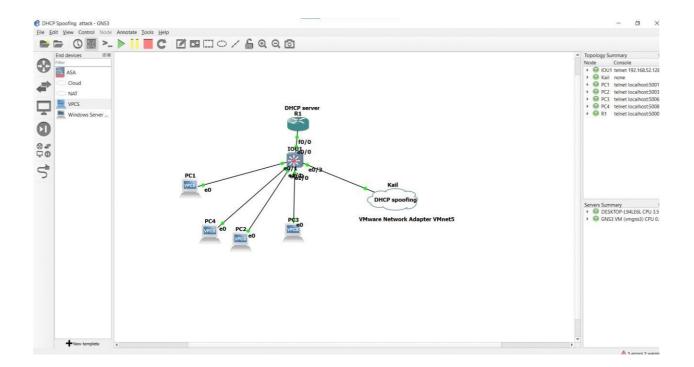
DHCP Starvation Attack

is a network attack where an attacker sends fake DHCP requests to exhaust the server's IP pool, blocking legitimate users from getting an IP address. Attackers use spoofed MAC addresses to overwhelm the server quickly

LAB on DHCP Starvation Attack



Step for configurations

1. Enter on Router and enable DHCP

R1(config)#int f0/0

R1(config-if)#ip address 10.0.0.1 255.0.0.0

R1(config-if)#no shutdown

R1(config-if)#exit

R1(config)#ip dhcp pool DHCP

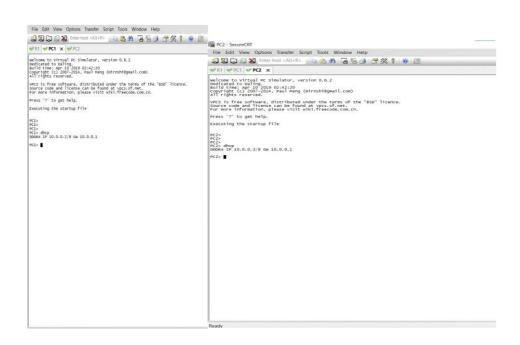
R1(dhcp-config)#network 10.0.0.0 255.0.0.0

R1(dhcp-config)#default-router 10.0.0.1

R1(dhcp-config)#dns-server 8.8.8.8

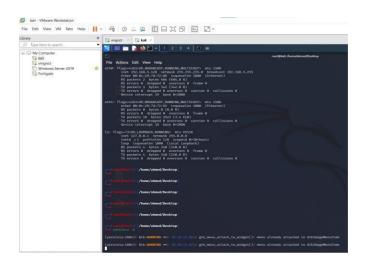
2. Enter on All PC

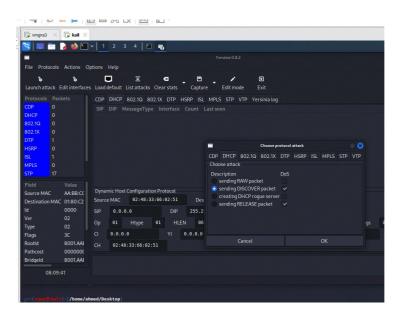
PC> dhcp

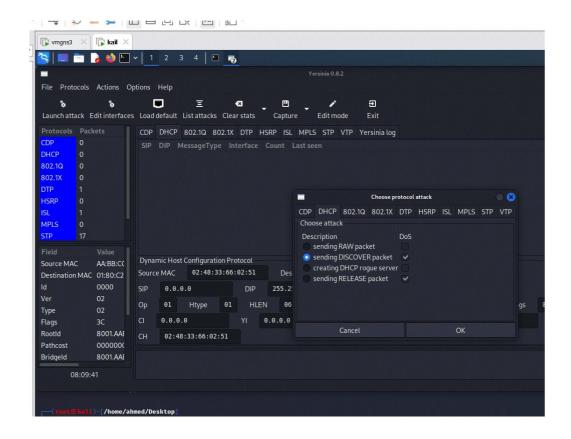


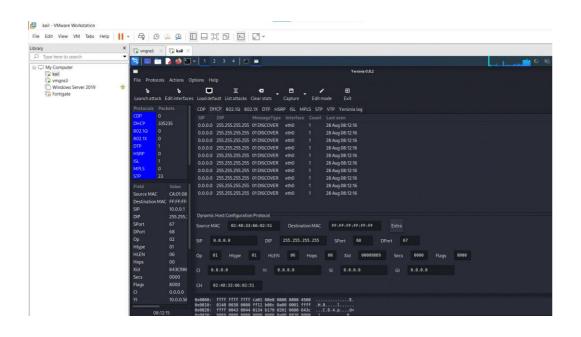
3. Launch DHCP Attack

Enter on Kail









4. Enter all PC for check iP

Each PC not given IP from DHCP Server

5.enter DHCP server

DHCP # show ip dhcp binding

□ DHCP			
File Edit View Op	otions Transfer Script	Tools Window Help	
#1 #1 C #1 #1	Enter host <alt+r></alt+r>	à 🖺 👫 😼 🕏 🤧 🚰 😤	
♥ DHCP × ♥ PC1	❤ PC2		
Current index 10.0.0.190 DHCP#show ip dhcp		- 10.255.255.254 Leased ac	ddresses
IP address	ools not associated Client-ID/ Hardware address/ User name	Lease expiration	Туре
10.0.0.2 10.0.0.3	0100.5079.6668.00 0100.5079.6668.01	Aug 28 2024 03:21 PM Aug 28 2024 03:12 PM	Automatic Automatic
10.0.0.4	461c.240c.1bee	Aug 28 2024 03:15 PM	Automatic
10.0.0.5	17e5.c745.aad1	Aug 28 2024 03:15 PM	Automatic
10.0.0.6 10.0.0.7	a325.5219.4afd f3fb.291b.a1d5	Aug 28 2024 03:15 PM Aug 28 2024 03:15 PM	Automatic Automatic
10.0.0.8	5a1d.0f38.52cf	Aug 28 2024 03:15 PM	Automatic
10.0.0.9	8352.9973.a188	Aug 28 2024 03:15 PM	Automatic
10.0.0.10 10.0.0.11	0723.a564.2eac 5e33.ac69.89c8	Aug 28 2024 03:15 PM Aug 28 2024 03:15 PM	Automatic Automatic
10.0.0.12	3de9.5f6d.ca84	Aug 28 2024 03:15 PM	Automatic
10.0.0.13	b85b.f877.f1b8	Aug 28 2024 03:15 PM	Automatic
10.0.0.14 10.0.0.15	01e0.0c6a.60ec e87b.7958.7a0e	Aug 28 2024 03:15 PM Aug 28 2024 03:15 PM	Automatic Automatic
10.0.0.16	a705.0918.8fa0	Aug 28 2024 03:15 PM	Automatic
10.0.0.17	22d6.571f.a3f1	Aug 28 2024 03:15 PM	Automatic
10.0.0.18 10.0.0.19	ce47.0a7c.9c5c 848a.8b47.426c	Aug 28 2024 03:15 PM Aug 28 2024 03:15 PM	Automatic
10.0.0.20	0b86.ac44.ee7c	Aug 28 2024 03:15 PM	Automatic Automatic
10.0.0.21	1024.dd19.ad09	Aug 28 2024 03:15 PM	Automatic
10.0.0.22	972e.a24b.0a55 2f31.1f2e.a24f	Aug 28 2024 03:15 PM	Automatic
10.0.0.23 10.0.0.24	c9b6.936d.6ba5	Aug 28 2024 03:15 PM Aug 28 2024 03:15 PM	Automatic Automatic
10.0.0.25	2ec7.1511.0a2c	Aug 28 2024 03:15 PM	Automatic
10.0.0.26	ced4.cb7c.4f75	Aug 28 2024 03:15 PM	Automatic
10.0.0.27 10.0.0.28	2a81.6973.3728 6c13.ad66.4448	Aug 28 2024 03:15 PM Aug 28 2024 03:15 PM	Automatic Automatic
10.0.0.29	9f64.8a7c.2744	Aug 28 2024 03:15 PM	Automatic
10.0.0.30	6bc3.3971.8b35	Aug 28 2024 03:15 PM	Automatic
10.0.0.31 10.0.0.32	6f8a.3148.54d2 ab07.6f4e.1ac8	Aug 28 2024 03:15 PM Aug 28 2024 03:15 PM	Automatic Automatic
10.0.0.33	4e90.aa33.f299	Aug 28 2024 03:15 PM	Automatic
10.0.0.34	c04b.f658.0896	Aug 28 2024 03:16 PM	Automatic
10.0.0.35 10.0.0.36	8db3.a752.6eef 6d8a.8908.2244	Aug 28 2024 03:16 PM Aug 28 2024 03:16 PM	Automatic Automatic
10.0.0.37	7a7d.a17b.300d	Aug 28 2024 03:16 PM	Automatic
10.0.0.38	a0f7.8b21.6ad8	Aug 28 2024 03:16 PM	Automatic
10.0.0.39 10.0.0.40	f504.dd57.89bd 5d32.794b.1735	Aug 28 2024 03:16 PM Aug 28 2024 03:16 PM	Automatic Automatic
10.0.0.41	3b88.5861.704f	Aug 28 2024 03:16 PM	Automatic
10.0.0.42	b1c6.b463.275e	Aug 28 2024 03:16 PM	Automatic
10.0.0.43 10.0.0.44	36c5.7032.7f24 47e6.2340.d058	Aug 28 2024 03:16 PM Aug 28 2024 03:16 PM	Automatic Automatic
10.0.0.45	8acd.1b1b.0fdb	Aug 28 2024 03:16 PM	Automatic
10.0.0.46	5c0a.ff03.46bb	Aug 28 2024 03:16 PM	Automatic
10.0.0.47 10.0.0.48	c472.a03a.7664 8ab8.d64a.5d71	Aug 28 2024 03:16 PM Aug 28 2024 03:16 PM	Automatic Automatic
10.0.0.49	8161.e71c.1828	Aug 28 2024 03:10 PM	Automatic
10.0.0.50	e51d. 8169. 9e84	Aug 28 2024 03:16 PM	Automatic
10.0.0.51 10.0.0.52	17d6.6f41.5d1a acec.135c.a290	Aug 28 2024 03:16 PM Aug 28 2024 03:16 PM	Automatic Automatic
10.0.0.53	5761.3646.ed61	Aug 28 2024 03:10 PM	Automatic
10.0.0.54	3b02.d266.5f84	Aug 28 2024 03:16 PM	Automatic
10.0.0.55 10.0.0.56	f463.6962.6a37 35a7.747f.5675	Aug 28 2024 03:16 PM Aug 28 2024 03:16 PM	Automatic Automatic
10.0.0.57	0238.c166.7351	Aug 28 2024 03:16 PM Aug 28 2024 03:16 PM	Automatic
10.0.0.58	0596.9849.f5fa	Aug 28 2024 03:16 PM	Automatic
10.0.0.59	223f.e057.7225	Aug 28 2024 03:16 PM	Automatic
10.0.0.60 10.0.0.61	0931.a215.6416 8cb3.bc64.d229	Aug 28 2024 03:16 PM Aug 28 2024 03:16 PM	Automatic Automatic
]			



File Edit View Options Transfer Script Tools Window Help 🖏 🖫 🔓 🧸 Enter host <Alt+R> 🖟 🧸 🦂 🧸 🥞 🥌 🤻 🤻 🤻 ◆ DHCP × ◆ PC1 ◆ PC2 55e8.7b00.dce3 17be.3338.c7b1 Aug 28 2024 03:18 PM Aug 28 2024 03:18 PM 2024 03:18 PM 10.0.0.115 Automatic 10.0.0.116 Automatic b9c0.7831.ab0c 10.0.0.117 Aug 28 2024 03:18 PM Automatic Aug 28 2024 03:18 PM Aug 28 2024 03:18 PM 10.0.0.118 800d.bc5a.e0a6 Automatic b641.b902.8dde 10.0.0.119 Automatic 10.0.0.120 5cf7.4c37.c313 Aug 28 2024 03:18 PM Automatic 24e4.345d.8482 Aug 28 2024 03:18 Automatic 10.0.0.121 Aug 28 2024 03:18 PM 10.0.0.122 324a.c660.ecc0 Automatic Aug 28 2024 03:18 PM 5299.7615.38d0 10.0.0.123 Automatic Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM 10.0.0.124 78d3.4d79.792b Automatic 10.0.0.125 0d2c.2311.1def Automatic 10.0.0.126 bc93.9615.6b91 Aug 28 2024 03:19 PM Automatic 0df6.b455.42f9 8335.316f.ef3f Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM 10.0.0.127 Automatic 10.0.0.128 Automatic Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM 10.0.0.129 b686.bd31.8f93 Automatic 10.0.0.130 ba93.183e.23a0 Automatic 6344.4236.13e1 Aug 28 2024 03:19 PM 10.0.0.131 Automatic Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM 10.0.0.132 4c19.3c53.a556 Automatic 10.0.0.133 b3b7.e753.bbfb Automatic 0fa4.bc0c.9c29 Aug 28 2024 03:19 PM 10.0.0.134 Automatic 10.0.0.135 2066.fb7e.3895 Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM Automatic 6615.5e70.2439 10.0.0.136 Automatic 4a51.bf2f.ae1c Aug 28 2024 03:19 PM 10.0.0.137 Automatic a08c.9129.bce7 5334.7d59.c440 Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM Automatic 10.0.0.138 10.0.0.139 Automatic 1308.8061.d991 10.0.0.140 Aug 28 2024 03:19 PM Automatic Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM 4982.a076.2882 6797.ff7f.16c6 10.0.0.141 Automatic 10.0.0.142 Automatic 10.0.0.143 2104.283f.e753 Aug 28 2024 03:19 PM Automatic 8a24.0f03.98fc fa1d.602d.c408 Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM 10.0.0.144 Automatic 10.0.0.145 Automatic 10.0.0.146 1667.8c71.770a Aug 28 2024 03:19 PM Automatic b5de.103a.7ae1 5de3.060c.7783 Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM 10.0.0.147 Automatic 10.0.0.148 Automatic 10.0.0.149 c13c.6a6c.d7e8 Aug 28 2024 03:19 PM Automatic Aug 28 2024 03:19 PM Aug 28 2024 03:19 PM be7a, 3b00, a86d 10.0.0.150 Automatic 5564.cd2a.15c5 10.0.0.151 Automatic Aug 28 2024 03:19 PM 10.0.0.152 b1c3.7807.8efa Automatic Aug 28 2024 03:19 PM Aug 28 2024 03:20 PM 10.0.0.153 61ca.0e3a.4520 Automatic 10.0.0.154 5f4b.dc16.a91c Automatic Aug 28 2024 03:20 PM 10.0.0.155 36c8.bc5a.7425 Automatic Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM 80e4.fa3e.3e26 6e7d.3060.e7c2 10.0.0.156 Automatic 10.0.0.157 Automatic 10.0.0.158 13be.5a45.434f Aug 28 2024 03:20 PM Automatic Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM 10.0.0.159 3d83.070f.51dc Automatic ff7f.312b.ce8c 10.0.0.160 Automatic Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM 10.0.0.161 7644.fb20.b83e Automatic 10.0.0.162 ca14.9929.d90c Automatic 10.0.0.163 c4e1.1523.d401 Automatic c18b.f91f.82d2 Aug 28 2024 03:20 PM 10.0.0.164 Automatic Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM 10.0.0.165 f094.e37b.fb5b Automatic 5a8a.1409.0cf7 10.0.0.166 Automatic 310c.0b11.da6a 10.0.0.167 Aug 28 2024 03:20 PM Automatic Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM 10.0.0.168 78c1.a541.25d7 Automatic 10.0.0.169 bae9.b03d.1341 Automatic Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM 10.0.0.170 e88b.7715.c475 Automatic eef4.9f33.8622 10.0.0.171 Automatic eef0.cb7a.5ec5 10.0.0.172 Aug 28 2024 03:20 PM Automatic 9ab2.6f0d.72c4 Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM Automatic 10.0.0.173 10.0.0.174 596b.ed7e.b106 Automatic ef9b.6941.7600 Aug 28 2024 03:20 PM 10.0.0.175 Automatic 2eb2.4637.48e8 d21d.f741.c44b Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM 10.0.0.176 Automatic 10.0.0.177 Automatic Obed. 8126. c1e1 10.0.0.178 Aug 28 2024 03:20 PM Automatic Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM Aug 28 2024 03:20 PM 10.0.0.179 1a88.e612.bdd9 Automatic 2bf4.7738.ec4b 10.0.0.180 Automatic 94fa.3f32.88b1 10.0.0.181 Automatic

Secure of DHCP Starvation

Enter on Switch

IOU1(config)#ip dhcp snooping vlan 1
IOU1(config)#ip dhcp snooping
IOU1(config)#no ip dhcp snooping information option
IOU1(config)#interface e0/0

IOU1(config-if)#no shutdown
IOU1(config-if)#ip dhcp snooping trust

IOU1(config) int range e0/1-3 IOU1(config-if)#no shutdown

IOU1(config-if)#ip dhcp snooping limit rate 3