



# Network Configuration Protocol Commands

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- [clear netconf-yang agent rate-limit, on page 2](#)
- [clear netconf-yang agent session, on page 3](#)
- [netconf-yang agent rate-limit, on page 4](#)
- [netconf-yang agent session, on page 5](#)
- [netconf-yang agent ssh , on page 6](#)
- [netconf-yang agent yfw idle-timeout , on page 7](#)
- [show gribi aft, on page 8](#)
- [show netconf-yang clients, on page 10](#)
- [show netconf-yang rate-limit, on page 11](#)
- [show netconf-yang statistics, on page 12](#)
- [ssh server capability netconf-xml, on page 14](#)
- [ssh server netconf port, on page 15](#)

# clear netconf-yang agent rate-limit

To clear the set rate-limit statistics, use the **clear netconf-yang agent rate-limit** command in the appropriate mode.

**clear netconf-yang agent rate-limit**

**Syntax Description** This command has no keywords or arguments.

**Command Default** None

**Command Modes** EXEC

Command History	Release	Modification
	Release 7.0.12	This command was introduced.

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

Task ID	Task ID	Operation
	config-services	read, write

## Example

This example shows how to use the **clear netconf-yang agent rate-limit** command:

```
RP/0/RP0/CPU0:router # clear netconf-yang agent rate-limit
```

# clear netconf-yang agent session

To clear the specified netconf agent session, use the **clear netconf-yang agent session** in EXEC mode.

**clear netconf-yang agent session** *session-id*

<b>Syntax Description</b>	<i>session-id</i> The session-id which needs to be cleared.
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<b>Command Default</b>	None
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<b>Command Modes</b>	XR EXEC mode
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 7.0.12	This command was introduced.

<b>Usage Guidelines</b>	No specific guidelines impact the use of this command. The <b>show netconf-yang clients</b> command can be used to get the required session-id(s).
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<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	config-services	read, write

## Example

This example shows how to use the **clear netconf-yang agent session** command:

```
RP/0/RP0/CPU0:router (config) # clear netconf-yang agent session 32125
```

# netconf-yang agent rate-limit

To set the rate-limit for the netconf yang agent, use the **netconf-yang agent rate-limit** command in the appropriate mode. To delete the set rate-limit, use the **no** form of the command.

**netconf-yang agent rate-limit** *bytes*  
**no netconf-yang agent rate-limit** *bytes*

<b>Syntax Description</b>	<i>bytes</i> The number of bytes to process per second. Range is 4096-4294967295. It is based on the size of the request(s) from the client to the netconf server.
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<b>Command Default</b>	By default, no limit is set
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<b>Command Modes</b>	XR Config mode
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 7.0.12	This command was introduced.

<b>Usage Guidelines</b>	No specific guidelines impact the use of this command. Use the <b>show netconf-yang rate-limit</b> command to check if the set limit is adequate.
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<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	config-services	read, write

## Example

This example shows how to use the **netconf-yang agent rate-limit** command:

```
RP/0/RP0/CPU0:router # netconf-yang agent rate-limit 5000
```

# netconf-yang agent session

To set the session details (limits and timeouts) for a netconf-yang agent, use the **netconf-yang agent session** command in the appropriate mode. To remove the configured session limits and timeouts, use the **no** form of the command.

**netconf-yang agent session** { **limit** *value* | **absolute-timeout** *value* | **idle-timeout** *value* }

**no netconf-yang agent session** { **limit** *value* | **absolute-timeout** *value* | **idle-timeout** *value* }

Syntax Description	limit <i>value</i>	Sets the maximum count for concurrent netconf-yang sessions. Range is 1 to 1024.
	<b>absolute-timeout</b> <i>value</i>	Enables session absolute timeout and sets the absolute session lifetime. Range is 1 to 1440. Unit is minutes.
	<b>idle-timeout</b> <i>value</i>	Enables session idle timeout and sets the idle session lifetime. Range is 1 to 1440. Unit is minutes.

**Command Default** By default, no limits are set

**Command Modes** XR Config mode

Command History	Release	Modification
	Release 7.0.12	This command was introduced.

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

Task ID	Task ID	Operation
	config-services	read, write

## Example

This command shows how to use the **netconf-yang agent session** command:

```
RP/0/RP0/CPU0:router (config) # netconf-yang agent session limit
```

# netconf-yang agent ssh

To enable netconf agent over SSH (Secure Shell) , use the **netconf-yang agent ssh** command in the global configuration mode. To disable netconf, use the **no** form of the command.

**netconf-yang agent ssh**  
**no netconf-yang agent ssh**

**Syntax Description** This command has no keywords or arguments.

**Command Default** None

**Command Modes** Global Configuration

Command History	Release	Modification
	Release 7.0.12	This command was introduced.

**Usage Guidelines** SSH is currently the supported transport method for Netconf.

Task ID	Task ID	Operation
	config-services	read, write

## Example

This example shows how to use the **netconf-yang agent ssh** command:

```
RP/0/RP0/CPU0:router (config) # netconf-yang agent ssh
```

## netconf-yang agent yfw idle-timeout

To configure idle timeout value for the operational yang model use the **netconf-yang agent yfw idle-timeout** command. Idle timeout indicates the duration for which there is no netconf process activity. If the idle timeout value is configured, all the operational yang models that are not being used for the specified duration, are released from the memory.

**netconf-yang agent yfw idle-timeout** *time in seconds*

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**Syntax Description**

Specify the time in seconds. The valid value must be between the range of 1 to 4294967295 seconds

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**Command Default**

If this command is not configured, the operational yang models are not released from the memory. To manually release the yang models, the Netconf process should be restarted.

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**Command Modes**

XR Config mode

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**Command History**

Release	Modification
Release 7.0.12	This command was introduced.

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**Example**

This example shows how to use the **netconf-yang agent yfw idle-timeout** command:

```
RP/0/RP0/CPU0:router (config) # netconf-yang agent yfw idle-timeout 60
```

# show gribi aft

To display Routing Information Base (RIB) data modified using gRPC Routing Information Base Interface (gRIBI) RPCs, use the **show gribi aft** command in XR EXEC mode.

```
show gribi aft { next-hops | | next-hop-groups | | ipv4-unicast } vrf all
```

## Syntax Description

<b>next-hops</b>	Specifies registered next-hop notification addresses.
<b>next-hop-groups</b>	Specifies registered next-hop-groups notification addresses.
<b>ipv4-unicast</b>	Specifies IPv4 unicast address prefixes.
<b>vrf all</b>	Specifies all the VRF associated with the source interface.

## Command Default

No default behavior or values.

## Command Modes

XR EXEC mode

## Command History

Release	Modification
Release 7.9.1	This command was introduced.

## Usage Guidelines

No specific guidelines impact the use of this command.

## Task ID

Task ID	Operations
ipv4	read

## Examples

The following example illustrates the **show gribi aft next-hops** command to view the registered next hop entries:

```
Router#show gribi aft next-hops
Thu Feb 02 17:01:19.548 UTC
100: 192.0.2.40
200: 192.0.2.42
1000: 192.0.2.6
1100: 192.0.2.10
1111: (vrf REPAIR)
1200: 192.0.2.14
2000: 192.0.2.18
2100: 192.0.2.22
3000: 192.0.2.26
4000: Decapsulate IPv4(vrf DEFAULT)
```

The following example shows the **show gribi aft next-hop-groups** command to view the registered next hop group entries:

```
Router#show gribi aft next-hop-groups
Thu Feb 02 17:01:24.736 UTC
```



```
100, Backup NHG: 1111
  [100, 2]: 192.0.2.40
  [200, 2]: 192.0.2.42
  [1111, 100]: (vrf REPAIR) (!)
1000
  [1100, 30]: 192.0.2.10
  [1200, 10]: 192.0.2.14
  [1000, 60]: 192.0.2.6
1111
  [1111, 100]: (vrf REPAIR)
2000
  [2000, 50]: 192.0.2.18
  [2100, 50]: 192.0.2.22
3000
  [3000, 10]: 192.0.2.26
4000
  [4000, 10]: Decapsulate IPv4(vrf DEFAULT)
```

The following example shows the **show gribi aft ipv4-unicast** command to view the IPv4 address family configured in the RIB:

```
Router#show gribi aft ipv4-unicast vrf all
Thu Feb 02 17:01:24.736 UTC
VRF: DEFAULT
10.1.0.1/22 via NHG 3000
192.0.2.40/22 via NHG 1000
192.0.2.42/22 via NHG 2000
```

# show netconf-yang clients

To display the client details for netconf-yang, use the **show netconf-yang clients** command in EXEC mode.

## show netconf-yang clients

**Syntax Description** This command has no keywords or arguments.

**Command Default** None

**Command Modes** EXEC

Command History	Release	Modification
	Release 7.0.12	This command was introduced.

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

Task ID	Task ID	Operation
	config-services	read

## Example

This example shows how to use the **show netconf-yang clients** command:

```
RP/0/RP0/CPU0:router (config) # sh netconf-yang clients
Netconf clients
client session ID|  NC version|  client connect time|  last OP time|  last
OP type|  <lock>|
 22969|  1.1|  0d 0h 0m 2s|  11:11:24|
close-session|  No|
 15389|  1.1|  0d 0h 0m 1s|  11:11:25|
get-config|  No|
```

**Table 1: Field descriptions**

Field name	Description
Client session ID	Assigned session identifier
NC version	Version of the Netconf client as advertised in the hello message
Client connection time	Time elapsed since the client was connected
Last OP time	Last operation time
Last OP type	Last operation type
Lock (yes or no)	To check if the session holds a lock on the configuration datastore

# show netconf-yang rate-limit

To display the statistics of the total data dropped , due to the set rate-limit, use the **show netconf-yang rate-limit** command in the appropriate mode.

**show netconf-yang rate-limit**

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**Syntax Description** This command has no keywords or arguments.

---

**Command Default** None

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**Command Modes** EXEC

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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 7.0.12	This command was introduced.

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---

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

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<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	config-services	read

---

## Example

This example shows how to use the **show netconf-yang rate-limit** command:

```
RP/0/RP0/CPU0:router # show netconf-yang rate-limit
rate-limit statistics
Total data dropped: 0 Bytes
```

# show netconf-yang statistics

To display the statistical details for netconf-yang, use the **show netconf-yang statistics** command in EXEC mode.

## show netconf-yang statistics

**Syntax Description** This command has no keywords or arguments.

**Command Default** None

**Command Modes** EXEC

Command History	Release	Modification
	Release 7.0.12	This command was introduced.

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

Task ID	Task ID	Operation
	config-services	read

## Example

This example shows how to use the **show netconf-yang statistics** command:

```
RP/0/RP0/CPU0:router (config) # sh netconf-yang statistics
Summary statistics

```

time per request	# requests	total time	min time per request	max
avg time per request				
other	0	0h 0m 0s 0ms	0h 0m 0s 0ms	
0h 0m 0s 0ms	0h 0m 0s 0ms			
close-session	4	0h 0m 0s 3ms	0h 0m 0s 0ms	
0h 0m 0s 1ms	0h 0m 0s 0ms			
kill-session	0	0h 0m 0s 0ms	0h 0m 0s 0ms	
0h 0m 0s 0ms	0h 0m 0s 0ms			
get-schema	0	0h 0m 0s 0ms	0h 0m 0s 0ms	
0h 0m 0s 0ms	0h 0m 0s 0ms			
get	0	0h 0m 0s 0ms	0h 0m 0s 0ms	
0h 0m 0s 0ms	0h 0m 0s 0ms			
get-config	1	0h 0m 0s 1ms	0h 0m 0s 1ms	
0h 0m 0s 1ms	0h 0m 0s 1ms			
edit-config	3	0h 0m 0s 2ms	0h 0m 0s 0ms	
0h 0m 0s 1ms	0h 0m 0s 0ms			
commit	0	0h 0m 0s 0ms	0h 0m 0s 0ms	
0h 0m 0s 0ms	0h 0m 0s 0ms			
cancel-commit	0	0h 0m 0s 0ms	0h 0m 0s 0ms	
0h 0m 0s 0ms	0h 0m 0s 0ms			
lock	0	0h 0m 0s 0ms	0h 0m 0s 0ms	
0h 0m 0s 0ms	0h 0m 0s 0ms			
unlock	0	0h 0m 0s 0ms	0h 0m 0s 0ms	
0h 0m 0s 0ms	0h 0m 0s 0ms			
discard-changes	0	0h 0m 0s 0ms	0h 0m 0s 0ms	

```

0h 0m 0s 0ms | 0h 0m 0s 0ms | 0h 0m 0s 0ms |
validate      0 | 0h 0m 0s 0ms | 0h 0m 0s 0ms |
0h 0m 0s 0ms | 0h 0m 0s 0ms | 0h 0m 0s 0ms |
xml parse     8 | 0h 0m 0s 4ms | 0h 0m 0s 0ms |
0h 0m 0s 1ms | 0h 0m 0s 0ms | 0h 0m 0s 0ms |
netconf processor 8 | 0h 0m 0s 6ms | 0h 0m 0s 0ms |
0h 0m 0s 1ms | 0h 0m 0s 0ms |

```

**Table 2: Field descriptions**

Field name	Description
Requests	Total number of processed requests of a given type
Total time	Total processing time of all requests of a given type
Min time per request	Minimum processing time for a request of a given type
Max time per request	Maximum processing time for a request of a given type
Avg time per request	Average processing time for a request type

## ssh server capability netconf-xml

To enable NETCONF reach XML subsystem via port 22, use the **ssh server capability netconf-xml** command in the XR Config mode. Use **no** form of this command to disable NETCONF reach XML subsystem.

**ssh server capability netconf-xml**

<b>Syntax Description</b>	This command has no keywords or arguments.	
<b>Command Default</b>	Port 22 is the default port.	
<b>Command Modes</b>	Global configuration	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 7.0.12	This command was introduced.
<b>Usage Guidelines</b>	No specific guidelines impact the use of this command.	
<b>Task ID</b>	<b>Task ID</b>	<b>Operations</b>
	crypto	read, write

# ssh server netconf port

To configure a port for the netconf SSH server, use the **ssh server netconf port** command in the global configuration mode. To return to the default port, use the **no** form of the command.

```
ssh server netconf port port-number
no ssh server netconf port port-number
```

## Syntax Description

**port** Port number for the netconf SSH server (default port number is 830).  
*port-number*

## Command Default

The default port number is 830.

## Command Modes

Global configuration

## Command History

Release	Modification
Release 7.0.12	This command was introduced.

## Usage Guidelines

You must configure the **ssh server netconf** command for at least one VRF, in order to configure a netconf port to enable netconf subsystem support.

## Task ID

Task ID	Operations
crypto	read, write

## Examples

This example shows how to use the ssh server netconf port command with port 831:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# ssh server netconf port 831
```

## Related Commands

Command	Description
ssh server netconf	Configures the vrf(s), where netconf subsystem requests are to be received.
netconf-yang agent ssh	Configures the <b>ssh netconf-yang backend</b> for the netconf subsystem (Required to allow the system to service netconf-yang requests).  For more information, see the <i>System Management Command Reference for Cisco 8000 Series Routers</i> .

ssh server netconf port