

**LAPORAN KOMPREHENSIF TUGAS BESAR
IMPLEMENTASI HONEYPOT COWRIE SEBAGAI SISTEM
PERTAHANAN DAN DETEKSI DINI PADA VIRTUAL
PRIVATE SERVER (VPS)**



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A. PENDAHULUAN

Perkembangan layanan berbasis internet mendorong banyak organisasi dan individu untuk memanfaatkan Virtual Private Server (VPS) sebagai media penyimpanan data dan penyedia layanan secara online. VPS memberikan fleksibilitas dan kemudahan dalam pengelolaan sumber daya, namun di sisi lain memiliki kelemahan pada aspek keamanan, terutama terhadap serangan yang menyasar layanan jaringan seperti Secure Shell (SSH). Kondisi ini menuntut adanya mekanisme pendeteksian serangan yang efektif agar administrator dapat mengenali pola serangan sejak dini dan melakukan tindakan pencegahan yang tepat.

Salah satu pendekatan yang banyak digunakan untuk mempelajari dan mendeteksi serangan adalah penggunaan honeypot. Honeypot merupakan sistem jebakan yang sengaja dibuat menyerupai server asli dengan tujuan menarik perhatian penyerang, sehingga seluruh aktivitas penyerang dapat dipantau dan direkam tanpa mengganggu layanan produksi. Data log yang dihasilkan honeypot dapat dimanfaatkan untuk menganalisis teknik, pola, serta intensitas serangan yang terjadi pada sebuah server.

Pada tugas besar ini diimplementasikan honeypot Cowrie pada lingkungan VPS atau simulasi VPS berbasis Ubuntu Server sebagai pendeteksi serangan terhadap layanan SSH. Cowrie dipilih karena mampu mensimulasikan layanan SSH secara interaktif dan mencatat detail aktivitas penyerang, mulai dari upaya login hingga perintah yang dijalankan. Pengujian dilakukan dengan tiga jenis serangan, yaitu port scanning menggunakan Nmap, brute force attack menggunakan Hydra, dan denial of service (DoS/DDoS) menggunakan LOIC. Hasil pengujian kemudian dianalisis untuk melihat kemampuan honeypot dalam mendeteksi serangan serta tingkat akurasi deteksi yang dihasilkan.

Tujuan dari laporan ini adalah mendeskripsikan proses konfigurasi honeypot Cowrie pada Ubuntu Server, menjelaskan langkah pelaksanaan tiga skenario serangan terhadap layanan SSH, serta menyajikan hasil dan analisis deteksi serangan oleh honeypot. Dengan demikian, diharapkan implementasi ini dapat menjadi referensi dalam meningkatkan keamanan layanan VPS

sekaligus sebagai sarana pembelajaran mengenai perilaku dan pola serangan pada sistem jaringan.

B. KONFIGURASI LINGKUNGAN DAN HONEYPOT

1. Konfigurasi Server Asli (VPS)

Dalam pelaksanaan tugas besar ini, honeypot diimplementasikan pada sebuah server berbasis Ubuntu Server yang berperan sebagai simulasi VPS. Server dijalankan pada lingkungan virtual (*Virtual Private Server* atau mesin virtual menggunakan VirtualBox) dengan spesifikasi minimal 1 vCPU, 2 GB RAM, dan kapasitas penyimpanan 20 GB untuk menjamin stabilitas layanan sistem operasi dan aplikasi honeypot. Koneksi jaringan server dikonfigurasi menggunakan mode **Bridged Adapter** agar server mendapatkan alamat IP yang valid dan dapat diakses secara langsung oleh mesin penyerang dalam jaringan lokal yang sama.

Setelah proses instalasi Ubuntu Server selesai, dilakukan konfigurasi awal berupa pembaruan paket sistem menggunakan perintah `apt update` dan `apt upgrade` untuk memastikan sistem memiliki *patch* keamanan terbaru. Layanan SSH asli pada server diaktifkan agar administrator dapat mengelola server secara *remote*. Untuk menghindari konflik, port SSH bawaan (default) dipindahkan dari port 22 ke port lain (yaitu **port 2222**). Hal ini dilakukan agar port 22 dapat digunakan secara khusus oleh honeypot Cowrie sebagai layanan jebakan. Dengan pemisahan ini, aktivitas penyerang yang mencoba mengakses SSH pada port standar (22) akan masuk ke honeypot, sementara administrator tetap memiliki akses aman melalui port 2222.

2. Instalasi & Konfigurasi Honeypot Cowrie

Honeypot yang digunakan pada penelitian ini adalah **Cowrie**, yaitu honeypot interaktif yang mensimulasikan layanan SSH dan Telnet untuk menangkap dan mencatat aktivitas penyerang. Proses instalasi dimulai dengan membuat akun pengguna (user) khusus bernama `cowrie` yang berfungsi menjalankan layanan honeypot secara terisolasi, sehingga meminimalisir risiko terhadap akun administrator utama (`root`).

Selanjutnya, dilakukan instalasi berbagai dependensi yang dibutuhkan, seperti Python 3, `python3-venv`, `git`, dan pustaka pendukung kriptografi menggunakan manajer paket `apt`.

Kode sumber Cowrie diunduh dari repositori resmi GitHub dan ditempatkan pada direktori *home* pengguna cowrie. Di dalam direktori tersebut, dibuat lingkungan virtual Python (*virtual environment*) untuk mengelola paket dependensi Cowrie secara terpisah dari sistem global guna mencegah konflik *library*. Karena terdapat kendala pada instalasi standar, instalasi dilakukan menggunakan metode *developer mode* (`pip install -e .`) untuk memastikan *source code* terkompilasi dengan benar.

Konfigurasi dasar honeypot dilakukan dengan menyalin berkas `cowrie.cfg.dist` menjadi `cowrie.cfg` dan menyesuaikan beberapa parameter kunci. Parameter `listen_endpoints` diubah agar Cowrie berjalan pada **port 2223** (mengingat port 2222 sudah digunakan oleh SSH asli). Agar honeypot terlihat meyakinkan, ditambahkan aturan NAT (*Network Address Translation*) menggunakan `iptables` yang berfungsi membelokkan (*redirect*) trafik dari **port 22 (Pintu Utama)** ke **port 2223 (Honeypot)**.

Dengan konfigurasi ini, setiap upaya koneksi SSH ke alamat IP server pada port standar akan dialihkan secara transparan ke honeypot, dan seluruh aktivitas penyerang akan direkam pada berkas log. Layanan Cowrie kemudian dijalankan, dan administrator dapat memantau serangan secara *real-time* melalui berkas log yang tersimpan di direktori `var/log/cowrie/cowrie.log`. Konfigurasi ini memastikan sistem siap untuk tahap pengujian menggunakan tiga vektor serangan: *Port Scanning*, *Brute Force*, dan *Denial of Service* (DoS)

C. SKENARIO DAN LANGKAH PENYERANGAN

1. Pengujian Port Scanning (Nmap)
2. Pengujian Brute Force Attack (Hydra)
3. Pengujian Denial of Service / DDoS (LOIC)

4. Pengujian Pola Penyerangan

a. Individual

1) port scanning

Attacker

```
(kali@kali)-[~]
$ nmap -p 22 192.168.52.119
Starting Nmap 7.95 ( https://nmap.org ) at 2026-02-01 21:03 EST
Nmap scan report for 192.168.52.119
Host is up (0.00053s latency).

PORT      STATE SERVICE
22/tcp    open  ssh
MAC Address: 08:00:27:CC:2E:25 (PCS Systemtechnik/Oracle VirtualBox virtual NIC)

Nmap done: 1 IP address (1 host up) scanned in 0.43 seconds
```

2) brute force

Attacker

```
(kali@kali)-[~]
$ hydra -l root -P pass.txt 192.168.52.119 ssh -t 4~
Hydra v9.5 (c) 2023 by van Hauser/THC & David Maciejak - Please do not use in military or secret service organization, or for illegal purposes (this is non-binding, these ** ignore laws and ethics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2026-02-01 21:08:34
[DATA] max 4 tasks per 1 server, overall 4 tasks, 6 login tries (l:1/p:6), ~2 tries per task
[DATA] attacking ssh://192.168.52.119:22/
[22][ssh] host: 192.168.52.119 login: root password: qwerty
[22][ssh] host: 192.168.52.119 login: root password: admin
1 of 1 target successfully completed, 2 valid passwords found
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2026-02-01 21:08:36
```

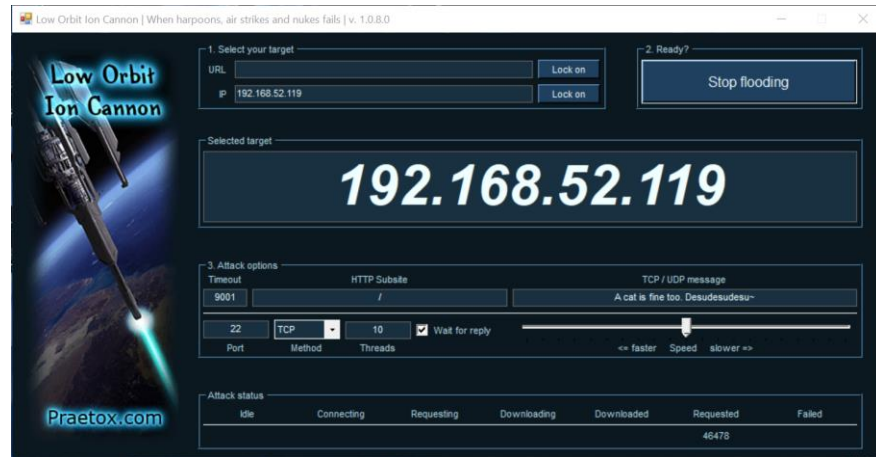
Server

```
Server kali-linux-2025 [Berjalan] - Oracle VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan
cowrie@kali:~$ cowrie

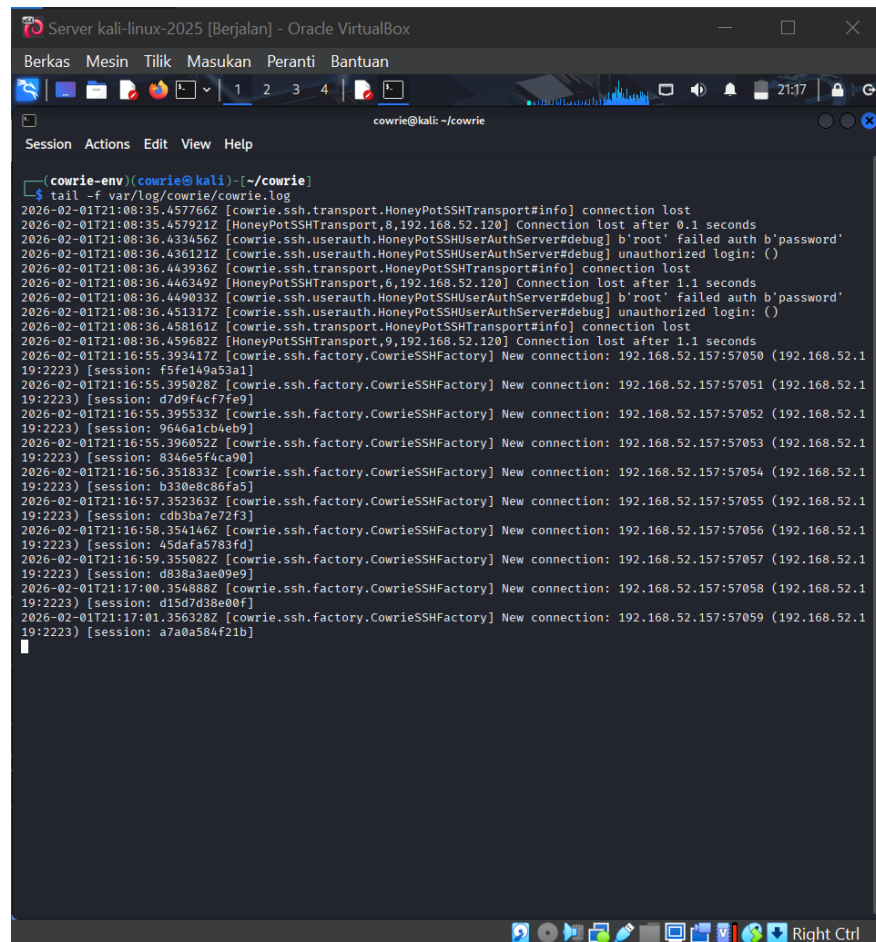
Session Actions Edit View Help
2026-02-01T21:08:35.420876Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T21:08:35.422684Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T21:08:35.423484Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] NEW KEYS
2026-02-01T21:08:35.423969Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] NEW KEYS
2026-02-01T21:08:35.424791Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
2026-02-01T21:08:35.425641Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
2026-02-01T21:08:35.427004Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T21:08:35.427733Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T21:08:35.428565Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'password'
2026-02-01T21:08:35.429612Z [HoneyPotSSHTransport,6,192.168.52.120] Could not read etc/userdb.txt, default database activated
2026-02-01T21:08:35.429809Z [HoneyPotSSHTransport,6,192.168.52.120] login attempt [b'root'/b'123456'] failed
2026-02-01T21:08:35.430693Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'password'
2026-02-01T21:08:35.431012Z [HoneyPotSSHTransport,7,192.168.52.120] Could not read etc/userdb.txt, default database activated
2026-02-01T21:08:35.431164Z [HoneyPotSSHTransport,7,192.168.52.120] login attempt [b'root'/b'qwerty'] succeeded
2026-02-01T21:08:35.431537Z [HoneyPotSSHTransport,7,192.168.52.120] Initialized emulated server as architecture: lin
ux-x64-lsb
2026-02-01T21:08:35.431706Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' authenticated with b'passw
ord'
2026-02-01T21:08:35.431855Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-connection'
2026-02-01T21:08:35.432307Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
2026-02-01T21:08:35.432658Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
2026-02-01T21:08:35.433007Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'password'
2026-02-01T21:08:35.433633Z [HoneyPotSSHTransport,8,192.168.52.120] Could not read etc/userdb.txt, default database activated
2026-02-01T21:08:35.437830Z [HoneyPotSSHTransport,8,192.168.52.120] login attempt [b'root'/b'admin'] succeeded
2026-02-01T21:08:35.439381Z [HoneyPotSSHTransport,8,192.168.52.120] Initialized emulated server as architecture: lin
ux-x64-lsb
2026-02-01T21:08:35.440272Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' authenticated with b'passw
ord'
2026-02-01T21:08:35.441056Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-connection'
2026-02-01T21:08:35.441834Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'password'
2026-02-01T21:08:35.442393Z [HoneyPotSSHTransport,9,192.168.52.120] Could not read etc/userdb.txt, default database activated
2026-02-01T21:08:35.442838Z [HoneyPotSSHTransport,9,192.168.52.120] login attempt [b'root'/b'root'] failed
2026-02-01T21:08:35.449912Z [HoneyPotSSHTransport,7,192.168.52.120] avatar root logging out
2026-02-01T21:08:35.452446Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:08:35.453958Z [HoneyPotSSHTransport,7,192.168.52.120] Connection lost after 0.1 seconds
2026-02-01T21:08:35.457261Z [HoneyPotSSHTransport,6,192.168.52.120] avatar root logging out
2026-02-01T21:08:35.457766Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:08:35.457921Z [HoneyPotSSHTransport,8,192.168.52.120] Connection lost after 0.1 seconds
2026-02-01T21:08:36.433456Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' failed auth b'password'
2026-02-01T21:08:36.436121Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] unauthorized login: ()
2026-02-01T21:08:36.442936Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:08:36.446340Z [HoneyPotSSHTransport,6,192.168.52.120] Connection lost after 1.1 seconds
2026-02-01T21:08:36.449033Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' failed auth b'password'
2026-02-01T21:08:36.451317Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] unauthorized login: ()
2026-02-01T21:08:36.458161Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:08:36.459682Z [HoneyPotSSHTransport,9,192.168.52.120] Connection lost after 1.1 seconds
```

3) DoS

Attacker



Server



b. Double

1) Port Scanning + Brute Force,

Attacker

```
(kali@kali)-[~]
$ nmap 192.168.52.119 -i hydra -l root -P pass.txt 192.168.52.119 ssh -t 4
[1] 14718
Starting Nmap 7.95 ( https://nmap.org ) at 2026-02-01 21:21:44
Hydra v9.5 (c) 2023 by van Hauser/THC & David Maciejak - Please do not use in military or secret service organization, or for illegal purposes (this is non-binding, these *** ignore laws and ethics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2026-02-01 21:21:44
[DATA] max 4 tasks per 1 server, overall 4 tasks, 6 login tries (l1/p:6), ~2 tries per task
[DATA] attacking ssh://192.168.52.119:22/
Nmap scan report for 192.168.52.119
Host is up (0.0015s latency).
Not shown: 999 closed tcp ports (reset)
PORT      STATE SERVICE
22/tcp    open  ssh
MAC Address: 08:00:27:CC:2E:25 (PCS Systemtechnik/Oracle VirtualBox virtual NIC)

Nmap done: 1 IP address (1 host up) scanned in 0.35 seconds
[1] + done      nmap 192.168.52.119
[22][ssh] host: 192.168.52.119 login: root password: admin
[22][ssh] host: 192.168.52.119 login: root password: qwerty
1 of 1 target successfully completed, 2 valid passwords found
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2026-02-01 21:21:45
```

Server

```
Server kali-linux-2025 [Berjalan] - Oracle VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan
cowrie@kali: ~/cowrie
Session Actions Edit View Help

$ cowrie-env(cowrie@kali)-[~/cowrie]
$ tail -f var/log/cowrie/cowrie.log
2026-02-01T21:20:59.388309Z [HoneyPotSSHTransport,27,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:20:59.436828Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57102 (192.168.52.119:2223) [session: 8d0898b157ba]
2026-02-01T21:21:00.394243Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T21:21:00.407376Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:21:00.408270Z [HoneyPotSSHTransport,28,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:21:00.457917Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57103 (192.168.52.119:2223) [session: c179ff03d1f8]
2026-02-01T21:21:01.391324Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T21:21:01.395021Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:21:01.395999Z [HoneyPotSSHTransport,29,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:21:01.412403Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57104 (192.168.52.119:2223) [session: 6b344159c7c8]
2026-02-01T21:21:44.435418Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:58578 (192.168.52.119:2223) [session: 3728b4321b94]
2026-02-01T21:21:44.436230Z [HoneyPotSSHTransport,40,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:21:44.440036Z [HoneyPotSSHTransport,40,192.168.52.120] SSH client hash fingerprint: 742b4fd5532ca4f243aae081017fe8c5
2026-02-01T21:21:44.441122Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] kex alg=b'curve25519-sha256' key alg=b'ssh-ed25519'
2026-02-01T21:21:44.441324Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] outgoing: b'aes256-ctr' b'hmac-sha2-256' b'none'
2026-02-01T21:21:44.441589Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] incoming: b'aes256-ctr' b'hmac-sha2-256' b'none'
2026-02-01T21:21:44.484354Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] NEW KEYS
2026-02-01T21:21:44.486340Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T21:21:44.488318Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
2026-02-01T21:21:44.490600Z [HoneyPotSSHTransport,40,192.168.52.120] Got remote error, code 11 reason: b'Bye Bye'
2026-02-01T21:21:44.492002Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:21:44.493663Z [HoneyPotSSHTransport,40,192.168.52.120] Connection lost after 0.1 seconds
2026-02-01T21:21:44.715329Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:58582 (192.168.52.119:2223) [session: 2f83f0be8f10]
2026-02-01T21:21:44.718796Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:58584 (192.168.52.119:2223) [session: 2f14722ea6a0]
2026-02-01T21:21:44.722318Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:58604 (192.168.52.119:2223) [session: da046f704b7c]
2026-02-01T21:21:44.725763Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:58618 (192.168.52.119:2223) [session: cd7115f692fc]
2026-02-01T21:21:44.728303Z [HoneyPotSSHTransport,41,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:21:44.732032Z [HoneyPotSSHTransport,42,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:21:44.736240Z [HoneyPotSSHTransport,43,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:21:44.739727Z [HoneyPotSSHTransport,44,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:21:44.742896Z [HoneyPotSSHTransport,41,192.168.52.120] SSH client hash fingerprint: 742b4fd5532ca4f243aae081017fe8c5
2026-02-01T21:21:44.747570Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] kex alg=b'curve25519-sha256' key alg=b'ssh-ed25519'
2026-02-01T21:21:44.749138Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] outgoing: b'aes256-ctr' b'hmac-sha2-256' b'none'
```

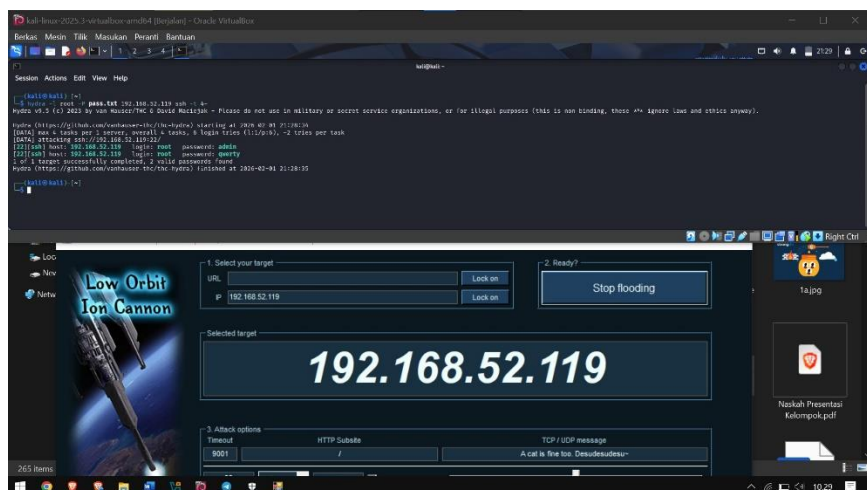


```
Server kali-linux-2025 [Berjalan] - Oracle VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan

cowrie@kali: ~/cowrie

Session Actions Edit View Help
2026-02-01T21:21:44.869555Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'password'
2026-02-01T21:21:44.870594Z [HoneyPotSSTransport,44,192.168.52.120] Could not read etc/userdb.txt, default database
activated
2026-02-01T21:21:44.871243Z [HoneyPotSSTransport,44,192.168.52.120] login attempt [b'root'/b'qwerty'] succeeded
2026-02-01T21:21:44.872364Z [HoneyPotSSTransport,44,192.168.52.120] Initialized emulated server as architecture: li
nux-x64-lsb
2026-02-01T21:21:44.873281Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' authenticated with b'passw
ord'
2026-02-01T21:21:44.873983Z [cowrie.ssh.transport.HoneyPotSSTransport#debug] starting service b'ssh-connection'
2026-02-01T21:21:44.879798Z [HoneyPotSSTransport,44,192.168.52.120] avatar root logging out
2026-02-01T21:21:44.904908Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:21:44.905224Z [HoneyPotSSTransport,44,192.168.52.120] Connection lost after 0.2 seconds
2026-02-01T21:21:45.856052Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' failed auth b'password'
2026-02-01T21:21:45.857087Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] unauthorized login: ()
2026-02-01T21:21:45.863517Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:21:45.864980Z [HoneyPotSSTransport,42,192.168.52.120] Connection lost after 1.1 seconds
2026-02-01T21:21:45.870062Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' failed auth b'password'
2026-02-01T21:21:45.870949Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] unauthorized login: ()
2026-02-01T21:21:45.877935Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:21:45.879372Z [HoneyPotSSTransport,43,192.168.52.120] Connection lost after 1.2 seconds
2026-02-01T21:22:55.549662Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:22:55.550481Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:22:55.551256Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:22:55.551517Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:22:55.551880Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:22:55.552189Z [HoneyPotSSTransport,30,192.168.52.157] Connection lost after 120.1 seconds
2026-02-01T21:22:55.552956Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:22:55.554146Z [HoneyPotSSTransport,31,192.168.52.157] Connection lost after 120.1 seconds
2026-02-01T21:22:55.555338Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:22:55.555985Z [HoneyPotSSTransport,32,192.168.52.157] Connection lost after 120.1 seconds
2026-02-01T21:22:55.557296Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:22:55.558205Z [HoneyPotSSTransport,33,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:22:55.562399Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:22:56.394294Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:22:56.395246Z [HoneyPotSSTransport,34,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:22:57.410579Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:22:57.411318Z [HoneyPotSSTransport,35,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:22:57.411847Z [HoneyPotSSTransport,35,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:22:58.412963Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:22:58.413589Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:22:58.414074Z [HoneyPotSSTransport,36,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:22:59.440461Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:22:59.441537Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:22:59.442074Z [HoneyPotSSTransport,37,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:23:00.461205Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:23:00.462982Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:23:00.466546Z [HoneyPotSSTransport,38,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:23:01.417387Z [-] Timeout reached in HoneyPotSSTransport
2026-02-01T21:23:01.419098Z [cowrie.ssh.transport.HoneyPotSSTransport#info] connection lost
2026-02-01T21:23:01.420022Z [HoneyPotSSTransport,39,192.168.52.157] Connection lost after 120.0 seconds
```

2) Brute Force + DoS Attacker



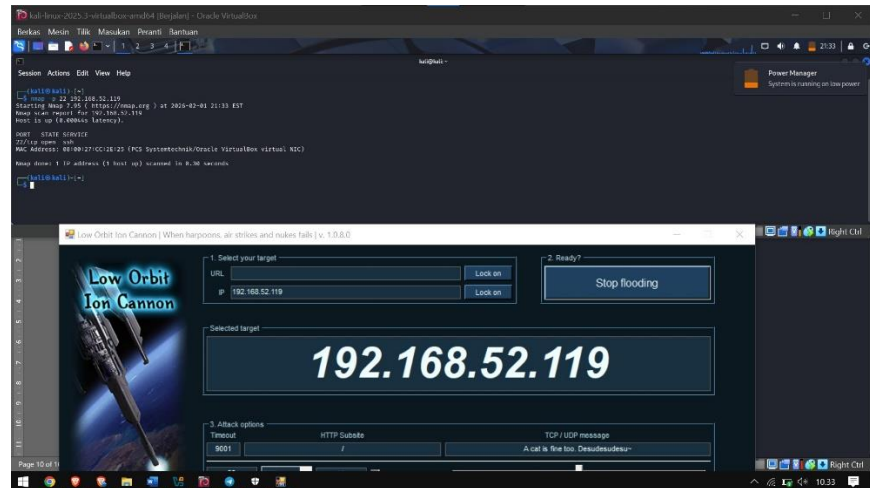
Server

```
Server kali-linux-2025 [Berjalan] - Oracle VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan
cowrie@kali: ~$ cowrie
Session Actions Edit View Help
2026-02-01T21:27:58.263546Z [HoneyPotSSHTransport,52,192.168.52.157] Connection lost after 16.3 seconds
2026-02-01T21:28:32.481653Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57129 (192.168.52.1
19:2223) [session: 4e1f8e50f6a5]
2026-02-01T21:28:32.484116Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57128 (192.168.52.1
19:2223) [session: f21aab2db0775]
2026-02-01T21:28:32.486119Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57130 (192.168.52.1
19:2223) [session: 8cccefb44d59]
2026-02-01T21:28:32.488033Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57131 (192.168.52.1
19:2223) [session: 5f8f80af7733]
2026-02-01T21:28:32.489573Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57132 (192.168.52.1
19:2223) [session: b012ca76bf1c]
2026-02-01T21:28:34.335318Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:59188 (192.168.52.1
19:2223) [session: 8f8df7470d75]
2026-02-01T21:28:34.341282Z [HoneyPotSSHTransport,65,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:28:34.361894Z [HoneyPotSSHTransport,65,192.168.52.120] SSH client hash fingerprint: 742b4fd5532ca4f24
3aae081017fe8c5
2026-02-01T21:28:34.364146Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] kex alg=b'curve25519-sha256' key alg=b
'ssh-ed25519'
2026-02-01T21:28:34.365148Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] outgoing: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T21:28:34.365707Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] incoming: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T21:28:34.406143Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] NEW KEYS
2026-02-01T21:28:34.410337Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T21:28:34.412717Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
2026-02-01T21:28:34.415308Z [HoneyPotSSHTransport,65,192.168.52.120] Got remote error, code 11 reason: b'Bye Bye'
2026-02-01T21:28:34.416836Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:28:34.418244Z [HoneyPotSSHTransport,65,192.168.52.120] Connection lost after 0.1 seconds
2026-02-01T21:28:34.487575Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57133 (192.168.52.1
19:2223) [session: 97a8b78d9d08]
2026-02-01T21:28:34.646134Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:59204 (192.168.52.1
19:2223) [session: 1dc2a0fed4]
2026-02-01T21:28:34.653832Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:59210 (192.168.52.1
19:2223) [session: 7f9d389a51a3]
2026-02-01T21:28:34.657063Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:59214 (192.168.52.1
19:2223) [session: 157cf223a357]
2026-02-01T21:28:34.659462Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:59226 (192.168.52.1
19:2223) [session: c46ff60f1d5e]
2026-02-01T21:28:34.661386Z [HoneyPotSSHTransport,67,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:28:34.664874Z [HoneyPotSSHTransport,68,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:28:34.667246Z [HoneyPotSSHTransport,69,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:28:34.672634Z [HoneyPotSSHTransport,70,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T21:28:34.676841Z [HoneyPotSSHTransport,68,192.168.52.120] SSH client hash fingerprint: 742b4fd5532ca4f24
3aae081017fe8c5
2026-02-01T21:28:34.679498Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] kex alg=b'curve25519-sha256' key alg=b
'ssh-ed25519'
2026-02-01T21:28:34.679755Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] outgoing: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T21:28:34.679884Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] incoming: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T21:28:34.680546Z [HoneyPotSSHTransport,69,192.168.52.120] SSH client hash fingerprint: 742b4fd5532ca4f24
```

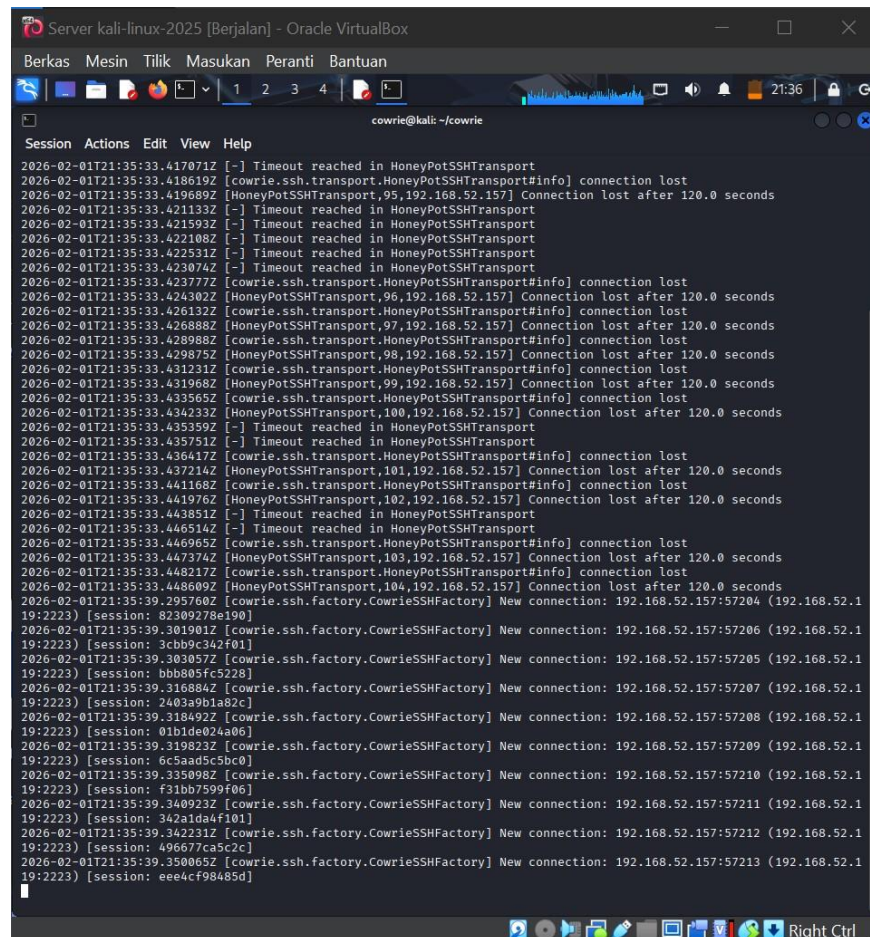
```
Server kali-linux-2025 [Berjalan] - Oracle VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan
cowrie@kali: ~$ cowrie
Session Actions Edit View Help
19:2223) [session: 1ba6ee42b032]
2026-02-01T21:28:35.765159Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' failed auth b'password'
2026-02-01T21:28:35.766147Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] unauthorized login: ()
2026-02-01T21:28:35.772244Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:28:35.773515Z [HoneyPotSSHTransport,69,192.168.52.120] Connection lost after 1.1 seconds
2026-02-01T21:28:35.776049Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' failed auth b'password'
2026-02-01T21:28:35.777213Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] unauthorized login: ()
2026-02-01T21:28:35.783351Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:28:35.784546Z [HoneyPotSSHTransport,70,192.168.52.120] Connection lost after 1.1 seconds
2026-02-01T21:28:36.483264Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57135 (192.168.52.1
19:2223) [session: 81fa9da2f665]
2026-02-01T21:28:37.486233Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57136 (192.168.52.1
19:2223) [session: f365b4d52732]
2026-02-01T21:28:38.486710Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57137 (192.168.52.1
19:2223) [session: 2713b3985419]
2026-02-01T21:30:32.485595Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T21:30:32.487033Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:30:32.487865Z [HoneyPotSSHTransport,60,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:30:32.489164Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T21:30:32.489570Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T21:30:32.490167Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:30:32.490500Z [HoneyPotSSHTransport,61,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:30:32.491387Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:30:32.491818Z [HoneyPotSSHTransport,62,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:30:32.492489Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T21:30:32.492934Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:30:32.500009Z [HoneyPotSSHTransport,63,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:30:32.555106Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57145 (192.168.52.1
19:2223) [session: 7bda07ecce07]
2026-02-01T21:30:32.558132Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57146 (192.168.52.1
19:2223) [session: 650c303f26b1]
2026-02-01T21:30:32.562664Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57147 (192.168.52.1
19:2223) [session: 69e512babcf9]
2026-02-01T21:30:32.574704Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57148 (192.168.52.1
19:2223) [session: 6934775e49bd]
2026-02-01T21:30:32.485579Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T21:30:32.488252Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:30:32.489697Z [HoneyPotSSHTransport,64,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:30:32.505381Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57149 (192.168.52.1
19:2223) [session: 8e9436d396da]
2026-02-01T21:30:32.491576Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T21:30:32.494946Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:30:32.496832Z [HoneyPotSSHTransport,66,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:30:32.503775Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57150 (192.168.52.1
19:2223) [session: e1cf5a0af46f]
2026-02-01T21:30:32.486826Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T21:30:32.488170Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T21:30:32.489336Z [HoneyPotSSHTransport,71,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T21:30:32.510331Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.157:57151 (192.168.52.1
19:2223) [session: d7ff24649f06]
2026-02-01T21:30:32.487030Z [-] Timeout reached in HoneyPotSSHTransport
```

3) DoS + Port Scanning

Attacker



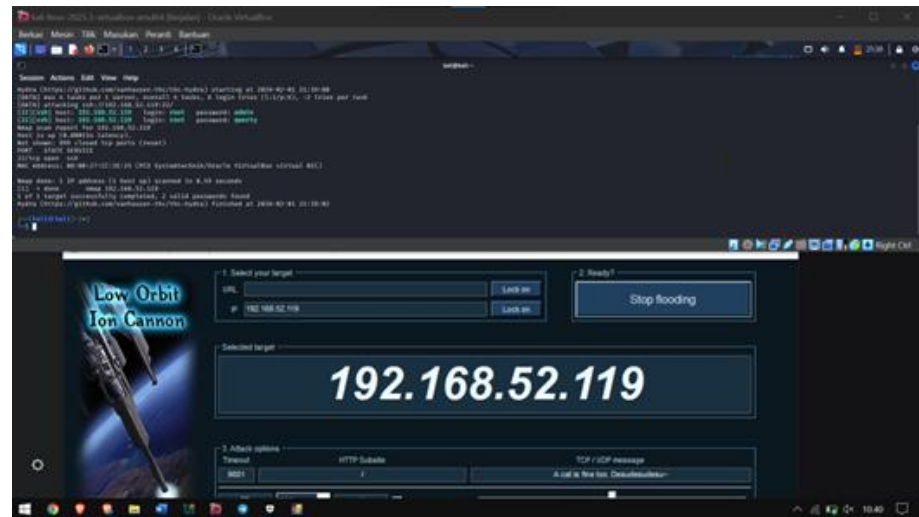
Server



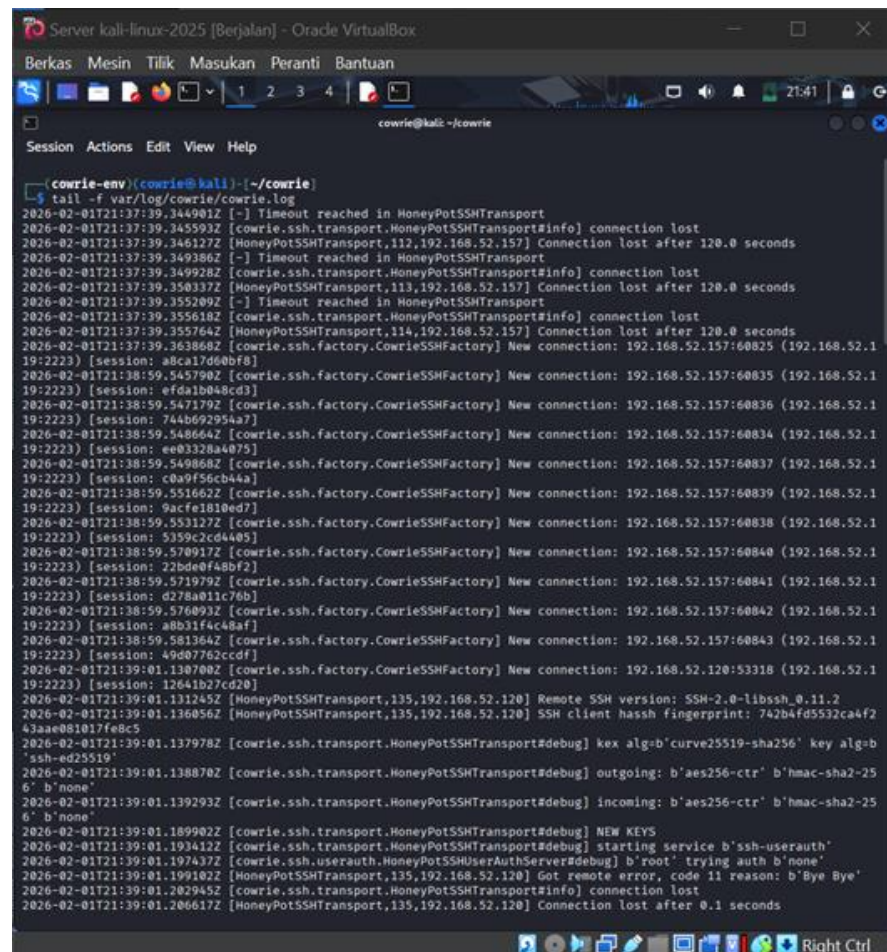
c. Multiple

Melakukan tiga serangan sekaligus ke server.

Attacker



Server



```
Server kali-linux-2025 [Berjalan] - Oracle VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan

cowrie@kali: ~/cowrie

Session Actions Edit View Help

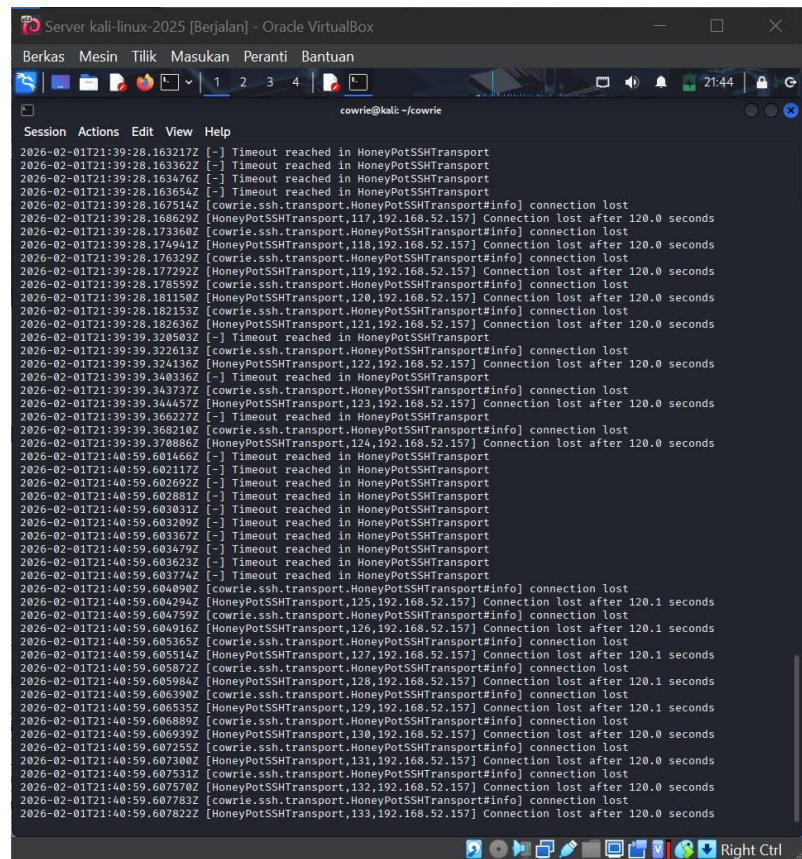
19:2223 [session: 51c1db638c79]
2026-02-01T12:39:01.433496Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:37838 (192.168.52.1
19:2223) [session: 6984dcf5af2]
2026-02-01T12:39:01.435001Z [cowrie.ssh.factory.CowrieSSHFactory] New connection: 192.168.52.120:37840 (192.168.52.1
19:2223) [session: 5e864dd1d09a]
2026-02-01T12:39:01.437758Z [HoneyPotSSHTransport,136,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T12:39:01.440288Z [HoneyPotSSHTransport,137,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T12:39:01.441913Z [HoneyPotSSHTransport,138,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T12:39:01.443250Z [HoneyPotSSHTransport,139,192.168.52.120] Remote SSH version: SSH-2.0-libssh_0.11.2
2026-02-01T12:39:01.446626Z [HoneyPotSSHTransport,137,192.168.52.120] SSH client hash fingerprint: 742b4fd5532ca4f2
43aae081017fe8c5
2026-02-01T12:39:01.448845Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] kex alg=b'curve25519-sha256' key alg=b
'ssh-ed25519'
2026-02-01T12:39:01.449390Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] outgoing: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T12:39:01.449827Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] incoming: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T12:39:01.450409Z [HoneyPotSSHTransport,138,192.168.52.120] SSH client hash fingerprint: 742b4fd5532ca4f2
43aae081017fe8c5
2026-02-01T12:39:01.451984Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] kex alg=b'curve25519-sha256' key alg=b
'ssh-ed25519'
2026-02-01T12:39:01.452915Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] outgoing: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T12:39:01.453654Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] incoming: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T12:39:01.454169Z [HoneyPotSSHTransport,136,192.168.52.120] SSH client hash fingerprint: 742b4fd5532ca4f2
43aae081017fe8c5
2026-02-01T12:39:01.455773Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] kex alg=b'curve25519-sha256' key alg=b
'ssh-ed25519'
2026-02-01T12:39:01.456102Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] outgoing: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T12:39:01.456543Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] incoming: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T12:39:01.457662Z [HoneyPotSSHTransport,139,192.168.52.120] SSH client hash fingerprint: 742b4fd5532ca4f2
43aae081017fe8c5
2026-02-01T12:39:01.458853Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] kex alg=b'curve25519-sha256' key alg=b
'ssh-ed25519'
2026-02-01T12:39:01.459183Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] outgoing: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T12:39:01.459388Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] incoming: b'aes256-ctr' b'hmac-sha2-25
6' b'none'
2026-02-01T12:39:01.499976Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] NEW KEYS
2026-02-01T12:39:01.502225Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] NEW KEYS
2026-02-01T12:39:01.502719Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] NEW KEYS
2026-02-01T12:39:01.504915Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T12:39:01.505470Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T12:39:01.506909Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T12:39:01.508080Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] NEW KEYS
2026-02-01T12:39:01.512647Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
2026-02-01T12:39:01.516024Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
2026-02-01T12:39:01.517555Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
```

```
Server kali-linux-2025 [Berjalan] - Oracle VirtualBox
Berkas Mesin Tilik Masukan Peranti Bantuan

cowrie@kali: ~/cowrie

Session Actions Edit View Help

2026-02-01T12:39:01.521241Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-userauth'
2026-02-01T12:39:01.523064Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'password'
2026-02-01T12:39:01.523590Z [HoneyPotSSHTransport,138,192.168.52.120] Could not read etc/userdb.txt, default databas
e activated
2026-02-01T12:39:01.523948Z [HoneyPotSSHTransport,138,192.168.52.120] login attempt [b'root'/'b'qwerty'] succeeded
2026-02-01T12:39:01.524814Z [HoneyPotSSHTransport,138,192.168.52.120] Initialized emulated server as architecture: l
inux-x64-lsb
2026-02-01T12:39:01.525352Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' authenticated with b'passw
ord'
2026-02-01T12:39:01.525761Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-connection'
2026-02-01T12:39:01.526181Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'password'
2026-02-01T12:39:01.526594Z [HoneyPotSSHTransport,137,192.168.52.120] Could not read etc/userdb.txt, default databas
e activated
2026-02-01T12:39:01.526839Z [HoneyPotSSHTransport,137,192.168.52.120] login attempt [b'root'/'b'123456'] failed
2026-02-01T12:39:01.527413Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'password'
2026-02-01T12:39:01.527584Z [HoneyPotSSHTransport,136,192.168.52.120] Could not read etc/userdb.txt, default databas
e activated
2026-02-01T12:39:01.527714Z [HoneyPotSSHTransport,136,192.168.52.120] login attempt [b'root'/'b'admin'] succeeded
2026-02-01T12:39:01.528142Z [HoneyPotSSHTransport,136,192.168.52.120] Initialized emulated server as architecture: l
inux-x64-lsb
2026-02-01T12:39:01.528334Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' authenticated with b'passw
ord'
2026-02-01T12:39:01.528473Z [cowrie.ssh.transport.HoneyPotSSHTransport#debug] starting service b'ssh-connection'
2026-02-01T12:39:01.530716Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'none'
2026-02-01T12:39:01.532559Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' trying auth b'password'
2026-02-01T12:39:01.533293Z [HoneyPotSSHTransport,139,192.168.52.120] Could not read etc/userdb.txt, default databas
e activated
2026-02-01T12:39:01.533637Z [HoneyPotSSHTransport,139,192.168.52.120] login attempt [b'root'/'b'root'] failed
2026-02-01T12:39:01.545377Z [HoneyPotSSHTransport,138,192.168.52.120] avatar root logging out
2026-02-01T12:39:01.547591Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T12:39:01.554758Z [HoneyPotSSHTransport,138,192.168.52.120] Connection lost after 0.1 seconds
2026-02-01T12:39:01.556272Z [HoneyPotSSHTransport,136,192.168.52.120] avatar root logging out
2026-02-01T12:39:01.558415Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T12:39:01.558509Z [HoneyPotSSHTransport,136,192.168.52.120] Connection lost after 0.1 seconds
2026-02-01T12:39:02.541153Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' failed auth b'password'
2026-02-01T12:39:02.529850Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] unauthorized login: ()
2026-02-01T12:39:02.534691Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] b'root' failed auth b'password'
2026-02-01T12:39:02.536534Z [cowrie.ssh.userauth.HoneyPotSSHUserAuthServer#debug] unauthorized login: ()
2026-02-01T12:39:02.539734Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T12:39:02.541153Z [HoneyPotSSHTransport,137,192.168.52.120] Connection lost after 1.1 seconds
2026-02-01T12:39:02.548145Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T12:39:02.549709Z [HoneyPotSSHTransport,139,192.168.52.120] Connection lost after 1.1 seconds
2026-02-01T12:39:28.139220Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T12:39:28.140999Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T12:39:28.141754Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T12:39:28.145462Z [HoneyPotSSHTransport,115,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T12:39:28.151464Z [cowrie.ssh.transport.HoneyPotSSHTransport#info] connection lost
2026-02-01T12:39:28.155919Z [HoneyPotSSHTransport,116,192.168.52.157] Connection lost after 120.0 seconds
2026-02-01T12:39:28.162887Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T12:39:28.163217Z [-] Timeout reached in HoneyPotSSHTransport
2026-02-01T12:39:28.163622Z [-] Timeout reached in HoneyPotSSHTransport
```



D. HASIL PENGUJIAN

No	Pola Serangan	Nama Pengujian	Kondisi Sebelum (%)	Kondisi Sesudah (%)	Hasil (Terdeteksi / Tidak)
1	Individual	Port Scanning	0%	100%	Terdeteksi
2	Individual	Bruteforce Attack	0%	100%	Terdeteksi
3	Individual	DDoS Attack	0%	100%	Terdeteksi
4	Double	Port Scanning & Bruteforce Attack	0%	100%	Terdeteksi
5	Double	Bruteforce Attack & DDoS Attack	0%	100%	Terdeteksi
6	Double	DDoS Attack & Port Scanning	0%	100%	Terdeteksi
7	Multiple	Port Scanning, Bruteforce Attack, & DDoS Attack	0%	100%	Terdeteksi