



# TECHNICAL CAPABILITIES BRIEF

**PACE SETTER SOLUTIONS LLC** *High-Consequence Software Quality Assurance & Data Integrity*

## 1. STRATEGIC OVERVIEW

Pace Setter Solutions LLC provides specialized Software Quality Assurance (QA) and Technical Staffing designed for mission-critical federal environments. We bridge the gap between complex software requirements and production-ready deployments through our **Quality-as-a-Service (QaaS)** model. By integrating automated quality gates and a "Shift-Left" philosophy, we ensure system stability, compliance, and data fidelity for national-scale infrastructure.

## 2. CORE SERVICE PILLARS

### A. Automation Architecture & Engineering

We design and deploy containerized UI and API automation frameworks tailored for high-availability systems.

- **Technology Stack:** Playwright, Cypress, Selenium, K6, Jenkins.
- **Infrastructure:** Integration of AWS/Azure/GCP/Docker/Kubernetes into the CI/CD pipeline.
- **The Result:** Scaled automation coverage from zero to **85%+** for legacy-to-cloud transitions, reducing manual regression cycles from hours to minutes.

### B. Data Integrity & Migration Verification

Pace Setter Solutions specializes in the end-to-end verification of large-scale data migrations to cloud environments (AWS/Azure/GCP).

- **Custom Frameworks:** Development of automated validation engines using **Node.js, Mocha, and TypeScript** to replace manual spot-checking.
- **Fidelity Protocol:** Performance of bit-for-bit reconciliation across hundreds of thousands of records in parallel, ensuring zero data loss during high-consequence transitions (e.g., HHA, ASC, HOSPICE, and MDS datasets).

## C. Performance Engineering & Scalability

We conduct rigorous load and stress testing to identify system bottlenecks before they reach production.

- **Load Testing:** Simulation of peak enrollment and traffic periods (up to **5,000 RPM / 84 RPS**) using Artillery.io, K6, and JMeter.
- **API Stability:** Verification of 5x standard load capacity for internal AWS-hosted APIs, ensuring zero downtime during high-traffic federal enrollment windows.

## D. Mission-Critical Compliance

We ensure all deployments meet strict federal mandates without slowing down the development cycle.

- **Section 508 Accessibility:** 100% sign-off for public-facing federal portals using JAWS and AXE.
- **Security Alignment:** Compliance with HIPAA and NIST-aligned security validation protocols.

## 3. SPECIALIZED STAFF AUGMENTATION

We provide a **Rapid Bench Deployment** model (48–72 hour turnaround) for pre-vetted, US-based experts:

- **Roles:** Senior SDETs, Automation Test Leads, Performance Engineers, Data Validation Engineers, and QA Managers.
- **Vetting:** Every consultant undergoes a proprietary 3-stage technical evaluation and background screening.
- **Integration:** Our resources arrive trained in Agile/Scrum and DevSecOps environments for seamless day-one productivity.

## 4. DETAILED CASE STUDIES (Selected Performance)

### CMS Modernization & Data Migration

- **The Challenge:** Validating millions of healthcare records moving to AWS Cloud while reducing a manual 8-hour Excel-based verification process.
- **The Action:** Engineered a custom Node.js/Docker framework to automate data validation across 14 Scrum teams.
- **The Outcome:** Reduced the 8-hour test cycle to **30 seconds**. Validated hundreds of thousands of records across 200+ parallel test cases in **90 minutes** with **100% data fidelity**.

## Enterprise Infrastructure (DOD/Navy)

- **The Challenge:** Scaling regression testing for high-availability systems with zero existing automation.
  - **The Action:** Deployed containerized Playwright/Jenkins frameworks and automated sprint environment resets.
  - **The Outcome:** Orchestrated 500+ daily regression tests via AWS/Docker with a **99% success rate**, reducing developer downtime by **15%** per cycle.
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## 5. ADMINISTRATIVE & CONTACT DATA

- **CAGE:** 1ANQ5 | **UEI:** CF2AWSXNHEZ9 | **DUNS:** 131636096
- **Primary NAICS:** 541511, 561320, 541512, 541519
- **Product Service Codes (PSC)**

### IT & SOFTWARE SERVICES

**DA01** App Development Support

**DA10** Software as a Service (SaaS)

**DD01** IT Service Delivery & Ops

**DJ01** Security & Compliance

**DJ10** Security as a Service

### SUPPORT & ENGINEERING

**DE01** End User & Help Desk

**R408** Program Management

**R410** Program Evaluation

**R425** Engineering & Technical

- **Socio-Economic:** Small Business
- **CMMC Level 1 Certified**
- **Point of Contact:** Daniel Reale | 732-749-4074 | dreale@pacesettersolutionsllc.com
- **Website:** [pacesettersolutionsllc.com](https://pacesettersolutionsllc.com)

## 6. Labor Category Descriptions

### QA Automation Lead / Architect

- **Strategic Role:** Designs testing roadmaps and leads multi-team Scrum environments.
- **Expertise:** Full-stack QA strategy; Section 508 and HIPAA compliance; DevSecOps integration.

### Senior Software Development Engineer in Test (SDET)

- **Strategic Role:** Engineering-focused specialist building automated testing infrastructure and CI/CD quality gates.
- **Expertise:** TypeScript/JavaScript/Python; Playwright, Cypress, and k6; containerized test architecture.

### Security Engineer (DevSecOps & Compliance)

- **Strategic Role:** Integrates automated security scanning and vulnerability assessments into the SDLC to ensure continuous compliance.
- **Expertise:** Static/Dynamic Analysis (SAST/DAST); OWASP Top 10 mitigation; automated dependency scanning; RMF and ATO support.

### Data Validation Engineer (Migration Specialist)

- **Strategic Role:** Specialized in mathematical verification of large-scale data migrations.
- **Expertise:** Expert SQL and Node.js/Python; bit-for-bit reconciliation and automated fidelity verification.

### Performance & Scalability Engineer

- **Strategic Role:** Identifies system bottlenecks and ensures stability under peak federal enrollment loads.
- **Expertise:** JMeter, Artillery.io, and k6; API monitoring and AWS infrastructure stability.

### Quality Assurance Engineer (Accessibility & Functional)

- **Strategic Role:** Expert in functional integrity and Section 508 compliance, engineering the user experience to meet federal mandates.
- **Expertise:** Manual exploratory testing; screen reader engineering (JAWS/NVDA); WCAG 2.1/2.2 compliance.