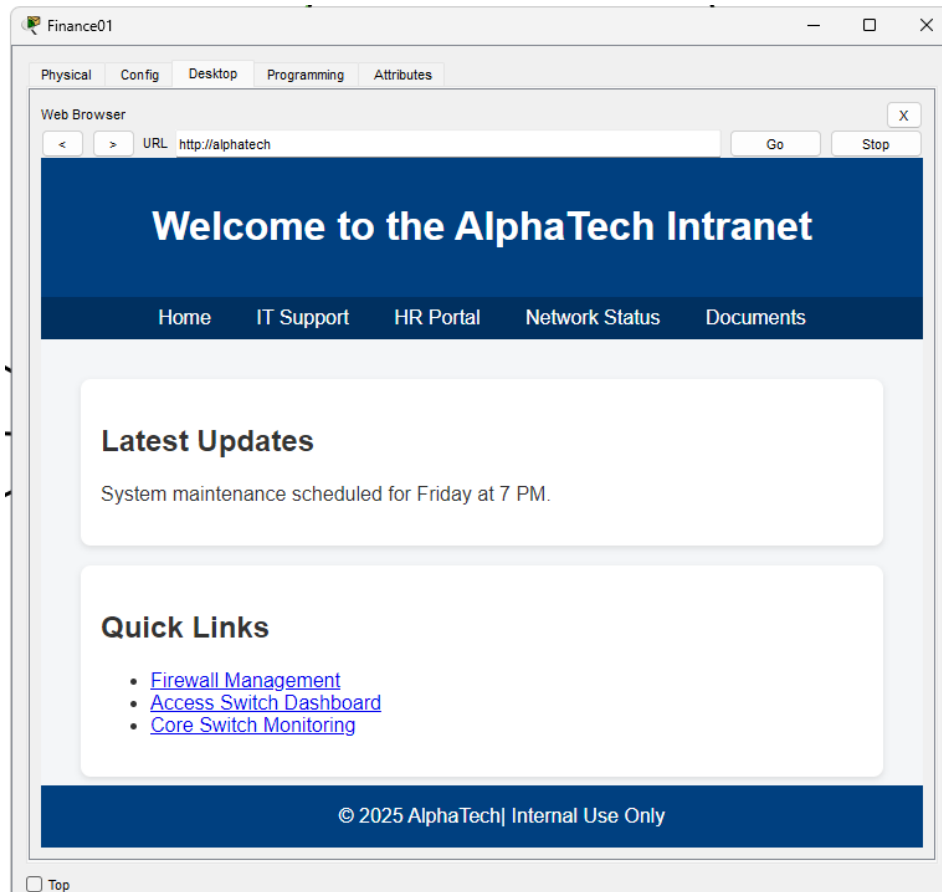


**The purpose of this document is to showcase and capture key aspects of the configuration and setup within my lab environment.**

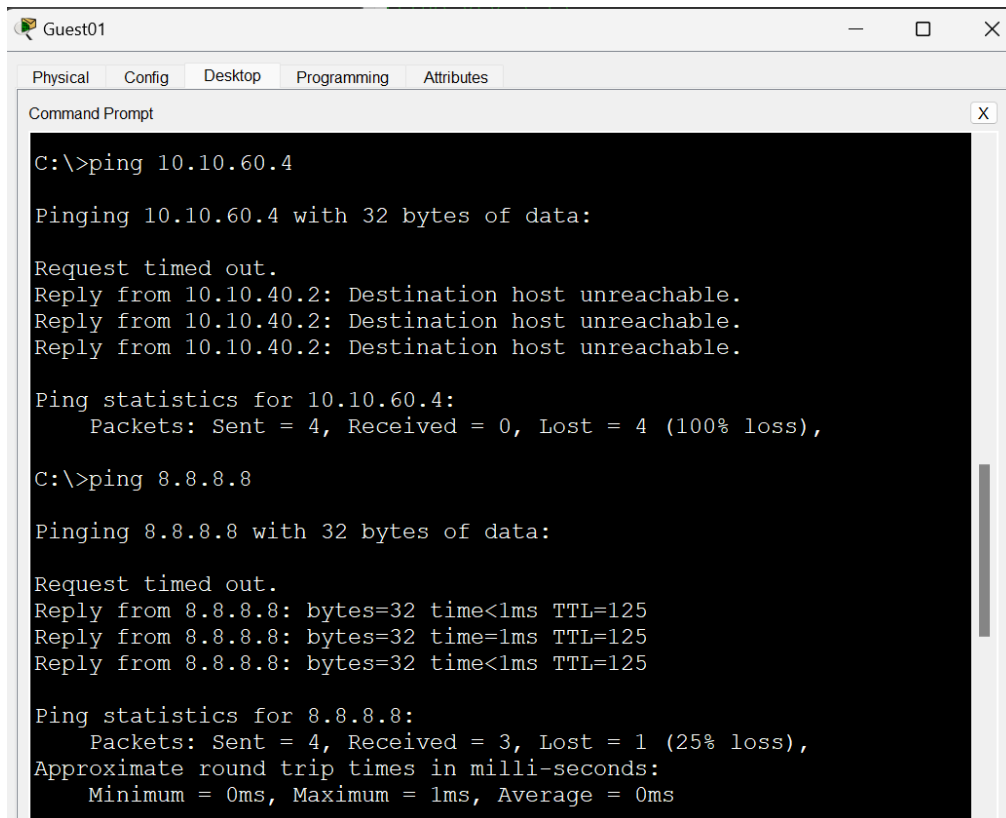
Finance01 pc can successfully browse the **intranet** hosted on **AT-SVR01** (VLAN 60), which shows that the VLANs are correctly routing between the finance department and the internal servers.

*Figure 1: Intranet access from Finance*



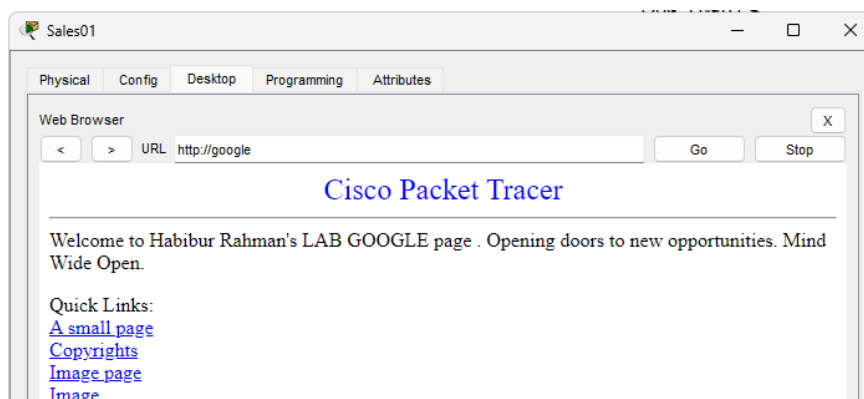
Guest01 PC (VLAN 40) can ping the internet (e.g., Google DNS) but cannot access internal network resources, as expected. This indicates the correct isolation of the guest network from the internal network.

Figure 2: Guest is not able to access internal network but able to access the internet



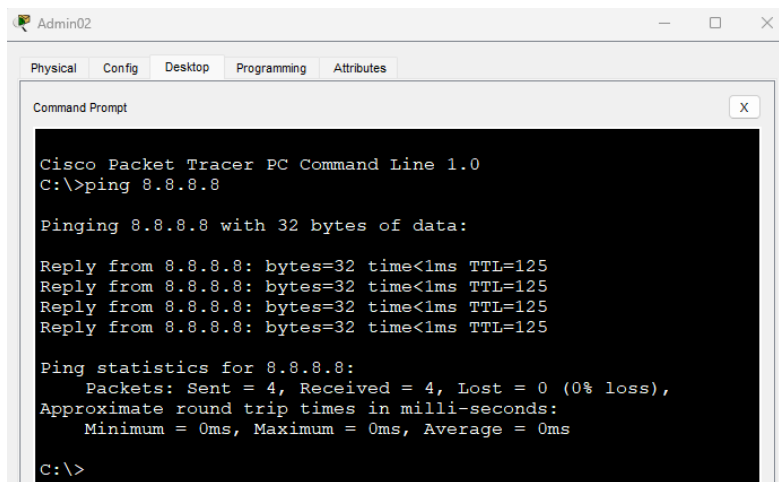
This screenshot shows Sales01 PC (VLAN20) can browse to the Internet (sample google page) which resides outside of the office router.

Figure 3 :Sales dept browsing the Internet



Admin02 PC (VLAN 10): can successfully ping to Google from the admin department (VLAN 10), verifying proper internet connectivity same as all other VLANs

Figure 4: ping success from admin department (VLAN10) to the internet (Google)



```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:

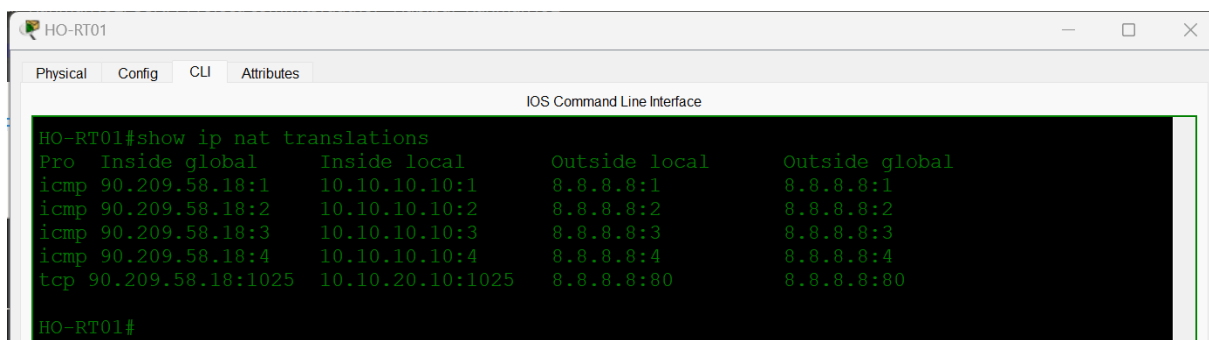
Reply from 8.8.8.8: bytes=32 time<1ms TTL=125
Reply from 8.8.8.8: bytes=32 time<1ms TTL=125
Reply from 8.8.8.8: bytes=32 time<1ms TTL=125
Reply from 8.8.8.8: bytes=32 time<1ms TTL=125

Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

NAT Traffic on Edge Router the packet capture shows that traffic from internal VLANs (Sales Figure 3 and Admin Figure 4) is being translated by the edge router for external internet access, confirming that NAT (Network Address Translation) is functioning as expected.

Figure 5: NAT Traffic captured on Edge router



```
HO-RT01#show ip nat translations
Pro  Inside global      Inside local       Outside local      Outside global
icmp 90.209.58.18:1    10.10.10.10:1      8.8.8.8:1          8.8.8.8:1
icmp 90.209.58.18:2    10.10.10.10:2      8.8.8.8:2          8.8.8.8:2
icmp 90.209.58.18:3    10.10.10.10:3      8.8.8.8:3          8.8.8.8:3
icmp 90.209.58.18:4    10.10.10.10:4      8.8.8.8:4          8.8.8.8:4
tcp  90.209.58.18:1025 10.10.20.10:1025   8.8.8.8:80         8.8.8.8:80

HO-RT01#
```

SYSLOG Capture on AT-SVR01, logs from the SYSLOG server show that network events and traffic from the Core\_SW02 (10.10.60.3) & Core\_SW01 (10.10.60.2) are being captured, which aids in troubleshooting and monitoring.

Figure 6: Logs from the SYSLOG server

Syslog			
Service		<input checked="" type="radio"/> On <input type="radio"/> Off	
	Time	HostName	Message
1	05.05.2025 09:24:51.527 AM	10.10.60.3	%HSRP-6-STATECHANGE: Vlan99 Grp 99 state Spe...
2	05.05.2025 09:24:52.001 AM	10.10.60.3	...
3	05.05.2025 09:23:20.022 AM	10.10.60.2	09:23:20: %OSPF-5-ADJCHG: Process 1, Nbr ...
4	05.05.2025 09:23:20.075 AM	10.10.60.2	09:23:20: %OSPF-5-ADJCHG: Process 1, Nbr ...
5	05.05.2025 09:23:20.075 AM	10.10.60.2	09:23:20: %OSPF-5-ADJCHG: Process 1, Nbr ...
6	05.05.2025 09:24:52.052 AM	10.10.60.3	09:24:52: %OSPF-5-ADJCHG: Process 1, Nbr ...
7	05.05.2025 09:24:52.052 AM	10.10.60.3	09:24:52: %OSPF-5-ADJCHG: Process 1, Nbr ...
8	05.05.2025 09:23:25.002 AM	10.10.60.2	09:23:25: %OSPF-5-ADJCHG: Process 1, Nbr ...
9	05.05.2025 09:24:57.002 AM	10.10.60.3	09:24:57: %OSPF-5-ADJCHG: Process 1, Nbr ...
10	05.05.2025 09:23:25.059 AM	10.10.60.2	09:23:25: %OSPF-5-ADJCHG: Process 1, Nbr ...
11	05.05.2025 09:24:57.003 AM	10.10.60.3	09:24:57: %OSPF-5-ADJCHG: Process 1, Nbr ...
12	05.05.2025 09:24:57.104 AM	10.10.60.3	09:24:57: %OSPF-5-ADJCHG: Process 1, Nbr ...
13	05.05.2025 09:23:25.092 AM	10.10.60.2	09:23:25: %OSPF-5-ADJCHG: Process 1, Nbr ...
14	05.05.2025 09:25:01.490 AM	10.10.60.3	%HSRP-6-STATECHANGE: Vlan40 Grp 40 state Spe...
Clear Log			

SSH to Core Switch (IT\_admin01 PC) SSH access from an IT admin PC to the core switch, indicating proper configuration for administrative access.

Figure 5: SSH to Core switch

IT\_Admin01

PhysicalConfigDesktopProgrammingAttributes

SSH Client

Password:

Core\_SW01#

Core\_SW01#

Core\_SW01#

Core\_SW01#

Core\_SW01#

Core\_SW01#show

Core\_SW01#show run

Core\_SW01#show running-config

Building configuration...

Current configuration : 7824 bytes

!

version 12.2(37)SE1

service timestamps log datetime msec