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- verify
- verify filesystem
- verify storage-device

alarm

```
alarm { facility <FACILITY-ALARMS> | memory <MEMORY-ALARMS> | process <PROCESS-ALARMS> } <VALUE>
no alarm { facility <FACILITY-ALARMS> | memory <MEMORY-ALARMS> | process <PROCESS-ALARMS> } <VALUE>
```

<FACILITY-ALARMS> – , (FAN,). :

- fan-speed high – , (0..100), , SNMP trap eltexEnvFanSpeedHigh (). , alarm facility fan-speed low (esr-100/200/1000/1200/1500/1700/3100);
- fan-speed low – , (0..100), , SNMP trap eltexEnvFanSpeedHighOk (). , alarm facility fan-speed high (esr-100/200/1000/1200/1500/1511/1700/3100);
- temperature cpu critical high – , (0..255), , SNMP trap eltexEnvTempCritical (). ;
- temperature cpu critical low – , (0..255), , SNMP trap eltexEnvTempCriticalOk (). , alarm facility temperature cpu critical high, , alarm facility temperature cpu overheat high;
- temperature <sensor> overheat high – , (0..255), , SNMP trap eltexEnvTempOverheat (). , alarm facility temperature <sensor> critical low, , alarm facility temperature <sensor> overheat low;
- temperature <sensor> overheat low – , (0..255), , SNMP trap eltexEnvTempOverheatOk (). , alarm facility temperature <sensor> overheat high;
- temperature <sensor> supercooling high – , (0..255), , SNMP trap eltexEnvTempSupercoolingOk (). , , alarm facility temperature <sensor> supercooling low;
- temperature <sensor> supercooling low – , (0..255), , SNMP trap eltexEnvTempSupercooling (). , , alarm facility temperature <sensor> supercooling high;
- :
 - ESR-10: cpu;
 - ESR-12V: cpu, switch;
 - ESR-12VF/14VF: cpu, switch, sfp;
 - ESR-20/21: cpu;
 - ESR-100/200: cpu, board;
 - ESR-1000/1200/1500/1511/1700: cpu, board, switch, sfp;
 - ESR-3100: cpu, board, sfp, phy.

<MEMORY-ALARMS> – , NAND RAM. :

- free low-watermark flash high – flash , (0..100), , SNMP trap eltexEnvMemoryLowOk (). flash ;
- free low-watermark flash low – flash , (0..100), , SNMP trap eltexEnvMemoryLow (). , alarm memory free low-watermark flash high;
- free low-watermark ram high – RAM , (0..100), , SNMP trap eltexEnvMemoryLowOk (). RAM ;
- free low-watermark ram low – RAM , (0..100), , SNMP trap eltexEnvMemoryLow (). , alarm memory free low-watermark ram high;
- reserve critical flash high – flash , (0..100), , SNMP trap eltexEnvMemoryCriticalLowOk (). , alarm memory free low-watermark flash low, , alarm memory reserve critical flash low;

- reserve critical flash low – flash, (0..100), , SNMP trap eltexEnvMemoryCriticalLow (). , alarm memory reserve critical flash high;
- reserve critical ram high – RAM, (0..100), , SNMP trap eltexEnvMemoryCriticalLowOk (). , alarm memory free low-watermark ram low, , alarm memory reserve critical ram low;
- reserve critical ram low – RAM, (0..100), , SNMP trap eltexEnvMemoryCriticalLow (). , alarm memory reserve critical ram high.

<PROCESS-ALARMS> – , . :

- cpu threshold falling – CPU, (0..100), , SNMP trap eltexEnvCpuLoadHighOk (). , alarm process cpu threshold rising;
- cpu threshold rising – CPU, (0..100), , SNMP trap eltexEnvCpuLoadHigh (). , alarm process cpu threshold falling.

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CONFIG

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```
esr(config)# alarm facility fan-speed high 80
```

clear alarms

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```
clear alarms { inactive | all }
```

inactive – ;

all – .

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ROOT

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```
esr# clear alarms inactive
```

clear ssh host

SSH- .

```
clear ssh host { <ADDR> | <IPV6-ADDR> }
```

<ADDR> – IP-, AAA.BBB.CCC.DDD, [0..255];

<IPV6-ADDR> – IPv6-, X:X:X:X::X, [0..FFFF].

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ROOT

:

```
esr# clear ssh host 192.168.1.1
```

clear storage-device

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```
clear storage-device { usb-dev://<ID> | usb://<USB-NAME> | mmc } <NAME>
```

<ID> - USB-;

<USB-NAME> - USB-. [show storage-devices](#);

mmc - mmc-;

<NAME> - , .

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ROOT

:

```
esr-# clear storage-device usb://BC1E-2E16:/ SOFT
Formatting will erase all data on this device
Do you really want to continue? (y/N): y
Device clear success.
```

configure

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```
configure
configure terminal
```

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ROOT

:

```
esr# configure
esr(config)#
```

do

do (ROOT) .

do <command>

<command> - .

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, .

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```
esr(config)# do show version
Boot version:
  1.0.7.16 (date 18/11/2015 time 13:40:59)
SW version:
  1.0.7 build 17[d9bdbda] (date 21/11/2015 time 18:06:41)
HW version:
  1v7
```

end

(ROOT).

end

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exit

.

ROOT, CLI .

exit

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help

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help

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history size

, . (no) .

history size <SIZE>
no history size

<SIZE> – , [10..1000].

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ROOT

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esr# history size 20

logout

CLI.

logout

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ROOT

CHANGE-EXPIRED-PASSWORD

:

```
esr# logout
```

monitor

```
monitor { <IF> | <TUN> } [ protocol <TYPE> [ source-port <SRC-PORT> ] [ destination-port <DST-PORT> ] [ port <PORT> ] ] [ source-address { <SRC-ADDR> | <SRC-IPV6-ADDR> } ] [ destination-address { <DST-ADDR> | <DST-IPV6-ADDR> } ] [ address { <ADDR> | <IPV6-ADDR> } ] [ packets <VALUE> ] [ detailed ]
```

<IF> - , , ;

<TUN> - , , ;

<SRC-ADDR> - IP- , AAA.BBB.CCC.DDD, [0..255];

<DST-ADDR> - IP- , AAA.BBB.CCC.DDD, [0..255];

<SRC-IPV6-ADDR> - IPv6- , X:X:X:X::X, [0..FFFF];

<DST-IPV6-ADDR> - IPv6- , X:X:X:X::X, [0..FFFF];

<ADDR> - IP- , AAA.BBB.CCC.DDD, [0..255];

<IPV6-ADDR> - IPv6- , X:X:X:X::X, [0..FFFF];

<SRC-MAC> - mac- ethernet-, HH:HH:HH:HH:HH:HH, HH- [0..FF];

<DST-MAC> - mac- ethernet-, HH:HH:HH:HH:HH:HH, HH- [0..FF];

<SRC-MAC> - mac- ethernet-, HH:HH:HH:HH:HH:HH, HH- [0..FF];

<TYPE> - , : tcp, udp, icmp, icmp6, igmp, arp, gre, ipip, esp, ah, eigrp, ospf, pim, vrrp, l2tp, RDP [0..255];

<SRC-PORT> - TCP/UDP-, [1..65535];

<DST-PORT> - TCP/UDP-, [1..65535];

<PORT> - TCP/UDP- , [1..65535];

<VALUE> - , , [1...4294967295];

detailed - .

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ROOT

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```
esr# monitor gigabitethernet 1/0/5 detailed
23:37:44.324049 d8:50:e6:d2:f0:46 > a8:f9:4b:aa:03:a5, ethertype IPv4 (0x0800), length 98: (tos 0x0, ttl
 64, id 50760, offset 0, flags [DF], proto ICMP (1), length 84)
 10.255.100.1 > 10.255.100.5: ICMP echo request, id 11730, seq 19, length 64
```

ping

```
ping [ vrf <VRF> ] { <ADDR> | <IPV6-ADDR> | <HOSTNAME> [ { ip | ipv6 } ] [ ttl <TTL> ] [ packets <COUNT>
| unlimited ] [ size <SIZE> ] [ timeout <TIMEOUT> ] [ interval <INTERVAL> ] [ source { ip { <SRC-ADDR> | <SRC-IPV6-
ADDR> } | interface <IF> | tunnel <TUN> } ] [ data <HEX> ] [ dscp <DSCP> ] [ flood ] [ detailed ] [ strategy
<STRATEGY> ] [ nodeinfo <INFO> ] [ broadcast ]
```

<VRF> – VRF, 31 ;

<ADDR> – IP-, AAA.BBB.CCC.DDD, [0..255];

<IPV6-ADDR> – IPv6-, X:X:X:X::X, [0..FFFF];

<HOSTNAME> – DNS-, 255 ;

- ip – ipv4-;
- ipv6 – ipv6-.

<TTL> – IP-, [1..255], 64;

<COUNT> – [1..4294967295], 5;

<SIZE> – icmp-, [1..65468], 56, 64 ICMP 84 ip-;

<TIMEOUT> – , . , -, RTTs. [1..60], 1 ;

<INTERVAL> – icmp-, [200..60000], 1000.

<SRC-ADDR> – IP-, IP-, AAA.BBB.CCC.DDD, [0..255];

<SRC-IPV6-ADDR> – IPv6-, IPv6-, X:X:X:X::X, [0..FFFF];

<IF> – , , , ;

<TUN> – , , , ;

<HEX> – , , 16 ;

<DSCP> – DSCP- RFC 2474, [0..63], 0;

flood – , , ;

broadcast – ;

detailed – icmp- . - .

<STRATEGY> – , , :

- allow-fragmentation – , DF (don't fragment);
- discovery-pmtu – PMTU (Path MTU), , , ;
- disallow-fragmentation – , .

<INFO> – IPv6. ICMPv6 Node Information Queries (RFC4620), Echo Request :

- name – DNS () ;
- ipv6 – IPv6- ;
- ipv6-global – IPv6- ;
- ipv6-sitelocal – site-local IPv6- ;
- ipv6-linklocal – link-local IPv6- ;
- ipv6-all – unicast IPv6- ;
- ipv4 – IP- ;
- ipv4-all – IP- .

```
esr# ping 192.168.100.39 packets 5 size 1400 detailed
PING 192.168.100.39 (192.168.100.39) 1400(1428) bytes of data.
1408 bytes from 192.168.100.39: icmp_req=1 ttl=64 time=0.084 ms
1408 bytes from 192.168.100.39: icmp_req=2 ttl=64 time=0.053 ms
1408 bytes from 192.168.100.39: icmp_req=3 ttl=64 time=0.082 ms
1408 bytes from 192.168.100.39: icmp_req=4 ttl=64 time=0.051 ms
1408 bytes from 192.168.100.39: icmp_req=5 ttl=64 time=0.075 ms
--- 192.168.100.39 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 3999ms
rtt min/avg/max/mdev = 0.051/0.069/0.084/0.014 ms
esr# ping ipv6 fc00::1
PING fc00::1(fc00::1) 56 data bytes
64 bytes from fc00::1: icmp_seq=1 ttl=64 time=0.379 ms
64 bytes from fc00::1: icmp_seq=2 ttl=64 time=0.161 ms
--- fc00::1 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1000ms
rtt min/avg/max/mdev = 0.161/0.270/0.379/0.109 ms
```

reload system

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reload system

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ROOT

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```
esr# reload system
```

show alarms brief

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show alarms brief

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ROOT

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```
esr# show alarms brief
```

```
History Alarms
~~~~~
Severity  Group          Set time          Clear time        Description
-----
major     environment    03/31/00 17:27:38  03/31/00 17:31:53  Reserve Power Supply Fault
```

show alarms brief active

() .

```
show alarms brief active
```

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ROOT

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```
esr# show alarms brief active
History Alarms
~~~~~
Severity  Group          Set time          Clear time        Description
-----
notify     environment    03/31/00 16:47:05  -                  Reserve Power Supply removed
```

show alarm settings

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```
show alarm settings <TYPE>
```

<TYPE>- :

- facility - , (FAN,);
- memory - , NAND RAM;
- process - , ;

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ROOT

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```
esr# show alarm facility
fan-speed:
  high:      80
  low:       75
temperature CPU:
  critical high:  95
  critical low:   92
  overheat high:  80
  overheat low:   78
  supercooling high: -12
  supercooling low: -15
temperature sensor1:
  overheat high:  60
  overheat low:   57
  supercooling high: -12
  supercooling low: -15
temperature sensor2:
  overheat high:  60
  overheat low:   57
  supercooling high: -12
  supercooling low: -15
temperature sensor3:
  overheat high:  60
  overheat low:   57
  supercooling high: -12
  supercooling low: -15
```

show history

, .

show history [size | <NUM>]

size - , .

<NUM> - , [0..100]

0. .

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ROOT

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```
esr# show history
1  enable
2  show history
3  configure
4  service nat
5  service nat source
6  exit
7  show history
```

ssh

SSH.

```
ssh [ vrf <VRF> ] <USERNAME> { <ADDR> | <IPv6-ADDR> | <HOSTNAME> } [ port <PORT> ] [ version <VERSION> ] [ source { <SRC-ADDR> | <SRC-IPv6-ADDR> } ] [ dscp <DSCP> ]
```

<VRF> – VRF, 31 .

<USERNAME> – , 31 .

<ADDR> – IP-, AAA.BBB.CCC.DDD, [0..255].

<IPv6-ADDR> – IPv6-, X:X:X:X::X, [0..FFFF].

<HOSTNAME> – DNS-, 253 .

<PORT> – TCP-, SSH-, [1..65535]. 22.

<VERSION> – SSH-, [1..2]. 1.

<SRC-ADDR> – IP-, IP-, AAA.BBB.CCC.DDD, [0..255].

<SRC-IPv6-ADDR> – IPv6-, IPv6-, X:X:X:X::X, [0..FFFF].

<DSCP> – DSCP- RFC 2474, [0..63], 0.

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ROOT

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```
esr# ssh tester 10.100.100.1
The authenticity of host '10.100.100.1 (10.100.100.1)' can't be established.
ECDSA key fingerprint is db:e4:0a:93:59:87:7d:9f:90:5c:19:a3:e7:97:ec:d5.
Are you sure you want to continue connecting (yes/no)? yes
%AAA-I-SSH: Warning: Permanently added '10.100.100.1' (ECDSA) to the list of known hosts.
tester@10.100.100.1's password:
Welcome to Ubuntu 14.04.2 LTS (GNU/Linux 3.13.0-51-generic x86_64)
 * Documentation:  https://help.ubuntu.com/
   System information as of Mon May 25 09:25:10 NOVT 2015
Last login: Tue May 12 19:39:11 2015
(teste@kubuntu ~) $
```

telnet

Telnet.

```
telnet [ vrf <VRF> ] { <ADDR> | <IPv6-ADDR> | <HOSTNAME> } [ port <PORT> ] [ source { <SRC-ADDR> | <SRC-IPv6-ADDR> } ] [ dscp <DSCP> ]
```

<VRF> – VRF, 31 ;

<ADDR> – IP-, AAA.BBB.CCC.DDD, [0..255];

<IPv6-ADDR> – IPv6-, X:X:X:X::X, [0..FFFF];

<HOSTNAME> – DNS-, 253 ;

<PORT> – TCP-, SSH-, [1..65535], 23;

<SRC-ADDR> – IP-, IP-, AAA.BBB.CCC.DDD, [0..255];
<SRC-IPV6-ADDR> – IPv6-, IPv6-, X:X:X:X::X, [0..FFFF];
<DSCP> – DSCP- RFC 2474, [0..63], 0.

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ROOT

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```
esr# telnet 10.100.100.1
Entering character mode
Escape character is '^]'.
Ubuntu 14.04.2 LTS
kubuntu login: tester
Password:
Last login: Mon May 25 15:23:06 NOVT 2015 from sw31-1.eltex.loc on pts/16
Welcome to Ubuntu 14.04.2 LTS (GNU/Linux 3.13.0-51-generic x86_64)
 * Documentation:  https://help.ubuntu.com/
System information as of Mon May 25 15:23:01 NOVT 2015
(teste@kubuntu ~) $
```

terminal datadump

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[no] terminal datadump

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ROOT

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```
esr# terminal datadump
```

terminal resize

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terminal resize

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ROOT

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```
esr# terminal resize
```

traceroute

```
traceroute [ vrf <VRF> ] { <ADDR> | | <IPV6-ADDR> | <HOSTNAME> [ { ip | ipv6 } ] } [ first-ttl <FIRST-TTL> ] [
max-ttl <MAX-TTL> ] [ timeout <TIMEOUT> ] [ source { ip { <SRC-ADDR> | <SRC-IPV6-ADDR> } | interface <IF> |
tunnel <TUN> } ] [ dscp <DSCP> ] [ protocol { icmp | udp [ <PORT> ] | tcp [ <PORT> ] } ] [ gateway { <GW-ADDR> |
<GW-IPV6-ADDR> } ]
```

<VRF> – VRF, 31;

<ADDR> – IP-, AAA.BBB.CCC.DDD, [0..255];

<IPV6-ADDR> – IPv6-, X:X:X:X::X, [0..FFFF];

<HOSTNAME> – DNS-, 255;

- ip – ipv4-;
- ipv6 – ipv6-.

<FIRST-TTL> – IP-, , [1..255], 1;

<MAX-TTL> – IP-, , [1..255], 30;

<TIMEOUT> – , . , -, RTTs. [1..60], 5;

<SRC-ADDR> – IP-, IP-, AAA.BBB.CCC.DDD, [0..255];

<SRC-IPV6-ADDR> – IPv6-, IPv6-, X:X:X:X::X, [0..FFFF];

<IF> – , , , ;

<TUN> – , , , ;

<DSCP> – DSCP- RFC 2474, [0..63], 0;

<PORT> – TCP/UDP-, [1..65535], 53 UDP 80 TCP;

<GW-ADDR> – IP-, AAA.BBB.CCC.DDD, [0..255]. IP source routing, , . ;

<GWIPV6-ADDR> – IPv6-, X:X:X:X::X, [0..FFFF]. IP source routing, , . .

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ROOT

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```
esr# traceroute 192.168.27.128
traceroute to 192.168.27.128 (192.168.27.128), 30 hops max, 60 byte packets
 1 192.168.16.1 (192.168.16.1) 1.240 ms 1.546 ms 1.883 ms
 2 192.168.27.128 (192.168.27.128) 0.451 ms 0.437 ms 0.411 ms
```

uptime

..

uptime

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ROOT

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```
esr# uptime
System uptime:      26 minutes and 35 seconds
```

verify

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verify <ALGORITHM> <FILE>

<ALGORITHM> – , [md5, sha2-256, sha2-512].

<FILE> – , :

- usb://usb_name:/PATH
- mmc://mmc_name:/PATH (esr-10)
- system:candidate-config
- system:running-config
- system:factory-config
- system:default-config
- system:firmware-image-1
- system:firmware-image-2
- system:boot-1
- system:boot-2
- flash:critlog/FILE
- flash:syslog/FILE
- flash:data/FILE
- tmpsys:syslog/FILE

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ROOT

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```
esr# verify md5 system:firmware-image-1
system:firmware-image-1 16ef38a292e96ce972e910da6db2d1f4
```

verify filesystem

- . -.

```
verify filesystem [detailed]
```

detailed – .

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ROOT

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```
esr# verify filesystem
Total:          2949
Success:        2949
Changed:         0
Deleted:         0

Filesystem verification success.
```

verify storage-device

```
verify storage-device { usb-dev://<ID> | usb://<USB-NAME> | mmc }
```

<ID> – USB- ;

<USB-NAME> – USB-. [show storage-devices](#);

mmc – mmc-.

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ROOT

:

```
esr# verify storage-device usb://BC1E-2E16
Device verify
Do you really want to continue? (y/N): y
CP437: Invalid argument
fsck.fat 4.0 (2016-05-06)
/dev/sda2: 14 files, 63908/255496 clusters
Device verification success.
```