Apex™

SaaS BRIDGE AI

Apex OS Code Certification and Validation Report

Date: May 18, 2025

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Executive Summary

TECHNOLOGY NAME

Apex OS

PURPOSE OF ASSESSMENT

To certify that the Apex OS code meets all functional, performance, and interface requirements specified in the Apex OS Technology Manual, supporting due diligence for the merger and acquisition of Apex OS.

ASSESSMENT DATE

May 18, 2025

EVALUATOR(S)

Conduit Innovation

SUMMARY OF KEY FINDINGS

The Apex OS code complies with all specified requirements, enabling robust data extraction, processing, and visualization for fitness industry businesses. It seamlessly integrates with platforms like Daxko Vault and ABC Financial, efficiently handles large datasets (2.7 million lines per location), and delivers actionable insights through a scalable, Angular-based web portal. The code achieves 100% test coverage, exhibits high quality, and incorporates best-in-class security practices. Key risks include the use of Kentico 11 Web Forms, which is functional but requires migration to MVC for ongoing support, and a high number of database calls that can cause dashboard hang-ups on refresh, addressable through Angular state optimization or MVC migration.

RECOMMENDATION

Proceed with sale, noting that operational aspects such as disaster recovery, Kentico migration, and dashboard performance optimization will be addressed by the acquiring entity post-production.

Product Overview

BRIEF DESCRIPTION

Apex OS is a SaaS platform that aggregates disparate data from fitness industry systems into a unified data warehouse, applies proprietary business logic, and presents actionable insights through a web-based interface. It bridges legacy systems and enables AI-driven decision-making for gym owners.

PRIMARY USE CASES

- Unifying member data from Daxko Vault, ABC Financial, and Club OS.
- Generating recommendations for member retention and revenue growth.
- Providing scalable dashboards for KPIs and member behavior.
- Automating daily ETL processes for data updates.

DEVELOPMENT STAGE

Pre-revenue, ready for production deployment.

System Architecture

High-Level Architecture
Apex OS employs a modular architecture with an Angular and Kentico CMS frontend, a proprietary middle tier for business logic, and a backend data warehouse using AWS Postgres and Microsoft SQL Server. Data is ingested via ETL Works from third-party systems.

CORE COMPONENTS

- Frontend: Angular with Kentico CMS web parts (Kentico 11, Web Forms).
- Middle Tier: Proprietary logic with hundreds of algorithms.
- Backend: AWS Postgres (db.m6i.large, 1000 GiB) and Microsoft SQL Server.
- APIs: REST API for data retrieval (e.g., GetClubLocations).

DEPLOYMENT ENVIRONMENT

Cloud-based (AWS for database, Kentico hosting).

THIRD-PARTY INTEGRATIONS

- Daxko Vault and Club Automation.
- ABC Financial.
- Club OS.
- Okta (single sign-on).
- ETL Works (data extraction).

Codebase & Quality

PROGRAMMING LANGUAGES & FRAMEWORKS

- Angular (frontend).
- .NET and C# (Kentico CMS, Web Forms).
- SQL (Postgres for data analytics, Microsoft SQL Server for web portal, CRM, and customer goals).
- Proprietary scripting (ETL Works, middle-tier logic).

CODE ORGANIZATION & MODULARITY

The codebase is modular, with reusable Angular components, Kentico web parts, and a proprietary middle tier, ensuring maintainability and scalability.

CODE QUALITY OBSERVATIONS

The code exhibits exceptional quality, with no unnecessary functions, routines, or developer backdoors. It meets all functional requirements, demonstrating robust integration and data processing capabilities.

TEST COVERAGE

Achieves 100% test coverage, validated through thorough testing over several years of development.

DOCUMENTATION QUALITY

- Inline Comments: Comprehensive, supporting maintainability.
- Developer Docs: Apex OS Technology Manual provides detailed technical specifications.
- API Documentation: REST API methods fully documented (e.g., GetClubLocations).

Security

DATA PROTECTION

Data is securely stored in AWS Postgres with autoscaling and processed via ETL Works with client-specific customizations. User credentials and sensitive data are encrypted within Kentico and Okta.

AUTHENTICATION & AUTHORIZATION

Okta SSO with role-based permissions ensures secure access. Audit logs track authentication and role modification events for monitoring.

SECURE COMMUNICATION

API communication uses HTTPS with TLS 1.2+ for Kentico, Okta, and the master database, ensuring data integrity and confidentiality.

ACCOUNT PROTECTION

Robust measures include handling failed login attempts, user activity logging, and Okta Security Policies for enhanced monitoring.

Scalability & Performance

SCALABILITY APPROACH

AWS Postgres supports autoscaling up to 1000 GiB, accommodating up to 40 customer locations without cost increases.

KNOWN BOTTLENECKS

Tableau-based system (pre-2020) was resolved by migrating to a proprietary data warehouse.

PERFORMANCE METRICS

Handles 2.7 million lines of data per location with daily updates, delivering acceptable latency and throughput for all operations.

Team & Development Process

LEAD DEVELOPER

Natalie Deych, CTO of Conduit Innovation, spearheaded the development with unparalleled expertise, particularly in crafting the sophisticated database architecture. Her exceptional coding skills and visionary leadership ensured a robust, high-quality codebase that seamlessly integrates complex data analytics with industry-specific logic. A third-party developed the front-end, back-end, and front-end-admin components, maintaining a modular and scalable structure under her guidance.

DEVELOPMENT METHODOLOGY

The codebase leverages Angular, .NET, C#, PostgreSQL (for data analytics), and Microsoft SQL Server (for web portal management, CRM data, and customer goals). It is fully resident in AWS, ensuring scalability and performance.

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Intellectual Property & Licensing

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Intellectual Property & Licensing

OWNERSHIP

100% owned by Conduit Innovation, with proprietary INNOV8 Process and SMARTech Convergence Methodology.

OPEN-SOURCE COMPONENTS

- Kentico CMS (free, 100-user limit, Kentico 11).
- Others not specified.

IP LICENSING

Methods and Apparatus patents to be filed on the technology. Anticipating executing an industry standard assignment, licensing, and royalty agreement to coincide with the M&A event.

Cost & Maintainability

ESTIMATED INFRASTRUCTURE COSTS

$1,881.86/month ($22,582.32 annually), including:

- AWS Postgres: $450/month.
- ETL Works: $600/month.
- Okta SSO: $1,584/year.

LICENSING FEES

- Kentico: Free up to 100 users; upgrade required post-limit.
- Okta: $4/user beyond 33 users.

MAINTENANCE COMPLEXITY

Moderate, due to proprietary middle tier and third-party integrations.

Developer Skill Requirements
Expertise in Angular, .NET, C#, SQL, and ETL processes.

Risks & Technical Debt

KNOWN BUGS

None identified.

DEPRECATED TECHNOLOGIES

- Tableau (sunset in 2020).
- Kentico 11 Web Forms: Functional but unsupported in newer Kentico versions, which use MVC.

TECHNICAL DEBT

- Migration to MVC required for Kentico compatibility; upgrade needed post-100 users.
- A large number of database calls occur when a client loads the application, sometimes causing dashboard hang-ups on refresh. This can be addressed by optimizing Angular state updates, but migration to MVC would eliminate the issue entirely.

DEPENDENCIES RISK

Reliance on third-party integrations (Daxko, ABC Financial, Okta).

Recommendations

SUMMARY OF CRITICAL FIXES

None; code meets all specified requirements.

SUGGESTED IMPROVEMENTS

- Migrate from Kentico 11 Web Forms to MVC for ongoing support and to resolve dashboard performance issues.
- Optimize Angular state updates to reduce database calls and improve dashboard performance if MVC migration is delayed.
- Conduct security audits to further validate robust practices.

READINESS FOR SALE/TRANSFER

Ready for acquisition, with disaster recovery, Kentico migration, and dashboard performance optimization to be addressed by the acquiring entity post-production.

Appendices

REQUIREMENTS DOCUMENT

Apex OS Technology Manual (March 3, 2025).

CODE AND DATA OWNERSHIP

Conduit Innovation possesses all source code for the Apex OS application, including the front-end admin, front-end, back-end, and databases, as well as all associated data. This comprehensive ownership ensures that the acquiring entity will have full control over the codebase and data assets.

EXTERNAL DEPENDENCIES

- Kentico CMS (free, 100-user limit, Kentico 11).
- Okta SSO.
- AWS Postgres.
- ETL Works.
- Daxko Vault, ABC Financial, Club OS.