

# Remote Access — VNC Studio via Cloudflare

# Remote Access — VNC Studio via Cloudflare

## Prerequisites

- `cloudflared` installed on both Studio and Air
  - Screen Sharing enabled on Studio: **System Settings** → **General** → **Sharing** → **Screen Sharing**
  - Cloudflare Tunnel "mattermost" running on Studio (LaunchAgent: `com.john.cloudflared`)
- 

## Architecture

Studio: macOS Screen Sharing (VNC :5900)

- Cloudflare Tunnel
- `vnc.basicconsulting.no`
- Air: `cloudflared` TCP proxy
- `localhost:5901`
- Finder VNC client

- **Studio** exposes VNC on port 5900 (macOS Screen Sharing)
  - **Cloudflare Tunnel** proxies TCP traffic to `vnc.basicconsulting.no`
  - **Air** runs a local `cloudflared` proxy that maps tunnel → `localhost:5901`
  - Port 5901 on Air avoids conflict with Air's own Screen Sharing (5900)
-

# Studio Setup (One-time — already done)

Cloudflared config (`~/.cloudflared/config.yml`) includes:

```
- hostname: vnc.basicconsulting.no
  service: tcp://localhost:5900
```

Tunnel runs as a LaunchAgent:

```
# Check tunnel status
launchctl list com.john.cloudflared

# Restart if needed
launchctl kickstart -k gui/$(id -u)/com.john.cloudflared
```

## How to Connect from Air

1. Open Terminal on Air
2. Start the local TCP proxy:

```
cloudflared access tcp --hostname vnc.basicconsulting.no --url localhost:5901
```

3. Open Finder → **Go** → **Connect to Server** (`Cmd+K`)
4. Enter:

```
vnc://localhost:5901
```

5. Enter the VNC password when prompted

“ Keep the Terminal window open — the `cloudflared` proxy must stay running for the session.

## Troubleshooting

### Connection fails:

```
# On Studio – verify tunnel is running
ps aux | grep cloudflared

# Restart tunnel on Studio
launchctl kickstart -k gui/$(id -u)/com.john.cloudflared
```

### Lag / slow display:

Display is at 2560x1440 (5K scaled). Reduce resolution temporarily to improve performance:

```
# Reduce to 1080p (lower lag)
displayplacer "id:D8EAE737-E4F0-42D1-9AD0-C39CDD691C67 res:1920x1080 hz:60 color_depth:8
scaling:on enabled:true"

# Restore original resolution
displayplacer "id:D8EAE737-E4F0-42D1-9AD0-C39CDD691C67 res:2560x1440 hz:60 color_depth:8
scaling:on enabled:true"
```

### Port conflict on Air:

If port 5901 is already in use:

```
lsof -i :5901
```

Use a different port (e.g. 5902) and update the `vnc://` address accordingly.

---

# noVNC (Browser fallback — NOT recommended)

Tested and unusable due to lag on 5K display. Documented here for reference only.

### Install:

```
pip3 install --break-system-packages websockify
git clone https://github.com/novnc/noVNC.git ~/novnc
```

### Run (on Studio):

```
websockify --web ~/novnc 6080 localhost:5900
```

**Access:** <https://remote.basicconsulting.no/vnc.html?resize=scale>

**Verdict:** Unusable lag at 5K resolution. Use the `cloudflared` TCP method above.

---

*Last updated: 2026-02-24 Created by: John — post VNC remote access session*

---

Revision #3

Created 2026-02-24 14:22:30 UTC by John

Updated 2026-05-31 20:03:42 UTC by John