

Dan Ward

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Boston, MA

Summary

With over 20 years of DevOps and software engineering experience, Dan has worked with a wide variety of technologies in industries as varied as health care, life sciences, mass emergency notifications, global real estate and finance. Most recently he has been responsible for moving a multi-client on-prem solution to the AWS cloud for a company that creates software used in hospital operating theaters.

Dan is comfortable working on both sides of "Dev" and "Ops". Whether it's designing a secure HIPAA-compliant cloud-based network for hosting medical applications, building CI/CD pipelines, writing custom notification systems or utilities to export, search and validate Octopus Deploy installations, Dan enjoys sinking his teeth into complex technical implementations. And while Dan has been working full-time with Microsoft's technology stack for many years, like any true geek, he loves technology of all shapes and sizes.

Proficiencies and Expertise

- Cloud: AWS – secure network design for EC2s and lambdas, code build/deploy and custom Slack notification systems. Experience with AWS services and resources from subnets to directory service conditional forwarders, PrivateLink endpoints to load balancers, certificates, SNS topics, CloudWatch Alarm, Logs and Events and much, much more - **all deployed via Terraform**. *Limited Azure experience* - but eager to learn it!
- Build/deploy tech: Git/GitLab/GitHub, AWS CodeCommit/Build, Sonatype Nexus, custom portable build utilities, Octopus Deploy, Azure Build Pipelines, AppVeyor, TeamCity, Docker, WiX, TFS, Subversion, MS Build.
- Automation: PowerShell script module frameworks, build & deployment, operations configuration validation with Pester unit tests, custom developer and operations utilities, etc.
- Platforms/tools: AWS, .NET, Atlassian, Sitecore, SLI Systems, Coveo, Lucene, SharePoint
- Databases: MS SQL, Oracle

Open Source Projects: github.com/DTW-DanWard

Octopus Deploy Utilities: exports Octopus configurations, provides searching, reporting, configuration validation, unit testing, etc. Test your deployments *before* production.

PowerShell Beautifier: Internet's first PowerShell whitespace re-formatter, changes aliases to commands, fixes casing on functions, methods, parameters, etc.

Invoke-Docker-PSObject: invoke Docker commands in PowerShell and receive objects not strings. Properly sort, filter and use your Docker output.

Work Experience

LiveData Spring 2019 - Present

Head of DevOps

- Designed and implemented complex AWS infrastructure setup for lift & shift of a complicated *non-cloud-friendly* legacy application. Design includes support for multiple client site-site VPNs *to a single VPC* using Palo Alto Next-Generation Firewall EC2.
- Because the application utilizes hospital patient data, network security is frighteningly strict with:
 - Very narrow network ACL and security group rules with AWS service access only via VPC endpoints.
 - Windows patching via WSUS (the *only* EC2 with general internet access) in a protected subnet, MS Active Directory for VM & application credentials.
 - All VPC defaults (routing, ACLs, security groups, etc.) completely locked down.
- Designed and built custom alerting system with multiple AWS SNS topics/levels and custom Slack notification lambda providing pleasant-looking and useful messages. Alerting source types include: Console sign in and control plane (CloudTrail) events (like security group modifications and EC2 termination), Windows EC2 log-in (Active Directory/CloudWatch Logs) and hacking attempts (via GuardDuty), Palo Alto site-site VPN tunnel monitoring, Parameter Store changes, EC2 and lambda instance-specific performance metrics and alerts and more.
- **100% of all AWS cloud infrastructure setup under Terraform / git control.** Additionally, all Terraform projects were designed to be easily ported and deployed to new regions.
- Saved company thousands of dollars by moving from multiple multi-subdomain certificates to instance specific AWS certificates.
- Wrote custom PowerShell wrapper for Terraform to ensure all changes committed and pushed to origin before applying. Wrapper provided additional capabilities like logging all before & changes to S3, which user & machine was performing the changes, the commit hash used, etc.
- Presented & trained coworkers on numerous subjects including: AWS network infrastructure design, modern DevOps software practices, AWS alerting & notification technologies, git workflows, etc.
- Took on responsibility for fixing issues that had been overlooked or ignored for years, including:
 - physical cleaning and reorganization of server room and hardware laboratory
 - complete review & reorganization of all SaaS accounts and internal groups, purged old accounts, etc.
 - introduced formal processes and documented everything!

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OnSolve Fall 2017 – Winter 2018

Head of DevOps

- Managed migration of 180+ applications from TFS to TeamCity and from a custom in-house deploy system to Octopus Deploy.
- Scripted export of Octopus Deploy configuration data with PowerShell Core. Used that to:
 - Built automated configuration data validation system using Pester testing/mock framework. Saved countless hours automating confirmation of all new projects while reviewing changes to existing projects.
 - Implemented utilities to see changes to the entire Octopus Deploy system over time.
 - Created search utilities for finding deploy-time variable substitution in Octopus Deploy projects, global variables *and* all .NET code configuration files.
- Scripted processes to identify and fix configuration issues across hundreds of manually configured staging & production servers.
- Responsible for GitLab, Octopus Deploy & TeamCity configuration and maintenance.
- Responsible for build, deployment & documentation process for all staging releases. Assisted production releases.
- Managed team of 7 DevOps resources across multiple offices.

DMI – Commerce Summer 2012 – Summer 2017

Technical Lead

Client: Vistaprint Summer 2017 – Summer 2017

- Investigated SLI Systems (SaaS search) to replace existing site functionality.
- Created PowerShell data extraction process aggregating data from microservices and Sitecore to seed data.

Client: Cushman & Wakefield Summer 2012 – Summer 2017

- Managed the successful rebuild and launch of Cushman & Wakefield's global web site infrastructure on time and on budget. Migrated from a legacy ATG installation to a modern Sitecore content management system in 6 months, supporting content across 30+ sites in over 30+ languages.
- Managed all maintenance and upgrades to the system *with 0 production downtime over 5 years*. Changes included: new site functionality, section redesigns, Sitecore upgrades, infrastructure upgrades and performance testing.
- Managed and maintained all infrastructure and migration process to new hosting environment.
- Created and maintained the build and deployment system in PowerShell.

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- Scripted processes to purge old content, identify bad item data, fix known issues and improve the overall quality of the content.
- Analyzed and fixed performance issues within Sitecore publishing, Coveo re-indexing and cache invalidation processes.
- Provided all day-to-day support for authors in EMEA and USA.

Institute for Healthcare Improvement Fall 2003 – Summer 2012

Software Engineer, Build/Release/Infrastructure Manager

Designed, delivered and supported numerous applications critical to the focus of the organization including the build & deployment system, the CRM and the main content management systems. Typically responsible for overall design and implementation of middle-tier and back-end systems while junior developers implemented front-end and maintained code base.

- Created custom build & deployment system using a reusable PowerShell framework. System is responsible for building and deploying SharePoint, ASP.NET applications, web and Windows services, database objects and functionality, etc. For the 70+ applications running on the 30+ servers at IHI, developers do not have remote desktop access to any servers but can easily deploy application packages everywhere. This system also provides continuous integration and quality tests via custom post-commit processing.
- PowerShell framework custom functionality includes: remote deployments using WinRM, a generic task-based processing system, a service locator-type utility for storing common values, a powerful logging module, etc.
- Managed application support on all server environments: managed configurations, application pool balancing, security, etc.
- Worked with developers across all applications to help ensure quality, security, performance, and consistency. Directed major cross-application changes. Managed all .NET upgrades.

Corning Life Sciences Fall 2001 – Fall 2003

Senior Software Engineer

Re-implemented ActiveX-based complaint management system (CMS) as an ASP.NET application front-end with an Oracle database back-end. CMS managed the complete workflow / lifecycle of complaints, produced custom Word document correspondence from XML templates, consumed and utilized customer and product data from PeopleSoft CRM system, provided data exports in downloadable MS Access files for offline analysis, etc.

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Originally built in .NET 1.0/1.1, the complaint management system was used at Corning for over 14 years with no downtime and required very little maintenance from local IT staff. It was used internally by customer service representatives, quality control personnel, lab engineers and warehouse representatives around the world for processing business-critical data, client correspondence, email notifications and more.

Agency.com Spring 1997 – Fall 2001

Senior Technical Consultant

Client: Liberty Mutual: Distributed Car Insurance Application

Created back-end data-replication system for a distributed car insurance system. Primary Oracle database was replicated to 34,000 unique MS Access databases with support for versioned schemas.

Client: Reuters: Personal Finance Web Site

Responsible for discovery, design and resource management of financial tools for a multi-language personal finance site.

Client: Deutsche Bank: Foreign Exchange Division

Created web front-end for foreign exchange trading system used for large (\$10+ million) transactions for Tier 1 clients.

Client: Corning Life Sciences

Created client-server complaint management system (described above). This original implementation was a client-server application using an IE/ActiveX front-end an MTS/Oracle back-end.

Client: Financial Times: FT Your Money Web Site

Administered Oracle database environments and Interwoven TeamSite for personal finance site.

Sapient Fall 1995 – Spring 1997

System Administrator & Webmaster

Maintained corporate Intranet. Built and managed corporate automated roll-out of Windows 95. Installed, configured, and maintained NT and Novell servers and anti-virus solutions. Provided PC desktop support for over 350 individuals.

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Education

University of Massachusetts Amherst

Computer Science, Bachelor of Science

President of Upsilon Pi Epsilon - Computer Science Honors Society