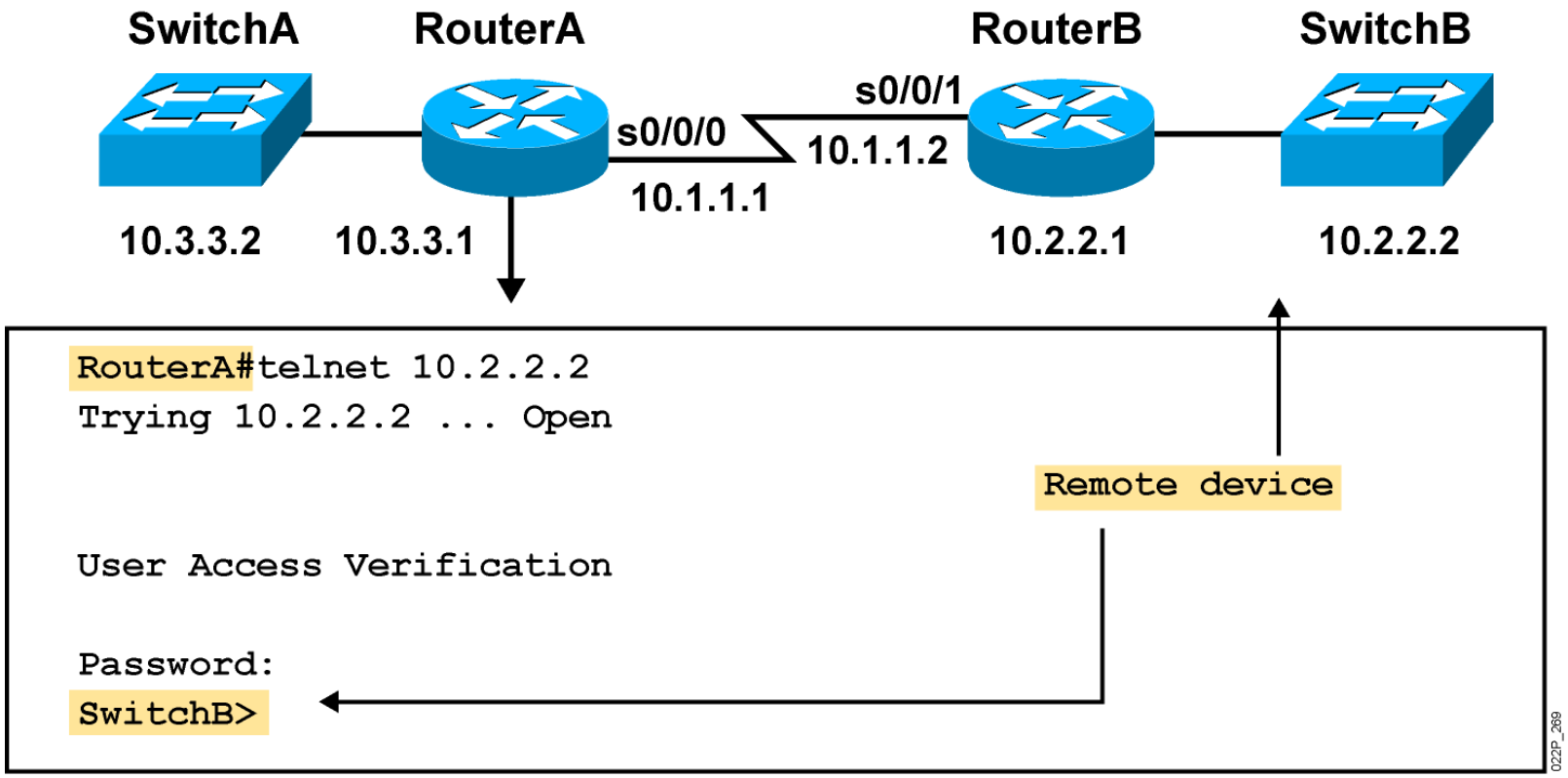
Accessing Remote Devices

Telnet

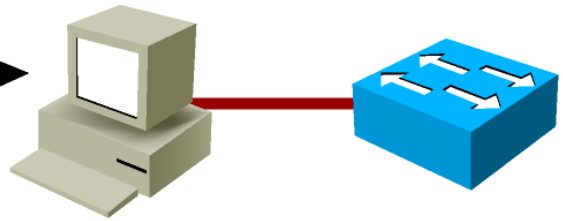
Using Telnet to Connect to Remote Devices



Configuring Telnet

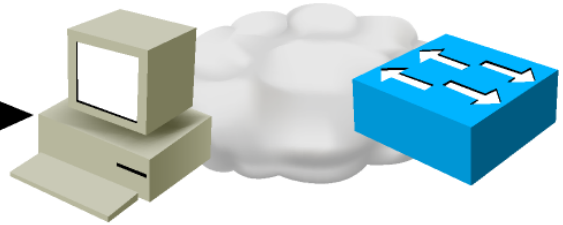
Console Password

```
SwitchX(config)#line console 0
SwitchX(config-line)#login
SwitchX(config-line)#password cisco
```



Virtual Terminal Password

```
SwitchX(config)#line vty 0 4
SwitchX(config-line)#login
SwitchX(config-line)#password sanjose
```



Enable Password

```
SwitchX(config)#enable password cisco
```

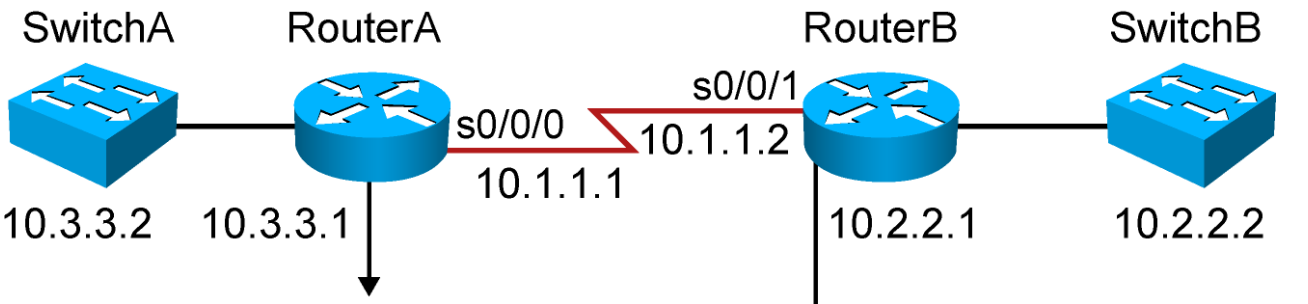
Secret Password

```
SwitchX(config)#enable secret sanfran
```

Service Password-Encryption Commands

```
SwitchX(config)#service password-encryption
SwitchX(config)#no service password-encryption
```

Viewing Telnet Connections

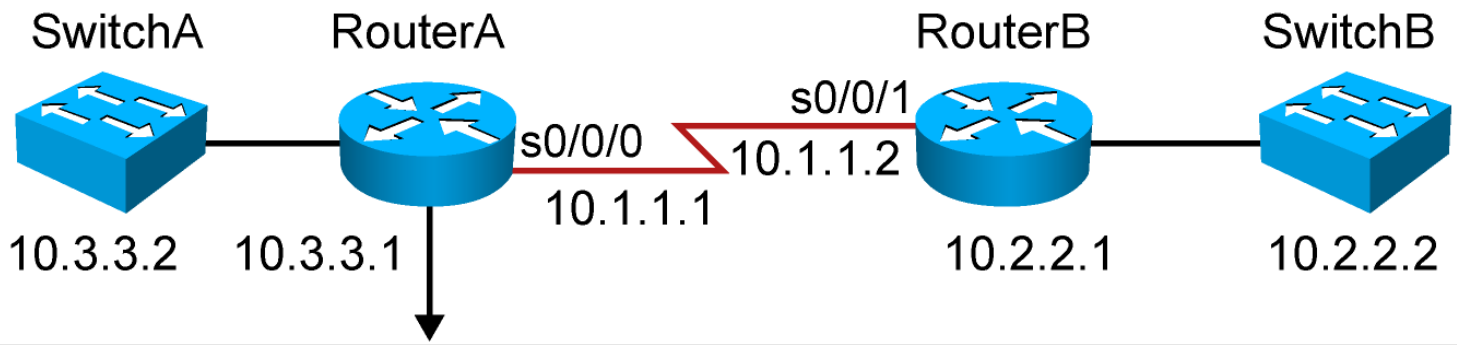



```
RouterA#show sessions
Conn  Host            Address         Byte    Idle  Conn Name
*  1  10.1.1.2        10.1.1.2        0       0     10.1.1.2
```

```
RouterB#show users
     Line         User      Host(s)          Idle       Location
*   0 con 0                 idle             1w0d
    11 vty 0                idle          00:00:09      10.1.1.1
```

301P_270

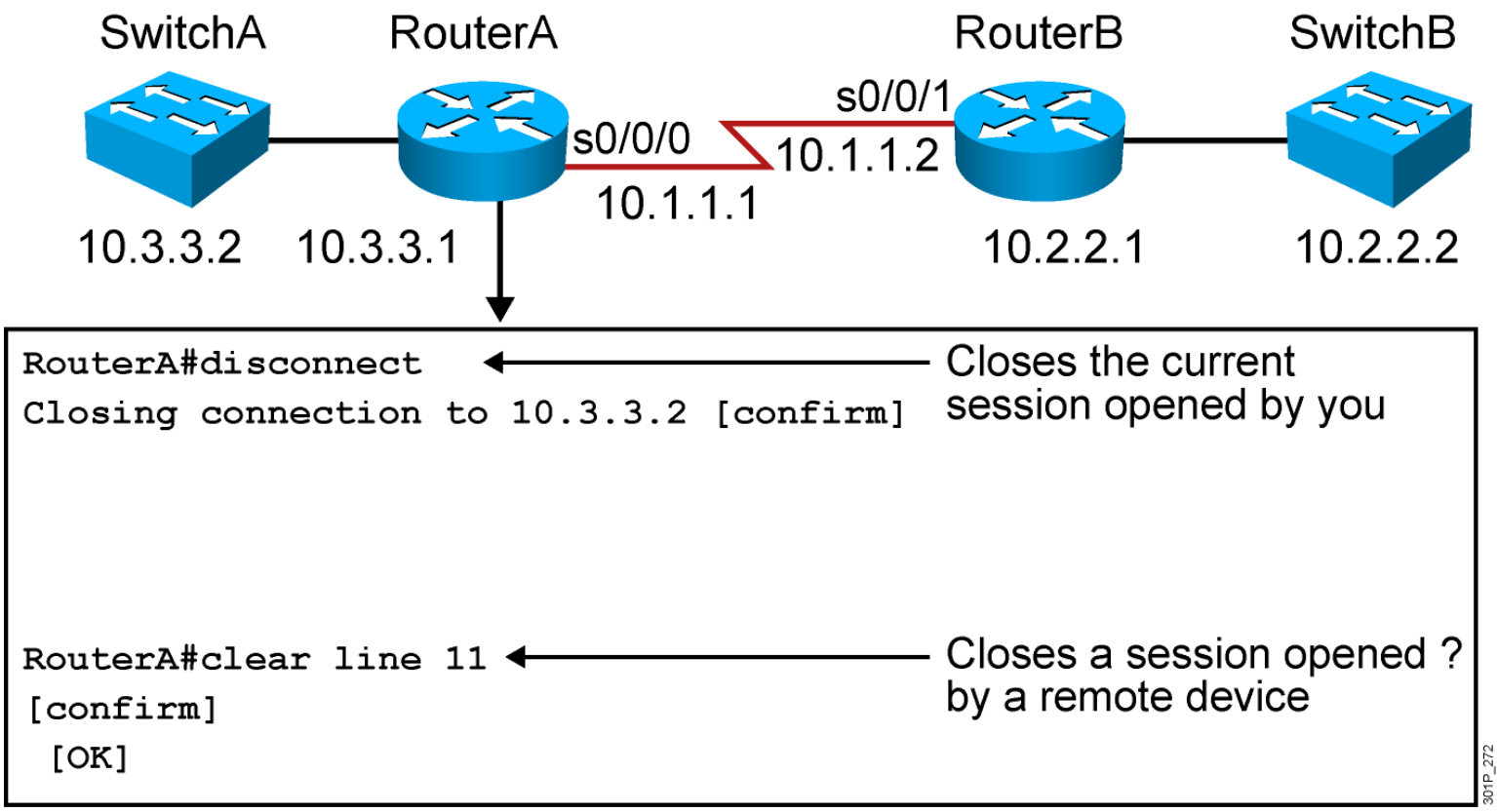
Suspending and Resuming a Telnet Session




```
RouterB#<Ctrl-Shift-6>x
RouterA#show sessions
Conn Host                    Address                 Byte   Idle Conn Name
*   1 10.1.1.2               10.1.1.2                   0      1 10.1.1.2
RouterA#resume 1
RouterB#
```

301P_271

Closing a Telnet Session



Recovery Password

Router Power-On Boot Sequence

1. Perform power-on self-test (POST).
2. Load and run bootstrap code.
3. Find the Cisco IOS Software.
4. Load the Cisco IOS Software.
5. Find the configuration.
6. Load the configuration.
7. Run the configured Cisco IOS Software.

The configuration register bit numbers

Configuration Register	2							1						0			2
Bit number	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
Binary	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	

Step by step recovery password

1. Power-off Router and wait 30s then turn it on
2. When you see the line “Readonly ROMMON initialized”, press Ctrl + Break
3. Set configuration register to 0x2142 and reboot the router

   rommon 1 > confreg 0x2142

   rommon 2 > reset
4. **Copy startup-config running-config**
5. Change all password and **copy running-config startup-config**
6. Set back the config-register to 0x2102

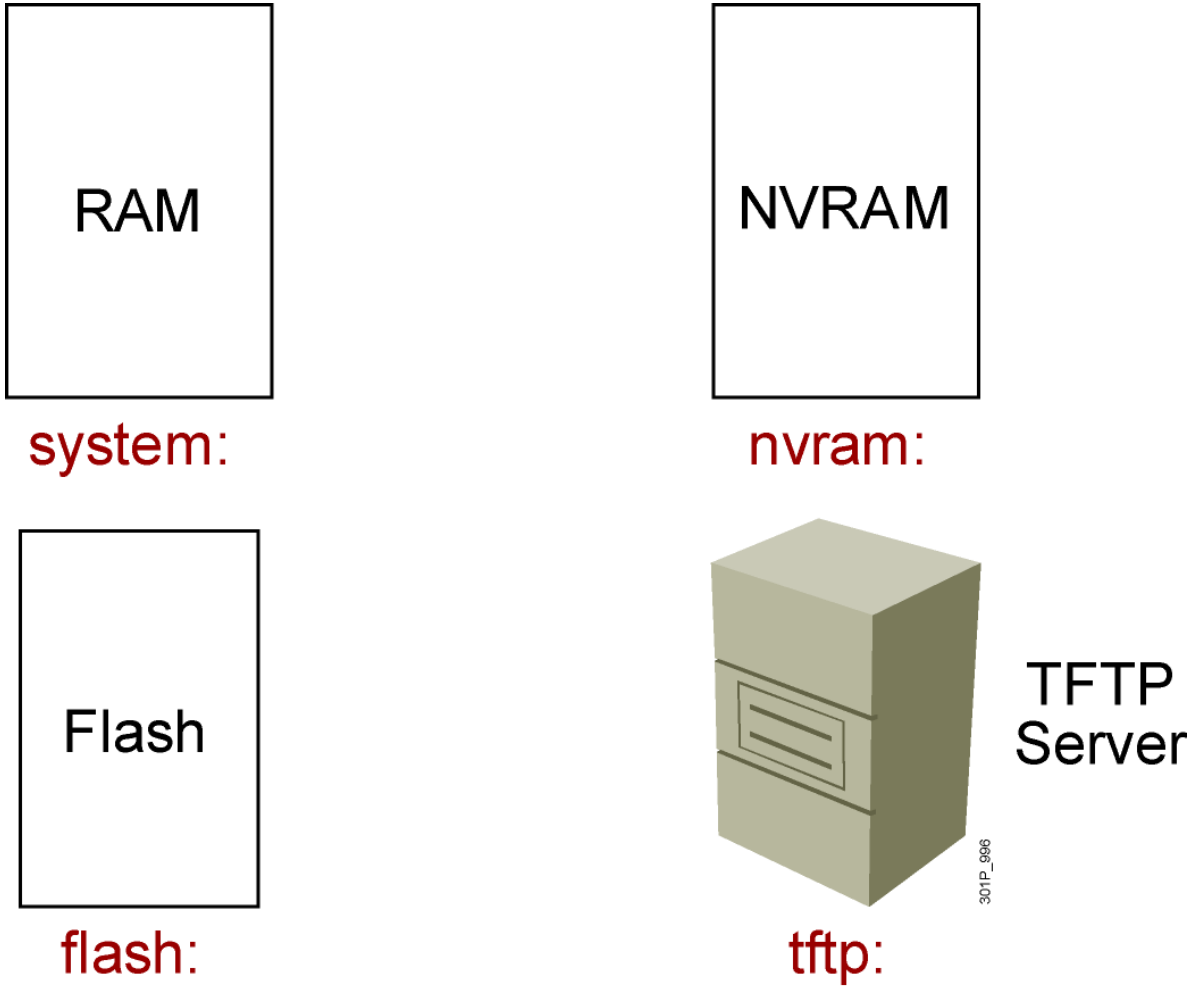
   Router(config)#config-register 0x2102

show version **Command**

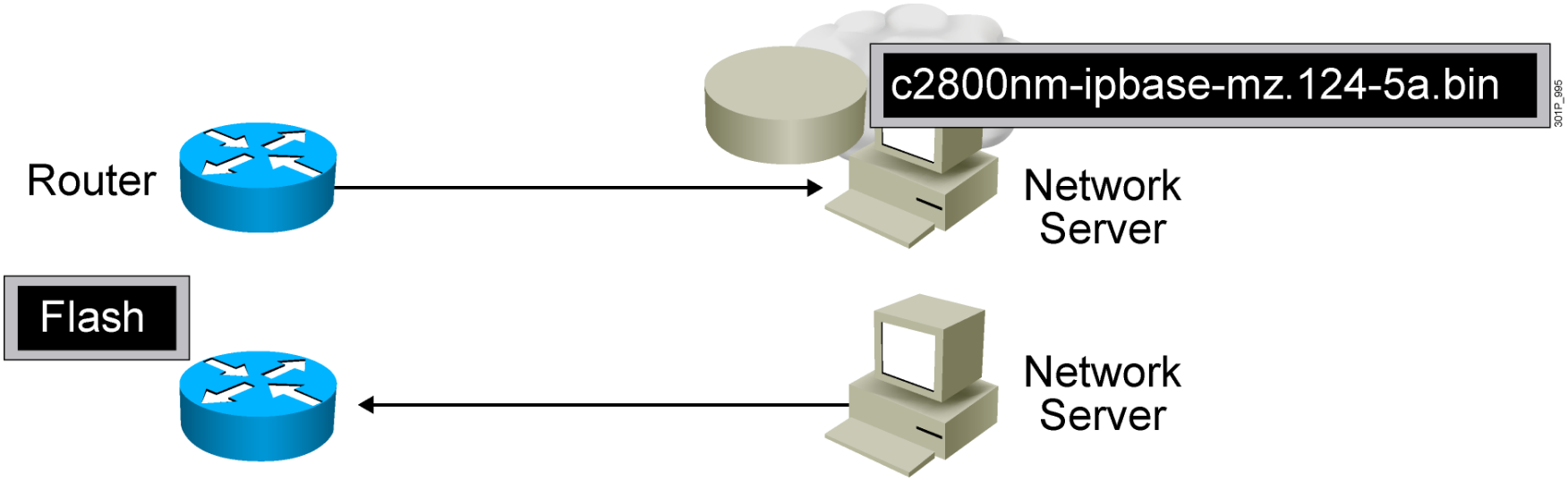
```
Cisco IOS Software, 2800 Software (C2800NM-IPBASE-M), Version
12.4(5a), RELEASE SOFTWARE (fc3)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2006 by Cisco Systems, Inc.
Compiled Sat 14-Jan-06 03:19 by alnguyen

ROM: System Bootstrap, Version 12.4(1r) [hqluong 1r], RELEASE
SOFTWARE (fc1)

RouterX uptime is 1 week, 5 days, 21 hours, 30 minutes
System returned to ROM by reload at 23:04:40 UTC Tue Mar 13 2007
System image file is "flash:c2800nm-ipbase-mz.124-5a.bin"

Cisco 2811 (revision 53.51) with 251904K/10240K bytes of memory.
Processor board ID FTX1013A1DJ
2 FastEthernet interfaces
2 Serial(sync/async) interfaces
DRAM configuration is 64 bits wide with parity enabled.
239K bytes of non-volatile configuration memory.
62720K bytes of ATA CompactFlash (Read/Write)

Configuration register is 0x2142 (will be 2102 at next reload)
```

Managing Cisco Devices

Cisco IOS File System and Devices



Managing Cisco IOS Images

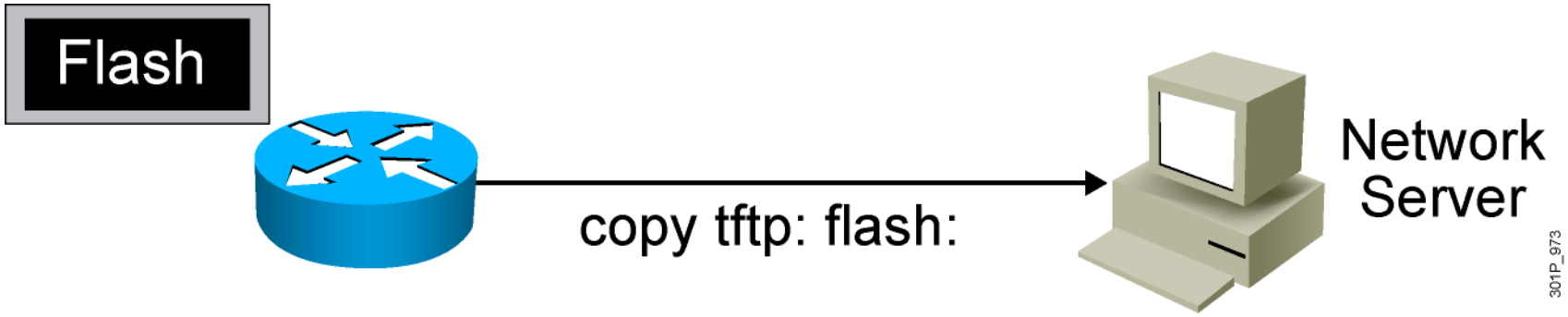


Verifying Memory and Deciphering Image Filenames

```
RouterX#show flash:
-#- --length-- -----date/time------ path
1     14951648 Feb 22 2007 21:38:56 +00:00 c2800nm-ipbase-mz.124-5a.bin
2         1823 Dec 14 2006 08:24:54 +00:00 sdmconfig-2811.cfg
3      4734464 Dec 14 2006 08:25:24 +00:00 sdm.tar
4       833024 Dec 14 2006 08:25:38 +00:00 es.tar
5      1052160 Dec 14 2006 08:25:54 +00:00 common.tar
6         1038 Dec 14 2006 08:26:08 +00:00 home.shtml
7       102400 Dec 14 2006 08:26:22 +00:00 home.tar
8       491213 Dec 14 2006 08:26:40 +00:00 128MB.sdf

41836544 bytes available (22179840 bytes used)
```

Verify that flash memory has room for the Cisco IOS image

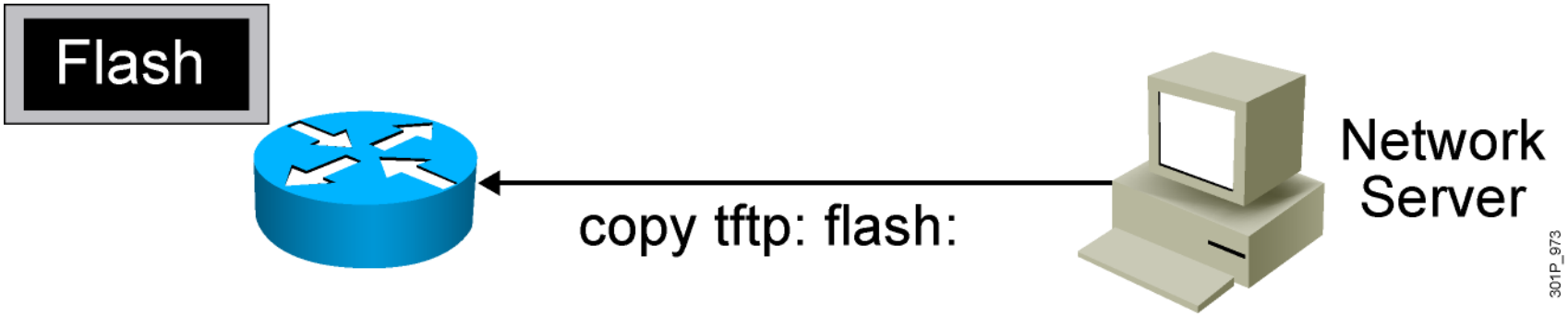
Creating a Software Image Backup




```
RouterX#copy flash tftp:
Source filename []? c2800nm-ipbase-mz.124-5a.bin
Address or name of remote host []? 10.1.1.1
Destination filename [c2800nm-ipbase-mz.124-5a.bin]
!!!!!!!!!!!!!!!!!!!!!!!!!!!! <output omitted>
12094416 bytes copied in 98.858 secs (122341 bytes/sec)
RouterX#
```

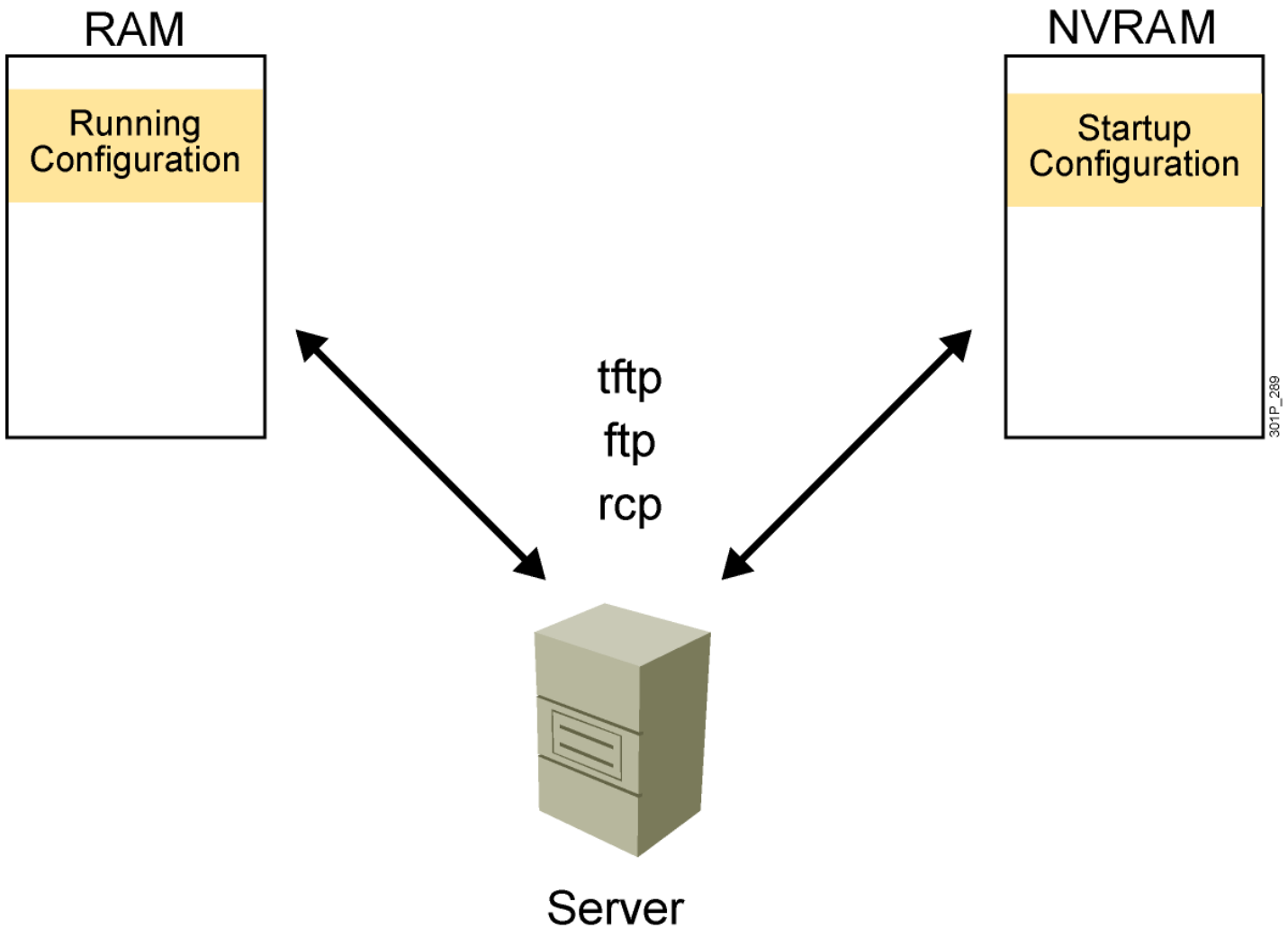
Back up current files prior to updating flash memory

Upgrading the Image from the Network

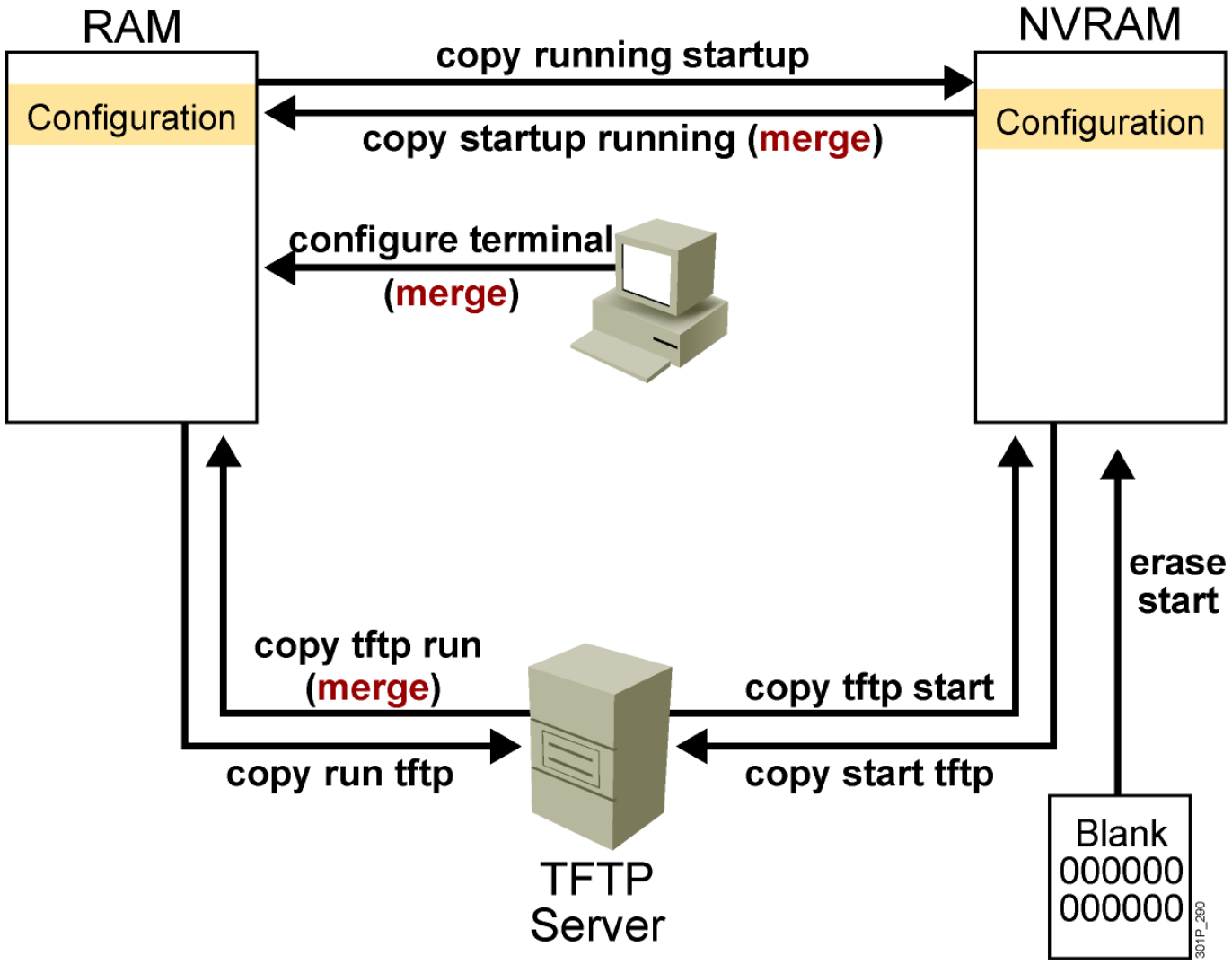



```
RouterX#copy tftp flash:
Address or name of remote host [10.1.1.1]?
Source filename []? c2800nm-ipbase-mz.124-5a.bin
Destination filename [c2800nm-ipbase-mz.124-5a.bin]
Accessing tftp://10.1.1.1/c2600-js-mz.122-21a.bin...
Erase flash: before copying? [confirm]
Erasing the flash filesystem will remove all files! Continue? [confirm]
Erasing device... eeeeeeeeee (output omitted) ...erased
Erase of flash: complete
Loading c2800nm-ipbase-mz.124-5a.bin from  10.1.1.1 (via Ethernet0/0): !!!!!!!!!
(output omited)
[OK - 12094416 bytes]
Verifying checksum...  OK (0x45E2)
12094416 bytes copied in 120.465 secs (100398 bytes/sec)
RouterX
```

Device Configuration Files

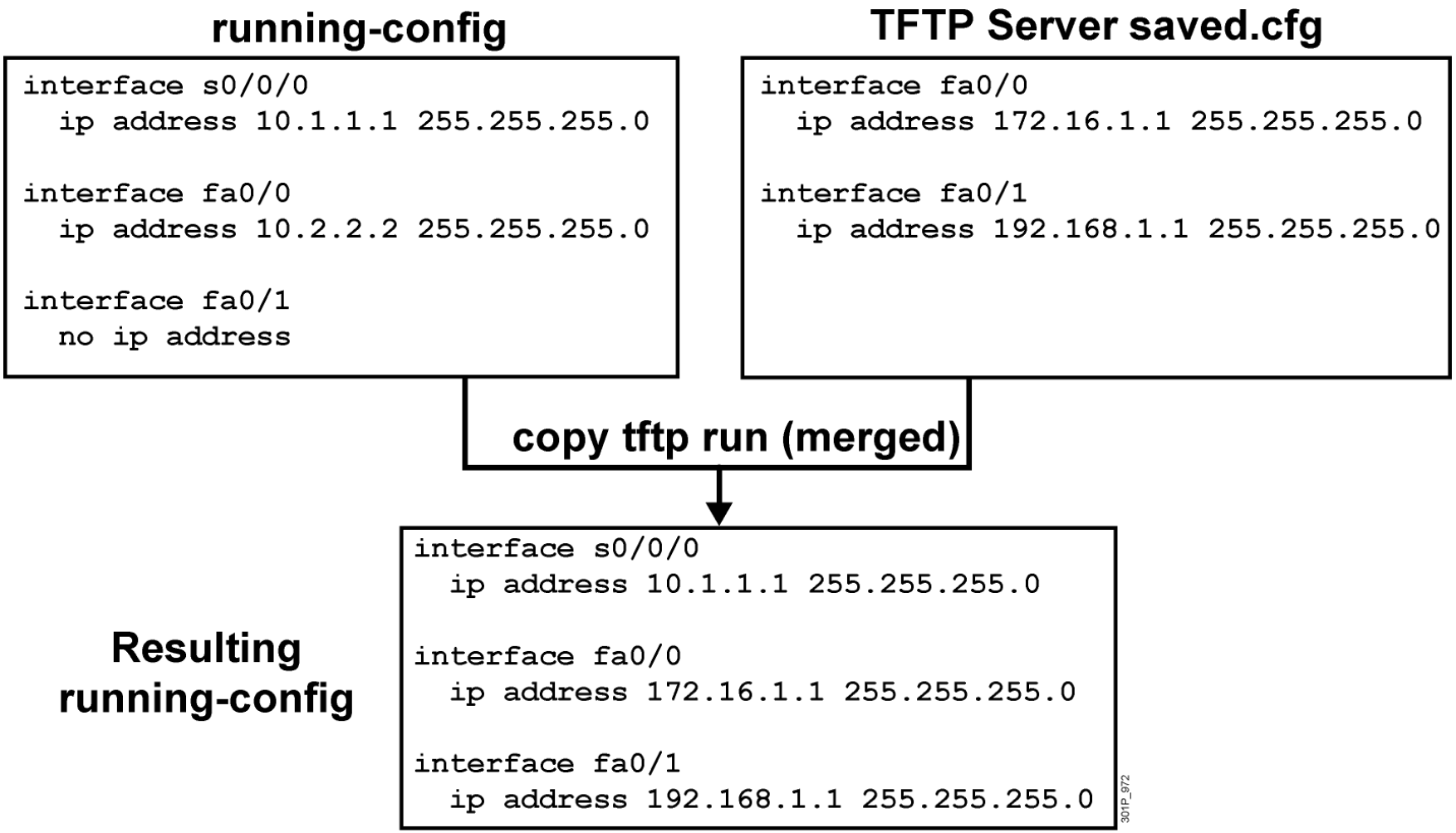


Cisco IOS copy Command



- NVRAM
- Terminal
- TFTP server
- Erase start

Cisco IOS copy Command Example



copy run tftp **and** copy tftp run **Commands**

```
RouterX#copy running-config: tftp:
Address or name of remote host []? 10.1.1.1
Destination filename [running-config]? wgroa.cfg
.!!
1684 bytes copied in 13.300 secs (129 bytes/sec)

RouterX#copy tftp: running-config:
Address or name of remote host []? 10.1.1.1
Source filename []? wgroa.cfg
Destination filename [running-config]?
Accessing tftp://10.1.1.1/wgroa.cfg...
Loading wgroa.cfg from 10.1.1.1 (via Ethernet0): !
[OK - 1684/3072 bytes]

1684 bytes copied in 17.692 secs (99 bytes/sec)
```


CISCO