

UNIVERZITET U BIHAĆU
TEHNIČKI FAKULTET
BIHAĆ

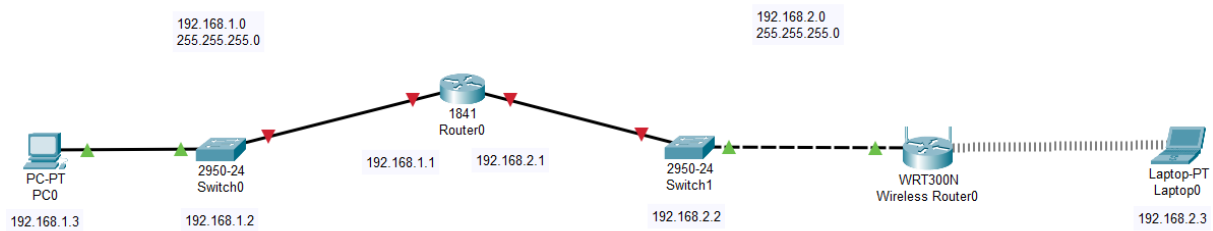
RAČUNARSKE MREŽE

Laboratorijske vježbe

CISCO Packet Tracer
(Vježba 5)

mr. Amel Toroman, dipl. ing.el.
Viši asistent

PRIMJER 1: Autorizovani pristup mrežnim uređajima



Podešavanje rutera za kraticu *FastEthernet0/0* kroz *Command Line Interface* (CLI mod)

Lijeva strana mreže

```
Router4
Physical Config CLI Attributes
IOS Command Line Interface
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M),
Version 12.4(15)T1, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname RT1
RT1(config)#interface fa0/0
RT1(config-if)#ip address 192.168.1.1 255.255.255.0
RT1(config-if)#no shutdown
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

Podešavanje sata na Ruteru (CLI mod)

- Provjera trenutnog vremena
 - o **show clock**

```
RT1#show clock  
*0:8:55.84 UTC Mon Mar 1 1993
```

Podešavanje sata

```
RT1> enable  
RT1#
```

```
RT1# clock set  
% Incomplete command.
```

```
RT1# clock set ?  
hh:mm:ss Current Time
```

```
RT1# clock set 17:25:00  
% Incomplete command.
```

```
RT1# clock set 17:25:00 ?  
<1-31> Day of the month  
MONTH Month of the year
```

```
RT1# clock set 17:25:00 1 JUN?  
MONTH
```

```
RT1# clock set 17:25:00 1 JUN 2020  
RT1#
```

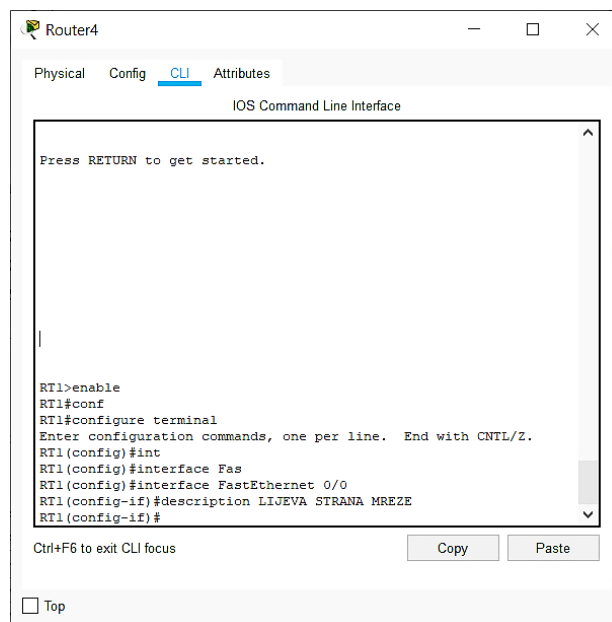
```
RT1# show clock  
17:28:2.528 UTC Mon Jun 1 2020
```

Sa naredbom **show running-config** možemo vidjeti sve što je na ruteru iskonfigurisano.
(Vidimo sve postavke osim postavke sata)

Dodjeljivanje opisa interfejsima

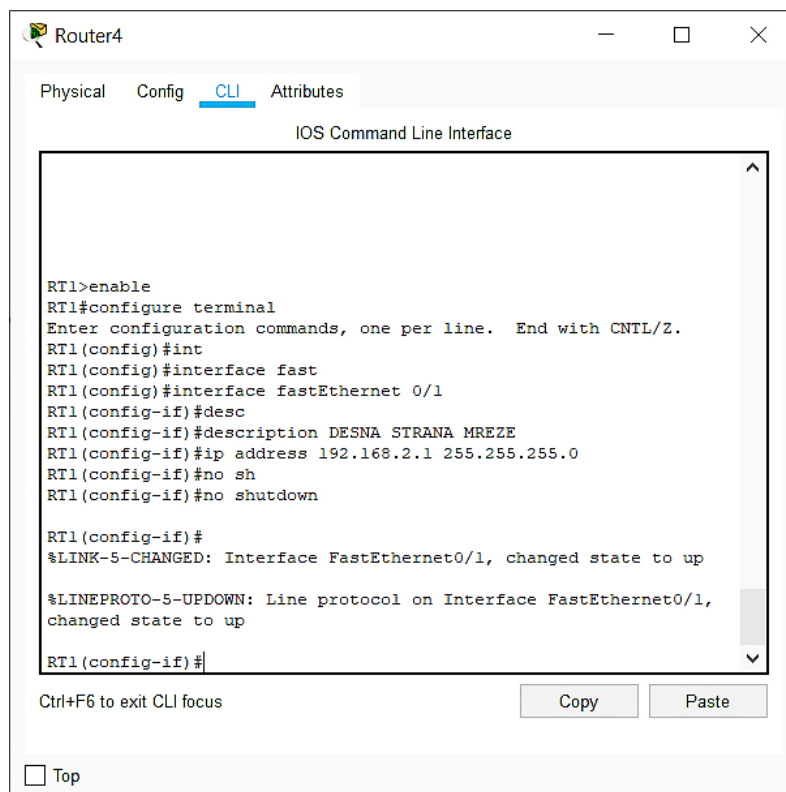
Opis dodjeljujemo sa komandom **description**

Npr. dodat ćemo interfejsu *FastEthernet0/0* opis *LIJEVA STRANA MREŽE*

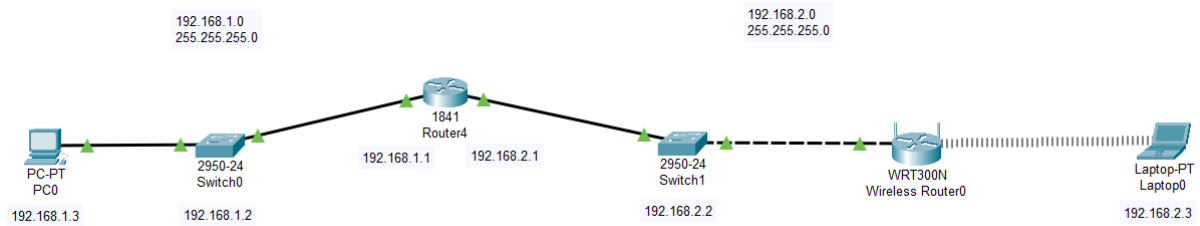


Podešavanje rutera za kraticu *FastEthernet0/1* kroz *Command Line Interface* (CLI mod)

Desna strana mreže



Prethodnim koracima je konfigurisana i DESNA strana mreže, odnosno konfigurisana je cijela mreža.



Cisco Packet Tracer - E:\NASTAVNI MATERIALI\Računarske mreže\2019-2020\Vježbe - Online\13. (02.06.2020.)\Primjeri\Primjer1.pkt

File Edit Options View Tools Extensions Help

Logical Physical x 100% y 620

Simulation Panel [Root] 03:58:33

Event List

Vis	Time(sec)	Last Device	At Device	Type
0.000	-	PC0	PC0	ICMP
0.001	0.001	PC0	Switch0	ICMP
0.002	0.002	Switch0	Router4	ICMP
0.003	0.003	Router4	Switch1	ICMP
0.004	0.004	Switch1	Wireless R...	ICMP
0.005	0.005	Wireless R...	Laptop0	ICMP

Reset Simulation ☒ Constant Delay Captured to: 0.005 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IGT, IGTv6, LACP, LLDP, Mcast, NBP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RTP, SCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 02:32:37.445 PLAY CONTROLS Realtime Simulation

Cisco Packet Tracer - E:\NASTAVNI MATERIALI\Računarske mreže\2019-2020\Vježbe - Online\13. (02.06.2020.)\Primjeri\Primjer1.pkt

File Edit Options View Tools Extensions Help

Logical Physical x 142% y 308

Simulation Panel [Root] 04:36:30

Event List

Vis	Time(sec)	Last Device	At Device	Type
0.000	-	PC0	PC0	ICMP
0.001	0.001	PC0	Switch0	ICMP
0.002	0.002	Switch0	Router4	ICMP
0.003	0.003	Router4	Switch1	ICMP
0.004	0.004	Switch1	Wireless R...	ICMP
0.005	0.005	Wireless R...	Laptop0	ICMP
0.009	0.009	Laptop0	Wireless R...	ICMP
0.010	0.010	Wireless R...	Switch1	ICMP
0.011	0.011	Wireless R...	Router4	ICMP
0.012	0.012	Router4	Switch0	ICMP
0.013	0.013	Switch0	PC0	ICMP
0.014	0.014	Wireless R...	Wireless R...	ICMP

Reset Simulation ☒ Constant Delay Captured to: 0.014 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IGT, IGTv6, LACP, LLDP, Mcast, NBP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RTP, SCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

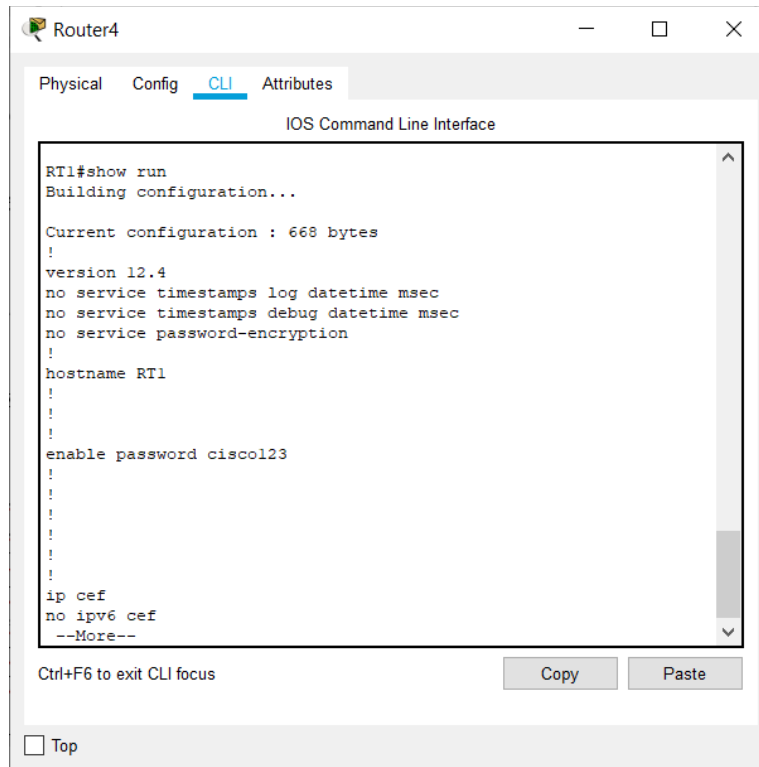
Edit Filters Show All/None

Time: 02:32:48.879 PLAY CONTROLS Realtime Simulation

Podešavanje pristupnih šifri na ruter

Imamo dvije vrste šifri (tajni password i javni password)

Postavka javnog passworda



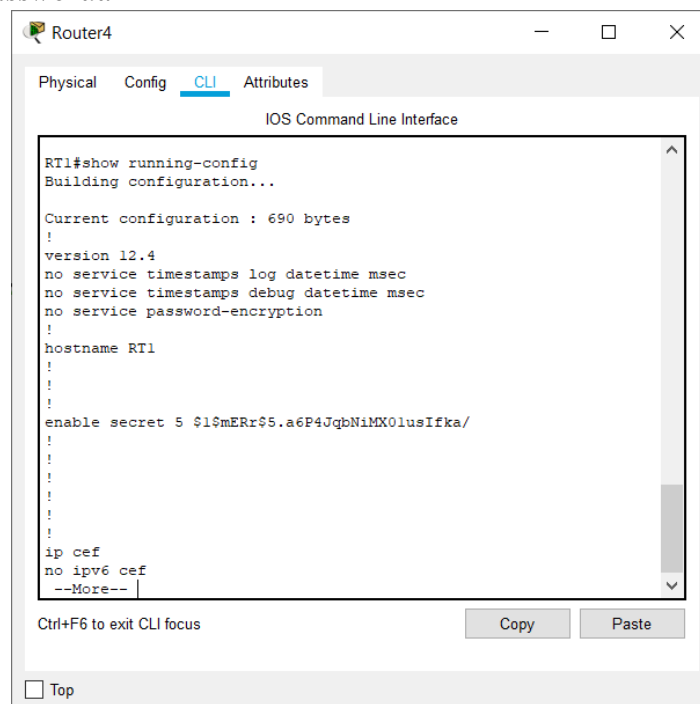
The screenshot shows the Router4 CLI interface with the 'CLI' tab selected. The command 'RT1#show run' has been entered, displaying the current configuration. The configuration includes the hostname 'RT1' and the command 'enable password cisco123'. The password 'cisco123' is visible in plain text, indicating it is a public password. The interface also shows tabs for Physical, Config, CLI, and Attributes, and a 'Top' button at the bottom left.

```
RT1#show run
Building configuration...

Current configuration : 668 bytes
!
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname RT1
!
!
!
enable password cisco123
!
!
!
!
!
ip cef
no ipv6 cef
--More--
```

Ovaj javni password je enkriptovan i vidljiv je kroz postavke rutera.

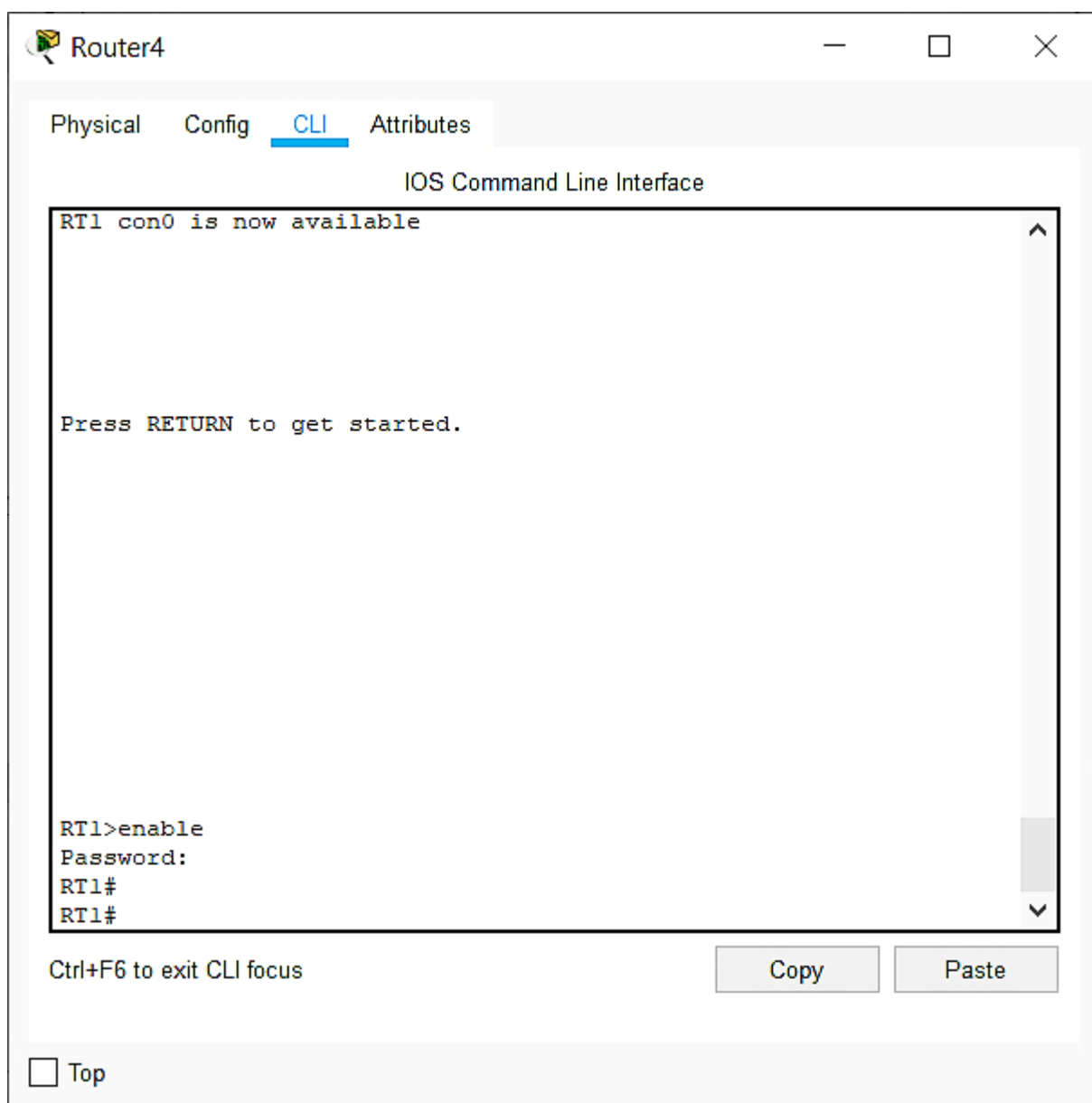
Postavka tajnog passworda



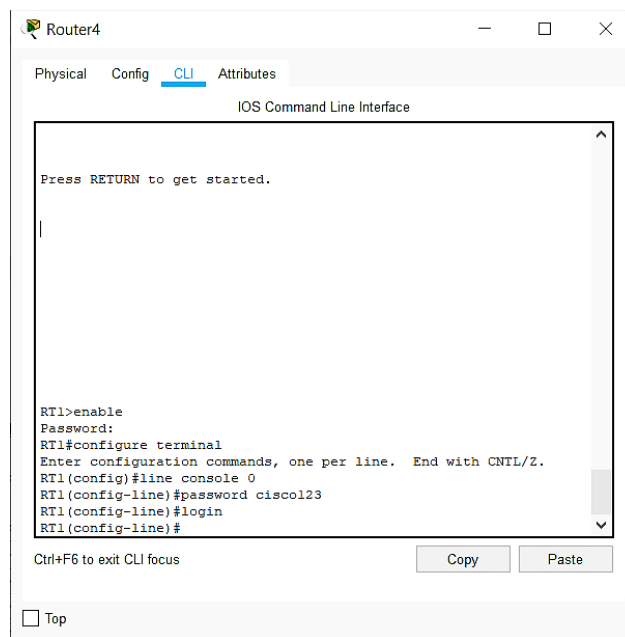
The screenshot shows the Router4 CLI interface with the 'CLI' tab selected. The command 'RT1#show running-config' has been entered, displaying the current configuration. The configuration includes the hostname 'RT1' and the command 'enable secret 5 \$1\$mERr\$5.a6P4JqbNiMX0lusIfka/'. The secret password is encrypted and displayed as a hash, indicating it is a secret password. The interface also shows tabs for Physical, Config, CLI, and Attributes, and a 'Top' button at the bottom left.

```
RT1#show running-config
Building configuration...

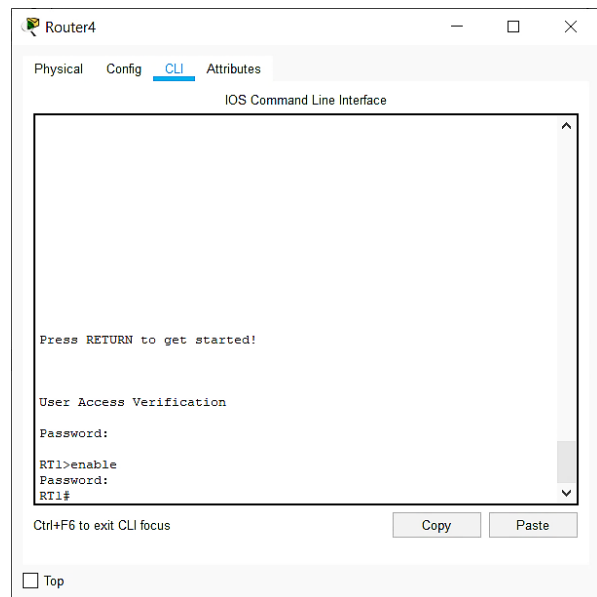
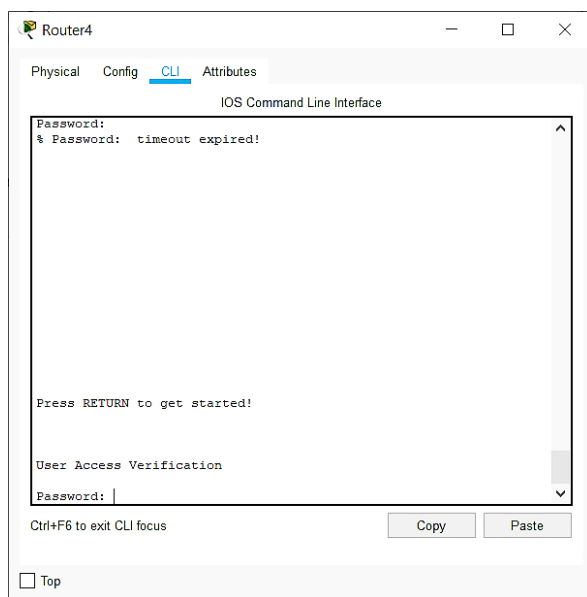
Current configuration : 690 bytes
!
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname RT1
!
!
!
enable secret 5 $1$mERr$5.a6P4JqbNiMX0lusIfka/
!
!
!
!
!
ip cef
no ipv6 cef
--More--
```



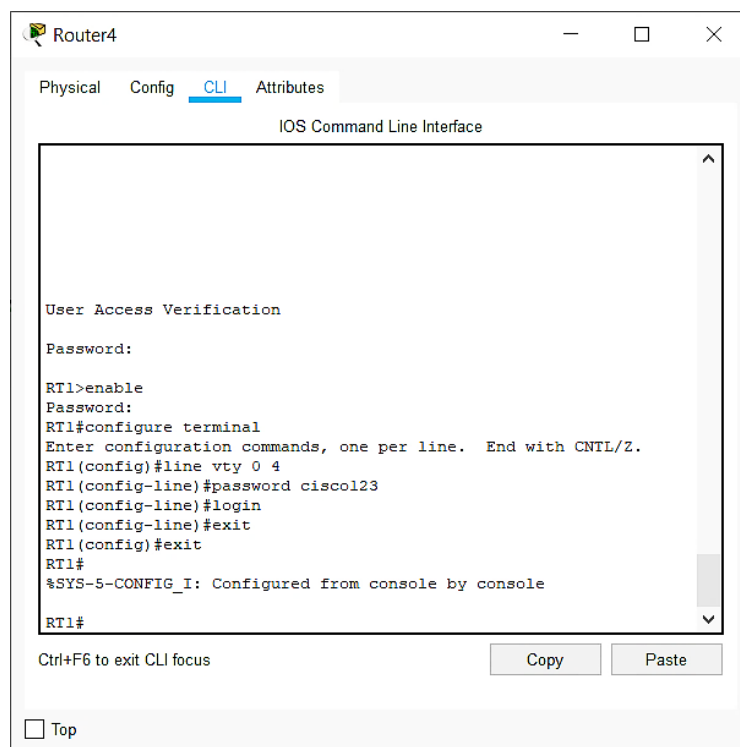
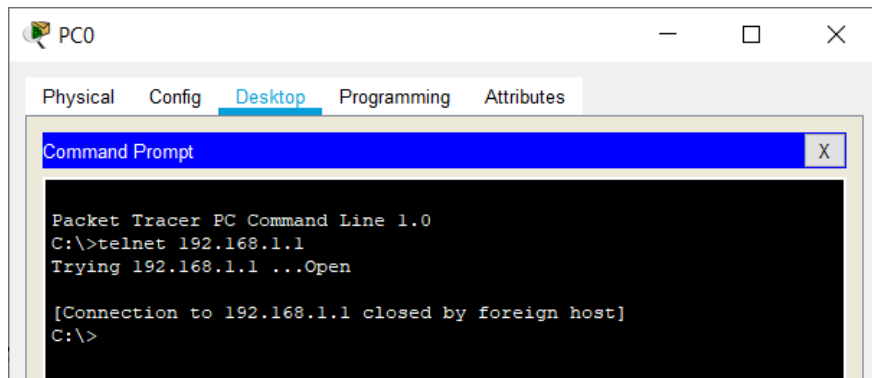
Konfigurisanje pristupnog passworda preko konzole



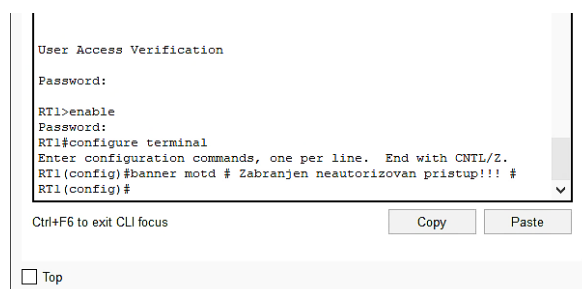
Testiranje postavljenog passworda

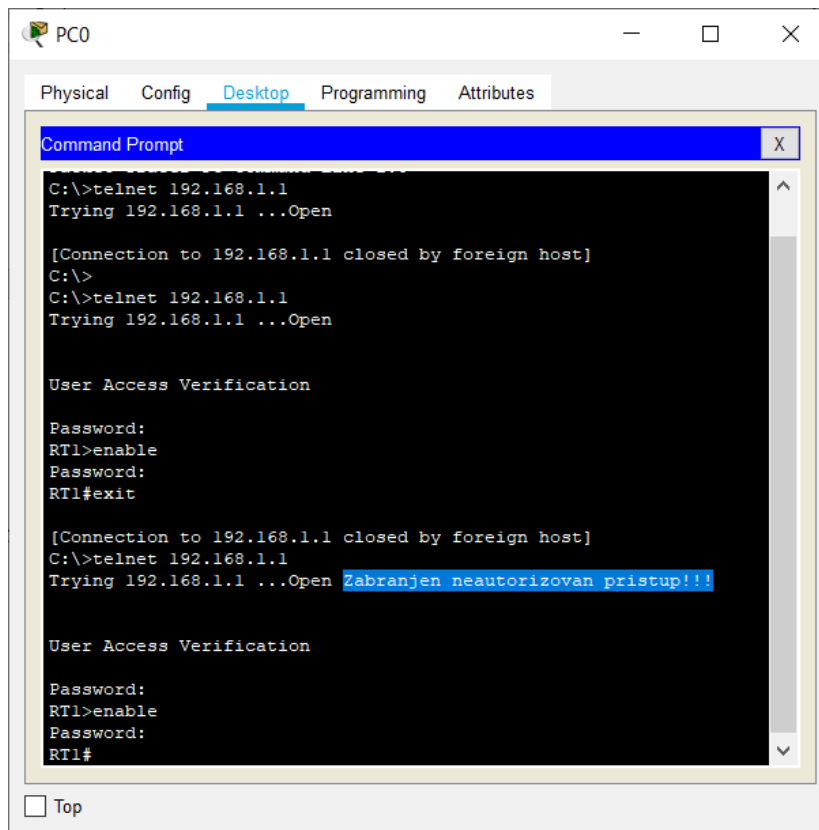


Remote konektovanja sa računara na ruter (telnet)



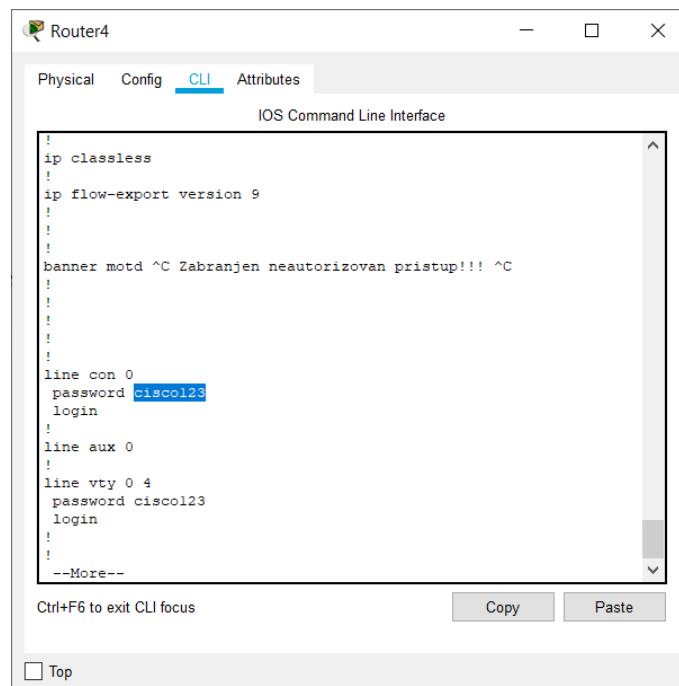
Dodavanje poruke (obavještenja) prilikom telneta na ruter



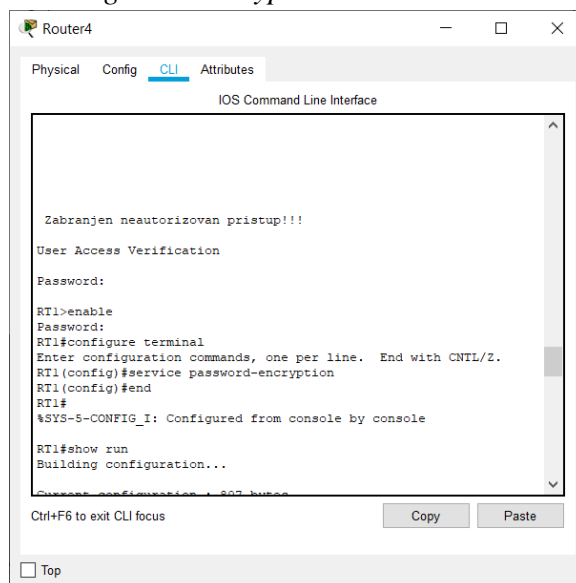


Password koji je unesen za telnet nije kriptovan.

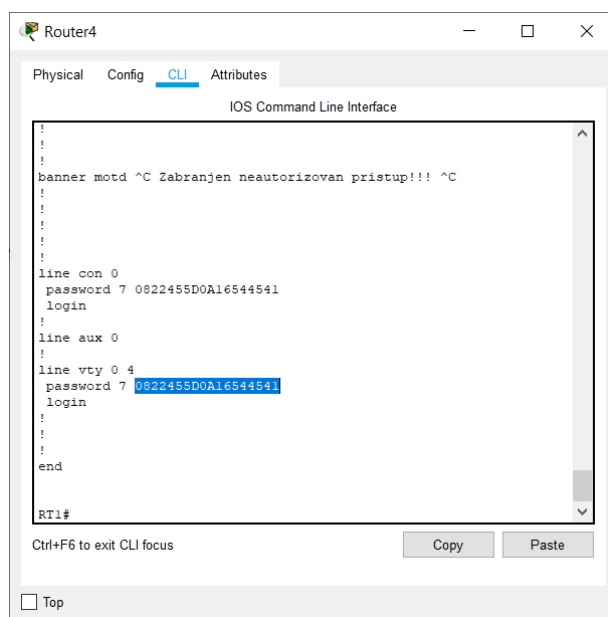
RT1#**show running-command**



Kriptovanje telnet passworda algoritmom Type 7



RT1#**show running-command**



Nedostatak algoritma Type 7 je što je vrlo slab i vrlo jednostavno ga je „probiti“.

Provjera slabosti Type 7 algoritma

- Kopiramo password: **0822455D0A16544541**
- Odemo na web browser računara i ukucamo u google: **crack cisco password type 7**
- Otvorimo stranicu (<https://www.ifm.net.nz/cookbooks/passwordcracker.html>)

IFM - Cisco Password Cracker

ifm.net.nz/cookbooks/passwordcracker.html

Incognito (2)

ifm Network Experts

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Cisco Password Cracker

IFM supplies network engineering services for \$NZ180+GST per hour. If you require assistance with designing or engineering a Cisco network - hire us!

Note: This page uses client side Javascript. It does not transmit any information entered to IFM.

Ever had a type 7 Cisco password that you wanted to crack/break? This piece of Javascript was inspired by the WWW page <http://insecure.org/spl0its/cisco.passwords.html>. The passwords will be in lines like:

```
enable password 7 095C4F1A0A1218000F
...
username user password 7 12090404011C03162E
```

Take the type 7 password, such as the text above in red, and paste it into the box below and click "Crack Password".

Type 7 Password: 0822455D0A16544541

Crack Password

Plain text: cisco123

Type 7 Password: 0822455D0A16544541

Crack Password

Plain text: cisco123