

# Intel® Trace Analyzer and Collector for Linux\* OS

## Getting Started Guide

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### Overview

To simplify the use of the Intel® Trace Analyzer and Collector, a set of environmental scripts is provided to you. Source/execute the appropriate script (`<installdir>/bin/itacvars.[c]sh`) in your shell before using the software. For example, if using the Bash shell:

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

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

- Let your application run together with the Trace Collector to generate one (or more) trace file(s).
- Start the Trace Analyzer and to load the generated trace for analysis.

### Generating a Trace File

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

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

Then generating a trace can be accomplished by adding:

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

or even simpler (for the Intel® MPI Library)

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

This will create a set of trace files named `myApp.stf*` containing trace information for all MPI calls issued by the application.

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

```
$ mpiicc -trace <all our object files> -o myApp # when using  
the Intel® C++ Compiler
```

or

```
$ mpiifort -trace <all our object files> -o myApp # when using  
the Intel® Fortran Compiler
```

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, invoke the graphical user interface:

```
$ traceanalyzer myApp.stf
```

Read section *For the Impatient* in the [Trace Analyzer Reference Guide](#) to get guidance on the first steps with this tool.

## Further options

This document gives only a short introduction to the Trace Analyzer and Collector. For more features and details see the product documentation:

Refer to the [Intel Trace Collector Reference Guide](#) 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.

Refer to the Intel Trace Analyzer Reference Guide to learn more about the Trace Analyzers capabilities to display, aggregate, filter, tag, and compare trace data.

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