OpenClaw + Tailscale Setup Guide

OpenClaw + Tailscale Funnel Setup Guide

Connecting OpenClaw to External Dashboards (Vercel) While Maintaining Local Access

Overview

This guide walks you through configuring OpenClaw with Tailscale Funnel to expose your gateway securely to the internet. This enables:

- ✅ External dashboards (e.g., Vercel-hosted apps) to connect to your OpenClaw instance
- ✅ Local web chat continues to work on `127.0.0.1`
- ✅ Secure, authenticated access via Tailscale's infrastructure

Prerequisites

- OpenClaw installed and running
- Admin access to the OpenClaw host machine
- A Tailscale account (free tier works)

Step 1: Backup Your Configuration

> ⚠ **IMPORTANT:** Always backup before making changes.

```
cp ~/.openclaw/openclaw.json ~/.openclaw/openclaw.json.backup-$(date +%Y%m%d)
```

Step 2: Install Tailscale

If you don't have Tailscale installed on your OpenClaw machine:

```
curl -fsSL https://tailscale.com/install.sh | sh
```

Step 3: Start Tailscale and Register Device

```
sudo tailscale up
```

This will output a registration URL:

```
To authenticate, visit:
https://login.tailscale.com/a/<tailscale_generated_id>
```

1. Open this URL in your browser
2. Log in with your Tailscale account
3. Approve the device

Verify: Check the Tailscale admin console to confirm your device appears.

Step 4: Configure Tailscale Admin Console

Log into Tailscale Admin Console and configure:

4.1 DNS Settings

Navigate to **DNS** and enable:

☒ **MagicDNS** — Enables friendly hostnames
☒ **HTTPS Certificates** — Enables TLS for funnel

4.2 Access Controls

Navigate to **Access Controls** and add the funnel attribute:

Under **Node Attributes**, add:

Group	Attribute
`autogroup:member`	`attribute:funnel`

This allows your nodes to use the funnel feature.

Step 5: Update OpenClaw Configuration

Edit `~/.openclaw/openclaw.json` and update the gateway section:

```json
{
  "gateway": {
    "port": 18789,
    "mode": "local",
    "bind": "loopback",
    "auth": {
      "mode": "token",
      "token": "YOUR_SECURE_TOKEN_HERE"
    },
    "tailscale": {
      "mode": "off",
      "resetOnExit": false
    },
    "http": {
      "endpoints": {
        "chatCompletions": {
          "enabled": true
        }
      }
    }
  }
}
```

Key Settings Explained

Setting	Value	Purpose
bind	"loopback"	Gateway listens on localhost only
auth.token	Your token	Required for API authentication
tailscale.mode	"off"	We'll use manual funnel instead
chatCompletions.enabled	true	Enables the OpenAI-compatible API endpoint

> **Note:** We keep `bind: "loopback"` because Tailscale Funnel handles external access. This is more secure than binding to all interfaces.

Step 6: Start the Tailscale Funnel

On your OpenClaw machine, start the funnel for port 18789:

```
        tailscale funnel 18789
```

This will output your public funnel URL:

```
https://ip-172-31-70-66.tailf479a9.ts.net
```

> **Save this URL** — you'll need it for your Vercel environment variables.

Step 7: Restart OpenClaw Gateway

Apply the configuration changes:

```
        openclaw gateway stop
        openclaw gateway start
```

Step 8: Verify Setup

8.1 Check Local Web Chat

Open the local OpenClaw web interface and verify it still works.

Ask: *"What's my local and Tailscale status?"*

You should see confirmation that both local and Tailscale connections are active.

8.2 Test the API Externally

From any machine (not the OpenClaw host), test the API:

```
        curl -s https://YOUR-HOSTNAME.tailXXXXXX.ts.net/v1/chat/completions \
          -H "Authorization: Bearer YOUR_TOKEN_HERE" \
          -H "Content-Type: application/json" \
          -d '{"model":"openclaw","messages":[{"role":"user","content":"ping"}]}'
```

Expected Response: A streaming response or JSON containing the assistant's reply (e.g., "pong").

Step 9: Configure Vercel Environment Variables

In your Vercel project dashboard:

1. Go to **Settings → Environment Variables**
2. Add the following:

Variable	Value
`OPENCLAW_GATEWAY_URL`	`https://YOUR-HOSTNAME.tailXXXXXX.ts.net`
`OPENCLAW_GATEWAY_TOKEN`	`YOUR_SECURE_TOKEN_HERE`

3. **Redeploy** your Vercel application to pick up the new variables.

Verification Checklist

After completing all steps, confirm:

- [ ] Tailscale funnel is running (`tailscale funnel 18789`)
- [ ] OpenClaw gateway is started with new config
- [ ] Local web chat works on `127.0.0.1:18789`
- [ ] External API test returns a valid response
- [ ] Vercel dashboard can connect to your gateway

Troubleshooting

Issue	Solution
Funnel URL not working	Ensure MagicDNS and HTTPS Certificates are enabled in Tailscale admin
"Unauthorized" error	Verify the token in your curl command matches `gateway.auth.token`
Connection refused	Check that OpenClaw gateway is running: `openclaw gateway status`
Vercel still shows "not connected"	Redeploy after setting env vars; check for typos in URL/token

Security Notes

- Your gateway token is like a password — keep it secret
- Tailscale Funnel traffic is encrypted end-to-end
- Only requests with valid `Authorization: Bearer` headers are processed
- Consider rotating your token periodically

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