
Summary

Entrepreneur and private investor focusing on AI, cloud, data migrations, system integrations, and automation to build intelligent solutions bringing value to business and clients.

Professional Experience

Willow River Solutions – CEO, Founder, Solutions Architect (May 2016 – Present)

Willow River Solutions offers an array of products and services for Compliance, Cloud, Data, and Automation to multiple industries, including life sciences, medical device, finance, education, and insurance.

Compliance

Compliance services include risk assessments, lifecycle documentation, and processes for infrastructure qualifications and application validation for GxP 21 CFR Part 11 and Annex 11 compliance.

Products offered include document templates and baseline requirements for physical host servers, virtual machines, network devices, cloud platform infrastructure, standard infrastructure processes and work instructions.

- Computer System Validation (CSV) lifecycle, discovery, validation plan, requirements, IQ, OQ, PQ, RTM, and summary reports for enterprise and critical applications and services.
- Gain insights and document current compliance and qualification status, scope, requirements, and gaps.
- Create and manage Infrastructure Qualification Plan and required deliverables, SOPs, and WIs for all infrastructure configuration items - virtual and physical compute resources, storage, network, and power devices.
- Complete location, vendor, configuration item, system risk, 21 CFR Part 11, and change risk assessments.
- Complete asset discovery and documentation of in-scope items for qualification
- Create and manage compliant processes, systems, and integrations for inventory and configuration item management.
- Provide roadmap for gap and deficiency mitigation and maintain a compliant state for existing and new items.
- Application experience includes: ZenDesk, Jira, Returnly, GitHub, TraceLink and Guardian, Egnyte, POMSnet Aquila MES, Iqvia SmartSolve QMS, Boomi, DocuSign, Oracle Argus, Oracle Siebel, IRMSWeb, and category 5 data warehouse, applications, and integrations.

Cloud / Data / Automation

Services include design, build, and migrate on-premises resources to Cloud Infrastructure. Build data consolidation and analytics solutions with cloud automation services and Python applications.

Provide AI tools and solutions to automate validation, qualification, entity, and document generation for business and regulatory compliance.

- Discover current infrastructure, data, business requirements, and future state.
- Design, plan, build, and migrate on-premises infrastructure to cloud.

- Design, plan, and build processes to consolidate data (flat file, Access database, SQL database, API sources) to Azure SQL.
- Deploy Logic App and storage account event-based triggering, control, and notification mechanisms.
- Setup Azure Data Factory pipelines and Synapse Analytics with copy data and data flow activities to move files from source to sink: Azure storage (blobs, data lakes) to Azure SQL with automatic ingestion and transformation.
- Setup processes to export reports and files (CSV, Parquet) to SharePoint and data lakes.
- Design and build Power BI reports, apps, and dashboards from multiple data sets / semantic models.
- Utilize Azure DevOps for work item management and version control with Git.
- Document databases, columns, and usage for consumption and understanding.
- Database estate management (SQL server, Azure SQL) including administration (DBA), backup and restore processes, maintenance plans, performance tuning.
- Manage resources, project plans, status reports, and budgets for deliverables.

Integral Systems Corp – CSV and Data Engineering Consultant (Jun 2022 – Present)

Process development, computer system validation, Azure architecture and administration, data analysis, Access database migration to Azure SQL, and Power BI development. Lifecycle automation with Logic Apps, pipelines, and data transformations to move legacy data to cloud for insight and intelligent business decisions.

Cenbion - Sr. Systems Architect (Jun 2019 – Present)

Technical advisor for RFPs and solution design. Projects completed - gather and document infrastructure and instance requirements, design, build, and qualify complete IaaS cloud solutions utilizing LightEdge Private Cloud and Azure Cloud Services. Infrastructure components include: AD, application servers, web servers, SQL 2014-2019 database servers, and file servers for production, development, and PCI environments on Windows 2012 R - 2019. Backup (local, off-site), monitoring, and automation with SQL jobs, Task Scheduler, and PowerShell.

Azzur Group - CSV Consultant (Jul 2022 – Apr 2024)

Validation lifecycle, discovery, 21 CFR Part 11 and system risk assessments, validation plan, requirements, IQ, OQ, PQ, RTM, and summary reports for enterprise applications across multiple clients.

Resilience National (Formerly Tmunity Therapeutics) - IT-CSV Lead & Infrastructure (GMP) Engineer (Aug 2020 – Oct 2022)

Infrastructure Architect and Computer Systems Validation lead, including Infrastructure Qualifications (IQ) for on-premises and AWS cloud services, validation deliverables, core infrastructure engineering (VMware, EMC, Dell VxRail), build, changes, backup, data integrity. Deploy and manage AWS SSM, Datadog, Rapid7, and CarbonBlack to compute resources. Design next generation AWS infrastructure with GxP VPC and Oracle RDS for POMSnet Aquila MES.

Astrix Technology Group - Sr. IT Infrastructure CSV Consultant (Nov 2019 – Aug 2021) *Contract to Spark Therapeutics*

Develop and manage GxP Infrastructure Qualification life-cycle documentation, including Validation Plans, Specifications, Testing Protocols (IQ), Traceability Matrix, SOPs, Change Control, Risk Assessments, and Validation Reports.

- Conduct Infrastructure Qualification compliance risk assessments in accordance with client standard operating procedures.
- Support Infrastructure Qualification efforts and act as the primary user/sponsor contact for coordinating work, reporting status, resolving issues, and addressing change control requests as they apply.
- Implement and configure paperless validation lifecycle management (ValGenesis) for Infrastructure Qualifications, including workflows, templates, and entities.
- Support complex technical quality requirements in specific IT Infrastructure and CSV situations, such as validation of new systems, upgrades, changes, or remediation.
- Provide guidance, interpretation, and ensure compliance with CSV and IT-related regulations, quality manuals, company policies, and procedures.
- Identify, scope, and write new procedures for infrastructure management, service management, database estate, system decommissioning, system periodic review, and related work instructions.
- Provide technical input to address validation deviations and assessments for change requests; identify qualification/validation requirements to ensure GxP compliance; perform technical reviews of validation deliverables.
- Interface with internal stakeholders to analyze data and situations leading to sound decision making.

Aeritae Consulting Group - Sr. Consultant (Jun 2019 – Nov 2019)

Managed relationships, vendors, project plans, and budgets to deliver customer solutions with an Agile framework. Work included ServiceNow, process ownership, release management, documentation, best practices training, resource planning, scrum, and weekly project status reports.

ProPharma Group – Director, Enterprise Applications (Nov 2000 – Apr 2019)

Responsible for building and supporting secure on-premises and IaaS solutions (instances and infrastructure), regulatory compliance and data integrity, process creation and documentation, computer systems validation following best practices and risk-based approach (IQ, OQ, PQ), infrastructure qualification (IQ), enterprise application portfolio (IRMS Web, Oracle Argus, Oracle Siebel, Grand Avenue, GreatPlains) implementations, and management of multiple custom development projects. Lead, mentor, and advocate for team, manage budgets, and vendor relationships.

- Partner with executive leadership team to support and enable growth of company while meeting and responding to business strategic needs and ensuring a smooth transition during company acquisitions.
- Lead, train, and mentor application and development team. Set and review personal and professional goals, ensure training opportunities align with company goals and career paths.
- Build and manage budgets, projects, and vendor relationships. Obtain license, hardware, and service quotes, contract negotiations, and purchasing across all business units and environments.
- Manage enterprise application portfolio lifecycle: business challenge, scoping, requirements, development / configuration, validation, deployment, deliverables, follow-up, review.
- Design and build AWS instances according to approved specifications and required networking, backup, and security access for multiple data warehouse and application migrations from on-premises.
- DevOps infrastructure for automated builds and deployments.
- Responsible for Microsoft SQL database administration of cloud and on-premises instances: verify backup and scheduled job completion, database size and health, index rebuilds, database shrink, patches, upgrades, data imports and exports, upgrades of tools. Design, size, install, configure, and build server and database instances.
- Actively participate in global client, prospect, and FDA audits of operations and the computer systems validation program. Written responses provided to RFPs, audit reports, and results.

- Guide business analysts and developers in designing, building, testing, documenting, and deploying custom client data migrations, data warehouse, enterprise application integrations, and reporting.
- Build data dictionary and business glossary for custom reports and data knowledge.
- Participate in user, functional, design reviews, requirement clarification, alternative solutions, vendor interviews, solution selections.
- Risk assessments and mitigation for vendors, validation, and regulatory compliance for changes to validated and qualified systems and impact to data integrity and security
- Own and manage IT Operational SOPs.
- Design and build fully monitored data center with redundant systems for power, cooling, and security. Conduct and document quarterly maintenance and testing.
- Work with clients to understand and resolve usage and data issues with data warehouse and reporting applications; provide technical support to team; research and resolve database and infrastructure performance, configuration, and hardware issues.
- Data research and analysis using SQL and PL/SQL, views, functions, and stored procedures.

Prism Software Solutions - IS Manager (Aug 1999 - Oct 2000)

BioconX – Senior Software Engineer (Aug 1998 - Apr 2000)

GuidanceSystems - Software Engineer (Jan 1999 - Jul 1999)

AGS - UNIX Administrator & Systems Analyst (Aug 1997 - Jan 1999)

NxTrend Technology - IS Systems Engineer (Mar 1996 - Aug 1997)

HGA - IS Technical Support (Mar 1994 - Mar 1996)

Industry and Regulatory Experience

- Architecture, Engineering, Consulting, Education
- Pharmaceuticals, Medical Devices, Clinical Trials, Health & Safety Call Center, Fully Integrated Bio-techs, Compound Manufacturers
- Food and Drug Administrator (FDA) - 21 CFR Part 11
- Environmental Protection Agency (EPA) - FIFRA
- Wholesale Distribution

Education

NEI College of Technology | Minneapolis, MN

AAS in Information Management Systems (IMS), 3.6 GPA

Certifications

- Azure AI Fundamentals (AI-900), 03/2023, Microsoft
- Azure Power Platform Fundamentals (PL-900), 11/2022, Microsoft
- Kneat Gx End-User and Power User Level 1, 07/2022, Kneat Solutions
- AWS Certified Cloud Practitioner, 06/2022, AWS

- Applied Data Science Program, 01/2022 - 04/2022, MIT
 - Portfolio: <https://eportfolio.mygreatlearning.com/william-ricci>
- Azure Data Analyst Associate (PL-300), 01/2021, Microsoft
- Azure Data Fundamentals (DP-900), 11/2020, Microsoft
- Azure Fundamentals (AZ-900), 11/2019, Microsoft
- Certified ScrumMaster 05/2019-05/2023, Agile Alliance
- ServiceNow Certified Administrator, 6/2019, ServiceNow
- ITIL v3 Foundations, 05/2015, Axelos

Technical

Applications: Oracle Argus Safety, Oracle Siebel Service, Oracle BIP and OAM, Grand Avenue Software, IQVIA SmartSolve, ValGenesis, Atlassian Jira, Confluence, ITGlue, Deltek Vision, Dynamics GP and CRM, EndNote, Tableau, Veeva Vault, Veeva CRM, GreatPlains, DocuSign

Service Management: EasyVista, ServiceNow, LogicMonitor, ScienceLogic, Datadog, PRTG

Databases and Tools: SQL 2008-2022, Power BI, Navicat, Dataedo, RedGate Toolbelt, SQLDoc, Monitor

AI: OpenAI (API), Claude (API), GPT-Trainer, GitHub Co-pilot for VSCode

ML & Development: Python3, numpy, pandas, scikit-learn, NLTK, seaborn, matplotlib, sqlalchemy, pypyodbc, streamlit, Azure DevOps, GitHub

Scripting Tools: PowerShell, VBScript, Bash

OS and Virtualization: Windows Server 2008R2–2022, VMWare 6.x/7.x, RHEL Linux, macOS

Cloud

Public Cloud - Azure: VMs, Azure Container Apps, Azure SQL, SQL on VM, Virtual Networks, Peering Connections, Synapse Analytics, Data Factory, Pipelines, Logic Apps, Microsoft Fabric

Public Cloud - AWS: EC2, EBS, S3, Glacier, VPC, Elastic IPs, Security Groups, Peering Connections, CloudWatch, CloudTrail, AWS Config, CloudRanger, Postgres RDS, Oracle RDS

Private Cloud - Vultr: VMs, private networks, firewalls, and block and object storage

Private Cloud - LightEdge: VMs, FortiGate firewalls, public/private subnets and DMZ, Cisco/VMware Orchestration