OpenClaw

The Complete Installation & Setup Guide

From zero to running — on your local machine or any VPS

openclaw.ai

What Is OpenClaw?

OpenClaw is an open-source AI automation framework that lets you build, orchestrate, and deploy autonomous AI agents and workflows. Think of it as the operating system for your AI automations — it handles model routing, task orchestration, tool integrations, and cost optimization so you can focus on building the actual business logic.

Whether you're a developer building SaaS products, a solopreneur automating your business, or a "vibe coder" looking to monetize your skills, OpenClaw gives you the infrastructure to run AI agents at scale without burning through your API budget.

Why OpenClaw?

Cost Optimization	Strategic model routing can reduce your AI costs by up to 97%. Route simple tasks to lightweight models and reserve the heavy hitters for complex work.
Agent Orchestration	Build multi-step AI workflows that chain together tools, APIs, and models into reliable automated pipelines.
Local-First	Run everything on your own machine or VPS. Your data stays yours, your costs stay predictable, and you're not locked into any vendor.
Open Source	Full transparency, community-driven development, and the freedom to customize everything to your specific use case.

Prerequisites

Before you install OpenClaw, make sure your system meets these minimum requirements:

- **Operating System:** macOS 12+, Ubuntu 20.04+ / Debian 11+, or any modern Linux distro. Windows users should use WSL2.
- **Node.js:** Version 18 or higher (recommended: v20 LTS)

- **Git:** Any recent version for cloning repos and version control
- **RAM:** Minimum 4GB (8GB+ recommended for running local models alongside OpenClaw)
- **Disk Space:** At least 2GB free for OpenClaw and dependencies
- **API Keys:** You'll need at least one AI provider API key (Anthropic, OpenAI, etc.) to power your agents

> 💡 **Tip: Check Your Node Version**
> Run "node --version" in your terminal. If you don't have Node.js or it's below v18, visit nodejs.org to grab the latest LTS release.

Installation

Step 1: Run the One-Line Installer

OpenClaw provides a single command that handles the entire installation. Open your terminal and run:

```
curl -fsSL https://openclaw.ai/install.sh | bash
```

This script is hosted at **https://openclaw.ai/** and it will automatically detect your operating system, download the correct binary, install dependencies, and add OpenClaw to your system PATH.

What the installer does:

- Detects your OS and architecture (Intel/ARM, Linux/macOS)
- Downloads the latest stable OpenClaw release
- Installs required dependencies
- Adds the openclaw command to your PATH
- Creates the default config directory at ~/.openclaw/

> ⚠️ **Security Note**
> Always review install scripts before piping them to bash. You can inspect the script first by visiting https://openclaw.ai/install.sh in your browser, or by running: curl -fsSL https://openclaw.ai/install.sh | less

Step 2: Verify the Installation

Once the installer finishes, verify everything is working:

```
openclaw --version
```

You should see the version number printed to your terminal. If you get a “command not found” error, try restarting your terminal or running “source ~/.bashrc” (or “source ~/.zshrc” for zsh users).

Step 3: Initialize Your Project

Navigate to your project directory (or create a new one) and initialize OpenClaw, your agent can do this for you as well:

```
mkdir my-openclaw-project
cd my-openclaw-project
openclaw onboard
```

This creates a configuration file and the basic project structure you’ll need to start building agents and workflows.

Basic Configuration

After initialization, you’ll need to configure a few essential settings to get OpenClaw talking to your AI providers.

Setting Up API Keys

OpenClaw supports multiple AI providers. Add your API keys using the built-in config command:

```
# Add your Anthropic API key
openclaw config set ANTHROPIC_API_KEY sk-ant-your-key-here

# Add OpenAI (optional, for multi-model routing)
openclaw config set OPENAI_API_KEY sk-your-key-here
```

Alternatively, you can set these as environment variables in your shell profile or in a .env file in your project root.

Configuring Model Routing

One of OpenClaw’s most powerful features is intelligent model routing. This is how you can achieve massive cost savings — by sending simple tasks to cheaper, faster models and only using premium models when the task demands it. Open your project’s openclaw.config file and set up your tiers:

```
# openclaw.config (example routing setup)

routing:
  tier_1:  # Routine tasks (classification, formatting)
    model: claude-haiku-4-5
    max_tokens: 1000

  tier_2:  # Complex execution (code gen, analysis)
    model: claude-sonnet-4-6
```

```
    max_tokens: 4000

  tier_3:  # Strategic decisions (planning, architecture)
    model: claude-opus-4-6
    max_tokens: 8000
```

> 💡 **Pro Tip: The Three-Tier Strategy**
> This three-tier approach is the foundation of how top OpenClaw users achieve 90%+ cost reductions. Most tasks in a typical automation workflow are Tier 1 (simple classification, data formatting, quick lookups). Only a small fraction need the full power of a frontier model.

Deploying on a VPS

While running OpenClaw locally is great for development and testing, you'll want a VPS (Virtual Private Server) for anything running 24/7 in production. A VPS gives you always-on uptime, consistent performance, and the ability to run agents and automations unattended.

Recommended VPS Providers

Provider	Starting Price	Best For	Notes
DigitalOcean	$6/mo	Beginners	Simple UI, great docs
Hetzner	€4.50/mo	Cost efficiency	Best price-to-performance
Linode (Akamai)	$5/mo	Reliability	Solid network, good support
Vultr	$6/mo	Global reach	30+ data center locations
AWS Lightsail	$5/mo	AWS ecosystem	Easy on-ramp to full AWS

VPS Setup Steps

Once you've provisioned your VPS (Ubuntu 22.04+ recommended), SSH in and follow these steps:

1. **Update your system and install Node.js:**

```
sudo apt update && sudo apt upgrade -y
curl -fsSL https://deb.nodesource.com/setup_20.x | sudo -E bash -
sudo apt install -y nodejs git
```

2. **Install OpenClaw with the same one-liner:**

```
curl -fsSL https://openclaw.ai/install.sh | bash
```

3. **Initialize your project:**

```
openclaw onboard
```

4. **Use a process manager to keep OpenClaw running:**

```
# Install PM2 for process management
sudo npm install -g pm2

# Start your OpenClaw agent
pm2 start openclaw -- run agent.yaml

# Ensure it restarts on reboot
pm2 startup && pm2 save
```

> 💡 **VPS Sizing Recommendation**
> For most OpenClaw workloads, a 2 vCPU / 4GB RAM instance is plenty. OpenClaw itself is lightweight since the heavy AI processing happens on the provider's side. You're mainly paying for uptime and network reliability.

Verifying Your Setup

Run through this quick checklist to make sure everything is configured correctly:

1. **Check OpenClaw version:** `openclaw --version`
2. **Verify API key is set:** `openclaw config get ANTHROPIC_API_KEY`
3. **Run a test prompt:** `openclaw run --test "Hello, are you working?"`
4. **Check system health:** `openclaw doctor`

If all four commands return without errors, you're good to go. OpenClaw is installed, configured, and ready to build with.

Common Troubleshooting

- **"command not found: openclaw"** — Restart your terminal session, or manually add the install directory to your PATH. Run "source ~/.bashrc" or "source ~/.zshrc" depending on your shell.
- **"Permission denied" during install** — Don't run the installer with sudo. If you hit permissions issues, check that your user owns the target directory: "sudo chown -R $USER /usr/local/lib/openclaw"
- **API key errors** — Double-check your key with "openclaw config get ANTHROPIC_API_KEY". Make sure you're using the full key string and that your API account has available credits.

- **Connection timeouts on VPS** — Ensure your VPS firewall allows outbound HTTPS (port 443). On Ubuntu: “sudo ufw allow out 443”
- **High memory usage** — Check which models you’re routing to. If you’re running local models alongside OpenClaw, you may need to upgrade your VPS tier.

Next Steps

Now that OpenClaw is installed and running, here’s where to go from here:

- **Explore the docs:** Visit openclaw.ai for full documentation, tutorials, and example workflows.
- **Build your first agent:** Start with a simple single-task agent to get familiar with the YAML workflow format.
- **Set up model routing:** Configure your three-tier model strategy to start optimizing costs from day one.
- **Join the community:** Connect with other OpenClaw users to share configs, workflows, and optimization tips.
- **Automate something real:** Pick a repetitive task in your business and build an agent to handle it. That’s where the magic happens.

Ready to Build?

Get started in 30 seconds:

```
curl -fsSL https://openclaw.ai/install.sh | bash
```

Visit openclaw.ai for full documentation and community resources.