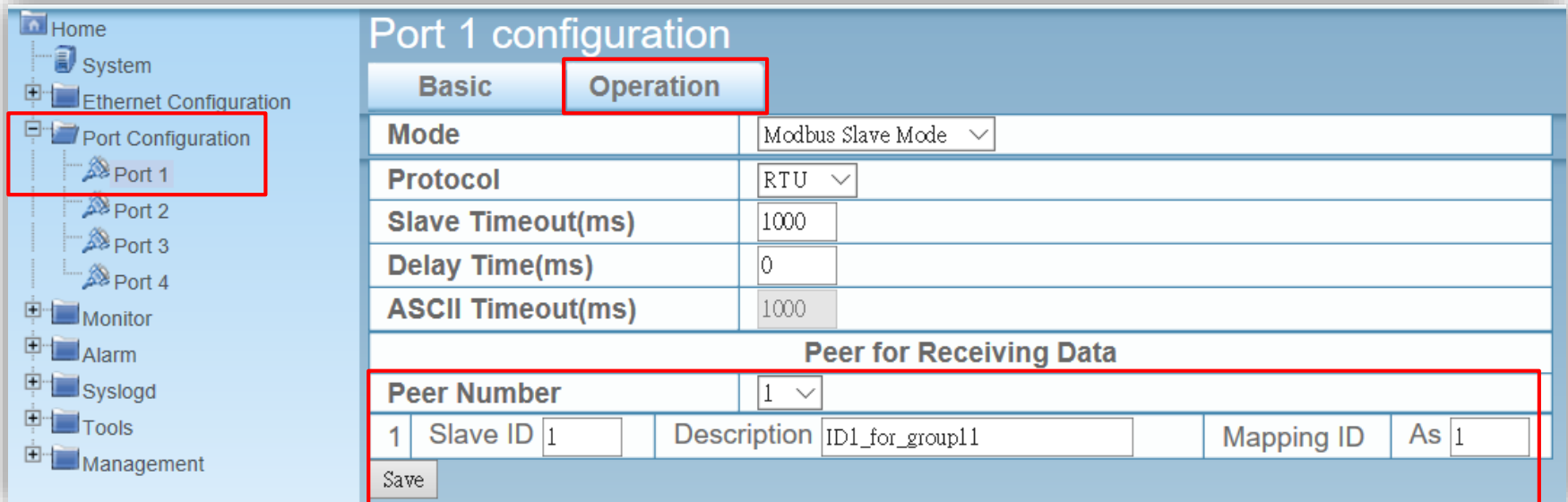
# Taking it Step by Step

1. Configure primary and backup device ID
2. Configure redundant ID for primary and backup device



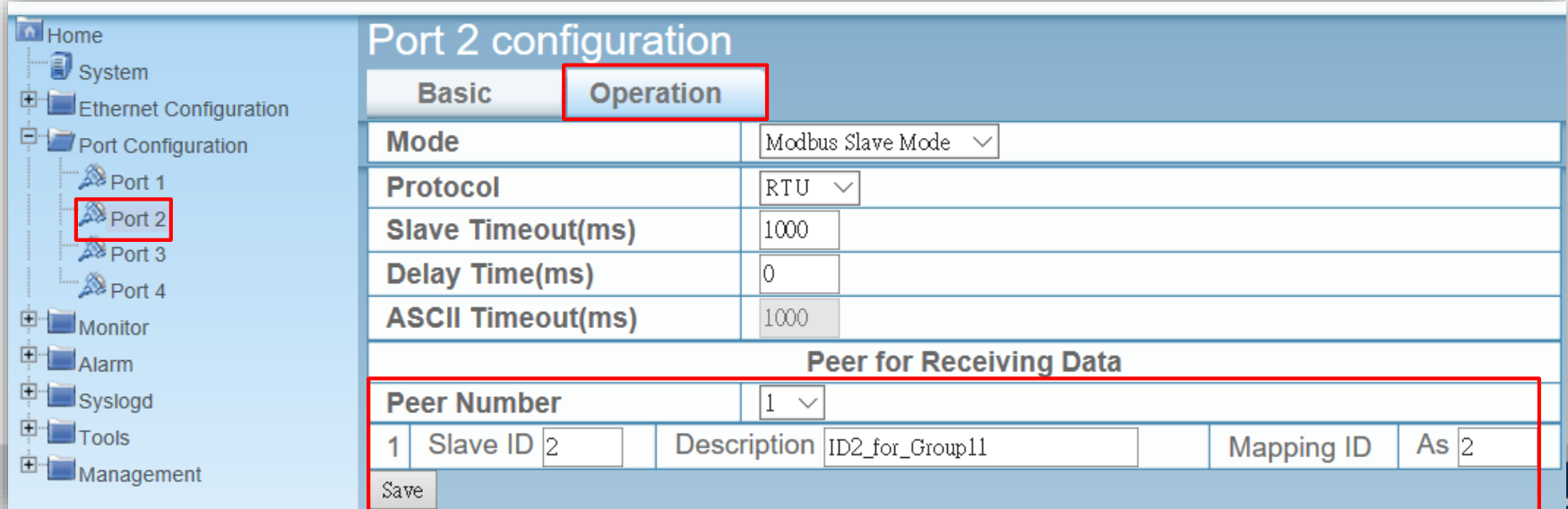
# Step 1: Configure primary and backup device ID

- Go to Port 1/Port2 → Operation



The screenshot shows the 'Port 1 configuration' window. On the left sidebar, 'Port 1' is selected under 'Port Configuration'. The 'Operation' tab is active. The configuration fields are as follows:

Port 1 configuration	
Basic	Operation
Mode	Modbus Slave Mode
Protocol	RTU
Slave Timeout(ms)	1000
Delay Time(ms)	0
ASCII Timeout(ms)	1000
Peer for Receiving Data	
Peer Number	1
1 Slave ID	1
Description	ID1_for_group11
Mapping ID	As 1
Save	



The screenshot shows the 'Port 2 configuration' window. On the left sidebar, 'Port 2' is selected under 'Port Configuration'. The 'Operation' tab is active. The configuration fields are as follows:

Port 2 configuration	
Basic	Operation
Mode	Modbus Slave Mode
Protocol	RTU
Slave Timeout(ms)	1000
Delay Time(ms)	0
ASCII Timeout(ms)	1000
Peer for Receiving Data	
Peer Number	1
1 Slave ID	2
Description	ID2_for_Group11
Mapping ID	As 2
Save	

## Step 2: Configure redundant ID for primary and backup device

- Go to System

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Home

System

Ethernet Configuration

Port Configuration

Port 1

Port 2

Port 3

Port 4

Monitor

Alarm

Syslogd

Tools

Management

### System Configuration

Firmware version:	1.67		
Revision number	5044		
Device Name	ENABLE_JIT_DIAG		
Device Description			
Telnet	<input type="radio"/> Disable <input checked="" type="radio"/> Enable		
SNMP	<input type="radio"/> Disable <input checked="" type="radio"/> Enable		
Local Time	2017 / 3 / 9 6 : 1 : 6 <a href="#">Modify</a>		
Time Server	tock.stdtime.gov.tw		
<b>Modbus Settings</b>			
Listen Port for Slave Mode	502		
Redundant ID for Slave Mode	1 ▼		
1 Redundant ID 11	Primary Path 1	Secondary Path 2	<a href="#">Resume</a>
<a href="#">Save</a>			

A close-up, sepia-toned photograph of a hand cupping a human ear from behind. The hand is positioned to catch sound waves, symbolizing active listening and attentiveness. The background is a soft, out-of-focus light color.

**We listen to every  
request from customers**

**Thank You!**





*Enabling an Intelligent Planet*