Getting Started with Intel(R) Trace Analyzer and Collector

This document describes some simple use cases to get you started with the Trace Analyzer and Collector after successfull installation.

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Overview

To simplify the use of Intel(R) Trace Analyzer and Collector it provides environmental scripts. Please source/execute the appropriate script (<installdir>/bin/itacvars.csh, <installdir>/bin/itacvars.sh, <installdir>/bin/itacvars.bat) in your shell before using the software.

```
$ source <installdir>/bin/itacvars.sh # better added to $HOME/.profile or similar
```

The typical use of the Trace Analyzer and Collector is as follows:

The first step is to let your application run together with the Trace Collector to generate one (or more) trace file(s).

The second step is to start the Trace Analyzer and to load the generated trace for analysis.

Generating a Trace File

Generating a trace file from a MPI application can be as simple as setting just one environment variable or adding an additional argument to mpiexec. Assume you are starting your application with the following bash command:

```
$ mpiexec -n 4 myApp
```

Then generating a trace can be accomplished by typing:

```
$ LD_PRELOAD=<installdir>/slib/libVT.so mpiexec -n 4 myApp
```

or even simpler (Intel(R) MPI Library)

```
mpiexec -n 4 -trace myApp
```

This will create trace files named myApp.stf* containing trace information for all calls to MPI library functions issued by the application.

If your application is statically linked against the Intel(R) MPI Library you have to re-link your binary like this:

```
$ mpiicc -trace <all our object files> -o myApp
```

or

```
$ mpiifort -trace <all our object files> -o myApp
```

Normal execution of your application

```
$ mpiexec -n 4 myApp
```

will then create the trace files named myApp.stf*.

Analyzing a Trace File

To analyze the generated trace you would type:

```
$ traceanalyzer myApp.stf
```

Please read section "For the Impatient" in the [Trace Analyzer Reference Guide](#) get guidance on the first steps with this tool.

Further options

This document gives only a short introduction to the Trace Analyzer and Collector. More features and details are described in the documentation:

To learn more about the Trace Collector's features like its API for source code instrumentation, compiler guided instrumentation, instrumentation of binary executables, runtime configuration and a lot more please refer to the [Intel Trace Collector Reference Guide](#).

To learn more about the Trace Analyzers capabilities to display, aggregate, filter, tag and compare trace data please refer to Intel Trace Analyzer Reference Guide [(HTML)](#) or [(PDF)](#).

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