Ollama Run LLMs locally

START HERE

`ollama pull` *`<model>`*
Download a model

`ollama run` *`<model>`*
Chat with a model

`ollama run` *`<model>`* **`"`***`<prompt>`***`"`**
One-shot answer

`ollama ls`
List local models

`ollama ps`
What is loaded now?

`ollama stop` *`<model>`*
Unload a model

`ollama rm` *`<model>`*
Delete a model

`ollama serve`
Start the server

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

`ollama run` *`<model>`* **`--think=false`**
Turn thinking off or set its effort
Takes true/false, or high/medium/low on models that support it.

`ollama run` *`<model>`* **`--hidethinking`**
Hide the thinking output

`ollama run` *`<model>`* **`--keepalive`** *`<dur>`*
Keep the model loaded, e.g. 30m

`ollama run` *`<embed-model>`* **`"`***`<text>`***`"`**
Print an embedding as JSON

`"""`
Start and end multi-line input
Type it on its own at the >>> prompt.

`ollama launch` *`<app>`*
Start a coding app wired to Ollama

MANAGE MODELS

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

`ollama ls`
List downloaded models

`ollama ps`
List loaded models

MANAGE MODELS (cont.)

`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 show` *`<model>`* **`--parameters`**
Print its parameters

`ollama show` *`<model>`* **`--template`**
Print its prompt template

`ollama show` *`<model>`* **`--system`**
Print its system message

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

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

`ollama push` *`<user>`***`/`***`<model>`**
Upload a model to ollama.com
The name must include your ollama.com username.

`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

`/set format json / /set noformat`
Toggle JSON output

`/show info`
Show model details

`/show modelfile`
Show the Modelfile

`/show parameters`
Show the parameters

IN-CHAT COMMANDS (cont.)

`/save` *`<name>`*
Save this session as a model

`/load` *`<name>`*
Load a saved session or a model

`/? shortcuts`
Show keyboard shortcuts

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

`MESSAGE` *`<role>`* *`<text>`*
Add an example turn (user or assistant)

`TEMPLATE """`*`<go template>`***`"""`**
Define the full prompt format
Uses Go template variables .System, .Prompt and .Response; the right syntax depends on the model.

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

`PARAMETER num_ctx` *`<n>`*
Context window in tokens

`PARAMETER seed` *`<n>`*
Make output reproducible

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

`OLLAMA_KEEP_ALIVE=`*`<dur>`*
How long idle models stay loaded
10m, 24h or seconds; a negative value keeps them loaded, 0 unloads right away.

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

SERVER AND ENVIRONMENT (cont.)

`OLLAMA_NUM_PARALLEL=`*`<n>`*
Parallel requests per model
Memory use grows with this times the context length.

`OLLAMA_MAX_LOADED_MODELS=`*`<n>`*
Models kept loaded at once

`OLLAMA_ORIGINS=`*`<origin>`*
Allow extra web origins (CORS)

`systemctl edit ollama.service`
Set variables for the Linux service
Add Environment="OLLAMA_X=y" under [Service], then systemctl daemon-reload and systemctl restart ollama.

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

`GET /api/tags`
List local models

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

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

RECIPES

Ask over HTTP

```
curl http://localhost:11434/
api/chat -d '{
  "model": "<model>",
  "messages": [{"role": "user",
"content": "Hello"}],
  "stream": false
}' | jq -r .message.content
```

Expose on the network (systemd)

```
sudo systemctl edit
ollama.service
# add under [Service]:
# Environment="OLLAMA_HOST=0.0.
0.0:11434"
sudo systemctl daemon-reload
sudo systemctl restart ollama
```

Make a persona model

```
printf 'FROM llama3.2\nSYSTEM
"Answer in one line."\n' >
Modelfile
ollama create terse -f
Modelfile
ollama run terse "Why is the
sky blue?"
```

Summarise a file

```
cat notes.md | ollama run
<model> "Summarise in 5
bullets"
ollama ps
ollama stop <model>
```