

Cursor AI 2.0+: An Advanced Agent-Driven Development Environment

From AI-assisted editing to autonomous, multi-agent software engineering workflows



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1. Executive Summary

- Showcases **agent-centric development workflows** in Cursor
- Demonstrates **parallel multi-agent execution and evaluation**
- Illustrates **MCP server integrations** with external context
- Highlights **Cloud Agent handoff and background execution**
- Captures **agent-driven debugging and refactoring flows**
- Presents **end-to-end autonomous development** visually

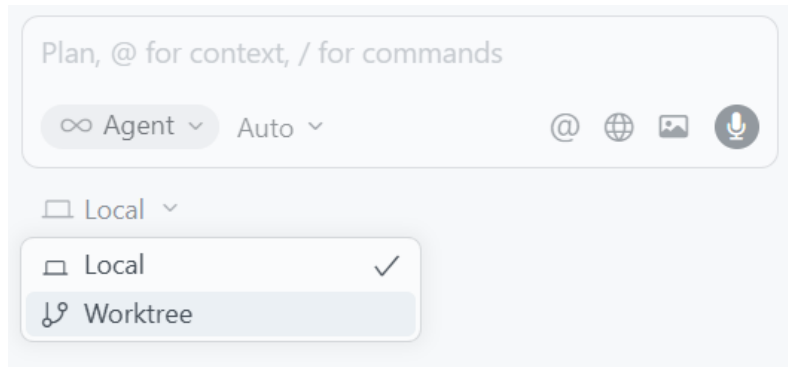
2. Key Purposes

- Visually document **multi-agent orchestration**
- Showcase **MCP integration workflows**
- Capture **Cloud Agent execution flows**
- Highlight **debugging and auto-fix screenshots**
- Present **Cursor UI and agent layouts**
- Provide **visual evidence of autonomy**

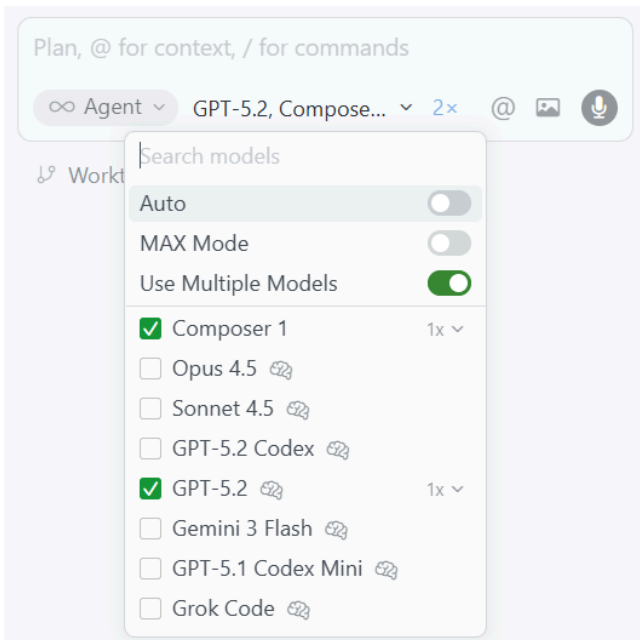
3. Multiple Agents

To run multiple agents, you must first switch from **Local** to **Worktree**, which creates an isolated copy of the project without affecting the main branch

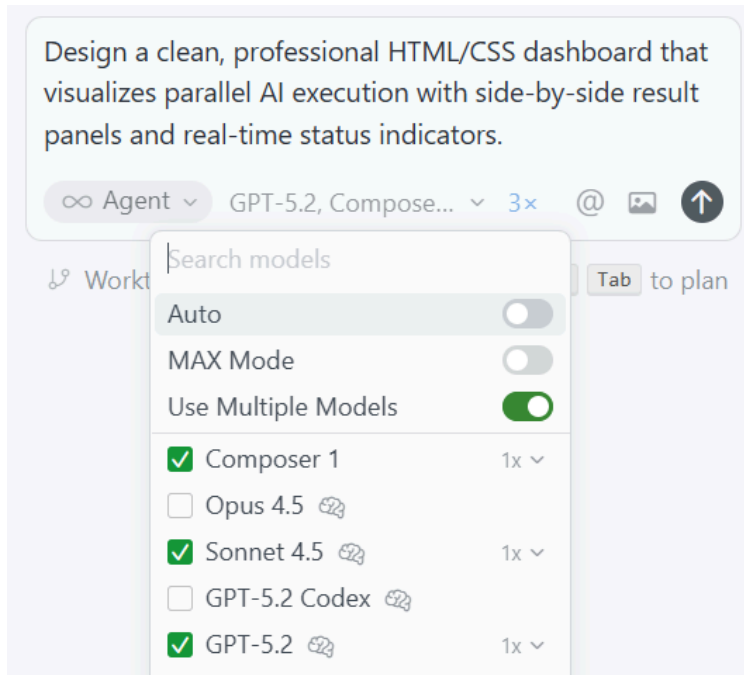
In the agent window, switch from **Local** to **Worktree**



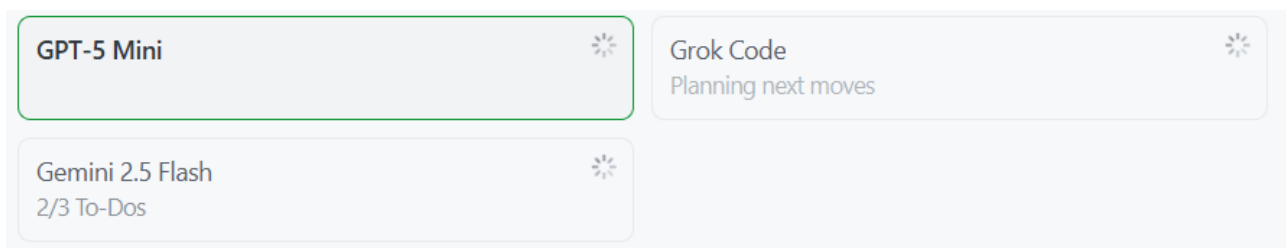
After switching to **Worktree**, enable **Use Multiple Models** in the model settings. You can now run multiple agents simultaneously



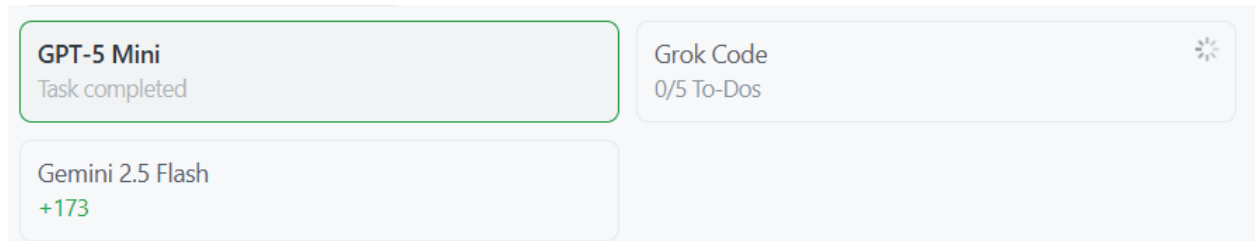
Let us now see how multiple models can be run simultaneously



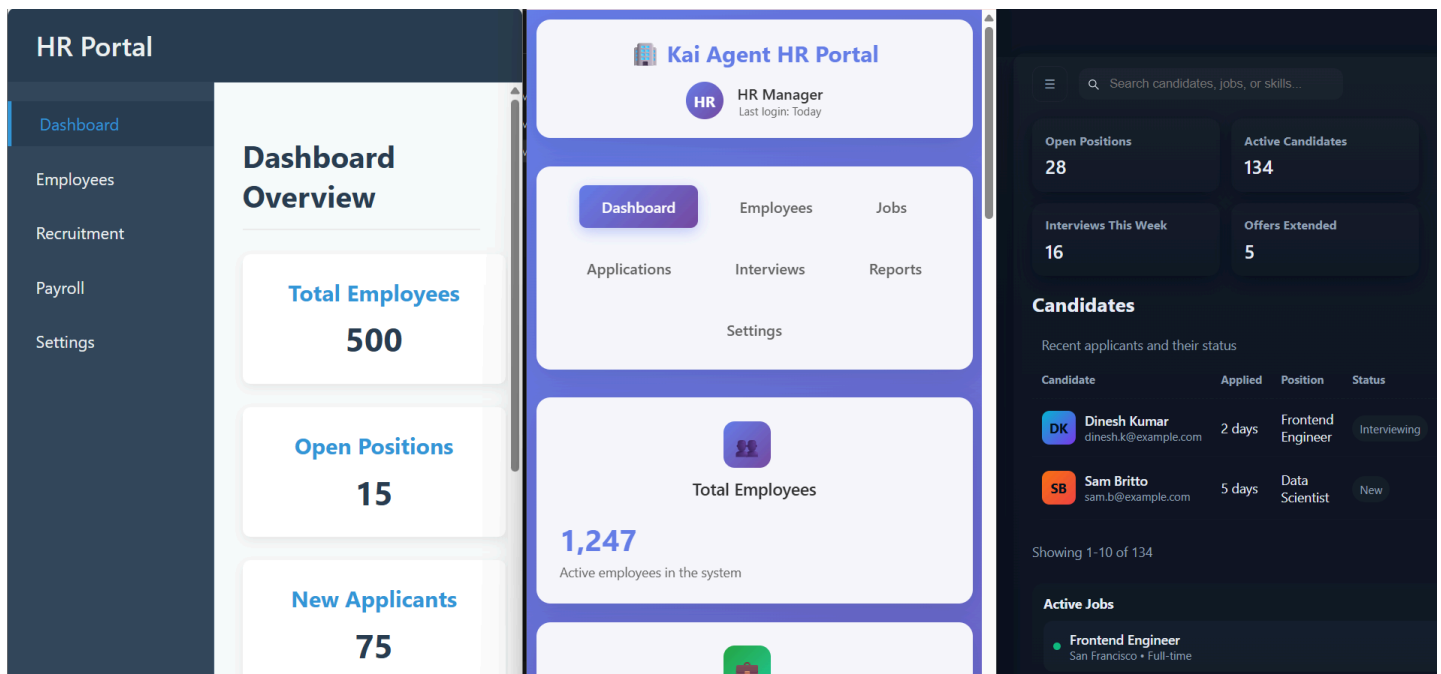
You can observe multiple agents running simultaneously on the same task



You can see that **Gemini 2.5 Flash** completed the task first, followed by **GPT-5 Mini**, while **Grok Code** is still running



The third output, generated by **GPT-5.2 Mini**, performs better when compared to the first output from **Gemini** and the second output from **Grok Code**



Cursor Local Server Connection:

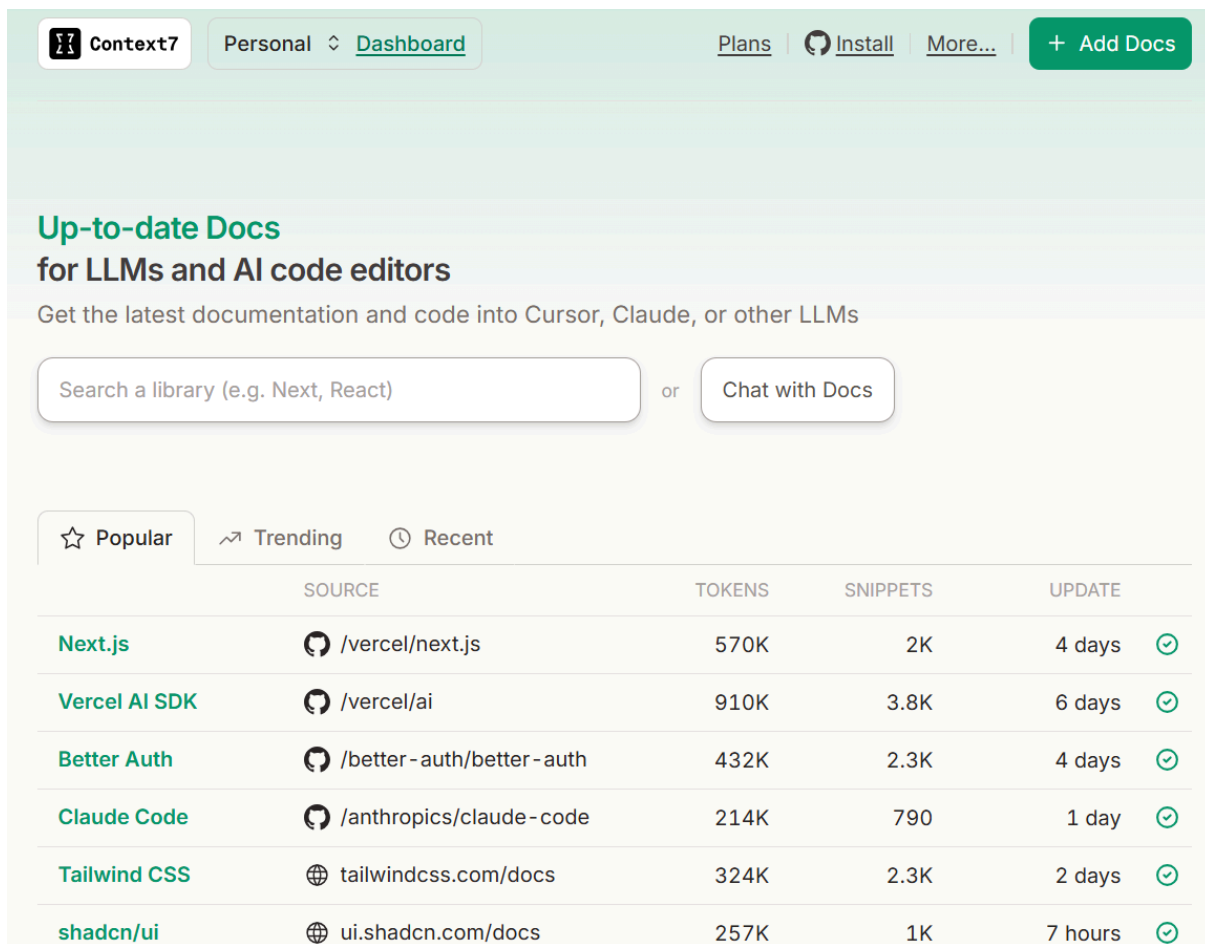
```
{
  "mcpServers": {
    "context7": {
      "command": "npx",
      "args": ["-y", "@upstash/context7-mcp", "--api-key",
"YOUR_API_KEY"]
    }
  }
}
```

Cursor Remote Server Connection:












```
{
  "mcpServers": {
    "context7": {
      "url": "https://mcp.context7.com/mcp",
      "headers": {
        "CONTEXT7_API_KEY": "YOUR_API_KEY"
      }
    }
  }
}
```

Replace the API key placeholder with your actual API key, which can be obtained from the Context website's dashboard

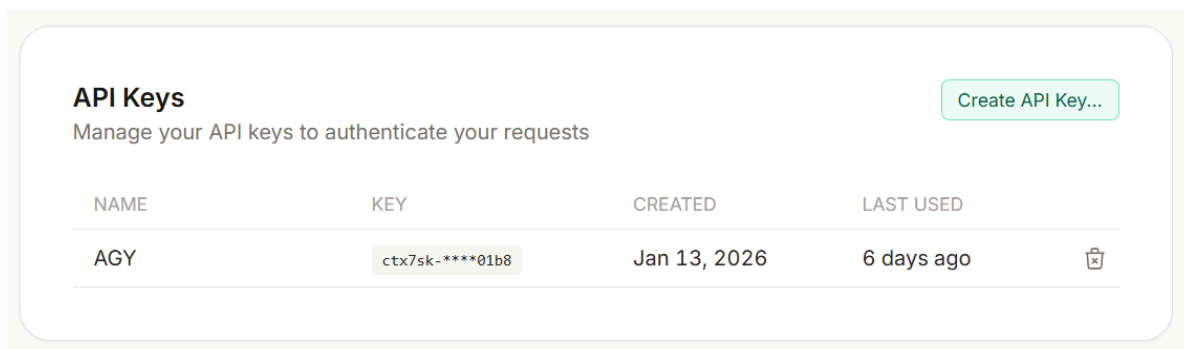
To obtain the API key, go to the **Context7** website and click on **Dashboard**




The screenshot shows the Context7 dashboard. At the top, there is a navigation bar with 'Context7', 'Personal', 'Dashboard', 'Plans', 'Install', 'More...', and a '+ Add Docs' button. Below this is a section titled 'Up-to-date Docs for LLMs and AI code editors' with a search bar and a 'Chat with Docs' button. A table lists popular documentation sources with columns for SOURCE, TOKENS, SNIPPETS, and UPDATE.

| | SOURCE | TOKENS | SNIPPETS | UPDATE |
|---------------|--|--------|----------|---|
| Next.js |  /vercel/next.js | 570K | 2K | 4 days  |
| Vercel AI SDK |  /vercel/ai | 910K | 3.8K | 6 days  |
| Better Auth |  /better-auth/better-auth | 432K | 2.3K | 4 days  |
| Claude Code |  /anthropics/claude-code | 214K | 790 | 1 day  |
| Tailwind CSS |  tailwindcss.com/docs | 324K | 2.3K | 2 days  |
| shadcn/ui |  ui.shadcn.com/docs | 257K | 1K | 7 hours  |

Click **Create API Key**, enter a name, and the API key will be generated.

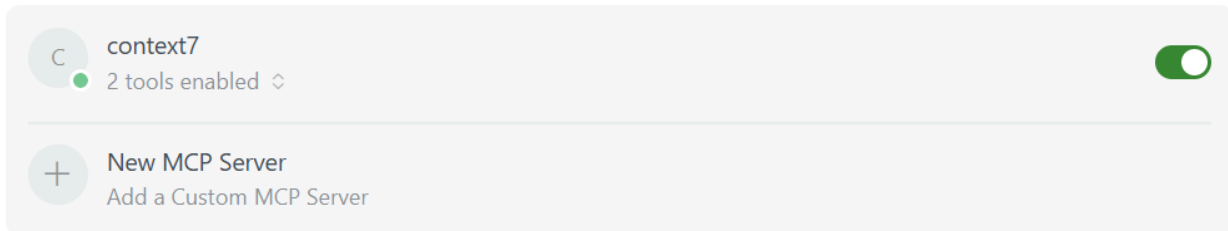


The screenshot shows the 'API Keys' management interface. It includes a 'Create API Key...' button and a table with columns for NAME, KEY, CREATED, and LAST USED. A single API key named 'AGY' is listed with a key value of 'ctx7sk-****01b8', created on 'Jan 13, 2026', and last used '6 days ago'.

| NAME | KEY | CREATED | LAST USED |
|------|-----------------|--------------|--|
| AGY | ctx7sk-****01b8 | Jan 13, 2026 | 6 days ago  |

Now the **Context7 MCP Server** is ready to be used

Installed MCP Servers

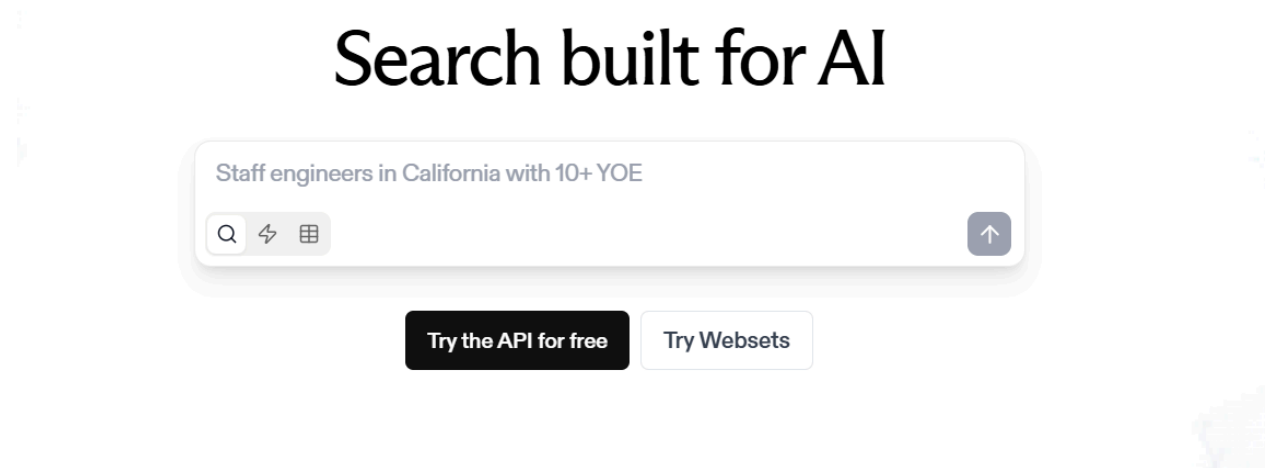


The screenshot shows a list of installed MCP servers. The first entry is 'context7', which has a green dot and the text '2 tools enabled' with a dropdown arrow. To its right is a green toggle switch. Below this is a '+ New MCP Server' button with the subtext 'Add a Custom MCP Server'.

4.2 Integrating Exa AI MCP Server

Exa AI in Cursor enables AI agents to fetch precise, real-time web knowledge (code, docs, GitHub) using semantic search, reducing hallucinations and powering research-aware development.

Go to **Exa AI's official website**, log in, and navigate to the **dashboard**





From the dashboard, generate and copy the **API key**, then click **Exa MCP** to obtain Cursor's Exa AI MCP configuration code

One API to get any information from the web

Our endpoints ■ API STATUS

/search
Returns results and their contents

- www. [redacted]
- www. [redacted]
- www. [redacted]

/contents
Returns webpage contents

Space X

[redacted]

/answer
Fast, web-grounded answers

Who is the president of Brazil?

- Lulz Inácio Lula da Silva is the current president of Brazil

/research
Long-running research with structured output

Summarize the Impact of CRISPR on gene therapy

Searching...

Found 10 papers

Get started

Click to copy

| | | | |
|--|---|----------------------------|--|
| API Key Get started in 5 min | <div style="border: 1px solid #ccc; padding: 2px; background-color: #e0f0ff;">B47B60*****</div> | Usage Past month | <div style="border: 1px solid #ccc; padding: 2px; background-color: #e0f0ff;">-----</div> |
| | | | Docs ↗ |
| | | | Exa MCP NEW ↗ |

Click **Install in Cursor** to automatically open Cursor and add the MCP server

Exa MCP

Install in **Cursor**

Install in **VS Code**



4.3 Integrating Ref MCP Server

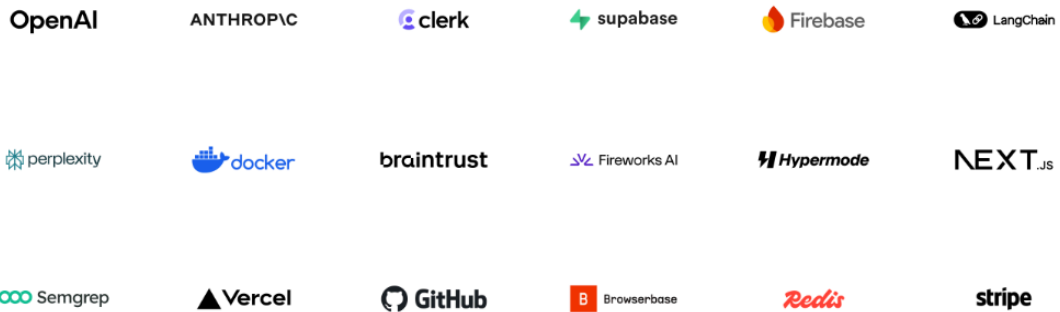
Ref in Cursor enables efficient, token-optimized retrieval of relevant information from PDFs and GitHub repositories (including private sources) to provide accurate, grounded context for AI workflows.

Go to <https://ref.tools/> and click **MCP** in the top-right corner

Ref. docs mcp blog sign up

Context for your agent.

Stop hallucinations by searching public and private docs. No context bloat.







...and thousands more!

Try Ref for free



Click **Add to Cursor** to automatically add the MCP configuration code to Cursor

| | |
|---|--|
| <p> Claude Code</p> <p>Install via Claude CLI command.</p> <pre>claude mcp add --transport http Ref https://api.ref.tools/mcp --header "x-ref-api-key: <your-api-key>"</pre> <p><input type="button" value="Copy"/></p> | <p> Cursor</p> <p>Add directly to Cursor with 1-click.</p> <p>Add to Cursor</p> |
| <p> Remote URL (OAuth)</p> <p>Sign in with OAuth for supported clients.</p> <pre>https://api.ref.tools/mcp</pre> <p><input type="button" value="Copy"/></p> | <p> All other tools</p> <p>We provide instructions for many different MCP clients.</p> <p>Find your MCP client</p> |

Go to the **Ref dashboard**, log in to generate the **API key**, and replace the placeholder with the actual key

Install MCP Server?

Name:

Type:

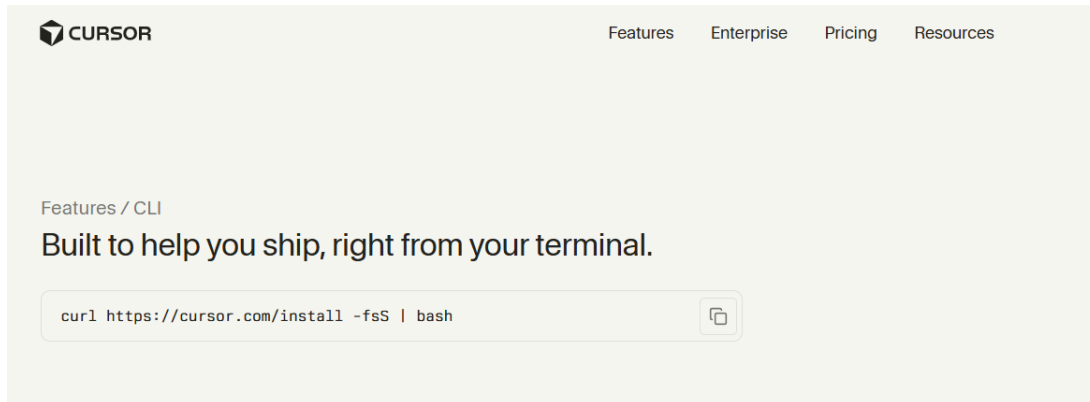
URL:



5. Cursor CLI

Cursor CLI is a terminal-based AI assistant that lets developers write, review, debug, and test code using natural language directly from the command line.

Go to <https://cursor.com/cli> and copy the provided **curl** command



AWS CloudShell is used as the terminal environment

```
curl https://cursor.com/install -fsS | bash
```

Cursor Agent Installer

- ✓ Detected linux/x64
- ✓ Package downloaded and extracted
- ✓ Package installed successfully
- ✓ Bin directory ready
- ✓ Symlink created

✨ Installation Complete!

Start using Cursor Agent:
agent

Happy coding! 🚀



The installation is complete, and the Cursor agent is ready to use

```
~ $ agent
```

```
[<<<<<<`
</mQ>><<<<<<<<;
?<I1111!!!!z      1
-<1i1111!!!!!!!!!!!!
_>I!1111!!!!!!!!!!!!1! 1
-<I11111111!!!!!!!!!!!!1m 1`
'<!;I11111111!!!!!!!!!!!!1jm11
+>1IIII11111111!!!!!!!!!!!!10Z1;
<i!IIIIII11111111!!!!1|Z11
)1{[]}?~++~iI1111110I1
{}11{[]}[-++I?III
1(\\//>^
```



Press any key to log in...

```
~ $ agent
```

Signing in

If your browser didn't open, click this link to log in:

https://cursor.com/loginDeepControl?challenge=G31qFQo2j5FePhaCMiaNUKfL_vVx1EM9ypkOpNWK_c8&uuid=f02cd9b

Cursor Agent v2026.01.17-d239e66

~

(cwd is not a git repository, cursor rules and ignore files don't apply)

→ **P**lan, search, build anything

Claude 4.5 Opus (Thinking)

/ commands · @ files · ! shell



Type / to view all available commands

```
→ /
```

```
→ /model <model>      Set the current model
/auto-run [state]     Toggle auto-run (default) or set [on|off|status]
/plan                 Toggle plan mode
/ask                  Toggle ask mode (Q&A, read-only; no edits or command execution)
/clear                Start a new chat session
/compress             Summarize the conversation to reduce context
/vim                  Toggle Vim keys
/line-numbers         Toggle line numbers in code blocks
/shell [command]      Enter Shell Mode (hint: type ! on an empty line)
↓ more below
```

~ \$ agent

```
Cursor Agent v2026.01.17-d239e66
~
(cwd is not a git repository, cursor rules and ignore files don't apply)
```

```
→ Plan out the UI for HR Portal where we upload JD and it matches the uploaded resume
```

```
Claude 4.5 Opus (Thinking)
/ commands · @ files · ! shell
```

~ \$ agent

```
Cursor Agent v2026.01.17-d239e66
~
(cwd is not a git repository, cursor rules and ignore files don't apply)
```

```
Plan out the UI for HR Portal where we upload JD and it matches resumes uploaded
```

Exploring the workspace, then drafting the UI plan for the HR Portal.

```
○ Listing, searching 1 directory, 1 search
  Listed .
  Searching "...scription resume matching application"
```

```
○ Searching... 243 tokens
```

```
→ Add a follow-up
```

```
Auto
/ commands · @ files · ! shell
```

Creating a UI plan document for the HR Portal covering structure, pages, components, and user flows.

HR_PORTAL_UI_PLAN.md +843

```
+ # HR Portal UI Plan
+ ## Job Description & Resume Matching System

+ ---
+
+ ## 1. Overview
+
+ ### Purpose
+ An enterprise HR Portal that enables HR teams to:
+ - Upload and manage Job Descriptions (JD)
+ - Upload and manage candidate resumes
+ - Automatically match resumes to job descriptions
+ ... truncated (832 more lines) · ctrl+r to review
```

Created a UI plan for the HR Portal. Summary:

Plan highlights

Core sections

1. Dashboard – Overview with stats, quick actions, and activity feed
2. Job Descriptions – CRUD for job postings with matching criteria
3. Resumes – Library management and bulk/single upload
4. Matches – Results, detailed analysis, and comparison views
5. Candidates – Profile management and application tracking
6. Settings – Profile and matching algorithm configuration

It also prompts for follow-up actions or questions

Should I:

1. Create wireframe mockups for specific pages?
2. Generate a component library specification?
3. Create a technical architecture document?
4. Build a prototype of any specific section?

→ Add a follow-up

Cursor CLI supports planning, writing, and running code—just like the IDE

6. Cloud Agent

- Cloud agents in Cursor run AI coding tasks remotely, allowing parallel execution without relying on the local machine.
- Cloud agents in Cursor can be monitored and managed seamlessly from both web and mobile devices

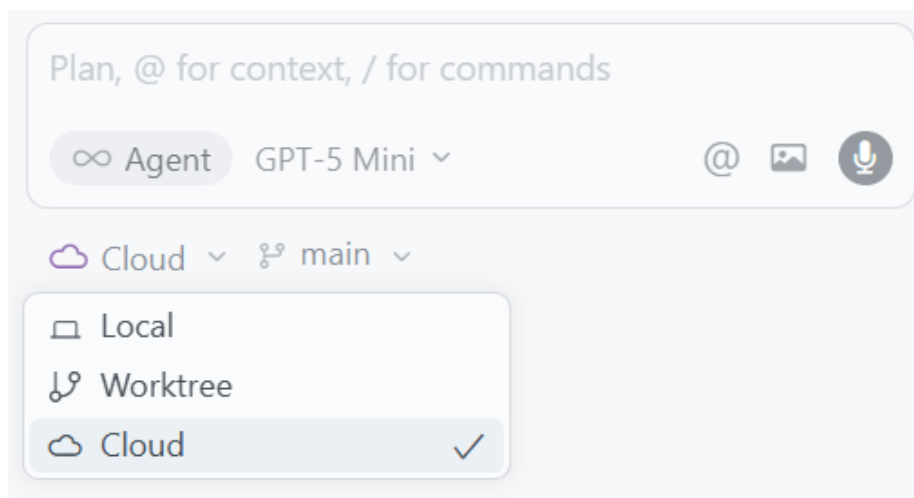
You can access cloud agents in two ways:

- Select **Cloud** from the dropdown under the agent input to run agents from the editor.
- Start and manage cloud agents directly from cursor.com/agents

6.1 Accessing Cloud Agents from the Editor

To run **cloud agents**, switch the agent execution mode from **Local** to **Cloud**, which runs agents in an isolated remote environment without affecting the local workspace.

In the agent window, select **Cloud** as the execution mode to start using cloud agents



6.1 Accessing Cloud Agents from the Web

Go to <https://cursor.com/agents>

