**HOST DISCOVERY USING NMAP SCRIPTING ENGINE (NSE)**

**Script Summary:**

It is a basic host detection script that checks whether a given host is up or down using UDP probes.

**Script:**

local nmap = require "nmap"

local socket = require "socket" description = "This is a sample NSE script" author = "" categories = {"default", "discovery", "safe"}

hostrule = function(host)

local timeout = 5

local s = socket.udp()

s:settimeout(timeout)

local result, err = s:sendto("", tostring(host), 1)

if err == "timeout" then

return false

else

return true

end

end

action = function(host)

print("Host ip: " ..host.ip.. " is Detected.")

end

**Command:**

Nmap --Script(scriptname) Target

(eg: nmap --Script=host.nse 192.168.121.1/24)

**Explanation:**

* First two lines import the Nmap and socket libraries, respectively, into the script.
* The description field provides a brief description of what the script does, the author field specifies the author(s) of the script, and the categories field lists the categories that the script belongs to.
* The hostrule function, which determines whether the script should be executed on a given host. In this case, the function sends an empty UDP packet to the target host's IP address and returns false if the send operation times out, indicating that the host is not responsive. Otherwise, the function returns true, indicating that the host is responsive.
* The action function, which is executed on each host that passes the hostrule test. In this case, the function simply prints a message to the console indicating that the host has been detected.

**Output:**

