

Paul Hale

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Profile

I have over 30 years professional IT experience beginning my career as a computer engineer working for SD-Scicon in 1988. I began programming computers on my dad's Sinclair ZX81 back in 1981 when I became mesmerised by computers. I'm truly passionate about software development and IT. I'm looking to work in friendly environments where I can add value and share knowledge whilst continuing along a career path of continuous learning.

Over the years I have accumulated a wealth of technical experience but have never stood still. I'm a polyglot programmer who enjoys learning new languages and implementing them where best appropriate. Ideally, I would like to work within and help build a modern, agile development environment incorporating fully automated DevOps driven projects. I especially like architecting and building cross-platform native apps using .NET MAUI backed by orchestrated containerised microservices using C#, Golang, Rust, gRPC, Message Queues, Docker, Kubernetes and / or Azure Service Fabric with CI/CD pipelines publishing to production Azure cloud environments. Along with native app development experience I am also a highly capable web app developer. I work well collaboratively and set realistic expectations and delivery goals.

.NET / C# Development Experience

I have been working with .NET since its release in 2002. I have built many native GUI, console and web-based apps and tools using .NET and C#.

- Cross-Platform app development using Microsoft's new .NET MAUI (Multi-platform App UI) Framework
- MVVM (Model-View-ViewModel) design pattern (inc. latest Community Toolkit MVVM)
- Implemented .NET 6 and .NET 7 latest features in modern apps
- Console apps, Microservices and gRPC using C# 10
- MVC / React / Google AMP websites with real-time updates using SignalR
- Over two decades worth of OOP experience
- TDD using xUnit, NUnit and MSTest
- Entity Framework / Migrations / LINQ
- Experienced C# Developer
- Primary .NET IDEs – Visual Studio 2022 Pro / Visual Studio Code

Latest project built using .NET was fully automating the migration of 35,000 users from Windows 7 to Windows 10.

Go Development Experience

As a Golang developer I have been using the language since early 2019 to build console apps and back office containerised microservices orchestrated with Kubernetes and Azure Service Fabric.

- Event storming Domain-Driven Design microservice architectures using Miro
- Event driven microservices with message queues (RabbitMQ, ZeroMQ)
- gRPC, Protobuffers 3 with Golang
- Development of an automation tool that walks directory trees generating Terraform declarative configuration files
- Online business banking integration with HSBC's API's
- Domain search and query tools
- Concurrency using goroutines and channels. Specifically looking up multiple domain names and whois records
- Dependency management with Go modules
- Integration with Azure DNS
- Integration with Azure DevOps Boards
- Integration with Azure Function and Logic Apps
- Integration with Microsoft Teams Notifications
- Code quality assurance utilising TDD with Go native automated unit tests
- Primary Go IDE - JetBrains GoLand

Full Stack Development Experience

As a developer I have been writing code for over 30 years and have used many languages, libraries, frameworks and technology stacks.

I am an advocate of Software Craftsmanship best practices and continuously strive at keeping code bases clean, DRY and free from technical debt:

- I call upon and implement tried and tested design patterns where possible
- General programming experience with C#, Golang, Rust, TypeScript, JavaScript, Swift and Python. I especially enjoy designing and developing cross-platform native apps backed by microservice architectures
- Architecting microservices using Event Storming and Miro
- Domain-Driven Design (DDD) and Command Query Responsibility Segregation (CQRS)
- Microservices development using Golang, Rust, TypeScript, JavaScript, C#, .NET Core and Node
- Event driven microservices with message queues
- gRPC, Protobuffers 3 with Golang and C#
- Cloud native 12-factor app development
- Web Components and Polymer Elements
- Progressive Web App development (PWAs)
- Rust and WebAssembly development (Yew framework)
- AMP website and AMP web story development
- TDD and BDD
- MS SQL, MySQL and NoSQL (MongoDB) and Redis
- Azure Serverless Function and Logic App Development
- Next.js and React.js
- Some ServiceNow development experience (Glide API)
- .NET Core, MVC and C# dynamic web sites
- Dapp, smart contract and Web3 development experiments using Rust / Solana blockchain, Solidity / Ethereum blockchain and Rust / DFINITY Internet Computer

DevOps Engineer Experience

As a DevOps engineer, I enjoy building automated software delivery pipelines. I have built custom pipelines using Tmux, Bash scripting, Node, TypeScript and JavaScript as well as using more conventional DevOps tools such as Jenkins, GitLab and Azure DevOps:

- Building custom CI/CD Pipelines for automated build, test, deployment and integration
- Jenkins declarative Pipelines with Groovy and bash shell scripting
- Job tracking with Azure DevOps Boards and Jira
- SCM using Git, GitHub, Git hooks
- System Administration and Configuration Management with Ansible
- Continuous Integration, testing, and delivery
- Infrastructure as Code (IaC) with Terraform and Hashicorp Configuration Language
- Azure Arm templates
- Docker, Podman and containers
- Microservice orchestration with Kubernetes and Azure Service Fabric
- Vagrant provisioning of development and test environments
- Implementing monitoring and alerting within a cloud environment
- Notification integration using Microsoft Teams, Slack and Azure DevOps hooks and APIs
- Linux fundamentals and excellent bash scripting skills
- Configuration management with NeoVim / Vim
- Comfortable working in Linux, MacOS or Windows environments with Windows Subsystem for Linux

Cloud Experience

As an Azure Cloud Solution Architect, I have:

- Performed deep systems analysis for aligning cloud strategy with business strategy
- Assessed cloud migration requirements and presented options for Azure IaaS, PaaS and SaaS solutions plus implementation
- Provisioned Azure resources through (IaC) specifically Terraform
- Development of native Azure Function and Logic apps
- Collated and authored high quality technical design documentation
- Migrated workloads from on premises environments to Azure using official 'Azure Migrate' tooling
- Migrated many on premises Virtual Machines into Azure IaaS VM's
- Migrated several on premises SQL databases into Azure SQL using Microsoft's 'Data Migration Assistant' tooling
- Migrated DNS Zone records into Azure AnyCast DNS
- Migrated static, ASP.NET and WordPress websites into Azure PaaS hosting
- Gained automation experience using Azure CLI and Arm templates
- Modified backend code to be Azure storage compatible
- Successful cloud migrations for almost 100 projects
- Provision of Azure SQL Server Databases as app and web databases
- Provision of Azure Cosmos DB as cross-platform .NET MAUI geo-located database

Cloud Security Experience

As an Azure Cloud Security Engineer, I have:

- Configured Azure host-level, data plane and storage account security
- Configured and managed Azure Network Security Groups (NSGs)
- Configured and managed Azure Resource Manager policies
- Configured and managed Azure Roll-Based Access Control (RBAC)
- Configured Azure Security Center and security alerts
- Complied with cyber security governance, risk, and compliance mandates

Recent Contracts and Freelance Work

Full Stack Developer / DevOps Engineer

Domainscanners: Milton Keynes, 2005 - Date

I incorporated Domainscanners as a small hosting company that I also use to complete freelance projects and contract assignments. Originally, I single-handedly provisioned and managed all co-located servers. I migrated all server workloads into the Cloud in 2018; first into Azure based VM's (IaaS), then later I split the workloads into Azure PaaS and SaaS environments freeing me from VM maintenance.

My experience gained since 2005 is noted earlier under relevant experience subheadings but notable achievements whilst working directly under Domainscanners umbrella are...

- ✓ Became a proficient Golang developer
- ✓ Became an Automation SME using Jenkins, GitLab and Azure DevOps CI/CD Pipelines
- ✓ Extended existing system provision and management experience
- ✓ Learnt to break monolithic systems into de-coupled microservices architectures
- ✓ Architected and implemented Domainscanners multi-cloud (Azure / GCP) hosting platform
- ✓ Successful cloud migrations for almost 100 projects
- ✓ Managed cloud and cloud security solutions
- ✓ Development of custom back-office apps and cloud integration
- ✓ Office 365, Teams, SharePoint, Dynamics 365 provision, management and app development
- ✓ AMP website / story development

Through Domainscanners I have also worked on several freelance and contract assignments, most recently:

ITERGO

Fully remote, April 2021 – August 2022 (Contract)

Lead developer on Windows 7 → Windows 10 migration team. Developed a suite of console and GUI apps using C# and backend Microservices using Go. The project concluded with the successful, fully automated migration of over 35,000 users.

Atos

Fully remote, January 2021 – May 2021 (Contract)

Worked in the SEF – Service Enablement Framework team as a Go developer building tools to enable lights out administration of Azure cloud products and services. Developed various console tools and fully documented using Confluence. Delivered Azure automated deployments using Terraform and GitLab CI/CD pipelines.

Supersize Print

Fully remote, January 2016 – December 2017 (Freelance)

Migrated customers co-located servers into Azure. First stage involved migrating the servers into Azure IAAS Virtual Machines with zero downtime. Stage two migrated the VM's into Azure PaaS and re-writing backend code using C# to interact with Azure blob storage. Migrated legacy Access CRM to Dynamics 365 and customised to client's requirements.

Aldermore Bank

London / Reading / Peterborough, March 2015 – October 2015 (Contract)

Development of high performant microservices written in Rust and orchestrated using Azure Service Fabric guest containers. This was a feasibility project designed for benchmarking heavy load transactions. Data was surfaced using a LightSwitch App.

Work Experience before 2005

Full Stack Lead Developer

Safenames: Milton Keynes, 2002 – 2005 (Partner / Lead Developer / Freelance)

Delivered a web based international domain name registration portal used to consolidate international domains. Development work was focused mainly on the backend consuming various 3rd party APIs.

Stack: ASP.NET, C#, MVC, SQL, Dynamics 365

Mobile Developer

Vodafone: London, 2000 - 2002 (Contract)

Worked on Vodafone's mobile WAP portal that delivered sports and news articles to mobile devices over Vodafone's network.

Stack: WAP, WML, Java, JSP

Mobile Developer

KPNQwest: The Hague, Holland, 1999 - 2000 (Contract)

Worked on surfacing contact, calendar and email to Nokia 7110 phones over WAP. This might seem a little silly now, but you should have seen all the managers faces as they walked around accessing their calendar and email for the first time on their mobile phones back in 2000.

Stack: WAP, WML, ASP, C# / VB

Developer / Technical Author

BP Oil: London, 1998 - 1999 (Contract)

Developed a common desktop operating environment app to simplify and speed up deployment and documented server and desktop rollout best practises.

Stack: Visual Basic

Developer

Mercedes Benz: Milton Keynes, 1997 - 1998 (Contract)

Worked on an in-house centralised print storage / management system that was accessible to all Mercedes Benz dealers located around the World.

Developer

Deutsche Morgan Grenfell: London, 1996 - 1997 (Contract)

Worked within the banks TAG (Technical Architect Team). Worked on some early intranet and Lotus Notes back office apps.

PC, Server, Network Engineer, Developer

SD-Scicon / EDS: UK / Europe, 1988 - 1996 (Full Time / Contract)

Started at SD-Scicon as a trainee PC engineer later providing 2nd and 3rd line support. I was also responsible for the engineering divisions client databases. This was way back in the days of dBase and Clipper. Once acquired by EDS, I performed server and LAN installations throughout the UK and Europe for a number of EDS's high-profile clients including General Motors, ATKearney and Rolls-Royce.

Organisations I have worked for

Aldermore Bank, Deutsche Morgan Grenfell, EDS, A.T.Kearny, Rolls-Royce, BT, General Motors, HMRC, Hitachi Data Systems, Open University, TNT, Computacenter, Fujitsu, TNT, Royal & Sun Alliance, Mercedes Benz, BP Oil, KPNQwest

Security Clearance

I would need sponsorship to attain Active SC Clearance but would not envisage any problems what-so-ever attaining it.

Home Office and Remote Working Environment

I have been working from my home office / converted garage since 2005. My working environment offers the following:

- Quiet and comfortable working environment separated from my home where I can fully concentrate on my work without distractions
- 2019 MacBook Pro, Intel i9, 2.4 GHz, 8-Core, 64Gig, 2TB, MacOS
- Custom built development PC, Intel i7-8086K Limited Edition, 5GHz, 6-Core, 64Gig, 4TB NVMe, triple boots to Fedora, Kali and Windows 10 Pro
- Mac Pro Mid 2010, Intel Xeon, 3.33GHz, 6-Core, 32Gig, 3TB, Ubuntu
- Synology NAS DS1513+, 20TB
- Gigabit Fibre Broadband - Avg. speed 900Mbps up/down
- Microsoft Action Pack subscriber with Teams VOIP integration, SharePoint, Azure etc
- Familiar with most remote working tools
- Based in Newport Pagnell, just outside Milton Keynes. Convenient for travel to London, Cambridge and Birmingham (all 35 – 45 mins travelling distance)

Experience Summary

- Strong C#, .NET and .NET Framework skills
- Strong Golang development experience
- Strong TypeScript experience
- Strong Node.js experience
- Strong JavaScript experience
- Strong Bash scripting and Python skills
- Strong DevOps skills
- Strong Automation skills
- Strong CI/CD skills
- Strong Docker and containerisation experience
- Strong Domain-Driven Design experience
- Strong Microservices development skills
- Strong Kubernetes and Azure Service Fabric experience
- Strong gRPC and Protobuf skills
- Strong Event-Driven Message Queue experience
- Strong Event Storming experience
- Strong Full Stack Front End / Back End Development skills
- Strong AMP skills
- Strong Dynamics 365 CRM Implementation and development experience
- Strong Azure Function App and Logic App integration experience
- Strong Cloud experience with Azure (some Google GCP)
- Strong Cloud Migration experience
- Strong Cloud Security experience
- Strong Cloud Management experience