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Linux: How do I find out causes for memory faults?

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[Memory faults](#) ^[1] can occur due to various causes.

You can use memtester command which stress test to find memory subsystem faults. memtester command is an effective userspace tester for stress-testing the memory subsystem. It is very effective at finding intermittent and non-deterministic faults under Linux.

You can run memtester as follows:

memtester MEMORY ITERATIONS

Where,

=> MEMORY: The amount of memory to allocate and test, in megabytes

=> ITERATIONS: Number of loops to iterate through. Default is infinite

memtester's exit code is 0 when everything works properly. Otherwise, it is the logical OR of the following values:

- x01: Error allocating or locking memory, or invocation error
- x02: Error during stuck address test
- x04: Error during one of the other tests

Example

```
$ memtest 5 1
```

Output:

```
memtester version 4.0.5 (32-bit)
Copyright (C) 2005 Charles Cazabon.
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pagesize is 4096
pagesizemask is 0xfffff000
want 5MB (5242880 bytes)
got 5MB (5242880 bytes), trying mlock ...locked.
Loop 1/1:
Stuck Address      : ok
Random Value       : ok
Compare XOR        : ok
Compare SUB        : ok
Compare MUL        : ok
Compare DIV        : ok
Compare OR         : ok
Compare AND        : ok
Sequential Increment: ok
Solid Bits         : ok
Block Sequential   : ok
Checkerboard       : ok
Bit Spread         : ok
Bit Flip           : ok
Walking Ones       : ok
Walking Zeroes     : ok

Done.
```

Display memtester's exit code with following command (it is 0 when everything works properly):

```
$ echo $?
```

Output:

0

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[1] Memory faults: http://en.wikipedia.org/wiki/Page_fault

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