

## Configuring E1 BERT Properties

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This section discusses BERT properties for the E1 interface specifically. For general information about the JUNOS implementation of the BERT procedure, see Interface Diagnostics.

You can configure an E1 interface or a CE1 or E1 partition on a channelized PIC to execute a bit error rate test (BERT) when the interface receives a request to run this test. You specify the duration of the test and the error rate to include in the bit stream by including the `bert-period` and `bert-error-rate` statements at the `[edit interfaces interface-name e1-options]` hierarchy level:

```
[edit interfaces interface-name e1-options]
bert-error-rate rate;
bert-period seconds;
```

By default, the BERT period is 10 seconds. You can configure the BERT period to last from 1 through 239 seconds on some PICs and from 1 through 240 seconds on other PICs. Standard CE1, standard E1, E1 IQ, and E1 IQE interfaces, and PICs partitioned to CE1 and E1 channels, support an extended BERT period range, up to 86,400 seconds (24 hours), and have a default BERT period value of 240 seconds.



**NOTE:** When configuring E1 and CE1 interfaces on 10-port Channelized E1/T1 IQE PICs, `bert-period` must be set at the `[edit interface ce1-fpc/pic/port]` hierarchy level.

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`rate` is the bit error rate. This can be an integer from 0 through 7, which corresponds to a bit error rate from  $10^{-0}$  (0, which corresponds to no errors) to  $10^{-7}$  (1 error per 10 million bits). The default is 0.

Individual concatenated E1 interfaces do not support the `bert-algorithm` configuration statement. For individual concatenated E1 interfaces, the `bert-algorithm` statement at the `[edit interfaces interface-name e1-options]` hierarchy level is ignored. The algorithm for the E1 BERT procedure is `pseudo-2e15-o151` (pattern is  $2^{15}-1$ , as defined in the CCITT/ITU O.151 standard).

For channelized E1 intelligent queuing (IQ and IQE) interfaces, you can configure the BERT algorithm by including the `bert-algorithm` statement at the `[edit interfaces ce1-fpc/pic/port e1-options]` or `[edit interfaces e1-fpc/pic/port e1-options]` hierarchy level:

```
[edit interfaces ce1-fpc/pic/port e1-options]
bert-algorithm algorithm;
[edit interfaces e1-fpc/pic/port e1-options]
bert-algorithm algorithm;
```

For a list of supported algorithms, enter a ? after the `bert-algorithm` statement; for example:

```
[edit interfaces ce1-0/0/0 e1-options]
user@host# set bert-algorithm ?
```

Possible completions:

pseudo-2e11-o152 Pattern is  $2^{11} - 1$  (per 0.152 standard)

pseudo-2e15-o151 Pattern is  $2^{15} - 1$  (per 0.152 standard)

pseudo-2e20-o151 Pattern is  $2^{20} - 1$  (per 0.151 standard)

pseudo-2e20-o153 Pattern is  $2^{20} - 1$  (per 0.153 standard)