

Change-Based Testing

Parasoft can help you optimize your testing efforts by automatically identifying the test cases directly related to your most recent source code modifications. You can then rerun only the impacted test cases rather than retest the entire system after each modification. Parasoft's change-based testing solution is enabled through Parasoft DTP, which collects and correlates development and testing data. You can process the data with DTP extensions that execute custom calculations, trigger workflows, and perform other intelligent analytic processes.

In this section:

- [Correlating Code via Test Case Execution](#)
- [Correlating Tests](#)
- [Determining Where Retesting is Needed](#)

Correlating Code via Test Case Execution

Parasoft DTP can monitor which source code is exercised when a test executes, then correlate that source code with the appropriate task, requirement, or defect.

To do this, you need to:

1. Enable reporting to Parasoft DTP - see [Connecting to DTP](#).
2. Mark which task, requirement, or defect each test is related to - see [Indicating Code and Test Correlations](#).

You can also review Parasoft's [Application Coverage](#) workflow for additional information.

Correlating Tests

If you are correlating code via test case execution (as described above) no additional configuration is necessary.

Determining Where Retesting is Needed

You can extend DTP with custom tools from the [Parasoft Marketplace](#), such as the Change Based Testing DTP Workflow, to help you determine when retesting is required. The high-level process is:

1. DTP collects data from SOAtest
2. DTP correlates the SOAtest data with additional observations collected throughout the application development and testing lifecycle
3. Change Based Testing and other DTP Workflows further refine and process the data according to your policies
4. Prioritized, actionable findings are returned to the developer or tester for immediate implementation

For details, see [Change Based Testing](#) in the DTP documentation.