

The world still runs on mainframes

Friday, June 5, 2026

Today's top story, from reporters Aili McConnon and Euny Hong:

At New York Tech Week, there's no single stage—just a citywide cascade of more than 1,500 events over a choose-your-own-adventure week. In a single morning, you might start at an AI workshop in the Financial District, swing by a founders' coffee in SoHo and end up in a Madison Avenue auditorium for a panel on a technology many people assume disappeared decades ago—but is, in fact, the unsung hero quietly powering the AI era.

Enter the mainframe. As Tina Tarquinio, Chief Product Officer for IBM Z and LinuxONE, put it at a Tech Week panel that convened in IBM's Manhattan offices, "If you used a credit card today, booked a flight, refilled a prescription or pulled cash from an ATM, you used a mainframe." In fact, mainframes process 87% of all online credit card transactions.

These silent heroes, which quickly and reliably process trillions of transactions each day, form the backbone of the global economy, said PJ Catalano, IBM Z and LinuxONE Principal Test Lead (and mainframe influencer), in an interview with IBM Think.

Take, for example, online banking, where a simple action like checking your balance involves several mainframe interactions. Multiply that by 10,000 customers, Catalano said, and factor in guardrails like fraud verification, and you're talking about millions of interactions per second. "That is what mainframes are built for: doing the work that powers the economy, the travel industry and healthcare systems, every day," he said. "And that's why they deserve lots of hugs."

The mainframe's sheer ubiquity is also the reason why enterprises should steer clear of the misconception that to be cutting-edge, you need to rip it up and replace it with something else, said Matt Thorkildsen, an engineer in core infrastructure at American Express, from the stage. In fact, a recent Gartner report revealed that roughly 75% of organizations that migrate off the mainframe end up coming back. And once you experience running the workload elsewhere, the economics and the resiliency story bring most companies back to the mainframe.

"Mainframes give you a simple, unified approach to managing work at scale," Catalano said, noting that distributing the same work over thousands of small servers adds many more potential problems. "On the mainframe, all of it can be done concurrently, without impacting the work that is happening on the system."