Programmability Command Reference for Cisco NCS 5500 Series Routers

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CONTENTS

Preface

- Communications, Services, and Additional Information, on page v

Communications, Services, and Additional Information

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grpc-commands

gnsi load service authorization policy

To instruct the router to load the service authorization policy file into its memory and update the policy, use the **gnsi load service authorization policy** command in Global Configuration Mode.

gnsi load service authorization policy *file_path*

Syntax Description

file-path	Specifies the path of the policy file.

Command Default

Enabled, by default

Command Modes

Global Configuration Mode

Command History

Release	Modification
Release 7.11.1	This command was introduced.

Usage Guidelines

A policy file which has no specified or the policy is invalid, the default behavior will transition to the zero-policy behavior. Zero-policy allows all gRPC services to all the users if their profiles are configured.

Task ID

Task ID	Operation
config-services	read, write

This example shows how to activate the authorization policy test.json in the router.

```
Router(config)#gnsi load service authorization policy /disk0:/test.json
Successfully loaded policy
```

grpc gnsi service certz ssl-profile-id

To instruct the router to load the certz.proto, use the **grpc gnsi service certz ssl-profile-id** command in Global Configuration Mode. To disable the SSL profiles configured with certz.proto, use the no form of the command.

grpc gnsi service certz ssl-profile-id *ssl-profile name*

Syntax Description

ssl-profile name	Specifies the SSL-profile name for which certz. proto needs to be activated.

Command Default

None

Command Modes

Global Configuration Mode

Command History

Release	Modification
Release 24.1.1	This command was introduced.

Usage Guidelines

If Certz. proto is not active, then gNOI cert.proto is taken into consideration. If niether certz.proto nor cert.proto is active, then TLS trustpoint's data is considered.

Task ID

Task ID	Operation
config-services	read, write

This example shows how to activate the certz.proto in the router.

```
Router(config)#grpc gnsi service certz ssl-profile-id gNxI
Router(config)#commit
```

grpc max-concurrent-streams

To specify a limit on the number of concurrent streams per gRPC connection to be applied on the server, use the **grpc max-concurrent-streams** command in the Global Configuration mode. To restore the default value, use the **no** form of this command.

grpc   **max-concurrent-streams** *limit*

Syntax Description		
	max-concurrent-streams *limit*	Specifies the limit on the number of concurrent streams per gRPC connection to be applied on the server. The range is from 1 to 128. The command default is 32.

Command Default

By default, the maximum concurrent streams per gRPC connection is 32.

Command Modes

Global Configuration mode

Command History

Release	Modification
Release 24.1.1	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
config-services	read, write

Examples

The following example shows how to set the limit of the number of concurrent streams per gRPC connection to 40:

```
Router#configure
Router(config)#grpc max-concurrent-streams 40
```

show grpc certificate

To display the active gRPC certificate management policies on the router, use the **show grpc certificate** command in EXEC mode.

show grpc certificate

Syntax Description	This command has no keywords or arguments.

Command Default	None

Command Modes	EXEC mode

Command History

Release	Modification
Release 24.1.1	The command was introduced.

Usage Guidelines	No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
config-services	read

This example displays the active gRPC certificate management policies on the router. The below-mentioned command output is truncated version.

```
Router#show grpc certificate
Certificate:
    Data:
        Version: 3 (0x2)
        Serial Number: 32 (0x20)
        Signature Algorithm: sha256WithRSAEncryption
        Issuer: CN=localhost,O=OpenConfig,C=US
        Validity
            Not Before: Nov  8 08:49:38 2023 GMT
            Not After : Mar 22 08:49:38 2025 GMT
        Subject: CN=ems,O=OpenConfig,C=US
        Subject Public Key Info:
            Public Key Algorithm: rsaEncryption
                RSA Public-Key: (4096 bit)
                Modulus:
                    00:ea:6a:6c:25:be:9f:15:71:ce:74:89:03:ec:ef:
                    0b:3b:de:58:a8:7e:28:b8:cf:b3:82:91:b4:5c:42:
                    e7:d8:28:98:35:bd:35:60:a7:4e:f8:77:02:46:5f:
                    27:a4:16:cf:3c:e3:24:28:69:9c:22:1e:e3:52:96:
                    71:87:7c:40:0c:1f:dd:30:ea:dc:40:ca:93:00:54:
                    5e:de:20:54:5b:f4:2f:9f:19:6f:71:61:28:69:3d:
                    97:26:ab:e1:5f:53:3c:f1:a2:c3:14:f4:01:90:1a:
                    .
                    .
                    .
```

```
                    Exponent: 65537 (0x10001)
            X509v3 extensions:
                X509v3 Key Usage: critical
                    Digital Signature
                X509v3 Extended Key Usage:
                    TLS Web Client Authentication, TLS Web Server Authentication
                X509v3 Authority Key Identifier:
                    keyid:0A:A8:9A:6A:23:34:AE:CA:96:00:2C:F3:04:38:14:E3:D4:8D:77:BD

            X509v3 Subject Alternative Name:
                    DNS, IP Address:64.103.223.56
        Signature Algorithm: sha256WithRSAEncryption
             b9:89:ec:60:3d:8d:7d:9c:dc:08:56:89:99:44:92:98:45:b6:
             97:ba:e3:e5:f2:48:b2:44:8d:db:23:bb:a1:c0:62:79:78:18:
             d7:55:f6:4a:67:5b:75:e0:c0:0b:52:51:07:36:d5:6c:c7:67:
             48:86:8d:dd:70:1c:9f:7c:a1:7b:aa:a5:4e:e1:ad:cf:4c:e5:
             81:db:92:cf:88:70:5a:1c:8d:de:0d:e8:b3:05:de:b9:04:4d:
             23:e1:de:66:e5:08:bd:2e:31:0a:07:a6:c0:00:3a:38:2f:00:
             .
             .
             .
```

show gnsi service authorization policy

To display the active gRPC service authorization policies on the router, use the **show gnsi service authorization policy** command in Global Configuration mode.

show gnsi service authorization policy

Syntax Description   This command has no keywords or arguments.

Command Default   Enabled, by default

Command Modes   Global Configuration mode

Command History

Release	Modification
Release 7.11.1	The command was introduced.

Usage Guidelines   No specific guidelines impact the use of this command.

Task ID

Task ID	Operation
config-services	read

This example displays the policy which is active on the router:

```
Router#show gnsi service authorization policy
Wed Jul 19 10:56:14.509 UTC{
    "version": "1.0",
    "created_on": 1700816204,
    "policy": {
        "name": "authz",
        "allow_rules": [
            {
                "name": "allow all gNMI for all users",
                "request": {
                    "paths": [
                        "*"
                    ]
                },
                "source": {
                    "principals": [
                        "*"
                    ]
                }
            }
        ],
        "deny_rules": [
            {
                "name": "deny gNMI set for oper users",
                "request": {
                    "paths": [
                        "/gnmi.gNMI/*"
```

```
                                ]
                        },
                        "source": {
                            "principals": [
                                "User1"
                            ]
                        }
                    }
                ]
            }
        }
```