

James Murphy

Solutions Architect — AI & Contact Centre

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Solutions architect with 20 years designing and delivering contact-centre platforms: Genesys on premises and in the cloud, SIP carriers and SBCs, F5 and BGP, IVR and agent desktops, for customers including MYOB, the Victorian Department of Education and Queensland Rail. Now applies AI to the same problems: an AI root-cause analysis pipeline over customer ticket data, MCP servers that give AI agents safe access to company systems, and voice testing at scale.

EXPERIENCE

Paretio · Principal Engineer

Oct 2025 – Oct 2026

Analytics platform that helps businesses understand changes in their customer ticket data.

- Led development of the **AI root-cause analysis pipeline**, which investigates a change in a customer's ticket data and writes a finding with evidence, an estimate of business impact and recommendations.
- Built the **Paretio MCP server** in TypeScript, giving AI agents secure, read-only access to the company's analytics, infrastructure and development systems, with input validation, steering errors and secret redaction.
- Built automated checks on model output: groundedness of dollar figures, plausibility of annualised amounts, a gate on unsupported comparisons and a trace from each figure back to its source.
- Built **anomaly detection** in Python to find tickets with unusual metrics in ClickHouse event data, growing it from one Lambda into a parallel Step Functions workflow over DynamoDB and Neptune.
- Used **Claude Code** and **Codex** throughout, directing implementation and taking responsibility for architecture, system design and code review.

Cyara · Technical Lead — Integrations

Oct 2022 – Jul 2025

B2B SaaS platform for testing and load-testing contact-centre and customer-experience systems.

- Gave technical direction to a **team of six** building the agent integrations, including Genesys and Amazon Connect, that let the platform simulate contact-centre agents for large organisations including Apple.
- Designed the move of about 17 agent integrations (Genesys, Cisco, Avaya, Amazon Connect, Twilio Flex, NICE CXone and others) from .NET Framework to modern .NET on Linux.
- Built a **Swift and PJSIP** application to test Apple's "Shop with a Specialist" launch with **1,000 concurrent 720p video agents**: H.264 video and audio over SIP with SRTP, run at 500 per machine.
- Built a **WebRTC** voice-testing proof of concept inside the Genesys Cloud agent client, playing recorded audio as the agent's voice, with Playwright driving the calls.

Global Speech Networks · Solution Architect

Oct 2017 – Jul 2022

Hosted Genesys contact-centre platform in Melbourne and Sydney. At GSN from Mar 2016 as InProd's contractor; employee from Oct 2017.

- Designed and delivered hosted Genesys contact centres, from design to go-live, for customers including **MYOB**, the **Victorian Department of Education** and **Queensland Rail**.
- Primary contact-centre engineer on MYOB's move to the platform: Genesys call path and IVR, F5 iRules for SIP NAT and SDP rewriting, carrier SIP trunks, and queue logic with in-queue callback.
- Secured GSN's own IP range and AS number and designed the carrier connection with BGP on F5, enabling Melbourne–Sydney failover with **zero dropped calls and less than five seconds of silence**.
- Consolidated **six carriers into one SIP provider**. Migrating the mobile numbers alone saved an estimated **\$214k a year**.

- Moved the Victorian Department of Education to **Genesys Cloud**, GSN's first bring-your-own-carrier tenant, with carriage through GSN's own AudioCodes SBC; set up Microsoft Teams Direct Routing.
- Automated infrastructure and application deployments with **Ansible** and InProd, enabling the same team to onboard **3–4 customers in the time previously needed for one**; trained four engineers on it.
- Stood up a work-from-home contact centre for a new customer in about a week when COVID hit in 2020.

InProd · Founding Engineer

2014 – Oct 2017

- First and lead developer of a configuration-management and auditing product for Genesys (change sets, audit trail, rollback, lab-to-production promotion): a Java Platform SDK service, a Django REST API and an Ember.js interface.
- Packaged it for customer installs as CentOS RPMs with per-customer repositories, with Docker and Ansible builds of InProd and Genesys environments.

EARLIER

Telstra, Contact Centre Engineer (Sep 2012 – Oct 2014): engineer on Sensis's high-availability Genesys deployment, and Genesys reporting and SIP Server work for federal government customers. Four Genesys 8 certifications.

Engage, Technical Lead — Founding Engineer (Nov 2009 – Sep 2012): early employee at a hosted contact-centre startup later acquired by LivePerson. Built a queue callback service, a Java softphone and a reporting portal with custom reports in under 10 seconds; rolled Puppet out across 80+ servers in two locations.

Salmat, Software Developer, R&D and Reporting (Nov 2005 – 2009): moved from the phones into R&D. Cut nightly reporting from over two hours to under five minutes, and built C# tools on the Genesys Platform SDK.

PROJECTS

Ask (Swift · CUDA · 2026) — Pure-Swift LLM runtime that runs Qwen3-8B on an RTX 3090 through cuBLAS and runtime-compiled kernels, with its own tokenizer and a cached prompt prefix, verified against the reference implementation's tokens and logits. Answers the career questions at r.jmurphyau.com.

OriginKit (Swift · 2026) — Zero-dependency web, DNS and mail server in pure Swift, with hand-written HTTP/1.1, TLS and mTLS, streamed compression, an S3 client and a load generator. Serves jmurphyau.com.

ember-truth-helpers (Ember.js · open source since 2015) — Created this Ember add-on, now community-maintained, with 700+ GitHub stars and over 7 million npm downloads a year. Also contributed to Ember.js core, Ember Data and FastBoot.

SKILLS

Contact centre — Genesys (Engage, Cloud, SIP Server, Info Mart, routing, agent desktops), Amazon Connect, IVR, Microsoft Teams Direct Routing

Voice & network — SIP, RTP/SRTP, WebRTC, AudioCodes SBCs, F5 BIG-IP and iRules, BGP, DNS, TLS

AI — LLM pipelines and agents, MCP servers, OpenAI Responses API, Claude Code / Agent SDK

Cloud & automation — AWS (Lambda, Step Functions, ECS), Terraform, Ansible, Puppet, Docker, Linux

Languages — TypeScript, Swift, Python, C#, Java

Certifications — AWS Certified Solutions Architect – Associate · Genesys 8 Platform SDK, Info Mart, e-Services and SIP Server