

Network Setup: Mac + iPhone Hotspot + Pi

Overview

You can connect your Mac to iPhone hotspot for internet **AND** still access the Pi via Ethernet simultaneously. macOS supports multiple network interfaces (multi-homing).

Configuration

Mac Network Setup

1. WiFi Interface (iPhone Hotspot):

- Connect to iPhone hotspot via WiFi
- Gets internet access automatically
- IP assigned by iPhone (typically 172.20.10.x)

2. Ethernet Interface (Pi Connection):

- Connect Ethernet cable to Pi
- Configure with **static IP**:
- IP Address: `192.168.10.1`
- Subnet Mask: `255.255.255.0` (or `/24`)
- **DO NOT set default gateway** (keeps internet via WiFi)
- **DO NOT set DNS** (uses WiFi DNS)

Pi Configuration

- IP: `192.168.10.2`
- Gateway: `192.168.10.1` (Mac Ethernet)
- Subnet: `192.168.10.0/24`

How to Configure Mac Ethernet

Via System Settings (macOS Ventura+):

1. System Settings → Network
2. Select Ethernet interface
3. Configure IPv4: **Manually**
4. IP Address: `192.168.10.1`
5. Subnet Mask: `255.255.255.0`
6. **Leave Router/DNS empty** (or set to 192.168.10.1 if required, but don't use as default route)

Via Terminal:

```
# Set static IP on Ethernet (replace en1 with your Ethernet interface)
sudo ifconfig en1 192.168.10.1 netmask 255.255.255.0

# Verify
ifconfig en1
ping -c 2 192.168.10.2
```

Verification

```
# Check Mac interfaces  
ifconfig | grep -E "^[a-z]inet "  
  
# Test Pi connectivity  
ping -c 2 192.168.10.2  
  
# Test internet (should work via WiFi)  
ping -c 2 8.8.8.8  
  
# Check routing  
netstat -rn | grep default
```

Important Notes

1. **Service Order**: macOS automatically routes internet traffic via WiFi (higher priority) and local traffic via Ethernet
2. **No Conflicts**: The two networks (iPhone hotspot and Pi Ethernet) are separate and don't interfere
3. **Pi Internet**: If Pi needs internet, it can route through Mac Ethernet (192.168.10.1), which forwards to WiFi
4. **SSH Access**: `ssh andre@192.168.10.2` will work normally

Troubleshooting

Problem: Can't reach Pi after connecting to iPhone hotspot

- **Solution**: Ensure Ethernet has static IP 192.168.10.1 and no default gateway

Problem: Mac loses internet when Ethernet is connected

- **Solution**: Remove default gateway from Ethernet interface (keep WiFi as default route)

Problem: Pi can't access internet

- **Solution**: Enable IP forwarding on Mac (if needed):
`sudo sysctl -w net.inet.ip.forwarding=1`

Summary

■ This setup works perfectly!

- Mac gets internet via iPhone hotspot
- Mac accesses Pi via Ethernet (192.168.10.2)
- No conflicts or issues
- Standard macOS multi-homing behavior