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  -
- AAA
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- **shutdown.** CLI.
- (NTP). NTP NTP . NTP CLI.
- NTP broadcast client, .
- **ip firewall disable,** . . Firewall . Firewall CLI.

« Syslog» .

SYSLOG CLI.

- syslog syslog-.
- syslog- .
- syslog- .
- syslog.
- timestamp msec syslog- ESR-1500 ESR-1511.

- **tmpsys:syslog** . .
- **flash:syslog** , ESR.

:

info syslog syslog-. 512 . 3- . syslog.

:

syslog- :

```
esr(config)# syslog file tmpsys:syslog/default info
```

:

```
esr(config)# syslog max-files 3
esr(config)# syslog file-size 512
```

:

```
esr(config)# syslog host mylog 192.168.1.2 info udp 514
```

syslog:

```
esr(config)# syslog sequence-numbers
```

.

AAA CLI.

- admin.
- , , .
- 8 .
- , .

:

- , 1 12 .
- 16 , — 64 .
- 3 , 5 , 4 2 . 4 .

:

admin:

```
esr(config)# security passwords default-expered
```

30 12 :

```
esr(config)# security passwords lifetime 30
esr(config)# security passwords history 12
```

:

```
esr(config)# security passwords min-length 16
esr(config)# security passwords max-length 64
```

:

```
esr(config)# security passwords upper-case 3
esr(config)# security passwords lower-case 5
esr(config)# security passwords special-case 2
esr(config)# security passwords numeric-count 4
esr(config)# security passwords symbol-types 4
```

AAA

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AAA CLI.

- .
- .

- .
- , . RADIUS/TACACS/LDAP .
- **admin** 1.
- .
- AAA.

- admin .
- **no username admin** **admin**, . **admin** .
- **no password admin** **admin**, . **admin** ‘password'.
- admin 15 ENABLE-.

:

AAA:

- SSH RADIUS.
- RADIUS, RADIUS- .
- ENABLE- RADIUS, RADIUS- ENABLE-.
- admin .
- .
- .
- .

:

local-operator 8:

```
esr(config)# username local-operator
esr(config-user)# password Pa$$w0rd1
esr(config-user)# privilege 8
esr(config-user)# exit
```

ENABLE-:

```
esr(config)# enable password $6e5c4r3e2t!
```

admin:

```
esr(config)# username admin
esr(config-user)# privilege 1
esr(config-user)# exit
```

RADIUS-, 192.168.1.11 192.168.2.12:

```
esr(config)# radius-server host 192.168.1.11
esr(config-radius-server)# key ascii-text encrypted 8CB5107EA7005AFF
esr(config-radius-server)# priority 100 esr(config-radius-server)# exit
esr(config)# radius-server host 192.168.2.12
esr(config-radius-server)# key ascii-text encrypted 8CB5107EA7005AFF
esr(config-radius-server)# priority 150
esr(config-radius-server)# exit
```

:

```
esr(config)# aaa authentication login CONSOLE radius local
esr(config)# aaa authentication login SSH radius
esr(config)# aaa authentication enable default radius enable
esr(config)# aaa authentication mode break
esr(config)# line console
esr(config-line-console)# login authentication CONSOLE
esr(config-line-console)# exit esr(config)# line ssh
esr(config-line-ssh)# login authentication SSH
esr(config-line-ssh)# exit
```

:

```
esr(config)# logging userinfo
esr(config)# logging aaa
esr(config)# syslog cli-commands
```

SSH, Telnet CLI.

- telnet.
- sha2-512 .
- aes256ctr .
- dh-group-exchange-sha256 .
- Host-Key SSH rsa .
- ip-.
- .

:

telnet. . .

:

telnet:

```
esr(config)# no ip telnet server
```

:

```
esr(config)# ip ssh server
esr(config)# ip ssh authentication algorithm md5 disable
esr(config)# ip ssh authentication algorithm md5-96 disable
esr(config)# ip ssh authentication algorithm ripemd160 disable
esr(config)# ip ssh authentication algorithm sha1 disable
esr(config)# ip ssh authentication algorithm sha1-96 disable
esr(config)# ip ssh authentication algorithm sha2-256 disable
esr(config)# ip ssh encryption algorithm 3des disable
esr(config)# ip ssh encryption algorithm aes128 disable
esr(config)# ip ssh encryption algorithm aes128ctr disable
esr(config)# ip ssh encryption algorithm aes192 disable
esr(config)# ip ssh encryption algorithm aes192ctr disable
esr(config)# ip ssh encryption algorithm aes256 disable
esr(config)# ip ssh encryption algorithm arcfour disable
esr(config)# ip ssh encryption algorithm arcfour128 disable
esr(config)# ip ssh encryption algorithm arcfour256 disable
esr(config)# ip ssh encryption algorithm blowfish disable
esr(config)# ip ssh encryption algorithm cast128 disable
esr(config)# ip ssh key-exchange algorithm dh-group-exchange-sha1 disable
esr(config)# ip ssh key-exchange algorithm dh-group1-sha1 disable
esr(config)# ip ssh key-exchange algorithm dh-group14-sha1 disable
esr(config)# ip ssh key-exchange algorithm ecdh-sha2-nistp256 disable
esr(config)# ip ssh key-exchange algorithm ecdh-sha2-nistp384 disable
esr(config)# ip ssh key-exchange algorithm ecdh-sha2-nistp521 disable
esr(config)# ip ssh host-key algorithm dsa disable
esr(config)# ip ssh host-key algorithm ecdsa256 disable
esr(config)# ip ssh host-key algorithm ecdsa384 disable
esr(config)# ip ssh host-key algorithm ecdsa521 disable
esr(config)# ip ssh host-key algorithm ed25519 disable
```

:

```
esr# update ssh-host-key rsa
esr# update ssh-host-key rsa 2048
```

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CLI.

- ip spoofing.
- TCP- .
- TCP- SYN.
- ICMP-.
- ICMP- .
- ip-.
- .

:

.

:

ip spoofing :

```
esr(config)# ip firewall screen spy-blocking spoofing
esr(config)# logging firewall screen spy-blocking spoofing
```

TCP- :

```
esr(config)# ip firewall screen spy-blocking syn-fin
esr(config)# logging firewall screen spy-blocking syn-fin
esr(config)# ip firewall screen spy-blocking fin-no-ack
esr(config)# logging firewall screen spy-blocking fin-no-ack
esr(config)# ip firewall screen spy-blocking tcp-no-flag
esr(config)# logging firewall screen spy-blocking tcp-no-flag
esr(config)# ip firewall screen spy-blocking tcp-all-flags
esr(config)# logging firewall screen spy-blocking tcp-all-flags
```

ICMP- :

```
esr(config)# ip firewall screen suspicious-packets icmp-fragment
esr(config)# logging firewall screen suspicious-packets icmp-fragment
```

ICMP- :

```
esr(config)# ip firewall screen suspicious-packets large-icmp
esr(config)# logging firewall screen suspicious-packets large-icmp
```

ip- :

```
esr(config)# ip firewall screen suspicious-packets unknown-protocols
esr(config)# logging firewall screen suspicious-packets unknown-protocols
```