Ollama Run LLMs locally

Registry ollama.com → `pull` → **Local models** ollama ls → `run` → **Server** port 11434 → `HTTP API` → **Clients** CLI, curl, apps

CONCEPTS

The CLI is a client: it talks to a local server on port 11434. Desktop and systemd installs start it for you.

Models stay in memory for 5 minutes after the last request, then unload. Change it with OLLAMA_KEEP_ALIVE.

Model names are name:tag; without a tag you get latest. Pick a tag to choose a size or quantization.

RUN AND CHAT

`ollama run <model>`
Start an interactive chat

`ollama run <model> "<prompt>"`
Answer one prompt and exit

`cat <file> | ollama run <model> "<prompt>"`
Feed a file as context

`ollama run <model> --verbose`
Show timings and tokens/s

`ollama run <model> --format json`
Force JSON output

RUN AND CHAT (cont.)

`ollama run <model> --think=false`
Turn thinking off or set its effort

`"""`
Start and end multi-line input

MANAGE MODELS

`ollama pull <model>`
Download or update a model

`ollama ls`
List downloaded models

`ollama ps`
List loaded models

`ollama stop <model>`
Unload a running model

`ollama rm <model>`
Remove a model

`ollama show <model>`
Show details of a model

`ollama show <model> --modelfile`
Print its Modelfile

`ollama cp <source> <new-name>`
Copy a model under a new name

MANAGE MODELS (cont.)

`ollama create <name> -f <Modelfile>`
Build a model from a Modelfile

`ollama signin`
Sign in to ollama.com

IN-CHAT COMMANDS

`/? / /help`
Show help for slash commands

`/bye`
Leave the chat

`/clear`
Clear the session context

`/set system <text>`
Set the system message

`/set parameter <name> <value>`
Change a parameter, e.g. temperature

`/set verbose / /set quiet`
Show or hide stats after replies

`/set think / /set nothink`
Turn thinking on or off

`/show info`
Show model details

MODELFILE

Custom model

```
FROM llama3.2
PARAMETER temperature 0.7
PARAMETER num_ctx 8192
SYSTEM """You are a concise assistant."""
```

`FROM <model or path>`
Base model, GGUF file or weights dir

`PARAMETER <name> <value>`
Set a runtime parameter

`SYSTEM """<text>"""`
Set the system message

`PARAMETER stop "<seq>"`
Stop generating at a string

`PARAMETER num_ctx <n>`
Context window in tokens

SERVER AND ENVIRONMENT

`ollama serve`
Run the server in the foreground

`OLLAMA_HOST=0.0.0.0:11434`
Listen on all interfaces

`OLLAMA_HOST=<host:port> ollama ls`
Point the CLI at another server

`OLLAMA_MODELS=<dir>`
Where models are stored

SERVER AND ENVIRONMENT (cont.)

`OLLAMA_KEEP_ALIVE=<dur>`
How long idle models stay loaded

`OLLAMA_CONTEXT_LENGTH=<n>`
Default context window in tokens

`OLLAMA_NUM_PARALLEL=<n>`
Parallel requests per model

`systemctl edit ollama.service`
Set variables for the Linux service

REST API

`http://localhost:11434/api`
Base URL of the local API

`POST /api/chat`
Chat with message history

`POST /api/generate`
Complete a single prompt

`http://localhost:11434/v1`
OpenAI-compatible base URL

Responses stream by default; send "stream": false for one JSON reply.