Práctica Router

Nombre: Santiago Valencia García. **Código:** A00395902.

4. Comando *show version*:

En Router1:

```
Router1#show version
Cisco IOS XE Software, Version 03.16.05.S - Extended Support Release
Cisco IOS Software, ISR Software (X86_64_LINUX_IOSD-UNIVERSALK9-M), Version Version 15.5 (3)S5,
RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2017 by Cisco Systems, Inc.
Compiled Thu 19-Jan-17 11:24 by mcpre

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GPL code under the terms of GPL Version 2.0.  For more details, see the
documentation or "License Notice" file accompanying the IOS-XE software,
or the applicable URL provided on the flyer accompanying the IOS-XE
software.


ROM: IOS-XE ROMMON

Router uptime is 10 minutes, 14 seconds
Uptime for this control processor is 10 minutes, 14 seconds
System returned to ROM by power-on
System image file is "bootflash:/isr4300-universalk9.03.16.05.S.155-3.S5-ext.SPA.bin"
Last reload reason: PowerOn


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States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use encryption.
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A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html
```

```
If you require further assistance please contact us by sending email to
export@cisco.com.


Suite License Information for Module:'esg'

------------------------------------------------------------------------------
Suite                 Suite Current         Type           Suite Next reboot
------------------------------------------------------------------------------
FoundationSuiteK9     None                  None           None

securityk9
appxk9

AdvUCSuiteK9          None                  None           None

uck9
cme - srst
cube


Technology Package License Information:

------------------------------------------------------------------------
Technology    Technology-package                  Technology-package
              Current               Type          Next reboot
------------------------------------------------------------------------
appxk9           None              None             None
uck9             None              None             None
securityk9       securityk9        Permanent        securityk9
ipbase           ipbasek9          Permanent        ipbasek9
security         securityk9        Permanent        securityk9
ipbase           ipbasek9          Permanent        ipbasek9
```

```
cisco ISR4331/K9 (1RU) processor with 1795999K/6147K bytes of memory.
Processor board ID FLM232010G0
3 Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
4194304K bytes of physical memory.
3223551K bytes of flash memory at bootflash:.


Configuration register is 0x2102
```

En Switch1:

```
Switch1#show version
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE4, RELEASE SOFTWARE
(fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2013 by Cisco Systems, Inc.
Compiled Wed 26-Jun-13 02:49 by mnguyen

ROM: Bootstrap program is C2960 boot loader
BOOTLDR: C2960 Boot Loader (C2960-HBOOT-M) Version 12.2(25r)FX, RELEASE SOFTWARE (fc4)

Switch uptime is 39 minutes
System returned to ROM by power-on
System image file is "flash:c2960-lanbasek9-mz.150-2.SE4.bin"


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A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.

cisco WS-C2960-24TT-L (PowerPC405) processor (revision B0) with 65536K bytes of memory.
Processor board ID FOC1010X104
Last reset from power-on
1 Virtual Ethernet interface
24 FastEthernet interfaces
2 Gigabit Ethernet interfaces
The password-recovery mechanism is enabled.

64K bytes of flash-simulated non-volatile configuration memory.
Base ethernet MAC Address       : 00:0A:41:75:13:73
Motherboard assembly number     : 73-10390-03
Power supply part number        : 341-0097-02
Motherboard serial number       : FOC10093R12
```

```
Power supply serial number      : AZS1007032H
Model revision number           : B0
Motherboard revision number     : B0
Model number                    : WS-C2960-24TT-L
System serial number            : FOC1010X104
Top Assembly Part Number        : 800-27221-02
Top Assembly Revision Number    : A0
Version ID                      : V02
CLEI Code Number                : COM3L00BRA
Hardware Board Revision Number  : 0x01


Switch Ports Model              SW Version            SW Image
------ ----- -----              ----------            ----------
*    1 26    WS-C2960-24TT-L    15.0(2)SE4            C2960-LANBASEK9-M


Configuration register is 0xF
```

En Switch2:

```
Switch2#show version
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE4, RELEASE SOFTWARE
(fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2013 by Cisco Systems, Inc.
Compiled Wed 26-Jun-13 02:49 by mnguyen

ROM: Bootstrap program is C2960 boot loader
BOOTLDR: C2960 Boot Loader (C2960-HBOOT-M) Version 12.2(25r)FX, RELEASE SOFTWARE (fc4)

Switch uptime is 39 minutes
System returned to ROM by power-on
System image file is "flash:c2960-lanbasek9-mz.150-2.SE4.bin"


This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
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http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.

cisco WS-C2960-24TT-L (PowerPC405) processor (revision B0) with 65536K bytes of memory.
Processor board ID FOC1010X104
Last reset from power-on
1 Virtual Ethernet interface
24 FastEthernet interfaces
2 Gigabit Ethernet interfaces
The password-recovery mechanism is enabled.

64K bytes of flash-simulated non-volatile configuration memory.
Base ethernet MAC Address       : 00:01:C7:6C:15:D9
Motherboard assembly number     : 73-10390-03
Power supply part number        : 341-0097-02
Motherboard serial number       : FOC10093R12
Power supply serial number      : AZS1007032H
Model revision number           : B0
Motherboard revision number     : B0
Model number                    : WS-C2960-24TT-L
System serial number            : FOC1010X104
Top Assembly Part Number        : 800-27221-02
Top Assembly Revision Number    : A0
Version ID                      : V02
CLEI Code Number                : COM3L00BRA
Hardware Board Revision Number  : 0x01


Switch Ports Model              SW Version            SW Image
------ ----- -----              ----------            ----------
*    1 26    WS-C2960-24TT-L    15.0(2)SE4            C2960-LANBASEK9-M


Configuration register is 0xF
```

6. Mensaje de bienvenida:

```
Bienvenido al Router1

Router1>
Router1>
Router1>
```

7.

Comando *show cdp neighbors:*

En Router1:

```
Router1#show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone
Device ID     Local Intrfce   Holdtme    Capability   Platform     Port ID
Switch1       Gig 0/0/0        127            S       2960         Gig 0/1
Switch2       Gig 0/0/1        127            S       2960         Gig 0/1
```

En Switch1:

```
Switch1#show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone
Device ID     Local Intrfce   Holdtme    Capability   Platform     Port ID
Router1       Gig 0/1          141            R       ISR4300      Gig 0/0/0
```

En Switch2:

```
Switch2#show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone
Device ID     Local Intrfce   Holdtme    Capability   Platform     Port ID
Router1       Gig 0/1          126            R       ISR4300      Gig 0/0/1
```

Comando *show cdp neighbors detail:*

En Router1:

```
Router1#show cdp neighbors detail

Device ID: Switch1
Entry address(es):
  IP address : 192.168.1.2
Platform: cisco 2960, Capabilities: Switch
Interface: GigabitEthernet0/0/0, Port ID (outgoing port): GigabitEthernet0/1
Holdtime: 157

Version :
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE4, RELEASE SOFTWARE
(fc1)
Technical Support: http://www.cisco.com/techsupport
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Compiled Wed 26-Jun-13 02:49 by mnguyen

advertisement version: 2
Duplex: full
---------------------------

Device ID: Switch2
Entry address(es):
  IP address : 192.168.2.2
Platform: cisco 2960, Capabilities: Switch
Interface: GigabitEthernet0/0/1, Port ID (outgoing port): GigabitEthernet0/1
Holdtime: 157

Version :
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 15.0(2)SE4, RELEASE SOFTWARE
(fc1)
Technical Support: http://www.cisco.com/techsupport
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Compiled Wed 26-Jun-13 02:49 by mnguyen

advertisement version: 2
Duplex: full
```

En Switch1:

```
Switch1#show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone
Device ID    Local Intrfce   Holdtme    Capability   Platform    Port ID
Router1      Gig 0/1          141            R       ISR4300     Gig 0/0/0
Switch1#
Switch1#
Switch1#
Switch1#
Switch1#
Switch1#
Switch1#show cdp neighbors detail

Device ID: Router1
Entry address(es):
  IP address : 192.168.1.1
Platform: cisco ISR4300, Capabilities: Router
Interface: GigabitEthernet0/1, Port ID (outgoing port): GigabitEthernet0/0/0
Holdtime: 150

Version :
Cisco IOS XE Software, Version 03.13.04.S - Extended Support Release
Cisco IOS Software, ISR Software (X86_64_LINUX_IOSD-UNIVERSALK9-M), Version 15.5(3)S5, RELEASE
SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2017 by Cisco Systems, Inc.
Compiled Mon 05-Oct-15 11:24 by mcpre

advertisement version: 2
Duplex: full
```

En Switch2:

```
Switch2#show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone
Device ID    Local Intrfce   Holdtme    Capability   Platform    Port ID
Router1      Gig 0/1          126            R       ISR4300     Gig 0/0/1
Switch2#
Switch2#
Switch2#
Switch2#show cdp neighbors detail

Device ID: Router1
Entry address(es):
  IP address : 192.168.2.1
Platform: cisco ISR4300, Capabilities: Router
Interface: GigabitEthernet0/1, Port ID (outgoing port): GigabitEthernet0/0/1
Holdtime: 161

Version :
Cisco IOS XE Software, Version 03.13.04.S - Extended Support Release
Cisco IOS Software, ISR Software (X86_64_LINUX_IOSD-UNIVERSALK9-M), Version 15.5(3)S5, RELEASE
SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2017 by Cisco Systems, Inc.
Compiled Mon 05-Oct-15 11:24 by mcpre

advertisement version: 2
Duplex: full
```

Comparación entre ambos commandos:

show cdp neighbors: Muestra un resumen básico de los dispositivos vecinos (ID del dispositivo, interfaz local, capacidad, plataforma, y puerto remoto). Se usa para obtener una vista rápida de qué dispositivos están conectados y en qué puertos.

show cdp neighbors detail: Proporciona información detallada como la dirección IP, versión de software, y estado del dúplex. Es útil para solucionar problemas y conocer más detalles del entorno del dispositivo.

8. Comando *show ip route:*

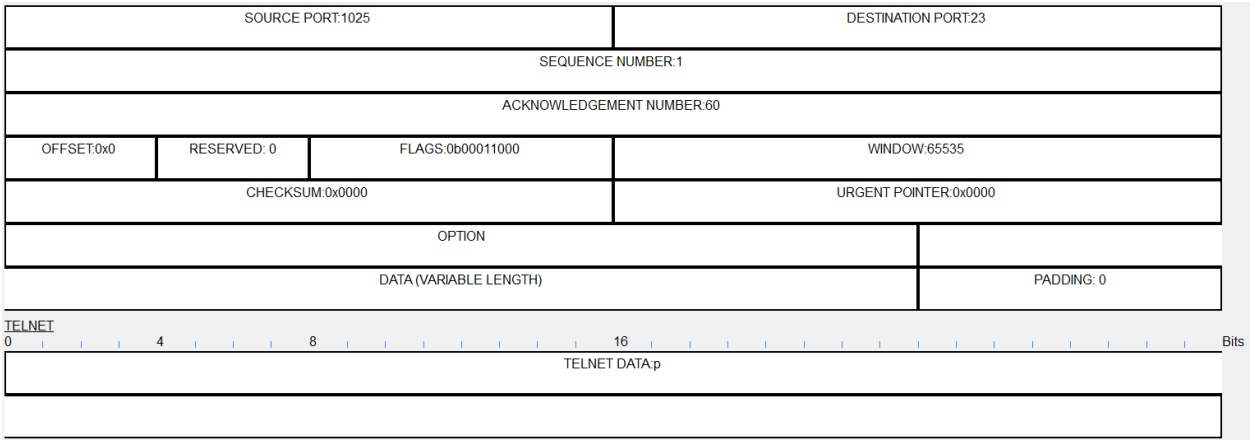
```
Router1#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.1.0/24 is directly connected, GigabitEthernet0/0/0
L       192.168.1.1/32 is directly connected, GigabitEthernet0/0/0
     192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.2.0/24 is directly connected, GigabitEthernet0/0/1
L       192.168.2.1/32 is directly connected, GigabitEthernet0/0/1
```

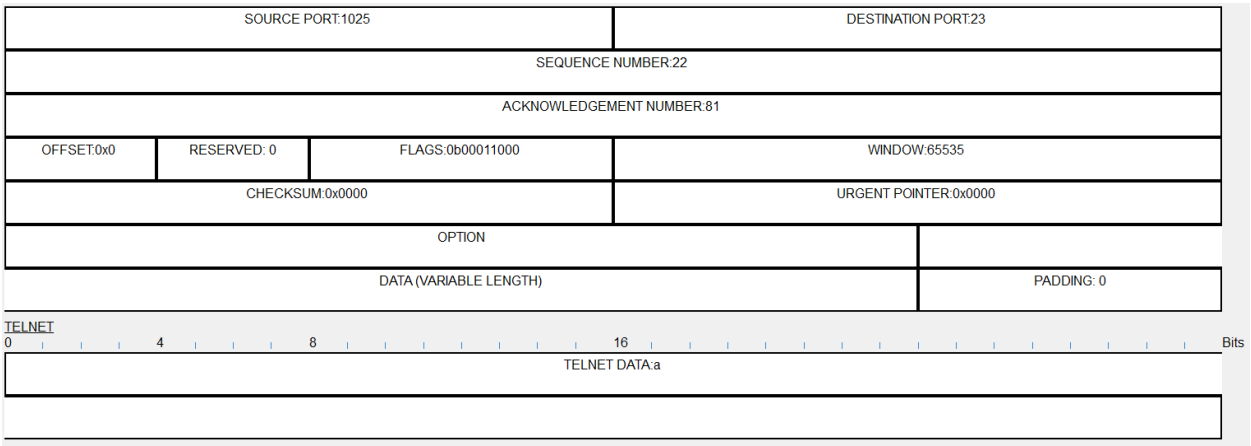
El comando *show ip route* muestra la tabla de enrutamiento del router, que incluye rutas directamente conectadas (C) y locales (L). Las subredes 192.168.1.0/24 y 192.168.2.0/24 están conectadas a las interfaces GigabitEthernet0/0/0 y GigabitEthernet0/0/1, respectivamente, con rutas locales específicas para las direcciones 192.168.1.1/32 y 192.168.2.1/32. Además, no se observa un gateway de último recurso configurado.

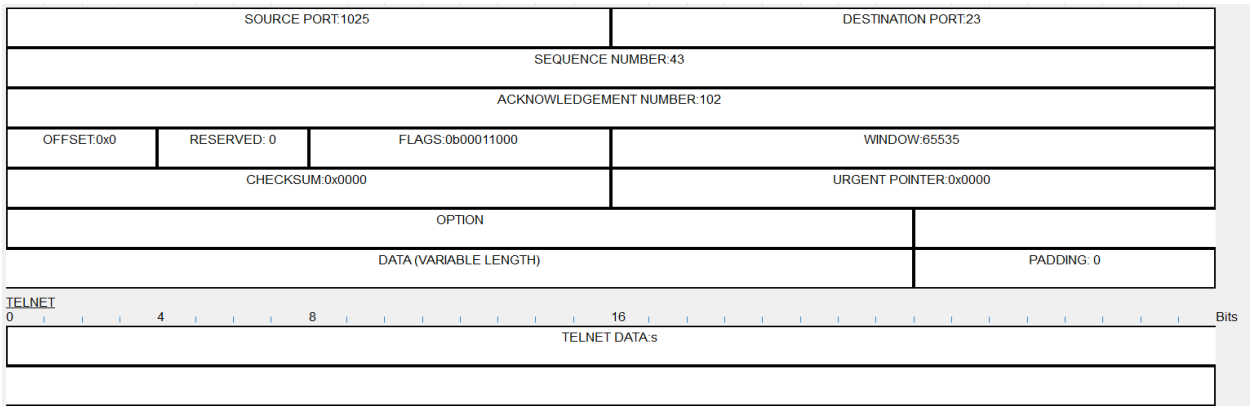
9. Comprobación de telnet:

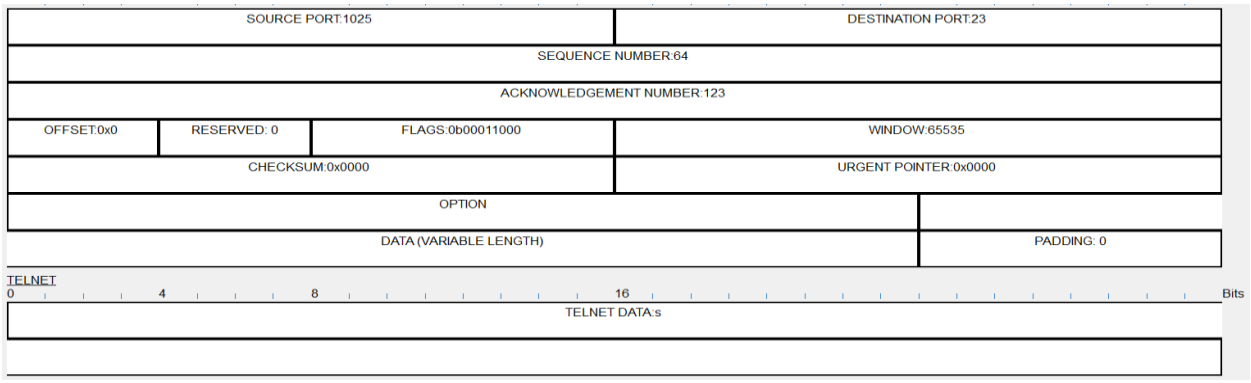
```
Router1#telnet 192.168.1.2
Trying 192.168.1.2 ...Open


User Access Verification

Password:
Switch1>exit

[Connection to 192.168.1.2 closed by foreign host]
Router1#
```

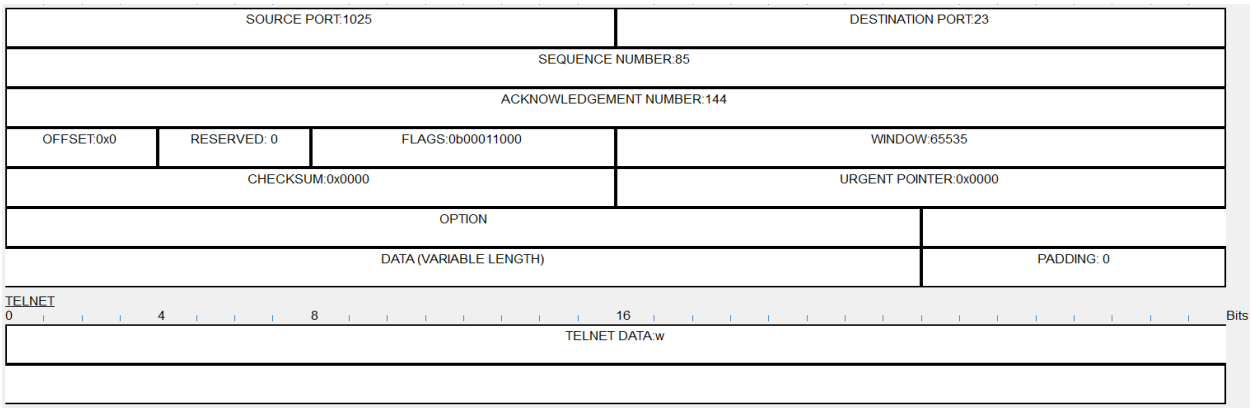
10. Captura de password vía telnet:

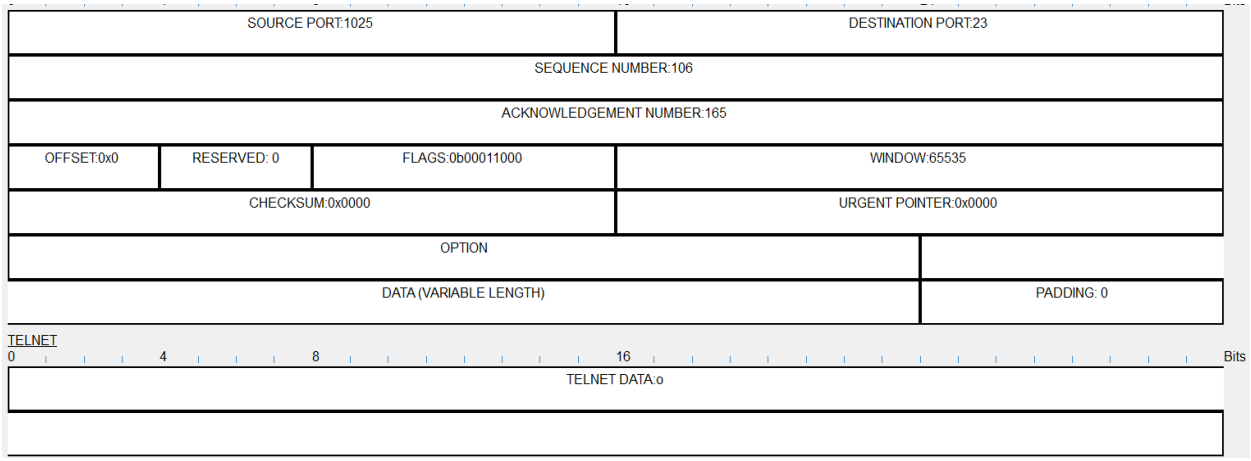


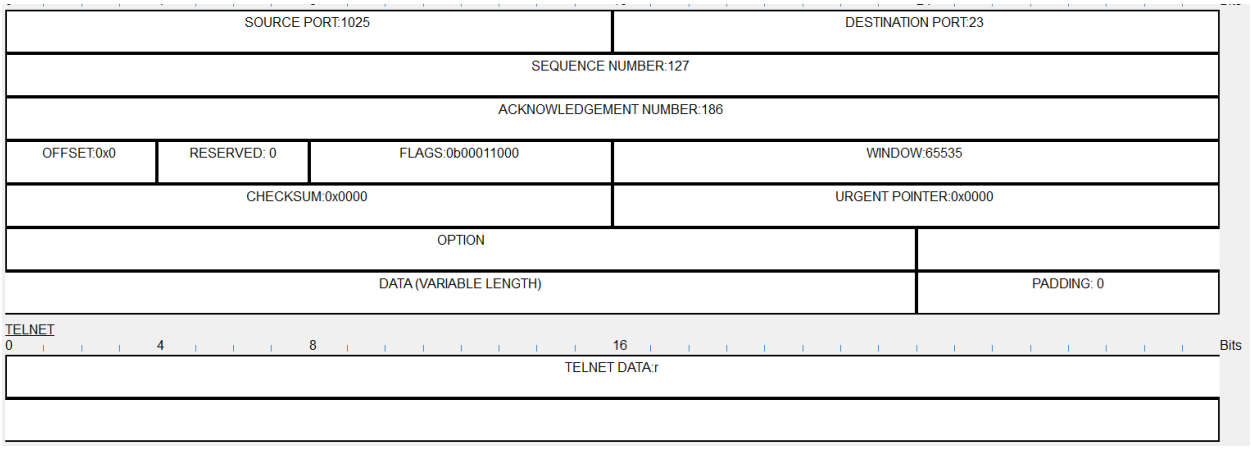


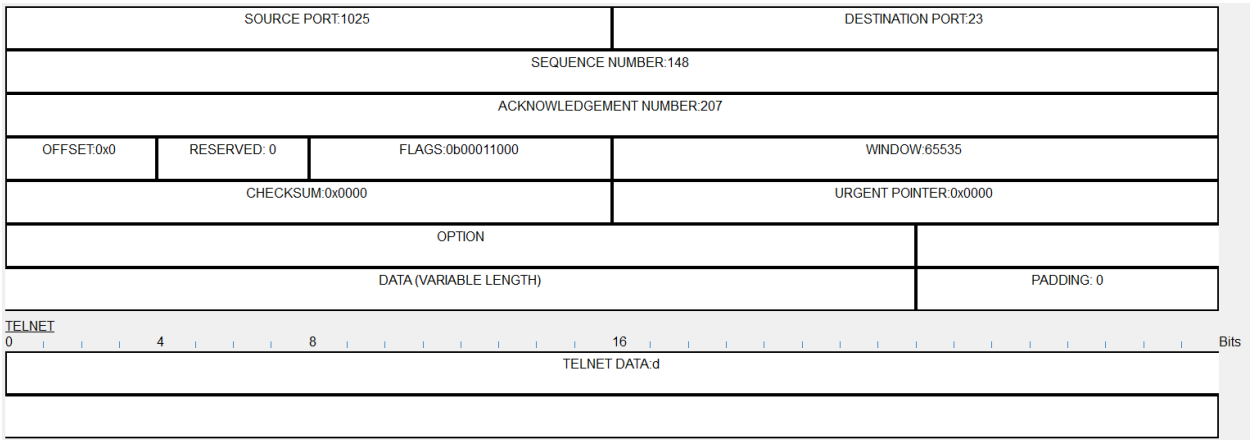

SOURCE PORT:1025
DESTINATION PORT:23
SEQUENCE NUMBER:43
ACKNOWLEDGEMENT NUMBER:102
OFFSET:0x0
RESERVED: 0
FLAGS:0b00011000
WINDOW:65535
CHECKSUM:0x0000
URGENT POINTER:0x0000
OPTION
DATA (VARIABLE LENGTH)
PADDING: 0
TELNET
0
4
8
16
Bits
TELNET DATA:s


SOURCE PORT:1025
DESTINATION PORT:23
SEQUENCE NUMBER:64
ACKNOWLEDGEMENT NUMBER:123
OFFSET:0x0
RESERVED: 0
FLAGS:0b00011000
WINDOW:65535
CHECKSUM:0x0000
URGENT POINTER:0x0000
OPTION
DATA (VARIABLE LENGTH)
PADDING: 0
TELNET
0
4
8
16
Bits
TELNET DATA:s


SOURCE PORT:1025
DESTINATION PORT:23
SEQUENCE NUMBER:85
ACKNOWLEDGEMENT NUMBER:144
OFFSET:0x0
RESERVED: 0
FLAGS:0b00011000
WINDOW:65535
CHECKSUM:0x0000
URGENT POINTER:0x0000
OPTION
DATA (VARIABLE LENGTH)
PADDING: 0
TELNET
0
4
8
16
Bits
TELNET DATA:w


SOURCE PORT:1025
DESTINATION PORT:23
SEQUENCE NUMBER:106
ACKNOWLEDGEMENT NUMBER:165
OFFSET:0x0
RESERVED: 0
FLAGS:0b00011000
WINDOW:65535
CHECKSUM:0x0000
URGENT POINTER:0x0000
OPTION
DATA (VARIABLE LENGTH)
PADDING: 0
TELNET
0
4
8
16
Bits
TELNET DATA:o





11. Uso del comando *ip hostname x.x.x.x:*

```
Router1(config)#ip host Switch1 192.168.1.2
Router1(config)#exit
Router1#
%SYS-5-CONFIG_I: Configured from console by console

Router1#
Router1#
Router1#
Router1#
Router1#telnet Switch1

Trying 192.168.1.2 ...Open


User Access Verification

Password:
Switch1>exit

[Connection to 192.168.1.2 closed by foreign host]
Router1#
```

12. Uso del comando *copy running-config tftp:*

13. Copia del archivo comprimido del sistema operativo:

2960-lanbasek9-mz.150-2.SE4.bin

Router1-confg

Switch1-confg

Switch2-confg

asa842-k8.bin

asa923-k8.bin

c1841-advipservicesk9-mz.124-15.T1.bin

c1841-ipbase-mz.123-14.T7.bin

c1841-ipbasek9-mz.124-12.bin

c1900-universalk9-mz.SPA.155-3.M4a.bin

isr4300-universalk9.16.06.04.SPA.bin

```
Router1#copy flash: tftp:
Source filename []? isr4300-universalk9.16.06.04.SPA.bin
Address or name of remote host []? 192.168.2.4
Destination filename [isr4300-universalk9.16.06.04.SPA.bin]?

Writing isr4300-
universalk9.16.06.04.SPA.bin...!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

```
Switch2#copy flash: tftp:
Source filename []? 2960-lanbasek9-mz.150-2.SE4.bin
Address or name of remote host []? 192.168.2.4
Destination filename [2960-lanbasek9-mz.150-2.SE4.bin]?

Writing 2960-lanbasek9-mz.
150-2.SE4.bin...!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!
[OK - 4670455 bytes]
```