

A Terminal Is All You Need: ServiceNow Shows Simple Agents Beat Complex Ones for Enterprise Tasks

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ServiceNow researchers built [StarShell](#), a minimal coding agent with nothing but a terminal and a filesystem, then tested it against GUI-based web agents and tool-augmented agents using [Model Context Protocol](#) (MCP, a standard for exposing curated API tools to models).

They ran all three agent types across [729 tasks](#) on ServiceNow, GitLab, and ERPNext with four frontier LLMs. Terminal agents matched or beat web agents in 7 of 12 platform-model combinations. MCP agents scored worst, hitting just 11.5-16.7% on ServiceNow despite 93 available tools, because rigid tool schemas couldn't express arbitrary API operations. The best config, Gemini 3.1 Pro with a terminal, reached 77.5% overall at \$0.09 per task.

Web agents cost 4-9x more because every interaction requires processing large accessibility trees and screenshots. On ERPNext with Opus 4.6, web agents cost \$6.49 per task versus \$0.72 for terminal, with only a modest accuracy edge (81.6% vs. 76.8%). When terminal agents got a persistent "skills" directory to store notes from previous tasks, costs dropped another 43.7% on ServiceNow while accuracy rose 3.6%. The agent learned to skip re-exploring APIs it had already figured out.

This reinforces what [earlier multi-agent research found](#): complexity for its own sake rarely pays off. The industry is investing heavily in MCP registries, browser automation, and multi-agent orchestration, but a strong model with direct API access can discover endpoints, write code, and iterate through a simple terminal. ServiceNow, whose entire business is enterprise workflow automation, publishing this result carries weight.

Sources:

- [Terminal Agents Suffice for Enterprise Automation \(arXiv\)](#)
- [HuggingFace Daily Papers \(#1 Paper, April 2\)](#)
- [Model Context Protocol \(Anthropic\)](#)
- [Beyond Browsing: API-Based Web Agents \(ACL 2025\)](#)

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