Studio5000 相关软件使用



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关键词:

Studio5000, AB PLC, EtherNet/IP, BootP-DHCP Tool, RSLinx classic, ControlFlash

摘要:

本文介绍了 BootP-DHCP Tool, RSLinx classic, ControlFlash 软件的使用

目标群体:

本文仅针对有一定自动化设备调试基础的工程师,需要对 Rockwell Studio5000 有一定了解。

声明:

本文档为技术工程师根据官方资料和测试结果编写,旨在指导用户快速上手使用 Festo 产品,如果发现描述与官方 正式出版物冲突,请以正式出版物为准。

我们尽量罗列了实验室测试的软、硬件环境,但现场设备型号可能不同,软件/固件版本可能有差异,请务必在理 解文档内容和确保安全的前提下执行测试。

我们会持续更正和更新文档内容, 恕不另行通知。

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1 BootP-DHCP 设置 IP 地址

该软件是用来设置网络设备的 IP 地址

1.1 设置本机 IP 地址

	Internet 协议版本 4 (TCP/IPv4) 属性
9項 连接封原用: ☑ Intel(R) PRO/1000 MT Desktop Adapter	常规 如果网络支持此功能,则可以获取自动指派的 IP 设置。否则,你需要从网 络系统管理员处获得适当的 IP 设置。
配置(C) 此连接使用下列项目(O):	○ 自动获得 IP 地址(O) ④ 伸曲下面的 IP 地址(C)
 ✓ ■ Microsoft 网络客户牌 ✓ ■ Microsoft 网络的文件和打印机共享 ✓ ■ QoS 数据包计划程序 	IP 地址(I): 192.168.0.200
 ☑ Internet 协议版本 4 (TCP/IPv4) ☑ Microsoft 网络适配器多路传送器协议 ☑ Microsoft LLDP 协议驱动程序 	ナ(%)推動(U): 235.235.0 默认网关(D):
 ☑ Internet 协议版本 6 (TCP/IPv6) ☑ ● 链路层拓扑发现响应程序 	○ 自动获得 DNS 服务器地址(B) ◎ 使用下面的 DNS 服务器地址(E):
安装(N) 印载(U) 属性(R) 描述	首选 DNS 服务器(P):
传输控制协议/Internet 协议。该协议是默认的广域网络协议,用于在不同的相互连接的网络上通信。	資用 DNS 版好號(A):
	□ 退出时验证设置(L)
确定取消	确定取消

1.2 BOOTP-DHCP 设定 IP 地址

1.2.1 扫描到设备的 MAC 地址



1.2.2 双击扫描到的 MAC 地址,为该设备设置 IP 地址

Add Relation	Discourse History	Clear History
Ethernet Address (I	New Entry	× Hostname
00:0E:F0:61:6F:DB	Server IP Address: 192.168.0.180	
	Client Address (MAC): 00:0E:F0:61:6F:DB	
	Client IP Address: 192 . 168 . 0 . 10	
	Hostname:	
	Description:	
Ethernet Address (l	OK Cancel	ption

1.2.3 固化 IP (静态)

第1步:当设定的 IP 地址出现后

第2步:选中下框 IP 地址

第3步: Disabble BOOTP/DHTP 来设置静态 IP 地址

K	BootP DHCP EtherNet/IP C	ommissi	oning Tool			– 🗆 🗙
Fil	e Tools Help					
	Add Relation		Discovery H	listory		Clear History
	Ethernet Address (MAC)	Туре	(hr:min:sec)	#	IP Address	Hostname
	00:0E:F0:61:6F:DB	DHCP	23:54:19	11	192.168.0.10] (1)
			Entered Da	1-1		
	Delete Relation		Entered He	lations	Enable BUUTP/DHU	P Disable BUUTP/DHCP
	Ethernet Address (MAC)	Туре	IP Address		Hostname Desc	ription
	00:0E:F0:61:6F:DB	DHCP	192.168.0.10)		
			2			
	irrors and warnings ient 192.168.0.10 to Ethernet addr	ess 00:0E:1	F0:61:6F:DB			Relations 1 of 256

第4步会显示:[Disable BOOP]Command successful,说明静态 IP 已经设置成功,进入 RSLinx 组态驱动。 不成功,保持窗口,进入 RSLinx 组态驱动 (此时是动态 IP 地址,设备断电 IP 地址会丢)

2 RSLinxClassic 组态驱动

该软件是用来配置通讯连接驱动/路径

2.1 创建以太网驱动

Communcations-Configure Drvivers

🗞 RSLinx Classic Gateway - [RSWho - 2]	- <u> </u>
File Edit View Communications Station DDE/OPC Security Window H	lelp _ = = ×
🖆 品 🞜 🐻 🛍 RSWho	
Autobrowse Re Configure Drivers ound	
B Workstation, SC Configure Shortcuts	
Einx Gatewa Configure Client Applications	192 158 0 192 158 0
B AB ETHIPT, Configure CIP Options	1769-L24 CMMT-AS
Driver Diagnostics	
Gateway Diagnostics	
Caleway Diagnostics	
, , , , , , , , , , , , , , , , , , ,	07/03/20 05:00 PM
选择 Ethernet/IP 驱动	
RSLinx Classic Gateway - [RSWho - 2]	– 🗆 X
File Edit View Communications Station DDE/OPC Security Window H	lelp
≥ # \$5 ® ® 12 N	
Autobrowse Refresh 🗈 🖭 Browsing - node 192.168.0.20 found	
- 🛃 Workstation, SC-202004071617	a 18
Configure Drivers	? ×
Available Driver Types:	3.0 I -AS
EtherNet/IP Driver Add New	Close
	Help
Configured Drivers:	
Name and Descripti Add New RSLinx Classic Driver X	
AB_ETHIP-1 A-B EL Choose a name for the new driver.	Configure
(15 characters maximum)	Startup
AB_ETHIP-2	Start



选择通讯网卡

Configure driver: AB_ETHIP-2				?	×
EtherNet/IP Settings					
 Browse Local Subnet 	C Browse R	emote Subnet			
Description Windows Default			IP Address		
Intel(R) PRO/1000 MT Desktop	Adapter		192.168.0.2	200	
1					- 1
	确定	取消	应用(A)	帮助	י של

2.2 扫描同网段的以太网设备



2.3 BootP-DHCP 软件设置静态 IP 地址

Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Point Configuration Image: State Cancer of Poin	Reliev Classic Cateway	IPSWbo - 11					
Image: Intel Control Network South Part of South Part	File Edit View Comm	unications Station DDE/OPC	Security Window	Help			
Image: The second to seco			secondy window i	icib.			- 0 4
Image: Participant Diagnostics Top:// 192.168.0.20 Image: Participant Diversion 192.168.0.20 Image: Participant Diversio		<u>**</u>					
Control Configuration Configuration	Autobrowse Refresh	Browsing - node 192.16	8.0.10 found				
the time Gateways, Ethernet ■ A BA ETHIN 1, Ethernet 192-168.0.10 CKMMT-AS B 192-168.0.2 Remove Configure Driver Security Device Properties Module Statistics Module Configuration 102-168.0 1769-124 CMMT-AS 102-168.0 1769-124 CMMT-AS 102-168.0 1769-124 CMMT-AS 102-168.0 1769-124 CMMT-AS	🖃 🔜 Workstation, SC-20200	4071617		1			
Image: AB 2 Fully 1, theread For the memory Image: Boold Configure Driver 69-L24ER-QB1B/A LC Driver Diagnostics Configure Driver Security Device Properties Module Statistics Module Configuration		ernet		102 169 0	102 169 0		
B 192.168.0.20 Remove 69-L24ER-QB1B/A LC Driver Diagnostics Configure Driver Security Module Statistics Module Configuration	H 102 169 0 10 Ch	ANAT AS CAMPAT AS		1769-L24	CMMT-AS		
Configure Driver Security Device Properties Module Statistics Module Configuration	H 192.168.0.20	Remove	69-L24ER-OB1B/A LC				
< Configure Driver Security Device Properties Module Statistics Module Configuration	L p istroomt	Driver Disgnortics					
<		Configure Driver					
Security Device Properties Module Statistics Module Configuration							
Configuration		Security					
		Device Properties					
		Module Statistics					
		Module Configuration					
<							
C >							
For Help proce E1 06/00/20 11:55 DM	<		>				
10/10/0/09/20 11:55 PM //	For Help, press F1					06/09/20	11:55 PM //

手动修改为静态 IP 地址。

AB_ETHIP-1\192.168.0.10 CMMT	-AS Configuration	×
General Port Configuration	Advanced Port Configuration Network	
Port: 1 ~		
Manually configure IP setti	ngs	
Obtain IP settings automat	ically using BOOTP	
Obtain IP settings automat	ically using DHCP	
IP Address:	192 . 168 . 0 . 10	
Network Mask:	255 . 255 . 255 . 0	
Gateway Address:	0.0.0.0	
Primary Name Server:	0.0.0.0	
Secondary Name Server:	0 . 0 . 0 . 0	
Domain Name:	festo.com	
Host Name:	cmmt-ep	
Status: Network Inter	face Configured	
	确定 取消 应用(A)	帮助

3 ControlFlash 固件更新

该软件是用来刷新 PLC 的固件版本,固件版本需要和 RSLogix5000 或 Studio5000 软件要一样,否则无法使用。下一步

注意:刷固件之前	前需要将 PLC 的拨码拨到编程模式
Welcome to ControlFLA	SH
Control	Welcome to ControlFLASH, the firmware update tool. ControlFLASH needs the following information from you before it can begin updating a device. 1.The Catalog Number of the target device. 2.The Network Configuration parameters (optional). 3.The Network Path to the target device. 4.The Firmware Revision for this update. View Log View Inventory Change RSLinx Edition In use: RSLinx Classic
< .	上一步(B) 下一步(N) > 取消 帮助

选择对应 PLC 型号,此处 1769-L24ER-QB1B 归类 1769-L2 系列

Catalog Number



选择在线 PLC



选择升级的固件版本

Firmware Revision

Control FLASH	Catalog CompactLogix 5370 (1769-L2) Serial Number: 7036D02F Current 21.011 Select the new revision for this update:
<	上一步(B) 下一步(N) > 取消 帮助

确认当前版本和要升级的版本

Control FLASH	DANGER: The target module is about to be with new firmware. During the update the module will be unable to perform its normal control function. Please make sure that all processes affected by this equipment have been suspended and that all safety critical functions are not To abort this firmware update, press Cancel now. To begin the update now, press Finish. Catalog CompactLogix 5370 (1769-L2) Serial Number: 7036D02F Current 21.011 New Revision: 31.011
1 千级中	上一步(B) 完成 取消 帮助
Progress	
Catalog Number: Co Serial Number: 70 Current Revision: 21 New Revision: 31	mpactLogix 5370 (1769-L2) 36D02F 011 011
Transmitting update 2	of 4, block 8278 of 14336
升级成功	
Update Status	×
Catalog Number: 1769-L24 Serial Number: 7036D02	ER-QB1B OK
Current Revision: 31.011 New Revision: 31.011	Help
Statue:	

odate complete. Please verify this new mware update before using the target wice in its intended application.

View Log

Summary