

Lista de Exercícios P2

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Introdução

Requisição: Caros alunos,

A nossa lista 2 consistirá na instalação de servidores. Utilizando o Linux Ubuntu (pode ser em uma VM), instale e teste o funcionamento de servidores DHCP, DNS, FTP e SSH.

Apresente em um documento o passo a passo realizado por meio de Print Screens, essa será a maneira de comprovar a realização do exercício.

Prof. Max.

Devido este tutorial usar **Kali Linux** não será necessário uso de **sudo**(Ubuntu) ou **su**(Debian). Utilizaremos linhas de comandos para instalação e testes.

DHCP

DHCP (Dynamic Host Configuration Protocol), é um protocolo de serviço TCP/IP onde oferece configurações dinâmicas em terminais, usa um modelo cliente-servidor que trabalha da seguinte forma.

Quando um novo dispositivo conecta-se a rede, o cliente/host DHCP envia um pacote UDP em broadcast com uma requisição, onde qualquer servidor DHCP na rede pode responder a requisição. Os servidores mantêm o gerenciamento centralizado dos endereços usados na rede e seus parâmetros. Os servidores DHCP que capturaram esta requisição responderão para a porta do host solicitante com um pacote com configuração onde constarão os dados necessários para conexão como endereço de IP, máscara de rede, gateway e outros.

Configurar IP servidor

1 - Abra o Terminal. (Dica sempre prefira atualizar o sistema antes de instalar algum novo pacote com os comandos: apt-get update && apt-get upgrade)

Primeiro passo será atribuir um IP fixo no servidor.

Comando: (vi ou vim ou nano ou gedit) /etc/network/interfaces

```
auto lo
iface lo inet loopback
```



```
"interfaces" 3L, 32C
```

1,1

All

Salve.

Atribua ao ficheiro o endereço(address) , mascara (netmask) , transmissor (broadcast) e a porta de rede do servidor como mostrada na figura abaixo.

```
auto eth0
iface eth0 inet static ←
    address 10.0.2.15
    netmask 255.255.255.0
    broadcast 10.10.10.255
```



Lembre-se de deixar como static a porta da forma como mostrada na figura acima, como foi utilizado a ferramenta "vi" para edição repare na seta abaixo onde indicasse ":wq" onde ":" indica o comando "w" para salvar e "q" para sair (famoso salvar e sair).

Instalação DHCP

Comando para instalação:

```
root@linux:~# apt-get install isc-dhcp-server
```

```
root@kali:~# apt-get install isc-dhcp-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libc-bin libc-dev-bin libc-l10n libc6 libc6-amd64 libc6-dbg libc6-dev
  libdns-export1100 libirs-export160 libisc-export169 libisccfg-export160
  libselinux1 libsemanage-common libsemanage1 libsepoll locales locales-all
  policycoreutils selinux-utils
Suggested packages:
  isc-dhcp-server-ldap glibc-doc
The following NEW packages will be installed:
  isc-dhcp-server libdns-export1100 libirs-export160 libisc-export169
  libisccfg-export160 policycoreutils selinux-utils
The following packages will be upgraded:
  libc-bin libc-dev-bin libc-l10n libc6 libc6-amd64 libc6-dbg libc6-dev
  libselinux1 libsemanage-common libsemanage1 libsepoll locales locales-all
13 upgraded, 7 newly installed, 0 to remove and 1884 not upgraded.
Need to get 39.7 MB of archives.
After this operation, 29.8 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libc-l10n all 2.27-3 [862 kB]
Get:2 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 locales all 2.27-3 [3,809 kB]
Get:3 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 locales-all i386 2.27-3 [4,167 kB]
Get:4 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libc6 i386 2.27-3 [2,747 kB]
Get:5 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libc-bin i386 2.27-3 [792 kB]
Get:6 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libc-dev-bin i386 2.27-3 [275 kB]
Get:7 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libc6-dev i386 2.27-3 [5,205 kB]
Get:8 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libc6-amd64 i386 2.27-3 [3,055 kB]
Get:9 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libc6-dbg i386 2.27-3 [16.0 MB]
Get:10 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libsepoll i386 2.7-1 [284 kB]
Get:11 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libselinux1 i386 2.7-2+b2 [91.2 kB]
Get:12 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libsemanage-common all 2.7-2 [17.4 kB]
Get:13 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libsemanage1 i386 2.7-2+b2 [104 kB]
Get:14 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libisc-export169 i386 1:9.11.3+dfsg-1 [206 kB]
Get:15 http://mirror.pwnieexpress.com/kali kali-rolling/main i386 libdns-export1100 i386 1:9.11.3+dfsg-1 [836 kB]
```

Antes de Continuar a instalação o sistema mostra quantos MB serão usados e pergunta se deseja continuar, basta digita "Y" como indicado pela seta na imagem acima.

Definição de Interface de Rede

Caminho para edição do ficheiro:

Comando: vi /etc/default/isc-dhcp-server

```
# Defaults for isc-dhcp-server (sourced by /etc/init.d/isc-dhcp-server)

# Path to dhcpcd's config file (default: /etc/dhcp/dhcpd.conf).
#DHCPDV4_CONF=/etc/dhcp/dhcpd.conf
#DHCPDV6_CONF=/etc/dhcp/dhcpd6.conf

# Path to dhcpcd's PID file (default: /var/run/dhcpcd.pid).
#DHCPDV4_PID=/var/run/dhcpcd.pid
#DHCPDV6_PID=/var/run/dhcpcd6.pid

# Additional options to start dhcpcd with.
#           Don't use options -cf or -pf here; use DHCPD_CONF/ DHCPD_PID instead
OPTIONS=""

# On what interfaces should the DHCP server (dhcpcd) serve DHCP requests?
#           Separate multiple interfaces with spaces, e.g. "eth0 eth1".
INTERFACESv4="eth0" 
INTERFACESv6=""

-- INSERT --
```

Insira a interface para escuta, nesta simulação usarei "eth0".

Salve.

Configuração Servidor

Abra o ficheiro de configuração.

Comando: vi /etc/dhcp/dhcpd.conf

```
# If this DHCP server is the official DHCP server for the local
# network, the authoritative directive should be uncommented.
#authoritative;

# Use this to send dhcp log messages to a different log file (you also
# have to hack syslog.conf to complete the redirection).
#log-facility local7;

# No service will be given on this subnet, but declaring it helps the
# DHCP server to understand the network topology.

#subnet 10.152.187.0 netmask 255.255.255.0 {
#}

# This is a very basic subnet declaration.

subnet 10.0.2.0 netmask 255.255.255.0 {
    range 10.0.2.10 10.0.2.20;
    range 10.0.2.22 10.0.2.40;
    option routers 10.0.2.1;
}

#subnet 10.254.239.0 netmask 255.255.255.224 {
#    range 10.254.239.10 10.254.239.20;
#    option routers rtr-239-0-1.example.org, rtr-239-0-2.example.org;
#}

# This declaration allows BOOTP clients to get dynamic addresses,
# which we don't really recommend.

#subnet 10.254.239.32 netmask 255.255.255.224 {
#    range dynamic-bootp 10.254.239.40 10.254.239.60;
#    option broadcast-address 10.254.239.31;
```

46,1

21%

Localize a posição indicada pela seta e configure de acordo com os dados da rede a ser usada.

Inicializando e Verificando Serviço

Iniciar servidor:

Comando: service isc-dhcp-server start (Iniciar server)
 Comando: service isc-dhcp-server status (Verifica status)

```
root@kali:/etc/network# service isc-dhcp-server start
root@kali:/etc/network# service isc-dhcp-server status
● isc-dhcp-server.service - LSB: DHCP server
  Loaded: loaded (/etc/init.d/isc-dhcp-server; generated; vendor preset: disabled)
  Active: active (running) since Tue 2018-04-24 16:33:10 UTC; 1min 5s ago
    Docs: man:systemd-sysv-generator(8)
 Process: 5190 ExecStart=/etc/init.d/isc-dhcp-server start (code=exited, status=0/SUCCESS)
   Tasks: 1 (limit: 4915)
  CGroup: /system.slice/isc-dhcp-server.service
          └─5202 /usr/sbin/dhcpd -4 -q -cf /etc/dhcp/dhcpd.conf eth0

Apr 24 16:33:10 kali isc-dhcp-server[5190]: Starting ISC DHCPv4 server: dhcpcd.
Apr 24 16:33:10 kali systemd[1]: Started LSB: DHCP server.
Apr 24 16:33:19 kali dhcpcd[5202]: DHCPREQUEST for 10.207.2.137 from 00:1a:3f:b1:5e:be via eth0: ignored (not auth
Apr 24 16:33:20 kali dhcpcd[5202]: DHCPREQUEST for 10.207.2.64 from 10:f0:05:01:95:a5 via eth0: ignored (not auth
Apr 24 16:33:22 kali dhcpcd[5202]: DHCPINFORM from 10.207.3.109 via eth0: unknown subnet for client address 10.20
Apr 24 16:33:24 kali dhcpcd[5202]: DHCPREQUEST for 10.207.2.64 from 10:f0:05:01:95:a5 via eth0: ignored (not auth
Apr 24 16:33:28 kali dhcpcd[5202]: DHCPREQUEST for 10.207.2.64 from 10:f0:05:01:95:a5 via eth0: ignored (not auth
Apr 24 16:33:31 kali dhcpcd[5202]: DHCPDISCOVER from e0:98:61:15:8a:4b via eth0
Apr 24 16:33:31 kali dhcpcd[5202]: DHCPREQUEST for 10.207.2.245 (10.207.1.3) from e0:98:61:15:8a:4b via eth0: ign
Apr 24 16:34:12 kali dhcpcd[5202]: ns1.example.org: host unknown.
Lines 1-19/19 (END)
```

Comando reiniciar server: service isc-dhcp-server restart.

Instalar Pacote Clientes

Em um cliente linux é necessário instalar o pacote dhcp client.

Comando: apt-get install isc-dhcp-client

```
root@kali:~# apt-get install isc-dhcp-client
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
  resolvconf avahi-autoipd isc-dhcp-client-ddns
The following packages will be upgraded:
  isc-dhcp-client
1 upgraded, 0 newly installed, 0 to remove and 1883 not upgraded.
Need to get 342 kB of archives.
After this operation, 0 B of additional disk space will be used.
0% [Working] ■
```



A configuração realizada durante a instalação deve ser suficiente.

DNS

DNS (Domain Name Server)

O servidor DNS é responsável em responder pelos domínios e direcionar tudo que é relacionado a ele.

Instalar dnsutils

Instalar dnsutils

Comando: apt-get install dnsutils

```
root@kali:~# apt-get install dnsutils
Reading package lists... Done
Building dependency tree
Reading state information... Done
dnsutils is already the newest version (1:9.10.3.dfsg.P4-12.1).
dnsutils set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@kali:~# ■
```



Ferramentas DNS

O Berkeley Internet Name Domain(BIND - Nomes de Dominio de Internet da Berkeley) implementa um servidor de nomes de domínios de Internet.BIND é o software de servidor de nomes mais utilizado na Internet. Este pacote distribui vários programas clientes relacionados com DNS que são derivados da árvore fonte do BIND.

Ferramentas:

Comando: dig entre_site.com

```
root@kali:~# dig google.com

; <>> DiG 9.10.3-P4-Debian <>> google.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<- opcode: QUERY, status: NOERROR, id: 24821
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 4000
;; QUESTION SECTION:
;google.com.           IN      A

;; ANSWER SECTION:
google.com.        230    IN      A      216.58.202.14

;; Query time: 1 msec
;; SERVER: 10.207.1.3#53(10.207.1.3)
;; WHEN: Wed Apr 25 12:24:08 UTC 2018
;; MSG SIZE rcvd: 55

root@kali:~#
```

Question Session(pedido/requisição) e Answer Section (Informações que o DNS envia em resposta ao pedido).

Por padrão para um domínio, o pacote Dig exibe o registro **A**. Para o domínio **MX** (Mail Exchanger) como exemplo use o comando:

- dig site.com MX.

```
root@kali:~# dig google.com MX

; <>> DiG 9.10.3-P4-Debian <>> google.com MX
;; global options: +cmd
;; Got answer:
;; ->>HEADER<- opcode: QUERY, status: NOERROR, id: 65137
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 11

;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 4000
;; QUESTION SECTION:
;google.com.           IN      MX

;; ANSWER SECTION:
google.com.        600    IN      MX      20 alt1.aspmx.l.google.com.
google.com.        600    IN      MX      40 alt3.aspmx.l.google.com.
google.com.        600    IN      MX      30 alt2.aspmx.l.google.com.
google.com.        600    IN      MX      10 aspmx.l.google.com.
google.com.        600    IN      MX      50 alt4.aspmx.l.google.com.

;; ADDITIONAL SECTION:
alt1.aspmx.l.google.com. 242   IN      A      108.177.15.26
alt1.aspmx.l.google.com. 293   IN      AAAA     2a00:1450:400c:c0c::1b
alt3.aspmx.l.google.com. 293   IN      A      108.177.14.27
alt3.aspmx.l.google.com. 293   IN      AAAA     2a00:1450:4010:c0f::1b
alt2.aspmx.l.google.com. 293   IN      A      74.125.128.27
alt2.aspmx.l.google.com. 293   IN      AAAA     2a00:1450:4013:c02::1a
aspmx.l.google.com.    242   IN      A      64.233.190.26
aspmx.l.google.com.    242   IN      AAAA     2800:3f0:4003:c00::1b
alt4.aspmx.l.google.com. 293   IN      A      74.125.200.27
alt4.aspmx.l.google.com. 293   IN      AAAA     2404:6800:4003:c00::1a

;; Query time: 69 msec
;; SERVER: 10.207.1.3#53(10.207.1.3)
;; WHEN: Wed Apr 25 12:59:21 UTC 2018
;; MSG SIZE rcvd: 367
```

FTP

FTP (File Transfer Protocol) um dos protocolos mais utilizados para transferência de ficheiros.

Instalar FTP

Comando para instalação.

Comando: apt-get install ftp

```
root@kali:~# apt-get install ftp
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  ftp
0 upgraded, 1 newly installed, 0 to remove and 1902 not upgraded.
Need to get 61.5 kB of archives.
After this operation, 141 kB of additional disk space will be used.
WARNING: The following packages cannot be authenticated!
  ftp
Install these packages without verification? [y/N] y
Get:1 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 ftp i386 0.17-34 [61.5 kB]
Fetched 61.5 kB in 1s (55.5 kB/s)
Selecting previously unselected package ftp.
(Reading database ... 306404 files and directories currently installed.)
Preparing to unpack .../archives/ftp_0.17-34_i386.deb ...
Unpacking ftp (0.17-34) ...
Setting up ftp (0.17-34) ...
update-alternatives: using /usr/bin/netkit-ftp to provide /usr/bin/ftp (ftp) in auto mode
Processing triggers for man-db (2.7.6.1-2) ...
root@kali:~#
```

Comando: apt-get install vsftpd

```
root@kali:~# apt-get install vsftpd
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  vsftpd
0 upgraded, 1 newly installed, 0 to remove and 1902 not upgraded.
Need to get 163 kB of archives.
After this operation, 388 kB of additional disk space will be used.
WARNING: The following packages cannot be authenticated!
  vsftpd
Install these packages without verification? [y/N] y
Get:1 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 vsftpd i386 3.0.3-9 [163 kB]
Fetched 163 kB in 3s (52.3 kB/s)
Preconfiguring packages ...
Selecting previously unselected package vsftpd.
(Reading database ... 306346 files and directories currently installed.)
Preparing to unpack .../vsftpd_3.0.3-9_i386.deb ...
Unpacking vsftpd (3.0.3-9) ...
Setting up vsftpd (3.0.3-9) ...
update-rc.d: We have no instructions for the vsftpd init script.
update-rc.d: It looks like a network service, we disable it.
Processing triggers for systemd (232-22) ...
Processing triggers for man-db (2.7.6.1-2) ...
root@kali:~#
```

Inicializando e Verificando

Comando para inicializar e verificar status:

Comando:

- service vsftpd start (iniciar)
- service vsftpd status (verificar status de funcionamento)

```
root@kali:~# service vsftpd start
root@kali:~# service vsftpd status
● vsftpd.service - vsftpd FTP server
   Loaded: loaded (/lib/systemd/system/vsftpd.service; disabled; vendor preset: disabled)
     Active: active (running) since Wed 2018-04-25 13:19:13 UTC; 4s ago
       Process: 31645 ExecStartPre=/bin/mkdir -p /var/run/vsftpd/empty (code=exited, status=0/SUCCESS)
      Main PID: 31648 (vsftpd)
         Tasks: 1 (limit: 4915)
        CGroup: /system.slice/vsftpd.service
                  └─31648 /usr/sbin/vsftpd /etc/vsftpd.conf

Apr 25 13:19:13 kali systemd[1]: Starting vsftpd FTP server...
Apr 25 13:19:13 kali systemd[1]: Started vsftpd FTP server.
root@kali:~#
```

Configuração VSFTPD

Caso deseje editar.

Comando: vi /etc/vsftpd.conf

```
# Example config file /etc/vsftpd.conf
#
# The default compiled in settings are fairly paranoid. This sample file
# loosens things up a bit, to make the ftp daemon more usable.
# Please see vsftpd.conf.5 for all compiled in defaults.
#
# READ THIS: This example file is NOT an exhaustive list of vsftpd options.
# Please read the vsftpd.conf.5 manual page to get a full idea of vsftpd's
# capabilities.
#
# Run standalone?  vsftpd can run either from an inetd or as a standalone
# daemon started from an initscript.
listen=NO
#
# This directive enables listening on IPv6 sockets. By default, listening
# on the IPv6 "any" address (::) will accept connections from both IPv6
# and IPv4 clients. It is not necessary to listen on *both* IPv4 and IPv6
# sockets. If you want that (perhaps because you want to listen on specific
# addresses) then you must run two copies of vsftpd with two configuration
# files.
listen_ipv6=YES
#
# Allow anonymous FTP? (Disabled by default).
anonymous_enable=NO
#
# Uncomment this to allow local users to log in.
local_enable=YES
#
# Uncomment this to enable any form of FTP write command.
#write_enable=YES
#
# Default umask for local users is 077. You may wish to change this to 022,
# if your users expect that (022 is used by most other ftppd's)
#local_umask=022
#
"/etc/vsftpd.conf" 155L, 5850C
```

22,15

Top

Permite que o VSFTPD funcione em modo daemon

- listen=YES

Alterando os valores- Desabilitar FTP anônimo:

- anonymous_enable=NO

Habilitar acesso aos usuários locais da máquina:

- local_enable=YES

Habilitar opção de escrita no servidor FTP:

- write_enable=YES

Habilitar umask para permissão de grupo:

- local_umask=002

Habilitar o log detalhado:

- xferlog_enable=YES

Habilitar porta 20 para dados:

- connect_from_port_20=YES

Habilitar formato detalhado de log:

- xferlog_std_format=YES

Liberar acesso somente ao home do usuário:

- chroot_local_user=YES

Modo de operação standalone:

- listen=YES

Teste de funcionamento

Nesta Distro por questões de segurança e por padrão o usuário **ROOT** também vem bloqueado, use o comando e comente a linha do usuário que deseja desbloquear.

Comando: vi /etc/ftpusers

```
# /etc/ftpusers: list of users disallowed FTP access. See ftpusers(5).
```

```
#root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
nobody
-
-
-
```

Para testar o acesso use o comando na própria máquina.

Comando: ftp localhost (será requisitado login(no caso root não é necessário digitar) e senha):

```
root@kali:~# ftp localhost
Connected to localhost.
220 (vsFTPd 3.0.3)
Name (localhost:root): root
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>
```

SSH

OpenSSH(Open Secure Shell) um conjunto de utilitários de rede relacionados à segurança que provem a criptografia em sessões de comunicação em uma rede de computadores usando o protocolo SSH.

Instalação OpenSSH

Comando de Instalação SSH.

Comando: apt-get install openssh-server

```
root@kali:~# apt-get install openssh-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libc-bin libc-dev-bin libc-l10n libc6 libc6-amd64 libc6-dbg libc6-dev libcom-err2 libcomerr2 locales
    locales-all openssh-client openssh-sftp-server
Suggested packages:
  glibc-doc keychain libpam-ssh monkeysphere ssh-askpass molly-guard rssh ufw
The following NEW packages will be installed:
  libcom-err2
The following packages will be upgraded:
  libc-bin libc-dev-bin libc-l10n libc6 libc6-amd64 libc6-dbg libc6-dev libcom-err2 locales locales-all
    openssh-client openssh-server openssh-sftp-server
13 upgraded, 1 newly installed, 0 to remove and 1889 not upgraded.
Need to get 38.4 MB of archives.
After this operation, 20.0 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
WARNING: The following packages cannot be authenticated!
  libc-l10n locales locales-all libc6 libc-bin libc-dev-bin libc6-dev libc6-amd64 libc6-dbg libcom-err2
  libcomerr2 openssh-sftp-server openssh-server openssh-client
Install these packages without verification? [y/N] y
Get:1 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 libc-l10n all 2.27-3 [862 kB]
Get:2 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 locales all 2.27-3 [3,809 kB]
Get:3 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 locales-all i386 2.27-3 [4,167 kB]
Get:4 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 libc6 i386 2.27-3 [2,747 kB]
Get:5 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 libc-bin i386 2.27-3 [792 kB]
Get:6 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 libc-dev-bin i386 2.27-3 [275 kB]
Get:7 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 libc6-dev i386 2.27-3 [5,205 kB]
Get:7 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main i386 libc6-dev i386 2.27-3 [5,205 kB]
```

Backup das chaves atuais

O Openssh vem com um conjunto de chaves SSH pré-geradas, porém pode se guardá-las e gerar novas.

Comando para Backup das chaves atuais:

Comando: mkdir /etc/ssh/default_key (cria a pasta default_keys)

Comando: mv /etc/ssh/ssh_host_* /etc/ssh/default_keys/ (Move o arquivo ssh_host_* para default_keys)

```
root@kali:~# mkdir /etc/ssh/default_keys
root@kali:~# mv /etc/ssh/ssh_host_* /etc/ssh/default_keys/
root@kali:~#
```

Gerar novas chaves:

Comando: dpkg-reconfigure openssh_server

```
root@kali:~# dpkg-reconfigure openssh-server
Creating SSH2 RSA key; this may take some time ...
2048 SHA256:rgvth0HDZymTGWgUZKQ8SWezlpWfclBYC+ubInyHwUU root@kali (RSA)
Creating SSH2 ECDSA key; this may take some time ...
256 SHA256:50XrypHhacDZMdiPB1FYe+K4e2V8KVe6kVK+17CK+ts root@kali (ECDSA)
Creating SSH2 ED25519 key; this may take some time ...
256 SHA256:yDNf2stC4N7hBxF7TvYhpUh2V83r6SevsYGjCa2RHTQ root@kali (ED25519)
root@kali:~#
```

Reinic peace:

Comando: systemctl start ssh.socket

Comando: systemctl start ssh.service

```

root@kali:~# systemctl start ssh.socket
root@kali:~# systemctl start ssh.service
root@kali:~# systemctl status ssh.service
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; disabled; vendor preset: disabled)
   Active: active (running) since Wed 2018-04-25 15:40:02 UTC; 3s ago
     Process: 2801 ExecStartPre=/usr/sbin/sshd -t (code=exited, status=0/SUCCESS)
    Main PID: 2802 (sshd)
      Tasks: 1 (limit: 4915)
     CGroup: /system.slice/ssh.service
             └─2802 /usr/sbin/sshd -D

Apr 25 15:40:02 kali systemd[1]: Starting OpenBSD Secure Shell server...
Apr 25 15:40:02 kali sshd[2802]: Server listening on 0.0.0.0 port 22.
Apr 25 15:40:02 kali sshd[2802]: Server listening on :: port 22.
Apr 25 15:40:02 kali systemd[1]: Started OpenBSD Secure Shell server.
root@kali:~#

```

Comandos de uso e Liberados

Comandos SSH:

Comando: ssh ou ssh --help

Comando: ssh -D porta user@iesb.com

```

root@kali:~# ssh
usage: ssh [-46AaCfGgKkMNnqsTtVvXxYy] [-B bind_interface]
           [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
           [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
           [-i identity_file] [-J [user@]host[:port]] [-L address]
           [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]
           [-Q query_option] [-R address] [-S ctl_path] [-W host:port]
           [-w local_tun[:remote_tun]] destination [command]
root@kali:~# 

```

Comandos liberados após acesso SSH.

- vim (editor de texto)
- mkdir (criar pastas)
- cd (mudar a pasta)
- ls (listar arquivos e diretórios)
- ll (lista arquivos de diretórios com mais detalhes)
- rm (remover arquivos e pastas)
- cp (copiar arquivos e pastas)
- mv (mover ou renomear arquivos)
- git (controle de versão)
- echo (apresentar texto na tela)
- entre outros...

Getting Started

System requirements

Distro: Kali Linux 4.9.0 (Debian)

Pacotes: apt-get, isc-dhcp-client, isc-dhcp-client, vi, dnsutils, ftp, vsftpd, openssh,systemctl.