

# Manuel (Jack) Stewart II

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## Identity: Connecting People and Technology

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- *Identity and access management engineer working exclusively in higher education, with deep range across the full identity stack — directory services, federation, cloud identity, provisioning, lifecycle, and monitoring — on-premises, in Azure, and hybrid.*
- *Polymath applications developer and systems architect: authentication, authorization, and data provisioning services delivered to any application or platform, on-premises or in the cloud.*
- *Early adopter of AI-augmented identity engineering, integrating Claude, GitHub Copilot, and OpenAI into driver development, policy authorship, scripting, incident analysis, and operational tooling via Model Context Protocol servers.*
- *Forward-thinking practitioner exploring graph databases as a native substrate for identity data, where affiliations, entitlements, and lifecycle state are modeled as the relationships they actually are.*
- *Equally comfortable gathering requirements, provisioning project infrastructure, installing and configuring applications, writing code, and presenting to stakeholders from individual contributors through the C-Suite.*

## IDENTITY SKILLS

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Active Directory (multi-domain, Certificate Services, DNS) • AD CS PKI (two-tier hierarchy, CRL renewal, LDAPS) • Ansible/Ansible for Windows • Artificial Intelligence integration (Claude, GitHub Copilot, OpenAI; Model Context Protocol servers) • Azure architecture: Control Plane, Data Plane; Management Groups, Subscriptions, Resource Groups; Static Web Apps, Functions, ExpressRoute, Logic Apps • Azure resource provisioning • bash • Conditional Access design • CyberArk Privileged Access Manager and Application Identity Manager • Databases: Chroma, MySQL, Neo4j, Oracle RDBMS, SQL Server • Data formats: JSON, XML, TOML, YAML • Duo (MFA, External Authentication Method) • Entra ID and Entra ID Connect • FastAPI • git and GitHub Actions • Google Apps for Education • Graph databases (Neo4j) for identity relationship modeling • Internet2: Grouper, Shibboleth • Large Language Models • NetIQ/OpenText eDirectory and Identity Manager • Natural Language Processing • OpenLDAP • Passwordstate • Perl • PowerShell • Python • React/Vite • REST APIs • SAML • Systems architecture and integration • XSLT

### LANGUAGES

Arabic: CEFR A1 • German: CEFR A2 • Russian: CEFR A1 • Spanish: CEFR C1

## EXPERIENCE

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### University of North Texas System: Denton, Texas

February 2024 – Present

#### Roles

- Identity and Access Management: IAM Engineer (2024 – Present)

#### Production Support

- Provided subject matter expertise for Active Directory (four domains), Entra ID, OpenText eDirectory, OpenText Identity Manager, AD CS PKI, and Duo across a multi-institution higher education environment serving 72,000+ users.
- Performed Active Directory forensics via repadmin metadata correlation and Security log analysis; assessed site-level domain controller retention and topology.
- Built hybrid monitoring architecture integrating systemd schedulers with a Model Context Protocol server, SQLite state, and Teams Adaptive Card alerting.
- Modernized the Python IAM scripting ecosystem behind a shared library (iam-modules) and a governing CONTRACT.md standardizing configuration, logging, exception handling, and CLI conventions across all consuming repositories.

#### AI Integration in Identity Management

- Pioneered AI-assisted IAM workflows using Claude, GitHub Copilot, and OpenAI to accelerate IDM driver development, XML policy authorship, PowerShell scripting, and incident analysis.
- Built Model Context Protocol server integrations enabling conversational interaction with identity infrastructure, personal knowledge management, and operational tooling.
- Engaged with the emerging identity-and-AI seam: how AI agents authenticate, are authorized, and are governed within identity infrastructure, including delegation patterns and scoped authorization for agentic workflows.
- Established AI-augmented documentation practices for IDM driver behavior, contract governance, and architectural decision records.

#### Project Sampler

### ADFS-to-Entra Migration (2025 – 2026)

- Led de-federation of core UNT System domains and enabled Password Hash Sync for 72,000+ users.
- Deployed Duo as Entra ID External Authentication Method and executed PowerShell bulk removal of orphaned legacy authentication method registrations across the full user population.
- Consolidated Conditional Access policies from 23 to 6 and migrated user risk remediation ahead of the October 2026 classic policy deprecation deadline.

### **ALMA v2 Lifecycle Automation Architecture**

- Designed and built a resilient lifecycle automation system featuring per-call retry, circuit breaker patterns, checkpoint-with-resume capability, and a three-phase Act → Wait → Verify operation model.
- Recovered from a directory outage that produced 92,720 false-failure verdicts by re-architecting the verification layer; replaced loginTime-based inactivity filtering with a no-roles/no-affiliations approach that surfaced ~240,000 previously suppressed candidates.
- Authored CONTRACT.md governance framework standardizing configuration loading, logging, connection handling, exception patterns, and CLI conventions across all consuming IAM repositories.

### **Systems Architecture and Integration**

- Designed and built iam-apis with FastAPI, integrating PeopleSoft Oracle databases, OpenText eDirectory, and Active Directory Global Catalog behind unified authentication and Sectigo TLS.
- Developed UNT Directory App v3 on Azure Static Web Apps with a React/Vite frontend and Python Azure Functions backend, integrating Entra ID authentication with on-premises LDAP via VNet and ExpressRoute.
- Authored architectural review documents comparing Entra API-driven, Okta, and Pathlock approaches to cloud-first identity provisioning.

### **OpenText IDM Driver Development**

- Developed and maintained HSCAD, UNTAD, and UNTADSTU drivers bridging eDirectory and Active Directory across four AD domains.
- Authored Publisher Command Transform policies, performed GCV cleanup (27 unused GCVs removed from HSCAD), and restructured TrafficCop policy chains.
- Deployed AD CS PKI in development: two-tier hierarchy across five servers in two data centers, validated end-to-end with IDM password sync.

### **IAM Toolbox Suite**

- Full-stack development of a React/Vite multi-app suite including the IDM Simulator (DOM XPath policy resolution, jadutil function implementations, XDS Validator), IDM Log Reader, DriverSync, Dyptich, GitHub Bridge, RDP Manager, and Password Generator.
- Built Jenkins/PowerShell email provisioning pipeline with attribute-based routing and Entra Connect Sync gating.

## **University of Michigan: Ann Arbor, Michigan**

March 2012 – October 2023

### **Roles**

- IAM Operations Team: Application Developer Lead (2022 – 2023)
- IAM Line of Business Team: Application Developer Lead (2013 – 2022)
- IAM Operations Team: Client Server Programmer Senior (2012 – 2013)

### **Production Support**

- Provided subject matter expertise for Active Directory, Azure/Entra AD, CyberArk, NetIQ eDirectory, NetIQ IDM, and Passwordstate, supporting an environment of 100,000+ users.
- Installed and configured infrastructure via Ansible for BIG-IP, Linux, and Windows.
- Performed monitoring and support of IAM infrastructure and applications via log review, custom scripting, Splunk alerts, etc.
- Produced ad hoc reports using Splunk, PowerShell, Python, etc.
- Processed single sign-on requests using the Internet2 SAML implementation, Shibboleth.

### **Project Sampler**

#### **Lead Active Directory Domain Administrator (2022 – 2023)**

- Served as lead Active Directory domain administrator of a 1-million-object domain with a highly distributed administration model.
- Performed domain controller promotions and Certificate Services upgrades using Ansible.
- Deployed Active Directory domain controllers to the Azure cloud service and Dearborn campuses.
- Upgraded Certificate Services using an offline root certificate authority and online issuing CA structure.

#### **Passwordstate Implementation (2021 – 2022)**

- Served as implementation project manager and technical lead.
- Installed, configured, tuned, and documented the application.

#### **Team Dynamix NetIQ IDM Driver Provisioning (2020)**

- Developed Team Dynamix NetIQ IDM user synchronization driver using the Scripting driver.

- Wrote custom Python scripts to synchronize users and groups from eDirectory to Team Dynamix.

### **Azure Implementations (2017 – 2019, 2022)**

- Performed swing upgrade of Azure AD Connect v2.
- Led identity provisioning efforts for two back-to-back Azure and Azure AD implementations.
- Customized user and group synchronization rules to match business process requirements.
- Created detailed cross-team go-live runbooks for a complex migration from an old tenant to a new tenant.

### **University of Louisville: Louisville, Kentucky**

1994 – 2012

#### ***Roles***

- Enterprise Development Team: Technical Lead
- Middleware Team: Enterprise Database Administrator
- Directory Services Team: Team Leader
- LAN Team: Team Leader
- Student Computer Labs: Team Leader

#### ***Project Highlights***

Built the institution's identity management practice from the ground up:

- Led the first comprehensive identity management implementation: installed and configured Novell DirXML (later NetIQ Identity Manager) and authored multiple connectors in XSLT.
- Led the subsequent technical migration to Oracle Identity Manager, including OIM database and application infrastructure, and developed Active Directory, Exchange, and Outlook Live connectors.

## **EDUCATION**

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### **University of Kentucky, Lexington, Kentucky**

Master of Science in Library Science

### **University of Louisville, Louisville, Kentucky**

Bachelor of Music in Music History, minor in Mathematics