Moxa Remote Connect Gateway User's Manual

Edition 1.1, May 2019

www.moxa.com/product



Moxa Remote Connect Gateway User's Manual

The software described in this manual is furnished under a license agreement and may be used only in accordance with the terms of that agreement.

Copyright Notice

© 2019 Moxa Inc. All rights reserved.

Trademarks

The MOXA logo is a registered trademark of Moxa Inc. All other trademarks or registered marks in this manual belong to their respective manufacturers.

Disclaimer

Information in this document is subject to change without notice and does not represent a commitment on the part of Moxa.

Moxa provides this document as is, without warranty of any kind, either expressed or implied, including, but not limited to, its particular purpose. Moxa reserves the right to make improvements and/or changes to this manual, or to the products and/or the programs described in this manual, at any time.

Information provided in this manual is intended to be accurate and reliable. However, Moxa assumes no responsibility for its use, or for any infringements on the rights of third parties that may result from its use.

This product might include unintentional technical or typographical errors. Changes are periodically made to the information herein to correct such errors, and these changes are incorporated into new editions of the publication.

Technical Support Contact Information

www.moxa.com/support

Moxa Americas

Toll-free:1-888-669-2872Tel:+1-714-528-6777Fax:+1-714-528-6778

Moxa Europe

Tel: +49-89-3 70 03 99-0 Fax: +49-89-3 70 03 99-99

Moxa India

Tel: +91-80-4172-9088 Fax: +91-80-4132-1045

Moxa China (Shanghai office)

Toll-free:	800-820-5036
Tel:	+86-21-5258-9955
Fax:	+86-21-5258-5505

Moxa Asia-Pacific

Tel:	+886-2-8919-1230
Fax:	+886-2-8919-1231

Table of Contents

1.	Introduction	1-1
2.	Installation	2-1
3.	LED Indicators	3-1
4.	Interfaces RESET Button WAN/LAN Ethernet Ports USB Interface.	4-1 . 4-2 . 4-2 . 4-3
	Digital Input and Digital Output	. 4-3
5.	Management	5-1
6.	Activation Wizard Activate a Gateway Activation Option #1 Activation Option #2 Activation Option #3	6-1 . 6-2 . 6-2 . 6-4 . 6-5
7.	Gateway Activation Status Tunnel Control.	7-1 . 7-2 . 7-3
8.	Network	8-1 . 8-2
9.	Local Device	9-1 .9-2
10.	Service	0-1 10-2
11.	System	1-1

1 Introduction

The MRC gateway is a 2-port Ethernet device that creates a connection between Ethernet equipment installed at a remote site and the Moxa Remote Connect Platform. The remote connection normally occurs between a SCADA server and a device that belongs to a service engineer.



Installation



The MRC gateway supports a power input range from 12 to 36 VDC. Please ensure you use the correct power supply to power on the gateway. The MRC gateway also has an embedded DIN-rail mounting kit to allow the device to be mounted on a DIN-rail.

LED Indicators



LED Symbol	LED Name	Color	Function
	USB	Green	Steady On: USB device is connected and working
			Off: USB device is not connected
ds	Power	Green	Steady On: The gateway is powered on
0			Off: The gateway is powered off
	Internet	Green	Off: WAN interface is not ready (DHCP failure, PPPoE failure, etc.)
Ψ			Blinking: Testing the Internet connection
			Steady On: Internet is available
\sim	Cloud Server	Green	Off: Not connected to the MRC Server
C t C			Blinking: Gateway is testing the MRC Server connectivity
			Steady On: MRC Server is connected
	Activation Key	Green	Off: There is no activation key inside the gateway
_ _			Blinking: The activation key is invalid
			Steady On: The activation key is valid and the gateway is activated
60	VPN Tunnel	Green	Off: The VPN tunnel is down and remote access is not supported
65			Blinking: The gateway is trying to establish a VPN tunnel
			Steady On: The gateway has successfully established a VPN tunnel
	SIM Card	Green	Off: No SIM card
SIM			Blinking: SIM card error
			Steady On: SIM card is ready
	Cellular Signal	Green	There are three LEDs that display the signal strength of the cellular
			device.
			3 LEDs On: Best signal quality
			2 LEDs On: Normal signal quality
			1 LED On: Bad signal quality (may cause no Internet connection)
			0 LED On: Very bad signal quality (no Internet connection)

LED Symbol	LED Name	Color	Function
	Ethernet Speed		Ethernet port is connected at 10M speed (amber) or 100M speed (green) speed

4 Interfaces

The following topics are covered in this chapter:

- RESET Button
- WAN/LAN Ethernet Ports
- USB Interface
- Digital Input and Digital Output

RESET Button



The RESET button can perform three functions depending on how long the button is depressed for.

Operation	LED Behavior	Action
Press and release	One LED is blinking	Reboot the MRC gateway
between 1 to 5 seconds	()	
Press and release	Two LEDs are blinking	First add the default IP (192.168.127.254) to the LAN
between 6 to 10 seconds	(⊕ and ᢙ)	interface. After powering off and then powering back on
		the MRC gateway, the LAN IP will be restored to the
		original LAN IP setting. For example, if the original LAN
		IP is 192.168.127.111, then after pressing the reset
		button for 6 to 10 seconds, you can use the LAN IP
		192.168.127.254 to log in to the gateway web
		management console, and then power off and power
		back on the gateway. After taking this action, use the
		LAN IP 192.168.127.111 to log in to the gateway web
		management console.
Press and release	Three LEDs are blinking	Reset all configurations and remove the activation key.
between 11 to 15 seconds		Note: If the RESET button is depressed for longer than
	(₩, < 1 >, and ")	15 seconds, the MRC gateway will reboot without
		changing any settings.

WAN/LAN Ethernet Ports

There are two Ethernet ports, WAN and LAN, on the MRC gateway. The WAN connects to the network that provides Internet access to the MRC Server and the LAN connects to the field devices that require monitoring or connections. Users can expand the number of LAN connections by adding a switch that provides more Ethernet ports.



USB Interface

The USB interface supports FAT/FAT32/NTFS-formatted USB dongles for key activation and tunnel connectivity control.



Digital Input and Digital Output

There is one DI and one DO on the bottom of the MRC gateway. The DI is used to control the connection for the tunnel to the MRC Server. The DO can be used as an alarm when the remote access tunnel is active.



Management

The MRC gateway provides a secure web console to perform configurations. After you have connected a laptop to the LAN port, open your browser and type in the default web console address to access the web GUI: http://192.168.127.254

Default username: admin Default password: moxa



After you successfully login to the web console, you will see the management portal of the MRC gateway.



Click "Edit" to change the password.

MOXA MRC-1002 7 Activation	n Wizard 📤 Gateway 🎿 Netwo	rk 🕸 Local Device 🕫 Service	🗲 System	🔵 admin 👻 🥕 🗘
Account	4 E	dit User Password	×.	
	New Password:			
	Confirm Password:		· .	
		🖺 Sa	ve Cancel	

6 Activation Wizard

The following topics are covered in this chapter:

- Activate a Gateway
- □ Activation Option #1
- □ Activation Option #2
- □ Activation Option #3

The MRC gateway has a wizard to assist users complete the configuration settings. There are three ways to connect your MRC gateway to the MRC server.



Activate a Gateway

Below are the three options to register the MRC gateway.

Option	Scenario
#1: I have an activation key	You get a string from the MRC server administrator in order to
	activate your gateway.
#2: I have an activation key in a USB	You get a file from the MRC server administrator in order to
storage device	activate your gateway.
#3: I do not have an activation key	You get activating information from the MRC server administrator
	to manually activate your gateway.

Activation Option #1

When choosing option 1, users need to copy the string (activation key) and paste it into the MRC gateway.

мохл	MRC-1002 X Activat	ion Wizard 🛛 📤 Gatewa	y 📥 Network	Local Device	📽 Service 🍞 System		admin 👻 🦨	۵
Wizard								
START	ACTIVATION	SCENARIO	WAN	LAN	LOCAL DEVICES	TIME	FINISH	
		Activation Key:	I have activation	n key		Next 🌶		
		C	I have activation	n key in USB storage	2			
		C	I don't have acti	ivation key				

When choosing Option #1, follow the wizard to finish the gateway activation.

м) XV	MRC-1002	Activation	Wizard 🗅 Ga	teway 📥 Network	🕸 Local Device	📽 Service	🗲 System		admin 🕶	2	۵
1	Nizard											
	START	AC	TIVATION	SCENARIO	WAN	LAN	LO	CAL DEVICES	TIME	FINISH		
			A	ctivation Key:	Paste the activa	tion key string		← Bac	k Next 🗲			

	MRC-1002 PActivation V	Wizard 🌰 Gateway	📥 Network	Cocal Device	📽 Service 🏾 🗲 System		🔵 admin 🕶 🦨	۵
Wizard								
START	ACTIVATION	SCENARIO	WAN	LAN	LOCAL DEVICES	TIME	FINISH	
					← Back	Next 🗲		
	Ac	tivation Key:			*			

Select the time zone where you will install the gateway.

мохл	MRC-1002	Activation Wiz	ard 🗅 Gateway	A Network	Local Device	of Service	🗲 System		🥚 admin 🕶 🦨	۵
Wizard										
START	AC	TIVATION	SCENARIO	WAN	LAN	LO	CAL DEVICES	TIME	FINISH	
		ті	me Zone: (+	08:00) Beijing,	Hong Kong, Singap	oore, Taipei	◆ Back	Next >		

On the last step, please click "Initialize Now" to activate your gateway. (Remember to first connect your gateway to the Internet.)



Input the activation key.

Activation Option #2

When choosing Option #2, the MRC gateway will execute the auto configuration exchange with the MRC server. Users should insert the USB drive that has the activation file stored on it. Then, follow the wizard to finish activating your gateway.

мохл	MRC-1002 🏼 🖉 Activa	ition Wizard 🛛 📤 Gatewa	ay 📥 Network	Local Device	📽 Service 🏼 🖌 System		🧶 admin 🕶 🦨 🗘
Wizard							
START	ACTIVATION	SCENARIO	WAN	LAN	LOCAL DEVICES	TIME	FINISH
						Next 🌶	
		Activation Key:	I have activation	key			
		(0	I have activation	key in USB storage			
		C	I don't have activ	vation key			

Confirm your USB dongle has the correct activation key installed.

MOXA	MRC-1002 🏸	Activation Wizard	📤 Gateway 📑	Network	Cocal Device	🕫 Service 🏒	^c System		🧶 admin 🕶 🦨	۵
Wizard										
START	ACTIVA	ATION SCI	ENARIO	WAN	LAN	LOCA	L DEVICES	TIME	FINISH	
							🗲 Back	Next 🗲		
		M	ake sure tha	t the USE	B Key is inse	rted to MF	RC-1002.			

Select the time zone where you will install the gateway.

MOXA	MRC-1002	Activation Wizard	📤 Gateway	📥 Network	Local Device	of Service	🗲 System		🧶 admin 🔹 🦨	۵
Wizard										
START	ACTI	VATION SCI	ENARIO	WAN	LAN	LOC	AL DEVICES	TIME	FINISH	
							← Back	Next 🗲		
		Time 2	Yone: (+0)	8:00) Beijing, H	Hong Kong, Singap	ore, Taipei 👻				

On the last step, please click "Initialize Now" to activate your gateway. (Remember to first connect your gateway to the Internet.)



Activation Option #3

When choosing option #3, you need to fill in all the necessary information retrieved **from the MRC Server** administrator step by step.

мохл	MRC-1002 Z Activat	ion Wizard 🛛 📤 Gatewa	ny 👗 Network	Local Device	Service	🗲 System		🥥 admin 🕶 🦨	۵
Wizard									
START	ACTIVATION	SCENARIO	WAN	LAN	LO	CAL DEVICES	TIME	FINISH	
		Activation Key:	I have activation	n key			Next 🗲		
			I have activation	n key in USB storag ivation key	e				

Step 1:

Input the MRC server IP address or domain name, service port, the Group Code, and a user-defined gateway name. The gateway name must be unique in the MRC server. If activation is not successful, it is possible that you registered your gateway with an existing name already stored in the MRC server. If you have any further issues please contact your MRC server administrator.

мохл	MRC-1002	🎢 Wizard	lateway Config.	📥 Network	Local Device	¢ Service	🗲 System		🥚 admin 🕶 🖌	ب
Wizar	d									
STAF	RT J	ACTIVATION	SCENARIO	WA	AN	LAN	LOCAL DEVICES	TIME	FINISH	
							← Bac	k Next 🗲		
		Se	rver IP Address:							
			Port:	443						
			Group Code:							
			Gateway Name:							

Description
The IP Address or the host domain name and the service port of the MRC
server.
The unique code to register the MRC gateway to the device group in the MRC
server.
The unique name of the MRC gateway within the same device group in the
MRC Server.

NOTE The Group Code is provided by your MRC Server administrator. If you are the MRC Server administrator, please check "Group Code" in the MRC Server.

Step 2:

Choose the network scenario for your gateway's Internet installation.



Mode	Scenario
WAN-LAN Mode	Connect an external ADSL modem, cable modem, or Internet WIFI router to
	establish remote access.
WAN-LAN Mode with NAT	Use the existing factory network to access the Internet in order to establish
	remote access. Keep the device communicating to the factory network by using
	NAT.
Transparent-LAN Mode	Use the existing factory network to access the Internet in order to establish
	remote access. Keep the LAN device communication transparent to the factory
	network.
Cellular-WAN Mode	Use cellular as Internet access. The two Ethernet ports are both LAN ports that
	can be used for connecting to local devices.

Step 3:

Select the Internet Access method for your MRC gateway. WAN-LAN Mode, WAN-LAN Mode with NAT, Transparent-LAN Mode:

	C-1002 🏾 X Activation Wiza	ard 📤 Gatewa	ay 📥 Network 🔅 L	ocal Device 🛛 🕫 S	ervice 🎤 System		admin 🔹 🦨
Wizard							
START	ACTIVATION	SCENARIO	WAN	LAN	LOCAL DEVICES	TIME	FINISH
					🗲 Back	Next 🇲	
	Internet IP	Setting: ©	Static IP	P © PPPoE		_	
	Internet IP DNS :	Setting: ON	Static IP DHC DHC DNS Server IP Address	P © PPPoE DHCP or PPPoE)			
	Internet IP DNS 5	Setting:	Static IP DHC Server (Optional for DNS Server IP Address DNS Server IP Address	P © PPPoE PDCP or PPPoE)			

Internet IP Setting:	Static IP	DHCP	PPPoE
IP Address:	IP Address		
Subnet Mask:	Subnet Masl	¢	
Gateway:	IP Address		

DNS Server (Optional for DHCP or PPPoE)

DNS Server1:	DNS Server IP Address
DNS Server2:	DNS Server IP Address
DNS Server3:	DNS Server IP Address

Setting DHCP

Internet IP Setting:	Static IP	OHCP	O PPPOE
	DNS Server (O	ptional for DH	CP or PPPoE)

DNS Server1:	DNS Server IP Address
DNS Server2:	DNS Server IP Address
DNS Server3:	DNS Server IP Address

Setting PPPoE

DNS Server3:

Internet IP Setting:	Static IP	DHCP	PPPoE					
User Name:	PPPoE User	Name						
Password:	PPPoE User Password							
Host Name:	PPPoE Host Name							
	DNS Server (0	ptional for DH	CP or PPPoE)					
DNS Server1:	DNS Server	IP Address						
DNS Server2:	DNS Server IP Address							

DNS Server IP Address

6-8

Cellular-WAN Mode:

мохл	MRC-1002 Activation	Wizard 🏻 📤 Gat	eway 📥 Network	🌣 Local Device 🛛 🕫	Service 🍾 System		🧶 admin 🕶 🦨 🗘
Wizard							
START	ACTIVATION	SCENARIO	WAN	LAN	LOCAL DEVICES	TIME	FINISH
					← Back	Next 🗲	
	Intern	et IP Setting:	Cellular				
	Carrier:	AT&T			•		
	APN:	APN					
	PIN:	PIN					
	Username:	Username					
	Password:	Password					
	Cellular Keep Alive:	On					
	Cellular Watchdog:	Off					
			DNS Server (Optiona	l for DHCP or PPPoE)		
	ļ	DNS Server1:	DNS Server IP Add	Iress			
	1	DNS Server2:	DNS Server IP Add	iress			
BACK	j	DNS Server3:	DNS Server IP Add	iress			

NOTE To ensure the stability of cellular connection, please enable "Cellular Keep Alive" and "Cellular Watchdog"
 1) "Cellular Keep Alive" keeps checking the cellular availability and once it fails, the MRC gateway will try to reconnect to the cellular base station.

2) "Cellular Watchdog" keeps monitoring the internal cellular module status and once the module is abnormal, the MRC gateway will reset the module.

Step 4:

Input the LAN settings and the management IP for your MRC gateway. The MRC gateway's management IP and subnet must be the same as the network where your local devices are located.

мохл	MRC-1002	🎢 Wizard	🗅 Gateway Config.	A Network	Local Device	of Service	🗲 System		🧶 admin 🔹 🖍	\$
Wizar	d									
STAF	RT A	ACTIVATION	SCENARIO	WA	N	LAN	LOCAL DEVICES	TIME	FINISH	
							← Bac	sk 🛛 Next 🗲		
		Manager	ment IP Address:	192.168.127	.254					
			Subnet Mask:	255.255.255	5.0					

Step 5:

Configure your local devices for remote access. Click "..." to add a local device.

м	NXC	MRC-1002	🎢 Wizard	lateway Config.	📥 Network	Local Device	¢ Service			🥘 admin 🕶	2	۵
[Wizar	d										
	STAF	RT A		SCENARIO	WA	N	LAN	LOCAL DEVICES	TIME	FINISH		
								← Back	Next 🗲			
		E	1	Name		IP		Health Check		+ -		

Input the name of a local device and its IP address. Select "Ping Check" or "Port Link" for the MRC gateway to check the health status of your device by PING or Port Link On/Off events. You can disable the Health Check function if you want.

Wizard			Add Device		×	
START	ACTIVATION	Name:	Device's name			TIME FINISH
		IP:	Device's IP Address		N	ext 🗲
		Health Check:	Ping Check	-		•
		Ping Interval:	60			

Users can configure a maximum of 25 local devices for remote access through the MRC Suite.

	IRC-1002	🎢 Wizard 🛛 🛆 🕻	Gateway Config.	🛔 Network	Local Device	of Service	✤ System		🥏 admin 🕶	2	<u>م</u>
Wizard											
START	A		SCENARIO	WA	N	LAN	LOCAL DEVICES	TIME	FINISH		
							← Back	Next 🗲			
		Name		IP			Health Check		+ -		
		Controlle	er	192.168.	127.1		Ping Check (10 sec	onds)			

Step 6:

Select the time zone where you will install the gateway.

мохл	MRC-1002	Activation	Wizard 🛛 📤 Gateway	📥 Network	Local Device	📽 Service	🗲 System		🥘 admin 🕶 🧨	۵
Wizard										
START	AC	TIVATION	SCENARIO	WAN	LAN	LO	CAL DEVICES	TIME	FINISH	
							← Back	Next 🗲		
			Time Zone: (+	+08:00) Beijing,	Hong Kong, Singa	oore, Taipei	•			

On the last step, please click "Initialize Now" to activate your gateway. (Remember to first connect your gateway to the Internet.)

	C-1002 🏾 🖉 Activation Wiza	rd 🦲 Gateway	📥 Network 🛛 🗘	.ocal Device 🛛 😋 S	iervice 🖋 System		🔵 admin 🔹 🦨 🗘		
Wizard									
START	ACTIVATION	SCENARIO	WAN	LAN	LOCAL DEVICES	ТІМЕ	FINISH		
		R	eady	to g	jo!				
	Click the button to activate your MRC-1002								
			Initia	lize Now					

The following topics are covered in this chapter:

- Activation Status
- Tunnel Control

Activation Status

On the "Gateway" settings page, you can check the activation status of your MRC gateway. You can also configure the remote access capability of your MRC gateway. In the Network Connection Status row below, it shows two status. On the left hand side, it show the activation status, and on the right hand side, it shows the network connection status. Please refer to below table to see the status.

Activation Status	Meaning
Error to get activation status	Not yet to insert Activation Key in the MRC Gateway
Connecting to internet	Fail to connect internet
Activated	MRC Gateway is activated by MRC-Server
Deactivated	MRC Gateway is deactivate by MRC-Server
Reactivating	MRC Gateway is reactivating for sync data after MRC-Server upgrade
Expired	MRC Gateway is expired from group/domain due date
Disabled by Server Admin	MRC Gateway service off from MRC-Server
Deleted by Server Admin	MRC Gateway deleted from MRC-Server

Network Connection Status	Meaning
Online	MRC1002 is connected to MRC-Server by MRC tunnel

MOXA MRC-1002 7 Activation Wiza	ard 🕒 Gateway 📥 Network 🔅 Lo	cal Device 🛯 🕫 Service 🎤 System	🥘 admin 🕶 🦨 🗘
Gateway / Activation Stat	Activation Status		
GATEWAY	ACTIVATION STATUS		
ACTIVATION STATUS			8
TUNNEL CONTROL	Name:	GW_Writer_UI_Review_1127	_
	Status:	Activated / Online	

Tunnel Control

Users can configure the method for how the MRC gateway establishes a tunnel for remote access.

MRC-1002 Activation	Wizard 📤 Gateway 📥 Network 🏶	Local Device 🛯 📽 Service 🖌 System	🕘 admin 🕶 🦨 🗘
Gateway Tunnel Cont	rol		
GATEWAY	🖋 TUNNEL CONTROL		
ACTIVATION STATUS			8 2
TUNNEL CONTROL	Tunnel Status	: Connect	
	Tunnel Control	Permanent connection	•

Click on " " to change the tunnel control settings. There are three tunnel control options:

Option	Description
Permanent Connection	The MRC gateway automatically establishes the tunnel for remote access
	whenever a connection to the Internet is available.
Controlled by USB key	The MRC gateway initializes the tunnel for remote access only when a USB dongle
	(loaded with the gateway's activation key) is inserted into the gateway.
Controlled by DI ON	The MRC gateway initializes the tunnel for remote access only when a DI (digital
	input) has been detected.

MC-1002 Activation	Wizard 🗅 Gateway 🍰 Network 🌩 Loc	al Device 📽 Service 🗲 System	🥏 admin 🕶 🦨 🗘
Gateway / Tunnel Cont	trol		
GATEWAY	🖋 TUNNEL CONTROL		
ACTIVATION STATUS	Tunnel Control:	Permanent connection	
TUNNEL CONTROL		Permanent connection Controlled by USB Key Controlled by DI ON	
	& Back		

The following topic is covered in this chapter:

Scenario Setting

Users can change the network scenario settings and check the WAN/LAN status from the Network settings page.

Scenario Setting

MOXA MRC-1002 % Activ	vation Wizard 🔺 Gateway 🛃 Network 🌣 Local Device 🕫 Service 🗲 System	🔵 admin 🕶 🖍 🗘
Network Scenario	Setting	
A NETWORK	A SCENARIO SETTING	
SCENARIO SETTING		ß
WAN STATUS	WAN-LAN Mode	_
LAN STATUS	(using external device for Internet access)	
	titionet eg sys-bit.x LAN Fort	
	Ethernet Switch Target Machine	

Click "C" to change the tunnel control settings and click "Next" to continue inputting settings.

Network / Scenario	tion Wizard Cateway A Networ	k 🏶 Local Device 📽 Service	₽ 🗲 System	🔵 admin 👻 🦨 🇘
A NETWORK	A SCENARIO SETTING			
SCENARIO SETTING	WAN-LAN Mode	WAN-LAN Mode with NAT	Transparent-LAN Mode	Cellular-WAN Mode
WAN STATUS	(using external device for Internet access)	(using existing device for Internet access)	(using existing network for Internet access)	(using embedded cellular for Internet access)
LAN STATUS	Historret G. Status Settor Tiget Machine	Hermet River Unit of the sector Sector Sector Sector Sector Sector Target Machine	torend Rover North Control North C	Improve Improve Improve <
	_			
	← Back			

Mode	Scenario
WAN-LAN Mode	Connect an external ADSL modem, cable modem, or Internet WIFI router to
	establish remote access.
WAN-LAN Mode with NAT	Use the existing factory network to access the Internet in order to establish
	remote access. Keep the device communicating to the factory network by using
	NAT.
Transparent-LAN Mode	Use the existing factory network to access the Internet in order to establish
	remote access. Keep the LAN device communication transparent to the factory
	network.
Cellular-WAN Mode	Use cellular as Internet access. The two Ethernet ports are both LAN ports that
	can be used for connecting to local devices.

WAN-LAN Mode:

MC-1002 Activation	Wizard 🌰 Gateway 📥 Network	< 🌣 Local Device 🛯 📽 Service	🖌 System	🦲 admin 🕶 🥐 🏒
Network / Scenario S	etting			
A NETWORK	A SCENARIO SETTING			
SCENARIO SETTING	WAN-LAN Mode	WAN-LAN Mode with NAT	Transparent-LAN Mode	Cellular-WAN Mode
WAN STATUS	(using external device for Internet access)	(using existing device for Internet access)	(using existing network for Internet access)	(using embedded cellular for Internet access)
LAN STATUS	VWN Pret C (S)	Harden Kall Hoches Kall Control Router Hoches Kall Hoches Kall Hoche	Edward Bund Sunto	to receive the second s
	& Back	Scenario Setting	ì	

Step 1: Setup Internet access

MOXA MRC-1002 P Activatio	on Wizard 📤 Gateway 👗 Network 🔅 Lo	ocal Device 🛯 📽 Service 🎤 System	🧶 admin 🕶 🖍 🗘
Network Scenario S	etting		
A NETWORK	L SCENARIO SETTING		8
SCENARIO SETTING	Internet IP Setting:	◎ Static IP	
WAN STATUS		DNS Server (Optional for DHCP or PPPoE)	
LAN STATUS	DNS Server1:	DNS Server IP Address	
	DNS Server2:	DNS Server IP Address	
	DNS Server3:	DNS Server IP Address	
			Next
	♦ Back		

Setting Static IP

Internet IP Setting:	Static IP	◎ DHCP	PPPoE
IP Address:	IP Address		
Subnet Mask:	Subnet Mask		
Gateway:	IP Address		

DNS Server (Optional for DHCP or PPPoE)

DNS Server1:	DNS Server IP Address
DNS Server2:	DNS Server IP Address
DNS Server3:	DNS Server IP Address

Setting DHCP

Internet IP Setting:	Static IP	OHCP	PPPoE
	DNS Server (O	ptional for DH	CP or PPPoE)
DNS Server1:	DNS Server	IP Address	
DNS Server2:	DNS Server	IP Address	
DNS Server3:	DNS Server	IP Address	

Setting PPPoE

Internet IP Setting:	◎ Static IP ◎ DHCP ◎ PPPoE
User Name:	PPPoE User Name
Password:	PPPoE User Password
Host Name:	PPPoE Host Name
	DNS Server (Optional for DHCP or PPPoE)
DNS Server1:	DNS Server IP Address
DNS Server2:	DNS Server IP Address
DNS Server3:	DNS Server IP Address

Step 2: Setup the management IP address for LAN (must be the same subnet as the local network devices).

MOXA MRC-1002 PAG	ctivation Wizard 🔺 Gateway 🚠 Network 🔅 Lo	cal Device 🛯 📽 Service 🖌 System	🥚 admin 🗸 🦨 🗘
Network Scenari	io Setting		
A NETWORK	📥 SCENARIO SETTING		
SCENARIO SETTING	IP Address:	192.168.127.254	
WAN STATUS			
LAN STATUS	Subnet Mask:	255.255.255.0	
	_		Next
	+ Back		

Click "Next" and wait for the configurations to change.

WAN-LAN Mode with NAT:

MC-1002 Activation	Wizard 🌰 Gateway 🛔 Networ	k 🔹 Local Device 🐗 Service	e 🎤 System	🥌 admin 🕶 🥕 🗘
Network / Scenario S	etting			
A NETWORK	A SCENARIO SETTING			
SCENARIO SETTING	WAN-LAN Mode	WAN-LAN Mode with NAT	Transparent-LAN Mode	Cellular-WAN Mode
WAN STATUS	(using external device for Internet access)	(using existing device for Internet access)	(using existing network for Internet access)	(using embedded cellular for Internet access)
LAN STATUS	Harret Reale	Herrer Breit	Herrer Raser	terrer terrer
	← Back			

Step 1: Setup Internet access.

NETWORK	A SCENARIO SETTING			
CENARIO SETTING	WAN-LAN Mode (using external device for	WAN-LAN Mode with NAT (using existing device for	Transparent-LAN Mode (using existing network for	Cellular-WAN Mode (using embedded cellular
AN STATUS	Internet Router	Internet access)		for Internet access)
	c.g: 192.168.1.x	Ethernet	Ethernet	e.g. 192.168.1.x
	Ethernet	e.g. 192.168.1.x	e.g. 192.168.1.X	Ethernet
	Target Machine	Target Machine	Target Machine	Target Machine

Step 2: Setup management IP address for LAN (must be the same subnet as local network devices).

MOXA MRC-1002 PActivation Wizard	🛎 Gateway 👗 Network 🔅 Loc	cal Device 🕫 Service 🖋 Sys	tem 🥥 admin 🕶 🦨 🗘
Network / Scenario Setting			
A NETWORK	SCENARIO SETTING		
SCENARIO SETTING	IP Address:	192.168.127.254	
WAN STATUS	Subnet Mask:	255.255.255.0	
LAN STATUS			New
			Next
•	Back		

Click "Next" and wait for the configurations to change.

Transparent-LAN Mode:

MOXA [®] MRC-1002 P Activatio	n Wizard 🔺 Gateway 👍 Netwo	ork 🔹 Local Device 📽 Serv	ice 🗲 System	🦲 admin 🕶 🛃 🏠
Network / Scenario Se	etting			
A NETWORK	A SCENARIO SETTING			
SCENARIO SETTING	WAN-LAN Mode	WAN-LAN Mode	Transparent-LAN Mode	Cellular-WAN Mode
WAN STATUS	(using external device for Internet access)	(using existing device for Internet access)	(using existing network for Internet access)	(using embedded cellular for Internet access)
	hterset Rater	Interest Kourf Interest Kourf	blerer Bohrer Sentes Sobrer C, syste Marker Target Machine	there the factory for factory for the factor f
	← Back			

Step 1: Setup the unified interface for Internet access and LAN management IP address (must be the same as local devices' subnet).

MOXA MRC-1002 X Activation Wizard A Ga	iteway 📥 Network 🏾 🏶 Lo	cal Device 🕫 Service 🎤 System	🦲 admin 🕶 🦨 🗘
Network / Scenario Setting			
A NETWORK	RIO SETTING		
SCENARIO SETTING	Internet IP Setting:	Static IP	
WAN STATUS		DNS Server (Optional for DHCP or PPPoE)	
LAN STATUS	DNS Server1:	DNS Server IP Address	
	DNS Server2:	DNS Server IP Address	
	DNS Server3:	DNS Server IP Address	
			Next
- Back			

 ${\sf Click}$ "Next" and wait for the configurations to change.

Cellular-WAN Mode:

In this mode, the two Ethernet ports are operating as two LAN ports and your MRC gateway will use cellular to access the Internet.

MOXA MRC-1002 Z Activation	Wizard 📤 Gateway 📥 Networ	k 🍄 Local Device 🕫 Service	e ∲System	odmin 🔹 🦨 🗘
A NETWORK	A SCENARIO SETTING			
SCENARIO SETTING	WAN-LAN Mode	WAN-LAN Mode with NAT	Transparent-LAN Mode	Cellular-WAN Mode
WAN STATUS	(using external device for Internet access)	(using existing device for Internet access)	(using existing network for Internet access)	(using embedded cellular for Internet access)
LAN STATUS	Herrert Kester Herret WANFert C. 5.92-56.4.4 HAN Port Switch Tiggt Machine	Kenario Settina	Herrer Rode Herrer Herrer Herrer Rode Herrer Herrer Herrer Rode Herrer Herrer Herrer Rode Herrer Herrer Herrer Her	therenet theren
		Escentral Setting		
	← Back			

Step 1: Setup cellular for Internet access. There are two pre-defined carriers in the system, "AT&T" and "Verizon". If your cellular provider is not in the list, please choose "Generic".

MOXA MRC-1002 Activation	Wizard 📤 Gateway 📥 Network	🌣 Local Device 🛛 🕫 Service 🎤 System	🦲 admin 🕶 🦨 🗘
Network Scenario Set	tting		
A NETWORK	L SCENARIO SETTING		8
SCENARIO SETTING	Addressing Met	thod: © Cellular	
WAN STATUS	Carrier:	AT&T	
LAN STATUS	ADN	ADM	
	AFN.	Arn	
	PIN:	PIN	
	Username:	Username	
	Password:	Password	
	Cellular Keep Alive:	Dn	
	Cellular Watchdog:	Off	
		DNS Server (Optional for DHCP or PPPoE)	
	DNS Ser	ver1: DNS Server IP Address	
	DNS Ser	ver2: DNS Server IP Address	
	DNS Ser	ver3: DNS Server IP Address	
			Next
BACK	← Back		

APN: Input the APN Access Point Name. (Provided by your carrier.)

PIN: Input the PIN code to unlock your SIM card. (Provided by your carrier)

Username/Password: Input username and password for Internet access. (Provided by your carrier) **Cellular Keep Alive:** When the cellular drops Internet access, the MRC gateway will restart the cellular connection to the carrier.

Cellular Watchdog: When the cellular system stops working, the MRC gateway will restart the cellular hardware to re-initialize the connection.

Step 2: Setup management IP address for LAN (must be the same subnet as local network devices).

MC-1002 Activation Wizard	Gateway 📥 Network 🏾 🍄 Loo	cal Device 🕫 Service 🗲 System	🦲 admin 👻 🦨 🗘
Network Scenario Setting			
A NETWORK	ARIO SETTING		
SCENARIO SETTING	IP Address:	192.168.127.254	
WAN STATUS	Subnet Mask:	255.255.255.0	
LAN STATUS			
			IVEXT
+ Back			

Click "Next" and wait for the configurations to change.

The following topic is covered in this chapter:

Local Device

Local Device

Users can locally add or remove Ethernet devices that are available for remote access. After modifying the local device list, the MRC gateway will automatically push the configuration back to the MRC server.

NOTE The MRC gateway must have the capability to access the Internet when performing this configuration. 🔵 admin 👻 🥕 MCC-1002 🌾 Wizard 📤 Gateway 🍰 Network 🌣 Local Device 🐝 Service 🖋 System Local Device **Local Device** LOCAL DEVICE LOCAL DEVICE Û 0 Edit IP/MAC Virtual IP Health Check Name Status Service 10.150.1.162 Offline 192.168.127.1 Ping Check (10 s) C 4 B Controller01

Click "•" to add more devices; click "•" to remove the selected device. After adding a new device and pressing the "•" button, the configurations will automatically update to the configurations on the MRC server.

NETWORK	A SCENARIO SETTING			8
CENARIO SETTING	WAN-LAN Mode	WAN-LAN Mode with NAT	Transparent-LAN Mode	Cellular-WAN Mode
AN STATUS	(using external device for Internet access)	(using existing device for Internet access)	(using existing network for Internet access)	(using embedded cellular for Internet access)
AN STATUS	therest four Soldsree C (1) 2005 1.1 C (1)	Herrer Bude Herrer Bude Herre	Herrer Haver Herrer Haver He	Internet G. St. A.L. Ethernet Target Machine Target Machine

Input the name of the device and select the IP Ethernet device or L2 Ethernet device type. Then, input the IP address or MAC address for your device. If "Auto IP Mapping" configuration is enabled, you can choose any of the IP addresses in the virtual IP list for your IP Ethernet device. For the last step, you can choose "Health Check" function and select PING or port link to check the status of the device.

MC-1002 Vizard	lateway 🛔 Network	Cocal Device 📽 Service	≁ System	📄 admin 👻 🦨 🗘
Local Device / Local D	Device			
LOCAL DEVICE	I LOCAL DEVICE			
LOCAL DEVICE				+ 🖿 🗢
	Edit Name	Status IP/MAC	C Virtual IP Health Check	Service
	🛛 🕜 Controller	r01 Offline 192.168.12	27.1 10.150.1.162 Ping Check (10 s)	C 4 B

Users can also setup service-based access control of the devices. For example, you can limit the HTTP web service of the local device so that only Engineer A can have access to it. Therefore, other engineers will not be able to access that device's HTTP web service.

Local Device	Service			×	
LOCAL DEVICE	Service	Protocol Port Range	Allowed Client List		
LOCAL DEVICE	ALL		Any Client	2	+ 1 2
					Service
				3)	
				III o	

NOTE The allowed client list is referring to the client list in the client management page.

10 Service

The following topic is covered in this chapter:

Service

Service

Users can change the time zone if the gateway was moved to a location in a different time zone. This will reflect the local time when auditing the event logs.

MOXA [®] MRC-1002 [®] Wizard	s Gateway 🚠 Network 🗢 Local Device 🕫 Service 🎤 System	🥏 admin 🕶 🦨 🗘
Service / Date & Time		
✿ SERVICE	Ø DATE & TIME	
DATE & TIME		C
	2017-11-24 18:10:41	
	Time Zone: (+08:00) Beijing, Hong Kong, Singapore, Tai	pei

Click "" to change the settings.

мохл	MRC-1002	🎢 Wizard	🗅 Gateway	📥 Network	Local Device	C Service	🗲 System		admin 🕶	2	۵
Servic	e / Date	& Time									
¢\$ SERV	ICE		Ø DATE	& TIME							
DATE & TI	ИЕ				Time Zone:	(+08:00) I	Beijing, Hong Kong, Singapor	re, Taipei 🗸 👻			
								🖺 Save			
			← Back	¢							

System / System Information System Information Firmware Upgrade Reset To Default Reboot System Information SYSTEM INFORMATION System Information Model Name MRC-1002 Firmware Version MRC1002_V1.0.0_17112216	MRC-1002 & Wize	ard 🌰 Gateway 🎄 Network 🌩 Local D	Device 📽 Service 🎤 System	🦲 admin 🗝 🦨 🗸
SYSTEM SYSTEM INFORMATION Reboot SYSTEM INFORMATION System Information Model Name MRC-1002 Firmware Version MRC1002_V1.0.0_17112216	System / System In	formation	System Information Firmware Upgrade Reset To Default	
SYSTEM INFORMATION System Information Model Name MRC-1002 Firmware Version MRC1002_V1.0.0_17112216		SYSTEM INFORMATION	Reboot	
Model Name MRC-1002 Firmware Version MRC1002_V1.0.0_17112216	SYSTEM INFORMATION		System Information	
Firmware Version MRC1002_V1.0.0_17112216		Model Name	MRC-1002	
		Firmware Version	MRC1002_V1.0.0_17112216	
		l		

Users can obtain the system information locally and upgrade the firmware of the gateway.

system System Info	6 Firmware Uprade ×	
SYSTEM	Note: 1. Download the latest firmware from the Moxa website at www.moxa.com. 2. Do NOT turn off the device during the firmware upgrade process © Local Upgrade © Online Upgrade Firmware File: Choose File No file chosen	

If necessary, users can reset the gateway to default settings or reboot the gateway.

MOXA MRC-1002 > Wizard	🛎 Gateway 👎 Network 🔅 Local Device 🕫 Service 🌶 System	🛑 admin 🕶 🦨 🗘
System / System Info	Reset To Default ×	
SYSTEM INFORMATION	Are you sure to reset the MRC-1002 back to the default settings? Note: During the reset-to-default process, you will be logged out of the MRC-1002. You must wait until the process is complete before you can log into the MRC-1002 again.	
	2 Reset Cancel	

MOXA MRC-1002 > Wizard	🛎 Gateway 🎄 Network 🛭 & Local Device 🛇 Service 🖋 System	odmin 👻 🦨 🗘
System / System Info	Reboot Device ×	
✓ SYSTEM SYSTEM INFORMATION	Are you sure you want to reboot the device? Note: During the reboot process, you will be logged out of the device. You must wait until the process is complete before you can log into the device again.	
	Cancel Cancel	