

Nmap Fundamentals

Listing open ports on a remote host	<code>nmap [target]</code>
Exclude a host from scan	<code>nmap --exclude [excluded ip] [target]</code>
Use custom DNS Server	<code>nmap --dns-servers [DNS1],[DNS2] [target]</code>
Scan - no ping targets	<code>nmap -PN [target]</code>
Scan - no DNS resolve	<code>nmap -n [target]</code>
Scan specific port	<code>nmap -p80 [target]</code>
Scan an IPv6 target	<code>nmap -6 [target]</code>

Scanning Port Ranges

Scan specific port list	<code>nmap -p 80,443,23 [target]</code>
Scan specific port range	<code>nmap -p 1-100 [target]</code>
Scan all ports	<code>nmap -p- [target]</code>
Scan specific ports by protocol	<code>nmap -p T:25,U:53 [target]</code>
Scan by Service name	<code>nmap -p smtp [target]</code>
Scan Service name wildcards	<code>nmap -p smtp* [target]</code>
Scan only port registered in Nmap services	<code>nmap -p [1-65535] [target]</code>

Scanning Large Networks

Skipping tests to speed up long scans	<code>nmap -T4 -n -Pn -p- [target]</code>
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Arguments:

No Ping	<code>-Pn</code>
No reverse resolution	<code>-n</code>
No port scanning	<code>-sn</code>

Timing Templates Arguments

Scanning Large Networks (cont)

Scanning is not supposed to interfere with the target system	-T2
Recommended for broadband and Ethernet connections	-T4
Normal Scan Template	-T3
Not Recommended	-T5 or T1 or T0

Nmap Specifics

Select Interface to make scans	<code>nmap -e [INTERFACE] [target]</code>
Save as text file (export)	<code>nmap -oN [filename] [target]</code>
Save as xml (export)	<code>nmap -oX [filename] [target]</code>
Save as all supported file types	<code>nmap -oA [filename] [target]</code>
Periodically display statistics	<code>nmap --stats-every [time] [target]</code>

Finding alive hosts

Default ping scan mode	<code>nmap -sP [target]</code>
Discovering hosts with TCP SYN ping scans	<code>nmap -sP -PS [target]</code>
Specific Port using TCP SYN ping scans	<code>nmap -sP -PS80 [target]</code>
Ping No arp	<code>nmap -sP --send-ip [target]</code>
IP Protocol ping scan (IGMP, IP-in-IP, ICMP)	<code>nmap -sP -PO [target]</code>
ARP Scan	<code>nmap -sP -PR [target]</code>

Fingerprinting services of a remote host

Display service version	<code>nmap -sV [target]</code>
Set probes	<code>nmap -sV --version-intensity 9 [target]</code>
Aggressive detection	<code>nmap -A [target]</code>
Troubleshooting version scans	<code>nmap -sV --version-trace [target]</code>
Perform a RPC scan	<code>nmap -sR [target]</code>

Fingerprinting the operating system of a host

Detect Operating System	<code>nmap -O [target]</code>
Guess Operating System	<code>nmap -O -p- --osscan-guess [target]</code>
Detect Operating System (Verbose)	<code>nmap -O -v [target]</code>
Listing protocols supported by a remote host	<code>nmap -sO [target]</code>
Discovering stateful firewalls by using a TCP ACK scan	<code>nmap -sA [target]</code>

Nmap Scripting Engine

Execute individual scripts	<code>nmap --script [script.nse] [target]</code>
Execute scripts by category	<code>nmap --script [category] [target]</code>
Troubleshoot scripts	<code>nmap --script [script] --script-trace [target]</code>
Update the script database	<code>nmap --script-updatedb</code>
Script categories	auth broadcast dos default discovery external intrusive malware safe version vuln

Nmap Examples

Detect Service versions and OS	<code>nmap -sV -O [target]</code>
Detect Web Servers	<code>nmap -sV --script http-title [target]</code>
Scan top common ports	<code>nmap --top-ports 10 [target]</code>
Discover host using Broadcast pings	<code>nmap --script broadcast-ping</code>
Getting information from whois records	<code>nmap --script whois [target]</code>
Brute force DNS records	<code>nmap --script dns-brute [target]</code>
Scan a firewall for MAC address spoofing	<code>nmap -v -sT -PN --spooof-mac [Mac Address] [target]</code>
Run all scripts in the vuln category	<code>nmap -sV --script vuln [target]</code>
Run the scripts in the categories version or discovery	<code>nmap -sV --script="version,discovery" [target]</code>
Sniffer Detect	<code>nmap -sP --script sniffer-detect [target]</code>



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