Cisco forest

Switches and routers

- Cisco ASA5505
  - Firmware upgrade
  - Backup and restore configuration using Trivial File Transfer Protocol (TFTP)
  - Backup and restore configuration using Secure SHell (SSH)
  - Restore factory settings ASA5505 aka reset

Cisco ASA5505

Cisco ASA5505

Firmware upgrade

Login into ASA (SSH or serial port)

Provide 'enable' password

```
enable
```

Prepare files on TFTP server.

```
ping 192.168.74.128
copy tftp: disk0:
dir
```

Perform change of booting image

```
show version
configure terminal
dir

show bootvar
no boot system disk0:/asa845-k8.bin
boot system disk0:/asa917-32-k8.bin

exit
write memory
show run | include boot
show bootvar

reload

show version
```

Cisco ASA5505

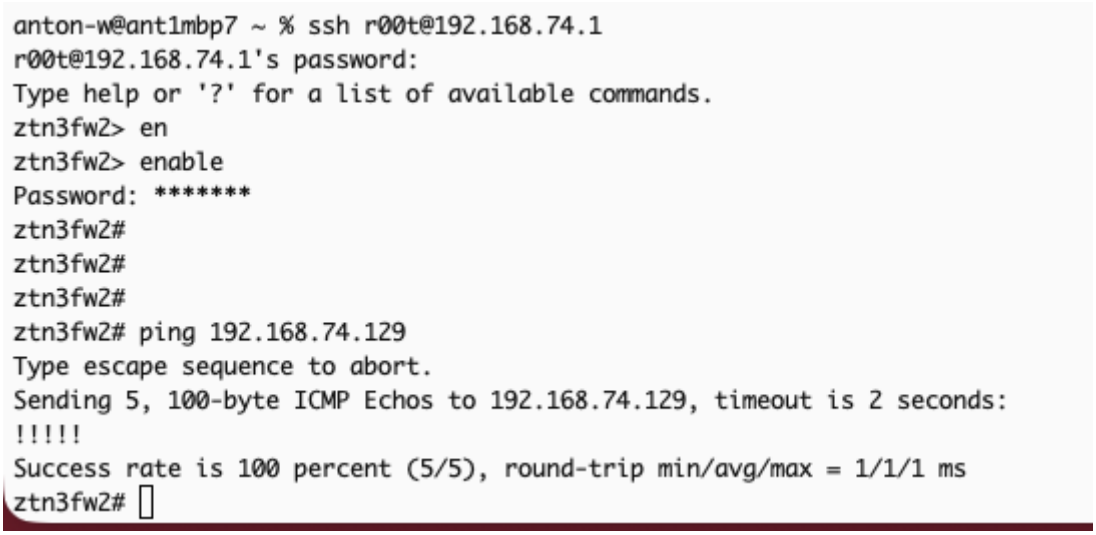
Backup and restore configuration using Trivial File Transfer Protocol (TFTP)

Run tftp server (pumkin on tftpd)

Ensure tftp server is listening

```
ping 192.168.74.129
```

Backup (from ASA)




```
copy running-config tftp://192.168.74.129
```

```
ztn3fw2# copy running-config tftp:192.168.74.129

Source filename [running-config]?

Address or name of remote host []?

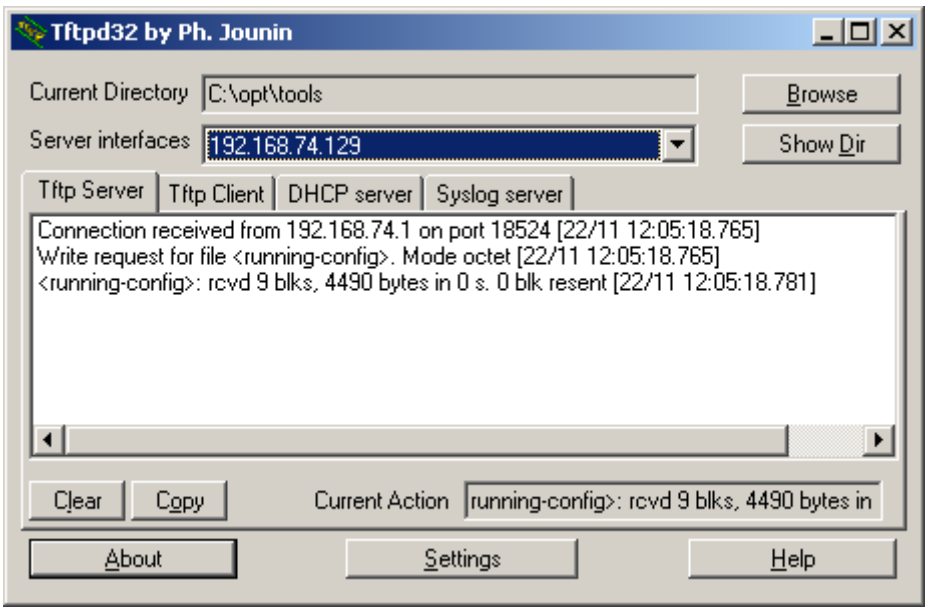
?Host name or address not specified
%Error parsing filename (Invalid argument)
ztn3fw2# copy running-config tftp://192.168.74.129

Source filename [running-config]?

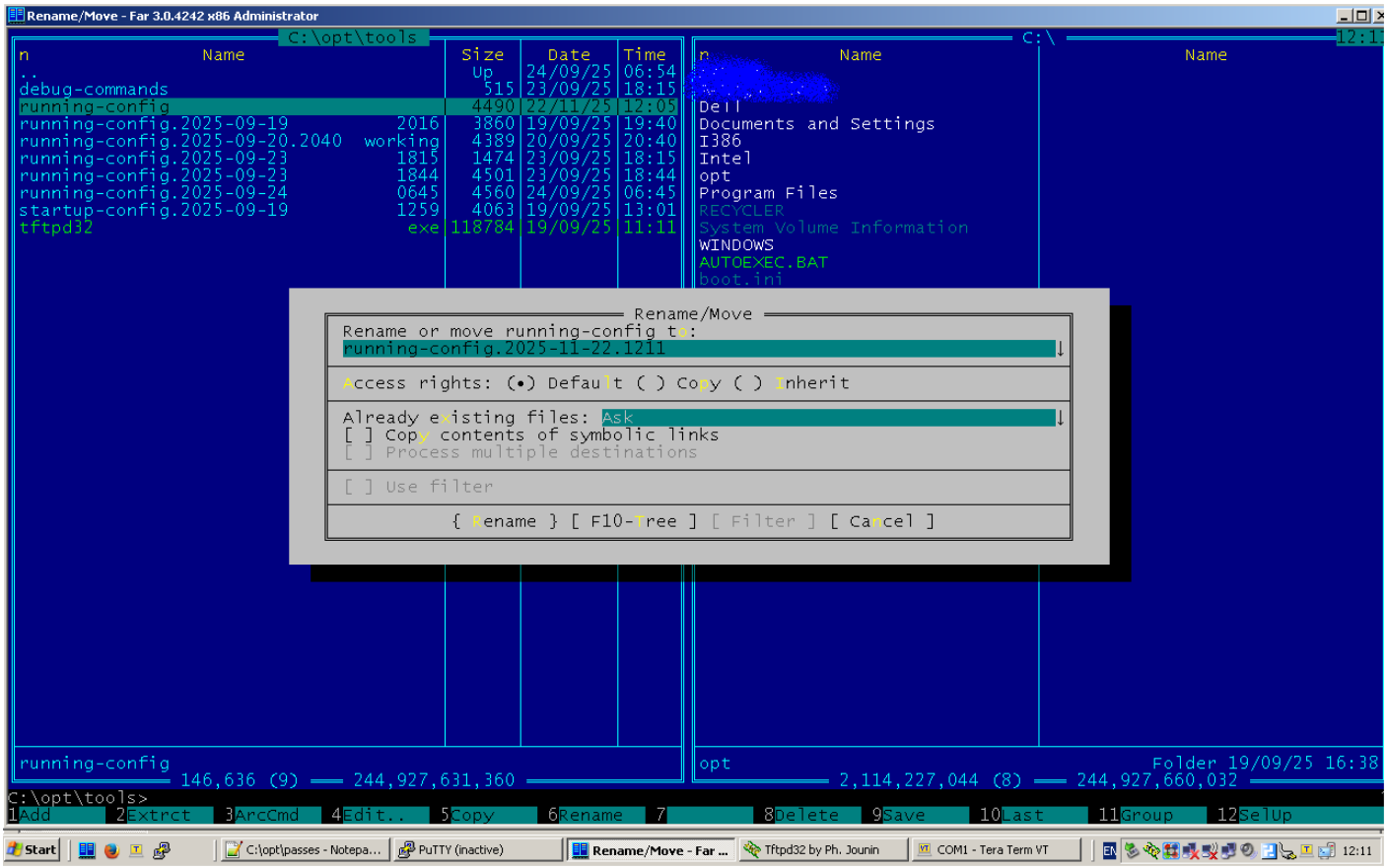
Address or name of remote host [192.168.74.129]?

Destination filename [running-config]?
Cryptochecksum: 774f2691 301533d8 c6aa28b0 8ab66fb4
!!
4490 bytes copied in 1.120 secs (4490 bytes/sec)
ztn3fw2#
```

On the server side:



Rename config.



Restore (to ASA)

- ensure the correct name of config exists before pulling it from target.
- configuration will be applied immedeately (otherwise, use 'startup-config' as a destination file)

```
copy tftp://192.168.74.129/running-config.2025-09-20.2040.working running-config
```

```
ztn3fw2# copy tftp://192.168.74.129/running-config.2025-09-20.2040.working run$

Address or name of remote host [192.168.74.129]?

Source filename [running-config.2025-09-20.2040.working]?

Destination filename [running-config]?

Accessing tftp://192.168.74.129/running-config.2025-09-20.2040.working...!!
!!
Connection to 192.168.74.1 closed by remote host.
Connection to 192.168.74.1 closed.
anton-w@ant1mbp7 ~ %
```

Login and overwrite startup config, reboot if needed.

wr m

reload

Cisco ASA5505

Backup and restore configuration using Secure SHell (SSH)

scp must be enabled

```
enable
conf t
ssh enable scopy
```

dump running-config into file

```
copy running-config flash:/running-config
dir
```

SSH weak algorithms and ciphers need to be enabled

```
vi ~/.ssh/config
```

config

```
Host 192.168.74.1
    KexAlgorithms +diffie-hellman-group14-sha1
    HostKeyAlgorithms +ssh-rsa
    Ciphers +aes256-cbc
```

Pull config (-O tells to use legacy SCP protocol instead of SFTP)

```
scp -O r00t@192.168.74.1:running-config .
ls -la
```

```
anton-w@ant1mbp7 tftp % scp -O r00t@192.168.74.1:running-config .
r00t@192.168.74.1's password:
running-config                                                                                100% 4567    59.6KB/s   00:00
anton-w@ant1mbp7 tftp % ls -la
total 16
drwxr-xr-x@ 3 anton-w  staff    96 Nov 22 18:52 .
drwxr-xr-x@ 5 anton-w  staff   160 Nov 22 16:40 ..
-rw-r--r--@ 1 anton-w  staff  4567 Nov 22 18:52 running-config
anton-w@ant1mbp7 tftp %
```

Rename config for archive

TODO

Restore

Push config

TODO

Cisco ASA5505

Restore factory settings ASA5505 aka reset

Connect console cable.

Switch off the device.

While turning it on, press ESC to access ROMMON.

Execute command to skip startup-condif

```
confreg 0x41
boot
```

```
CISCO SYSTEMS
Embedded BIOS Version 1.0(12)13 08/28/08 15:50:37.45

Low Memory: 632 KB
High Memory: 507 MB
PCI Device Table.
Bus Dev Func VendID DevID Class              Irq
 00  01  00   1022   2080  Host Bridge
 00  01  02   1022   2082  Chipset En/Decrypt 11
 00  0C  00   1148   4320  Ethernet           11
 00  0D  00   177D   0003  Network En/Decrypt 10
 00  0F  00   1022   2090  ISA Bridge
 00  0F  02   1022   2092  IDE Controller
 00  0F  03   1022   2093  Audio              10
 00  0F  04   1022   2094  Serial Bus         9
 00  0F  05   1022   2095  Serial Bus         9

Evaluating BIOS Options ...
Launch BIOS Extension to setup ROMMON

Cisco Systems ROMMON Version (1.0(12)13) #0: Thu Aug 28 15:55:27 PDT 2008

Platform ASA5505

Use BREAK or ESC to interrupt boot.
Use SPACE to begin boot immediately.
Boot interrupted.

Ethernet0/0
MAC Address: c[redacted]
Link is UP

Use ? for help.
rommon #0> confreg 0x41

Update Config Register (0x41) in NVRAM...

rommon #1> boot
Launching BootLoader...
Default configuration file contains 1 entry.

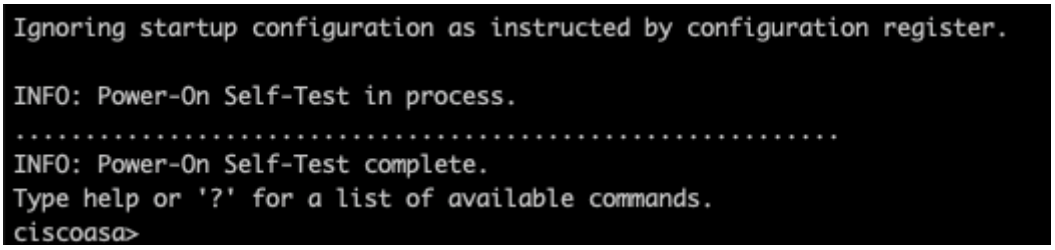
Searching / for images to boot.

Loading /asa924-33-k8.bin... Booting...
Platform ASA5505

Loading...
IO memory blocks requested from bigphys 32bit: 10033
dosfsck 2.11, 12 Mar 2005, FAT32, LFN
Starting check/repair pass.
Starting verification pass.
/dev/hda1: 112 files, 13161/31033 clusters
dosfsck(/dev/hda1) returned 0
Processor memory 331350016, Reserved memory: 68157440

Total SSMs found: 0
```

booting



Once loaded, elevate privileges and return register

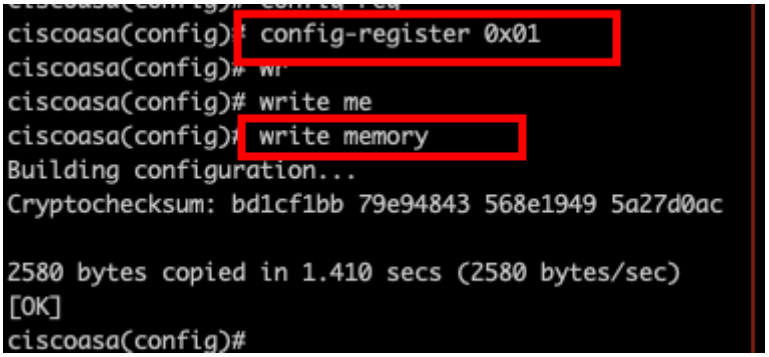
```
enable
configure terminal
congigure factory-defaults
```

```
ciscoasa(config)# configure factory-default

WARNING: The boot system configuration will be cleared.
The first image found in disk0:/ will be used to boot the
system on the next reload.
Verify there is a valid image on disk0:/ or the system will
not boot.

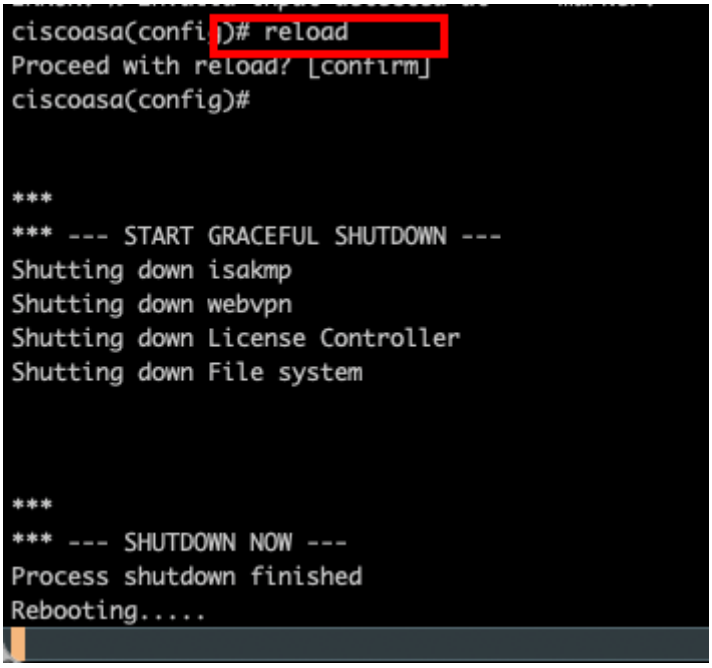
Begin to apply factory-default configuration:
Clear all configuration
Executing command: interface Ethernet 0/0
Executing command: switchport access vlan 2
Executing command: no shutdown
Executing command: exit
Executing command: interface Ethernet 0/1
Executing command: switchport access vlan 1
Executing command: no shutdown
Executing command: exit
Executing command: interface Ethernet 0/2
Executing command: switchport access vlan 1
Executing command: no shutdown
Executing command: exit
Executing command: interface Ethernet 0/3
Executing command: switchport access vlan 1
Executing command: no shutdown
Executing command: exit
Executing command: interface Ethernet 0/4
Executing command: switchport access vlan 1
Executing command: no shutdown
Executing command: exit
Executing command: interface Ethernet 0/5
Executing command: switchport access vlan 1
Executing command: no shutdown
Executing command: exit
Executing command: interface Ethernet 0/6
Executing command: switchport access vlan 1
Executing command: no shutdown
Executing command: exit
Executing command: interface Ethernet 0/7
Executing command: switchport access vlan 1
Executing command: no shutdown
Executing command: exit
Executing command: interface vlan2
Executing command: nameif outside
INFO: Security level for "outside" set to 0 by default.
Executing command: no shutdown
Executing command: ip address dhcp setroute
Executing command: exit
Executing command: interface vlan1
Executing command: nameif inside
INFO: Security level for "inside" set to 100 by default.
Executing command: ip address 192.168.1.1 255.255.255.0
Executing command: security-level 100
Executing command: allow-ssc-mgmt
ERROR: SSC card is not available
Executing command: no shutdown
Executing command: exit
Executing command: object network obj_any
Executing command: subnet 0.0.0.0 0.0.0.0
Executing command: nat (inside,outside) dynamic interface
Executing command: exit
Executing command: http server enable
Executing command: http 192.168.1.0 255.255.255.0 inside
```

```
config-register 0x01
write memory
```



reboot

```
reload
```



```
Help to improve the ASA platform by enabling anonymous reporting,
which allows Cisco to securely receive minimal error and health
information from the device. To learn more about this feature,
please visit: http://www.cisco.com/go/smartcall

Would you like to enable anonymous error reporting to help improve
the product? [Y]es, [N]o, [A]sk later: n

In the future, if you would like to enable this feature,
issue the command "call-home reporting anonymous".

Please remember to save your configuration.

ciscoasa(config)#
ciscoasa(config)#
```

Next boot