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Configuration and operations

Configuration

OpenClaw reads an optional **JSON5** config from `~/.openclaw/openclaw.json` .

If the file is missing, OpenClaw uses safe defaults. Common reasons to add a config:

Connect channels and control who can message the bot

Set models, tools, sandboxing, or automation (cron, hooks)

Tune sessions, media, networking, or UI

See the [full reference](#) for every available field.

💡 **New to configuration?** Start with `openclaw onboard` for interactive setup, or check out the [Configuration Examples](#) guide for complete copy-paste configs.

Minimal config

```
// ~/.openclaw/openclaw.json
{
  agents: { defaults: { workspace: "~/.openclaw/workspace" } },
  channels: { whatsapp: { allowFrom: ["+15555550123"] } },
}
```

Editing config

**Interactive wizard****CLI (one-liners)****Control UI****Direct edit**

>

```
openclaw onboard      # full setup wizard
openclaw configure    # config wizard
```

Strict validation

⚠ OpenClaw only accepts configurations that fully match the schema. Unknown keys, malformed types, or invalid values cause the Gateway to **refuse to start**. The only root-level exception is `$schema` (string), so editors can attach JSON Schema metadata.

When validation fails:

The Gateway does not boot

Only diagnostic commands work (`openclaw doctor` , `openclaw logs` , `openclaw health` , `openclaw status`)

Run `openclaw doctor` to see exact issues

Run `openclaw doctor --fix` (or `--yes`) to apply repairs

Common tasks

Set up a channel (WhatsApp, Telegram, Discord, etc.)

Choose and configure models

Control who can message the bot

Set up group chat mention gating



Configure sessions and resets

Enable sandboxing >

Set up heartbeat (periodic check-ins)

Configure cron jobs

Set up webhooks (hooks)

Configure multi-agent routing

Split config into multiple files (\$include)

Config hot reload

The Gateway watches `~/.openclaw/openclaw.json` and applies changes automatically – no manual restart needed for most settings.

Reload modes

Mode	Behavior
hybrid (default)	Hot-applies safe changes instantly. Automatically restarts for critical ones.
hot	Hot-applies safe changes only. Logs a warning when a restart is needed – you handle it.
restart	Restarts the Gateway on any config change, safe or not.
off	Disables file watching. Changes take effect on the next manual restart.



```
gateway: {  
  reload: { mode: "hybrid", debounceMs: 300 },  
},  
}
```

What hot-applies vs what needs a restart

Most fields hot-apply without downtime. In `hybrid` mode, restart-required changes are handled automatically.

Category	Fields	Restart needed?
Channels	<code>channels.*</code> , <code>web</code> (WhatsApp) – all built-in and extension channels	No
Agent & models	<code>agent</code> , <code>agents</code> , <code>models</code> , <code>routing</code>	No
Automation	<code>hooks</code> , <code>cron</code> , <code>agent.heartbeat</code>	No
Sessions & messages	<code>session</code> , <code>messages</code>	No
Tools & media	<code>tools</code> , <code>browser</code> , <code>skills</code> , <code>audio</code> , <code>talk</code>	No
UI & misc	<code>ui</code> , <code>logging</code> , <code>identity</code> , <code>bindings</code>	No
Gateway server	<code>gateway.*</code> (port, bind, auth, tailscale, TLS, HTTP)	Yes
Infrastructure	<code>discovery</code> , <code>canvasHost</code> , <code>plugins</code>	Yes

ⓘ `gateway.reload` and `gateway.remote` are exceptions – changing them does not trigger a restart.

Config RPC (programmatic updates)

```
config.apply (full replace)
```



config.patch (partial update)

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Environment variables

OpenClaw reads env vars from the parent process plus:

`.env` from the current working directory (if present)

`~/.openclaw/.env` (global fallback)

Neither file overrides existing env vars. You can also set inline env vars in config:

```
{
  env: {
    OPENROUTER_API_KEY: "sk-or-...",
    vars: { GROQ_API_KEY: "gsk-..." },
  },
}
```

Shell env import (optional)

Env var substitution in config values

See [here](#) for full precedence and sources.

Full reference

For the complete field-by-field reference, see [here](#).

Related: [Configuration Examples](#) · [Configuration Reference](#) · [Doctor](#)



< [Gateway Runbook](#)

>

[Configuration Reference](#) >

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