

Wecon V-NET Web User Manual (V3.1)



# Wecon V-NET Web User Manual (V3.1)

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WECON technology Co., Ltd.



# Content

Chapter 1 Web link	
Chapter 2 Login page introduction	2
2.1 Register	2
2.2 User login	4
2.3 Retrieve password	6
2.4 Information navigation bar	6
2.4.1 Shortcut menu	6
2.4.2 Service	7
2.4.3 Account Information	9
2.5 Home page	
2.5.1 Device statistics information	
2.5.2 Map thumbnail	
2.5.3 Announcement	14
2.5.4 Current alarms	14
2.6 Device List Management	
2.6.1 Device list	15
2.6.2 Device search	26
2.6.3 Custom tags	
2.6.4 Toolbar	26
Chapter 3 V-BOX configuration on PC	
3.1 V-NET PC software introduction	
3.2 Configure V-BOX	
3.3 V-BOX password	
3.4 Network settings	
3.3.1 Connect to the cloud automatically	
3.3.2 Connection mode setting	
3.5 Update time	
3.6 Blink	
3.7 Get V-BOX ID	40
Chapter 4 V-BOX access configuration	
4.1 Basic configurations	41
4.1.1 Add a V-BOX	
4.1.2 Basic information	43
4.1.3 Communication port configuration	45
4.1.4 Network configuration	
4.1.5 Status push(Email)	
4.1.6 Tags usage	52
4.1.7 Registers information	53
4.1.8 Device version	53
4.2 Real-time data configuration	54
4.2.1 Real-time monitoring point configuration	



4.2.2 Monitoring points group management	56
4.2.3 Real-time data modification	57
4.3 Alarm configuration	58
4.3.1 Alarm tags	58
4.3.2 Current alarm	59
4.3.3 Historical alarm	60
4.4 Historical data configuration	60
4.4.1 Historical tags	60
4.4.2 Data query	61
4.5 Cloud SCADA	62
4.6 LUA script	63
4.6.1 Lua script management	63
4.6.2 Script editor	67
Chapter 5 V-BOX template	73
5.1 Template introduction	73
5.2 Template operation	74
5.2.1 Add template	74
5.2.2 Group management	75
5.2.3 Copy template	76
5.2.4 Generate template	77
5.2.5 Delete template	78
5.3 Basic information	
5.4 Template configuration	
5.5 V-BOX list	81
5.5.1 Associate V-BOX	
5.5.2 Disassociate V-BOX	82
5.5.3 Synchronous configuration	82
5.6 Release template	83
5.6.1 Release template	83
5.6.2 Release and save as historical	
5.6.3 Historical version	
5.7 View the V-BOX bound to the template	85
5.7.1 The V-BOX with bound template	85
5.7.2 V-BOX with unbound template	
5.8 Template cloud SCADA	
5.8.1 Configuration toolbar	87
5.8.2 Template configuration cloud SCADA	87
5.8.3 Differences with cloud SCADA platform	90
Chapter 6 Account management	
6.1 Administrator authority	91
6.2 View-account management	
6.2.1 Create account	
6.2.2 Authority Management	93
6.2.3 Modify the monitoring point authority	93



6.2.4 Assign monitoring point	
6.3 View account usage	97
6.3.1 Data monitoring	
6.3.2 Alarm	
6.3.3 Historical data	101
Chapter 7 Role management	102
7.1 Role introduction	102
7.2 Compatibility with old sub-accounts	103
7.2.1 Compatibility description	103
7.2.2 The old engineer account	103
7.3 Group management	103
7.4 Role management	104
7.4.1 New role	
7.4.2 Configure role permissions	105
7.4.3 Modify the role name	108
7.4.4 Delete the role	108
7.5 Account Management	
7.5.1 Create an account	109
7.5.2 Account list	
7.5.3 Modify sub-account	111
7.5.4 Delete sub-account	112
7.5.5 Assigned devices	113
7.5.6 Unbind devices	
Chapter 8 HMI ig series configuration	115
8.1 Connect ig screen to V-NET	115
8.1.1 Add ig screens	115
8.1.2 Obtain machine code	117
8.1.3 Basic information	119
8.1.4 Status Push	
8.1.5 Registers Information	
8.1.6 Version	
8.2 Device List	122
8.3 Remote Monitoring	
8.4 Data View	126
8.4.1 Communication port	127
8.4.2 Collect point	128
8.4.3 Alarm record	129
8.4.4 Data record	130
8.5 Pass-through	133
Chapter 9 Remote download	134
9.1 PLC Download	134
9.1.1 The COM port	134
9.1.2 Remote download configuration	135
9.1.3 Transport Settings	137



9.1.4 PLC upload	
9.1.5 PLC download	
9.1.6 Monitor mode	
9.1.7 Stop pass-through	
9.2 HMI download	
9.2.1 Download configuration	
9.2.2 HMI download	
9.2.3 Stop remote	
Chapter 10 Device maintenance	
10.1 Replace devices	
10.2 Transfer devices	
Chapter 11 OPC configuration	
11.1 Introduction	
11.2 Basic configuration	
11.2.1 Login interface	
11.2.2 Server setting	149
11.2.3 configuration successfully	
11.3 Example	
11.3.1 Run the OPC tool	
11.3.2 Create OPC device	



# **Chapter 1 Web link**

- Chinese server: <u>http://V-BOX.net</u>
- Europe server: <u>http://eu.V-BOX.net</u>
- Asean server: http://asean.V-BOX.net
- V-BOX PC software and APP download link: <u>http://www.we-con.com.cn/en/service.html</u>
- Chinese server: <u>http://api.V-BOX.net</u>
- Europe server: <u>http://api.eu.V-BOX.net</u>
- Asean server: <u>http://api.asean.V-BOX.net</u>



# **Chapter 2 Login page introduction**

## 2.1 Register

Users could register V-BOX account through mobile phone number or email. The registration interface is shown in the figure below, but users in other countries (except China) could only register with e-mail address.

For mobile app register interface is shown in Figure 2-1



Figure 2-1



For PC V-NET register interface is shown in Figure 2- 2 and Figure 2- 3.

11/ELUN



Figure 2-2

Europe Node (Europe)	v
In order to get a better speed ex	perience, V-NET has deployed three
ervice nodes around the world. Th	he data of the three nodes are currently
solated from each other. Please cl	hoose the correct node to log in according
o your current registration informa	tion.
Please enter User Name	
Please enter the registered email	
Please enter Password	Please Confirm password
Company Name	
Contact Email	
I have read and accent service	e term
Thave read and accept service	e term



#### Operating procedures of Registering by an Email address

(1) Enter user name, the user name should be a unique name. If the username already exists, the prompt message would appear, as below. And numbers, letters, and underscores are legal characters for the username, and the length of user name shall not exceed 20 digits.





Figure 2-4

(2) Enter the email address.

3 Set the password, and please ensure that the password which has been entered secondly shall be consistent.

(4) Select "I have read and accept it", after reading "Registration Clauses", please make sure you could accept all terms of this agreement.

(5) Click "Register" to execute account registration, and the prompt message would display as below  $_{\circ}$ 



Figure 2-5

**Note:** if user do not receive the register email, please check the Recycle bin.

## 2.2 User login

When the user logs in, the account could be the user name or email address (subject to the registered account). Only when the user name or email address is legal and matches the password, could the login succeed. The same account could be logged in at the same time on the web and mobile, but not on different PC devices at the same time. If you use the same account to log in on different PC devices successively, the account on the device that logs in first would be forced offline.

The configuration of the main picture, background color, and background picture of the middle part

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in the landing page could be modified. Set the module parameters for configuration through the super management (main station super management and virtual super management) background landing interface. The virtual super management could only be configured if it is approved. The login interface is shown as below:



Figure 2-6

#### Operating procedures of login

① Select user interface, Chinese or English are supported.

(2) Enter user name, such as WECONSupport.

3 Enter password.

(4) Check "Keeping the state of sign in within 30 days", if necessary, kindly note, please don't use this option in public PC.

5 Click "Sign in" button.

Login	
Q User Name	
Password	
Remember password	Forgot Password?
Sign ir	۱
No account? Apply 5	or registration

Figure 2-7



## 2.3 Retrieve password

When the user forgets the login password, the password could be retrieved through email. The password could be modified successfully only when the entered verification code is consistent with the verification code received by the user on email and the entered password is legal, As shown below:

STANDAR V-BOX			UT01 DOX
	password?	Use Sign up via entail	1 have account $\hat{T}$ . Sign in Sign In
	Forget	password?	
	Enul		
	Verification Code	Sert	
	Please ontoi Password		
	Please Confirm password		
		OK	
feady			CAP MUM SCR

Figure 2-8

## 2.4 Information navigation bar

Information navigation bar is on the top of the right interface of the V-NET platform, and it would be displayed on all pages of the platform (except for special pages, such as full-screen map pages, etc.), as shown in following figure.



Figure 2-9

#### 2.4.1 Shortcut menu

The shortcut menu configuration is on the left side of the information navigation bar, the shortcut menu of user-defined configuration is displayed here. The homepage is a fixed menu and could not be canceled. The shortcut menus that could be configured include Role, Account setting, Email, Account management. The configurable shortcut menu could be configured in the administrator account.

Click the button on the information navigation bar to choose to close or display the shortcut menu in the pop-up box, as shown in the following figure.





Figure 2-10

#### 2.4.2 Service

"Service" module includes eight functions, including Account management, Role, Cloud SCADA, Email, Help, Feedback, HTTP access, Request to share.



Figure 2-11

- (1) Account management. Refer to detail for Chapter 6 Account management.
- (2) Role. Refer to detail for Chapter 7 Role management.
- (3) Cloud SCADA. Refer to detail for 4.5 Cloud SCADA
- (4) Email. Refer to detail for 4.1.5 Status push(Email)



- (5) Help. Click it to jump to this user manual.
- (6) Feedback. Click it to jump to the user feedback interface and fill in product requirements, function suggestions, product defects, etc., as shown in the following figure.

Home   Localization   Email   Users & Groups Feedback Role   \$	Service ▼ △ ●
Home > Feedback	Sub-account  Role  Cloud SCADA
3 Subject Subject Type Request Improvement Product defects Anonymous Yes No	Email Help Feedback HTTP access
Content	Request to share
Submit 4	

Figure 2-12

#### (7) HTTP access.

Click it to jump to the configuration interface of HTTP access, as shown in following figure.

Interface Addres	ss http://api.asean.v-box.net		🖸 Role	9	
Execution interfac	ce Sign In	•	🚳 Clou	ud SCADA	
			🔄 Ema	ail	
comia		comkey	Ø Help	0	
alias		password	🗭 Fee	dback	
lculate signature co	ntent		\star HTT	Paccess	
Head co	ommon		< Req	uest to share	

Figure 2-13

#### (8) Request to share.

After the other account agrees to the request of sharing the V-BOX or ig screen, after the other party's account agrees, the device requested to be shared would be displayed in the "Share with Others" list under my account. To request sharing, the machine code of the v- box or ig screen should be entered.



Access Key	Access Key	

Figure 2-14

The system would send a share request to the device account and waits for the other account's approval or rejection.

K Home   Account Setting   Email   Account	int management   Feedback   Role	0			Service • 🤌 💽 🔤 •
My request Request to share	Share Device Transfer	Device System Notification			
Equipment name	Access Key		Request account	Time	Edit
S-NG	V040011t	154df	1	2021-11-26 10:25:32	[Agree] [Refuse]

Figure 2-15

## 2.4.3 Account Information

The right of the information navigation bar displays the currently logged-in account information, including **user avatar, username**. Click username to display a drop-down box, including **User avatar, Administrator account name, Account type, Change password, Modify avatar, Account details, Localization,** and **Sign out.** 

(1) Modify avatar. Upload the user avatar. If the user does not upload the avatar, the default profile picture is used. As shown below.



Figure 2-16

(2) Change password. Users need to enter the old password and the new password. Only when the entered password is valid would the operation succeed. As shown below.



hange Password	
Old Password	
New Password	
New Password	
	Cancel

Figure 2-17

- (3) Account details. It includes users' information and company information.
  - 1) users' information includes Username, Email, Phone number, and click "edit" to change email or phone number.
  - 2) Company information includes Company name, Owner, Contact. Phone number and Email. As shown below.

count management   Feedback   Role   🔅		Service • D
User		◆ Edit
User Name		Change Password
Email	choose con.com.cn	Account Details
Phone Number		In Localization
Password		sign out
Company		¢ Edit
Company		
Owner		
Contact		
Number		
Email		

Figure 2-18

(4) Localization. Click it to change the time zone, region, and map of the account. After the change, the time reported by the device would be converted and displayed in the set time zone. As shown below.



		2
		🖺 Save
User Timezone	e (UTC+06:00) Dhaka	~1
Regior	China	×
Мар	Google	~





Figure 2-20

## 2.5 Home page

The home page is the page that the user jumps to by default after logging in to the platform. Users could jump through the shortcut menu configured in the information navigation bar. The home page includes four modules, including **device statistics information, map thumbnail, announcement,** and **current alarms**. The home page is shown in the following figure.



#### Wecon V-NET Web User Manual (V3.1)

Device	Template	Home   Localiza	tion   Email   Users & Grou	ps   Feedback   Role	0				Service ▼	🤌 🜔	13
	٩	Alarm Items		Number of current a	arm Device	Number of onlin	e Device		Number of u	ipgradeable De	vice >
Custom Tags		68/88	Alarm/Total	3/6	Device/Total	4/6		Online/Total	0/6	Up	gradeable/Total
🗅 default group (0/	6) <	Map Thumbnail			Google 🗸 Details	3 Announcement					
		Tajikistan	***		STA.	2021-11-16 19:45:39	<ul> <li>From user</li> <li>Devi</li> </ul>	i <b>use: [</b> ] in [!	2021-11-16 19:	uest 45:39 request S	hare the
		istan		CI	nina	2021-05-20 15:27:54	<ul> <li>ASE</li> <li>IMPO</li> <li>V-BO</li> </ul>	AN Server V-NET L DRTANT NOTICED DXPlease notice	imite on History ear V-BOX Use	Data Storage A rs, Thanks for us	Amount sing WECON
		Pakistan Map Wecon	ew Delhi Iş Ra <del>cıl</del> Disclaimer: The <b>Nepal</b> tion used i cannot accept any responsibili <b>chi</b> rou do not like it	1 V-NET was derived from map utany errors, omissions, or po	service provider. Therefore, sitional accuracy. Disable	2021-05-19 13:48:20	<ul> <li>user</li> <li>user</li> <li>Devi</li> </ul>	[a Hand ove [au., in 2021-05-13 ce[HuŷnhVănQuy]⊦	er the Device 21:09:09	and over	
		Google	KeybBard sh	artéuts   1 Map data @2021 Googl	e, SK telecom Terms of Use	2021-05-13	From	n user 📥 Hand ov	er the Device to	o you	
		Current Alarm	Nama	Lovel	Massaga		Value	Triggor Time		Status	Confirmation
		H-WF	HDX0	Minor	message		O	Released2021-11	-15 14:51:19	Unconfirmed	Confirm
		H-WF	HDX0	Minor			1	Trigger 2021-11	-15 14:50:29	Unconfirmed	Confirm
		H-WF	HDX0	Minor			0	Released2021-11	-15 11:23:49	Unconfirmed	Confirm
		H-WF	HDX0	Minor			1	Trigger 2021-11	-15 11:23:47	Unconfirmed	Confirm
		H-WF	HDX0	Minor			0	Released2021-11	-15 11:22:49	Unconfirmed	Confirm
+ = 🖙 ★	4 C \$	H-WF	нохо	Minor			1	Triader 2021-11	-15 11:22:02	Unconfirmed	Confirm

Figure 2-21

## 2.5.1 Device statistics information

The device statistics information includes the current alarm numbers of the V-BOX/ig screen, the items of current alarm devices, the number of online devices, and the number of upgradeable devices. The progress bar in the statistical information is the proportion of data and total number.

- (1) Current alarm items. The number of current alarms is divided by the number of all alarms.
- (2) Number of current alarm devices. Current number of devices with alarms is divided by the total number of all devices.
- (3) Number of online devices. The number of online devices is divided by the total number of all devices.
- (4) Number of upgradeable devices. The number of devices that could upgrade firmware is divided by the total number of all devices.

Click the number of upgradeable devices, it would jump to the upgradeable device list page, where you could upgrade the V-BOX online, as shown in the following figure.

< Home	Role	Ö Batch I	ingrade Refresh	1			Service -	English 🗸	Q	0
Select	Status	Device Name	Access Key		Device model	Current Version	Upgradea	ble version		Last upgrade time
	٠	Printing plant	Vir001	)1918	V-BOX S-00	version(S01-1.0.1.20052901)	version(S0	1-1.0.1.21012601)		2021-08-24 17:34
	٠	Refrigeration systems	Vir001	201917	V-BOX S-00	version(S01-1.0.1.20052901)	version(S0	1-1.0.1.21012601)		2021-08-24 17:34

Figure 2-22



## 2.5.2 Map thumbnail

The map thumbnail could realize the functions of color switching, point aggregation and dispersion, normal and satellite map switching, as shown in the following figure.



Figure 2-23

#### Click the [Details] button in the upper right corner of the map thumbnail to enlarge the map.

lcon	Name	Meaning
0	On line	V-BOX or ig screen is online.
0	Off-line	V-BOX or ig screen is off-line.
•	Pass-through	V-BOX or ig screen status is in pass-through.
0	VPN pass-through	V-BOX or ig screen status is in VPN pass-through.
•	Ordinary download channel is ready	V-BOX or ig screen is ready for ordinary download channel (could perform ordinary download).
•	Ordinary download	V-BOX or ig screen status is in ordinary download.
۲	Off-line alarm	V-BOX or ig screen status is in off-line alarm.





V-BOX or ig screen has at least one current alarm, and the device status is in online alarm.

Table 2- 1

## 2.5.3 Announcement

It displays the latest 10 notification announcements, including device transfer, sharing, system notification and other messages. As shown in the following figure.

Announcement	
2021-11-26 10:29:39	From user [3] Share the Device to you user [3] in 2021-11-26 02:29:39Share the Device[S-NG]Here you are!
2021-11-08 19:00:51	From user [k] Sharing request user [bbox] in 2021-11-08 11:00:51 request Share the Device[123]with him !
2021-05-14 13:38:00	user [h] refuse receive Device! user [h] in 2021-05-14 05:37:10 refuse to receive smart Device[11]!

Figure 2-24

## 2.5.4 Current alarms

It displays the latest 10 current alarms of the designated V-BOX/ or ig screen that the user has the authority to operate. As shown in the following figure.

Current Alarm						-	
Source	Name	Level	Message	Value	Trigger Time	Status C	onfirmation
H-WF	HDX0	Minor		0	Released2021-11-15 14:51:19	Unconfirmed	Confirm
H-WF	HDX0	Minor		1	Trigger 2021-11-15 14:50:29	Unconfirmed	Confirm
H-WF	HDX0	Minor		0	Released2021-11-15 11:23:49	Unconfirmed	Confirm
H-WF	HDX0	Minor		1	Trigger 2021-11-15 11:23:47	Unconfirmed	Confirm
H-WF	HDX0	Minor		0	Released2021-11-15 11:22:49	Unconfirmed	Confirm
H-WF	нохо	Minor		1	Triager 2021-11-15 11:22:02	Unconfirmed	Confirm

Figure 2-25

#### Note

(1) When the user does not configure to display the alarms of the V-BOX or ig screen that needed, it displays is the alarm records of all the V-BOXs or ig screens by default, and displays the latest 10 current alarm records of all the V-BOXs or ig screens.

(2) The user could click the button in the upper right corner to configure the V-BOX or ig screen that displays the alarm records. (only select configuration, not configure the alarm monitoring point of the V-BOX or ig screen.

## 2.6 Device List Management

#### 2.6.1 Device list

There are five functional areas in the device list modules: **Multi-grade device list, Template list, Customized monitoring points, Device search and Toolbar**.

The multi-level device list displays all the devices under the account, and displays it in the form of a

multi-level grouped tree menu. Select the V-BOX device 🖾, it would automatically jump to the

functional module interface. There are seven modules, including **Real-time Data, Alarm, Historical data, Cloud SCADA, Lua script, Pass-through, and Configuration**. As shown in the following figure.

Device	Template	< Home   Localization   Email   Users & Groups   Feedback   Role   🌣 💿 Service 🗸 🤌 💽 1							<b>0</b> 1.00	
Search	٩	Ō		A		<u>lan</u>	<b>2</b> 2		۵	0
Custom Tags		Real-time Da	ta	Alarm	н	istorical Data	Cloud SCADA	Lua Script	Pass-through	Configuration
🕞 default group (	D/7) ~	Default group	Ø Grou	ıp Se 🥥	Setting					
O H-WF V14001210513004201058b0	3	+ New Tag	🔳 Quid	k Action 🗸 🎿	/ ᆂ Import/Ex	port <del>-</del>			Enter a name	or address Search
O Turog U370H1210563220W00033	-	Select All	Status	ID	Name -	Value	Port	Read Address	Edit	
OH-DOM F. V1500121110800130138950	<b>11</b> 8		•	1944504	H1000	0	COM1	4 4096	🕼 Edit 🕂 Mov	e 💼 Delete
Ø 12313 U321U1211014220W0001m			•	1943890	H2000	0	COM1	4 8192	🕼 Edit 🕂 Mov	e 🗎 Delete
<ul> <li>⊘ ig</li> <li>U320H1210816220W00024F</li> </ul>		« 1 » N		age Pernage 1		at 2 Items				
Ø H-00	白			age i el page li	/000	it a romo				
Ø S00	, d									
+ = = *	< C ÷									

Figure 2-26

Select the ig screen , it would automatically jump to the functional module interface. There are

four modules, including **Remote monitoring**, **Data view**, **Pass-through**, **and Basic**. As shown in the following figure.





Figure 2-27

#### (1) Group right-click menu

Position the mouse on the multi-grade group name, right-click the mouse to display a drop-down menu bar, including map, add, and rename functions. As shown in the following figure.

Device		Template			
	rch	٩			
Custo	m Tags				
🗅 defa	@ Map				
	+ Add				
	Name change				

Figure 2-28

- 1) Map. It displays the location of all V-BOXs or ig screens under this group on the map.
- 2) Add. Add a new V-BOX or ig screen to this group.
- 3) Name change. Change the group name

#### (2) Device right-click menu

Position the mouse on the name of a V-BOX or ig screen under a multi-grade group name, right-click the mouse to display a drop-down menu bar, including Follow, Share Device, Move Group, Copy Access Key, Transfer, Replace, Pass-through, Cloud SCADA, Share configure, Export, Import, Mark on the map, Generate template. As shown in the following figure.





★ Follow
< Share Device
🕂 Move Group
Copy Access Key
Imansfer
≓ Replace
Pass-through
2 Cloud SCADA
Share configuration
≛ Export
📥 Import
Mark on map
Generate template
Figure 2- 29

#### 2) ig screen

★ Follow
Share Device
🕂 Move Group
🗈 Copy Access Key
I Transfer
Dass-through
S Mark on map



#### 1 Follow

Select the device in the list and right-click, then click **[follow]** to add the devices you need to focus on to the follow list, and the followed V-BOX or ig screen could be viewed in the "My Follow" list, right-click and select cancel follow to delete it. As shown in the following figure.





Figure 2-31

#### 2 Share device

Share the V-BOX or ig screen device with permission (read and write) to other accounts. After sharing, the device is still in its own device list, and other accounts could view it without receiving it. Select the device in the list and right-click, then click [share device] in the menu bar to share the device. After sharing successfully, view the details in the "My Shares" list. As shown in the following figure.



Figure 2-32



**Note:** If select [Allow tags to write values], other accounts would has the permission to write values to the monitoring point of V-BOX or ig screen. If not, the value in the data monitoring interface would be gray and could not be changed. As shown in the following figure.

Share Device		×
Device Name	H-WF	
Access Key	V14	
Share to	C Account	After Sale
	Please verify the account information	
	User Name:	
	Phone:	
	Email:	
	Company Name:	
Allow tags to write values	(The monitoring point itself has the permis values, this option setting is valid)	sion to write
		Cancel Share

Figure 2-33

#### 3 Move group

Select the device in the list and right-click, then click [Move group] to modify the group to which the V-BOX or ig screen belongs. As shown in the following figure.



Figure 2-34



Toggle [Heating system] g	roup	×
Group	Default group	•
		ancel OK
Excha		25

Figure 2-35

#### (4) Copy Access Key

Select the device in the list and right-click, then click [Copy Access Key] to copy the access key of the V-BOX or ig screen to the clipboard. As shown in the following figure.

Device	Template	<
	٩	o
Custom Tags		Real-time Data
🕞 default group	(0/6) ~	Default g
Ø H-WF	Ċ,	
	★ Follow	
0	d Ohana Davi	
	Snare Devi	ce
Ø 12313	🕂 Move Grou	p
		cc Kou
Ø ig	E Copy Acce	SS NEY
	M S Transfer	
Ø H-00		
Ø \$00	Pass-throu	igh
VESTERNAR BEES	Cloud SCA	DA
+ = 🖕 1	k ≪ C ≑	1

Figure 2-36

Default group	0	Group Se.		3 Setting
+ New Tag		Ouick Actio	- n	Entera
Construction of the local division of the lo		Guichraut	Contraction of the local	Enter e
Access ke Select All S	y copi tatus	ed to clipbo	ard ! Name •	Value

Figure 2-37



#### 5 Transfer

Transfer the V-BOX or ig screen from one account to another. the V-BOX or ig screen would not change any information except for the user. The transfer would be successful after the account received the device, and the device would no longer be in your own account.

**Remove device.** When removing the V-BOX or ig screen, you need to fill in the information of the transferred user and the password of the V-BOX or ig screen. The account information would appear if you fill in it correctly, and confirm that the information to transfer it. As shown in the following figure.

Transfer Device	2	ŝ
Device Name	H-WF	
Access Key	V140 53d	
password		
Transfer to		
	Please verify the account information User Name: Phone: Email: Company Name:	
	Cancel	

Figure 2-38

**Receive device.** When receiving the V-BOX or ig screen, it needs to reset the name of the device and select the group.

#### 6 Replace

Select the device in the list and right-click, then click [Replace], and the old V-BOX (same model) would be replaced with a new one in this account. The new one could not be bound to any account during the replacement process. As shown in the following figure.





Figure 2-39

Replace Device		×
Device Name	H-WF	
Original S/N	\53d	
Access Key	Access Key	
password	Password	
	Cancel	Donlaco
	Cancel	керасе

#### Figure 2-40

#### 7 Pass-through

Select the device in the list and right-click, then select Pass-through to jump to the Pass-through interface. As shown in the following figure.





Figure 2-41

Device	Template	Home   Localization   Email   U	sers & Groups   Fe	eedback   Role   🔅			🕲 Service 👻 🙏	0 .
Search	٩	٥	A	[dil]	<b>8</b>		۵.	0
Custom Tags		Real-time Data	Alarm	Historical Data	Cloud SCADA	Lua Script	Pass-through	Configuration
🕞 default group (0	//6) ~					Stone		
O H-WF	Ľ,	Status	Offline			Pass-through proc	ess.	
0		Edit	New 2		~	Add or select the of	onfiguration for pass-through	1
Ø 12313		Name	2			Start pass-through     Virtual port conner	ted from PLC software	
U321U1211014220W0001fb		Port	COM1			Virtual port discon	nected from PLC software	
U320H1210316220W00024N						Stop		
O H-00 V1100120110400318abdb91	Ë	Virtual Port						
Ø S00	ä	Port	RS422		~			
		Baud Rate	9600		~			
		Stop Bit	1					
		5						
		Data Bit	7		~			
		Parity	EVEN		~			
			Update	Delete				
+ = 🖕 \star	s 2 ÷							

Figure 2-42

#### 8 Cloud SCADA

Select the device in the list and right-click, then click [Cloud SCADA] to jump to the Cloud SCADA interface. As shown in the following figure.









#### Figure 2-44

#### **9** Share configuration

Share the configure of V-BOX by the share code, and the validity period of the share code should be set. Select the device in the list and right-click, then click [Share configure] to share the share code of the V-BOX. Copy the share code, jump to the [configure] interface, and click the [sharing code



#### import] to import the share code. As shown in the following figures.

Sharing Code (Expired)	157	С	G
Validity period of sharing code	2021-07-08 23:17:18		HO

Figure 2-45

Contract Real-time Data	1	Alarm	Lill Historical Data	Cloud SCADA	>Lua Script	Constant Pass-through	🔅 Configuration
Basic Co	Sharing	code import configurati	on		×	n	
Devid	√alidity	Sharing Cod	e 1559				
Acc		Configu	ure the owning Device:	H-00 Model: V-BOX H-00			
Industr					Cancel Import		
Max. alarm	records	10000					
L	ocation	longitude longitud	latitude latitude	♥ Edit			
т	argeting	Use Device base	station positioning	~			
	Remark						
Ad	ivanced	Unlink Device	Restart Force sy	nc Save Copy C	onfiguration	Sharing Code ipmort	Export

Figure 2-46

#### **10** Export

Select the device in the list and right-click, then click [Export] to export the configure of the device.

#### (1) Import

Select the device in the list and right-click, then click [Import] to import the configuration for the device.

#### 12 Mark on map

Select the device in the list and right-click, then click [Mark on map] to mark the new latitude and longitude on the map for the current V-BOX or ig screen.



#### **13** Generate template

Select the device in the list and right-click, then click [Generate template] to generate a new template from the device configuration. The generated template is in the template list.

#### 2.6.2 Device search

Enter the device name or the machine code in the search box, and it would automatically match to find the device. As shown in the following figure.



Figure 2-47

#### 2.6.3 Custom tags

Click [Custom tags], it would pop up the interface, including Real-time Data, Alarm, Historical Data. User could customize a certain monitoring point under the designated V-BOX to the data monitoring interface, and view all alarm records and historical data. As shown in the following figure.

Device	Template	K Home   Localization   Email   I	Jsers & Groups   Feedbac	k   Role   🔅			Serve	vice • 🗘 🚺	•
Search	٩	٥			A			<u>lad</u>	
Custom Tags		Real-time	Data		Alarm			Historical Data	
🗅 default group (	0/4) <	Default group Group Se							
		No template 🗸 🗷 Ass	gn monitoring point						
		Status ID	Name 👻	Device	Value	Port	Read Address		Edit

Figure 2-48

#### 2.6.4 Toolbar

The toolbar at the bottom of the module is mainly a collection of buttons for operating on the V-BOX or ig screen and device list. As shown in the following figure.



Figure 2-49

(1) Add device

Add new V-BOX or ig screen.

(2) Device list



Display the multi-grade device list of all the V-BOXs and ig screen.

#### (3) Group management

Administrators could manage V-BOX and ig screen groups.

Custom Tags		+ Add Group				
default group (2/2)	<b>6</b> <					
1 (7/7)	<b>↔</b> <	Group Name	Group ID	Parent ID	Time Created	Edit
(4/4)	<b>⊕</b> <	O Default group	6863	0	2019-02-26 22:09:31	c i
(8/8)	<b>⇔</b> <	OTTO	7661	0	2019-03-26 14:55:36	c ñ
(1/1)	<b>6</b> <		7662	0	2019-03-26 14:55:51	c î
(3/3)	<b>↔</b> <		7663	0	2019-03-26 14:56:02	c i
			66055	0	2020-11-10 16:02:35	<b>c i</b>
		○著	66057	0	2020-11-10 16:03:47	c î

#### Figure 2-50

**1)** Add group. When adding a group, the group name should be entered. As shown in the following figure.

.dd Group	,
Step 1: select parent directory	
Note: root directory is elected when you add only one directory. Curr	ently only three
levels of directories are supported	
Root	
└──Default group	
<b>0</b> - <b>1</b>	
The parent directory you selected is: Root directory	
Step 2: fill in the group name	
Please enter the name of new group	
	Cancel OK

Figure 2-51



2) Edit group. When editing a group, the new group name should be entered. As shown in the following figures.

Home > Group					
+ Add Group					
Group Name	Group ID	Parent ID	Time Created	Edit	
<ul> <li>Default group</li> </ul>	6863	0	2019-02-26 22:09:31	Ø	Î
				_	-

Figure 2-52

it Grou	ip
Step	1: select parent directory
Note: levels	root directory is elected when you add only one directory. Currently only three of directories are supported
R	pot
(	Default group
(	
(	
(	
(	
(	
Т	he parent directory you selected is: Root directory
Step	2: fill in the group name
Defa	ault group



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**3) Delete group.** When deleting a group, if there are devices under the selected group, the group could not be deleted. To ensure operational reliability and data security, a dialog box would pop up to confirm whether the operation continues. As shown in the following figure.

+ Add Group	_	
	Time Created	Edit
	19-02-26 22:09:31	c î
	19-03-26 14:55:36	Ø 🗊
Are you sure to delete this group?	19-03-26 14:55:51	c î
Canad	19-03-26 14:56:02	c î
Cancel	20-11-10 16:02:35	c î

Figure 2-54

#### (4) My follow

It is the list of V-BOXs or ig screens followed by the account. As shown in the following figure.



Figure 2-55



(5) Share list

The share list is divided into share with others and my share.

#### 1) Share with others

It is the list of V-BOXs or ig screens shared by other accounts. All the data in the V-BOX or ig screen could be viewed, but the configuration could not be modified. Only the sharer could cancel the sharing of the V-BOX or ig screen, and the shareee could not cancel the sharing. Right-click the name of the device could view the sharer. As shown in the following figure.



Figure 2-56

#### 2) My share

It is the list of V-BOXs or ig screens shared by the account. Right-click the name of the device could view the details of the sharee, and modify the configuration. As shown in the following figure.



Figure 2-57



Details	-			×
Batch Cance Select All	Account	Tag write value	Date	Cancel
			2021-02-22 17:05	â
			2021-02-22 17:05	Ê
				Close

Figure 2-58

#### Note:

1 After the account cancels the sharing, the V-BOX or ig screen would be removed from the sharing list of both accounts.

2 When the main account is unbound or handed over to the V-BOX or ig screen, the shared information of the V-BOX or ig screen would be automatically canceled.

③ When the permission of the engineer account is modified or the assigned V-BOX or ig screen changes, the shared V-BOX or ig screen would change synchronously.

#### (6) Refresh list

Refresh the list of V-BOX or ig screen.

(7) Device multi-condition order

The V-BOX or ig screen is sorted according to different status. The filter conditions include display order and other order. Click the restore button in the upper right corner to re-select the filter order conditions.


×

louise pault condition order	a una	manulti a	andition	a and an

Display order ( Condition display )	ŕ		Undo
1.Device type			
All	V-BOX	Онмі	
2.Device status			
🕑 All	Online	Offline	Other
3.Device association			
🕑 All	Associated tem	No associated t	
Other order ( Selected first )			
1.Device name			
🕑 All	Contain CN	Contain EN	Contain NUM
Keyword Keyword			
2.Device type			
🕑 All	○ V-BOX	Онм	
3.Device status			
🕑 All	Online	Offline	Other
4.Device association			
IIA 😒	Associated tem	No associated t	

Figure 2-59

- **1) Display order** (Condition display) includes device type, device status, and device association. Filter all V-BOX or ig screen lists according to the selected conditions.
- 2) Other order (Selected first) include device name, device type, device status, and device association. Sort all the V-BOXs or ig screens in the list according to the selected order condition.

# **Chapter 3 V-BOX configuration on PC**

## **3.1 V-NET PC software introduction**

When using the V-BOX for the first time, users should first configure the parameters. Users could download the V-NET PC software from the official website of Wecon

(https://www.we-con.com.cn/en/). Open the V-NET PC configuration software, as shown in the following figure.

V-NET Access	₽±@? - •×
	Login
	Q User Name
	Password
	Remember password Forgot Password?
	Sign in
	No account? Apply for registration



The upper right corner is the jump to the configuration page. The details of the configuration interface are as follows:

(1) Device monitoring. Display the monitoring screen or login interface of the main interface, and the login interface of V-NET PC, as shown in the figure above.

(2) Configuration download. To configure the device network, V-BOX access password, V-BOX screen access mode, V-BOX machine code acquisition, the update device time, etc., as shown in the the following figure:



V-NET Access				≞∓⊚;	- <b>• ×</b>
		Dark color	Light color	Operation guide	
PC connect box with	Operation remain			clear	
<ul> <li>○ USB:Download</li></ul>	Please connect gateway to pc with USB cable or local network Please connect gateway to pc with USB cable or local network Refresh box list success Please connect gateway to pc with USB cable or local network Detected V-BOX S-NG V040011 add12a				
192.168.39.253					
192.168 53 () Network configuration 또 Network testing			·		
Dupdate firmware					
Update time					
- Blink					
Get machine code	I				

Figure 3-2

(3) Settings. Users could disable and enable the virtual serial port, and change the COM port used for penetration.

**Note:** If a PLC or other software is connecting to the original COM port when changing, it would be disconnected. As shown in the following figure.

Virtual serial setting	
Using virtual serial	Disable
Set using COM	
COM2(using)	Set
Disable virtual serial service before closing s	oftware
Browser	
Recommended Use Google Chrome	Browse
Chrome(using)	Set
Server	
ASEAN(using)	Set
НМІ	
D. I. D. I.F. II. I	Set

Figure 3-3



(4) About: Display the company information of the software and software version, As shown in the following figure.

	E X
V-NET Configuration Tool Wecon Technology Co.,Ltd. @all rights reserved	
21-06-17 V2.2.94	*
)	V-NET Configuration Tool Wecon Technology Co.,Ltd. @all rights reserved

Figure 3-4

## **3.2 Configure V-BOX**

**The way to connect to the PC configuration tool** is to use an android download cable or LAN network cable search to connect the V-BOX to the PC software. When the PC software recognizes the V-BOX, it would be displayed in the list. As shown below.: "Detected V-BOX S-NG".

V-NET ACCESS			ARØ5 - 6
PCili	Operation	Dark color Light color	Operation guide
2C connect box with	remain		titu
<ul> <li>○ USB:Download</li></ul>	Please connect gateway to pc with USB cable or local network Please connect gateway to pc with USB cable or local network Refresh box list success Please connect gateway to pc with USB cable or local network Detected V-BOX S-NG V0400110 - u-204125		
192.168.39.253	VOTOTI I TIZZUIZA		
192.168.3 53			
品 Network testing			
Dupdate firmware	1		
Update time	1		
-ò: Blink			
Get machine code			



## 3.3 V-BOX password

For the V-BOX device, there is an access password, the default is 8888888. Users could change the password as they want.

**Operating procedures of changing access password.** 

V-NET Access				Ģ	∃∓© ?	
			Dark color	Light color OI	peration guid	e
PC connect box with	Cloud setting Operation remain					
O USB:Download 💿 LAN				Server A	EAN Y	1
box IP address				Sava		
Enable Network scanning	Enable Ethernet					
192.168.39.253 G	DHCP O Static IP address					
192.168.39.253	IP address Enter IP address	Subnet mask	Enter subnet mask			
	Default gateway Enter gateway	Preferred DNS s	Enter DNS server			
	Alternate DNS s Enter DNS server	LAN IP	Enter LAN IP1			
(3) Network configuration	Enable WIFI					
물 Network testing	Enable 4G					
(f) Update firmware						
Undate time	1 box access password	S)				
C Optime and	box connect service with  ( ) Ethernet					
-¦¢- Blink	Cancel Upload confid	uration Download configu	ration			
Get machine code						

Figure 3-6

## 3.4 Network settings

V-BOX connection settings, that is, V-BOX access mode configuration, to configure the mode in which V-BOX would connect to the server for data. There are three server configurations, including China server, Asean server, and Europe server. Please use a suitable server to ensure the stability of the network. There are three connection modes, including Ethernet mode, WIFI mode, and 4G mode.

**Note:** 4G mode is only available in V-BOX that supports 4G function. Each country's 4G frequency band and system are different. When purchasing a V-BOX containing 4G function, please maintain sufficient communication with the salesman. For example, V-BOX H-AG(Global 4G module ).

### 3.3.1 Connect to the cloud automatically

When V-BOX is not configured to connect to the cloud, V-BOX would first automatically retrieve whether there is a connection mode activated. If the network access is retrieved, it would automatically use the method to connect to the cloud. The priority of the connection to the cloud: **Ethernet> WiFi>4G**, the default WiFi account is testwifi, and the password is testwifi. The specific instructions are as follows:

(1) If there is only one way to connect to the Internet, the system would automatically select it

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to connect to the cloud. For example, if there is a network cable plugged in the Ethernet port, the connection to the cloud of the system defaults to Ethernet. If WiFi signal access is retrieved, the connection to the cloud of the system defaults to WIFI. If an existing 4G card is inserted, the connection to the cloud of the system defaults to 4G.

- (2) If the Ethernet port and WiFi are connected at the same time, the connection to the cloud of the system defaults to Ethernet.
- (3) If the Ethernet port and 4G are connected at the same time, the connection to the cloud of the system defaults to Ethernet.
- (4) If WiFi and 4G are connected at the same time, the connection to the cloud of the system defaults to WIFI. If the WiFi signal couldnot be retrieved, it would automatically switch to the 4G connection mode.
- (5) If all the three connection modes are retrieved, the connection to the cloud of the system defaults to Ethernet. If the Ethernet couldnot be connected to the Internet, it would automatically retrieve the WiFi signal. If the WiFi model couldnot be connected normally, it would automatically retrieve the 4G signal.

### 3.3.2 Connection mode setting

(1) Ethernet mode. There are two modes of dynamic IP address and static IP address. When using static IP address mode, complete IP information should be configured, and it should not conflict with other IPs.

#### Operating procedures of Ethernet settings are as below.

- (1) Connect Ethernet cable to V-BOX.
- 2 Check "Enable Ethernet".
- ③ Select modes, "Use a dynamic IP address" or "Use a static IP address".
- (4) If select "Use a static IP address", please enter IP address, subnet mask, default gateway,

preferred DNS server and Alternate DNS server.

5 Select "Ethernet" in Server connection.

-NET Access		<b>☆</b> ₹©
connect box with	Cloud setting Operation remain	Dark color Light color Operation g
SB:Download () LAN		Server ASEAN
P address		
nable Network scanning	Enable Ethernet	
192,168,39,253	IP address Enter IP address	Subnet mask Enter subnet mask
	Default gateway Enter gateway	Preferred DNS s Enter DNS server
	Alternate DNS s Enter DNS server	LAN IP Enter LAN IP1
Network configuration	Enable WIFI	
h Network testing	Enable 4G	
Update firmware		
) Update time	box access password box connect service with	Þ
X- Blink	Cancel Unload configu	uration Download configuration
	ouncer opious comiga	

Figure 3-7



(2) WIFI mode. Configure the WIFI account and password first, after powering on the V-BOX, it would automatically match the WIFI information and connect to the network.

#### **Operating procedure of WIFI settings**

- 1 Check "Enable WIFI".
- 2 Enter WIFI name.
- 3 Enter WIFI password.
- (4) Select "WIFI" in Server connection.

V-NET Access	₽₹⊜.5
°C connect box with	Cloud setting Operation remain
) USB-Download	Server ASEAN
192 168 39 253	IP address     Enter IP address     Subnet mask     Enter subnet mask       Default gateway     Enter gateway     Preferred DNS s     Enter DNS server       Alternate DNS s     Enter DNS server     LAN IP     Enter LAN IP1
(3) Network configuration	Enable WIFI WIFI name Enter WIFI name     Image: The Definition of the term of term o
R Network testing	Enable 4G
Update time	box access password 40
-¢- Blink	box connect service with   Ethernet  WIFI
Get machine code	Cancel Upload configuration Download configuration

Figure 3-8

(3) 4G mode. Use 4G card to connect the network. Please consult the mobile client for the data traffic cost consumed during use.

#### **Operating procedure of 4G settings**

- 1 Install 4G SIM card in V-BOX.
- 2 Check "Enable 4G".
- 3 Select "4G" in Server connection.



V-NET Access					₽₹@ 5 🖻
C connect has with	Cloud setting Operatio	n		Dark color Light colo	r Operation guide
) USB:Download				ş	Server ASEAN •
ox IP address ] Enable Network scanning	Enable Ethernet     DHCP     O	itatic IP address			
92.168.39.253	IP address	Enter IP address	Subnet mask	Enter subnet mask	
192.168.39.253	Default gateway	Enter gateway	Preferred DNS s	Enter DNS server	
	Alternate DNS s	Enter DNS server	LAN IP	Enter LAN IP1	
8	Enable WIFI WIFI	Enter WIFI name	V 🖺 🏛 WIFI	password Enter WIFI passw	vord 🛷
A Network testing	DHCP O S	static IP address			
Update firmware	Enable 4G		ß		
Update time	box access password		Ø		
-¢: Blink	box connect service with	Ethernet O WIFI			
		Cancel Unload confi	nuration Download configu	ration	

Figure 3-9

# 3.5 Update time

Click [Update time] to synchronize the time on the PC side to the V-BOX.

📥 V-N	ET Access				⊕±©? -□×
				Dark color Light color	Operation guide
PC conne	ect box with	1	Operation remain		clear
O USB 1 box IP ad	Download		Please connect gateway to pc with USB cable or local network Please connect gateway to pc with USB cable or local network Refresh box list success Please connect gateway to pc with USB cable or local network Detected V-BOX S-NG V04001/ ia2d12a		
192.168	39 253	G			
19	2.168 53				
		۳			
\$	Network configuration				
呙	Network testing				
۲	Update firmware				
Ø	Update time				
÷.	Blink				
	Get machine code				

Figure 3-10



## 3.6 Blink

Click [Blink], and the indicator light of the V-BOX flashes for 5 to10 seconds.

V-NET Access				≞∓©; -
		Dark color	Light color	Operation guide
C connect box with	Operation remain			clear
) USB:Download () LAN ox IP address Enable Network scanning	Please connect gateway to pc with USB cable or local network Please connect gateway to pc with USB cable or local network Refresh box list success Please connect gateway to pc with USB cable or local network Detected V-BOX S-NG V04001122417a			
192.168.39.253	G			
192.168.3 53				
ঠ্টি Network configuration				
译 Network testing				
Dupdate firmware				
(I) Undate time				
ej opuare unic				
-☆ Blink				

Figure 3-11

## 3.7 Get V-BOX ID

Every V-BOX has its own unique machine code. Only when the machine code is acquired could it be bound and monitored. The machine code could be seen in the back of V-BOX or could be required through V-NET PC software.

V-NET Ac	cess			-	₽±@? ED
			Dark color	Light color	Operation guide
PC connect box wit	h	Operation remain			clear
○ USB:Download box IP address ✓ Enable Network	LAN scanning	Please connect gateway to pc with USB cable or local network Please connect gateway to pc with USB cable or local network Refresh box list success Please connect gateway to pc with USB cable or local network Detected V-BOX S-NG V040011 <sup></sup>			
192.168.39.253		Q			
192.168	53 configuration				
LP trease	AR County				
Update	e firmware				
e) Upd	ate time				
-¢; E	Blink				
Get ma	chine code				

# **Chapter 4 V-BOX access configuration**

## 4.1 Basic configurations

### 4.1.1 Add a V-BOX

When logging in to the V-NET for the first time, the user needs to add the V-BOX or ig screen and bind it with the account. The account bound to the V-BOX or ig screen is called the "administrator account". A device could only be bound to one account, that is, the administrator account is unique.

When binding the V-BOX or ig screen, the user needs to know the machine code and password of the device, and enter the device name and set group. All the devices added by the administrator would be placed in the "default group" by default. If the administrator has created a device group, the added devices could also be placed in other groups.

Device Temp	Add Device		×	□ Q 13459491945 ▼
Search Custom Tags	Q Access Key	2 Access Key	0	Number of upgradeable > 0/4 Upgradeable/Total
default group (0:4)     O INitig     O 12313		Ipmort Template		N Server V-NET Limite on
	Password Remark	Password Remark	0	RTANT NOTICEDear V-BOX Thanks for using WECON (Please notice
G 309 Ministration and a	Group	3 Default group		alej sola Hano over the e regim 2021-05-13-21-09-09
	Industry	Smart home		O Value Trigger
		c	ancel OK	On Trigger
	intig ne			

Figure 4-1

- (1) Access key(machine code). Each V-BOX or ig screen has a unique machine code.
- (2) If multiple V-BOXs or ig screens are bound at the same time, export the template to fill in the machine codes, and then import the form to bind.
  - **1) Template.** An export template file is an excel form named "batch\_mould" with the format to input machine codes.



Device	Add Device	Ronina -	English - X	O weconuser -
Search				Number of upgrade:
C Share with others A	Access Key	Access Key	Θ	22/25
🖬 My Share 🔨		2		
● 水处理系统 V01001171116005		Ipmort Template		
<ul> <li>中央空调 Vir0011711160050</li> </ul>	Password	Password		
● 供證系統 Vir0011711160050	Remark	Remark	0	
<ul> <li>智能农场(Smart fa Vir0011711160050</li> </ul>	Group	Default group	¥	
换热系统(Exchang Vir0011711160050	Industry	Smart home	*	0
1	supply) 恒压供求( supply)	Water Start alarm Mine	Cancel OK	button is triggered!
	supply)			

#### Figure 4-2

2) Import. Fill in the machine codes to the template file, and import it.

**Note:** The content of the template file should only be header and machine codes, and all the other contents need to be deleted.

#### machineCode

注意:除了您自己填写的内容和表头把本条提示删除【Note: In addition to the content and header that you filled in, please delete this "note"】 **Delete** 

#### Figure 4-3

- (3) Password. The default password is 888888. The length of the device password is 6 digits, Special characters are allowed, and couldnot be empty.
- (4) Device alias. It is the device name in the device menu bar. The name display up to 12 digits. Special characters are restricted to input except ,·\_-+=}]", ...? 、; : """ 【 】 () ...! 《》, and couldnot be empty.

#### Note:

(1) If the user binds multiple devices at the same time, the passwords of the devices should be consistent. Only one machine code could be entered on a line. When entering multiple machine codes, use the "Enter" key to change the line. If not, the format is wrong, and the binding would fail and an error would be reported.



(2) If the user binds multiple machine codes in batches, the device alias would use the input device name as the prefix, and the system would automatically add a suffix. Example: Default group (device alias)\_1 (automatically added suffix).

### 4.1.2 Basic information

After adding a V-BOX or ig screen, click the device list on the left to select V-BOX or ig screen, and it would automatically jump to the device detail interface with seven subpages. The subpages include **Real-time Data, Alarm, Historical data, Cloud SCADA, Pass-through, and Configuration**. Users could modify the information with valid data, and click the "save" button to finish the modification successfully. As shown in the following figure.

me   Account Setting   Email	News   Account mana	agement   Feedback   Role   🔅			Service • Head English •	0
Real-time Data	Alarm	Lill Historical Data	Cloud SCADA	≽<br Lua Script	A Pass-through	Configuration
sic Communication	Network	Status Push Tags Usage	Registers Information	Version 🛆		
Device Name	Air Heat Source S	tation	3			
Status	Online  🕫 Refres	'n				
Access Key	Vir00117111600502	7a27201914				
Model	V-BOX S-00					
Industry Sector	Smart home		~			
Max. alarm records	10000					
Location	longitude -109.21	1! latitude 37.90262	<b>♀</b> Edit			
Targeting	Use Device base	station positioning	~			
Remark						
Advanced	Unlink Device	Restart Force sync	Save Copy Configuratio	on Import Sharing	Code ipmort Export	

Figure 4-4

### (1) Unbind the device

The administrator could click "Unlink device" to unbind the V-BOX or ig screen on the "Basic Information" sub-page under the "Basic Configuration" page. If the configuration of the communication port and monitoring point corresponding to the device is not deleted after unbinding, then the next time the device is added, the data is still exist and automatically transferred to the device. As shown in the following figure.



Home   Account Setting   Email	News   Account man	agement   Feedback   Role   🏾 🏚			Service - English	• Q •
Real-time Data	Alarm	Historical Data	Cloud SCADA	>Lua Script	Co Pass-through	Configuration
sic Communication	Network	Status Push Tags Usage	Registers Information	Version 🕰		
Device Name	Air Heat Source S	Station				
Status	Online CRefres	h				
Access Key	Vir00117111600502	7a27201914				
Model	V-BOX S-00					
Industry Sector	Smart home		~			
Max. alarm records	10000					
Location	longitude -109.2	11! latitude 37.90262	<b>♀</b> Edit			
Targeting	Use Device base	station positioning	~			
Remark		•				
Advanced	Unlink Device	Restart Force sync	Save Copy Configuration	Import Sharing Co	ode ipmort Export	

Figure 4-5

### (2) Copy configuration

Copy configuration is to copy the device configuration from one V-BOX to another V-BOX. If the configurations of multiple devices are the same or alike, the user could configure the information of one V-BOX first, and copy the configuration to another V-BOX through the [Copy Configuration] function. The configuration could only be copied if there is a V-BOX of the same model in the account. As shown in the following figure.

Home   Account Setting   Em	ail   News   Account managemen	Feedback   Role   🔅			Service • English	•    Q weconuser
Real-time Data	Alarm	LIII Historical Data	Cloud SCADA	>Lua Script	Ass-through	Configuration
Basic Communicatio	n Network Status F	Copy Configuration	× nation	Version 🕰		
Device Name	Air Heat Source Station	Choose data configur Device	ation to target			
Status	Online CRefresh	Treatment System	ns 🗸			
Access Key	Vir001171116005027a27201	Commu	unication			
Model	V-BOX S-00	Real-Ti	me Data			
Industry Sector	Smart home	Historio	arm cal Data			
Max. alarm records	10000					
Location	longitude -109.211		Cancel OK			
Targeting	Use Device base station p	oositioning	~			
Remark						
Advanced	Unlink Device Rest	art Force.sync	Save Copy Configuration	Import Sharing C	ode ipmort Export	

Figure 4-6



If the configuration is copied successfully, the following figure would be prompted.

Prompt	×
In copying alarm configurations. Success In copying COM port. Success In copying realtime configurations. Success In copying historical configurations. Success	
	Ok

Figure 4-7

**Note:** Only when the configuration information of the "Water Treatment System" of the V-BOX is empty could the configuration information be copied successfully. If other parameters are configured in the "water treatment system" of V-BOX, and a copy failure message would be prompted as below.

	Prompt	2
In copying COM port.	Communication port configuration already exists, Copying failed!	
		~



### 4.1.3 Communication port configuration

Users could add, modify and delete communication configuration in "Configuration", but only the administrator account has permissions to operate this function.

Home   Account Setting   Em	ail   News   Account m	anagement <sub>i</sub> Feedbac	ck   Role   🔅			Service • English •	- Q Q
Real-time Data	Alarm	Historic	<mark>lıl</mark> cal Data	Cloud SCADA	>Lua Script	🔕 Pass-through	🔅 Configuration 🍙
Basic Communicatio	n Network	Status Push	Tags Usage	Registers Information	Version 🛆	26	
se cor gure equipment co	onnected with Device	e (such as: PLC bran	nd and model, da	ata acquisition module, PID o	control table or MODBUS s	standard protocol, etc.)	
ID	Port	Port ID		Port	Prot	tocol	Edit
1 (	COM1	18097		RS422	WECO	N LX1S	2 1

Figure 4-9



### (1) Add communication port configuration

Click the Add button to configure the communication port. If the configurations are configured successfully, the system would synchronize the configuration information and drive files to the V-BOX. The operating procedure is as the figure below.

Real-time Data	Alarm	Lill Historical Data	Cloud SCADA	>Lua Script	Pass	CS s-through	Configuration
sic Communication	Network Stat	us Push Tags Usage	Registers Information	Version 🕰			
e configure equipment co	New Port					×	
dd 3	Port	COM1 *	Device Type	Allen-Bradley	•		
ID F	Protocol	Allen-Bradley DF1 *	Device Station No.	0			Edit
1 0	Device Station No.	1	Retry Count	2			6 8
			Wait Timeout	300	ms		
	Receive Timeout	50	ms Integration interval	0			
	Length	0	Delay Time	0	ms	_	
	Retry Timeout	0	ms Baud Rate	19200	~	_	
			Port	RS232	~	_	
	Stop Bit	1 ~	Data Bit	8	~	_	
	Parity	NONE 🗸					

Figure 4-10

#### (2) Modify communication port configuration

The administrator could click the button is not to modify the data of the V-BOX except for the machine code. If the drive file changes, the monitoring point and data of the communication port would be deleted synchronously. The operating procedure is as the figure below.

Real-time Data		Historical Data	Cloud SC	ADA	>Lua Script	Pas	Constant Sector	Configuration
asic Communication N Ed	t Port						_4	×
se configure equipment connected	Port	COM1	*	Device Type	WECON	٣	T	
Add	Protocol	WECON LX1S	¥	Device Station No.	0			
ID Port	Device Station No.	0		Retry Count	2			<b>E</b> 3
1 COM1	Sution No.			Wait Timeout	300		ms	
	Receive Timeout	50	ms	Integration interval	0			
	Length	0		Delay Time	0		ms	
	Retry Timeout	0	ms	Baud Rate	9600	~		
				Port	R\$422	~		
	Stop Bit	1	~	Data Bit	7	~		
	Parity	EVEN	~					
	L							5

Figure 4-11



### (3) Delete communication port configuration

Click the button it to delete the communication port configuration, the monitoring point data associated with the communication port configuration under the V-BOX would also be deleted, and a dialog box would pop up to confirm whether the operation continues. The operating procedure is as the figure below.



Figure 4-12

### 4.1.4 Network configuration

Users could view the network configuration of V-BOX and update and change it. As shown below

Home   Role   😡				🕲 Service 👻 🚦	English 👻 🗋	0
Ceal-time Data	Alarm	Historical Data	Cloud SCADA	>Lua Script	A Pass-through	Configuration
Basic Comr	nunication	Network Statu	s Push Tags Usa	ge Register	s Information	Version 🙆
Enable Ether	Ret ID					
Enable Wi-Fi	Staul IP					
SSID SSIE	)	Password W	i-Fi password 🛛 🛷			
	Statia ID					
ОНСР	Static IP					
DHCP     Device Access Pa	assword Max	. 32 characters allowe	ed 🕪	-		

Figure 4-13



### 4.1.5 Status push(Email)

Status push is to push the data set by the V-BOX to the mailbox. As shown below.

Device	Template	K Home   Account Setting	Email   Account manage	ement   Feedback   Rol	ei 🗘		ال 🗢 Service 🗸	0 5
Search	٩	٥	A	htt	2		۵	*
Custom Tags		Real-time Data	Alarm	Historical Data	Cloud SCADA	Lua Script	Pass-through	Configuration
🕒 default group (1/3	5) 🔷 🗸	Basic Communic	ation Network	Status Push	Tags Usage Registers	Information Version	n	
O 1212 V0A0012005120065e3056607	۵ <b>۵</b>	Online/Offline Sta	tus					
Ø 123 U370H0211006620W001017								
Chenzi		WeChat Push (Not a	vailable)					
Ø H-00	ä	Email Notification	3					
• H-AG V13001201109003908395#5								

Figure 4-14

- (1) Email notification. Set the email push information in Service--Email.
  - **1)** Add recipient. Add the recipient name, email address, and enable the email permission. As shown below.

& Recipient	SMTP Settings	C Role	
		B Cloud SCADA	
All Y	Q Search	Email	+ New
Name	Fmail	O Help	Edit
(IIII)e		P Feedback	17 P
e		★ HTTP access	
	Alou	Request to share	6
, in the second s	New	OFF	6 1
<b>b</b> '	Recipient	OFF	6 1
		OFF	6
	Please enter email		



2) Sender settings. Here we recommend Gmail. The setting procedure is as the following figures.



### Wecon V-NET Web User Manual (V3.1)

Gmail	Q Search m	ail	ŦĚ	© \$
Settings				
General Labels Inb	box Accounts and	mport Filters and Blocked Addresses Forwarding and	POP/IMAP Add-ons Chat and Meet Advanced Offi	ine Themes
Learn more		Enable POP for all mail     Enable POP for mail that arrives from now on		
		2. When messages are accessed with POP keep Gmail's co	py in the Inbox 👻	
		3. Configure your email client (e.g. Outlook, Eudora, Netsca Configuration instructions	pe Mail)	
MAP access: access Gmail from other o	r clients using IMAP)	Status: IMAP is disabled Enable IMAP Disable IMAP		
	-			
		When I mark a message in IMAP as deleted:	10	
		<ul> <li>Auto-Expunge on - Immediately update the server. (defau Auto-Expunge off - Wait for the client to update the server     </li> </ul>	it) r.	
		When a message is marked as deleted and expunged from	the last visible IMAP folder:	
		Archive the message (default)		
		Move the message to the Trash		
		Internetiately delete the message forever		
		Folder size limits		
		Do not limit the number of messages in an IMAP folder (	default)	
		Limit IMAP folders to contain no more than this many m	essages 1,000 🗸	
		Configure your email client (e.g. Outlook, Thunderbird, iPho	ne)	
		Configuration instructions	4	
		Save	Changes Cancel	

Figure 4-16

Google Account Q Se	arch Google Account	0 # 🚺
<b>A</b>	Find a lost device	
Home     Personal info	Manage devices	
Data & privacy		@gmail.com
Security	Less secure app access Your account is vulnerable because you allow apps and devices that	Manage your Google Account
People & sharing	use less secure sign-in technology to access your account. To keep your account secure, Google will automatically turn this setting OFF if	
Payments & subscriptions	it's not being used.	음t Add another account
(i) About	() On	Sign out
0	Turn off access (recommended)	
		Privacy Policy · Terms of Service

Figure 4-17

if Gmail still could not work during your test Gmail. Google account would receive V-BOX asking. Please check the below message, and allow V-BOX application to use Gmail.

Google Account	Q Search Google Account	© # <mark>0</mark>
Home     Home     Personal info	Security Settings and recommendations to help you keep your account secu	re
Data & privacy     Security     People & sharing	Critical security issues found Your account is at risk, secure it now	li i@gmail.com Manage your Google Account
Payments & subscription	ins 4	온* Add another account
(i) About	lake action	Sign out
	Recent security activity	Privacy Policy + Terms of Service

Figure 4-18



If SMTP still could not solve the problem, please check the link below.

https://support.google.com/mail/answer/7126229?visit\_id=637347010295058878-3054942826&r d=2#couldtsigni

#### 3) SMTP Settings.

Fill in the SMTP setting as the sender's information, check the SMTP setting and enter the email address to be verified, and a checking email would be sent to the email to remind the SMTP setting to succeed.

- (1) Sender: The name is arbitrary without requirements.
- (2) Email address: Fill in the sender's email address.
- (3) Password: Fill in the password of the sender's email.
- (4) SMTP: Fill in smtp.qq.com.
- 5 Port: If the secret key selects "No", fill in 25. If the secret key selects "SSL", fill in 465 or

587.

(6) The setting procedure is as the following figure.

P SMTP test	
Sender Jim Test email	
Email	- con.com.cn
Password SMTP cont	figured
SMTP smtp.gmail.com Check in the test mailbox The ve a test end	on.com.cnWould recei
Port 465	
From : Juit	

Figure 4-19

### 4) Sending settings.

- 1 Add: add a new configuration, and multiple configurations could be added.
- 2 Enable: Check to enable to use the e-mail push function, and fill in the configuration.



### Wecon V-NET Web User Manual (V3.1)

▲ Recipient SMTP Settings	Sending Settings
Configuration 1 🛞	Add
Enable 🗹	Email 🔮 Default 🔷 Custom
Trigger 🕑 Trigger 🔵 Intervals	mode
Conditic 🗮 Monitoring tags	Recipient Please add recipient Select
No Data	Template WECON V-NET system Q • Your device has a new alarm, please handle it in time Login V-net
Maximum tags 10 allowed	V-BOX Temperature monitoring system
	Alarm Name Fujian Province alarm of Area A
	Alarm Level Serious Alarm
	Alarm Content Fujian Province Area A temperature is too low
	Value 20
	Alarm Time 2019-03-05 10: 58
	Status reply directly
	This email is sent automatically by the system. Please do not

Figure 4-20

5) Trigger. There are two ways to send emails, including "Triggers" and "Intervals".

(1) **Trigger.** It needs to bind an alarm tag. When the alarm tag reaches the alarm condition, it would send an email.

Trigger	🕑 Trigger ု	Intervals	
Conditi	c 📃 Monitoring ta	igs	
	No Data		



(2) Intervals. Users could select "Once a day", "Once a week" and "Once a month".and the time.



Figure 4-22



### (2) Mode: There are modes.

1 **Default**. Default is the WECON template.

Template	14/ECD	N <sup>®</sup> WECON V-NET system	8
	Your device	has a new alarm, please handle it in time	Login V-net
	V-BOX	Temperature monitoring system	
	Alarm Name	Fujian Province alarm of Area A	
	Alarm Level		
	Alarm Content		
	Value	20	
	Event	Trigger Alarm	
	Alarm Time	2019-03-05 10: 58	
	Status	reply directly	
	This	email is sent automatically by the system. Please do	not



(2) **Custom:** Users could add a bit monitoring point or word monitoring point according to their needs. When users choose to send emails at regular intervals, there is only Custom mode.

Email mode	🔾 Default 🛛 🔮 Custom	
Subject	#1212 -M0	B⁺ ₩
Recipient	Please add recipient	Select
Content		
	Save settings	

Figure 4-24

### 4.1.6 Tags usage

It records the current use and a maximum number of data monitoring points of data monitoring, historical records, and alarm records of the current V-BOX. As shown below.



### Wecon V-NET Web User Manual (V3.1)

Device	Template	K Home   Account S	Setting   Email   A	Account management   F	Feedback   Role   🔅	۵ د	Service - 🗘 🌔	1: 5.
Search	٩	٥	A	111	20		۵	٠
Custom Tags		Real-time Data	Alarm	Historical Data	Cloud SCADA	Lua Script	Pass-through	Configuration
🕒 default group (1/4	) 🗛 🗸	Basic Con	nmunication	Network Stat	tus Push Tags	Usage Reg	isters Information	Version
1212 V0A001200512006563066607	äo	Real-time Data	2			343/600		
Ø 123 ∪370H0211005620W001017		Historical Record				0/100		
⊘ chenzl ∪320U1211018220W0001#6		Alarm				144/300		
O H-AG		Instruction		20/500 (used /total	1)			



### 4.1.7 Registers information

It records the V-BOX information, such as IP address, WIFI. As shown below.

Real-time Data	Alarm	Historical Data	Cloud SCADA	>Lua Script	Ass-through	Configuration
Basic Comm	unication Network	Status Push	Tags Usage Registe	rs Information 2	ersion	0
	Time 2021-11-25 11:3	34:38 🗸 Change				
Access	s Key V130012011090	003906395a5d1bc				
Pass	word 888888	Change				
IP Ado	dress 192.168.39.221			Subnet Mask 255	.255.255.0	
Default Gat	eway 192.168.39.1			MAC C6:	52:A6:95:E1:8D	
N	WifilP 0.0.0.0			Wi-Fi mask 0.0.	0.0	
Wi-Fi gat	teway 0.0.0.0			WifiMAC 00:	00:00:00:00:00	
Wi-Fi s	signal 0			4GIP 0.0	0.0	
4G 1	mask 0.0.0.0			4G gateway 0.0	0.0	
4G	GMAC 00:00:00:00:00:	00		4G signal 0		
4G positio	oning 0		4G latit	ude / longitude 0,0		

Figure 4-26

### 4.1.8 Device version

As the product is constantly updated, the functions of theV-BOX could be judged based on the version information. As shown below.



asic Communication Network Status Push Tags Usage Registers Information Version	
asic Communication Network Status Push Tags Usage Registers Information Version	
asic Communication Network Status Push Tags Usage Registers Information	
Firmware information	
Name Opping	

Figure 4-27

## 4.2 Real-time data configuration

### 4.2.1 Real-time monitoring point configuration

In the "Real-time Data" interface, users could configure real-time monitoring points to easily obtain equipment data, and operate online. To add a real-time monitoring point, users need to select a group or enter the real-time monitoring point name, the connected device (ie, communication port), address type, register type, and other data. As shown below.

Device		K Home   Accou	Int Setting   E	Email   Ac	count management   Fee	edback   Role   🔅				~~
Search	٩	۵			A	<u>laul</u>	<b>6</b> 20			>
Custom Tags		Real-time	Data		Alarm	Historical Data	Cloud SC	ADA		Lua Script
🕒 default group		1.BMS	2.BA	NS	New tag					× 9 Settin
Ø 1212. VAOMING GIOSEESOE	5601.	+ New Tag	🔳 Quick	Action -	Name	Max. character le	ngth 50 allowed			4
⊘ 123 Untestmissestwidt		Select All	Status	ID	Connection	1-Local Address			~	lead Adr
O chenzl				1807	Port	Bit Address 🗸	Date Type 🛛 🛛 🕢	HDX	~	DX 0 . 0
H-AG v1300120110200390639	at		•	1783	Register Main No.	0	Main range 0 29999	99 ( Decimal )		2
🗅 Tajalli (0/0)			•	1782	Register Sub	0	Sub No. 0 15 ( Dec	imal )		: 4 105
				1782	Permissions	Read-only	Write-only			:40
			•	1782	Low Data Mode	Read-write	data refresh intervals. P	lease set in alch	nal	: 4 1
			•	1782	Man Display	setting. [ 2 seconds	by default]	iease set in giot	741	: 4.2
			•	1782	Description	Max. character le	ngth 50 allowed			:43
			•	1782	Mapping to	Select target tag	Sele	ct tag Cl	ear	: 4.4
				1782					-	5 : 45
			•	1782				Cance	el	ж : 46

Figure 4-28



### (1) Add and delete in batch. As shown below.

+ New Tag	🔳 Qu	iick Action -	🛓 / 🕹 Import/Export -					Enter a name or address Search
Select All	Add in	n Batch 2	Name <del>•</del>	Value		Port	Read Address	Edit
	Delet	e selected	test1	OFF		Local Address	HDX 0 . 0	🕼 Edit 🕂 Move 🛍 Delete
	•	1783121	Y2	OFF		COM1	Y 2	🕼 Edit 💠 Move 🗎 Delete
	•	1782246	1.Battery Model SN	<u>0</u>		COM2	1:4105	🕼 Edit 💠 Move 💼 Delete
	•	1782245	1.Voltage of pack	<u>0</u>	V	COM2	1:40	🕼 Edit 💠 Move 🗎 Delete
	٠	1782244	1.Current	<u>0</u>	A	COM2	1:41	🕼 Edit 💠 Move 🛍 Delete
	•	1782243	1.Cell Voltage 1	<u>0</u>	V	COM2	1:42	🕼 Edit 💠 Move 💼 Delete
	•	1782242	1.Cell Voltage 2	<u>0</u>	V	COM2	1:43	🕼 Edit 💠 Move 🛍 Delete
	٠	1782241	1.Cell Voltage 3	<u>0</u>	V	COM2	1:44	🕼 Edit 💠 Move 💼 Delete
	•	1782240	1.Cell Voltage 4	<u>0</u>	V	COM2	1:45	🕼 Edit 💠 Move 🗎 Delete
	•	1782239	1.Cell Voltage 5	0	V	COM2	1:46	🕼 Edit 💠 Move 💼 Delete

Figure 4-29

Humo	Max. character ler	igth 50 allowed							
Connection	1-Local Address				~				
Port	Bit Addres: 🗸	Date Type 🛛 🥹		HDX	~				
Register Main No.	0	Main range 0	299999 (	Decimal )					
Register Sub	D	D Sub No. 0 15 ( Decimal )							
Permissions	Read-only	Write-only							
ow Data Mode. Batch Count	Enable custom of setting [ 2 seconds ]	3 fault] Increm	als. Pleas nent	e set in glot 1	oal				
Map Display	O ON 🔮 O	FF							
Description	Max. character ler	igth 50 allowed							
Mapping to	Select target tag		Select ta	ig Cl	lear				

Figure 4-30



(2) Import and export. As shown below.

C Real-time I	Data	Alarr	n	<b>Historical Data</b>	Cloud S	SCADA
1.BMS	2	.BMS	3.BMS	4.BMS	AC	script
+ New Tag	🔳 Qu	ick Action 🗸	🛓 / 🛓 Impo	rt/Export -		
Select All	Status	ID	Import Excel	Value		Port
	٠	1807281	Export Templ	ate	FF	Local Address
	•	1807280	Export Select	ted O	FF	Local Address
	•	1783121	YZ	0	IFF	COM1



### 4.2.2 Monitoring points group management

Real-time monitoring points could be grouped and managed, and monitoring points could be moved to different groups. Users could click the "Group Settings" to add, modify, and delete groups.

O Real-time D	ata	Alarm	Historica	l Data	Cloud SCADA	L	ua Script
1.BMS	2.BMS	3.BMS	4.BMS	AC	script	Group Se	2 @ Setting

Figure 4-32

(1) Add group. Enter the group name to add a new group. As shown below.

1.BMS	2.BMS	Create Group	
<ul> <li>Add Group</li> </ul>		Please enter the group name	2
			Cancel
		GWIG	Cancel



(2) Modify group. Enter the new group name to modify the group. As shown below.





(3) Delete group. When deleting a group, a dialog box would prompted to confirm the deletion operation. As shown below.

	Edit
Deleting a group will also unbind tags under the group.	C 🔒
2	2 1
Cancel OK	2 🖻
4.000	2 🖻



### 4.2.3 Real-time data modification

Users could modify the real-time data of the monitoring point. Click the data of one monitoring

point to edit, and click . the monitoring point real-time data would be modified to the data

entered. Click it to cancel the modification.

Temperatu	ure	Humidity	Button	switch new nun	iber 🛛 🕸 Group Se.	😡 Set	ting
+ New Ta	ig 🔳	Quick Actio	n 🗸 🕹 /	L Import/Export -			
Select All	Status	ID	Name 🔻	Value		Port	Read Address
	•	826870	Temp_14	29 0 ~ 65535		× COM1	D 14

Figure 4-36

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## 4.3 Alarm configuration

Users could configure the alarms, and view the current alarms and historical alarms. Alarms could be divided into current alarm and historical alarm according to the administrator's confirmation.

Device	Template	K Home   Accoun	t Setting   Email   Account	management   Feed	lback   Role   🔅				Service ▼ ()	. 0 .
Search	٩	0			au	<b>2</b>	</th <th>/&gt;</th> <th>4</th> <th>0</th>	/>	4	0
Custom Tags		Real-time Dat	a Alarm	Histo	rical Data	Cloud SCADA	Lua S	Script	Pass-through	Configuration
🕞 default group (	0/4) 🙆 🗸	Current Alarm	Historical Alarm	Alarm Tags	Setting					
Ø 1212 V040012005120065e30866	<b>а С</b>									
Ø 123		All 🗸	Sroup Setting	🖋 Alarm Tags						
U370H0211005620W00101	1	ID	Name	Condition	Messag	e Level	Port	Read Address	Group	Edit
U320U1211018220W00011	· 6	13546	4. Stand by	Value = 0	Stand b	/ Minor	COM2	4:425	4.BMS Alarm	🕼 Edit 📋 Delete
O H-AG	s	13545	4. Charging	Value = 1	Chargin	g Minor	COM2	4:425	4.BMS Alarm	🕼 Edit 📋 Delete
🗅 Tajalli (0/0)	<	13544	4. Discharging	Value = 2	Dischargi	ng Minor	COM2	4:425	4.BMS Alarm	🕼 Edit 📋 Delete

Figure 4-37

### 4.3.1 Alarm tags

In the sub-page of "Alarm Registration" under "Alarm Record", users could add a new alarm. When adding an alarm record, users need to select or enter data such as name, group, the connected device (ie communication port), address type, etc. As shown below.



Figure 4-38



Name	Max. character le	ngth 50 allowed		
Group	1.BMS Alarm			~
Connection	1-Local Address			~
Level	Minor			~
Port	Bit Addres 🗸	Date Type 📀	HDX	~
Register Main No.	0	Main range	0 299999 ( De	cimal )
Register Sub	0	Sul	b No. 0 15 ( De	cimal )
Condition	🥑 ON 🔵 OFF			
Map Display	🔿 ON 🥥 OFF			
Message	Max. length allow	ved [249]		

Figure 4-39

### 4.3.2 Current alarm

The alarm data in the "current alarm" sub-page are all the records that have not yet been "confirmed". The administrator could "confirm" the current alarm data to change its state. The alarm data could be queried according to the code, name, start and end date, and other conditions. As shown below

Real-time D	Real-time Data		LIL Historical Data	Cloud SCADA	L	via Script Pas	Constant and the second	🔅 Configuration 🛆
Current Alar	rm Histori	cal Alarm	Alarm Tags Setting					
All V	All	✓ All	✓ Confirm in batch	Export to XLS	Current pages	~		
Select All	Name	Level	Message	Value	Trigger	Time	Status	Confirmation
	Start alarm	Minor	Warning: startup button is trigge	ered! 1	Trigger	2021-07-28 00:21:47	Unconfirmed	Confirm
	Start alarm	Minor	Warning: startup button is trigge	ered! 0	Released	2020-11-11 08:52:32	Unconfirmed	Confirm
	Start alarm	Minor	Warning: startup button is trigge	ered! 0	Released	2020-11-11 08:52:31	Unconfirmed	Confirm
	Start alarm	Minor	Warning: startup button is trigge	ered! 0	Released	2020-11-11 08:52:30	Unconfirmed	Confirm

Figure 4-40



### 4.3.3 Historical alarm

The alarm data after the "confirm" operation is the historical alarm data and would be transferred to the "historical alarm" sub-page. The data could be queried according to the code, name, start and end date, and other conditions. As shown below

Real-time D	Real-time Data			Historical Data	Cloud SCADA	Lua Sc	ript	Ass-throu	gh Configuration 🗠
Current Alar	m His	torical Alarm	Alarm T	ags Setting					
ID				Name					
Start time			===	End Date	E	٩			
Delete select	ed Exp	port to XLS	Current pag	ies 🗸					C <sub>2</sub>
Select All	ID	Name	Level		Message	Value	Trigger	Status	Time
	39130	Start alarm	Minor	Warning: sta	rtup button is triggered!	1	Trigger	Confirm	2021-09-13 10:45:06
	39130	Start alarm	Minor	Warning: sta	rtup button is triggered!	1	Trigger	Confirm	2021-09-02 14:41:11

Figure 4-41

## 4.4 Historical data configuration

Users could add the address to be monitored, collect data according to conditions, and form data tables, which could be used for query and storage.

### 4.4.1 Historical tags

On the "Historical tags" sub-page of "Historical Data", Users could configure historical data, including name, the connection device (communication port), address type, and register type, etc., As shown below

Real-time Dat	al-time Data Alarm		<b>Lini</b> Historical Data	Cloud St	) CADA	>Lua Script
Data	orical Tag	Historical Tag				×
Historical Tag	3.≣ Add in Bate	Name	Max. character le	ngth 50 allowed		<b>Y</b>
ID	Name	Group	His			~
825865	Yield4	Connection	1-Local Address			~
825864	Yield3	Port	Bit Addres 🗸	Date Type 🛛	HDX	~
825863	Yield2	Register	0	Main range 0 2999	99 (Decimal)	
825862	Yield1	Main No.				
825861	hum4	Register Sub	0	Sub No. 0 15 ( Dec	cimal)	
825860	hum3	Description	Max. character le	noth 50 allowed		
825859	hum2					
825858	hum1				Con	5
825857	temp4				Can	



### 4.4.2 Data query

On the "Data" sub-page of "Historical Data", Users could query and delete historical data. including name, the connection device (communication port), address type, and register type, etc. When querying data, users need to select or enter the monitoring point and start and end dates. The display of historical data could be viewed in both tables and curves. As shown below.

Real-time Data	Alarm	Lill Historical Data	1 Eloud SCADA	>Lua Script	Ass-through	🔅 Configuration 🛆
Data 2 Historical Ta	g Setting					
Tag	Start Date 2021-1	1-25 00:00:00 💷 E	End Date 2021-11-26 00:0	10:00 4 List 9	Curve	
His 🗸	Past 24hr Past 7 Day	s Past 30 Days Ascending	Descending Delete selecte	ed Export to XLS Cu	irrent page 🐱	
Hum	Select All		Time		Hum	Temp
Temp			2021-11-26 17:15:59.000		185	423
temp1			2021-11-26 17:10:59.000		905	726
temp2			2021-11-26 17:05:59.000		929	840
temp3			2021-11-26 17:00:59.000		965	361
temp4			2021-11-26 16:55:59.000		618	59
hum1			2021-11-26 16:50:59.000		514	573
hum?			2021-11-26 16:45:59.000		891	512
numz			2021-11-26 16:40:59.000		90	560
hum3			2021-11-26 16:35:59.000		251	763
hum4			2021-11-26 16:30:59.000		335	10
Yield1	«« « » »» No.	1Page Perpage 500 🗸 /0	Count 288 Items			





Figure 4-44



## 4.5 Cloud SCADA

Cloud SCADA is to monitor remote configuration interface. Click it to jump to the interface, and a cloud SCADA project bound to the V-BOX is As shown below



Figure 4-45

(1) One V-BOX could be bound to at most one cloud SCADA project.

If the V-BOX is not bound to a cloud SCADA project, it would prompt "you have not bound the Web SCADA project for Device, please bind it!".

If the bound project has been deleted, it would prompt "The project you bound has been deleted or you have no permission to view it! Please rebind.". As shown below





- (2) V-BOX would preference to use the cloud SCADA project in the template. If a cloud SCADA project template has been bound to the V-BOX, it couldnot bind or modify the cloud SACDA project of the V-BOX separately.
- (3) If the V-BOX is not bound to a template, the V-BOX could choose to bind the cloud SCADA project specified in the cloud SCADA platform. The cloud SCADA project across the V-BOX is



not optional.

- (4) The V-BOX uses The template cloud SCADA project to design on the cloud SCADA platform, But bthe browsing and viewing access are in the V-NET. The projects could not be browsed and viewed in the cloud SCADA platform.
- (5) If the template project is modified, Cloud SCADA of all V-BOXs using this template would update synchronously.

## 4.6 LUA script

### 4.6.1 Lua script management

Click "LUA script" to jump to the LUA script management module of V-BOX. The module has the functions including a script list, new script, edit script, delete scripts in batch, sync scripts, sync scripts in batch, import scripts, export scripts, debug, view box scripts, etc. As shown below

Device	emplate	K Home   Account Setting   Email   Account management   Feedback   Role   🎄					Service •	Service • D O			
Search Q		٥		A	ad	dd 🚳		0	ø		
Custom Tags		Real-time	Data	Alarm	Historical Data	Cloud SCADA	A Lua Scrip	t Pass-through	Configuration		
B default group (0/4)		🔸 Import	♠ Export	→ Sync Selected	X Delete selected	+ New	>_ Debug				
Ø 1212 V0A0012005120085e306880	ä	Select All	Status	Name	Executio	n	Enable	Sync	Scripts Edit		
Ø 123 US70H0211008820W001017				q1	Timing		ON	Sync	Details 📝 🗊		

Figure 4-47

#### (1) New script

#### 1) Create a new script

Click the button to fill in the name and execution, then click "save and next" to create a new script. As shown below



Figure 4-48



1 Name. The name of the script should start with [a-z, A-Z] and a maximum of 32 characters are allowed.

(2) Execution. There are four script execution conditions as the following.

Execution condition	Function	Number
initialization	Execute only once after power on.	Maximum one
Execution if connected	Execute after the V-BOX is connected to the server.	Maximum one
Execution if Disconnected	Execute when the box is disconnected from the server.	Maximum one
Timing	Executed cyclically according to the set timing time	Maximum five

#### Table 4- 1

3 Timing. If the user selects "Timing" as execution condition, the time and the time unit need to be entered.

un Lua scripts		
	Step 1: Settings	Step 2: Lua Editor
Name	1	
Execution	Timing	~
Timing	1000	ms 🗸
	Save and next	Day Hour Minute Second
		ms

Figure 4-49

**Note:** The script could not be modified after it is created except for the timing.

### 2) Edit script

(1)

Click Click climp to the LUA script edit interface and the script editor would display the

initialization code. As shown below.

Edit L	Edit Lua Scripts			O Step 1: Settings			Step 2: Lua Editor					×
tag	Port	Rea		向	(Å	D	Ê	Å	Ŕ	÷	?	
Q All	Grouț 🗸 Tag	Ē	1 2 3	function dosom end	test1.ma ething	in()						
MO	Loca	HDX										
1233	Ethe	CIO5.0										





2 The LUA script written by the user would be written in the initialized function structure, and the structure is not allowed to be modified.

### (2) Script list

The added script is displayed in the script list. A Row represents a script. As shown below.

Real-time E	Data	Alarm	Historical Data	Cloud SCADA	Lua Script	Pass-through	Cont	tiguration
✤ Import	<b>↑</b> Expo	ort 🔶 Sync	Selected × Dele	te selected + N	iew 📐 Debug			
Select All	Status	Name	Execution	Enable	Sync	Scr	ipts	Edit
	•	test5	Timing		Sync	Det	ails	<b>e</b>
	•	wecon258	Initialization	ON	Sync	Det	ails	<b>e</b> 1
	•	mq	Timing		Sync	Det	ails	e 🖻
		test1	Timing	OFF	Sync	Det	ails	2 🖻
		test	Timing	OFF	Sync	run [Details] Det	ails	6

### Figure 4-51

The following table describes the parameters in the script list.

Parameter	Instruction
Status	The two status of script, including sync and not synced
Name	Script name
Execution	Script execution condition
Enable	Script enable switch.
Sync	ON is to enable the script, and OFF is to disable the script. When the V-BOX is offline or penetrating, the button is grayed out and could not be operated.
Scripts	View the scripts that are already running on the V-BOX.
Operation	Edit or delete the script.
	• -

#### (3) Delete script

the

Edit

button

to delete the script. Select multiple scripts, click the

button

\* Delete selected to delete in batch. As shown below.



### Wecon V-NET Web User Manual (V3.1)

Real-time Data		Alarm		Alarm Historical Data		>Lua Script		Pass-through	Configuratio		ation
↓ Import	↑ Ехр	ort 🛛 🗲 Sy	nc Selected	X Delete s	selected + New	>_ Debug					
Select All	Status	Name	Exe	cution	Enable		Sync	Sc	ripts	Ed	lit
	•	t1	Execute	f connected	ON		Sync	De	etails	Ø	Ŵ
	•	t2	Execute if	disconnected	ON		Sync	De	etails	Ø	Ŵ
	•	test5	Ti	ming			Sync	De	etails	ß	
					Figure 4-52						

### (4) Sync in batch

Select the scripts in the list, click the button Sync Selected to sync in batch. The failed sync information would display after the sync button in the script list. As shown below

Real-tim	ne Data	Alarm	Historical Data	Cloud SCADA	>Lua Script		A Pass-through		Configuratio	
	♠ Export	→ Sync Selected	X Delete selected +	New >_ Debug						
Select All	Status	Name	Execution		Enable		Sync	Scripts	scripts Edi	
		t1	Execute if connected		OFF		Sync	Details	Ø	đ
		t2	Execute if disconne	ected	OFF		Sync	Details	Ø	Đ
	•	test5	Timing		ON		Sync	Details	ľ	Û
				Figure 4- 53	3					
	).	test1	Timing		ON		Sync	Details	Ø	Ì
		test	Timing		ON	Sync 🔒	Failed to run [Details]	Details	đ	Ē



Export

### (5) Import and export script

- 1) Export script. Click the button file with a .script extension.
  - nsion.

, all the scripts of the V-BOX could be exported as a

2) Import script. Click the button to the V-BOX. After the script is imported, the script in the current V-BOX is cleared.

#### Note:

(1) Replacing the communication port would replace the original communication port in the script with the communication port of the current V-BOX.

2 If the communication port of the current V-BOX is empty, it would prompt: there is no communication port configuration in the script, no need to replace it.

3 If the communication port in the imported script file is empty, it would prompt: there is no communication port configuration in the script, no need to replace it.



#### (6) Debug

Click the button	>_ Debug	to jump to th	e script debug	interface. As s	hown below.	
Real-time Data	Alarm	<b></b> Historical Data	Cloud SCADA	>Lua Script	C Pass-through	Configuration
Debug						Return to the list
			OFF			Clear

#### Figure 4-55

### 4.6.2 Script editor

The script editor is an online editor to write Lua scripts. When creating new scripts and modifying scripts, users could switch to the script editor page to write the Lua script of the V-BOX script. As shown below.

Edit Lua Scripts				O Step 1: Se	ttings	Step	2: Lua Edito	IT.			×	
tag	Port	Read Ad			( <b>1</b>	\$ F		?				
Q All Groups	✓ Tag		3	if not mq.m then	,							
111	Local Ad	HDX0.0	5	mq.m, err = mqt if mq.m then	t.create("t	cp://192.1	8.1.10:18	83", "vbox"	) Create	object		
test1	Local Ad	HDX0.0	7 8	mq.config = username	{ = <mark>= ""</mark> ,	account nu	iber					
Test	Local Ad	HDX0.0	9 10	password netway	d = "", = 1, WIF	password I connecti	on, wrong	value or no	t specified	will use Ethernet		
Y2	COM1	Y2	11 12	11         keepalive = 100, Optional, set the connection heartbeat interval to 100 seconds           12         cleansession = 0, Optional, keep the session								
SOC 4	Local Ad	HDW503	13 14	} mq.m:on("me	ssage", fun	ction(topi	, msg)	Register t	o receive me	ssage callback		
SOC 3	Local Ad	HDW502	15 16	15         local str = string.format("%s:%s", topic, msg)           16         print("mqtt msg:", str) Print out the subject and content received								
SOC 2	Local Ad	HDW501	17 18	end )								
SOC 1	Local Ad	HDW500	20	mq.m:on(off	_setstring(	"@xxx", "c	ause"(ca	use or " go	ost connecti ot nil"))	on caliback		
Battery Model SN 4	Local Ad	HDW450	22	mq.m:on("arr	rived", fun	ction()	Register	to send a m	essage to th	e callback		
Battery Model SN 3	Local Ad	HDW400	24	end)	isg arrived	)						
Battery Model SN 2	Local Ad	HDW350	26 27	print("mqtt	create fai	led:", err	Faile	d to create	object			
Battery Model SN 1	Local Ad	HDW300	28 29	else if mg.m:isconner	ted() then							
BMS4 Cell Tempera	Local Ad	HDW235	30 31	If online	e, post a m	essage						
BMS4 Cell Tempera	Local Ad	HDW234	32 33	mq.m:publis	n("devices/	wecon_02/m	essages/ev	ents/", "th	is is from b	ox", 0, 0)		
BMS4 Cell Tempera	Local Ad	HDW233	34 35	print("Not ( local stat,	connected") err = mg.m	:connect(m	.config)	connecti	lon			

#### Figure 4- 56

The function sections in the script edit page are As shown below.


Monitori	ng poir	ts list			Ste	ep 1: Setti	ngs	1	Step 2: Lu	a Editor	1	2 Tool ba	ar	
ag	Port	Read Ad	•	Ô	ľ۵,	Q	Ê	Ś	Ŕ	Ð	7			
O All Groups	✓ Tag		19 20 21		mq.m:   - end)	on("offi - addr_s	ine <b>", fu</b> etstring	nccion ("@xxx"	(cause) "cause"	- кеgist (cause	or "g	<pre>iosc connection ot nil"))</pre>	Code editing	area
111	Local Ad	HDX0.0	22		mq.m:	on("arri	ved", fu	nction(	) Reg:	ster to	send a i	message to the c	allback	
est1	Local Ad	HDX0.0	24		end)	Tric( ms	B di i 1ve	u )						
Test	Local Ad	HDX0.0	26		print	("mqtt c	reate fa	iled:",	err)	Failed t	o creat	e object		
/2	COM1	Y2	28	else	f ma mil	sconnect	ed() the	2						
OC 4	Local Ad	HDW503	30		If	online,	post a	message						
OC 3	Local Ad	HDW502	32		mq.m:	publish(	"devices	/wecon_	02/messa	ges/event	s/", "t	his is from box"	, 0, 0)	
OC 2	Local Ad	HDW501	34		print	("Not Co	nnected"	)	rt(ma.com	fig)	connect	ion		
60C 1	Local Ad	HDW500	36		if st	at == ni	1 then -	- Deter	nine whet	ther to c	onnect	2011		
attery Model SN 4	Local Ad	HDW450	38		end	eturn	Connect	ion fai	led, retu	irn direc	tly			
lattery Model SN 3	Local Ad	HDW400	40		mq	.m:subsc	ribe("de	vices/v	oox-demo,	messages	/events,	/", 0) Subscr	ibe to topics	
lattery Model SN 2	Local Ad	HDW350	42 43 44	-	- The fo - mq.m:u	llowing nsubscri isconnec	comment be("stc/ t() D	lines a test") isconne	re only unsub: unsub:	sed as i cribe	nterfac	e demonstration	usage, know how to call i	t
Battery Model SN 1	Local Ad	HDW300	45	end	- mq.m:c	lose() -	- shut d	own						
MS4 Cell Tempera	Local Ad	HDW235	47 en	d										
MS4 Cell Tempera	Local Ad	HDW234	Eunction	Save ci	irrent code	s Sneci	al note sh	ortcutict	l+s] A sm:	all red dot r	ext to the	e save button indica	Note ates that the codes have been m	area
MSA Cell Tempera	Local Ad	HDW233	have not	been sav	ved.	opeci	an motor of	oncoden	1.0127.0116		10 10 10	e ouve outforr mono	and that the codes have been h	iouniou, pui

Figure 4-57

#### (1) Monitoring points list

- 1) The area displays all the monitoring points of the current V-BOX with a function of search monitoring points.
- 2) Click the line of the monitoring point, and the monitoring point would be inserted at the current cursor of the script editor. The inserted monitoring point would be added with the symbol "@" in front of the monitoring point name in the editor and defined as a string. For example, "@City A temperature", the monitoring point variable would check grammar following the grammatical rules of the string. After the script is synchronized, the monitoring point variable would be converted to an address on the server-side and sent to the V-BOX side for use.

#### 🔊 Note:

1 The address format of the monitoring points are converted to is "@ address type \_ serial number # station number: register type major number. sub number". If the station number is empty, then remove it.

2 When the mouse passes over the row where the monitoring point is located, more detailed monitoring point information would be displayed through the floating box, and clicking the floating box could also display it to the cursor of the script editor.

#### (2) Toolbar

The toolbar is at the top of the script editor. As shown below.



Figure 4-58



From left to right, the functions are as below.

(1) Save codes. Save the current codes, with the small red dot next to it indicating that the code was modified but not saved.

(2) Clear codes. Clear the current codes in the script editor, and restore them to the initialization structure.

(3) Insert new address. Inserts a new bit or word address at the current cursor.

④ Copy codes. The shortcut keys are "ctrl+c". For some browsers with earlier versions (IE8 and below), it may not be able to copy content for use outside of this editor. It is advised to use "ctrl+c".

(5) Paste codes. The shortcut keys are "ctrl+v". This button is limited to pasting text copied from the current editor except using Internet Explorer. t is advised to use "ctrl+v".

- (6) Cancel. Cancel the actions in the editor at each step.
- (7) Restore. Restore the actions in the editor at each step.
- (8) Comment. Comment or uncomment the code in the current line or the selected line.

(9) Help. Jump to help document of script editor, and it is a simple introduction to Lua script editing.

#### (3) Code editing area

The Lua script editor provides Lua scripts for users to write scripts and could perform syntax verification, keyword prompts, common code snippet prompts, variable prompts, code completion, etc. At the same time, it provides monitoring point management functions, which could be directly Insert the address as a variable in the code.

1) syntax check



#### Figure 4-59

Users could check the validity of the syntax in real-time when writing Lua code. As shown in the

figure above, there would be an icon icon next to the line number of the syntax error line, and the error message would be prompted after the mouse placing. When multiple lines have errors, it would be displayed on the first line of the error. After solving the error in this line, it would be displayed on the next line of the error line.

The syntax check includes the following contents.

- 1 Check the spelling of keywords.
- 2 Check the definition of variables.
- 3 Check the usage specifications of operators.
- (4) Check the syntax of the function structure.

**Note:** The syntax check above does not include running error checking. Running error checking is an error message that is sent to the box, compiled through the V-BOX, and returned.



### 2) Script prompts

When writing code, the script editor provides hints for fuzzy matching keywords, defined variables, code snippets, etc. Click the corresponding prompt line to complete the codes. As shown below

for		
fori	snippet	for
forp	snippet	
for	snippet	
for	keyword	
<b>for</b> each	keyword	for \${1:i}=\${2:1},\${3:10} do
<b>for</b> eachi	keyword	\${4:print(i)}
format	keyword	end
floor	keyword	

#### Figure 4-60

The provided prompt codes and complete codes include the following categories:

(1) Keywords. Lua language keywords, built-in method names, built-in constants, library functions.

- (2) Code snippet. commonly used code snippets in Lua language.
- ③ Defined variables (local), the names of all the defined variables.

Name	Sample code	Name
Code snippet	local x = 1	Variable definition
	function fname() body end	Function structure
	for i=1,10 do print end	for loop structure
	while (condition) do body end	while loop structure
	if (condition) then body end	Conditional structure
Method name	_G _VERSION assert collectgarbage dofile error getmetatable ipai rs " +	



	<pre>"load loadfile next pairs pcall print rawequal " + "rawget rawlen rawset require select setmetatable " + "tonumber tostring type xpcall create isyieldable resume running  " + "status wrap yield debug gethook getinfo getlocal " + "getmetatable getregistry getupvalue " + "getuservalue sethook setlocal setmetatable setupvalue setuserval ue traceback upvalueid upvaluejoin " + "abs acos asin atan ceil cos deg exp " + "floor fmod huge log max  maxinteger min mininteger " + "modf pi rad random randomseed sin sqrt tan " + "loaded loadlib path preload searchers searchpath byte char du mp " + "find format gmatch gsub len lower match pack packsize rep rev erse " + "sub unpack upper concat insert move pack remove sort unpack  charpattern " + "foreachi maxn foreach concat remove </pre>	
Built-in constants	true false nil _G _VERSION	

### 3) Codes highlight

Code type	Color
Normal code	Black
Keyword	Red
Variable	Black
String	Blue
Built-in method name	Green
Constants and built-in constants	Purple
Library function	Black
Comments, [[xx]]	Gray



#### (4) Note area

#### 💬 Note

**Function:**Paste **Special note:**Shortcut[ctrl+v].Except for IE browser, this button is limited to pasting content in the current editor. It is recommended to use ctrl+v to paste the key combination.

- Figure 4-61
- 1) It is located below the script editor and hidden by default. A prompt is displayed when user clicks a custom method name or the mouse moves over the toolbar button.
- 2) Double click the prompt box or click the button to close it.
- 3) Click the up or down arrow to expand or collapse the prompt message.

#### (5) Save reminder

If the script content is modified and not saved, a confirmation dialog box would be displayed when jumping to another module. The message varies with browsers.

Leave site?		
Changes you made may not be saved.		
	Leave	Cancel

Figure 4-62

# **Chapter 5 V-BOX template**

## **5.1 Template introduction**

Users could use the configuration of a custom general template to make all V-BOX bound to the template use V-BOX the configuration uniformly, instead of configuring a single V-BOX one by one. Using templates to configure V-BOX would greatly improve the configuration efficiency of the V-BOX of the same model, which is easy to manage and easy to use. The V-BOX that uses this template would automatically synchronize the configuration of the template's data points and communication protocol, and its original configuration would be overwritten by the template's configuration. The change of the template set would be automatically synchronized to all the V-BOX in the template. When the V-BOX is removed from the template, the V-BOX would automatically have the same monitoring point and communication protocol configuration as the template.

Click on a template name in the template list on the left, on the right side, the user could configure, view, and publish the current template. At the top is the menu bar of the current template, including **Basic Information**, **Template Configuration**, **Device List**, **Release**, **Release and save as history**, **History version**. The button is the basic information of the template.

Device Template	Home   Account Setting   Email   Account ma	nagement   Feedback   Rol	eı 🗘		Service • Q 0 13 •
Enter the template nar <b>Q</b>	Basic Template Config	Device		<ul> <li>O Release</li> <li>O 1</li> </ul>	Release and save as historical Historic Version
🕒 Default group 🗸 🗸					
44 0   ¥   ⊡	The total number of Device using the	Number of online Device	using this te	Number of Device synchronization su.	Number of Device synchronization fail
test 0   ≭   ⊡	O station	0 station		<b>O</b> station	<b>O</b> station
123 0   ¥   🗋					
45 0   ¥   □		Template Basic			
		Name 4	4		
		Group D	efault group		
		Creat date 2	D21-07-20 11:43:3	35	
		Device Model V	-BOX S-NG		
		Remarks Informati on			
			Modify I	nformation	
+ 🖕 😋					

Figure 5-1



## 5.2 Template operation

Click the switch menu [Template] at the top left of the V-NET. In the template list, users could view all templates created.



Figure 5-2

- (1) **Template search.** On the top of the template list, users could enter the template name in the search box for a fuzzy search, and the group to which the matched template belongs is automatically opened, and all matching results could be viewed.
- (2) **Template.** In the template list, the templates are managed in the way of first-level group management. Click the group name to open the group and view all the templates under the group. When you click again, you could shrink the group. Click the template name could view the detailed content of the template on the right side of the page.
- (3) Shortcut key. The number of V-BOXs bound to the template, the delete template button, and the copy template button are displayed below each template name
- (4) **Toolbar.** The toolbar at the bottom of the template list contains add a template, group management, and refresh template list.

### 5.2.1 Add template

Click the button **I** on the toolbar to add a new template. As shown below.



Device	Template	Add Template	_		A Source •
Enter the temp	olate nar <b>Q</b>			6	j sa
🔁 Default group		Name	test		
44 0   🗙   🖻		Group	Default group	~	1
test		Model	V-BOX S-00	~	
123 0   ¥   🛅		Remarks Information			
45 0   ×   🗇					
•				Cancel	4
	32		coroup. De	nanc Brook	

#### Figure 5-3

- (1) **Template name.** The name of the created template. The name could not be empty.
- (2) **Template group.** Select the group to which the newly created template belongs.
- (3) Model. Select the V-BOX model bound to the template.

**Note:** Once the template is created successfully, the V-BOX model is not allowed to be modified, and the template could only be bound to the V-BOX of the same model.

(4) **Remarks information.** Remarks information of the template.

### 5.2.2 Group management

Click the button on the toolbar, and in the pop-up box, users could manage the grouping of templates.

#### (1) New group.

At the top of the group management pop-up box, Users could add a new group. Enter the group

name in the input box and click the button to add a group. The group name is not allowed to be empty, and no spaces are allowed.



Template Group Management	
New Group test	2 3 + New
Group Name	Edit
Default group	<b>a</b>
test	<b>a</b>
test	C D

Figure 5-4

#### (2) Group management.

In the group management pop-up box, all the groups created would be displayed. Users could modify and delete the selected group.

**Note:** If there are templates in the group, Users could not delete the group. Users need to remove all the templates before delete them.

svice	Template Group Management		×
tter the	New Group	+ New	
efault g	Group Name		Edit
×   0	Default group		C 🗎 👝
st   ×   []	test		C 🖻 🕹
23   ×   Ū			Close
1   ×   匠		Template Basic	
+[	<u>_</u>		

Figure 5-5

### 5.2.3 Copy template

Click the button under the template name in the template list to copy the current template as a new template, As shown below



Copy Te	mplate		×
Enter the template nar Q	ource Template	44	
Default group	Name		
test	Group	Default group	~
0   *   10 123	Model	V-BOX S-NG	~
0   ×   🗇 45 0   ×   🛱	Remarks Information		
🗅 test			
			Cancel OK

Figure 5-6

**Note:** For the copied new template, only the template name, grouping and remarks could be modified, but the model of the V-BOX could not be changed.

### **5.2.4 Generate template**

Right-click the name of the V-BOX in the V-BOX list, and click the [Generate Template] button to generate a new template from the configuration of the V-BOX that is not currently bound. The V-BOX model of the new template is not available for change, as shown in the following figure.

Device	Template	<			Service ▼	<b>S</b> <sup>1</sup>
Search	٩	Alarm Ite	Generate template		,	e per of
Custom	Tags	522/5	Name			Upg
Ø default g Ø 121:	rroup (1/4) ~	Map Thu	Group	Default group	~	
VOAG01265 Ø 123	Pass-through		Model	V-BOX H-AG	~	Shar
⊘ cher	Cloud SCADA     Share configuration		Remarks			the D
O H-A	≛ Export					CI
🗅 Tajalli	<ul> <li>Import</li> <li>Mark on map</li> </ul>	;urrent,				_
	Generate template	Source			Cancel OK	
		L				
+ = 5	₽ ★ < C ÷					

Figure 5-7



### 5.2.5 Delete template

If a template is bound to a V-BOX, the template could not be deleted. Users need to unbind all V-BOXs bound to the template to delete a template.



Figure 5-8

## **5.3 Basic information**

After clicking the template name, the [Basic Information] page of the template is opened by default, as shown in the figure below.



#### Wecon V-NET Web User Manual (V3.1)

Device Template 1	Home   Account Setting   Email   Account man	agement   Feedback	Role   🌣		Service •
Enter the template nar Q	Basic Template Config	Device		<ul><li>❷ Release</li><li>❷ F</li></ul>	telease and save as historical Historic Version
2 test1 1   ×   □ h-ag 0   ×   □	The total number of Device using the	Number of online De	vice using this te	Number of Device synchronization su.	Number of Device synchronization fail
	Station	Template Basic	non	Station	₩ Station
		Name	test1		
		Group	Default group		
🗅 test 🧹		Creat date	2021-11-30 15:04:4	11	
		Device Model	V-BOX H-AG		
		Remarks Informati on			
			Modify I	nformation	
+ 🖕 🕄		N			

Figure 5-9

- (1) In the **[Template Statistics]** of **[Basic Information]**, some statistics of the V-BOX bound to the template are displayed, including the total number of devices using the template, the number of online devices using the template, the number of successfully synchronized devices, and the number of failed devices.
- (2) In the template [Basic Information], view the basic information when V-BOX creates the template.
- (3) Click the [Modify Information] button to modify the basic information of the template. The V-BOX model of the template is not allowed to be modified, as shown in Figure below.

Name	44	
Group	Default group	~
Model	V-BOX S-NG	~
Remarks Information		

Figure 5-10

## 5.4 Template configuration

Click the **[Template Configuration]** menu to enter the detailed configuration page of the current template. The detailed configurations include **Communication port configuration]**, **Real-timemonitoring point configuration**, **Alarm record configuration**, **Historical data configuration**, **Script configuration**, **Cloud SCADA configuration**, **Global setting.** As shown below.

Device Template 1 <	Device Template 1 < Home   Account Setting   Email   Account management   Feedback   Role   *								
Enter the template nar <b>Q</b>	Basic	Template Config	Device	<ul> <li></li></ul>	as historical <u>Historic Version</u>				
Default group     test1     1   ×   □	Communication	Real-Time	Alarm Histori	cal Script Cloud SCADA	Global Setting				
h-ag Ple 0   ≭   ⊡ pro	ease configure equi otocol, etc.)	pment connected with E	Device (such as: PLC brand	and model, data acquisition module, PID control	table or MODBUS standard				
44 0   ×   🗇	■ Add								
test	ID P	ort Port	ID Port	Protocol	Edit				
123	1 CC	DM1 2621	8 RS232	Allen-Bradley DF1	<b>e</b>				
0   ×   🖸	2 CC	DM2 2621	9 RS232	Allen-Bradley DF1	6				

#### Figure 5-11

- (1) **Communication port configuration.** Configure the communication port used by the template. For specific configuration, please refer to <u>4.1.3 [Communication Port Configuration]</u>.
- (2) Real-time monitoring point configuration. Configure the real-time monitoring point for the template. For specific configuration, please refer to <u>4.2 [Real-time data configuration]</u>, but there is no real-time data of monitoring points in the template.
- (3) Alarm record configuration. Configure the alarm record for the template. For specific configuration, please refer to <u>4.3 [Alarm Configuration]</u>, but there is no specific alarm data in the template. To view the alarm data, Users need to view it in the V-BOX bound to the template.
- (4) Historical data configuration. Configure historical data for the template. For specific configuration, please refer to <u>4.4 [Historical Data Configuration]</u>, but there is no specific historical data in the template. To view the historical data, Users need to view it in the V-BOX bound to the template.
- (5) Script configuration. Configure the scripting strategy of the template. For specific configuration, please refer to <u>4.6 [Lua script]</u>, but the template could not be issued with a separate script strategy, and it also could not view the scripts run by the V-BOX.
- (6) Cloud SCADA configuration. Users could select only one Cloud SCADA project for the

template configuration. Click the button in the upper right corner it to jump to the Cloud SCADA platform to design the Cloud SCADA project of the template. For the design of a template Cloud SCADA project, users could only click here to jump, and the project couldnot be found on the Cloud SCADA platform for design. For specific configuration, please refer to **5.8 [Template Cloud Configuration]**.

(7) Global setting. Configure the traffic saving mode and data push function for the template.



## 5.5 V-BOX list

Click [V-BOX List] configuration menu to bind the template to the V-BOX. Synchronize the template configuration to the V-BOX, and the configuration in the V-BOX would be modified to the configuration of the template, and the template configuration would overwrite the original configuration of the V-BOX.

**Note:** A V-BOX could be associated with only one template, and a template could be associated with multiple V-BOXs.



Figure 5-12

### 5.5.1 Associate V-BOX

Association Device

(1) Click the button **1**, and in the pop-up box, the user could select the V-BOX of the same model as that in the template under the same account to associate the template. The list only displays the V-BOX of the same model that is not associated with the template. As shown below.





**Note:** This is only to associate the V-BOX to the template. If the template is not published and the synchronization configuration is not operated, the template in the V-BOX is still the original configuration, that is to say, the configuration of the template is not delivered to the V-BOX.

- (2) The associated V-BOX would be displayed in the V-BOX list.
- (3) In the V-BOX list, Users could view the status of the V-BOX bound to the template, the name of the V-BOX, machine code, associated time, synchronization status, operation, etc.

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### Wecon V-NET Web User Manual (V3.1)

Basic Template Config			<b>E</b> Device	<b>⊙</b> Rele	ase 🛛 🛛 🛛 Relea	se and save as historical Historic Version
Search			Q Search	Representation	guration 🛛 🗏 Asso	ciation Device 🛛 🖻 Disassociate series
Select All	State	Device Name	Access Key	Association Time	Sync status	Edit
	•	H-AG	V13001 11bc	2021-11-30 16:55:08	Synced	Check Device View Disassociated

Figure 5-14

#### (4) View the data of each module in the current configuration of the V-BOX. As shown below.

Basic		Config Template Config	Device	<b>⊘</b> Rele	ase 🛛 🛛 🛛 Relea	ase and save as historical Historic Version
Search			Q Search	≓ Sync config	guration 🛛 🛢 Asse	ociation Device 🛛 🗷 Disassociate series
Select All	State	Device Name	Access Key	Association Time	Sync status	Edit
~	•	H-AG	V13001	2021-11-30 16:55:08	Synced	Check Device View Disassociated



### 5.5.2 Disassociate V-BOX

**Disassociate V-BOX.** Disassociate the V-BOX from the template. After disassociation, the V-BOX retains all the configuration information of the release version in the template.

Click the button Disassociate series or [Disassociated] behind the V-BOX to disassociate the selected V-BOX or the current V-BOX from the current template in batches. After disassociation, a published configuration of the template would be copied to the V-BOX, and the V-BOX would disassociate the template and restore it to the original un-associated template.



Figure 5-16

### 5.5.3 Synchronous configuration

Click the button Click the button to send the configuration (release version) of the template to the selected V-BOX. The current online V-BOX would be delivered immediately, and the



offline V-BOX would be delivered after the next time it goes online. After the synchronization is successful, the configuration of the current template would overwrite the configuration of the selected V-BOX. As shown below.



Figure 5-17

# 5.6 Release template

The template could only take effect after it is released. That is, the template configuration edited by the user could be synchronously delivered to the bound V-BOX only after it is released. The released template is called [Release Version]. A template could only have one release version at most, and the others are called the historical version or the currently edited version.

The V-BOX synchronization configuration function in <u>5.5.3 Synchronous configuration</u> is to deliver template configuration of [Release Version] to the V-BOX. If the template has never been released before, it would prompt [The template has not been synchronized] when synchronizing the configuration of the V-BOX. At this time, the user needs to release the template first, and then perform the synchronization configuration of the V-BOX.

### 5.6.1 Release template

The configured template needs to be released before it could take effect. Click the

button

**O** Release to release the current template. After a successful release, the configuration

would be automatically synchronized to all bound V-BOX. As shown below.



### Wecon V-NET Web User Manual (V3.1)

Basic	<b>de</b> Template Co	onfig			<b>⊖</b> Rele	ase 2	⊖ Relea	ise and sa
Search		Note			× Sync config	guration	📰 Asso	ociation De
Select All Stat	e Device Na		-		on Time	Sync	status	
•	H-AG		8		16:55:08	Syn	ced	Checl
« 1 » No.1	Page Perpa	After templ boxes del publis config	the template is released, ate will be delivered to all s will be delivered immedia ivered after the next time t shing, please carefully che uration is fully configured.	the configuration of the associated boxes (onlin ately, offline boxes will t they go online). Before eck whether the templat Are you sure to publish	e ne be te h?			

Figure 5-18

### 5.6.2 Release and save as historical

Release and save as historical

Click the button

to release the current template and save it as a

historical version. The stored historical version could be viewed or rolled back in the [historical version] page, as shown below.

Basic Rel	ease and save as historical	×		and save as historical	E
Search	shed version can be rolled back or viewed in the historical $\boldsymbol{v}$	_	🗐 Associat	lion Device 🔲 💷 Disas	
	Fill out the release log				
Select C State		5 5	status	Edit	
		/n	ced	Check Device View Dis	as
1 » No 1 Pa					
		3			
	Cancel	Save			

Figure 5-19

### 5.6.3 Historical version

Click the [Historical Version] menu to view the release version of the current template and all historical versions, as shown below.



O Current historical version: Please select the historical version	Current historical version: Please select the historical version from the list below to view				
Historic Version					
Release Date	Release Log	Operation			
2021-12-01 09:39:49 (Release version)		Roll back to this version Details			
2021-12-01 09:39:49		Roll back to this version Details			
2021-12-01 09:39:27		Roll back to this version Details			



### (1) Release version

The first one in the history version list is the [release version] of the current template.

#### (2) History version

Except for [Release Version] in the list, all historical versions are stored after [Release and save as historical version].

#### (3) View details

Click the [Details] button to view all configuration information of the selected version.

#### (4) Roll back to this version

Click [roll back to this version] to overwrite the currently edited template configuration information with the configuration information of this version. Only the current edited version is overwritten, and the release process is not performed.

## 5.7 View the V-BOX bound to the template

When the template configuration is completed and the configuration is delivered to the V-BOX, the user could view the configuration and data of the V-BOX in the [Device] list.

The status icons of the V-BOX with bound template and the V-BOX with an unbound template in the list of the V-BOX are shown below.

### 5.7.1 The V-BOX with bound template

- (1) The icon behind the V-BOX 📴: indicates that the V-BOX is bound to a template.
- (2) The icon behind the V-BOX : indicates that the V-BOX is bound to a template of another account.
- (3) The V-BOX with the icon icon could view the bound template. The user could right-click the name of the V-BOX and select [Currently Binding Template] in the right-click menu to jump to the template, as shown below.





Figure 5-21

### 5.7.2 V-BOX with unbound template

The icon behind the V-BOX  $\square$ : indicates that the V-BOX is not bound to any template. Right-click the V-BOX name, and click the [Generate Template], the configuration of the V-BOX could be generated a new template.



Figure 5-22



## 5.8 Template cloud SCADA

Adding a template cloud SCADA in the [template configuration] interface of the V-BOX template is to configure a cloud SCADA project for the template, and to jump to the cloud SCADA platform for configuration design. To view the data status screen of the analysis page of the cloud SCADA project, the user needs to browse to the cloud SCADA module bound to the template.

### 5.8.1 Configuration toolbar

The tools in the toolbar are to operate the currently bound configuration project, the specific operations are as follows:

- (1) Full screen **2**. To realize the full screen display of the configuration project. Print "Esc" to exit the full screen.
- (2) Bind the V-BOX configuration project . If the V-BOX does not use a template, the button could bind the V-BOX or modify the cloud SCADA platform to specify the configuration project of the V-BOX. If the cloud SCADA project in the template has been used by V-BOX, this button is grayed out and could not be used.
- (3) Unbind the V-BOX configuration project 🔝 . Click the configuration project in the selected configuration project list again to unbind the V-BOX cloud SCADA for the V-BOX.
- (4) Edit Sedit the configuration project bound to the V-BOX, and it would jump to the configuration editor page of the cloud SCADA platform.

### 5.8.2 Template configuration cloud SCADA

(1) If the template has a cloud configuration project, click the button in the upper right corner to jump to the cloud SCADA platform to design the cloud SCADA project of the template. If the template has not been configured with the cloud SCADA project, click [Create] to jump to the unique cloud SCADA editing interface of the modified template, as shown below.

Device Template	Home   Account Setting	g   Email   Account manag	gement   Feedback	Role   🍄			Servi	ce• Q	015
Enter the template nar <b>Q</b>	Basic	C Template Config	Device					e as historical	Historic Version
Default grown     test3	Communication	Real-Time	Alarm	Historical	Script	Cloud SCADA	Global Setting	0	
h-ag								e	
44 0   <b>x</b>   □									
test 0   ≭   □									
123 0   ¥   🗀					$\mathbf{i}$				
45 0   ¥   🗅					r)				
🗅 test						4			
			The temp	late has not yet config	ured Cloud SCA	DA projec, Create			

Figure 5-23



(2) Edit the cloud SCADA project in the cloud SCADA platform interface, click the save button in the upper left corner, as shown below.



Figure 5-24

(3) Click [Release] or [Release and save as history] to release the current template. As shown below.



Figure 5-25



(4) View the cloud SCADA module in the list of devices associated with the V-BOX. As shown below.



Figure 5-26

(5) When unbinding the V-BOX from the template, if the template has a cloud SCADA project, a cloud SCADA project specifying the V-BOX would be generated in the centralized monitoring module of the cloud SCADA platform. The project name is "template+ V-BOX name+random number". As shown below.



Figure 5-27



### 5.8.3 Differences with cloud SCADA platform

- (1) The template cloud SCADA could not be found in the cloud SCADA platform. The template cloud SCADA project could only be edited from the [template]-[template configuration]-[cloud SCADA] of V-NET.
- (2) The V-BOX bound to the template project could only use the configuration of the template.
- (3) When viewing the template cloud SCADA project, only the default status of the component could be viewed, and could not view the data status and operate. Users could only view the data of the project in the [device]-[cloud SCADA] bound to the template V-BOX.
- (4) When designing the template cloud SCADA project, there is no function of compiling and importing the template, be sure to click save.
- (5) When unbinding the V-BOX from the template, if the template has a cloud SCADA project, a cloud SCADA project specifying the V-BOX would be generated in the centralized monitoring module of the cloud SCADA platform. The project name format is "template+ V-BOX name+random number".
- (6) If the template has been configured with a cloud SCADA project, only the cloud SCADA project could be displayed in the cloud SCADA module of the V-BOX bound to the template. and the V-BOX could not be configured to specify to use other cloud SCADA projects.



# **Chapter 6 Account management**

When logging in to an account, bind the V-BOX with the account by adding the V-BOX information, and the account bound to the V-BOX is called the "administrator account". A V-BOX could only be bound to one account, that is, the administrator account is unique.

## 6.1 Administrator authority

An admin account could be configured with multiple view accounts, and the view accounts could be assigned to monitor the V-BOX, as well as the read and write operation rights of the V-BOX data. As shown below.



Figure 6-1

Here is the relationship analysis of the figure above. The admin account has four V-BOXs (A, B, C, D), and each V-BOX has operable data (A1, A2, A3, A4, B1, B2, B3, C1, C2, C3, C4, D1, D2, D3). And Admin account creates three view accounts, and assigns different authorities for each view account.

For example,

- View account one could monitor and operate one data (A1, B1, C1, D1) of four V-BOXs (A, B, C, D),
- 2 View account two could monitor and operate one data (A2, B2, C2, D3) of four V-BOXs (A, B, C, D),
- ③ View account three could monitor and operate the data (A3, A4, C3, C4, D3) of three V-BOXs (A, C, D) ).

## 6.2 View-account management

Click the "Account Management" button to enter the view account management page. List). In the view account management page, the user could perform operations such as adding, disabling, and authority management of view accounts. Authority management includes the management of real-time monitoring points, historical monitoring points, and alarm monitoring points.



### Wecon V-NET Web User Manual (V3.1)

Home   Ac	count Setting   Er b-account	mail Acco	unt management	Feedbac	k   Role   🔅			Service -	а <b>О</b>
All group	✓ All Group	states Email	Account Phone Number	typ∉ ❤ Enable	Croup Se Account type	ting + Create ad	count	Role  Cloud SCADA	
test	Default group				Viewer	2021-04-13 11:41:13	CEdit Account Real-Time Tags	<ul> <li>Email</li> <li>Help</li> </ul>	Device assignment
Test1 « 1 »	No. 1 Pag	e Perpag	e 10 🗸 /Co	ount 2 Item	Viewer	2019-10-05 10:06:29	CEdit Account Real-Time Tags	<ul> <li>Feedback</li> <li>HTTP access</li> <li>Request to share</li> </ul>	Arvice assignment

Figure 6-2

### 6.2.1 Create account

The status of view accounts could be divided into Enabled or disabled.

+ Create account

to create a view account, and the account and password of the view

account need to be entered. The user could select whether to enable the view account immediately after adding the view account.

Creat account		
Name	✓ Viewer	
User Name		
Password		
Group	Default group	~
Enable	~	
		Cancel OK

Figure 6-3



### 6.2.2 Authority Management

When disabling a view account, uncheck it directly, and login would be prohibited after disabling.

All group	~	All st	ates	<ul> <li>Account ty</li> </ul>	pe 🗸	📽 Group Settin
User Name	G	roup	Email	Phone Number	Enable	Account type
wecon_user4						Viewer
wecon_user3	Defa	ult group				Viewer
wecon_user2						Viewer
wecon_user1						Viewer



### 6.2.3 Modify the monitoring point authority

Click the button Click the button to modify the monitoring points authority of a view account, it would jump to the "modify the status of the monitoring point" page.

Home > Sub-	account								
All group	✓ All st	tates 🔹	✓ Account typ	pe 🗸	ଷ୍ଟ Group Setti	ng 🕂 Create acc	ount		
User Name	Group	Email	Phone Number	Enable	Account type	Time Created			1
wecon_user4				~	Viewer	2019-03-26 17:35:26	CE Edit Account	©Real-Time Tags	<b>dul</b> Hist
wecon_user3	Default group			~	Viewer	2019-03-26 17:26:38	CEdit Account	Real-Time Tags	[Jul]Hist
wecon_user2				~	Viewer	2019-03-26 17:26:23	CEdit Account	©Real-Time Tags	<b>lul</b> Hist



Users could manage the monitoring point authority of the currently selected view account, including "read only", "Write only", or "Read and write". Users could unbind the monitoring point authority of the view account. After unbinding, a certain set of authorities (real-time, history, and alarm) of the view account for the monitoring point would be deleted.

Edit Tag			×		
S	Tag permissions	Read-only Write-only Read-write	3		
		Canc	el OK issi	ons	Edit
	545	1212	Read-or	ily 🖉 Change Perm	ission

Figure 6-6



### 6.2.4 Assign monitoring point

Assign monitoring points to the currently selected view account. The assigned monitoring points could come from different V-BOXs. After the assignment, the view account has a certain set of authorities to the assigned monitoring points.

Home > View	Account >test			
Real-time per	nissions			
No template	Assign monitoring point     Batch editing	a Unlink series		
serial	Tag	Device	Permissions	Edit
1737764	545	1212	Read-only	Change Permission



#### (1) Real-time monitoring point assignment

It is to assign the monitoring points under [Real-time tags] under the V-BOX. Users could select "Assign all" to assign all the monitoring points under the selected device, that is to select all the remaining unassigned monitoring points of the device.

Home > Sub	accou	nt									
All group	~	All	states	~	Account t	type 🗸	of Group Set	ting + Create a	ccount		1
User Name	Gr	oup	Email	Pho	ne Number	Enable	Account type	Time Created			
test	Defau	lt group				~	Viewer	2021-04-13 11:41:13	CEdit Account	©Real-Time Tags	ШН
Test1							Viewer	2019-10-05 10:06:29	CEdit Account	•Real-Time Tags	ын

#### Sote:

Figure 6-8

1 If the monitoring point authority is read-only, it could not be modified to write-only or read-write.

2 If the monitoring point authority is write-only, it could not be changed to read-only or read-write.



inpiate ino	template	~	Device	All Device 🗸	
Assign All	Assign n	ew permission	Read-only	Write-only Read-write	
: Check Assi y, it cannot b write permiss Select All	gn all to ass le modified. ' sion. Name	ign all unassig When saving, t Device	ned tags in sele he modification	cted box.lf tag advanced permission is will be skipped.Tip:Only Read & Write Permissions 🔁	s read-only or write tags can modify r Address
	7987	1212	O Rea	d-only O Write-only	D
	1233	1212	O Rea	d-only     Write-only     Read-write	5,0
	MO	1212	🖲 Rea	d-only O Write-only O Read-write	1,3

Figure 6-9

Home > View A	ccount >test			
Real-time perm	issions			
No template	<ul> <li>✓ + Assign monitoring point</li> <li>+ Batch editing</li> </ul>	Cunlink series		
serial	Tag	Device	Permissions	Edit
1737764	545	1212	Read-only	Change Permission
1737765	7987	1212	Read-write	Change Permission
1737768	1233	1212	Write-only	Change Permission

Figure 6-10

### (2) Historical monitoring points assignment

It is to assign the monitoring points under [Historical tags] under the V-BOX. Users could select "Assign all" to assign all the monitoring points under the selected device, that is to select all the remaining unassigned monitoring points of the device.

Home > S	ub-account										
All grou	p 🗸 🦯	All states	~	Accour	it type 🗸	<b>¢</b> \$ Group S	Setting	♣ Create a	account		
ser Name	Group	Email	Phone M	Number	Enable	Account type	Time Cr	eated			Edit
test	Default group				~	Viewer	2021-04-13	<mark>11</mark> :41:13	CEdit Account	©Real-Time Tags	Historical Tags
Test1						Viewer	2019-10-05	10:06:29	CEdit Account	©Real-Time Tags	Historical Tags

Figure 6-11



	remaining ta	igs to the view acc	ount(test)			
Templ	late No t	emplate v	Device All Devi		~	
Se	elect All	serial	Group Name	Device	Permissio	ons
ſ		203271	test	1212	Read-on	ly
		210943	test	H-AG	Read-on	ly
					729333330	
			Figure 6- 12		Cance	ок
-lome ≥ Vi	ew Account >	• test	Figure 6- 12		Cance	ОК
Home > Vi	ew Account >	• test	Figure 6- 12		Cance	ОК
Home > Vi istorical No templa	ew Account > permissions	∙ test s FAssign monitoring	Figure 6- 12 point Pulink	series	Cance	OK
Home > Vi istorical No templa serial	ew Account > permissions ate v	• test s ► Assign monitoring Group Name	Figure 6- 12 point 🖹 Unlink	series	Permissions	Edit
Home > Vi istorical No templa serial 203271	ew Account > permission: ate v	• test s F Assign monitoring Group Name test	Figure 6- 12 point  Unlink	series evice	Permissions Read-only	Edit

Figure 6-13

### (3) Historical monitoring points assignment

It is to assign the monitoring points under [Alarm tags] under the V-BOX. Users could select "Assign all" to assign all the monitoring points under the selected device, that is to select all the remaining unassigned monitoring points of the device.

Home > Sub	-account						
Ali group	✓ All	states	✓ Acco	unt type 🗸 🗸	<b>¢</b> \$ Group Set	tting + Create ac	count
User Name	Group	Email	Phone Num	er Enable	Account type	Time Created	Edit
test	Default group				Viewer	2021-04-13 11:41:13	CEdit Account Real-Time Tags
Test1					Viewer	2019-10-05 10:06:29	CEdit Account ©Real-Time Tags Hill Historical Tags AAlarm Tags

Figure 6-14



lata h	la tamplata	Device		
late	vo tempiate	• Device	All Device	Ť
			Assign All	
neck 'Assi	ign All' to assig	in all tags in selec	ted Device	
Select	All	Name	Device	Address
		A1	H-AG	0,0
		A2	H-AG	0,0
N N	io. 1 Page	Per page 10	<ul> <li>/Count 2 Items</li> </ul>	
<i>"</i>				

Figure 6-15

ccount > test											
Alarm permission list											
<ul> <li>Assign monitoring point</li> </ul>	o Unlink series										
Name	Device	Address	Edit								
A1	H-AG	0,0	🖻 Unlink								
A2	H-AG	0,0	甸 Unlink								
	ccount > test ion list	Image: Second secon	ion list <ul> <li>+ Assign monitoring point</li> <li>© Unlink series</li> </ul> Name Device   A1 H-AG   A2 H-AG								

#### Figure 6-16

**Note:** The hierarchical management in the view account is not intelligent enough. It is recommended to use the [role management] function to manage accounts.

## 6.3 View account usage

Use the view account to log in through <u>eu.v-box.net</u> or <u>asean.v-box.net</u>. The home page of the view account is data monitoring, data recording, and historical data. All the above data are assigned by the administrator account, and the view account could not be bound to the device.



				_			4	
	C Real-time Data				Alarm		Historical Data	
	All	Default group	T1 📢	Group Se				
Ν	lo template	~						
St	atus	ID	Name <del>•</del>	Device	Value	Port	Read Address	
	•	1808615	4	H-AG	OFF	Local Address	HDX 0.0	
	•	1808614	3	H-AG	OFF	Local Address	HDX 0 . 0	
	•	1808613	2	H-AG	OFF	Local Address	HDX 0.0	
	•	1808612	1	H-AG	OFF	Local Address	HDX 0.0	
	•	1738842	MO	1212	OFF	Local Address	HDX 1.3	
	•	1737768	1233	1212	OFF	Ethernet	CIO 5.0	
	•	1737765	7987	1212	<u>Q</u>	Ethernet	W 0	
	-	1737764	545	1212	OFF	Ethernet	CIO 0 0	

Figure 6-17

### 6.3.1 Data monitoring

### (1) Group management

A view account could manage monitoring point groups, such as creating, modifying, and deleting a group. Users need to enter a group name when creating a group.

All Defa	Create Group	×
+ Add Group	Please enter the group name	
		Cancel

Figure 6-18

Users need to enter a new group name when modifying a group.



98



### Wecon V-NET Web User Manual (V3.1)

When deleting a group, a prompt dialog box would pop up to confirm the deletion operation. If the deletion is confirmed, the monitoring point under the group would also be unbound from the group.



Figure 6-20

#### (2) Monitoring assignment

The view account could group and manage all the monitoring points assigned by the administrator. In the "Data Monitoring" page, the view account could assign the monitoring points to different groups.

emplate	No template	*			
Select All	ID	Status	Address	Name	Description
	1808615	Device synced	0,0	4	
	1808614	Device synced	0,0	3	
	1808613	Device synced	0,0	2	
	1808612	Device synced	0,0	1	
	1738842	Changes saved	1,3	MO	
	1737768	Device synced	5,0	1233	
2) a 2	No 1 Poo	Decesso 10	Count 7 Home		
« 1 »	No. 1 Pag	e Perpage 10 🗸	/Count 7 Items		

Figure 6-21



The same monitoring points are allowed assigned to different groups. After assigning, the real-time data of the real-time monitoring points under the current group could be viewed in a certain group. If the view account has read and write authorities, the real-time data of the monitoring points could be modified, otherwise, it could only be queried.

### 6.3.2 Alarm

After the administrator assigns the alarm monitoring points to the view account, the view account could view the alarm data of the monitoring points assigned by the administrator on the "Alarm" page. Users could view "Current Alarm" and "Historical Alarm" on the page. The alarm data has two states: "confirmed" and "unconfirmed". The "current alarm" displays the alarm data in the "unconfirmed" state, and the "historical alarm" displays the alarm data in the "confirmed" state.

### (1) Current alarm

The view account could confirm the unconfirmed alarm data by clicking "Confirm" if it has read and write permission. Otherwise, it could only query the alarm data.

	Real-tir	me Data			Alarm		Historical	Data
Current Alar	n Hist	orical Alarm						
No temp 🗸	All	✓ All	✓ Cor	nfirm in batch	Export to XLS	Current pages 🗸		
Select All	Name	Level	Message	Value	Trigger	Time	Status	Confirmation
	A1	Minor		0	Released	2021-12-02 15:34:05	Unconfirmed	Confirm
	A2	Minor		0	Released	2021-12-02 15:34:05	Unconfirmed	Confirm
	A3	Minor		0	Released	2021-12-02 15:34:05	Unconfirmed	Confirm
	A4	Minor		0	Released	2021-12-02 15:34:05	Unconfirmed	Confirm



### (2) Historical alarm

After the alarm is confirmed in [Current Alarm], the corresponding current alarm data would be displayed in the "Historical alarm" sub-page. the alarm data could be queried according to the code, name, start and end date, and other conditions.

Real-time Data				Alarm			Historical Data		
Current Alarm	Historical	Alarm							
ID			Name			Template	No template	~	
Start time		HO	End Date		<b>==</b> 0	Q			
Export to XLS	Current pag	es 🗸							
ID	Name	Level	Message	Value	Trigger	State	us	Time	
14543	A1	Minor		0	Released	Confi	rm	2021-12-02 <mark>1</mark> 5:33:31	
14544	A2	Minor		0	Released	Confi	rm	2021-12-02 1 <mark>5</mark> :33:31	
14543	A1	Minor		1	Trigger	Confi	rm	2021-12-02 15:31:55	



### 6.3.3 Historical data

On the "historical data" page, the view account could query the historical data according to monitoring point, start and end date(Only query supported). The historical data could display in lists and curves.

#### (1) Display in lists

Device	<				1	0	•
Custom Tags	Rea	l-time Data	Alarm		<b>Lil</b> Historical Data		
Data							
	Template	Start Date	End Date	List Curve	Q		
	No template 🗸 🗸	Part 24br Part 7 Dave Part	30 Dave Accending Decending Exot	to XLS Current page	_		
	Тад	Fasi 24111 Fasi / Days Fasi	Su Days Ascending Descending	ounent page			
	H-AG-test 🗸		Time			T2	
	1		2021-12-02 13:38:29.529	9		0	
	T1		2021-12-02 13:37:29.529	9		0	
	Т2		2021-12-02 13:36:29.525	9		0	
	ТЗ		2021-12-02 13:35:29.525	9		0	
k	Т4		2021-12-02 13:34:29.529	9		0	
	T5		2021-12-02 13:33:29.525	9		1	
	TC		2021-12-02 13:32:29.525	9		1	
			2021-12-02 13:31:29.529	9		0	
	17		2021-12-02 13:30:29.529	9		0	
			2021-12-02 13:29:29.525	9		0	
		«« « » »» No.1Page I	Per page 500 v /Count 222 Items				

Figure 6-24

#### Device < Ω. 0 Custom Tags Historical D Real-time Data Alarm Data Template Curve Q Start Date End Date ..... List HØ No template Past 24hr Past 7 Days Past 30 Days Ascending Descending Current page 🗸 Tag H-AG-test 1 T1 0.8 ТЗ Τ4 0.6 T5 0.4 Т6 Τ7 0.2 2021-12-02 13:38:29.529 2021-12-02 12:47:09.277 2021-12-02 11:07:09.277

### (2) Display in curves

Figure 6-25

# **Chapter 7 Role management**

# 7.1 Role introduction

Role management could configure role permissions, and assign a role to the newly added sub-account, and the sub-account would have all the permissions of the role. The new sub-account management [role management] makes the configuration of sub-accounts more convenient and quicker, and is more conducive to unified management.

1 Up to 5 levels of sub-accounts are supported under each Master account.

2 Each account could create a maximum of one hundred sub-accounts. Sub-accounts could only be created and deleted by grade, but could not be operated or managed across grades.

3 The administrator could bind V-BOX and ig screen, create and delete level 2 sub-accounts, and restrict the management of all the sub-accounts permissions of it.

4 The sub-accounts of level 2, level 3, and level 4 could only create and delete the next level sub-accounts, and restrict the management of all the sub-accounts permissions of it.

5 Level 5 sub-accounts have no role management function, and could only view the information assigned by level 4 sub-accounts.

The relationship of "Role management" is shown below.



Figure 7-1

## 7.2 Compatibility with old sub-accounts

### 7.2.1 Compatibility description

(1) The old sub-account(old user)management is entered through the menu [Account management], and the following [Account management] all refer to the old sub-account management.

2 The new sub-account management is entered through the menu [Role management], and the following [Role management] all refer to the new sub-account management.

3 The old sub-account management [Account management] includes engineer account and view account.

The following table explains the compatibility of these two types of old accounts.

Category	Account management	Role management
Engineer account	Normal use, but unable to add	Compatible
Viewer account	Normal use	Compatible

Table 7-1

### 7.2.2 The old engineer account

The following are applications of the old engineer account in the new and old sub-account system.

1 After [Role Management] goes online, the old engineer account that has not been modified in the [Role Management] system could be used in both the new and old sub-account management systems.

2 If the old engineer account is bound to a role in the [Role Management] system, the account would be switched to a new sub-account, and use the permissions function of the new sub-account management system, and it would no longer be displayed in the old sub-account management system.

③ If the old engineer account is bound to the V-BOX, it could not be modified in the [Role Management]. Users need to unbind all the V-BOXs before assigning the roles.

④ Once the old engineer account is bound to a certain role, the new sub-account would not be displayed and used in the [Account Management] system.

## 7.3 Group management

The role and group need to be set before creating a new sub-account. Click the switch menu [Group Management] to manage group, as shown in the following.


K Home   Account Setting   Email   Account management   Feedback Role	Service ▼
Account Management Role Group 2	
+ Add Group	
Group Name	Edit
Default group	۲. m
engineer	۲ ش
manager	<b>e</b>
worker	đ m

Figure 7-2

On the group management page, users could add, modify, and delete groups.

- (1) Add group. The group name could not be repeated and supports up to 16 characters.
- (2) Modify group. Users could modify and edit account passwords, roles, and groups.

Delete a group. If there are sub-accounts under the group, it is not allowed to delete the group.

## 7.4 Role management

Click the switch menu [Role Management] to perform role management. The left side is the list of created roles, and the right side is the detailed configurations of the currently selected role.

The role has the authority to configure V-BOX and HMI. If the sub-account is bound to a role, the sub-account would have all the authorities configured by the role, and could also configure the real-time data read and write permissions, as shown in the following figure.



Figure 7-3



#### 7.4.1 New role

Click the [New Role] on the left to add a role, as shown below.

Account Man	agement	Role	Creat role	×
Role list	New Role	1	Please enter the role name	
	Ø Ó			
engineer				3
test			Cancel	OK
			📀 Read-write 👩	

Figure 7-4

**Note:** A maximum of 100 roles could be created. It needs to create at least one role before creating a subaccount.

#### 7.4.2 Configure role permissions

Click a role in the role list to configure the detailed permissions of the role on the right, as shown below.



	1.1.1	
Can you create a sub-account	~	0

V-BOX Permissions			HMI Permissions		
Real-Time data Read-write	000	Read-only Write-only Read-write 🕜	Real-Time data Read-write	000	Read-only Write-only Read-write
Real-Time data	~	0	Remote monitoring	~	0
Historical Data	~	0	Remote monitoring write	~	0
Alarm	~	0	Common Pass-through Use	~	0
Lua Script	~	0	Normal download	~	0
Basic	~	0	Share Device permissions	~	0
Common Pass-through Use	~	0	Data manipulation	~	0
VPN penetration authority	~	0	VPN penetration authority	~	0
hare management permissions	~	Ø			
		B S	ave settings		

Figure 7-5

The following table lists the description of the role that has the permissions configuration of the

V-BOX and the HMI. Uses could also move the mouse to the icon  $^{\textcircled{O}}$  behind the configuration

item on the platform. After configuring the role permissions, click the button Save settings save the modified role permissions. The specific permissions configuration are as follows.

V-BOX permission configuration						
Permission configuration item name	Description					
could you create a sub-account	To configure whether the account belonging to the role could create a sub-account and assign a V-BOX device.					
Real-time data read- write	To configure the read and write permissions of the data monitoring point of the V-BOX, including read-only, write-only, and read-write functions.					
Real-time data	To configure the basic operational functions of the real-time data of the					

to



	V-BOX (add, delete, modify real-time monitoring points, etc.).
Historical data	To configure the basic operational functions of the historical data of the V-BOX device (deleting original data, data registration, etc.).
Alarm	To configure the basic operational functions of the alarm record of the V-BOX (confirm alarm data, alarm registration, etc.).
Lua script	To configure the basic operational functions of the Lua script of the V-BOX (add, delete, edit strategy, synchronization strategy, etc.).
Basic	To configure the operational functions of the basic information module of the V-BOX (modify the V-BOX information, copy the configuration, import the configuration, restart the V-BOX, synchronize the V-BOX, add communication ports, firmware upgrades, etc.).
Common Pass-through Use	To configure whether the V-BOX under the account belonging to the role has the permission of pass-through.
VPN pass-through authority	To configure whether the V-BOX under the account belonging to the role has the permission of VPN pass-through. After configuration, it would directly affect the permissions of the account that the role belongs to and all sub-accounts of the role.
Share management permissions	To configure whether the account belonging to the role has the permission to share the V-BOX.
	HMI permission configuration
Permission configuration item name	Description
Real-time data read- write	To configure the read and write permissions of the data monitoring point of the HMI, including read-only, write-only, and read-write functions.
Remote monitoring	
	To configure whether the account belonging to the role has the functions of remote monitoring operation, including write.
Common Pass-through Use	To configure whether the account belonging to the role has the functions of remote monitoring operation, including write. To configure whether the account belonging to the role has the function of pass-through.



Share device permissions	To configure whether the account that belongs to the role has permission to share the HMI.
Data operation authority	To configure the basic operational functions of the data operation of the HMI (confirmation and deletion of alarm data, deletion of historical data, operation buttons on the basic information page, etc.).
VPN Pass-through	To configure whether the V-BOX under the account belonging to the role has the permission of VPN pass-through.

#### Note:

(1) The configuration would directly affect the module operation permissions of the account to which the role belongs and all of its sub-accounts.

(2) [Disable]. This operation means that the account belonging to the role and all its sub-accounts would not be able to create sub-accounts or assign V-BOX and ig screen to sub-accounts.

(3) [Enable], This operation means that only the configuration of the account belonging to the role is enabled, and the permissions of all sub-accounts of the account need to be enabled by the sub-account.

#### 7.4.3 Modify the role name

Click the button low behind the current role in the role list to modify the name of the role.



Figure 7-6

### 7.4.4 Delete the role

Click the button behind the current role in the role list to delete the role. After the role is deleted, it could not be restored.

**Note:** If an account belongs to the role, all the accounts that the role belongs to need to be removed before deleting it.



Test1   worker   engineer   test     V-BOX Permissions   Real-Time data Read-write   Read-only   Write-only   Read-write	New Role	Can you create a sub-account 🔽 🔞
Real-Time data Read-write Read-only Write-only Read-write	Test1	V-BOX Permissions
test 📀 Read-write	engineer	Real-Time data Read-write O Read-only Write-only
	test	Read-write

Figure 7-7

# 7.5 Account Management

After adding groups and roles, users could add sub-accounts. Click the switch menu [Account Management] to manage the sub-accounts of the current account, as shown below.

	Account Manageme	nt Role	Group				
Q	All gr 🗸 All F	Ri 🗸 All sta	ates 🗸	Please en	Search Accoun	t 🕇 C	reate account
	Account Name	Group	Role	Email	Phone Number	Enable	Operation
	OTS1	Default group	Test1			~	C 🚨 🖻
	WECONworker1	Default group	worker			~	🕑 🚨 🖻
	weconworker11	default group	weconworker1				P 🚨 🗊
	Oweconworker12	default group	worker				P 🕰 🛍
	OWECONengineer2	Default group	engineer			~	🖉 🚨 🖻
	OWECONengineer1	Default group	engineer			~	C 🖸 🖻

Figure 7-8

### 7.5.1 Create an account

Click the button

on the right to create a sub-account of the current account,

as shown below :



Account Managemen	nt	Create account			×			
All group 🗸	A	User Name	Please enter User Name		4	Search Acci	ount	+ Create account
ccount Name					N	lumber	Enable	Operation
)TS1	De	Password	Please enter Password					C 🛆 û
WECONworker1	De	Role	Test1	~				C 🗅 🖻
⊙weconworker11	de	Group	Default group	•				6 🕰 🗊
Oweconworker12	de	150 405						
)WECONengineer2	De	Enable	~					6 0 0
WECONengineer1	De				5			

Figure 7-9

① User name. Create the name of the account. The user name is 1-20 characters in length and could only consist of letters, numbers, and underscores.

2 Password. The length of the password could not be less than 6 digits.

3 Role and group. Please configure roles in [Role Management] and configure groups in [Group Management] before creating an account.

④ Enable. Select the enable means that the account could log in normally, otherwise, it is prohibited to login.

### 7.5.2 Account list

The created account could be displayed in the account list. The current account could only create up to 100 sub-accounts.

All the sub-accounts and all the detailed information of the sub-accounts created by the sub-account could be viewed in the account list.

Accounts in role management currently include administrator account and support 5-level accounts. The account management page of administrator account is shown below:

A	Account Management		Role	Group				
Q	All gr 🖌	All Ri 🗸	All sta	ates 🗸	Please en	Search Account	+ (	Create account
Acc	count Name	Gi	oup	Role	Email	Phone Number	Enable	Operation
ОТ	rs1	Defau	lt group	Test1			~	C 🚨 🖻
ΘV	VECONworker	1 Defau	It group	worker			~	C 🗅 🛍
G	weconworker1	1 defau	lt group	weconworker1				P 🚨 📋
(		r12 defau	lt group	worker				D 🕰 💼
OV	VECONengine	er2 Defau	It group	engineer			~	C 🖬 🛍
OV	VECONengine	er1 Defau	It group	engineer			~	C 🖸 🖻

Figure 7-10



Users could click the icon in front of the account name to shrink and expand sub-accounts and to view sub-accounts. The meaning of each icon is shown in the table below.

lcon	Description
0	This sub-account has no sub-accounts.
<b>(</b>	This sub-account has sub-accounts and is in contraction, and could be expanded after clicking.
Θ	This sub-account has sub-accounts and is in an expanded state, and could be contracted after clicking.

Table 7-2

### 7.5.3 Modify sub-account

Click the button sub-account created by the current account in the account list to modify the details of the sub-account, but the username could not be modified.

Expand the multi-level list of all sub-accounts of a sub-account to view all sub-accounts of the

sub-account. Click the button is could view details about the sub-account, but could not modify the sub-account.

Note: The current account could only modify the sub-account information created by it. For all the sub-accounts created under the sub-account, it could only view but not modify it.

Edit account info	rmation		×		
User Name	WECONworker1		irch Ac	count	ite account
Password		•	imber	Enable	Operation
Role	worker	~		<b>_</b>	C A B
Group	Default group	•		~	
			2		
		Cancel	ок		

Figure 7-11





Figure 7-12

### 7.5.4 Delete sub-account

Click the button next to the role to delete the role. After the role is deleted, it could not be restored. Users could only delete the information about the sub-accounts created by themselves, but could not delete the sub-accounts across the levels, and the delete button is grayed out and could not be operated. Remove all the sub-accounts of the sub-account and unbind all the assigned V-BOXs and ig screens to delete a sub-account.

Account Name	Group	Role	Email	Phone Number	Enable	Operation
Account ITS	11 has a lin	k Device inle	ase unli	nk it firstl	~	
efault group	engineer	r Denice, pier		ik it in ste	~	C 🖬 🖻
weconworker11	default group	weconworker1				0
Oweconworker12	default group	worker				P 🕰 🔒
Account [WECONwo	irker1 orker1] has sub-	accounts that can	not be delet	ed (Recomm	~	C 🖬 🗊
ault group work	er ended to dis	able the account)!			~	C 🖬 🕯

Figure 7-13



#### 7.5.5 Assigned devices

Click the button behind the sub-account, users could view the assigned devices for the

sub-account. Click the button + Assign Device, and select the device to assign the devices to the account in the pop-up box, and click OK, the assignment is complete. as shown below.

account TS1 A	ssigned Devic	e list											×			
All group	•	All states	~	Device Typ€	~	Whether to	~	All Models	~	Please enter De	vice name	Q		+ (	rea	te a
Select All	Device Type	Status	I	D [TS1]D	)evic	e Group	D	evice Name		Model	Edit	:	r I	Opr	erati 1	ion
No Data														C	0	Ô
								_		2				ľ		1
								+	Ass	sign Device 📄	Unlink series	Cance		I	-	

Figure 7-14

All group	Ŧ	All states V	Device Type 🗸	Whether to 🗸 A	II Models 🗸	Please enter Device	name Q
elect All	Device Ty	pe Status	ID	Device Group		Device Name	Model
		0	1543	Default group		123	PI3070ig
		0	1539	Default group		chenzl	PI3102ig
	겁	0	878	Default group		1212	V-BOX E-4G
~		Ø	732	Default group		H-AG	V-BOX H-AG

Figure 7-15

(1) Before assigning V-NET devices, users need to select the sub-account device group, and the device would be assigned to the account.

2 Users could search for the corresponding V-NET device through the search bar.

**Note:** The current account could only assign V-NET devices to sub-accounts created by itself. For all sub-accounts created by sub-accounts, the account couild only view the list of assigned V-NET devices, but could not assign V-NET devices.

#### 7.5.6 Unbind devices

In the list of assigned V-NET devices, users could click the button and



button

Dnlink series

to unbind the selected V-NET device from the account. If a certain

device to the sub-account is unbound, it would also unbind the devices assigned to all sub-accounts created by the sub-account.

account TS1 Assigned Device list	×
All group   All states   Device Type  Whether to  All Models  Please enter Device	name Q + Create acc
Select All Device Type Status Model	Edit Operation
🗆 🖾 🧔 🥐 v-box h-ag	E Unlink
« 1 » No.1 Page Per p: This operation will unbind the account [TS1] Device [H-	6.08
AG], do you want to continue?	B Q I
Cancel OK Ssign Device a Uni	link series Cancel
WECONengineer1 Default group engineer	

Figure 7-16

# **Chapter 8 HMI ig series configuration**

# **8.1 Connect ig screen to V-NET**

### 8.1.1 Add ig screens

When logging in to the V-NET for the first time, users need to add an ig screen and bind it with the account. The account bound to the ig screen is called the "administrator account". A device could only be bound to one account, that is, the administrator account is unique.

When binding an ig screen, users need to know the machine code and password of the device, and enter the device name and set group. All the devices added by the administrator would be placed in the "default group" by default. If the administrator has created a device group, the added devices could also be modified to other groups.

Access Key			
Access Key	A		Number of upgradeable
	Access Key	0	U/4 Upgradeable/Tota
	Ipmort Template		N Conver V MET Limite on
Descuord	Deserved		y Data Storage Amount
Password	Password		Thanks for using WECON
Remark	Remark	0	CPlease notice
Group	Default group		e nej in 2021-05-13 21 (er.09
Industry	Smart home •		c
			Value Trigger
	Can	cel OK	On Troper
	Password Remark Group Industry	Password Password Remark Group Default group Industry Smart home Can	Password Password Remark Remark Group Default group Industry Smart home Cancel CK



- (1) Access key(machine code). Each ig screen has a unique machine code for remote monitoring equipment identification. If multiple V-BOXs or ig screens are bound at the same time, export the template to fill in the machine codes, and then import the form to bind.
- (2) Import. Fill in the machine codes to the template file, and import it.
- (3) **Template.** An export template file is an excel form named "batch\_mould" with the format to input machine codes.



Device	Add Device	Conico -	Coolleb - (	O weconuser -
Search				Number of upgrade
Share with others A	Access Key	Access Key	Ø	22/25
🖬 My Share 🔨		2		
● 水处理系统 V01001171116005		Ipmort Template		
◎ 中央空間 Vir0011711160050	Password	Password		
● 供禮系统 Vir0011711160050	Remark	Remark	0	
<ul> <li>智能农场(Smart fa Vir0011711160050</li> </ul>	Group	Default group	•	
<ul> <li>換熱系統(Exchang Vir0011711160050</li> </ul>	Industry	Smart home	~	0
_1	supply) 恒任供水( supply)	Water Start atarm Minor	Cancel OK Warning starts	button is triggered!
+= = * *			_	

#### Figure 8-2

**Note:** The content of the template file should only be header and machine codes, and all the other contents need to be deleted.

machineCode	
注意:除了您自己填写的内容和表头	把本条提示删除【Note: In
addition to the content and he	eader that you filled in,
please delete this "note"】	<b>Delete</b>

- Figure 8-3
- (4) **Password.** The default password is 888888, and it is the cloud access password. Binding device password for the first time, please refer to the configuration software "PIStudio" [cloud configuration].



apping 🔞 Text 🛛 🙆 E	-Mail 🛛 👴 Bit Alarm 🛛 😹 Trend Chart 🛛 🧞 User Permission 🚺	Cloud 🚹 Project Window 📃 Report 🔽
ape 💿 Address	🛕 Word Alarm 📩 History XY Plot 📑 MessagePrompt	Preview Window 💼 🗏
nt 🔲 SMS	🙀 Recipe 🛛 💾 Data record 🖬 Traditional Recipe	🔽 Compiling window 🥒 🛛 🭕
Library	Data Tool	Tool
Cloud		×
Basic Tags User	MOTT OpenCloud	
		ĭ
Enable		
Server Selection		
Server	Europe	
Password	888888	
Unload Soloction		2
to Cloud	To User MOTT	
Low Data Mode se	etting	
V "Low Data Mo	de" by default on new tags	
Cycle(s)	2	
		确定 即消 邦助

Figure 8-4

(5) Device alias. It is the device name in the device menu bar.Note:

(1) If the user binds multiple devices at the same time, the passwords of the devices should be consistent. Only one machine code could be entered on a line. When entering multiple machine codes, use the "Enter" key to change the line. If not, the format is wrong, and the binding would fail and an error would be reported.

(2) If the user binds multiple machine codes in batches, the device alias would use the input device name as the prefix, and the system would automatically add a suffix. Example: Default group (device alias)\_1 (automatically added suffix)

#### 8.1.2 Obtain machine code

The method of obtaining the machine code is as follows.

(1) PIStudio—[Project]—[Tool]—[Download]—copy the machine code, as shown below.

# 

	]+{	pile Q Off-line	ownload	Help About
	and a second	Tool		Help
-	55			×
				V2.0
PC Port: USB:Do	wnload 🔄	IP:   192	. 168 .	1 . 200
File type: Project	File 🗾	Password:	(Upload	d Project)
Auto-scan USB	port 🗆 Mor	e	Upload	prohibited
				×
MacCode:U320H12 The machine code is	successfully obtai	ned and copied t	o the past	
HMI to PC	PC to HMI	Sync Clock		Close
Recalibration	Delete setting	HMI version	Ma	chine Code

#### Figure 8-5

(2) Obtain from the ig screen. Long press the upper right corner of the HMI to enter the backstage, and Users could see it in "Machine Info" [Machine Id], as shown below.

HMi Info	HMI Version	About
Model:	PIXXXXX	ADOUL
Serial No:	XXXXXXXXXXXXXXXXXX	
Machine Id:	*****	Network
		USB Update
		System
		Restart
	00	

#### Figure 8-6



### 8.1.3 Basic information

After the administrator adds a device, click on a device from the device list on the left side to enter the device details page. The page includes four sub-pages: "Remote monitoring", "Data view", "Pass-through", and "Basic", as shown in below.

Device	Template	K Home   Account Setting   Email   Ac	count management   Fe	eedback   Role   🛛 🖗			Service • Q 0 15 •
Search	٩	20		0		۵	o:
Custom Tags		Remote monitoring		Data v	liew	Pass-through	Basic
🗈 default group		Basic Status Push Re	gisters Information	Version			
Ø 1212 vokorcocercocercos							
Ø 3102ig	H.	Device name	13459491945				
Ø 123		Status	Offline C Refres	h			
Ø chenzl		Access Key	U320H1211022220	W00014f176f744ec5			
Ø H-AG		Record	Collection	History Alarm ©			
🗅 Tajalli (0/0)		Wechat Alarm Push	<u>~</u>				
		password		B			
		Model	PI3102ig				
		Industry Sector	Smart home		~		
		Max. alarm records	10000				
		Location	longitude	latitude	<b>♀</b> Edit		
		Targeting	Use Device base	station positioning	~		
		Remark					
		Advanced	Unbind Device	Save Force sync	Device restart		
+ = 🖕 🗚	* * C +						

#### Figure 8-7

In the "Basic Information" sub page of basic configuration, users could also manage the device information, such as modifying the device name, latitude and longitude, and remarks. After the user inputs modified information, and the input data is legal, click the "Save" button at the bottom. then it would be modified successfully.

- (1) **Device name.** The alias of the HMI device in the device menu bar.
- (2) Online status. Click the refresh button to refresh the online status of the HMI.
- (3) Machine code. Each HMI has a unique and independent machine code for the identification of the remote device.
- (4) **Record.** The selected configuration and data would not be updated when the HMI project is downloaded again.

The configured data is collection point information, alarm data, and data record data on the IG screen. That is, the selected configuration would not be updated to the cloud with the ig screen at the same time. The project on the tHMI actually has the configuration.

If users want the cloud and ig screen configurations to be the same, deselect and save the modification, and download the project again or force to synchronization. This operation is to delete all configurations on the cloud and synchronize the configurations on the screen to the cloud.



Remote monitoring		Data view		Pass-through	C Basic
Access Key	U320H1211022220W00014f176f744ec5				
Record	Collection	fistory Alarm	9.3		
Wechat Alarm Push					
password			Þ	9	
Model	PI3102ig				
Industry Sector	Smart home		~	Are you sure you want to update co	nfigurations anyway ?
Max. alarm records	10000			Cancel	
Location	longitude	latitude	<b>♀</b> Edit		
Targeting	Use Device base s	tation positioning	~		
Remark					
Advanced	Unbind Device	Save Force s	ync Device resta	nt	

Figure 8-8

- (5) Password. It is the cloud access password, the default is 888888, and it could be modified.
- (6) Maximum storage of alarm data. The number of alarm data stored is with a range of 1-50000.

#### (7) Positioning method.

- 1) Device base station positioning.
- 2) Manual positioning.
- (8) Unbind the device. Administrator could click the button
- (9) After modifying the basic information of the device, users need to click the button

save it successfully. If the save is not successful, click

to unbind the device.



### 8.1.4 Status Push

In the "Status Push" interface under "Basic ", users could set the ""Email Notification" settings. For details, refer to <u>4.1.5 Status push(Email)</u>

Remote monitoring	Data view	Pass-through	Basic
Basic Status Push Online/Offline Statu	Registers Inform	ation Version	
WeChat Push (Not av	ailable)		
Email Notification			

Figure 8-9

### 8.1.5 Registers Information

In the "Registers Information" page, users could view the machine code or IP address of the device, Wi-Fi IP, 4G IP and other information, as shown below.

Basic Status Pu	sh Registers Information	Version	
Current Network	Ethernet		
IP Address	192	Subnet Mask	2 0
Default Gateway	192.	MAC	1a:2f4
WifilP	0.0.0.0	Wi-Fi mask	0.0.0
Wi-Fi gateway	0.0.0.0	WifiMAC	00:00:00:00:00:00
Wi-Fi signal	0	4GIP	0.0.0.0
4G mask	0.0.0.0	4G gateway	0.0.0.0
4GMAC	00:00:00:00:00:00	4G signal	0
4G positioning	0	4G latitude / Iongitude	

Figure 8-10



#### 8.1.6 Version

As the product is in the pace of continuous updating, the functional attributes of the device could be judged based on the version information. As shown below.

Basic	Status Push	Registers Information	Version				
	System:R0	6R988_V1.1.491_D20211101					
	HmiTerm	R06D006_V1.9.796_D2021111	8				
	FS:R06P168_V1.0.5_D2021-09-07						
	OS:R06P9	99_V1.3.19_D20210812 pi3xx	xig				
	Project:R0	5R998_V7.2.189_D20211104					
	Driver(s) :						
	libModbus	Master_TCP.so :V3.0.0 2020-	12-04				
	libWecon_	2NProtocol.so :V3.0.0 2021-06	-25				

Figure 8-11

## **8.2 Device List**

The main function of the device module: **Multi-level device list, Custom monitoring point, Search device, and Toolbar.** 

The multi-level device list displays all the devices under the account, and displays it in the form of a

multi-level grouped tree menu. After selecting the device  $\blacksquare$ , it would automatically jump to the

functional interface, including **Remote monitoring**, **Data view**, **Pass-through**, **and Basic**. As shown below.



Device	Template	<			Servi	ce▼ Q	0 -
Search	۹	<b>B</b>		0	۵		00
Custom Tags		Remote mor	nitoring	Data view	Pass-through		Basic
🕞 default group (1/5)	) ~	Communica	tion port	Collection point	Alarm configuration	Alarm Recor	d
1212 VGA001200512006583086607	ä	Data Record	Configuration	n Data Record			
3102ig U320H1211022220W00014ft		serial	Port	Port	Agreement r	ame	Edit
0 123 U370H0211008620W001017		1	Ethernet		MODBUS TCP	Master	Details
		2	COM1	RS422	WECON LX	3VP	Details
+ = 🗁 \star •	< 2 ≑						



When the mouse is located on a device name under a multi-level group, right-click the mouse to display a drop-down list, which includes functions such as Follow, Share Device, Move Group, Copy Access Key, Transfer, Pass-through, Mark on map, etc., as shown in Figure 8-10 shows:

Position the mouse on the multi-grade group name, right-click the mouse to display a drop-down list, including Follow, Share Device, Move Group, Copy Access Key, Transfer, Pass-through, Mark on map. As shown in the following figure.



Figure 8-13

- (1) Follow. Select the device in the list and right-click, then click [follow] to add the devices, Users need to focus on to the list, and the followed ig screen could be viewed in the "My Follow" list, right-click and select "cancel follow" to delete it. As shown in the following figure.
- (2) Share Device. Users could share the device with other accounts for viewing (only for viewing, not operating).
- (3) Move Group. Modify the group to which the device belongs, as shown below.

Toggle [3102ig] group			×
Group	Default group	v	
	Default group		
	<b>Tajalli</b>	Cancel	ок





- (4) Copy machine code. Copy the machine code of the device.
- (5) **Transfer.** Transfer the device to another account. After the other account agrees to receive it, the device would be bound to the account, and the device would be removed from the removed account. For details, please refer to [Transfer Device].
  - **1) Remove device.** When transfer the device to another account, Users need to fill in the information of the transferred user and the password of the device. The account information would appear if you fill in the right one. Confirm that the account information of the opposite is accurate and then transfer. As shown in Figure 8-12:

When removing the ig screen, users need to fill in the information of the transferred user and the password of the ig screen. The account information would appear if you fill in it correctly, and confirm that the information to transfer it. As shown in the following figure.

Transfer Device	×
Device Name	3102ig
Access Key	U3271
password	Password
Transfer to	Username/phone/email
	Please verify the account information
	User Name:
	Phone:
	Email:
	Company Name:
	Cancel Transfer

Figure 8-15

- 2) Receive device. When receiving the ig screen, it needs to reset the name of the device and select the group.
- (6) **Pass-through.** Select the device in the list and right-click, then click [Pass-through] to jump to the Pass-through page.
- (7) Mark on map. Mark the new latitude and longitude on the map for the current device.



# 8.3 Remote Monitoring

Remote monitoring could display the project page of the current screen in real-time, and realize the operation of the project on the web page, remote monitoring of the screen, and the control of the screen, etc. As shown below.



Figure 8-16

(1) The remote monitoring screens of the Web+ ig screens could only display up to 4 screens at the same time. According to the priority of the user entering the remote monitoring interface, that is, when the fifth user access, there would be a prompt as below.



Error! The number of remote monitoring visits reaches the upper limit

Figure 8-17

(2) If the device is offline, it would display that the device configuration project could not be loaded successfully! As shown below.



Figure 8-18



## 8.4 Data View

Data view has six modules, including **Communication port, Collection point, Alarm configuration**, **Alarm Record, Data Record Configuration, Data Record**. As shown below.

Device	Template	K Home   Account Setting   Email   Account management   Feedback   Role   Service •					□ 1: 45 -
Search	٩	æ		0		۵	00
Custom Tags		Remote monitoring	9	Data view	Pass	-through	Basic
🗁 default group (*	1/5) ~	Communication port	Collection point	Alarm configuration	Alarm Record	Data Record Configuration	Data Record
1212 V0A0012005120065e30688	ar	serial	Port	Port	Ag	reement name	Edit
3102ig uszoh1211022220W00014r	n	1	Ethernet		MOD	BUS TCP Master	Details
Ø 123 U370H0211008620W001017	7	2	COM1	RS422	W	ECON LX3VP	Details
O chenzi							

Figure 8-19

The data and the configurations for data viewing are all from the configuration software PIStudio. The monitoring point could not be added to the V-NET account, and the cloud function should be enabled first. The operation is as below.

~ ~		_0
🔊 Text 🛛 🞑 E-Mail	User Permission	loud Project Window Report
Address	Word Alarm Mistory XY Plot MessagePrompt	Preview Window
SW2	🕼 Recipe 🔡 Data record 🕼 Traditional Recipe	Compiling window 🥖 🦓 🛛
Library	Data Tool	Tool
loud	and Longer	
Basic Tags	MOTT OpenCloud	
2	MQTT Opencious	
I Enable		
Server Selection		
Server	Europe 👻	
Descourd	222222	
Password	888888	
Upload Selection		
() to Cloud	💿 to User MQTT	
Low Data Mode se	etting	
🔽 "Low Data Mod	de" by default on new tags	
Cvcle(s)	2	
		确定 取消 帮助

Figure 8-20



### **8.4.1 Communication port**

The connection method and protocol name and communication port of HMI could only be viewed, and could not be added or modified.

Remote mor	Remote monitoring Dat		ata view Pass-throu		<b>C</b> Basic
Communication p	Collection point	Alarm configuration	Alarm Record	Data Record Configuration	Data Record
serial	Port	Port	Agre	ement name	Edit
1	Ethernet		MODB	JS TCP Master	Details
2	COM1	RS422	WE	CON LX3VP	Details



The communication port information comes from the information set on the ig screen, and it needs to be configured on the PIStudio.

				PIStuc	io Project p			
Home Project	Communic	ation						
Communication 2 Mappin	Connect	tion:						
🕼 Project Settings 🛛 🛃 Shape	No.	Commun	Protocol	Device t	уре			
Font pack	1	Ethernet		MODBUS TO	Master			
Settings	2	COM1	RS422	WECON	X3VP			
oject 4 ×					1			
- <b></b>					1.00			
Screen	_				3			
1: PLC		New	Delete		tting			
2: Motor								
⊞- <mark>®</mark> Script	HMI No.: 0 Device No.: 0							
🕀 🛄 Lua								
	СОМ	E	thernet					
	Protocol	Ν	IODBUS TCP Mast	er				
	HMI Mod	lel P	PI3102ig					
	COM:	4	lone		Setting			
	Device I	P:	192.168.40.100:5	02	Setting			
eview 🛛 🕹 🕹	Timeout	: (	1500, 50, 2, 3, 0	, 0 ,5)	Setting			

Figure 8-22



### 8.4.2 Collect point

It is the data monitoring of the device. The collection point is the monitoring tag. Its read-write, write-only, and read-only permissions also come from the tags set in PIStudio. Users could not add or delete collection points here.

Remote monitor	ing	Data	O Data view		CS Pass-through	<b>C</b> Basic	
Communication port	Collection point	Alarm config	juration	Alarm Record	Data Record Configuration	Data Record	
Group list	Status	ID	Name	Value	Port	Read Address	Edit
		10001		<u>0</u>	Local Address	HDW100	Details
	•	10002	i2	<u>0</u>	Local Address	HDW101	Details



The read-write permissions of the collection points set in the HMI would directly restrict the modification of the read-write permissions of the collection point in the V-NET.

Cloud Basic Tags User N	<ul> <li>● Bit Alarm Mode Trend Chart Set User Permission</li> <li>▲ Word Alarm History XY Plot Traditional Recipe</li> <li>■ Data record Traditional Recipe</li> <li>■ Data Tool</li> </ul>	Cloud Project Window Report C III III IIII IIII IIIII IIIIIIIIIII
DataRecord ID	Group name	Total channels Sample time
Add	Delete	Export 确定 取消 帮助

Figure 8-24



General			Channel List							
Group Name Record	1		No.	Channel name	Address	Data format	Data length	Number o	R/W	Low Da
		Edit	1	Channel1		16-bit signed	1	4.0	r	on
Tabl damasla(1, 100)			2	Channel2		16-bit signed	1	4.0	r	on
rotal channels(1~100)	10	Apply 5	3	Channel3		16-bit signed	1	4.0	r	on
Sample Cycle(s)	15	6	4	Channel4		16-bit signed	1	4.0	r	on
		•	5	Channel5		16-bit signed	1	4.0	r	on
Quick setting			6	Channel6		16-bit signed	1	4.0	r	on
Start channel		Edit 7	7	Channel7		16-bit signed	1	4.0	r	on
Start charmen	L		8	Channel8		16-bit signed	1	4.0	r	on
Data format	16-bit signed	•	9	Channel9		16-bit signed	1	4.0	r	on
Number of digits		Edit	10	Channel10		16-bit signed	1	4.0	r	on
Number of aights	4.0								2	<u> </u>
R/W	r	8								
Select channel language	Language 1	•								
								Save		Close

Figure 8-25

### 8.4.3 Alarm record

Alarm record of the device and monitoring points could not be added in the V-NET. The data comes from the bit alarm and word alarm configured on the PIStudio. As shown below.

Bit Alarm     Word Alarm     Recipe      I:PLC 2:Mot	Trend Chart Sa User Permission Sa History XY Plot SagePrompt Data record II Traditional Recipe Data Tool	Cloud Project Wind Preview Win Compiling w	low Report dow Delete report indow P Shape Tool	🗋 Format 🛛 🦷	Decompile Password Tool Resource report
Bit Alarm Bit alarm Recipe ID	© Word alarm Trend Chart Address Conditions	Data rec History Alarm message	cord XY Plot Alarm screer	n Buzzer	upload to Cloud
Copy Add	Bit Alarm Settings Bit Address: Group No.: Record bit alarm Upload to Cloud Alert Control Bit: Clear alert when alarm off Beep when alarm ON Beep Once	Not save alarm OFF	Alarm Condition   When bit ON  When bit OFF  Alarm Screen  Alarm Screen:  Non  Position:  X  Pop-up interval:  Pop-up once  Close screen when	e 0 γ Sec(1 Se alarm off	• c ~ 1Day)
y 1 )Error (s)	Content	Text Lib	Edit All Texts		*

Figure 8-26



#### Users could confirm the alarm and export the data.

Re	emote mo	onitoring		O Data viev	N		Case-through		<b>OS</b> Basic
Communica	ation po	rt Collectio	on point Ala	arm configura	tion Alarr	m Record	Data Record Configuration	Data Record	
ID				Status	All		~		
Start time				End Date			a		
Confirm in ba	atch	Delete selected	d Export to X	KLS Curr	rent pages 🗸 🗸	•			
Select All	ID	Name	Message	Value	Trigger	Status	Tim	e	Confirmation
	1	HDX0.0		On	Trigger	Unconfirme	ed 2021-10-22 2	2:36:10.000	Confirm
	1	HDX0.0		On	Trigger	Unconfirme	ed 2021-10-22 2	2:36:09.000	Confirm
	1	HDX0.0		On	Trigger	Unconfirme	ed 2021-10-22 2	2:36:08.000	Confirm

Figure 8-27

### 8.4.4 Data record

It is the historical data of the device. The monitoring points could not be added, and could only be viewed.

Remote monitor	ing		o Data view		CS Pass-through		Basic
Communication port	Collection	point	Alarm configuration	Alarm Record	Data Record Configuration	Data Record	
Group list		ID	Name	Po	rt F	lead Address	Edit
		10001	1000	Local A	ddress	HDW0	Details
	10	10002	2	Local A	ddress	HDW1	Details
		10003	; 3	Local A	ddress	HDW2	Details
		10004		Local A	ddress	HDW3	Details

Figure 8-28



The data comes from the bit alarm and word alarm configured on the PIStudio. As shown below.



Figure 8-29



When querying data, users need to select or enter the monitoring point and start and end dates. The display of historical data could be viewed in both tables and curves. As shown below.

Remote monit	toring	O Data view	CS Pass-through	<b>OS</b> Basic
Communication port	Collection point	Alarm configuration Alarm Record	Data Record Configuration	Data Record
Тад	Start Date	End Date	HO List Curve	٩
~	Past 24hr Past 7 D	ays Past 30 Days Ascending Descending	Delete selected Export to XLS	Current page 🗸
	Select All	Time		
		2021-12-06 16:16:3	37.000	23
		2021-12-06 16:16:3	34.000	23
		2021-12-06 16:16:3	31.000	24
		2021-12-06 16:16:2	28.000	24

Figure 8-30

		0			
Remote monitoring		O Data view	Pass-through	Basic	
Communication port	Collection point	Alarm configuration Alarm Reco	ord Data Record Configuration	Data Record	
Tag	Start Date	Ho End Date	HIS List Curve	٩	
	Past 24hr Past 7 Da	ys Past 30 Days Ascending Descending	Delete selected Export to XLS	Current page 🗸	
			•		
	<sup>25</sup>		W/L/WWLWYW/WWW/W/WL/L/	MANN MUMMANN MANN	
	20				
	15				
	10				
	5				

Figure 8-31



## 8.5 Pass-through

This function allows applications on the computer to download directly to PLC or HMI. The remote download function of pass-through couldnot be used on the Web server temporarily, it could be used only on the PC client. For details, refer to **09 Remote download**.

Home   Account Setting   Email	Account management   Feedback   Role   🔅			Service ▼
Remote monitoring	Data view	Pass-throu	ugh	<b>C</b> Basic
Status Edit Name Port Virtual Port	Offline New hhbh hhhh COM1	Step Pass- Add o Start Virtua Virtua Stop	S: through process: or select the configur pass-through al port connected fror al port disconnected f	ation for pass-through m PLC software from PLC software
Port	RS422	~		
Baud Rate	9600	~		
Stop Bit	1	~		
Data Bit	7	~		
Parity	EVEN	~		
Wait Timeout	0			
	Update Delete			

Figure 8-32



# **Chapter 9 Remote download**

The function of pass-through allows applications on the computer to remotely pass-through the device, download projects, etc., via the V-BOX or ig screen.





# 9.1 PLC Download

Through the V-NET PC software, remotely pass-through the V-BOX or IIoT ig screen (the PLC remote download procedure is the same) to directly control the PLC devices, including upload, download, and monitor PLC programs.

### 9.1.1 The COM port

When installing the software for the first time, users need to restart the computer to prevent the virtual serial port node from being incorrect. PLC software may not be able to identify the virtual serial port. After the software is successfully installed, the virtual serial port is displayed in device Manager, as shown below.





Click the setting button in the upper right corner of the PC software to view the COM port configuration used for PLC downloads and Pass-through. The marked area is. This COM port is the same virtual serial port as the device manager. As shown below.



	₽ <b>⊍©1</b> - □ ×
(	Service → Q Q 5 →
Virtual serial setting Using virtual serial	Disable Basic
Set using COM COM2(using)	Set
Disable virtual serial service before closing software Browser Bacommended Line Google Chrome	ugh process: Browse lect the configuration for pass-throug
Chrome(using)	Set S-through
Server Europe(using)	Set

Figure 9-3

### 9.1.2 Remote download configuration

When operating pass-through, V-BOX and IG screen should be connected to the network, and ensure normal communication with PLC.

If the virtual serial port is set successfully, the system automatically updates the enabled virtual serial port. Fill in the device information, choose COM1 or COM2 as the communication port. When

the information filled in is the same as the PLC, Click the button

If the pass-through succeeds, the current status changes to "running", and all the filling information becomes gray and could not be filled, and only the function button "stop" is left indicating that the pass-through is successful.

Status	Offline		
Edit	New	LX3VE	
Name	LX3VE		
Port	COM	0	3
Virtual Port	COM	<b>6</b>	
Port	RS42	Please do not operate Device while running pass- through(Please do not leave this page during startup. If	,
Baud Rate	9600	the page is abnormal for a long time, please try to restart the device)	,
Stop Bit	1	Cancel	,
Data Bit	7		,
Parity	EVEN	2	,
	Update	Start pass through Delete	

Figure 9-4



Status	Running	
Edit	New LX3VE	Ŧ
Name	LX3VE	
Port	COM1	Ţ
Virtual Port	COM2: Virtual Serial Port	
Port	RS485	×
Baud Rate	9600	×
Stop Bit	1	¥
Data Bit	7	×
Parity	EVEN	v
Stop		



The descriptions of the remote download page are as follows.

1 Status. Display the statuses of the device, including ready to pass-through, pass-through is in progress.

- 2 Edit. Users could add and save different pass-through parameters configurations.
- 3 Name. Set the name of the saved record.
- (4) Communication port. The communication ports of V-BOX and the device to pass-through

5 Virtual port. The virtual serial port is generated by the PC. After successful penetration, the PLC software connects to the virtual serial port, and then the PLC could be monitored,

uploaded/downloaded, etc.

6 Connection ways include RS232, RS422, RS485, and Ethernet.

7 Baud rate. Select the baud rate corresponding to the configuration of the communication port on the device.

8 Stop bit. Select the communication parameters corresponding to the communication port configuration of the device.

9 parity. Select the communication parameters corresponding to the communication port configuration of the device.

10 Update. Update or save the setting records.

(1) Start pass-through. Click "Start pass-through" and the current state changes to "Stop". At this time, PLC software could be used for remote monitoring, uploading/downloading programs, and other operations.

12 Delete. To delete the saved settings.

(13) Stop. To stop pass-through.



#### 9.1.3 Transport Settings

Here is the example of LX3VE. Click <u>here</u> to download the PLC programming software of Wecon "Wecon PLC Editor".

Open the PLC programming software of Wecon "Wecon PLC Editor", click"Transfer setup"-"Serial connection" to select the virtual serial port set in <u>9.1.1 The COM port</u>, select "Connection test" and the communication with the device is successful. As shown below.



Figure 9-6

### 9.1.4 PLC upload

(1) Select "Read from PLC"-"Parameter+program", click "Execute" to upload the program of PLC to the PC. As shown below.



Edit Mode	Image: Transfer Setup       Image: Transfer Setup	Verify With PLC Diagnostics Remote Operation Online	<ul> <li></li></ul>	lock setting	Check Program
Online Operation					<u> </u>
Read	(R) OWrite(W	) 💿 Verify(	C)	O Delete(D)	)
Para	am+Prog(P)	Select All()	4)	Car	ncel all select(N)
Module Nar	me/Data Name (3VE	Detail			
	ogram				Memory Setup:
E Pa	MAIN rameter				Unset
	PLC Parameter vice Memory				
Ele	ectronic CAM table	<u>Not Set</u> Not Set	0	-	
Show		Execute(E)		Stop	Close

Figure 9-7

(2) During uploading PLC program, it would prompt "Parameter/program already exists. Do you want to cover it?", select "Yes". If upload successfully, it would prompt "Read from PLC(Complete) ". As shown below.



Figure 9-8



### 9.1.5 PLC download

(1) Select "Write to PLC"-"Parameter+program", click "Execute" to download the program to the PLC. As shown below.



Figure 9-9

(2) During downloading the program, it would prompt "After stop remotely, continue to execute?", select "Yes". If upload successfully, it would prompt "Write to PLC(Complete) ". As shown below.




Figure 9-10

#### 9.1.6 Monitor mode

Open the PLC software on PC, and open a PLC program or an uploaded program, select "Monitor mode" to monitor the status of the ladder diagram. As shown below.



Figure 9-11

### 9.1.7 Stop pass-through

If the operation of PLC is complete, the connection between PC and PLC software should be terminated first, and the V-BOX would restart automatically. As shown below.

	LX3VE	
LX3VE		
COM1		<b>3</b> 1
COM2: VI	irtual Serial Port	
RS485		2,
9600		
1		· •
7		8
EVEN		
	New           LX3VE           COM1           COM2: VI           RS485           9600           1           7           EVEN	New     LX3VE       LX3VE       COM1       COM2: Virtual Serial Port       RS485       9600       1       7       EVEN

Figure 9-12



## 9.2 HMI download

#### 9.2.1 Download configuration

Users could click here to download the software "PIStudio". If the account is logged in for the first

time, users need to click the Settings button on the upper right corner of the software to configure the virtual serial port parameters. The COM port used during pass-through is a virtual serial port. After setting successfully once, there is no need to repeat this step again.

Remote monitoring	Data view	Pass-thi	rough	<b>O</b> B Basic
Remote monitoring	Data view	Cotting	lough	Dasic
PLC download HMI d Status Please head the download Start remot gfig for HMI Download tool position D\360极速浏览器下载\HMIEditorP\ ersion Release Build VER:R05R998_V7.2.189_C	ownload to the setting window of client software, and s d tool of HMI, then refresh this webpage e Browse D20211104	Virtual Using Set us COM	I serial setting virtual serial ing COM 8(using) able virtual serial service before rer mmended Use Google Chrome	Disable      Set  closing software  Browse
Version Release Build VER:R05R998_V7.2.189_D	<u>Position</u> 20211104 D.(360极速浏览器下载)(HMEd 20211104 D.(360极速浏览器下載)(PIStudi 20210617 D.(PIStudio617)	4 Server Europ	re(using) r pe(using)	Set
Release Build VER:R05R998_V7.1.105_D				

Figure 9-13

### 9.2.2 HMI download

During the pass-through, the HMI should be online. When the status is ready, and the download

Start remote configuration is complete, click the button 6 0 Remote monitoring Data view Basic Device remote download will begin, please do not do other operations during penetration Cancel Figure 9-14



Click "OK", it would prompt a download tool box, select "PC to HMI", then select the ".wmt" file which has been compiled to download the program to the HMI. When the download is complete, the HMI would restart automatically.

3	Status The ch	annel of Ethernet downloa	d is ready			
BC Date Ethernat		ਡ੍ਰਾ 打开 	文文档 → 展示箱 → 销售演示工	程-英 ▶   ▼ 4 / 渡索 (	销售演示工程-英	<u>x</u> بر
		组织 ▼ 新建文件夹			i⊞ <b>•</b> [	1 0
File type: Project File	Passw . □ More	☆ 收藏夹	名称	修改日期	类型	大/
1. 1 Mile Start des porc	1.1010		J cloud	2021-08-28 15:33	文件夹	
- (Coloct item do not pood	to delete)	🏊 WPS网盘	퉬 G_Picture	2021-12-06 10: <mark>1</mark> 5	文件夹	
	to delete)		퉬 qpf2	2021-12-06 19:00	文件夹	
🗖 Data record	🗖 Alarm red	<b>一</b> 度	鷆 Recipe	2021-08-19 10:41	文件夹	
🗖 Recipe	🗖 User Man	<b>99</b> (1)	l screens	2021-08-30 15:22	文件夹	
🗖 Instalment	🔽 User Data		📕 Script 🛛 👩	2021-08-28 15:33	文件夹	
		₩ 计异机 ▲ 本地磁盘 (C:) → 本地磁盘 (D:)	DEMO.wmt	2021-08-19 9:45	WMT 文件	
	-0	□ 本地磁盘 (E:) □ 杂 (F:) ☆ 截图 (\\192.168 /				
Recalibration Dele	to HMI	文件名(N	I): DEMO.wmt	₩ ▼ Project 打开	File(*.w 3 (O) 取	<b>▼</b> 〕 消

Figure 9-15

### 9.2.3 Stop remote

When the download is complete, the HMI would restart automatically. If users need to download again, click "Restart" or "End remote". As shown below.



Figure 9-16



## **Chapter 10 Device maintenance**

In order not to affect the normal operation of the devices, Wecon provides "replace device" and "transfer device" for customers to use the devices quickly and conveniently.

## **10.1 Replace devices**

When the V-BOX or ig screen is abnormal and could not continue to use, users could select the function of "Replace". It is to replace an old device with a new device, at the same time, synchronize the configuration information of the old device to the new device.

Replace a device is to replace an old device with a new device. There are two devices, and device A is bound to an account. If device A is abnormal, replace device A with device B, and device B should be in the unbound state. The procedures are as below.

- Device K Home | Account Setting | Email | Account management | Feedback | Role | Service -0 ۹ 0 </> 0 A dil Cloud SCADA Lua Script Real-time Data Alarm Historical Data Pass-through Custom Tags D⇒ default group (1/5) Basic Communication Network Status Push Tags Usage Registers Information Version Device Name H-AG Online CRet Status Access Key V1300 Access key of device A H-AG Model V-BOX H-AG Taialli (O Industry Sector Smart home Max. alarm records 10000 Location longitude longituc latitude latitude Targeting Use Device base station positioning Remark Advanced = b \* < C
- Device A is bound to an account.

Figure 10-1

Device	Template	< Home   Acco	ount Setting	Email   Accour	nt management	Feedback   Role	>		Service -	Q Q1 5-
Search	٩	0		A		<u>htt</u>	æ		۵	0
Custom Tags		Real-time [	Data	Alarm		Historical Data	Cloud SCADA	Lua Script	Pass-through	Configuration
🕒 default group (1/5) 🗸 Default group 🔅 Group Se 😡 Setting										
Ø 1212 VCADD1 DT	ä	+ New Tag	🔳 Qui	ck Action -	🛓 / 🛓 Import/E	Export +			Enter a	name or address Search
Ø 3102ig		0.1	-	10	Name	Malua	<b>B</b> -4	Burd Address		
Ø 123		Select All	Status	U	Name •	value	Роп	Read Address		Edit
us7c /.			•	1808615	4	OFF	Local Address	HDX 0 . 0	I Edit	Hove 🗎 Delete
U320 No.			•	180 <mark>8614</mark>	3	OFF	Local Address	HDX 0 . 0	🕼 Edit	🕂 Move 💼 Delete
H-AG     V13001 5	Ľ,		٠	1808613	2	OFF	Local Address	HDX 0.0	🕼 Edit	🕂 Move 💼 Delete
🗅 Tajalli (0/0)	۲.		•	1808612	1	OFF	Local Address	HDX 0.0	🕼 Edit	🕂 Move 💼 Delete

Figure 10-2



(2) Search device A in the device list, right-click it, then click "Replace".



Figure 10-3

(3) Enter the machine code and the password of device B (the default password is 888888) in the replacement interface, and click Replace.

Replace Device			×
Device Name	H-AG		
Original S/N	V130	1bc	Access key of device A
Access Key	V04	4df	Access key of device B
password	888888		
			Cancel Replace

Figure 10-4



(4) During the replacement, it would prompt whether to continue the replacement, as shwon below.

	8
Device	e [H-AG] S/N will be replaced with
[V040	54df] Do you want to
	continue?

Figure 10-5

(5) Click "OK" to confirm the replacement, and device A is replaced by device B. All the configuration information except machine code remains unchanged.

#### Note:

(1) Only the old device and the new one are of the same model could be replaced.

2 The device B that needs to be replaced could not be in the bound state, otherwise, it would prompt "The device has been bound!"

### **10.2 Transfer devices**

The **"transfer"** function is to transfer the device from one account to another, other information of the device would not change except the change of users. When removing the device, fill in the information of the transferred user and the password of the device correctly, confirm the account information and then transfer. The procedures are as follows.

(1) Search the device in the device list, right-click it, then click "Transfer".



Figure 10-6



(2) Enter the information about the transferred user and the password of the device (the default password is 888888). Fill in correctly would appear the account information as below.

Transfer Device		×
Device Name	3102ig	
Access Key	U32	
password	•••••	
Transfer to	Н	
	Please verify the account information User Name:H*****0 Phone: Email:vo****3.com	
	Company Name.	
	Cancel	ansfer

Figure 10-7

(3) Click "Transfer", if the transfer is successful, wait for the account to accept.





(4) In the receiving account, click the small bell prompt box in the upper right corner of the page, find the device that needs to be transferred in, and click "Accept".

My request	Request to share	Share Device	Transfer Device	System Notification		
Device Name	Access Key		Recipr	ocal Account	Time	Edit
3102ig	U320		1		2021-12-07 14:27:56	[Accept] [Refuse]
3102ig	U32		1	5	2021-12-07 14:25:11	The other party has cancelled





(5) To receive the device, the name of the device and the group and industry to which the device belongs need to be reset.

Figure 10- 10

# **Chapter 11 OPC configuration**

# **11.1 Introduction**

**Open Platform Communications (OPC)** is a series of standards and specifications for industrial telecommunication. WECON V-BOX series product provides OPC function to users. This document describes how to use OPC TOOL on your computer.

## **11.2 Basic configuration**

The device uses the OPC configuration tool to push the data sources of the device to other OPC clients

### **11.2.1 Login interface**

Login	
User Name:	
Password:	•••••
🔽 Remem	ber password Settings
🔽 Run Wi	th Windows
📃 Auto Lo	ogin

Figure 11-1

Interface function:

(1) Use the sqlite database to record the users who have successfully logged in. According to the login time, they are arranged in the user name drop-down box from large to small.

(2) Remember password: use DES secondary encryption, the secret key is CPUID and network card MAC address respectively.

3 Configure the server address, and the software restart is required for the configuration to take effect.



### 11.2.2 Server setting

The default server address is the V-NET monitoring address. When deploying a private cloud, connect to the corresponding network address. After configuring the server address, the OPC Tool restart is required to take effect.





After configuring the server address, the OPC Tool restart is required to take effect.

Server Settings	
Server Address:	http://api.v-box.net
Please restart progr	am after settings changed

Figure 11-3

- 1 About. Software version information.
- 2 Settings. To set the server address settings.
- 3 Logout. Log out of the current account.
- (4) Exit. Exit the software.

At present, Wecon has three servers. Please enter the corresponding server address.

- 1 China: http://api.V-BOX.net
- 2 Asean: http://api.asean.V-BOX.net
- 3 Europe: http://api.eu.V-BOX.net

### 11.2.3 configuration successfully

After the user logs in successfully, the OPC SERVER is started. As shown below.



Figure 11-4

Note: When using the OPC function, run the OPC Tool software.



## 11.3 Example

The precondition is to use the OPC Server and OPC Client on the same PC.

### **11.3.1 Run the OPC tool**



Figure 11- 5

### **11.3.2 Create OPC device**

Take the OPC Quick Client.exe tool for example. <u>Download</u> here.

(1) Run "OPC Quick Client.exe"

oc OPC Quic	k Client - 无标题				
File Edit	View Tools Help				
🗅 😅 🖬	📸 💣 💣 😭   X 🛙	a <b>r</b> x			
		Item ID	🕗 🛛 Data Type	Value	Timestamp
		•	III		•
Date	Time	Event			
Ready					Item Count: 0

Figure 11-6

(2) Run V-BOX OPC tool and set corresponding server



Figure 11-7



### Wecon V-NET Web User Manual (V3.1)

ings		L
Gerver Settings		
Server Address:	http://api.v-box.net	
Please restart progr	am after settings changed	OK

Figure 11-8

(3) Select "New Server Connection" and select "V-BOX.OPCSERVER DLL"

File Edit Vi	iew Tools Help w Server Connection w Group	n2			
Ne	w Group				
Ne	w Item		Z Data Type	Value	Timestamp
Cut	t	Ctrl+X			
Co	ру	Ctrl+C			
Pas	ste	Ctrl+V			
Del	lete	Del			
Sel	lect All	Ctrl+A			
Pro	operties				
			III		
Date	Time	Event			

Figure 11-9

- A local Machine	
	SERVER DLL
🗄 👼 Remote Machin	e
<sup>9</sup> rog ID:	V-BOX.OPCSERVER.DLL
<sup>9</sup> rog ID: Remote Machine Name:	V-BOX.OPCSERVER.DLL

Figure 11- 10



opc Quick Cl	ient - 无标题 *				
File Edit Viev	v Tools Help				
D 🗳 日 📩	💣 💣 😭   👗 🖻	• <b>6 ×</b>			
: V-BOX.OP	CSERVER.DLL	Item ID	Z Data Type	Value	Timestamp
		•	III		*
Date	Time	Event			
1 2021-12-08	10:47:54	Connected to se	rver		
0 2021-12-08	10:48:07	Disconnected fro	om s		
1 2021-12-08	10:48:56	Connected to se	rver		
0 2021-12-08	10:48:56	Connected to se	rver		

Figure 11- 11

(4) Add a new group, set the group name according to your needs.

OPC OPC	Quali	ent - 无标题 *				
File Ed	lit View	Tools Help				
	New S	Server Contion				
	New (	Group		🗸 🛛 Data Type	Value	Timestamp
	New I	tem				
	Cut Copy Paste Delete		Ctrl+X			
			Ctrl+C			
			Ctrl+V			
			Del			
	Select	All	Ctrl+A			
	Properties					
				III		Þ
Date		Time	Event			
1 2021-1	2-08	10:47:54	Connected to	server		
0 2021-1	12-08	10:48:07	Disconnected	from s		
20211	12-00	10.40.00	Connected to	SCIVCI		
						Item Count: 0

Figure 11- 12



(5) Add a new item for the group.

) 🖬	New S	erver Connection		080	1990	1120
1	New I	tem 2		∕ Data Type	Value	Timestamp
	Cut	_	Ctrl+X			
	Сору		Ctrl+C			
P	Paste		Ctrl+V			
	Delete		Del			
	Select	All	Ctrl+A			
	Prope	rties				
<u></u>			•	III		
ate		Time	Event			
2021-12-	08	10:47:54	Connected to	server		
2021-12-	08	10:48:07	Disconnected	from s		
2021-12-	08	10:48:56	Connected to	server		
2021-12-	08	10:53:20	Added group '	1' to "V		

Figure 11- 13

(6) Select corresponding V-BOX and monitor point. Double click it to add Item.

	es				ОК
Access Path	r:	3		▲ ►	Cancel
Item ID:	H-AG.默认	组.1_1808612	<b>~</b>	6	Help
Data Type:	Native	-		<b>X</b>	
Active	▼				
-			Party and a second seco		
⊡-∰ V-BI ⊕-@ ⊡-@	0X.0PCSERVI 1212 H-46 副默认组	ER.DLL	1_1808612 2_1808613 3_1808614 4_1808615		

Figure 11- 14



Then this Item value would display as below.

OPC Quick Cl	ient - 无标题 *			-		X
File Edit View	v Tools Help					
0 🖻 🖬 🛒	💣 💣 😭 👗 🖻	8 ×			_	
E V-BOX.OPC	SERVER.DLL	Item ID	Data Type	Value	Timestamp	Quality
		H-AG.默认组.1_1808612	●H-AG.默认组.1_1808612 Boolean 0 11:11			
Date	Time	<	, III			Þ
1 2021-12-08	11:19:07	Connected to server				
1 2021-12-08	11:19:10	Added group '1111't				
2021-12-08	11:19:20	Added 1 items to gro				
Ready					Item Co	unt: 1

Figure 11- 15

Right-click the item, and select "Synchronous Write" to change the value of item.

OPC Quick Cl	ient - 无标题 *						X
File Edit View	v Tools Help						
D 🗳 🖬 📩	🍏 💣 😭 👗 🖻	n 💼 🗙					- Î
E-::	SERVER.DLL	Item ID	Ζ.	Data Type	Value	Timestamp	Quality
i			New It Set Act Set Ina Synchr Synchr Asynch	em tive onous Cache onous Devic onous Write pronous 2.0 F	e Read e Read Read Read	44 40 49.783	Good •
Date	Time	Event	~			CH IV	
2021-12-08	11:19:10	Added group '1111't	Cut			Ctrl+A	
1 2021-12-08	11:19:20	Added 1 items to gro	Daste			Ctrl+V	
			Delete			Del	
			Proper	ties			
Ready						Item Co	ount: 1 //

#### Figure 11- 16

**Note:** After the software is started, it would not dynamically adjust according to the increase, deletion, or configuration modification of the server monitoring point, and would only update the value of the monitoring point from time to time.