PARASOFT®

Parasoft Development Testing Platform

RELEASE NOTES

Parasoft Development Testing Platform (DTP) eliminates the business risk of faulty software by enabling organizations to gain visibility into, and enforce consistency of, software quality practices throughout the SDLC. It enables your software quality efforts to evolve from Automated to Continuous—delivering a platform for defect prevention and the uniform measurement of risk across projects and teams.

With seamless integration into your software development environment, you can observe and collect data from across the SDLC infrastructure; including open source and third-party testing tools. Parasoft DTP allows you to aggregate disparate data with statistical analysis techniques—transforming traditional reporting of data into a central system of decision based on information.

Next Evolution of Process Intelligence Engine (PIE)

PIE, Parasoft's award-winning technology, identifies patterns buried deep in the raw data collected from disparate components of the development infrastructure. PIE uses these patterns to deliver actionable, prioritized findings and provide unprecedented levels of visibility into development processes. This helps you understand how well the code is tested and constructed so that you are truly able to make the necessary business decisions based on your organization's needs.

Increased Framework Flexibility for Understanding Risk in your Code

The PIE interface has been extended to enable the graphical creation and chaining of analytics to identify the business risks "hidden in the code". The identification of risk can be used to trigger workflows, either within or outside of the DTP ecosystem, and report on how they correlate to the rest of the code base through the centralized reporting interface.

Every organization faces different business risks—and within an organization, the risks confronting each project team also vary. To efficiently mitigate risks associated with specific teams, the application of automated tools and analysis techniques must be optimized to prevent software defects.

PIE allows you to collect, prioritize, and create derivative analysis from an array of testing tools and automated analysis techniques—giving you the ability to improve on the raw data individually collected by testing and development components. This flexibility allows you to apply multivariate analysis on data collected across the entire development infrastructure, while targeting specific risks and implementing greater automation around your defect prevention processes.

Advanced Workflows for Continuous Testing

DTP 5.1 extends support for advanced defect remediation workflows. The metadata associated with findings (e.g., risk/impact, priority, assignment) can be set based on analytics implemented with PIE. Workflows can be applied on-demand, according to scheduled intervals, or in an event-based model, so developers can efficiently focus on the findings that are important to the business.

Developers can use the web-based prioritization view to navigate findings associated with their project or download important findings directly into their IDE for remediation. Once remediated, code can be checked back into source control for analysis as part of a CI process or, when combined with the local execution of the DTP Static Analysis Engine, immediately validated on the developer's desktop.

This flexibility affords organizations the ability to efficiently execute defect containment strategies that assist in the mitigation of business risks. DTP seamlessly integrates with CI and DevOps tools, which help you ensure that the goals associated with your continuous testing implementation are achieved.

New DTP Engines and Navigation for Unit Testing and Code Coverage

Parasoft DTP 5.1 introduces the next generation of code analysis engines and connectors for unit testing and code coverage. These tools allow you to capture and report both results and code coverage from any type of testing activity (including unit, functional, and manual tests).

The new unit test connectors collect execution data from open format test frameworks (such as JUnit, NUnit, Google Test, and more) then centrally aggregate and process the information within DTP. You can leverage PIE to dissect and analyze the data to answer critical questions about software quality, such as:

» Have I tested my business critical functions enough?

» Where is the risk in my code?

» What is my true total code coverage across my testing practices?

Enhanced Unit Testing Workflows and Exploration

DTP collects and centralizes code-level unit, integration and message layer test results—giving you the ability to truly understand your test data.

DTP's interface for navigating and exploring test and coverage data arms you with critical information for answering detailed code coverage questions, such as:

» Has the code been thoroughly tested?

» How has the code been tested?

» What parts of the code have test coverage?

» How many tests validate specific parts of the code base?

The ability to merge different runs of different kinds of testing enables a holistic view of the quality of your testing. Rather than having to look at individual silos, such as a set of unit tests or a set of functional tests, tests can be brought together and viewed in a centralized manner as a complete set of continuous test results.

True Test Coverage Data

Parasoft DTP can map and merge coverage from multiple runs to expose the true combined code coverage. This is important because tests very rarely have a one-to-one relationship with code. Tests overlap and coverage vary, so calculating true coverage requires a sophisticated system that can show how tests actually cover the code. This is critical to exposing the inherent risks in the application.

New Widgets

Parasoft DTP 5.1 continues to add out-of-the-box tools to help you rapidly monitor, measure, and plan development quality goals. This release includes the following new widgets:

- **Tests Statistics:** Provides statistical and trending information about tests, including the percentage of tests passing, number of tests, number of failed tests, and number of incomplete tests
- **Tests Summary:** Shows the percentage of unit tests that are succeeding, as well as the change in test success rate
- **Coverage per Run:** Shows coverage information for a specific test run
- **Coverage Summary:** Provides an overview of merged coverage information across multiple test runs
- **Coverage Trend:** Shows how merged coverage has changed over time and includes the ability to navigate to snapshots of the coverage.
- **Tests Trend:** Provides a color-coded view of the change in number of tests
- **Static Analysis - Top 5 Assignees Bar/Table:** Shows five users that have the most static analysis violations assigned to them in either a bar or table format

Additional Updates

The following changes were also made to Parasoft DTP:

- Support for Google Chrome 37 and later
- MySQL 5.1.x and Oracle 9, 10 are no longer supported

PRs/FRs Resolved

The following IDs refer to reported PRs and FRs:

Reported PR/FR ID	Description
109878/109382	New database updater to increase size of storage for test results stored in Oracle.