NPort S9000 Series
Command Line Interface

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NPort S9000 Series
Command Line Interface

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Table of Contents

1. Command Modes 1-1

CLI (Command Line Interface) 1-1
Configuring the NPort S9000 to CLI Mode 1-1
Basic Operation 1-2
Useful Interactive "Help" Features 1-3

2. Commands 2-1

2.1 Root Layer Commands 2-1
2.1.1 quit 2-1
2.1.2 exit 2-1
2.1.3 reload 2-2
2.1.4 terminal 2-2
2.1.5 login 2-3
2.1.6 copy 2-3
2.1.7 save 2-4
2.1.8 ping 2-4
2.1.9 clear 2-4
2.1.10 show 2-5
2.1.11 configure 2-7
2.1.12 sslcertgen 2-8
2.1.13 sshkeygen 2-8
2.2 Configuration Mode Commands 2-9
2.2.1 password-policy minimum-length 2-9
2.2.2 password-policy complexity-check 2-9
2.2.3 password-policy complexity-check 2-10
2.2.4 password-policy password-lifetime 2-10
2.2.5 login-lockout retry-threshold 2-11
2.2.6 login-lockout lockout-time 2-11
2.2.7 logging-capacity 2-12
2.2.8 hostname 2-12
2.2.9 snmp-server location 2-13
2.2.10 snmp-server description 2-13
2.2.11 snmp-server contact 2-14
2.2.12 snmp-server community 2-14
2.2.13 snmp-server version 2-14
2.2.14 snmp-server read-write-user 2-15
2.2.15 snmp-server read-only-user 2-15
2.2.16 snmp-server host 2-16
2.2.17 snmp-server trap-mode 2-16
2.2.18 interface 2-17
2.2.19 clock set 2-17
2.2.20 clock timezone 2-18
2.2.21 clock summer-time 2-18
2.2.22 ntp remote-server 2-19
2.2.23 ntp refresh-time 2-19
2.2.24 ntp server 2-19
2.2.25 irig-b 2-20
2.2.26 time-source 2-20
2.2.27 logging 2-20
2.2.28 line-swap-fast-recover 2-21
2.2.29 ip auto-logout 2-21
2.2.30 ip http-server 2-21
2.2.31 ip http-server login-message 2-22
2.2.32 ip http-server login-failure-message 2-22
2.2.33 ip telnet 2-23
2.2.34 ip ssh 2-23
2.2.35 ip snmp-agent 2-23
2.2.36 ip moxa-service 2-24
2.2.37 ip mms-service 2-24
2.2.38 ip igmp-snooping 2-24
2.2.39 ip igmp-snooping vlan 2-25
2.2.40 ip igmp-snooping querier vlan 2-25
2.2.41 ip igmp-snooping query-interval 2-26
2.2.42 ip igmp-snooping enhanced 2-26
2.2.43 ip igmp static-group 2-27
2.2.44 ip dhcp-relay server 2-27
2.2.45 ip dhcp-relay option82 2-28
2.2.46 ip dhcp-relay option82 remote-id-type 2-28
2.2.47 serial 2-29

2.2.48 vlan create 2-29
2.2.49 vlan mode 2-29
2.2.50 gvrp 2-30
2.2.51 redundancy 2-30
2.2.52 redundancy mode 2-30
2.2.53 auth mode 2-31
2.2.54 auth tacacs+ 2-31
2.2.55 auth tacacs+ server-ip 2-31
2.2.56 auth tacacs+ server-port 2-32
2.2.57 auth tacacs+ shared-key 2-32
2.2.58 auth tacacs+ auth-type 2-33
2.2.59 auth tacacs+ timeout 2-33
2.2.60 lldp enable 2-34
2.2.61 lldp timer 2-34
2.2.62 dot1x auth 2-34
2.2.63 dot1x reauth 2-35
2.2.64 dot1x radius 2-35
2.2.65 monitor 2-36
2.2.66 email-warning server 2-36
2.2.67 email-warning mail-address 2-37
2.2.68 email-warning account 2-37
2.2.69 email-warning send test email 2-38
2.2.70 email-warning event 2-38
2.2.71 relay-warning override 2-39
2.2.72 relay-warning config relay 2-39
2.2.73 relay-warning event 2-40
2.2.74 garp 2-40
2.2.75 ptp enable 2-41
2.2.76 ptp mode 2-41
2.2.77 ptp log-sync-interval 2-42
2.2.78 ptp log-announce-interval 2-42
2.2.79 ptp announce-receipt-timeout 2-42
2.2.80 ptp log-min-delay-req-interval 2-43
2.2.81 ptp log-min-pdelay-req-interval 2-43
2.2.82 ptp domain-number 2-43
2.2.83 ptp transport 2-44
2.2.84 ptp priority1 2-44
2.2.85 ptp priority2 2-44
2.2.86 ptp utc-offset 2-45
2.2.87 loopprotection 2-45
2.2.88 qos mode 2-45
2.2.89 qos mapping 2-46
2.2.90 account add 2-46
2.2.91 account edit 2-47
2.2.92 system-log system 2-47
2.2.93 system-log network 2-48
2.2.94 system-log config 2-48
2.2.95 system-log opmode 2-49
2.2.96 reset-button 2-49
2.2.97 console auth 2-49
2.2.98 console try-next-auth 2-50
2.3 Commands for Configuring Interface 2-50
2.3.1 Ethernet Interface Commands 2-50
2.3.2 VLAN Interface Commands 2-61
2.3.3 Serial Interface Commands 2-64
2.3.4 Protocol Modbus Interface Commands 2-78
2.3.5 Protocol DNP3 Interface Commands 2-83

1

Command Modes

Command Line Interface (CLI)

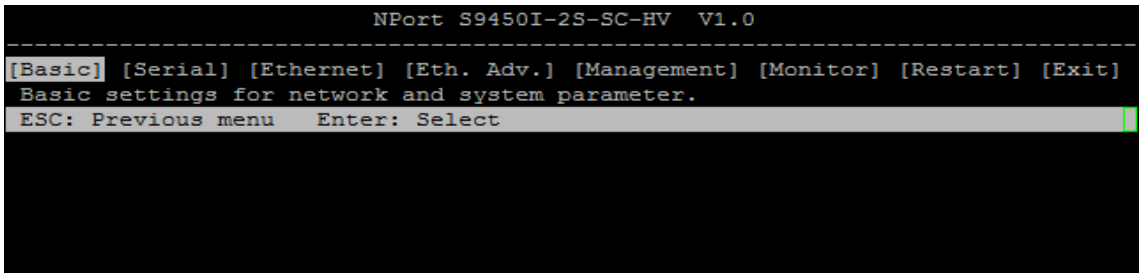
The command line interface (CLI) for the NPort S9000 series can be accessed through either the serial console or Telnet console. For either type of connection, access to the command line interface is generally referred to as an EXEC session.

The commands are separated into several tiers for different type of commands. The first tier commands are the root-layer commands, which should be executed under the root directory for some major function categories. These commands include view the settings, configuring the settings, etc. Other commands for different tiers should be excuted in their relative folders. Please find all the details in Chapter 2, which explains how to use the commands to configure or monitor the NPort S9000 series.

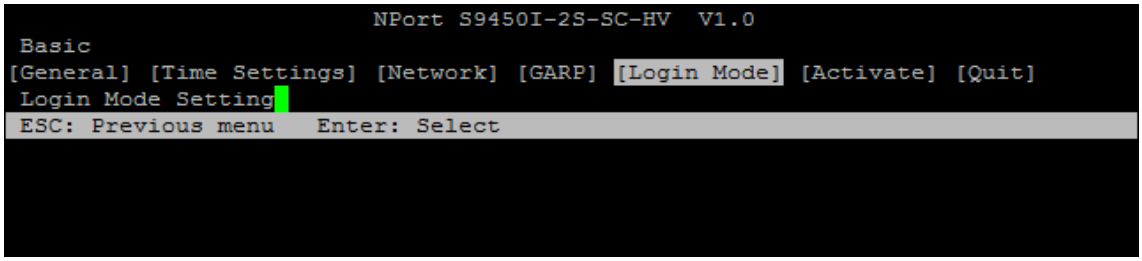
Configuring the NPort S9000 to CLI Mode

The default configuration mode for both the serial, Telnet, and SSH console is MENU mode. To change the NPort S9000 to CLI configuration mode, log in the NPort S9000's serial, Telnet or SSH console and go to **Login Mode** under **Basic Settings** and then press **y** to activate the change. You will then be able to view the CLI display in the console. (Note that the default login username is **admin**, and the password is **moxa**.)

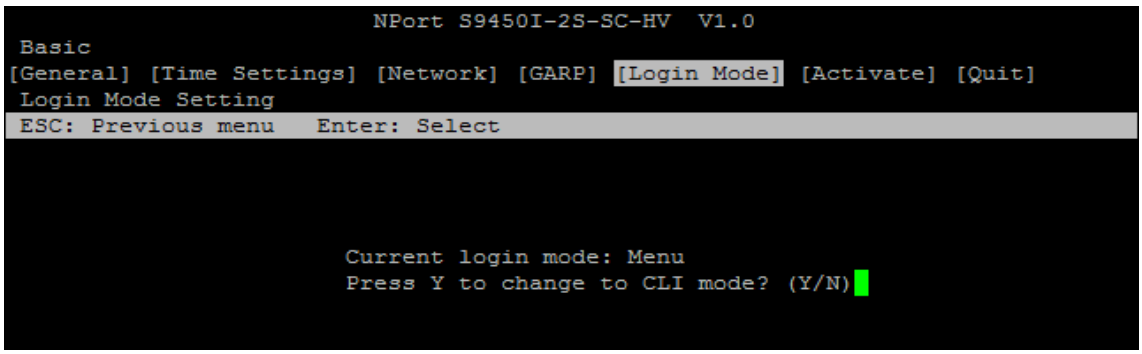
1. Select **Basic Settings**.



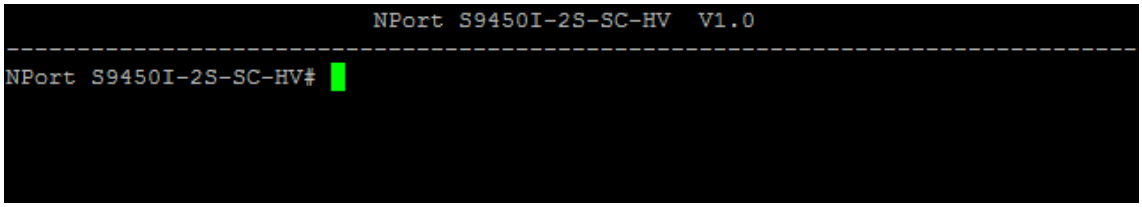
2. Select **Login mode**.



3. Press **y** to activate.



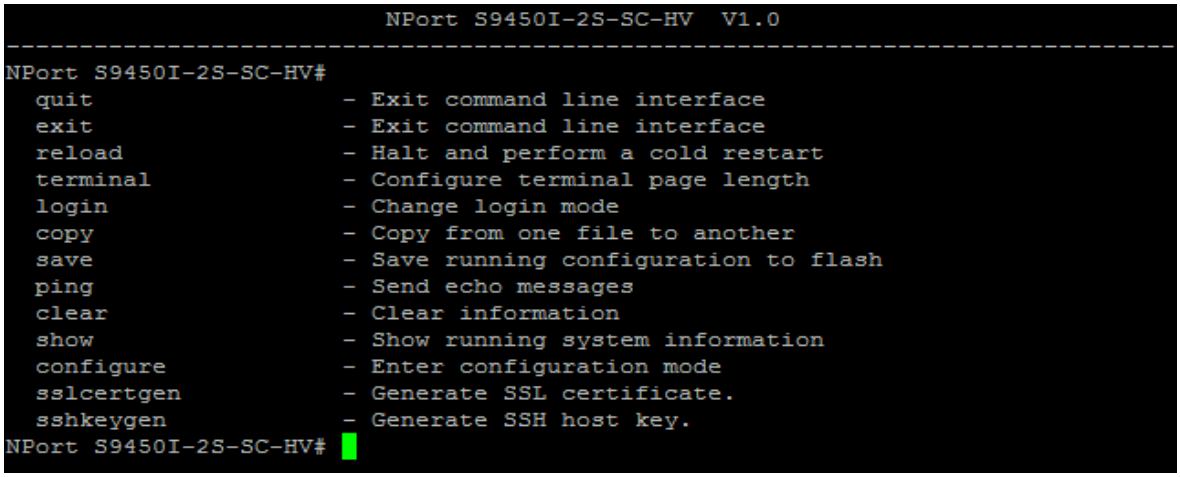
4. Now log in to access CLI display mode.



After changing to CLI mode, the CLI mode will be the default setting for the next reboot.

Basic Operation

The CLI is organized in different configuration levels. When you first enter CLI mode, type **?** to view a quick help panel that shows the basic commands of the first configuration level. Type any of the commands shown on the screen to access the next configuration level. The quick help panel, accessed from any level by typing **?**, is a useful tool for understanding the commands in any level.



To enter the next level, type the commands shown in the console.

To access the next higher level, type **exit**.

To go directly back to the first level, type **Ctrl + z**.

```
NPort S9450I-2S-SC-HV(config)#
NPort S9450I-2S-SC-HV#
```

Useful Interactive "Help" Features

The CLI includes several types of interactive commands. The **Help** commands are listed in the following table:

Command	Purpose
?	Provides a brief description of the Help feature in any command level.
Partial command?	Provides a list of commands that begin with the character string (no space between the command and the question mark).
Partial command<Tab>	Completes a partial command name (no space between the command and <Tab>).
Command?	Lists the keywords, arguments, or both associated with the command (type a space between the command and the question mark).
Command keyword?	Lists the arguments that are associated with the keyword (type a space between the keyword and the question mark).

2

Commands

2.1 Root Layer Commands

After logging in to the CLI console, users will be at the root folder of the CLI console. In the root folder, users can see the system settings, ping other devices, upgrade firmware and so on.

2.1.1 quit

Use **quit** *to quit the current configuration mode.*

Commands

quit

Syntax Description	**quit**	Exit command line interface
Defaults	N/A	
Permission	Admin group, User group	
Usage Guidelines	N/A	
Examples	`NPort S9450I-2S-SC-HV# quit`	

2.1.2 exit

Use **exit** *to exit the current configuration mode.*

Commands

exit

Syntax Description	**exit**	Exit from configure mode
		Exit from port setting mode
		Exit command line interface
		Exit from management interface setting
Defaults	N/A	
Permission	Admin group, User group	
Usage Guidelines	N/A	
Examples	`NPort S9450I-2S-SC-HV(config)# exit` `NPort S9450I-2S-SC-HV#`	

2.1.3 reload

Use the **reload** *privileged command on the switch to restart the Moxa Switch. Use the* ***reload factory-default*** *privileged command to restore the switch configuration to the factory default values.*

Commands

reload [factory-default]
reload [serial] {p1 | p2 | p3 | p4 | all}

Syntax Description	**reload**	Halt and perform a cold restart
	factory-default	Halt and perform a cold restart with factory default
	serial	Restart a serial port.
	p1	Serial port 1.
	p2	Serial port 2.
	p3	Serial port 3.
	p4	Serial port 4.
	all	All serial ports.
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPort S9450I-2S-SC-HV# reload`
	`NPort S9450I-2S-SC-HV# reload factory-default`
	`NPort S9450I-2S-SC-HV# reload serial p1 p3`
	`NPort S9450I-2S-SC-HV# reload serial all`	

2.1.4 terminal

Use the **terminal** *privileged command on the device server to Configure terminal page length. Use* **terminal default** *to set the terminal length to default value.*

Commands

terminal *terminal-length*
terminal default length

Syntax Description	**terminal**	Configure terminal page length
	terminal-length	Terminal page length
	default length	Reset the terminal length to the default
Defaults	20	
Permission	Admin group	
Usage Guidelines	terminal-length: 20 – 100, or set 0 to prevent pagination	
Examples	`NPort S9450I-2S-SC-HV# terminal 20` `NPort S9450I-2S-SC-HV# terminal default length`	

2.1.5 login

Use the **login** *privileged command on the device server to configure default login console.*

Commands

login mode { menu | cli }

Syntax Description	**login**	Change login mode
	mode	Login modes
	menu	Legacy menu mode
	cli	Command line interface
Defaults	menu	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9450I-2S-SC-HV# login mode cli`	

2.1.6 copy

Use the **copy** *privileged command on the device server to copy an image or configuration file from a remote server to the Flash memory or copy the running configuration, startup configuration, or event log to a remote server via TFTP.*

Commands

copy tftp device-firmware
copy xmodem device-firmware
copy tftp running-config
copy {running-config|event-log|startup-config} tftp *[tftp-address]*

Syntax Description	**copy**	Copy from one file to another
	tftp	Remote server through TFTP
	xmodem	Copy from xmodem
	device-firmware	System firmware
	running-config	Current running configuration of system
	startup-config	System startup configuration
	event-log	Event log file
	tftp-address	TFTP address. E.g., tftp://192.168.127.1/abc.txt
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPort S9450I-2S-SC-HV# copy tftp`
	`  device-firmware     - System firmware`
	`  running-config      - Current running configuration of system`
	`NPort S9450I-2S-SC-HV# copy tftp running-config`
	`Address or name of remote host [192.168.127.1]? 192.168.127.95`
	`Source file name? cli.ini`
	`Save import config to flash? [Y/n]`
	`Saving configuration ...Success`	

2.1.7 save

Use the **save** *privileged command on the device server to save the configuration to the flash rom.*

Commands

save config

Syntax Description	**save config**	Save running configuration to flash
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9450I-2S-SC-HV# save config Saving configuration ... Success	

2.1.8 ping

Use the **ping** *user EXEC command on the device server to diagnose the remote host if it is alive.*

Commands

ping *destaddr*

Syntax Description	**ping**	Send echo messages
	destaddr	Ping destination address or hostname
Defaults	N/A	
Permission	Admin group, User group	
Usage Guidelines	N/A	
Examples	NPort S9450I-2S-SC-HV# ping 192.168.127.1 PING 192.168.127.1, Send/Recv/Lost = 4/4/0	

2.1.9 clear

Use the **clear** *privileged command on the device server to clear the information.*

Commands

clear { logging event-log | counters }

Syntax Description	**clear**	Clear information
	logging event-log	System event logs
	counters	Clear statistic counters
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9450I-2S-SC-HV# clear loggin event-log NPort S9450I-2S-SC-HV# clear counters	

2.1.10 show

Use the **show** *user EXEC command on the device server to display the system informations.*

Commands

show { version | running-config | startup-config | system | users | ip | serial | clock | snmp | gmrp | password-policy | login-lockout | logging-capacity | qos | loopprotection | s2n-conn | serial-status | serial-error | serial-setting | serial-alias | serial-param | system-info | network-conn | accounts }

show auth { mode | tacacs+ | radius}
show interface ethernet *mod_port* **[{ config | rate-limit | counters }]**
show interface trunk [*trunk_id_range* **[counters]]**
show interface mgmt [access-ip]
show interface serial *port* **{ opmode | data-packing }**
show interface serial protocol { modbus | dnp3 }
show redundancy { turbo-ring-v1 | turbo-ring-v2 | turbo-chain | spanning-tree }
show redundancy mst { configuration | cist | instance *instid* **}**
show mac-address-table { static | learned | interface ethernet *mod_port* **| trunk** *trunk_id* **}**
show logging [event-log]
show vlan [config]
show port-security *mod_port*
show dot1x { local-userdb | radius }
show lldp [entry]
show port [monitor]
show email-warning [config]
show relay-warning [{config | status }]
show garp [timer]
show ptp {settings | status | port [*mod_port***] }**
show qos [{cos-to-queue | dscp-to-queue }]

Syntax Description	**show**	Show running system information
	version	System version information
	running-config	Current running configuration of system
	startup-config	System startup configuration
	system	System hardware and software status
	users	Display login user settings
	auth	Display authentication settings
	mode	Display current server mode authentication settings
	tacacs+	TACACS+ authentication
	radius	RADIUS authentication
	ip	Display IP information
	serial	Show serial console setting
	interfaces	Interface status and configuration
	ethernet	IEEE 802.3/IEEE 802.3z
	mod_port	Port ID or list. Ex. 1/1,2,3,2/1-3,5,...
	config	Show interface module/port settings
	rate-limit	Rate limiting configuration
	counters	Display counters in detail
	counters	Display counters
	trunk	Show interface trunk information
	trunk_id_range	Trunk ID (or list)
	counters	Display counters in detail
	mgmt	Display management VLAN information
	access-ip	Display accessible IP list

	serial	Show serial info
	port	Serial port 1 - n
	opmode	Show serial port opmode
	data-packing	Show serial port data-packing
	protocol	Show serial protocol
	modbus	Show Modbus protocol settings
	dnp3	Show DNP3 protocol settings
	clock	Display the system clock
	snmp	Display SNMP configuration
	redundancy	Display redundancy protocol status
	turbo-ring-v1	Display turbo ring v1 status
	turbo-ring-v2	Display turbo ring v2 status
	turbo-chain	Display turbo chain status
	spanning-tree	Display spanning tree settings
	mst	Display multiple spanning tree settings
	configuration	Display multiple spanning tree global settings
	cist	Display MSTP cist status
	instance	Display MSTP msti status
	instid	MSTP instance ID
	mac-address-table	Display MAC address forwarding table
	static	Retrieve static MAC addresses
	learned	Retrieve learned MAC addresses
	interface	Retrieve MAC address by interface
	ethernet	Ethernet Port interface
	mod_port	Port ID. Ex. 1/3, 2/1,...
	trunk	Trunk interface
	trunk_id	Trunk ID. From 1 to 2
	logging	Display syslog information
	event-log	Display system event logs
	vlan	Display VLAN status
	config	Display VLAN configuration
	gvrp	Display GVRP configuration
	port-security	Display port access control table
	mod_port	Port ID or list. Ex. 1/1,2,3,2/1-3,5,...
	dot1x	Display 802.1x settings
	local-userdb	Display current local database
	radius	Display 802.1x radius settings
	gmrp	Display 802.1x radius settings
	lldp	Display LLDP information
	entry	LLDP entries
	email-warning	Display Email warning configuration
	config	Email warning configuration
	relay-warning	Display relay warning configuration
	config	Relay warning configuration
	status	Current relay warning list
	garp	Display GARP information
	timer	Display GARP timer information
	ptp	
	settings	Display current PTP configuration
	status	Display current PTP port state
	port	Display PTP port disable/enable state
	mod_port	Display PTP port disable/enable state

	password-policy	Display password policy settings
	login-lockout	Display login lockout settings
	logging-capacity	Display logging capacity settings
	qos	Display QoS configuration
	cos-to-queue	CoS to traffic queue mappings
	dscp-to-queue	DSCP to traffic queue mappings
	loopprotection	Display loop protection settings
	s2n-conn	Display the running serial to network connections
	serial-status	Display the running serial port current status
	serial-error	Display the running serial port error count
	serial-setting	Display the running serial port settings
	serial-alias	Display serial port alias name
	serial-param	Display serial port parameters
	system-info	Display system related status
	network-conn	Display network connection information
	accounts	Show current account informations
Defaults	N/A	
Permission	Admin group, User group	
Usage Guidelines	N/A	
Examples	NPort S9650I-16-2HV# show version Model Name : NPort S9650I-16-2HV Firmware Version : V1.0 NPort S9650I-16-2HV# show interfaces serial protocol modbus Serial protocol Modbus setting : Initial delay : 0 Send TCP exception : disable Modbus TCP listen port : 502 Modbus TCP response timeout : 1000 Slave ID Map : Channel No. Type Definition Modbus Address Range ---------- ---------- ---------- ---------- 1 Modbus Serial Port 1 00001 - 00005	

2.1.11 configure

Use the **configure** *privileged command on the device server to enter configuration mode.*

Commands

configure { terminal }

Syntax Description	**configure**	Enter configuration mode
	terminal	Configure from the terminal
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9450I-2S-SC-HV# configure NPort S9450I-2S-SC-HV(config)#	

2.1.12 sslcertgen

Use the **sslcertgen** *privileged command on the device server to generate SSL certificate.*

Commands

sslcertgen

Syntax Description	**sslcertgen**	Generate SSL certificate
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9450I-2S-SC-HV#sslcertgen Generating... it may take a few minutes... generating ssl certificate : done NPort S9450I-2S-SC-HV#	

2.1.13 sshkeygen

Use the **sshkeygen** *privileged command on the device server to generate SSH host key.*

Commands

sshkeygen

Syntax Description	**sshkeygen**	Generate SSH host key
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9450I-2S-SC-HV# sshkeygen Generating... it may take a few minutes... generating ssh host key : done NPort S9450I-2S-SC-HV#	

2.2 Configuration Mode Commands

In the root layer, use the "configure" command to enter configuration mode. In the configuration mode, user could set all system related settings of the device server.

2.2.1 password-policy minimum-length

Use **password-policy minimum-length** *global password-policy configuration commands on the device server to configure the minimum password-length with specified characters. Use the* **no** *form of this command to return to the default.*

Commands

password-policy minimum-length *characters*
no password-policy minimum-length

Syntax Description	**password-policy**	Global password-policy configuration subcommands
	minimum-length	Password minimum length
	characters	4 to 16 characters
Defaults	Password minimum length is 4 by default	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9450I-2S-SC-HV(config)# password-policy minimum-length 8` `NPort S9450I-2S-SC-HV(config)# no password-policy minimum-length`	

2.2.2 password-policy complexity-check

Use **password-policy complexity-check** *global password-policy configuration commands on the device server to enable the password policy. Use the* **no** *form of this command to disable complexity-check.*

Commands

password-policy complexity-check
no password-policy complexity-check

Syntax Description	**password-policy**	Global password-policy configuration subcommands
	complexity-check	Complexity check
Defaults	Password complexity-check is disable by default	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9450I-2S-SC-HV(config)# password-policy complexity-check`	

2.2.3 password-policy complexity-check

Use **password-policy complexity-check** *global password-policy configuration commands on the device server to enable the password policy check. Use the* **no** *form of this command to disable complexity-check.*

Commands

password-policy complexity-check { digit | alphabet | special-characters }
no password-policy complexity-check { digit | alphabet | special-characters }

Syntax Description	**password-policy**	Global password-policy configuration subcommands
	complexity-check	Complexity check
	digit	Enable password policy : at least one digit check
	alphabet	Enable password policy : mixed upper and lower case letters check
	special-characters	Enable password policy : at least one special character check
Defaults	Password complexity-check is disable by default Password complexity-check alphabet is disable by default Password complexity-check special-characters is disable by default	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9450I-2S-SC-HV(config)# password-policy complexity-check digit` `NPort S9450I-2S-SC-HV(config)# no password-policy complexity-check alphabet`	

2.2.4 password-policy password-lifetime

Use **password-policy lifetime** *global password-policy configuration commands on the device server to enable the password lifetime and the password lifetime with specified days. Use the* **no** *form of this command to disable password-lifetime check.*

Commands

password-policy password-lifetime *[days]*
no password-policy password-lifetime

Syntax Description	**password-policy**	Global password-policy configuration subcommands
	password-lifetime	Password lifetime
	days	90 to 180 days
Defaults	Password lifetime is disable by default Password lifetime is 90 days by default	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9450I-2S-SC-HV(config)# password-policy password-lifetime` `NPort S9450I-2S-SC-HV(config)# password-policy password-lifetime 100`	

2.2.5 login-lockout retry-threshold

Use **login-lockout retry-threshold** *global login-lockout configuration commands on the device server to configure the login-lockout retry-threshold with specified times. Use the* **no** *form of this command to return to the default.*

Commands

login-lockout retry-threshold *retry*
no login-lockout retry-threshold

Syntax Description	**login-lockout**	Global login-lockout configuration subcommands
	retry-threshold	Login retry threshold
	retry	0 to 10 times(0 to disable)
Defaults	Login retry-threshold is 0 by default	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9450I-2S-SC-HV(config)# login-lockout retry-threshold 5` `NPort S9450I-2S-SC-HV(config)# no login-lockout retry-threshold`	

2.2.6 login-lockout lockout-time

Use **login-lockout lockout-time** *global login-lockout configuration commands on the device server to configure the login-lockout lockout-time with specified minutes. Use the* **no** *form of this command to return to the default.*

Commands

login-lockout lockout-time *minutes*
no login-lockout lockout-time

Syntax Description	**login-lockout**	Global login-lockout configuration subcommands
	lockout-time	Login lockout time
	minutes	1 to 60 minutes
Defaults	Login lockout-time is 5 minutes by default	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9450I-2S-SC-HV(config)# login-lockout lockout-time 10` `NPort S9450I-2S-SC-HV(config)# no login-lockout lockout-time`	

2.2.7 logging-capacity

Use the **logging-capacity** *privileged command on the device server to set logging capacity related settings.*

Commands

logging-capacity over-size-action { overwrite-oldest | stop-recording }

Syntax Description	**logging-capacity**	Set logging capacity related settings.
	over-size-action	Set logging capacity oversize-action.
	overwrite-oldest	Set logging capacity oversize-action : Overwrite oldest event logs
	stop-recording	Set logging capacity oversize-action : Stop recording event logs
Defaults	overwrite-oldest	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# logging-capacity over-size-action stop-recording` `NPort S9650I-16-2HV(config)# logging-capacity over-size-action overwrite-oldest`	

2.2.8 hostname

To specify or modify the host name for the device server, use the **hostname** *global configuration command. To return to the default, use the* **no** *form of this command.*

Commands

hostname *name*
no hostname

Syntax Description	**hostname**	Set system's network name (maximum 30 characters)
	no	Negate a command or set its defaults
Defaults	Name is the default device server name with the serial number	
Permission	Admin group	
Usage Guidelines	Maximum string tokens are 5. Maximum device server name length is 30 characters.	
Examples	`NPort S9650I-16-2HV(config)# hostname MOXA Nport device server` `NPort S9650I-16-2HV(config)# no hostname`	

2.2.9 snmp-server location

To set the system location string, use the **snmp-server location** *global configuration command. To remove the location string, use the* **no** *form of this command.*

Commands

snmp-server location *text*
no snmp-server location

Syntax Description	**snmp-server**	Configure SNMP server
	location	Device server location
	text	Location string
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# snmp-server location moxacorp` `NPort S9650I-16-2HV(config)# no snmp-server location`	

2.2.10 snmp-server description

To set the system description string, use the **snmp-server description** *global configuration command. To remove the description string, use the* **no** *form of this command.*

Commands

snmp-server description *text*
no snmp-server description

Syntax Description	**snmp-server**	Configure SNMP server
	description	Device server description
	text	Description string
Defaults	The default description is the model name.	
Permission	Admin group	
Usage Guidelines	"text" parameter can be set as string separated by space. Maximum string tokens are 5. Maximum length of device server maintainer contact info is 40.	
Examples	`NPort S9650I-16-2HV(config)# snmp-server description MOXA nport device` `NPort S9650I-16-2HV(config)# no snmp-server description`	

2.2.11 snmp-server contact

To set the system contact string, use the **snmp-server contact** *global configuration command. To remove the contact string, use the* **no** *form of this command.*

Commands

snmp-server contact *text*
no snmp-server contact

Syntax Description	**snmp-server**	Configure SNMP server
	contact	Device server maintainer contact information
	text	Maintainer contact information
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	"text" parameter can be set as string separated by space. Maximum string tokens are 5. Maximum length of maintainer contact info is 40.	
Examples	`NPort S9650I-16-2HV(config)# snmp-server contact james` `NPort S9650I-16-2HV(config)# no snmp-server contact`	

2.2.12 snmp-server community

To set up the community access string to permit access to the Simple Network Management Protocol (SNMP), use the **snmp-server community** *global configuration command.*

Commands

snmp-server community *community_str*

Syntax Description	**snmp-server**	Configure SNMP server
	community	SNMP community setting
	community_str	SNMP community string
Defaults	overwrite-oldest	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# snmp-server community public`	

2.2.13 snmp-server version

To set up the snmp version, use the **snmp-server version** *global configuration command.*

Commands

snmp-server version [v1-v2c-v3 | v1-v2c | v3]

Syntax Description	**snmp-server**	Configure SNMP server
	version	SNMP version setting
	v1-v2c-v3	Version 1, 2C and 3 support
	v1-v2c	Version 1 and 2C support
	v3	Only version 3 support
Defaults	Default version is v1-v2c	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# snmp-server version v1-v2c-v3`	

2.2.14 snmp-server read-write-user

To configure a read-write privileged user and its authentication type and password to a Simple Network Management Protocol (SNMP), use the **snmp-server read-write-user** *global configuration command.*

Commands

snmp-server read-write-user *username* **auth {no-auth|md5|sha}** *password*

Syntax Description	**snmp-server**	Configure SNMP server
	read-write-user	SNMP read-write privileged user setting
	username	The name of the read-write privileged user
	auth	Specifies which authentication level should be used
	auth-type	no-auth | md5 | sha
	password	Password (maximum 30 characters)
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	Username: max 16 characters Password: max 16 characters	
Examples	`NPort S9650I-16-2HV(config)# snmp-server read-write-user admin auth md5 moxacli`	

2.2.15 snmp-server read-only-user

To configure a read-write privileged user and its authentication type and password to a Simple Network Management Protocol (SNMP), use the **snmp-server read-only-user** *global configuration command.*

Commands

snmp-server read-only-user *username* **auth {no-auth|md5|sha}** *password*

Syntax Description	**snmp-server**	Configure SNMP server
	read-only-user	SNMP read-write privileged user setting
	username	The name of the read-only privileged user
	auth	Specifies which authentication level should be used
	auth-type	no-auth | md5 | sha
	password	Password (maximum 30 characters)
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	Username: max 16 characters Password: max 16 characters	
Examples	`NPort S9650I-16-2HV(config)#snmp-server read-only-user user auth md5 moxacli`	

2.2.16 snmp-server host

To specify the recipient of a Simple Network Management Protocol (SNMP) notification operation, use the **snmp-server host** *global configuration command. To remove the specified host, use the* **no** *form of this command*

Commands

snmp-server host *host-addr community-string*
no snmp-server host [*host-addr***]**

Syntax Description	**snmp-server**	Configure SNMP server
	host	SNMP host setting
	host-addr	SNMP host address
	community-string	SNMP Community string
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# snmp-server host 192.168.127.254 moxacli` `NPort S9650I-16-2HV(config)# no snmp-server host`	

2.2.17 snmp-server trap-mode

To enable all Simple Network Management Protocol (SNMP) notifications (traps or informs) available on your system, use the **snmp-server trap-mode** *global configuration command. To disable all available SNMP notifications, use the* **no** *form of this command*

Commands

snmp-server trap-mode trap
snmp-server trap-mode inform [retry *times* **timeout** *seconds***]**
no snmp-server trap-mode

Syntax Description	**snmp-server**	Configure SNMP server
	trap-mode	SNMP Trap/Inform mode setting
	trap	SNMP Trap
	inform	SNMP Inform
	retry	Inform retries times
	times	1 to 99
	timeout	Timeout timer
	seconds	1 to 300 seconds
Defaults	The default mode is “trap”	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# snmp-server trap-mode trap` `NPort S9650I-16-2HV(config)# snmp-server trap-mode inform retry 3 timeout 10`	

2.2.18 interface

Use the **interface** *privileged command on the device server to select an interface to configure.*

Commands

interface mgmt
interface trunk *trunk_id_range*
interface ethernet *mod_port*
interface serial *ser_id*
interface serial protocol { modbus | dnp3 }

Syntax Description	**interface**	Select an interface to configure
	mgmt	Configure management VLAN
	trunk	Configure trunk interface
	trunk_id_range	Trunk ID (or list)
	ethernet	IEEE 802.3/IEEE 802.3z
	mod_port	Port ID or list. Ex. 1/1,2,3,2/1-3,5,...
	serial	Serial port interface
	ser_id	Serial port index (1 to n)
	protocol	Configure serial interface protocols
	modbus	Configure Modbus protocol settings
	dnp3	Configure DNP3 protocol settings
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV(config-serif)#`
	
	`NPort S9650I-16-2HV(config)# interface ethernet 1/1`
	`NPort S9650I-16-2HV(config-if)#`
	
	`NPort S9650I-16-2HV(config)# interface mgmt`
	`NPort S9650I-16-2HV(config-vlan)#`	

2.2.19 clock set

Use the **clock set** *global configuration command on the device server to set the current device server time.*

Commands

clock set *hh:mm:ss month day year*

Syntax Description	**clock**	Configure time-of-day clock
	set	Adjust the clock
	hh:mm:ss	hh:mm:ss
	month	1 to 12
	day	1 to 31
	year	2000 to 2037
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# clock set 11:11:11 1 1 2010`	

2.2.20 clock timezone

Use the **clock timezone** *global configuration command on the device server to set the current time zone.*

Commands

clock timezone gmt *offset-hour offset_minutes*

Syntax Description	**clock**	Configure time-of-day clock
	timezone	Time zone hour shifting
	gmt	Greenwich Mean Time
	offset-hour	-12 to 12
	Half an hour	Only type 30
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# clock timezone gmt 5 30`	

2.2.21 clock summer-time

Use the **clock summer-time** *global configuration command on the device server to enable the daylight saving time offset and set the apply duration. Use the* **no** *form of this command to disable it.*

Commands

clock summer-time start-date *month week day hour*
clock summer-time end-date *month week day hour*
clock summer-time offset *offset-hour*

Syntax Description	**clock**	Configure time-of-day clock
	summer-time	Configure Summer time parameter
	start-date	The date when summer time offset start
	end-date	The date when summer time offset end
	month	From 'Jan', 'January' or '1' to 'Dec', 'December', or '12'
	week	From '1st' or '1' to 'Last' or '6'
	day	From 'Sun', 'Sunday' or '1' to 'Sat', 'Saturday' or '7'
	hour	0 to 23
	offset	Summer time offset
	offset-hour	1 to 12
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	When configuring the summer time offset, the start-date and end-date must be configured correctly first.	
Examples	`NPort S9650I-16-2HV(config)# clock summer-time start-date Jan 1 Saturday 12` `NPort S9650I-16-2HV(config)# clock summer-time end-date Feb 1 Sun 13`	

2.2.22 ntp remote-server

Use the **ntp remote-server** *global configuration command on the device server to configure the remote NTP server. Use the* **no** *form of this command to return to the default.*

Commands

ntp remote-server *server-addr-1 [server-addr-2]*
no ntp remote-server

Syntax Description	**ntp**	Configure Network Time Protocol
	remote-server	Configure NTP server for time query
	server-addr-1	IP address or DNS name
	server-addr-2	IP address or DNS name
Defaults	The default configuration contains one time server "time.nist.gov"	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ntp remote-server 192.168.127.1 time.stdtime.gov.tw`	

2.2.23 ntp refresh-time

Use the **ntp refresh-time** *global configuration command on the device server to configure the interval of each NTP query. Use the* **no** *form of this command to return to the default.*

Commands

ntp refresh-time *seconds*
no ntp refresh-time

Syntax Description	**ntp**	Configure Network Time Protocol
	refresh-time	Configure NTP query intervals
	seconds	1-9999 seconds
Defaults	Default query interval is 600 sec	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ntp refresh-time 600`	

2.2.24 ntp server

Use the **ntp server** *global configuration command on the device server to enable the device server as an NTP server. Use the* **no** *form of this command to return to disable it.*

Commands

ntp server
no ntp server

Syntax Description	**ntp**	Configure Network Time Protocol
	server	Enable NTP server
Defaults	Default is disabled	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ntp server`	

2.2.25 irig-b

Use the **irig-b** *privileged command on the device server to configure the global irig-b settings and serial interface irig-b settings.*

Commands

irig-b output { off|pwm|pps }

Syntax Description	**irig-b**	Configure irig-b for system irig-b output.
	off	Set the irig-b to off.
	pwm	Set the irig-b to pwm.
	pps	Set the irig-b to pps.
Defaults	The default is off	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPort S9650I-16-2HV(config)# irig-b pwm`
	
	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV(config-serif)# irig-b pps`	

2.2.26 time-source

Use the **time-source** *privileged command on the device server to configure time source.*

Commands

time-source { local|ntp|irig-b|ptp }

Syntax Description	**time-source**	Configure the time source of the device server.
	local	Time source from local.
	ntp	Time source from ntp.
	irig-b	Time source from irig-b.
	ptp	Time source from ptp.
Defaults	The default is local	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# time-source ntp`	

2.2.27 logging

Use the **logging** *global configuration command on the device server to configure the remote SYSLOG server. Use the* **no** *form of this command to remove the server.*

Commands

logging *ip-address*
no logging *ip-address*

Syntax Description	**logging**	Syslog server setting
	ip-address	IP or DNS name w/wo. port, Ex:1.2.3.4 or 1.2.3.4:5678
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# logging 192.168.1.1`	

2.2.28 line-swap-fast-recover

Use the **line-swap-fast-recovery** *global configuration command on the device server to enable the fast recovery feature of the MAC address table when line swapping. Use the* **no** *form of this command to disable it.*

Commands

line-swap-fast-recovery
no line-swap-fast-recovery

Syntax Description	**line-swap-fast-recovery**	Enable Line Swap Fast Recoverty feature
Defaults	This feature is enabled by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# line-swap-fast-recovery`	

2.2.29 ip auto-logout

Use **ip auto-logout** *global configuration commands on the device server to configure the auto-logout for the consoles with specified minutes.*

Commands

ip auto-logout *minutes*

Syntax Description	**ip**	Global IP configuration subcommands
	auto-logout	Auto-logout timer
	minutes	1 to 1440 minutes
Defaults	Auto-logout is 5 minutes by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip auto-logout 120`	

2.2.30 ip http-server

Use **ip http-server** *global configuration commands on the device server to enable HTTP/HTTPs service. Use the* **no** *form of this command to disable HTTP/HTTPS service.*

Commands

ip http-server
ip http-server secure
no ip http-server
no ip http-server secure

Syntax Description	**ip**	Global IP configuration subcommands
	http-server	Enable
	secure	Enable HTTP/HTTPS web service
Defaults	HTTP/HTTPS service is enabled.	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPort S9650I-16-2HV(config)# ip http-server`
	`NPort S9650I-16-2HV(config)# ip http-server secure`
	`NPort S9650I-16-2HV(config)# no ip http-server`	

2.2.31 ip http-server login-message

Use **ip http-server login-message** *global configuration commands on the device server to configure the login message. Use the* **no** *form of this command to return to the default.*

Commands

ip http-server login-message *login_string*
no ip http-server login-message

Syntax Description	**ip**	Global IP configuration subcommands
	http-server	http-server
	login-message	Configure HTTP/HTTPS login message
	login_string	Login message
Defaults	Login-message is "You are accessing a specific industrial automation control system.\r\nThe system usage is monitored, recorded, and subject to audit." by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip http-server login-message Welcome` `NPort S9650I-16-2HV(config)# no ip http-server login-message`	

2.2.32 ip http-server login-failure-message

Use **ip http-server login-failure-message** *global configuration commands on the device server to configure the login fail message. Use the* **no** *form of this command to return to the default.*

Commands

ip http-server login-failure-message *login_fail_string*
no ip http-server login-failure-message

Syntax Description	**ip**	Global IP configuration subcommands
	http-server	http-server
	login-failure-message	Configure HTTP/HTTPS login fail message
	login_fail_string	Login message
Defaults	Login-failure-message is "The account or password you entered is incorrect.\r\n(Your account will be temporarily locked if excessive tried.)" by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip http-server login-failure-message Login fail!` `NPort S9650I-16-2HV(config)# no ip http-server login-failure-message`	

2.2.33 ip telnet

Use **ip telnet** *global configuration commands on the device server to enable telnet service. Use the* **no** *form of this command to disable telnet service.*

Commands

ip telnet
no ip telnet

Syntax Description	**ip**	Global IP configuration subcommands
	telnet	telnet service
Defaults	Telnet service is enable.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip telnet` `NPort S9650I-16-2HV(config)# no ip telnet`	

2.2.34 ip ssh

Use **ip ssh** *global configuration commands on the device server to enable ssh service. Use the* **no** *form of this command to disable ssh service.*

Commands

ip ssh
no ip ssh

Syntax Description	**ip**	Global IP configuration subcommands
	ssh	ssh service
Defaults	SSH service is enable.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip ssh` `NPort S9650I-16-2HV(config)# no ip ssh`	

2.2.35 ip snmp-agent

Use **ip snmp-agent** *global configuration commands on the device server to enable snmp agent. Use the* **no** *form of this command to disable snmp agent.*

Commands

ip snmp-agent
no ip snmp-agent

Syntax Description	**ip**	Global IP configuration subcommands
	snmp-agent	SNMP agent
Defaults	SNMP agent is enable.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip snmp-agent` `NPort S9650I-16-2HV(config)# no ip snmp-agent`	

2.2.36 ip moxa-service

Use **ip moxa-service** *global configuration commands on the device server to enable moxa-service. Use the* **no** *form of this command to disable moxa-service.*

Commands

ip moxa-service
no ip moxa-service

Syntax Description	**ip**	Global IP configuration subcommands
	moxa-service	Enable Moxa service
Defaults	Moxa service enable.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip moxa-service` `NPort S9650I-16-2HV(config)# no ip moxa-service`	

2.2.37 ip mms-service

Use **ip mms-service** *global configuration commands on the device server to enable mms-service. Use the* **no** *form of this command to disable mms-service.*

Commands

ip mms-service
no ip mms-service

Syntax Description	**ip**	Global IP configuration subcommands
	mms-service	Enable MMS service
Defaults	MMS enable.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip mms-service` `NPort S9650I-16-2HV(config)# no ip mms-service`	

2.2.38 ip igmp-snooping

Use the **ip igmp-snooping** *global configuration command on the device server to globally enable Internet Group Management Protocol (IGMP) snooping on the device server. Use the command with keywords to enable IGMP snooping. Use the* **no** *form of this command to disable IGMP snooping.*

Commands

ip igmp-snooping
no ip igmp-snooping

Syntax Description	**ip**	Global IP configuration subcommands
	igmp-snooping	IGMP snooping
Defaults	IGMP snooping is globally disable.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip igmp-snooping` `NPort S9650I-16-2HV(config)# no ip igmp-snooping`	

2.2.39 ip igmp-snooping vlan

Use the **ip igmp-snooping vlan** *global configuration command on the device server to globally enable Internet Group Management Protocol (IGMP) snooping on a VLAN. Use the* **no** *form of this command to disable IGMP snooping on a vlan.*

Commands

ip igmp-snooping vlan *vlan-id* **[mrouter** *module/port***]**
no ip igmp-snooping vlan *vlan-id* **[mrouter** *module/port***]**

Syntax Description	**ip**	Global IP configuration subcommands
	igmp-snooping	IGMP snooping
	vlan	VLAN parameters
	vlan-id	1 to 4094
	mrouter	IGMP snooping query port enable
	module/port	Port(Trunk) ID or list. E.g., 1/1,2,4-5,2/1,Trk1,Trk2-Trk4
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip igmp-snooping vlan 1 mrouter 1/1` `NPort S9650I-16-2HV(config)# no ip igmp-snooping vlan 1 mrouter 1/1`	

2.2.40 ip igmp-snooping querier vlan

Use the **ip igmp-snooping querier** *global configuration command to enable and configure the IGMP querier feature on a VLAN interface. Use the* **no** *form of this command to disable the IGMP querier feature.*

Commands

ip igmp-snooping querier vlan *vlan-id*
no ip igmp-snooping querier vlan *vlan-id*

Syntax Description	**ip**	Global IP configuration subcommands
	igmp-snooping	IGMP snooping
	querier	IGMP snooping qeury enable
	vlan	VLAN parameters
	vlan-id	1 to 4094
Defaults	The IGMP snooping querier feature is globally disabled	
Permission	Admin group	
Usage Guidelines	The IGMP snooping function must be enabled first	
Examples	`NPort S9650I-16-2HV(config)# ip igmp-snooping querier vlan 1` `NPort S9650I-16-2HV(config)# no ip igmp-snooping querier vlan 1`	

2.2.41 ip igmp-snooping query-interval

Use the **ip igmp-snooping query-interval** *global configuration command on the device server to configure the interval between IGMP queries. Use the* **no** *form of this command to return to the default.*

Commands

ip igmp-snooping query-interval interval

Syntax Description	**ip**	Global IP configuration subcommands
	igmp-snooping	IGMP snooping
	query-interval	IGMP snooping query interval
	interval	20 to 600 seconds
Defaults	Query interval default value is 125 seconds	
Permission	Admin group	
Usage Guidelines	The IGMP snooping function must be enabled first	
Examples	`NPort S9650I-16-2HV(config)# ip igmp-snooping query-interval 100`	

2.2.42 ip igmp-snooping enhanced

Use the **ip igmp-snooping enhanced** *global configuration command on the device server to enable the enhanced mode. Use the* **no** *form of this command to disable the enhanced mode.*

Commands

ip igmp-snooping enhanced
no ip igmp-snooping enhanced

Syntax Description	**ip**	Global IP configuration subcommands
	igmp-snooping	IGMP snooping
	enhanced	IGMP snooping enhanced mode
Defaults	Enhanced mode is globally disabled.	
Permission	Admin group	
Usage Guidelines	The IGMP snooping function must be enabled first	
Examples	`NPort S9650I-16-2HV(config)# ip igmp-snooping enhanced` `NPort S9650I-16-2HV(config)# no ip igmp-snooping enhanced`	

2.2.43 ip igmp static-group

Use the **ip igmp static-group** *global configuration command on the device server to add a static multicast MAC address and its member ports. Use the* **no** *form of this command to remove the static multicast group or just its member ports.*

Commands

ip igmp static-group *MAC-address* **interface** *module/port*
no ip igmp static-group [*MAC-address***] [interface** *module/port***]**

Syntax Description	**ip**	Global IP configuration subcommands
	igmp	IGMP
	static-group	Add New Static Multicast MAC Address
	MAC-address	MAC address XX:XX:XX:XX:XX:XX
	interface	Binding ports
	module/port	Port(Trunk) ID or list. E.g., 1/1,2,4-5,2/1,Trk1,Trk2-Trk
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip igmp static-group 01:00:00:00:00:01 interface 1/2-3` `NPort S9650I-16-2HV(config)# no ip igmp static-group`	

2.2.44 ip dhcp-relay server

Use **ip dhcp-relay server** *to configure the DHCP server address that the device server will forward DHCP messages to. To remove the DHCP server address, use the no form of this command.*

Commands

ip dhcp-relay server *serverIndex serverAddr*
no ip dhcp-relay server *serverIndex*

Syntax Description	**ip**	Global IP configuration subcommands
	dhcp-relay	Configure DHCP relay agent parameter
	server	DHCP server IP address
	serverIndex	DHCP server address index, 1 to 4
	serverAddr	DHCP server IP address
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip dhcp-relay server 1 192.168.127.100` `NPort S9650I-16-2HV(config)# no ip dhcp-relay server 3`	

2.2.45 ip dhcp-relay option82

Use the **ip dhcp-relay option82** *global and interface configuration command to enable DHCP Relay with Option 82 messages. To disable it, use the* **no** *form of this command.*

Commands

ip dhcp-relay option82
no ip dhcp-relay option82

Syntax Description	**ip**	Configure IP parameters
	dhcp-relay	Configure DHCP relay agent parameter
	option82	Option 82
Defaults	Default is disabled.	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPort S9650I-16-2HV(config)# ip dhcp-relay option82`
	
	`NPort S9650I-16-2HV(config)# interface ethernet 1`
	`NPort S9650I-16-2HV(config-if)# ip dhcp-relay option82`	

2.2.46 ip dhcp-relay option82 remote-id-type

Use the **ip dhcp-relay option82 remote-id-type** *global configuration command to select the remote ID information of DHCP option82 messages. Use ip dhcp-relay option82 man-id to manually set the remote id instead of the predefined ones.*

Commands

ip dhcp-relay option82 remote-id-type *remoteIdType*
ip dhcp-relay option82 man-id *manualId*

Syntax Description	**ip**	Global IP configuration subcommands
	dhcp-relay	Configure DHCP relay agent parameter
	option82	Option 82
	remote-id-type	Remote Id type
	remoteIdType	ip | mac | client-id | other
	man-id	Manual remote ID
	manualId	Manual remote ID, maximum 15 characters
Defaults	DHCP-relay option82 is disable in factory default. Default remote-id-type is IP.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# ip dhcp-relay option82 remote-id-type mac`	

2.2.47 serial

Use the **serial** *global command to enable serial console. To disable it, use the* **no** *form of this command.*

Commands

serial
no serial

Syntax Description	**serial**	Enable serial console
Defaults	Default is enabled.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# serial` `NPort S9650I-16-2HV(config)# no serial`	

2.2.48 vlan create

Use the **vlan create** *global configuration command on the device server to create a VLAN in the VLAN database. Use the* **no** *form of this command to delete a VLAN.*

Commands

vlan create *vlan-id-list*
no vlan create *vlan-id-list*

Syntax Description	**vlan**	Configure VLAN parameters
	create	Configure VLAN parameters
	vlan-id-list	VLAN IDs of the VLANs
Defaults	N/A.	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config)# vlan create 1,3-5,7`	

2.2.49 vlan mode

Use the **vlan mode** *configuration command on the device server to change current VLAN mode operated on the device server. Use the* **no** *form of this command to return to the default.*

Commands

vlan mode { 1qvlan | pvlan | unaware }
no vlan mode

Syntax Description	**vlan**	Configure VLAN parameters
	mode	Set (default) vlan mode
	1qvlan	IEEE 802.1Q
	pvlan	Port-based vlan
	unaware	Unaware vlan
Defaults	The default mode is 802.1Q mode in the product with 802.1Q supported; otherwise is port-based VLAN mode.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# vlan mode 1qvlan`	

2.2.50 gvrp

Use the **gvrp** *global configuration command on the device server to enable GVRP. Use the* **no** *form of this command to disable it.*

Commands

gvrp
no gvrp

Syntax Description	**gvrp**	Enable/Disable GVRP
Defaults	The feature is enabled by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# gvrp`	

2.2.51 redundancy

Use the **redundancy** *global configuration command on the device server to enter the redundancy configuration mode.*

Commands

redundancy

Syntax Description	**redundancy**	Enter redundancy configuration mode
Defaults	The feature is enabled by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# redundancy`	

2.2.52 redundancy mode

Use the **redundancy mode** *global configuration command on the device server to change the redundancy protocol mode.*

Commands

redundancy mode { mst | rstp | turbo-ring-v1 | turbo-ring-v2 | turbo-chain }

Syntax Description	**redundancy**	Enter redundancy configuration mode
	mode	Specify the redundancy protocol
	mst	MSTP
	rstp	Rapid Spanning Tree
	turbo-ring-v1	Turbo ring version 1
	turbo-ring-v2	Turbo ring version 2
	turbo-chain	Turbo chain
Defaults	The default redundancy protocol mode is RSTP.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# redundancy mode turbo-ring-v2`	

2.2.53 auth mode

Use the **auth mode** *global configuration command on the device server to change the authentication login option.*

Commands

auth mode { tacas+ | radius }
no auth mode

Syntax Description	**auth**	Configure authentication mechanism
	mode	Authentication login option
	tacas+	TACACS+ authentication
	radius	RADIUS authentication
Defaults	N/A.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# auth mode radius`	

2.2.54 auth tacacs+

Use the **auth tacacs+** *global configuration command on the device server to enable TACACS+ authentication. Use the* **no** *form of this command to return to the default setting.*

Commands

auth tacacs+
no auth tacacs+

Syntax Description	**auth**	Configure authentication mechanism
	tacacs+	TACACS+ authentication
Defaults	The default setting is disabled.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# auth tacacs+`	

2.2.55 auth tacacs+ server-ip

Use the **auth tacacs+** *server-ip global configuration command on the device server to set the TACACS+ authentication server address. Use the* **no** *form of this command to set to default.*

Commands

auth tacacs+ server-ip *server-address*
no auth tacacs+ server-ip

Syntax Description	**auth**	Configure authentication mechanism
	tacacs+	TACACS+ authentication
	server-ip	TACACS+ authentication server
	server-address	IP or DNS name, Ex:1.2.3.4
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# auth tacacs+ server-ip 192.168.1.1`	

2.2.56 auth tacacs+ server-port

Use the **auth tacacs+ server-port** *global configuration command on the device server to set the TACACS+ authentication server port. Use the* **no** *form of this command to set to default.*

Commands

auth tacacs+ server-port *server-port*
no auth tacacs+ server-port

Syntax Description	**auth**	Configure authentication mechanism
	tacacs+	TACACS+ authentication
	server-port	TACACS+ authentication server
	server-port	1 - 65535
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# auth tacacs+ server-port 1234`	

2.2.57 auth tacacs+ shared-key

Use the **auth tacacs+ shared-key** *global configuration command on the device server to set the TACACS+ authentication server shared key information. Use the* **no** *form of this command to remove the settings.*

Commands

auth tacacs+ shared-key key
no auth tacacs+ shared-key

Syntax Description	**auth**	Configure authentication mechanism
	tacacs+	TACACS+ authentication
	shared-key	Configure the shared key
	key	Key string, max 15 characters
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# auth tacacs+ shared-key 1234`	

2.2.58 auth tacacs+ auth-type

Use the **auth tacacs+ auth-type** *global configuration command on the device server to specify the type of TACACS+ authentication. Use the* **no** *form of this command to return to the default setting.*

Commands

auth tacacs+ auth-type { ascii | pap | chap | arap | mschap }
no auth tacacs+ auth-type

Syntax Description	**auth**	Configure authentication mechanism
	tacacs+	TACACS+ authentication
	auth-type	Specify the authentication type
	ascii	Normal ASCII code authentication
	pap	Password Authentication Protocol
	chap	Challenge-handshake authentication protocol
	arap	AppleTalk Remote Access Protocol
	mschap	Microsoft Challenge-handshake authentication protocol
Defaults	Default type is ASCII code authentication.	
Permission	Admin group	
Usage Guidelines	To enable the TACACS+ authentication, the command "auth tacacs+" must be executed first.	
Examples	`NPort S9650I-16-2HV(config)# auth tacacs+ auth-type pap`	

2.2.59 auth tacacs+ timeout

Use the **auth tacacs+ timeout** *global configuration command on the device server to set the TACACS+ authentication server timeout. Use the* **no** *form of this command to set the setting back to default value.*

Commands

auth tacacs+ timeout *seconds*
no auth tacacs+ timeout

Syntax Description	**auth**	Configure authentication mechanism
	timeout	Configure server timeout
	seconds	1 to 255 sec.
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# auth tacacs+ timeout 30`	

2.2.60 lldp enable

Use the **lldp enable** *global configuration command to enable LLDP. To stop LLDP, use the* **no** *form of this command.*

Commands

lldp enable
no lldp enable

Syntax Description	**lldp**	Configure LLDP parameters
	enable	Start up
Defaults	LLDP is enable in factory default	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# lldp enable`	

2.2.61 lldp timer

Use the **lldp timer** *global configuration command to configure the transmission frequency of LLDP messages. To reset the timer to default, use the no form of this command.*

Commands

lldp timer *transFreq*
no lldp timer

Syntax Description	**lldp**	Configure LLDP parameters
	timer	Transmission frequency of LLDP updates
	transFreq	5 to 32768 seconds
Defaults	Transmission frequency of LLDP updates is 30 seconds	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# lldp timer 50`	

2.2.62 dot1x auth

Use the **dot1x auth** *global configuration command to set dot1x authentication type.*

Commands

dot1x auth { local | radius | radius-local }

Syntax Description	**dot1x**	802.1x setting
	auth	802.1x auth type
	local	802.1x authentication uses local database
	radius	802.1x authentication uses radius server
	radius-local	802.1x authentication uses both local and radius server
Defaults	802.1x local authentication	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# dot1x auth local`	

2.2.63 dot1x reauth

Use the **dot1x reauth** *global configuration command on the device server to globally enable periodic re-authentication of the client. Use the* **no** *form of this command to return to the default setting.*

Commands

dot1x reauth [period *period***]**
no dot1x reauth [period *period***]**

Syntax Description	**dot1x**	802.1x setting
	reauth	802.1x reauth enable
	period	802.1x reauth period
	period	60 to 65535 seconds
Defaults	802.1x reauth default enable and period 3600 seconds	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# dot1x reauth period 3600`	

2.2.64 dot1x radius

Use the **dot1x radius** *global configuration command on the device server to globally configure 802.1x radius setting. Use the* **no** *form of this command to return to the default setting.*

Commands

dot1x radius server [same]
dot1x radius 1stServer server-ip *server_ip*
dot1x radius 1stServer server-port *server_port*
dot1x radius 1stServer shared-key *server_key*
dot1x radius 2ndServer server-ip *server_ip*
dot1x radius 2ndServer server-port *server_port*
dot1x radius 2ndServer shared-key *server_key*
no dot1x radius {1stServer | 2ndServer | both}

Syntax Description	**dot1x**	802.1x setting
	radius	802.1x radius setting
	server	802.1x radius setting
	same	The same configuration as radius auth server setting
	1stServer	802.1x 1st radius setting
	2ndServer	802.1x 2nd radius setting
	server-ip	Configure server IP or DNS name
	server_ip	IP or DNS name, Ex:1.2.3.4
	server-port	Configure the server port
	server_port	1 ~ 65535
	shared-key	Configure the shared key
	server_key	Key string, max 15 characters
	both	Set default radius setting
Defaults	802.1x reauth default enable and period 3600 seconds	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# dot1x reauth period 3600` `NPort S9650I-16-2HV(config)# no dot1x radius both`	

2.2.65 monitor

Use **monitor** *global configuration commands to enable the monitoring of data transmitted/received by a specific port. Use the* **no** *form of this command to disable the monitoring.*

Commands

monitor source interface *mod_port* **[direction]**
no monitor source interface
monitor destination interface *mod_port*
no monitor destination interface

Syntax Description	**monitor**	Configure Port mirror
	source	Monitored port
	interface	Port
	destination	Mirror port
	modPort	Port ID. E.g., 1/3, Trk2,...
	direction	both | tx | rx
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	Traffic send/receive by a source port (Monitored port) will be mirrored to the destination port(Mirror port)	
Examples	`NPort S9650I-16-2HV(config)# monitor source interface 3/1 both` `NPort S9650I-16-2HV(config)# no dot1x radius both`	

2.2.66 email-warning server

Use **email-warning server** *to configure Mail Server IP/Name (IP address or name) for the device server. To clear the setting, use the* **no** *form of this command.*

Commands

email-warning server *smtpServerIp [smtpPort]*
no email-warning server

Syntax Description	**email-warning**	Email warning setting
	server	Email Server
	smtpServerIp	Email Server name/address
	smtpPort	SMTP Port, 1 to 65535
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# email-warning server mail.hinet.net 25` `NPort S9650I-16-2HV(config)# email-warning server ms1.hinet.net`	

2.2.67 email-warning mail-address

Use **email-warning mail-address** *to configure the email address(es) to which warning messages will be sent. To clear the setting, use* **no** *form of this command.*

Commands

email-warning mail-address mailIndex mailAddress
no email-warning mail-address mailIndex

Syntax Description	**email-warning**	Email warning setting
	mail-address	Target email address
	mailIndex	1 to 4
	mailAddress	Email address
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# email-warning mail-address 1 test2@moxa.com`	

2.2.68 email-warning account

Use **email-warning account** *to configure the account and the password to log in to the remote Mail Server. To clear the setting, use the* **no** *form of this command.*

Commands

email-warning account *name password*
no email-warning account

Syntax Description	**email-warning**	Email warning setting
	account	Email account on server
	name	User name
	password	User password
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# email-warning account test1 1234` `NPort S9650I-16-2HV(config)# no email-warning account test1`	

2.2.69 email-warning send test email

Use **email-warning send test email** *to send a test email.*

Commands

email-warning send test email

Syntax Description	**email-warning**	Email warning setting
	send	Send test email
	test	Test email
	email	Test email address
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	The test email will be sent to the mail address that "email-warning mail-address" command configured.	

Examples	`NPort S9650I-16-2HV(config)# email-warning send test email`
	`Sending test email ...`
	`You may check if your dedicated email addresses have received this email!`	

2.2.70 email-warning event

Use the **email-warning event** *global configuration command to enable the system warning events to send through the email if the event occurs. Use the* **no** *form of this command to disable the specified warning event notifications.*

Commands

email-warning event { all | cold-start | warm-start | power-trans-off | power-trans-on | config-change | auth-fail | topology-change }

no email-warning event { cold-start | warm-start | power-trans-off | power-trans-on | config-change | auth-fail | topology-change}

Syntax Description	**email-warning**	Email warning setting
	event	System events
	all	Enable all events
	cold-start	Device server cold start
	warn-start	Device server warm start
	power-trans-off	Power transition (on->off)
	power-trans-on	Power transition (off->on)
	config-change	Configuration changed
	auth-fail	Authentication failed
	topology-change	Topology changed (from redundant protocols)
Defaults	All system events are disabled by default.	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPort S9650I-16-2HV(config)# email-warning event cold-start`
	`NPort S9650I-16-2HV(config)# email-warning event topology-change`
	`NPort S9650I-16-2HV(config)# email-warning event auth-fail`	

2.2.71 relay-warning override

Use **relay-warning override** *relay to override the relay warning setting temporarily. Releasing the relay output will allow administrators to fix any problems with the warning condition. Use the* **no** *form of this command to disable the override.*

Commands

relay-warning override relay [*relayId* **]**
no relay-warning override relay [*relayId* **]**

Syntax Description	relay-warning	Configure relay warning
	override	Override the relay warning setting
	relay	Relay
	relayId	Relay's ID = 1 or 2
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	relayId will only be used on the product that have multiple relays.	
Examples	`NPort S9650I-16-2HV (config)# relay-warning override relay`	

2.2.72 relay-warning config relay

Use **relay-warning config relay** *to select relay to trigger when a warning event occurs.*

Commands

relay-warning config relay [*relayId* **]**

Syntax Description	**relay-warning**	Configure relay warning
	config	Choose which relay to configure
	relay	Relay
	relayId	Relay's ID = 1 or 2
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	These commands only existed in device with multiple relays.	
Examples	`NPort S9650I-16-2HV (config)# relay-warning config relay 1`	

2.2.73 relay-warning event

Use **relay-warning event** *global configuration commands to enable the warning events to trigger relay. Use the* **no** *form of this command to disable it.*

Commands

relay-warning event { power-input1-fail | power-input2-fail | turbo-ring-break }
no relay-warning event { power-input1-fail | power-intput2-fail | turbo-ring-break }

Syntax Description	**relay-warning**	Configure relay warning
	event	System events
	power-input1-fail	Power input 1 failure (On->Off)
	power-input2-fail	Power input 2 failure (On->Off)
	turbo-ring-break	Turbo Ring break
Defaults	All system events are disabled by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# relay-warning event turbo-ring-break`	

2.2.74 garp

Use **garp** *global configuration commands to configure GARP parameters.*

Commands

garp join-time *time*
garp leave-time *time*
garp leaveall-time *time*

Syntax Description	**garp**	Configure GARP parameters
	join-time	Configure GARP join timer parameters
	leave-time	Configure GARP leave timer parameters
	leaveall-time	Configure GARP leaveall timer parameters
	time	timer parameters
Defaults	N/A	
Permission	Admin Group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# garp join-time 33`	

2.2.75 ptp enable

Use the **ptp enable** *command on the device server to enable the PTP operation. Use the* **no** *form of this command to disable the PTP operation on the device server.*

Commands

ptp enable
no ptp

Syntax Description	**ptp**	Configure PTP
	enable	Enable the ptp operation
Defaults	ptp is default disable	
Permission	Admin group	
Usage Guidelines	Ethernet port interface can only be set when system PTP configure is enabled.	

Examples	`NPORT S9650I-16-2HV(config)# ptp enable`
	`NPORT S9650I-16-2HV(config)# no ptp`
	`NPORT S9650I-16-2HV(config-if)# ptp enable`
	`NPORT S9650I-16-2HV(config-if)# no ptp`	

2.2.76 ptp mode

Use the **ptp mode** *global configuration command on the device server to set the PTP operation mode.*

Commands

ptp mode e2e-bc
ptp mode p2p-bc
ptp mode e2e-oc
ptp mode p2p-oc

Syntax Description	**ptp**	Configure PTP
	mode	Set the ptp operation mode
	e2e-bc	ptp v2 end-to-end boundary clock mode, this mode can only be set when time source is set to PTP.
	p2p-bc	ptp v2 peer-to-peer boundary clock mode, this mode can only be set when Time source is PTP.
	e2e-oc	ptp v2 end-to-end ordinary clock mode, this mode can only be set when time source not PTP.
	p2p-oc	ptp v2 peer-to-peer ordinary clock mode, this mode can only be set when time source not PTP.
Defaults	Default setting of ptp is mode	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# ptp mode v2-e2e-bc`	

2.2.77 ptp log-sync-interval

Use the **ptp log-sync-interval** *global configuration command on the device server to set the log-sync-interval parameter.*

Commands

ptp log-sync-interval *interval*

Syntax Description	**ptp**	Configure PTP
	log-sync-interval	Set the logarithm to the base 2 of the mean SyncInterval
	interval	-3 to 1
Defaults	default is 0	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# ptp log-sync-interval`	

2.2.78 ptp log-announce-interval

Use the **ptp log-announce-interval** *global configuration command on the device server to set the log-announce-interval parameter.*

Commands

ptp log-announce-interval *interval*

Syntax Description	**ptp**	Configure PTP
	log-announce-interval	Set the logarithm to the base 2 of the mean AnnounceInterval
	interval	0 to 4
Defaults	default is 1	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# ptp log-announce-interval`	

2.2.79 ptp announce-receipt-timeout

Use the **ptp announce-receipt-timeout** *configuration command on the device server to set the announce-receipt-timeout parameter.*

Commands

ptp announce-receipt-timeout *interval*

Syntax Description	**ptp**	Configure PTP
	announce-receipt-timeout	Set the integral multiple of announceInterval
	interval	2 to 10
Defaults	default is 3	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# ptp announce-receipt-timeout`	

2.2.80 ptp log-min-delay-req-interval

Use the **ptp log-min-delay-req-interval** *global configuration command on the device server to set the log-min-delay-req-interval parameter.*

Commands

ptp log-min-delay-req-interval *interval*

Syntax Description	**ptp**	Configure PTP
	log-min-delay-req-interval	Set the logarithm to the base 2 of the mean minDelayReqInterval
	interval	0 to 5
Defaults	default is 0	
Permission	Admin group	
Usage Guidelines	Only E2E mode can set this value.	
Examples	`NPORT S9650I-16-2HV(config)# ptp log-min-delay-req-interval`	

2.2.81 ptp log-min-pdelay-req-interval

Use the **ptp log-min-pdelay-req-interval** *global configuration command on the device server to set the log-min-pdelay-req-interval parameter.*

Commands

ptp log-min-pdelay-req-interval *interval*

Syntax Description	**ptp**	Configure PTP
	log-min-delay-req-interval	Set the logarithm to the base 2 of the mean minPDelayReqInterval
	interval	-1 to 5
Defaults	default is 0	
Permission	Admin group	
Usage Guidelines	Only P2P mode can set this value.	
Examples	`NPORT S9650I-16-2HV(config)# ptp log-min-pdelay-req-interval 3`	

2.2.82 ptp domain-number

Use the **ptp domain-number** *configuration command on the device server to set the domain number of the local clock.*

Commands

ptp domain-number *interval*

Syntax Description	**ptp**	Configure PTP
	domain-number	Set the domain number of the local clock
	interval	0 to 3
Defaults	default is 0	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# ptp domain-number`	

2.2.83 ptp transport

Use the **ptp transport** *configuration command on the device server to set the transport type of the ptp domain.*

Commands

ptp transport [802_3|ipv4]

Syntax Description	**ptp**	Configure PTP
	transport	Set the transport type of the ptp doman
	802_3	Set the transport type of the PTP domain to 802.3/Ethernet
	Ipv4	Set the transport type of the PTP domain to IPv4
Defaults	default is ipv4	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# ptp transport 802_3` `NPORT S9650I-16-2HV(config)# ptp transport ipv4`	

2.2.84 ptp priority1

Use the **ptp priority1** *configuration command on the device server to set the priority1 parameter of the local clock.*

Commands

ptp priority1 *priority*

Syntax Description	**ptp**	Configure PTP
	priority1	Set the priority1 parameter of the local clock
	priority	0 to 255
Defaults	default is 128	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# ptp priority1 128`	

2.2.85 ptp priority2

Use the **ptp priority2** *configuration command on the device server to set the priority2 parameter of the local clock.*

Commands

ptp priority2 *priority*

Syntax Description	**ptp**	Configure PTP
	Priority2	Set the priority2 parameter of the local clock
	priority	0 to 255
Defaults	default is 128	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# ptp priority2 128`	

2.2.86 ptp utc-offset

Use the **ptp utc-offset** *configuration command on the device server to set the PTP utc-offset field.*

Commands

ptp utc-offset *interval*

Syntax Description	**ptp**	Configure PTP
	utc-offset	sets the offset between TAI and UTC
	interval	0 to 65535
Defaults	default is 0	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# ptp utc-offset 0`	

2.2.87 loopprotection

Use the **loopprotection** *configuration command on the device server to enable loop protection.*

Commands

loopprotection

no loopprotection

Syntax Description	**loopprotection**	Enable loop protection
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# loopprotection`	

2.2.88 qos mode

Use the **qos mode** *global configuration command on the device server to configure the current QoS strategy. Use the* **no** *form of this command to return to the default.*

Commands

qos mode { weighted-fair | strict }

no qos mode

Syntax Description	**qos**	Configure QoS
	mode	Configure queuing mechanism
	weighted-fair	Weighted fair queuing
	strict	Strict queuing
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# qos mode strict`	

2.2.89 qos mapping

Use the **qos mapping** *global configuration command on the device server to configure the CoS and DSCP mappings. Use the* **no** *form of this command to return to the default.*

Commands

qos mapping cos-to-queue *cos-value queue*
no qos mapping cos-to-queue
qos mapping dscp-to-cos *dscp-value cos-value*
no qos mapping dscp-to-cos
qos mapping dscp-to-queue *dscp-value queue*
no qos mapping dscp-to-queue

Syntax Description	**qos**	Configure QoS
	mapping	Configure QoS mapping
	cos-to-queue	CoS to traffic queue
	cos-value	CoS value (0 to 7)
	queue	Traffic queue
	dscp-to-cos	DSCP to CoS mapping
	dscp-value	DSCP value (0 to 63)
	dscp-to-queue	DSCP to traffic queue
Defaults	Cos (queue): 0 (0), 1(0), 2(1), 3(1), 4(2), 5(2), 6(3), 7(3) DSCP(Cos): 0-7(0), 8-15(1), 16-23(2), 24-31(3), 32-39(4), 40-47(5), 48-55(6), 56-63(7)	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# qos mapping cos-to-queue 7 3` `NPORT S9650I-16-2HV(config)# qos mapping dscp-to-cos 23 7`	

2.2.90 account add

To configure the user account name and its group to log in to this device.

Commands

account add name name **new_password** *new_password* **group {admins | users | guests } [note** *note***]**

Syntax Description	**account**	To manage the user account database
	add	To add a new user account to a given group
	name	Account name
	new_password	The password for the new created account or for an existing account whose password need to be changed.
	old_password	The password of an exising account.
	group	The device provides 3 levels of access privileges: admins, users, and guests.
	note	The user could note anything in this field.
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	The minimum length of account name is 1 character and the maximum length is 16 characters. The default minimum length of password is 1 character, and the maximum length is fixed to 16 characters. The maximum length of note field is 40 characters.	
Examples	`Model(config)# account add name Tom new_password 12345 group users note "for maintenance engineer"`	

2.2.91 account edit

To configure the user account name and its group to log in to this device.

Commands

account edit name *name* **old_password** *old_password* **new_password** *new_password*
account edit name *name* **[group {admins | users | guest }] [note** *note* **]**

Syntax Description	**account**	To manage the user account database
	edit	To edit the attributes of an existing user
	name	Account name
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	The minimum length of account name is 1 character and the maximum length is 16 characters. The default minimum length of password is 1 character, and the maximum length is fixed to 16 characters. The maximum length of note field is 40 characters.	
Examples	`Model(config)# account edit name Tom group guests` `Model(config)# account edit name Tom old_password 12345 new_password 13579`	

2.2.92 system-log system

To configure which events will be logged locally and/or remotely by the device server.

Commands

system-log system local
no system-log system local
system-log system remote
no system-log system remote

Syntax Description	**system-log**	To enable the system log according to different event group.
	system	This event group includes: System Cold Start, System Warm Start, Power Transition, DI On/Off.
	local	The events will be logged in device server's local database.
	remote	The events will be logged to remote sys-log server.
Defaults	The default settings are all disabled	
Permission	Admin group	
Usage Guidelines	To enable remote log function, the user also has to configure SysLog Server Settings.	
Examples	`Model(config)# system-log system local`	

2.2.93 system-log network

To configure which events will be logged locally and/or remotely by the device server.

Commands

system-log network local
no system-log network local
system-log network remote
no system-log network remote

Syntax Description	**system-log**	To enable the system log according to different event group.
	network	This event group includes: DHCP/BOOTP/PPPoE Get IP/Renew, NTP, Mail Fail, NTP Connect Fail, DHCP Fail, IP Conflict, Ethernet Link Down.
	local	The events will be logged in device server's local database.
	remote	The events will be logged to remote sys-log server.
Defaults	The default settings are all disabled	
Permission	Admin group	
Usage Guidelines	To enable remote log function, the user also has to configure SysLog Server Settings.	
Examples	`Model(config)# system-log network local` `Model(config)# no system-log network remote`	

2.2.94 system-log config

To configure which events will be logged locally and/or remotely by the device server.

Commands

system-log config local
no system-log config local
system-log config remote
no system-log config remote

Syntax Description	**system-log**	To enable the system log according to different event group.
	config	This event group includes: Login Fail, IP Changed, Password Changed, Config Changed, Firmware Upgrade, SSL Key Import, Config Import, Config Export.
	local	The events will be logged in device server's local database.
	remote	The events will be logged to remote sys-log server.
Defaults	The default settings are all disabled	
Permission	Admin group	
Usage Guidelines	To enable remote log function, the user also has to configure SysLog Server Settings.	
Examples	`Model(config)# system-log config local` `Model(config)# no system-log config remote`	

2.2.95 system-log opmode

To configure which events will be logged locally and/or remotely by the device server.

Commands

system-log opmode local
no system-log opmode local
system-log opmode remote
no system-log opmode remote

Syntax Description	system-log	To enable the system log according to different event group.
	opmode	This event group includes: Connect, Disconnect, Authentication Fail, Restart.
	local	The events will be logged in device server's local database.
	remote	The events will be logged to remote sys-log server.
Defaults	The default settings are all disabled	
Permission	Admin group	
Usage Guidelines	To enable remote log function, the user also has to configure SysLog Server Settings.	
Examples	`Model(config)# system-log opmode local` `Model(config)# no system-log opmode remote`	

2.2.96 reset-button

To configure the reset button auto disable after device bootup.

Commands

reset-button
no reset-button

Syntax Description	**reset-button**	To enable the reset button auto disable after 60 sec when bootup done.
Defaults	The default settings are no	
Permission	Admin group	
Usage Guidelines	To disable the reset button after 60 seconds of device boot up.	
Examples	`Model(config)#reset-button-disable` `Model(config)#no reset-button-disable`	

2.2.97 console auth

To configure the authentication type of the web/telnet/ssh/cli console.

Commands

console auth {local | radius | radius-local | tacasplus | tacasplus-local}

Syntax Description	**console**	Set the parameters of the console.
	auth	Set the login authentication type
Defaults	The default settings are local	
Permission	Admin group	
Usage Guidelines	N/A.	
Examples	`Model(config)# console auth radius` `Model(config)#no reset-button-disable`	

2.2.98 console try-next-auth

To enable or disable try next authentication type when console auth is radius-local and tacas+-local mode.

Commands

console try-next-auth
no console try-next-auth

Syntax Description	**console**	Set the parameters of the console.
	try-next-auth	Try next authentication type when the first authentication type fail
Defaults	The default settings are disabled.	
Permission	Admin group	
Usage Guidelines	This command only work only when console login mode is radius-local or tacas+-local.	
Examples	`Model(config)# console try-next-auth` `Model(config)# no console try-next-auth`	

2.3 Commands for Configuring Interface

These commands can only be executed under each interface folder of the CLI console, such as Ethernet interface, serial interface etc. They are used to set all the related settings of the interface of the device server.

2.3.1 Ethernet Interface Commands

From the CLI root, use "configure" command to enter configure mode, then input "interface Ethernet" command to enter the Ethernet interface folder.

2.3.1.1 email-warning event

Use the **email-warning event** *interface configuration command to allow interface warning events to be sent through the email if the event occurs. Use the* **no** *form of this command to disable the specified warning event notifications.*

Commands

email-warning event { link-on | link-off }
no mail-warning event { link-on | link-off }
email-warning event traffic-overload *[rxThreshold duration]*
no email-warning event traffic-overload

Syntax Description	**email-warning**	Configure email warning
	event	Port events
	link-on	Link ON
	link-off	Link OFF
	traffic-overload	Traffic overloading
	rxThreshold	0 to 100
	duration	1 to 300
Defaults	All port events are disabled by default.	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPort S9650I-16-2HV(config)# interface ethernet 3/1`
	`NPort S9650I-16-2HV(config-if)# email-warning event link-on`
	`NPort S9650I-16-2HV(config-if)# email-warning event traffic-overload 80 20`	

2.3.1.2 relay-warning event

Use **relay-warning event** *interface configuration commands to enable the warning events to trigger the relay. Use the* **no** *form of this command to disable it.*

Commands

relay-warning event { link-on | link-off }
relay-warning event traffic-overload *[rxThreshold duration]*
no relay-warning event { link | traffic-overload }

Syntax Description	**relay-warning**	Configure relay warning
	event	Port events
	link-on	Link ON
	link-off	Link OFF
	traffic-overload	Traffic overloading
	rxThreshold	0 to 100
	duration	1 to 300
	link	All link events
Defaults	All interface events are disabled by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# interface ethernet 3/1` `NPort S9650I-16-2HV(config-if)# relay-warning event traffic-overload`	

2.3.1.3 trunk-group

Use the **trunk-group** *interface configuration command on the device server to assign an Ethernet port to a trunk group. Use the* **no** *form of this command to remove an Ethernet port from a trunk group.*

Commands

trunk-group *trunk_id*
no trunk-group

Syntax Description	**trunk-group**	Join trunk group as members
	trunk_id	Trunk ID. From 1 to 4
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config-if)# trunk-group 1`	

2.3.1.4 trunk-mode

Use the **trunk-mode** *interface configuration command on the device server to set the trunk mode of the specified trunk group. Use the* **no** *form of this command to return to the default setting.*

Commands

trunk-mode { static | lacp }
no trunk-mode

Syntax Description	**trunk-mode**	Trunk mode configuration
	static	Configure as static trunk
	lacp	Configure as LACP trunk
Defaults	The default trunk mode of creating trunk manually is static.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config-if)# trunk-mode static`	

2.3.1.5 shutdown

To disable an interface, use the **shutdown** *interface configuration command. To restart a disabled interface, use the* **no** *form of this command.*

Commands

shutdown
no shutdown

Syntax Description	**shutdown**	Shutdown the selected interface
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config-if)# shutdown` `NPORT S9650I-16-2HV(config-if)# no shutdown`	

2.3.1.6 name

Use the **name** *interface configuration command to configure the interface name. To remove the configuration, use the* **no** *form of this command.*

Commands

name
no name

Syntax Description	**name**	Port name
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPORT S9650I-16-2HV(config)# interface ethernet 1/1`
	`NPORT S9650I-16-2HV(config-if)# name interface1_port1`
	`NPORT S9650I-16-2HV(config-if)# no name`	

2.3.1.7 speed-duplex

Use the **speed-duplex** *interface configuration command to specify the speed of the interface and its duplex mode. Use the* **no** *form of this command to return the interface to its default value.*

Commands

speed-duplex {10M-Full | 10M-Half | 100M-Full| 100M-Half | 1G-Full | Auto}
no speed-duplex

Syntax Description	**speed-duplex**	Configure speed and duplex operation
	10M-Full	Speed 10M-full
	10M-Half	Speed 10M-Half
	100M-Full	Speed 100M-Full
	100M-Half	Speed 100M-Half
	1G-Full	Speed 1G-Full
	Auto	Speed Auto
Defaults	The default is Auto	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# interface ethernet 1/1` `NPORT S9650I-16-2HV(config-if)# speed-duplex 100M-Full`	

2.3.1.8 flowcontrol

To set the method of data flow control between the terminal or other device, use the **flowcontrol** *interface configuration command. Use the* **no** *form of this command to disable flow control*

Commands

flowcontrol
no flowcontrol

Syntax Description	**flowcontrol**	Configure flowcontrol
Defaults	The default is disable	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPORT S9650I-16-2HV(config)# interface ethernet 1/1`
	`NPORT S9650I-16-2HV(config-if)# flowcontrol`
	`NPORT S9650I-16-2HV(config-if)# no flowcontrol`	

2.3.1.9 media cable-mode

Use the **media cable-mode** *interface configuration command on the device server to enable the medium-dependent interface crossover feature on the interface. Use the* **no** *form of this command to disable Auto-MDIX.*

Commands

media cable-mode [mdi | mdix | auto]
no media cable-mode

Syntax Description	**media**	Select a media
	cable-mode	Select cable mode
	mdi	MDI
	mdix	MDIX
	auto	Auto select MDI/MDIX
Defaults	The default is auto	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config-if)# media cable-mode auto` `NPort S9650I-16-2HV(config-if)# no media cable-mode`	

2.3.1.10 switchport access vlan

Use the **switchport access vlan** *interface configuration command on the device server to configure a port as a static-access or dynamic-access port. If the switchport mode is set to access, the port operates as a member of the specified VLAN. If set to dynamic, the port starts discovery of VLAN assignment based on the incoming packets it receives. Use the* **no** *form of this command to reset the access mode to the default VLAN for the device server.*

Commands

switchport access vlan *vlan-id*
no switchport access vlan

Syntax Description	**switchport**	Set switching mode characteristics
	access	Set access mode characteristics of the interface
	vlan	Set (default) pvid in access mode
	vlan-id	1 to 4094
Defaults	vlan-id = 1	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport access vlan 2`	

2.3.1.11 switchport trunk fixed vlan add

Use the **switchport trunk fixed vlan add** *interface configuration command on the device server to add the trunk characteristics when the interface is in trunking mode. Use the* **no** *form of this command to reset a trunking characteristic to the default.*

Commands

switchport trunk fixed vlan add *vlan-id-list*
no switchport trunk fixed vlan

Syntax Description	**switchport**	Set switching mode characteristics
	trunk	Set trunking mode characteristics of the interface
	fixed	Set fixed VLAN characteristics
	vlan	1 to 4094
	add	Add VLANs to the current list
	vlan-id-list	VLAN IDs of the VLANs
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport trunk fixed vlan add 1,3-5,7`	

2.3.1.12 switchport trunk fixed vlan remove

Use the **switchport trunk fixed vlan remove** *configuration command on the device server stack to remove the trunk characteristics when the interface is in trunking mode. Use the* **no** *form of this command to reset a trunking characteristic to the default.*

Commands

switchport trunk fixed vlan remove *vlan-id-list*
no switchport trunk fixed vlan

Syntax Description	**switchport**	Set switching mode characteristics
	trunk	Set trunking mode characteristics of the interface
	fixed	Set fixed VLAN characteristics
	vlan	1 to 4094
	remove	Remove VLANs from the current list
	vlan-id-list	VLAN IDs of the VLANs
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport trunk fixed vlan remove 1,3-5,7`	

2.3.1.13 switchport trunk forbidden vlan add

Use the **switchport trunk forbidden vlan add** *configuration command on the device server to add the trunk forbidden characteristics when the interface is in trunking mode. Use the* **no** *form of this command to reset a trunking characteristic to the default.*

Commands

switchport trunk forbidden vlan add *vlan-id-list*
no switchport trunk forbidden vlan

Syntax Description	**switchport**	Set switching mode characteristics
	trunk	Set trunking mode characteristics of the interface
	forbidden	Set forbidden VLAN characteristics
	vlan	1 to 4094
	add	Add VLANs to the current list
	vlan-id-list	VLAN IDs of the VLANs
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport trunk forbidden vlan add 1,3-5,7`	

2.3.1.14 switchport trunk forbidden vlan remove

Use the **switchport trunk forbidden vlan remove** *configuration command on the switch stack or on a standalone switch to remove the trunk forbidden characteristics when the interface is in trunking mode. Use the* **no** *form of this command to reset a trunking characteristic to the default.*

Commands

switchport trunk forbidden vlan remove *vlan-id-list*
no switchport trunk forbidden vlan

Syntax Description	**switchport**	Set switching mode characteristics
	trunk	Set trunking mode characteristics of the interface
	forbidden	Set forbidden VLAN characteristics
	vlan	1 to 4094
	remove	Remove VLANs from the current list
	vlan-id-list	VLAN IDs of the VLANs
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport trunk forbidden vlan remove 1,3-5,7`	

2.3.1.15 switchport trunk native vlan

Use the **switchport trunk native vlan** *interface configuration command on the device server to configure PVID of a port as a trunking port. Use the* **no** *form of this command to return to the default.*

Commands

switchport trunk native vlan *vlan-id*
no switchport trunk native vlan

Syntax Description	**switchport**	Set switching mode characteristics
	trunk	Set trunking mode characteristics of the interface
	native	Set trunking native characteristics
	vlan	Set pvid vlanid in trunk mode
	vlan-id	1 to 4094
Defaults	vlan-id = 1	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport trunk native vlan 2`	

2.3.1.16 switchport pvlan

Use the **switchport pvlan** *interface configuration command on the switch stack to define a port-based VLAN association for an isolated or community port or a mapping for a promiscuous port. Use the* **no** *form of this command to remove the port-based VLAN association or mapping from the port.*

Commands

switchport pvlan *vlan-groups*
no switchport pvlan *vlan-groups*

Syntax Description	**switchport**	Set switching mode characteristics
	pvlan	Configure port-based vlan
	vlan-groups	Set/unset port-based vlan group
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport pvlan 2,3,4`	

2.3.1.17 switchport hybrid fixed vlan add

Use the **switchport hybrid fixed vlan add** *interface configuration command on the device server to add the trunk hybrid characteristics when the interface is in hybrid mode. Use the* **no** *form of this command to reset to the default.*

Commands

switchport hybrid fixed vlan add *vlan-id-list* **tag**
switchport hybrid fixed vlan add *vlan-id-list* **untag**
no switchport hybrid fixed vlan tag
no switchport hybrid fixed vlan untag

Syntax Description	**switchport**	Set switching mode characteristics
	hybrid	Set hybrid mode characteristics of the interface
	fixed	Set fixed VLAN characteristics
	vlan	1 to 4094
	add	Add VLANs to the current list
	vlan-id-list	VLAN IDs of the VLANs
	untag	Configure egress traffic as VLAN untagged traffic
	tag	Configure egress traffic as VLAN tagged traffic
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport hybrid forbidden vlan add 1,3-5,7 tag`	

2.3.1.18 switchport hybrid forbidden vlan add

Use the **switchport hybrid forbidden vlan add** *interface configuration command on the device server to add the trunk forbidden characteristics when the interface is in hybrid mode. Use the* **no** *form of this command to reset to the default.*

Commands

switchport hybrid forbidden vlan add *vlan-id-list*
no switchport hybrid forbidden vlan

Syntax Description	**switchport**	Set switching mode characteristics
	hybrid	Set hybrid mode characteristics of the interface
	forbidden	Set forbidden VLAN characteristics
	vlan	1 to 4094
	add	Add VLANs to the current list
	vlan-id-list	VLAN IDs of the VLANs
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport hybrid forbidden vlan add 1,3-5,7`	

2.3.1.19 switchport hybrid forbidden vlan remove

Use the **switchport hybrid forbidden vlan remove** *interface configuration command on the device server to remove the trunk forbidden characteristics when the interface is in hybrid mode. Use the* **no** *form of this command to reset to the default.*

Commands

switchport hybrid forbidden vlan remove *vlan-id-list*
no switchport hybrid forbidden vlan

Syntax Description	**switchport**	Set switching mode characteristics
	hybrid	Set hybrid mode characteristics of the interface
	forbidden	Set forbidden VLAN characteristics
	vlan	1 to 4094
	remove	Remove VLANs from the current list
	vlan-id-list	VLAN IDs of the VLANs
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport hybrid forbidden vlan remove 1,3-5,7`	

2.3.1.20 switchport hybrid native vlan

Use the **switchport hybrid native vlan** *interface configuration command on the device server to configure the PVID of a port. Use the* **no** *form of this command to return to the default PVID.*

Commands

switchport hybrid native vlan *vlan-id*
no switchport hybrid native vlan

Syntax Description	**switchport**	Set switching mode characteristics
	hybrid	Set hybrid mode characteristics of the interface
	native	Set trunking native characteristics
	vlan	Set pvid vlanid in hybrid mode
	vlan-id	1 to 4094
Defaults	vlan-id = 1	
Permission	Admin group	
Usage Guidelines	You can only use this command mode for configuring normal-range VLANs, that is, VLAN IDs 1 to 4094.	
Examples	`NPort S9650I-16-2HV(config-if)# switchport hybrid native vlan 2`	

2.3.1.21 port-security

Use the **port-security** *interface configuration command on the device server to add a static unicast MAC-address on a specified port. Use the* **no** *form of this command to remove the specified MAC address.*

Commands

port-security *MAC-address*
no port-security *MAC-address*

Syntax Description	**port-security**	Set port security
	MAC-address	MAC address XX:XX:XX:XX:XX:XX
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config-if)# port-security 00:00:00:00:00:01`	

2.3.1.22 dot1x auth

Use the **dot1x auth** *interface configuration command on the device server to enable port 802.1x authenticate. Use the* **no** *form of this command to return to the default setting.*

Commands

dot1x auth
no dot1x auth

Syntax Description	**dot1x**	802.1x setting
	auth	802.1x port authentication enable/disable
Defaults	802.1x port authentication default disable	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config-if)# dot1x auth`	

2.3.1.23 gmrp

Use the **gmrp** *interface configuration command on the device server to active the IEEE 802.1D-1998 GMRP (GARP Multicast Registration Protocol). Use the* **no** *form of this command to stop this function.*

Commands

gmrp
no gmrp

Syntax Description	**gmrp**	Enable GMRP (GARP Multicast Registration Protocol)
Defaults	gmrp is default disable	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config-if)# gmrp`	

2.3.1.24 ip auto-assign

Use the **ip auto-assign** *interface configuration command on the device server to enable and set the auto IP assignment of specified interfaces. Use the* **no** *form of this command to remove an Ethernet port from a trunk group.*

Commands

ip auto-assign *ipaddr*
no ip auto-assign

Syntax Description	**ip**	Configure IP paramters
	auto-assign	Automatic port IP assignment through DHCP/BootP/RARP
	ipaddr	E.g., 11.22.33.44
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	This specified IP address must be in the same subnet of the system IP address.	
Examples	`NPort S9650I-16-2HV(config-if)# ip auto-assign 192.168.1.1`	

2.3.2 VLAN Interface Commands

From the CLI root directory, use the "configure" command to enter configure mode, and use the "interface mgmt " command to enter the VLAN configure folder. In this folder, user could set all LAN management settings.

2.3.2.1 ip address

Use the **ip address** *VLAN configuration command on the device server to configure the IP retrieve mechanism of the device server. Use* **no** *form of this command to return to the default.*

Commands

ip address {static *ip-address netmask* **| dhcp | bootp }**
no ip address

Syntax Description	**ip**	Configure IP paramters
	address	Congiure IP address
	static	E.g., 11.22.33.44
	ip-address	IP address
	netmask	Subnet mask
	dhcp	Use DHCP to retrieve IP setting automatically
	bootp	Use BOOTP to retrieve IP setting automatically
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# interface mgmt` `NPORT S9650I-16-2HV(config-vlan)# ip address static 192.168.1.1 255.255.255.0`	

2.3.2.2 ip default-gateway

Use the **ip default-gateway** *VLAN configuration command on the device server to configure the IP default gateway address. Use the* **no** *form of this command to return to the default.*

Commands

ip default-gateway *ip-address*
no default-gateway

Syntax Description	**ip**	Configure IP paramters
	default-gateway	Configure default gateway address
	ip-address	IP address
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# interface mgmt` `NPORT S9650I-16-2HV(config-vlan)# ip default-gateway 192.168.1.1`	

2.3.2.3 ip name-server

Use the **ip name-server** *VLAN configuration command on the device server to configure the DNS server for the device server. Use the* **no** *form of this command to return to the default.*

Commands

ip name-server *dns-ip-address1 [dns-ip-address2]*
no ip name-server

Syntax Description	**ip**	Configure IP paramters
	name-server	Configure DNS server address
	dns-ip-address1	IP address
	dns-ip-address2	IP address
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# interface mgmt` `NPORT S9650I-16-2HV(config-vlan)# ip name-server 192.168.1.1 255.255.255.0`	

2.3.2.4 bind vlan

Use the **bind vlan** *configuration command on the device server to bind the management address with a specified VLAN ID. Use the* **no** *form of this command to return to the default.*

Commands

bind vlan *VLAN-ID*

Syntax Description	**bind**	Bind VLAN as management VLAN
	vlan	VLAN parameters
	VLAN-ID	1 to 4094
Defaults	Default management VLAN ID is 1	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPORT S9650I-16-2HV(config)# interface mgmt` `NPORT S9650I-16-2HV(config-vlan)# bind vlan 1`	

2.3.2.5 access-ip

Use **access-ip** *in the configuration command as to restrict access to the serial to specified IP addresses. Use the* **no** *form of this command to disable this feature or to remove the IP addresses from access list.*

Commands

access-ip *[ip-address netmask]*
no access-ip *[ip-address netmask]*

Syntax Description	**access-ip**	Enable the accessible IP list
	ip-address	IP address
	netmask	IP netmask
Defaults	The feature is disabled by default.	
Permission	Admin group	
Usage Guidelines	This feature will take effect when the access-ip command is executed.	
Examples	NPORT S9650I-16-2HV(config)# interface mgmt NPORT S9650I-16-2HV (config-vlan)# access-ip 10.10.10.10 255.255.255.0 NPORT S9650I-16-2HV (config-vlan)# no access-ip	

2.3.3 Serial Interface Commands

From the CLI root directory, use the "configure" command to enter configure mode, and use the "interface serial " command to enter the serial interface folder. In the folder, users can set all serial-related settings.

2.3.3.1 email-warning event

Use the **email-warning event** *serial interface configuration command to allow interface warning events to be sent through the email if the event occurs. Use the* **no** *form of this command to disable the specified warning event notifications.*

Commands

email-warning event {dcd-changed | dsr-changed}
no email-warning event {dcd-changed | dsr-changed}

Syntax Description	**email-warning**	Configure email warning.
	event	Port events.
	dcd-changed	DCD changed
	dsr-changed	DSR changed
Defaults	All serial port events are disabled by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9650I-16-2HV(config)# email-warning event dcd-changed NPort S9650I-16-2HV(config)# no email-warning event dsr-changed	

2.3.3.2 port-alias

To configure the alias name for specified serial port.

Commands

port-alias *alias-string*
no port-alias

Syntax Description	**port-alias**	Configure alias name for serial port
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	Alias: 1 – 16 characters	

Examples	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV(config-serif)# port-alias dev_serial_port1`
	`NPort S9650I-16-2HV(config-serif)# no port-alias`	

2.3.3.3 baud-rate

To configure the baudrate for specified serial port.

Commands

baud-rate *rate*

Syntax Description	**baud-rate**	Configure baud rate for serial port
Defaults	The default is 115200	
Permission	Admin group	
Usage Guidelines	Baud-rate: 50, 75, 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19200,38400, 57600, 115200, 230400, 460800, 921600, or user specific baud-rate value	
Examples	`NPort S9650I-16-2HV(config)# interface serial 1` `NPort S9650I-16-2HV(config-serif)# baud-rate 9600`	

2.3.3.4 parity

To configure the serial parity for specified serial port.

Commands

parity {none | odd | even | mark | space}

Syntax Description	**parity**	Configure parity for serial port
Defaults	The default is none	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# interface serial 1` `NPort S9650I-16-2HV(config-serif)# parity odd`	

2.3.3.5 data-bit

To configure the data-bit for specified serial port.

Commands

data-bit {5 | 6 | 7 | 8}

Syntax Description	**data-bit**	Configure data-bit for serial port
Defaults	The default is 8	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# interface serial 1` `NPort S9650I-16-2HV(config-serif)# data-bit 6`	

2.3.3.6 stop-bit

To configure the stop-bit for specified serial port.

Commands

stop-bit {1 | 1.5 | 2}

Syntax Description	**stop-bit**	Configure stop-bit for serial port
Defaults	The default is 1	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# interface serial 1` `NPort S9650I-16-2HV(config-serif)# stop-bit 2`	

2.3.3.7 flowctrl

To configure the flow control for specified serial port.

Commands

flowcontrol {none | rtscts | xonxoff }

Syntax Description	**flowctrl**	Configure flow control for serial port
Defaults	The default is rtscts	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# interface serial 1` `NPort S9650I-16-2HV(config-serif)# flowctrl xonxoff`	

2.3.3.8 fifo

To configure the flow control for specified serial port.

Commands

fifo

no fifo

Syntax Description	**fifo**	Enable fifo for serial port
Defaults	The default is enable	
Permission	Admin group	
Usage Guidelines	N/A	

Examples	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV(config-serif)# fifo`
	`NPort S9650I-16-2HV(config-serif)# no fifo`	

2.3.3.9 port-type

To configure the flow control for specified serial port.

Commands

port-type {232 | 422 | 485-2w | 485-4w }

Syntax Description	**port-type**	Configure interface for serial port
Defaults	The default is 232	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# interface serial 1` `NPort S9650I-16-2HV(config-serif)# port-type 485-2w`	

2.3.3.10 opmode

To configure the operation mode for specified serial port.

Commands

opmode {disable | realcom | rfc2217 | tcpserver | tcpclient | udp | modbus | dnp3 | dnp3-raw-socket}

Syntax Description	**opmode**	Configure operation mode for serial port
Defaults	The default is realcom	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# interface serial 1` `NPort S9650I-16-2HV(config-serif)# opmode modbus`	

2.3.3.11 realcom

To configure the parameters of RealCOM mode for specified serial port.

Commands

realcom alive-check *minute*
realcom [max-conn *maxconn***] [ignore-jammed-ip {enable | disable}] [allow-driver-ctrl {enable | disable}]**
realcom conn-down-rts {low | high}
realcom conn-down-dtr {low | high}

Syntax Description	**realcom**	To configure the parameters of RealCOM mode.
	alive-check	TCP alive check time specifies how long the device server will wait for a response to "keep alive" packets before closing the TCP connection.
	max-conn	Max connection is used if you need to receive data from different hosts simultaneously.
	ignore-jammed-ip	When in multiple connection, if there are any remote sides happen connection problem, the device should ignore these sides and keep send serial-to-Ethernet data or stop send, this setting only work when max connection is not 1.
	allow-driver-ctrl	Allow driver control determines how the port will proceed if driver control commands are received from multiple hosts that are connected to the port, this setting only work when max connection is not 1.
	conn-down-rts	Set the RTS signal to high/low when the connection is down.
	conn-down-dtr	Set the DTR signal to high/low when the connection is down.
Defaults	The default settings for each parameter are: TCP alive check time: 7 min Max connection: 1 Ignore jammed IP: disable Allow driver control: disable Connection goes down - RTS: always high Connection goes down - DTR: always high	
Permission	Admin group	
Usage Guidelines	alive-check: 0 – 99 min max-conn: 1 – 8	

Examples	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV(config-serif)# realcom alive-check 5`
	`NPort S9650I-16-2HV(config-serif)# realcom max-conn 8 ignore-jammed-ip enable allow-driver-ctrl disable`
	`NPort S9650I-16-2HV(config-serif)# realcom conn-down-rts low`	

2.3.3.12 rfc2217

To configure the parameters of RFC 2217 mode for specified serial port.

Commands

rfc2217 alive-check *minute*
rfc2217 tcp-port *tcp-port*

Syntax Description	**rfc2217**	To configure the parameters of RFC 2217 mode.
	alive-check	TCP alive check time specifies how long the device server will wait for a response to "keep alive" packets before closing the TCP connection.
	tcp-port	This is the TCP port number assignment for the serial port on the device server.
Defaults	The default settings for each parameter are: TCP alive check time: 7 min TCP port: 4001	
Permission	Admin group	
Usage Guidelines	Alive-check: 0 – 99 min Tcp-port: 1 – 65535	

Examples	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV(config-serif)# rfc2217 alive-check 5`
	`NPort S9650I-16-2HV(config-serif)# rfc2217 tcp-port 3456`	

2.3.3.13 tcpserver

To configure the parameters of TCP Server mode for specified serial port.

Commands

tcpserver alive-check *minute*
tcpserver inactivity *milli-second*
tcpserver [max-conn *maxconn*] **[ignore-jammed-ip {enable | disable}] [allow-driver-ctrl {enable | disable}]**
tcpserver conn-down-rts {low | high}
tcpserver conn-down-dtr {low | high}
tcpserver local-tcp-port *tcp-port*
tcpserver local-cmd-port *tcp-port*

Syntax Description	**tcpserver**	To configure the parameters of TCP Server mode.
	alive-check	TCP alive check time specifies how long the device server will wait for a response to "keep alive" packets before closing the TCP connection.
	inactivity	Inactivity time specifies how long the device server will wait for incoming and outgoing data through the serial port before closing the TCP connection.
	max-conn	Max connection is used if you need to receive data from different hosts simultaneously.
	ignore-jammed-ip	When in multiple connection, if there are any remote sides happen connection problem, the device should ignore these sides and keep send serial-to-Ethernet data or stop send, this setting only work when max connection is not 1.
	allow-driver-ctrl	Allow driver control determines how the port will proceed if driver control commands are received from multiple hosts that are connected to the port, this setting only work when max connection is not 1.
	conn-down-rts	Set the RTS signal to high/low when the connection is down.
	conn-down-dtr	Set the DTR signal to high/low when the connection is down.
	local-tcp-port	Specific the local TCP port for TCP server use.
	local-cmd-port	Specific the local CMD port for TCP server use.
	no	Clear the setting to empty
Defaults	The default settings for each parameter are: TCP alive check time: 7 min Inactivity time: 0 ms (disable) Max connection: 1 Ignore jammed IP: disable Allow driver control: disable Connection goes down - RTS: always high Connection goes down - DTR: always high Local TCP port: 4001 Local CMD port: 966	
Permission	Admin group	
Usage Guidelines	Alive-check: 0 – 99 min Inctivict time: 0 – 65535 ms Max connection: 1 - 8 Tcp-port: 1 – 65535	

Examples	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV (config-serif)# tcpclient alive-check 5`
	`NPort S9650I-16-2HV (config-serif)# tcpserver alive-check 5`
	`NPort S9650I-16-2HV (config-serif)# tcpserver inactivity 5000`
	`NPort S9650I-16-2HV(config-serif) # tcpserver max-conn 8 ignore-jammed-ip enable allow-driver-ctrl disable`	

	NPort S9650I-16-2HV(config-serif) # tcpserver local-tcp-port 4005

2.3.3.14 tcpclient

To configure the parameters of TCP Client mode for specified serial port.

Commands

tcpclient alive-check *minute*
tcpclient inactivity *milli-second*
tcpclient ignore-jammed-ip {enable|disable}
tcpclient [dest-ip1 *ip-address*] **[dest-port1** *tcp-port*]
tcpclient [dest-ip2 *ip-address*] **[dest-port2** *tcp-port*]
tcpclient [dest-ip3 *ip-address*] **[dest-port3** *tcp-port*]
tcpclient [dest-ip4 *ip-address*] **[dest-port4** *tcp-port*]
tcpclient local-port1 *tcp-port*
tcpclient local-port2 *tcp-port*
tcpclient local-port3 *tcp-port*
tcpclient local-port4 *tcp-port*
no tcpclient dest-ip1
no tcpclient dest-ip2
no tcpclient dest-ip3
no tcpclient dest-ip4
tcpclient conn-ctrl {startup-none | anychar-none | anychar-inactivity | dsron-off | dsron-none | dcdon-off | dcdon-none}

Syntax Description	**tcpclient**	To configure the parameters of TCP Client mode.
	alive-check	TCP alive check time specifies how long the device server will wait for a response to "keep alive" packets before closing the TCP connection.
	inactivity	Inactivity time specifies how long the device server will wait for incoming and outgoing data through the serial port before closing the TCP connection.
	ignore-jammed-ip	When in multiple connection, if there are any remote sides happen connection problem, the device should ignore these sides and keep send serial-to-Ethernet data or stop send.
	dest-ip1	1st destination IP address specifies an IP address allows the device server to connect actively to the remote host.
	dest-ip2	2nd destination IP address specifies an IP address allows the device server to connect actively to the remote host.
	dest-ip3	3rd destination IP address specifies an IP address allows the device server to connect actively to the remote host.
	dest-ip4	4th destination IP address specifies an IP address allows the device server to connect actively to the remote host.
	dest-port1	1st destination port specifies the TCP port number allows the device server to connect actively to the remote host.
	dest-port2	2nd destination port specifies the TCP port number allows the device server to connect actively to the remote host.
	dest-port3	3rd destination port specifies the TCP port number allows the device server to connect actively to the remote host.
	dest-port4	4th destination port specifies the TCP port number allows the device server to connect actively to the remote host.
	local-port1	1st designated local port specifies the desired local port number of the device server for this TCP connection.
	local-port2	2nd designated local port specifies the desired local port number of the device server for this TCP connection.
	local-port3	3rd designated local port specifies the desired local port number of the

		device server for this TCP connection.
	local-port4	4th designated local port specifies the desired local port number of the device server for this TCP connection.
	conn-ctrl	Connection control determines the parameters under which a TCP connection is established or disconnected
	no	Clear the setting to empty
Defaults	The default settings for each parameter are: TCP alive check time: 7 min Inactivity time: 0 ms (disable) Max connection: 1 Ignore jammed IP: disable Destination IP address 1: blank Destination port 1: 4001 Destination IP address 2: blank Destination port 2: 4001 Destination IP address 3: blank Destination port 3: 4001 Destination IP address 4: blank Destination port 4: 4001 Designated local port 1: 5011 Designated local port 2: 5012 Designated local port 3: 5013 Designated local port 4: 5014 Connection control: Startup/None	
Permission	Admin group	
Usage Guidelines	Alive-check: 0 – 99 min Inctivict time: 0 – 65535 ms IP address : IPv4 address or DNS name Tcp-port: 1 – 65535	

Examples	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV (config-serif)# tcpclient alive-check 5`
	`NPort S9650I-16-2HV (config-serif)# tcpclient ignore-jammed-ip enable`
	`NPort S9650I-16-2HV (config-serif)# tcpclient dest-ip1 192.168.1.100 dest-port1 4001`
	`NPort S9650I-16-2HV (config-serif)# tcpclient dest-ip2 192.168.1.101`
	`NPort S9650I-16-2HV (config-serif)#dest-port2 4002`
	`NPort S9650I-16-2HV (config-serif)# no tcpclient dest-ip3`
	`NPort S9650I-16-2HV (config-serif)# tcpclient local-port1 5011`
	`NPort S9650I-16-2HV (config-serif)# tcpclient conn-ctrl anychar-none`	

2.3.3.15 udp

To configure the parameters of UDP mode for specified serial port.

Commands

udp [dest-ip1-begin *ip-address*] **[dest-ip1-end** *ip-address* **] [dest-port1** *port*]
udp [dest-ip2-begin *ip-address*] **[dest-ip2-end** *ip-address* **] [dest-port2** *port*]
udp [dest-ip3-begin *ip-address*] **[dest-ip3-end** *ip-address* **] [dest-port3** *port*]
udp [dest-ip4-begin *ip-address*] **[dest-ip4-end** *ip-address* **] [dest-port4** *port*]
udp local-port *udp-port*
no udp dest-ip1-begin
no udp dest-ip1-end
no udp dest-ip2-begin
no udp dest-ip2-end
no udp dest-ip3-begin
no udp dest-ip3-end
no udp dest-ip4-begin
no udp dest-ip4-end

Syntax Description	**udp**	To configure the parameters of dnp3 mode.
	dest-ip1-begin	1st start ranges of IP addresses for the serial port to connect to.
	dest-ip1-end	1st end ranges of IP addresses for the serial port to connect to.
	dest-ip2-begin	2nd start ranges of IP addresses for the serial port to connect to.
	dest-ip2-end	2nd end ranges of IP addresses for the serial port to connect to.
	dest-ip3-begin	3rd start ranges of IP addresses for the serial port to connect to.
	dest-ip3-end	3rd end ranges of IP addresses for the serial port to connect to.
	dest-ip4-begin	4th start ranges of IP addresses for the serial port to connect to.
	dest-ip4-end	4th end ranges of IP addresses for the serial port to connect to.
	dest-port1	1st destination port specifies the UDP port number allows the device server to connect actively to the remote host
	dest-port2	2nd destination port specifies the UDP port number allows the device server to connect actively to the remote host
	dest-port3	3rd destination port specifies the UDP port number allows the device server to connect actively to the remote host
	dest-port4	4th destination port specifies the UDP port number allows the device server to connect actively to the remote host
	local-port	This is the UDP port that the device server listens to and that other devices must use to contact the device server.
	no	Clear the setting to empty
Defaults	The default settings for each parameter are: Destination IP address 1 begin: blank Destination IP address 1 end: blank Destination port 1: 4001 Destination IP address 2 begin: blank Destination IP address 2 end: blank Destination port 2: 4001 Destination IP address 3 begin: blank Destination IP address 3 end: blank Destination port 3: 4001 Destination IP address 4 begin: blank Destination IP address 4 end: blank Destination port 4: 4001 Local listen port: 4001	
Permission	Admin group	

Usage Guidelines	IP address: IPv4 address Tcp-port: 1 – 65535
Examples	NPort S9650I-16-2HV(config)# interface serial 1 NPort S9650I-16-2HV(config-serif)# udp dest-ip1-begin 192.168.1.100 dest-ip1-end 192.168.1.105 dest-port1 4001 NPort S9650I-16-2HV(config-serif)# udp dest-ip2-begin 192.168.1.200 dest-ip2-end 192.168.1.205 NPort S9650I-16-2HV(config-serif)# udp local-port 4001 NPort S9650I-16-2HV(config-serif)# udp dest-port3 4003

2.3.3.16 dnp3

To configure the parameters of Modbus mode for specified serial port.

Commands

dnp3 mode {outstation|master}

Syntax Description	**dnp3**	To configure the parameters of dnp3 mode.
	mode	Set the mode of the device which the serial port acted.
	outstation	Outstation mode
	master	Master mode
Defaults	The default settings fordnp3 mode is outstation	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9650I-16-2HV(config)# interface serial 1 NPort S9650I-16-2HV(config-serif)# dnp3 mode master	

2.3.3.17 dnp3-raw-socket

To configure the parameters of Modbus mode for specified serial port.

Commands

dnp3-raw-socket local-tcp-port *tcp-port*

dnp3-raw-socket [remote-ip *ip-address***] [remote-tcp-port** *tcp-port***]**

Syntax Description	**dnp3-raw-socket**	To configure the parameters of dnp3-raw-socket mode.
	local-tcp-port	Set the local tcp port which device used for the serial.
	remote-ip	Set the remote IP address
	remote-tcp-port	Set the remote TCP port
Defaults	The default settings for each parameter are: local-tcp-port: 4001 remote-ip: empty remote-tcp-port: 20000	
Permission	Admin group	
Usage Guidelines	Ip-address: IPv4 address TCP port: 1 – 65535	
Examples	NPort S9650I-16-2HV(config)# interface serial 1 NPort S9650I-16-2HV(config-serif)# dnp3-raw-socket remote-ip 1.2.3.4 remote-tcp-port 20001 NPort S9650I-16-2HV(config-serif)# dnp3-raw-socket local-tcp-port 1234	

2.3.3.18 modbus

To configure the parameters of Modbus mode for specified serial port.

Commands

modbus [connected-dev { rtu-master | rtu-slave | ascii-master | ascii-slave }] [resp-timeout *milli-second*] **[inter-char-timeout** *milli-second*] **[inter-frame-delay** *milli-second*]
[designated-tcp-port *tcp-port* **]**

Syntax Description	**modbus**	To configure the parameters of Modbus mode.
	connected-dev	Set the type of the device type and role which the serial port connected.
	response-timeout	Set the Modbus response time out of the serial port. Only valid when connected-dev is RTU-slave or ascii-slave
	Inter-char-timeout	Set the inter-character timeout of the serial port. Only valid when connected-dev is RTU-slave .
	Inter-frame-delay	Set the inter-frame delay of the serial port. Only valid when connected-dev is RTU-slave .
	Designated-tcp-port	Set the designated TCP port of the serial port. Only valid when connected-dev is RTU-slave or ascii-slave
Defaults	The default settings for each parameter are: Connected devce type: RTU Slave Response timeout: 1000 Inter-character timeout: 0 Inter-frame delay: 0 Designated TCP port: 0	
Permission	Admin group	
Usage Guidelines	Response timeout: 10 – 120000 ms Inter-character timeout: 10 - 500 ms, 0 for disable Inter-frame dela: 10 - 500 ms, 0 for disable Designated TCP port: 1024 - 65535, 0 for disable	

Examples	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV(config-serif)# modbus connected-device-type RTU-slave`
	`NPort S9650I-16-2HV(config-serif)# modbus response-timeout 2000 inter-char-timeout 10 inter-frame-delay 10`
	`NPort S9650I-16-2HV(config-serif)# modbus designated-tcp-port 4001`	

2.3.3.19 data-packing

To configure the data packing settings in different operation mode for specified serial port.

Commands

data-packing length *packet-length*
data-packing deli1-char *delimiter1-character* **[deli2-char** *delimiter2-character* **]**
data-packing deli1 {enable|disable} [deli2 {enable|disable}]
data-packing process {nothing | plus1 | plus2 | strip}
data-packing force-transmit *millisecond*

Syntax Description	**data-packing**	To configure the data packing behavior.
	length	It refers to the maximum amount of data that is allowed to accumulate in the serial port buffer before sending.
	deli1	Enable or disable the delimiter 1 functionality.
	deli1-char	To configure the delimiter 1 character.
	deli2	Enable or disable the delimiter 2 functionality, this function could be set only when deli1 was set; If the deli1 is disable, this value must be disable.
	deli2-char	To configure the delimiter 2 character,this function could be set only when deli1-char was set.
	process	The delimiter proces determines how the data is handled when a delimiter is received.
	force-transmit	This parameter defines how large a gap in serial communication the device server will allow before packing the serial data in its internal buffer for network transmission.
Defaults	The default settings for each parameter are: packet length: 0 delimiter 1: disable delimiter 1 character: 0x00 delimiter 2: disable delimiter 2 character: 0x00 delimiter process: nothing force transmit: 0 ms	
Permission	Admin group	
Usage Guidelines	Data-packing length: 0 - 1024 deli1-char: HEX value(length: 1 - 2) deli2-char: HEX value(length: 1- 2) force-transmit: 0 – 65535 ms	

Examples	`NPort S9650I-16-2HV(config)# interface serial 1`
	`NPort S9650I-16-2HV(config-serif)# data-packing length 100`
	`NPort S9650I-16-2HV(config-serif)# data-packing deli-char 0x55 deli2-char 0xff`
	`NPort S9650I-16-2HV(config-serif)# data-packing force-transmit 1000`	

2.3.3.20 email-warning event

Use the **email-warning event** *serial interface configuration command to allow interface warning events to be sent through the email if the event occurs. Use the* **no** *form of this command to disable the specified warning event notifications.*

Commands

email-warning event {dcd-changed | dsr-changed}
no email-warning event {dcd-changed | dsr-changed}

Syntax Description	**email-warning**	Configure email warning.
	event	Port events.
	dcd-changed	DCD changed
	dsr-changed	DSR changed
Defaults	All serial port events are disabled by default.	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	`NPort S9650I-16-2HV(config)# interface serial 1` `NPort S9650I-16-2HV(config-serif)# email-warning event dcd-changed`	

2.3.3.21 irig-b

To configure the irig-b setting for specified serial port.

Commands

irig-b output { off|pwm|pps }

Syntax Description	**init-delay**	Configure initial delay for the modbus protocol
Defaults	The default is off	
Permission	Admin group	
Usage Guidelines	listen-tcp-port: 0 - 30000	
Examples	`NPort S9650I-16-2HV(config)# interface serial 1` `NPort S9650I-16-2HV(config-serif)# irig-b pwm`	

2.3.4 Protocol Modbus Interface Commands

From the CLI root directory, use the "configure" command to enter configure mode, and use the "interface serial protocol modbus " command to enter the Modbus protocol folder. In this folder, user can set all Modbus protocol settings.

2.3.4.1 init-delay

To configure the initial delay of the Modbus.

Commands

init-delay *mili-seconds*

Syntax Description	**init-delay**	Configure initial delay for the Modbus protocol
Defaults	The default is 0	
Permission	Admin group	
Usage Guidelines	listen-tcp-port: 0 - 30000	
Examples	`NPort S9650I-16-2HV(config)# interface serial protocol modbus` `NPort S9650I-16-2HV(config-modbus)# init-delay 1000`	

2.3.4.2 send-tcp-exception

To configure the send TCP exception of the Modbus.

Commands

send-tcp-exception
no send-tcp-exception

Syntax Description	**send-tcp-exception**	Configure enable or disable send TCP exception for the Modbus protocol
Defaults	The default is disable	
Permission	Admin group	
Usage Guidelines	listen-tcp-port: 1 - 65535	

Examples	`NPort S9650I-16-2HV(config)# interface serial protocol modbus`
	`NPort S9650I-16-2HV(config-modbus)# send-tcp-exception`
	`NPort S9650I-16-2HV(config-modbus)# no send-tcp-exception`	

2.3.4.3 tcp-listen-port

To configure the listen TCP port of the Modbus protocol.

Commands

tcp-listen-port *listen-tcp-port*

Syntax Description	**tcp-listen-port**	Configure the listen TCP port for the Modbus protocol
Defaults	The default is 502	
Permission	Admin group	
Usage Guidelines	listen-tcp-port: 1 - 65535	
Examples	`NPort S9650I-16-2HV(config)# interface serial protocol modbus` `NPort S9650I-16-2HV(config-modbus)# tcp-listen-port 1234`	

2.3.4.4 tcp-response-timeout

To configure the listen TCP response timeout of the Modbus protocol.

Commands

tcp-response-timeout *milli-seconds*

Syntax Description	**tcp-response-timeout**	Configure the TCP client response time out for the Modbus protocol
Defaults	The default is 1000	
Permission	Admin group	
Usage Guidelines	milli-seconds: 10 – 120000 ms	
Examples	NPort S9650I-16-2HV(config)# interface serial protocol modbus NPort S9650I-16-2HV(config-modbus)# tcp-response-timeout 3000	

2.3.4.5 sid-map

To display the slave id mapping table of the Modbus protocol.

Commands

sid-map

Syntax Description	**sid-map**	To configure the slave-id mapping of Modbus mode.
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9650I-16-2HV(config)# interface serial protocol modbus NPort S9650I-16-2HV(config-modbus)# sid-map Slave ID Map : Channel no. Type Definition Modbus Address Range -------------- ---------- ---------- ---------- 1 Modbus Serial Port 1 00001 – 00005 2 Modbus Serial Port 2 00006 – 00010 3 Modbus Serial Port 3 00011 – 00015 4 Modbus Serial Port 4 00016 – 00020 5 Modbus TCP 192.168.1.1: 502 00100 – 00150	

2.3.4.6 sid-map add remote-ip

To configure the slave id mapping table of the Modbus protocol.

Commands

sid-map add remote-ip *ip-address* **remote-tcp-port** *tcp-port* **sid-start** *slave-id* **sid-end** *slave-id*

Syntax Description	**sid-map**	To configure the slave-id mapping of Modbus mode.
	remote-ip	The desination is Modbus tcp IP address.
	remote-tcp-port	The remote TCP port
	sid-start	Set the mapping start slave id.
	sid-end	Set the mapping end slave id.
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	Ip-address: IPv4 address Tcp-port: 1 – 65535 Slave-id: 1 - 255	
Examples	`NPort S9650I-16-2HV(config)# interface serial protocol modbus` `NPort S9650I-16-2HV(config-modbus)# sid-map add remote-ip 1.2.3.4 remote-tcp-port 502 sid-start 1 sid-end 5`	

2.3.4.7 sid-map edit

To configure the slave id mapping table of the Modbus protocol.

Commands

sid-map edit channel *id* **[remote-ip** *remote-ip*] **[remote-tcp-port** *remote-port* **] [sid-start** *slave-id-start*]**[sid-end** *slave-id-end*]

Syntax Description	**sid-map**	To configure the slave-id mapping of Modbus mode.
	channel	The channel ID of the slave ID map
	remote-ip	The desination is Modbus tcp IP address, this parameter is work only when channel is Modbus TCP.
	remote-tcp-port	The remote TCP port, this parameter is work only when channel is Modbus TCP.
	sid-start	Set the mapping start slave id.
	sid-end	Set the mapping end slave id.
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	Ip-address: IPv4 address Tcp-port: 1 – 65535 slave-id-start/slave-id-end: 1 – 255 Channel index: 1 - n	
Examples	NPort S9650I-16-2HV(config)# interface serial protocol modbus NPort S9650I-16-2HV(config-modbus)# sid-map Slave ID Map : Channel number Type Definition Modbus Address Range ---------- ---------- ---------- ---------- 1 Modbus Serial Port 1 00001 – 00005 2 Modbus Serial Port 2 00006 – 00010 3 Modbus Serial Port 3 00011 – 00015 4 Modbus Serial Port 4 00016 – 00020 5 Modbus TCP 192.168.1.1: 502 00100 – 00150 NPort S9650I-16-2HV (config-modbus)#sid-map edit channel 1 sid-start 3 sid-end 5 NPort S9650I-16-2HV (config-modbus)#sid-map edit channel 5 remote-tcp-port 505 NPort S9650I-16-2HV (config-modbus)#sid-map edit channel 5 remote-ip 1.2.3.4 remote-tcp-port 1234 NPort S9650I-16-2HV (config-modbus)#sid-map edit channel 5 remote-ip 1.2.3.4 remote-tcp-port 1234 sid-start 101 sid-end 110	

2.3.4.8 no sid-map

To remove an entry of the slave id mapping table of the Modbus protocol.

Commands

no sid-map channel *id*

Syntax Description	**sid-map**	To configure the slave-id mapping of Modbus mode.
	channel	The channel ID of the slave ID map
	id	The channel id
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	id: 1 - n	
Examples	NPort S9650I-16-2HV(config)# interface serial protocol modbus NPort S9650I-16-2HV (config-modbus)# sid-map Slave ID Map : Channel number Type Definition Modbus Address Range ---------- ---------- ---------- ---------- 1 Modbus Serial Port 1 00001 – 00005 2 Modbus Serial Port 2 00006 – 00010 3 Modbus Serial Port 3 00011 – 00015 4 Modbus Serial Port 4 00016 – 00020 5 Modbus TCP 192.168.1.1: 502 00100 – 00150 NPort S9650I-16-2HV (config-modbus)# no sid-map channel 5 NPort S9650I-16-2HV (config-modbus)# sid-map Slave ID Map : Channel number Type Definition Modbus Address Range ---------- ---------- ---------- ---------- 1 Modbus Serial Port 1 00001 – 00005 2 Modbus Serial Port 2 00006 – 00010 3 Modbus Serial Port 3 00011 – 00015 4 Modbus Serial Port 4 00016 – 00020	

2.3.5 Protocol DNP3 Interface Commands

From the CLI root directory, use the "configure" command to enter the configure mode, and use the "interface serial protocol dnp3 " command to enter the DNP3 protocol folder. In this folder, user could set all DNP3 protocol settings.

2.3.5.1 listen-port

To configure the initial delay of the modbus.

Commands

listen-port *tcp-port*

Syntax Description	**listen-port**	Configure listen TCP port for the DNP3 protocol
Defaults	The default is 20000	
Permission	Admin group	
Usage Guidelines	tcp-port: 1 - 65535	
Examples	NPort S9650I-16-2HV(config)# interface serial protocol dnp3 NPort S9650I-16-2HV (config-dnp3)# listen-port 20001	

2.3.5.2 address-table

To configure the address table of the DNP3 protocol.

Commands

address-table

Syntax Description	**address-table**	To configure the address table of DNP3 mode.
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9650I-16-2HV(config)# interface serial protocol dnp3 NPort S9650I-16-2HV (config-dnp3)# address-table Address table : Channel number Type Definition DNP3 Address Range ---------- ---------- ---------- ---------- 1 DNP3 Serial Port 1 00001 – 00005 2 DNP3 Serial Port 2 00006 – 00010 3 DNP3 Serial Port 3 00011 – 00015 4 DNP3 Serial Port 4 00016 – 00020 5 DNP3 TCP 192.168.1.1 : 502 10000 – 11000	

2.3.5.3 address-table add

To configure the address table of the DNP3 protocol.

Commands

address-table add remote-ip *ip-address* **remote-tcp-port** *tcp-port* **addr-start** *addr-start* **addr-end** *addr-end*

Syntax Description	**address-table**	To configure the address table of DNP3 mode.
	remote-ip	The destination is tcp.
	remote-tcp-port	Remote side TCP port
	addr-start	Set the start address.
	addr-end	Set the end address.
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	Ip-adddress: IPv4 address tcp-port: 1 - 65535 address: 1 to 65519	
Examples	`NPort S9650I-16-2HV(config)# interface serial protocol dnp3` `NPort S9650I-16-2HV (config-dnp3)# address-table remote-ip 192.168.1.1 remote-tcp-port 20000 addr-start 1 addr-end 5`	

2.3.5.4 address-table edit

To configure the address table of the DNP3 protocol.

Commands

address-table edit channel *id* **[remote-ip** *ip-address*][**remote-tcp-port** *tcp-port* **][addr-start** *addr-start* **][addr-end** *addr-end*]

Syntax Description	**address-table**	To configure the address table of DNP3 mode.
	channel	The channel ID of DNP3 address table
	remote-ip	The destination IP address, this setting only works when the channel type is DNP3 TCP.
	remote-tcp-port	Remote side TCP port, this setting only works when the channel type is DNP3 TCP.
	addr-start	Set the start address.
	addr-end	Set the end address.
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	Ip-adddress: IPv4 address tcp-port: 1 - 65535 address: 1 to 65519	
Examples	NPort S9650I-16-2HV(config)# interface serial protocol dnp3 NPort S9650I-16-2HV (config-dnp3)# address-table Address table : Channel number Type Definition DNP3 Address Range ---------- ---------- ---------- ---------- 1 DNP3 Serial Port 1 00001 – 00005 2 DNP3 Serial Port 2 00006 – 00010 3 DNP3 Serial Port 3 00011 – 00015 4 DNP3 Serial Port 4 00016 – 00020 5 DNP3 TCP 192.168.1.1 : 502 10000 – 11000 NPort S9650I-16-2HV (config-dnp3)# address-table edit channel 1 sid-start 3 sid-end 5 NPort S9650I-16-2HV (config- dnp3)# address-table edit channel 5 remote-tcp-port 505 NPort S9650I-16-2HV (config- dnp3)# address-table edit channel 5 remote-ip 1.2.3.4 remote-tcp-port 1234 NPort S9650I-16-2HV (config- dnp3)# address-table edit channel 5 remote-ip 1.2.3.4 remote-tcp-port 1234 sid-start 101 sid-end 110	

2.3.5.5 no address-table

To remove an entry of the address table of the DNP3 protocol.

Commands

no address-table channel *id*

Syntax Description	**address-table**	To configure the address table of DNP3 mode.
	channel	The channel ID of DNP3 address table
	id	DNP3 channel id
Defaults	N/A	
Permission	Admin group	
Usage Guidelines	N/A	
Examples	NPort S9650I-16-2HV(config)# interface serial protocol dnp3 NPort S9650I-16-2HV (config-dnp3)# address-table Address table : Channel number Type Definition DNP3 Address Range ---------- ---------- ---------- ---------- 1 DNP3 Serial Port 1 00001 – 00005 2 DNP3 Serial Port 2 00006 – 00010 3 DNP3 Serial Port 3 00011 – 00015 4 DNP3 Serial Port 4 00016 – 00020 5 DNP3 TCP 192.168.1.1 : 502 10000 – 11000 NPort S9650I-16-2HV (config-dnp3)# no address-table edit channel 5	