CHRISTIAAN NEL

Solutions Architect | Payments and Event-Driven AWS Platforms
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PROFILE

Solution architect with more than 17 years building and running software for startups and large enterprises in parking, payments, cryptocurrency, community management, ICT services and FMCG. Individual contributor reporting to the CEO who works with the executive team on architecture decisions, advises on cost and provider choices, and writes the code on the riskiest paths: payments, money movement, identity and access on event-driven AWS. Has built or integrated payment systems in four roles, most recently a checkout with automatic provider failover for a ticketless-parking platform in South Africa with about 170,000 active users in 90 days.

CAREER HIGHLIGHTS

- Raised top-up success from about 70% to about 81% of users who tried on a given day, and from about 74% to between 88% and 95% of submitted top-ups, with a payments orchestration layer and new checkout that route each user to a provider, fail over automatically across Apple Pay, Samsung Pay, Google Pay, card and Instant EFT, and use idempotent handling so a duplicate request is not charged twice. After the incumbent acquiring bank gave notice of termination, planned and delivered it in about one month against an original plan of more than 3 months, using a self-built agentic software factory that runs quality, security and scope reviews and adversarial testing across LLMs from several vendors. Live since September 2026.
- Kept customers paying through a card-provider outage in October 2026 by switching the failing provider off in the orchestration layer, without a deploy. Led the incident response, shipped the fixes within two days, settled every affected payment with no open discrepancy, and wrote the root-cause analysis.
- Cut month-to-month AWS infrastructure cost by more than 30% at Glovent Solutions, a community-management platform with 50,000+ monthly active users, by re-architecting its serverless estate on API Gateway, Lambda, DynamoDB and RDS PostgreSQL and removing legacy CPU and storage bottlenecks.
- Cut financial reporting turnaround for an FMCG operator from 8 days to 10 minutes, and Volume-Price-Mix analysis from 14 days to 15 minutes, by building Electron desktop apps that turn large SAP exports into automated reports.

EXPERIENCE

ADMYT (Pty) Ltd · Cape Town, South Africa Dec 2024 – Present
Solutions Architect
National ticketless-parking and payments platform: 83 live sites in South Africa plus operations in Poland, about 530,000 licence-plate reads a day and about 400 million queued messages a year (Nov 2026). Senior Specialist. Reports to the CEO and works with the executive team on architecture decisions, and advises on cost and provider choices, including a cost model built from the real debit/credit mix that showed a vendor's quoted blended rate was understated. Designs the platform one engineering team builds against and mentors its engineers on architecture. Owns the architecture for the event-driven platform, payments, the finance ledger, AWS accounts and access, VPC and network design, and reliability, and writes and reviews the hard-path code in Node.js and TypeScript. Wrote the target architecture and security review, the payments white paper and kiosk payments design.

- Bet on an event-driven architecture, rebuilding the platform section by section for asynchronous processing, while registered parking sessions grew about 62% year on year (Oct 2026). Moved email, marketing sync and push notifications to asynchronous Lambda, so system responses users see now take seconds.
- Led the replacement of the six-year-old mobile app with React Native and Expo, one codebase for iOS and Android, and built much of it: wallet, top-up, arrears, receipts, push notifications and offline mode (73 merged pull requests).
- Put about 13 staff on AWS single sign-on (SSO) through IAM Identity Center and Google Workspace, and replaced SSH on port 22 and four role scripts with a Rust tool for sign-in, database tunnels and EC2 access over SSM Session Manager. Set up a multi-account Control Tower landing zone so services leave the legacy account one at a time.
- Created the platform reliability framework and built its CloudWatch dashboard: tiered services, SLOs, a weighted health score and an error-budget policy, and drove the score to 99.4% by November 2026, above its 99.0% target, with alarms, Slack alerts, real-user monitoring and emergency runbooks.
- Took payments out of line with gate events by moving charges onto a queue, so exits stayed fast when provider failures and response times rose at peak, including Black Friday 2025. Held automatic charges while a provider was degraded and capped retries. Led payments work that reduced card-data exposure: only provider tokens and masked card details stored, tokenisation moved earlier in the add-card and 3-D Secure flow, tokens masked in payment audit logs, and provider-hosted checkout for new cards. Started an arrears and risk engine that scores a risk grade per user from ledger reads and stops a second payback or a promo credit from double-counting.

KUBERKON (Pty) Ltd · Pretoria, South Africa Feb 2023 – Present
Managing Director and Tech Lead

- Part-time cloud and software consultancy, run alongside full-time roles. Rescued in-flight client systems and reduced delivery cost, including a rebuild of a 10-year-old PHP parts-acquisition platform for a major auto-parts insurer.

GLOVENT SOLUTIONS (Pty) Ltd · Pretoria, South Africa Apr 2020 – Dec 2024
Senior Full-Stack Engineer
Includes a one-year break for the Luno role below.
Community-management software for residential estates. Designed the platform one engineering team built against. Built and ran the cloud-native platform: Cognito authentication, Kinesis and Firehose streaming, Pinpoint messaging, tamper-resistant AGM and board voting over WebSockets with an immutable ledger, an armed-response SOS panic feature, and a consent-gated identity model (one resident profile, separate community records, opt-in sharing).

- Shipped the platform to production in five months with Agile and DevOps delivery, grew it to 50,000+ monthly active users on web and hybrid mobile, and opened a new revenue stream with an advertising and banner service.

LUNO SA (Pty) Ltd · Johannesburg, South Africa Apr 2022 – Mar 2023
Senior Web Developer
Global cryptocurrency exchange.

- Stabilised crypto onboarding by leading a refactor of the KYC-to-first-purchase web flows, enabled card-funded purchases by integrating Stripe, and raised release confidence with Cypress end-to-end tests.

SELF-EMPLOYED · Pretoria, South Africa Oct 2019 – Apr 2020
Software Developer
Built Electron desktop apps for an FMCG operator's finance team that turn large SAP exports into automated financial and Volume-Price-Mix reports.

Career break · Pretoria, South Africa Aug 2018 – Sep 2019
Full-time postgraduate study
Master of Theology (M.Th), University of Pretoria, awarded 2020.

BIG BRAVE / BEVERAGE INSIGHTS · Johannesburg, South Africa Jan 2015 – Jul 2018
Senior Software Developer and IoT Engineer

- Delivered web platforms and APIs with Paygate, Twilio and loyalty integrations, built IoT beverage telemetry (ESP8266, C++, Google Cloud), and ran a load-balanced MySQL / MongoDB property-management platform.

CONTRACT ENGINEERING · Johannesburg / Pretoria Feb 2014 – Nov 2017
Freelance Software Developer

- For BTCSA, RGB Vision and Vektron Energy, launched a student-payment portal (SnapScan, PayGate), reduced hosting cost for a tertiary institute, and delivered WordPress / LAMP and energy-telemetry portals.

BCX · Johannesburg, South Africa Feb 2008 – Feb 2014
System Engineer
Large African ICT services provider.

- Recovered revenue and tightened overtime control with a Delphi / MySQL workforce and billing system (2010 BCX X-Calibre Award). Kept MySQL highly available across data centres, gave DBA consulting to enterprise clients including Africa Bank, and removed ASG-Zena bottlenecks for a large retailer.

SKILLS

Architecture: Solution Architecture, Solution Design, System Architecture, Event-Driven Architecture, Microservices, Serverless, Distributed Systems, Payments Orchestration, Apple Pay, Samsung Pay, Google Pay, Instant EFT, Card Tokenisation, 3-D Secure, Idempotency, Payment Reconciliation, Payment Settlement, Double-Entry Ledger Design, Site Reliability Engineering (SRE), SLOs and Error Budgets, Observability, Incident Response, Cloud Security, Cloud Cost Optimisation, AI-Assisted Engineering, Agentic AI Workflows, LLMs (Claude, ChatGPT/Codex, Grok), Technical Leadership

Amazon Web Services (AWS): Lambda, API Gateway, SQS, SNS, EventBridge, Kinesis, Kinesis Data Firehose, ECS, EC2, Elastic Load Balancing (ALB), Auto Scaling, CloudFront, CloudWatch, AWS CDK (CloudFormation), IAM Identity Center, Control Tower, VPC Design, SSM Session Manager, Secrets Manager, RDS, Aurora, DynamoDB, S3, Cognito, Pinpoint, Amplify

Data, Identity and Infrastructure: PostgreSQL, MySQL, MariaDB, MongoDB, MongoDB Atlas, OAuth 2.0, OpenID Connect (OIDC), Docker, Zabbix, Infrastructure as Code, working knowledge of Terraform

Languages and Stack: Node.js, TypeScript, JavaScript, Python, Rust, PHP, C++, REST APIs, Express.js, WebSockets, React Native, Expo, React, Angular, Ionic, Capacitor, Full-Stack Development

Delivery: CI/CD, Git, GitHub, GitLab, Bitbucket, Cypress, Test-Driven Development (TDD), Code Review, Nx, Agile, Scrum

EDUCATION

Master of Theology (M.Th), University of Pretoria, 2020
Bachelor of Theology (B.Th) cum laude, 2017, Baptist Theological College of Southern Africa
Diploma in Theology (Dip.Th), 2016, Baptist Theological College of Southern Africa

PROFESSIONAL DEVELOPMENT

MySQL for Database Administrators, Oracle University (2013) · AWS developer exam-preparation course (Udemy, 2020; not certified) · Agile Fundamentals (Udemy, 2020) · Test-Driven Development (Udemy, 2022)