1. The systemctl command belongs to_____ daemon management system, and the service command belongs to_____ daemon management system.

Systemd
SysVinit

2. After finishing the Microsoft Windows installation process, and connecting the network adapter to VMnet2 or 'Private to my Mac' (for MacOS users), the VM is obtaining an IP address in the range of 169.254.0.1 through 169.254.255.254. However the DHCP server is turned off, and the network adapter in VMware Workstation/Fusion is not connected to NAT. Why is the Windows system getting an IP address if there is no DHCP server available for it?

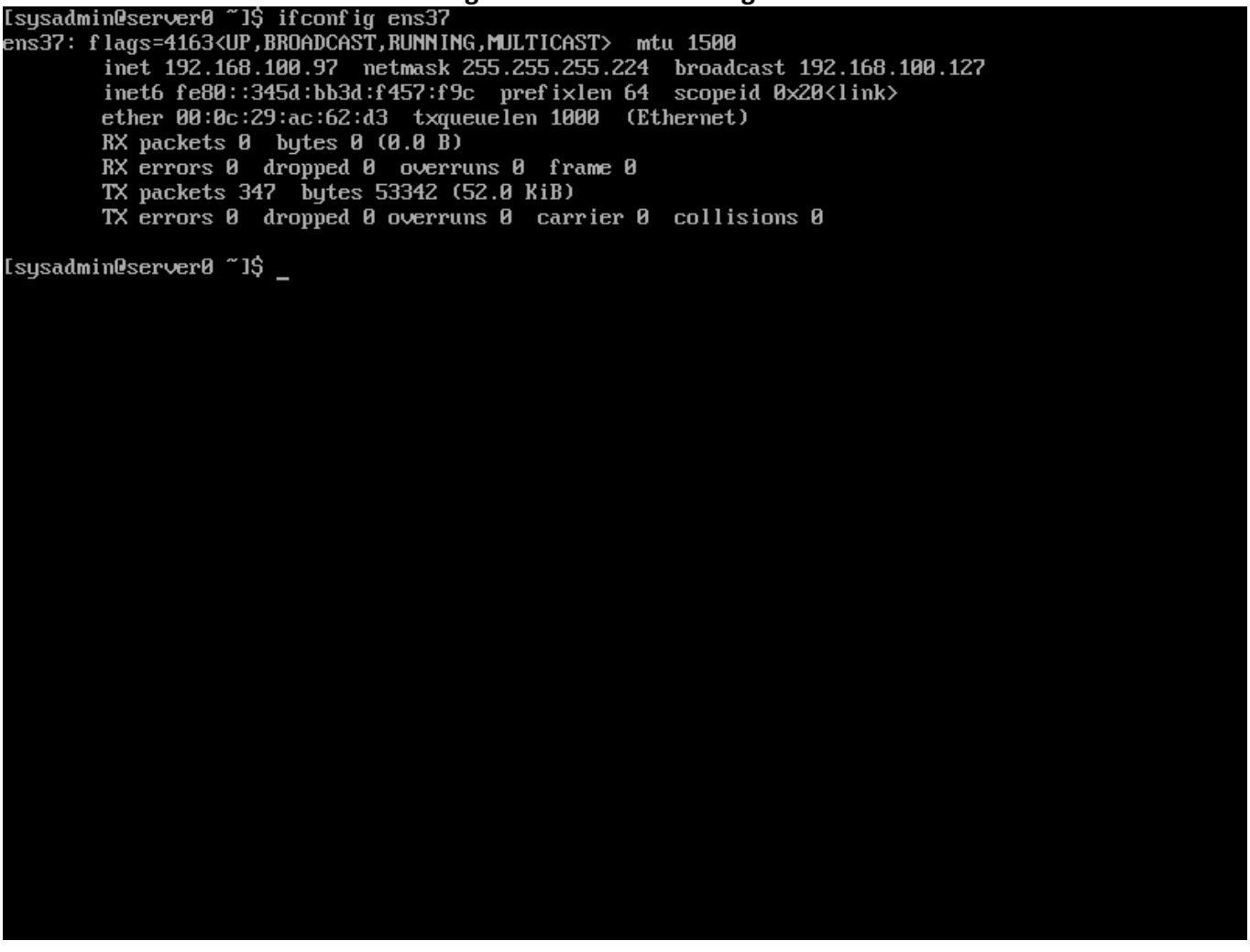
The Windows system is assigning itself an IP address through automatic private IP addressing (APIPA).

3. Using the 4th subnet of the 192.168.100.0/27. Configure a DHCP server on your server0 CentOS system with only one Microsoft Windows client.

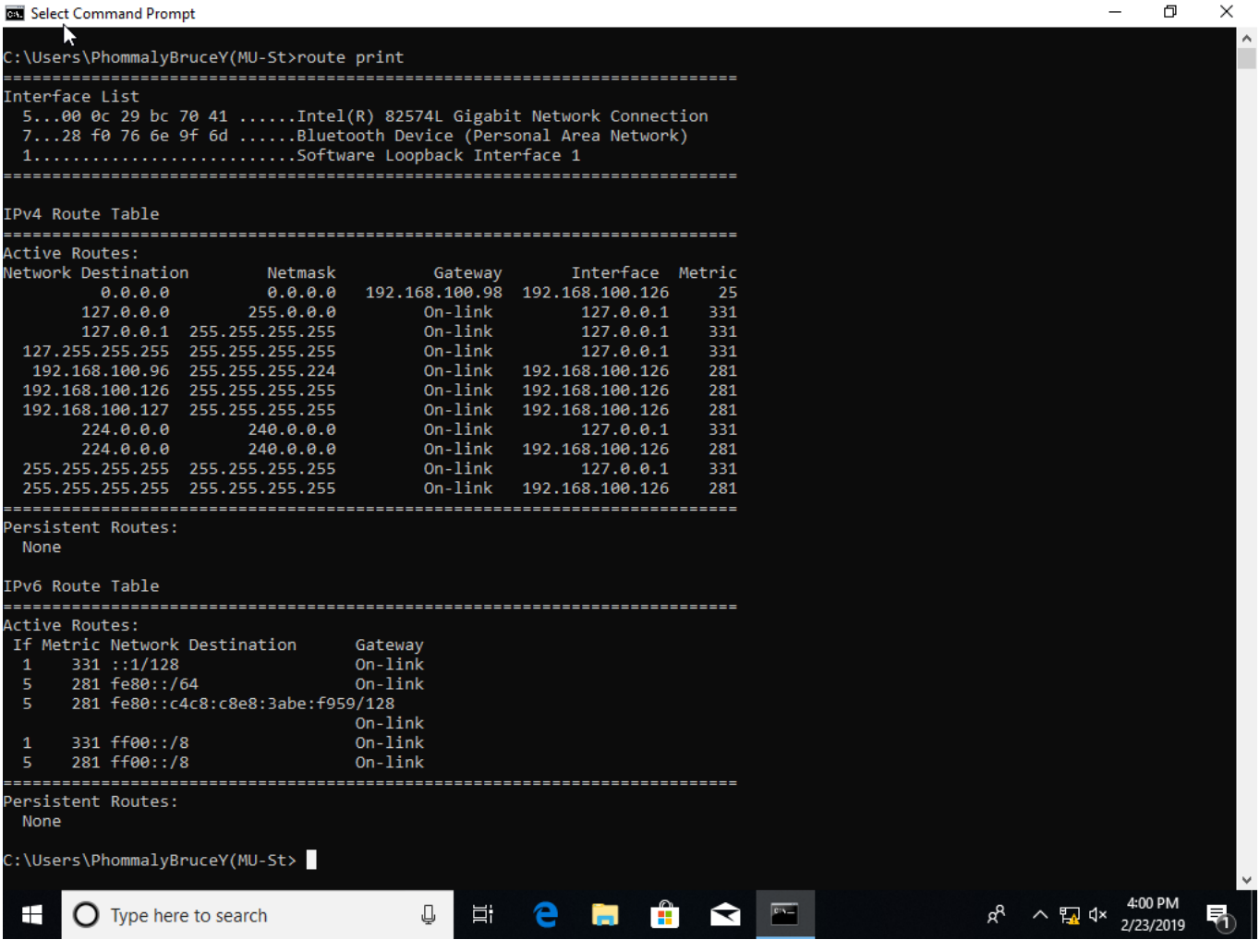
- **Assign the first valid IP to the network adapter connected to your VMnet2 or 'Private to my Mac' on your CentOS server0.**
- **Assign the 8.8.4.4 as a DNS server for all the DHCP client systems.**
- **Assign the second valid IP as a gateway for all the DHCP client systems.**
- **Assign the last valid IP to your Microsoft Windows DHCP client (use the client MAC address to assign the IP).**

Submit:

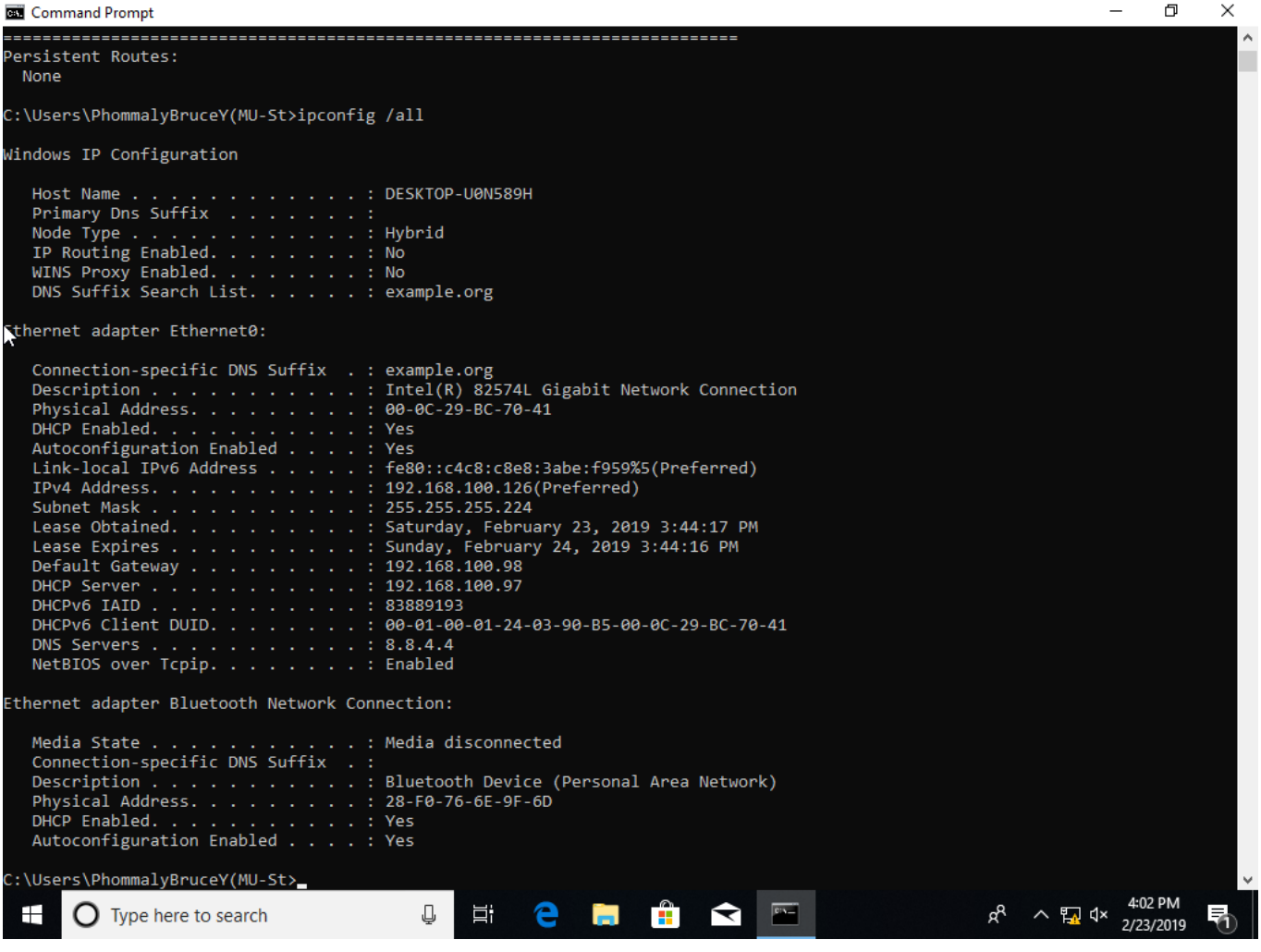
1. A screenshot of the server executing the command ifconfig with the correct IP address



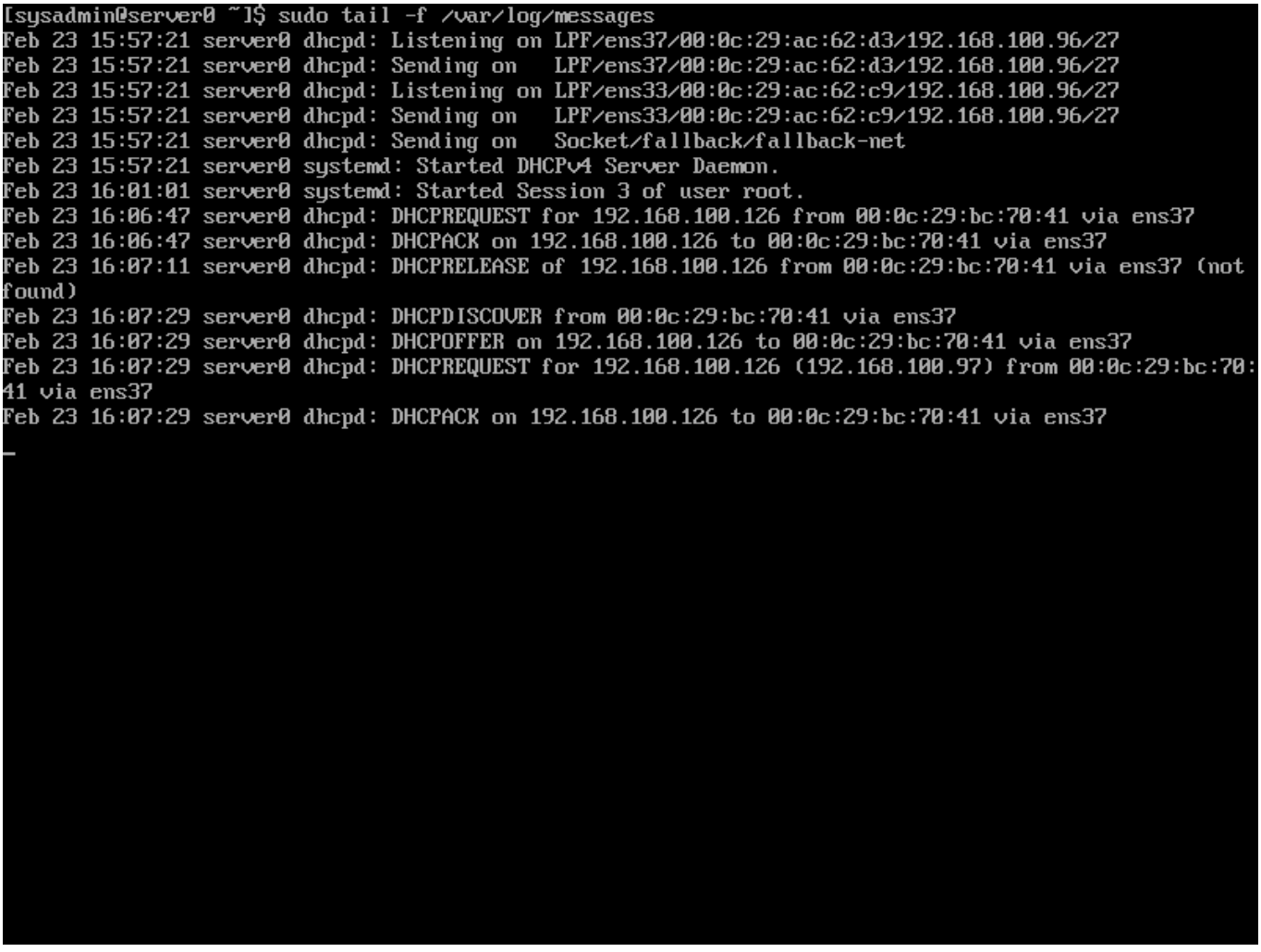
2. A screenshot of the client executing the command route –n with the correct DNS output



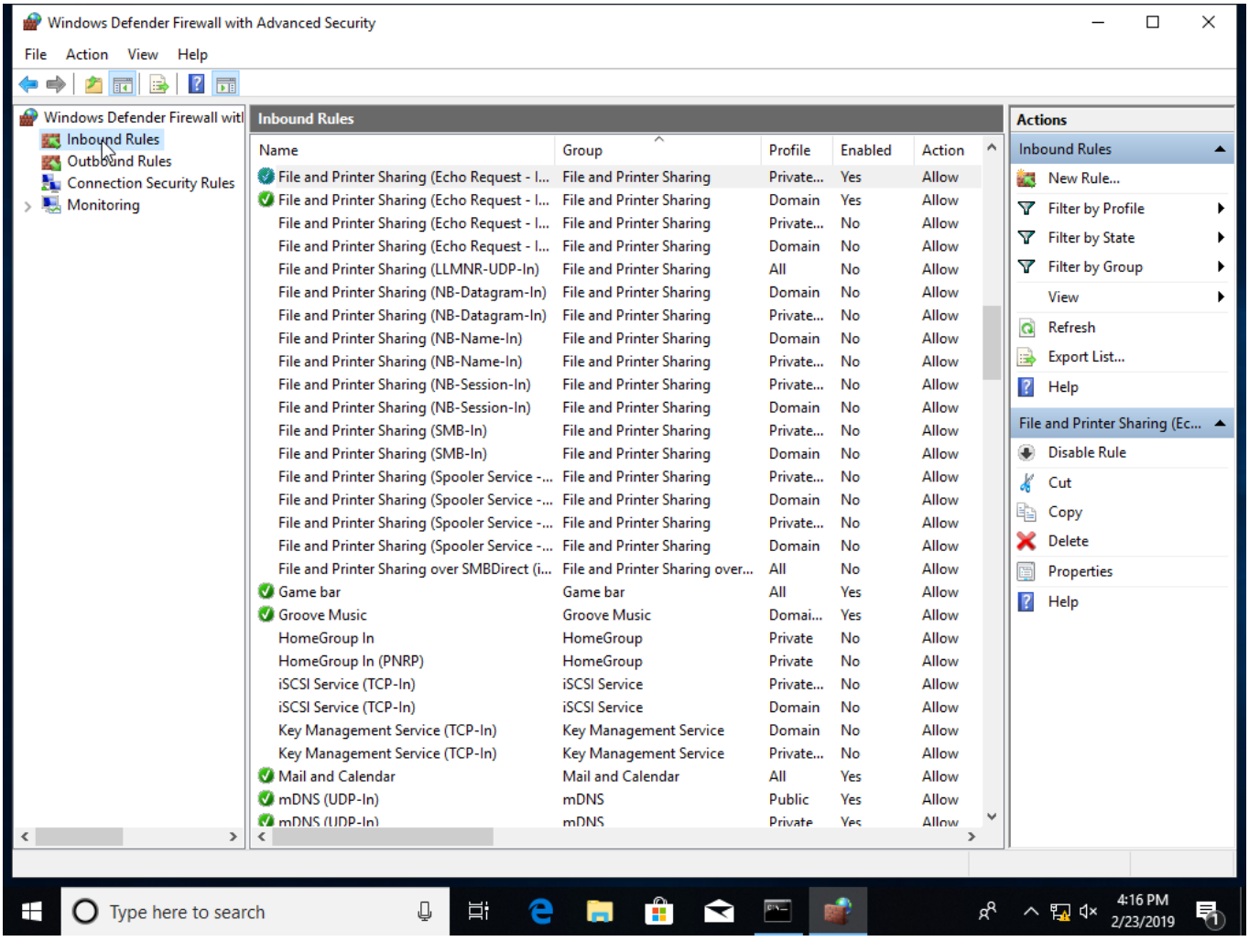
3. A screenshot of the client executing the command cat /etc/resolv.conf with the correct DNS output

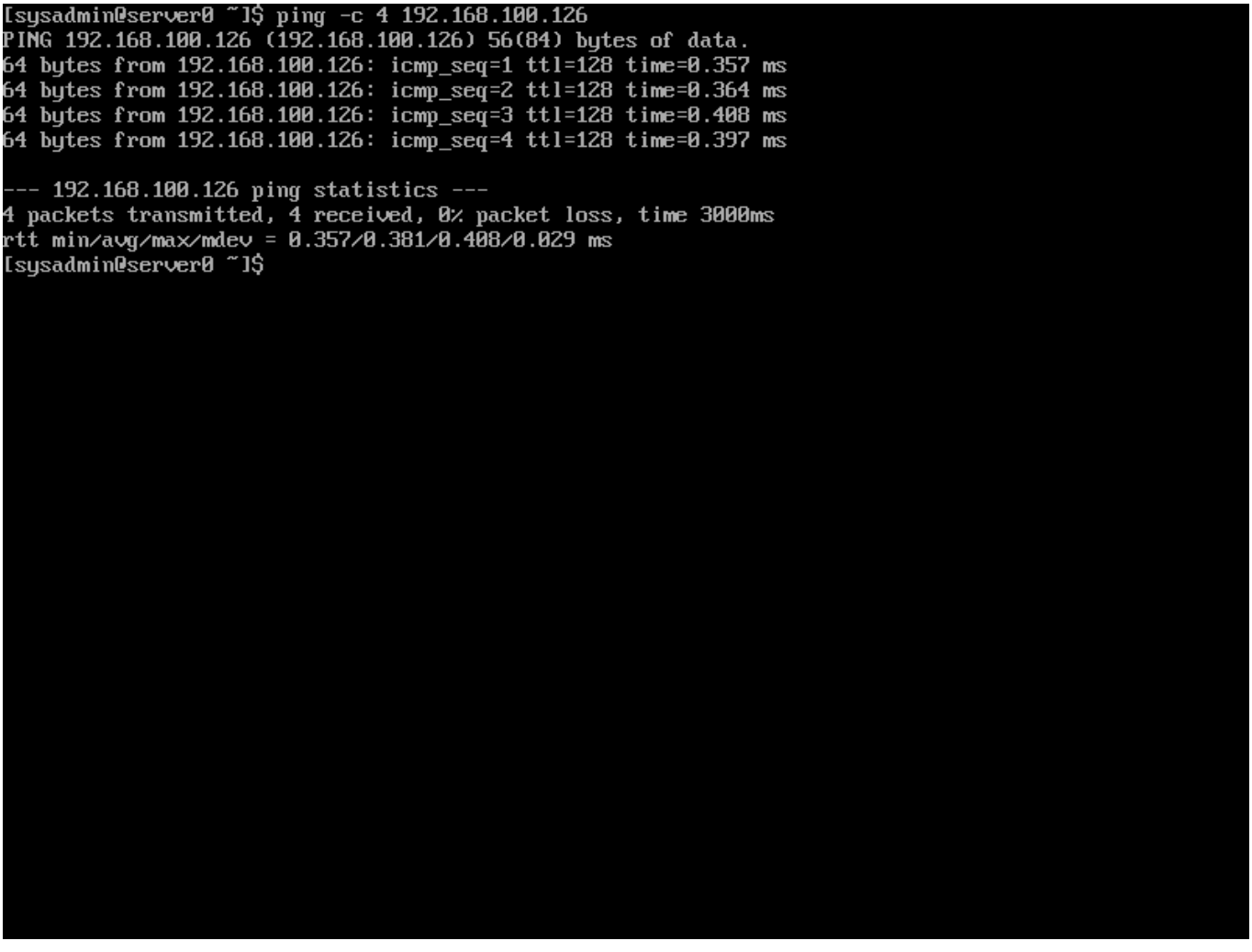


4. A screenshot of the server executing showing the content of /var/log/messages with the correct DHCP communication process from the client (i.e. DHCP messages type: DHCPDiscover, DHCPOffer, DHCPRequest, DHCPAck).



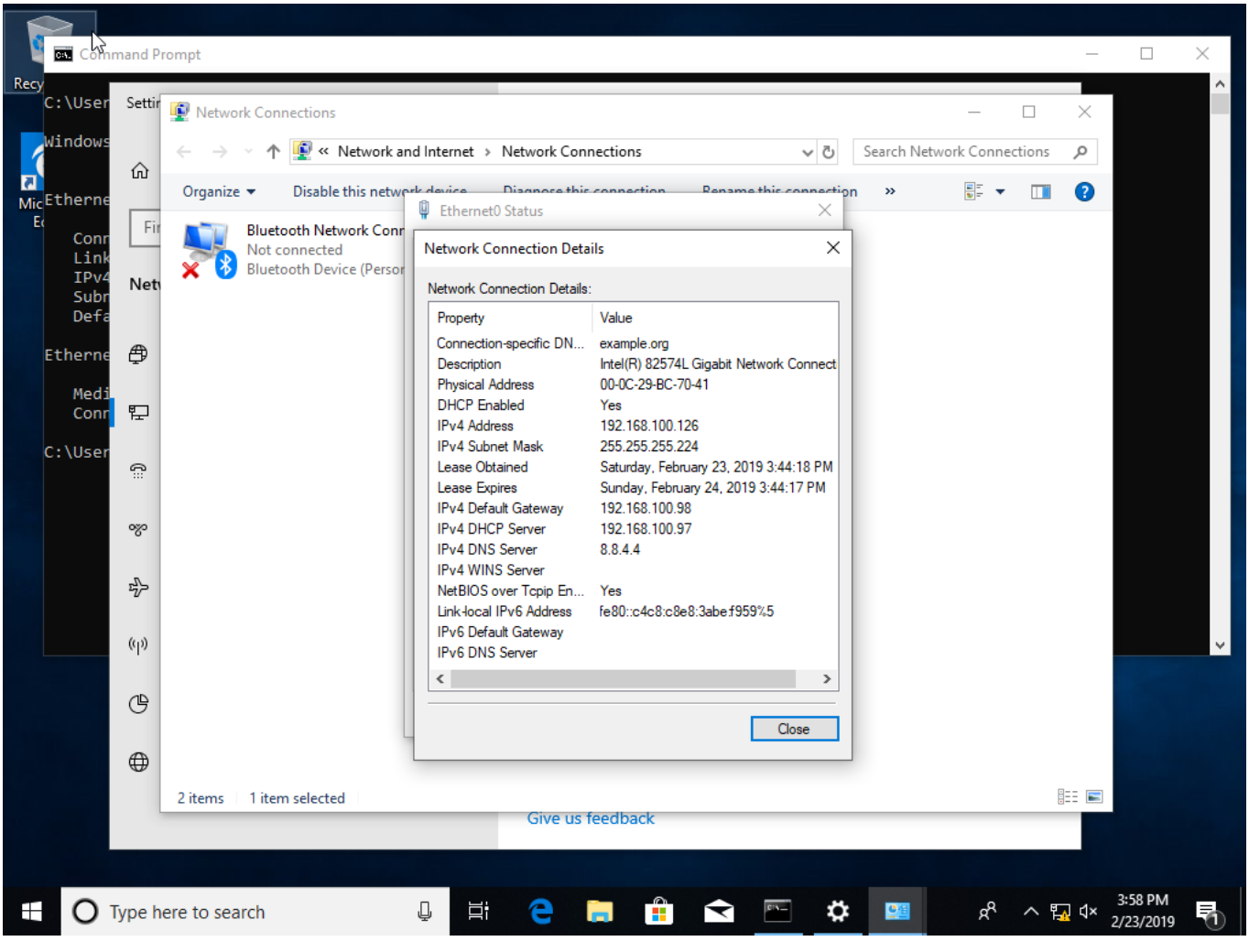
4. Once we finalize configuring the DHCP server on CentOS, the Windows system gets an IP address from there. The Windows system can ping to the DHCP server successfully. However, the DHCP server cannot ping to the windows VM. Inquire about the reason or reasons why this communication is not possible. Provide an explanation and the steps you follow on your Windows VM to solve the problem. Include a screenshot.





By default, ping requests are blocked by the firewall. So, search and open the windows firewall, then click advanced settings and then inbound rules on the left, find the rule File and Printer Sharing (Echo Request – ICMPv4-In) and enable the rule.

5. Our Windows VM obtained network configuration from CentOS DHCP server. How can we obtain information from Windows VM about the CentOS DHCP server IP address? Include a screenshot.



By navigating to the network configuration, then right-clicking on the network interface card, and then clicking status and finally details.

6. How can we guarantee that after rebooting our CentOS server0 with the DHCP service installed on it, the DHCP service will continue enabled and working? Show the command to be used. Tip: Service commands on 'SysVinit vs Systemd' table.

sudo systemctl enable dhcpd.service