

Lab 5 of 7 (30 points)

3580-spv **Configuring VLANs and Deciphering STP Output**

336318 **CONFIGURING EXPANDED SWITCHED NETWORKS: RSTP and Troubleshooting**

Name: Kevin O'Neal

Date: 8-12-2012

Professor: Hopkins

3580-spv Configuring VLANs and Deciphering STP Output (10 points)

Write a paragraph (minimum five college-level sentences) below that summarizes what was accomplished in this lab, what you learned by performing it, how it relates to this week's TCO's and other course material; and just as important, how you feel it will benefit you in your academic and professional career

In this lab we configured the ip addresses on the routers and switches. We then configured the virtual trunk protocol with the domain ICND and in the server mode. Next, we configured a trunk between s1 and s2. On Sw1, configure VLAN2 with the name: vlan_b. Then, on s2 we configured vlan2 on port 2. Finally, we configured spanning-tree protocol on s1. We checked our configurations with the show spanning-tree command command and show vlan command and also used the data to find the root bridge and BID. All these commands and configurations will help me in my future endeavors of networking administration at Devry and at my future place of employment.

336318 CONFIGURING EXPANDED SWITCHED NETWORKS: RSTP and troubleshooting

Also, after completing the lab, you must show your work by copying and pasting a screenshot of the following configurations/verification:

Task 1: Show interface trunk on Sw1 (3 points)

NETW206 Week 5 Lab Report

```
swl(config-if)#no shut
swl(config-if)#
00:42:50: %LINK-3-UPDOWN: Interface GigabitEthernet0/1, changed state to down
swl(config-if)#
00:42:53: %LINK-3-UPDOWN: Interface GigabitEthernet0/1, changed state to up
swl(config-if)#
00:42:55: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
swl(config-if)#exit
swl(config)#show int trunk
^
% Invalid input detected at '^' marker.

swl(config)#exit
swl#
00:44:34: %SYS-5-CONFIG_I: Configured from console by console
swl#show interface trunk

Port          Mode          Encapsulation  Status        Native vlan
-----
Gi0/1         on            802.1q         trunking     1
Gi0/12        on            802.1q         trunking     1

Port          Vlans allowed on trunk
-----
Gi0/1         1-4094
Gi0/12        1-4094

Port          Vlans allowed and active in management domain
-----
Gi0/1         1
Gi0/12        1

Port          Vlans in spanning tree forwarding state and not pruned
-----
Gi0/1         none
Gi0/12        1
swl#
```

11:44 PM
8/12/2012

Task2: Show Spanning-tree on Sw1 & CoreSwB (3 points)

NETW206 Week 5 Lab Report

Sw1 - Mozilla Firefox

khse.vlab.elementk.com/vlab/deviceMaster.vlab?deviceId=1

Network Diagram Lab Content Device Controls Thumbnails View: single

Sw1

```
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300
```

Interface	Role	Sts	Cost	Prio.	Mbr	Type
Gi0/1	Altn	BLK	4	128.1		P2p
Gi0/2	Desg	FWD	19	128.2		P2p
Gi0/3	Desg	FWD	19	128.3		P2p
Gi0/12	Root	FWD	4	128.12		P2p

```
sw1#show spanning-tree
```

VLAN0001

```
Spanning tree enabled protocol rstp
Root ID Priority 1
Address 18ef.6386.3b00
Cost 4
Port 12 (GigabitEthernet0/12)
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
```

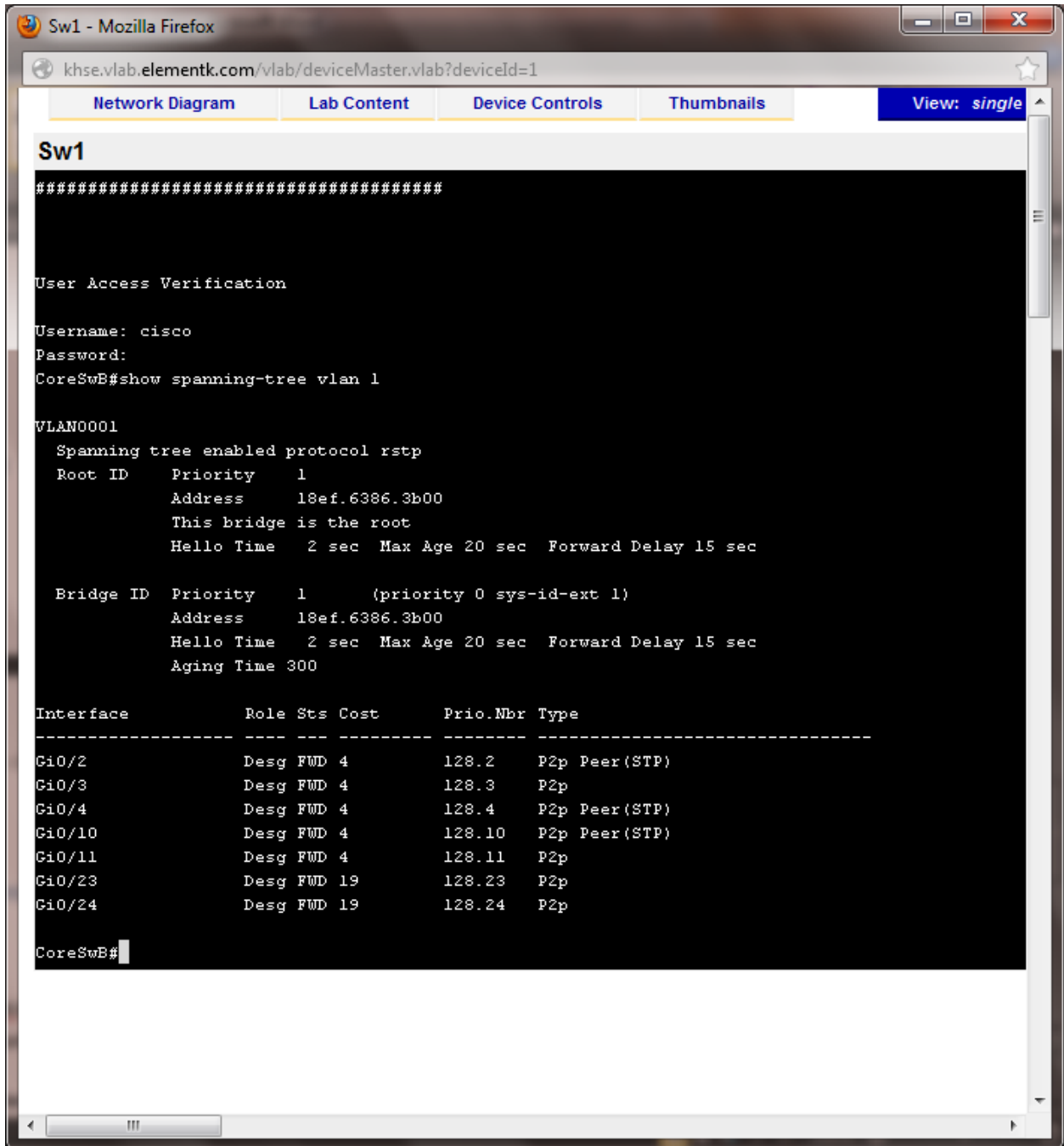
Bridge ID Priority 32769 (priority 32768 sys-id-ext 1)

```
Address 0023.34ab.3480
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300
```

Interface	Role	Sts	Cost	Prio.	Mbr	Type
Gi0/1	Altn	BLK	4	128.1		P2p
Gi0/2	Desg	FWD	19	128.2		P2p
Gi0/3	Desg	FWD	19	128.3		P2p
Gi0/12	Root	FWD	4	128.12		P2p

```
sw1#
```

NETW206 Week 5 Lab Report



```
#####  
User Access Verification  
  
Username: cisco  
Password:  
CoreSwB#show spanning-tree vlan 1  
  
VLAN0001  
Spanning tree enabled protocol rstp  
Root ID    Priority    1  
           Address    18ef.6386.3b00  
           This bridge is the root  
           Hello Time 2 sec  Max Age 20 sec  Forward Delay 15 sec  
  
Bridge ID  Priority    1    (priority 0 sys-id-ext 1)  
           Address    18ef.6386.3b00  
           Hello Time 2 sec  Max Age 20 sec  Forward Delay 15 sec  
           Aging Time 300  
  
Interface          Role Sts Cost          Prio.Nbr Type  
-----  
Gi0/2              Desg FWD 4            128.2   P2p Peer (STP)  
Gi0/3              Desg FWD 4            128.3   P2p  
Gi0/4              Desg FWD 4            128.4   P2p Peer (STP)  
Gi0/10             Desg FWD 4            128.10  P2p Peer (STP)  
Gi0/11             Desg FWD 4            128.11  P2p  
Gi0/23             Desg FWD 19           128.23  P2p  
Gi0/24             Desg FWD 19           128.24  P2p  
  
CoreSwB#
```

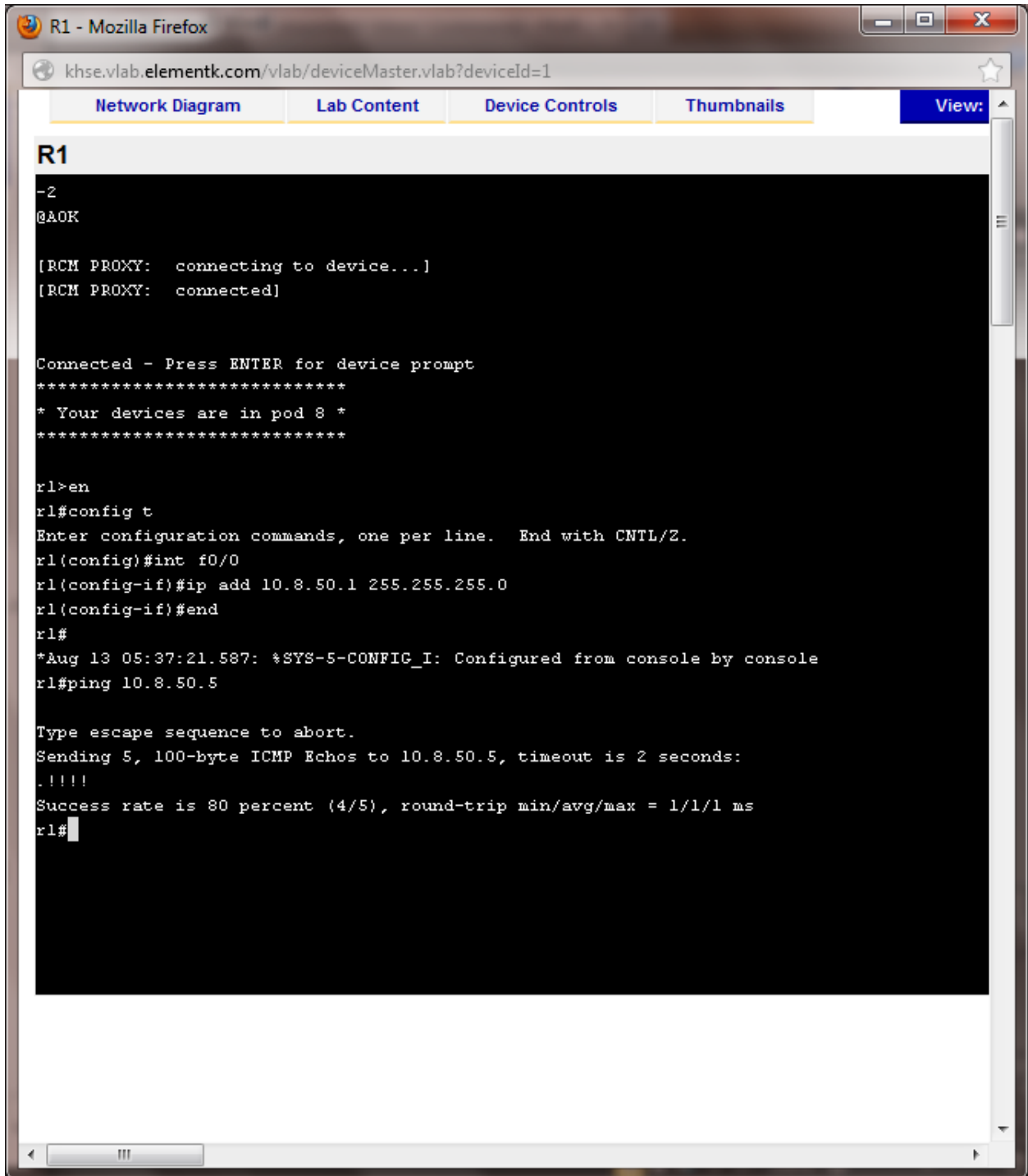
Task 3: Show VTP on Sw1 (3 points)

NETW206 Week 5 Lab Report

```
-----  
Fa0/1      Root FWD 19      128.1      P2p  
Fa0/2      Desg FWD 19      128.2      Edge P2p  
Fa0/12     Desg FWD 19      128.12     P2p  
  
swl#show vtp  
% Incomplete command.  
  
swl#show vtp 81  
^  
% Invalid input detected at '^' marker.  
  
swl#show vlan ICND  
^  
% Invalid input detected at '^' marker.  
  
swl#show vtp ICND  
^  
% Invalid input detected at '^' marker.  
  
swl#show vtp status  
VTP Version           : 2  
Configuration Revision : 0  
Maximum VLANs supported locally : 1005  
Number of existing VLANs : 6  
VTP Operating Mode     : Transparent  
VTP Domain Name        : ICND  
VTP Pruning Mode       : Disabled  
VTP V2 Mode            : Disabled  
VTP Traps Generation   : Disabled  
MD5 digest             : 0xDB 0x68 0x76 0x8B 0x64 0x2F 0x02 0xC2  
Configuration last modified by 10.8.1.2 at 0-0-00 00:00:00  
swl#
```

Task 4: From R1, Ping 10.1.50.5 (3 points)

NETW206 Week 5 Lab Report



```
R1 - Mozilla Firefox
khse.vlab.elementk.com/vlab/deviceMaster.vlab?deviceId=1
Network Diagram Lab Content Device Controls Thumbnails View:
R1
-2
@AOK

[RCM PROXY: connecting to device...]
[RCM PROXY: connected]

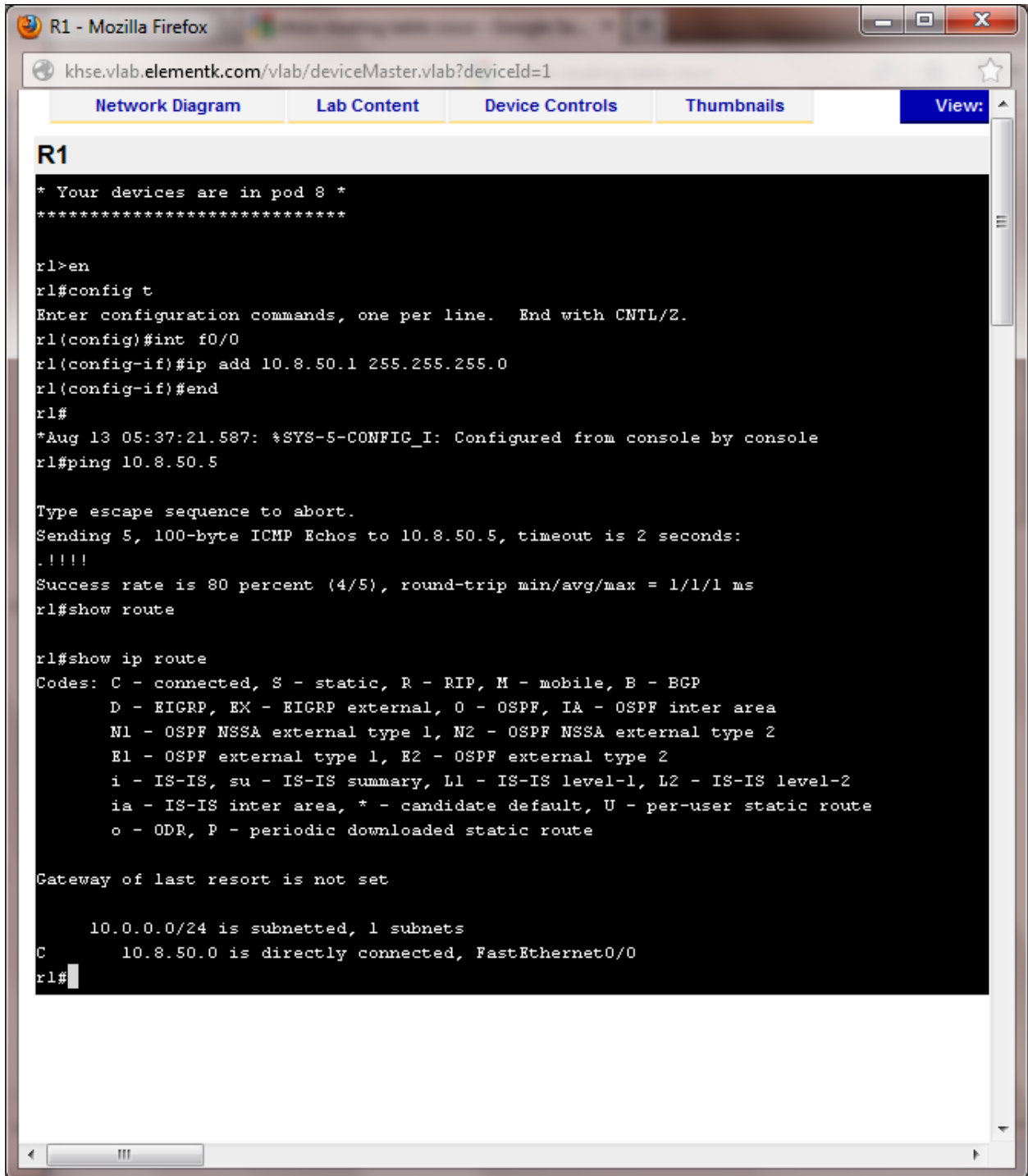
Connected - Press ENTER for device prompt
*****
* Your devices are in pod 8 *
*****

r1>en
r1#config t
Enter configuration commands, one per line. End with CNTL/Z.
r1(config)#int f0/0
r1(config-if)#ip add 10.8.50.1 255.255.255.0
r1(config-if)#end
r1#
*Aug 13 05:37:21.587: %SYS-5-CONFIG_I: Configured from console by console
r1#ping 10.8.50.5

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.8.50.5, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/1/1 ms
r1#
```

Task 5: From R1, show routing table (3 points)

NETW206 Week 5 Lab Report



```
R1 - Mozilla Firefox
khse.vlab.elementk.com/vlab/deviceMaster.vlab?deviceId=1
Network Diagram Lab Content Device Controls Thumbnails View:
R1
* Your devices are in pod 8 *
*****

rl>en
rl#config t
Enter configuration commands, one per line. End with CNTL/Z.
rl(config)#int f0/0
rl(config-if)#ip add 10.8.50.1 255.255.255.0
rl(config-if)#end
rl#
*Aug 13 05:37:21.587: %SYS-5-CONFIG_I: Configured from console by console
rl#ping 10.8.50.5

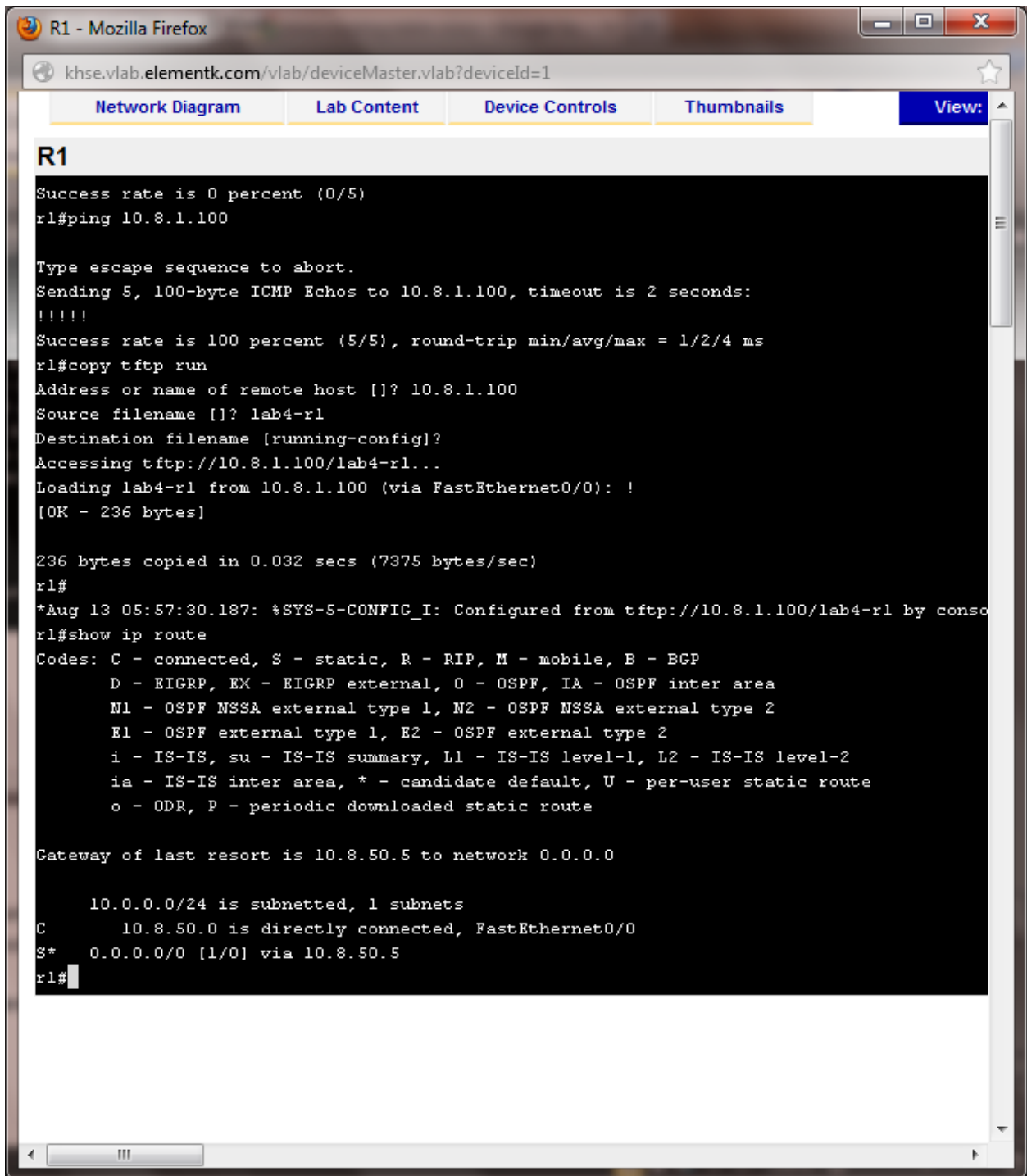
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.8.50.5, timeout is 2 seconds:
!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/1/1 ms
rl#show route

rl#show ip route
Codes: 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
       i - IS-IS, su - IS-IS summary, 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

      10.0.0.0/24 is subnetted, 1 subnets
C       10.8.50.0 is directly connected, FastEthernet0/0
rl#
```

NETW206 Week 5 Lab Report



```
R1
Success rate is 0 percent (0/5)
rl#ping 10.8.1.100

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.8.1.100, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/4 ms
rl#copy tftp run
Address or name of remote host []? 10.8.1.100
Source filename []? lab4-rl
Destination filename [running-config]?
Accessing tftp://10.8.1.100/lab4-rl...
Loading lab4-rl from 10.8.1.100 (via FastEthernet0/0): !
[OK - 236 bytes]

236 bytes copied in 0.032 secs (7375 bytes/sec)
rl#
*Aug 13 05:57:30.187: %SYS-5-CONFIG_I: Configured from tftp://10.8.1.100/lab4-rl by console
rl#show ip route
Codes: 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
       i - IS-IS, su - IS-IS summary, 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 10.8.50.5 to network 0.0.0.0

     10.0.0.0/24 is subnetted, 1 subnets
C       10.8.50.0 is directly connected, FastEthernet0/0
S*     0.0.0.0/0 [1/0] via 10.8.50.5
rl#
```

Paste a screenshot of your completed ElementK lab transcript found at Home/Account/Information/Transcript. Your name must appear on your transcript (5 points)

NETW206 Week 5 Lab Report

The screenshot shows a web browser window with several tabs open. The active tab is 'Account Information' on the DeVry University website. The page title is 'Account Information' and the URL is 'https://knowledge.elementk.com/accountinformation/StudentTranscript.jsp?navSelected=transcript'. The page content includes a navigation menu, a search bar, and a section titled 'Account Information' with a sub-section 'vLabs'. The 'vLabs' section contains a table of completed labs with columns for 'Title' and 'Date Completed'. The table lists 14 labs, all of which are marked as completed. The browser's search bar at the bottom shows the text 'hardening' and navigation buttons for 'Next', 'Previous', 'Highlight all', and 'Match case'.

DeVry University
WHERE SUCCESS STORIES BEGIN™

Home | My Content | Catalog | Professional Development | Help

Welcome, Kevin O'Neal of DeVry University | Logout | skillssoft

Account Information

The Account Information section of the site allows you to verify and update your personal information, set your general preferences, view information on the courses you've accessed, and find detailed information on orders you've placed. Fields marked with an (*) are required.

Personal Information | Preferences | Transcript | Login History

Filter Transcript by: Completed [FILTER]

Title	Date Completed
A Simple Network Using RIP Protocol	May 20, 2012
BSCI: Configuring OSPF Single Area	Jun 17, 2012
CALCULATING SUBNET MASKS	Mar 24, 2012
CLASSIFYING NETWORK ADDRESSING	Mar 10, 2012
COMPUTING USABLE SUBNETS AND HOSTS	Mar 18, 2012
CONFIGURING EXPANDED SWITCHED NETWORKS: RSTP and Troubleshooting	Aug 12, 2012 Aug 13, 2012
CONFIGURING EXPANDED SWITCHED NETWORKS: VLANs and VTP	Jul 28, 2012 Jul 30, 2012
Configuring RIPv1 and RIPv2 on the same network	May 27, 2012
Configuring VLANs and Deciphering STP Output	Aug 13, 2012
CONNECTING TO THE INTERNET AND MAIN OFFICE: Static and Dynamic Routes	May 13, 2012
CONVERTING DECIMAL TO BINARY AND BINARY TO DECIMAL	Mar 10, 2012
ENHANCING THE SECURITY OF INITIAL ROUTER CONFIGURATION	Apr 8, 2012

Find: hardening [Next] [Previous] [Highlight all] [Match case]

Please post all screenshots and summary on the same document.