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CLI GUIDE

**Cisco RV320/RV325 Command Line Interface
Reference Guide Release 1.2.1.x**

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Introduction

The command-line interface (CLI) provides a text-based method for managing and monitoring the RV32x routers' LAN settings and access rules. You can access the command-line interface using SSH.

This chapter describes how to use the command-line interface and contains the following topics:

- [Accessing the CLI](#)
- [CLI Command Conventions](#)
- [Entering Commands](#)

Accessing the CLI

The command-line interface can be accessed by using SSH. SSH version 2 is supported.

NOTE SSH is disabled by default. To enable SSH, please follow the below steps:

-
- STEP 1** Log in the user interface of the device. Enter the username/password.
 - STEP 2** Click **Firewall > General**. Check **Enable SSH** to allow login from the LAN side. Check **Enable Remote SSH** to allow login from Internet.
 - STEP 3** When accessing the device by SSH, username/password is needed. The username/password is same as the GUI password.

After users successfully log into the router, the prompt consists of the router's hostname RV32X, followed by a '>', as shown here:

```
RV32X>
```

CLI Command Conventions

There are certain command entry standards that apply to all commands. The following table describes the command conventions:

[]	In a command line, square brackets indicate an optional entry.
{ }	In a command line, curly brackets indicate a selection of compulsory parameters separated with the character. One option must be selected.
<i>Italics</i>	Italic text indicates a parameter, variable and arguments.
bold	Command names and keywords are shown in bold .
Screen Display	Fixed-width font indicates CLI prompts, CLI commands entered by the user, and system messages displayed on the console.

Entering Commands

A CLI command is a series of keywords and arguments. Keywords identify a command, and arguments specify configuration parameters. For example, in the command **interfaces vlan show 1**, **interfaces**, **vlan**, and **show** are keywords, **1** is an argument that specifies the VLAN ID. To enter the commands that require parameters, enter the required parameters after the command keyword.

If the command entered is incomplete, invalid, or has missing or invalid parameters, then the appropriate error message is displayed. This assists in entering the correct command.

NOTE The commands can only be accepted as lower case.

All the allowable commands for RV32x router release 1.2.1.09 are listed in next chapter. The commands are mainly be categorized into two types:

- **access-list**
- **interface vlan**

access-list

Command **access-list** enables you to manage access rules with command line. To get help with using the **access-list** command, input the **access-list help** command or **access-list** command. All the access-list commands are listed below:

- **access-list show** [*ruleID*]
- **access-list add inf** {lan | wan1 | wan2 | usb1 | usb2 | any} {enable | disable} {allow | deny} **service** *name* {tcp | udp} {*port* | *portrange*} {**src-ip** any | *ip* | *iprange*} {**dst-ip** any | *ip* | *iprange*} [**log** {on | off}] {always | periodic {everyday | mon | tue | wed | thu | fri | sat | sun} *hh:mm~hh:mm*}
- **access-list modify ruleID inf** {lan | wan1 | wan2 | usb1 | usb2 | any} {enable | disable} {allow | deny} **service** *name* {tcp | udp} {*port* | *portrange*} {**src-ip** any | *ip* | *iprange*} {**dst-ip** any | *ip* | *iprange*} [**log** {on | off}] {always | periodic {everyday | mon | tue | wed | thu | fri | sat | sun} *hh:mm~hh:mm*}
- **access-list priority** *original_ID* *new_ID*
- **access-list del** *rule_ID*

access-list show [*ruleID*]

To show the access rules' status, use the **access-list show** [*ruleID*] command.

Parameters

(Optional) *ruleID*—Enter the available access rule ID. If you want to show every rule's status, leave this field empty.

Default Configuration

None.

access-list

```
access-list add inf {lan | wan1 | wan2 | usb1 | usb2 | any} {enable | disable} {allow | deny} service name {tcp |
udp} {port | portrange} {src-ip any | ip | iprange} {dst-ip any | ip | iprange} [log {on | off}] {always | periodic
{everyday | mon | tue | wed | thu | fri | sat | sun} hh:mm~hh:mm}
```

Help

Use the **access-list show help** command to get the instruction and examples on using the **access-list show** command.

Example

The first example is to show the status of rule 1. The second example is to show every rules' status.

```
RV32X> access-list show 1
RV32X> access-list show
```

```
access-list add inf {lan | wan1 | wan2 | usb1 | usb2 | any} {enable |
disable} {allow | deny} service name {tcp | udp} {port | portrange}
{src-ip any | ip | iprange} {dst-ip any | ip | iprange} [log {on | off}]
{always | periodic {everyday | mon | tue | wed | thu | fri | sat | sun}
hh:mm~hh:mm}
```

To add an access rule to the access list, use the **access-list add inf** {lan | wan1 | wan2 | usb1 | usb2 | any} {enable | disable} {allow | deny} **service name** {tcp | udp} {*port* | *portrange*} {**src-ip** any | *ip* | *iprange*} {**dst-ip** any | *ip* | *iprange*} [**log** {on | off}] {always | periodic {everyday | mon | tue | wed | thu | fri | sat | sun} *hh:mm~hh:mm*} command.

Parameters

lan | wan1 | wan2 | usb1 | usb2 | any —Select the interface to add the accessing rule.

enable | disable—Enable or disable the rule.

allow | deny —Allow or deny the service.

name —Enter the service name.

NOTE If you want to add a service into the service management pool at the same time of adding a new accessing rule, complete **service name** {tcp | udp} {port | portrange}. The service name should not be included in the service management pool.

tcp | udp —Select the protocol of the service.

```
access-list add inf {lan | wan1 | wan2 | usb1 | usb2 | any} {enable | disable} {allow | deny} service name {tcp |
udp} {port | portrange} {src-ip any | ip | iprange} {dst-ip any | ip | iprange} [log {on | off}] {always | periodic
{everyday | mon | tue | wed | thu | fri | sat | sun} hh:mm~hh:mm}
```

port | portrange—Specify the number of the port, or the range of the port number.

src-ip any | ip | iprange—Specify the source IP address or the range of the IP addresses.

dst-ip any | ip | iprange —Specify the destination IP address or the range of the IP addresses

(Optional) *log {on | off}*—To turn on/off logging.

always | periodic {everyday | mon | tue | wed | thu | fri | sat | sun} hh:mm~hh:mm — Specify the time to apply the accessing rule.

Default Configuration

Each part have default setting. If you don't enter the specific value, command will be recognized to use default setting. The default for the arguments are listed as below:

inf — any, enable, allow.

service — All Traffic

src-ip — any

dst-ip default— any

time setting default— always

(Optional) *log*—off

Help

Use the **access-list add help** command or **access-list add** to show the instruction and examples of using the **access-list add** command.

Example

The first example below is to add a new access rule to access list.

The second example is to add a rule to deny http for destination ip 192.168.88.100~192.168.88.200 at wan2 for any time.

```
RV32X> access-list add inf wan1 enable allow service test tcp 80~90 src-ip
192.168.1.100~192.168.1.120 dst-ip 192.168.2.100~192.168.2.130 periodic mon/fri/sat
11:00~18:00
RV32X> access-list add inf wan2 enable deny service http dst-ip 192.168.88.100~192.168.88.200
```

```
access-list modify ruleID inf {lan | wan1 | wan2 | usb1 | usb2 | any} {enable | disable} {allow | deny} service
name {tcp | udp} {port | portrange} {src-ip any | ip | iprange} {dst-ip any | ip | iprange} [log {on | off}] {always |
periodic {everyday | mon | tue | wed | thu | fri | sat | sun} hh:mm~hh:mm}
```

access-list modify *ruleID* inf {lan | wan1 | wan2 | usb1 | usb2 | any} {enable | disable} {allow | deny} **service** *name* {tcp | udp} {*port* | *portrange*} {**src-ip** any | *ip* | *iprange*} {**dst-ip** any | *ip* | *iprange*} [**log** {on | off}] {always | periodic {everyday | mon | tue | wed | thu | fri | sat | sun} *hh:mm~hh:mm*}

To modify the accessing rule is similar as adding one, you just need to specify the rule ID. The command is like **access-list modify** *ruleID* inf {lan | wan1 | wan2 | usb1 | usb2 | any} {enable | disable} {allow | deny} **service** *name* {tcp | udp} {*port* | *portrange*} {**src-ip** any | *ip* | *iprange*} {**dst-ip** any | *ip* | *iprange*} [**log** {on | off}] {always | periodic {everyday | mon | tue | wed | thu | fri | sat | sun } *hh:mm~hh:mm*}.

Parameters

ruleID—Specify the ID of the accessing rule which you want to modify.

lan | wan1 | wan2 | usb1 | usb2 | any—Select the interface to add the accessing rule.

enable | disable —Enable or disable the rule.

allow | deny—Allow or deny the service.

name —Enter the service name.

NOTE To add a new service into the service management pool at the same time of modifying the accessing rule, complete **service name** {tcp | udp} {port | portrange}. But you cannot modify the existed service.

tcp | udp—Select the protocol of the service.

port | *portrange*—Specify the number of the port, or the range of the port number.

src-ip any | *ip* | *iprange* —Specify the source IP address or the range of the IP addresses.

dst-ip any | *ip*—Specify the destination IP address or the range of the IP addresses

(Optional) log {on | off}—To turn on/off logging.

always | periodic {everyday | mon | tue | wed | thu | fri | sat | sun } *hh:mm~hh:mm* —Specify the time to apply the accessing rule.

Default Configuration

The default for the arguments are as same as the ones of adding a rule in above section.

NOTE Omission of some arguments means referring to the former parameters when you only want to make modification on the certain value of the rule. An example is shown in the **Example** section.

(Optional) log—off

Help

Use the **access-list modify help** or **access-list modify** command to get the instruction and examples on using the **access-list modify** command.

Example

The first example shows the complete command to modify rule 1.

The second example indicates that for rule 2 only the interface is changed to wan1. Other configuration remains same as before.

```
RV32X> access-list modify 1 inf wan2 enable deny service test tcp 80 src-ip 192.168.1.100
dst-ip any always
RV32X> access-list modify 2 inf wan1
```

access-list priority *original_ID new_ID*

To change the priority for new rules. Use the command **access-list priority** *original_ID new_ID*.

Parameters

original_ID—Input the original rule ID.

new_ID—Input the new rule ID.

NOTE The default rule ID for a new rule is always 1. The change of the priority by this command will cause the follow-up rules to ascend. Furthermore, you cannot change the priority for the default rules.

Default Configuration

None.

Help

Use the **access-list priority help** or **access-list priority** command to get the instruction and examples on using the **access-list priority** command.

Example

The example indicates that the rule 1's priority has been descended to rule 2, and the follow-up rules, in this case is rule 2's priority has been ascended to 1.

```
RV32X> access-list priority 1 2
```

access-list del *rule_ID*

To delete a rule, use the command **access-list del** *rule_ID*.

Parameters

rule_ID—Input the rule ID of which you want to delete.

Default Configuration

None.

Help

Use the **access-list del help** or **access-list del** command to get the instruction and examples on using the **access-list del** command.

Example

The example is to delete the rule 2.

```
RV32X> access-list del 2
```

interface vlan

Command **interface vlan** enables you to manage LAN with command line. To get help with using the **interface vlan** command, input the **interface vlan help** or **interface vlan** command. All the **interface vlan** commands are listed below:

- **interface vlan show** [vlanID]
- **interface vlan add** vlanID
- **interface vlan del** vlanID
- **interface vlan modify** vlanID ip IP netmask
- **interface vlan modify** vlanID dhcp startIP~endIP [lease-time time] dns {proxy | isp | static dnsIP1 [dnsIP2]} {wins wnsIP} [option66 opt66] [option150 opt150] [option67 opt67]
- **interface vlan modify** vlanID disable dhcp
- **interface vlan modify** vlanID dhcprelay remote_server_IP
- **interface vlan membership** vlanID [description discription] routing {enable | disable} device {enable | disable} p1 {tag | untag | exclude} p2 {tag | untag | exclude} p3 {tag | untag | exclude} p4 {tag | untag | exclude}...
- **interface vlan** {enable | disable}

interface vlan show [vlanID]

To show the status of the VLAN, use the command **interface vlan show** [vlanID].

Parameters

(Optional) *vlanID*—Enter the VLAN ID. If you want to show each VLAN's status, leave this field empty.

Default Configuration

None.

Help

Use the **interface vlan show help** command to get the instruction and examples on using the **interface vlan show** command.

Example

The first example below is to show the status of VLAN 1. The second example is to show every VLAN's status.

```
RV32X> interface vlan show 1
RV32X> interface vlan show
```

interface vlan add *vlanID*

To add a new VLAN into the VLAN membership, use the **interface vlan add *vlanID*** command.

Parameters

vlanID—Enter the new VLAN ID to create a new VLAN.

Default Configuration

None.

Help

Use the **interface vlan add help** command or **interface vlan add** to show the instruction and examples of using the **interface vlan add** command.

Example

The example below is to add a new VLAN whose vid is 99.

```
RV32X> interface vlan add 99
```

interface vlan del *vlanID*

To delete a VLAN, use the **interface vlan del *vlanID*** command.

interface vlan

interface vlan modify vlanID ip IP netmask

2

Parameters

vlanID—Enter the VLAN ID which you want to delete.

Default Configuration

None.

Help

Use the **interface vlan del help** command or **interface vlan del** to show the instruction and examples of using the **interface vlan del** command.

Example

The example below is to delete VLAN 2.

```
RV32X> interface vlan del 2
```

interface vlan modify *vlanID ip IP netmask*

To modify the VLAN's IP address and its netmask, use the **interface vlan modify *vlanID ip IP netmask*** command.

Parameters

vlanID—Enter the VLAN ID that you want to modify.

IP—Enter the IP address that you want to change to.

netmask —Enter the subnet mask that you want to change to.

Default Configuration

None.

Help

Use the **interface vlan modify help** or **interface vlan modify** command to get the instruction and examples on using the **interface vlan modify** command.

```
interface vlan modify vlanID dhcp startIP~endIP [lease-time time] dns {proxy | isp | static dnsIP1 [dnsIP2]}
{wins wnsIP} [option66 opt66] [option150 opt150] [option67 opt67]
```

Example

The example below is to modify the IP address and its subnet mask of VLAN 25 to be 192.168.22.1/255.255.255.128.

```
RV32X> interface vlan modify 25 ip 192.168.22.1 255.255.255.128
```

interface vlan modify *vlanID* dhcp *startIP~endIP* [*lease-time time*] dns {proxy | isp | static *dnsIP1* [*dnsIP2*] } {wins *wnsIP*} [option66 *opt66*] [option150 *opt150*] [option67 *opt67*]

To modify the VLAN's DHCP address pool, as well as DNS and WINS configuration, use the **interface vlan modify *vlanID* dhcp *startIP~endIP* [*leasetime time*] dns {proxy | isp | static *dnsIP1* [*dnsIP2*] } {wins *wnsIP*} [option66 *opt66*] [option150 *opt150*] [option67 *opt67*]** command.

Parameters

vlanID—Enter the VLAN ID that you want to modify the DHCP address pool.

startIP~endIP—Enter the range of IP addresses distributed by the DHCP server. Use '~' between the start IP address and the end IP address.

(Optional) *time*—Specify the value of the dynamic IP addresses' lease time in minute, ranging from 5 to 43200.

dnsIP1 [*dnsIP2*]—If you choose static DNS, enter all the static addresses. There can be multiple addresses. Use a space to separate them.

wnsIP—Enter the WINS IP address.

(Optional) *opt66/150/67*—The content in square brackets are optional. Enter the value corresponding to the fields which are included in the package.

Default Configuration

The default lease time of the dynamic IP addresses is 1440 minutes.

Help

Use the **interface vlan modify help** or **interface vlan modify** command to get the instruction and examples on using the **interface vlan modify** command.

Example

The example below is to modify VLAN 25's IP address range to 192.168.22.2~192.168.22.150, static DNS is 11.11.11.11 and 11.11.11.22, the WINS address is 33.33.33.33, option66's value is tftp.server.org, option 150's value is 44.44.44.44 and option 67's value is file.txt.

```
RV32X> interface vlan modify 25 dhcp 192.168.22.2~192.168.22.150 dns static 11.11.11.11
11.11.11.22 wins 33.33.33.33 option66 tftp.server.org option150 44.44.44.4 option67 file.txt
```

interface vlan modify *vlanID* disable dhcp

To disable the DHCP configuration, use **interface vlan modify *vlanID* disable dhcp** command.

Parameters

vlanID—Specify the VLAN ID whose DHCP configuration is disabled.

Default Configuration

None.

Help

Use the **interface vlan modify help** or **interface vlan modify** command to get the instruction and examples on using the **interface vlan modify** command.

Example

The example below is to disable VLAN 25's DHCP configuration.

```
RV32X> interface vlan modify 25 disable dhcp
```

interface vlan modify *vlanID* dhcprelay *remote_server_IP*

To enable the DHCP relay configuration, use **interface vlan modify *vlanID* dhcprelay *remote_server_IP*** command.

interface vlan

interface vlan membership *vlanID* [*description* *discription*] routing {enable | disable} device {enable | disable} p1 {tag | untag | exclude} p2 {tag | untag | exclude} p3 {tag | untag | exclude} p4 {tag | untag | exclude}...

Parameters

vlanID—Specify the VLAN ID to enable DHCP relay.

remote_server_IP—Specify the IP address of the remote DHCP server.

Default Configuration

None.

Help

Use the **interface vlan modify help** or **interface vlan modify** command to get the instruction and examples on using the **interface vlan modify** command.

Example

The example below is to enable DHCP relay for VLAN 25, and the remote IP address of DHCP server is 55.55.55.55.

```
RV32X> interface vlan modify 25 dhcprelay 55.55.55.55
```

interface vlan membership *vlanID* [*description* *discription*]
routing {enable | disable} **device** {enable | disable} **p1** {tag | untag | exclude} **p2** {tag | untag | exclude} **p3** {tag | untag | exclude} **p4** {tag | untag | exclude}...

To manage the VLAN membership port configuration, use the **interface vlan membership** *vlanID* [*description* *discription*] **routing** {enable | disable} **device** {enable | disable} **p1** {tag | untag | exclude} **p2** {tag | untag | exclude} **p3** {tag | untag | exclude} **p4** {tag | untag | exclude}... command.

Parameters

vlanID—Specify the VLAN ID.

(Optional) *discription*—Input the description of the VLAN.

routing {enable | disable}—Enable or disable the inter VLAN routing feature..

device {enable | disable}—Enable or disable the device management feature.

interface vlan

interface vlan {enable | disable}

2

p* {tag | untag | exclude}—Tag/untag/exclude the designated LAN port *.

Default Configuration

The default description for VLANx is descx. 'x' refers to the VLAN ID.

Help

Use the **interface vlan membership help** or **interface vlan membership** command to get the instruction and examples on using the **interface vlan membership** command.

Example

The example below is to modify the VLAN 25's membership configuration whose inter VLAN routing and device management is disabled, LAN port 1 tagged, LAN port 2 tagged, LAN port 3 excluded.

```
RV32X> interface vlan membership 25 description test routing disable device disable p1 tag p2 tag p3 exclude
```

interface vlan {enable | disable}

To enable/disable VLAN setting, use the **interface vlan {enable | disable}** command.

Parameters

Enable/disable the VLAN setting feature.

Default Configuration

None.

Help

Use the **interface vlan help** command to show the instruction and examples of using the **interface vlan {enable | disable}** command.

Example

The example below is to enable VLAN setting.

interface vlan

interface vlan {enable | disable}

2

RV32X> **interface vlan enable**

Where to Go From Here

Cisco provides a wide range of resources to help you and your customer obtain the full benefits of the Cisco RV320/RV325 router.

Support	
Cisco Support Community	www.cisco.com/go/smallbizsupport
Cisco Support and Resources	www.cisco.com/go/smallbizhelp
Phone Support Contacts	www.cisco.com/en/US/support/tsd_cisco_small_business_support_center_contacts.html
Cisco Firmware Downloads	www.cisco.com/go/smallbizfirmware Select a link to download firmware for Cisco products. No login is required.
Cisco Open Source Requests	www.cisco.com/go/smallbiz_opensource_request
Cisco Partner Central (Partner Login Required)	www.cisco.com/web/partners/sell/smb
Product Documentation	
Cisco RV320/RV325	www.cisco.com/go/rv320 www.cisco.com/go/rv325
Warranty Information	www.cisco.com/go/warranty
Regulatory Compliance and Safety Information	http://www.cisco.com/c/en/us/support/routers/small-business-rv-series-routers/products-installation-guides-list.html