# **Show Commands**

### instance

Syntax instance

instance [interface interface-name [vrid virtual-router-id] instance interface interface-name vrid virtual-router-id ipv6

Context show>vrrp

**Description** This command displays information for VRRP instances.

If no command line options are specified, summary information for all VRRP instances displays.

**Parameters** interface *ip-int-name* — Displays detailed information for the VRRP instances on the specified IP interface including status and statistics.

**Default** Summary information for all VRRP instances.

vrid virtual-router-id — Displays detailed information for the specified VRRP instance on the IP interface.

**Default** All VRIDs for the IP interface.

**Values** 1 — 255

**ipv6** — Specifies the IPv6 instance.

Output VRRP Instance Output — The

**VRRP Instance Output** — The following table describes the instance command output fields for VRRP.

| Label          | Description   |
|----------------|---|
| Interface name | The name of the IP interface.   |
| VR ID          | The virtual router ID for the IP interface  |
| Own<br>Owner   | Yes — Specifies that the virtual router instance as owning the virtual router IP addresses.   |
|                | ${\tt No}-{\tt Indicates}$ that the virtual router instance is operating as a non-owner.  |
| Adm            | $\mathtt{Up}-$ Indicates that the administrative state of the VRRP instance is up.  |
|                | Down — Indicates that the administrative state of the VRRP instance is down.  |
| Opr            | $\mathtt{Up}\ -\ \mathrm{Indicates}\ \mathrm{that}\ \mathrm{the}\ \mathrm{operational}\ \mathrm{state}\ \mathrm{of}\ \mathrm{the}\ \mathrm{VRRP}\ \mathrm{instance}\ \mathrm{is}\ \mathrm{up}.$ |
|                | ${\tt Down}-{\tt Indicates}$ that the operational state of the VRRP instance is down.   |

| Label          | Description (Continued)   |
|----------------|---|
| State          | When owner, <b>backup</b> defines the IP addresses that are advertised within VRRP advertisement messages.  |
|                | When non-owner, <b>backup</b> actually creates an IP interface IP address used for routing IP packets and communicating with the system when the access commands are defined (ping-reply, telnet-reply, and sshreply).  |
| Pol Id         | The value that uniquely identifies a Priority Control Policy.   |
| Base Priority  | The <i>base-priority</i> value used to derive the in-use priority of the virtual router instance as modified by any optional VRRP priority control policy.  |
| InUse Priority | The current in-use priority associated with the VRRP virtual router instance.   |
| Msg Int        | The administrative advertisement message timer used by the master virtual router instance to send VRRP advertisement messages and to derive the master down timer as backup.  |
| Inh Int        | Yes — When the VRRP instance is a non-owner and is operating as a backup and the <b>master-int-inherit</b> command is enabled, the master down timer is indirectly derived from the value in the advertisement interval field of the VRRP message received from the current master.   |
|                | No — When the VRRP instance is operating as a backup and the <b>master-int-inherit</b> command is <i>not</i> enabled, the configured advertisement interval is matched against the value in the advertisement interval field of the VRRP message received from the current master. If the two values do not match then the VRRP advertisement is discarded. |
|                | If the VRRP instance is operating as a master, this value has no effect.  |
| Backup Addr    | The backup virtual router IP address.   |
| BFD            | Indicates BFD is enabled.   |
| VRRP State     | Specifies whether the VRRP instance is operating in a master or backup state.   |
| Policy ID      | The VRRP priority control policy associated with the VRRP virtual router instance.  |
|                | A value of 0 indicates that no control policy policy is associated with the virtual router instance.  |
| Preempt Mode   | Yes — The preempt mode is enabled on the virtual router instance where it will preempt a VRRP master with a lower priority.   |
|                | ${ m No}$ — The preempt mode is disabled and prevents the non-owner virtual router instance from preempting another, less desirable virtual router.   |

| Label                     | Description (Continued)   |
|---------------------------|---|
| Ping Reply                | Yes — A non-owner master is enabled to reply to ICMP Echo requests directed to the virtual router instance IP addresses.  |
|                           | Ping Reply is valid only if the VRRP virtual router instance associated with this entry is a non-owner.   |
|                           | A non-owner backup virtual router never responds to such ICMP echo requests irrespective if Ping Reply is enabled.  |
|                           | ${\tt No-ICMP}$ echo requests to the virtual router instance IP addresses are discarded.  |
| Telnet Reply              | Yes — Non-owner masters can to reply to TCP port 23 Telnet requests directed at the virtual router instances IP addresses.  |
|                           | $\ensuremath{\mathtt{No}}$ — Telnet requests to the virtual router instance IP addresses are discarded.   |
| SSH Reply                 | Yes - Non-owner masters can to reply to SSH requests directed at the virtual router instances IP addresses.   |
|                           | ${\tt No-All\ SSH}$ request messages destined to the non-owner virtual router instance IP addresses are discarded.  |
| Primary IP of Mas-<br>ter | The IP address of the VRRP master.  |
| Primary IP                | The IP address of the VRRP owner.   |
| Up Time                   | The date and time when the operational state of the event last changed.   |
| Virt MAC Addr             | The virtual MAC address used in ARP responses when the VRRP virtual router instance is operating as a master.   |
| Auth Type                 | Specifies the VRRP authentication Type 0 (no authentication), Type 1 (simple password), or Type 2 (MD5) for the virtual router.   |
| Addr List Mismatch        | Specifies whether a trap was generated when the IP address list received in the advertisement messages received from the current master did not match the configured IP address list. |
|                           | This is an edge triggered notification. A second trap will not be generated for a packet from the same master until this event has been cleared.                                      |
| Master Priority           | The priority of the virtual router instance which is the current master.  |
| Master Since              | The date and time when operational state of the virtual router changed to master.   |
|                           | For a backup virtual router, this value specifies the date and time when it received the first VRRP advertisement message from the virtual router which is the current master.        |

# Sample Output

|  | router vrrp insta                             |                |        |                             |                       |            |
|--|---|----------------|--------|-----------------------------|-----------------------|------------|
| VRRP Instances                                     |   |                |        |                             |                       |            |
| Interface Name                                     |   | VR Id Ow<br>IP |        | State<br>Pol Id             | Base Pri<br>InUse Pri | _          |
| n2   |   | 1 No           | -      |                             | 100<br>100            | 1<br>No    |
| Backup Addr: 5                                     | 5.1.1.10                                      | 1.0            |        |                             | 100                   | 1 0        |
| n2   |   | IDAQ NO        | -      |                             | 100<br>100            | 1.0<br>Yes |
| Backup Addr: 5                                     | 5::10<br>FE80::10                             | 11 00          | op     | 11/ a                       | 100                   | 163        |
| Instances : 2                                      |   |                |        |                             |                       |            |
| *A:ALA-A#  |   |                | =====  |                             |                       | :======    |
|  | router vrrp insta                             |                | face n | 2 vrid 1                    |                       |            |
| vkkp instance i                                    | for interface "n<br>                          |                |        | .=======                    |                       |            |
| Owner  | : No  |                | VRRP   | State                       | : Master              |            |
| Primary IP of Ma<br>Primary IP<br>VRRP Backup Addi |   | Self)          | Stand  | lby-Forwardin               | ng: Disabled          | į          |
| Admin State  |   |                | Oper   | State                       | : Up                  |            |
| Up Time  | : 09/23/2004                                  | 06:53:45       | Virt   | MAC Addr                    | : 00:00:56            | :00:01:01  |
| Auth Type Config Mesg Into                         | 71 : 1  |                | In-Us  | e Mesg Intvl                | . : 1                 |            |
| Master Inherit I<br>Base Priority                  |   |                | Tn IIo | e Priority                  | . 100                 |            |
| Policy ID  | : n/a   |                |        | pt Mode                     |                       |            |
| Ping Reply   | : No  |                |        | t Reply                     |                       |            |
| SSH Reply  | : No  |                |        | route Reply                 |                       |            |
| Init Delay   |   |                |        | Timer Expire                |                       | ec         |
| Creation State                                     | : Active                                      |                |        |                             |                       |            |
| Master Informati                                   |   |                |        |                             |                       |            |
| Addr List Mismat                                   | aster: 5.1.1.2 (S<br>tch : No<br>: 09/23/2004 |                | Maste  | r Priority                  | : 100                 |            |
| Masters Seen (La                                   | ast 32)                                       |                |        |                             |                       |            |
| Primary IP of Ma                                   | aster Last Seen                               | 1              | Ad     | ldr List Mism               | natch Ms              | sg Count   |
| 5.1.1.2  | 09/23/200                                     | 4 06:53:4      | 9 No   | ,                           |                       | 0          |
| Statistics   |   |                |        |                             |                       |            |
| Become Master<br>Adv Sent                          | : 1<br>: 103                                  |                | Adv R  | er Changes<br>Received      | : 0                   |            |
| Pri Zero Pkts Se                                   |   |                |        | ero Pkts Rcv                |                       |            |
| Preempt Events<br>Mesg Intvl Disca                 |   |                |        | pted Events<br>Intvl Errors |                       |            |

```
Addr List Discards : 0
                           Addr List Errors : 0
Auth Type Mismatch : 0
                           Auth Failures : 0
Invalid Auth Type : 0
                           Invalid Pkt Type : 0
IP TTL Errors : 0
Total Discards : 0
                           Pkt Length Errors : 0
            : 0
*A:ALA-A# show router vrrp instance interface n2 vrid 1 ipv6
______
VRRP Instance 1 for interface "n2"
______
No Matching Entries
*A:ALA-A# show router vrrp instance interface n2 vrid 10 ipv6
______
VRRP Instance 10 for interface "n2"
______
                            VRRP State
Owner
            : No
Primary IP of Master: FE80::1 (Self)
        : FE80::1
Primary IP
                           Standby-Forwarding: Disabled
VRRP Backup Addr : 5::10
             : FE80::10
Config Mesg Intvl : 1.0
                           In-Use Mesq Intvl : 1.0
Master Inherit Intvl: Yes
Base Priority : 100
                           In-Use Priority : 100
        : n/a
                            Preempt Mode : Yes
Policy ID
Ping Reply
            : No
                            Telnet Reply
                            Traceroute Reply : No
            : 0
Init Delay
                            Init Timer Expires: 0.000 sec
Creation State : Active
Master Information
______
Primary IP of Master: FE80::1 (Self)
Addr List Mismatch : No
                           Master Priority : 100
          : 09/23/2004 06:55:16
Master Since
Masters Seen (Last 32)
______
Primary IP of Master
              Last Seen Addr List Mismatch Msg Count
               09/23/2004 06:55:16 No
Statistics
Master Transitions : 1
                           Discontinuity Time: 09/09/2004 01:57*
             . 23
                           Adv Received : 0
Adv Sent
Pri Zero Pkts Sent : 0
                           Pri Zero Pkts Rcvd: 0
Preempt Events : 0
                           Preempted Events : 0
Mesg Intvl Discards: 0
                           Mesg Intvl Errors : 0
Total Discards : 0
                           Addr List Errors : 0
```

| Auth Failures | : 0 | Invalid Pkt Type : 0  |
|---------------|-----|-----------------------|
| IP TTL Errors | : 0 | Pkt Length Errors : 0 |

\_\_\_\_\_\_

# policy

**Syntax** policy [vrrp-policy-id [event event-type specific-qualifier]]

Context show>vrrp

**Description** This command displays VRRP priority control policy information.

If no command line options are specified, a summary of the VRRP priority control event policies dis-

plays.

**Parameters** *vrrp-policy-id* — Displays information on the specified priority control policy ID.

**Default** All VRRP policies IDs

**Values** 1 — 9999

event event-type — Displays information on the specified VRRP priority control event within the

policy ID.

Label

**Default** All event types and qualifiers

Values port-down port-id

lag-port-down lag-id

 $\begin{tabular}{ll} \textbf{host-unreachable} & host-ip-addr \\ \textbf{route-unknown} & route-prefix/mask \\ \end{tabular}$ 

mc-ipsec-non-forwarding

specific-qualifier — Display information about the specified qualifier.

**Values** port-id, lag-id, host-ip-addr, route-prefix/mask, tunnel-group-id

#### **Output** VRRP Policy Output — The following table describes the VRRP policy command output fields.

| Label              | Description  |
|--------------------|--|
| Policy Id          | The VRRP priority control policy associated with the VRRP virtual router instance.   |
|                    | A value of 0 indicates that no control policy is associated with the virtual router instance.  |
| Current Priority & | Effects  |
| Current Explicit   | When multiple explicitly defined events associated with the priority control policy happen simultaneously, the lowest value of all the current explicit priorities will be used as the in-use priority for the virtual router. |

Description

<sup>\*</sup> indicates that the corresponding row element may have been truncated.

| Label              | Description (Continued)   |
|--------------------|---|
| Current Delta Sum  | The sum of the priorities of all the delta events when multiple delta events associated with the priority control policy happen simultaneously. This sum is subtracted from the base priority of the virtual router to give the in-use priority.  |
| Delta Limit        | The delta-in-use-limit for a VRRP policy. Once the total sum of all delta events has been calculated and subtracted from the base-priority of the virtual router, the result is compared to the delta-in-use-limit value. If the result is less than this value, the delta-in-use-limit value is used as the virtual router in-use priority value. If an explicit priority control event overrides the delta priority control events, the delta-in-use-limit has no effect. |
|                    | If the delta-in-use-limit is 0, the sum of the delta priority control events to reduce the virtual router's in-use-priority to 0 can prevent it from becoming or staying master.  |
| Current Priority   | The configured delta-in-use-limit priority for a VRRP priority control policy or the configured delta or explicit priority for a priority control event.  |
| Applied            | The number of virtual router instances to which the policy has been applied. The policy cannot be deleted unless this value is 0.   |
| Description        | A text string which describes the VRRP policy.  |
| Event Type & ID    | A delta priority event is a conditional event defined in a priority control policy that subtracts a given amount from the base priority to give the current in-use priority for the VRRP virtual router instances to which the policy is applied.   |
|                    | An explicit priority event is a conditional event defined in a priority control policy that explicitly defines the in-use priority for the VRRP virtual router instances to which the policy is applied.  |
|                    | Explicit events override all delta Events. When multiple explicit events occur simultaneously, the event with the lowest priority value defines the in-use priority.  |
| Event Oper State   | The operational state of the event.   |
| Hold Set Remaining | The amount of time that must pass before the set state for a VRRP priority control event can transition to the cleared state to dampen flapping events.   |
| Priority & Effect  | Delta — The <i>priority-level</i> value is subtracted from the associated virtual router instance's base priority when the event is set and no explicit events are set. The sum of the priority event <i>priority-level</i> values on all set delta priority events are subtracted from the virtual router base priority to derive the virtual router instance in-use priority value.   |
|                    | If the <b>delta</b> priority event is cleared, the <i>priority-level</i> is no longer used in the in-use priority calculation.  |

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|-----|---|---|---|---|
| - 1 | ᆫ | U | е | ı |

### **Description (Continued)**

Explicit — The *priority-level* value is used to override the base priority of the virtual router instance if the priority event is set and no other **explicit** priority event is set with a lower *priority-level*.

The set **explicit** priority value with the lowest *priority-level* determines the actual in-use protocol value for all virtual router instances associated with the policy.

In Use

Specifies whether or not the event is currently affecting the in-use priority of some virtual router.

### **Sample Output**

| A:ALA-A# | show | vrrp | policy |
|----------|------|------|--------|
|          |      |      |        |

| VRRP Policies |                              |                     |                      |  |           |
|---------------|------------------------------|---------------------|----------------------|--|-----------|
| Policy<br>Id  | Current<br>Priority & Effect | Current<br>Explicit | Current<br>Delta Sum | Delta<br>Limit                               | Applied   |
| 1 2           | None<br>None                 | None<br>None        | None<br>None         | 1<br>1<br>================================== | Yes<br>No |

A:ALA-A#

#### A:ALA-A# show vrrp policy 1

| VRRP Policy 1 |                              |
|---------------|------------------------------|
| =========     |                              |
| Description   | : 10.10.200.253 reachability |

\_\_\_\_\_\_

Current Priority: None Applied : No
Current Explicit: None Current Delta Sum : None

Delta Limit : 1

| Applied To     | VR | Opr | Base | In-use | Master | Is     |
|----------------|----|-----|------|--------|--------|--------|
| Interface Name | Id |     | Pri  | Pri    | Pri    | Master |

None

Priority Control Events

| Event Type & ID              | Event Oper State | Hold Set<br>Remaining | -      |    |
|------------------------------|------------------|-----------------------|--------|----|
| Host Unreach 10.10.200.252   | n/a              | Expired               | 20 Del | No |
| Host Unreach 10.10.200.253   | n/a              | Expired               | 10 Del |    |
| Route Unknown 10.10.100.0/24 | n/a              | Expired               | 1 Exp  |    |

A:ALA-A#

**VRRP Policy Event Output** — The following table describes a specific event VRRP policy command output fields.

| Label                          | Description   |
|--------------------------------|---|
| Description                    | A text string which describes the VRRP policy.  |
| Policy Id                      | The VRRP priority control policy associated with the VRRP virtual router instance.  |
|                                | A value of 0 indicates that no control policy is associated with the virtual router instance.   |
| Current Priority               | The base router priority for the virtual router instance used in the master election process.   |
| Current Explicit               | When multiple explicitly defined events associated with the priority control policy happen simultaneously, the lowest value of all the current explicit priorities will be used as the in-use priority for the virtual router.  |
| Applied                        | The number of virtual router instances to which the policy has been applied. The policy cannot be deleted unless this value is 0.   |
| Current Delta Sum              | The sum of the priorities of all the delta events when multiple delta events associated with the priority control policy happen simultaneously. This sum is subtracted from the base priority of the virtual router to give the in-use priority.  |
| Delta Limit                    | The delta-in-use-limit for a VRRP policy. Once the total sum of all delta events has been calculated and subtracted from the base-priority of the virtual router, the result is compared to the delta-in-use-limit value. If the result is less than this value, the delta-in-use-limit value is used as the virtual router in-use priority value. If an explicit priority control event overrides the delta priority control events, the delta-in-use-limit has no effect. |
|                                | If the delta-in-use-limit is 0, the sum of the delta priority control events to reduce the virtual router's in-use-priority to 0 can prevent it from becoming or staying master.  |
| Applied to Inter-<br>face Name | The interface name where the VRRP policy is applied.  |
| VR ID                          | The virtual router ID for the IP interface.   |
| Opr                            | ${\tt Up}\ -\ {\tt Indicates}$ that the operational state of the VRRP instance is up.   |
|                                | ${\tt Down}$ — Indicates that the operational state of the VRRP instance is down.   |
| Base Pri                       | The base priority used by the virtual router instance.  |
| InUse Priority                 | The current in-use priority associated with the VRRP virtual router instance.   |

| Label              | Description (Continued)   |  |
|--------------------|---|--|
| Master Priority    | The priority of the virtual router instance which is the current master.  |  |
| Priority           | The base priority used by the virtual router instance.  |  |
| Priority Effect    | Delta — A delta priority event is a conditional event defined in a priority control policy that subtracts a given amount from the base priority to give the current in-use priority for the VRRP virtual router instances to which the policy is applied.   |  |
|                    | Explicit — A conditional event defined in a priority control policy that explicitly defines the in-use priority for the VRRP virtual router instances to which the policy is applied.   |  |
|                    | Explicit events override all delta events. When multiple explicit events occur simultaneously, the event with the lowest priority value defines the in-use priority.  |  |
| Current Priority   | The configured delta-in-use-limit priority for a VRRP priority control policy or the configured delta or explicit priority for a priority control event.  |  |
| Event Oper State   | The operational state of the event.   |  |
| Hold Set Remaining | The amount of time that must pass before the set state for a VRRP priority control event can transition to the cleared state to dampen flapping events.   |  |
| Priority           | The base priority used by the virtual router instance.  |  |
| Priority Effect    | Delta — The <i>priority-level</i> value is subtracted from the associated virtual router instance's base priority when the event is set and no explicit events are set. The sum of the priority event <i>priority-level</i> values on all set delta priority events are subtracted from the virtual router base priority to derive the virtual router instance in-use priority value. |  |
|                    | If the <b>delta</b> priority event is cleared, the <i>priority-level</i> is no longer used in the in-use priority calculation.  |  |
|                    | Explicit — The <i>priority-level</i> value is used to override the base priority of the virtual router instance if the priority event is set and no other <b>explicit</b> priority event is set with a lower <i>priority-level</i> .  |  |
|                    | The set <b>explicit</b> priority value with the lowest <i>priority-level</i> determines the actual in-use protocol value for all virtual router instances associated with the policy.   |  |
| Hold Set Config    | The configured number of seconds that the hold set timer waits after an event enters a set state or enters a higher threshold set state, depending on the event type.   |  |
| Value In Use       | Yes — The event is currently affecting the in-use priority of some virtual router.  |  |

| Label |
|-------|
|-------|

### **Description (Continued)**

No — The event is not affecting the in-use priority of some virtual router.

# trans to Set The number of times the event has transitioned to one of the 'set' states.

Last Transition The time and date when the operational state of the event last changed.

#### **Sample Output**

```
A:ALA-A#show vrrp policy 1 event port-down
VRRP Policy 1, Event Port Down 1/1/1
Description
                          Applied
Current Priority: None
Current Explicit: None
                            Current Delta Sum : None
Delta Limit : 1
Applied To
                        VR
                           Opr
                                   Base In-use Master Is
                                   Pri
Interface Name
                        Ιd
                                         Pri
                                                Pri
______
                            Down 100 100 0
ies301backup
______
Priority Control Event Port Down 1/1/1
Priority : 30
                             Priority Effect : Delta
Hold Set Config : 0 sec
                             Hold Set Remaining: Expired
Value In Use : No
                             Current State : Cleared
# trans to Set : 6
                             Previous State
                                          : Set-down
Last Transition: 04/13/2007 04:54:35
A:ALA-A#
A:ALA-A# show vrrp policy 1 event host-unreachable
VRRP Policy 1, Event Host Unreachable 10.10.200.252
 ______
Description : 10.10.200.253 reachability
                        Applied
Current Priority: None
                                          · No
Current Explicit: None
                            Current Delta Sum : None
Delta Limit
            VR Opr Base In-use Master Is
Applied To
Interface Name
                       Id
                                   Pri Pri Pri Master
None
Priority Control Event Host Unreachable 10.10.200.252
Priority : 20
Interval : 1 sec
Drop Count : 3
                            Priority Effect : Delta
                            Timeout : 1 sec
Hold Set Config : 0 sec
                            Hold Set Remaining: Expired
```

Value In Use : No Current State : n/a # trans to Set : 0 Previous State : n/a

Last Transition : 04/13/2007 23:10:24

A:ALA-A# show vrrp policy 1 event route-unknown

\_\_\_\_\_\_\_

VRRP Policy 1, Event Route Unknown 10.10.100.0/24

\_\_\_\_\_\_

Description : 10.10.200.253 reachability

Current Priority: None Applied : No Current Explicit: None Current Delta Sum : None

Delta Limit

\_\_\_\_\_\_

Applied To VR Opr Base In-use Master Is Pri Pri Pri Master Interface Name Id \_\_\_\_\_\_

Priority Control Event Route Unknown 10.10.100.0/24

\_\_\_\_\_\_

Priority : 1 Priority Effect : Explicit

Less Specific : No Default Allowed : No

Next Hop(s) : None Protocol(s) : None

Hold Set Config : 0 sec Hold Set Remaining: Expired Value In Use : No Current State : n/a # trans to Set : 0 Previous State : n/a

Last Transition: 04/13/2007 23:10:24

A:ALA-A#

### statistics

**Syntax** statistics

Context show>router>vrrp

**Description** This command displays statistics for VRRP instance.

Output **VRRP Statistics Output** — The following table describes the VRRP statistics output fields.

**Table 8: Show VRRP Statistics Output** 

| Label           | Description                                      |  |
|-----------------|--|--|
| VR Id Errors    | Displays the number of virtual router ID errors. |  |
| Version Errors  | Displays the number of version errors.           |  |
| Checksum Errors | Displays the number of checksum errors.          |  |

### **Sample Output**

A:ALA-48# show router vrrp statistics VRRP Global Statistics

VR Id Errors : 0
Checksum Errors : 0

Version Errors

A:ALA-48#

# **Monitor Commands**

#### instance

Syntax instance interface interface-name vr-id virtual-router-id [ipv6] [interval seconds] [repeat

repeat] [absolute | rate]

Context monitor>router>vrrp

**Description** Monitor statistics for a VRRP instance.

**Parameters** interface-name — The name of the existing IP interface on which VRRP is configured.

**vr-id** *virtual-router-id* — The virtual router ID for the existing IP interface, expressed as a decimal integer.

interval seconds — Configures the interval for each display in seconds.

Default 5 seconds
Values 3 — 60

**repeat** repeat — Configures how many times the command is repeated.

**Default** 10 **Values** 1 — 999

**absolute** — When the **absolute** keyword is specified, the raw statistics are displayed, without processing. No calculations are performed on the delta or rate statistics.

rate — When the rate keyword is specified, the rate-per-second for each statistic is displayed instead of the delta.

**ipv6** — Specifies to monitor IPv6 instances.

### **Sample Output**

```
*A:ALA-A# monitor router vrrp instance interface n2 vr-id 1
        ______
       Monitor statistics for VRRP Instance 1 on interface "n2"
At time t = 0 sec (backers)

Become Master : 1

Adv Sent : 1439

Pri Zero Pkts Sent : 0

Preempt Events : 0

Mesg Intvl Discards : 0

Addr List Discards : 0

Mismatch : 0

Control of the control of the
       ______
        ______
                                                                                                                                                  Master Changes : 1
                                                                                                                                                Adv Received : 0
                                                                                                                                                  Pri Zero Pkts Rcvd: 0
                                                                                                                                                      Preempted Events : 0
                                                                                                                                                      Mesg Intvl Errors : 0
                                                                                                                                                      Addr List Errors : 0
                                                                                                                                                  Auth Failures
                                                                                                                                                    Invalid Pkt Type : 0
      IP TTL Errors : 0
Total Discards : 0
                                                                                                                                                    Pkt Length Errors : 0
       ______
```

\*A:ALA-A#

| *A:ALA-A# monitor router vrrp instance interface n2 vr-id 10 ipv6 |                                       |  |  |  |  |
|---|---------------------------------------|--|--|--|--|
| Monitor statistics for VRRP Instance 10 on interface "n2"         |                                       |  |  |  |  |
| At time t = 0 sec (Base Statistics)                               |                                       |  |  |  |  |
| Master Transitions : 1  | Discontinuity Time: 09/09/2004 01:57* |  |  |  |  |
| Adv Sent : 1365   | Adv Received : 0                      |  |  |  |  |
| Pri Zero Pkts Sent : 0  | Pri Zero Pkts Rcvd: 0                 |  |  |  |  |
| Preempt Events : 0  | Preempted Events : 0                  |  |  |  |  |
| Mesg Intvl Discards : 0   | Mesg Intvl Errors : 0                 |  |  |  |  |
| Total Discards : 0  | Addr List Errors : 0                  |  |  |  |  |
| Auth Failures : 0   | Invalid Pkt Type : 0                  |  |  |  |  |
| IP TTL Errors : 0   | Pkt Length Errors : 0                 |  |  |  |  |
|   |                                       |  |  |  |  |

<sup>\*</sup>A:ALA-A#

# **Clear Commands**

### interface

**Syntax interface** *ip-int-name* [**vrid** *virtual-router-id*]

interface ip-int-name vrid virtual-router-id ipv6

Context clear>router>vrrp

**Description** This command resets VRRP protocol instances on an IP interface.

**Parameters** *ip-int-name* — The IP interface to reset the VRRP protocol instances.

**vrid** *vrid* — Resets the VRRP protocol instance for the specified VRID on the IP interface.

**Default** All VRIDs on the IP interface.

**Values** 1 — 255

ipv6 — Clears IPv6 information for the specified interface.

### statistics

Syntax statistics [policy policy-id]

Context clear>router>vrrp

**Description** This command enables the context to clear and reset VRRP entities.

**Parameters** policy policy-id — Clears statistics for the specified policy.

**Values** 1 — 9999

#### statistics

**Syntax statistics interface** *interface-name* [**vrid** *virtual-router-id*]

statistics

statistics interface interface-name vrid virtual-router-id ipv6

Context clear>router>vrrp

**Description** This command clears statistics for VRRP instances on an IP interface or VRRP priority control poli-

cies.

Parameters interface ip-int-name — Clears the VRRP statistics for all VRRP instances on the specified IP inter-

face.

vrid virtual-router-id — Clears the VRRP statistics for the specified VRRP instance on the IP interface

**Default** All VRRP instances on the IP interface.

**Values** 1 — 255

**policy** [*vrrp-policy-id*] — Clears VRRP statistics for all or the specified VRRP priority control policy.

**Default** All VRRP policies.

**Values** 1 — 9999

**ipv6** — Clears IPv6 statistics for the specified interface.

# **Debug Commands**

#### events

Syntax events

events interface ip-int-name [vrid virtual-router-id] events interface ip-int-name vrid virtual-router-id ipv6

no events

no events interface ip-int-name vrid virtual-router-id ipv6 no events interface ip-int-name [vrid virtual-router-id]

Context debug>router>vrrp

**Description** This command enables debugging for VRRP events.

The **no** form of the command disables debugging.

**Parameters** *ip-int-name* — Displays the specified interface name.

vrid virtual-router-id — Displays the specified VRID.ipv6 — Debugs the specified IPv6 VRRP interface.

# packets

**Syntax** packets interface ip-int-name [vrid virtual-router-id]

packets

no packets interface ip-int-name [vrid virtual-router-id] [ipv6]

no packets

Context debug>router>vrrp

**Description** This command enables debugging for VRRP packets.

The no form of the command disables debugging.

**Parameters** *ip-int-name* — Displays the specified interface name.

**vrid** *virtual-router-id* — Displays the specified VRID.