



Complete WSL Setup and Management Guide

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Moving WSL Distributions to Another Drive

Check Current Distributions

```
wsl --list --all --verbose
```

Method 1: Using WSL Move Command (Recommended)

```
# Shutdown WSL first
wsl --shutdown

# Move each distribution
wsl --manage <DistroName> --move "D:\Program Files\WSL\<DistroName>"

# Example:
wsl --manage parrot --move "D:\Program Files\WSL\parrot"
wsl --manage Debian --move "D:\Program Files\WSL\Debian"
wsl --manage docker-desktop --move "D:\Program Files\WSL\docker-desktop"
```

Method 2: Export and Import

```
# Create destination folder
mkdir "D:\Program Files\WSL"

# Export distribution
wsl --export <DistroName> "D:\Program Files\WSL\<DistroName>.tar"
```

```
# Unregister old installation
wsl --unregister <DistroName>

# Import to new location
wsl --import <DistroName> "D:\Program Files\WSL\<DistroName>" "D:\Program Files\WSL\<DistroName>\bin"

# Delete tar file after successful import
del "D:\Program Files\WSL\<DistroName>.tar"
```

Verify New Location

```
Get-ChildItem -Path HKCU:\Software\Microsoft\Windows\CurrentVersion\Lxss | ForEach-Object {
```

Setting Up Parrot OS on WSL

Install from Microsoft Store or Import

```
# Check available distributions
wsl --list --online

# Install specific distribution
wsl --install -d <DistroName>
```

First Launch

```
# Update system immediately
sudo apt update && sudo apt upgrade -y
```

User Management

Create New User

```
# Login as root first
wsl -d parrot -u root

# Create user (example: ben)
adduser ben

# Add user to sudo group
usermod -aG sudo ben

# Verify user is in sudo group
groups ben
```

Set Default User

```
# Edit WSL configuration
nano /etc/wsl.conf

# Add these lines:
[user]
default=ben

# Exit and restart WSL
exit
```

In PowerShell:

```
wsl --shutdown
wsl -d parrot
```

Fix "unable to resolve host" Warning

```
sudo nano /etc/hosts

# Change:
127.0.0.1 localhost

# To:
127.0.0.1 localhost parrot
```

Desktop Environment (Xfce with xrdp)

Install Required Packages

```
# Update repositories
sudo apt update

# Install Xfce desktop and xrdp
sudo apt install xfce4 xfce4-goodies xrdp dbus-x11 -y
```

Configure xrdp for Xfce

```
# Create/edit startwm script
echo "startxfce4" | sudo tee /etc/xrdp/startwm.sh
sudo chmod +x /etc/xrdp/startwm.sh
```

Configure xrdp for IPv4 (Important!)

```
sudo nano /etc/xrdp/xrdp.ini

# Find the line:
port=3389

# Change to:
port=tcp://:3389

# Save and exit (Ctrl+O, Enter, Ctrl+X)
```

Start xrdp Service

```
sudo service xrdp start

# Check status
sudo service xrdp status

# Verify it's listening on IPv4
sudo netstat -tlnp | grep xrdp
```

Connect via Remote Desktop

1. Press `Win+R` on Windows
2. Type `mstsc` and press Enter
3. Enter: `127.0.0.1:3389` or `localhost:3389`
4. Username: your WSL username
5. Password: your WSL password
6. Click Connect

Stop xrdp When Not Needed

```
sudo service xrdp stop
```

Set Environment Variables for GUI Apps

```
# Add to ~/.bashrc
echo 'export GDK_BACKEND=x11' >> ~/.bashrc
echo 'export DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/$(id -u)/bus"' >> ~/.bashrc

# Reload configuration
source ~/.bashrc
```

Security Tools Installation

Install All Parrot Security Tools

```
# Full installation (several GB)
sudo apt install parrot-tools-full -y
```

Install Specific Tool Categories

```
# Web application testing
sudo apt install parrot-tools-web -y

# Information gathering
sudo apt install parrot-tools-infogathering -y

# Exploitation tools
sudo apt install parrot-tools-exploit -y

# Forensics
sudo apt install parrot-tools-forensics -y

# Wireless testing
sudo apt install parrot-tools-wireless -y

# Password cracking
sudo apt install parrot-tools-crypto -y

# Reverse engineering
sudo apt install parrot-tools-reversing -y

# Cloud security
sudo apt install parrot-tools-cloud -y
```

View Available Packages

```
apt search parrot-tools
```

System Upgrade

```
# Full system upgrade
sudo parrot-upgrade

# Or standard upgrade
sudo apt update && sudo apt full-upgrade -y
```

Troubleshooting Common Issues

ERROR_SHARING_VIOLATION After Moving

If you get "process cannot access the file" errors after moving:

Solution 1: Restart vmcompute service

```
Get-Service vmcompute | Restart-Service
wsl --shutdown
```

Solution 2: Use Handle tool to find locking process

```
# Download Handle
Invoke-WebRequest -Uri 'https://download.sysinternals.com/files/Handle.zip' -OutFile C:\h
Expand-Archive -Path C:\handle.zip -DestinationPath C:\Handle

# Find what's locking the file
C:\Handle\handle64.exe "D:\Program Files\WSL\parrot\ext4.vhdx"

# Kill the locking process
Stop-Process -Id <PID> -Force
```

Solution 3: Restart computer

This is the most reliable solution for persistent locks.

xrdp Connection Refused

Check if xrdp is running:

```
sudo service xrdp status
```

Restart xrdp:

```
sudo service xrdp restart
```

Ensure it's listening on IPv4:

```
sudo netstat -tlnp | grep xrdp
# Should show: tcp 0.0.0.0:3389 not tcp6
```

D-Bus Errors in Desktop

```
# Start D-Bus service
sudo service dbus start

# Launch Xfce with dbus
dbus-launch xfce4-session
```

WSL Service Name Issues

The correct service name is **vmcompute**, not LxssManager:

```
Get-Service vmcompute | Restart-Service
```

Useful WSL Commands

List Distributions

```
# List all installed distributions
wsl --list --all

# List with details
wsl --list --verbose
```

Start/Stop WSL

```
# Shutdown all instances
wsl --shutdown

# Start specific distribution
wsl -d <DistroName>

# Start as specific user
wsl -d <DistroName> -u <username>

# Start as root
wsl -d <DistroName> -u root
```

Export/Import Distributions

```
# Export
wsl --export <DistroName> <FilePath>

# Import
wsl --import <DistroName> <InstallLocation> <FilePath> --version 2
```

```
# Import existing VHD  
wsl --import-in-place <DistroName> <VHDPATH>
```

Unregister Distribution

```
wsl --unregister <DistroName>
```

Set Default Distribution

```
wsl --set-default <DistroName>
```

Update WSL

```
wsl --update
```

Check WSL Version

```
wsl --version
```

Quick Reference: Common Tasks

Update System

```
sudo apt update && sudo apt upgrade -y
```

Start Desktop Environment

```
sudo service xrdp start  
# Then connect via RDP: localhost:3389
```

Stop Desktop Environment

```
sudo service xrdp stop
```


Install New Tools

```
sudo apt install <package-name> -y
```

Check Disk Usage

```
df -h
```

Access Windows Files from WSL

```
cd /mnt/c/Users/<YourWindowsUsername>/
```

Access WSL Files from Windows

In Windows Explorer, type:

```
\\wsl$\\<DistroName>
```

Important Notes

1. Always shutdown WSL before moving distributions:

```
wsl --shutdown
```

2. Quit Docker Desktop before moving docker-desktop distribution

3. Create backups before major changes:

```
wsl --export parrot "D:\Backups\parrot-backup.tar"
```

4. Check distribution location in registry:

```
Get-ChildItem -Path HKCU:\Software\Microsoft\Windows\CurrentVersion\Lxss | ForEach-Ob
```

5. For persistent issues after moving, restart Windows

6. xrdp requires IPv4 configuration (tcp://:3389) to work properly on WSL

Support and Resources

- Official WSL Documentation: <https://learn.microsoft.com/en-us/windows/wsl/>
- Parrot OS Documentation: <https://parrotsec.org/docs/>
- xrdp GitHub: <https://github.com/neutrinolabs/xrdp>
- WSL GitHub Issues: <https://github.com/microsoft/WSL/issues>

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Tested On: Windows 11, WSL 2, Parrot OS 6.x

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1. <https://learn.microsoft.com/en-us/windows/wsl/setup/environment>
2. <https://theshepord.github.io/intro-to-WSL/>
3. <https://learn.microsoft.com/en-us/windows/wsl/install>
4. https://www.reddit.com/r/linux4noobs/comments/ileyz5/an_introduction_to_linux_through_windows/
5. <https://www.geeksforgeeks.org/installation-guide/how-to-install-wsl2-windows-subsystem-for-linux-2-on-windows-10/>
6. <https://operavps.com/docs/install-wsl-windows/>
7. <https://www.youtube.com/watch?v=zZf4YH4WiZo&vl=en>
8. <https://www.youtube.com/watch?v=S34znhl-pRA>
9. <https://www.sitepoint.com/wsl2/>