

RICHARD K. BUSSEY



U.S. Marine Corps Veteran

SENIOR TECHNOLOGY ARCHITECT | DATA, DATABASE, INTEGRATION & ENTERPRISE APPLICATIONS

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PROFESSIONAL SUMMARY

Senior technology architect, database architect, enterprise applications engineer, integration specialist, and software developer with extensive experience designing, modernizing, integrating, securing, automating, and supporting enterprise technology platforms.

Career experience spans enterprise data architecture, Microsoft SQL Server architecture and administration, Azure data platforms, ERP and enterprise applications, systems integration, ETL/ELT, reporting and analytics, application development, infrastructure architecture, automation engineering, high availability and disaster recovery, technical governance, and production operations.

Combines architecture-level responsibility with hands-on engineering. Experienced translating business and operational requirements into data models, integration architectures, database platforms, APIs, automation frameworks, application services, reporting solutions, operational standards, and implementation plans.

Deep Microsoft technology background encompassing SQL Server, Azure SQL, Azure Data Factory, Azure Synapse, Azure Data Lake, Dynamics 365, Dynamics GP, Dynamics AX, Dataverse, Power Platform, PowerShell, C#, T-SQL, SSIS, SSRS, and Power BI.

More than 13 years of PowerShell engineering experience developing enterprise integrations, reusable modules, classes, automation frameworks, testing infrastructure, configuration systems, build pipelines, operational tooling, and cross-platform automation.

Experienced as the senior technical escalation point for complex problems spanning databases, applications, integrations, infrastructure, performance, availability, reporting, data quality, recovery, and production operations.

AREAS OF EXPERTISE

Enterprise & Solution Architecture: Enterprise Architecture | Solution Architecture | Data Architecture | Database Architecture | Integration Architecture | Application Architecture | Technical Strategy | Architecture Governance | Technology Modernization | Requirements Analysis | Solution Design | Technical Standards

Data Architecture & Engineering: Enterprise Data Architecture | Data Modeling | Data Integration | ETL/ELT | Data Warehousing | Data Lakes | Data Marts | Data Quality | Data Validation | Data Transformation | Metadata | Reporting Architecture | Analytics Platforms

Database Engineering & Administration: Microsoft SQL Server | Azure SQL | Azure SQL Managed Instance | SQL Server Always On Availability Groups | Windows Server Failover Clustering | Database Migration | Performance Tuning | Execution Plan Analysis | Indexing | Capacity Planning | Backup & Recovery | Security | Monitoring | Automation

Enterprise Applications & ERP: Dynamics 365 Finance & Operations | Dynamics 365 Field Service | Microsoft Dynamics GP | Dynamics AX 2012 R2 | Dataverse | Power Platform | Paycom | OptimoRoute | Enterprise Application Integration

Integration Engineering: REST APIs | OData | JSON | XML | API Authentication | File-Based Integration | Scheduled Integration | Source-to-Target Mapping | Data Validation | Reconciliation | Interface Monitoring | Error Handling | Production Support

Software & Automation Engineering: PowerShell 7+ | Windows PowerShell | C# | T-SQL | SQL | SQLite | Modular Architecture | Reusable Classes | Cmdlet Development | Configuration Management | Structured Logging | Exception Handling | Automation Frameworks

DevOps, Testing & Engineering Governance: Git | GitHub | GitHub Actions | Azure DevOps | CI/CD | Pester | PSScriptAnalyzer | Automated Quality Gates | Contract Testing | Unit Testing | Integration Testing | Release Governance | Semantic Versioning | Automated Documentation

Technical Leadership: Architecture Reviews | Cross-Functional Collaboration | Requirements Facilitation | Vendor Coordination | Implementation Leadership | Production Escalation | Mentoring | Technical Documentation | Operational Governance

PROFESSIONAL EXPERIENCE

TELGIAN CORPORATION

Senior Solutions Architect | Enterprise Integration Lead

September 2022 - October 2025

Provided architecture, integration, database, automation, and implementation leadership supporting enterprise applications and a major transformation from Microsoft Dynamics AX 2012 R2 to Dynamics 365 Finance & Operations and Dynamics 365 Field Service.

Worked across finance, operations, IT, developers, vendors, and implementation partners to translate business processes into technical architectures, integrations, data transformations, validation controls, implementation plans, and production support models.

Enterprise Architecture & Applications

- Provided solution architecture and senior technical leadership for enterprise application, integration, database, data, and automation initiatives.
- Supported transformation from Microsoft Dynamics AX 2012 R2 to Dynamics 365 Finance & Operations and Dynamics 365 Field Service.
- Designed solutions connecting Dynamics 365 F&O, Field Service, Dataverse, Paycom, OptimoRoute, Deltek Vision, and other enterprise platforms.
- Evaluated business workflows, system dependencies, data requirements, integration boundaries, security requirements, and operational support considerations.
- Worked with implementation partners, application developers, business teams, infrastructure personnel, and vendors throughout solution delivery.

Integration Architecture & Engineering

- Owned integrations from requirements and source-to-target mapping through design, development, testing, deployment, monitoring, documentation, troubleshooting, and production support.
- Developed API, file-based, scheduled, and database-driven integrations using C#, PowerShell, REST, OData, JSON, T-SQL, Postman, and secure authentication mechanisms.
- Defined data mappings, transformation rules, validation requirements, reconciliation controls, exception handling, and operational monitoring.
- Built automated ETL/ELT processes supporting financial, operational, workforce, and field-service data across cloud and on-premises environments.
- Designed reusable integration and automation patterns rather than isolated point solutions.

PowerShell & Software Engineering

- Engineered reusable PowerShell modules, classes, functions, and automation components supporting API integration, configuration management, validation, reconciliation, logging, exception handling, scheduled processing, and production operations.
- Applied structured software-engineering practices to enterprise automation, including modular design, error handling, testing, logging, configuration separation, and reusable service patterns.
- Used PowerShell and C# for integration and automation scenarios requiring more sophisticated application logic than conventional administrative scripting.
- Reduced recurring manual operational effort by more than 10 hours per week through integration and workflow automation.

Database & Data Engineering

- Supported SQL Server databases serving more than 300 users across multi-terabyte environments.
- Supported database-backed enterprise applications, integrations, scheduled data processing, reporting workloads, and operational systems.
- Performed database troubleshooting, query analysis, performance optimization, data validation, and production support.
- Worked across application, database, integration, and infrastructure boundaries to diagnose complex production problems.

Documentation & Operations

- Produced architecture documentation, data-flow references, implementation documentation, operational procedures, monitoring controls, troubleshooting guides, and support documentation.
- Established repeatable operational practices for integrations and automation processes.
- Served as a senior escalation resource for issues involving enterprise applications, databases, integrations, scheduled processing, and data movement.

ATRICURE, INC.

Senior Enterprise Applications Engineer / Database Architect

September 2013 - July 2022

Designed, engineered, administered, and supported enterprise database, ERP, reporting, integration, and application platforms within a medical-device manufacturing environment.

Worked across finance, manufacturing, applications, infrastructure, and business teams to modernize enterprise platforms while maintaining availability, recoverability, performance, data integrity, and dependable data movement.

Database Architecture & SQL Server Engineering

- Architected, administered, secured, monitored, and performance-tuned Microsoft SQL Server environments supporting enterprise applications, ERP systems, reporting, integrations, and business operations.
- Supported SQL Server versions spanning multiple enterprise generations, including SQL Server 2012 – 2019.
- Worked with multi-terabyte SQL Server environments and mission-critical application databases.
- Performed query and execution-plan analysis, indexing, database maintenance, performance troubleshooting, capacity planning, security administration, backup/recovery planning, and operational monitoring.
- Investigated complex production issues spanning databases, applications, infrastructure, reporting, integrations, and dependent systems.

High Availability & Disaster Recovery

- Designed a SQL Server Always On Availability Groups architecture spanning three data centers.
- Implemented an architecture using a production primary and two readable secondary replicas.
- Used secondary replicas to support reporting while providing high availability and disaster-recovery capabilities.
- Worked with Windows Server Failover Clustering and SQL Server high-availability technologies.
- Developed and documented recovery procedures, operational dependencies, support responsibilities, and failover considerations.

Azure & Cloud Modernization

- Migrated Dynamics GP database workloads from on-premises SQL Server to Azure SQL Managed Instance.
- Used native backup and restore processes to support database migration.
- Designed and supported data movement between on-premises systems and Microsoft Azure.
- Worked with Azure SQL, Azure Data Factory, and related Microsoft data technologies.
- Participated in cloud modernization while preserving application compatibility, data integrity, recoverability, and operational supportability.

ERP & Enterprise Applications

- Supported Microsoft Dynamics GP financial and operational environments.
- Performed ERP upgrades, database support, data integrations, reporting, troubleshooting, and Tier 3 application support.
- Worked directly with finance, manufacturing, application, infrastructure, and business teams to understand enterprise workflows and technical dependencies.
- Designed solutions integrating ERP data with manufacturing, reporting, operational, and business systems.

Data Engineering, Reporting & Analytics

- Designed data movement and reporting solutions using SQL Server, Azure SQL, Azure Data Factory, SSIS, Power BI, and SSRS.
- Defined data mappings, transformation logic, validation rules, implementation plans, and support procedures.
- Developed and supported reporting platforms serving operational, financial, manufacturing, and business requirements.
- Coordinated requirements, testing, deployment, validation, troubleshooting, and production support across multiple technical and business groups.

Technical Leadership

- Served as a senior technical resource for database, ERP, application, reporting, integration, infrastructure, and performance issues.
- Developed technical and operational documentation for enterprise platforms and solutions.
- Worked across organizational boundaries to resolve problems requiring coordinated database, application, infrastructure, and business analysis.

INDEPENDENT SOFTWARE & ARCHITECTURE ENGINEERING

ENTERPRISE POWERSHELL AUTOMATION FRAMEWORK (EPAF)

Creator | Principal Architect | Lead Developer

2012 – Present

Architected and developed an enterprise-grade PowerShell automation framework intended to standardize the creation, configuration, governance, testing, documentation, packaging, execution, and operational management of PowerShell automation solutions.

The framework evolved from the Enterprise PowerShell Framework into the Enterprise PowerShell Automation Framework (EPAF) and has been developed as a governed software platform rather than a collection of administrative scripts.

Still under development.

Architecture

- Designed a modular framework architecture composed of reusable, independently governed PowerShell modules.
- Established architectural domains covering core services, configuration, runtime, service contracts, services, kernel, platform, execution engine, scheduling, workflow, generation, testing, security, governance, observability, packaging, and extension infrastructure.
- Designed framework components for Windows, Linux, and macOS compatibility using PowerShell 7.
- Established explicit architectural principles governing maintainability, module independence, versioning, security, testability, documentation, extensibility, and reproducibility.

Framework Engineering

- Developed reusable modules supporting configuration, cryptography, security, logging, console operations, dependency management, Azure, Dataverse, services, testing, documentation, governance, build orchestration, release management, and related framework capabilities.
- Implemented reusable classes, structured result models, service contracts, adapters, extension points, and standardized command surfaces.
- Developed environment-aware configuration and secure secret-reference patterns.
- Implemented structured logging, exception handling, validation, operational controls, and deterministic project behavior.

Project Generation

- Architected a project-generation system capable of creating standardized PowerShell automation projects.
- Generated consistent project structures for source code, configuration, scripts, documentation, logging, data, security, testing, deployment, and governance.
- Integrated generation validation into the framework quality pipeline.

Quality Engineering

- Designed a multi-stage automated quality gate incorporating PowerShell source formatting, parser validation, PSScriptAnalyzer, module manifest validation, independent module imports, contract tests, unit tests, integration tests, generator validation, documentation validation, governance validation, and release validation.
- Built automated testing around Pester 6.
- Integrated automated engineering controls into Git/GitHub workflows.

Architecture Governance

- Developed formal architecture and governance artifacts including constitutions, architecture principles, architectural plans, architecture evaluations, architecture reviews, decision records, audits, and release governance.
- Established documentation as an architectural component rather than an after-the-fact deliverable.
- Implemented automated generation and validation of governance and project-status artifacts.
- Established controlled migration procedures for framework-wide architectural changes.

Platform Evolution

- Runtime architecture; service contracts; service registration; kernel services; platform abstraction; execution engine; scheduling; workflow; project-generation runtime; cross-platform certification; plugin/extension architecture; package management; distributed execution; observability; build and release automation; governance automation.

MrBERP

Creator / Product Architect / Lead Developer

Independent Software Product - 2026 – Present

Architected and developed MrBERP, a cross-platform ERP/CRM and business-operations platform originally created to support a small manufacturing and commerce operation and subsequently expanded into a broader modular enterprise application.

Still under development.

Product Architecture

- Designed a modular application architecture using PowerShell 7+, SQLite, Poda, browser-based presentation, and structured application services.
- Designed the application for Windows, Linux, and macOS operation.
- Established database migrations, transaction semantics, auditing, structured logging, authorization, error handling, and configuration management.

- Applied architecture governance and development standards throughout the repository.
- Established quality gates for parsing, formatting, static analysis, manifest validation, clean module import, export consistency, database migration validation, and automated testing.

ERP & Operational Domains

- Inventory management; work-in-process; manufacturing and production; manufacturing planning and MRP; vendor management; purchasing and purchase orders; purchase receiving; sales order management; customer/CRM functions; fixed assets; financial operations; reporting and analytics; sales-tax compliance; shipping and logistics; product catalog; document management and search; commerce synchronization; platform administration; workflow and automation; security and audit; backup and recovery; integration exchange and APIs.

Data & Database Architecture

- Designed a relational SQLite data model with controlled schema migrations.
- Implemented referential integrity and transaction controls.
- Developed read and write models for operational business domains.
- Designed reporting models for sales, inventory, work-in-process, purchasing, financials, fixed assets, customers, and sales-tax compliance.
- Developed sample-data and scale-certification infrastructure for repeatable testing.
- Implemented CSV and JSON reporting/export capabilities.

Financial & Compliance Capabilities

- Designed reporting and operational capabilities for monthly, quarterly, year-end, and custom-period financial packages; customer receivables; state sales; sales-tax collection and remittance; nexus status; filing calendars; outstanding tax liabilities; returns and payments; accountant reporting packages; and tax exemptions.

Integration Architecture

- Designed integration capabilities for banking and accounting systems, Etsy, Shopify, Amazon, Square, USPS, UPS, FedEx, customer synchronization, imported orders, shipment exports, and integration synchronization history.

Automation & Workflow

- Designed scheduled jobs, workflow definitions, workflow instances, approvals, tasks, notifications, domain events, and job-history capabilities.
- Implemented auditing and ShouldProcess semantics for state-changing operations.
- Designed automation services as governed application capabilities rather than ad hoc scripts.

Software Quality & Release Engineering

- Established automated repository quality gates covering source parsing, formatting, PSScriptAnalyzer, module manifests, clean imports, export consistency, SQLite migrations, and Pester testing.
- Achieved a documented release quality gate of 208 passed tests with zero failures and zero skipped tests for the MrBERP 1.0 release.
- Developed architecture documentation, development standards, decision logs, product architecture, release criteria, roadmaps, domain documentation, and release notes.
- Managed feature branches, controlled release integration, semantic versioning, Git tags, and main-branch release validation.

Licensing Architecture

- Designed a software-license enforcement model using customer and license identities, digitally signed license files, entitlement controls, optional installation binding, and auditability.
- Structured the commercial model around customer licensing while retaining software ownership and intellectual property.

EARLIER TECNICAL EXPERIENCE

Prior to the positions detailed above, developed and supported technology solutions across manufacturing, engineering, construction, and commercial organizations.

Career experience preceding 2013 included:

- Software and database application development
- Microsoft SQL Server development and administration
- Relational database design
- Reporting platform development
- Business-process automation
- PowerShell development
- C# and Microsoft development technologies
- Infrastructure and systems technologies
- Application troubleshooting and production support
- Technical requirements analysis
- Business-system implementation
- Data conversion and migration
- Operational reporting

Specific employer names, job titles, and dates are intentionally omitted from this master CV until corroborating career records are incorporated.

TECHNICAL COMPETENCIES

Database Platforms: Microsoft SQL Server | Azure SQL | Azure SQL Managed Instance | SQLite | SQL Server Always On Availability Groups | Windows Server Failover Clustering | SQL Server Agent | Database Migration | Backup/Restore | HA/DR | Performance Tuning | Execution Plans | Indexing | Database Security | Capacity Management

Data & Analytics: Azure Data Factory | Azure Synapse | Azure Data Lake | ETL | ELT | SSIS | SSRS | Power BI | Data Modeling | Data Warehousing | Data Marts | Data Integration | Data Transformation | Data Validation | Reporting Architecture | Operational Analytics

ERP & Enterprise Applications: Dynamics 365 Finance & Operations | Dynamics 365 Field Service | Dynamics GP | Dynamics AX 2012 R2 | Dataverse | Power Platform | Deltek Vision | Paycom | OptimoRoute

Programming & Automation: PowerShell 7+ | Windows PowerShell | C# | T-SQL | SQL | REST | OData | JSON | XML | PowerShell Classes | Custom Cmdlets | Modular Software Architecture | API Development | Scheduled Processing

Software Engineering & DevOps: Git | GitHub | GitHub Actions | Azure DevOps | CI/CD | Pester 6 | PSScriptAnalyzer | Automated Testing | Contract Testing | Unit Testing | Integration Testing | Configuration Management | Semantic Versioning | Release Engineering | Automated Documentation

Architecture & Engineering Practices: Enterprise Architecture | Data Architecture | Database Architecture | Integration Architecture | Solution Architecture | Application Architecture | Architecture Governance | Architecture Decision Records | Design Principles | Technical Standards | Requirements Engineering | Source-to-Target Mapping | Security Architecture | Operational Architecture | Cross-Platform Architecture

Operations: Production Support | Monitoring | Structured Logging | Exception Management | Incident Troubleshooting | Root-Cause Analysis | Backup & Recovery | Disaster Recovery | Performance Management | Capacity Planning | Security | Documentation | Operational Procedures

SELECTED CAREER CAPABILITIES

Enterprise Data Architecture

- Design data architectures spanning operational applications, relational databases, cloud data services, integration pipelines, reporting platforms, and analytics.

- Translate business information requirements into data structures, integration flows, validation controls, reporting models, and operational standards.
- Bridge traditional SQL Server architecture with modern Azure data services.

Database Architecture

- Extensive hands-on SQL Server architecture and administration experience.
- Architecture of highly available, geographically distributed database platforms.
- Database modernization and migration to Azure.
- Performance engineering at query, indexing, database, workload, and infrastructure levels.
- Production support of multi-terabyte database environments.

Enterprise Integration

- Design and implementation of API, database, file-based, and scheduled integrations.
- Integration lifecycle ownership from requirements through production operations.
- Extensive experience integrating ERP, financial, workforce, field-service, reporting, and operational platforms.

Automation Engineering

- More than 13 years of PowerShell engineering.
- Development of reusable modules, classes, automation frameworks, application services, testing infrastructure, project generators, and operational tooling.
- Application of conventional software-engineering discipline to enterprise automation.

Architecture Governance

- Architecture principles and standards; architectural decision records; architecture reviews and audits; release governance; automated quality gates; documentation governance; versioning and dependency management; cross-platform certification; reproducible builds and releases.

Technical & Project Leadership

- Senior technical leadership across business, application, infrastructure, database, development, vendor, and implementation teams.
- Requirements analysis and solution definition.
- Technical implementation planning and coordination.
- Production escalation and problem resolution.
- Architecture and operational documentation.
- Mentoring and technical guidance.

SELECTED PROFESSIONAL ACHIEVEMENTS

Designed a SQL Server Always On architecture spanning three data centers, using readable secondary replicas to combine high availability, disaster recovery, and reporting workload distribution.

Migrated enterprise Dynamics GP SQL Server workloads to Azure SQL Managed Instance.

Supported multi-terabyte database environments serving more than 300 users.

Reduced recurring operational effort by more than 10 hours per week through enterprise integration and workflow automation.

Developed more than 13 years of PowerShell-based enterprise automation and software-engineering experience.

Architected the Enterprise PowerShell Automation Framework, establishing modular architecture, automated testing, governance, project generation, cross-platform engineering, extension architecture, packaging, distributed execution, and observability capabilities.

Architected and developed MrBERP, a modular cross-platform ERP/CRM platform spanning operational, manufacturing, financial, CRM, reporting, compliance, integration, automation, security, and administrative domains.

Developing the MrBERP through an automated quality gate with 208 passing Pester tests and zero failures.

Worked across database administration, database architecture, data engineering, application engineering, integration engineering, software development, enterprise applications, cloud modernization, and solution architecture rather than operating within a single technology specialization.

EDUCATION & PROFESSIONAL DEVELOPMENT

Self-Taught Technology Professional

Career developed through extensive hands-on engineering, independent technical study, enterprise implementation experience, software development, architecture work, production operations, and continuous adoption of evolving Microsoft, cloud, database, integration, and software-engineering technologies.

Technical development has encompassed database systems, software engineering, enterprise architecture, cloud platforms, ERP systems, systems integration, infrastructure, automation, testing, DevOps, data engineering, and technical governance.

MILITARY SERVICE

UNITED STATES MARINE CORPS

U.S. Marine Corps Veteran - Honorable Discharge

PROFESSIONAL FOCUS

Enterprise Architecture | Data Architecture | Database Architecture | Solution Architecture | Enterprise Data Management | Database Engineering | Integration Architecture | Enterprise Applications | Cloud Data Platforms | Technical Leadership | Automation Architecture | Software Engineering