# Performance journalling for the Teamcenter Integrations for Pro/ENGINEER and SolidWorks

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## Introduction

Teamcenter 8.3.2 introduces a new logging capability called “performance journaling”. It resolves several problems with traditional server-side journaling with a lightweight file format resulting in less processing time overhead and smaller file sizes. It is available OOTB on the server-side by setting environment variables, and can be extended to Teamcenter clients with a combination of configuration changes and file additions. The output log flies from performance journaling can be analyzed by Teamcenter support and product development, to identify performance factors in the customer environment.

## Prerequisites

* Teamcenter 8.3.2 has the basic capability to generate performance journal files. Newer versions such as Tc9.1.2 and Tc10.1.0 support slightly more functionality in the analysis tools.
* Configuration settings. Both the integration client and the Teamcenter server startup environments must be modified in order to activate the journaling. The rest of this document describes the procedure.

## Configuration

### Server

Certain variables must be effective in the environment in which the tcserver process is started. These are:

TC\_KEEP\_SYSTEM\_LOG=Y

TC\_JOURNAL=FULL

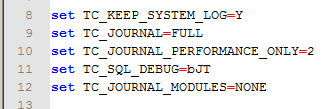
TC\_JOURNAL\_PERFORMANCE\_ONLY=2

TC\_SQL\_DEBUG=bJT

TC\_JOURNAL\_MODULES=NONE

There are many ways to accomplish this, but I recommend the following:

* 2-tier: Add the settings to the top of the %TC\_ROOT%\iiopservers.bat file, like this:



* 4-tier: Add the settings to the top of the %TC\_ROOT%\pool\_manager\mgrstart{db\_name}.bat file

When a new session is started after these variables are set, the tcserver process will write a new tcserver log file with a **.pjl** extension. This file will be written to the same location used for Teamcenter syslogs and traditional journal files. Often this is %TPR\_DIR%\temp, but it can be other locations. The base part of the file name will follow the usual convention, for example: **tcserver.exe690da33.pjl**.

### iPEM or SWIM client

Logging is enabled on the client side in two steps:

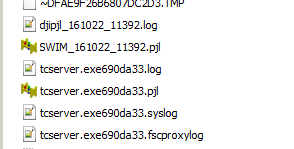
1. Extract the files in the accompanying djipjl.zip file into a directory location on your iPEM or SWIM client
2. Add the following lines to the top of your {ipem | swim}runnersoa.bat file:

set PJL\_DIR=D:\apps\djipjl

set TXD\_DEBUG\_CLASS=-agentpath:%PJL\_DIR%\djipjl\_win64=swim-pjl.properties

Where the **PJL\_DIR** is set to the full directory path of the location selected in step (1). The additional highlighted entries may be different based on your client OS type and which integration you are using. The example above works on Windows 64 bit clients using the SolidWorks integration. The README provided with the djipjl.zip gives full details on how to set these, and other, preferences.

Once these changes are made on the client, you will get a file named **SWIM\_nnnnnn\_nnnnn.pjl** in your logs directory. For example, **SWIM\_161022\_11392.pjl.**



## Test procedure

Here is the recommended procedure for capturing and sending logs, to analyze performance of the Teamcenter Integrations for Pro/ENGINEER and SolidWorks.

1. Install and configure both server and client journaling, as documented above.
2. Set the Teamcenter site preference “UNLOAD\_OBJECTS” to false[[1]](#footnote-1).
3. If using 4 tier, then restart the TC server pool.
4. Set the following in the integration’s properties file (ipem.properties for Pro/ENGINEER, swim.properties for SolidWorks):
   * log.enable=true
   * log.file=c:\\temp\\txdlog.txt
   * log.suppress=1000
5. Launch the CAD integration using the desktop shortcut provided. Do not start a Teamcenter Rich Client, unless the test case explicitly requires it.
6. Log into Teamcenter and perform the test in as few steps as possible, as quickly as possible. Do not perform functions which are unrelated to the test case, and do not pause for long periods of time.
7. Exit from the CAD application so that your client logs out of Teamcenter. If using 2-tier, kill any lingering TAO window.
8. Collect the two .pjl files described above, from the integration client and the Teamcenter server process, and send them to Teamcenter support or Product Development, depending upon who made the request for the performance logging. Also send the integration log file (txdlog.txt).

1. Do not leave UNLOAD\_OBJECTS set to false in a production environment. This change should only be made for performance testing [↑](#footnote-ref-1)