QBurst | A High AI-Q™ Company



Accelerating Aerospace Cloud QA Automation and DevOps With Claude

Embedding AI-driven workflow augmentation across test automation, simulation, and CI/CD quality gating to achieve contractual release confidence.

Overview

QBurst rolled out Claude Code and Claude for Teams across the client's cloud services QA and DevOps teams, embedding AI workflow augmentation directly into test automation, CI/CD gating, and release verification.

- **AI-Augmented Testing & Simulation:** Leveraged Claude to author test automation scripts and build cabin-to-cloud and airline-to-cloud simulators, eliminating physical test bench dependencies.
- **Automated CI/CD Quality Gates:** Integrated automated test gating to validate pull requests prior to merge, enforcing rigorous release readiness.
- **Defect-Free Deployment:** Shipped the critical PMD Phase 1 release with zero Cloud-related hotfixes under strict contractual acceptance standards.



Client Profile

The US-based client delivers high-reliability connected aircraft solutions and digital cloud platforms, transitioning global airline operators to next-generation connected services.

Challenges: Stringent Acceptance and Physical Hardware Constraints

Supporting mission-critical aerospace cloud services presented severe engineering and delivery constraints.

High Cost of Field Defects: In-flight software issues and field hotfixes carry substantial operational costs and contractual penalties with commercial airline customers.

Hardware-Bound Verification Bottlenecks: Quality engineering traditionally relied on physical aircraft and lab environments, slowing verification throughput and feedback loops.

- **Complex Legacy Migration Pressures:** Transitioning airline clients from legacy SmartPipe architectures to modern cloud services while maintaining rapid delivery velocity.

Embedded Engineering-Workflow Augmentation

Serving as the sole delivery partner under a staff augmentation model, QBurst embedded Claude into the core software development lifecycle (SDLC).

- **Claude Code & Teams Integration:** Deployed Claude Code and Claude for Teams within the client's organization, enabling QA and DevOps engineers to augment daily workflows natively.
- **Virtual Simulation Engineering:** Developed cloud-based cabin-to-cloud and airline-to-cloud software simulation tools using Claude, eliminating reliance on physical test setups.
- **Automated Test Authoring & Maintenance:** Accelerated the generation and refactoring of end-to-end regression suites and system verification scripts.
- **Pre-Merge CI/CD Gating:** Established automated PR validation gates, ensuring code builds meet strict reliability criteria before merging into release branches.

Technical Highlights & Operational Tooling

- **AI Tooling & Environments:** Claude Code, Claude for Teams (claude.ai) operating securely within the client's enterprise perimeter.
- **DevOps & Delivery:** Automated CI/CD pipelines, automated PR gating, branch-level verification policies.
- **Simulation & Testing:** Cabin-to-cloud simulators, airline-to-cloud mock endpoints, end-to-end test automation suites.
- **Coverage Scope:** Customer integration testing, system verification, release readiness, and regression governance.

Impact: Zero-Defect Releases and Accelerated Testing Cycles

Embedding AI directly into testing and release workflows yielded immediate quality and operational milestones:

- **Zero Cloud-Related Hotfixes:** Deployed the major PMD Phase 1 release into production without requiring a single post-launch cloud fix.
- **Hardware Dependency Removed:** Enabled continuous testing through virtual cabin-to-cloud simulators, removing physical environment bottlenecks.
- **Strengthened Release Confidence:** Enforced strict, automated pre-merge gating to maintain contractual quality compliance with airline partners.
- **Seamless Cloud Modernization:** Accelerated customer transitions from SmartPipe to client's cloud services platform with enhanced test velocity.