

Projeleri yaparken FastAPI kullanabilirsiniz.

1- Eş zamanlı 172.29.0.1/16 networkü tarayan ve burda bulunduğu IP adreslerine aynı şekilde eş zamanlı SSH connection açan basit bir proje oluşturabilir misin? Veritabanı kullanmak zorunda değilsin kullanmak istersen embedded bir database seçebilirsin. Not: En hızlı çalışan kodu yazınız.

2- Eş zamanlı ve arka planda 512 adet IP adresine sürekli ping atan ve ulaşılamayan IP adreslerini listeleyen uygulama yazabilir misin? Not: Uygulama sürekli olarak çalışacaktır.

3- Insert, Update ve Delete işlemlerini gerçekleştiren ve bunu 100.000 kayıt olarak en hızlı sürede yerine getirebilecek uygulama yazabilir misin? Not: Database yapısını kendin oluşturabilirsin. Minimum 2 adet tablo ve 5 adet kolon bulunması zorunludur. Veri tabanı olarak SQLite veya PostgreSQL kullanabilirsin.

4- Eşzamanlı şekilde 1000 adet farklı python processi çalıştırıp (T0 anında başlatacak şekilde) işlemi biten processlerin manuel olarak kullandıkları kaynaklarını (RAM, CPU) serbest bıraktırmışsınız (GIL kapatmadan) ? Bu processleri databaseden çekip anlık durumlarını kaydedebilmemişsiniz ?

5- Uzakta bulunan bir Linux serverda ssh bağlantısı açıp uzaktan (Komut veya bir config) gönderebilen bir python sınıfı oluşturabilirmisin ? (Mümkünse verdiğim network bloğuna eşzamanlı işlem yapacak şekilde olsun)

6- Aşağıda gösterilen veri streaming (sürekli akan) bir veridir. Sürekli akan bu veri içerisinde "OPTION: 53 (1) DHCP message type 3 (DHCPREQUEST)" olan kısımları , 1 Client-identifier - 2 Request IP address -3 Vendor class identifier -4 Host name alanlarının karşılığındaki değerleri alıp parse eden uygulamayı yazıyınız. Bazı durumlarda bu 4 veriden bazıları boş gelebilmektedir yada hiç gelmemektedir. Bu yazılım belirli bir SSH komutunu 300 sn dinleyerek verileri toplayarak anlık olarak parse etme işlemini yapacaktır. Ayrıştırılmış verileri txt dosyasına veya veritabanına yazabilirsiniz.

[illegible]

28 (Broadcast address)
51 (IP address leasetime)
58 (T1)
59 (T2)
43 (Vendor specific info)
114 (URL)
108 (Swap Path)

TIME: 2023-08-24 17:46:37.098
IP: 10.38.1.26 (0:c:29:e5:40:a0) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 2 (BOOTPREPLY)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: 54330ee6
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 10.38.1.117
SIADDR: 10.143.0.19
GIADDR: 0.0.0.0
CHADDR: 96:4e:d7:51:42:de:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: snponly.efi.
OPTION: 53 (1) DHCP message type 5 (DHCPACK)
OPTION: 58 (4) T1 60 (60s)
OPTION: 59 (4) T2 105 (1m45s)
OPTION: 51 (4) IP address leasetime 120 (2m)
OPTION: 54 (4) Server identifier 10.38.1.26
OPTION: 1 (4) Subnet mask 255.255.255.0
OPTION: 3 (4) Routers 10.38.1.254
OPTION: 6 (8) DNS server 10.38.1.26,10.143.0.14
OPTION: 15 (11) Domainname rakort.pls

TIME: 2023-08-24 17:46:52.386
IP: 0.0.0.0 (a0:ec:f9:38:67:3d) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 1 (BOOTPREQUEST)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: 00002097
SECS: 0
FLAGS: 8000
CIADDR: 0.0.0.0
YIADDR: 0.0.0.0
SIADDR: 0.0.0.0
GIADDR: 0.0.0.0
CHADDR: a0:ec:f9:38:67:3d:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: .
OPTION: 53 (1) DHCP message type 1 (DHCPDISCOVER)
OPTION: 57 (2) Maximum DHCP message size 1200
OPTION: 61 (7) Client-identifier 01:a0:ec:f9:38:67:3d
OPTION: 12 (6) Host name Rakort
OPTION: 55 (9) Parameter Request List 1 (Subnet mask)
6 (DNS server)
15 (Domainname)

44 (NetBIOS name server)
3 (Routers)
7 (Log server)
33 (Static route)
150 (???)
43 (Vendor specific info)

OPTION: 60 (14) Vendor class identifier Cisco AP c1600

TIME: 2023-08-24 17:46:52.387
IP: 10.38.1.26 (0:c:29:e5:40:a0) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 2 (BOOTPREPLY)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: 00002097
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 10.38.1.128
SIADDR: 10.143.0.19
GIADDR: 0.0.0.0
CHADDR: a0:ec:f9:38:67:3d:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: snponly.efi.
OPTION: 53 (1) DHCP message type 5 (DHCPACK)
OPTION: 58 (4) T1 60 (60s)
OPTION: 59 (4) T2 105 (1m45s)
OPTION: 51 (4) IP address leasetime 120 (2m)
OPTION: 54 (4) Server identifier 10.38.1.26
OPTION: 1 (4) Subnet mask 255.255.255.0
OPTION: 6 (8) DNS server 10.38.1.26,10.143.0.14
OPTION: 15 (11) Domainname rakort.pls
OPTION: 3 (4) Routers 10.38.1.254

TIME: 2023-08-24 17:47:08.194
IP: 0.0.0.0 (70:d9:31:39:a1:80) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 1 (BOOTPREQUEST)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: 0017c30c
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 0.0.0.0
SIADDR: 0.0.0.0
GIADDR: 0.0.0.0
CHADDR: 70:d9:31:39:a1:80:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: .
OPTION: 53 (1) DHCP message type 1 (DHCPDISCOVER)
OPTION: 61 (7) Client-identifier 01:70:d9:31:39:a1:80
OPTION: 57 (2) Maximum DHCP message size 1464
OPTION: 60 (9) Vendor class identifier huawei AP
OPTION: 55 (10) Parameter Request List 1 (Subnet mask)
3 (Routers)
6 (DNS server)
15 (Domainname)
28 (Broadcast address)

33 (Static route)
43 (Vendor specific info)
44 (NetBIOS name server)
121 (Classless Static Route)
184 (???)

TIME: 2023-08-24 17:47:08.194
IP: 10.38.1.26 (0:c:29:e5:40:a0) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 2 (BOOTPREPLY)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: 0017c30c
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 10.38.1.112
SIADDR: 10.143.0.19
GIADDR: 0.0.0.0
CHADDR: 70:d9:31:39:a1:80:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: snponly.efi.
OPTION: 53 (1) DHCP message type 2 (DHCPOFFER)
OPTION: 1 (4) Subnet mask 255.255.255.0
OPTION: 58 (4) T1 60 (60s)
OPTION: 59 (4) T2 105 (1m45s)
OPTION: 51 (4) IP address leasetime 120 (2m)
OPTION: 54 (4) Server identifier 10.38.1.26
OPTION: 3 (4) Routers 10.38.1.254
OPTION: 6 (8) DNS server 10.38.1.26,10.143.0.14
OPTION: 15 (11) Domainname rakort.pls

TIME: 2023-08-24 17:47:08.194
IP: 0.0.0.0 (70:d9:31:39:a1:80) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 1 (BOOTPREQUEST)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: 43a74a5b
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 0.0.0.0
SIADDR: 0.0.0.0
GIADDR: 0.0.0.0
CHADDR: 70:d9:31:39:a1:80:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: .
OPTION: 53 (1) DHCP message type 3 (DHCPPREQUEST)
OPTION: 50 (4) Request IP address 10.38.1.112
OPTION: 61 (7) Client-identifier 01:70:d9:31:39:a1:80
OPTION: 54 (4) Server identifier 10.38.1.26
OPTION: 57 (2) Maximum DHCP message size 1464
OPTION: 60 (9) Vendor class identifier huawei AP
OPTION: 55 (10) Parameter Request List 1 (Subnet mask)
3 (Routers)
6 (DNS server)
15 (Domainname)
28 (Broadcast address)

33 (Static route)
43 (Vendor specific info)
44 (NetBIOS name server)
121 (Classless Static Route)
184 (???)

TIME: 2023-08-24 17:47:08.195
IP: 10.38.1.26 (0:c:29:e5:40:a0) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 2 (BOOTPREPLY)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: 43a74a5b
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 10.38.1.112
SIADDR: 10.143.0.19
GIADDR: 0.0.0.0
CHADDR: 70:d9:31:39:a1:80:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: snponly.efi.
OPTION: 53 (1) DHCP message type 5 (DHCPACK)
OPTION: 58 (4) T1 60 (60s)
OPTION: 59 (4) T2 105 (1m45s)
OPTION: 51 (4) IP address leasetime 120 (2m)
OPTION: 54 (4) Server identifier 10.38.1.26
OPTION: 1 (4) Subnet mask 255.255.255.0
OPTION: 3 (4) Routers 10.38.1.254
OPTION: 6 (8) DNS server 10.38.1.26,10.143.0.14
OPTION: 15 (11) Domainname rakort.pls

TIME: 2023-08-24 17:47:11.834
IP: 0.0.0.0 (7e:e7:25:62:8e:bf) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 1 (BOOTPREQUEST)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: 52af474c
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 0.0.0.0
SIADDR: 0.0.0.0
GIADDR: 0.0.0.0
CHADDR: 7e:e7:25:62:8e:bf:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: .
OPTION: 53 (1) DHCP message type 1 (DHCPDISCOVER)
OPTION: 61 (7) Client-identifier 01:7e:e7:25:62:8e:bf
OPTION: 57 (2) Maximum DHCP message size 1500
OPTION: 60 (15) Vendor class identifier android-dhcp-13
OPTION: 12 (9) Host name Android8T
OPTION: 55 (12) Parameter Request List 1 (Subnet mask)
3 (Routers)
6 (DNS server)
15 (Domainname)
26 (Interface MTU)
28 (Broadcast address)

51 (IP address leasetime)
 58 (T1)
 59 (T2)
 43 (Vendor specific info)
 114 (URL)
 108 (Swap Path)

OPTION: 80 (0) Naming Authority

TIME: 2023-08-24 17:47:11.834
 IP: 10.38.1.26 (0:c:29:e5:40:a0) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
 OP: 2 (BOOTPREPLY)
 HTYPE: 1 (Ethernet)
 HLEN: 6
 HOPS: 0
 XID: 52af474c
 SECS: 0
 FLAGS: 0
 CIADDR: 0.0.0.0
 YIADDR: 10.38.1.129
 SIADDR: 10.143.0.19
 GIADDR: 0.0.0.0
 CHADDR: 7e:e7:25:62:8e:bf:00:00:00:00:00:00:00:00:00:00
 SNAME: .
 FNAME: snponly.efi.
 OPTION: 53 (1) DHCP message type 2 (DHCPOFFER)
 OPTION: 1 (4) Subnet mask 255.255.255.0
 OPTION: 58 (4) T1 60 (60s)
 OPTION: 59 (4) T2 105 (1m45s)
 OPTION: 51 (4) IP address leasetime 120 (2m)
 OPTION: 54 (4) Server identifier 10.38.1.26
 OPTION: 3 (4) Routers 10.38.1.254
 OPTION: 6 (8) DNS server 10.38.1.26,10.143.0.14
 OPTION: 15 (11) Domainname rakort.pls

TIME: 2023-08-24 17:47:11.835
 IP: 0.0.0.0 (7e:e7:25:62:8e:bf) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
 OP: 1 (BOOTPREQUEST)
 HTYPE: 1 (Ethernet)
 HLEN: 6
 HOPS: 0
 XID: 52af474c
 SECS: 0
 FLAGS: 0
 CIADDR: 0.0.0.0
 YIADDR: 0.0.0.0
 SIADDR: 0.0.0.0
 GIADDR: 0.0.0.0
 CHADDR: 7e:e7:25:62:8e:bf:00:00:00:00:00:00:00:00:00:00
 SNAME: .
 FNAME: .
 OPTION: 53 (1) DHCP message type 3 (DHCPREQUEST)
 OPTION: 61 (7) Client-identifier 01:7e:e7:25:62:8e:bf
 OPTION: 50 (4) Request IP address 10.38.1.129
 OPTION: 54 (4) Server identifier 10.38.1.26
 OPTION: 57 (2) Maximum DHCP message size 1500
 OPTION: 60 (15) Vendor class identifier android-dhcp-13
 OPTION: 12 (9) Host name Android8T
 OPTION: 55 (12) Parameter Request List 1 (Subnet mask)
 3 (Routers)

6 (DNS server)
15 (Domainname)
26 (Interface MTU)
28 (Broadcast address)
51 (IP address leasetime)
58 (T1)
59 (T2)
43 (Vendor specific info)
114 (URL)
108 (Swap Path)

TIME: 2023-08-24 17:47:11.835
IP: 10.38.1.26 (0:c:29:e5:40:a0) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 2 (BOOTPREPLY)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: 52af474c
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 10.38.1.129
SIADDR: 10.143.0.19
GIADDR: 0.0.0.0
CHADDR: 7e:e7:25:62:8e:bf:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: snponly.efi.
OPTION: 53 (1) DHCP message type 5 (DHCPACK)
OPTION: 58 (4) T1 60 (60s)
OPTION: 59 (4) T2 105 (1m45s)
OPTION: 51 (4) IP address leasetime 120 (2m)
OPTION: 54 (4) Server identifier 10.38.1.26
OPTION: 1 (4) Subnet mask 255.255.255.0
OPTION: 3 (4) Routers 10.38.1.254
OPTION: 6 (8) DNS server 10.38.1.26,10.143.0.14
OPTION: 15 (11) Domainname rakort.pls

TIME: 2023-08-24 17:47:41.994
IP: 0.0.0.0 (7e:e7:25:62:8e:bf) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 1 (BOOTPREQUEST)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: cee3c8d9
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 0.0.0.0
SIADDR: 0.0.0.0
GIADDR: 0.0.0.0
CHADDR: 7e:e7:25:62:8e:bf:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: .
OPTION: 53 (1) DHCP message type 3 (DHCPREQUEST)
OPTION: 61 (7) Client-identifier 01:7e:e7:25:62:8e:bf
OPTION: 50 (4) Request IP address 10.38.1.129
OPTION: 57 (2) Maximum DHCP message size 1500
OPTION: 60 (15) Vendor class identifier android-dhcp-13
OPTION: 12 (9) Host name Android8T


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OPTION: 55 ( 12) Parameter Request List
1 (Subnet mask)
3 (Routers)
6 (DNS server)
15 (Domainname)
26 (Interface MTU)
28 (Broadcast address)
51 (IP address leasetime)
58 (T1)
59 (T2)
43 (Vendor specific info)
114 (URL)
108 (Swap Path)
```

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TIME: 2023-08-24 17:47:41.994
IP: 10.38.1.26 (0:c:29:e5:40:a0) > 255.255.255.255 (ff:ff:ff:ff:ff:ff)
OP: 2 (BOOTPREPLY)
HTYPE: 1 (Ethernet)
HLEN: 6
HOPS: 0
XID: cee3c8d9
SECS: 0
FLAGS: 0
CIADDR: 0.0.0.0
YIADDR: 10.38.1.129
SIADDR: 10.143.0.19
GIADDR: 0.0.0.0
CHADDR: 7e:e7:25:62:8e:bf:00:00:00:00:00:00:00:00:00:00
SNAME: .
FNAME: snponly.efi.
OPTION: 53 ( 1) DHCP message type          5 (DHCPACK)
OPTION: 58 ( 4) T1                          60 (60s)
OPTION: 59 ( 4) T2                          105 (1m45s)
OPTION: 51 ( 4) IP address leasetime        120 (2m)
OPTION: 54 ( 4) Server identifier            10.38.1.26
OPTION: 1 ( 4) Subnet mask                   255.255.255.0
OPTION: 3 ( 4) Routers                       10.38.1.254
OPTION: 6 ( 8) DNS server                    10.38.1.26,10.143.0.14
OPTION: 15 (11) Domainname                   rakort.pls

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