Claude Code Ecosystem

Comprehensive Comparison Guide

Prepared for: Your Reference

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Chat Session: Current conversation

Core Similarities Across All Environments

Feature	Claude Code (Local)	Claude Code Web	Claude.ai Chat
Claude Model Access	■ Latest	■ Latest	■ Latest
File Reading/Writing	■ Full access	■ In sandbox	■ In sandbox
Code Execution	■ Via bash	■ Via bash	■ Via bash
GitHub Integration	■ Direct local	■ Via proxy	■ No
Multi-file Editing	■ Yes	■ Yes	■ Yes
Command Tools	■ Your tools	■ Pre-installed	■ Pre-installed

Key Differences: Execution Environment

Aspect	Claude Code (Local)	Claude Code Web	Claude.ai Chat
Execution Location	Your local machine	Anthropic cloud (AWS)	Anthropic cloud (AWS)
OS Environment	Your actual OS	Ubuntu Linux container	Ubuntu 24 sandbox
File System	Your real filesystem	Isolated per-session	Ephemeral /home/claude
Persistence	■ Permanent	■■ Per-session	■ Resets
Sandbox Type	OS-level	Container	Full VM
Processor	Your CPU/RAM	Cloud compute	Cloud compute

Key Differences: Tools & Configuration

Aspect	Claude Code (Local)	Claude Code Web	Claude.ai Chat
Tool Installation	Manual (you install)	Pre-configured	Pre-configured
Tool Customization	■ Full control	■■ Limited	■ None
Python Packages	Your installed	Standard dev	Basic available
System Access	Sandboxed settings	Container only	No host access
Custom Scripts	■ Anywhere	■■ Per-session	■■ Per-session

Key Differences: File Storage & Persistence

Aspect	Claude Code (Local)	Claude Code Web	Claude.ai Chat
Project Storage	Local directories	GitHub repos (cloned)	Upload or create new
Skills Storage	~/.local/share/	Anthropic-managed	/mnt/skills/ (read-only)
User Files	Anywhere you specify	/workspace in container	/mnt/user-data/ uploads/
Output Files	Your filesystem	GitHub PR	/mnt/user-data/ outputs/
FS Type	Your disk	Container overlay	Ephemeral tmpfs
Expandability	■ Your disk	■■ Container limits	■ Fixed small

Key Differences: Workflow & Integration

Aspect	Claude Code (Local)	Claude Code Web	Claude.ai Chat
Primary Interface	Terminal (CLI)	Web browser	Web browser
Access Method	npx claude-code	claude.ai/code	claude.ai chat
GitHub Integration	Direct git	Proxy + auto-PR	Manual export
Parallel Tasks	Multiple terminals	■ Multiple	■ One at a time
Mobile Access	■ No	■ iOS app	■ Mobile web
Session Management	Terminal-based	Cloud UI	Conversation
Teleport	N/A	■ To local CLI	N/A

Key Architectural Insights

Claude Code (Local)

• Philosophy: Power tool for developers who want full control
• Model: Agent running on YOUR machine with YOUR tools
• Persistence: Everything is permanent and organized as YOU want
• Customization: Infinite - install anything, configure everything
• Best For: Primary development workflow, complex projects

Claude Code Web

• Philosophy: Delegated asynchronous coding agent
• Model: "Hire Claude to work on a task while you do other things"
• Persistence: Per-task (GitHub is the source of truth)
• Customization: Limited to environment configuration
• Best For: Parallel development, bug backlogs, routine tasks

Claude.ai Chat

• Philosophy: Conversational assistant with computational capabilities
• Model: Interactive problem-solving and document creation
• Persistence: None - purely ephemeral execution
• Customization: None - pre-configured Skills only
• Best For: Analysis, document creation, quick prototyping, learning

Summary: Answering Your Questions

What is the local component in Claude.ai Chat?

There is NO local component. Everything runs on Anthropic's servers in an isolated Ubuntu 24 sandbox. The 'network permissions' you configure control what domains the CLOUD sandbox can access, not your local machine. Your local system only sends your prompts and uploaded files to Claude - no code executes locally.

What is Claude Code Web?

Claude Code Web is a cloud-based version of Claude Code that runs in Anthropic-managed containers on AWS. You connect GitHub repositories, assign coding tasks, and Claude works autonomously in isolated containers. The file system is ephemeral per-task, but results persist via automatic GitHub PR creation. Think of it as hiring multiple coding agents that work in parallel, each in their own disposable workspace.

Is Claude Code Web like Google Colab?

Sort of, but with key differences. Colab is interactive notebook-based with manual state management. Claude Code Web is task-based and autonomous - you assign a task, Claude works independently, creates a PR, and the environment disappears. Persistence comes through GitHub integration, not a cloud filesystem. It's more like serverless functions for development tasks than a persistent cloud workspace.

Where are Skills stored and executed?

In Claude.ai Chat: Skills are in /mnt/skills/ (read-only, Anthropic-managed, cloud execution). In Claude Code Web: Skills are managed by Anthropic in the container environment. In Claude Code Local: Skills are in ~/.local/share/claude-code/skills/ on YOUR machine, executed locally. Only the local version gives you full control over Skills.

What data leaves your system?

Only what you explicitly send: your prompts, uploaded files, and API calls. Claude.ai Chat and Claude Code Web execute entirely in Anthropic's cloud - nothing runs on your local machine. Claude Code (local CLI) executes on your machine, but can be sandboxed to prevent unauthorized network access. The network permissions you configure for cloud services control what the CLOUD environment can access, not data exfiltration from your machine.