

## Configuring RED

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Each line module supports a default drop profile and 15 configurable drop profiles. You can configure the default drop profile on all E Series line modules except for the ES2 10G LM.

To configure RED:

1. Create a drop profile and enter Drop Profile Configuration mode.

```
host1(config)#drop-profile internetDropProfile  
host1(config-drop-profile)#
```

You can configure up to 16 drop profiles.

2. Set the average-length exponent, which specifies the exponent used to weight the average queue length over time, controlling WRED responsiveness.

```
host1(config-drop-profile)#average-length-exponent 9
```

- Specifying an average-length exponent enables the RED average queue length computation.
- A higher value smooths out the average and slows WRED reaction to congestion and decongestion, accommodating short bursts without dropping. Too large a value can smooth the average to the point that WRED does not react at all.
- A lower value speeds up WRED reaction. Too low a value can cause overreaction to short bursts, dropping packets unnecessarily.

3. (Optional) Set the minimum and maximum threshold for committed traffic.

```
host1(config-drop-profile)#committed-threshold percent 30 90 4
```

4. (Optional) Set the minimum and maximum threshold for conformed traffic.

```
host1(config-drop-profile)#conformed-threshold percent 25 90 5
```

5. (Optional) Set the minimum and maximum threshold for exceeded traffic.

```
host1(config-drop-profile)#exceeded-threshold percent 20 90 6
```

The thresholds specify a linear relationship between average queue length and drop probability.

You can express thresholds as either percentages of maximum queue size by including the keyword **percent**, or as absolute byte values by omitting the keyword.

- Related Topics**
- Configuring WRED
  - Monitoring RED and WRED
  - average-length-exponent

- committed-threshold
- conformed-threshold
- drop-profile
- exceeded-threshold

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