CYIENT

FAST

FRAMEWORK FOR AUTOMATED SYSTEM TESTING

Harnessing the Power of Automation,
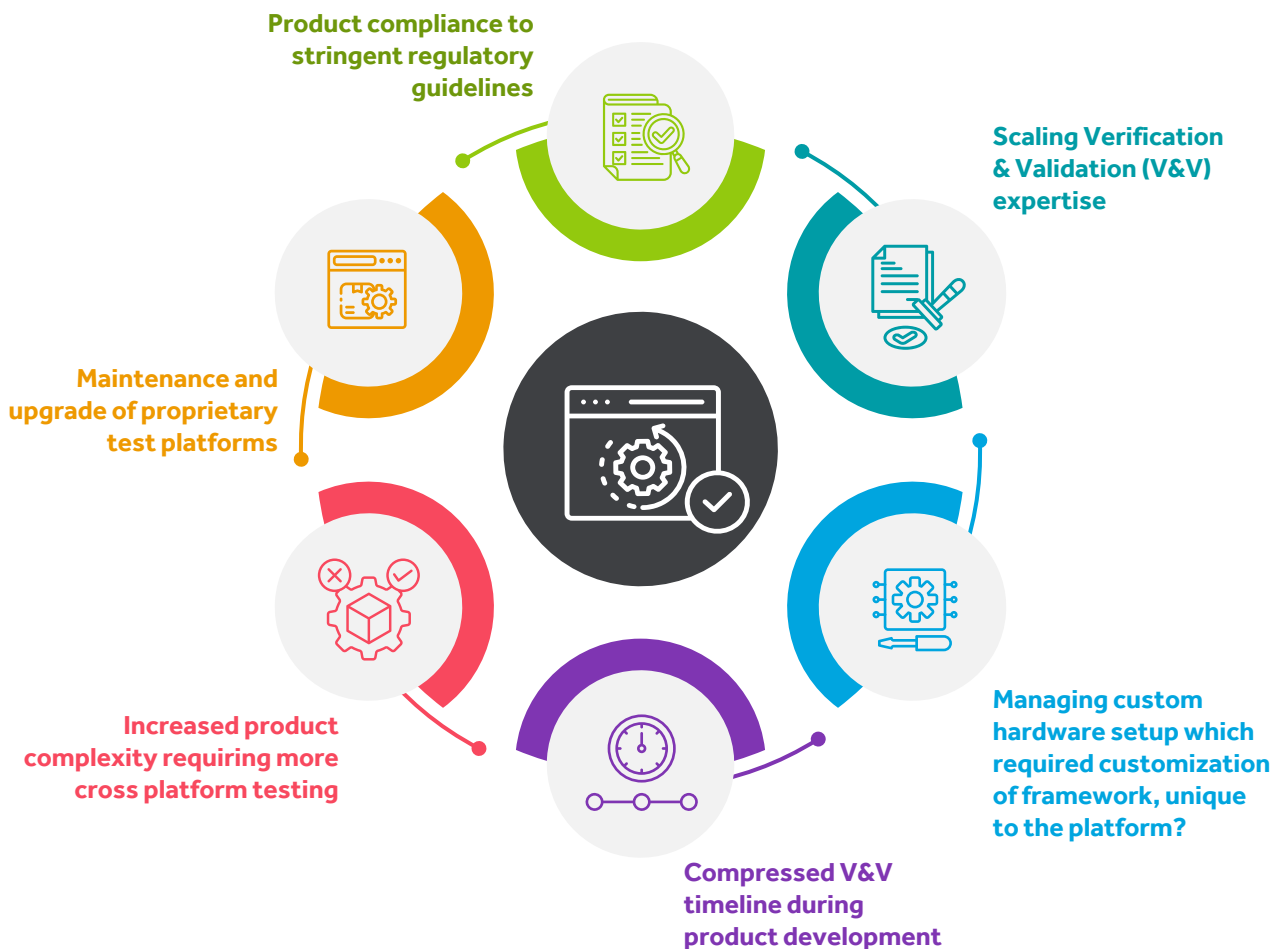Ensuring Dependable and Efficient Software Testing

What is CyFAST?

CyFAST is a single automated test solution for applications developed on various platforms (Web, Windows Desktop, Mobile, IoT, Embedded Device Applications, Networked Embedded Devices, and APIs). Cyient's CyFAST solution provides a very simple intuitive test configuration and orchestration workflow using a secure, enterprise grade scalable cloud environment. Once the test environment is configured during project setup, test engineer needs to select tests, define rules and execute test cases.

Key Challenges in Automated Testing

Product compliance to stringent regulatory guidelines

Scaling Verification & Validation (V&V) expertise

Managing custom hardware setup which required customization of framework, unique to the platform?

Compressed V&V timeline during product development

Increased product complexity requiring more cross platform testing

Maintenance and upgrade of proprietary test platforms

CyFAST – a Solution to Automate Testing

Cross-platform Testing - Single Test Platform to serve automation testing on various platforms (embedded, web, mobile, desktop, API, and simulators)

Reuse existing automation assets to enable end to end solution testing

Risk-based Testing - Risk based prioritizing test case execution and planning

Traceability Management Easy to integrate with ALM & CI/CD tools to create end to end traceability

Distributed Testing - Plan and schedule multisite and parallel/distributed execution of test cases

Customized Reports - Report can be generated in multiple/customized formats

Scalability - Easy to use, scale or develop embedded device testing libraries and hooks

Cognitive Intelligence – Automation of impact analysis, regression plan generation and improved productivity in test case script development
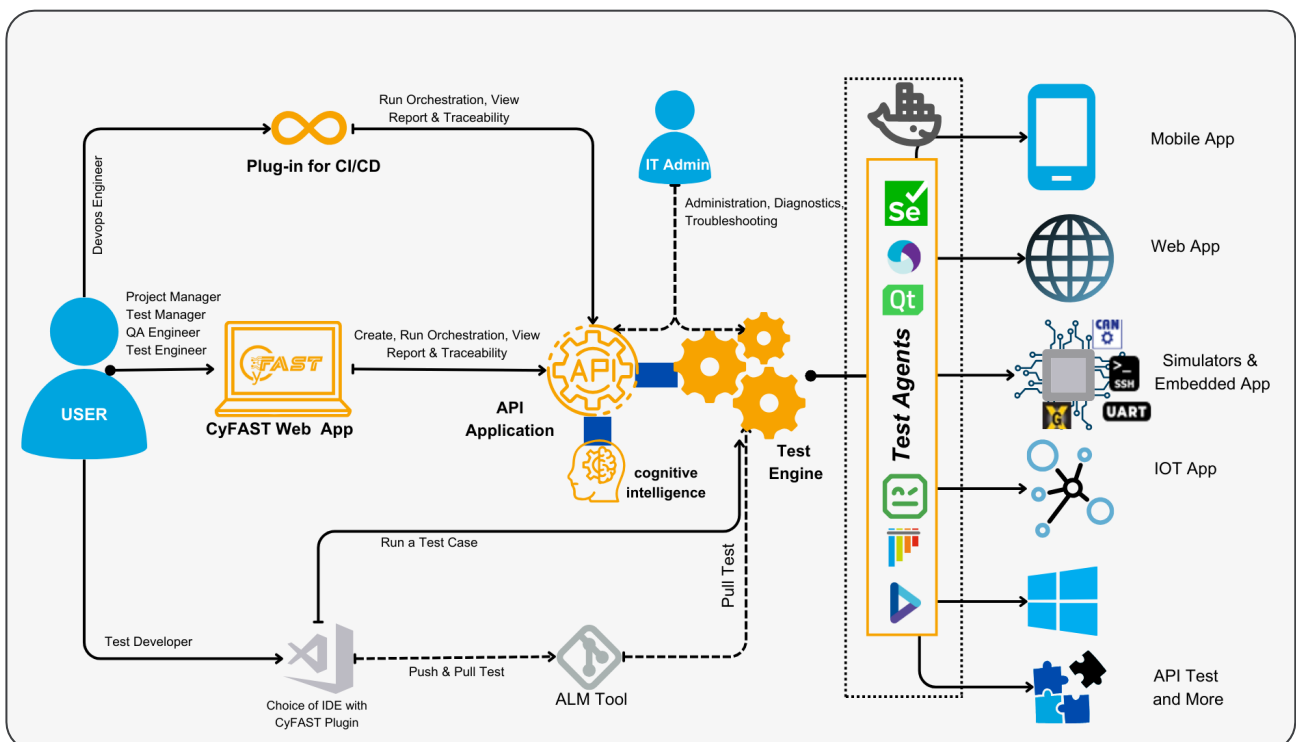
BENEFITS

- Supports **wide range of applications** across **healthcare, aerospace etc.,** including **embedded applications**

- Reduction in License cost

- Maximum Test coverage

- Lower operational costs

- Reduction in time-to-market up to 50%

- Plug & Play Model with minimal customization.

- Ability to use existing test assets

FEATURES

- E2E System and Functional testing

- Risk-based impact analysis for test planning, prioritization, and execution

- Cloud based remote execution of tests with ease.

- Planning and scheduling multisite and parallel test execution.

- Plug-and-play integration with ALM tools (Azure/Jenkin Extension)

- Report customization to support QMS and Industry specific compliance.

- Cognitive intelligence for optimized test orchestration, risk-based testing, and Regression analysis.

- Ready to Use Embedded assets and library to execute tests on embedded systems

Run Orchestration, View Report & Traceability

Plug-in for CI/CD

Devops Engineer

Project Manager
Test Manager
QA Engineer
Test Engineer

CyFAST Web App

Create, Run Orchestration, View Report & Traceability

USER

API Application

cognitive intelligence

IT Admin

Administration, Diagnostics, Troubleshooting

Test Engine

Test Agents

Mobile App

Web App

Simulators & Embedded App

IOT App

API Test and More

Run a Test Case

Pull Test

Test Developer

Push & Pull Test

Choice of IDE with CyFAST Plugin

ALM Tool

Healthcare Case Studies

- **Patient monitor** – GUI based real-time patient monitoring system required multiple combination of scenarios to be generated and verified, which was time consuming and prone to error; test automation using CyFAST, reduced 80% test execution time, and **60%** in automation of test cases.

- **Analyzer Instrument** – Real-time analyzer instrument required complex embedded system testing involving motor controls, lighting and many other subsystem and integration testing; test automation using CyFAST, **reduced 85% test execution time**, and 50% in automation of test cases.

- **Infusion Pump** – An embedded medical device with flow measurement, motor control and GUI based workflow verification required deep system understanding and complex tools know how to generate the various scenarios, which were automated using CyFAST, and **reduced 80% test execution time**, and **70% in automation of test cases**.

Aerospace Case Studies

- **Flight attended panel (FAP)** - FAP consists of many screens and options for test verification. Hardware availability and system access was difficult to reproduce and scale; using CyFAST for remote multi-channel execution of tests on proprietary hardware, **reduced time of execution by 90%.**

About Cyient

Cyient (Estd: 1991, NSE: CYIENT) is a global Engineering and Technology solutions company. We collaborate with our customers to design digital enterprises, build intelligent products and platforms and solve sustainability challenges. We are committed to designing tomorrow together with our stakeholders and being a culturally inclusive, socially responsible, and environmentally sustainable organization.

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