



## Achieving Continuous Delivery

### iACD - Appian Continuous Delivery Framework

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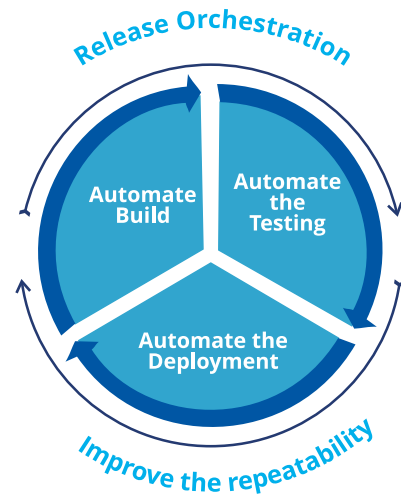
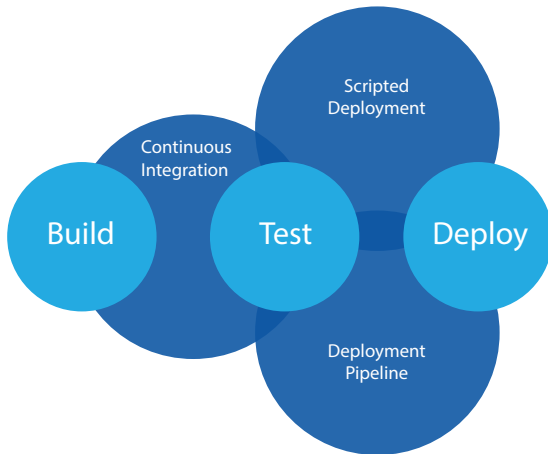
#### Overview

iACD is a Continuous Delivery Framework that allows organizations to respond to increasing business demands by delivering features and functionality with a quicker time to market. The framework uses Appian's Process Management capabilities to orchestrate and automate the application release process. It brings together a number of the key DevOps processes, specifically: Continuous Integration, Scripted Deployment and the Deployment Pipeline. These DevOps processes enable Continuous Deployment, which ultimately allows an organization to achieve the Continuous Delivery of new releases of an application.

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## Building Blocks of Continuous Delivery



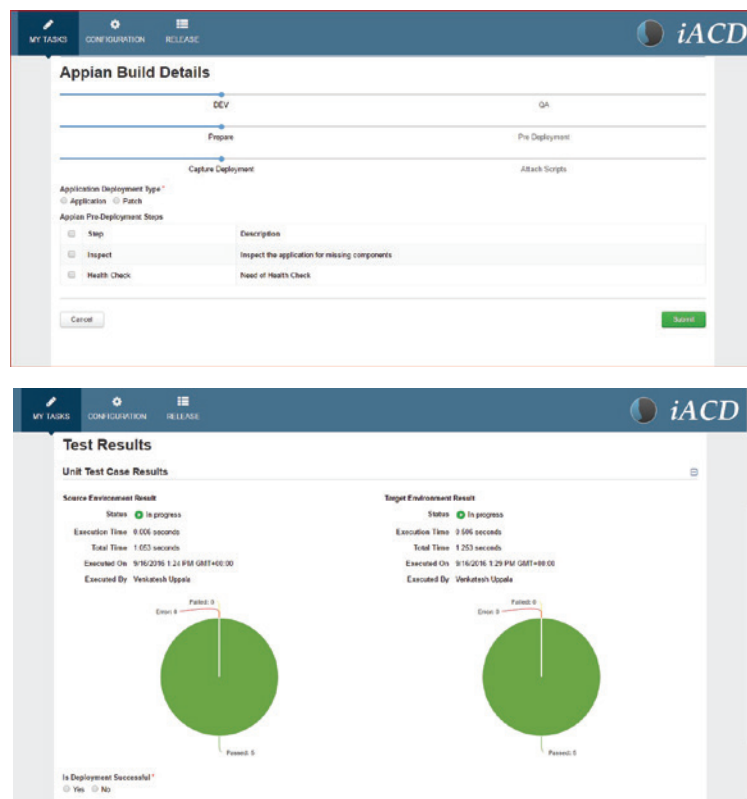
Business Challenges	Technical Challenges
<ul style="list-style-type: none"> <li>◆ Inability to respond to ever increasing business demands for new features and functionality</li> <li>◆ Waiting for significant periods of time, for what is perceived as minor changes or additions</li> <li>◆ Regimented Quarterly release cycles due to lengthy test and regression test cycles</li> <li>◆ Inability to compete with younger more agile businesses, not trapped by legacy systems and processes</li> <li>◆ Unable to innovate at pace</li> </ul>	<ul style="list-style-type: none"> <li>◆ Lack of cross-functional teams across the Development, Testing and Operations organizations</li> <li>◆ Insufficient test coverage and test automation to regress test functionality in a timely manner</li> <li>◆ Lack of environments and a single route to live, causing a bottleneck in the delivery cycle</li> <li>◆ Accidental defect introduction causing the regression of functionality and cyclical delays</li> <li>◆ Failed Builds into upstream environments due to human intensive and error-prone release processes</li> </ul>

### Solution Overview

iACD utilizes the Appian's BPM platform, combined with an organization's incumbent DevOps Tools, to achieve the Automated Build, Automated Test and Automated Deployment of an application. It provides a single view of the Release Orchestration process across various environments i.e. Development, System Integration Test, System Acceptance Test, User Acceptance Test and Production.

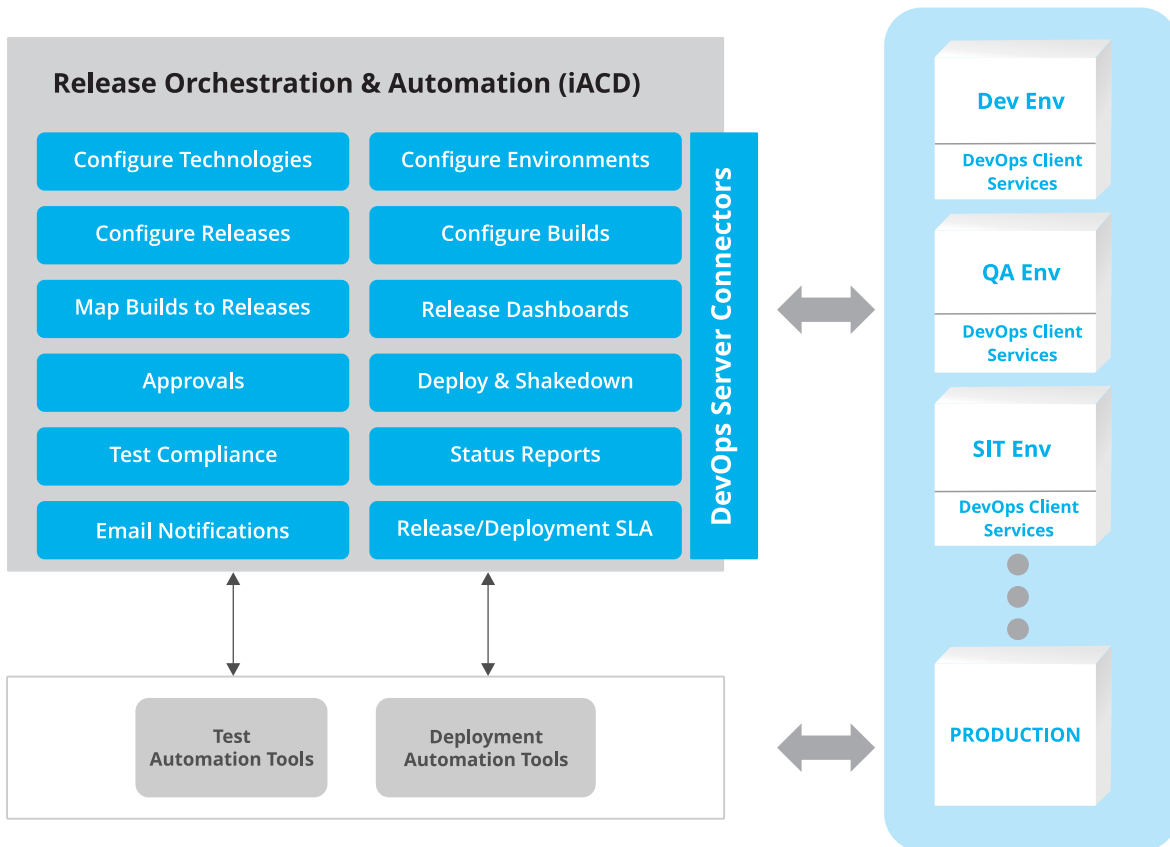
iACD considers a Release as a 'Process' within Appian and tracks it end-to-end, enforcing best practices on the following lines:

- ◆ Leverage Appian's Batch Testing modules to validate the build in Development, prior to deployment
- ◆ Automatic creation of the Build within Development for deployment
- ◆ Automated Deployment of the build to upstream environments using tools like IBM uDeploy, Jenkins and CA's Release Automation
- ◆ Cross-check deployment by comparing validation rules and automated testing results across environments
- ◆ Automated Smoke and Functional Testing of the build in higher environments using tools like Selenium and FitNesse
- ◆ Generation of Release notes and other build artefacts, related to the Release
- ◆ Pre-Deployment Code quality checks in Development including ability to upload validation scripts



Incessant's iACD framework maintains the Release & Build hierarchy. A Release can contain multiple builds, some of which may not be Appian related, i.e. Java, .NET. iACD encapsulates and orchestrates this release process irrespective of the technology components and allows releases to be triggered either manually, or scheduled for a future date and time. iACD can also orchestrate deployments across on-premise and cloud installations of Appian.

The iACD architecture uses DevOps agents (Client Services) that are deployed throughout various environments. These agents are exposed as REST services that execute operations that include performing builds, running test scripts for integration, regression testing and orchestrate release automation.



## Unique Features of iACD Framework

- ◆ Deploys applications with lower risks and fewer failures
- ◆ Manages multiple deployments occurring on a scheduled basis
- ◆ Provides a 360° view of all release processes, deployments and build levels across multiple environments
- ◆ Performs automated smoke testing before and after deployments
- ◆ Performs full regression tests as required in each environment
- ◆ Automates quality checks before and after deployment for each build
- ◆ Sends real time notifications and alerts of the deployment statuses
- ◆ Uses out of the box connectors to integrate with commonly used DevOps Tools:
  - I. Release Automation (CA RA and IBM uDeploy)
  - II. Continuous Integration (Jenkins and Bamboo)
  - III. Test Automation (Selenium and FitNesse)

For more information, write to [contact@incessanttechnologies.com](mailto:contact@incessanttechnologies.com)

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