

Prefix List Commands

Note All commands applicable for the Cisco NCS 5500 Series Router are also supported on the Cisco NCS 540 Series Router that is introduced from Cisco IOS XR Release 6.3.2. References to earlier releases in Command History tables apply to only the Cisco NCS 5500 Series Router.

Note

- Starting with Cisco IOS XR Release 6.6.25, all commands applicable for the Cisco NCS 5500 Series Router are also supported on the Cisco NCS 560 Series Routers.
- Starting with Cisco IOS XR Release 6.3.2, all commands applicable for the Cisco NCS 5500 Series Router are also supported on the Cisco NCS 540 Series Router.
- References to releases before Cisco IOS XR Release 6.3.2 apply to only the Cisco NCS 5500 Series Router.
- Cisco IOS XR Software Release 7.0.1 specific updates are not applicable for the following variants of Cisco NCS 540 Series Routers:
  - N540-28Z4C-SYS-A
  - N540-28Z4C-SYS-D
  - N540X-16Z4G8Q2C-A
  - N540X-16Z4G8Q2C-D
  - N540X-16Z8Q2C-D
  - N540-12Z20G-SYS-A
  - N540-12Z20G-SYS-D
  - N540X-12Z16G-SYS-A
  - N540X-12Z16G-SYS-D

This chapter describes the Cisco IOS XR software commands used to configure IP Version 4 (IPv4) and IP Version 6 (IPv6) prefix on NCS 5000 routers.

For detailed information about prefix list concepts, configuration tasks, and examples, refer to the *IP Addresses and Services Configuration Guide for Cisco NCS 5500 Series RoutersIP Addresses and Services Configuration Guide for Cisco NCS 540 Series RoutersIP Addresses and Services Configuration Guide for Cisco NCS 560 Series Routers*.

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clear prefix-list ipv4

To reset the hit count on an IP Version 4 (IPv4) prefix list, use the **clear prefix-list ipv4** command in XR EXEC mode.

clear prefix-list ipv4 *name* [*sequence-number*]

Syntax Description

name	Name of the prefix list from which the hit count is to be cleared.
sequence-number	(Optional) Sequence number of a prefix list. Range is 1 to 2147483646.

Command Default

No default behavior or values

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

The hit count is a value indicating the number of matches to a specific prefix list entry. Use the **clear prefix-list ipv4** command to clear counters for a specified configured prefix list.

Use the *sequence-number* argument to clear counters for a prefix list with a specific sequence number.

Task ID

Task ID	Operations
acl	read, write

Examples

The following example displays IPv4 prefix lists, shows how to clear the counters for list3, then shows how to display the IPv4 prefix lists again, showing that counters are cleared for list3:

```
RP/0/RP0/CPU0:router# show prefix-list ipv4

ipv4 prefix-list list1
 10 permit 172.18.30.154/16 (8 matches)
ipv4 prefix-list list2
 20 deny 172.24.30.164/16 (12 matches)
ipv4 prefix-list list3
 30 permit 172.19.31.154/16 (32 matches)

RP/0/RP0/CPU0:router# clear prefix-list ipv4 list3

RP/0/RP0/CPU0:router# show prefix-list ipv4

ipv4 prefix-list list1
 10 permit 172.18.30.154/16 (8 matches)
ipv4 prefix-list list2
 20 deny 172.24.30.164/16 (12 matches)
```

```
ipv4 prefix-list list3
 30 permit 172.19.31.154/16
```

clear prefix-list ipv6

To reset the hit count on an IP Version 6 (IPv6) prefix list, use the **clear prefix-list ipv6** command in XR EXEC mode.

clear prefix-list ipv6 *name* [*sequence-number*]

Syntax Description

name	Name of the prefix list from which the hit count is to be cleared.
sequence-number	(Optional) Clears counters for a prefix list with a specific sequence number. Range is 1 to 2147483646.

Command Default

No default behavior or values

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

The hit count is a value indicating the number of matches to a specific prefix list entry. Use the **clear prefix-list ipv6** command to clear counters for a specified configured prefix list.

Use the *sequence-number* argument to clear counters for a prefix list with a specific sequence number.

Task ID

Task ID	Operations
acl	read, write

Examples

The following example shows IPv6 prefix lists, clears the counters for sequence number 60 on prefix list list3, then displays the IPv6 prefix lists again, showing that counters are cleared for sequence number 60:

```
RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list1
 40 permit 2000:1::/64 (5 matches)
 60 deny 3000:1::/64 (7 matches)

RP/0/RP0/CPU0:router# clear prefix-list ipv6 list1 60
RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list1
 40 permit 2000:1::/64 (5 matches)
 60 deny 3000:1::/64
```

copy prefix-list ipv4

To create a copy of an existing IP Version 4 (IPv4) prefix list, use the **copy prefix-list ipv4** command in XR EXEC mode.

copy prefix-list ipv4 *source-name destination-name*

Syntax Description

source-name	Name of the prefix list to be copied.
destination-name	Destination prefix list where the contents of the *source-name* will be copied.

Command Default

No default behavior or values

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

Use the **copy prefix-list ipv4** command to copy a configured prefix list. Use the *source-name* argument to specify the prefix list to be copied and the *destination-name* argument to specify where to copy the contents of the source prefix list. The *destination-name* argument must be a unique name; if the *destination-name* argument name exists for a prefix list or access list, the prefix list is not copied. The **copy prefix-list ipv4** command checks that the source prefix list exists, then checks the existing list names to prevent overwriting existing prefix lists.

Task ID

Task ID	Operations
acl	read, write
filesystem	execute

Examples

The following example displays IPv4 prefix lists, shows how to copy prefix-list1 to list4, then displays the IPv4 prefix lists again, showing prefix list4:

```
RP/0/RP0/CPU0:router# show prefix-list ipv4

ipv4 prefix-list list1
 10 permit 172.24.20.164/16
ipv4 prefix-list list2
 20 deny 172.18.30.154/16
ipv4 prefix-list list3
 30 permit 172.29.30.154/16

RP/0/RP0/CPU0:router# copy prefix-list ipv4 list1 list4

RP/0/RP0/CPU0:router# show prefix-list ipv4
```

```
ipv4 prefix-list list1
 10 permit 172.24.20.164/16
ipv4 prefix-list list2
 20 deny 172.18.30.154/16
ipv4 prefix-list list3
 30 permit 172.29.30.154/16
ipv4 prefix-list list4
 10 permit 172.24.20.164/16
```

copy prefix-list ipv6

To create a copy of an existing IP Version 6 (IPv6) prefix list, use the **copy prefix-list ipv6** command in XR EXEC mode.

copy prefix-list ipv6 *source-name destination-name*

Syntax Description

source-name	Name of the prefix list to be copied.
destination-name	Destination prefix list where the contents of the *source-name* will be copied.

Command Default

No default behavior or values

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

Use the **copy prefix-list ipv6** command to copy a configured prefix list. Use the *source-name* argument to specify the prefix list to be copied and the *destination-name* argument to specify where to copy the contents of the source prefix list. The *destination-name* argument must be a unique name; if the *destination-name* argument name exists for a prefix list or access list, the prefix list is not copied. The **copy prefix-list ipv6** command checks that the source prefix list exists then checks the existing list names to prevent overwriting existing prefix lists.

Task ID

Task ID	Operations
acl	read, write
filesystem	execute

Examples

The following example shows IPv6 prefix lists, shows how to copy prefix-list1 to list4, then displays the IPv6 prefix lists again, showing prefix list4:

```
RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list1
 40 permit 2000:1::/64
 60 deny 3000:1::/64
ipv6 prefix-list list2
 10 permit 5555::/24

RP/0/RP0/CPU0:router# copy prefix-list ipv6 list1 list3

RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list1
 40 permit 2000:1::/64
 60 deny 3000:1::/64
ipv6 prefix-list list2
```

```
 10 permit 5555::/24
ipv6 prefix-list list3
 40 permit 2000:1::/64
 60 deny 3000:1::/6
```

deny (prefix-list)

To set deny conditions for an IP Version 4 (IPv4) prefix list, use the **deny** command in IPv4 prefix list configuration modes. To remove a condition from a prefix list, use the **no** form of this command.

[*sequence-number*] **deny** *network/length* [**ge** *value*] [**le** *value*] [**eq** *value*]
no *sequence-number* **deny**

Syntax Description

sequence-number	(Optional) Sets deny conditions for a prefix list with a specific sequence number. If you do not use a sequence number, the condition defaults to the next available sequence number in the prefix list. Range is 1 to 2147483646. By default, the first statement is number 10, and the subsequent statements are incremented by 10. The **sequence-number** argument must be used with the **no** form of the command.
network / *length*	Network number and length (in bits) of the network mask.
ge *value*	(Optional) Specifies a prefix length greater than or equal to the value. It is the lowest value of a range of the *length* (the "from" portion of the length range).
le *value*	(Optional) Specifies a prefix length less than or equal to the value. It is the highest value of a range of the *length* (the "to" portion of the length range).
eq *value*	(Optional) Exact value of the *length* .

Command Default

There is no specific condition under which a packet is denied passing the IPv4 prefix list.

Command Modes

IPv4 prefix list configuration

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

Use the **deny** command to specify conditions under which a packet cannot pass the prefix list.

The **ge**, **le** and **eq** keywords can be used to specify the range of the prefix length to be matched, for prefixes that are more specific than the *network/length* argument. Exact match is assumed when neither **ge** nor **le** is specified. The range is assumed to be from the **ge** *value* to 32 if only the **ge** keyword is specified. The range is assumed to be from the *length* to the **le** *value argument* if only the **le** attribute is specified.

A specified **ge** *value* or **le** *value* must satisfy the following condition:

length < **ge** *value* < **le** *value* <= 32 (for IPv4)

length < **ge** *value* < **le** *value* <= 128 (for IPv6)

Task ID

Task ID	Operations
acl	read, write

Examples

The following example shows how to deny the route 10.0.0.0/0:

```
RP/0/RP0/CPU0:router(config)# ipv4 prefix-list list1
RP/0/RP0/CPU0:router(config-ipv4_pfx)# 50 deny 10.0.0.0/0
```

The following example shows how to deny all routes with a prefix of 10.3.32.154:

```
RP/0/RP0/CPU0:router(config)# ipv4 prefix-list list1
RP/0/RP0/CPU0:router(config-ipv4_pfx)#80 deny 10.3.32.154 le 32
```

The following example shows how to deny all masks with a length greater than 25 bits routes with a prefix of 172.18.30.154/16:

```
RP/0/RP0/CPU0:router(config)# ipv4 prefix-list list1
RP/0/RP0/CPU0:router(config-ipv4_pfx)#100 deny 172.18.30.154/16 ge 25
```

The following example shows how to deny mask lengths greater than 25 bits in all address space:

```
RP/0/RP0/CPU0:router(config)# ipv6 prefix-list list2
RP/0/RP0/CPU0:router(config-ipv6_pfx)# 70 deny  2000:1::/64 ge 25
```

The following example shows how to add deny conditions to list3, then use the **no** form of the command to remove the condition with the sequence number 30:

```
RP/0/RP0/CPU0:router(config)# ipv6 prefix-list list3

RP/0/RP0/CPU0:router(config-ipv6_pfx)# deny 2000:1::/64 ge 25
RP/0/RP0/CPU0:router(config-ipv6_pfx)# deny 3000:1::/64 le 32
RP/0/RP0/CPU0:router(config-ipv6_pfx)# deny 4000:1::/64 ge 25
Uncommitted changes found, commit them? [yes]: y

RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list3
 10 deny 2000:1::/64 ge 25
 20 deny 3000:1::/64 le 32
 30 deny 4000:1::/64 ge 25

RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# ipv6 prefix-list list3
RP/0/RP0/CPU0:router(config-ipv6_pfx)# no 30
Uncommitted changes found, commit them? [yes]: y
RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list3
 10 deny 2000:1::/64 ge 25
 20 deny 3000:1::/64 le 32
```

ipv4 prefix-list

To define an IP Version (IPv4) prefix list by name, use the **ipv4 prefix-list** command in XR Config mode. To remove the prefix list, use the **no** form of this command.

ipv4 prefix-list *name*
no ipv4 prefix-list *name*

Syntax Description

name	Name of the prefix list. Names cannot contain a space or quotation marks.

Command Default

No IPv4 prefix list is defined.

Command Modes

XR Config mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

Use the **ipv4 prefix-list** command to configure an IPv4 prefix list. This command places the router in prefix-list configuration mode, in which the denied or permitted access conditions must be defined with the **deny** or **permit** command. You must add a condition to create the prefix list.

Use the **resequence prefix-list ipv4** command to renumber existing statements and increment subsequent statements to allow a new IPv4 prefix list statement (**permit**, **deny**, or **remark**) to be added. Specify the first entry number (the *base*) and the increment by which to separate the entry numbers of the statements. The software will renumber the existing statements, thereby making room to add new statements with the unused entry numbers.

Task ID

Task ID	Operations
acl	read, write
ipv4	read, write

Examples

The following example shows the prefix lists, then configures list2, then shows the conditions in both prefix lists:

```
RP/0/RP0/CPU0:router# show prefix-list ipv4

ipv4 prefix-list list1
 10 permit 172.20.10.171/16 le 24
 20 permit 172.18.0.0/16
 30 deny 172.24.20.164/16 ge 25

RP/0/RP0/CPU0:router# configure
```

```
RP/0/RP0/CPU0:router(config)# ipv4 prefix-list list2

RP/0/RP0/CPU0:router(config-ipv4_pfx)#deny 172.18.30.154/16 ge 25
RP/0/RP0/CPU0:router(config-ipv4_pfx)#
Uncommitted changes found, commit them? [yes]: Y

RP/0/RP0/CPU0:router# show prefix-list ipv4

ipv4 prefix-list list1
 10 permit 172.20.10.171/16 le 24
 20 permit 172.18.0.0/16
 30 deny 172.24.20.164/16 ge 25
ipv4 prefix-list list2
 10 deny 172.18.30.154/16 ge 25
```

ipv6 prefix-list

To define an IP Version (IPv6) prefix list by name, use the **ipv6 prefix-list** command in XR Config mode. To remove the prefix list, use the **no** form of this command.

ipv6 prefix-list *name*
no ipv6 prefix-list *name*

Syntax Description

name	Name of the prefix list. Names cannot contain a space or quotation marks.

Command Default

No IPv6 prefix list is defined.

Command Modes

XR Config mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
acl	read, write
ipv6	read, write

Examples

The following example shows how to create a prefix list named list-1:

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# ipv6 prefix-list list-1
RP/0/RP0/CPU0:router(config-ipv6-pfx)# 40 permit 2000:1::/64
RP/0/RP0/CPU0:router(config-ipv6-pfx)# 60 deny 3000:1::/64
RP/0/RP0/CPU0:router(config-ipv6-pfx)#
Uncommitted changes found, commit them? [yes]: y

RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list1
 40 permit 2000:1::/64
 60 deny 3000:1::/64
RP/0/RP0/CPU0:router#
```

permit (prefix-list)

To set permit conditions for an IP Version 4 (IPv4) prefix list, use the **permit** command in IPv4 prefix list configuration modes. To remove a condition from a prefix list, use the **no** form of this command.

[*sequence-number*] **permit** *network/length* [**ge** *value*] [**le** *value*] [**eq** *value*]
no *sequence-number* **permit**

Syntax Description

sequence-number	(Optional) Number of the **permit** statement in the prefix list. This number determines the order of the statements in the prefix list. Range is 1 to 2147483646. By default, the first statement is number 10, and the subsequent statements are incremented by 10.
network / length	Network number and length (in bits) of the network mask.
ge *value*	(Optional) Specifies a prefix length greater than or equal to the value. It is the lowest value of a range of the *length* (the "from" portion of the length range). Range is 1 to 128.
le *value*	(Optional) Specifies a prefix length less than or equal to the value. It is the highest value of a range of the *length* (the "to" portion of the length range). Range is 1 to 128.
eq *value*	(Optional) Exact value of the *length* . Range is 1 to 128.

Command Default

No default behavior or value

Command Modes

IPv4 prefix list configuration

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

Use the **permit** command to specify conditions under which a packet can pass the prefix list.

The **ge**, **le** and **eq** keywords can be used to specify the range of the prefix length to be matched, for prefixes that are more specific than the *network/length* argument. Exact match is assumed when neither **ge** nor **le** is specified. The range is assumed to be from the **ge** *value* to 32 if only the **ge** keyword is specified. The range is assumed to be from the *length* to the **le** *value* argument if only the **le** attribute is specified.

A specified **ge** *value* or **le** *value* must satisfy the following condition:

length < **ge** *value* < **le** *value* <= 32 (for IPv4)

length < **ge** *value* < **le** *value* <= 128 (for IPv6)

Task ID

Task ID	Operations
acl	read, write

Examples

The following example shows how to permit the prefix 172.18.0.0/16:

```
RP/0/RP0/CPU0:router(config)# ipv4 prefix-list list1
RP/0/RP0/CPU0:router(config-ipv4_pfx)# permit 172.18.0.0/16
```

The following example shows how to accept a mask length of up to 24 bits in routes with the prefix 172.20.10.171/16:

```
RP/0/RP0/CPU0:router(config)# ipv4 prefix-list list1
RP/0/RP0/CPU0:router(config-ipv4_pfx)# permit 172.20.10.171/16 le 24
```

The following example shows how to permit mask lengths from 8 to 24 bits in all address space:

```
RP/0/RP0/CPU0:router(config)# ipv6 prefix-list list1
RP/0/RP0/CPU0:router(config-ipv6_pfx)# permit 2000:1::/64 ge 8 le 24
```

The following example shows how to add permit conditions to list3, then remove the condition with the sequence number 30:

```
RP/0/RP0/CPU0:router(config)# ipv6 prefix-list list3
RP/0/RP0/CPU0:router(config-ipv6_pfx)# permit 2000:1::/64 ge 25
RP/0/RP0/CPU0:router(config-ipv6_pfx)# permit 3000:1::/64 le 32
RP/0/RP0/CPU0:router(config-ipv6_pfx)# permit 3000:1::/64 ge 25
Uncommitted changes found, commit them? [yes]: y
RP/0/RP0/CPU0:router#show ipv6 prefix-list

ipv6 prefix-list list3
 10 permit 2000:1::/64 ge 25
 20 permit 3000:1::/64 le 32
 30 permit 4000:1::/64 ge 25

RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# ipv6 prefix-list list3
RP/0/RP0/CPU0:router(config-ipv6_pfx)# no 30
Uncommitted changes found, commit them? [yes]: y
RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list3
 10 permit 2000:1::/64 ge 25
 20 permit 3000:1::/64 le 32

10 deny 2000:1::/64 ge 25
 20 deny 3000:1::/64 le 32
 30 deny 4000:1::/64 ge 25
```

remark (prefix-list)

To write a helpful comment (remark) for an entry in either an IP Version 4 (IPv4) prefix list, use the **remark** command in IPv4 prefix-list configuration mode. To remove the remark, use the **no** form of this command.

[*sequence-number*] **remark** *remark*
no *sequence-number*

Syntax Description

sequence-number	(Optional) Number of the **remark** statement in the prefix list. This number determines the order of the statements in the prefix list. The number can be from 1 to 2147483646. (By default, the first statement is number 10, and the subsequent statements are incremented by 10).
remark	Comment that describes the entry in the prefix list, up to 255 characters long.

Command Default

The prefix list entries have no remarks.

Command Modes

IPv4 prefix-list configuration

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

Use the **remark** command to write a helpful comment for an entry in a prefix list. The remark can be up to 255 characters in length; anything longer is truncated.

If you know the sequence number of the remark you want to delete, you can remove it by entering the **no** *sequence-number* command.

Use the **resequence prefix-list ipv4** command if you want to add statements to an existing IPv4 prefix list.

Task ID

Task ID	Operations
acl	read, write

Examples

In the following example, a remark is made to explain a prefix list entry:

```
RP/0/RP0/CPU0:router(config)# ipv4 prefix-list deny-ten
RP/0/RP0/CPU0:router(config-ipv4_pfx)# 10 remark Deny all routes with a prefix of 10/8
RP/0/RP0/CPU0:router(config-ipv4_pfx)# 20 deny 10.0.0.0/8 le 32
RP/0/RP0/CPU0:router(config-ipv4_pfx)# end
```

In the following example, a remark is made to explain usage:

```
RP/0/RP0/CPU0:router# show prefix-list ipv6
```

```
ipv6 prefix-list list1
 40 permit 2000:1::/64
 60 deny 3000:1::/64

RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# ipv6 prefix-list list1
RP/0/RP0/CPU0:router(config-ipv6-pfx)# 10 remark use from july23 forward
RP/0/RP0/CPU0:router(config-ipv6-pfx)#
Uncommitted changes found, commit them? [yes]: y

RP/0/0/CPU0:Apr  4 02:20:34.851 : config[65700]: %LIBTARCFG-6-COMMIT : Configura
tion committed by user 'UNKNOWN'.   Use 'show commit changes 1000000023' to view
 the changes.
RP/0/0/CPU0:Apr  4 02:20:34.984 : config[65700]: %SYS-5-CONFIG_I : Configured fr
om console by console
RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list1
 10 remark use from july23 forward
 40 permit 2000:1::/64
 60 deny 3000:1::/64
```

resequence prefix-list ipv4

To renumber existing statements and increment subsequent statements to allow a new prefix list statement (**permit**, **deny**, or **remark**) to be added, use the **resequence prefix-list ipv4** command in Admin Configuration modeSystem Admin Config mode XR Config mode.

resequence prefix-list ipv4 *name* [*base* [*increment*]]

Syntax Description

name	Name of a prefix list.
base	(Optional) Number of the first statement in the specified prefix list, which determines its order in the prefix list. Maximum value is 2147483646.
increment	(Optional) Number by which the base sequence number is incremented for subsequent statements. Maximum value is 2147483646.

Command Default

base: 10

increment: 10

Command Modes

Admin Configuration modeSystem Admin Config mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

The sequence number of a prefix list entry determines the order of the entries in the list. The router compares network addresses to the prefix list entries. The router begins the comparison at the top of the prefix list, with the entry having the lowest sequence number.

If multiple entries of a prefix list match a prefix, the entry with the lowest sequence number is considered the real match. When a match or deny occurs, the router does not go through the rest of the prefix list.

By default, the first statement in a prefix list is sequence number 10, and the subsequent statements are incremented by 10.

Use the **resequence prefix-list ipv4** command to add a **permit**, **deny**, or **remark** statement between consecutive entries in an existing IPv4 prefix list. Specify the first entry number (the *base*) and the increment by which to separate the entry numbers of the statements. The software renumbers the existing statements, thereby making room to add new statements with the unused entry numbers.

Task ID

Task ID	Operations
acl	read, write

Examples

The following example shows how to display the sequence number intervals for prefix list list1, resequence list1 from 10 to 30, and displays the resulting sequence numbers:

```
RP/0/RP0/CPU0:router# show prefix-list ipv4


ipv4 prefix-list ldp_filter
 10 permit 120.0.0.0/8 ge 8 le 32 (2000 matches)
 30 permit 130.3.0.0/24 ge 8 le 32


RP/0/RP0/CPU0:router

RP/0/RP0/CPU0:router#  resequence prefix-list ipv4 ldp_filter 30 10

RP/0/RP0/CPU0:router# show prefix-list ipv4


ipv4 prefix-list ldp_filter
 30 permit 120.0.0.0/8 ge 8 le 32 (6000 matches)
 40 permit 130.3.0.0/24 ge 8 le 32
```

resequence prefix-list ipv6

To renumber existing statements and increment subsequent statements to allow a new prefix list statement (**permit**, **deny**, or **remark**) to be added, use the **resequence prefix-list ipv6** command in XR EXEC mode.

resequence prefix-list ipv6 *name* [*base* [*increment*]]

Syntax Description

name	Name of a prefix list.
base	(Optional) Number of the first statement in the specified prefix list, which determines its order in the prefix list. Maximum value is 2147483644.
increment	(Optional) Number by which the base sequence number is incremented for subsequent statements. Maximum value is 2147483644.

Command Default

base: 10

increment: 10

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

The sequence number of a prefix list entry determines the order of the entries in the list. The router compares network addresses to the prefix list entries. The router begins the comparison at the top of the prefix list, with the entry having the lowest sequence number.

If multiple entries of a prefix list match a prefix, the entry with the lowest sequence number is considered the real match. Once a match or deny occurs, the router does not go through the rest of the prefix list.

By default, the first statement in a prefix list is sequence number 10, and the subsequent statements are incremented by 10.

Use the **resequence prefix-list ipv6** command to add a **permit**, **deny**, or **remark** statement between consecutive entries in an existing IPv6 prefix list. Specify the first entry number (the *base*) and the increment by which to separate the entry numbers of the statements. The software renumbers the existing statements, thereby making room to add new statements with the unused entry numbers.

Task ID

Task ID	Operations
acl	read, write

Examples

The following example shows how to display the sequence number intervals for prefix list 1, resequence list1 from 10 to 30, and displays the resulting sequence numbers:

```
RP/0/RP0/CPU0:router# show prefix-list ipv6
ipv6 prefix-list list1
 10 permit 2000:1::
/16 le 24
 20 permit 3000:1::/16 le 32
 20 permit 172.18.0.0/16
 30 deny 3000:1::
/16 ge 25
ipv6
prefix-list list2
 10 deny 4000:1::
/16 ge 25

RP/0/RP0/CPU0:router# resequence prefix-list ipv4 list1 10 30

RP/0//CPU0:
Apr  4 02:29:39.513 : ipv6_acl_action_edm
[183]: %LIBTARCFG-6-COMMIT
: Configuration committed by user 'UNKNOWN'.   Use 'show commit changes 10000000
24' to view the changes.
```

show prefix-list afi-all

To display the contents of the prefix list for all the address families, use the **show prefix-list afi-all** command in XR EXEC mode.

show prefix-list afi-all

Syntax Description

This command has no keywords or arguments.

Command Default

No default behavior or values

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
acl	read

Examples

The following sample output is from the **show prefix-list afi-all** command:

```
RP/0/RP0/CPU0:router# show prefix-list afi-all

ipv4 prefix-list ldp_filter
 10 permit 120.0.0.0/8 ge 8 le 32 (2000 matches)
 30 permit 130.3.0.0/24 ge 8 le 32
```

show prefix-list

To display information about a prefix list or prefix list entries, use the **show prefix-list** command in XR EXEC mode.

show prefix-list [*list-name*] [*sequence-number*]

Syntax Description

list-name	(Optional) Name of a prefix list.
sequence-number	(Optional) Sequence number of the prefix list entry. Range is 1 to 2147483646.

Command Default

No default behavior or values

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
acl	read

Examples

The following sample output is from the **show prefix-list** command:

```
RP/0/RP0/CPU0:router#  show prefix-list ipv4 summary

Prefix List Summary:
  Total Prefix Lists configured:         0
  Total Prefix List entries configured : 0
```

show prefix-list ipv4

To display the contents of current IP Version 4 (IPv4) prefix list, use the **show prefix-list ipv4** command in XR EXEC mode.

show prefix-list ipv4 [*list-name*] [*sequence-number*] [**summary**]

Syntax Description

list-name	(Optional) Name of a prefix list.
sequence-number	(Optional) Sequence number of the prefix list entry. Range is 1 to 2147483646.
summary	(Optional) Displays summary output of prefix list contents.

Command Default

All IPv4 prefix lists are displayed.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

Use the **show prefix-list ipv4** command to display the contents of all IPv4 prefix lists. To display the contents of a specific IPv4 prefix list, use the *name* argument. Use the *sequence-number* argument to specify a given prefix list entry. Use the **summary** keyword to display a summary of prefix list contents.

Task ID

Task ID	Operations
acl	read

Examples

The following example displays all configured prefix lists:

```
RP/0/RP0/CPU0:router# show prefix-list ipv4


ipv4 prefix-list ldp_filter
 10 permit 120.0.0.0/8 ge 8 le 32 (2000 matches)
 30 permit 130.3.0.0/24 ge 8 le 32
```

The following example uses the *list-name* argument to display the prefix list named list1:

```
RP/0/RP0/CPU0:router# show prefix-list ipv4 list1

ipv4 prefix-list list1
 10 permit 172.20.10.171/16 le 24
 20 permit 172.18.0.0/16
```

```
 30 deny 172.24.20.164/16 ge 25
```

The following example uses the *list-name* and *sequence-number* argument to display a prefix list named list1 with a sequence number of 10:

```
RP/0/RP0/CPU0:router# show prefix-list ipv4 list1 30

ipv4 prefix-list list1
 30 deny 172.24.20.164/16 ge 25
```

show prefix-list ipv4 standby

To display the contents of current IPv4 standby access lists, use the **show access-lists ipv4 standby** command in XR EXEC mode.

show prefix-list ipv4 standby [*prefix-list name*] [**summary**]

Syntax Description

prefix-list name	(Optional) Name of a particular IPv4 prefix list. The value of the prefix-list-name argument is a string of alphanumeric characters that cannot include spaces or quotation marks.
summary	(Optional) Displays a summary of all current IPv4 standby prefix lists.

Command Default

No default behavior or values

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

Use the **show prefix-list ipv4 standby** command to display the contents of current IPv4 standby prefix lists. To display the contents of a specific IPv4 prefix list, use the *name* argument.

Use the **show prefix-list ipv4 standby summary** command to display a summary of all standby IPv4 prefix lists.

Task ID

Task ID	Operations
acl	read

Examples

In the following example, the contents of all IPv4 access lists are displayed:

```
RP/0/RP0/CPU0:router# show prefix-list ipv4 standby summary
Prefix List Summary:
  Total Prefix Lists configured:         2
  Total Prefix List entries configured : 6
```

show prefix-list ipv6

To display the contents of the current IP Version 6 (IPv6) prefix list, use the **show prefix-list ipv6** command in XR EXEC mode.

show prefix-list ipv6 [**summary**][*list-name*] [*sequence-number*] [**summary**]

Syntax Description

list-name	(Optional) Name of a prefix list.
sequence-number	(Optional) Sequence number of the prefix list entry. Range is 1 to 2147483646.
summary	(Optional) Displays summary output of prefix list contents.

Command Default

All IPv6 prefix lists are displayed.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 6.0	This command was introduced.

Usage Guidelines

Use the **show prefix-list ipv6** command to display the contents of all IPv4 prefix lists.

To display the contents of a specific IPv6 prefix list, use the *name* argument. Use the *sequence-number* argument to specify a given prefix list entry. Use the **summary** keyword to display a summary of prefix list contents.

Task ID

Task ID	Operations
acl	read

Examples

The following example shows how to display all configured prefix lists:

```
RP/0/RP0/CPU0:router# show prefix-list ipv6

ipv6 prefix-list list1
 10 permit 5555::/24
 20 deny 3000::/24
 30 permit 2000::/24
ipv6 prefix-list list2
 10 permit 2000::/24
```

The following example uses the *list-name* argument to display the prefix list named list1:

```
RP/0/RP0/CPU0:router# show prefix-list ipv6 list1

ipv6 prefix-list list1
```

```
 10 permit 5555::/24
 20 deny 3000::/24
 30 permit 2000::/24
```

The following example uses the *list-name* and *sequence-number* argument to display a prefix list named list1 with a sequence number of 10:

```
RP/0/RP0/CPU0:router# show prefix-list ipv6 list1 10

ipv6 prefix-list abc
 10 permit 5555::/24
```

The following example displays a summary of prefix list contents:

```
RP/0/RP0/CPU0:router# show prefix-list ipv6 summary

Prefix List Summary:
  Total Prefix Lists configured:        2
  Total Prefix List entries configured: 2
```