

MARK J. ROSEBERRY, JR.

Service Delivery Lead

Enterprise IT Governance | Cloud & Endpoint Engineering | Pipeline Engineering | Applied AI

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Executive Profile: Service delivery leader with 12 years of experience spanning enterprise IT, cloud engineering, Arctic pipeline engineering, and capital project controls. Leads statewide endpoint lifecycle standards and modernizes enterprise IT policy across the Trans-Alaska Pipeline System (TAPS). Combines field-tested engineering judgment with hands-on cloud delivery and independent applied AI research to align technology investments with operational reliability.

12 Years

ENGINEERING & IT

TAPS Statewide

ENDPOINT & POLICY SCOPE

\$5M - \$30M

CAPITAL PROJECT CONTROLS

Multi-Model

APPLIED AI & MCP R&D

PROFESSIONAL EXPERIENCE

Enterprise IT & Operations Leadership

Alyeska Pipeline Service Company

July 2023 - Present

IT Service Delivery Lead - Endpoint & User Services

Statewide enterprise endpoint services supporting corporate offices, pump stations, and marine terminal operations.

- Enterprise Governance:** Authored and modernized published enterprise IT policies, including a full overhaul of the Mobile Device Policy establishing security and operational standards across TAPS facilities.
- Lifecycle Stewardship:** Rebuilt the enterprise hardware catalog and multi-year endpoint lifecycle standards; co-led statewide printer consolidation to reduce device sprawl, maintenance, and supply overhead.
- Incident Readiness:** Designed and deployed mobile command stations, scaling a live proof of concept into operational capability supporting emergency response and incident management teams.
- Executive Continuity:** Restored primary executive conference infrastructure ahead of a critical leadership summit, repurposing existing assets to avoid unnecessary capital expenditure.

Tex R Us, LLC (Managed Service Provider)

August 2022 - June 2023

IT Cloud Engineer

- Zero-Touch Provisioning:** Built Microsoft 365 and Entra ID environments and introduced the firm's first Windows Autopilot and Intune provisioning pipeline, automating endpoint configuration and security baselines.
- Cloud Migrations:** Led file server, email, and domain migrations to SharePoint Online, OneDrive, Exchange Online, and Google Workspace with enforced SPF, DKIM, and DMARC authentication.
- Security & Resilience:** Deployed MFA, Conditional Access, and endpoint protection; administered Cisco Meraki networks, multi-hypervisor virtualization, and backup and disaster recovery appliances.

UMIAQ Design, LLC

April 2022 - August 2022

Engineer I

- Arctic Municipal Infrastructure:** Delivered municipal water, wastewater, and utility engineering designs and construction administration for Arctic communities.

ASRC Energy Services - Houston Contracting Company

October 2014 - April 2022

Cost Scheduler / Project Controls Lead

September 2019 - April 2022

- Capital Project Controls:** Led Primavera P6 scheduling for North Slope pipeline, power, and fiber scopes (\$5M-\$30M), integrating resource-loaded baselines, WBS governance, and executive reporting.
- Commercial Analysis:** Produced earned value reporting (SPI/CPI), workforce forecasts, and Time Impact Analyses substantiating multimillion-dollar contract change claims.

ASRC Energy Services - Houston Contracting Company (Continued)

Field Engineering & Operations

Mechanical Field Engineer / Project Engineer

October 2014 - September 2019

- Engineering Automation:** Replaced manual surveying spreadsheets with an automated calculation engine computing coordinates, drill depths, and slurry volumes across 6,336 North Slope pipeline supports (VSMs) using deterministic logic with zero machine learning.
- Arctic Field Execution:** Delivered pipeline engineering packages for BP and ConocoPhillips North Slope fields; designed hydrostatic test manifolds and custom rigging that eliminated elevated ladder fall hazards.

Early Foundations (2008 - 2014): Engineering internships (AES), Arctic drilling operations (Kuukpik Drilling), and satellite ground-station RF interference research (NOAA).

APPLIED AI & INFRASTRUCTURE LAB

Independent R&D & Production Systems (2024 - Present)

- Vendor-Agnostic Context (MCP):** Built self-hosted Model Context Protocol (MCP) integrations and hierarchical markdown indexing (INDEX.md) enabling structured retrieval across Claude, Gemini, and OpenAI models.
- Hierarchical Context Indexing Engine (ot-context-engine):** Built on a 64GB Apple M4 Pro Mac Mini (gemma4:26b MLX). Indexed 8 public NIST, CISA, PHMSA, and ISA/IEC OT standards (128 pages / 72.9K raw tokens) into a hierarchical INDEX.md vault -- cutting vault size by 50.6%, preserving 100% fidelity across 22 technical matrices, and achieving 79.8% fewer query tokens, 5.57x faster TTFT, and a +25-pt lift in fact retrieval over raw document dumps.
- Bounded Multi-Agent Governance ("Frontier Council"):** Architected parent-worker delegation with supervisory watchdog timers (+30s to +60s) to contain token spend. Developed a multi-model "Frontier Council" convening Claude Opus, ChatGPT Pro, and Gemini Pro on high reasoning across gated review stages to cross-audit architecture, red-team edge cases, and prevent autonomous project drift.
- Edge Vision & Segmented Lab:** Operate a multi-VLAN virtualization and security testbed (IPS, SIEM, zero open inbound ports) running 4-season Alaska outdoor edge computer vision and event-driven automation.

CORE COMPETENCIES & TECHNICAL ARCHITECTURE

Cross-Functional Technical Mastery

SERVICE DELIVERY & GOVERNANCE - Enterprise IT Policy Modernization & Publishing - Statewide Endpoint Lifecycle & Hardware Catalog - Incident Readiness & Mobile Command Stations - Executive Collaboration Systems & Asset Continuity	CLOUD & MODERN WORKPLACE - Microsoft 365, Entra ID & Conditional Access - Windows Autopilot & Intune Provisioning Pipeline - SCCM Enterprise Administration & OS Transitions - Cloud Migrations: SharePoint, Exchange & Google
SECURITY & INFRASTRUCTURE - Multi-VLAN Network Segmentation & Zero Trust Tunnels - Suricata IPS Threat Prevention & Wazuh SIEM - Cisco Meraki Switching, Routing & Wireless - VMware ESXi, Proxmox VE & BCDR Engineering	ENGINEERING & APPLIED AI - Model Context Protocol (MCP) Server Integration - Bounded Agent Workflows & Dynamic Watchdog Timers - Oracle Primavera P6 Capital Project Controls (\$5M-\$30M) - Pipeline Hydraulics, Process Control & Slurry Automation

EDUCATION, CREDENTIALS & CONTINUOUS DEVELOPMENT

B.S. in Petroleum Engineering University of Alaska Fairbanks (2014) ANSEP Scholar Engineering Foundations: Process control systems, fluid dynamics, hydraulic pressure/drag, multiphase flow, thermodynamics, and petroleum chemistry.	CompTIA Professional Certifications Security+ Network+ A+ (2022) Continuous Technical Development Harvard CS50P (Python) Oracle Primavera P6 PMBOK Project Management (24.5 Hours)
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