

Testing from the Command Line Interface

This topic explains how to run a test from the C++test command line interface (`cpptestcli`), which is described in [Command Line Interface \(cli\)](#).

Sections include:

- [Prerequisites](#)
- [Setup Overview](#)
- [cli Usage](#)
- [cli Options](#)
- [Local Settings \(Options\) Files](#)
- [Using Variables in Local Settings \(Options\) Files](#)

Prerequisites

The command line mode requires a command line interface license (available with C++test Automation Edition).



Extended Command Line Mode vs. Desktop Command Line Mode

There are two command line interface licenses available for C++test:

1. **Extended Command Line Mode** is provided in Automation Edition and available for Custom Editions.
2. **Desktop Command Line Mode** is available for Custom Editions. The Desktop Command Line Mode provides similar functionality to the Extended Command Line Mode, except that parallel processing is limited to simultaneously executing 8 parallel threads for a given task (e.g. static analysis) in the Desktop Command Line Mode.

- To access the full functionality available with the Automation Edition, you also need to install and configure Parasoft Team Server.
- We strongly recommend that you configure C++test preferences (for Team Server, task assignment, reporting, etc.) and team Test Configurations as described in the [Configuration](#) before you start testing.
- For command line execution, you will need to ensure that the installation directory is on the path, or launch `cpptest` with the full path to the executable (for example, `c:\parasoft\c++test\cpptestcli.exe`). Before you can test code with C++test, it must be added to a Visual Studio project. See [Creating a Project](#).
- Before you perform the initial test, we strongly recommend that you review and modify project options. For details on how to do this, see [Local Settings \(Options\) Files](#).
- For `cpptestcli` to email each developer a report that contains only the errors/results related to his or her work, one of the following conditions must be true:
 - You have configured C++test to compute code authorship based on source control data AND your project is under a supported source control system AND each developer's source control username + the mail domain (specified using an options file and the `-localsettings` option described in `-localsettings %LOCALSETTINGS_FILE%`) matches the developer's email address.
 - You have configured C++test to compute code authorship based on local user AND each user name + the mail domain (specified using an options file and the `-localsettings` option described in `-localsettings %LOCALSETTINGS_FILE%`) matches the developer's email address.

Setup Overview

Parasoft C++test has two user modes: interactive desktop usage in the GUI and command line mode via the command line interface (CLI). The CLI interface is a standard feature of the Automation Edition.

CLI mode is typically used to perform regular or continuous code analysis and test in conjunction with regular/continuous builds or as a part of an automatic regression test infrastructure. C++test CLI can be invoked on a full Visual Studio solution, or one or more projects or source files that are part of a solution. As part of the CLI execution, C++test can perform one or more of the following:

- Static analysis of code, including checks against a configured coding policy, analysis of possible runtime bugs, and metrics analysis.
- Execution of unit tests in a given solution.
- Analysis of SCM code repository to identify code changes since the last run and initiate code review sessions on updated code.
- Generation of reports and their distribution to a central report server and/or to individual developers and managers, according to specified reporting configurations.

As part of the execution, C++test can use your SCM client (if supported) to automatically retrieve file modification information from the SCM system and generate tasks for specific individuals based on results of code analysis and executed tests.

Specific execution options for C++test are controlled via Test Configurations and Preferences.

Test Configurations can be sourced from the built in set, or created using C++test interactive mode in the GUI. It is highly recommended that you do not use the built-in configurations (other than for getting started). We suggest using the built in configurations as starting templates for customer-specific configurations, which are then stored on disk or on Parasoft Team Server.

Preferences can be configured from the C++test GUI. Most of the preference settings can also be supplied with a configuration file that is provided as a parameter to a CLI call. A table of the configuration file preference settings is available in [Local Settings \(Options\) Files](#). C++test preferences set from the GUI are applied by default. These can be overridden — on an individual basis—by preference values contained in the configuration file used with a given run. This enables you to have a basic set of preferences configured for all CLI runs, and then vary individual settings as necessary by providing an additional configuration file for a specific run with a given Test Configuration. This can be useful, for example, to include different information in reports for different runs, or to change options for email distribution of reports, including report names, email headings, etc.

Step 1: Configure Preferences

C++test preferences and Parasoft Test preferences (which apply across Parasoft products) are accessed through the **Parasoft> Preferences** menu. Start by configuring the following preferences:

- **License:** Specify the license or License Sever settings.
- **Team:** Check **Enable Team Server**. If Team Server is not autodetected, enter the Team Server's IP address in **Server Information> Host Name**. If you are running Team Server on the same machine as your C/C++test, enter `localhost`. Unless you changed the Team Server default port (18888) when it was installed, do not change the port here. Click **Test Connection** to verify the correct settings.
- **Source Controls:** These settings enable automatic mapping of the tool results to the individuals who last changed the affected code or test artifact. Check your source control system, and use the instructions in [Connecting to Source Control](#) to set the options appropriate for your SCM.
- **Scope and Authorship:** Check the appropriate options for your environment as described in [Configuring Task Assignment and Code Authorship Settings](#).
- **Reports:** The following options are enabled by default and are a good starting point:
 - **Detailed report for developers** (includes task breakdown with details).
 - **Overview of tasks by authors** (summary table).
 - **Generate formatted reports in command line mode**.
 - **Suppressions Details** (applies to static analysis only).
- **E-mails:** Enter settings that will be used to send emails with reports. This needs to be an existing email account on an email server accessible from the C++test test machine.
- **Reports> Email Notifications:**
 - If desired, enable **Send Reports by Email**. Regardless of this setting, reports will always be uploaded to Parasoft Team Server for later viewing (controlled by the CLI option). Email distribution will use the settings for E-mails above.
 - Manager reports contain a rollup of all test results generated by C++test Developer reports contain only results for individual developers. Enable options and specify email addresses accordingly.

Step 2: Customize Test Configurations

Create a custom Test Configuration as described in [Configuring Test Configurations and Rules for Policies](#). See [Configuring Test Configurations](#) for details on C++test-specific options.

Step 3: Create a localsettings File

Create a localsettings file as described in [Local Settings \(Options\) Files](#).

Step 4: Activate CLI in the Currently-Running Build System (e.g., batch script)

For example, a sample command line to be added might be:

- ```
cpptestcli -solution "c:\MySolution" -resource "ProjectToTest" -config builtin://ShouldHaveRules - publishsteamserver -localsettings acme_policy.settings
```

The reports will be sent after each batch run, and trend reports will be populated with data. The reports will also be available for viewing via **Parasoft> Explore> Team Server Reports**.

## cli Usage

The general procedure for testing from the command line is as follows:

- Use the `cpptestcli` utility, with appropriate options, to launch analysis in the command-line mode. A complete list of options is provided in [cli Options](#). Key options are:
  - **-config:** Specifies Test Configuration.
  - **-resource:** Specifies the resource (e.g., project, folder, file) to be tested.
  - **-publish:** Publishes test results to DTP.
  - **-publishsteamserver:** Publishes test results to Team Server.
  - **-report:** Generates a report.
  - **-localsettings:** Passes advanced settings for Team Server/Parasoft DTP/mail reporting. Options are described in [Local Settings \(Options\) Files](#).

### Testing Headers

C++test does not directly test headers unless they are included by a source file under test. See [How do I analyze header files/what files are analyzed?](#) for details.

### Testing Template Functions

C++test does perform static analysis and unit testing of instantiated function templates and instantiated members of class templates. See [Support for Template Functions](#) for details.

### Notes for Command Line Testing on Windows

- C++test does not support file paths specified using Cygwin's "/cygdrive/DISK/PATH" format; instead, use the standard Windows path format.
- Depending on the shell/console, backslashes in file paths should be escaped/doubled; e.g., "C:\\MyLocation\\MyFile"
- All backslashes in file paths must be escaped/doubled when used in options files (with the `-localsettings` option). Alternatively, you can use forward slashes; e.g., "C:/MyLocation/MyFile".

## cli Invocation

The general form of invocation for `cpptestcli` is:

- `cpptestcli [OPTIONS]`

Typically, invocations follow this pattern:

### Excluding Specific Project Resources from Analysis/Testing

If you want to exclude some files from analysis/testing (for instance, to prevent static analysis of automatically-generated files), you can indicate which project resources should not be tested as described in [Excluding Project Resources from Testing](#). Perform this configuration in the GUI, then the settings will be applied for all tests on this project—from the GUI or from the command line.

## cli Options

Available `cpptestcli` options are listed in the following tables.

### General Options

- `-config %CONFIG_URL%` - Specifies that you want to run the Test Configuration available at `%CONFIG_URL%`. This parameter is required except when importing projects. `%CONFIG_URL%` is interpreted as a URL, the name of a Test Configuration, or the path to a local file. Examples:
  - By filename:  
`-config "mylocalconfig.properties"`
  - By URL:  
`-config "http://intranet.acme.com/cptest/team_config.properties"`
  - Built-in configurations:  
`-config "builtin://Demo Configuration"`  
`-config "Demo Configuration"`
  - User-defined configurations:  
`-config "user://My First Configuration"`
  - Team configurations:  
`-config "team://Team Configuration"`  
`-config "team://teamconfig.properties"`
- `-help` - Displays help information. Does not run testing.
- `-localsettings %LOCALSETTINGS_FILE%` - Reads the options file `%LOCALSETTINGS_FILE%` for global preferences. These settings specify details such as Parasoft DTP settings, email settings, and Team Server settings. The options file is a properties file. These files can control reporting preferences (who should reports be sent to, how should those reports be labelled, what mail server and domain should be used, etc.) Team Server settings, Parasoft DTP settings, email settings, and more. For details on creating options files; see [Local Settings \(Options\) Files](#).
- `-nobuild` - Prevents C++test from rebuilding the project before testing it. Use this option if the project is already built before the test run.
- `-fail` - Fails the build by returning a non-zero exit code if any violations are reported.
- `-publish` - Publishes the report to DTP. You can enable sending reports to DTP in the GUI or in the command line mode; see [Connecting to DTP](#).
- `-publishteamserver` - Publishes the report to the Team Server. The Team Server location can be specified in the GUI or in the options file (described in the `-localsettings %LOCALSETTINGS_FILE%` entry).

- `-report %REPORT_FILE%` - Generates an XML report to the given file `%REPORT_FILE%` and adds an HTML (or PDF or custom format—if specified using the `report.format` option) report with the same name (and a different extension) in the same directory. All of the following commands will produce an HTML report `filename.html` and an XML report `filename.xml`.
  - `-report filename.xml`
  - `-report filename.htm`
  - `-report filename.html`

If the specified path ends with an ".html"/".htm"/".xml" extension, it will be treated as a path to the report file to generate. Otherwise, it will be treated as a path to a directory where reports should be generated.

If the file name is explicitly specified in the command and a file with this name already exists in the specified location, the previous report will be overwritten. If your command doesn't explicitly specify a file name, the existing report file will not be overwritten—the new file will be named `repXXXX.html`, where `XXXX` is a random number.

If the `-report` option is not specified, reports will be generated with the default names "report.xml/html" in the current directory.

- `-dtp.autoconfig %PROJECT_NAME@SERVER_NAME:port%` - Pulls settings stored on the DTP server (recommended for ease of maintenance — especially if you do not already have a locally stored settings file).  
For example:  
`-dtp.autoconfig Project1@dtp.company.com:8080`
- `-encodepass <plainpassword>` - Generates an encoded version of a given password. Prints the message 'Encrypted password: <encpass>' and terminates the cli application.  
If your nightly process will 1) login to Team Server and b) send emails, you can use this option to encrypt the required passwords.
- `-showdetails` - Prints detailed test progress information.
- `-solutionConfig %SOLUTION_CONFIG_NAME%` - Specifies the solution configuration to use for building the solution and for analysis. `Debug` and `Release` are common names. If the switch is omitted, then the active configuration is used. Specifying the solution configuration is strongly recommended because the active configuration may change unexpectedly.
- `-targetPlatform %TARGET_PLATFORM_NAME%` - Specifies the solution target platform to use for building the solution and for analysis. Any `CPU` and `x86` are common names. If omitted, the active configuration is used. Specifying the target platform is strongly recommended because the active configuration may change unexpectedly.
- `-appconsole stdout|% OUTPUT_FILE%` - Redirects C++test's console output to standard output or an `%OUTPUT_FILE%` file.  
Examples:  
`-appconsole stdout` (console redirected to the standard output)  
`-appconsole console.out` (console redirected to console.out file)
- `-list-compilers` - Prints a list of valid compiler family values. Must be used along with `-solution`.
- `-list-configs` - Prints a list of valid Test Configuration values. Must be used along with `-solution`.
- `-include %PATTERN%, -exclude %PATTERN%` - Specifies files to be included/excluded during testing.  
You must specify a file name or path after this option.  
Patterns specify file names, with the wildcards `*` and `?` accepted, and the special wildcard `**` used to specify one or more path name segments. Syntax for the patterns is similar to that of Ant filesets.  
Examples:  
`-include **/Bank.cpp` (test Bank.cpp files)  
  
`-include **/ATM/Bank/*.cpp` (test all .cpp files in folder ATM/Bank)  
  
`-include c:/ATM/Bank/Bank.cpp` (test only the c:/ATM/Bank/Bank.cpp file)  
  
`-exclude **/internal/**` (test everything except classes that have path with folder "internal")  
  
`-exclude **/*Test.cpp` (test everything, but files that end with Test.cpp)  
  
Additionally if a pattern is a file with a .lst extension, it is treated as a file with a list of patterns.  
For example, if you use `-include c:/include.lst` and `include.lst` contains the following (each line is treated as single pattern):  
`**/Bank.cpp`  
  
`**/ATM/Bank/*.cpp`  
  
`c:/ATM/Bank/Bank.cpp`  
  
then it has same effect as specifying:  
`-include **/Bank.cpp -include **/ATM/Bank/*.cpp`  
  
`-include c:/ATM/Bank/Bank.cpp"`
- `-useenv` - Causes the IDE to use `PATH`, `INCLUDE`, and `LIB` environment variables for Visual C++ compilation rather than the settings specified in the VC++ Directories section of the Projects options (in the Options dialog box).
- `-clearcmc` - Cleans Visual Studio's Component Model Cache

## Options for Testing Projects Available in the Visual Studio IDE

| Option | Purpose | Notes |
|--------|---------|-------|
|--------|---------|-------|

|                                                                                                                      |                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre>-solution % SOLUTION_FILE%- solution % SOLUTION_FILE%Specifie s the location of the solution file to use.</pre> | <p>Specifies the location of the solution file to use. Specifies the location of the solution file to use.</p> | <p>N/AN/ASpecifies the location of the solution file to use.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <pre>-resource %RESOURCE% resource % RESOURCE% to test.</pre>                                                        | <p>Specifies the path to the workspace resource % RESOURCE% to test.</p>                                       | <p>Use multiple times to specify multiple resources.</p> <p>Use quotes when the resource path contains spaces or other non-alphanumeric characters.</p> <p>If %RESOURCE% is a .properties file, the value corresponding to <code>com.parasoft.xtest.checkers.resources</code> will be interpreted as a colon(:)-separated list of resources. Only one properties file can be specified in this way. If %RESOURCE% is a .lst file, each line will be treated as a resource. If no resources are specified on the command line, the complete workspace will be tested.</p> <p>For example, to test the <code>ATM.cxx</code> file in the C++test ATM example, you could use <code>-resource "ATM/Source Files/ATM.cxx"</code> (without the solution name)</p> <p>or</p> <pre>-resource "Examples/ATM/Source Files/ATM.cxx" (with the solution name)</pre> <p>Other Examples:</p> <pre>-resource "MySolution/MyProject" -resource "MySolution/MyProject/Source Files" -resource "MySolution/MyProject/SourceFiles/MyClass.cpp" -resource "c:\testedprojects.properties"</pre> |



#### Notes

- To see a list of valid command line options, enter for `cpptestcli -help`.
- `cpptestcli` automatically emails designated group managers and architects a report that lists all team/project errors and identifies which developer is responsible for each error. If no errors are reported, reports will be sent unless the options file contains the `report.mail.on.error.only=true` option.
- If the appropriate prerequisites are met, `cpptestcli` automatically emails each developer a report that contains only the errors /results related to his or her work. If no errors are reported for a particular developer, a report will not be emailed to that developer.

## Local Settings (Options) Files

Localsettings files can be passed at the command line to control options for reporting, task assignment, licensing, and more. This lets you:

- Configure and use different setting configurations for different projects.
- Extend or override team-wide settings as needed (for example, for settings that involve local paths).
- Adjust settings without having to open the GUI.

Options files can control report settings, Parasoft DTP settings, error authorship settings, Team Server settings, and more. You can create different options files for different projects, then use the DTP settings, error authorship settings, Team Server settings, and more. You can create different options files for different projects, then use the `-localsettings` option to indicate which file should be used for the current command line test.

Each options file must be a simple text file. There are no name or location requirements. Each setting should be entered in a single line.

If a parameter is specified in this file and there is an equivalent parameter in the GUI's Preferences panel (available from **Parasoft> Preferences**), the parameter set in this file will override the related parameter specified from the GUI. If a parameter is not specified in this file, C++test will use the equivalent parameter specified in the GUI.

Any options for creating or importing projects are valid *only when creating or importing the project*. They are ignored during subsequent runs.

### Creating a Local Settings (Options) File by Exporting Your GUI Preferences

The fastest and easiest way to create options files is to export your Preferences from the GUI.

1. Choose **Parasoft> Preferences**.
2. Select **Parasoft** (the root element in the left tree).
3. Click the **share** link in the right side of the panel.
4. In the dialog that opens, specify which preferences you want to export to a file.
5. Click the **Browse** button, then specify the file where you want the settings saved.
6. Click **OK**.

- If you select an existing file, the settings will be appended to that file. Otherwise, a new file will be created.
- Exported passwords will be encrypted.

Options files can determine the following settings:

- Reporting Settings
- Parasoft DTP Settings
- Project Center Settings
- Team Server Settings
- Licensing Settings
- Technical Support Settings
- Authorship/Scope Settings
- Source Control Settings
  
- File Encoding Settings
  
- Miscellaneous Settings

### Notes

- Each setting should be entered on a single line.
- If your options file contains any invalid settings, details will be reported in the command line output.
- If you are running cli mode from a developer/tester desktop (as opposed to from a Server machine), use the `tasks.clear=false` option to ensure that your results from previous runs are preserved.

## Reporting Settings

| Setting                                                                     | Purpose                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>report.associations</code>                                            | Specifies whether the report shows requirements, defects, tasks, and feature requests that are associated with a test.                                                                                  |
| <code>report.authors_details</code>                                         | Determines whether the report includes an overview of the number and type of tasks assigned to each developer. The default is <code>true</code> .                                                       |
| <code>report.contexts_details</code>                                        | Determines whether the report includes an overview of the files that were checked or executed during testing. The default is <code>false</code> .                                                       |
| <code>report.custom.extension</code><br><code>report.custom.xml.file</code> | Specifies the location and extension of the XSL file for a custom format. Used with <code>report.format=custom</code><br>For details and examples, see <a href="#">Configuring Reporting Settings</a> . |
| <code>report.developer_errors=true false</code>                             | Determines whether manager reports include details about developer errors.                                                                                                                              |
| <code>report.developer_reports=true false</code>                            | Determines whether the system generates detailed reports for all developers (in addition to a summary report for managers).                                                                             |
| <code>report.format=html pdf custom</code>                                  | Specifies the report format.                                                                                                                                                                            |

|                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>report.generate_htmls=true false</code>                                 | <p>Determines whether HTML reports are generated and saved on the local file system. XML reports are generated and saved regardless of this setting's value.</p> <p>The default setting is <code>true</code>.</p>                                                                                                                                                                                                                              |
| <code>report.graph.cs_start_date=[MM/dd/yy]</code>                            | <p>Determines the start date for trend graphs that track static analysis tasks over a period of time. See <a href="#">Understanding Reports</a> for more details on these reports.</p>                                                                                                                                                                                                                                                         |
| <code>report.graph.ue_coverage_start_date=[MM/dd/yy]</code>                   | <p>Determines the start date for trend graphs that track coverage over a period of time. See <a href="#">Understanding Reports</a> for more details on these reports.</p>                                                                                                                                                                                                                                                                      |
| <code>report.location_details=true false</code>                               | <p>Specifies whether absolute file paths are added to XML data. This needs to be enabled on the Server installation if you want to relocate tasks upon import to desktop installations.</p>                                                                                                                                                                                                                                                    |
| <code>report.mail.attachments=true false</code>                               | <p>Determines whether reports are sent as attachments. All components are included as attachments; before you can view an HTML report with images, all attachments must be saved to the disk.</p> <p>The default setting is <code>false</code>.</p>                                                                                                                                                                                            |
| <code>report.mail.cc=[email_addresses]</code>                                 | <p>Specifies where to mail comprehensive manager reports. This setting must be followed by a semicolon-separated list of email addresses. This setting is typically used to send reports to managers or architects. It can also be used to send comprehensive reports to developers if developer reports are not sent automatically (for example, because the team is not using a supported source control system).</p>                        |
| <code>report.mail.compact=trends links</code>                                 | <p>Specifies that you want to email a compact report or link rather than a complete report.</p> <p>If <code>trends</code> is used, the email contains a trend graphs, summary tables, and other compact data; detailed data is not included.</p> <p>If <code>links</code> is used, the email contains only a link to a report (which is available on Team Server)</p>                                                                          |
| <code>report.mail.domain=[domain]</code>                                      | <p>Specifies the mail domain used to send reports.</p>                                                                                                                                                                                                                                                                                                                                                                                         |
| <code>report.mail.enabled=true false</code>                                   | <p>Determines whether reports are emailed to developers and to the additional recipients specified with the <code>cc</code> setting.</p> <p>Remember that each developer that worked on project code will automatically be sent a report that contains only the errors/results related to his or her work.</p>                                                                                                                                 |
| <code>report.mail.exclude=[email_addresses]</code>                            | <p>Specifies any email addresses you do not want to receive reports. This setting is used to prevent C++test from automatically sending reports to someone that worked on the code, but should not be receiving reports.</p>                                                                                                                                                                                                                   |
| <code>report.mail.exclude.developers=true false</code>                        | <p>Specifies whether reports should be mailed to any developer whose email is not explicitly listed in the <code>report.mail.cc</code> property. This setting is used to prevent reports from being mailed to individual developers.</p>                                                                                                                                                                                                       |
| <code>report.mail.format=html asciid</code>                                   | <p>Specifies the email format.</p>                                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>report.mail.from=[email_address OR user_name_of_the_same_domain]</code> | <p>Specifies the "from" line of the emails sent.</p>                                                                                                                                                                                                                                                                                                                                                                                           |
| <code>report.mail.include=[email_addresses]</code>                            | <p>Specifies the email addresses of developers that you want to receive developer reports. This setting must be followed by a semicolon-separated list of email addresses. This setting is typically used to send developer reports to developers if developer reports are not sent automatically (for example, because the team is not using a supported source control system). It overrides developers specified in the 'exclude' list.</p> |
| <code>report.mail.on.error.only=true false</code>                             | <p>Determines whether reports are sent to the manager only if an error is found or a fatal exception occurs. Developer emails are not affected by this setting; developer emails are sent only to developers who are responsible for reported errors.</p> <p>The default setting is <code>false</code>.</p>                                                                                                                                    |
| <code>report.mail.server=[server]</code>                                      | <p>Specifies the mail server used to send reports.</p>                                                                                                                                                                                                                                                                                                                                                                                         |

|                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| report.mail.subject=My<br>New Subject                                                           | Specifies the subject line of the emails sent. The default subject line is "C++test Report." For example, if you want to change the subject line to "C++test Report for Project A", you would use<br>report.mail.subject=C++test Report for Project A                                                                                                                                                                                                                           |
| report.mail.time_delay=[server]                                                                 | Specifies a time delay between emailing reports (to avoid bulk email restrictions).                                                                                                                                                                                                                                                                                                                                                                                             |
| report.mail.unknown=[email_address<br>OR<br>user_name_of_the_same_domain]                       | Specifies where to mail reports for errors assigned to "unknown".                                                                                                                                                                                                                                                                                                                                                                                                               |
| report.mail.username=[username]<br>report.mail.password=[password]<br>report.mail.realm=[realm] | Specifies the settings for SMTP server authentication.<br><br>The realm value is required only for those servers that authenticate using SASL realm.                                                                                                                                                                                                                                                                                                                            |
| report.active_rules=true false                                                                  | Determines if C++test reports contain a list of the rules that were enabled for the test.                                                                                                                                                                                                                                                                                                                                                                                       |
| report.suppressed_messages=true false                                                           | Determines whether reports include suppressed messages.<br>The default setting is false.                                                                                                                                                                                                                                                                                                                                                                                        |
| session.tag=[name]                                                                              | Specifies a session tag used to label these results. This value is used for uploading summary results to Team Server.<br><br>The tag is an identifier of the module checked during the analysis process. Reports for different modules should be marked with different tags.                                                                                                                                                                                                    |
| report.coverage_details_htmls=[coverage_type]                                                   | Determines whether a test's HTML report links to another report that includes source code annotated with line-by-line coverage details.<br><br>The following values can be used for [coverage_type]:<br>FC - for function coverage<br><br>LC - for line coverage<br><br>SC - for statement coverage<br><br>BCC - for block coverage<br><br>DC - for decision coverage<br><br>SCC - for simple condition coverage<br><br>MCDC - for MC/DC coverage<br><br>CC - for Call Coverage |
| report.metrics_details=true false                                                               | Determines whether an XML report with metrics summary information (as well as individual class and method detail data where applicable) is produced. This report will be generated only when a metrics-enabled Test Configuration is run.                                                                                                                                                                                                                                       |

## Parasoft DTP/ Project Center Settings

| Setting                       | Purpose                                                                                                                                                                    |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dtp.enabled=true false        | Determines whether the current C++test installation is connected to DTP. This setting is not needed if you want to use the value specified in the GUI.                     |
| concerto.reporting=true false | Determines whether the current C++test installation is connected to Parasoft Project Center. This setting is not needed if you want to use the value specified in the GUI. |
| dtp.autoconfig=true false     | Enables autoconfiguration with C++test settings stored on the DTP server                                                                                                   |
| dtp.server=[server]           | Specifies the host name of the DTP server. This setting is not needed if this information is specified in the GUI.                                                         |
| concerto.data.port=[port]     | Specifies the Parasoft Project Center port. This setting is not needed if you want to use the value specified in the GUI.                                                  |

|                                                            |                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>dtp.port=[port]</code>                               | Specifies the port number of the DTP server. This setting is not needed if you want to use the value specified in the GUI.                                                                                                                                                                        |
| <code>concerto.user_defined_attributes=[attributes]</code> | Specifies the user-defined attributes for Parasoft Project Center.<br>Use the format <code>key1:value1; key2:value2</code><br>For more details on attributes, see <a href="#">Connecting to Project Center</a> .<br>This setting is not needed if you want to use the value specified in the GUI. |
| <code>concerto.log_as_nightly=true false</code>            | Determines whether the results sent to Parasoft Project Center are marked as being from a nightly build.                                                                                                                                                                                          |
| <code>concerto.use_resource_attributes=true false</code>   | Determines whether Parasoft Project Center attributes specified in the GUI at the project level should be used. This allows you to disable project level Parasoft Project Center attributes.                                                                                                      |
| <code>dtp.project=[project_name]</code>                    | Specifies the name of the DTP project that you want these results linked to.                                                                                                                                                                                                                      |

## Team Server Settings

| Setting                                                                                                                                       | Purpose                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>tcm.server.enabled=true false</code>                                                                                                    | Determines whether the current C++test installation is connected to the Team Server. This setting is not needed if you want to use the value specified in the GUI.                                                                                                                                                                                                                                            |
| <code>tcm.server.name=[name]</code>                                                                                                           | Specifies the machine name or IP address of the machine running Team Server. This setting is not needed if you want to use the value specified in the GUI.                                                                                                                                                                                                                                                    |
| <code>tcm.server.port=[port]</code>                                                                                                           | Specifies the Team Server port number. This setting is not needed if you want to use the value specified in the GUI.                                                                                                                                                                                                                                                                                          |
| <code>tcm.server.accountLogin=true false</code><br><code>tcm.server.username=[username]</code><br><code>tcm.server.password=[password]</code> | Determines whether username and password are submitted to connect to Team Server. Usernames/passwords are not always needed; it depends on your team's setup.<br><br>If the first setting is <code>true</code> , the second and third settings specify the username and password.<br><br>Note that Team Server must have the username and password setting already enabled before these settings can be used. |

## Licensing Settings

|   | Setting                                                     | Purpose                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <code>cpptest.license.use_network=true false</code>         | Determines whether the current C++test installation retrieves its license from LicenseServer. This setting is not needed if you want to use the value specified in the GUI.<br><br>Example: <code>cpptest.license.use_network=true</code>                                                                                                                                                                                                                      |
| 2 | <code>cpptest.license.network.host=[host]</code>            | Specifies the machine name or IP address of the machine running LicenseServer Configuration Manager. This setting is not needed if you want to use the value specified in the GUI.<br><br>Example: <code>cpptest.license.network.host=10.9.1.63</code>                                                                                                                                                                                                         |
| 3 | <code>cpptest.license.network.port=[port]</code>            | Specifies the LicenseServer port number. This setting is not needed if you want to use the value specified in the GUI.<br><br>Example: <code>cpptest.license.network.port=2222</code>                                                                                                                                                                                                                                                                          |
| 4 | <code>cpptest.license.network.edition=[edition_name]</code> | Specifies the type of license that you want this C++test installation to retrieve from LicenseServer. This setting is not needed if you want to use the value specified in the GUI.<br><br>[edition_name] can be <code>automation_edition</code> . To use a custom edition, do not set anything after the "="; simply leaving the value empty.<br><br>Example: <code>cpptest.license.network.edition=cpptest.license.network.edition=automation_edition</code> |
| 5 | <code>cpptest.license.autoconf.timeout=[seconds]</code>     | Specifies the maximum number of seconds C++test will wait for the license to be automatically configured from LicenseServer. Default is 10.                                                                                                                                                                                                                                                                                                                    |
| 6 | <code>cpptest.license.local.expiration=[expiration]</code>  | Specifies the local license that you want this C++test installation to use. This setting is not needed if you want to use the value specified in the GUI.                                                                                                                                                                                                                                                                                                      |

|   |                                                                     |                                                                                                                                                                                                                          |
|---|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7 | <code>cpptest.license.local.password=[password]</code>              | Specifies the local password that you want this C++test installation to use. This setting is not needed if you want to use the value specified in the GUI.                                                               |
| 8 | <code>cpptest.license.wait.for.tokens.time=[time in minutes]</code> | Specifies the time that C++test will wait for a license if a license is not currently available.<br><br>For example to make C++test wait 3 minutes for license tokens, use <code>cpptest.wait.for.tokens.time=3</code> . |

## Technical Support Settings

| Setting                                               | Purpose                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>techsupport.auto_creation=true false</code>     | Determines whether archives are automatically prepared when testing problems occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <code>techsupport.send_email=true false</code>        | Determines whether prepared archives are emailed to Parasoft support. If you enable this, be sure to specify email settings from the GUI or with the options in <a href="#">Reporting Settings</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>techsupport.archive_location=[directory]</code> | Specifies where archives are stored.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <code>techsupport.verbose=true false</code>           | Determines whether verbose logs are included in the archive. Note that this option cannot be enabled if the logging system has custom configurations. <ul style="list-style-type: none"> <li>• Verbose logs are stored in the <code>xtest.log</code> file within the user-home temporary location (on Windows, this is <code>&lt;drive&gt;:\Documents and Settings\&lt;user&gt;\Local Settings\Temp\parasoft\xtest</code>).</li> <li>• Verbose logging state is cross-session persistent (restored on application startup).</li> <li>• The log file is a rolling file: it won't grow over a certain size, and each time it achieves the maximum size, a backup will be created.</li> </ul> |
| <code>techsupport.verbose.scontrol=true false</code>  | Determines whether verbose logs include output from source control commands. Note that the output could include fragments of your source code.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>techsupport.item.general=true false</code>      | Determines whether general application logs are included.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>techsupport.item.environment=true false</code>  | Determines whether environment variables, JVM system properties, platform details, additional properties (memory, other) are included in the archive.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <code>techsupport.advanced=true false</code>          | Specifies if advanced options will be sent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <code>techsupport.advanced.options=[option]</code>    | Specifies any advanced options that the support team asked you to enter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <code>techsupport.dtp.engine=true false</code>        | Specifies if additional data generated during analysis will be sent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Authorship/Scope Settings

| Setting                                                  | Purpose                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>authors.mappings.location=team local shared</code> | Specifies where the authorship mapping file is stored. This setting defaults to <code>team</code> unless <code>local</code> or <code>shared</code> is specified.<br><br>If set to <code>local</code> (recommended), authorship mappings can be set directly in the local settings. See <code>authors.mapping</code> and <code>authors.user{n}</code> for details.<br><br>If set to <code>shared</code> , you can store mappings in a local file using the <code>authors.mappings.file</code> option.<br><br>The <code>team</code> and <code>shared</code> options are deprecated. Files specified by these options should be in the previously used format of:<br><br><pre>#author to author user1=user3 user2=user3 #author to email user3=me@parasoft.com</pre> |

|                                                           |                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>authors.mapping{n}=[from_user, to_user]</code>      | <p>Specifies a specific author mapping for <code>authors.mappings.location=local</code>, as described above.</p> <p>For example:</p> <pre>authors.mappings.location=local authors.mapping1=baduser,gooduser authors.mapping2=brokenuser,fixedReader authors.mapping3=olduser,newuser</pre> |
| <code>authors.user{n}=[username, email, full_name]</code> | <p>Specifies a specific author name and email for <code>authors.mappings.location=local</code>.</p> <p>For example:</p> <pre>authors.user1=dan,dan@parasoft.com,Dan Stowe authors.user2=jim,jim@parasoft.com,Jim White</pre>                                                               |
| <code>authors.mappings.file=[path]</code>                 | <p>Specifies the location of a "shared" file as described in <code>authors.mappings.location</code> above.</p> <p>For example:</p> <pre>authors.mappings.file=/home/user/dev/temp/author_mapping1.txt</pre>                                                                                |
| <code>authors.ignore.case=true false</code>               | <p>Determines whether author names are case sensitive. If true, David and david will be considered the same user. If false, David and david will be considered two separate users.</p>                                                                                                     |
| <code>scope.sourcecontrol=true false</code>               | <p>Determines whether C++test computes code authorship based on a data from a supported source control system. This setting is not needed if you want to use the value specified in the GUI.</p>                                                                                           |
| <code>scope.local=true false</code>                       | <p>Determines whether C++test computes code authorship based on the local user. This setting is not needed if you want to use the value specified in the GUI.</p>                                                                                                                          |
| <code>scope.recommended.computation=first random</code>   | <p>Determines how C++test selects the Recommended Tasks for each developer — it can choose n developer tasks at random (the default) or select the first n developer tasks reported (n is the maximum number of tasks that C++test is configured to show each developer per day)</p>       |
| <code>scope.xmlmap=true false</code>                      | <p>Specifies whether C++test computes task assignment based on XML files that define how you want tasks assigned for particular files or sets of files (these mappings can be specified in the GUI then saved in an XML file).</p>                                                         |
| <code>scope.xmlmap.file=[file]</code>                     | <p>Specifies the name of the XML file that defines how you want tasks assigned for particular files or sets of files.</p>                                                                                                                                                                  |

## Source Control Settings



### Defining multiple repositories of the same type

Indexes (numbered from 1 to n) must be added to the prefix if you want to define more than one repository of the same type. For example:

```
scontrol.rep1.type=ccase
scontrol.rep1.ccase.vob=/vobs/myvob1

scontrol.rep2.type=ccase
scontrol.rep2.ccase.vob=/vobs/myvob2
```

If you are defining only one repository, you do not need to use an index. For example:

```
scontrol.rep.type=ccase
scontrol.rep.ccase.vob=/vobs/myvob1
```

## AccuRev Repository Definition Properties

| Property                                    | Description                                |
|---------------------------------------------|--------------------------------------------|
| <code>scontrol.rep.type=accurev</code>      | AccuRev repository type identifier.        |
| <code>scontrol.rep.accurev.host=</code>     | AccuRev server host.                       |
| <code>scontrol.rep.accurev.port=</code>     | AccuRev server port. Default port is 1666. |
| <code>scontrol.rep.accurev.login=</code>    | AccuRev user name.                         |
| <code>scontrol.rep.accurev.password=</code> | AccuRev password.                          |

## ClearCase Repository Definition Properties

| Property                | Description                                                                                                   |
|-------------------------|---------------------------------------------------------------------------------------------------------------|
| scontrol.ccase.exec=    | Path to external client executable (cleartool).                                                               |
| scontrol.rep.type=ccase | ClearCase repository type name.                                                                               |
| scontrol.rep.ccase.vob= | Path inside VOB. ccase.vob value + File.separator must be the valid path to a ClearCase controlled directory. |

## CVS Repository Definition Properties

| Property                                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| scontrol.rep.type=cvs                     | CVS repository type identifier.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| scontrol.rep.cvs.root=                    | Full CVSROOT value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| scontrol.rep.cvs.pass=                    | <p>Plain or encoded password. The encoded password should be the same as in the .cvspass file.</p> <p>For CVS use the value in .cvspass from within the user's home directory</p> <p>For CVSNT use the value store in the registry under HKEY_CURRENT_USER\Software\Cvsnt\cvspass</p> <p>When you are first logged in to the CVS repository from the command line using "cvs login", the password is saved in the registry.</p> <p>To retrieve it, go to the registry (using regedit), and look for the value under HKEY_CURRENT_USER\CVSNT&gt;cvspass.</p> <p>This should display your entire login name (:pserver:exampleA@exampleB:/exampleC) encrypted password value.</p> |
| scontrol.rep.cvs.useCustomSSHCredentials= | Determines whether the cvs login and password should be used for EXT/SSH connections. Allowed values are true and false. It is disabled by default.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| scontrol.rep.cvs.ext.server               | <p>If connecting to a CVS server in EXT mode, this specifies which CVS application to start on the server side.</p> <p>Has the same meaning as the CVS_SERVER variable .cvs is the default value.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| scontrol.rep.cvs.ssh.loginname=           | Specifies the login for SSH connections (if an external program can be used to provide the login).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| scontrol.rep.cvs.ssh.password=            | Specifies the password for SSH connection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| scontrol.rep.cvs.ssh.keyfile=             | Specifies the private key file to establish an SSH connection with key authentication.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| scontrol.rep.cvs.ssh.passphrase=          | Specifies the passphrase for SSH connections with the key authentication mechanism.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| scontrol.rep.cvs.useShell=                | Enable an external program (CVS_RSH) to establish a connection to the CVS repository. Allowed values are true and false. It is disabled by default.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| scontrol.rep.cvs.ext.shell=               | Specifies the path to the executable to be used as the CVS_RSH program. Command line parameters should be specified in the cvs.ext.params property.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| scontrol.rep.cvs.ext.params=              | <p>Specifies the parameters to be passed to an external program. The following casesensitive macro definitions can be used to expand values into command line parameters:</p> <ul style="list-style-type: none"> <li>• {host} repository host</li> <li>• {port} port</li> <li>• {user} cvs user</li> <li>• {password} cvs password</li> <li>• {extuser} parameter cvs.ssh.loginname</li> <li>• {extpassword} parameter cvs.ssh.password</li> <li>• {keyfile} parameter cvs.ssh.keyfile</li> <li>• {passphrase} parameter cvs.ssh.passphrase</li> </ul>                                                                                                                         |

## Git Repository Definition Properties

| Property | Description |
|----------|-------------|
|----------|-------------|

|                             |                                                                                                                                           |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| scontrol.rep.type=git       | Git repository type identifier.                                                                                                           |
| scontrol.git.exec=          | Path to Git executable. If not set, assumes git command is on the path.                                                                   |
| scontrol.rep.git.branch=    | The name of the branch that the source control module will use. This can be left blank and the currently checked out branch will be used. |
| scontrol.rep.git.url=       | The remote repository URL (e.g., git://hostname/repo.git).                                                                                |
| scontrol.rep.git.workspace= | The directory containing the local git repository.                                                                                        |

## Perforce Repository Definition Properties

| Property                        | Description                                                                                                                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| scontrol.perforce.exec=         | Path to external client executable (p4).                                                                                                                                                         |
| scontrol.rep.type=perforce      | Perforce repository type identifier.                                                                                                                                                             |
| scontrol.rep.perforce.host=     | Perforce server host.                                                                                                                                                                            |
| scontrol.rep.perforce.port=     | Perforce server port. Default port is 1666.                                                                                                                                                      |
| scontrol.rep.perforce.login=    | Perforce user name.                                                                                                                                                                              |
| scontrol.rep.perforce.password= | Password.                                                                                                                                                                                        |
| scontrol.rep.perforce.client=   | The client workspace name, as specified in the P4CLIENT environment variable or its equivalents. The workspace's root dir should be configured for local path (so that files can be downloaded). |

## Serena Dimensions Repository Definition Properties



### Linux Configuration Note

Linux users should run in an environment prepared for using Serena programs, such as 'dmcli'

- LD\_LIBRARY\_PATH should contain the path to <SERENA Install Dir>/libs.
- DM\_HOME should be specified.

| Property                     | Description                                                |
|------------------------------|------------------------------------------------------------|
| scontrol.rep.type=serena     | Serena Dimensions repository type identifier.              |
| scontrol.rep.serena.host=    | Serena Dimensions server host name.                        |
| scontrol.rep.serena.dbname=  | Name of the database for the product you are working with. |
| scontrol.rep.serena.dbconn=  | Connection string for that database.                       |
| scontrol.rep.serena.login =  | Login name.                                                |
| scontrol.rep.serena.password | Password.                                                  |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| scontrol.rep.serena.mapping | <p>Maps workspace resources to Serena Dimension repository paths.</p> <ul style="list-style-type: none"> <li>• Example 1: If you use <code>scontrol.rep.serena.mapping_1=\${project_loc}\MyProject};PRODUCT1\WORKSET1;src\MyProject</code>, then Project 'MyProject' will be mapped to the Serena workset <code>PRODUCT1:WORKSET1</code> and workset relative path: <code>src\MyProject</code></li> <li>• Example 2: If you use <code>scontrol.rep.serena.mapping_2=\${workspace_loc};PRODUCT1\WORKSET1</code>, then the complete workspace will be mapped to the Serena workset <code>PRODUCT1:WORKSET1</code>.</li> </ul> |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Subversion Repository Definition Properties

| Property                    | Description                                                                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| scontrol.rep.type=svn       | Subversion repository type identifier.                                                                                                          |
| scontrol.rep.svn.url=       | Subversion URL specifies protocol, server name, port and starting repository path (e.g., <code>svn://buildmachine.foobar.com/home/svn</code> ). |
| scontrol.rep.svn.login=     | Login name.                                                                                                                                     |
| scontrol.rep.svn.password = | Password (not encoded).                                                                                                                         |
| scontrol.svn.exec=          | Path to external client executable ( <code>svn</code> ).                                                                                        |

## CM Synergy Repository Definition Properties

| Property                            | Description                                                                                                                                                                                                      |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| scontrol.rep.type=synergy           | Synergy/CM repository type identifier                                                                                                                                                                            |
| scontrol.rep.synergy.host=          | Computer on which synergy/cm engine runs. Local host is used when missing. <i>For Web mode, the host must be a valid Synergy Web URL with protocol and port (e.g., <code>http://synergy.server:8400</code>).</i> |
| scontrol.rep.synergy.dbpath=        | Absolute synergy database path e.g <code>\\host\db\name</code> (backslash symbols '\' in UNC/Windows paths must be doubled).                                                                                     |
| scontrol.rep.synergy.projspec=      | Synergy project spec which contains project name and its version e.g <code>name-version</code> .                                                                                                                 |
| scontrol.rep.synergy.login=         | Synergy user name.                                                                                                                                                                                               |
| scontrol.rep.synergy.password=      | Synergy password (not encoded).                                                                                                                                                                                  |
| scontrol.rep.synergy.port=          | Synergy port.                                                                                                                                                                                                    |
| scontrol.rep.synergy.remote_client= | (UNIX only) Specifies that you want to start ccm as a remote client. Default value is false. Optional. <i>This is not used for Web mode.</i>                                                                     |
| scontrol.rep.synergy.local_dbpath=  | Specifies the path name to which your database information is copied when you are running a remote client session. If null, then the default location will be used. <i>This is not used for Web mode.</i>        |
| scontrol.synergy.exec=              | Path to external client executable ( <code>ccm</code> )                                                                                                                                                          |

## Microsoft Team Foundation Server Repository Definition Properties

| Property                   | Description                                                                      |
|----------------------------|----------------------------------------------------------------------------------|
| scontrol.rep.type=tfs      | TFS repository type identifier.                                                  |
| scontrol.rep.tfs.host=     | Name of the machine running TFS.                                                 |
| scontrol.rep.tfs.port=     | TFS server's port number (optional; when not specified, 8080 is used).           |
| scontrol.rep.tfs.protocol= | The protocol used to connect to TFS server. Available values are HTTP and HTTPS. |

|                            |                |
|----------------------------|----------------|
| scontrol.rep.tfs.login =   | TFS user name. |
| scontrol.rep.tfs.password= | TFS password.  |

## Microsoft Visual Source Safe Repository Definition Properties

| Property                   | Description                                                                                                                              |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| scontrol.rep.type=vss      | Visual SourceSafe repository type identifier.                                                                                            |
| scontrol.rep.vss.smdir=    | Path of repository database (backslash symbols \ in UNC/Windows paths must be doubled).                                                  |
| scontrol.rep.vss.projpath= | VSS project path.                                                                                                                        |
| scontrol.rep.vss.login=    | VSS login.                                                                                                                               |
| scontrol.rep.vss.password= | VSS password.                                                                                                                            |
| scontrol.vss.exec=         | Path to external client executable (ss).                                                                                                 |
| scontrol.vss.lookup=       | Determines whether a full VSS database search is performed to find associations between local paths and repository paths. True or false. |

## Important Notes

- The repository(n).vss.smdir property should contain a UNC value even if the repository database resides locally.
- Be aware of VSS Naming Syntax, Conventions and Limitations. Any character can be used for names or labels, except the following:
  - Dollar sign (\$)
  - At sign (@)
  - Angle brackets (< >), brackets ([ ]), braces ({ }), and parentheses ( ( ))
  - Colon (: ) and semicolon (;)
  - Equal sign (=)
  - Caret sign (^)
  - Exclamation point (!)
  - Percent sign (%)
  - Question mark (?)
  - Comma (,)
  - Quotation mark (single or double) ( " )
- VSS 6.0 (build 8163), which is deployed with Visual Studio 6, does not work properly with projects whose names start with a dot (.) symbol. If such a project name is used, subprojects cannot be added.
- Do not use custom working directories for sub-projects (example: Project \$/SomeProject has the working directory C:\TEMP\VSS\SomeProject and its subproject \$/SomeProject/SomeSubProject has the working directory D:\SomeSubProject).

## File Encoding Settings

| Setting                                                     | Purpose                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| fileencoding.<br>mode=default user auto                     | <p>Defines how file encoding is calculated.</p> <p>default specifies that you want to use system properties.</p> <p>user indicates that you will explicitly specify the encoding name (using the setting below).</p> <p>auto enables automatic detection of encoding for the Far-East language specified with fileencoding.autolanguage</p> |
| fileencoding.user-<br>encoding=<name_of_encoding>           | <p>If fileencoding.mode is set to user, this specifies the encoding name Valid names are ASCII-US , UTF-8, UTF-16, UTF-16LE, UTF-16BE or java.nio canonical name.</p> <p>It should be specified in form parasoft-dotNET-[codepagenumber]</p>                                                                                                |
| fileencoding.auto-<br>language=<language's<br>numeric_code> | <p>If fileencoding.mode is set to auto, this specifies the language's numeric code. Valid codes are:</p> <ul style="list-style-type: none"> <li>• JAPANESE = 1</li> <li>• CHINESE = 2</li> <li>• SIMPLIFIED CHINESE = 3</li> <li>• TRADITIONAL CHINESE = 4</li> <li>• KOREAN = 5</li> </ul>                                                 |

## Miscellaneous Settings

| Setting                                        | Purpose                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| report.rules=<br>[url_path_to_rules_directory] | Specifies the directory for rules html files (generated by clicking the <code>Printable Docs</code> button in the Test Configuration's Static Analysis tab).<br><br>For example:<br><br>report.rules=file:///C:/Temp/Burt/parasoft/xtest/gendoc/<br><br>report.rules=./gendoc/<br><br>The default setting is none.                                                                                                                                                                                                       |
| tasks.clear=true false                         | Clears existing tasks upon startup in cli mode. This prevents excessive time being spent "loading existing results."<br><br>The default is true.                                                                                                                                                                                                                                                                                                                                                                         |
| console.verbosity.level=low normal high        | Specifies the verbosity level for the Console view. Available settings are:<br><br>low: Configures the Console view to show errors and basic information about the current step's name and status (done, failed, up-to-date).<br><br>normal: Also shows command lines and issues reported during test and analysis.<br><br>high: Also shows warnings.                                                                                                                                                                    |
| cpptest.custom.rules.dir=[directory]           | Indicates where user-defined rules are saved.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| cpptest.custom.configs.dir=[directory]         | Indicates where user-defined Test Configurations are saved.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| custom.compilers.dir=[directory]               | Overrides the custom compiler directory settings (found in <b>Parasoft&gt; Configurations&gt; Custom compilers</b> ) and uses the defined directory to search for custom compilers                                                                                                                                                                                                                                                                                                                                       |
| parallel.mode=Manual Auto Disabled             | Determines which of the following modes is active: <ul style="list-style-type: none"> <li>• <b>Auto</b>: Allows Parasoft Test to control parallel processing settings.</li> <li>• <b>Manual</b>: Allows you to manually configure parallel processing settings to suit your specific needs.</li> <li>• <b>Disabled</b>: Configures Parasoft Test to use only one of the available CPUs.</li> </ul> For more details on this and other parallel processing options, see <a href="#">Configuring Parallel Processing</a> . |
| parallel.max_threads=<number>                  | Specifies the maximum number of parallel threads that can be executed simultaneously. The actual number of parallel threads is determined by the number of CPUs, available memory, and license settings.                                                                                                                                                                                                                                                                                                                 |
| parallel.free_memory_limit=<percentage>        | Specifies the amount of memory that should be kept free in low memory conditions (expressed as a percentage of the total memory available for the application). This is used to ensure that free memory is available for other processes.                                                                                                                                                                                                                                                                                |
| parallel.no_memory_limit=true false            | Indicates that you do not want to place any restrictions (beyond existing system limitations) on the memory available to C++test                                                                                                                                                                                                                                                                                                                                                                                         |

Here is one sample options file named `local.properties`:

```
Team Server settings: (these may be redundant with settings already specified in Team Preferences of the
installed version, so may not be needed).
tcm.server.enabled=true
tcm.server.name=<team_server.company.com>

Report settings
report.developer_errors=true
report.developer_reports=true
report.format=html
session.tag=<project name>

Mail settings:
report.mail.enabled=true
report.mail.cc=<manager1@mailserver.com1;manager2@mailserver.com1>
report.mail.server=mail.company.com
report.mail.domain=company.com
report.mail.subject=<Static Analysis results on Project X>
report.mail.attachments=true
```

Here is another sample:

```
Team Server settings
tcm.server.enabled=true
tcm.server.name=teamserver.mycompany.com
tcm.server.port=18888
tcm.server.accountLogin=true
tcm.server.username=tcm_user
tcm.server.password=tcm_pass

Parasoft DTP settings
dtp.server=dtp.mycompany.com
dtp.port=32323

Mail settings
report.mail.enabled=true
report.mail.server=mail.mycompany.com
report.mail.domain=mycompany.com
report.mail.cc=project_manager
report.mail.subject=Coding Standards
concerto.log_as_nightly=true
```

## Using Variables in Local Settings (Options) Files

The following variables can be used in reports, e-mail, Parasoft DTP, Team Server, and license settings. Note that session tag value can't contain any ':' characters.

### **env\_var**

example: \${env\_var:HOME}

Outputs the value of the environmental variable specified after the colon.

### **project\_name**

example: \${project\_name}

Outputs the name of the tested project. If more than one project is provided as an input, it first outputs the tested project name, then "..."

### **workspace\_name**

example: \${workspace\_name}

Outputs the Solution name.

### **config\_name**

\$ example: \${config\_name}

Outputs the name of executed Test Configuration; applies only to Reports and Email settings.

#### analysis\_type

\$ example: \${analysis\_type}

Outputs a comma separated list of enabled analysis types (for example: Static, Generation, Execution); applies only to Reports and Email settings.

#### tool\_name

\$ example: \${tool\_name}

Outputs the tool name (for example: C++test).

Example localsettings file

```
REPORTS
#Determines whether reports are emailed to developers and to the additional recipients specified with the cc
setting.
#Remember that if the team is using CVS for source control and each developer's email address matches his or
her CVS username + the mail domain, each developer that worked on project code will automatically be sent a
report that contains only the errors/results related to his or her work.
report.mail.enabled=true
#Exclude developers emails (true/false)
report.mail.exclude.developers=false
Append developers errors to manager emails (true/false) report.developer_errors=true
Send reports to developers (true|false) report.developer_reports=true
Append suppressed messages (true|false) report.suppressed_msgs=false#Determines where to mail complete test
reports.
#This setting is typically used to send reports to managers or architects.
#It can also be used to send reports to developers if developer reports
#are not sent automatically (for example, because the team is not using CVS).
report.mail.cc=manager@domain.com; ${env_var:USERNAME} @domain.com
mail target for unknown developer errors report.mail.unknown=manager@domain.com
#Specifies the mail server used to send reports.
report.mail.server=mail_server.domain.com
#Specifies the mail domain used to send reports.
report.mail.domain=domain.com
#Specify mali from report.mail.from=nightly
#Specifies any email addresses you do not want to receive reports.
#This setting is used to prevent from automatically sending reports to someone that worked on the code, but
should not be receiving reports. This setting is only applicable if the team is using CVS for source control
and developer reports are being sent automatically.
report.mail.exclude=developer1;developer2
Specifies the subject line of the emails sent.
report.mail.subject= ${tool_name} Report - ${config_name}
Report test params include (true|false)
report.test_params=true
Team Server
#Determines whether the current installation is connected to the Team Server.
tcm.server.enabled=true
#Specifies the machine name or IP address of the machine running Team Server.
tcm.server.name=team_server.domain.com
#Specifies the Team Server port number.
tcm.server.port=18888
tcm.server.accountLogin=true
tcm.server.username=user
tcm.server.password=password
session.tag= ${config_name}
Parasoft Project Center
#Determines if the current installation is connected to Parasoft Project Center.
concerto.reporting=true
#Specifies the host name of the Parasoft DTP server.
dtp.server=grs_server.domain.com
Specifies the port number of the Parasoft Project Center report collector.
concerto.data.port=32323
Specifies user-defined attributes for Parasoft Project Center.
#Use the format key1:value1; key2:value2
#Attributes help you mark results in ways that are meaningful to your organization.
#They also determine how results are grouped in Parasoft Project Center and how you can filter results in
Parasoft Project Center.
```

```
#For example, you might want to label results by project name and/or by project component name.
#Each attribute contains two components: a general attribute category name
#and a specific identification value. For example, assume your organization wants to classify results by
project.
#You might then use the attribute project:projname1. For the next project, you could use a different
#local settings file that specified an attribute such as project:projname2.
concerto.user_defined_attributes=Type:Nightly;Project:Project1
Determines whether the results sent to Parasoft Project Center are marked as being from a nightly build.
concerto.log_as_nightly=true
SCOPE
#code authorship based on CVS
scope.sourcecontrol=true
#code authorship based on author tag
scope.author=false
#code authorship based on local user
scope.local=false
LICENSE
#override license settings
#cpptest.license.autoconf.timeout=40
cpptest.license.use_network=true
cpptest.license.network.host=license_server.domain.com
cpptest.license.network.port=2222
cpptest.license.network.edition=automation_edition
SOURCE CONTROL
scontrol.repl.type=cvs
scontrol.repl.cvs.root=:pserver:developer@cvs_server.domain.com:/home/cvs/
scontrol.repl.cvs.pass=mypassword
```