

UNIFACE CONTINUOUS INTEGRATION

Save time building and releasing your software

Using Compuware's Continuous Integration configuration service

When software developers work in parallel to implement different functionality, they are normally working on increasingly out-of-date code which does not reflect the other pending changes. That means that a significant integration task is needed late in the project, with a risk of quality problems and consequent delays. The Continuous Integration (CI) approach addresses this problem by integrating, rebuilding and re-testing the code frequently. The result is better-quality software and projects that are delivered on time and to budget. Compuware can help you apply CI to Uniface projects, with or without third-party tools.

THE PROBLEM

As the complexity of a software project grows, the build process can become unmanageable. New bugs are discovered late in the lifecycle as developers integrate new code and attempt to build it for the first time. This can lead to large gaps between deployments, unexpected delays and a longer time to market for features that are needed urgently to address fast-changing business needs.

WHAT IS CONTINUOUS INTEGRATION AND HOW CAN IT HELP?

CI is the practice of frequently integrating changes with a central code repository and creating a build immediately. The build is typically initiated by a version control commit or a daily build task (which can be run overnight).

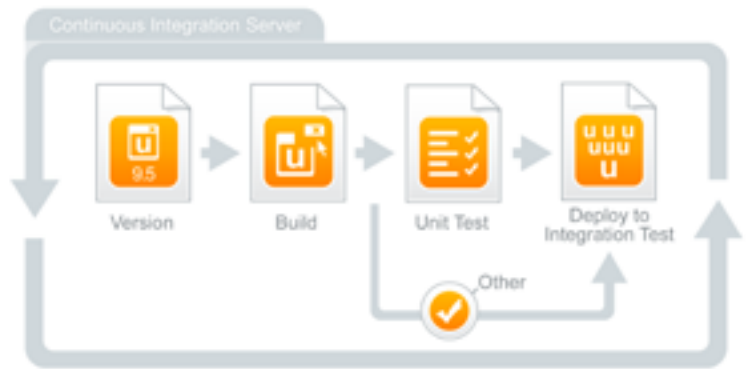


Figure 1: The Continuous Integration (CI) cycle.

WHAT IS CONTINUOUS INTEGRATION AND HOW CAN IT HELP? (Continued)

The benefits of this approach are:

- You gain real-time visibility of the current state of the development code and changes that would prevent the amended code from building successfully are quickly identified and resolved
- Visibility of the project build history provides valuable information about common problems that need to be addressed
- Frequent integration improves developer communication and, consequently, improves your ability to build and test a release at short notice, helping you to complete projects on time, so you can meet time-to-market commitments and stay within your budget
- When combined with other techniques, Continuous Integration becomes even more powerful. If a Test Driven Development process is followed to produce unit tests for the project, these can be run on each build to ensure that the software is still behaving as the developers expect when a change is made
- You can integrate additional custom tasks within your CI process (examples include code documentation, deployment to the test environment, gathering of quality and performance metrics and so on). This typically involves further CI build server customization
- You save money and effort on building and releasing software.

COMPUWARE CAN HELP YOU IMPLEMENT CI

There are a number of open source, third party tools available, such as CruiseControl.NET and Hudson, that can help you implement a continuous integration process. However, these are not “Uniface-aware” as standard and, therefore, additional work is required to hook into the version control updates; automate the Uniface build, test and other custom processes; and integrate results into the web dashboard. Some tools are also more difficult to setup and configure than others.

Using Compuware Uniface Services you get access to:

- Sample code, scripts and configuration files for Uniface integration with existing CI tools and version control systems, or alternatively, sample code to help create a full Uniface solution
- Experienced consultants who can help with best practices, implementation and integration of your tools and processes.

COMPLEMENTARY OFFERINGS

Prior to implementing Continuous Integration, you should ideally implement a version control process. If needed, Compuware provides a complete configuration service to assist with Uniface version control integration for a number of tools (see separate fact sheet).

Combined with Test Driven Development (again described in a separate fact sheet), new builds can be self testing, giving confidence in the quality of the software and alerting developers to problems early in the project lifecycle.

If you'd like to know more about Continuous Integration, or about our products and services in this area, Compuware Uniface Services can help.

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To learn more, visit: www.uniface.com

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