

C++test Configuration Overview

This topic explains how you can configure (or update) team-wide settings once, then have those settings propagated across the team's C++test installations. It also covers how to extend or override these settings as needed (for example, for machine-specific paths). Additionally, various C++test options can be specified in the preferences panel.

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Workflow Overview

If your organization is using Parasoft DTP, we strongly recommend that you adopt the following workflow to simplify configuration and updating of preference settings across your team:

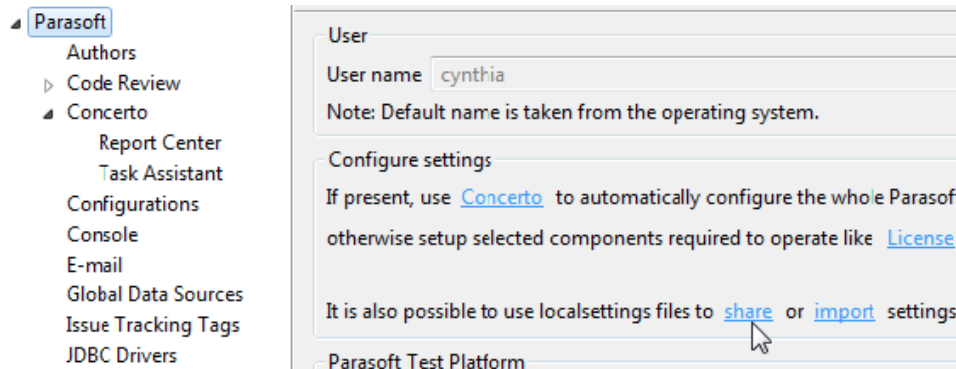
1. Configure team-wide preferences.
 - a. Configure team-wide preferences settings in the C++test GUI.
 - b. Convert those settings into the localsettings format.
 - c. Add the settings to your team's DTP server.
2. Configure C++test preferences on each desktop and server installation.
 - a. Let C++test automatically detect the settings stored on DTP.
 - b. Extend or override those settings as needed.
3. When team-wide preferences need to be updated, update them on the DTP server. Changes will automatically be propagated to the connected C++test installations.

Configuring Team-wide Preference Settings

Team-wide preference settings can be specified from the GUI, exported into localsettings, then shared via Parasoft DTP.

To configure team-wide settings:

1. Open the Parasoft GUI and configure the following settings:
 - E-mail (described in [Configuring Email Settings](#)).
 - License (described in [Licensing](#)).
 - DTP (described in [Connecting to DTP](#)).
 - Project Center (described in [Connecting to Project Center](#)).
 - Team Server (described in [Connecting to Team Server](#)).
 - Source control (described in [Connecting to Source Control](#)).
 - Authors (described in [Specifying Author-to-Author and Author-to-Email Mappings](#)).
 - Any additional settings you want to share. See [Preference Configuration Basics](#) for details.
2. In the top-level Parasoft Preferences page, click the **Share** link, specify which settings you want to export, and specify where you want to store the localsettings file that contains the exported preferences.



3. Add the exported settings to Parasoft DTP (edit the project, then paste the settings from the exported localsettings file into the **Parasoft Test Settings** tab).

Configuring Preferences on Each Installation

To configure each desktop and server installation to use the preferences stored on DTP:

1. Open the Parasoft Preferences panel (**Parasoft> Preferences**).
2. Open the **DTP** page.
3. Configure your DTP server connection now (see [Connecting to DTP](#) for details).
4. Update machine-specific settings (for example, settings that involve local paths) as desired—see [Preference Configuration Basics](#) for details.
 - If needed, you can change/override imported settings on the related Preferences panel pages (e.g., to override license settings, go to the License page). Just clear the **Use DTP settings** option on the appropriate page, then manually configure the settings.
 - If you do override imported settings and later want to restore them, click the **Restore DTP Defaults** button on the related preference page (to restore specific settings). Or, to reconfigure settings for the selected project and restore all defaults, click the **Restore Defaults** button the DTP page.

Working with Multiple DTP Projects

If you're working with multiple DTP projects, you can easily switch from one project's settings to another by clicking the DTP preferences page's **Projects> Configure** button, then changing the selected project.

Refreshing Parasoft Test Settings Specified on DTP

If you are storing C++test settings on DTP, those settings are refreshed each time that C++test is started.

If you want to manually refresh these settings (e.g., if you know that settings changed and you want to retrieve the new settings immediately, without restarting C++test):

1. Choose **Parasoft> Preferences**.
2. Open **Parasoft> DTP**.
3. Click the **Configure** button to the right of the **Project** field. This will synchronize the selected project's settings with those on the DTP server.

Using Preference Settings for Command-Line Execution

Using an Existing Locally-Stored Localsettings File

If you already have a locally-stored localsettings file that represents the settings you want to use for command-line execution:

- Specify that file at the command line (e.g., using `-localsettings my_localsettings_file`)

For more details, see [Configuring Localsettings](#) and [Testing from the Command Line Interface](#).

Using the Settings Stored on the DTP Server

If you would prefer to use settings stored on the DTP server (recommended for ease of maintenance)—you can do this in either of two ways:

- Specify `-dtp.autoconfig project_name@servername:port` at the command line. For example:
`-dtp.autoconfig Project1@concerto.company.com:8080`
This is often used when teams do not already have a locally-stored localsettings file.
- Use the `dtp.autoconfig=true` localsettings option. For example:
`dtp.enabled=true`
`dtp.server=servername`
`dtp.port=8080`
`dtp.autoconfig=true`
`dtp.project=project_name`

This is often used when a team already has a localsettings file, then wants to import some additional settings from DTP. You can define common properties in DTP, then configure per-test-run specific properties in various localsettings files for different test runs.

For details on how to specify localsettings, see [Configuring Localsettings](#).

Specifying Multiple Groups of Settings

If you want to use a combination of settings (for example, 1) key project settings stored on DTP 2) settings for all tests from this particular machine and 3) settings tailored for just a specific set of analyses from this machine), you can express a hierarchy of files as follows:

1. Export each group of settings as a localsettings file using the procedure described in [Exporting GUI Preferences to a localsettings File](#)
2. Use both `-dtp.autoconfig` and `-localsettings` at the command line. For example:

```
-dtp.autoconfig Project1@concerto.company.com:8080 -localsettings  
machine_override_properties -localsettings project_override_properties
```

Be sure to list your most general settings first, and your most specific settings last. Settings will be processed in the order in which they are listed; any settings that are duplicated across groups will be overridden each time a duplicate is found.

Updating Team-wide Settings

If you are using this recommended process, you can update team-wide settings in Parasoft DTP, then those modifications will automatically be propagated to all the connected machines.

To prevent this automated updating (e.g., because you have updated settings locally and do not want them overridden), disable **Use DTP settings** on the Preferences page(s) you do not want to be updated from DTP.

Preference Configuration Basics

To customize preferences:

1. Choose **Parasoft> Preferences**. The Preferences dialog will open.
2. In the left pane, select the category that represents the settings you want to change. See the following table and the listed references for details.
3. Modify the settings as needed.
4. Click either **Apply** or **OK** to commit the modified settings.

Preferences Categories

Parasoft (Root-Level)

Sets general preferences and allows you to export settings to a localsettings file.

- **Ignore solution and solution folder names in paths:** Enables "reduced paths" mode. In this mode—where only reduced (project relative) paths are used. Names of solution and solution folders will be skipped in these paths. New paths will be unique because project names are unique inside a solution.
- **User name:** Allows you to set a different user name than the one specified in the operating system. C++test uses this user name for code review and Project Center settings. The user name specified here can be overwritten at the code review and Project Center level.
- **Share/import:** See [Exporting GUI Preferences to a localsettings File](#).

Authors

Maps a team member's automatically-detected username to a different username and/or email address.

See [Configuring Task Assignment and Code Authorship Settings](#).

Code Review

Specifies settings for automating the preparation, notification, and tracking of the peer review process.

See [Configuring Code Review Preferences](#).

Configurations

Specifies the number of Test Configurations available in the **Parasoft> Test History** menu, the location where custom static analysis rules (user rules) are saved and searched for, and the location where user-defined Test Configurations and rules are saved and searched for.

- **Size of recently run test configurations:** Determines the number of Test Configurations available in the **Parasoft> Test History** menu.
- **Custom directories:** Indicates where user-defined Test Configurations and custom directories (e.g., for user rules, embedded cross-compilers, etc.) are saved.

Console

Specifies settings for the Console view.

- **Low:** Configures the Console view to show errors and basic information about the current step's name and status (done, failed, up-to-date).
- **Normal:** Adds command lines and issues reported during test and analysis.
- **High:** Uses full-format violation listings and also reports warnings.
- **Show console on any change:** Determines whether the console is brought to the front any time its content changes.

DTP

Specifies setting for the DTP server.

See [Connecting to DTP](#).

When expanded, it allows you to configure settings for DTP Project Center (see [Connecting to Project Center](#)) and Team Server (see [Connecting to Team Server](#)) which are deprecated.

E-mail

Specifies email settings used for report notifications and for sending files to Parasoft Technical Support.

See [Configuring Email Settings](#).

File Encoding

Determines the encoding for files without a BOM signature. You can choose to use the system defaults, indicate specific encoding, or automatically detect a specific Far-East language.

Issue Tracking Tags

Specifies custom tags that the team uses to associate a test case with an issue from an issue/feature/defect tracking system (for example, Bugzilla).

See [Using Custom Defect/Issue Tracking Tags](#).

JDBC Drivers

Specifies JDBC drivers (e.g., drivers needed to connect to a database used for parameterizing tests).

See [Configuring JDBC Drivers](#).

License

Specifies license settings.

See [Licensing](#).

Parallel Processing

Specifies parallel processing settings.

See [Configuring Parallel Processing](#).

Quality Tasks

Specifies general options related to how tasks are displayed in the Quality Tasks view.

See [Configuring Task Reporting Preferences](#).

Reports

Specifies what reports include and how they are formatted.

See [Configuring Reporting Settings](#).

Scope and Authorship

Specifies how Parasoft Test computes code authorship and assigns tasks to different team members.

See [Configuring Task Assignment and Code Authorship Settings](#).

Source Control

Specifies how Parasoft Test connects to your source control repositories.

See [Connecting Source Control](#).

Technical support

Specifies options for preparing "support archives" and sending them to the Parasoft support team.

See [Preparing a "Support Archive" and Sending it to Technical Support](#)

Using Variables in Preference Settings

The following variables can be used in reports, e-mail, Project Center, Team Server, and license settings. Note that the 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 "..."

solution_name

example: `${solution_name}`

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

general_project

example: `${general_project}`

Outputs the name of the DTP general project that results are linked to. See [General Project - Notes](#) for details.

workspace_name

example: `${workspace_name}`

Outputs the workspace name or Visual Studio solution name. For example,

```
report.mail.subject=Code Review Scanner Results for ${workspace_name}
```

would evaluate to something like "Code Review Scanner Results for solution.sln"

solution_loc (Visual Studio)

example: `${solution_loc}`

Outputs the Visual Studio solution location. For example,

```
report.mail.subject=Code Review Scanner Results for ${solution_loc}
```

would evaluate to something like "Code Review Scanner Results for c:/nightly/folder/.../solution.sln"

config_name

example: `${config_name}`

Outputs the name of executed test configuration; applies only to Reports and Email settings.

analysis_type

example: `${analysis_type}`

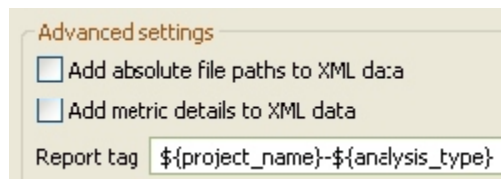
Outputs a comma separated list of enabled analysis types (for example: Static, Execution); applies only to Reports and Email settings.

tool_name

\$ example: `${tool_name}`

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

For example:

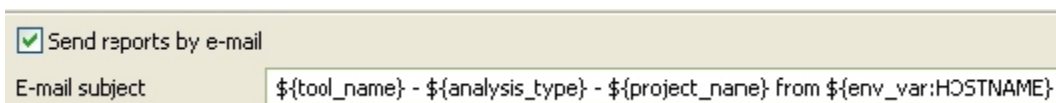


Advanced settings

Add absolute file paths to XML data

Add metric details to XML data

Report tag `${project_name}-${analysis_type}`



Send reports by e-mail

E-mail subject `${tool_name} - ${analysis_type} - ${project_name} from ${env_var:HOSTNAME}`



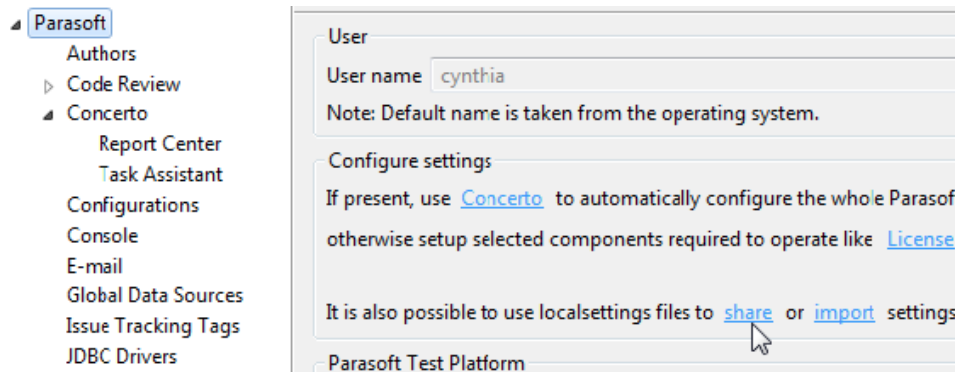
Exporting GUI Preferences to a localsettings File

You can export C++test preferences from the GUI to a localsettings text file. For example, this is useful if you want to:

- Copy settings into DTP for team-wide sharing (see [Workflow Overview](#))
- Quickly create a settings file that you can modify for command-line testing preferences.
- Share the preferences via source control (rather than via DTP).
- Edit preferences in a text file rather than in the GUI.

To export preferences to a localsettings file:

1. Choose **Parasoft> Preferences**. The Preferences dialog will open.
2. Select **Parasoft** (the root element in the left tree) in the Preferences dialog.
3. In the top-level Parasoft Preferences page, click the **Share** link, specify which settings you want to export, then export the settings to a localsettings file.



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

To import these preferences:

1. Choose **Parasoft> Preferences**. The Preferences dialog will open.
2. Select **Parasoft** (the root element in the left tree) in the Preferences dialog.
3. Click the **Import** link, then specify the file where the saved settings are stored, and which settings you want to import:

Specifying Solution-Level Preferences

By default, general Parasoft Preferences are common for all tested solutions/projects. To define preferences specific for a given solution:

1. In the solution directory, create a "parasoft.properties" file.
2. Add preference entries to that "parasoft.properties" file. Use the format described in [Configuring Test Configurations](#).

Each time the solution is opened, the global preferences will be overridden by the ones read from the "parasoft.properties" file. After the solution is closed (or another solution is opened), global preferences will be restored.

Solution-specific preferences are read-only. If you modify any preferences in the GUI, the changes will not be reflected in the "parasoft.preferences" file automatically.

Overriding the System User Name Outside of the GUI

If you need to override the system user name (e.g., if you are integrating the product into an automated process and do not want the resulting tasks assigned to the default system name), you can do so as follows:

1. Go to <Install Directory>\plugins\com.parasoft.xtest.runtime.vstudio.core\parasoft.properties

2. Add the following line to this file:
`user.name=<username>`
3. Save the file. (You may need to move the file in order to save it, due to Windows UAC).
4. Restart Visual Studio.
5. Reload the project solution.

Note that this configuration is the equivalent to modifying the **User name** setting at the top level of the Preferences UI.