

Radio Congestion Policy Configuration Mode Commands

The Radio Congestion Policy Configuration Mode provides the commands to configure the parameters to interpret the congestion indications per TCP flow, the congestion sampling time and reporting frequency.

Important In release 20.0, MVG is not supported. Commands in this configuration mode must not be used in release 20.0. For more information, contact your Cisco account representative.

Command Modes

Exec > ACS Configuration > Radio Congestion Policy Configuration

active-charging service *service_name* **> radio-congestion policy** *policy_name*

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-radio-congestion-policy)#`

Important The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

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congestion-level

Configures the congestion values for each congestion level — None, Low, Medium, High, and Extreme.

Product

All

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes

Exec > ACS Configuration > Radio Congestion Policy Configuration

active-charging service *service_name* **> radio-congestion policy** *policy_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-radio-congestion-policy)#
```

Syntax Description

congestion-level low *low_value* **medium** *medium_value* **high** *high_value* **extreme** *extreme_value*
default congestion-level

default

Configures this command with its default setting.

low *low_value*

Specifies the congestion range for low congestion.

low_value must be a number from 1 to 100.

Default: 20

medium *medium_value*

Specifies the congestion range for medium congestion.

medium_value must be a number from 1 to 100.

Default: 40

high *high_value*

Specifies the congestion range for high congestion.

high_value must be a number from 1 to 100.

Default: 60

extreme *extreme_value*

Specifies the congestion range for extreme congestion.

extreme_value must be a number from 1 to 100.

Default: 80

Usage Guidelines

Use this command to configure the congestion values for each congestion level — None, Low, Medium, High, and Extreme. The congestion level values will be reported to the CAE in order to select a video optimization mechanism suitable for subscriber-side network congestion condition. The congestion level range for NO congestion must be less than 10.

Example

The following command configures the values — *10*, *20*, *30* and *40* for Low, Medium, High and Extreme congestion respectively:

```
congestion-level low 10 medium 20 high 30 extreme 40
```

correlation-method

Configures the correlation method used to correlate multiple flows of a subscriber to calculate the congestion level of a subscriber.

Product

All

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes

Exec > ACS Configuration > Radio Congestion Policy Configuration

active-charging service *service_name* **> radio-congestion policy** *policy_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-radio-congestion-policy)#
```

Syntax Description

```
correlation-method { mean | optimistic | pessimistic }
default correlation-method
```

default

Configures this command with its default setting.

Default: **mean**

mean

Configures the mean correlation method. The congestion level is the average across all concurrent TCP flows.

optimistic

Configures the optimistic correlation method. The congestion level is the lowest value indicated across all the concurrent flows.

pessimistic

Configures the pessimistic correlation method. The congestion level is the highest value indicated across all concurrent flows.

Usage Guidelines

Use this command to configure the method used to correlate multiple flows of a subscriber to calculate the congestion level of a subscriber. Each flow will have a congestion level and at the end of each reporting interval, the correlation method will be used to correlate all these flows to arrive at a congestion level for the subscriber.

Example

The following command configures the **optimistic** correlation method:

```
correlation-method optimistic
```

data-loss threshold

Configures the acceptable data loss percentage in the network.

Product

All

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes

Exec > ACS Configuration > Radio Congestion Policy Configuration

active-charging service *service_name* **> radio-congestion policy** *policy_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-radio-congestion-policy)#
```

Syntax Description

data-loss threshold *threshold_value* **weightage** *weightage_value*
default data-loss

default

Configures this command with its default setting.

threshold *threshold_value*

Configures the percentage of packet loss considered as acceptable in the network. This is used to determine the congestion level to be reported.

threshold_value must be a number from 1 to 99.

Default: 1%

weightage *weightage_value*

Configures the data loss weightage to be given to packet loss while calculating the congestion level for a subscriber.

weightage_value must be a number from 0 to 100.

Default: 50

Usage Guidelines

Use this command to configure the acceptable percentage of packet-loss in the network, and the data loss weightage to be given to packet loss while calculating the congestion level for a subscriber. Currently, the minimum value allowed to be configured is 1%. This is required to offset the effects of parameters other than the airlink congestion. The congestion primarily occurs at the airlink, but it is also possible at other places in the flow path. The link monitor cannot distinguish between airlink and congestion at any other point. For example, if 1% packet loss is considered normal in some network and if some flow of a subscriber experiences

a packet loss of 2%, then it will be considered as a sign of congestion. If some flow of a subscriber has a packet loss of 1% or less, then it is not considered as congestion, as it is in the normal range for that network.

Example

The following command sets the packet loss percentage to *1* and the data loss weightage to *50*:

```
data-loss threshold 1 weightage 50
```

do show

Executes all **show** commands while in Configuration mode.

Product All

Privilege Security Administrator, Administrator

Syntax Description

```
do show
```

Usage Guidelines Use this command to run all Exec mode **show** commands while in Configuration mode. It is not necessary to exit the Config mode to run a **show** command.

The pipe character **|** is only available if the command is valid in the Exec mode.



Caution There are some Exec mode **show** commands which are too resource intensive to run from Config mode. These include: **do show support collection**, **do show support details**, **do show support record** and **do show support summary**. If there is a restriction on a specific **show** command, the following error message is displayed:

```
Failure: Cannot execute 'do show support' command from Config mode.
```

end

Exits the current configuration mode and returns to the Exec mode.

Product All

Privilege Security Administrator, Administrator

Syntax Description

```
end
```

Usage Guidelines Use this command to return to the Exec mode.

exit

Exits the current mode and returns to the parent configuration mode.

Product

All

Privilege

Security Administrator, Administrator

Syntax Description

exit

Usage Guidelines

Use this command to return to the parent configuration mode.

reporting-interval

Configures the reporting interval in terms of the number of sampling intervals.

Product

All

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes

Exec > ACS Configuration > Radio Congestion Policy Configuration

active-charging service *service_name* **> radio-congestion policy** *policy_name*

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-radio-congestion-policy)#`

Syntax Description

reporting-interval *interval_value* **min-samples-required** *num_samples*
default reporting-interval

default

Configures this command with its default setting.

reporting-interval *interval_value*

Specifies the reporting interval in seconds.

interval_value must be a number from 1 to 60.

Default: 5 seconds

min-samples-required *num_samples*

Specifies the minimum number of samples required for reporting.

num_samples must be a number from 1 to 60.

Default: 5

Usage Guidelines Use this command to configure the reporting interval in terms of the number of sampling intervals. This indicates after how many sampling intervals, the report must be generated and reported to external entities like PCRF if required.

Example

The following command configures the reporting interval as *10* seconds and *5* samples for a subscriber:

```
reporting-interval 10 min-samples-required 5
```

rtt-samples

Configures RTT (Round Trip Time) samples for base RTT.

Product All

Privilege Security Administrator, Administrator, Operator, Inspector

Command Modes Exec > ACS Configuration > Radio Congestion Policy Configuration

active-charging service *service_name* **> radio-congestion policy** *policy_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-radio-congestion-policy)#
```

Syntax Description

```
rtt-samples min_samples
default rtt-samples
```

default

Configures this command with its default setting.

Default:

min_samples

Specifies the minimum number of RTT samples for base RTT.

min_samples must be a number from 1 to 20.

Usage Guidelines Use this command to configure the minimum number of RTT samples for base RTT.

Example

The following command configures *10* RTT samples:

```
rtt-samples 10
```

rtt-variance

Configures the RTT (Round Trip Time) variance.

Product

MVG

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes

Exec > ACS Configuration > Radio Congestion Policy Configuration

active-charging service *service_name* **> radio-congestion policy** *policy_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-radio-congestion-policy)#
```

Syntax Description

rtt-variance threshold *variance_percent* **weightage** *rtt_weightage*
default rtt-variance

default

Configures this command with its default setting.

rtt-variance threshold *variance_percent*

Specifies the RTT acceptable variance percentage.

variance_percent must be a number from 50 to 500.

Default: 100

weightage *rtt_weightage*

Specifies the weightage to be given to RTT variance while calculating the congestion level of a subscriber.

rtt_weightage must be a number from 0 to 100.

Default: 50

Usage Guidelines

Use this command to configure the RTT variance.

Example

The following command sets the RTT variance threshold to *60*% and weightage to *80*:

```
rtt-variance threshold 60 weightage 80
```

sampling-interval

Configures the sampling interval.

Product

All

Privilege

Security Administrator, Administrator, Operator, Inspector

Command Modes

Exec > ACS Configuration > Radio Congestion Policy Configuration

active-charging service *service_name* **> radio-congestion policy** *policy_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-radio-congestion-policy)#
```

Syntax Description

sampling-interval *sampling_interval*
default sampling-interval

default

Configures this command with its default setting.

Default: 5 seconds

sampling_interval

Specifies the sampling interval, in seconds.

sampling_interval must be a number from 2 to 60.

Usage Guidelines

Use this command to configure the sampling interval. This indicates the interval in seconds at which various TCP parameters are captured to determine the congestion level.

Example

The following command specifies a sampling interval of *20* seconds:

```
sampling-interval 20
```