## The MXview One/MXview and MXconfig (nonjava)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

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## About Moxa

Moxa is a leading provider of edge connectivity, industrial computing, and network infrastructure solutions for enabling connectivity for the Industrial Internet of Things. With 35 years of industry experience, Moxa has connected more than 82 million devices worldwide and has a distribution and service network that reaches customers in more than 80 countries. Moxa delivers lasting business value by empowering industry with reliable networks and sincere service for industrial communications infrastructures. Information about Moxa's solutions is available at <a href="https://www.moxa.com">www.moxa.com</a>.

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## **1** Introduction

This document explains how to configure or monitor the NPort and MGate Series when using MXconfig and MXview software. You can use Moxa's MXconfig Series to configure multiple Moxa devices simultaneously. The MXview Series is an industrial network management software that helps to monitor and view Moxa devices on a dashboard during daily operations. The MXconfig Series reduces deployment efforts and maintenance costs, while the MXview Series minimizes downtime.

## 1.1 Purpose

This document explains how to configure, maintain, and monitor multiple NPorts/MGates in industrial networks. Check if your NPort or MGate device is supported iby MXconfig/MXview before configuring or monitoring with these tools. If no, import the NPort and MGate plugin package to MXconfig/MXview. This guide also explains how to import plugins to enable support in NPort, MGate products in the MXconfig Series and MXview Series.

## 2 How to configure and maintain multiple NPorts/MGates in industrial networks

## 2.1 Prerequisites

Before starting with the MXconfig Series, make sure you have enabled SNMP and Moxa command service on your NPort and MGate devices. Refer to the product user manual for related settings.

## 2.2 Introduction to MXconfig (non-java) and MXconfig (java)

Moxa's legacy MXconfig java version is a comprehensive Windows-based utility that installs, configures, and maintains multiple Moxa devices on industrial networks. To improve cybersecurity and prevent vulnerabilities, Moxa offers the java-free MXconfig C# version. The MXconfig (non-java) or MXconfigCS uses version 3.x, and the legacy MXconfig (java) uses version 2.x.

## 2.3 What functions are supported in the MXconfig Series

- Broadcast search for NPort and MGate devices.
- Unlocking selected devices after inputting the device password.
- Exporting multiple configuration files with user-definable filenames and importing multiple configuration files to multiple devices.
- Upgrading firmware to selected devices.
- Copying configuration to selected devices.
- Security wizard for convenient setup of security-related parameters.

## 2.4 How to import plugins to the MXconfig Series

## 2.4.1 MXconfig (non-java or "MXconfigCS") import plugin steps

First, download the MXconfig utility from Moxa's website and install it. Check the supported models on the MXconfig official website. If the models needed are not on the support list, please follow the steps below to install the plugin. After installing the plugin, the models needed will be supported on MXconfig.

• Execute the plugin file (.exe file).

Name	
MXconfigCS_plugin_package_setup_Ver1.0_Build_22122216.exe	
Version.txt	

• Follow the instructions on the wizard to install the plugin.



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🕼 Setup - MXconfigCS_plugin_package		_	
Select Destination Location Where should MXconfigCS_plugin_package b	e installed?		Ð
Setup will install MXconfigCS_plugin_	package into the	following folde	er.
To continue, click Next. If you would like to	select a different	folder, click Br	owse.
C:\Program Files\Moxa\MXconfigCS			Browse
At least 2.1 MB of free disk space is required			
	< Back	Next >	Cancel
🕼 Setup - MXconfigCS_plugin_package			
Ready to Install Setup is now ready to begin installing MXcon computer.	figCS_plugin_pa	ackage on your	
Click Install to continue with the installation, change any settings.	or click Back if y	ou want to rev	view or
Destination location: C:\Program Files\Moxa\MXconfigCS			^
			$\sim$
<			>

## The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series



• Launch the MXconfig (non-java) or MXconfigCS application.



## The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

• Check if the plugin of the desired model series' is installed. The following is an example after installing the MGate Series plugin.

m MV C								~
MXconfig								×
File Edit About								
🚳 🔍 🗓 🗎 🥥	°0; 🗃 📇 (	👱 💁 💿 🔜 🤡 🥝 🖬						
	Search Range				×		Location	
	Please select which kinds of devices you would like to search.							
	Active	Description	Progress	Status				
		Industrial Switch		Waiting				
		Industrial Wireless		Waiting				
		Industrial Ethernet Gateway		Waiting		2		
	Active	From		То				
							Information	
						ľ í		
							Converding	
							Forwarding	
							Interrace	
			Add Network	lodify Network	move Network			
		Keep existing search result	Search	Stop	Close			
							4	
						-		

• For more detailed information about MXconfig, please check the "Help" tab in the MXconfig application.



## 2.5 Typical operating scenarios

The following examples use MXconfig (non-java).

## **2.5.1** Broadcast search of the network

• Click the search button.



• Add a search network and specify the search IP address range.

Search Range			×						
Please select which kinds of devices you would like to search.									
Active	Description	Progress	Status						
	Industrial Switch		Finished						
$\checkmark$	Industrial Wireless		Finished						
$\checkmark$	Industrial Ethernet Gateway	Finished							
Active	From	То							
	192.168.127.1	192.168.127.254 2							
	Ac	Id Network 1 Modify Netwo	rk Remove Network						
	Keep existing search result	Search 3 Stop	Close						

- Click **Search** to start searching.
- Check the search results. If it cannot search the device, check if the device's firmware version supports MXconfig.

MXconfig File Edit About								
🛛 🔍 🗟 🗴 🖉 😒 😁 🛤 🕸 🔝	ò: 🗄	I 😡 🥘 🗳						
⊕-🗛 ALL		Model	IP Address	MAC Address	Serial	Firmware Version	Name	Location
	â	MGate MB3170	192.168.127.254	0090E87F91BC	TAIHE1008441	V3.0build17030713	MG-MB3170I_8441	

## 2.5.2 Unlocking selected devices after inputting the device password

• Right-click on the searched device and select "Unlock Devices".

🔯 MXconfig			- 🗆 ×
File Edit About			
🔗 🔍 🖻 🎯 👘 🛎 📇 💁 🐼	۵ 😒 📾		
Model IP Addre	ess MAC Address Serial	Firmware Version Name	Location
	127.2 0090E87F and Low Low Console Security Wizard Unlock Devices Web Telnet Console Connectivity Test Reboot Factory Default Delete Device	ettings MG-MB3170	DL_8441
Network Model MGate MB IP 192.168.1 Netmask 255.255.2 MACAdress 0000E87F Serial No. TAIHE1000 Firmware Ver. V4.4build2	31701 27.254 55.0 918C 3441 3053016		Information     LLDP     Forwarding     Interface

• After unlocking the devices, further operations such as reboot and factory default can be performed.

🖾 MXconfig						
File Edit About						
🙆 🔍 🗟 👜 🧟	🎨 🖻 🙇 🚱	🧟 🗟 🔙	💕 🕥 😒			
⊕ <mark>ALL</mark>	Model	IP Address	MAC Address	Serial	Firmware Version	Name
	MGate MB3170I	192.168.127.2	0090E87F91BC	TAILE:	Image: Constant of the second secon	MG-MB31701_844
	Network Model IP Netmask MAC Address Serial No. Firmware Ver.	MGate MB3170I 192.168.127.254 255.255.250 0090E87F91BC TAIHE1008441 V4.4build23053010	3			

# 2.5.3 Exporting multiple configuration files with user-definable filenames and importing multiple configuration files to multiple devices

- Select multiple devices.
- Click the Export Configuration icon or right-click on the devices and select the Export Configuration function.

Model	IP Address	MAC Address	Serial	Firmware Version	Name	Location
192.168.127.243       Model         192.168.127.253       192.168.127.253         192.168.127.254       INS-6708-2         192.168.127.254       INS-6508-2         192.168.127.254       INS-6508-2         192.168.127.254       INS-6508-2         192.168.127.254       INS-6508-2         INS-6509-2       INS-6509-2         INS-6509-2       INS-6509-2         INS-6509-2       INS-6509-2         INS-6509-2       INS-6509-2         INS-6509-2       INS-6509-2         INS-6509-2       INS-6509-2         INS-6509-2       INS-6402-0         INS-6509-2       INS-6509-2         INS-6408-2       INS-6408-2         INS-6408-2       INS-6408-2         INS-6409-2       INS-6408-2	IP Address           IPOE         122 198 12           CTX.         1         0x         Co.           GT         15         0x         Mit.           T-2         15         12         Ext.           15         12         12         12         Mit.           14         2x         14         Un           15         0x         Ext.         15           16         0x         Ext.         10           15         0x         Ext.         10           16         0x         Tel         0x         0x           17         0x         Tel         0x         0x           18         0x         Co.         0x         0x           19         0x         Tel         0x         0x           19         0x         0x         0x         0x           19         0x         0x         0x         0x           19         0x         0x         0x         0x           10         0x         0x         0x         0x           10         0x         0x         0x         0x <t< td=""><td>MAC Address     MAC Address     MOSOLE8011223     MOSOLE8011223     MOSOLE8011223     mfigure Network     utiple Function Settings     ecute CLI     curity Wizard     grade Firmware     port Configuration     port Configuration     port Configuration     lock Devices     eb     net Console     nectivity Test     vice Locator     boot     test Device</td><td>Serial           MOXA0000000           TAEID 1026775           TBACD 1033640           MOXA0000000           TAICB 1122974           00000           05777           06071</td><td>Firmware Version V6.2: build 20080 V5.7 build 200117 v0.25 Build 2021 v1.9.8 Build 2021 V3.8 build 2021 V3.8 build 2021 V3.8 build 170411 V5.6 build 20092</td><td>Name moxa moxa Managed Redun Firewall/VPN Rou</td><td>Location Switch Loca Switch Loca cba Device Loca A A Informa LLDP Forwar</td></t<>	MAC Address     MAC Address     MOSOLE8011223     MOSOLE8011223     MOSOLE8011223     mfigure Network     utiple Function Settings     ecute CLI     curity Wizard     grade Firmware     port Configuration     port Configuration     port Configuration     lock Devices     eb     net Console     nectivity Test     vice Locator     boot     test Device	Serial           MOXA0000000           TAEID 1026775           TBACD 1033640           MOXA0000000           TAICB 1122974           00000           05777           06071	Firmware Version V6.2: build 20080 V5.7 build 200117 v0.25 Build 2021 v1.9.8 Build 2021 V3.8 build 2021 V3.8 build 2021 V3.8 build 170411 V5.6 build 20092	Name moxa moxa Managed Redun Firewall/VPN Rou	Location Switch Loca Switch Loca cba Device Loca A A Informa LLDP Forwar
MAC Address Full SerNo. Serial No Firmware Ver. Location	00-1 1 2 2 M MOX-400000 00000 V6.2 build 20 Switch Locat	lete Device 00 0080519 00				Interfac

- Enter the file path where the configuration file will be saved.
- Select the Filename, including IP, MAC, Name, Location, and Serial
- Click **Export**.

## 2.5.4 Upgrading firmware to selected devices

• Click the Upgrade Firmware icon, select the firmware file, and click **Upgrade**.

MXconfig							- 🗆 X
File Edit About							
) < 🗟 🖻 🧳 🎙	i) 🖬 🕌 🤹	💁 🗟 🔜 🤇	🗳 🕑				
ALL	Model	IP Address	MAC Address	Serial	Firmware Version	Name	Location
192,100,127,234	MGate MB3170I	192.168.127.2	0090E87F91BC	TAIHE1008441	V4.4build23053016	MG-MB3170I_8441	
		Firmware Upgr	ade - 192.168.127.254		- 🗆 ×		
		File: padsimox	a-mgate-mb3170-firi	mware-v4.4.rom	Browse 2		
					Canaal		
				<sup>Opgrade</sup> 3	Calicer		
l							
	Network						
	Model	MGate MB3170I					∧ Information
	Netmask	192.168.127.254 255.255.255.0					LLDP
	MAC Address Serial No.	0090E87F91BC TAIHE1008441					Forwarding
	Firmware Ver.	V4.4build2305301	6				Interface
							× .

• Check the results to see if it succeeded.

Firmware Upgrade – 🗆 🗙								
File Edit								
Index	IP	Model	Progress	Status				
1	192.168.127.254	MGate MB3170I	100%	Succeeded				
		nformation i All operations are finished OK	× _					
*Timeout: please confirm the execution results in Information Overview dialog								

• To upgrade firmware to multiple devices, select multiple devices and click the Upgrade Firmware button.

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• Select Sequential Mode or Concurrent Mode.

**Note** To speed up the upgrade process, use Concurrent Mode to upgrade all devices simultaneously. To upgrade the devices one by one, use Sequential Mode.

• Click Upgrade.

## 2.5.5 Copy configuration to selected devices

• Click the Copy Configuration button.

🕅 MXconfig	-		×
File Edit About			
🤗 🔍 🗟 🍙 🎱 🖻 🗸 💁 🥸 🚱 🚱 🚳 🕼			
ALL Model IP Add Copy Configuration Serial Firmware Version Name	Loca	ation	
Gate MB3170I 192.168.127.2 0090E87F91BC TAIHE1008441 V4.4build23053016 MG-MB3170I_8441			
Network			
Model MGate MB31701	∧ Ir	nformatior	
IP 192.168.127.254		LLDP	
MAC Address 0090E87F91BC		Forwardin	
Serial No. TAIHE1008441 Firmware Ver. V4.4build23053016	1	Interface	_

• Select the target device(s) to import the copied configuration file.

	11	He dat	Overlait	10	No. of Concession, Name	1
urce IP 2.168.127.254	ind.		Senal		realite	Cocaron
ogress						
Belect Target Devices						
escription						
Please select one or more wices to be configured.						
Hold shift/ctrl to select ultiple devices.						
ocked devices will not be ited in the table.)						

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## 2.5.6 Security wizard for convenient setup of security-related parameters

ISA/IEC 62443 is a continuously evolving cybersecurity standard that is being used in many industrial automation applications. This standard, including its subsections, covers general, policy and procedure, system-level, and component-level requirements. MXconfig follows Moxa's security guidelines, which are based on the IEC 62443-4-2 component-level recommendations. The Security Wizard assesses Moxa's network devices' security level and makes configuration recommendations.

- Select the devices that the Security Wizard will set.
- Right-click on the devices and select the Security Wizard.
- The Security Wizard window will pop up.
- Select Profile: General Baseline, IEC 62443-4-2 Level 1, or IEC 62443-4-2 Level 2.
- Click Next.

**Note** Click **Custom** to create your own setting items. Custom profiles can be saved and loaded.

- Enter all related parameters in every setting item that is not in the green circle.
- Click Next.

**Note** Click Skip to avoid making modifications on specific setting items. If you skip certain security settings, MXconfig cannot guarantee that all security settings will be set.

## The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

🐼 Sercurity Wizard							- 0	×
File View								
Display IP V Selected Devices 192.168.127.134	Profile	IEC62443-4-2 Level 1	~	Custom			Load	
	Enable Iter	n						
	Aut	to Logout						
	Acc	cessible IP						
	Sys	slog Server						
	🗹 Tra	ap Server						
	Acc	count Lockout						
	🗹 Pa	ssword Policy						
	Sys	stem Notifications						
	🗹 Bro	oadcast Storm						
	□ Co	nfig Encryption						
	🗹 Ma	nagement Interface						
	🗹 Pa	ssword						
	SN SN	IMP Setting						
On Load Settings								
Ou roan semilis								
						Next	Close	
Sercurity Wizard							- 0	×
Display IP ~			Skip		Accessi	ible IP		
Selected Devices 192.168.127.134	<ul> <li>Auti</li> <li>Acc</li> <li>Sys</li> <li>Trai</li> </ul>	o Logout essible IP log Server p Server	The "Enable Acc in the device's A	cessible IP" funct accessible IP list ssible IP	tion only work	is if there are one or	more IPs	
			Index	IP		Netma	ask	~
	Acc	ount Lockout	1					
	🔴 Pas	sword Policy	2					
	Sue	tem Natifications	3					
	U Sys	terri Nourications	4					
	🔵 Bro	adcast Storm	5					
	Mar	nagement Interface	6					
			7					
	🔴 Pas	sword	8					
	SNI	MP Setting	9					~
			*Hint1. Add Acce	essible IPs using	g this table			
			*Hint2. If a netm	nask is not assigi	ned, the defa	ult value is 255.255	255.255	
On Load Settings			At least one IP i	must be set				

#### The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

• Check the security profile for General Baseline, IEC 62443-4-2 Level 1, IEC 62443-4-2 Level 2, and the mapping security functions in the following table.

Security functions	General Baseline	IEC 62443-4-2 Level 1	IEC 62443-4-2 Level 2
Accessible IP	$\checkmark$	$\checkmark$	$\checkmark$
Syslog server	$\checkmark$	$\checkmark$	$\checkmark$
Account Lockout		$\checkmark$	$\checkmark$
Password Policy		$\checkmark$	$\checkmark$
System Notifications		$\checkmark$	$\checkmark$
SNMP Agent	$\checkmark$	$\checkmark$	$\checkmark$
Management Interface		$\checkmark$	$\checkmark$
Password	$\checkmark$	$\checkmark$	$\checkmark$

## 3 How to monitor multiple NPorts or MGates in industrial networks

## **3.1 Prerequisites**

Before starting with the MXconfig Series, make sure you have enabled SNMP and LLDP service on your NPort and MGate devices. Refer to the product user manual for related settings.

## **3.2 Introduction to MXview One and MXview**

Moxa's MXview is a legacy network management software designed to configure, monitor, and diagnose networking devices in industrial networks. It provides an integrated management platform that can discover networking devices and SNMP/IP devices installed on subnets. All selected network components can be managed via a web browser from both local and remote sites—anytime and anywhere. MXview One is the nextgeneration network management software designed for the same purpose as MXview while also supporting different operating systems and advanced add-ons.

Security View function in MXview One and MXview follows Moxa's security guidelines based on IEC 62243 component-level recommendations. Security View checks the security level of Moxa's network devices, including NPort and MGate Series. Before viewing the NPort and MGate devices on MXview One or MXview, check if your NPort or MGate model is in the support list of MXview One or MXview. If not, please import the NPort or MGate plugin package to MXview One via Plugin Manager. The Plugin Manager is automatically installed when setting up MXview One orMXview. You can download the plugin package from the product page. Please execute Plugin Manager and add the plugin package.

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## **3.3 Supported functions in MXview One or MXview**

- Scan range (device search).
- Auto topology (need to enable LLDP on the device).
- Configuration import/export.
- Firmware upgrade.
- Locator (find the device).
- IP configuration.
- Device status.
- SNMP Trap (when the Ethernet link is down).
- Basic information (device information configuration).
- Device properties (detailed device information and status).
- Security View (detects the security level of a device).

## **3.4 How to import an NPort or MGate plugin to the MXview** Series

## 3.4.1 MXview One Windows/Linux import plugin steps

• Enter the MXview One Control Panel by opening the application or connecting to the IP of MXview One using 7100 port (e.g., in https://127.0.0.1:7100).

MXview One Con	trol Panel
Username	
Password	ø
Log In	

• In the MXview One Control Panel, navigate to the Plug-in Manager tab, select a plugin file, and click **Upload**.

( MXview One	e Control Panel De English 😩 adr	nin 🔻						
Server Control Configuration	Plug-in Version mgate							
DB Backup & Restore Plug-in Manager Certificates	<ul> <li>You can get the latest plug-in file from the Moxa website. ☑</li> <li>If you already have the plug-in file, please verify that the checksum of the plug-in file is the same as the checksum on the Moxa website.</li> </ul>							
Upload a plug-in file								
	Select a plug-in file Mgate 5000 plugin.zip 2							
	Upload 3							
	Supported Device Model(300)							
	Search Q							
	Model							

• Confirm **Upload**.

## The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

You can get the If you already I website.	e latest p nave the	blug-in file from the Moxa website. 🖸 plug-in file, please verify that the checksum of the plug-in file is the same as the che
Upload a plug-in file		Upload the Plug-in File
Select a plug-in file Upload	Mgat	Are you sure you want to upload the plug-in file? Cancel Upload
Supported Device Mo	del(300)	
Search		Q

• Wait for the uploading process to finish.

Upload the Plu	g-in File				
MXview One	stopped	2 Uploading the plug-ir	n file — 3 Starting	g MXview One	
			-		

• Search for the desired model series and make sure the plugin is installed.

	MGate-5217I					
	MGate-5134		MGate-5135		MGate-5435	
	MGate-5121		MGate-5122		MGate-5123	
	MGate-5114		MGate-5118		MGate-5119	
	MGate-5103		MGate-5109		MGate-5111	
	MGate-5105-MB-EIP		MGate-5102-PBM-PN		MGate-5101-PBM-MN	
	Model					
	Search	MGate-5 Q				
	Supported Device Mo	del(16)				
	Upload					
	Select a plug-in file					
Certificates	Upload a plug-in file					
Plug-in Manager	If you already	have the plug-in file, please verify that t	he checksum of the plug-in file	e is the same as the checksum on the Moxa we	bsite.	
DB Backup & Restore	You can get th	e latest plug-in file from the Moxa webs	ite. 🛛			

## 3.5 Typical operating scenarios

## 3.5.1 Scan range (device search)

- To be scanned by MXview, enable the **SNMP** service on the NPorts and MGates first.
- To launch Device Discovery manually, do the following: Navigate to Menu > Device Discovery. Device Discovery appears to the right of the navigation panel.
- Add the IP address ranges to scan for devices.

De	Device Discovery									
	1 Network Rang	e(s)				2 Discovery Result	<b>3</b> Complete			
	A Scanned	range(s) will be save	ed after device dis	covery.						
	Ð									
		Enabled/Disabled	Name	First IP Address	Last IP Address	Group				
	- 🖊 🕯	Enabled	MGate G2	10.123.20.13	10.123.20.254	Root				
	- / 1	Enabled	MGate	192.168.127.1	192.168.127.254	Root				
							1 = 2 of 2			
	Next									

## 3.5.2 Auto topology

- For devices with **LLDP** functionality, you can view the physical network topology map on MXview, down to the port number of the devices. If you need information on this level, please enable LLDP service on NPorts and MGates. For devices without an LLDP MIB, MXview can draw links by using ARP. To activate this function, select the Advanced Topology Analysis checkbox from the Auto Topology screen.
- Navigate to **Topology** > **Auto Topology**.
- Select Update Topology.
- For more detailed information, check the MXview user manual.

Auto Topology		
O New Topology		
Existing links are going to be deleted		
Update Topology		
Existing links will be kept while new links are added		
<ul> <li>Advanced Topology Analysis</li> <li>Strict Link Verification Mode</li> </ul>		
*Additional time is required.		
	Cancel	Apply

## 3.5.3 Configuration import/export.

 To import or export configuration from a NPort or a MGate, navigate to the main menu and select **Topology**. You can view the devices in two kinds of views: **Topology view** (graphical) or **List view**. To switch between these two views, click the icon on the upper-right corner.

≡ MX view ©NE		English	💄 admin 🔻
Q Type keyword to search	Root ↓ Topology → ◆ Edit → ◆ Visuelization → ▲ SFP →		<b>≡</b> 3 <b>6</b>
Dashboard Topology 2	Q.		1:1
Device Discovery Device Configuration Center	* •		# @ @
Event Management 🗸	10 122 20 49 10 123 20 42		

• Under both these views, select the device that you want to import or export the configuration, click **Maintenance**, then select **Import Config** or **Export Config**.

= MX viøw ONE		🌐 English 🔔 admin 🔻
Q Type keyword to search	Root A Maintenance 🗸 1 💐 Tools 🗸 🖍 Change Group 🕐 Refresh 🛛 GD Add Link 🖥 Delete	= 0
Dashboard	Import Config 2	Device Properties Current Status
Topology	Export Config	Basic Device Properties
Device Discovery Device Configuration Center	typgrade Firmware	Alas 192.168.127.251MGate-MB3660
Event Management	Trap Server	Model Name
Notification Management	Port Settings	MAC Address
Reports	SNMP Settings	00:90:E8:AA:37:91

 The Import Config/Export Config window pops up and shows the IP address of the selected device.

Import Config - 192.168.127.252	
Import Config *	Export Config - 192.168.127.252
* Please make sure the username and password for this device are correctly set in "Advanced Settings"	* Please make sure the username and password for this device are correctly set in "Advanced Settings"
Cancel Import	Cancel Export

• Lastly, click **Import** or **Export** to finish the operation.

## 3.5.4 Firmware upgrade

- To upgrade firmware to a device, navigate to the main menu and select **Topology**.
   You can view the devices in two kinds of views: **Topology view** (graphical) or **List view**. To switch between these two views, click the icon on the upper-right corner.
- Under both these views, select the device that you want to import or export configuration, click **Maintenance**, then select **Upgrade Firmware**.

≡ MXviøw ©NE		⊕English 🛓 admin 🔻 🍳
Q Type keyword to search	Root	
Dashboard	Import Config	Device Properties Current Status
Topology	Export Config	Basic Device Properties
Device Configuration Center	1 Upgrade Firmware	Alias 192.168.127.251MGate-MB3660
Event Management 🗸	Trap Server 10.123.20.42	Model Name MGate-MR2660

• The **Upgrade Firmware** window pops up and shows the IP address of the selected device.

Upgrade Firmware - 192.168.127.252		
Upgrade Firmware *	]	
* Please make sure the username and for this device are correctly set in "Adv Settings"	l password vanced	
Cancel	Upgrade	

• Select the firmware file from your local computer, then click **Upgrade**. MXview will upgrade the firmware to the specified device.

## **3.5.5** Device Locator (find devices in your field)

- To locate a device, navigate to the main menu and select **Topology**. You can view the devices in two kinds of views: **Topology view** (graphical) or **List view**. To switch between these two views, click the icon on the upper-right corner.
- You can use the **Device Locator** to locate a device in the field. When the **Device Locator** is activated, all the LEDs on the device blink to help you locate the device.
- Under both these views, select the device that you want to locate, click **Locator**, and click **Start**, then the LEDs on the device start blinking.

Device Locator	
Start Stop	
	Close

**Note** This feature is only available in MXview. It is no longer supported in MXview One.

## 3.5.6 IP configuration (configuring device IP settings)

- To configure IP settings for a device, navigate to the main menu and select
   **Topology**. You can view the devices in two kinds of views: **Topology view** (graphical) or **List view**. To switch between these two views, click the icon on the upper-right corner.
- Under both these views, select the device that you want to change IP configuration, click **Maintenance**, then select **IP Configuration**.

IP Configuration			
This feature is not available for L	ayer 3 devices.		
IP Address *			
10.81.10.10			
Netmask *			
255.255.255.0			
Gateway			
0.0.0.0			
DNS1			
0.0.0.0			
DNS2			
0.0.0.0			
		Cancel	Apply

**Note** This feature is only available in MXview. It is no longer supported in MXview One.

## **3.5.7** Device status

- To check the status of devices, navigate to the main menu and select **Topology**. You can view the devices in two kinds of views: **Topology view** (graphical) or **List view**. To switch between these two views, click the icon on the upper-right corner.
- If the device is not reachable from MXview using SNMP, the status turns to yellow. Please check the SNMP or other settings that may affect SNMP operation in the network. If the device is not reachable from MXview using ICMP (ping), the device status turns to red. Please check the network settings or examine for any network issues.

$\equiv$ MX view C	NE					
Root						
🔾 Maintenance 🗸	🔍 Tools 🗸	🖍 Change Group	C Refresh	G Add Link	Delete	
Q 祥	(	192.168.127.251	10.123.20	0.52		

## 3.5.8 SNMP Trap (when the Ethernet link is down)

MXview can act as a trap server to show device events. After configuring the SNMP settings correctly, the Ethernet Link down trap can be received and viewed in MXview's **Topology**, and the device's status turns to red. The SNMP trap event can be viewed in the Topology page or the **Event Management** > **Event History** page.

Ŧ	۵							Q, Searc
			Site Name	10	Source	Source IP	Device Allas	Description
۲	2	в	ST# SHANLINE	172	MXview	192.168.127.100	192 168 127 100-NPort 5000A Series	Device SNMP unreachable
•	2	в	Ste SHANLINB	171	MXview	192.168.127.254	192.168.127.254-MSate 5103	Port 1 Link Down
۲	•	в	Ste SHANLINB	170	Milview	192.168.127.100	192.168.127.100-MPort 5000A Series	Device ICMP unveschable

## 3.5.9 Basic information (device information configuration)

- To check the change the **Name**, **Location** and **Contact** information of the devices, navigate to the main menu, and select **Topology**. You can view the devices in two kinds of views: **Topology view** (graphical) or **List view**. To switch between these two views, click the icon on the upper-right corner.
- Click on the device that you want to change, and navigate to **Maintenance** > **Basic Information**.

Basic Information
Model
Name
Location
Switch Location
Contact

• After changing the basic information, click **Apply** to make the settings take effect.

**Note** This feature is only available in MXview. It is no longer supported in MXview One.

## 3.5.10 Device properties (detailed device information and status)

- To view the details of a specific device, select the device in the **Topology** map.
- The **Device Properties** panel, that shows the detailed information, appears on the right-hand side of the topology map.



• The detailed supported information in the **Device Properties** is categorized in three parts: **Device Properties**, **Port Information**, and **Other Device Properties**.

Device Properties
Alias
Model Name
MAC Address
Availability
System Description
System Object ID
System Contact
System Name
System Location
Serial Number
Firmware Version (FW version)
System Uptime

## The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

Port Information	Value	Definition
ifNumber	0 to 100	The number of ports, including Ethernet ports and serial ports
Interface 1	Status: up/down speed: 10M/100M/1000M (If it is an Ethernet port)	If it is an Ethernet port, this field will show two parameters: Status and Speed, and it will also show which port these parameters belong to.
Interface 2	Speed: 50 bps~921.6 kbps mode: RS-232/RS- 422/RS-485 (If it is a serial port)	If it is a serial port, this field will show two parameters: Speed and Mode (serial interface), and it will also show which port these parameters belong to.
Interface numbering		The number after 'interface' depends on the number of Ethernet and serial ports supported. For example, the MGate MB3660-16 supports 2 Ethernet ports and 16 serial ports, so there would be interfaces 1 to 18

Other Device Properties Defined by a different model.

• The following is an example of detailed **Device Properties** of an MGate model:

Device Properties	Current Status
Basic Device Prope	erties
Alias 192.168.127.251N	IGate-MB3660
Model Name MGate-MB3660	
MAC Address 00:90:E8:AA:37:91	
Availability 100.00%	
System Description MG-MB3660-16-J-2	AC
System Object ID .1.3.6.1.4.1.8691.21	1.1.3660

## The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

System Contact

System Name MG-MB3660-16-J-2AC\_6418

System Location

FW Version 3.1.5 Build 23050216

System Uptime Od Ohr 47min 39sec

#### **Port Information**

ifNumber 18

interface.1 up / 100M

ethernetCsmacd /Moxa Ethernet port 01

#### **Other Device Properties**

Default Gateway 255.255.255.255

DNS 1 IP address 0.0.0.0

DNS 2 IP address 0.0.0.0

lan1Status on

lan2Status off

power1Status off

power2Status

on

readyLedStatus operational

## 3.5.11 Security View (monitoring and detecting the security level of the device)

ISA/IEC 62443 is a continuously evolving cybersecurity standard that is being used in many industrial automation applications. This standard, including its subsections, covers general, policy and procedure, system-level, and component-level requirements.

MXconfig follows Moxa's security guidelines, which are based on the IEC 62443-4-2 component-level recommendations. Security View checks the security level of Moxa's network devices. The five levels for checking the results in Security View:

- > High
- > Medium
- > Basic
- > Open: Security Level below basic
- > Unknown: Devices without security-related information for MXview One
- To view the security levels of a device, navigate to the **Topology** view. If **List view** is selected, switch to **Topology view**.
- From the upper toolbar menu, navigate to **Visualization** > **Security View**. There is no need to select a device first to find the **Visualization** menu.

$\equiv$ MX view ONE					<b>⊕</b> English	👱 adr	nin <b>v</b>
	Root						
C Type keyword to search	📩 Topology 🗸	🔂 Group 🗸	🇨 Edit 🗸	O Visualization → 2		≔	6
Dashboard	Q			Traffic View			_
Topology 1				Security View 3			1:1 []
Device Discovery	30			The Wireless Table View			<u> </u>
Device Configuration Center							Q
Event Management	<						
Event History							

#### The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

• The Security View window will appear, and the Topology Map shows the security level of each device with a color-coded circle.



- **Note** The corresponding color of the security levels can be defined by the user. Please check the MXview/MXview One user manual to change the **Preferences**.
  - To quickly locate and identify a specific device in the topology view, click the device in the **Security View** pop-up window. In this stage, you can also select a specific device in the map to check its security-related information.



#### The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

• The **Security View** details panel will appear on the right, and the Topology Map highlights the circle around the device. It displays the device security level and security-related configuration statuses.

<	nt Status	Security View	>
De	vice Security	Level:High	
-	) ania		
•	basic		
• 1	Aedium		
•	High		
	Change D	afault Deceword /	
•	SNMP Co	ommunity String	0
	Set SNMF	P Trap/Inform or Syslog	•
•	Server		•
	💊 👩 Enable Tr	usted Access	0
•	🌒 🌒 Enable Au	uto Logout	0
	Enable Dr	DoS Protection	
_	Endore De	0001101000001	•
	Enable Pa	assword Complexity	
	<ul> <li>Strength (</li> </ul>	Check	-

• The definition of security levels: Basic, Medium and High are listed below:

Security Level and the Corresponding Configuration Items	Basic	Medium/ IEC62443-4-2 Level 1	High/ IEC 62443-4-2 Level 2
Change Default Password/SNMP Community String	V	<i>√</i>	$\checkmark$
Set Syslog Server	~	$\checkmark$	$\checkmark$
Enable Trusted Access	$\checkmark$	$\checkmark$	$\checkmark$
Disable Non-encrypted TCP/UDP Ports	$\checkmark$	$\checkmark$	$\checkmark$
Enable Password Complexity Strength Check		$\checkmark$	$\checkmark$
Enable Account Login Failure Lockout		$\checkmark$	$\checkmark$
Set Login Message		$\checkmark$	$\checkmark$

## The MXview One/MXview and MXconfig (non-java)/MXconfig (java) Plugin Technical Guide for NPort and MGate Series

• The description of the items in the Security View are listed below. You can also refer to the MXview user manual.

Item	Description		
Enable Auto Logout	Check if the Auto Logout function is enabled.		
Set Login Message	Check if both the Web Login Message and Web Login Fail Message are configured.		
Disable Nonencrypted TCP/UDP Ports	Check if non-encrypted TCP/UDP Ports are disabled. HTTP, Telnet, and Moxa Proprietary Protocol should be disabled. SNMP must be set to V3 only.		
Enable Account Login Failure	Lockout Check if the Account Login Failure Lockout function is enabled.		
Enable Trusted Access	Check if the Trusted Access function is enabled or not. At least one rule must be set.		
Enable Password Complexity	Check if the Password Complexity Strength		
Strength Check	Check function is enabled.		
Enable Configuration File Encryption	Check if the Configuration File Encryption function is enabled. At least one rule must be enabled.		
Set SNMP Trap/Inform or Syslog	Server Check if the SNMP Trap/Inform or Syslog Server is set.		
Change Default Password/SNMP	Check if the Default Password or SNMP		
Community String	Community String is set.		
Enable SSL/TLS High Secure Mode	Check if the HTTPS is enabled and HTTP is disabled.		