IP Accounting Configuration Commands

Table of Contents

Chapter 1   IP Accounting Configuration Commands

There are four kinds of IP accounting configuration commands:

- Basic IP Accounting, which this book calls "IP Accounting (Layer 3)"

- IP Accounting Access Control List (ACL)

- IP Accounting MAC Address

- IP Accounting Precedence

1.1   ip accounting output-packets:

Run the following command on a corresponding port:

Router_config_f0/0#ip accounting output-packets <cr>

All flows out of this port then will be put into statistics. You should notice that only forwarded packets will be put into statistics and those flows which are triggered on a router and terminated in this router will not be made statistics of. The following factors will be made statistics of: source IP, destination IP, packet quantity and byte quantity.

To set the number of caches, which will be put into statistics, run the following command:

Router_config#ip accounting-threshold 1024 <cr>

Note: **ip accounting access-violation** and **checkpoint database** share the corresponding caches, so this command affects the number of caches for the three commands. If the caches are used up, the following flows have to be dropped and the dropped packets and bytes will be recorded.

To set the statistics list, run the following command: (all flows will be put into statistics by default)

Router_config#ip accounting-list 1.1.1.0 255.255.255.0 <cr>

To set the **transits** entry, run the following command:

Router_config#ip accounting-transits 512 <cr>

To reduce the statistics hosts, you can set the host statistics list. If the source IP address of a host is not in the statistics list, that is, the **transits** parameter is zero, this host will be dropped; if the source IP address is in the list but the **transits** entries are full, this host will also be dropped.

Router#clear ip accounting <cr>

The cache can be classified into the active database and the checkpoint database. All flows are refreshed in the active entry and the checkpoint entry is used to remove the whole active database in a moment to the checkpoint database to observe what traffic each host has in this moment.

Router#clear ip accounting checkpoint <cr>

To delete the flows in the checkpoint database, run the above-mentioned command. Because the checkpoint entry and the active entry share the caches, the entries in the checkpoint database should be deleted to avoid occupying too much cache.

Router#show ip accounting output-packets <cr>

To show the entries in the active database, run the above-mentioned command. If the cache is used up and all flows are dropped, the following information appears:

Accounting threshold exceeded for xx packets and xx bytes.

Router#show ip accounting checkpoint output-packets <cr>

To show the entries in the checkpoint database, run the above-mentioned command. If the cache is used up and all flows are dropped, the following information appears:

Accounting threshold exceeded for xx packets and xx bytes.

Router# show ip accounting transits <cr>

The transits entries are those entries that do not meet the requirements of the flows in the accounting list.

Router# clear ip accounting transits <cr>

To delete the transits entries, run the above-mentioned command.

1.2   IP accounting access-vilation

Set the following command on a corresponding port:

Router_config_f0/0#ip accounting access-violation <cr>

All flows that are rejected by ACL will be put into statistics. Just as the accounting output packets, the flows can also be classified into the active database and the checkpoint database, in which the source IP, destination IP, byte quantity, packet quantity and ACL name will mainly be included.

Router_config#ip accounting-threshold 1024 <cr>

This command has the same chache as the previous.

Router#show ip accounting access-violation <cr>

The access-violation active entries are shown below:

Router#show ip accounting checkpoint access-violation <cr>

To display the access-violation checkpoint entries, run the above-mentioned command.

Router#clear ip accounting <cr>

To remove the active database of access-violation and output-packets to the checkpoint database, run the above-mentioned command.

Router#clear ip accounting checkpoint <cr>

To delete the checkpoint databases of access-violation and output-packets, run the above-mentioned command.

1.3   ip accounting precedence

Set the following command on a corresponding port:

Router_config_f0/0#ip accounting precedence input <cr>

Aftet the above-mentioned command is run, the priorities of packets that are received from this port will be put into statistics.

Router_config_f0/0#ip accounting precedence output <cr>

If the above-mentioned command is run, the priorities of packets that are transmitted from this port will be put into statistics.

After this command is run, the bytes and packets of 8 priorities are mainly put into statistics, but the IP address and the MAC address will not.

Router#show ip accounting precedence <cr>

To display the priorities on all interfaces, run the above-mentioned command.

Router#show ip accounting precedence interface f0/0 <cr>

To display the priorities on interface f0/0, run the above-mentioned command.

Router#clear ip accounting precedence <cr>

To delete the priorities on all interfaces, run the above-mentioned command.

Router#clear ip accounting precedence interface f0/0 <cr>

To delete the priorities on interface f0/0, run the above-mentioned command.

1.4   ip accounting mac-address

Set the following command on a corresponding port:

Router_config_f0/0#ip accounting mac-address input <cr>

After the above-mentioned command is run, the packets that is received by a port will be put into statistics and their source MAC address will be recorded.

Router_config_f0/0#ip accounting mac-address output <cr>

After the above-mentioned command is run, the packets that is sent by a port will be put into statistics and their destination MAC address will be recorded.

Each interface has 512 entries to record the received packets and another 512 entries to record the transmitted packets.

As to the input packets, their source MAC addresses, byte quantity and packet quantity are mainly recorded; as to the output packets, their destination MAC addresses, byte quantity and packet quantity are mainly recorded. However, the input packets and the output packets have a timestack, which is used to record the time of receiving recent packets.

Router#show ip accounting mac-address <cr>

To display the MAC addresses recorded on all interfaces, run the above-mentioned command.

Router#show ip accounting mac-address interface f0/0

To display the MAC addresses recorded on interface f0/0, run the above-mentioned command.

Router#clear ip accounting mac-address <cr>

To deleted the MAC addresses recorded on all interfaces, run the above-mentioned command.

-5-

Router#clear ip accounting mac-address interface f0/0 <cr>

To deleted the MAC addresses recorded on all interface f0/0, run the above-mentioned command.

Router#show ip accounting interface <cr>

To display all IP accounting information, which is set on all interfaces, run the above-mentioned command.