

## Content

<b>Chapter 1 Commands for 1+1 Hot Backup .....</b>	<b>1-1</b>
1.1 debug wireless switch redundancy detail .....	1-1
1.2 debug wireless switch redundancy packet .....	1-1
1.3 permit-ap-network <ipaddr> <mask> .....	1-1
1.4 show wireless bind-vrrp status .....	1-2
1.5 show wireless l2tunnel tunnel-list .....	1-2
1.6 show wireless switch redundancy ap status .....	1-3
1.7 show wireless switch redundancy status .....	1-3
1.8 switch-redundancy .....	1-3
1.9 switch-redundancy mode .....	1-4
1.10 switch-redundancy primary <ipaddr1> secondary <ipaddr2> .....	1-4
1.11 vrrp bind <vrid> .....	1-4
<b>Chapter 2 commands for DHCP Server Redundancy .....</b>	<b>2-1</b>
2.1 dhcp-redundancy priority .....	2-1
2.2 dhcp-redundancy keep-alive-interval .....	2-1
2.3 dhcp-redundancy preempt .....	2-1
2.4 dhcp-redundancy ip .....	2-2
2.5 dhcp-redundancy ipv6 .....	2-2
2.6 no dhcp-redundancy .....	2-3
2.7 show dhcp-redundancy server status .....	2-3

# Chapter 1 Commands for 1+1 Hot Backup

## 1.1 debug wireless switch redundancy detail

**Command:** debug wireless switch redundancy detail

**no debug wireless switch redundancy detail**

**Function:** Using the command to open detail level's debug information of redundancy module. The no command close related debug information.

**Parameters:** None.

**Command Mode:** Privileged EXEC mode.

**Default:** Close detail level's debug information of redundancy module.

**Usage Guide:** Using the command to open detail level's debug information of redundancy module.

**Example:** Open detail level's debug information of redundancy module

AC#debug wireless switch redundancy detail

detail WD\_LEVEL\_REDUNDANCY\_DETAIL debug is on

## 1.2 debug wireless switch redundancy packet

**Command:** debug wireless switch redundancy packet {all | send | receive | dump}

**no debug wireless switch redundancy packet {all | send | receive | dump}**

**Function:** Using the command to open packet level's debug information of redundancy module. The no command close related debug information.

**Parameters:** send: open debug information of sending packet during the processing of redundancy backup module;

receive: open debug information of receiving packet during the processing of redundancy backup module;

dump : open print information of sending and receiving packet during the processing of redundancy backup module;

all: open debug information of sending and receiving packet during the processing of redundancy backup module.

**Command Mode:** Privileged EXEC mode.

**Default:** Close packet level's debug information of redundancy backup module.

**Usage Guide:** Using this command to open packet level's debug information of redundancy backup module

**Example:** Open debug information of sending and receiving packet during the processing of redundancy backup module.

```
AC#debug wireless switch redundancy packet all
```

```
packet WD_LEVEL_REDUNDANCY_PKT_SND debug is on
```

```
packet WD_LEVEL_REDUNDANCY_PKT_RCV debug is on
```

### 1.3 permit-ap-network <ipaddr> <mask>

**Command:** permit-ap-network <ipaddr> <mask>

no permit-ap-network <ipaddr>

**Function:** Users can add a group AP of some network to AP Group in ap-group mode. The no command delete a group AP of the network.

**Parameters:** ipaddr: IP address of specified network;

Mask: mask.

**Command Mode:** ap-group mode.

**Default:** None.

**Usage Guide:** Users can band AP of the network IP address to a AP Group, the same IP address only can be band to a AP Group.

**Example:** Binding AP that IP address is 192.168.1.0 network segment to AP Group AP1.

```
AC(config-wireless)#ap-group AP1
```

```
AC(config-ap-group)#permit-ap-network 192.168.1.0 255.255.255.0
```

### 1.4 show wireless bind-vrrp status

**Command:** show wireless bind-vrrp status

**Function:** show the binding relationship between redundancy backup module and VRRP of local AC.

**Parameters:** None.

**Command Mode:** Priviledged EXEC mode.

**Default:** None.

**Usage Guide:** In wireless mode, using vrrp bind <vrid> to configure redundancy backup function of AC to bind a VRRP group. After band redundancy backup and VRRP, AC set same work state with VRRP, then users can use the command show wireless bind-vrrp status to display bind relationship and redundancy backup status between local AC redundancy backup module and VRRP.

**Example:** Redundancy backup function of AC bind a VRRP group 82, then display bind relationship and redundancy backup status between local AC redundancy backup module

and VRRP.

AC(config-wireless)#vrrp bind 82

AC(config-wireless)#show wireless bind-vrrp status

Local IP Address..... 194.8.8.8

Local State..... Master(Active)

Bind VRRP ID..... 82

VRRP State..... Master

## 1.5 show wireless l2tunnel tunnel-list

**Command:** show wireless l2tunnel tunnel-list

**Function:** This command can check data link master backup status of local AC.

**Parameters:** None.

**Command Mode:** Privileged EXEC mode.

**Default:** None.

**Usage Guide:** This command can check data link master link status of local AC, “Active” means link is on master link status and AP is managed by local AC; “Standby” means link is on backup link status.

**Example:** Check data link master backup status of local AC.

AC#show wireless l2tunnel tunnel-list

Tunnel List

```

-----
TUNNEL NAME      SIP&DIP                                (D) SPORT
DPORT  TYPE  STATE
-----
capwaptnl653      194.5.5.5                                (RX)3328  57779
ap2ac  Standby
                194.168.100.2                        (TX)57779  3328

capwaptnl68       194.5.5.5                                (RX)7424  57779
ap2ac  Standby
                194.168.100.1                        (TX)57779  7424

```

Table 1-1 the content of command show wireless l2tunnel tunnel-list

Code	Value	Explanation
TUNNEL NAME	capwaptnlxxx	Show name of channel
SIP&DIP	IP address	Show source IP address and destination IP address of channel

## Chapter 1 Commands for 1+1 Hot Backup

### Commands for Redundancy Backup

SPORT	Port number	Show source port number of channel
DPORT	Port number	Show destination port number of channel
TYPE	ap2ac	Show device which created in the channel at both ends type.
STATE	Active/Standby	Show channel's master/backup status

## 1.6 show wireless switch redundancy ap status

**Command:** show wireless switch redundancy ap status

**Function:** The command can check backup link's AP information of local AC.

**Parameters:** None.

**Command Mode:** Priviledged EXEC mode.

**Default:** None.

**Usage Guide:** Check backup link's AP information of local AC in Backup AC, Master AC display nothing.

**Example:** Check local backup link's AP information in Backup AC.

AC#show wireless switch redundancy ap status

AP MAC Address	IP Address	Profile	Status	Age
00-03-0f-0d-0d-00	194.168.100.2	700	Managed	0d:00:00:01
00-03-0f-ff-1d-00	194.168.100.1	700	Managed	0d:00:00:04

Table 1-2 The content of command show wireless switch redundancy ap status

Code	Value	Explanation
AP MAC Address	AP MAC Address	Show AP Mac address
IP Address	AP IP address	Show IP of AP
Profile	1-1024	Show profile id AP used
Status	Managed	Show AP status

## 1.7 show wireless switch redundancy status

**Command:** show wireless switch redundancy status

**Function:** Show the simple redundancy status of local AC.

**Parameters:** None.

**Command Mode:** Wireless Global Mode.

**Default:** None.

**Example:**

AC(config-wireless)#show wireless switch redundancy status

Master..... 172.100.0.254(Active)

Backup..... 172.100.0.253

Keep Alive Interval..... 1000

## 1.8 switch-redundancy

**Command:** switch-redundancy master <ipaddr> backup <ipaddr> interval 10000000  
no switch-redundancy

**Function:** Enable/disable simple redundancy backup function and configure the local role, the peer IP, keep alive between them.

**Parameters:** Master IP Address

Backup IP Address

Internal

**Command Mode:** Wireless Global Mode.

**Default:** Disable.

**Usage Guide:** Enable this command on both the two ACs which are redundancy for each other.

**Example:** Enable simple redundancy backup function.

AC(config-wireless)# switch-redundancy master 192.168.1.1 backup 192.168.1.2

## 1.9 switch-redundancy mode

**Command:** switch-redundancy mode {normal| preempt | load-balance}  
no switch-redundancy mode

**Function:** Configure the redundancy mode of 1+1 hot backup. The no command recover the preempt mode.

**Parameters:** normal: configure the redundancy mode of 1+1 hot backup to normal mode;  
preempt: configure redundancy mode of 1+1 hot backup to preempt mode;  
load-balance : configure redundancy mode of 1+1 hot backup to load-balance mode.

**Command Mode:** wireless mode.

**Default:** The default of 1+1 hot backup redundancy mode is preempt mode.

**Usage Guide:** Using the command to configure redundancy mode of 1+1 hot backup.

**Example:** Configure redundancy mode of 1+1 hot backup to preempt mode

AC(config-wireless)#switch-redundancy mode normal

## 1.10 switch-redundancy primary <ipaddr1> secondary <ipaddr2>

**Command:** switch-redundancy primary <ipaddr1> secondary <ipaddr2>

no switch-redundancy primary <ipaddr1> secondary <ipaddr2>

**Function:** Add priority for link master backup AC for AP in AP Group. The no command delete related configuration.

**Parameters:** ipaddr1: appoint AC IP address for primary.

ipaddr2: appoint AC IP address for secondary.

**Command Mode:** ap-group mode.

**Default:** None.

**Usage Guide:** In load-balance mode of 1+1 redundancy, using the command to add priority for link master backup AC for AP in AP Group to realize load-balance.

**Example:** Configure priority AC is AC which wireless address is 194.8.8.8 for ap in AP Group ap1, then attachable AC is the AC whose wireless address is 194.5.5.5.

AC(config-wireless)#ap-group ap1

AC(config-ap-group)#switch-redundancy primary 194.8.8.8 secondary 194.5.5.5

## 1.11 vrrp bind <vrid>

**Command:** vrrp bind <vrid>

no vrrp bind <vrid>

**Function:** Configure redundancy function of AC can bind a VRRP group in wireless mode. The no command delete the related binding.

**Parameters:** vrid: id of VRRP group.

**Command Mode:** wireless mode.

**Default:** Redundancy function do not bind to VRRP group.

**Usage Guide:** Using the command to configure redundancy function of AC to bind a VRRP group in wireless mode. After binding redundancy function with VRRP, AC set same working status with VRRP. Users can use command show wireless bind-vrrp status to show binding and redundancy status of local AC redundancy module and VRRP.

**Example:** Configure AC redundancy function to bind a VRRP group 82.

AC(config-wireless)#vrrp bind 82



# Chapter 2 commands for DHCP Server Redundancy

## 2.1 dhcp-redundancy priority

**Command:** `dhcp-redundancy priority <0-255>`  
`no dhcp-redundancy priority`

**Function:** Configure the priority of the DHCP Server device in the DHCP Server redundancy function to select the redundancy role. The DHCP Server device with the higher priority will be selected as the master role.

**Parameters:** <0-255>, the value of priority, and the range is from 0 to 255, 100 is as default.

**Command Mode:** Global Mode.

**Usage Guide:** Configure this command before enabled the DHCP Server redundancy function. If it needs to be configured again, the DHCP Server redundancy function should be disabled; the no command recovers to be default, the range is from 0 to 255 and it supports to keep the configuration.

**Example:** Configure the priority as 123 and enable the DHCP Server redundancy function. When configure the priority as 12, there will be the prompt that the DHCP Server redundancy function should be disabled.

```
AC (config)#dhcp-redundancy priority 123
```

```
AC(config)#dhcp-redundancy ip 1.1.1.1 2.2.2.2
```

```
AC(config)#dhcp-redundancy priority 12
```

DHCP Redundancy is abled, to change local priority, please turn off DHCP Redundancy first!

```
AC(config)#no dhcp-redundancy
```

```
AC(config)#dhcp-redundancy priority 12
```

```
AC(config)#
```

## 2.2 dhcp-redundancy keep-alive-interval

**Command:** `dhcp-redundancy keep-alive-interval <1-10>`  
`no dhcp-redundancy keep-alive-interval`

**Function:** Configure the interval that the DHCP Server device sends the keep-alive packet. The range is from 1 to 10 and the unit is second.

**Parameters:** <1-10>, it is the value of keep-alive interval, range is from 1 to 10 and the

default value is 5.

**Default:** The interval that the DHCP Server device sends the keep-alive packet is 5 seconds as default.

**Command Mode:** Global Mode.

**Usage Guide:** For example, if it was configured as 6, the DHCP Server redundancy module will send the keep-alive once every 6 seconds; the no command recovers to be default. It will become effective immediately after configured. It can be configured even though the DHCP Server redundancy function was enabled and it supports to keep the configuration.

**Example:** Configure the keep-alive interval as 8s.

```
AC(config)#dhcp-redundancy keep-alive-interval 8
```

```
AC(config)#
```

## 2.3 dhcp-redundancy preempt

**Command:** dhcp-redundancy preempt

**no dhcp-redundancy preempt**

**Function:** Configure the preempt mode of the DHCP Server1+1 redundancy. The no command disables this mode. This command is enabled as default.

**Parameters:** None.

**Default:** Enable.

**Command Mode:** Global Mode.

**Usage Guide:** When enabled the preempt mode, the choice of roles are absolutely according to the priority; when disabled the preempt mode, it only affects the choice of roles in one situation: there has been the master with the low priority in the network, a backup device with high priority is added, in this case, master is still the device with low priority and the backup is still the device with high priority, the roles will not change. This command will become effective immediately after configured and it supports to keep the configuration.

**Example:** Disable the preempt mode.

```
AC(config)#no dhcp-redundancy preempt
```

```
AC(config)#
```

## 2.4 dhcp-redundancy ip

**Command:** dhcp-redundancy ip local-ip peer-ip

**Function:** Enable the DHCP Server 1+1 redundancy function and configure the the IPv4 address of the couple DHCP Server1+1 redundancy at the same time. Local-ip means the

IP address of the DHCP Server redundancy function used by the local device; **peer-ip** means the IP address of the DHCP Server redundancy function used by the peer device.

**Parameters:** **local-ip:** the IP address of the DHCP Server redundancy function used by the local device; **peer-ip:** the IP address of the DHCP Server redundancy function used by the peer device.

**Default:** Disable.

**Command Mode:** Global Mode.

**Usage Guide:** After configured this command, the DHCP Server redundancy function will run immediately; this command is disabled as default, it will become effective immediately after configured. If it needs to be configured again, it should be disabled first. It supports to keep the configuration.

**Example:** Configure the local IPv4 address and the peer IPv4 address of the DHCP Server redundancy function. When configure again, there will be the prompt that it should be disabled.

```
AC(config)#dhcp-redundancy ip 1.1.1.1 2.2.2.2
```

```
AC(config)#dhcp-redundancy ip 1.1.1.1 2.2.2.3
```

DHCP Redundancy: DHCP Redundancy peer ipv4 address has been set, do not change parameter while running!

```
AC(config)#no dhcp-redundancy
```

```
AC(config)#dhcp-redundancy ip 1.1.1.1 2.2.2.3
```

```
AC(config)#
```

## 2.5 dhcp-redundancy ipv6

**Command:** **dhcp-redundancy ipv6 local-ip peer-ip**

**Function:** Enable the DHCP Server 1+1 redundancy function and configure the the IPv6 address of the couple DHCP Server1+1 redundancy at the same time. Local-ip means the IPv6 address of the DHCP Server redundancy function used by the local device; peer-ip means the IPv6 address of the DHCP Server redundancy function used by the peer device.

**Parameters:** **local-ip:** the IPv6 address of the DHCP Server redundancy function used by the local device; **peer-ip:** the IPv6 address of the DHCP Server redundancy function used by the peer device.

**Default:** Disable.

**Command Mode:** Global Mode.

**Usage Guide:** **dhcp-redundancy ipv6** and **dhcp-redundancy ip** can be configured at the same time. The one which was configured first will become effective. If the IP address which was configured first is at the inactive status or it has no routing, use the IP address

which was configured later. When restart the AC to recover the configuration, the IPv4 address is priority to be used. It supports to keep the configuration.

**Example:** Configure the local IPv6 address and the peer IPv6 address of the DHCP Server redundancy function. When configure again, there will be the prompt that it should be disabled.

```
AC(config)#dhcp-redundancy ipv6 2001::1 2001::2
```

```
AC(config)#dhcp-redundancy ipv6 2001::1 2001::3
```

DHCP Redundancy: DHCP Redundancy peer ipv6 address has been set, do not change parameter while running!

```
AC(config)#no dhcp-redundancy
```

```
AC(config)#dhcp-redundancy ipv6 2001::1 2001::3
```

```
AC(config)#
```

## 2.6 no dhcp-redundancy

**Command:** no dhcp-redundancy

**Function:** Disable the DHCP Server redundancy function of this device. Delete the commands of **dhcp-redundancy ip** and **dhcp-redundancy ipv6**, and hide the configuration of other commands.

**Parameters:** None.

**Default:** None.

**Command Mode:** Global Mode.

**Usage Guide:** Configure this command to delete the commands of **dhcp-redundancy ip** and **dhcp-redundancy ipv6**, and disable the udp connection and tcp connection, disable the DHCP Server redundancy function. It supports keeping the configuration.

**Example:** Disable the DHCP Server redundancy function. It will prompt that it has been disabled if disable it again.

```
AC(config)#no dhcp-redundancy
```

```
AC(config)#no dhcp-redundancy
```

DHCP Redundancy is already disabled!

```
AC(config)#
```

## 2.7 show dhcp-redundancy server status

**Command:** show dhcp-redundancy server status

**Function:** Check the status of the DHCP Server redundancy function.

**Parameters:** None.

**Default:** None.

**Command Mode:** Admin mode and above.

**Usage Guide:** When the DHCP Server redundancy function is not enabled, configure this command to prompt that "DHCP Redundancy is not enable!"; when this function has been enabled, configure this command to show the role, IPv4 address, IPv6 address, priority, keep-alive-interval and preempt mode of this device and the peer terminal.

**Example:** Check the status of the DHCP Server redundancy function.

AC#show dhcp-redundancy server status

	Redundancy	Role	IPv4 address	IPv6 address	Proirotiy
KeepAliveInterval		Preempt Mode			
LOCAL	Backup		1.1.1.1	2001::1	12
Disable					8
PEER	----		----	----	----
----					

Switch Over Time is 0

AC#con

AC(config)#no dhcp-redundancy

AC(config)#exit

AC#show dhcp-redundancy server status

DHCP Redundancy is not enable!

AC#