BONUS

Code Snippets

Throughout *Idiot's Guides: Raspberry Pi*, you're asked to type in excerpts of code into the command line. Here, we've culled the longer sections of code (3 lines or more) you're asked to type in so you can copy and paste rather than risk a typo. Just look for the appropriate chapter and header and scroll down to find the code you need to copy.

Chapter 11

Fixing Common Drop-Out Issues

```
#Disable power saving
options8192cu rtw_power_mgnt=0 rtw_enusbss=1
rtw_ips_mode=1
```

Chapter 13

Assigning Your Raspberry Pi a Static Internal IP Address

```
address xxx.xxx.x.xx
netmask xxx.xxx.xxx.x
network xxx.xxx.x.xx
broadcast xxx.xxx.x.xx
gateway xxx.xxx.x.xx
```

Writing the OpenVPN Configuration File

```
local 192.168.1.0 #Enter the IP address of your Raspberry Pi that you got up above here.
dev tun
proto udp
port 1194
ca /etc/openvpn/easy-rsa/keys/ca.crt
cert /etc/openvpn/easy-rsa/keys/Server.crt #Enter in your server certificate you
  generated above here. In our example it's raspberrypiVPN.crt
key /etc/openvpn/easy-rsa/keys/Server.key #Enter the server key you made above here, in
  our example, it's raspberrypiVPN.key
dh /etc/openvpn/easy-rsa/keys/dh1024.pem
server 10.8.0.0 255.255.255.0
ifconfig 10.8.0.1 10.8.0.2
push "route 10.8.0.1 255.255.255.255"
push "route 10.8.0.0 255.255.255.0"
push "route 192.168.2.0 255.255.255.0" #Enter your Raspberry Pi's IP address here after
  "route
"dhcp-option DNS yourdynamicaddress.server.com" #Enter your Dynamic DNS address here
push "redirect-gateway def1"
client-to-client
duplicate-cn
keepalive 10 120
cipher AES-128-CBC
comp-lzo
user nobody
group nogroup
persist-key
persist-tun
status /var/log/openvpn-status.log 20
log /var/log/openvpn.log
verb 1
```

Setting Up Your Raspberry Pi's Firewall

```
#!/bin/sh
iptables -t nat -A POSTROUTING -s 10.8.0.0/24 -o eth0 -j SNAT -to-source 192.168.X.X
```

Configuring Keys for Each Client

```
client
dev tun
proto udp
remote YOUR PUBLIC IP ADDRESS 1194
resolv-retry infinite
nobind
persist-key
persist-tun
mute-replay-warnings
ns-cert-type server
key-direction 1
cipher AES-128-CBC
comp-lzo
verb 1
mute 20
```

Also:

```
#!/bin/bash
# Default Variable Declarations
DEFAULT="Default.txt"
FILEEXT=".ovpn"
CRT=".crt"
KEY=".3des.key"
CA="ca.crt"
TA="ta.key"
#Ask for a Client name
echo "Please enter an existing Client Name:"
read NAME
#1st Verify that client's Public Key Exists
if [ ! -f $NAME$CRT ]; then
echo "[ERROR]: Client Public Key Certificate not found: $NAME$CRT"
exit
fi
echo "Client's cert found: $NAME$CR"
#Then, verify that there is a private key for that client
if [ ! -f $NAME$KEY ]; then
echo "[ERROR]: Client 3des Private Key not found: $NAME$KEY"
exit
fi
echo "Client's Private Key found: $NAME$KEY"
#Confirm the CA public key exists
if [ ! -f $CA ]; then
echo "[ERROR]: CA Public Key not found: $CA"
exit
fi
echo "CA public Key found: $CA"
#Confirm the tls-auth ta key file exists
if [ ! -f $TA ]; then
echo "[ERROR]: tls-auth Key not found: $TA"
exit
fi
echo "tls-auth Private Key found: $TA"
#Ready to make a new .opvn file--Start by populating with the
default file
cat $DEFAULT > $NAME$FILEEXT
#Now, append the CA Public Cert
echo "<ca>" >> $NAME$FILEEXT
cat $CA >> $NAME$FILEEXT
echo "</ca>" >> $NAME$FILEEXT
#Next append the client Public Cert
echo "<cert>" >> $NAME$FILEEXT
cat $NAME$CRT | sed -ne '/-BEGIN CERTIFICATE-/,/-END CERTIFICATE-/p' >> $NAME$FILEEXT
echo "</cert>" >> $NAME$FILEEXT
#Then, append the client Private Key
echo "<key>" >> $NAME$FILEEXT
cat $NAME$KEY >> $NAME$FILEEXT
echo "</key>" >> $NAME$FILEEXT
#Finally, append the TA Private Key
echo "<tls-auth>" >> $NAME$FILEEXT
cat $TA >> $NAME$FILEEXT
echo "</tls-auth>" >> $NAME$FILEEXT
echo "Done! $NAME$FILEEXT Successfully Created."
#Script written by Eric Jodoin
\ No newlineat end of file
```

Chapter 14

Setting Up a Static IP Address and SSH

```
address xxx.xxx.x.xx
netmask xxx.xxx.xxx.x
network xxx.xxx.x.xx
broadcast xxx.xxx.x.xx
gateway xxx.xxx.x.xx
```

Chapter 15

Changing Your Server's Settings

```
#Minecraft server properties #(File modification datestamp)
op-permission-level=4
allow-nether=false
level-name=world
enable-query=false
allow-flight=false
announce-player-achievements=true
server-port=25565
level-type=DEFAULT
enable-rcon=false
force-gamemode=false
max-build-height=256
spawn-npcs=true
white-list=true
spawn-animals=true
hardcore=false
snooper-enabled=true
online-mode=true
pvp=true
difficulty=1
enable-command-block=false
player-idle-timeout=0
gamemode=0
max-players=10
spawn-monsters=true
generate-structures=true
view-distance=5
spawn-protection=16
motd=Pi server
```

Chapter 16

Enabling Wi-Fi

```
allow-hotplug wlan0
iface wlan0 inet dhcp
wpa-ssid "YOUR ROUTER NAME"
wpa-psk "WIFI PASSWORD"
```

Assigning Your Raspberry Pi a Static IP Address

```
address xxx.xxx.x.xx
netmask xxx.xxx.xxx.x
network xxx.xxx.x.xx
broadcast xxx.xxx.x.xx
gateway xxx.xxx.x.xx
```

Installing Motion-Detection Software

```
sudo apt-get install -y libjpeg62 libjpeg62-dev libavformat53 libavformat-dev libavcodec53 libavcodec-dev
  libavutil51 libavutil-dev libc6-dev zlib1g-dev libmysqlclient18 libmysqlclient-dev libpq5 libpq-dev
```

Storing Videos on Your Computer

```
//PATHFROMSTEP4 /mnt/surveillance cifs username=YOURFOLDERUSERNAME,password=YOURFOLDERPASSWORD,iocharset=
  utf8,file_mode=0777,dir_mode=0777 0 0
```

Also:

```
afpfs#afp://YOURMACUSERNAME:MACPASSWORD@YOURMACIPADDRESS/FOLDERFROMSTEP3/mnt/surveillance fuse
  user=YOURUSERNAME,group=fuse 0 0
```

Chapter 17

Configuring a Wireless Interface

```
auto lo
auto br0
iface lo inet loopback
iface eth0 inet dhcp
allow-hotplug wlan0
allow-hotplug eth0
iface wlan0 inet manual
iface br0 inet dhcp
  bridge_fd 1
  bridge_hello 3
  bridge_maxage 10
  bridge_stp off
  bridge_ports eth0
```

Configuring hostapd

```
interface=wlan0
bridge=br0
driver= #TYPE YOUR WI-FI DRIVER NUMBER HERE, IT'S LIKELY NL80211 IF YOU PURCHASED A
  GENERIC ADAPTER
country_code= #TYPE YOUR COUNTRY HERE; THE DEFAULT IS US AND SHOULD FOLLOW ISO 3166-1
  FOR OTHER COUNTRIES
ctrl_interface=wlan0
ctrl_interface_group=0
ssid="NAME YOUR ROUTER"
hw_mode=g
channel=1 #THIS IS YOUR BROADCAST CHANNEL
wpa=3
wpa_passphrase= #MAKE UP A PASSWORD FOR YOUR ROUTER HERE
wpa_key_mgmt=WPA-PSK
wpa_pairwise=TKIP
rsn_pairwise=CCMP
beacon_int=100
auth_algs=3
macaddr_acl=0
wmm_enabled=1
eap_reauth_period=360000000
```

Configuring DNS Settings

```
domain-needed
interface=wlan0
dhcp-range=192.168.2.1,192.168.2.254,12h
```

Chapter 19

Editing Samba's Configuration Files

```
[Backups]
comment = Backup Folder
path = /media/hdd1/shares
valid users = @users
force group = users
create mask = 0660
directory mask = 0771
read only = no
```

Chapter 20

Using the Pi for Time-Lapse Photography

```
#!/bin/bash
DATE=$(date +"%Y-%m-%d_%H%M")
raspistill -o /home/pi/camera/$DATE.jpg
```

Also:

```
mencoder -nosound -ovc lavc -lavcopts vcodec=mpeg4:aspect=16/9:vbitrate=8000000 -vf scale=1920:1080 -o
  timelapse.avi -mf type=jpeg:fps=24 mf://@stills.txt
```

Chapter 21

Touchscreen Kits

```
#!/bin/bash
PID='pidof matchbox-keyboard'
if [ ! -e $PID ]; then
killall matchbox-keyboard
else
matchbox-keyboard&
fi
```

Also:

```
[Desktop Entry]
Name=Toggle Matchbox Keyboard
Comment=Toggle Matchbox
Keyboard Exec=toggle-matchbox.sh
Type=Application
Icon=matchbox-keyboard.png
Categories=Panel;Utility;MB
X-MB-INPUT-MECHANSIM=True
```

Also:

```
Plugin {
type = launchbar
Config {
Button {
id=lxde-screenlock.desktop
}
Button {
id=lxde-logout.desktop
}
}
Change it to read:
Plugin {
type = launchbar
Config {
Button {
id=toggle-matchbox.desktop
}
Button {
id=lxde-screenlock.desktop
}
Button {
id=lxde-logout.desktop
}
}
```

Support for Webcams and External Video Cameras

```
#!/bin/bash
DATE=$(date +"%Y-%m-%d_%H%M")
fswebcam -r 1280x720 -no-banner /home/pi/webcam/$DATE.jpg
```