

# TeamCity Server Logs

TeamCity Server keeps a log of internal activities that can be examined to investigate an issue with the server behavior or get internal error details.

The logs are stored in plain text files in a disk directory on the TeamCity server machine (usually in `<TeamCity Server home>/logs`).

The files are appended with messages when TeamCity is running.

While the server is running, the logs can be viewed in the web UI on the `Server Logs` tab of `Administration | Diagnostics` section.



## Enable Debug in Server Logs

In the web UI, go to `Administration | Diagnostics` page. On the `Troubleshooting` tab, choose a logging preset, view logs under `Server Logs` subsection.

If it is not possible to enable debug logging mode from the TeamCity web UI, refer to [Changing Logging Configuration](#) section to learn how to adjust logging options manually.

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## General Logging Description

TeamCity uses [log4j](#) library for the logging and its settings can be [customized](#).

By default, log files are located under the `<TeamCity Server home>/logs` directory.

The most important log files are:

<code>teamcity-server.log</code>	General server log
<code>teamcity-activities.log</code>	Log of user-initiated and main build-related events
<code>teamcity-vcs.log</code>	Log of <a href="#">VCS</a> -related activity
<code>teamcity-cleanup.log</code>	contains <a href="#">clean-up</a> -related log
<code>teamcity-notifications.log</code>	<a href="#">Notifications</a> -related log
<code>teamcity-clouds.log</code>	(off by default) <a href="#">Cloud-integration</a> -related log
<code>teamcity-sql.log</code>	(off by default) Log of SQL queries, see <a href="#">details</a>
<code>teamcity-http-auth.log</code>	(off by default) Log with messages related to <a href="#">NTLM</a> and other authentication for HTML requests
<code>teamcity-xmlrpc.log</code>	(off by default) Log of messages sent by the server to agents and IDE plugins via XML-RPC
<code>vcs-content-cache.log</code>	(off by default) Log related to individual file content requests from VCS
<code>teamcity-rest.log</code>	(off by default) <a href="#">REST-API</a> related logging
<code>teamcity-freemarker.log</code>	(off by default) <a href="#">Notification templates</a> processing-related logging
<code>teamcity-agentPush.log</code>	(off by default) Logging related to <a href="#">agent push</a> operations
<code>teamcity-remote-run.log</code>	(off by default) Logging related to <a href="#">personal builds</a> processing on the server
<code>teamcity-svn.log</code>	(off by default) <a href="#">SVN integration</a> log
<code>teamcity-tfs.log</code>	(off by default) <a href="#">TFS integration</a> log

teamcity-starteam.log	(off by default) <a href="#">StarTeam integration log</a>
teamcity-clearcase.log	(off by default) <a href="#">ClearCase integration log</a>
teamcity-ldap.log	<a href="#">LDAP-related log</a>
teamcity-nuget.log	<a href="#">NuGet-related log</a>
teamcity-maintenance.log	(off by default) logs of back-up/ restore/ migration performed with <a href="#">maintainDB tool</a>
teamcity-maintenance-truncation.log	(off by default) contains extended information on possible data truncation during back-up/ restore/ migration performed with <a href="#">maintainDB tool</a>
teamcity-versioned-settings.log	(off by default) contains information on <a href="#">synchronization of the project settings with the version control</a>
teamcity-ws.log	logs related to communication between browsers and the TeamCity server using the <a href="#">WebSocket connection</a>
teamcity-issue-trackers.log	logs related to communication between TeamCity and configured <a href="#">issue trackers</a>

Other files can also be created on [changing Logging Configuration](#).

Some of the files can have ".N" extensions - that are files with previous logging messages copied on main file rotation. See [maxBackupIndex](#) for preserving more files.

## Logging-related Diagnostics UI

Users with System Administrator role can view and download the server logs right from the TeamCity UI using Administration | Diagnostics | Server Logs.

The debug logging can be enabled via "Active logging preset " under the Administration | Diagnostics page, Troubleshooting, Debug logging subsection. Choosing a preset changes logging configuration immediately and the preset is preserved after a server restart, until changed on the page again. It is recommended to return to the "<Default>" once the necessary logs were collected.

The available presets are stored in the files with .xml extension under `<TeamCity Data Directory>/config/_logging` directory. New files can be added into the directory and existing files can be modified (using [.dist convention](#)). New presets can also be uploaded via Diagnostics | Logging Presets.

## Changing Logging Configuration

While TeamCity is running, logging configuration for the server can be switched to a logging preset.

If it is not possible to enable debug logging mode via logging presets (e.g. to get the logging during server initialization) or to make persistent changes to the logging, you can backup the `conf/teamcity-server-log4j.xml` file and copy/rename the `<TeamCity Data Directory>/config/_logging/debug-general.xml` file over `conf/teamcity-server-log4j.xml` before the server start.

## Changing Logging Settings

If you want to fine-tune the log4j configuration, you can edit `<TeamCity Server home>/conf/teamcity-server-log4j.xml` file (for .war TeamCity distribution, see [the related section](#)). If the server is running, the log4j configuration file will be reloaded automatically and the logging configuration will be changed on the fly (some log4j restrictions still apply, so for a massive change consider restarting the server).

Most useful settings of log4j configuration:

To change the minimum log level to save in the file, tweak the "value" attribute of the "priority" element:

```
<category ...>
  <priority value="INFO"/>
  ...
```

The logs are rotated by default. When debug is enabled, it makes sense to increase the "value" attribute of "maxBackupIndex" element to affect the number of preserved log files. While doing so, please ensure there is sufficient free disk space available.

```
<appender ...>
  <param name="maxBackupIndex" value="10"/>
  ...
```

For detailed description of `maxBackupIndex` and other supported attributes, see <http://logging.apache.org/log4j/1.2/apidocs/org/apache/log4j/RollingFileAppender.html>.

## Reading Logs

Each message has a timestamp and level (ERROR, WARN, INFO, DEBUG).

e.g.:

```
[2010-11-19 23:22:35,657] INFO - s.buildServer.SERVER - Agent vmWin2k3-3 has been
registered with id 19, not running a build
```

ERROR means an operation failed and some data was lost or action not performed. Generally, there should be no ERRORS in the log.

WARNs generally means that an operation failed, but will be retried or the operation is considered not important. Some amount of WARNs is OK. But you can review the log for such warnings to better understand what is going OK and what is not.

INFO is an informational message that just reports on the current activities.

DEBUG is only useful for issue investigation. e.g. to be analyzed by TeamCity developers.

## General Logging Configuration

By default TeamCity searches for log4j configuration in the `../conf/teamcity-server-log4j.xml` file (this resolves to `<TeamCity Server home>/conf/teamcity-server-log4j.xml` for TeamCity `.exe` and `.tar.gz` distributions when run from "bin"). If no such file is present, the default log4j configuration is used.

The logs are saved to the `../logs` directory by default.

The configuration options values can be changed via the corresponding `log4j.configuration` and `teamcity_logs` JVM options or [internal properties](#).

For example: `log4j.configuration=file:../conf/teamcity-server-log4j.xml` and `teamcity_logs=../logs/`

Default values can be looked up in the `bin/teamcity-server` script available in the `.exe` and `tar.gz` distributions.

If you start TeamCity by the means other than the bundled `teamcity-server` or `runAll` scripts, please make sure to pass the above-mentioned options to the server JVM.

See also the [recommendations](#) on installing TeamCity into not bundled web server.

The default `teamcity-server-log4j.xml` file content can be found in the `.exe` and `tar.gz` distributions. The one with debug enabled can be found under [TeamCity Data Directory/config/\\_logging/debug-general.xml](#) name after server's first start. See also sample `teamcity-server-log4j.xml` file.

See also:

[Administrator's Guide: Viewing Build Agent Logs](#)  
[Troubleshooting: Reporting Issues](#)