

# Garrard Kitchen

Solutions Architect & Developer, Cloud-native, Serverless advocate, C#, DevOps, Certified Expert Level. Azure. Agile. Research. Technical. Married, Father.

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## EXPERIENCE

### Carfiance 247, Manchester — *Head of Cloud Platform*

JAN 2021 - PRESENT

- Technical Leadership
- Leading Digital Migration
- AKS
- Windows and Linux containers, updating runtimes
- Architected and implemented Hub & Spoke network Topology
- Bicep
- c#, NodeJS
- Replaced ELK Stack with Logz.io
- GH Actions

### Carfiance 247, Manchester — *Principal Engineer*

MAY 2019 - DEC 2020

- Brown bags on AWS and on GCP Serverless, Microservices and DDD
- Townhall - Twilio Flex integration
- Architected and implemented new DiM Pipeline
- Observability
- Azure
- On beta program for GHA, advocated and embedded as the new CICD platform
- “Drop in” and help establish solutions to problems
- On Architecture advisory board
- PoCs - Kafka, GH Actions, parquet, intent (ignite distributed database), Twilio serverless

### Qualtrak, Watford (remote) — *CTO*

SEP 2008 - APR 2019

- Created an AWS Quickstart and had a solution that integrated with AWS Connect in AWS Marketplace. Integrated with MMS
- Integrated with many Call Recorders
- Managed a remote European team
- Azure/AWS Serverless
- AWS ECS Fargate

## SKILLS

Technical Leadership

Azure Architecture

Cloud-native

Serverless

Containerization

DevOps

.NET Core

Patterns & Practises

Agile

## AWARDS

Solutions Architect Expert Azure Certification

DevOps Engineer Expert Azure Certification

Developer Associate  
Azure Certification

Solutions Architect  
AWS Certification

Developer Associate  
AWS Certification

1st Dan, Ju Jitsu  
Shogun World

## LANGUAGES

c# (.NET 3.1, 6.0), NodeJS,  
Javascript, Typescript, Bicep,

- c#, NodeJS, Python

## EDUCATION

### **Liverpool Business School, Liverpool — Business Information Systems B.Sc (hons)**

SEP 1990 - JUN 1994

### **NEWI, North Wales — National Diploma in Computer Studies**

SEP 1988 - JUN 1990

## PROJECTS

### **Azure Migration — *entire real-estate (incl. SQL Services AG, RMQ, MongoDB) move to Azure***

Architected and leading migration effort to move our entire real-estate into Azure. Implemented a Hub & Spoke network topology for access from multiple on-premise data centres. Managed a small but senior team of Engineers. Working with Microsoft FastTrak (instigated and managed by myself) to ensure best practice is applied with AKS, SQL Server AG and DevOps. Upgrading runtimes of .NET Framework (Windows) and .NET Core (Linux) applications. Web HTTP APIs and workers (background services). NodeJS. Using Private Endpoints to secure, protected workloads and to restrict public access. Had developed entire CICD pipelines using AzDevOps Template - ala twelve-factor apps - but moved to GH Actions for greater simplicity. Devised a list of guiding principles - incl. minimising cognitive overload for Engineers.

### **DiM — CDC -> *feed internal and external systems***

Architect and implemented a new Data in Motion pipeline. Single source of truth. SQL Server CDC Mark, Sweep and delete in NestJS. NodeJS Microservices, Messaging using Redis Queue (NestJS), Integration with several Azure backing services. New single source of truth. Tracks state of entire customer journey. DLQ (runbooks + human interaction).

### **Observability — RCA**

Migrate projects (.NET Core, NodeJS) to use Azure Application Insights for logging, metrics, distributed tracing and alerting. Included Metric and Log Azure Alerts. Favour errors notification to Slack for immediacy and there can be a latency with SaaS solution.

TerraForm, python (some), go (some), T-SQL, markdown, Jupyter notebooks (c#, PS, python)

## FAVOURITE LIBRARIES (dependencies)

Azure.Identity, BrighterCommand (command, event, queries - out of proc), CsharpFunctionalExtensions, FluentValidation, mediatR (in-proc), MOQ, NestJS, Polly, Refit, Swagger (OpenAPI), Wiremock.Net, xUnit

## FAVOURITE DESIGN PATTERNS

Ambassador, BFF, Broker (Pub/Sub), Bulkhead, Cache aside, Circuit Breaker, Claim Check, CQRS, Competing Consumers, Decorator, Distributed Saga, DLQ, EDA, Gatekeeper, Gateway Aggregation, Gateway Offloading, Guaranteed delivery, Health Check, Idempotent Consumer, Lazy Loading, Mediator, Message Bus, Microservices, Outbox, SOLID (OCP, ISP, DIP), Retry, Sidecar, Strangler, Throttling

## TESTING

artillery.io (load/stress testing), MOQ, OpenAPI, POSTMAN, Wiremock.Net, xUnit

### **CRM Rewrite — *Homegrown to Twilio Flex***

Architected and worked with a team to rewrite asp.net core application to ReactJS SPA. BFF replaced with NodeJS host, extended some BFF .NET HTTP APIs (authz). Architected a new authz solution so our authz integrated with Twilio's.

### **Cloud Solutions — *Advisory & implementation***

Go to person for cloud-native solutions. Let requirements drive the solution, avoid "this is the solution, what are the requirements". Provide reports confirming business requirements, technical requirements and choice justifications (incl. warnings ala mutually exclusive constraints).

### **PoC — *Proof of concepts***

Developed multiple PoC to help either include or dismiss a particular technology or solution.

### **Integration — *AWS Connect***

Created an AWS Quickstart that integrated with VPC and Data Streaming Quickstarts. Created AMI and sold in AWS Marketplace. Gain 2 AWS certifications during our time with AWS - Develop and Solutions Architect.

### **Integrations — *Multiple Recorder products***

Architected and implemented multiple integrations with Recorder products, worldwide. Evolved our single-tenant product to becoming a multi-tenant HA product, deployable to either cloud or on-premise. Deployable to Cloud platforms (Azure and AWS).