

Dave Gardner

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SUMMARY

Engineering leader who builds infrastructure that other teams depend on, and who still writes code. Leads an international organisation of 60 across London, Cupertino and Seattle, including the control plane and data plane teams for Apple's Private Cloud Compute (PCC), the privacy-preserving infrastructure that runs Apple Intelligence models in the cloud.

Before PCC, created Device Compute, Apple's internal device cloud, and grew it to tens of thousands of physical and virtual devices. It became the foundation for all of Apple's main testing systems. Was hired in 2014 as the first UK manager for iCloud engineering, personally hired the first 20 engineers, and helped grow the London office to hundreds.

Hands-on throughout, mainly in Go. Over the last year has built production systems with Claude, including an AI agent that continuously triages and finds the root cause of PCC failures.

EXPERIENCE

Apple · London

Oct 2014 – present

Engineering leader, Private Cloud Compute

2025 – present

- Leads four teams: PCC Control Plane, PCC Data Plane, Cloud Media Processing for iCloud, and Swift Server Networking.
- Control Plane manages the fleet of first-party (Apple Silicon) and third-party (Google Cloud) hardware that runs PCC.
- Data Plane owns the on-node request path: attestation, protocol handling and application lifecycle.
- On the PCC on-call escalation path and works live incidents with SRE partners. Owns the strategic response for the PCC Platform: turns incident learnings into prioritised programmes of corrective work and drives them across the teams involved.
- Extended the end-to-end monitoring system with an AI agent that watches, triages and finds the root cause of failures.

Founder and lead, Device Compute

2015 – 2025

- Created Device Compute, Apple's internal device cloud. It gives engineers on-demand access to Apple devices, physical and virtual.
- Built it to modernise software validation at scale. It grew to tens of thousands of devices and became the foundation for all of Apple's main testing systems.
- Hand-built the initial versions of the core components in Go.

Hailo · London

Aug 2011 – Oct 2014

Lead Technical Architect

- Joined the taxi-hailing app before launch and built backend services.
- Was lead architect of the replatforming: a cloud-native Go microservices platform on AWS, designed so the platform and the engineering team could scale through independent, self-organising teams.
- Stack: Go, Cassandra, ZooKeeper, NSQ, RabbitMQ.
- Presented the technology platform to the board and investors, including a technical deep dive for prospective investors in New York in 2014. Spoke publicly on Cassandra adoption at Hailo.

Earlier roles

2002 – 2011

- **Technical Architect**, Imagini · 2010 – Aug 2011. Led the infrastructure team building the VisualDNA targeted advertising platform: 20M unique users per month, over 5M events per day.
- **Senior PHP Developer**, Mangahigh.com (Blue Duck Education) and Sonik Media · 2009 – 2010. Built a maths games site and client sites for British Cycling and Sky.
- **Head of Development**, Neoco · 2007 – 2009. Promoted from contractor to lead a team of four delivering client projects.
- **Founder**, MPD Consulting · 2002 – 2009. Built and sold a content and learning management system used by secondary schools across London, covering student reports, exam results and secure parental access.

HANDS-ON ENGINEERING

- **PCC testing-as-monitoring and AI triage agent (Apple)**. Built personally over the last year, working with Claude, partly to learn AI-assisted engineering properly. It is now an essential part of how PCC is operated.
- **Device Compute core (Apple)**. Hand-wrote foundational Go components, including device session pooling.
- **RiscPC emulator in JavaScript (personal)**. Emulates the Acorn RiscPC so it can run the RISC OS programs written in childhood. Used Claude to finish projects first started in 1992!

SKILLS

- **Languages**: Go (strongest) plus others as required
- **Systems**: large-scale distributed systems, fleet and control-plane management, hybrid first-party and Google Cloud infrastructure, AWS, Cassandra, message queues, attestation and privacy-preserving infrastructure, end-to-end testing and observability.
- **AI**: building production agents with Claude, AI-driven triage and root-cause analysis.
- **Leadership**: building organisations from zero, managing managers, incident response and corrective-action programmes, presenting to VPs and investors, technical strategy.

EDUCATION

1998 – 2001

University of Birmingham · BSc Physics, 2:1 (Hons)

INTERESTS

Volunteer Scout leader. Loves the outdoors.

Builds things for fun, including retro-computing projects.