

Monitoring DHCP Binding Information

Purpose Display information for specified DHCP client bindings, with results arranged in ascending order by binding ID.



NOTE: The **show dhcp binding** command replaces the **show ip dhcp-external binding**, **show ip dhcp-external binding-id**, and **show ip dhcp-local binding** commands, which are deprecated and might be removed completely in a future release.

Action To display information about all DHCP local server bindings:

```
host1:vr1#show dhcp binding local
BindingId      HwAddress      Type      IpSubnet      IpAddress      State
-----
2409734593     8000.0001.9365 local      0.0.0.0       81.3.0.2       bound
2409734595     8000.0003.9365 local      0.0.0.0       81.3.0.3       bound
2409734597     8000.0005.9365 local      0.0.0.0       81.3.0.4       bound
2409734599     8000.0007.9365 local      0.0.0.0       81.3.0.5       bound
2409734605     8000.000d.9365 local      0.0.0.0       81.3.0.8       bound
2409734607     8000.000f.9365 local      0.0.0.0       81.3.0.9       bound
2409734609     8000.0011.9365 local      0.0.0.0       81.3.0.10      bound
2409734611     8000.0013.9365 local      0.0.0.0       81.3.0.11      bound
2409734618     8000.000b.9365 local      0.0.0.0       81.3.0.7       bound
2409734619     8000.0009.9365 local      0.0.0.0       81.3.0.6       bound
```

The output of the **show dhcp binding** command is identical to the output of the **show dhcp host** command except for the order of the client bindings. The results of the **show dhcp binding** command are arranged in ascending order by binding ID, whereas the results of the **show dhcp host** command are arranged in ascending order by IP address.

To display information about a specific DHCP binding ID:

```
host1#show dhcp binding 3070230530
BindingId:      3070230530
HwAddress:      7000.0002.9365
IpSubnet:       0.0.0.0
IpAddress:      192.168.0.90
State:          bound
Type:           relay-p
Server:         192.168.15.1
Giaddr:         192.168.0.1
Lease:          3600
Remaining:      2079
IpInterface:    GigabitEthernet1/0/1.101
ClientId:       45-41-48-00-01-70-00-00-02-93-65
Interface:
Relay Agent:
Agent Circuit Id: test circuit id
Agent Remote Id: test remote id
Vendor Specific: 01-02-03-04-05-06-07-08-09-0a-0b-0c-0d-0e-0f-10
Unrecognized:   11-12-13-14-15-16-17-18-19-1a-1b-1c-1d-1e-1f-20
```

To display binding information for DHCP clients with a specified interface string:

```
host1:vr2#show dhcp binding interface ip71.*4
```

BindingId	HwAddress	Type	IpSubnet	IpAddress	State
3053453315	7000.0002.9365	external	0.0.0.0	71.1.0.4	bound
3053453325	7000.000c.9365	external	0.0.0.0	71.1.0.14	bound
3053453353	7000.0016.9365	external	0.0.0.0	71.1.0.24	bound

This **show dhcp binding** command uses the * (asterisk) regular expression metacharacter in the interface string to display information for DHCP client bindings on virtual router vr2 with an IP address beginning with 71 and ending with 4. The results of the **show dhcp binding** command are arranged in ascending order by binding ID.

To display binding information for DHCP clients that match the specified circuit ID string:

```
host1:vr3#show dhcp binding circuit-id \\xe3
```

BindingId	HwAddress	Type	IpSubnet	IpAddress	State
3070230529	7000.0000.9365	relay-p	0.0.0.0	71.1.0.2	bound
3070230531	7000.0002.9365	relay-p	0.0.0.0	71.1.0.4	bound
3070230535	7000.0006.9365	relay-p	0.0.0.0	71.1.0.8	bound
3070230537	7000.0008.9365	relay-p	0.0.0.0	71.1.0.10	bound
3070230539	7000.000a.9365	relay-p	0.0.0.0	71.1.0.12	bound
3070230541	7000.000c.9365	relay-p	0.0.0.0	71.1.0.14	bound
3070230543	7000.000e.9365	relay-p	0.0.0.0	71.1.0.16	bound
3070230545	7000.0010.9365	relay-p	0.0.0.0	71.1.0.18	bound
3070230547	7000.0012.9365	relay-p	0.0.0.0	71.1.0.20	bound
3070230549	7000.0014.9365	relay-p	0.0.0.0	71.1.0.22	bound
3070230553	7000.0018.9365	relay-p	0.0.0.0	71.1.0.26	bound
3070230555	7000.001a.9365	relay-p	0.0.0.0	71.1.0.28	bound
3070230557	7000.001c.9365	relay-p	0.0.0.0	71.1.0.30	bound
3070230569	7000.0016.9365	relay-p	0.0.0.0	71.1.0.24	bound
3070230572	7000.0004.9365	relay-p	0.0.0.0	71.1.0.6	bound

To specify nonprintable byte codes in the circuit ID string or remote ID string, you can use the string `\\xab`, where `ab` is a hex code of the byte. This **show dhcp binding** command uses the string `\\xe3` to represent byte E3 in the circuit ID string. This command displays information for the DHCP client bindings on virtual router vr3 with the specified circuit ID string, with results arranged in ascending order by binding ID.

To display information about DHCP local server bindings with a specified subnet address:

```
host1:vr1#show dhcp binding local 0.0.0.0
```

To display information about DHCP bindings with a specified IP prefix:

```
host1:vr1#show dhcp binding ip-prefix 10.1.0.0/28
```

To display information about DHCP relay proxy bindings without a lower-layer interface:

```
host1:vr1#show dhcp binding relay-proxy no-interface
```

To display binding information for DHCP clients that match the specified remote ID string:

```
host1:vr1#show dhcp binding remote-id "remote id.*even"
```

Filtering the display of DHCP client bindings by the circuit ID string or remote ID string is not supported for the DHCP external server application. DHCP external server does not store information about the agent-circuit-id suboption or agent-remote-id suboption of option 82.

Meaning Table 1 on page 3 lists the **show dhcp binding** command output fields.

Table 1: show dhcp binding Output Fields

Field Name	Field Description
BindingId	Client binding ID
HwAddress	MAC address of client
Type	Binding type; external (DHCP external server), local (DHCP local server), or relay-p (DHCP relay proxy)
IpSubnet	For DHCP local server bindings, the subnet of the IP address assigned to the client; 0.0.0.0 for DHCP external server and DHCP relay proxy bindings
IpAddress	IP address assigned to client
State	State of the DHCP client binding
Server	IP address of the DHCP server that allocated the client IP address
Giaddr	For DHCP relay proxy the IP address of the DHCP relay proxy; for DHCP local server bindings, the IP address of the DHCP relay that sent the packet or 0.0.0.0 if the packet comes from the client; for DHCP external server bindings, the giaddr from the DHCP packet
Lease	Total time for which the IP address is available, in seconds
Remaining	Time remaining on the current lease, in seconds
IpInterface	IP interface that is associated with the client
ClientId	DHCP Option 61 received from the client
Interface	Subinterface for DHCP local server bindings; does not apply to DHCP external server and DHCP relay proxy
Relay Agent	Indicates Relay Agent Information option (option 82)
Agent Circuit Id	Suboption 1 of the DHCP Relay Agent information option

Table 1: show dhcp binding Output Fields *(continued)*

Field Name	Field Description
Agent Remote Id	Suboption 2 of the DHCP relay agent information option
Vendor Specific	Suboption 9 of the DHCP relay agent information option

- Related Topics**
- show dhcp binding
 - To compare the output of the **show dhcp binding** command and the **show dhcp host** command, see Monitoring DHCP Binding Host Information