

HAEC Simulator Framework

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Chapter 1

HAEC Simulator Documentation

The HAEC simulator is an open-source HPC framework written in C++ for simulations which are based on traces. Currently the framework supports simulations using one the following network models:

1. Practical Network Coding Model (PNC),
2. Dimension Order Routing Model (DOR),
3. Macro Flow Data Model (MFD).

So far, all implemented network models assume that there are no link contention, no link errors, and no link attackers. Detailed information about the network models can be found in the following article: "Analysis of parallel applications on a high performance - Low energy computer", F. M. Ciorba, T. Ilsche, E. Franz, S. Pfennig, C. Scheunert, U. Markwardt, J. Schuchart, D. Hackenberg, R. Schöne, A. Knüpfer, W. E. Nagel, E. A. Jorswieck, and M. S. Müller, in Proceedings of the Workshop on Unconventional High Performance Computing, 2014.

1.1 Configuring and Running the HAEC Simulator

In preparation for running the HAEC simulator, a so-called "mapping file" has to be created which maps the process ids of the parallel application to the system nodes of the used grid topology. The format of the mapping file is as follows:

```
<Name of the mapping>
x_coordinate y_coordinate z_coordinate number_of_processes process_id(s)
0 0 0 2 38 72
1 0 0 2 3 73
[...]
2 2 2 4 35 51 75 77
```

The third row means: Application processes with MPI ranks 38 and 72 are mapped to the system node (0,0,0).

Then, the HAEC simulator can be configured by choosing one of the following ways:

1. "Semi-automatic configuration" by setting environment variables and executing a shell script.
2. "Manual configuration" by passing all command line options directly to the call of the HAEC simulator executable at the console.

1.1.1 Semi-Automatic Configuration

There will be a shell script named `haecsimrun.sh` available after the installation of the HAEC simulator. Program runs of the instrumented applications can be configured using the following environment variables prefixed by `HAECSIMRUN:`

- HAECSIMRUN_CONFIGURATION_FILE="`<file>`" Configuration file using JSON style, default="haec←
_sim.conf"
- HAECSIMRUN_COMMUNICATION_MODEL"`<PNC/DOR/MFD>`" Communication model. Practical network coding (PNC), Dimension order routing (DOR), Macro flow data (MFD), default=PNC
- HAECSIMRUN_TOPOLOGY="`<n1xn2xn3>`" Topology of the compute nodes, Currently, a grid topology is supported, only. default="3x3x3".
- HAECSIMRUN_LATENCY="`<int>`" Latency of the link connections in ns (nano seconds), default="100"
- HAECSIMRUN_BANDWIDTH="`<int>`" Bandwidth of the link connections in b/s (bits per second), default="12500000000" (100 GB/s)
- HAECSIMRUN_MAPPING_PROCS_TO_NODES="`<file>`" File for mapping application processes to system nodes, default="positions.map"
- HAECSIMRUN_INPUTTRACE_DIR="`<directory>`" Input trace directory, default="."
- HAECSIMRUN_OUTPUT_DIR="`<directory>`" Output directory which serves a basis for trace files, default="."

After setting the environment variables the script `haecsimrun.sh` can be executed in order to run the simulation.

1.1.2 Manual Configuration

The HAEC simulator will be invoked from the command line. As it works in parallel, a new simulation has to be launched using `mpirun`:

```
mpirun -np <Nprocs> main/haec_sim <inputtracefile.otf2>
```

The number of needed MPI processes `Nprocs` can be obtained by executing the following OTF2 command line tool and reading out the row `locations`:

```
otf2-print -I <inputtracefile.otf2>
```

Note

It is important to provide the correct number of MPI processes as there is no way to check this before the simulation starts. Otherwise, the HAEC simulator will crash during execution with the following exception:

```
otf2::exception: We have too few MPI processes to run.
```

There are several command line options. All options will be listed when launching the HAEC simulator without any arguments.

- `-o <outputtracefile>`
`--output-trace <outputtracefile>`
Path to output trace file. If no `outputtracefile` is given, then the default output trace file can be found in `BUILD/main/output_trace`.
- `-p <positionsmapfile>`
`--positions-map <positionsmapfile>`
Path to mapping file.
- `-c <configurationfile>`
`--config-file <configurationfile>`
Path to configuration file
- `--conf-override '<configuration option>:<JSON value>'`
Override the given configuration option
- `-V <level>`
`--verbosity <level>`
Verbosity of the messages during the simulation, where level is one of the following: trace, debug, info [default], warn, error, or fatal.

- `--no-zero-durations`

If this option is given, every function with a duration equal to zero will be stretched to 1 pico second.

Target system parameters are stored in a JSON configuration file. An example configuration file can be found at:

`etc/haec_sim.conf`

A nice online editor for the JSON format is available at:

`http://jsoneditoronline.org`

The JSON configuration path `.modules.static_network_model.communication_model` has to be set in order to ensure that each MPI point-to-point message in the input trace will be 'transmitted' using the desired network model. This can be done in two ways. The first way is to edit the configuration file, the second way is to use overrides:

```
--conf-override '.modules.static_network_model.communication_model:"PNC"'
--conf-override '.modules.static_network_model.communication_model:"DOR"'
--conf-override '.modules.static_network_model.communication_model:"MFD"'
```

Overriding configuration options is possible with the command line option `-conf-override` which can be specified multiple times for multiple overrides

The overrides consist of a path, a colon, and a JSON expression. If one only wants to override one specific option in the configuration file one can simply pass the path to it with the new value. For example, if one wants to set a different value for the latency, then a correct override would be:

```
-conf-override '.modules.static_network_model.latency:50000'
```

One can also give an arbitrary complex JSON object. One can also create a new config path, if one specifies the root of the new path. e.g. one could pass

```
-conf-override '.modules.cpu_resource_model:{"hyperthreading": false}'
```

to create a configuration for the module `cpu_resource_model`.

Note

One should not specify competing overrides, this means, defining different overrides, which specify the same full path. For example two or more of the following:

```
--conf-override '.modules.static_network_model.latency:50000'
--conf-override '.modules:{}'
--conf-override '.modules.static_network_model: {"latency": 50000}'
--conf-override '.:{"modules": {"static_network_model", {"latency": 50000}}}'
```

Depending on which one chooses, one could end up with different problems. The rules for which override takes precedence are fairly complicated and might change in the future. Thus, they are undefined. The first and the fourth in the example are doing completely different things. The first overrides only the value of the path `.modules.static_network_model.latency`, but the fourth replaces the complete configuration with being `.modules.static_network_model.latency` the only path.

1.2 How to Create a New Module?

For the creation of a new module, please refer to [Create your own module](#).

1.3 FAQ

1.3.1 Current Assumptions / Restrictions

- The target system is fixed and the topology of the target system is assumed to be grid topology.
- A fixed initial mapping of application processes from the input trace to a fixed description of the target system is assumed (topology manager).

1.4 Contact

Website: https://tu-dresden.de/zih/haec_sim

1.5 Funding

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Chapter 2

Create your own module

2.1 Basics

Each piece of a trace file has to proceed at chain of modules during the simulation. These pieces are divided into two different types:

- Definitions,
- events.

Definitions are used to store the state of the traced program. This can be the structure of the system, MPI communicators, functions of the traced program, e.g.

The events are recurring notifications during the trace of the program which marks a change in the runtime environment like MPI communications or enter and leave of functions.

For more details, please refer to [Open Trace Format 2 C++ binding](#).

The module `haec_sim::module::source` will always be the head of the module chain, the module `haec_sim::module::sink` will always be the tail of the chain. Besides those two module, the order of the other modules is user defined and could be different for each simulation.

Remarks

One should never rely on a certain order of modules!

Chapter 3

Open Trace Format 2 C++ binding

3.1 Definitions

Where are several definitions in OTF2. Yet not all definitions are accessible in `otf2xx`.

Currently available are the following:

- `otf2::definition::attribute`
- `otf2::definition::clock_properties`
- `otf2::definition::comm`
- `otf2::definition::group`
- `otf2::definition::location`
- `otf2::definition::location_group`
- `otf2::definition::metric_class`
- `otf2::definition::metric_instance`
- `otf2::definition::metric_member`
- `otf2::definition::parameter`
- `otf2::definition::region`
- `otf2::definition::string`
- `otf2::definition::system_tree_node`

For convenience there is a container class similar to a `std::map`:

- `otf2::definition::container`

3.2 Events

Where are several events in OTF2. Yet not all events are accessible in `otf2xx`.

Currently available are the following:

- `otf2::event::buffer_flush`

- `otf2::event::enter`
- `otf2::event::leave`
- `otf2::event::measurement`
- `otf2::event::metric`
- `otf2::event::mpi_collective_begin`
- `otf2::event::mpi_collective_end`
- `otf2::event::mpi_send`
- `otf2::event::mpi_receive`
- `otf2::event::mpi_isend`
- `otf2::event::mpi_isend_complete`
- `otf2::event::mpi_ireceive`
- `otf2::event::mpi_ireceive_request`
- `otf2::event::mpi_request_cancelled`
- `otf2::event::mpi_request_test`
- `otf2::event::parameter_int`
- `otf2::event::parameter_unsigned_int`
- `otf2::event::parameter_string`
- `otf2::event::thread_acquire_lock`
- `otf2::event::thread_fork`
- `otf2::event::thread_join`
- `otf2::event::thread_release_lock`
- `otf2::event::thread_task_complete`
- `otf2::event::thread_task_create`
- `otf2::event::thread_task_switch`
- `otf2::event::thread_team_begin`
- `otf2::event::thread_team_end`

A buffer for events used to read ahead some information for `mpi_ireceive_request`.

- `otf2::event::buffer`

3.3 Timestamp handling

For time we have got some basic ideas. First, we have time points, which are specific points on a timeline. We have durations, which are the distance between to time points. And we have a clock, which gives us a point of reference on the timeline - called epoch - and a precision.

- `otf2::chrono::clock`
- `otf2::chrono::time_point`
- `otf2::chrono::duration`
- `otf2::chrono::ticks`

Chapter 4

Namespace Index

4.1 Namespace List

Here is a list of all namespaces with brief descriptions:

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Chapter 5

Hierarchical Index

5.1 Class Hierarchy

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Chapter 6

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Chapter 8

Namespace Documentation

8.1 algebra Namespace Reference

Classes

- class [polynomial](#)

Functions

- `template<typename T >`
`boost::numeric::ublas::vector< T >` [get_pow_vec](#) (std::size_t N, T x)

8.1.1 Function Documentation

8.1.1.1 `template<typename T >` `boost::numeric::ublas::vector<T>` `algebra::get_pow_vec` (std::size_t N, T x)

8.2 boost Namespace Reference

Namespaces

- [serialization](#)

8.3 boost::serialization Namespace Reference

Functions

- `template<class Archive >`
`void` [save](#) (Archive &ar, const [otf2::chrono::duration](#) &dur, const unsigned int)
- `template<class Archive >`
`void` [load](#) (Archive &ar, [otf2::chrono::duration](#) &dur, const unsigned int)
- `template<class Archive >`
`void` [serialize](#) (Archive &ar, [otf2::chrono::duration](#) &dur, const unsigned int file_version)
- `template<class Archive >`
`void` [save](#) (Archive &ar, const [otf2::chrono::time_point](#) &tp, const unsigned int)
- `template<class Archive >`
`void` [load](#) (Archive &ar, [otf2::chrono::time_point](#) &tp, const unsigned int)
- `template<class Archive >`
`void` [serialize](#) (Archive &ar, [otf2::chrono::time_point](#) &tp, const unsigned int file_version)

8.3.1 Function Documentation

8.3.1.1 `template<class Archive > void boost::serialization::load (Archive & ar, otf2::chrono::time_point & tp, const unsigned int) [inline]`

8.3.1.2 `template<class Archive > void boost::serialization::load (Archive & ar, otf2::chrono::duration & dur, const unsigned int) [inline]`

8.3.1.3 `template<class Archive > void boost::serialization::save (Archive & ar, const otf2::chrono::time_point & tp, const unsigned int) [inline]`

8.3.1.4 `template<class Archive > void boost::serialization::save (Archive & ar, const otf2::chrono::duration & dur, const unsigned int) [inline]`

8.3.1.5 `template<class Archive > void boost::serialization::serialize (Archive & ar, otf2::chrono::time_point & tp, const unsigned int file_version) [inline]`

8.3.1.6 `template<class Archive > void boost::serialization::serialize (Archive & ar, otf2::chrono::duration & dur, const unsigned int file_version) [inline]`

8.4 haec_sim Namespace Reference

Namespaces

- [config](#)
- [log](#)
- [mapping](#)
- [module](#)
- [path](#)
- [resource_manager](#)
- [topology](#)

Classes

- class [environment](#)
A class to provide information about the environment of the run.
- struct [exception](#)
- class [trace_file](#)
an abstraction of traces

Functions

- `template<typename... Args>`
void [make_exception](#) (Args...args)

8.4.1 Function Documentation

8.4.1.1 `template<typename... Args> void haec_sim::make_exception (Args... args) [inline]`

8.5 haec_sim::config Namespace Reference

Namespaces

- [detail](#)

Classes

- class [config](#)

8.6 haec_sim::config::detail Namespace Reference

Classes

- class [convert_helper](#)
- class [convert_helper](#)< [bool](#) >
- class [convert_helper](#)< [double](#) >
- class [convert_helper](#)< [float](#) >
- class [convert_helper](#)< [int](#) >
- class [convert_helper](#)< [int64_t](#) >
- class [convert_helper](#)< [std::string](#) >
- class [convert_helper](#)< [uint64_t](#) >
- class [convert_helper](#)< [unsigned int](#) >

8.7 haec_sim::log Namespace Reference

Namespaces

- [detail](#)

Typedefs

- typedef [nitro::log::logger](#)< [detail::record](#), [detail::haec_log_formatter](#), [nitro::log::sink::stdout_mt](#), [detail::haec_log_filter](#) > [logging](#)

Functions

- void [set_min_severity_level](#) ([nitro::log::severity_level](#) sev)

8.7.1 Typedef Documentation

- 8.7.1.1 typedef [nitro::log::logger](#)<[detail::record](#), [detail::haec_log_formatter](#), [nitro::log::sink::stdout_mt](#), [detail::haec_log_filter](#)> [haec_sim::log::logging](#)

8.7.2 Function Documentation

- 8.7.2.1 void [haec_sim::log::set_min_severity_level](#) ([nitro::log::severity_level](#) sev) [\[inline\]](#)

8.8 haec_sim::log::detail Namespace Reference

Classes

- class [haec_log_formatter](#)

Typedefs

- typedef [nitro::log::record](#)< [nitro::log::message_attribute](#), [nitro::log::timestamp_attribute](#), [nitro::log::severity_attribute](#), [nitro::log::mpi_rank_attribute](#) > [record](#)
- template<typename [Record](#) >
using [haec_log_filter](#) = [nitro::log::filter::severity_filter](#)< [Record](#) >

8.8.1 Typedef Documentation

8.8.1.1 `template<typename Record > using haec_sim::log::detail::haec_log_filter = typedef nitro::log::filter::severity_filter<Record>`

8.8.1.2 `typedef nitro::log::record<nitro::log::message_attribute, nitro::log::timestamp_attribute, nitro::log::severity_attribute, nitro::log::mpi_rank_attribute> haec_sim::log::detail::record`

8.9 haec_sim::mapping Namespace Reference

Namespaces

- [detail](#)

Classes

- class [location](#)
class to map from locations to simulation ranks
- class [simulation_rank](#)
class to map from simulation ranks to locations

Functions

- [detail::lsr_mapping](#) & [lsr_mapping](#) ()

8.9.1 Function Documentation

8.9.1.1 `detail::lsr_mapping& haec_sim::mapping::lsr_mapping () [[inline]]`

8.10 haec_sim::mapping::detail Namespace Reference

Classes

- class [lsr_mapping](#)

8.11 haec_sim::module Namespace Reference

Classes

- class [base](#)
Base class for modules.
- class [no_zero_durations](#)
{ A module, which ensures that there are no functions with a duration of zero }

- class [sink](#)
The sink class.
- class [source](#)
This first module in the chain of modules processing trace files.

8.12 haec_sim::path Namespace Reference

Classes

- class [data_transfer_hop](#)
- class [data_transfer_path](#)

Functions

- [data_transfer_hop wireless_data_transfer_hop](#) ()
returns a [data_transfer_hop](#) with values for wireless connections
- [data_transfer_hop optical_data_transfer_hop](#) ()
returns a [data_transfer_hop](#) with values for optical connections

8.12.1 Function Documentation

8.12.1.1 [data_transfer_hop haec_sim::path::optical_data_transfer_hop](#) () [`inline`]

returns a [data_transfer_hop](#) with values for optical connections

8.12.1.2 [data_transfer_hop haec_sim::path::wireless_data_transfer_hop](#) () [`inline`]

returns a [data_transfer_hop](#) with values for wireless connections

8.13 haec_sim::resource_manager Namespace Reference

Namespaces

- [detail](#)
- [packet_component](#)

Classes

- class [base](#)
- struct [info](#)
- class [link](#)
- class [packet](#)
- class [process_pool](#)

Enumerations

- enum [type](#) { `type::shutdown`, `type::cpu`, `type::metric_collector`, `type::energy` }

8.13.1 Enumeration Type Documentation

8.13.1.1 `enum haec_sim::resource_manager::type` [`strong`]

Enumerator

shutdown
cpu
metric_collector
energy

8.14 `haec_sim::resource_manager::detail` Namespace Reference

Classes

- class [serialize_helper](#)
- class [serialize_helper](#)< Packet, Archive >
- class [serialize_helper](#)< Packet, Archive, Arg, Args...>

8.15 `haec_sim::resource_manager::packet_component` Namespace Reference

Classes

- struct [end_process_type](#)
- struct [is_manager_type](#)
- struct [name_type](#)
- struct [position_type](#)
- struct [rank_type](#)
- struct [tag_type](#)
- struct [time_duration_type](#)
- struct [time_range_type](#)
- struct [timestamp_type](#)
- struct [value_type](#)

Typedefs

- using [response_tag](#) = [tag_type](#)< 101 >
- using [request_tag](#) = [tag_type](#)< 100 >

8.15.1 Typedef Documentation

8.15.1.1 `using haec_sim::resource_manager::packet_component::request_tag = typedef tag_type<100>`

8.15.1.2 `using haec_sim::resource_manager::packet_component::response_tag = typedef tag_type<101>`

8.16 `haec_sim::topology` Namespace Reference

Classes

- class [depth_first_manager](#)
- class [manager](#)

Abstract base class for simulator topology managers. This class places processes on cores on specific boards.

- class [mapping_file_manager](#)
- class [mapping_file_parser](#)
- class [position](#)
- class [topology](#)

The topology class represents the layout of positions in a 3D-Mesh.

Functions

- `std::istream & operator>> (std::istream &s, position &pos)`
- `std::ostream & operator<< (std::ostream &s, const position &pos)`
- `bool operator< (const position &a, const position &b)`
- `bool operator== (const position &a, const position &b)`
- `bool operator!= (const position &a, const position &b)`

8.16.1 Function Documentation

8.16.1.1 `bool haec_sim::topology::operator!= (const position & a, const position & b)` `[inline]`

8.16.1.2 `bool haec_sim::topology::operator< (const position & a, const position & b)` `[inline]`

8.16.1.3 `std::ostream& haec_sim::topology::operator<< (std::ostream & s, const position & pos)` `[inline]`

8.16.1.4 `bool haec_sim::topology::operator== (const position & a, const position & b)` `[inline]`

8.16.1.5 `std::istream & haec_sim::topology::operator>> (std::istream & s, position & pos)` `[inline]`

8.17 nitro Namespace Reference

Namespaces

- [dl](#)
- [log](#)
- [meta](#)

8.18 nitro::dl Namespace Reference

Classes

- class [dl](#)

Class for dynamically loading libraries.

- class [exception](#)
- class [symbol](#)

Class for holding and calling a handler to a dynamically loaded symbol in a typesafe way.

- class `symbol< Ret(Args...)>`

Class for holding and calling a handler to a dynamically loaded symbol in a typesafe way.

8.19 nitro::log Namespace Reference

Namespaces

- [detail](#)
- [filter](#)
- [sink](#)

Classes

- struct [actual_stream](#)
- class [logger](#)
- class [message_attribute](#)
- class [mpi_rank_attribute](#)
- class [omp_thread_id_attribute](#)
- class [pid_attribute](#)
- class [pthread_id_attribute](#)
- class [record](#)
- class [severity_attribute](#)
- class [std_thread_id_attribute](#)
- class [timestamp_attribute](#)

Enumerations

- enum [severity_level](#) : char {
 [severity_level::trace](#), [severity_level::debug](#), [severity_level::info](#), [severity_level::warn](#),
 [severity_level::error](#), [severity_level::fatal](#) }

Functions

- template<typename S >
 S & [operator<<](#) (S &s, [severity_level](#) sev)

8.19.1 Enumeration Type Documentation

8.19.1.1 enum nitro::log::severity_level : char [strong]

Enumerator

trace

debug

info

warn

error

fatal

8.19.2 Function Documentation

8.19.2.1 `template<typename S > S& nitro::log::operator<< (S & s, severity_level sev)`

8.20 nitro::log::detail Namespace Reference

Classes

- struct [actual_stream](#)
- struct [actual_stream< false, Record, Formatter, Sink, Filter, Severity >](#)
- struct [assign_severity](#)
- struct [assign_severity< false, Record, Attributes...>](#)
- struct [has_attribute](#)
- struct [has_attribute< Attribute, Record< Attributes...> >](#)
- class [null_stream](#)
- struct [set_severity](#)
- struct [set_severity< record< Attributes...> >](#)
- class [smart_stream](#)

Functions

- `template<typename Record , template< typename > class Formatter, typename Sink , template< typename > class Filter, typename T , severity_level Severity>`
[smart_stream< Record, Formatter, Sink, Filter, Severity >](#) `operator<< (smart_stream< Record, Formatter, Sink, Filter, Severity > &&s, const T &t)`
- `template<typename Record , template< typename > class Formatter, typename Sink , template< typename > class Filter, typename T , severity_level Severity>`
[smart_stream< Record, Formatter, Sink, Filter, Severity >](#) `& operator<< (smart_stream< Record, Formatter, Sink, Filter, Severity > &s, const T &t)`
- `template<typename T >`
[null_stream operator<< \(null_stream &&s, const T &\)](#)

8.20.1 Function Documentation

8.20.1.1 `template<typename Record , template< typename > class Formatter, typename Sink , template< typename > class Filter, typename T , severity_level Severity>` [smart_stream<Record, Formatter, Sink, Filter, Severity>](#) `nitro::log::detail::operator<< (smart_stream< Record, Formatter, Sink, Filter, Severity > && s, const T & t)`

8.20.1.2 `template<typename Record , template< typename > class Formatter, typename Sink , template< typename > class Filter, typename T , severity_level Severity>` [smart_stream<Record, Formatter, Sink, Filter, Severity>](#) `& nitro::log::detail::operator<< (smart_stream< Record, Formatter, Sink, Filter, Severity > & s, const T & t)`

8.20.1.3 `template<typename T >` `null_stream nitro::log::detail::operator<< (null_stream && s, const T &)`

8.21 nitro::log::filter Namespace Reference

Classes

- class [and_filter](#)
- class [mpi_master_filter](#)
- class [not_filter](#)
- class [not_filter< not_filter< F1 > >](#)
- class [null_filter](#)
- class [or_filter](#)
- class [severity_filter](#)

8.22 nitro::log::sink Namespace Reference

Classes

- class [null](#)
- class [stdout](#)
- class [stdout_mt](#)

8.23 nitro::meta Namespace Reference

Classes

- struct [is_variadic_member](#)
meta function to check if a variadic type pack contains a given type.
- struct [is_variadic_member< U >](#)
meta function to check if a variadic type pack contains a given type.
- struct [is_variadic_member< U, first, Attributes...>](#)
meta function to check if a variadic type pack contains a given type.

8.24 otf2 Namespace Reference

Namespaces

- [chrono](#)
- [common](#)
- [definition](#)
- [detail](#)
- [event](#)
- [reader](#)
- [traits](#)
- [writer](#)

Classes

- class [attribute_list](#)
- struct [exception](#)
- class [reference](#)
represents a reference number for definitions
- class [reference_generator](#)
gives a free reference number for a set of definitions

Functions

- `template<typename... Args>`
void [make_exception](#) (Args...args)
- `template<typename... Args>`
void [check](#) (OTF2_ErrorCode code, Args...args)

8.24.1 Function Documentation

8.24.1.1 `template<typename... Args> void otf2::check (OTF2_ErrorCode code, Args... args)` `[inline]`

8.24.1.2 `template<typename... Args> void otf2::make_exception (Args... args)` `[inline]`

8.25 otf2::chrono Namespace Reference

Classes

- struct [clock](#)
simulated clock
- class [convert](#)
class to convert between ticks and time points
- class [ticks](#)
representing ticks in a typesafe manner

Typedefs

- typedef `std::chrono::duration< int64_t, std::ratio< 1, 1000000000000 > >` [picoseconds](#)
typedef for duration of length picosecond
- typedef `std::chrono::nanoseconds` [nanoseconds](#)
typedef for duration of length nanosecond
- typedef `std::chrono::microseconds` [microseconds](#)
typedef for duration of length microseconds
- typedef `std::chrono::milliseconds` [milliseconds](#)
typedef for duration of length milliseconds
- typedef `std::chrono::seconds` [seconds](#)
typedef for duration of length seconds
- typedef `std::chrono::minutes` [minutes](#)
typedef for duration of length minutes
- typedef `std::chrono::hours` [hours](#)
typedef for duration of length hours
- typedef [picoseconds](#) `duration`
otf2::chrono::duration defaults to picoseconds
- typedef [clock::time_point](#) `time_point`

Functions

- `template<typename Clock , typename Duration >`
[otf2::chrono::time_point convert_time_point](#) (`std::chrono::time_point< Clock, Duration > tp`)
converts from std::chrono::timepoint to otf2::chrono::time_point
- `template<typename FromDuration , typename ToDuration = otf2::chrono::duration>`
`constexpr ToDuration` [duration_cast](#) (`const FromDuration &dtn`)
convert between durations
- `std::ostream & operator<<` (`std::ostream &s, time_point tp`)
- `time_point` [armeddon](#) ()
returns latest representable time_point
- `time_point` [genesis](#) ()
returns the first representable time_point

8.25.1 Typedef Documentation

8.25.1.1 typedef picoseconds otf2::chrono::duration

[otf2::chrono::duration](#) defaults to picoseconds

8.25.1.2 typedef std::chrono::hours otf2::chrono::hours

typedef for duration of length hours

8.25.1.3 typedef std::chrono::microseconds otf2::chrono::microseconds

typedef for duration of length microseconds

8.25.1.4 typedef std::chrono::milliseconds otf2::chrono::milliseconds

typedef for duration of length milliseconds

8.25.1.5 typedef std::chrono::minutes otf2::chrono::minutes

typedef for duration of length minutes

8.25.1.6 typedef std::chrono::nanoseconds otf2::chrono::nanoseconds

typedef for duration of length nanosecond

8.25.1.7 typedef std::chrono::duration<int64_t, std::ratio<1,1000000000000> > otf2::chrono::picoseconds

typedef for duration of length picosecond

8.25.1.8 typedef std::chrono::seconds otf2::chrono::seconds

typedef for duration of length seconds

8.25.1.9 typedef clock::time_point otf2::chrono::time_point

8.25.2 Function Documentation

8.25.2.1 time_point otf2::chrono::armageddon () [inline]

returns latest representable [time_point](#)

Note

I'm not Nostradamus nor I'm predicting an armageddon to be at this [time_point](#). Additionally, as the epoch isn't defined for [otf2::chrono::clock](#), there isn't a reliable way to determine this timepoint anyways.

8.25.2.2 template<typename Clock, typename Duration > otf2::chrono::time_point otf2::chrono::convert_time_point (std::chrono::time_point< Clock, Duration > tp)

converts from std::chrono::timepoint to [otf2::chrono::time_point](#)

Parameters

| | | |
|----|-----------|---|
| in | <i>tp</i> | the <code>std::chrono</code> time point |
|----|-----------|---|

Returns

the same time point as `otf2::chrono::time_point`

8.25.2.3 `template<typename FromDuration , typename ToDuration = otf2::chrono::duration> constexpr ToDuration otf2::chrono::duration_cast (const FromDuration & dtn)`

convert between durations

This ain't a simple cast, it also takes different prefixes into account. e.g. `duration_cast<seconds>milliseconds(1000) == seconds(1)`

But this could also mean, that there is information loss. e.g. `duration_cast<seconds>milliseconds(1300) == seconds(1)`

Template Parameters

| | |
|---------------------|--------------------------------------|
| <i>FromDuration</i> | type of source duration |
| <i>ToDuration</i> | type of target duration, defaults to |

See also

[otf2::chrono::duration](#)

Parameters

| | | |
|----|------------|--------------------------|
| in | <i>dtn</i> | duration which is casted |
|----|------------|--------------------------|

Returns

duration to which is casted

8.25.2.4 `time_point otf2::chrono::genesis () [inline]`

returns the first representable `time_point`

8.25.2.5 `std::ostream& otf2::chrono::operator<< (std::ostream & s, time_point tp) [inline]`

8.26 otf2::common Namespace Reference

Classes

- class [both](#)

Enumerations

- enum `type` {
`type::none`, `type::uint8`, `type::uint16`, `type::uint32`,
`type::uint64`, `type::int8`, `type::int16`, `type::int32`,
`type::int64`, `type::Float`, `type::Double`, `type::string`,
`type::attribute`, `type::location`, `type::region`, `type::group`,
`type::metric`, `type::comm`, `type::parameter` }

- enum `system_tree_node_domain` {
`system_tree_node_domain::machine`, `system_tree_node_domain::shared_memory`, `system_tree_node_domain::numa`, `system_tree_node_domain::socket`,
`system_tree_node_domain::cache`, `system_tree_node_domain::core`, `system_tree_node_domain::pu` }
 - enum `group_type` {
`group_type::unknown`, `group_type::locations`, `group_type::regions`, `group_type::metric`,
`group_type::comm_locations`, `group_type::comm_group`, `group_type::comm_self` }
 - enum `group_flag_type` { `group_flag_type::none`, `group_flag_type::global_members` }
 - enum `location_type` { `location_type::unknown`, `location_type::cpu_thread`, `location_type::gpu`, `location_type::metric` }
 - enum `parameter_type` { `parameter_type::string`, `parameter_type::int64`, `parameter_type::uint64` }
 - enum `location_group_type` { `location_group_type::unknown`, `location_group_type::process` }
 - enum `role_type` {
`role_type::unknown`, `role_type::function`, `role_type::wrapper`, `role_type::loop`,
`role_type::code`, `role_type::parallel`, `role_type::sections`, `role_type::section`,
`role_type::workshare`, `role_type::single`, `role_type::single_sblock`, `role_type::master`,
`role_type::critical`, `role_type::critical_sblock`, `role_type::atomic`, `role_type::barrier`,
`role_type::implicit_barrier`, `role_type::flush`, `role_type::ordered`, `role_type::ordered_sblock`,
`role_type::task`, `role_type::task_create`, `role_type::task_wait`, `role_type::coll_one2all`,
`role_type::coll_all2one`, `role_type::coll_all2all`, `role_type::coll_other`, `role_type::file_io`,
`role_type::point2point`, `role_type::rma`, `role_type::data_transfer`, `role_type::artificial`,
`role_type::thread_create`, `role_type::thread_wait` }
 - enum `paradigm_type` {
`paradigm_type::unknown`, `paradigm_type::user`, `paradigm_type::compiler`, `paradigm_type::openmp`,
`paradigm_type::mpi`, `paradigm_type::cuda`, `paradigm_type::measurement_system`, `paradigm_type::pthread`,
`paradigm_type::hmpp`, `paradigm_type::omps`, `paradigm_type::hardware`, `paradigm_type::gaspi`,
`paradigm_type::upc`, `paradigm_type::shmem` }
 - enum `flags_type` { `flags_type::none`, `flags_type::dynamic`, `flags_type::phase` }
 - enum `collective_type` {
`collective_type::barrier`, `collective_type::broadcast`, `collective_type::gather`, `collective_type::gatherv`,
`collective_type::scatter`, `collective_type::scatterv`, `collective_type::all_gather`, `collective_type::all_gatherv`,
`collective_type::all_to_all`, `collective_type::all_to_allv`, `collective_type::all_to_allw`, `collective_type::all_reduce`,
`collective_type::reduce`, `collective_type::reduce_scatter`, `collective_type::scan`, `collective_type::exscan`,
`collective_type::reduce_scatter_block`, `collective_type::create_handle`, `collective_type::destroy_handle`,
`collective_type::allocate`,
`collective_type::deallocate`, `collective_type::create_handle_and_allocate`, `collective_type::destroy_handle_and_deallocate` }
 - enum `metric_type` { `metric_type::other`, `metric_type::papi`, `metric_type::rusage`, `metric_type::user` }
 - enum `metric_timing` { `metric_timing::start = 0`, `metric_timing::point = 1 << 4`, `metric_timing::last = 2 << 4`,
`metric_timing::next = 3 << 4` }
 - enum `metric_occurrence` { `metric_occurrence::strict`, `metric_occurrence::sync`, `metric_occurrence::async` }
 - enum `metric_scope` { `metric_scope::location`, `metric_scope::location_group`, `metric_scope::system_tree_node`, `metric_scope::group` }
- metric scope*
- enum `metric_value_property` { `metric_value_property::accumulated = 0`, `metric_value_property::absolute = 1`, `metric_value_property::relative = 2` }
 - enum `metric_base` { `metric_base::binary`, `metric_base::decimal` }
 - enum `metric_mode` {
`metric_mode::accumulated_start = both<metric_timing::start, metric_value_property::accumulated>::value`,
`metric_mode::accumulated_point = both<metric_timing::point, metric_value_property::accumulated>::value`,
`metric_mode::accumulated_last = both<metric_timing::last, metric_value_property::accumulated>::value`,
`metric_mode::accumulated_next = both<metric_timing::next, metric_value_property::accumulated>::value`,
`metric_mode::absolute_point = both<metric_timing::point, metric_value_property::absolute>::value`,

- `metric_mode::absolute_last` = both<metric_timing::last, metric_value_property::absolute>::value, `metric_mode::absolute_next` = both<metric_timing::next, metric_value_property::absolute>::value, `metric_mode::relative_point` = both<metric_timing::point, metric_value_property::relative>::value, `metric_mode::relative_last` = both<metric_timing::last, metric_value_property::relative>::value, `metric_mode::relative_next` = both<metric_timing::next, metric_value_property::relative>::value }
- enum `recorder_kind` { `recorder_kind::unknown`, `recorder_kind::abstract`, `recorder_kind::cpu`, `recorder_kind::gpu` }
- enum `event_type` { `event_type::buffer_flush`, `event_type::enter`, `event_type::leave`, `event_type::measurement`, `event_type::metric`, `event_type::mpi_collective_begin`, `event_type::mpi_collective_end`, `event_type::mpi_ireceive`, `event_type::mpi_ireceive_request`, `event_type::mpi_isend`, `event_type::mpi_isend_complete`, `event_type::mpi_receive`, `event_type::mpi_request_cancelled`, `event_type::mpi_request_test`, `event_type::mpi_send`, `event_type::parameter_int`, `event_type::parameter_string`, `event_type::parameter_unsigned_int`, `event_type::thread_acquire_lock`, `event_type::thread_fork`, `event_type::thread_join`, `event_type::thread_release_lock`, `event_type::thread_task_complete`, `event_type::thread_task_create`, `event_type::thread_task_switch`, `event_type::thread_team_begin`, `event_type::thread_team_end` }

8.26.1 Enumeration Type Documentation

8.26.1.1 enum otf2::common::collective_type [strong]

Enumerator

barrier
broadcast
gather
gatherv
scatter
scatterv
all_gather
all_gatherv
all_to_all
all_to_allv
all_to_allw
all_reduce
reduce
reduce_scatter
scan
exscan
reduce_scatter_block
create_handle
destroy_handle
allocate
deallocate
create_handle_and_allocate
destroy_handle_and_deallocate

8.26.1.2 enum `otf2::common::event_type` [`strong`]

enum for representing the type of an event This is used by the `otf2::event::buffer` to distinguish between events, as they are stored as void pointers.

Enumerator

- buffer_flush*
- enter*
- leave*
- measurement*
- metric*
- mpi_collective_begin*
- mpi_collective_end*
- mpi_ireceive*
- mpi_ireceive_request*
- mpi_isend*
- mpi_isend_complete*
- mpi_receive*
- mpi_request_cancelled*
- mpi_request_test*
- mpi_send*
- parameter_int*
- parameter_string*
- parameter_unsigned_int*
- thread_acquire_lock*
- thread_fork*
- thread_join*
- thread_release_lock*
- thread_task_complete*
- thread_task_create*
- thread_task_switch*
- thread_team_begin*
- thread_team_end*

8.26.1.3 enum `otf2::common::flags_type` [`strong`]

Enumerator

- none*
- dynamic*
- phase*

8.26.1.4 enum `otf2::common::group_flag_type` [`strong`]

Enumerator

- none*
- global_members*

8.26.1.5 enum otf2::common::group_type [strong]

an enum for representing the contents of a group definition

Enumerator

unknown a unknown type
locations locations
regions regions (not used)
metric metrics (not used)
comm_locations
comm_group
comm_self special group, only contains itself

8.26.1.6 enum otf2::common::location_group_type [strong]

Enumerator

unknown
process

8.26.1.7 enum otf2::common::location_type [strong]

an enum for representing the type of a location

Enumerator

unknown unknown
cpu_thread a cpu thread
gpu on gpu
metric a metric - acts as recorder for metric instances

8.26.1.8 enum otf2::common::metric_base [strong]

Enumerator

binary
decimal

8.26.1.9 enum otf2::common::metric_mode [strong]

Enumerator

accumulated_start
accumulated_point
accumulated_last
accumulated_next
absolute_point
absolute_last
absolute_next
relative_point
relative_last
relative_next

8.26.1.10 enum `otf2::common::metric_occurence` [`strong`]

metric occurrence

Enumerator

strict Metric occurs at every region enter and leave.

sync Metric occurs only at a region enter and leave, but does not need to occur at every enter/leave.

async Metric can occur at any place i.e. it is not related to region enter and leaves.

8.26.1.11 enum `otf2::common::metric_scope` [`strong`]

metric scope

Specifies the scope the values of a metric class are valid for

Enumerator

location for a location

location_group for a location group

system_tree_node for a system tree node

group a custom group of locations

8.26.1.12 enum `otf2::common::metric_timing` [`strong`]

Enumerator

start

point

last

next

8.26.1.13 enum `otf2::common::metric_type` [`strong`]

Enumerator

other

papi

rusage

user

8.26.1.14 enum `otf2::common::metric_value_property` [`strong`]

Enumerator

accumulated

absolute

relative

8.26.1.15 enum of2::common::paradigm_type [strong]

Enumerator

- unknown*
- user*
- compiler*
- openmp*
- mpi*
- cuda*
- measurement_system*
- pthread*
- hmpp*
- ompss*
- hardware*
- gaspi*
- upc*
- shmem*

8.26.1.16 enum of2::common::parameter_type [strong]

Enumerator

- string*
- int64*
- uint64*

8.26.1.17 enum of2::common::recorder_kind [strong]

Enumerator

- unknown*
- abstract*
- cpu*
- gpu*

8.26.1.18 enum of2::common::role_type [strong]

Enumerator

- unknown*
- function*
- wrapper*
- loop*
- code*
- parallel*
- sections*
- section*

workshare
single
single_sblock
master
critical
critical_sblock
atomic
barrier
implicit_barrier
flush
ordered
ordered_sblock
task
task_create
task_wait
coll_one2all
coll_all2one
coll_all2all
coll_other
file_io
point2point
rma
data_transfer
artificial
thread_create
thread_wait

8.26.1.19 enum `otf2::common::system_tree_node_domain` [`strong`]

Enumerator

machine
shared_memory
numa
socket
cache
core
pu

8.26.1.20 enum `otf2::common::type` [`strong`]

an enum for representing possible types within events and definitions

Enumerator

none
uint8

uint16
uint32
uint64
int8
int16
int32
int64
Float
Double
string
attribute
location
region
group
metric
comm
parameter

8.27 otf2::definition Namespace Reference

Namespaces

- [detail](#)

Classes

- class [attribute](#)
class for representing a attribute definition
- class [clock_properties](#)
class for representing a clock properties definition
- class [comm](#)
class for representing a comm definition
- struct [comp](#)
- class [container](#)
- class [container](#)< [otf2::definition::property](#)< [Definition](#) > >
- class [group](#)
class template for representing groups
- class [location](#)
class for representing location definitions
- class [location_group](#)
class for representing a location group definition
- class [metric_class](#)
class for representing metric class definitions
- class [metric_instance](#)
class for representing metric instance definitions
- class [metric_member](#)
class representing a metric member definition
- class [parameter](#)

- class for representing parameter definitions*
- class [property](#)
 - class for representing property definitions*
- class [region](#)
 - class for represening a region definition*
- class [string](#)
 - The string definiton class.*
- class [system_tree_node](#)
 - class for representing system tree node definitions*
- class [unknown](#)
 - class for representing an unknown definition*

Typedefs

- using [locations_group](#) = [group](#)< [otf2::definition::location](#), [otf2::common::group_type::locations](#) >
- using [regions_group](#) = [group](#)< [otf2::definition::region](#), [otf2::common::group_type::regions](#) >
- using [comm_locations_group](#) = [group](#)< [otf2::definition::location](#), [otf2::common::group_type::comm_locations](#) >
- using [comm_group](#) = [group](#)< [otf2::definition::location](#), [otf2::common::group_type::comm_group](#) >
- using [comm_self_group](#) = [group](#)< [otf2::definition::location](#), [otf2::common::group_type::comm_self](#) >
- using [location_property](#) = [property](#)< [location](#) >
- using [location_group_property](#) = [property](#)< [location_group](#) >
- using [system_tree_node_property](#) = [property](#)< [system_tree_node](#) >

Functions

- [std::ostream & operator<<](#) ([std::ostream &s](#), [location](#) loc)
 - [bool operator==](#) ([otf2::definition::location](#) lhs, [otf2::definition::location](#) rhs)
 - [std::ostream & operator<<](#) ([std::ostream &s](#), [otf2::definition::string](#) str)
- operator<< for easily printing out string definitions*

8.27.1 Typedef Documentation

- 8.27.1.1 [using otf2::definition::comm_group = typedef group<otf2::definition::location, otf2::common::group_type::comm_group>](#)
- 8.27.1.2 [using otf2::definition::comm_locations_group = typedef group< otf2::definition::location, otf2::common::group_type::comm_locations>](#)
- 8.27.1.3 [using otf2::definition::comm_self_group = typedef group<otf2::definition::location, otf2::common::group_type::comm_self>](#)
- 8.27.1.4 [using otf2::definition::location_group_property = typedef property<location_group>](#)
- 8.27.1.5 [using otf2::definition::location_property = typedef property<location>](#)
- 8.27.1.6 [using otf2::definition::locations_group = typedef group<otf2::definition::location, otf2::common::group_type::locations>](#)
- 8.27.1.7 [using otf2::definition::regions_group = typedef group<otf2::definition::region, otf2::common::group_type::regions>](#)

8.27.1.8 `using otf2::definition::system_tree_node_property = typedef property<system_tree_node>`

8.27.2 Function Documentation

8.27.2.1 `std::ostream& otf2::definition::operator<< (std::ostream & s, otf2::definition::string str) [inline]`

`operator<<` for easily printing out string definitions

8.27.2.2 `std::ostream& otf2::definition::operator<< (std::ostream & s, location loc) [inline]`

8.27.2.3 `bool otf2::definition::operator==(otf2::definition::location lhs, otf2::definition::location rhs) [inline]`

8.28 otf2::definition::detail Namespace Reference

Classes

- class [attribute_impl](#)
- class [base](#)

CRTP base class for definition references.

- class [comm_impl](#)
- class [group_base](#)
- class [group_impl](#)
- class [location_group_impl](#)
- class [location_impl](#)
- class [metric_base](#)

Dummy class to have metric instances and metric classes in the same id space.

- class [metric_class_impl](#)
- class [metric_instance_impl](#)
- class [metric_member_impl](#)
- class [parameter_impl](#)
- class [property_impl](#)
- class [region_impl](#)
- class [string_impl](#)
- class [system_tree_node_impl](#)

Functions

- `template<typename Def , typename Impl > bool operator==(const base< Def, Impl > &a, const base< Def, Impl > &b)`

8.28.1 Function Documentation

8.28.1.1 `template<typename Def , typename Impl > bool otf2::definition::detail::operator==(const base< Def, Impl > &a, const base< Def, Impl > &b) [inline]`

8.29 otf2::detail Namespace Reference

Classes

- struct [add_attribute](#)
- struct [add_attribute< otf2::definition::attribute::attribute_type::attribute >](#)

- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::comm](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::Double](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::Float](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::int16](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::int32](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::int64](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::int8](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::location](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::metric](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::parameter](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::region](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::string](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::uint16](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::uint32](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::uint64](#) >
- struct [add_attribute](#)< [otf2::definition::attribute::attribute_type::uint8](#) >
- class [make_exception](#)
- class [make_exception](#)< [Arg](#) >

Typedefs

- using [attribute_type](#) = [otf2::definition::attribute::attribute_type](#)

Functions

- [OTF2_AttributeList](#) * [OTF2_AttributeList_Clone](#) ([OTF2_AttributeList](#) const *const list)

8.29.1 Typedef Documentation

8.29.1.1 using [otf2::detail::attribute_type](#) = typedef [otf2::definition::attribute::attribute_type](#)

8.29.2 Function Documentation

8.29.2.1 [OTF2_AttributeList](#)* [otf2::detail::OTF2_AttributeList_Clone](#) ([OTF2_AttributeList](#) const *const list) [inline]

8.30 otf2::event Namespace Reference

Namespaces

- [detail](#)

Classes

- class [base](#)
CRTP base class for all events.
- class [buffer](#)
This class isn't an event, but a buffer for events.
- class [buffer_flush](#)
- class [enter](#)
- class [leave](#)
The class representing a leave event.

- class [measurement](#)
- class [metric](#)
- class [mpi_collective_begin](#)

The class representing the [mpi_collective_begin](#) event.

- class [mpi_collective_end](#)
- class [mpi_ireceive](#)
- class [mpi_ireceive_request](#)
- class [mpi_isend](#)
- class [mpi_isend_complete](#)
- class [mpi_receive](#)
- class [mpi_request_cancelled](#)
- class [mpi_request_test](#)
- class [mpi_send](#)
- class [parameter_int](#)

The class representing a [parameter_int](#) event.

- class [parameter_string](#)
- class [parameter_unsigned_int](#)
- class [thread_acquire_lock](#)
- class [thread_fork](#)
- class [thread_join](#)
- class [thread_release_lock](#)
- class [thread_task_complete](#)
- class [thread_task_create](#)
- class [thread_task_switch](#)
- class [thread_team_begin](#)
- class [thread_team_end](#)
- class [unknown](#)

Typedefs

- typedef [mpi_ireceive](#) [mpi_ireceive_complete](#)
- typedef [mpi_isend](#) [mpi_isend_request](#)

8.30.1 Typedef Documentation

8.30.1.1 typedef [mpi_ireceive](#) [otf2::event::mpi_ireceive_complete](#)

8.30.1.2 typedef [mpi_isend](#) [otf2::event::mpi_isend_request](#)

8.31 otf2::event::detail Namespace Reference

Classes

- struct [buffer_node](#)

8.32 otf2::reader Namespace Reference

Namespaces

- [detail](#)

Classes

- class [callback](#)
base class for `otf2` reader callbacks.
- class [reader](#)
the class for reading in trace files

8.33 `otf2::reader::detail` Namespace Reference

Namespaces

- [definition](#)
- [event](#)

8.34 `otf2::reader::detail::definition` Namespace Reference

Namespaces

- [global](#)

8.35 `otf2::reader::detail::definition::global` Namespace Reference

Functions

- `OTF2_CallbackCode` [attribute](#) (void *userData, `OTF2_AttributeRef` self, `OTF2_StringRef` name, `OTF2_↔StringRef` description, `OTF2_Type` type)
- `OTF2_CallbackCode` [clock_properties](#) (void *userData, `uint64_t` timerResolution, `uint64_t` globalOffset, `uint64_t` traceLength)
- `OTF2_CallbackCode` [comm](#) (void *userData, `OTF2_CommRef` self, `OTF2_StringRef` name, `OTF2_GroupRef` group, `OTF2_CommRef` parent)
- `OTF2_CallbackCode` [group](#) (void *userData, `OTF2_GroupRef` self, `OTF2_StringRef` name, `OTF2_Group↔Type` groupType, `OTF2_Paradigm` paradigm, `OTF2_GroupFlag` groupFlags, `uint32_t` numberOfMembers, const `uint64_t` *members)
- `OTF2_CallbackCode` [location](#) (void *userData, `OTF2_LocationRef` self, `OTF2_StringRef` name, `OTF2_↔LocationType` locationType, `uint64_t` numberOfEvents, `OTF2_LocationGroupRef` locationGroup)
- `OTF2_CallbackCode` [location_group](#) (void *userData, `OTF2_LocationGroupRef` self, `OTF2_StringRef` name, `OTF2_LocationGroupType` locationGroupType, `OTF2_SystemTreeNodeRef` systemTreeParent)
- `OTF2_CallbackCode` [metric_class](#) (void *userData, `OTF2_MetricRef` self, `uint8_t` numberOfMetrics, const `OTF2_MetricMemberRef` *metricMembers, `OTF2_MetricOccurrence` metricOccurrence, `OTF2_Recorder↔Kind` recorderKind)
- `OTF2_CallbackCode` [metric_instance](#) (void *userData, `OTF2_MetricRef` self, `OTF2_MetricRef` metricClass, `OTF2_LocationRef` recorder, `OTF2_MetricScope` metricScope, `uint64_t` scope)
- `OTF2_CallbackCode` [metric_member](#) (void *userData, `OTF2_MetricMemberRef` self, `OTF2_StringRef` name, `OTF2_StringRef` description, `OTF2_MetricType` metricType, `OTF2_MetricMode` metricMode, `OTF2_Type` valueType, `OTF2_MetricBase` metricBase, `int64_t` exponent, `OTF2_StringRef` unit)
- `OTF2_CallbackCode` [parameter](#) (void *userData, `OTF2_ParameterRef` self, `OTF2_StringRef` name, `OTF2_↔_ParameterType` parameterType)
- `OTF2_CallbackCode` [region](#) (void *userData, `OTF2_RegionRef` self, `OTF2_StringRef` name, `OTF2_↔StringRef` canonicalName, `OTF2_StringRef` description, `OTF2_RegionRole` regionRole, `OTF2_Paradigm` paradigm, `OTF2_RegionFlag` regionFlags, `OTF2_StringRef` sourceFile, `uint32_t` beginLineNumber, `uint32_↔_t` endLineNumber)
- `OTF2_CallbackCode` [string](#) (void *userData, `OTF2_StringRef` self, const char *string)

- OTF2_CallbackCode [system_tree_node](#) (void *userData, OTF2_SystemTreeNodeRef self, OTF2_StringRef name, OTF2_StringRef className, OTF2_SystemTreeNodeRef parent)
- OTF2_CallbackCode [system_tree_node_property](#) (void *userData, OTF2_SystemTreeNodeRef systemTreeNode, OTF2_StringRef name, OTF2_StringRef value)
- OTF2_CallbackCode [location_property](#) (void *userData, OTF2_LocationRef location, OTF2_StringRef name, OTF2_StringRef value)
- OTF2_CallbackCode [location_group_property](#) (void *userData, OTF2_LocationGroupRef locationGroup, OTF2_StringRef name, OTF2_StringRef value)
- OTF2_CallbackCode [unknown](#) (void *userData)

8.35.1 Function Documentation

- 8.35.1.1 OTF2_CallbackCode [otf2::reader::detail::definition::global::attribute](#) (void * *userData*, OTF2_AttributeRef *self*, OTF2_StringRef *name*, OTF2_StringRef *description*, OTF2_Type *type*) [inline]
- 8.35.1.2 OTF2_CallbackCode [otf2::reader::detail::definition::global::clock_properties](#) (void * *userData*, uint64_t *timerResolution*, uint64_t *globalOffset*, uint64_t *traceLength*) [inline]
- 8.35.1.3 OTF2_CallbackCode [otf2::reader::detail::definition::global::comm](#) (void * *userData*, OTF2_CommRef *self*, OTF2_StringRef *name*, OTF2_GroupRef *group*, OTF2_CommRef *parent*) [inline]
- 8.35.1.4 OTF2_CallbackCode [otf2::reader::detail::definition::global::group](#) (void * *userData*, OTF2_GroupRef *self*, OTF2_StringRef *name*, OTF2_GroupType *groupType*, OTF2_Paradigm *paradigm*, OTF2_GroupFlag *groupFlags*, uint32_t *numberOfMembers*, const uint64_t * *members*) [inline]
- 8.35.1.5 OTF2_CallbackCode [otf2::reader::detail::definition::global::location](#) (void * *userData*, OTF2_LocationRef *self*, OTF2_StringRef *name*, OTF2_LocationType *locationType*, uint64_t *numberOfEvents*, OTF2_LocationGroupRef *locationGroup*) [inline]
- 8.35.1.6 OTF2_CallbackCode [otf2::reader::detail::definition::global::location_group](#) (void * *userData*, OTF2_LocationGroupRef *self*, OTF2_StringRef *name*, OTF2_LocationGroupType *locationGroupType*, OTF2_SystemTreeNodeRef *systemTreeParent*) [inline]
- 8.35.1.7 OTF2_CallbackCode [otf2::reader::detail::definition::global::location_group_property](#) (void * *userData*, OTF2_LocationGroupRef *locationGroup*, OTF2_StringRef *name*, OTF2_StringRef *value*) [inline]
- 8.35.1.8 OTF2_CallbackCode [otf2::reader::detail::definition::global::location_property](#) (void * *userData*, OTF2_LocationRef *location*, OTF2_StringRef *name*, OTF2_StringRef *value*) [inline]
- 8.35.1.9 OTF2_CallbackCode [otf2::reader::detail::definition::global::metric_class](#) (void * *userData*, OTF2_MetricRef *self*, uint8_t *numberOfMetrics*, const OTF2_MetricMemberRef * *metricMembers*, OTF2_MetricOccurrence *metricOccurrence*, OTF2_RecorderKind *recorderKind*) [inline]
- 8.35.1.10 OTF2_CallbackCode [otf2::reader::detail::definition::global::metric_instance](#) (void * *userData*, OTF2_MetricRef *self*, OTF2_MetricRef *metricClass*, OTF2_LocationRef *recorder*, OTF2_MetricScope *metricScope*, uint64_t *scope*) [inline]
- 8.35.1.11 OTF2_CallbackCode [otf2::reader::detail::definition::global::metric_member](#) (void * *userData*, OTF2_MetricMemberRef *self*, OTF2_StringRef *name*, OTF2_StringRef *description*, OTF2_MetricType *metricType*, OTF2_MetricMode *metricMode*, OTF2_Type *valueType*, OTF2_MetricBase *metricBase*, int64_t *exponent*, OTF2_StringRef *unit*) [inline]
- 8.35.1.12 OTF2_CallbackCode [otf2::reader::detail::definition::global::parameter](#) (void * *userData*, OTF2_ParameterRef *self*, OTF2_StringRef *name*, OTF2_ParameterType *parameterType*) [inline]

- 8.35.1.13 `OTF2_CallbackCode otf2::reader::detail::definition::global::region (void * userData, OTF2_RegionRef self, OTF2_StringRef name, OTF2_StringRef canonicalName, OTF2_StringRef description, OTF2_RegionRole regionRole, OTF2_Paradigm paradigm, OTF2_RegionFlag regionFlags, OTF2_StringRef sourceFile, uint32_t beginLineNumber, uint32_t endLineNumber) [inline]`
- 8.35.1.14 `OTF2_CallbackCode otf2::reader::detail::definition::global::string (void * userData, OTF2_StringRef self, const char * string) [inline]`
- 8.35.1.15 `OTF2_CallbackCode otf2::reader::detail::definition::global::system_tree_node (void * userData, OTF2_SystemTreeNodeRef self, OTF2_StringRef name, OTF2_StringRef className, OTF2_SystemTreeNodeRef parent) [inline]`
- 8.35.1.16 `OTF2_CallbackCode otf2::reader::detail::definition::global::system_tree_node_property (void * userData, OTF2_SystemTreeNodeRef systemTreeNode, OTF2_StringRef name, OTF2_StringRef value) [inline]`
- 8.35.1.17 `OTF2_CallbackCode otf2::reader::detail::definition::global::unknown (void * userData) [inline]`

8.36 otf2::reader::detail::event Namespace Reference

Functions

- OTF2_CallbackCode [buffer_flush](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_TimeStamp stopTime)
- OTF2_CallbackCode [enter](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributes, OTF2_RegionRef regionID)
- OTF2_CallbackCode [leave](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_RegionRef region)
- OTF2_CallbackCode [measurement](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_MeasurementMode measurementMode)
- OTF2_CallbackCode [metric](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_MetricRef metric, uint8_t numberOfMetrics, const OTF2_Type *types, const OTF2_MetricValue *metricValues)
- OTF2_CallbackCode [mpi_collective_begin](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList)
- OTF2_CallbackCode [mpi_collective_end](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CollectiveOp collectiveOp, OTF2_CommRef communicator, uint32_t root, uint64_t sizeSent, uint64_t sizeReceived)
- OTF2_CallbackCode [mpi_irecv](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t sender, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength, uint64_t requestID)
- OTF2_CallbackCode [mpi_irecv_request](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [mpi_isend](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t receiver, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength, uint64_t requestID)
- OTF2_CallbackCode [mpi_isend_complete](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [mpi_rcv](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t sender, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength)
- OTF2_CallbackCode [mpi_request_cancelled](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [mpi_request_test](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [mpi_send](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t receiver, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength)

- OTF2_CallbackCode [parameter_int](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_ParameterRef parameter, int64_t value)
- OTF2_CallbackCode [parameter_string](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_ParameterRef parameter, OTF2_StringRef string)
- OTF2_CallbackCode [parameter_unsigned_int](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_ParameterRef parameter, uint64_t value)
- OTF2_CallbackCode [thread_acquire_lock](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model, uint32_t lockID, uint32_t acquisitionOrder)
- OTF2_CallbackCode [thread_fork](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model, uint32_t numberOfRequestedThreads)
- OTF2_CallbackCode [thread_join](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model)
- OTF2_CallbackCode [thread_release_lock](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model, uint32_t lockID, uint32_t acquisitionOrder)
- OTF2_CallbackCode [thread_task_complete](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber)
- OTF2_CallbackCode [thread_task_create](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber)
- OTF2_CallbackCode [thread_task_switch](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber)
- OTF2_CallbackCode [thread_team_begin](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam)
- OTF2_CallbackCode [thread_team_end](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam)
- OTF2_CallbackCode [unknown](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList)

8.36.1 Function Documentation

- 8.36.1.1 OTF2_CallbackCode of2::reader::detail::event::buffer_flush (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_TimeStamp *stopTime*) [inline]
- 8.36.1.2 OTF2_CallbackCode of2::reader::detail::event::enter (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributes*, OTF2_RegionRef *regionID*) [inline]
- 8.36.1.3 OTF2_CallbackCode of2::reader::detail::event::leave (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_RegionRef *region*) [inline]
- 8.36.1.4 OTF2_CallbackCode of2::reader::detail::event::measurement (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_MeasurementMode *measurementMode*) [inline]
- 8.36.1.5 OTF2_CallbackCode of2::reader::detail::event::metric (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_MetricRef *metric*, uint8_t *numberOfMetrics*, const OTF2_Type * *typeIDs*, const OTF2_MetricValue * *metricValues*) [inline]
- 8.36.1.6 OTF2_CallbackCode of2::reader::detail::event::mpi_collective_begin (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*) [inline]
- 8.36.1.7 OTF2_CallbackCode of2::reader::detail::event::mpi_collective_end (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_CollectiveOp *collectiveOp*, OTF2_CommRef *communicator*, uint32_t *root*, uint64_t *sizeSent*, uint64_t *sizeReceived*) [inline]

- 8.36.1.8 OTF2_CallbackCode otf2::reader::detail::event::mpi_irecv (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, uint32_t *sender*, OTF2_CommRef *communicator*, uint32_t *msgTag*, uint64_t *msgLength*, uint64_t *requestID*) [inline]
- 8.36.1.9 OTF2_CallbackCode otf2::reader::detail::event::mpi_irecv_request (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, uint64_t *requestID*) [inline]
- 8.36.1.10 OTF2_CallbackCode otf2::reader::detail::event::mpi_isend (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, uint32_t *receiver*, OTF2_CommRef *communicator*, uint32_t *msgTag*, uint64_t *msgLength*, uint64_t *requestID*) [inline]
- 8.36.1.11 OTF2_CallbackCode otf2::reader::detail::event::mpi_isend_complete (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, uint64_t *requestID*) [inline]
- 8.36.1.12 OTF2_CallbackCode otf2::reader::detail::event::mpi_recv (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, uint32_t *sender*, OTF2_CommRef *communicator*, uint32_t *msgTag*, uint64_t *msgLength*) [inline]
- 8.36.1.13 OTF2_CallbackCode otf2::reader::detail::event::mpi_request_cancelled (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, uint64_t *requestID*) [inline]
- 8.36.1.14 OTF2_CallbackCode otf2::reader::detail::event::mpi_request_test (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, uint64_t *requestID*) [inline]
- 8.36.1.15 OTF2_CallbackCode otf2::reader::detail::event::mpi_send (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, uint32_t *receiver*, OTF2_CommRef *communicator*, uint32_t *msgTag*, uint64_t *msgLength*) [inline]
- 8.36.1.16 OTF2_CallbackCode otf2::reader::detail::event::parameter_int (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_ParameterRef *parameter*, int64_t *value*) [inline]
- 8.36.1.17 OTF2_CallbackCode otf2::reader::detail::event::parameter_string (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_ParameterRef *parameter*, OTF2_StringRef *string*) [inline]
- 8.36.1.18 OTF2_CallbackCode otf2::reader::detail::event::parameter_unsigned_int (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_ParameterRef *parameter*, uint64_t *value*) [inline]
- 8.36.1.19 OTF2_CallbackCode otf2::reader::detail::event::thread_acquire_lock (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_Paradigm *model*, uint32_t *lockID*, uint32_t *acquisitionOrder*) [inline]
- 8.36.1.20 OTF2_CallbackCode otf2::reader::detail::event::thread_fork (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_Paradigm *model*, uint32_t *numberOfRequestedThreads*) [inline]
- 8.36.1.21 OTF2_CallbackCode otf2::reader::detail::event::thread_join (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_Paradigm *model*) [inline]
- 8.36.1.22 OTF2_CallbackCode otf2::reader::detail::event::thread_release_lock (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_Paradigm *model*, uint32_t *lockID*, uint32_t *acquisitionOrder*) [inline]
- 8.36.1.23 OTF2_CallbackCode otf2::reader::detail::event::thread_task_complete (OTF2_LocationRef *locationID*, OTF2_TimeStamp *time*, void * *userData*, OTF2_AttributeList * *attributeList*, OTF2_CommRef *threadTeam*, uint32_t *creatingThread*, uint32_t *generationNumber*) [inline]

- 8.36.1.24 `OTF2_CallbackCode otf2::reader::detail::event::thread_task_create (OTF2_LocationRef locationID, OTF2_TimeStamp time, void * userData, OTF2_AttributeList * attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber) [inline]`
- 8.36.1.25 `OTF2_CallbackCode otf2::reader::detail::event::thread_task_switch (OTF2_LocationRef locationID, OTF2_TimeStamp time, void * userData, OTF2_AttributeList * attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber) [inline]`
- 8.36.1.26 `OTF2_CallbackCode otf2::reader::detail::event::thread_team_begin (OTF2_LocationRef locationID, OTF2_TimeStamp time, void * userData, OTF2_AttributeList * attributeList, OTF2_CommRef threadTeam) [inline]`
- 8.36.1.27 `OTF2_CallbackCode otf2::reader::detail::event::thread_team_end (OTF2_LocationRef locationID, OTF2_TimeStamp time, void * userData, OTF2_AttributeList * attributeList, OTF2_CommRef threadTeam) [inline]`
- 8.36.1.28 `OTF2_CallbackCode otf2::reader::detail::event::unknown (OTF2_LocationRef locationID, OTF2_TimeStamp time, void * userData, OTF2_AttributeList * attributeList) [inline]`

8.37 otf2::traits Namespace Reference

Classes

- struct [definition_impl_type](#)
- struct [definition_impl_type< otf2::definition::attribute >](#)
- struct [definition_impl_type< otf2::definition::comm >](#)
- struct [definition_impl_type< otf2::definition::group< T, GroupType > >](#)
- struct [definition_impl_type< otf2::definition::location >](#)
- struct [definition_impl_type< otf2::definition::location_group >](#)
- struct [definition_impl_type< otf2::definition::metric_class >](#)
- struct [definition_impl_type< otf2::definition::metric_instance >](#)
- struct [definition_impl_type< otf2::definition::metric_member >](#)
- struct [definition_impl_type< otf2::definition::parameter >](#)
- struct [definition_impl_type< otf2::definition::property< Definition > >](#)
- struct [definition_impl_type< otf2::definition::region >](#)
- struct [definition_impl_type< otf2::definition::string >](#)
- struct [definition_impl_type< otf2::definition::system_tree_node >](#)
- struct [identity](#)
 - identity type trait*
- struct [is_definition](#)
- struct [is_definition< otf2::definition::attribute >](#)
- struct [is_definition< otf2::definition::comm >](#)
- struct [is_definition< otf2::definition::group< T, GroupType > >](#)
- struct [is_definition< otf2::definition::location >](#)
- struct [is_definition< otf2::definition::location_group >](#)
- struct [is_definition< otf2::definition::metric_class >](#)
- struct [is_definition< otf2::definition::metric_instance >](#)
- struct [is_definition< otf2::definition::metric_member >](#)
- struct [is_definition< otf2::definition::parameter >](#)
- struct [is_definition< otf2::definition::property< Definition > >](#)
- struct [is_definition< otf2::definition::region >](#)
- struct [is_definition< otf2::definition::string >](#)
- struct [is_definition< otf2::definition::system_tree_node >](#)
- struct [is_event](#)
- struct [is_event< otf2::event::enter >](#)
- struct [is_event< otf2::event::leave >](#)
- struct [reference_param_type](#)

- struct [reference_param_type](#)< [definition::group](#)< T, Type > >
- struct [reference_param_type](#)< [definition::metric_class](#) >
- struct [reference_param_type](#)< [definition::metric_instance](#) >
- struct [reference_type](#)
- struct [reference_type](#)< [definition::attribute](#) >
- struct [reference_type](#)< [definition::comm](#) >
- struct [reference_type](#)< [definition::detail::group_base](#) >
- struct [reference_type](#)< [definition::detail::metric_base](#) >
- struct [reference_type](#)< [definition::group](#)< Def, Type > >
- struct [reference_type](#)< [definition::location](#) >
- struct [reference_type](#)< [definition::location_group](#) >
- struct [reference_type](#)< [definition::metric_class](#) >
- struct [reference_type](#)< [definition::metric_instance](#) >
- struct [reference_type](#)< [definition::metric_member](#) >
- struct [reference_type](#)< [definition::parameter](#) >
- struct [reference_type](#)< [definition::property](#)< Definition > >
- struct [reference_type](#)< [definition::region](#) >
- struct [reference_type](#)< [definition::string](#) >
- struct [reference_type](#)< [definition::system_tree_node](#) >

8.38 otf2::writer Namespace Reference

Namespaces

- [detail](#)

Classes

- class [archive](#)
- class [global](#)
- class [local](#)

Functions

- template<typename Anything >
[global](#) & [operator](#)<< ([archive](#) &ar, Anything any)
- template<typename Definition >
[global](#) & [operator](#)<< ([archive](#) &ar, const [otf2::definition::container](#)< Definition > &c)
- template<typename Record >
[local](#) & [operator](#)<< ([local](#) &wrt, Record evt)
- template<typename Definition >
[local](#) & [operator](#)<< ([local](#) &wrt, const [otf2::definition::container](#)< Definition > &c)
- template<typename Definition >
[global](#) & [operator](#)<< ([global](#) &wrt, Definition def)

8.38.1 Function Documentation

8.38.1.1 `template<typename Record > local & otf2::writer::operator<< (local & wrt, Record evt)`

8.38.1.2 `template<typename Definition > local & otf2::writer::operator<< (local & wrt, const otf2::definition::container< Definition > & c)`

8.38.1.3 `template<typename Definition > global & otf2::writer::operator<<< (global & wrt, Definition def)`

8.38.1.4 `template<typename Anything > global & otf2::writer::operator<<< (archive & ar, Anything any)`

8.38.1.5 `template<typename Definition > global& otf2::writer::operator<<< (archive & ar, const otf2::definition::container< Definition > & c)`

8.39 otf2::writer::detail Namespace Reference

Namespaces

- [callbacks](#)

Functions

- OTF2_FlushType [pre_flush](#) (void *userData, OTF2_FileType fileType, OTF2_LocationRef location, void *callerData, bool final)
- OTF2_TimeStamp [post_flush](#) (void *userData, OTF2_FileType fileType, OTF2_LocationRef location)

8.39.1 Function Documentation

8.39.1.1 `OTF2_TimeStamp otf2::writer::detail::post_flush (void * userData, OTF2_FileType fileType, OTF2_LocationRef location) [inline]`

8.39.1.2 `OTF2_FlushType otf2::writer::detail::pre_flush (void * userData, OTF2_FileType fileType, OTF2_LocationRef location, void * callerData, bool final) [inline]`

8.40 otf2::writer::detail::callbacks Namespace Reference

Namespaces

- [collective](#)

8.41 otf2::writer::detail::callbacks::collective Namespace Reference

Functions

- MPI_Datatype [runtime_type_cast](#) (OTF2_Type type)
- OTF2_CallbackCode [barrier](#) (void *userData, OTF2_CollectiveContext *commContext)
- OTF2_CallbackCode [broadcast](#) (void *userData, OTF2_CollectiveContext *commContext, void *data, uint32_t numberElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [gather](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, void *outData, uint32_t numberElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [gatherv](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, uint32_t inElements, void *outData, const uint32_t *outElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [get_rank](#) (void *userData, OTF2_CollectiveContext *commContext, std::uint32_t *rank)
- OTF2_CallbackCode [get_size](#) (void *userData, OTF2_CollectiveContext *commContext, std::uint32_t *size)
- OTF2_CallbackCode [scatter](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, void *outData, uint32_t numberElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [scatterv](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, const uint32_t *inElements, void *outData, uint32_t outElements, OTF2_Type type, uint32_t root)

8.41.1 Function Documentation

- 8.41.1.1 `OTF2_CallbackCode otf2::writer::detail::callbacks::collective::barrier (void * userData, OTF2_CollectiveContext * commContext) [inline]`
- 8.41.1.2 `OTF2_CallbackCode otf2::writer::detail::callbacks::collective::broadcast (void * userData, OTF2_CollectiveContext * commContext, void * data, uint32_t numberElements, OTF2_Type type, uint32_t root) [inline]`
- 8.41.1.3 `OTF2_CallbackCode otf2::writer::detail::callbacks::collective::gather (void * userData, OTF2_CollectiveContext * commContext, const void * inData, void * outData, uint32_t numberElements, OTF2_Type type, uint32_t root) [inline]`
- 8.41.1.4 `OTF2_CallbackCode otf2::writer::detail::callbacks::collective::gatherv (void * userData, OTF2_CollectiveContext * commContext, const void * inData, uint32_t inElements, void * outData, const uint32_t * outElements, OTF2_Type type, uint32_t root) [inline]`
- 8.41.1.5 `OTF2_CallbackCode otf2::writer::detail::callbacks::collective::get_rank (void * userData, OTF2_CollectiveContext * commContext, std::uint32_t * rank) [inline]`
- 8.41.1.6 `OTF2_CallbackCode otf2::writer::detail::callbacks::collective::get_size (void * userData, OTF2_CollectiveContext * commContext, std::uint32_t * size) [inline]`
- 8.41.1.7 `MPI_Datatype otf2::writer::detail::callbacks::collective::runtime_type_cast (OTF2_Type type) [inline]`
- 8.41.1.8 `OTF2_CallbackCode otf2::writer::detail::callbacks::collective::scatter (void * userData, OTF2_CollectiveContext * commContext, const void * inData, void * outData, uint32_t numberElements, OTF2_Type type, uint32_t root) [inline]`
- 8.41.1.9 `OTF2_CallbackCode otf2::writer::detail::callbacks::collective::scatterv (void * userData, OTF2_CollectiveContext * commContext, const void * inData, const uint32_t * inElements, void * outData, uint32_t outElements, OTF2_Type type, uint32_t root) [inline]`

8.42 std Namespace Reference

Namespaces

- [chrono](#)

8.43 std::chrono Namespace Reference

Functions

- `std::ostream & operator<< (std::ostream &s, nanoseconds dur)`
- `std::ostream & operator<< (std::ostream &s, microseconds dur)`
- `std::ostream & operator<< (std::ostream &s, milliseconds dur)`
- `std::ostream & operator<< (std::ostream &s, seconds dur)`
- `std::ostream & operator<< (std::ostream &s, minutes dur)`
- `std::ostream & operator<< (std::ostream &s, hours dur)`

8.43.1 Function Documentation

- 8.43.1.1 `std::ostream& std::chrono::operator<< (std::ostream & s, nanoseconds dur) [inline]`

8.43.1.2 `std::ostream& std::chrono::operator<< (std::ostream & s, microseconds dur) [inline]`

8.43.1.3 `std::ostream& std::chrono::operator<< (std::ostream & s, milliseconds dur) [inline]`

8.43.1.4 `std::ostream& std::chrono::operator<< (std::ostream & s, seconds dur) [inline]`

8.43.1.5 `std::ostream& std::chrono::operator<< (std::ostream & s, minutes dur) [inline]`

8.43.1.6 `std::ostream& std::chrono::operator<< (std::ostream & s, hours dur) [inline]`

Chapter 9

Class Documentation

9.1 nitro::log::detail::actual_stream< bool, Record, Formatter, Sink, Filter, Severity > Struct Template Reference

```
#include <stream.hpp>
```

Public Types

- typedef [smart_stream](#)< Record, Formatter, Sink, Filter, Severity > [type](#)

9.1.1 Member Typedef Documentation

9.1.1.1 `template<bool , typename Record , template< typename > class Formatter, typename Sink , template< typename > class Filter, severity_level Severity> typedef smart_stream<Record, Formatter, Sink, Filter, Severity> nitro::log::detail::actual_stream< bool, Record, Formatter, Sink, Filter, Severity >::type`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/stream.hpp](#)

9.2 nitro::log::actual_stream< Severity, Record, Formatter, Sink, Filter > Struct Template Reference

```
#include <stream.hpp>
```

Public Types

- typedef Severity::type [type](#)

Public Attributes

- typedef [Record](#)
- typedef [Formatter](#)
- typedef [Sink](#)
- typedef [Filter](#)

9.2.1 Member Typedef Documentation

9.2.1.1 `template<severity_level Severity, typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter> typedef Severity ::type nitro::log::actual_stream< Severity, Record, Formatter, Sink, Filter >::type`

9.2.2 Member Data Documentation

9.2.2.1 `template<severity_level Severity, typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter> typedef nitro::log::actual_stream< Severity, Record, Formatter, Sink, Filter >::Filter`

9.2.2.2 `template<severity_level Severity, typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter> typedef nitro::log::actual_stream< Severity, Record, Formatter, Sink, Filter >::Formatter`

9.2.2.3 `template<severity_level Severity, typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter> typedef nitro::log::actual_stream< Severity, Record, Formatter, Sink, Filter >::Record`

9.2.2.4 `template<severity_level Severity, typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter> typedef nitro::log::actual_stream< Severity, Record, Formatter, Sink, Filter >::Sink`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/stream.hpp](#)

9.3 nitro::log::detail::actual_stream< false, Record, Formatter, Sink, Filter, Severity > Struct Template Reference

```
#include <stream.hpp>
```

Public Types

- typedef [null_stream](#) type

9.3.1 Member Typedef Documentation

9.3.1.1 `template<typename Record , template< typename > class Formatter, typename Sink , template< typename > class Filter, severity_level Severity> typedef null_stream nitro::log::detail::actual_stream< false, Record, Formatter, Sink, Filter, Severity >::type`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/stream.hpp](#)

9.4 of2::detail::add_attribute< Type > Struct Template Reference

```
#include <attribute_list.hpp>
```

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.5 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::attribute >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (`OTF2_AttributeList *list`, `otf2::definition::attribute attribute`, `otf2::definition::attribute value`)

9.5.1 Member Function Documentation

9.5.1.1 void `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::attribute >::operator()` (`OTF2_AttributeList * list`, `otf2::definition::attribute attribute`, `otf2::definition::attribute value`) [`inline`]

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.6 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::comm >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (`OTF2_AttributeList *list`, `otf2::definition::attribute attribute`, `otf2::definition::comm value`)

9.6.1 Member Function Documentation

9.6.1.1 void `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::comm >::operator()` (`OTF2_AttributeList * list`, `otf2::definition::attribute attribute`, `otf2::definition::comm value`) [`inline`]

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.7 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::Double >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (`OTF2_AttributeList *list`, `otf2::definition::attribute attribute`, `double value`)

9.7.1 Member Function Documentation

9.7.1.1 `void otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::Double >::operator() (OTF2_AttributeList * list, otf2::definition::attribute attribute, double value) [inline]`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.8 otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::Float > Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void [operator\(\)](#) (OTF2_AttributeList *list, [otf2::definition::attribute](#) attribute, float value)

9.8.1 Member Function Documentation

9.8.1.1 `void otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::Float >::operator() (OTF2_AttributeList * list, otf2::definition::attribute attribute, float value) [inline]`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.9 otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int16 > Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void [operator\(\)](#) (OTF2_AttributeList *list, [otf2::definition::attribute](#) attribute, std::int16_t value)

9.9.1 Member Function Documentation

9.9.1.1 `void otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int16 >::operator() (OTF2_AttributeList * list, otf2::definition::attribute attribute, std::int16_t value) [inline]`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.10 otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int32 > Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (`OTF2_AttributeList *list`, `otf2::definition::attribute` attribute, `std::int32_t value`)

9.10.1 Member Function Documentation

- 9.10.1.1 void `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int32 >::operator()` (`OTF2_AttributeList * list`, `otf2::definition::attribute` *attribute*, `std::int32_t value`) `[inline]`

The documentation for this struct was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp`

9.11 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int64 >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (`OTF2_AttributeList *list`, `otf2::definition::attribute` attribute, `std::int64_t value`)

9.11.1 Member Function Documentation

- 9.11.1.1 void `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int64 >::operator()` (`OTF2_AttributeList * list`, `otf2::definition::attribute` *attribute*, `std::int64_t value`) `[inline]`

The documentation for this struct was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp`

9.12 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int8 >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (`OTF2_AttributeList *list`, `otf2::definition::attribute` attribute, `std::int8_t value`)

9.12.1 Member Function Documentation

- 9.12.1.1 void `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int8 >::operator()` (`OTF2_AttributeList * list`, `otf2::definition::attribute` *attribute*, `std::int8_t value`) `[inline]`

The documentation for this struct was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp`

9.13 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::location >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (OTF2_AttributeList *list, `otf2::definition::attribute` attribute, `otf2::definition::location` value)

9.13.1 Member Function Documentation

9.13.1.1 void `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::location >::operator()` (`OTF2_AttributeList * list`, `otf2::definition::attribute attribute`, `otf2::definition::location value`)
[inline]

The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp

9.14 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::metric >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (OTF2_AttributeList *list, `otf2::definition::attribute` attribute, `otf2::definition::metric_class` value)

9.14.1 Member Function Documentation

9.14.1.1 void `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::metric >::operator()` (`OTF2_AttributeList * list`, `otf2::definition::attribute attribute`, `otf2::definition::metric_class value`)
[inline]

The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp

9.15 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::parameter >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (OTF2_AttributeList *list, `otf2::definition::attribute` attribute, `otf2::definition::parameter` value)

9.15.1 Member Function Documentation

9.15.1.1 void otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::parameter >::operator() (OTF2_AttributeList * list, otf2::definition::attribute attribute, otf2::definition::parameter value) [inline]

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.16 otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::region > Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void [operator\(\)](#) (OTF2_AttributeList *list, [otf2::definition::attribute](#) attribute, [otf2::definition::region](#) value)

9.16.1 Member Function Documentation

9.16.1.1 void otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::region >::operator() (OTF2_AttributeList * list, otf2::definition::attribute attribute, otf2::definition::region value) [inline]

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.17 otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::string > Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void [operator\(\)](#) (OTF2_AttributeList *list, [otf2::definition::attribute](#) attribute, [otf2::definition::string](#) value)

9.17.1 Member Function Documentation

9.17.1.1 void otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::string >::operator() (OTF2_AttributeList * list, otf2::definition::attribute attribute, otf2::definition::string value) [inline]

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.18 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint16 >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (`OTF2_AttributeList *list`, `otf2::definition::attribute` `attribute`, `std::uint16_t value`)

9.18.1 Member Function Documentation

9.18.1.1 void `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint16 >::operator()` (`OTF2_AttributeList * list`, `otf2::definition::attribute attribute`, `std::uint16_t value`) [`inline`]

The documentation for this struct was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp`

9.19 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint32 >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (`OTF2_AttributeList *list`, `otf2::definition::attribute` `attribute`, `std::uint32_t value`)

9.19.1 Member Function Documentation

9.19.1.1 void `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint32 >::operator()` (`OTF2_AttributeList * list`, `otf2::definition::attribute attribute`, `std::uint32_t value`) [`inline`]

The documentation for this struct was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp`

9.20 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint64 >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- void `operator()` (`OTF2_AttributeList *list`, `otf2::definition::attribute` `attribute`, `std::uint64_t value`)

9.20.1 Member Function Documentation

9.20.1.1 `void otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint64 >::operator() (OTF2_AttributeList * list, otf2::definition::attribute attribute, std::uint64_t value) [inline]`

The documentation for this struct was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp`

9.21 `otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint8 >` Struct Template Reference

```
#include <attribute_list.hpp>
```

Public Member Functions

- `void operator() (OTF2_AttributeList *list, otf2::definition::attribute attribute, std::uint8_t value)`

9.21.1 Member Function Documentation

9.21.1.1 `void otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint8 >::operator() (OTF2_AttributeList * list, otf2::definition::attribute attribute, std::uint8_t value) [inline]`

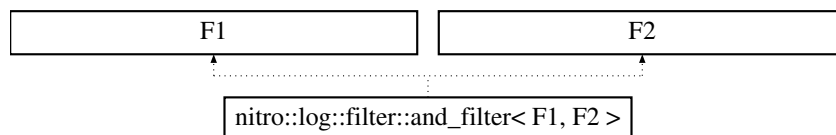
The documentation for this struct was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp`

9.22 `nitro::log::filter::and_filter< F1, F2 >` Class Template Reference

```
#include <and_filter.hpp>
```

Inheritance diagram for `nitro::log::filter::and_filter< F1, F2 >`:



Public Types

- `typedef F1::record_type record_type`

Public Member Functions

- `bool filter (record_type &r) const`

9.22.1 Member Typedef Documentation

9.22.1.1 `template<typename F1 , typename F2 > typedef F1::record_type nitro::log::filter::and_filter< F1, F2 >::record_type`

9.22.2 Member Function Documentation

9.22.2.1 `template<typename F1 , typename F2 > bool nitro::log::filter::and_filter< F1, F2 >::filter (record_type & r) const [inline]`

The documentation for this class was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/nitro/log/filter/and_filter.hpp`

9.23 otf2::writer::archive Class Reference

```
#include <archive.hpp>
```

Public Types

- `typedef std::function< otf2::chrono::time_point()> post_flush_func`
- `typedef std::function< OTF2_FlushType(bool)> pre_flush_func`

Public Member Functions

- `archive` (const std::string &path, const std::string &name, boost::mpi::communicator &comm, OTF2_↵ FileMode_enum mode=OTF2_FILEMODE_WRITE, std::size_t event_chunk_size=1024 *1024, std::size_↵ t definition_chunk_size=4 *1024 *1024, OTF2_FileSubstrate_enum file_substrate=OTF2_SUBSTRATE_↵ POSIX, OTF2_Compression_enum compression=OTF2_COMPRESSION_NONE)
- `archive` (const std::string &path, const std::string &name, OTF2_FileMode_enum mode=OTF2_FILE↵ MODE_WRITE, std::size_t event_chunk_size=1024 *1024, std::size_t definition_chunk_size=4 *1024 *1024, OTF2_FileSubstrate_enum file_substrate=OTF2_SUBSTRATE_POSIX, OTF2_Compression_enum compression=OTF2_COMPRESSION_NONE)
- `~archive` ()
- `archive` (OTF2_Archive *ar, boost::mpi::communicator &comm)
- `archive` (OTF2_Archive *ar)
- OTF2_Archive * `get` ()
- bool `is_slave` () const
- bool `is_master` () const
- void `set_creator` (const std::string &creator)
- std::string `get_creator` () const
- std::uint64_t `get_events_chunk_size` () const
- std::uint64_t `get_definitions_chunk_size` () const
- OTF2_Compression_enum `get_compression` () const
- std::string `get_description` () const
- void `set_description` (const std::string &desc)
- OTF2_FileSubstrate_enum `get_file_substrate` () const
- std::string `get_machine_name` () const
- void `set_machine_name` (const std::string &name)
- std::uint64_t `num_global_definitions` () const
- std::uint64_t `num_locations` () const
- std::uint32_t `num_snapshots` () const
- void `set_num_snapshots` (std::uint32_t num)

- `std::uint32_t num_thumbnails ()` const
- `std::uint64_t get_trace_id ()` const
- `std::string get_property (const std::string &name)` const
- `std::vector< std::string > get_property_names ()` const
- `void set_property (const std::string &name, bool value, bool overwrite=false)`
- `void set_property (const std::string &name, const std::string &value, bool overwrite=false)`
- `void set_pre_flush_callback (pre_flush_func f)`
- `void set_post_flush_callback (post_flush_func f)`
- `writer::local & operator() (otf2::definition::location loc)`
- `boost::mpi::communicator & comm ()`

Friends

- `template<typename Anything > global & operator<< (archive &ar, Anything any)`
- `template<typename Definition > global & operator<< (archive &ar, const otf2::definition::container< Definition > &c)`
- `OTF2_FlushType detail::pre_flush (void *, OTF2_FileType, OTF2_LocationRef, void *, bool)`
- `OTF2_TimeStamp detail::post_flush (void *, OTF2_FileType, OTF2_LocationRef)`

9.23.1 Member Typedef Documentation

9.23.1.1 `typedef std::function<otf2::chrono::time_point(> otf2::writer::archive::post_flush_func`

9.23.1.2 `typedef std::function<OTF2_FlushType(bool)> otf2::writer::archive::pre_flush_func`

9.23.2 Constructor & Destructor Documentation

9.23.2.1 `otf2::writer::archive::archive (const std::string & path, const std::string & name, boost::mpi::communicator & comm, OTF2_FileMode_enum mode = OTF2_FILEMODE_WRITE, std::size_t event_chunk_size = 1024*1024, std::size_t definition_chunk_size = 4*1024*1024, OTF2_FileSubstrate_enum file_substrate = OTF2_SUBSTRATE_POSIX, OTF2_Compression_enum compression = OTF2_COMPRESSION_NONE)` [inline]

9.23.2.2 `otf2::writer::archive::archive (const std::string & path, const std::string & name, OTF2_FileMode_enum mode = OTF2_FILEMODE_WRITE, std::size_t event_chunk_size = 1024*1024, std::size_t definition_chunk_size = 4*1024*1024, OTF2_FileSubstrate_enum file_substrate = OTF2_SUBSTRATE_POSIX, OTF2_Compression_enum compression = OTF2_COMPRESSION_NONE)` [inline]

9.23.2.3 `otf2::writer::archive::~~archive ()` [inline]

9.23.2.4 `otf2::writer::archive::archive (OTF2_Archive * ar, boost::mpi::communicator & comm)` [inline], [explicit]

9.23.2.5 `otf2::writer::archive::archive (OTF2_Archive * ar)` [inline], [explicit]

9.23.3 Member Function Documentation

9.23.3.1 `boost::mpi::communicator& otf2::writer::archive::comm ()` [inline]

9.23.3.2 `OTF2_Archive* otf2::writer::archive::get ()` [inline]

9.23.3.3 `OTF2_Compression_enum otf2::writer::archive::get_compression ()` const [inline]

- 9.23.3.4 `std::string otf2::writer::archive::get_creator () const` [inline]
- 9.23.3.5 `std::uint64_t otf2::writer::archive::get_definitions_chunk_size () const` [inline]
- 9.23.3.6 `std::string otf2::writer::archive::get_description () const` [inline]
- 9.23.3.7 `std::uint64_t otf2::writer::archive::get_events_chunk_size () const` [inline]
- 9.23.3.8 `OTF2_FileSubstrate_enum otf2::writer::archive::get_file_substrate () const` [inline]
- 9.23.3.9 `std::string otf2::writer::archive::get_machine_name () const` [inline]
- 9.23.3.10 `std::string otf2::writer::archive::get_property (const std::string & name) const` [inline]
- 9.23.3.11 `std::vector<std::string> otf2::writer::archive::get_property_names () const` [inline]
- 9.23.3.12 `std::uint64_t otf2::writer::archive::get_trace_id () const` [inline]
- 9.23.3.13 `bool otf2::writer::archive::is_master () const` [inline]
- 9.23.3.14 `bool otf2::writer::archive::is_slave () const` [inline]
- 9.23.3.15 `std::uint64_t otf2::writer::archive::num_global_definitions () const` [inline]
- 9.23.3.16 `std::uint64_t otf2::writer::archive::num_locations () const` [inline]
- 9.23.3.17 `std::uint32_t otf2::writer::archive::num_snapshots () const` [inline]
- 9.23.3.18 `std::uint32_t otf2::writer::archive::num_thumbnails () const` [inline]
- 9.23.3.19 `writer::local& otf2::writer::archive::operator() (otf2::definition::location loc)` [inline]
- 9.23.3.20 `void otf2::writer::archive::set_creator (const std::string & creator)` [inline]
- 9.23.3.21 `void otf2::writer::archive::set_description (const std::string & desc)` [inline]
- 9.23.3.22 `void otf2::writer::archive::set_machine_name (const std::string & name)` [inline]
- 9.23.3.23 `void otf2::writer::archive::set_num_snapshots (std::uint32_t num)` [inline]
- 9.23.3.24 `void otf2::writer::archive::set_post_flush_callback (post_flush_func f)` [inline]
- 9.23.3.25 `void otf2::writer::archive::set_pre_flush_callback (pre_flush_func f)` [inline]
- 9.23.3.26 `void otf2::writer::archive::set_property (const std::string & name, bool value, bool overwrite = false)`
[inline]
- 9.23.3.27 `void otf2::writer::archive::set_property (const std::string & name, const std::string & value, bool overwrite = false)` [inline]

9.23.4 Friends And Related Function Documentation

- 9.23.4.1 `OTF2_TimeStamp detail::post_flush (void *, OTF2_FileType, OTF2_LocationRef)` [friend]
- 9.23.4.2 `OTF2_FlushType detail::pre_flush (void *, OTF2_FileType, OTF2_LocationRef, void *, bool)` [friend]

9.23.4.3 `template<typename Anything > global& operator<< (archive & ar, Anything any) [friend]`

9.23.4.4 `template<typename Definition > global& operator<< (archive & ar, const otf2::definition::container< Definition > & c) [friend]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/writer/archive.hpp](#)

9.24 nitro::log::detail::assign_severity< bool, Record, Attributes > Struct Template Reference

```
#include <set_attribute.hpp>
```

Public Member Functions

- void `operator()` (Record< Attributes...> &r, const `severity_level` &v)

9.24.1 Member Function Documentation

9.24.1.1 `template<bool , template< typename...Attributes > class Record, typename... Attributes> void nitro::log::detail::assign_severity< bool, Record, Attributes >::operator() (Record< Attributes...> & r, const severity_level & v) [inline]`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/detail/set_attribute.hpp](#)

9.25 nitro::log::detail::assign_severity< false, Record, Attributes...> Struct Template Reference

```
#include <set_attribute.hpp>
```

Public Member Functions

- void `operator()` (Record< Attributes...> &, const `severity_level` &)

9.25.1 Member Function Documentation

9.25.1.1 `template<typename... Attributes, template< typename...Attributes2 > class Record> void nitro::log::detail::assign_severity< false, Record, Attributes...>::operator() (Record< Attributes...> & , const severity_level &) [inline]`

The documentation for this struct was generated from the following file:

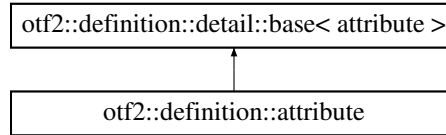
- [/home/tilsche/vc/haec-sim/include/nitro/log/detail/set_attribute.hpp](#)

9.26 otf2::definition::attribute Class Reference

class for representing a attribute definition

```
#include <attribute.hpp>
```

Inheritance diagram for otf2::definition::attribute:



Public Types

- typedef impl_type::attribute_type [attribute_type](#)

Public Member Functions

- [attribute](#) (otf2::reference< [attribute](#) > ref, otf2::definition::string name, otf2::definition::string description, [attribute_type](#) type)
- [attribute](#) ()=default
- [otf2::definition::string name](#) () const
Returns a string definition containing the name.
- [otf2::definition::string description](#) () const
Returns a string definition containing the name.
- [attribute_type type](#) () const
Returns the type of the attribute definition.

Additional Inherited Members

9.26.1 Detailed Description

class for representing a attribute definition

9.26.2 Member Typedef Documentation

9.26.2.1 typedef impl_type::attribute_type otf2::definition::attribute::attribute_type

9.26.3 Constructor & Destructor Documentation

9.26.3.1 otf2::definition::attribute::attribute (otf2::reference< [attribute](#) > ref, otf2::definition::string name, otf2::definition::string description, [attribute_type](#) type) [inline]

9.26.3.2 otf2::definition::attribute::attribute () [default]

9.26.4 Member Function Documentation

9.26.4.1 otf2::definition::string otf2::definition::attribute::description () const [inline]

Returns a string definition containing the name.

Returns

[otf2::definition::string](#) containing the name

9.26.4.2 otf2::definition::string otf2::definition::attribute::name () const [inline]

Returns a string definition containing the name.

Returns

[otf2::definition::string](#) containing the name

9.26.4.3 attribute_type otf2::definition::attribute::type () const [inline]

Returns the type of the attribute definition.

For possible values see [otf2::common::type](#)

Returns

the type of the attribute definition

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/attribute.hpp](#)

9.27 otf2::definition::detail::attribute_impl Class Reference

```
#include <attribute_impl.hpp>
```

Public Types

- typedef [otf2::common::type](#) [attribute_type](#)

Public Member Functions

- [attribute_impl](#) ([otf2::reference](#)< [attribute](#) > [ref](#), [string](#) [name](#), [string](#) [description](#), [attribute_type](#) [type](#))
- [attribute_impl](#) (const [attribute_impl](#) &)=delete
- [attribute_impl](#) & [operator=](#) (const [attribute_impl](#) &)=delete
- [attribute_impl](#) ([attribute_impl](#) &&)=default
- [attribute_impl](#) & [operator=](#) ([attribute_impl](#) &&)=default
- [string](#) [name](#) () const
- [string](#) [description](#) () const
- [attribute_type](#) [type](#) () const
- [otf2::reference](#)< [attribute](#) > [ref](#) () const

Static Public Member Functions

- static std::shared_ptr< [attribute_impl](#) > [undefined](#) ()

9.27.1 Member Typedef Documentation

9.27.1.1 `typedef otf2::common::type otf2::definition::detail::attribute_impl::attribute_type`

9.27.2 Constructor & Destructor Documentation

9.27.2.1 `otf2::definition::detail::attribute_impl::attribute_impl (otf2::reference< attribute > ref, string name, string description, attribute_type type) [inline]`

9.27.2.2 `otf2::definition::detail::attribute_impl::attribute_impl (const attribute_impl &) [delete]`

9.27.2.3 `otf2::definition::detail::attribute_impl::attribute_impl (attribute_impl &&) [default]`

9.27.3 Member Function Documentation

9.27.3.1 `string otf2::definition::detail::attribute_impl::description () const [inline]`

9.27.3.2 `string otf2::definition::detail::attribute_impl::name () const [inline]`

9.27.3.3 `attribute_impl& otf2::definition::detail::attribute_impl::operator= (const attribute_impl &) [delete]`

9.27.3.4 `attribute_impl& otf2::definition::detail::attribute_impl::operator= (attribute_impl &&) [default]`

9.27.3.5 `otf2::reference<attribute> otf2::definition::detail::attribute_impl::ref () const [inline]`

9.27.3.6 `attribute_type otf2::definition::detail::attribute_impl::type () const [inline]`

9.27.3.7 `static std::shared_ptr<attribute_impl> otf2::definition::detail::attribute_impl::undefined () [inline], [static]`

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/attribute_impl.hpp

9.28 otf2::attribute_list Class Reference

```
#include <attribute_list.hpp>
```

Public Types

- using `attribute_type = otf2::definition::attribute::attribute_type`

Public Member Functions

- `attribute_list ()`
- `attribute_list (const attribute_list &other)`
- `attribute_list (OTF2_AttributeList *list)`
- `attribute_list & operator= (attribute_list other)`
- `template<attribute_type Type, typename T > void add (otf2::definition::attribute attribute, T value)`
- `~attribute_list ()`
- `OTF2_AttributeList * get ()`
- `OTF2_AttributeList *const get () const`
- `attribute_list clone () const`

9.28.1 Member Typedef Documentation

9.28.1.1 `using otf2::attribute_list::attribute_type = otf2::definition::attribute::attribute_type`

9.28.2 Constructor & Destructor Documentation

9.28.2.1 `otf2::attribute_list::attribute_list () [inline]`

9.28.2.2 `otf2::attribute_list::attribute_list (const attribute_list & other) [inline]`

9.28.2.3 `otf2::attribute_list::attribute_list (OTF2_AttributeList * list) [inline], [explicit]`

9.28.2.4 `otf2::attribute_list::~~attribute_list () [inline]`

9.28.3 Member Function Documentation

9.28.3.1 `template<attribute_type Type, typename T > void otf2::attribute_list::add (otf2::definition::attribute attribute, T value) [inline]`

9.28.3.2 `attribute_list otf2::attribute_list::clone () const [inline]`

9.28.3.3 `OTF2_AttributeList* otf2::attribute_list::get () [inline]`

9.28.3.4 `OTF2_AttributeList* const otf2::attribute_list::get () const [inline]`

9.28.3.5 `attribute_list& otf2::attribute_list::operator= (attribute_list other) [inline]`

The documentation for this class was generated from the following file:

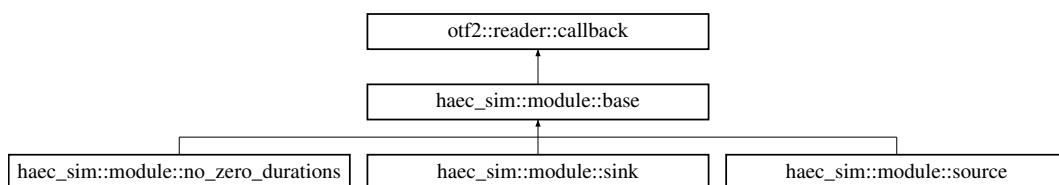
- [/home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp](#)

9.29 haec_sim::module::base Class Reference

Base class for modules.

```
#include <base.hpp>
```

Inheritance diagram for `haec_sim::module::base`:



Public Member Functions

- `base` (`boost::mpi::communicator comm`, `haec_sim::topology::topology &t`)
- `virtual ~base ()=0`
- `void set_next (haec_sim::module::base *next)`
- `void set_next (haec_sim::module::base &next)`
- `haec_sim::module::base *const next ()`
- `bool has_next () const`

- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::buffer_flush](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::enter](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::leave](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::measurement](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::metric](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_send](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_receive](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_isend_request](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_isend_complete](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_ireceive_complete](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_ireceive_request](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_request_test](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_request_cancelled](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_collective_begin](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_collective_end](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::parameter_string](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::parameter_int](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::parameter_unsigned_int](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_fork](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_join](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_team_begin](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_team_end](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_acquire_lock](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_release_lock](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_task_create](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_task_switch](#) &evnt) override
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_task_complete](#) &evnt) override
- virtual void [definition](#) ([otf2::definition::attribute](#) definition) override
- virtual void [definition](#) ([otf2::definition::comm](#) definition) override
- virtual void [definition](#) ([otf2::definition::locations_group](#) definition) override
- virtual void [definition](#) ([otf2::definition::regions_group](#) definition) override
- virtual void [definition](#) ([otf2::definition::comm_locations_group](#) definition) override
- virtual void [definition](#) ([otf2::definition::comm_group](#) definition) override
- virtual void [definition](#) ([otf2::definition::comm_self_group](#) definition) override
- virtual void [definition](#) ([otf2::definition::location](#) definition) override
- virtual void [definition](#) ([otf2::definition::location_group](#) definition) override
- virtual void [definition](#) ([otf2::definition::parameter](#) definition) override
- virtual void [definition](#) ([otf2::definition::region](#) definition) override
- virtual void [definition](#) ([otf2::definition::string](#) definition) override
- virtual void [definition](#) ([otf2::definition::system_tree_node](#) definition) override
- virtual void [definition](#) ([otf2::definition::clock_properties](#) definition) override
- virtual void [definition](#) ([otf2::definition::metric_class](#) definition) override
- virtual void [definition](#) ([otf2::definition::metric_member](#) definition) override
- virtual void [definition](#) ([otf2::definition::metric_instance](#) definition) override
- virtual void [definition](#) ([otf2::definition::location_property](#) definition) override
- virtual void [definition](#) ([otf2::definition::location_group_property](#) definition) override
- virtual void [definition](#) ([otf2::definition::system_tree_node_property](#) definition) override
- virtual void [events_done](#) (const [otf2::reader::reader](#) &rdr) override

Protected Member Functions

- [boost::mpi::communicator & comm](#) ()
- auto [comm](#) () const -> const [boost::mpi::communicator &](#)
- auto [topology](#) () -> [haec_sim::topology::topology &](#)
- auto [topology](#) () const -> const [haec_sim::topology::topology &](#)
- virtual [otf2::chrono::time_point recalculate_time](#) ([otf2::definition::location](#) location, [otf2::chrono::time_point](#) tp)
- bool [is_master](#) () const

9.29.1 Detailed Description

Base class for modules.

9.29.2 Constructor & Destructor Documentation

9.29.2.1 `haec_sim::module::base::base (boost::mpi::communicator comm, haec_sim::topology::topology & t)` `[inline]`

Creates own constructor.

9.29.2.2 `haec_sim::module::base::~~base ()` `[inline],[pure virtual]`

Creates own destructor.

9.29.3 Member Function Documentation

9.29.3.1 `boost::mpi::communicator& haec_sim::module::base::comm ()` `[inline],[protected]`

Returns the MPI communicator.

9.29.3.2 `auto haec_sim::module::base::comm () const -> const boost::mpi::communicator &` `[inline],[protected]`

9.29.3.3 `virtual void haec_sim::module::base::definition (otf2::definition::attribute definition)` `[inline],[override],[virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.4 `virtual void haec_sim::module::base::definition (otf2::definition::comm definition)` `[inline],[override],[virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.5 `virtual void haec_sim::module::base::definition (otf2::definition::locations_group definition)` `[inline],[override],[virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.6 `virtual void haec_sim::module::base::definition (otf2::definition::regions_group definition)` `[inline],[override],[virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#), and [haec_sim::module::sink](#).

9.29.3.7 `virtual void haec_sim::module::base::definition (otf2::definition::comm_locations_group definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#), and [haec_sim::module::sink](#).

9.29.3.8 `virtual void haec_sim::module::base::definition (otf2::definition::comm_group definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.9 `virtual void haec_sim::module::base::definition (otf2::definition::comm_self_group definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.10 `virtual void haec_sim::module::base::definition (otf2::definition::location definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#), and [haec_sim::module::source](#).

9.29.3.11 `virtual void haec_sim::module::base::definition (otf2::definition::location_group definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.12 `virtual void haec_sim::module::base::definition (otf2::definition::parameter definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.13 `virtual void haec_sim::module::base::definition (otf2::definition::region definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.14 `virtual void haec_sim::module::base::definition (otf2::definition::string definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.15 `virtual void haec_sim::module::base::definition (otf2::definition::system_tree_node definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.16 `virtual void haec_sim::module::base::definition (otf2::definition::clock_properties definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.17 `virtual void haec_sim::module::base::definition (otf2::definition::metric_class definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.18 `virtual void haec_sim::module::base::definition (otf2::definition::metric_member definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.19 `virtual void haec_sim::module::base::definition (otf2::definition::metric_instance definition) [inline], [override], [virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.20 `virtual void haec_sim::module::base::definition (otf2::definition::location_property definition)`
`[inline],[override],[virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.21 `virtual void haec_sim::module::base::definition (otf2::definition::location_group_property definition)`
`[inline],[override],[virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.22 `virtual void haec_sim::module::base::definition (otf2::definition::system_tree_node_property definition)`
`[inline],[override],[virtual]`

Copyhandler for global definition.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.23 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::buffer_flush & evt)`
`[inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.24 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::enter & evt)`
`[inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#), and [haec_sim::module::no_zero_durations](#).

9.29.3.25 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::leave & evt)`
`[inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#), and [haec_sim::module::no_zero_durations](#).

9.29.3.26 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::measurement & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.27 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::metric & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.28 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_send & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.29 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_receive & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.30 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_isend_request & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.31 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_isend_complete & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.32 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_ireceive_complete & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.33 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_ireceive_request & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.34 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_request_test & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.35 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_request_cancelled & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.36 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_collective_begin & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.37 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::mpi_collective_end & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.38 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::parameter_string & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.39 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::parameter_int & evt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.40 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::parameter_unsigned_int & evt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.41 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::thread_fork & evt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.42 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::thread_join & evt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.43 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::thread_team_begin & evt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.44 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::thread_team_end & evt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.45 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::thread_acquire_lock & evt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.46 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::thread_release_lock & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.47 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::thread_task_create & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.48 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::thread_task_switch & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.49 `virtual void haec_sim::module::base::event (otf2::definition::location location, const otf2::event::thread_task_complete & evnt) [inline],[override],[virtual]`

Copyhandler for given event.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.50 `virtual void haec_sim::module::base::events_done (const otf2::reader::reader & rdr) [inline],[override],[virtual]`

Method will be called after the [otf2::reader::reader](#) has finished reading all events and definition records in the trace file.

Reimplemented from [otf2::reader::callback](#).

Reimplemented in [haec_sim::module::sink](#).

9.29.3.51 `bool haec_sim::module::base::has_next () const [inline]`

Returns true if there is a next module.

9.29.3.52 `bool haec_sim::module::base::is_master () const [inline],[protected]`

Returns true if the current process is the master process (=0).

9.29.3.53 `haec_sim::module::base* const haec_sim::module::base::next () [inline]`

Returns the pointer to the next module.

9.29.3.54 `virtual otf2::chrono::time_point haec_sim::module::base::recalculate_time (otf2::definition::location location, otf2::chrono::time_point tp) [inline],[protected],[virtual]`

Recalculates new time point.

9.29.3.55 `void haec_sim::module::base::set_next (haec_sim::module::base * next) [inline]`

Sets pointer to next module.

9.29.3.56 `void haec_sim::module::base::set_next (haec_sim::module::base & next) [inline]`

Sets pointer to next module.

9.29.3.57 `auto haec_sim::module::base::topology ()-> haec_sim::topology::topology& [inline],[protected]`

9.29.3.58 `auto haec_sim::module::base::topology () const -> const haec_sim::topology::topology& [inline],[protected]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/module/base.hpp](#)

9.30 otf2::event::base< Event > Class Template Reference

CRTP base class for all events.

```
#include <base.hpp>
```

Public Member Functions

- [base](#) ()=default
- [base](#) (otf2::chrono::time_point timestamp)
- [base](#) (const otf2::event::base< Event > &other, otf2::chrono::time_point new_timestamp)
- [otf2::chrono::time_point](#) timestamp () const
- `template<otf2::attribute_list::attribute_type Type, typename T > Event & add_attribute (otf2::definition::attribute attribute, T value)`
- `const otf2::attribute_list & attribute_list () const`
- `otf2::attribute_list & attribute_list ()`

9.30.1 Detailed Description

```
template<typename Event>class otf2::event::base< Event >
```

CRTP base class for all events.

9.30.2 Constructor & Destructor Documentation

9.30.2.1 `template<typename Event> otf2::event::base< Event >::base () [default]`

9.30.2.2 `template<typename Event> otf2::event::base< Event >::base (otf2::chrono::time_point timestamp) [inline]`

9.30.2.3 `template<typename Event> otf2::event::base< Event >::base (const otf2::event::base< Event > & other, otf2::chrono::time_point new_timestamp) [inline]`

9.30.3 Member Function Documentation

9.30.3.1 `template<typename Event> template<otf2::attribute_list::attribute_type Type, typename T > Event& otf2::event::base< Event >::add_attribute (otf2::definition::attribute attribute, T value) [inline]`

9.30.3.2 `template<typename Event> const otf2::attribute_list& otf2::event::base< Event >::attribute_list () const [inline]`

9.30.3.3 `template<typename Event> otf2::attribute_list& otf2::event::base< Event >::attribute_list () [inline]`

9.30.3.4 `template<typename Event> otf2::chrono::time_point otf2::event::base< Event >::timestamp () const [inline]`

The documentation for this class was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/event/base.hpp>

9.31 haec_sim::resource_manager::base< Client > Class Template Reference

```
#include <base.hpp>
```

Public Member Functions

- `base` (const boost::mpi::communicator &`comm`, const boost::mpi::communicator &`comm_local`, [haec_sim](#)↔`::topology::topology` &`t`)
- virtual `~base` ()
- virtual void `run` ()=0
- `template<typename... Components>`
auto `gather_from_all` (const `packet`< Components...> &`my_value`) -> std::vector< `packet`< Components...>>
- `template<typename... Components>`
void `send_to_client` (const `packet`< Components...> &`p`, int `rank`)
- `template<typename... Components>`
int `recv_from_any_client` (`packet`< Components...> &`p`)
- `template<typename Packet >`
bool `packet_available` ()
- void `new_client` (int `rank`, const Client &`c`)
- void `remove_client` (int `rank`)
- std::size_t `num_clients` () const
- bool `has_clients` () const
- const Client & `get_client` (int `rank`) const
- Client & `get_client` (int `rank`)
- bool `has_client` (int `rank`) const
- const std::map< int, Client > & `clients` () const

- boost::mpi::communicator & `comm` ()
- boost::mpi::communicator & `comm_local` ()
- `haec_sim::topology::topology` & `topology` ()

9.31.1 Constructor & Destructor Documentation

9.31.1.1 `template<typename Client > haec_sim::resource_manager::base< Client >::base (const boost::mpi::communicator & comm, const boost::mpi::communicator & comm_local, haec_sim::topology::topology & t)` `[inline]`

9.31.1.2 `template<typename Client > virtual haec_sim::resource_manager::base< Client >::~~base ()` `[inline],[virtual]`

9.31.2 Member Function Documentation

9.31.2.1 `template<typename Client > const std::map<int,Client>& haec_sim::resource_manager::base< Client >::clients () const` `[inline]`

9.31.2.2 `template<typename Client > boost::mpi::communicator& haec_sim::resource_manager::base< Client >::comm ()` `[inline]`

9.31.2.3 `template<typename Client > boost::mpi::communicator& haec_sim::resource_manager::base< Client >::comm_local ()` `[inline]`

9.31.2.4 `template<typename Client > template<typename... Components> auto haec_sim::resource_manager::base< Client >::gather_from_all (const packet< Components...> & my_value)-> std::vector<packet<Components...>>` `[inline]`

9.31.2.5 `template<typename Client > const Client& haec_sim::resource_manager::base< Client >::get_client (int rank) const` `[inline]`

9.31.2.6 `template<typename Client > Client& haec_sim::resource_manager::base< Client >::get_client (int rank)` `[inline]`

9.31.2.7 `template<typename Client > bool haec_sim::resource_manager::base< Client >::has_client (int rank) const` `[inline]`

9.31.2.8 `template<typename Client > bool haec_sim::resource_manager::base< Client >::has_clients () const` `[inline]`

9.31.2.9 `template<typename Client > void haec_sim::resource_manager::base< Client >::new_client (int rank, const Client & c)` `[inline]`

9.31.2.10 `template<typename Client > std::size_t haec_sim::resource_manager::base< Client >::num_clients () const` `[inline]`

9.31.2.11 `template<typename Client > template<typename Packet > bool haec_sim::resource_manager::base< Client >::packet_available ()` `[inline]`

9.31.2.12 `template<typename Client > template<typename... Components> int haec_sim::resource_manager::base< Client >::recv_from_any_client (packet< Components...> & p)` `[inline]`

9.31.2.13 `template<typename Client > void haec_sim::resource_manager::base< Client >::remove_client (int rank)` `[inline]`

- 9.31.2.14 `template<typename Client > virtual void haec_sim::resource_manager::base< Client >::run ()` [pure virtual]
- 9.31.2.15 `template<typename Client > template<typename... Components> void haec_sim::resource_manager::base< Client >::send_to_client (const packet< Components...> & p, int rank)` [inline]
- 9.31.2.16 `template<typename Client > haec_sim::topology::topology& haec_sim::resource_manager::base< Client >::topology ()` [inline]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/base.hpp

9.32 `otf2::definition::detail::base< Def, Impl >` Class Template Reference

CRTP base class for definition references.

```
#include <base.hpp>
```

Public Types

- typedef `otf2::reference< typename otf2::traits::reference_param_type< Def >::type > reference_type`

Public Member Functions

- `base` (`std::shared_ptr< Impl > data`)
- `base` ()=default
- `base` (`const base &other`)=default
- `base` (`base &&other`)=default
- `base & operator=` (`const base &`)=default
- `base & operator=` (`base &&`)=default
- `reference_type ref` () const
Returns the reference number of the definition.
- `bool is_valid` () const
Returns if the definition object is valid.
- `std::shared_ptr< Impl > get` () const
Returns the internal pointer.

Static Public Member Functions

- static `Def undefined` ()
Returns a reference to an undefined definition.

Protected Attributes

- `std::shared_ptr< Impl > data_`

9.32.1 Detailed Description

template<typename Def, typename Impl>class otf2::definition::detail::base< Def, Impl >

CRTP base class for definition references.

This class is used to implement some common methods, constructors and member for the definition record reference types.

This class is implemented using CRTP.

This class holds the shared_ptr and some common methods.

Template Parameters

| | |
|-------------|--|
| <i>Def</i> | type of definition record reference type |
| <i>Impl</i> | type of definiotn record implementation type |

9.32.2 Member Typedef Documentation

9.32.2.1 template<typename Def, typename Impl> typedef otf2::reference<typename otf2::traits<::reference_param_type<Def>::type> otf2::definition::detail::base< Def, Impl >::reference_type

9.32.3 Constructor & Destructor Documentation

9.32.3.1 template<typename Def, typename Impl> otf2::definition::detail::base< Def, Impl >::base (std::shared_ptr< Impl > *data*) [inline]

9.32.3.2 template<typename Def, typename Impl> otf2::definition::detail::base< Def, Impl >::base () [default]

9.32.3.3 template<typename Def, typename Impl> otf2::definition::detail::base< Def, Impl >::base (const base< Def, Impl > & *other*) [default]

9.32.3.4 template<typename Def, typename Impl> otf2::definition::detail::base< Def, Impl >::base (base< Def, Impl > && *other*) [default]

9.32.4 Member Function Documentation

9.32.4.1 template<typename Def, typename Impl> std::shared_ptr<Impl> otf2::definition::detail::base< Def, Impl >::get () const [inline]

Returns the internal pointer.

Warning

{ This method isn't part of the public interface of definition objects. You're disencouraged to rely on it. }

Returns

std::shared_ptr<Impl> to the referenced object

9.32.4.2 template<typename Def, typename Impl> bool otf2::definition::detail::base< Def, Impl >::is_valid () const [inline]

Returns if the definition object is valid.

Warning

{ If this returns false, it's not allowed to call any other functions on this object }

For now, a definition is valid, if the internal pointer isn't set to nullptr.

Returns

true or false

9.32.4.3 `template<typename Def, typename Impl> base& otf2::definition::detail::base< Def, Impl >::operator= (const base< Def, Impl > &) [default]`

9.32.4.4 `template<typename Def, typename Impl> base& otf2::definition::detail::base< Def, Impl >::operator= (base< Def, Impl > &&) [default]`

9.32.4.5 `template<typename Def, typename Impl> reference_type otf2::definition::detail::base< Def, Impl >::ref () const [inline]`

Returns the reference number of the definition.

This number is used by libotf2 to identify a definition record.

Returns

a reference number

9.32.4.6 `template<typename Def, typename Impl> static Def otf2::definition::detail::base< Def, Impl >::undefined () [inline], [static]`

Returns a reference to an undefined definition.

In most cases undefined means, that the [ref\(\)](#) of this definition is -1.

Returns

a definiton object

9.32.5 Member Data Documentation

9.32.5.1 `template<typename Def, typename Impl> std::shared_ptr<Impl> otf2::definition::detail::base< Def, Impl >::data_ [protected]`

The documentation for this class was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/base.hpp>

9.33 otf2::common::both< timing, property > Class Template Reference

```
#include <common.hpp>
```

Static Public Attributes

- static const int [value](#) = static_cast<int>(timing) | static_cast<int>(property)

9.33.1 Member Data Documentation

9.33.1.1 `template<metric_timing timing, metric_value_property property> const int otf2::common::both< timing, property >::value = static_cast<int>(timing) | static_cast<int>(property) [static]`

The documentation for this class was generated from the following file:

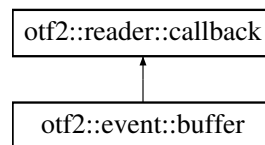
- [/home/tilsche/vc/haec-sim/include/otf2xx/common.hpp](#)

9.34 otf2::event::buffer Class Reference

This class isn't an event, but a buffer for events.

```
#include <buffer.hpp>
```

Inheritance diagram for otf2::event::buffer:



Public Member Functions

- [buffer](#) ([otf2::reader::callback](#) &callback)
- [~buffer](#) ()
- void [process_data](#) ()
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::buffer_flush](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::enter](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::leave](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::measurement](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::metric](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_send](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_receive](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_isend](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_isend_complete](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_ireceive](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_ireceive_request](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_request_test](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_request_cancelled](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_collective_begin](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_collective_end](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::parameter_string](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::parameter_int](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::parameter_unsigned_int](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::thread_fork](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::thread_join](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::thread_team_begin](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::thread_team_end](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::thread_acquire_lock](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::thread_release_lock](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::thread_task_create](#) &event) override
- virtual void [event](#) ([otf2::definition::location](#) loc, const [otf2::event::thread_task_switch](#) &event) override

- virtual void `event` (`otf2::definition::location` loc, const `otf2::event::thread_task_complete` &event) override
- template<typename Event >
void `add` (`otf2::definition::location` loc, const Event &event)
- void `add` (`otf2::definition::location` loc, const `otf2::event::mpi_ireceive_request` &event)
- void `add` (`otf2::definition::location` loc, const `otf2::event::mpi_ireceive` &event)
- virtual void `definition` (`otf2::definition::attribute` def) override
- virtual void `definition` (`otf2::definition::comm` def) override
- virtual void `definition` (`otf2::definition::locations_group` def) override
- virtual void `definition` (`otf2::definition::regions_group` def) override
- virtual void `definition` (`otf2::definition::comm_locations_group` def) override
- virtual void `definition` (`otf2::definition::comm_group` def) override
- virtual void `definition` (`otf2::definition::comm_self_group` def) override
- virtual void `definition` (`otf2::definition::location` def) override
- virtual void `definition` (`otf2::definition::location_group` def) override
- virtual void `definition` (`otf2::definition::parameter` def) override
- virtual void `definition` (`otf2::definition::region` def) override
- virtual void `definition` (`otf2::definition::string` def) override
- virtual void `definition` (`otf2::definition::system_tree_node` def) override
- virtual void `definition` (`otf2::definition::clock_properties` def) override
- virtual void `definition` (`otf2::definition::metric_member` def) override
- virtual void `definition` (`otf2::definition::metric_class` def) override
- virtual void `definition` (`otf2::definition::metric_instance` def) override
- virtual void `definition` (`otf2::definition::system_tree_node_property` def) override
- virtual void `definition` (`otf2::definition::location_group_property` def) override
- virtual void `definition` (`otf2::definition::location_property` def) override
- virtual void `definitions_done` (const `otf2::reader::reader` &rdr) override
definitions done callback
- virtual void `events_done` (const `otf2::reader::reader` &rdr) override
events done callback

9.34.1 Detailed Description

This class isn't an event, but a buffer for events.

It's used to add information to `mpi_isend` and `mpi_ireceive_request`

9.34.2 Constructor & Destructor Documentation

9.34.2.1 `otf2::event::buffer::buffer (otf2::reader::callback & callback)` [inline]

9.34.2.2 `otf2::event::buffer::~~buffer ()` [inline]

9.34.3 Member Function Documentation

9.34.3.1 `template<typename Event > void otf2::event::buffer::add (otf2::definition::location loc, const Event & event)`
[inline]

9.34.3.2 `void otf2::event::buffer::add (otf2::definition::location loc, const otf2::event::mpi_ireceive_request & event)` [inline]

9.34.3.3 `void otf2::event::buffer::add (otf2::definition::location loc, const otf2::event::mpi_ireceive & event)`
[inline]

9.34.3.4 `virtual void otf2::event::buffer::definition (otf2::definition::attribute def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.5 `virtual void otf2::event::buffer::definition (otf2::definition::comm def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.6 `virtual void otf2::event::buffer::definition (otf2::definition::locations_group def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.7 `virtual void otf2::event::buffer::definition (otf2::definition::regions_group def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.8 `virtual void otf2::event::buffer::definition (otf2::definition::comm_locations_group def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.9 `virtual void otf2::event::buffer::definition (otf2::definition::comm_group def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.10 `virtual void otf2::event::buffer::definition (otf2::definition::comm_self_group def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.11 `virtual void otf2::event::buffer::definition (otf2::definition::location def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.12 `virtual void otf2::event::buffer::definition (otf2::definition::location_group def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.13 `virtual void otf2::event::buffer::definition (otf2::definition::parameter def) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.14 `virtual void otf2::event::buffer::definition (otf2::definition::region def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.15 `virtual void otf2::event::buffer::definition (otf2::definition::string def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.16 `virtual void otf2::event::buffer::definition (otf2::definition::system_tree_node def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.17 `virtual void otf2::event::buffer::definition (otf2::definition::clock_properties def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.18 `virtual void otf2::event::buffer::definition (otf2::definition::metric_member def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.19 `virtual void otf2::event::buffer::definition (otf2::definition::metric_class def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.20 `virtual void otf2::event::buffer::definition (otf2::definition::metric_instance def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.21 `virtual void otf2::event::buffer::definition (otf2::definition::system_tree_node_property def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.22 `virtual void otf2::event::buffer::definition (otf2::definition::location_group_property def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.23 `virtual void otf2::event::buffer::definition (otf2::definition::location_property def) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.24 `virtual void otf2::event::buffer::definitions_done (const otf2::reader::reader &) [inline], [override], [virtual]`

definitions done callback

This callback gets called after the `otf2::reader::reader` has finished reading all definition records

Reimplemented from [otf2::reader::callback](#).

9.34.3.25 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::buffer_flush & event) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.26 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::enter & event) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.27 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::leave & event) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.28 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::measurement & event) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.29 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::metric & event) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.30 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_send & event) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.31 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_receive & event) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.32 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_isend & event) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.33 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_isend_complete & event) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.34 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_ireceive & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.35 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_ireceive_request & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.36 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_request_test & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.37 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_request_cancelled & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.38 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_collective_begin & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.39 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::mpi_collective_end & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.40 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::parameter_string & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.41 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::parameter_int & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.42 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::parameter_unsigned_int & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.43 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::thread_fork & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.44 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::thread_join & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.45 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::thread_team_begin & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.46 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::thread_team_end & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.47 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::thread_acquire_lock & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.48 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::thread_release_lock & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.49 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::thread_task_create & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.50 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::thread_task_switch & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.51 `virtual void otf2::event::buffer::event (otf2::definition::location loc, const otf2::event::thread_task_complete & event) [inline],[override],[virtual]`

Reimplemented from [otf2::reader::callback](#).

9.34.3.52 `virtual void otf2::event::buffer::events_done (const otf2::reader::reader &) [inline],[override],[virtual]`

events done callback

This callback gets called after the `otf2::reader::reader` finished reading all events and definitions in the trace file.

Reimplemented from [otf2::reader::callback](#).

9.34.3.53 `void otf2::event::buffer::process_data () [inline]`

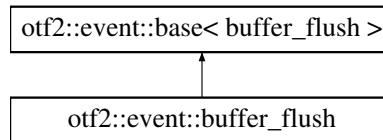
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/buffer.hpp](#)

9.35 otf2::event::buffer_flush Class Reference

```
#include <buffer_flush.hpp>
```

Inheritance diagram for otf2::event::buffer_flush:



Public Member Functions

- [buffer_flush](#) (otf2::chrono::time_point timestamp, otf2::chrono::time_point finish)
- [buffer_flush](#) (const buffer_flush &other, chrono::time_point new_timestamp)
- [otf2::chrono::time_point finish](#) () const

9.35.1 Constructor & Destructor Documentation

9.35.1.1 [otf2::event::buffer_flush::buffer_flush](#) (otf2::chrono::time_point *timestamp*, otf2::chrono::time_point *finish*) [inline]

9.35.1.2 [otf2::event::buffer_flush::buffer_flush](#) (const buffer_flush & *other*, chrono::time_point *new_timestamp*) [inline]

9.35.2 Member Function Documentation

9.35.2.1 [otf2::chrono::time_point otf2::event::buffer_flush::finish](#) () const [inline]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/buffer_flush.hpp](#)

9.36 otf2::event::detail::buffer_node Struct Reference

```
#include <buffer.hpp>
```

Public Member Functions

- [buffer_node](#) (const buffer_node &)=delete
- [buffer_node & operator=](#) (const buffer_node &)=delete
- [buffer_node](#) (otf2::definition::location loc, otf2::common::event_type type, void *event, bool completed=true)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::buffer_flush &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::enter &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::leave &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::measurement &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::metric &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_collective_begin &event)

- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_collective_end &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_ireceive &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_ireceive_request &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_isend &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_isend_complete &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_receive &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_request_cancelled &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_request_test &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::mpi_send &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::parameter_int &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::parameter_string &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::parameter_unsigned_int &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::thread_acquire_lock &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::thread_fork &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::thread_join &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::thread_release_lock &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::thread_task_complete &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::thread_task_create &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::thread_task_switch &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::thread_team_begin &event)
- [buffer_node](#) (otf2::definition::location loc, const otf2::event::thread_team_end &event)
- [~buffer_node](#) ()

Public Attributes

- [otf2::definition::location](#) location
- [otf2::common::event_type](#) type
- void * [event](#)
- bool [completed](#)

9.36.1 Constructor & Destructor Documentation

- 9.36.1.1 [otf2::event::detail::buffer_node::buffer_node](#) (const [buffer_node](#) &) [delete]
- 9.36.1.2 [otf2::event::detail::buffer_node::buffer_node](#) ([otf2::definition::location](#) loc, [otf2::common::event_type](#) type, void * *event*, bool *completed* = true) [inline]
- 9.36.1.3 [otf2::event::detail::buffer_node::buffer_node](#) ([otf2::definition::location](#) loc, const [otf2::event::buffer_flush](#) & *event*) [inline]
- 9.36.1.4 [otf2::event::detail::buffer_node::buffer_node](#) ([otf2::definition::location](#) loc, const [otf2::event::enter](#) & *event*) [inline]
- 9.36.1.5 [otf2::event::detail::buffer_node::buffer_node](#) ([otf2::definition::location](#) loc, const [otf2::event::leave](#) & *event*) [inline]
- 9.36.1.6 [otf2::event::detail::buffer_node::buffer_node](#) ([otf2::definition::location](#) loc, const [otf2::event::measurement](#) & *event*) [inline]
- 9.36.1.7 [otf2::event::detail::buffer_node::buffer_node](#) ([otf2::definition::location](#) loc, const [otf2::event::metric](#) & *event*) [inline]
- 9.36.1.8 [otf2::event::detail::buffer_node::buffer_node](#) ([otf2::definition::location](#) loc, const [otf2::event::mpi_collective_begin](#) & *event*) [inline]

- 9.36.1.9 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::mpi_collective_end & event) [inline]`
- 9.36.1.10 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::mpi_ireceive & event) [inline]`
- 9.36.1.11 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::mpi_ireceive_request & event) [inline]`
- 9.36.1.12 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::mpi_isend & event) [inline]`
- 9.36.1.13 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::mpi_isend_complete & event) [inline]`
- 9.36.1.14 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::mpi_receive & event) [inline]`
- 9.36.1.15 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::mpi_request_cancelled & event) [inline]`
- 9.36.1.16 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::mpi_request_test & event) [inline]`
- 9.36.1.17 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::mpi_send & event) [inline]`
- 9.36.1.18 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::parameter_int & event) [inline]`
- 9.36.1.19 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::parameter_string & event) [inline]`
- 9.36.1.20 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::parameter_unsigned_int & event) [inline]`
- 9.36.1.21 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::thread_acquire_lock & event) [inline]`
- 9.36.1.22 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::thread_fork & event) [inline]`
- 9.36.1.23 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::thread_join & event) [inline]`
- 9.36.1.24 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::thread_release_lock & event) [inline]`
- 9.36.1.25 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::thread_task_complete & event) [inline]`
- 9.36.1.26 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::thread_task_create & event) [inline]`
- 9.36.1.27 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::thread_task_switch & event) [inline]`

9.36.1.28 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::thread_team_begin & event)` [inline]

9.36.1.29 `otf2::event::detail::buffer_node::buffer_node (otf2::definition::location loc, const otf2::event::thread_team_end & event)` [inline]

9.36.1.30 `otf2::event::detail::buffer_node::~~buffer_node ()` [inline]

9.36.2 Member Function Documentation

9.36.2.1 `buffer_node& otf2::event::detail::buffer_node::operator= (const buffer_node &)` [delete]

9.36.3 Member Data Documentation

9.36.3.1 `bool otf2::event::detail::buffer_node::completed`

9.36.3.2 `void* otf2::event::detail::buffer_node::event`

9.36.3.3 `otf2::definition::location otf2::event::detail::buffer_node::location`

9.36.3.4 `otf2::common::event_type otf2::event::detail::buffer_node::type`

The documentation for this struct was generated from the following file:

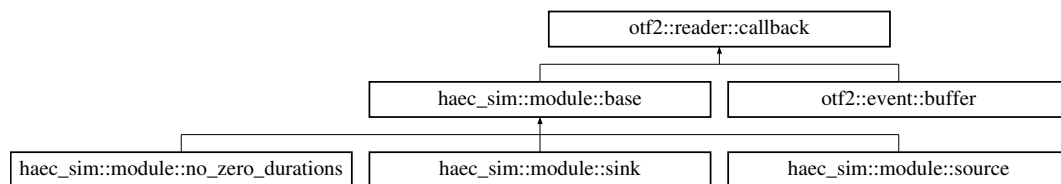
- </home/tilsche/vc/haec-sim/include/otf2xx/event/buffer.hpp>

9.37 otf2::reader::callback Class Reference

base class for [otf2](#) reader callbacks.

```
#include <callback.hpp>
```

Inheritance diagram for `otf2::reader::callback`:



Public Member Functions

- virtual void `event (otf2::definition::location, const otf2::event::buffer_flush &)`
- virtual void `event (otf2::definition::location, const otf2::event::enter &)`
- virtual void `event (otf2::definition::location, const otf2::event::leave &)`
- virtual void `event (otf2::definition::location, const otf2::event::measurement &)`
- virtual void `event (otf2::definition::location, const otf2::event::metric &)`
- virtual void `event (otf2::definition::location, const otf2::event::mpi_send &)`
- virtual void `event (otf2::definition::location, const otf2::event::mpi_receive &)`
- virtual void `event (otf2::definition::location, const otf2::event::mpi_isend_request &)`
- virtual void `event (otf2::definition::location, const otf2::event::mpi_isend_complete &)`
- virtual void `event (otf2::definition::location, const otf2::event::mpi_ireceive_complete &)`
- virtual void `event (otf2::definition::location, const otf2::event::mpi_ireceive_request &)`

- virtual void `event` (`otf2::definition::location`, const `otf2::event::mpi_request_test` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::mpi_request_cancelled` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::mpi_collective_begin` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::mpi_collective_end` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::parameter_string` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::parameter_int` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::parameter_unsigned_int` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::thread_fork` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::thread_join` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::thread_team_begin` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::thread_team_end` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::thread_acquire_lock` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::thread_release_lock` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::thread_task_create` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::thread_task_switch` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::thread_task_complete` &)
- virtual void `event` (`otf2::definition::location`, const `otf2::event::unknown` &)
- virtual void `definition` (`otf2::definition::attribute`)
- virtual void `definition` (`otf2::definition::comm`)
- virtual void `definition` (`otf2::definition::locations_group`)
- virtual void `definition` (`otf2::definition::regions_group`)
- virtual void `definition` (`otf2::definition::comm_locations_group`)
- virtual void `definition` (`otf2::definition::comm_group`)
- virtual void `definition` (`otf2::definition::comm_self_group`)
- virtual void `definition` (`otf2::definition::location`)
- virtual void `definition` (`otf2::definition::location_group`)
- virtual void `definition` (`otf2::definition::parameter`)
- virtual void `definition` (`otf2::definition::region`)
- virtual void `definition` (`otf2::definition::string`)
- virtual void `definition` (`otf2::definition::system_tree_node`)
- virtual void `definition` (`otf2::definition::clock_properties`)
- virtual void `definition` (`otf2::definition::metric_class`)
- virtual void `definition` (`otf2::definition::metric_member`)
- virtual void `definition` (`otf2::definition::metric_instance`)
- virtual void `definition` (`otf2::definition::location_property`)
- virtual void `definition` (`otf2::definition::location_group_property`)
- virtual void `definition` (`otf2::definition::system_tree_node_property`)
- virtual void `definition` (`otf2::definition::unknown`)
- virtual void `definitions_done` (const `otf2::reader::reader` &)
definitions done callback
- virtual void `events_done` (const `otf2::reader::reader` &)
events done callback
- virtual `~callback` ()=0

9.37.1 Detailed Description

base class for `otf2` reader callbacks.

Inherit from this class, but be careful! If you override one function, all other member functions names will be hidden by your override.

Fix this be inserting the following two lines in your class:

```
using otf2::reader::callback::event; using otf2::reader::callback::definition;
```

Make sure to adopt to your base class if your class inherit indirectly from this class.

Tip: Add the keyword `override` to your methodes you intent to override. This will prevent you from accidentally defining a methode with a different signature.

9.37.2 Constructor & Destructor Documentation

9.37.2.1 `otf2::reader::callback::~~callback ()` `[inline]`, `[pure virtual]`

9.37.3 Member Function Documentation

9.37.3.1 `virtual void otf2::reader::callback::definition (otf2::definition::attribute)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.2 `virtual void otf2::reader::callback::definition (otf2::definition::comm)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.3 `virtual void otf2::reader::callback::definition (otf2::definition::locations_group)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.4 `virtual void otf2::reader::callback::definition (otf2::definition::regions_group)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [haec_sim::module::sink](#), [otf2::event::buffer](#), [otf2::event::buffer](#), [haec_sim::module::base](#), and [haec_sim::module::base](#).

9.37.3.5 `virtual void otf2::reader::callback::definition (otf2::definition::comm_locations_group)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [haec_sim::module::sink](#), [otf2::event::buffer](#), [otf2::event::buffer](#), [haec_sim::module::base](#), and [haec_sim::module::base](#).

9.37.3.6 `virtual void otf2::reader::callback::definition (otf2::definition::comm_group)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.7 `virtual void otf2::reader::callback::definition (otf2::definition::comm_self_group)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.8 `virtual void otf2::reader::callback::definition (otf2::definition::location)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), [haec_sim::module::base](#), and [haec_sim::module::source](#).

9.37.3.9 `virtual void otf2::reader::callback::definition (otf2::definition::location_group)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.10 `virtual void otf2::reader::callback::definition (otf2::definition::parameter)` `[inline]`, `[virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.11 `virtual void otf2::reader::callback::definition (otf2::definition::region) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.12 `virtual void otf2::reader::callback::definition (otf2::definition::string) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.13 `virtual void otf2::reader::callback::definition (otf2::definition::system_tree_node) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.14 `virtual void otf2::reader::callback::definition (otf2::definition::clock_properties) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.15 `virtual void otf2::reader::callback::definition (otf2::definition::metric_class) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.16 `virtual void otf2::reader::callback::definition (otf2::definition::metric_member) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.17 `virtual void otf2::reader::callback::definition (otf2::definition::metric_instance) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.18 `virtual void otf2::reader::callback::definition (otf2::definition::location_property) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.19 `virtual void otf2::reader::callback::definition (otf2::definition::location_group_property) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.20 `virtual void otf2::reader::callback::definition (otf2::definition::system_tree_node_property) [inline], [virtual]`

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.21 `virtual void otf2::reader::callback::definition (otf2::definition::unknown) [inline], [virtual]`

Reimplemented in [haec_sim::module::source](#).

9.37.3.22 `virtual void otf2::reader::callback::definitions_done (const otf2::reader::reader &) [inline], [virtual]`

definitions done callback

This callback gets called after the `otf2::reader::reader` has finished reading all definition records

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::source](#).

9.37.3.23 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::buffer_flush &) [inline], [virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::base](#), and [haec_sim::module::sink](#).

9.37.3.24 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::enter &) [inline], [virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::base](#), [haec_sim::module::sink](#), and [haec_sim::module::no_zero_durations](#).

9.37.3.25 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::leave &) [inline], [virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::base](#), [haec_sim::module::sink](#), and [haec_sim::module::no_zero_durations](#).

9.37.3.26 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::measurement &) [inline], [virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::base](#), and [haec_sim::module::sink](#).

9.37.3.27 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::metric &) [inline], [virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.28 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_send &) [inline], [virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.29 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_receive &) [inline], [virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.30 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_isend_request &) [inline], [virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.31 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_isend_complete &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.32 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_ireceive_complete &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.33 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_ireceive_request &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.34 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_request_test &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.35 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_request_cancelled &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.36 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_collective_begin &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.37 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::mpi_collective_end &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.38 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::parameter_string &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.39 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::parameter_int &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.40 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::parameter_unsigned_int &) [inline],[virtual]`

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.41 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::thread_fork &)`
[inline],[virtual]

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.42 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::thread_join &)`
[inline],[virtual]

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.43 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::thread_team_begin &)` [inline],[virtual]

Reimplemented in [otf2::event::buffer](#), [haec_sim::module::sink](#), and [haec_sim::module::base](#).

9.37.3.44 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::thread_team_end &)` [inline],[virtual]

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.45 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::thread_acquire_lock &)` [inline],[virtual]

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.46 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::thread_release_lock &)` [inline],[virtual]

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.47 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::thread_task_create &)` [inline],[virtual]

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.48 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::thread_task_switch &)` [inline],[virtual]

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.49 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::thread_task_complete &)` [inline],[virtual]

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

9.37.3.50 `virtual void otf2::reader::callback::event (otf2::definition::location , const otf2::event::unknown &)`
[inline],[virtual]

Reimplemented in [haec_sim::module::source](#).

9.37.3.51 `virtual void otf2::reader::callback::events_done (const otf2::reader::reader &) [inline],[virtual]`

events done callback

This callback gets called after the `otf2::reader::reader` finished reading all events and definitions in the trace file.

Reimplemented in [haec_sim::module::sink](#), [otf2::event::buffer](#), and [haec_sim::module::base](#).

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/reader/callback.hpp](#)

9.38 otf2::chrono::clock Struct Reference

simulated clock

```
#include <clock.hpp>
```

Public Types

- typedef [otf2::chrono::duration](#) `duration`
typedef for durations of the clock
- typedef `duration::rep` `rep`
- typedef `duration::period` `period`
- typedef `std::chrono::time_point< clock >` `time_point`
typedef for time points of the clock

Static Public Attributes

- static const bool `is_steady` = true
This clock is steady.

9.38.1 Detailed Description

simulated clock

This clock is only for time points used in the simulator. It has by intent no `now()` method.

9.38.2 Member Typedef Documentation

9.38.2.1 `typedef otf2::chrono::duration otf2::chrono::clock::duration`

typedef for durations of the clock

See also

[otf2::chrono::duration](#)

9.38.2.2 `typedef duration::period otf2::chrono::clock::period`

9.38.2.3 `typedef duration::rep otf2::chrono::clock::rep`

9.38.2.4 `typedef std::chrono::time_point<clock> otf2::chrono::clock::time_point`

typedef for time points of the clock

See also

[otf2::chrono::time_point](#)

9.38.3 Member Data Documentation

9.38.3.1 `const bool otf2::chrono::clock::is_steady = true` `[static]`

This clock is steady.

The documentation for this struct was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/chrono/clock.hpp`

9.39 otf2::definition::clock_properties Class Reference

class for representing a clock properties definition

```
#include <clock_properties.hpp>
```

Public Member Functions

- `clock_properties` (`otf2::chrono::ticks ticks_per_second`, `otf2::chrono::ticks start_time`, `otf2::chrono::ticks length`)
- `clock_properties` ()
- `otf2::chrono::ticks ticks_per_second` () const
returns the number of ticks per second
- `otf2::chrono::ticks start_time` () const
returns the global start offset
- `otf2::chrono::ticks length` () const
returns the length of the trace file

9.39.1 Detailed Description

class for representing a clock properties definition

9.39.2 Constructor & Destructor Documentation

9.39.2.1 `otf2::definition::clock_properties::clock_properties (otf2::chrono::ticks ticks_per_second, otf2::chrono::ticks start_time, otf2::chrono::ticks length)` `[inline]`

9.39.2.2 `otf2::definition::clock_properties::clock_properties ()` `[inline]`

9.39.3 Member Function Documentation

9.39.3.1 `otf2::chrono::ticks otf2::definition::clock_properties::length ()` const `[inline]`

returns the length of the trace file

This is the number of ticks between the first and the last timestamp found in the trace.

Returns

length of the trace

9.39.3.2 `otf2::chrono::ticks` `otf2::definition::clock_properties::start_time () const` `[inline]`

returns the global start offset

This is the number of ticks since the epoch for the first timestamp which is found in the trace

Returns

global offset

9.39.3.3 `otf2::chrono::ticks` `otf2::definition::clock_properties::ticks_per_second () const` `[inline]`

returns the number of ticks per second

Returns

ticks per second

The documentation for this class was generated from the following file:

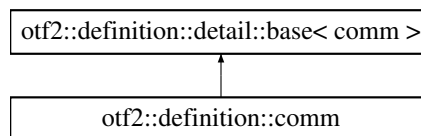
- /home/tilsche/vc/haec-sim/include/otf2xx/definition/clock_properties.hpp

9.40 `otf2::definition::comm` Class Reference

class for representing a comm definition

```
#include <comm.hpp>
```

Inheritance diagram for `otf2::definition::comm`:



Public Member Functions

- `comm (reference< comm > ref, otf2::definition::string name, otf2::definition::comm_group group, otf2::definition::comm parent)`
- `comm (reference< comm > ref, otf2::definition::string name, otf2::definition::comm_group group)`
- `comm (reference< comm > ref, otf2::definition::string name, otf2::definition::comm_self_group group, comm parent)`
- `comm (reference< comm > ref, otf2::definition::string name, otf2::definition::comm_self_group group)`
- `comm ()=default`
- `otf2::definition::string name () const`
returns the name of the comm definion as a string definition
- `otf2::definition::comm_group group () const`
returns the comm group of this comm
- `otf2::definition::comm_self_group self_group () const`
returns the comm self group of this comm
- `bool has_self_group () const`
returns if there is a comm self group If return is true, then it has got a comm self group Otherwise it has got a comm group

- bool `has_parent` () const
returns the comm has got a parent
- `otf2::definition::comm parent` () const
returns the parent of this comm

Additional Inherited Members

9.40.1 Detailed Description

class for representing a comm definition

9.40.2 Constructor & Destructor Documentation

9.40.2.1 `otf2::definition::comm::comm (reference< comm > ref, otf2::definition::string name, otf2::definition::comm_group group, otf2::definition::comm parent)` [inline]

9.40.2.2 `otf2::definition::comm::comm (reference< comm > ref, otf2::definition::string name, otf2::definition::comm_group group)` [inline]

9.40.2.3 `otf2::definition::comm::comm (reference< comm > ref, otf2::definition::string name, otf2::definition::comm_self_group group, comm parent)` [inline]

9.40.2.4 `otf2::definition::comm::comm (reference< comm > ref, otf2::definition::string name, otf2::definition::comm_self_group group)` [inline]

9.40.2.5 `otf2::definition::comm::comm ()` [default]

9.40.3 Member Function Documentation

9.40.3.1 `otf2::definition::comm_group otf2::definition::comm::group () const` [inline]

returns the comm group of this comm

Returns

a comm group

Attention

before call, check that there is a comm group

Exceptions

| | |
|-----------------------------|--------------------------|
| <code>otf::exception</code> | if thee is no comm group |
|-----------------------------|--------------------------|

9.40.3.2 `bool otf2::definition::comm::has_parent () const` [inline]

returns the comm has got a parent

Returns

bool

9.40.3.3 `bool otf2::definition::comm::has_self_group () const [inline]`

returns if there is a comm self group If return is true, then it has got a comm self group Otherwise it has got a comm group

Returns

bool

9.40.3.4 `otf2::definition::string otf2::definition::comm::name () const [inline]`

returns the name of the comm definion as a string definition

Returns

a string definiton containing the name

9.40.3.5 `otf2::definition::comm otf2::definition::comm::parent () const [inline]`

returns the parent of this comm

Returns

returns a `otf2::definition::comm`, which might not be valid, if the comm hasn't got a parent!

9.40.3.6 `otf2::definition::comm_self_group otf2::definition::comm::self_group () const [inline]`

returns the comm self group of this comm

Returns

a comm self group

Attention

before call, check that there is a comm self group

Exceptions

| | |
|-----------------------------|-------------------------------|
| <code>otf::exception</code> | if thee is no comm self group |
|-----------------------------|-------------------------------|

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/comm.hpp](#)

9.41 `otf2::definition::detail::comm_impl` Class Reference

```
#include <comm_impl.hpp>
```


Public Member Functions

- [comm_impl](#) ([reference](#)< [comm](#) > [ref](#), [string](#) [name](#), [otf2::definition::comm_group](#) [group](#), [std::shared_ptr](#)< [comm_impl](#) > [parent](#))
- [comm_impl](#) ([reference](#)< [comm](#) > [ref](#), [string](#) [name](#), [otf2::definition::comm_group](#) [group](#))
- [comm_impl](#) ([reference](#)< [comm](#) > [ref](#), [string](#) [name](#), [otf2::definition::comm_self_group](#) [group](#), [std::shared_ptr](#)< [comm_impl](#) > [parent](#))
- [comm_impl](#) ([reference](#)< [comm](#) > [ref](#), [string](#) [name](#), [otf2::definition::comm_self_group](#) [group](#))
- [comm_impl](#) (const [comm_impl](#) &)=delete
- [comm_impl](#) & [operator=](#) (const [comm_impl](#) &)=delete
- [comm_impl](#) ([comm_impl](#) &&)=default
- [comm_impl](#) & [operator=](#) ([comm_impl](#) &&)=default
- [reference](#)< [comm](#) > [ref](#) () const
- [string](#) [name](#) () const
- [otf2::definition::comm_group](#) [group](#) () const
- [otf2::definition::comm_self_group](#) [self_group](#) () const
- bool [has_self_group](#) () const
- bool [has_parent](#) () const
- [std::shared_ptr](#)< [comm_impl](#) > [parent](#) () const

Static Public Member Functions

- static [std::shared_ptr](#)< [comm_impl](#) > [undefined](#) ()

9.41.1 Constructor & Destructor Documentation

- 9.41.1.1 [otf2::definition::detail::comm_impl::comm_impl](#) ([reference](#)< [comm](#) > [ref](#), [string](#) [name](#), [otf2::definition::comm_group](#) [group](#), [std::shared_ptr](#)< [comm_impl](#) > [parent](#)) [[inline](#)]
- 9.41.1.2 [otf2::definition::detail::comm_impl::comm_impl](#) ([reference](#)< [comm](#) > [ref](#), [string](#) [name](#), [otf2::definition::comm_group](#) [group](#)) [[inline](#)]
- 9.41.1.3 [otf2::definition::detail::comm_impl::comm_impl](#) ([reference](#)< [comm](#) > [ref](#), [string](#) [name](#), [otf2::definition::comm_self_group](#) [group](#), [std::shared_ptr](#)< [comm_impl](#) > [parent](#)) [[inline](#)]
- 9.41.1.4 [otf2::definition::detail::comm_impl::comm_impl](#) ([reference](#)< [comm](#) > [ref](#), [string](#) [name](#), [otf2::definition::comm_self_group](#) [group](#)) [[inline](#)]
- 9.41.1.5 [otf2::definition::detail::comm_impl::comm_impl](#) (const [comm_impl](#) &) [[delete](#)]
- 9.41.1.6 [otf2::definition::detail::comm_impl::comm_impl](#) ([comm_impl](#) &&) [[default](#)]

9.41.2 Member Function Documentation

- 9.41.2.1 [otf2::definition::comm_group](#) [otf2::definition::detail::comm_impl::group](#) () const [[inline](#)]
- 9.41.2.2 bool [otf2::definition::detail::comm_impl::has_parent](#) () const [[inline](#)]
- 9.41.2.3 bool [otf2::definition::detail::comm_impl::has_self_group](#) () const [[inline](#)]
- 9.41.2.4 [string](#) [otf2::definition::detail::comm_impl::name](#) () const [[inline](#)]
- 9.41.2.5 [comm_impl](#)& [otf2::definition::detail::comm_impl::operator=](#) (const [comm_impl](#) &) [[delete](#)]

- 9.41.2.6 `comm_impl& otf2::definition::detail::comm_impl::operator= (comm_impl &&)` [default]
- 9.41.2.7 `std::shared_ptr<comm_impl> otf2::definition::detail::comm_impl::parent ()` const [inline]
- 9.41.2.8 `reference<comm> otf2::definition::detail::comm_impl::ref ()` const [inline]
- 9.41.2.9 `otf2::definition::comm_self_group otf2::definition::detail::comm_impl::self_group ()` const [inline]
- 9.41.2.10 `static std::shared_ptr<comm_impl> otf2::definition::detail::comm_impl::undefined ()` [inline], [static]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/comm_impl.hpp](#)

9.42 `otf2::definition::comp< Definition >` Struct Template Reference

```
#include <compare.hpp>
```

Public Types

- typedef Definition [first_argument_type](#)
- typedef Definition [second_argument_type](#)
- typedef bool [result_type](#)

Public Member Functions

- bool [operator\(\)](#) (const Definition &x, const Definition &y) const

9.42.1 Member Typedef Documentation

9.42.1.1 `template<typename Definition > typedef Definition otf2::definition::comp< Definition >::first_argument_type`

9.42.1.2 `template<typename Definition > typedef bool otf2::definition::comp< Definition >::result_type`

9.42.1.3 `template<typename Definition > typedef Definition otf2::definition::comp< Definition >::second_argument_type`

9.42.2 Member Function Documentation

9.42.2.1 `template<typename Definition > bool otf2::definition::comp< Definition >::operator() (const Definition & x, const Definition & y)` const [inline]

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/compare.hpp](#)

9.43 `haec_sim::config::config` Class Reference

```
#include <config.hpp>
```

Public Member Functions

- `config operator[]` (std::string key) const
- `config operator[]` (unsigned int key) const
- `Json::Value::const_iterator begin` () const
- `Json::Value::const_iterator end` () const
- `template<typename T >`
`T as` () const

Static Public Member Functions

- static `config read_config` (std::vector< std::string > overrides_vector)
- static const std::map< std::string, Json::Value > & `overrides` ()

9.43.1 Member Function Documentation

9.43.1.1 `template<typename T > T haec_sim::config::config::as` () const [inline]

9.43.1.2 `Json::Value::const_iterator haec_sim::config::config::begin` () const [inline]

9.43.1.3 `Json::Value::const_iterator haec_sim::config::config::end` () const [inline]

9.43.1.4 `config haec_sim::config::config::operator[]` (std::string key) const [inline]

9.43.1.5 `config haec_sim::config::config::operator[]` (unsigned int key) const [inline]

9.43.1.6 `static const std::map<std::string, Json::Value>& haec_sim::config::config::overrides` () [inline],
[static]

9.43.1.7 `static config haec_sim::config::config::read_config` (std::vector< std::string > overrides_vector) [inline],
[static]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp

9.44 `otf2::definition::container` < Definition > Class Template Reference

```
#include <container.hpp>
```

Public Types

- typedef Definition `value_type`

Public Member Functions

- `container` (const self &)=default
- `self & operator=` (const self &)=default
- `container` ()=default
- `container` (self &&)=default
- `self & operator=` (self &&)=default
- `value_type operator[]` (key_type key)

- void [add_definition](#) (Definition def)
- std::size_t [count](#) (key_type key) const
- std::size_t [size](#) () const
- iterator [begin](#) () const
- iterator [end](#) () const

9.44.1 Member Typedef Documentation

9.44.1.1 `template<typename Definition> typedef Definition otf2::definition::container< Definition >::value_type`

9.44.2 Constructor & Destructor Documentation

9.44.2.1 `template<typename Definition> otf2::definition::container< Definition >::container (const self &)`
[default]

9.44.2.2 `template<typename Definition> otf2::definition::container< Definition >::container ()` [default]

9.44.2.3 `template<typename Definition> otf2::definition::container< Definition >::container (self &&)`
[default]

9.44.3 Member Function Documentation

9.44.3.1 `template<typename Definition> void otf2::definition::container< Definition >::add_definition (Definition def)`
[inline]

9.44.3.2 `template<typename Definition> iterator otf2::definition::container< Definition >::begin () const`
[inline]

9.44.3.3 `template<typename Definition> std::size_t otf2::definition::container< Definition >::count (key_type key)`
const [inline]

9.44.3.4 `template<typename Definition> iterator otf2::definition::container< Definition >::end () const` [inline]

9.44.3.5 `template<typename Definition> self& otf2::definition::container< Definition >::operator= (const self &)`
[default]

9.44.3.6 `template<typename Definition> self& otf2::definition::container< Definition >::operator= (self &&)`
[default]

9.44.3.7 `template<typename Definition> value_type otf2::definition::container< Definition >::operator[] (key_type key)` [inline]

9.44.3.8 `template<typename Definition> std::size_t otf2::definition::container< Definition >::size () const`
[inline]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/container.hpp](#)

9.45 otf2::definition::container< otf2::definition::property< Definition > > Class Template Reference

```
#include <container.hpp>
```

Public Types

- typedef `otf2::definition::property< Definition > value_type`

Public Member Functions

- `container` (const `self` &)=default
- `self & operator=` (const `self` &)=default
- `container` ()=default
- `container` (`self` &&)=default
- `self & operator=` (`self` &&)=default
- `value_type operator[]` (`key_type` `key`)
- void `add_definition` (`otf2::definition::property< Definition > def`)
- `std::size_t count` (`key_type` `key`) const
- `std::size_t size` () const
- iterator `begin` () const
- iterator `end` () const

9.45.1 Detailed Description

`template<typename Definition>class otf2::definition::container< otf2::definition::property< Definition > >`

Specialization for property definition, as they don't have a reference

9.45.2 Member Typedef Documentation

9.45.2.1 `template<typename Definition > typedef otf2::definition::property<Definition> otf2::definition::container< otf2::definition::property< Definition > >::value_type`

9.45.3 Constructor & Destructor Documentation

9.45.3.1 `template<typename Definition > otf2::definition::container< otf2::definition::property< Definition > >::container (const self &) [default]`

9.45.3.2 `template<typename Definition > otf2::definition::container< otf2::definition::property< Definition > >::container () [default]`

9.45.3.3 `template<typename Definition > otf2::definition::container< otf2::definition::property< Definition > >::container (self &&) [default]`

9.45.4 Member Function Documentation

9.45.4.1 `template<typename Definition > void otf2::definition::container< otf2::definition::property< Definition > >::add_definition (otf2::definition::property< Definition > def) [inline]`

9.45.4.2 `template<typename Definition > iterator otf2::definition::container< otf2::definition::property< Definition > >::begin () const [inline]`

9.45.4.3 `template<typename Definition > std::size_t otf2::definition::container< otf2::definition::property< Definition > >::count (key_type key) const [inline]`

9.45.4.4 `template<typename Definition > iterator otf2::definition::container< otf2::definition::property< Definition > >::end () const [inline]`

- 9.45.4.5 `template<typename Definition > self& otf2::definition::container< otf2::definition::property< Definition > >::operator=(const self &) [default]`
- 9.45.4.6 `template<typename Definition > self& otf2::definition::container< otf2::definition::property< Definition > >::operator=(self &&) [default]`
- 9.45.4.7 `template<typename Definition > value_type otf2::definition::container< otf2::definition::property< Definition > >::operator[](key_type key) [inline]`
- 9.45.4.8 `template<typename Definition > std::size_t otf2::definition::container< otf2::definition::property< Definition > >::size () const [inline]`

The documentation for this class was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/definition/container.hpp>

9.46 otf2::chrono::convert Class Reference

class to convert between ticks and time points

```
#include <convert.hpp>
```

Public Member Functions

- [convert](#) (uint64_t ticks_per_second)
- [convert](#) (otf2::chrono::ticks ticks)
- [otf2::chrono::time_point operator\(\)](#) (otf2::chrono::ticks ticks) const
converts from ticks to time point
- [otf2::chrono::ticks operator\(\)](#) (time_point t) const
converts from time points to ticks

9.46.1 Detailed Description

class to convert between ticks and time points

This class can convert between ticks and time points. For this, it needs the number of ticks per second.

Note

The time epoch is assumed to be equal between the time point and time point represented with the number ticks given.

9.46.2 Constructor & Destructor Documentation

- 9.46.2.1 `otf2::chrono::convert::convert (uint64_t ticks_per_second) [inline]`

Parameters

| | | |
|----|-------------------------------|----------------------------|
| in | <i>ticks_per_↔ second</i> | Number of ticks per second |
|----|-------------------------------|----------------------------|

- 9.46.2.2 `otf2::chrono::convert::convert (otf2::chrono::ticks ticks) [inline]`

Parameters

| | | |
|-----------|--------------|----------------------------|
| <i>in</i> | <i>ticks</i> | Number of ticks per second |
|-----------|--------------|----------------------------|

9.46.3 Member Function Documentation

9.46.3.1 `otf2::chrono::time_point otf2::chrono::convert::operator() (otf2::chrono::ticks ticks) const` `[inline]`

converts from ticks to time point

Parameters

| | | |
|-----------|--------------|-------------------|
| <i>in</i> | <i>ticks</i> | ticks since epoch |
|-----------|--------------|-------------------|

Returns

`time_point` with a duration equal to the passed time since the epoch.

9.46.3.2 `otf2::chrono::ticks otf2::chrono::convert::operator() (time_point t) const` `[inline]`

converts from time points to ticks

Parameters

| | | |
|-----------|----------|--------------|
| <i>in</i> | <i>t</i> | a time point |
|-----------|----------|--------------|

Returns

number ticks equal to passed time of the duration of the time point

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/chrono/convert.hpp](#)

9.47 haec_sim::config::detail::convert_helper< T > Class Template Reference

```
#include <config.hpp>
```

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp](#)

9.48 haec_sim::config::detail::convert_helper< bool > Class Template Reference

```
#include <config.hpp>
```

Public Member Functions

- `convert_helper` (Json::Value value)
- `bool operator() () const`

9.48.1 Constructor & Destructor Documentation

9.48.1.1 `haec_sim::config::detail::convert_helper< bool >::convert_helper (Json::Value value)` `[inline]`

9.48.2 Member Function Documentation

9.48.2.1 `bool haec_sim::config::detail::convert_helper< bool >::operator() () const` `[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp](#)

9.49 `haec_sim::config::detail::convert_helper< double >` Class Template Reference

```
#include <config.hpp>
```

Public Member Functions

- [convert_helper](#) (Json::Value value)
- [double operator\(\) \(\) const](#)

9.49.1 Constructor & Destructor Documentation

9.49.1.1 `haec_sim::config::detail::convert_helper< double >::convert_helper (Json::Value value)` `[inline]`

9.49.2 Member Function Documentation

9.49.2.1 `double haec_sim::config::detail::convert_helper< double >::operator() () const` `[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp](#)

9.50 `haec_sim::config::detail::convert_helper< float >` Class Template Reference

```
#include <config.hpp>
```

Public Member Functions

- [convert_helper](#) (Json::Value value)
- [float operator\(\) \(\) const](#)

9.50.1 Constructor & Destructor Documentation

9.50.1.1 `haec_sim::config::detail::convert_helper< float >::convert_helper (Json::Value value)` `[inline]`

9.50.2 Member Function Documentation

9.50.2.1 `float haec_sim::config::detail::convert_helper< float >::operator() () const` `[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp](#)

9.51 haec_sim::config::detail::convert_helper< int > Class Template Reference

```
#include <config.hpp>
```

Public Member Functions

- [convert_helper](#) (Json::Value value)
- [int operator\(\)](#) () const

9.51.1 Constructor & Destructor Documentation

9.51.1.1 [haec_sim::config::detail::convert_helper< int >::convert_helper \(Json::Value value \)](#) [inline]

9.51.2 Member Function Documentation

9.51.2.1 [int haec_sim::config::detail::convert_helper< int >::operator\(\)](#) () const [inline]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp](#)

9.52 haec_sim::config::detail::convert_helper< int64_t > Class Template Reference

```
#include <config.hpp>
```

Public Member Functions

- [convert_helper](#) (Json::Value value)
- [int64_t operator\(\)](#) () const

9.52.1 Constructor & Destructor Documentation

9.52.1.1 [haec_sim::config::detail::convert_helper< int64_t >::convert_helper \(Json::Value value \)](#) [inline]

9.52.2 Member Function Documentation

9.52.2.1 [int64_t haec_sim::config::detail::convert_helper< int64_t >::operator\(\)](#) () const [inline]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp](#)

9.53 haec_sim::config::detail::convert_helper< std::string > Class Template Reference

```
#include <config.hpp>
```

Public Member Functions

- [convert_helper](#) (Json::Value value)
- `std::string operator() () const`

9.53.1 Constructor & Destructor Documentation

9.53.1.1 `haec_sim::config::detail::convert_helper< std::string >::convert_helper (Json::Value value)`
`[inline]`

9.53.2 Member Function Documentation

9.53.2.1 `std::string haec_sim::config::detail::convert_helper< std::string >::operator() () const` `[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp](#)

9.54 haec_sim::config::detail::convert_helper< uint64_t > Class Template Reference

```
#include <config.hpp>
```

Public Member Functions

- [convert_helper](#) (Json::Value value)
- `uint64_t operator() () const`

9.54.1 Constructor & Destructor Documentation

9.54.1.1 `haec_sim::config::detail::convert_helper< uint64_t >::convert_helper (Json::Value value)`
`[inline]`

9.54.2 Member Function Documentation

9.54.2.1 `uint64_t haec_sim::config::detail::convert_helper< uint64_t >::operator() () const` `[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp](#)

9.55 haec_sim::config::detail::convert_helper< unsigned int > Class Template Reference

```
#include <config.hpp>
```

Public Member Functions

- [convert_helper](#) (Json::Value value)
- `unsigned int operator() () const`

9.55.1 Constructor & Destructor Documentation

9.55.1.1 `haec_sim::config::detail::convert_helper< unsigned int >::convert_helper (Json::Value value)` `[inline]`

9.55.2 Member Function Documentation

9.55.2.1 `unsigned int haec_sim::config::detail::convert_helper< unsigned int >::operator() () const` `[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp](#)

9.56 haec_sim::path::data_transfer_hop Class Reference

```
#include <data_transfer_hop.hpp>
```

Public Member Functions

- [data_transfer_hop](#) (double [delay](#), double [bandwidth](#))

Protected Attributes

- double [delay](#)
- double [bandwidth](#)

9.56.1 Constructor & Destructor Documentation

9.56.1.1 `haec_sim::path::data_transfer_hop::data_transfer_hop (double delay, double bandwidth)` `[inline]`

9.56.2 Member Data Documentation

9.56.2.1 `double haec_sim::path::data_transfer_hop::bandwidth` `[protected]`

9.56.2.2 `double haec_sim::path::data_transfer_hop::delay` `[protected]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/path/data_transfer_hop.hpp](#)

9.57 haec_sim::path::data_transfer_path Class Reference

```
#include <data_transfer_path.hpp>
```

Public Member Functions

- void [add_hop](#) (const [data_transfer_hop](#) &hop)
- `std::size_t num_hops () const`
- `std::vector< data_transfer_hop >::const_iterator begin () const`
- `std::vector< data_transfer_hop >::const_iterator end () const`

9.57.1 Member Function Documentation

9.57.1.1 `void haec_sim::path::data_transfer_path::add_hop (const data_transfer_hop & hop) [inline]`

9.57.1.2 `std::vector< data_transfer_hop >::const_iterator haec_sim::path::data_transfer_path::begin () const [inline]`

9.57.1.3 `std::vector< data_transfer_hop >::const_iterator haec_sim::path::data_transfer_path::end () const [inline]`

9.57.1.4 `std::size_t haec_sim::path::data_transfer_path::num_hops () const [inline]`

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/path/data_transfer_path.hpp

9.58 `otf2::traits::definition_impl_type< T >` Struct Template Reference

```
#include <definition.hpp>
```

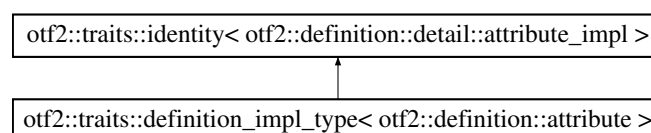
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.59 `otf2::traits::definition_impl_type< otf2::definition::attribute >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::attribute >`:



Additional Inherited Members

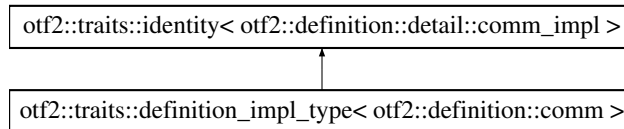
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.60 `otf2::traits::definition_impl_type< otf2::definition::comm >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::comm >`:



Additional Inherited Members

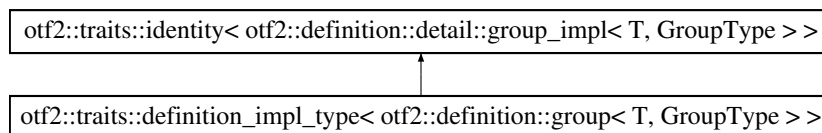
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.61 `otf2::traits::definition_impl_type< otf2::definition::group< T, GroupType > >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::group< T, GroupType > >`:



Additional Inherited Members

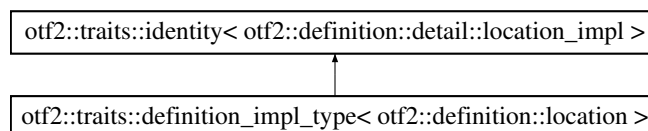
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.62 `otf2::traits::definition_impl_type< otf2::definition::location >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::location >`:



Additional Inherited Members

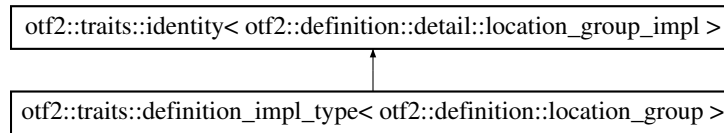
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.63 `otf2::traits::definition_impl_type< otf2::definition::location_group >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::location_group >`:



Additional Inherited Members

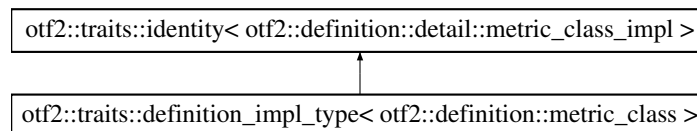
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.64 `otf2::traits::definition_impl_type< otf2::definition::metric_class >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::metric_class >`:



Additional Inherited Members

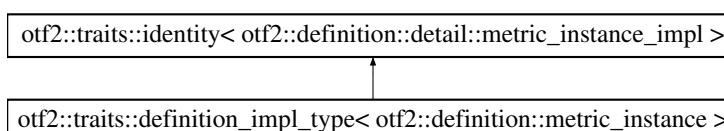
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.65 `otf2::traits::definition_impl_type< otf2::definition::metric_instance >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::metric_instance >`:



Additional Inherited Members

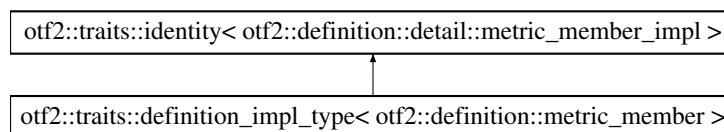
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.66 `otf2::traits::definition_impl_type< otf2::definition::metric_member >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::metric_member >`:



Additional Inherited Members

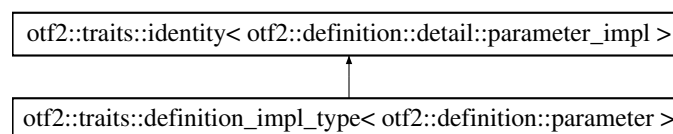
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.67 `otf2::traits::definition_impl_type< otf2::definition::parameter >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::parameter >`:



Additional Inherited Members

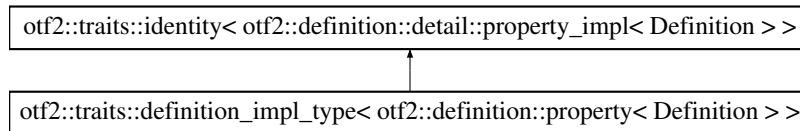
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.68 `otf2::traits::definition_impl_type< otf2::definition::property< Definition > >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::definition_impl_type< otf2::definition::property< Definition > >`:



Additional Inherited Members

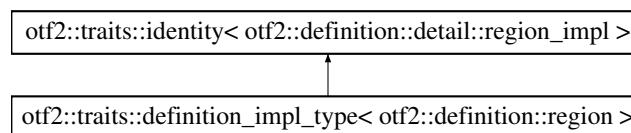
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.69 otf2::traits::definition_impl_type< otf2::definition::region > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::definition_impl_type< otf2::definition::region >:



Additional Inherited Members

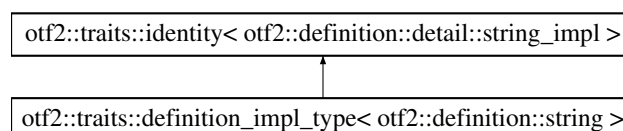
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.70 otf2::traits::definition_impl_type< otf2::definition::string > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::definition_impl_type< otf2::definition::string >:



Additional Inherited Members

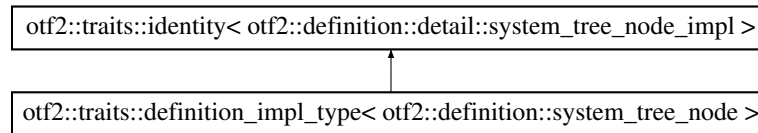
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.71 otf2::traits::definition_impl_type< otf2::definition::system_tree_node > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::definition_impl_type< otf2::definition::system_tree_node >:



Additional Inherited Members

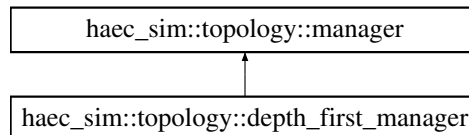
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp](#)

9.72 haec_sim::topology::depth_first_manager Class Reference

```
#include <depth_first_manager.hpp>
```

Inheritance diagram for haec_sim::topology::depth_first_manager:



Public Member Functions

- [depth_first_manager](#) ([haec_sim::topology::position size](#))
- virtual [haec_sim::topology::position new_position](#) ([otf2::definition::location](#)) override

9.72.1 Constructor & Destructor Documentation

9.72.1.1 [haec_sim::topology::depth_first_manager::depth_first_manager](#) ([haec_sim::topology::position size](#))
[inline]

9.72.2 Member Function Documentation

9.72.2.1 virtual [haec_sim::topology::position haec_sim::topology::depth_first_manager::new_position](#) ([otf2::definition::location](#)) [inline],[override],[virtual]

Implements [haec_sim::topology::manager](#).

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/topology/depth_first_manager.hpp](#)

9.73 nitro::dl::dl Class Reference

Class for dynamically loading libraries.

```
#include <dl.hpp>
```

Public Member Functions

- [dl](#) (const std::string &filename)
construct with the name of the library
- template<typename T >
[nitro::dl::symbol](#)< T > [load](#) (const std::string &name)
- std::shared_ptr< void > [get](#) () const

9.73.1 Detailed Description

Class for dynamically loading libraries.

This class uses libdl to load libraries dynamically.

9.73.2 Constructor & Destructor Documentation

9.73.2.1 [nitro::dl::dl::dl](#) (const std::string & *filename*) [[inline](#)]

construct with the name of the library

Parameters

| | | |
|-----------|-----------------|---|
| <i>in</i> | <i>filename</i> | the filename of the library { libdl tries to find a library with the given name in LD_LIBRARY_PATH. } |
|-----------|-----------------|---|

Exceptions

| | |
|--------------------------------------|--|
| nitro::dl::exception | { throws if the library could not be opened. } |
|--------------------------------------|--|

9.73.3 Member Function Documentation

9.73.3.1 [std::shared_ptr<void> nitro::dl::dl::get](#) () const [[inline](#)]

9.73.3.2 [template<typename T > nitro::dl::symbol<T> nitro::dl::dl::load](#) (const std::string & *name*) [[inline](#)]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/dl/dl.hpp](#)

9.74 haec_sim::resource_manager::packet_component::end_process_type Struct Reference

```
#include <components.hpp>
```

Public Member Functions

- template<class Archive >
void [serialize](#) (Archive &ar, const unsigned int file_version)

Public Attributes

- bool [end_process](#)

9.74.1 Member Function Documentation

9.74.1.1 `template<class Archive > void haec_sim::resource_manager::packet_component::end_process_type::serialize (Archive & ar, const unsigned int file_version) [inline]`

9.74.2 Member Data Documentation

9.74.2.1 `bool haec_sim::resource_manager::packet_component::end_process_type::end_process`

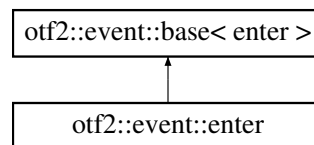
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp](#)

9.75 otf2::event::enter Class Reference

```
#include <enter.hpp>
```

Inheritance diagram for otf2::event::enter:



Public Member Functions

- [enter \(otf2::definition::region region, otf2::chrono::time_point timestamp\)](#)
- [enter \(const otf2::event::enter &other, otf2::chrono::time_point timestamp\)](#)
- [otf2::definition::region region \(\) const](#)

9.75.1 Constructor & Destructor Documentation

9.75.1.1 `otf2::event::enter::enter (otf2::definition::region region, otf2::chrono::time_point timestamp) [inline]`

9.75.1.2 `otf2::event::enter::enter (const otf2::event::enter & other, otf2::chrono::time_point timestamp) [inline]`

9.75.2 Member Function Documentation

9.75.2.1 `otf2::definition::region otf2::event::enter::region () const [inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/enter.hpp](#)

9.76 haec_sim::environment Class Reference

A class to provide information about the environment of the run.

```
#include <environment.hpp>
```

Static Public Member Functions

- static std::string [get_variable](#) (std::string name)
returns the given ENV variables
- static const [trace_file](#) & [input_trace](#) (std::string file="")
returns [trace_file](#) object for input trace
- static const [trace_file](#) & [output_trace](#) (std::string dir="", std::string file="")
returns [trace_file](#) object for output trace
- static const std::string & [positions_map_path](#) (std::string path="")
returns the path to the positions.map file
- static const std::string & [conf_path](#) (std::string path="")
returns the path to the haec_sim.conf file

9.76.1 Detailed Description

A class to provide information about the environment of the run.

Gives information about the output directory of the trace, input trace, ENV variables etc.

9.76.2 Member Function Documentation

9.76.2.1 `static const std::string& haec_sim::environment::conf_path (std::string path = " ")` `[inline],[static]`

returns the path to the haec_sim.conf file

9.76.2.2 `static std::string haec_sim::environment::get_variable (std::string name)` `[inline],[static]`

returns the given ENV variables

Returns the value of the given environment variable. Returns an empty string, if the variable isn't set.

9.76.2.3 `static const trace_file& haec_sim::environment::input_trace (std::string file = " ")` `[inline],[static]`

returns [trace_file](#) object for input trace

9.76.2.4 `static const trace_file& haec_sim::environment::output_trace (std::string dir = " ", std::string file = " ")`
`[inline],[static]`

returns [trace_file](#) object for output trace

9.76.2.5 `static const std::string& haec_sim::environment::positions_map_path (std::string path = " ")` `[inline],[static]`

returns the path to the positions.map file

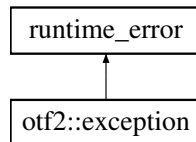
The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/environment.hpp

9.77 otf2::exception Struct Reference

```
#include <exception.hpp>
```

Inheritance diagram for otf2::exception:



Public Member Functions

- [exception](#) (const std::string &arg)

9.77.1 Constructor & Destructor Documentation

9.77.1.1 `otf2::exception::exception (const std::string & arg) [inline],[explicit]`

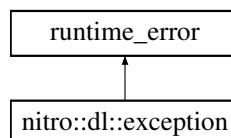
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/exception.hpp>

9.78 nitro::dl::exception Class Reference

```
#include <exception.hpp>
```

Inheritance diagram for nitro::dl::exception:



Public Member Functions

- [exception](#) (const std::string &what, const std::string &dlerror)
- const std::string & [dlerror](#) () const

9.78.1 Constructor & Destructor Documentation

9.78.1.1 `nitro::dl::exception::exception (const std::string & what, const std::string & dlerror) [inline],[explicit]`

9.78.2 Member Function Documentation

9.78.2.1 `const std::string& nitro::dl::exception::dlerror () const [inline]`

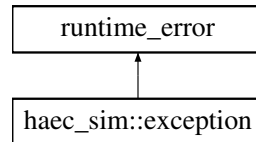
The documentation for this class was generated from the following file:

- </home/tilsche/vc/haec-sim/include/nitro/dl/exception.hpp>

9.79 haec_sim::exception Struct Reference

```
#include <exception.hpp>
```

Inheritance diagram for haec_sim::exception:



Public Member Functions

- [exception](#) (const std::string &arg)

9.79.1 Constructor & Destructor Documentation

9.79.1.1 `haec_sim::exception::exception (const std::string & arg)` `[inline]`, `[explicit]`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/exception.hpp](#)

9.80 otf2::writer::global Class Reference

```
#include <global.hpp>
```

Public Member Functions

- [global](#) (OTF2_GlobalDefWriter *wrt)
- [global](#) (global &)=default
- [global & operator=](#) (global &)=default
- [global](#) (global &&)=default
- [global & operator=](#) (global &&)=default
- `std::uint64_t num_definitions ()` const
- `std::uint64_t num_locations ()` const
- void [write](#) (otf2::definition::attribute data)
- void [write](#) (otf2::definition::comm data)
- void [write](#) (otf2::definition::location data)
- void [write](#) (otf2::definition::location_group data)
- void [write](#) (otf2::definition::comm_group data)
- void [write](#) (otf2::definition::comm_locations_group data)
- void [write](#) (otf2::definition::comm_self_group data)
- void [write](#) (otf2::definition::regions_group data)
- void [write](#) (otf2::definition::locations_group data)
- void [write](#) (otf2::definition::metric_class data)
- void [write](#) (otf2::definition::metric_instance data)
- void [write](#) (otf2::definition::metric_member data)
- void [write](#) (otf2::definition::parameter data)
- void [write](#) (otf2::definition::region data)
- void [write](#) (otf2::definition::string data)

- void [write](#) (otf2::definition::system_tree_node data)
- void [write](#) (otf2::definition::clock_properties data)
- void [write](#) (otf2::definition::system_tree_node_property data)
- void [write](#) (otf2::definition::location_property data)
- void [write](#) (otf2::definition::location_group_property data)
- [~global](#) ()

9.80.1 Constructor & Destructor Documentation

9.80.1.1 [otf2::writer::global::global](#) (OTF2_GlobalDefWriter * *wrt*) [inline]

9.80.1.2 [otf2::writer::global::global](#) (global &) [default]

9.80.1.3 [otf2::writer::global::global](#) (global &&) [default]

9.80.1.4 [otf2::writer::global::~~global](#) () [inline]

9.80.2 Member Function Documentation

9.80.2.1 [std::uint64_t otf2::writer::global::num_definitions](#) () const [inline]

9.80.2.2 [std::uint64_t otf2::writer::global::num_locations](#) () const [inline]

9.80.2.3 [global& otf2::writer::global::operator=](#) (global &) [default]

9.80.2.4 [global& otf2::writer::global::operator=](#) (global &&) [default]

9.80.2.5 void [otf2::writer::global::write](#) (otf2::definition::attribute *data*) [inline]

9.80.2.6 void [otf2::writer::global::write](#) (otf2::definition::comm *data*) [inline]

9.80.2.7 void [otf2::writer::global::write](#) (otf2::definition::location *data*) [inline]

9.80.2.8 void [otf2::writer::global::write](#) (otf2::definition::location_group *data*) [inline]

9.80.2.9 void [otf2::writer::global::write](#) (otf2::definition::comm_group *data*) [inline]

9.80.2.10 void [otf2::writer::global::write](#) (otf2::definition::comm_locations_group *data*) [inline]

9.80.2.11 void [otf2::writer::global::write](#) (otf2::definition::comm_self_group *data*) [inline]

9.80.2.12 void [otf2::writer::global::write](#) (otf2::definition::regions_group *data*) [inline]

9.80.2.13 void [otf2::writer::global::write](#) (otf2::definition::locations_group *data*) [inline]

9.80.2.14 void [otf2::writer::global::write](#) (otf2::definition::metric_class *data*) [inline]

9.80.2.15 void [otf2::writer::global::write](#) (otf2::definition::metric_instance *data*) [inline]

9.80.2.16 void [otf2::writer::global::write](#) (otf2::definition::metric_member *data*) [inline]

9.80.2.17 void [otf2::writer::global::write](#) (otf2::definition::parameter *data*) [inline]

9.80.2.18 void [otf2::writer::global::write](#) (otf2::definition::region *data*) [inline]

- 9.80.2.19 `void otf2::writer::global::write (otf2::definition::string data) [inline]`
- 9.80.2.20 `void otf2::writer::global::write (otf2::definition::system_tree_node data) [inline]`
- 9.80.2.21 `void otf2::writer::global::write (otf2::definition::clock_properties data) [inline]`
- 9.80.2.22 `void otf2::writer::global::write (otf2::definition::system_tree_node_property data) [inline]`
- 9.80.2.23 `void otf2::writer::global::write (otf2::definition::location_property data) [inline]`
- 9.80.2.24 `void otf2::writer::global::write (otf2::definition::location_group_property data) [inline]`

The documentation for this class was generated from the following file:

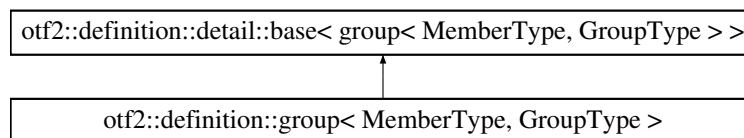
- </home/tilsche/vc/haec-sim/include/otf2xx/writer/global.hpp>

9.81 `otf2::definition::group< MemberType, GroupType >` Class Template Reference

class template for representing groups

```
#include <fwd.hpp>
```

Inheritance diagram for `otf2::definition::group< MemberType, GroupType >`:



Public Types

- `typedef impl_type::group_type group_type`
- `typedef impl_type::group_flag_type group_flag_type`
- `typedef impl_type::paradigm_type paradigm_type`
- `typedef impl_type::value_type value_type`

Public Member Functions

- `group (otf2::reference< detail::group_base > ref, otf2::definition::string name, paradigm_type paradigm, group_flag_type group_flag)`
- `group ()=default`
- `otf2::definition::string name () const`
returns the name of the group definion as a string definition
- `group_type type () const`
returns the type of the group definion
- `paradigm_type paradigm () const`
returns the paradigm of the group definion
- `group_flag_type group_flag () const`
returns the group flag of the group definion
- `std::vector< std::uint64_t > members () const`
returns the member of the group definion
- `std::size_t size () const`

returns the number of members

- [value_type operator\[\]](#) (std::size_t i) const

returns the i-th member in the group

- void [add_member](#) (value_type member)

adds a definition to the group

Additional Inherited Members

9.81.1 Detailed Description

```
template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown>class otf2↵
::definition::group< MemberType, GroupType >
```

class template for representing groups

See also

[otf2::definition::locations_group](#)
[otf2::definition::regions_group](#)
[otf2::definition::metric_group](#)
[otf2::definition::comm_group](#)
[otf2::definition::comm_locations_group](#)
[otf2::definition::comm_self_group](#)

9.81.2 Member Typedef Documentation

9.81.2.1 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown> typedef impl_type::group_flag_type otf2::definition::group< MemberType, GroupType >::group_flag_type`

9.81.2.2 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown> typedef impl_type::group_type otf2::definition::group< MemberType, GroupType >::group_type`

9.81.2.3 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown> typedef impl_type::paradigm_type otf2::definition::group< MemberType, GroupType >::paradigm_type`

9.81.2.4 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown> typedef impl_type::value_type otf2::definition::group< MemberType, GroupType >::value_type`

9.81.3 Constructor & Destructor Documentation

9.81.3.1 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown> otf2::definition::group< MemberType, GroupType >::group (otf2::reference< detail::group_base > ref, otf2::definition::string name, paradigm_type paradigm, group_flag_type group_flag) [inline]`

9.81.3.2 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown> otf2::definition::group< MemberType, GroupType >::group () [default]`

9.81.4 Member Function Documentation

9.81.4.1 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown> void otf2::definition::group< MemberType, GroupType >::add_member (value_type member) [inline]`

adds a definition to the group

9.81.4.2 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown>
group_flag_type otf2::definition::group< MemberType, GroupType >::group_flag () const [inline]`

returns the group flag of the group definition

See also

[otf2::common::group_flag_type](#)

9.81.4.3 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown>
std::vector<std::uint64_t> otf2::definition::group< MemberType, GroupType >::members () const
[inline]`

returns the member of the group definition

Returns

std::vector containing reference numbers of definitions

9.81.4.4 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown>
otf2::definition::string otf2::definition::group< MemberType, GroupType >::name () const [inline]`

returns the name of the group definition as a string definition

Returns

a string definition containing the name

9.81.4.5 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown>
value_type otf2::definition::group< MemberType, GroupType >::operator[] (std::size_t i) const
[inline]`

returns the i-th member in the group

If `my_group.members()` returns `{1,5,19}`, then `my_group[1]` will return the definition with reference number 5.

Returns

the i-th definition in the group

9.81.4.6 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown>
paradigm_type otf2::definition::group< MemberType, GroupType >::paradigm () const [inline]`

returns the paradigm of the group definition

See also

[otf2::common::paradigm_type](#)

9.81.4.7 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown>
std::size_t otf2::definition::group< MemberType, GroupType >::size () const [inline]`

returns the number of members

Returns

number of members as std::size_t

9.81.4.8 `template<class MemberType, otf2::common::group_type GroupType = otf2::common::group_type::unknown>
group_type otf2::definition::group< MemberType, GroupType >::type () const [inline]`

returns the type of the group definition

See also

[otf2::common::group_type](#)

The documentation for this class was generated from the following files:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/fwd.hpp](#)
- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/group.hpp](#)

9.82 otf2::definition::detail::group_base Class Reference

```
#include <group_impl.hpp>
```

9.82.1 Detailed Description

Dummy class to have all group templates in the same id space

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/group_impl.hpp](#)

9.83 otf2::definition::detail::group_impl< MemberType, GroupType > Class Template Reference

```
#include <group_impl.hpp>
```

Public Types

- typedef [otf2::common::group_type](#) [group_type](#)
- typedef [otf2::common::group_flag_type](#) [group_flag_type](#)
- typedef [otf2::common::paradigm_type](#) [paradigm_type](#)
- typedef MemberType [value_type](#)

Public Member Functions

- [group_impl](#) ([otf2::reference< detail::group_base > ref](#), [string name](#), [paradigm_type paradigm](#), [group_flag_type group_flag](#))
- [group_impl](#) ([const group_impl &](#))=delete
- [group_impl & operator=](#) ([const group_impl &](#))=delete
- [group_impl](#) ([group_impl &&](#))=default
- [group_impl & operator=](#) ([group_impl &&](#))=default
- [otf2::reference< detail::group_base > ref](#) () const
- [string name](#) () const
- [group_type type](#) () const
- [paradigm_type paradigm](#) () const
- [group_flag_type group_flag](#) () const

- `std::vector< std::uint64_t > members () const`
- `std::size_t size () const`
- `value_type operator[] (std::size_t i) const`
- `void add_member (value_type member)`

Static Public Member Functions

- `static std::shared_ptr< group_impl > undefined ()`

9.83.1 Member Typedef Documentation

9.83.1.1 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> typedef otf2::common::group_flag_type otf2::definition::detail::group_impl< MemberType, GroupType >::group_flag_type`

9.83.1.2 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> typedef otf2::common::group_type otf2::definition::detail::group_impl< MemberType, GroupType >::group_type`

9.83.1.3 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> typedef otf2::common::paradigm_type otf2::definition::detail::group_impl< MemberType, GroupType >::paradigm_type`

9.83.1.4 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> typedef MemberType otf2::definition::detail::group_impl< MemberType, GroupType >::value_type`

9.83.2 Constructor & Destructor Documentation

9.83.2.1 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> otf2::definition::detail::group_impl< MemberType, GroupType >::group_impl (otf2::reference< detail::group_base > ref, string name, paradigm_type paradigm, group_flag_type group_flag) [inline]`

9.83.2.2 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> otf2::definition::detail::group_impl< MemberType, GroupType >::group_impl (const group_impl< MemberType, GroupType > &) [delete]`

9.83.2.3 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> otf2::definition::detail::group_impl< MemberType, GroupType >::group_impl (group_impl< MemberType, GroupType > &&) [default]`

9.83.3 Member Function Documentation

9.83.3.1 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> void otf2::definition::detail::group_impl< MemberType, GroupType >::add_member (value_type member) [inline]`

9.83.3.2 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> group_flag_type otf2::definition::detail::group_impl< MemberType, GroupType >::group_flag () const [inline]`

9.83.3.3 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> std::vector<std::uint64_t> otf2::definition::detail::group_impl< MemberType, GroupType >::members () const [inline]`

- 9.83.3.4 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> string otf2::definition::detail::group_impl< MemberType, GroupType >::name () const [inline]`
- 9.83.3.5 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> group_impl& otf2::definition::detail::group_impl< MemberType, GroupType >::operator= (const group_impl< MemberType, GroupType > &) [delete]`
- 9.83.3.6 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> group_impl& otf2::definition::detail::group_impl< MemberType, GroupType >::operator= (group_impl< MemberType, GroupType > &&) [default]`
- 9.83.3.7 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> value_type otf2::definition::detail::group_impl< MemberType, GroupType >::operator[] (std::size_t i) const [inline]`
- 9.83.3.8 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> paradigm_type otf2::definition::detail::group_impl< MemberType, GroupType >::paradigm () const [inline]`
- 9.83.3.9 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> otf2::reference<detail::group_base> otf2::definition::detail::group_impl< MemberType, GroupType >::ref () const [inline]`
- 9.83.3.10 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> std::size_t otf2::definition::detail::group_impl< MemberType, GroupType >::size () const [inline]`
- 9.83.3.11 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> group_type otf2::definition::detail::group_impl< MemberType, GroupType >::type () const [inline]`
- 9.83.3.12 `template<class MemberType , otf2::common::group_type GroupType = otf2::common::group_type::unknown> static std::shared_ptr<group_impl> otf2::definition::detail::group_impl< MemberType, GroupType >::undefined () [inline],[static]`

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/group_impl.hpp

9.84 haec_sim::log::detail::haec_log_formatter< Record > Class Template Reference

```
#include <log.hpp>
```

Public Member Functions

- `std::string format (Record &r)`

9.84.1 Member Function Documentation

- 9.84.1.1 `template<typename Record > std::string haec_sim::log::detail::haec_log_formatter< Record >::format (Record &r) [inline]`

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/log/log.hpp

9.85 nitro::log::detail::has_attribute< Attributes > Struct Template Reference

```
#include <has_attribute.hpp>
```

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/detail/has_attribute.hpp](#)

9.86 nitro::log::detail::has_attribute< Attribute, Record< Attributes...> > Struct Template Reference

```
#include <has_attribute.hpp>
```

Static Public Attributes

- static const bool [value](#) = [nitro::meta::is_variadic_member](#)<Attribute, Attributes...>::value

9.86.1 Member Data Documentation

```
9.86.1.1 template<typename Attribute , typename... Attributes, template< typename...Attributes2 > class
Record> const bool nitro::log::detail::has_attribute< Attribute, Record< Attributes...> >::value =
nitro::meta::is_variadic_member<Attribute, Attributes...>::value [static]
```

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/detail/has_attribute.hpp](#)

9.87 otf2::traits::identity< Type > Struct Template Reference

identity type trait

```
#include <traits.hpp>
```

Public Types

- typedef Type [type](#)
type is the same as the input template parameter Type

9.87.1 Detailed Description

```
template<typename Type>struct otf2::traits::identity< Type >
```

identity type trait

9.87.2 Member Typedef Documentation

```
9.87.2.1 template<typename Type> typedef Type otf2::traits::identity< Type >::type
```

type is the same as the input template parameter Type

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/traits.hpp](#)

9.88 haec_sim::resource_manager::info Struct Reference

```
#include <info.hpp>
```

Public Member Functions

- `template<class Archive >`
void [serialize](#) (Archive &ar, const unsigned int file_version)

Public Attributes

- [type resource_manager_type](#)
- `std::size_t` [number_of_processes](#)

9.88.1 Member Function Documentation

9.88.1.1 `template<class Archive > void haec_sim::resource_manager::info::serialize (Archive & ar, const unsigned int file_version)` [[inline](#)]

9.88.2 Member Data Documentation

9.88.2.1 `std::size_t haec_sim::resource_manager::info::number_of_processes`

9.88.2.2 `type haec_sim::resource_manager::info::resource_manager_type`

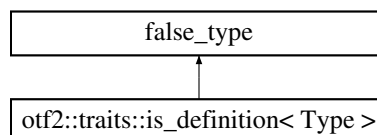
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/info.hpp](#)

9.89 otf2::traits::is_definition< Type > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::is_definition< Type >`:



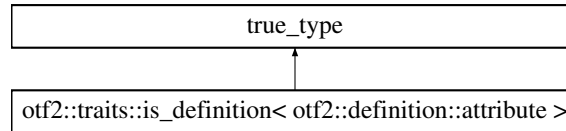
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp](#)

9.90 `otf2::traits::is_definition< otf2::definition::attribute >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::is_definition< otf2::definition::attribute >`:



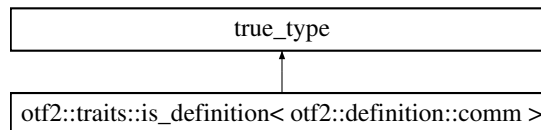
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.91 `otf2::traits::is_definition< otf2::definition::comm >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::is_definition< otf2::definition::comm >`:



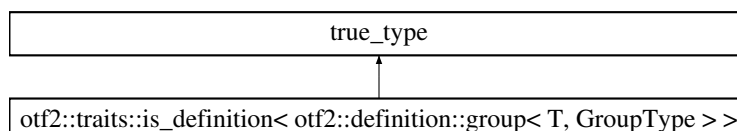
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.92 `otf2::traits::is_definition< otf2::definition::group< T, GroupType > >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::is_definition< otf2::definition::group< T, GroupType > >`:



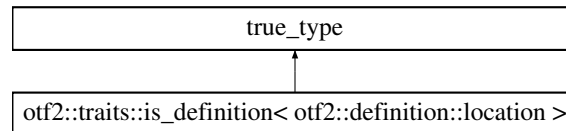
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.93 otf2::traits::is_definition< otf2::definition::location > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::is_definition< otf2::definition::location >:



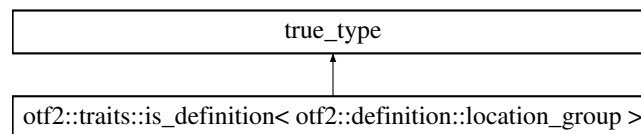
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.94 otf2::traits::is_definition< otf2::definition::location_group > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::is_definition< otf2::definition::location_group >:



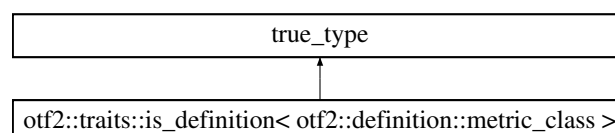
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.95 otf2::traits::is_definition< otf2::definition::metric_class > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::is_definition< otf2::definition::metric_class >:



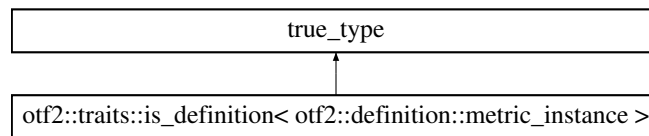
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.96 `otf2::traits::is_definition< otf2::definition::metric_instance >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::is_definition< otf2::definition::metric_instance >`:



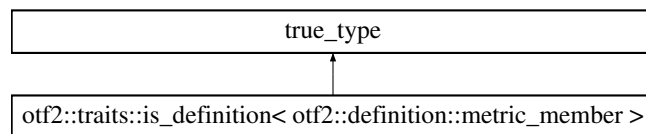
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp](#)

9.97 `otf2::traits::is_definition< otf2::definition::metric_member >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::is_definition< otf2::definition::metric_member >`:



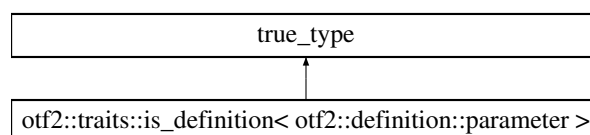
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp](#)

9.98 `otf2::traits::is_definition< otf2::definition::parameter >` Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for `otf2::traits::is_definition< otf2::definition::parameter >`:



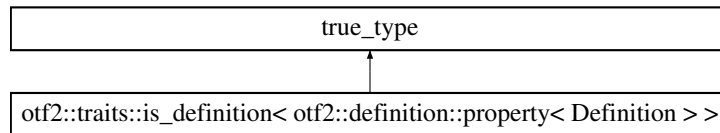
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp](#)

9.99 otf2::traits::is_definition< otf2::definition::property< Definition > > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::is_definition< otf2::definition::property< Definition > >:



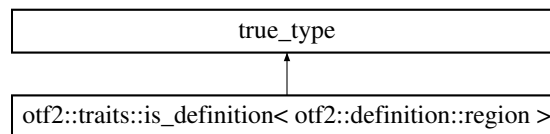
The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/traits/[definition.hpp](#)

9.100 otf2::traits::is_definition< otf2::definition::region > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::is_definition< otf2::definition::region >:



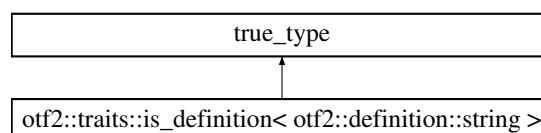
The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/traits/[definition.hpp](#)

9.101 otf2::traits::is_definition< otf2::definition::string > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::is_definition< otf2::definition::string >:



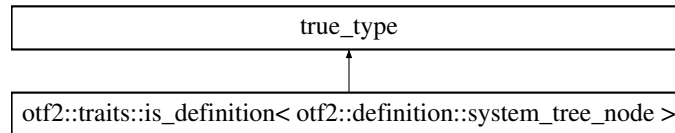
The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/traits/[definition.hpp](#)

9.102 otf2::traits::is_definition< otf2::definition::system_tree_node > Struct Template Reference

```
#include <definition.hpp>
```

Inheritance diagram for otf2::traits::is_definition< otf2::definition::system_tree_node >:



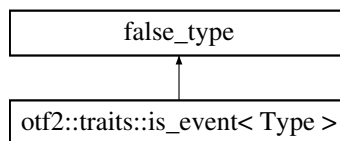
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp>

9.103 otf2::traits::is_event< Type > Struct Template Reference

```
#include <event.hpp>
```

Inheritance diagram for otf2::traits::is_event< Type >:



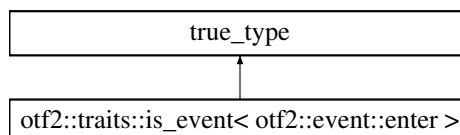
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/event.hpp>

9.104 otf2::traits::is_event< otf2::event::enter > Struct Template Reference

```
#include <event.hpp>
```

Inheritance diagram for otf2::traits::is_event< otf2::event::enter >:



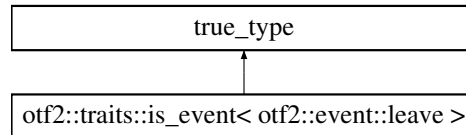
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/event.hpp>

9.105 otf2::traits::is_event< otf2::event::leave > Struct Template Reference

```
#include <event.hpp>
```

Inheritance diagram for otf2::traits::is_event< otf2::event::leave >:



The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/event.hpp>

9.106 haec_sim::resource_manager::packet_component::is_manager_type Struct Reference

```
#include <components.hpp>
```

Public Member Functions

- `template<class Archive > void serialize (Archive &ar, const unsigned int file_version)`

Public Attributes

- `bool is_manager`

9.106.1 Member Function Documentation

9.106.1.1 `template<class Archive > void haec_sim::resource_manager::packet_component::is_manager_type::serialize (Archive &ar, const unsigned int file_version) [inline]`

9.106.2 Member Data Documentation

9.106.2.1 `bool haec_sim::resource_manager::packet_component::is_manager_type::is_manager`

The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp

9.107 nitro::meta::is_variadic_member< U, Attributes > Struct Template Reference

meta function to check if a variadic type pack contains a given type.

```
#include <variadic.hpp>
```

9.107.1 Detailed Description

```
template<typename U, typename... Attributes> struct nitro::meta::is_variadic_member< U, Attributes >
```

meta function to check if a variadic type pack contains a given type.

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/meta/variadic.hpp](#)

9.108 nitro::meta::is_variadic_member< U > Struct Template Reference

meta function to check if a variadic type pack contains a given type.

```
#include <variadic.hpp>
```

Static Public Attributes

- static const bool [value](#) = false
value contains true if input type is contained in the pack

9.108.1 Detailed Description

```
template<typename U> struct nitro::meta::is_variadic_member< U >
```

meta function to check if a variadic type pack contains a given type.

9.108.2 Member Data Documentation

9.108.2.1 `template<typename U > const bool nitro::meta::is_variadic_member< U >::value = false` `[static]`

value contains true if input type is contained in the pack

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/meta/variadic.hpp](#)

9.109 nitro::meta::is_variadic_member< U, first, Attributes...> Struct Template Reference

meta function to check if a variadic type pack contains a given type.

```
#include <variadic.hpp>
```

Static Public Attributes

- static const bool [value](#) = std::is_same<U, first>::value || [is_variadic_member](#)<U, Attributes...>::value
value contains true if input type is contained in the pack

9.109.1 Detailed Description

```
template<typename U, typename first, typename... Attributes> struct nitro::meta::is_variadic_member< U, first, Attributes...>
```

meta function to check if a variadic type pack contains a given type.

9.109.2 Member Data Documentation

```
9.109.2.1 template<typename U , typename first , typename... Attributes> const bool nitro::meta::is_variadic_member<
U, first, Attributes...>::value = std::is_same<U, first>::value || is_variadic_member<U, Attributes...>::value
[static]
```

value contains true if input type is contained in the pack

The documentation for this struct was generated from the following file:

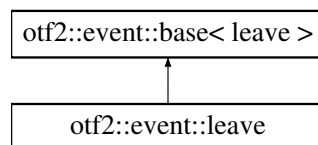
- [/home/tilsche/vc/haec-sim/include/nitro/meta/variadic.hpp](#)

9.110 otf2::event::leave Class Reference

The class representing a leave event.

```
#include <leave.hpp>
```

Inheritance diagram for otf2::event::leave:



Public Member Functions

- [leave](#) (otf2::definition::region region, otf2::chrono::time_point timestamp)
standard constructor
- [leave](#) (const otf2::event::leave &other, otf2::chrono::time_point timestamp)
special copy constructor, takes an other event and a new timestamp
- [otf2::definition::region](#) region () const
returns the region, which was entered

9.110.1 Detailed Description

The class representing a leave event.

9.110.2 Constructor & Destructor Documentation

```
9.110.2.1 otf2::event::leave ( otf2::definition::region region, otf2::chrono::time_point timestamp )
[inline]
```

standard constructor

Parameters

| | |
|------------------|--|
| <i>region</i> | the region, which was entered |
| <i>timestamp</i> | the timestamp, when the event has happen |

9.110.2.2 `otf2::event::leave::leave (const otf2::event::leave & other, otf2::chrono::time_point timestamp)`
`[inline]`

special copy constructor, takes an other event and a new timestamp

Parameters

| | |
|------------------|---|
| <i>other</i> | the other event, which should be copied |
| <i>timestamp</i> | the new timestamp |

9.110.3 Member Function Documentation

9.110.3.1 `otf2::definition::region otf2::event::leave::region () const` `[inline]`

returns the region, which was entered

Returns

The documentation for this class was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/event/leave.hpp>

9.111 haec_sim::resource_manager::link Class Reference

```
#include <link.hpp>
```

Public Member Functions

- [link](#) (boost::mpi::communicator &comm)
- `template<typename... Components>`
void [send_to_manager](#) (const [resource_manager::packet](#)< Components...> &p, int rank)
- `template<typename... Components>`
void [recv_from_manager](#) ([resource_manager::packet](#)< Components...> &p, int rank)
- `template<typename Packet >`
auto [recv_from_manager](#) (int rank) -> Packet
- `template<typename... Components>`
auto [gather_from_all](#) (const [resource_manager::packet](#)< Components...> &my_value) -> std::vector<[packet](#)< Components...>>
- boost::mpi::communicator & [comm](#) ()

9.111.1 Constructor & Destructor Documentation

9.111.1.1 `haec_sim::resource_manager::link::link (boost::mpi::communicator & comm)` `[inline]`

9.111.2 Member Function Documentation

- 9.111.2.1 `boost::mpi::communicator& haec_sim::resource_manager::link::comm () [inline]`
- 9.111.2.2 `template<typename... Components> auto haec_sim::resource_manager::link::gather_from_all (const resource_manager::packet< Components...> & my_value)-> std::vector<packet<Components...>> [inline]`
- 9.111.2.3 `template<typename... Components> void haec_sim::resource_manager::link::recv_from_manager (resource_manager::packet< Components...> & p, int rank) [inline]`
- 9.111.2.4 `template<typename Packet > auto haec_sim::resource_manager::link::recv_from_manager (int rank)-> Packet [inline]`
- 9.111.2.5 `template<typename... Components> void haec_sim::resource_manager::link::send_to_manager (const resource_manager::packet< Components...> & p, int rank) [inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/link.hpp](#)

9.112 otf2::writer::local Class Reference

```
#include <local.hpp>
```

Public Member Functions

- [local](#) (OTF2_EvtWriter *evt_wrt, OTF2_DefWriter *def_wrt, [otf2::definition::location](#) location)
- [otf2::definition::location](#) location ()
- `std::uint64_t num_events () const`
- void [write](#) (const [otf2::event::buffer_flush](#) &data)
- void [write](#) (const [otf2::event::enter](#) &data)
- void [write](#) (const [otf2::event::leave](#) &data)
- void [write](#) (const [otf2::event::measurement](#) &data)
- void [write](#) (const [otf2::event::metric](#) &data)
- void [write](#) (const [otf2::event::mpi_ireceive_complete](#) &data)
- void [write](#) (const [otf2::event::mpi_ireceive_request](#) &data)
- void [write](#) (const [otf2::event::mpi_isend_request](#) &data)
- void [write](#) (const [otf2::event::mpi_isend_complete](#) &data)
- void [write](#) (const [otf2::event::mpi_receive](#) &data)
- void [write](#) (const [otf2::event::mpi_request_test](#) &data)
- void [write](#) (const [otf2::event::mpi_request_cancelled](#) &data)
- void [write](#) (const [otf2::event::mpi_send](#) &data)
- void [write](#) (const [otf2::event::mpi_collective_begin](#) &data)
- void [write](#) (const [otf2::event::mpi_collective_end](#) &data)
- void [write](#) (const [otf2::event::parameter_int](#) &data)
- void [write](#) (const [otf2::event::parameter_unsigned_int](#) &data)
- void [write](#) (const [otf2::event::parameter_string](#) &data)
- void [write](#) (const [otf2::event::thread_acquire_lock](#) &data)
- void [write](#) (const [otf2::event::thread_fork](#) &data)
- void [write](#) (const [otf2::event::thread_join](#) &data)
- void [write](#) (const [otf2::event::thread_release_lock](#) &data)
- void [write](#) (const [otf2::event::thread_task_complete](#) &data)
- void [write](#) (const [otf2::event::thread_task_create](#) &data)
- void [write](#) (const [otf2::event::thread_task_switch](#) &data)
- void [write](#) (const [otf2::event::thread_team_begin](#) &data)
- void [write](#) (const [otf2::event::thread_team_end](#) &data)

9.112.1 Constructor & Destructor Documentation

9.112.1.1 `otf2::writer::local::local (OTF2_EvtWriter * evt_wrt, OTF2_DefWriter * def_wrt, otf2::definition::location location) [inline]`

9.112.2 Member Function Documentation

9.112.2.1 `otf2::definition::location otf2::writer::local::location () [inline]`

9.112.2.2 `std::uint64_t otf2::writer::local::num_events () const [inline]`

9.112.2.3 `void otf2::writer::local::write (const otf2::event::buffer_flush & data) [inline]`

9.112.2.4 `void otf2::writer::local::write (const otf2::event::enter & data) [inline]`

9.112.2.5 `void otf2::writer::local::write (const otf2::event::leave & data) [inline]`

9.112.2.6 `void otf2::writer::local::write (const otf2::event::measurement & data) [inline]`

9.112.2.7 `void otf2::writer::local::write (const otf2::event::metric & data) [inline]`

9.112.2.8 `void otf2::writer::local::write (const otf2::event::mpi_ireceive_complete & data) [inline]`

9.112.2.9 `void otf2::writer::local::write (const otf2::event::mpi_ireceive_request & data) [inline]`

9.112.2.10 `void otf2::writer::local::write (const otf2::event::mpi_isend_request & data) [inline]`

9.112.2.11 `void otf2::writer::local::write (const otf2::event::mpi_isend_complete & data) [inline]`

9.112.2.12 `void otf2::writer::local::write (const otf2::event::mpi_receive & data) [inline]`

9.112.2.13 `void otf2::writer::local::write (const otf2::event::mpi_request_test & data) [inline]`

9.112.2.14 `void otf2::writer::local::write (const otf2::event::mpi_request_cancelled & data) [inline]`

9.112.2.15 `void otf2::writer::local::write (const otf2::event::mpi_send & data) [inline]`

9.112.2.16 `void otf2::writer::local::write (const otf2::event::mpi_collective_begin & data) [inline]`

9.112.2.17 `void otf2::writer::local::write (const otf2::event::mpi_collective_end & data) [inline]`

9.112.2.18 `void otf2::writer::local::write (const otf2::event::parameter_int & data) [inline]`

9.112.2.19 `void otf2::writer::local::write (const otf2::event::parameter_unsigned_int & data) [inline]`

9.112.2.20 `void otf2::writer::local::write (const otf2::event::parameter_string & data) [inline]`

9.112.2.21 `void otf2::writer::local::write (const otf2::event::thread_acquire_lock & data) [inline]`

9.112.2.22 `void otf2::writer::local::write (const otf2::event::thread_fork & data) [inline]`

9.112.2.23 `void otf2::writer::local::write (const otf2::event::thread_join & data) [inline]`

9.112.2.24 `void otf2::writer::local::write (const otf2::event::thread_release_lock & data) [inline]`

9.112.2.25 `void otf2::writer::local::write (const otf2::event::thread_task_complete & data) [inline]`

9.112.2.26 void otf2::writer::local::write (const otf2::event::thread_task_create & data) [inline]

9.112.2.27 void otf2::writer::local::write (const otf2::event::thread_task_switch & data) [inline]

9.112.2.28 void otf2::writer::local::write (const otf2::event::thread_team_begin & data) [inline]

9.112.2.29 void otf2::writer::local::write (const otf2::event::thread_team_end & data) [inline]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/writer/local.hpp

9.113 haec_sim::mapping::location Class Reference

class to map from locations to simulation ranks

```
#include <mappings.hpp>
```

Static Public Member Functions

- static int [to_simulation_rank](#) (otf2::definition::location loc)
- static int [to_simulation_rank](#) (otf2::reference< otf2::definition::location >::ref_type ref)

9.113.1 Detailed Description

class to map from locations to simulation ranks

This class implements an implicit identity mapping of locations to simulation ranks.

9.113.2 Member Function Documentation

9.113.2.1 static int haec_sim::mapping::location::to_simulation_rank (otf2::definition::location loc) [inline], [static]

9.113.2.2 static int haec_sim::mapping::location::to_simulation_rank (otf2::reference< otf2::definition::location >::ref_type ref) [inline], [static]

The documentation for this class was generated from the following file:

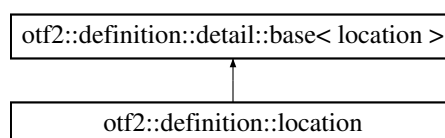
- /home/tilsche/vc/haec-sim/include/haec_sim/mappings.hpp

9.114 otf2::definition::location Class Reference

class for representing location definitions

```
#include <location.hpp>
```

Inheritance diagram for otf2::definition::location:



Public Types

- typedef impl_type::location_type [location_type](#)

Public Member Functions

- [location](#) (otf2::reference< otf2::definition::location > ref, otf2::definition::string name, otf2::definition::location_group lg, location_type type, std::uint64_t events=0)
- [location](#) (const otf2::definition::location &other, std::uint64_t events)
- [location](#) ()=default
- [otf2::definition::string name](#) () const
returns the name of the location definion as a string definition
- [otf2::definition::location_group location_group](#) () const
returns the location group of the location definion
- [location_type type](#) () const
returns the type of the location definion
- [std::uint64_t num_events](#) () const
returns the number of events for this location Use with care. If you read in this location and write it to another trace, you have to make sure, that you have also written all the events. Otherwise you should make a copy, like [haec_sim::module::sink](#).

Friends

- class [writer::local](#)

Additional Inherited Members

9.114.1 Detailed Description

class for representing location definitions

9.114.2 Member Typedef Documentation

9.114.2.1 typedef impl_type::location_type otf2::definition::location::location_type

9.114.3 Constructor & Destructor Documentation

9.114.3.1 otf2::definition::location::location (otf2::reference< otf2::definition::location > ref, otf2::definition::string name, otf2::definition::location_group lg, location_type type, std::uint64_t events = 0) [inline]

9.114.3.2 otf2::definition::location::location (const otf2::definition::location & other, std::uint64_t events) [inline]

9.114.3.3 otf2::definition::location::location () [default]

9.114.4 Member Function Documentation

9.114.4.1 otf2::definition::location_group otf2::definition::location::location_group () const [inline]

returns the location group of the location definion

Returns

a [location_group](#) definiton

9.114.4.2 `otf2::definition::string otf2::definition::location::name () const` `[inline]`

returns the name of the location definion as a string definition

Returns

a [string](#) definiton containing the name

9.114.4.3 `std::uint64_t otf2::definition::location::num_events () const` `[inline]`

returns the number of events for this location Use with care. If you read in this location and write it to another trace, you have to make sure, that you have also written all the events. Otherwise you should make a copy, like [haec_sim::module::sink](#).

9.114.4.4 `location_type otf2::definition::location::type () const` `[inline]`

returns the type of the location defintion

See also

[otf2::common::location_type](#)

9.114.5 Friends And Related Function Documentation

9.114.5.1 friend class `writer::local` `[friend]`

The documentation for this class was generated from the following file:

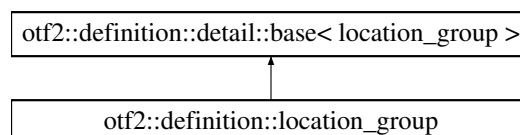
- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/location.hpp](#)

9.115 `otf2::definition::location_group` Class Reference

class for representing a location group definition

```
#include <location_group.hpp>
```

Inheritance diagram for `otf2::definition::location_group`:



Public Types

- typedef [otf2::common::location_group_type](#) `location_group_type`

Public Member Functions

- `location_group` (`reference< location_group > ref`, `otf2::definition::string name`, `location_group_type type`, `otf2::definition::system_tree_node stm`)
- `location_group` ()=default
- `otf2::definition::string name` () const
returns the name of the location group definion as a string definition
- `location_group_type type` () const
returns the type of the location group definion
- `otf2::definition::system_tree_node parent` () const
returns the parentof the location group definition

Additional Inherited Members

9.115.1 Detailed Description

class for representing a location group definition

Note

Don't mix up with `locationS_group`, which would be a group definition containing some location definitions.

9.115.2 Member Typedef Documentation

9.115.2.1 `typedef otf2::common::location_group_type otf2::definition::location_group::location_group_type`

9.115.3 Constructor & Destructor Documentation

9.115.3.1 `otf2::definition::location_group::location_group (reference< location_group > ref, otf2::definition::string name, location_group_type type, otf2::definition::system_tree_node stm) [inline]`

9.115.3.2 `otf2::definition::location_group::location_group () [default]`

9.115.4 Member Function Documentation

9.115.4.1 `otf2::definition::string otf2::definition::location_group::name () const [inline]`

returns the name of the location group definion as a string definition

Returns

a string definiton containing the name

9.115.4.2 `otf2::definition::system_tree_node otf2::definition::location_group::parent () const [inline]`

returns the parentof the location group definition

Returns

`otf2::definition_system_tree_node`

9.115.4.3 `location_group_type` `otf2::definition::location_group::type () const` `[inline]`

returns the type of the location group defintion

See also

[otf2::common::location_group_type](#)

The documentation for this class was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/definition/location_group.hpp`

9.116 `otf2::definition::detail::location_group_impl` Class Reference

```
#include <location_group_impl.hpp>
```

Public Types

- `typedef otf2::common::location_group_type location_group_type`

Public Member Functions

- `location_group_impl (reference< location_group > ref, string name, location_group_type type, system_↔ tree_node stm)`
- `location_group_impl (const location_group_impl &)=delete`
- `location_group_impl & operator= (const location_group_impl &)=delete`
- `location_group_impl (location_group_impl &&)=default`
- `location_group_impl & operator= (location_group_impl &&)=default`
- `reference< location_group > ref () const`
- `string name () const`
- `location_group_type type () const`
- `system_tree_node parent () const`

Static Public Member Functions

- `static std::shared_ptr< location_group_impl > undefined ()`

9.116.1 Member Typedef Documentation

9.116.1.1 `typedef otf2::common::location_group_type otf2::definition::detail::location_group_impl↔ ::location_group_type`

9.116.2 Constructor & Destructor Documentation

9.116.2.1 `otf2::definition::detail::location_group_impl::location_group_impl (reference< location_group > ref, string name, location_group_type type, system_tree_node stm)` `[inline]`

9.116.2.2 `otf2::definition::detail::location_group_impl::location_group_impl (const location_group_impl &)` `[delete]`

9.116.2.3 `otf2::definition::detail::location_group_impl::location_group_impl (location_group_impl &&)` `[default]`

9.116.3 Member Function Documentation

- 9.116.3.1 `string of2::definition::detail::location_group_impl::name () const` [\[inline\]](#)
- 9.116.3.2 `location_group_impl& of2::definition::detail::location_group_impl::operator= (const location_group_impl &)` [\[delete\]](#)
- 9.116.3.3 `location_group_impl& of2::definition::detail::location_group_impl::operator= (location_group_impl &&)` [\[default\]](#)
- 9.116.3.4 `system_tree_node of2::definition::detail::location_group_impl::parent () const` [\[inline\]](#)
- 9.116.3.5 `reference<location_group> of2::definition::detail::location_group_impl::ref () const` [\[inline\]](#)
- 9.116.3.6 `location_group_type of2::definition::detail::location_group_impl::type () const` [\[inline\]](#)
- 9.116.3.7 `static std::shared_ptr<location_group_impl> of2::definition::detail::location_group_impl::undefined ()` [\[inline\]](#), [\[static\]](#)

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/location_group_impl.hpp](#)

9.117 of2::definition::detail::location_impl Class Reference

```
#include <location_impl.hpp>
```

Public Types

- typedef [of2::common::location_type](#) [location_type](#)

Public Member Functions

- [location_impl](#) ([of2::reference< location > ref](#), [string name](#), [location_group lg](#), [location_type type](#), [std::uint64_t events=0](#))
- [location_impl](#) ([const location_impl &](#))=delete
- [location_impl & operator=](#) ([const location_impl &](#))=delete
- [location_impl](#) ([location_impl &&](#))=default
- [location_impl & operator=](#) ([location_impl &&](#))=default
- [string name](#) () const
- [of2::definition::location_group location_group](#) () const
- [location_type type](#) () const
- [of2::reference< location > ref](#) () const
- [std::uint64_t num_events](#) () const
- void [event_written](#) ()

Static Public Member Functions

- static [std::shared_ptr< location_impl > undefined](#) ()

Friends

- class [writer::local](#)

9.117.1 Member Typedef Documentation

9.117.1.1 `typedef otf2::common::location_type otf2::definition::detail::location_impl::location_type`

9.117.2 Constructor & Destructor Documentation

9.117.2.1 `otf2::definition::detail::location_impl::location_impl (otf2::reference< location > ref, string name, location_group lg, location_type type, std::uint64_t events = 0) [inline]`

9.117.2.2 `otf2::definition::detail::location_impl::location_impl (const location_impl &) [delete]`

9.117.2.3 `otf2::definition::detail::location_impl::location_impl (location_impl &&) [default]`

9.117.3 Member Function Documentation

9.117.3.1 `void otf2::definition::detail::location_impl::event_written () [inline]`

9.117.3.2 `otf2::definition::location_group otf2::definition::detail::location_impl::location_group () const [inline]`

9.117.3.3 `string otf2::definition::detail::location_impl::name () const [inline]`

9.117.3.4 `std::uint64_t otf2::definition::detail::location_impl::num_events () const [inline]`

9.117.3.5 `location_impl& otf2::definition::detail::location_impl::operator= (const location_impl &) [delete]`

9.117.3.6 `location_impl& otf2::definition::detail::location_impl::operator= (location_impl &&) [default]`

9.117.3.7 `otf2::reference<location> otf2::definition::detail::location_impl::ref () const [inline]`

9.117.3.8 `location_type otf2::definition::detail::location_impl::type () const [inline]`

9.117.3.9 `static std::shared_ptr<location_impl> otf2::definition::detail::location_impl::undefined () [inline], [static]`

9.117.4 Friends And Related Function Documentation

9.117.4.1 `friend class writer::local [friend]`

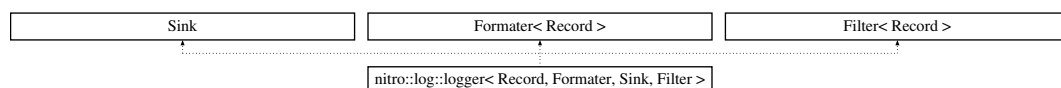
The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/location_impl.hpp

9.118 nitro::log::logger< Record, Formater, Sink, Filter > Class Template Reference

```
#include <logger.hpp>
```

Inheritance diagram for `nitro::log::logger< Record, Formater, Sink, Filter >`:



Static Public Member Functions

- static void `log` (Record &r)
- static `actual_stream`< severity_level::trace, Record, Formater, Sink, Filter >::type `trace` ()
- static `actual_stream`< severity_level::debug, Record, Formater, Sink, Filter >::type `debug` ()
- static `actual_stream`< severity_level::info, Record, Formater, Sink, Filter >::type `info` ()
- static `actual_stream`< severity_level::warn, Record, Formater, Sink, Filter >::type `warn` ()
- static `actual_stream`< severity_level::error, Record, Formater, Sink, Filter >::type `error` ()
- static `actual_stream`< severity_level::fatal, Record, Formater, Sink, Filter >::type `fatal` ()

9.118.1 Member Function Documentation

9.118.1.1 `template<typename Record , template< typename > class Formater, typename Sink , template< typename > class Filter> static actual_stream<severity_level::debug, Record, Formater, Sink, Filter>::type nitro::log::logger< Record, Formater, Sink, Filter >::debug () [inline],[static]`

9.118.1.2 `template<typename Record , template< typename > class Formater, typename Sink , template< typename > class Filter> static actual_stream<severity_level::error, Record, Formater, Sink, Filter>::type nitro::log::logger< Record, Formater, Sink, Filter >::error () [inline],[static]`

9.118.1.3 `template<typename Record , template< typename > class Formater, typename Sink , template< typename > class Filter> static actual_stream<severity_level::fatal, Record, Formater, Sink, Filter>::type nitro::log::logger< Record, Formater, Sink, Filter >::fatal () [inline],[static]`

9.118.1.4 `template<typename Record , template< typename > class Formater, typename Sink , template< typename > class Filter> static actual_stream<severity_level::info, Record, Formater, Sink, Filter>::type nitro::log::logger< Record, Formater, Sink, Filter >::info () [inline],[static]`

9.118.1.5 `template<typename Record , template< typename > class Formater, typename Sink , template< typename > class Filter> static void nitro::log::logger< Record, Formater, Sink, Filter >::log (Record & r) [inline],[static]`

9.118.1.6 `template<typename Record , template< typename > class Formater, typename Sink , template< typename > class Filter> static actual_stream<severity_level::trace, Record, Formater, Sink, Filter>::type nitro::log::logger< Record, Formater, Sink, Filter >::trace () [inline],[static]`

9.118.1.7 `template<typename Record , template< typename > class Formater, typename Sink , template< typename > class Filter> static actual_stream<severity_level::warn, Record, Formater, Sink, Filter>::type nitro::log::logger< Record, Formater, Sink, Filter >::warn () [inline],[static]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/logger.hpp](#)

9.119 haec_sim::mapping::detail::lsr_mapping Class Reference

```
#include <mappings.hpp>
```

Public Member Functions

- void `register_location` (otf2::definition::location location)
- void `register_location_on` (otf2::definition::location location, int rank)
- int `to_rank` (otf2::reference< otf2::definition::location >::ref_type ref) const
- int `to_rank` (otf2::definition::location location) const
- `otf2::definition::location to_location` (int rank) const

9.119.1 Member Function Documentation

- 9.119.1.1 void haec_sim::mapping::detail::lsr_mapping::register_location (otf2::definition::location *location*)
[inline]
- 9.119.1.2 void haec_sim::mapping::detail::lsr_mapping::register_location_on (otf2::definition::location *location*, int *rank*) [inline]
- 9.119.1.3 otf2::definition::location haec_sim::mapping::detail::lsr_mapping::to_location (int *rank*) const [inline]
- 9.119.1.4 int haec_sim::mapping::detail::lsr_mapping::to_rank (otf2::reference< otf2::definition::location >::ref_type *ref*) const [inline]
- 9.119.1.5 int haec_sim::mapping::detail::lsr_mapping::to_rank (otf2::definition::location *location*) const [inline]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/mappings.hpp

9.120 otf2::detail::make_exception< Arg, Args > Class Template Reference

```
#include <exception.hpp>
```

Public Member Functions

- void [operator\(\)](#) (std::stringstream &msg, Arg arg, Args...args)

9.120.1 Member Function Documentation

- 9.120.1.1 template<typename Arg , typename... Args> void otf2::detail::make_exception< Arg, Args >::operator() (std::stringstream & *msg*, Arg *arg*, Args... *args*) [inline]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/exception.hpp

9.121 otf2::detail::make_exception< Arg > Class Template Reference

```
#include <exception.hpp>
```

Public Member Functions

- void [operator\(\)](#) (std::stringstream &msg, Arg arg)

9.121.1 Member Function Documentation

- 9.121.1.1 template<typename Arg > void otf2::detail::make_exception< Arg >::operator() (std::stringstream & *msg*, Arg *arg*) [inline]

The documentation for this class was generated from the following file:

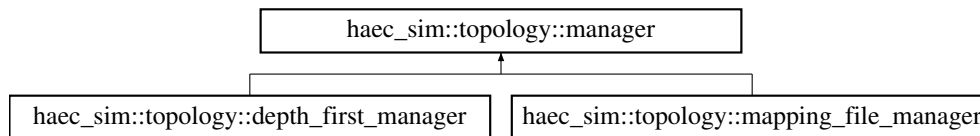
- /home/tilsche/vc/haec-sim/include/otf2xx/exception.hpp

9.122 haec_sim::topology::manager Class Reference

Abstract base class for simulator topology managers. This class places processes on cores on specific boards.

```
#include <manager.hpp>
```

Inheritance diagram for haec_sim::topology::manager:



Public Member Functions

- [manager](#) ([haec_sim::topology::position size](#))
- virtual [~manager](#) ()
- const [haec_sim::topology::position & size](#) () const
- virtual [haec_sim::topology::position new_position](#) ([otf2::definition::location loc](#))=0

9.122.1 Detailed Description

Abstract base class for simulator topology managers. This class places processes on cores on specific boards.

9.122.2 Constructor & Destructor Documentation

9.122.2.1 [haec_sim::topology::manager::manager](#) ([haec_sim::topology::position size](#)) [\[inline\]](#)

9.122.2.2 virtual [haec_sim::topology::manager::~~manager](#) () [\[inline\]](#), [\[virtual\]](#)

9.122.3 Member Function Documentation

9.122.3.1 virtual [haec_sim::topology::position haec_sim::topology::manager::new_position](#) ([otf2::definition::location loc](#)) [\[pure virtual\]](#)

Implemented in [haec_sim::topology::mapping_file_manager](#), and [haec_sim::topology::depth_first_manager](#).

9.122.3.2 const [haec_sim::topology::position& haec_sim::topology::manager::size](#) () const [\[inline\]](#)

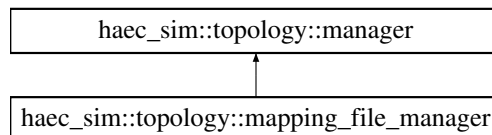
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/topology/manager.hpp](#)

9.123 haec_sim::topology::mapping_file_manager Class Reference

```
#include <mapping_file_manager.hpp>
```

Inheritance diagram for haec_sim::topology::mapping_file_manager:



Public Member Functions

- [mapping_file_manager](#) ([haec_sim::topology::position size](#))
- virtual [haec_sim::topology::position new_position](#) ([otf2::definition::location loc](#)) override

9.123.1 Constructor & Destructor Documentation

9.123.1.1 [haec_sim::topology::mapping_file_manager::mapping_file_manager](#) ([haec_sim::topology::position size](#)) [\[inline\]](#)

9.123.2 Member Function Documentation

9.123.2.1 virtual [haec_sim::topology::position haec_sim::topology::mapping_file_manager::new_position](#) ([otf2::definition::location loc](#)) [\[inline\]](#), [\[override\]](#), [\[virtual\]](#)

Implements [haec_sim::topology::manager](#).

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/topology/mapping_file_manager.hpp](#)

9.124 haec_sim::topology::mapping_file_parser Class Reference

```
#include <mapping_file_parser.hpp>
```

Public Member Functions

- [mapping_file_parser](#) ([std::string filename](#))
- [std::map< otf2::definition::location::reference_type::ref_type, position > parse](#) ()
- [const std::string & name](#) () const

9.124.1 Constructor & Destructor Documentation

9.124.1.1 [haec_sim::topology::mapping_file_parser::mapping_file_parser](#) ([std::string filename](#)) [\[inline\]](#)

9.124.2 Member Function Documentation

9.124.2.1 [const std::string& haec_sim::topology::mapping_file_parser::name](#) () const [\[inline\]](#)

9.124.2.2 [std::map<otf2::definition::location::reference_type::ref_type, position> haec_sim::topology::mapping_file_parser::parse](#) () [\[inline\]](#)

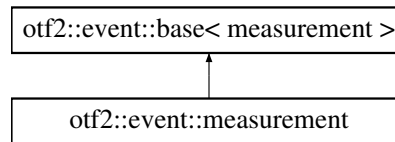
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/topology/mapping_file_parser.hpp](#)

9.125 otf2::event::measurement Class Reference

```
#include <measurement.hpp>
```

Inheritance diagram for otf2::event::measurement:



Public Types

- enum [mode_type](#) { [mode_type::on](#), [mode_type::off](#) }

Public Member Functions

- [measurement](#) (otf2::chrono::time_point timestamp, mode_type mode)
- [measurement](#) (const otf2::event::measurement &other, otf2::chrono::time_point timestamp)
- [mode_type mode](#) () const

9.125.1 Member Enumeration Documentation

9.125.1.1 enum otf2::event::measurement::mode_type [strong]

Enumerator

on

off

9.125.2 Constructor & Destructor Documentation

9.125.2.1 otf2::event::measurement::measurement (otf2::chrono::time_point timestamp, mode_type mode)
[inline]

9.125.2.2 otf2::event::measurement::measurement (const otf2::event::measurement & other, otf2::chrono::time_point timestamp) [inline]

9.125.3 Member Function Documentation

9.125.3.1 mode_type otf2::event::measurement::mode () const [inline]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/event/[measurement.hpp](#)

9.126 nitro::log::message_attribute Class Reference

```
#include <message.hpp>
```

Public Member Functions

- [message_attribute](#) ()=default
- `std::string` [message](#) () const
- `std::string &` [message](#) ()

9.126.1 Constructor & Destructor Documentation

9.126.1.1 `nitro::log::message_attribute::message_attribute ()` [default]

9.126.2 Member Function Documentation

9.126.2.1 `std::string` `nitro::log::message_attribute::message ()` const [inline]

9.126.2.2 `std::string&` `nitro::log::message_attribute::message ()` [inline]

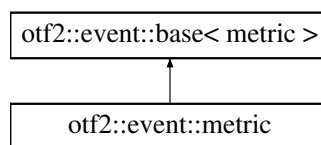
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/attribute/message.hpp](#)

9.127 otf2::event::metric Class Reference

```
#include <metric.hpp>
```

Inheritance diagram for `otf2::event::metric`:



Classes

- class [value_container](#)

Public Member Functions

- `metric` ()=default
- `metric` (`otf2::chrono::time_point` timestamp, `otf2::definition::metric_class` metric_c, `std::vector`< `value_↔` container > values)
- `metric` (`otf2::chrono::time_point` timestamp, `otf2::definition::metric_instance` metric_c, `std::vector`< `value_↔` container > values)
- `metric` (const `otf2::event::metric` &other, `otf2::chrono::time_point` timestamp)
- `std::vector`< `value_container` > & values ()
- const `std::vector`< `value_container` > & values () const
- const `value_container` & `get_value_for` (`otf2::definition::metric_member` member) const
- `otf2::definition::metric_class` `metric_class` () const
- `otf2::definition::metric_instance` `metric_instance` () const

9.127.1 Constructor & Destructor Documentation

9.127.1.1 `otf2::event::metric::metric ()` [default]

9.127.1.2 `otf2::event::metric::metric (otf2::chrono::time_point timestamp, otf2::definition::metric_class metric_c, std::vector< value_container > values)` [inline]

9.127.1.3 `otf2::event::metric::metric (otf2::chrono::time_point timestamp, otf2::definition::metric_instance metric_c, std::vector< value_container > values)` [inline]

9.127.1.4 `otf2::event::metric::metric (const otf2::event::metric & other, otf2::chrono::time_point timestamp)` [inline]

9.127.2 Member Function Documentation

9.127.2.1 `const value_container& otf2::event::metric::get_value_for (otf2::definition::metric_member member) const` [inline]

9.127.2.2 `otf2::definition::metric_class otf2::event::metric::metric_class () const` [inline]

9.127.2.3 `otf2::definition::metric_instance otf2::event::metric::metric_instance () const` [inline]

9.127.2.4 `std::vector<value_container>& otf2::event::metric::values ()` [inline]

9.127.2.5 `const std::vector<value_container>& otf2::event::metric::values () const` [inline]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/metric.hpp](#)

9.128 otf2::definition::detail::metric_base Class Reference

Dummy class to have metric instances and metric classes in the same id space.

```
#include <metric_base.hpp>
```

9.128.1 Detailed Description

Dummy class to have metric instances and metric classes in the same id space.

The documentation for this class was generated from the following file:

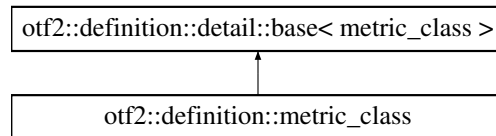
- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/metric_base.hpp](#)

9.129 otf2::definition::metric_class Class Reference

class for representing metric class definitions

```
#include <metric_class.hpp>
```

Inheritance diagram for `otf2::definition::metric_class`:



Public Types

- typedef impl_type::metric_occurence [metric_occurence](#)
- typedef impl_type::recorder_kind_type [recorder_kind_type](#)
- typedef impl_type::iterator [iterator](#)

Public Member Functions

- [metric_class](#) ([reference](#)< [detail::metric_base](#) > ref, [metric_occurence](#) occurrence, [recorder_kind_type](#) recorder_kind)
- [metric_class](#) ()=default
- [std::size_t](#) size () const
returns the number of metric members
- void [add_member](#) ([otf2::definition::metric_member](#) member)
add a metric member to this metric class
- [metric_occurence](#) occurrence () const
the occurrence of this metric class
- [otf2::definition::metric_member](#) operator[] (std::size_t i) const
returns the i-th metric member
- [recorder_kind_type](#) recorder_kind () const
returns the recorder kind of the metric class
- [iterator](#) begin () const
- [iterator](#) end () const

Additional Inherited Members

9.129.1 Detailed Description

class for representing metric class definitions

A metric class is a collection of metric members.

If you don't have a referencing metric instance, then the scope and recorder of this metric is implicitly given by the location, where the referencing metric event occurs.

9.129.2 Member Typedef Documentation

9.129.2.1 typedef impl_type::iterator [otf2::definition::metric_class::iterator](#)

9.129.2.2 typedef impl_type::metric_occurence [otf2::definition::metric_class::metric_occurence](#)

9.129.2.3 typedef impl_type::recorder_kind_type [otf2::definition::metric_class::recorder_kind_type](#)

9.129.3 Constructor & Destructor Documentation

9.129.3.1 `otf2::definition::metric_class::metric_class (reference< detail::metric_base > ref, metric_occurence occurence, recorder_kind_type recorder_kind) [inline]`

9.129.3.2 `otf2::definition::metric_class::metric_class () [default]`

9.129.4 Member Function Documentation

9.129.4.1 `void otf2::definition::metric_class::add_member (otf2::definition::metric_member member) [inline]`

add a metric member to this metric class

9.129.4.2 `iterator otf2::definition::metric_class::begin () const [inline]`

9.129.4.3 `iterator otf2::definition::metric_class::end () const [inline]`

9.129.4.4 `metric_occurence otf2::definition::metric_class::occurence () const [inline]`

the occurence of this metric class

See also

[otf2::common::metric_occurence](#)

9.129.4.5 `otf2::definition::metric_member otf2::definition::metric_class::operator[] (std::size_t i) const [inline]`

returns the i-th metric member

9.129.4.6 `recorder_kind_type otf2::definition::metric_class::recorder_kind () const [inline]`

returns the recorder kind of the metric class

See also

[otf2::common::recorder_kind](#)

9.129.4.7 `std::size_t otf2::definition::metric_class::size () const [inline]`

returns the number of metric members

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/metric_class.hpp](#)

9.130 `otf2::definition::detail::metric_class_impl` Class Reference

```
#include <metric_class_impl.hpp>
```

Public Types

- typedef [otf2::common::metric_occurence](#) `metric_occurence`
- typedef [otf2::common::recorder_kind](#) `recorder_kind_type`
- typedef `std::vector< otf2::definition::metric_member >::const_iterator` `iterator`

Public Member Functions

- [metric_class_impl](#) ([reference](#)< [metric_base](#) > *ref*, [metric_occurence](#) *occurence*, [recorder_kind_type](#) *recorder_kind*)
- [metric_class_impl](#) (const [metric_class_impl](#) &)=delete
- [metric_class_impl](#) & [operator=](#) (const [metric_class_impl](#) &)=delete
- [metric_class_impl](#) ([metric_class_impl](#) &&)=default
- [metric_class_impl](#) & [operator=](#) ([metric_class_impl](#) &&)=default
- [otf2::reference](#)< [metric_base](#) > *ref* () const
- [std::size_t](#) *size* () const
- void [add_member](#) ([otf2::definition::metric_member](#) *member*)
- [metric_occurence](#) *occurence* () const
- [otf2::definition::metric_member](#) [operator\[\]](#) ([std::size_t](#) *i*) const
- [recorder_kind_type](#) *recorder_kind* () const
- [iterator](#) *begin* () const
- [iterator](#) *end* () const

Static Public Member Functions

- static [std::shared_ptr](#)< [metric_class_impl](#) > *undefined* ()

9.130.1 Member Typedef Documentation

9.130.1.1 `typedef std::vector<otf2::definition::metric_member>::const_iterator otf2::definition::detail::metric_class_impl::iterator`

9.130.1.2 `typedef otf2::common::metric_occurence otf2::definition::detail::metric_class_impl::metric_occurence`

9.130.1.3 `typedef otf2::common::recorder_kind otf2::definition::detail::metric_class_impl::recorder_kind_type`

9.130.2 Constructor & Destructor Documentation

9.130.2.1 `otf2::definition::detail::metric_class_impl::metric_class_impl (reference< metric_base > ref, metric_occurence occurence, recorder_kind_type recorder_kind)` `[inline]`

9.130.2.2 `otf2::definition::detail::metric_class_impl::metric_class_impl (const metric_class_impl &)` `[delete]`

9.130.2.3 `otf2::definition::detail::metric_class_impl::metric_class_impl (metric_class_impl &&)` `[default]`

9.130.3 Member Function Documentation

9.130.3.1 `void otf2::definition::detail::metric_class_impl::add_member (otf2::definition::metric_member member)` `[inline]`

9.130.3.2 `iterator otf2::definition::detail::metric_class_impl::begin () const` `[inline]`

9.130.3.3 `iterator otf2::definition::detail::metric_class_impl::end () const` `[inline]`

9.130.3.4 `metric_occurence otf2::definition::detail::metric_class_impl::occurence () const` `[inline]`

9.130.3.5 `metric_class_impl& otf2::definition::detail::metric_class_impl::operator= (const metric_class_impl &)` `[delete]`

- 9.130.3.6 `metric_class_impl& otf2::definition::detail::metric_class_impl::operator= (metric_class_impl &&)`
[default]
- 9.130.3.7 `otf2::definition::metric_member otf2::definition::detail::metric_class_impl::operator[] (std::size_t i) const`
[inline]
- 9.130.3.8 `recorder_kind_type otf2::definition::detail::metric_class_impl::recorder_kind () const` [inline]
- 9.130.3.9 `otf2::reference<metric_base> otf2::definition::detail::metric_class_impl::ref () const` [inline]
- 9.130.3.10 `std::size_t otf2::definition::detail::metric_class_impl::size () const` [inline]
- 9.130.3.11 `static std::shared_ptr<metric_class_impl> otf2::definition::detail::metric_class_impl::undefined ()`
[inline], [static]

The documentation for this class was generated from the following file:

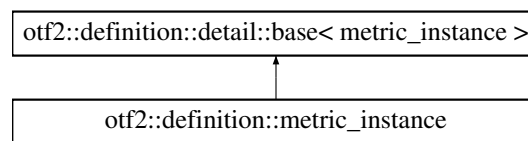
- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/metric_class_impl.hpp](#)

9.131 otf2::definition::metric_instance Class Reference

class for representing metric instance definitions

```
#include <metric_instance.hpp>
```

Inheritance diagram for `otf2::definition::metric_instance`:



Public Types

- typedef `impl_type::metric_occurence` [metric_occurence](#)
- typedef `impl_type::metric_scope` [metric_scope](#)

Public Member Functions

- [metric_instance](#) (`reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2↔::definition::location recorder, otf2::definition::location scope`)
- [metric_instance](#) (`reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2↔::definition::location recorder, otf2::definition::location_group scope`)
- [metric_instance](#) (`reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2↔::definition::location recorder, otf2::definition::system_tree_node scope`)
- [metric_instance](#) (`reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2↔::definition::location recorder, otf2::definition::locations_group scope`)
- [metric_instance](#) ()=default
- [metric_occurence](#) `occurence () const`
the occurence of this metric class
- [otf2::definition::metric_class](#) `metric_class () const`
returns the referenced metric class
- [otf2::definition::location recorder](#) `() const`

- returns the recorder*

 - `metric_scope scope () const`
returns the scope type of this metric
 - `otf2::definition::location location_scope () const`
returns the scope
 - `otf2::definition::location_group location_group_scope () const`
returns the scope
 - `otf2::definition::system_tree_node system_tree_node_scope () const`
returns the scope
 - `otf2::definition::locations_group group_scope () const`
returns the scope

Additional Inherited Members

9.131.1 Detailed Description

class for representing metric instance definitions

9.131.2 Member Typedef Documentation

9.131.2.1 `typedef impl_type::metric_occurence otf2::definition::metric_instance::metric_occurence`

9.131.2.2 `typedef impl_type::metric_scope otf2::definition::metric_instance::metric_scope`

9.131.3 Constructor & Destructor Documentation

9.131.3.1 `otf2::definition::metric_instance::metric_instance (reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder, otf2::definition::location scope) [inline]`

9.131.3.2 `otf2::definition::metric_instance::metric_instance (reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder, otf2::definition::location_group scope) [inline]`

9.131.3.3 `otf2::definition::metric_instance::metric_instance (reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder, otf2::definition::system_tree_node scope) [inline]`

9.131.3.4 `otf2::definition::metric_instance::metric_instance (reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder, otf2::definition::locations_group scope) [inline]`

9.131.3.5 `otf2::definition::metric_instance::metric_instance () [default]`

9.131.4 Member Function Documentation

9.131.4.1 `otf2::definition::locations_group otf2::definition::metric_instance::group_scope () const [inline]`

returns the scope

This returns the scope as group of locations definition.

Note

It might not be a valid definition

See also

[scope\(\)](#)

9.131.4.2 `otf2::definition::location_group otf2::definition::metric_instance::location_group_scope () const` `[inline]`

returns the scope

This returns the scope as location group definition.

Note

It might not be a valid definition

See also

[scope\(\)](#)

9.131.4.3 `otf2::definition::location otf2::definition::metric_instance::location_scope () const` `[inline]`

returns the scope

This returns the scope as location definition.

Note

It might not be a valid definition

See also

[scope\(\)](#)

9.131.4.4 `otf2::definition::metric_class otf2::definition::metric_instance::metric_class () const` `[inline]`

returns the referenced metric class

9.131.4.5 `metric_occurence otf2::definition::metric_instance::occurence () const` `[inline]`

the occurrence of this metric class

See also

[otf2::common::metric_occurence](#)

9.131.4.6 `otf2::definition::location otf2::definition::metric_instance::recorder () const` `[inline]`

returns the recorder

The recorder is the location, where this metric was recorded

9.131.4.7 `metric_scope` `otf2::definition::metric_instance::scope () const` `[inline]`

returns the scope type of this metric

This tells if the values are valid for a location, a location group, a system tree node or a custom group of locations.

See also

[otf2::common::metric_scope](#)

9.131.4.8 `otf2::definition::system_tree_node` `otf2::definition::metric_instance::system_tree_node_scope () const` `[inline]`

returns the scope

This returns the scope as system tree node definition.

Note

It might not be a valid definition

See also

[scope\(\)](#)

The documentation for this class was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/definition/metric_instance.hpp`

9.132 `otf2::definition::detail::metric_instance_impl` Class Reference

```
#include <metric_instance_impl.hpp>
```

Public Types

- `typedef otf2::common::metric_scope metric_scope`
- `typedef otf2::common::metric_occurence metric_occurence`

Public Member Functions

- `metric_instance_impl (reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder, otf2::definition::location scope)`
- `metric_instance_impl (reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder, otf2::definition::location_group scope)`
- `metric_instance_impl (reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder, otf2::definition::system_tree_node scope)`
- `metric_instance_impl (reference< detail::metric_base > ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder, otf2::definition::locations_group scope)`
- `metric_instance_impl (const metric_instance_impl &)=delete`
- `metric_instance_impl & operator= (const metric_instance_impl &)=delete`
- `metric_instance_impl (metric_instance_impl &&)=default`
- `metric_instance_impl & operator= (metric_instance_impl &&)=default`
- `otf2::reference< metric_base > ref () const`
- `metric_occurence occurence () const`

- [otf2::definition::metric_class metric_class \(\) const](#)
- [otf2::definition::location recorder \(\) const](#)
- [metric_scope scope \(\) const](#)
- [otf2::definition::location location_scope \(\) const](#)
- [otf2::definition::location_group location_group_scope \(\) const](#)
- [otf2::definition::system_tree_node system_tree_node_scope \(\) const](#)
- [otf2::definition::locations_group group_scope \(\) const](#)

Static Public Member Functions

- [static std::shared_ptr< metric_instance_impl > undefined \(\)](#)

9.132.1 Member Typedef Documentation

9.132.1.1 [typedef otf2::common::metric_occurence otf2::definition::detail::metric_instance_impl::metric_↔
occurence](#)

9.132.1.2 [typedef otf2::common::metric_scope otf2::definition::detail::metric_instance_impl::metric_scope](#)

9.132.2 Constructor & Destructor Documentation

9.132.2.1 [otf2::definition::detail::metric_instance_impl::metric_instance_impl \(reference< detail::metric_base
> ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder,
otf2::definition::location scope \) \[inline\]](#)

9.132.2.2 [otf2::definition::detail::metric_instance_impl::metric_instance_impl \(reference< detail::metric_base
> ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder,
otf2::definition::location_group scope \) \[inline\]](#)

9.132.2.3 [otf2::definition::detail::metric_instance_impl::metric_instance_impl \(reference< detail::metric_base
> ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder,
otf2::definition::system_tree_node scope \) \[inline\]](#)

9.132.2.4 [otf2::definition::detail::metric_instance_impl::metric_instance_impl \(reference< detail::metric_base
> ref, otf2::definition::metric_class metric_class, otf2::definition::location recorder,
otf2::definition::locations_group scope \) \[inline\]](#)

9.132.2.5 [otf2::definition::detail::metric_instance_impl::metric_instance_impl \(const metric_instance_impl & \)
\[delete\]](#)

9.132.2.6 [otf2::definition::detail::metric_instance_impl::metric_instance_impl \(metric_instance_impl && \)
\[default\]](#)

9.132.3 Member Function Documentation

9.132.3.1 [otf2::definition::locations_group otf2::definition::detail::metric_instance_impl::group_scope \(\) const
\[inline\]](#)

9.132.3.2 [otf2::definition::location_group otf2::definition::detail::metric_instance_impl::location_group_scope \(\) const
\[inline\]](#)

9.132.3.3 [otf2::definition::location otf2::definition::detail::metric_instance_impl::location_scope \(\) const \[inline\]](#)

9.132.3.4 [otf2::definition::metric_class otf2::definition::detail::metric_instance_impl::metric_class \(\) const
\[inline\]](#)

- 9.132.3.5 `metric_occurrence` `otf2::definition::detail::metric_instance_impl::occurrence () const` `[inline]`
- 9.132.3.6 `metric_instance_impl&` `otf2::definition::detail::metric_instance_impl::operator= (const metric_instance_impl &)` `[delete]`
- 9.132.3.7 `metric_instance_impl` `otf2::definition::detail::metric_instance_impl::operator= (metric_instance_impl &&)` `[default]`
- 9.132.3.8 `otf2::definition::location` `otf2::definition::detail::metric_instance_impl::recorder () const` `[inline]`
- 9.132.3.9 `otf2::reference<metric_base>` `otf2::definition::detail::metric_instance_impl::ref () const` `[inline]`
- 9.132.3.10 `metric_scope` `otf2::definition::detail::metric_instance_impl::scope () const` `[inline]`
- 9.132.3.11 `otf2::definition::system_tree_node` `otf2::definition::detail::metric_instance_impl::system_tree_node_scope () const` `[inline]`
- 9.132.3.12 `static std::shared_ptr<metric_instance_impl>` `otf2::definition::detail::metric_instance_impl::undefined ()` `[inline],[static]`

The documentation for this class was generated from the following file:

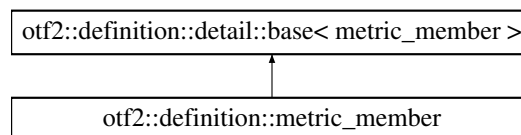
- /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/metric_instance_impl.hpp

9.133 otf2::definition::metric_member Class Reference

class representing a metric member definition

```
#include <metric_member.hpp>
```

Inheritance diagram for `otf2::definition::metric_member`:



Public Types

- typedef `impl_type::metric_type` [metric_type](#)
- typedef `impl_type::metric_mode` [metric_mode](#)
- typedef `impl_type::value_type_type` [value_type_type](#)
- typedef `impl_type::value_base_type` [value_base_type](#)
- typedef `impl_type::value_exponent_type` [value_exponent_type](#)

Public Member Functions

- [metric_member](#) ([reference< metric_member >](#) ref, [otf2::definition::string](#) name, [otf2::definition::string](#) description, [metric_type](#) type, [metric_mode](#) mode, [value_type_type](#) value_type, [value_base_type](#) value_base, [value_exponent_type](#) value_exponent, [otf2::definition::string](#) value_unit)
- [metric_member](#) ()=default
- [otf2::definition::string](#) name () const
returns the name of the metric member

- [otf2::definition::string description](#) () const
returns the description of the metric member
- [metric_type](#) type () const
returns the type of the metric member
- [metric_mode](#) mode () const
returns the mode of the metric member
- [value_type_type](#) value_type () const
returns the type of the value of the metric member
- [value_base_type](#) value_base () const
returns the base to scale the values with
- [value_exponent_type](#) value_exponent () const
returns the exponent to scale the values with
- [otf2::definition::string value_unit](#) () const
returns the unit of the values without prefixes

Additional Inherited Members

9.133.1 Detailed Description

class representing a metric member definition

A metric member defines one "channel" of an metric. It defines the value type, name etc.

9.133.2 Member Typedef Documentation

9.133.2.1 typedef impl_type::metric_mode otf2::definition::metric_member::metric_mode

9.133.2.2 typedef impl_type::metric_type otf2::definition::metric_member::metric_type

9.133.2.3 typedef impl_type::value_base_type otf2::definition::metric_member::value_base_type

9.133.2.4 typedef impl_type::value_exponent_type otf2::definition::metric_member::value_exponent_type

9.133.2.5 typedef impl_type::value_type_type otf2::definition::metric_member::value_type_type

9.133.3 Constructor & Destructor Documentation

9.133.3.1 `otf2::definition::metric_member::metric_member (reference< metric_member > ref, otf2::definition::string name, otf2::definition::string description, metric_type type, metric_mode mode, value_type_type value_type, value_base_type value_base, value_exponent_type value_exponent, otf2::definition::string value_unit) [inline]`

9.133.3.2 `otf2::definition::metric_member::metric_member () [default]`

9.133.4 Member Function Documentation

9.133.4.1 `otf2::definition::string otf2::definition::metric_member::description () const [inline]`

returns the description of the metric member

9.133.4.2 `metric_mode` `otf2::definition::metric_member::mode() const` `[inline]`

returns the mode of the metric member

See also

[otf2::common::metric_mode](#)

9.133.4.3 `otf2::definition::string` `otf2::definition::metric_member::name() const` `[inline]`

returns the name of the metric member

9.133.4.4 `metric_type` `otf2::definition::metric_member::type() const` `[inline]`

returns the type of the metric member

See also

[otf2::common::metric_type](#)

9.133.4.5 `value_base_type` `otf2::definition::metric_member::value_base() const` `[inline]`

returns the base to scale the values with

Either decimal(10) or binary(2)

See also

[otf2::common::metric_base](#)

9.133.4.6 `value_exponent_type` `otf2::definition::metric_member::value_exponent() const` `[inline]`

returns the exponent to scale the values with

9.133.4.7 `value_type_type` `otf2::definition::metric_member::value_type() const` `[inline]`

returns the type of the value of the metric member

See also

[otf2::common::type](#)

9.133.4.8 `otf2::definition::string` `otf2::definition::metric_member::value_unit() const` `[inline]`

returns the unit of the values without prefixes

The documentation for this class was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/definition/metric_member.hpp`

9.134 `otf2::definition::detail::metric_member_impl` Class Reference

```
#include <metric_member_impl.hpp>
```

Public Types

- typedef [otf2::common::metric_type](#) [metric_type](#)
- typedef [otf2::common::metric_mode](#) [metric_mode](#)
- typedef [otf2::common::type](#) [value_type_type](#)
- typedef [otf2::common::metric_base](#) [value_base_type](#)
- typedef [std::int64_t](#) [value_exponent_type](#)

Public Member Functions

- [metric_member_impl](#) ([reference](#)< [metric_member](#) > [ref](#), [otf2::definition::string](#) [name](#), [otf2::definition::string](#) [description](#), [metric_type](#) [type](#), [metric_mode](#) [mode](#), [value_type_type](#) [value_type](#), [value_base_type](#) [value_base](#), [value_exponent_type](#) [value_exponent](#), [otf2::definition::string](#) [value_unit](#))
- [metric_member_impl](#) ([const](#) [metric_member_impl](#) &)=delete
- [metric_member_impl](#) & [operator=](#) ([const](#) [metric_member_impl](#) &)=delete
- [metric_member_impl](#) ([metric_member_impl](#) &&)=default
- [metric_member_impl](#) & [operator=](#) ([metric_member_impl](#) &&)=default
- [otf2::reference](#)< [metric_member](#) > [ref](#) () const
- [otf2::definition::string](#) [name](#) () const
- [otf2::definition::string](#) [description](#) () const
- [metric_type](#) [type](#) () const
- [metric_mode](#) [mode](#) () const
- [value_type_type](#) [value_type](#) () const
- [value_base_type](#) [value_base](#) () const
- [value_exponent_type](#) [value_exponent](#) () const
- [otf2::definition::string](#) [value_unit](#) () const

Static Public Member Functions

- static [std::shared_ptr](#)< [metric_member_impl](#) > [undefined](#) ()

9.134.1 Member Typedef Documentation

9.134.1.1 typedef [otf2::common::metric_mode](#) [otf2::definition::detail::metric_member_impl::metric_mode](#)

9.134.1.2 typedef [otf2::common::metric_type](#) [otf2::definition::detail::metric_member_impl::metric_type](#)

9.134.1.3 typedef [otf2::common::metric_base](#) [otf2::definition::detail::metric_member_impl::value_base_type](#)

9.134.1.4 typedef [std::int64_t](#) [otf2::definition::detail::metric_member_impl::value_exponent_type](#)

9.134.1.5 typedef [otf2::common::type](#) [otf2::definition::detail::metric_member_impl::value_type_type](#)

9.134.2 Constructor & Destructor Documentation

9.134.2.1 [otf2::definition::detail::metric_member_impl::metric_member_impl](#) ([reference](#)< [metric_member](#) > [ref](#), [otf2::definition::string](#) [name](#), [otf2::definition::string](#) [description](#), [metric_type](#) [type](#), [metric_mode](#) [mode](#), [value_type_type](#) [value_type](#), [value_base_type](#) [value_base](#), [value_exponent_type](#) [value_exponent](#), [otf2::definition::string](#) [value_unit](#)) [[inline](#)]

9.134.2.2 [otf2::definition::detail::metric_member_impl::metric_member_impl](#) ([const](#) [metric_member_impl](#) &) [[delete](#)]

9.134.2.3 `otf2::definition::detail::metric_member_impl::metric_member_impl (metric_member_impl &&)`
[default]

9.134.3 Member Function Documentation

9.134.3.1 `otf2::definition::string otf2::definition::detail::metric_member_impl::description () const` [inline]

9.134.3.2 `metric_mode otf2::definition::detail::metric_member_impl::mode () const` [inline]

9.134.3.3 `otf2::definition::string otf2::definition::detail::metric_member_impl::name () const` [inline]

9.134.3.4 `metric_member_impl& otf2::definition::detail::metric_member_impl::operator= (const metric_member_impl &)` [delete]

9.134.3.5 `metric_member_impl& otf2::definition::detail::metric_member_impl::operator= (metric_member_impl &&)`
[default]

9.134.3.6 `otf2::reference<metric_member> otf2::definition::detail::metric_member_impl::ref () const` [inline]

9.134.3.7 `metric_type otf2::definition::detail::metric_member_impl::type () const` [inline]

9.134.3.8 `static std::shared_ptr<metric_member_impl> otf2::definition::detail::metric_member_impl::undefined ()`
[inline],[static]

9.134.3.9 `value_base_type otf2::definition::detail::metric_member_impl::value_base () const` [inline]

9.134.3.10 `value_exponent_type otf2::definition::detail::metric_member_impl::value_exponent () const` [inline]

9.134.3.11 `value_type_type otf2::definition::detail::metric_member_impl::value_type () const` [inline]

9.134.3.12 `otf2::definition::string otf2::definition::detail::metric_member_impl::value_unit () const` [inline]

The documentation for this class was generated from the following file:

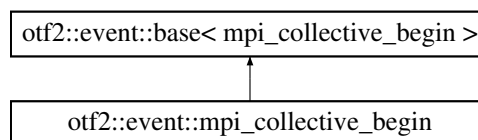
- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/metric_member_impl.hpp](#)

9.135 otf2::event::mpi_collective_begin Class Reference

The class representing the [mpi_collective_begin](#) event.

```
#include <mpi_collective_begin.hpp>
```

Inheritance diagram for `otf2::event::mpi_collective_begin`:



Public Member Functions

- [mpi_collective_begin \(otf2::chrono::time_point timestamp\)](#)
standard constructor
- [mpi_collective_begin \(const mpi_collective_begin &other, otf2::chrono::time_point timestamp\)](#)

special copy constructor

9.135.1 Detailed Description

The class representing the `mpi_collective_begin` event.

9.135.2 Constructor & Destructor Documentation

9.135.2.1 `otf2::event::mpi_collective_begin::mpi_collective_begin (otf2::chrono::time_point timestamp)` `[inline]`

standard constructor

Parameters

| | |
|------------------|--|
| <i>timestamp</i> | the timestamp, when the event has happen |
|------------------|--|

9.135.2.2 `otf2::event::mpi_collective_begin::mpi_collective_begin (const mpi_collective_begin & other, otf2::chrono::time_point timestamp)` `[inline]`

special copy constructor

Parameters

| | |
|------------------|-------------------|
| <i>other</i> | the other event |
| <i>timestamp</i> | the new timestamp |

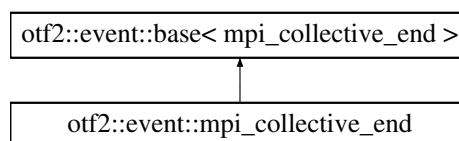
The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_collective_begin.hpp

9.136 otf2::event::mpi_collective_end Class Reference

```
#include <mpi_collective_end.hpp>
```

Inheritance diagram for `otf2::event::mpi_collective_end`:



Public Types

- typedef `otf2::common::collective_type` `collective_type`

Public Member Functions

- `mpi_collective_end (otf2::chrono::time_point timestamp, collective_type type, otf2::definition::comm comm, std::uint32_t root, std::uint64_t sent, std::uint64_t received)`
- `mpi_collective_end (const mpi_collective_end & other, otf2::chrono::time_point timestamp)`
- `collective_type type () const`
- `otf2::definition::comm comm () const`

- `std::uint32_t root () const`
- `std::uint64_t sent () const`
- `std::uint64_t received () const`

9.136.1 Member Typedef Documentation

9.136.1.1 `typedef otf2::common::collective_type otf2::event::mpi_collective_end::collective_type`

9.136.2 Constructor & Destructor Documentation

9.136.2.1 `otf2::event::mpi_collective_end::mpi_collective_end (otf2::chrono::time_point timestamp, collective_type type, otf2::definition::comm comm, std::uint32_t root, std::uint64_t sent, std::uint64_t received)` `[inline]`

9.136.2.2 `otf2::event::mpi_collective_end::mpi_collective_end (const mpi_collective_end & other, otf2::chrono::time_point timestamp)` `[inline]`

9.136.3 Member Function Documentation

9.136.3.1 `otf2::definition::comm otf2::event::mpi_collective_end::comm () const` `[inline]`

9.136.3.2 `std::uint64_t otf2::event::mpi_collective_end::received () const` `[inline]`

9.136.3.3 `std::uint32_t otf2::event::mpi_collective_end::root () const` `[inline]`

9.136.3.4 `std::uint64_t otf2::event::mpi_collective_end::sent () const` `[inline]`

9.136.3.5 `collective_type otf2::event::mpi_collective_end::type () const` `[inline]`

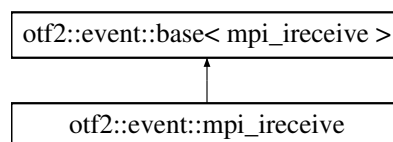
The documentation for this class was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_collective_end.hpp`

9.137 otf2::event::mpi_ireceive Class Reference

```
#include <mpi_ireceive.hpp>
```

Inheritance diagram for `otf2::event::mpi_ireceive`:



Public Member Functions

- `mpi_ireceive (otf2::chrono::time_point timestamp, uint32_t sender, otf2::definition::comm comm, uint32_t msg_tag, uint64_t msg_length, uint64_t request_id)`
- `mpi_ireceive (const otf2::event::mpi_ireceive &other, otf2::chrono::time_point timestamp)`
- `uint32_t sender () const`
- `otf2::definition::comm comm () const`
- `uint32_t msg_tag () const`

- uint64_t [msg_length](#) () const
- uint64_t [request_id](#) () const

9.137.1 Constructor & Destructor Documentation

9.137.1.1 `otf2::event::mpi_ireceive::mpi_ireceive (otf2::chrono::time_point timestamp, uint32_t sender, otf2::definition::comm comm, uint32_t msg_tag, uint64_t msg_length, uint64_t request_id)` [[inline](#)]

9.137.1.2 `otf2::event::mpi_ireceive::mpi_ireceive (const otf2::event::mpi_ireceive & other, otf2::chrono::time_point timestamp)` [[inline](#)]

9.137.2 Member Function Documentation

9.137.2.1 `otf2::definition::comm otf2::event::mpi_ireceive::comm () const` [[inline](#)]

9.137.2.2 `uint64_t otf2::event::mpi_ireceive::msg_length () const` [[inline](#)]

9.137.2.3 `uint32_t otf2::event::mpi_ireceive::msg_tag () const` [[inline](#)]

9.137.2.4 `uint64_t otf2::event::mpi_ireceive::request_id () const` [[inline](#)]

9.137.2.5 `uint32_t otf2::event::mpi_ireceive::sender () const` [[inline](#)]

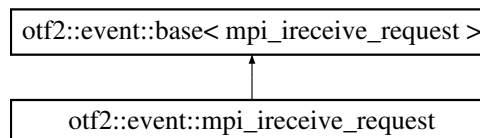
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_ireceive.hpp](#)

9.138 otf2::event::mpi_ireceive_request Class Reference

```
#include <mpi_ireceive_request.hpp>
```

Inheritance diagram for otf2::event::mpi_ireceive_request:



Public Member Functions

- [mpi_ireceive_request](#) (otf2::chrono::time_point timestamp, uint64_t request_id)
- [mpi_ireceive_request](#) (const otf2::event::mpi_ireceive_request &other, otf2::chrono::time_point timestamp)
- uint64_t [request_id](#) () const
- uint32_t [sender](#) () const
- [otf2::definition::comm comm](#) () const
- uint32_t [msg_tag](#) () const
- uint64_t [msg_length](#) () const
- bool [has_attached_data](#) () const

Friends

- class [buffer](#)

9.138.1 Constructor & Destructor Documentation

- 9.138.1.1 `otf2::event::mpi_ireceive_request::mpi_ireceive_request (otf2::chrono::time_point timestamp, uint64_t request_id)` `[inline]`
- 9.138.1.2 `otf2::event::mpi_ireceive_request::mpi_ireceive_request (const otf2::event::mpi_ireceive_request & other, otf2::chrono::time_point timestamp)` `[inline]`

9.138.2 Member Function Documentation

- 9.138.2.1 `otf2::definition::comm otf2::event::mpi_ireceive_request::comm () const` `[inline]`
- 9.138.2.2 `bool otf2::event::mpi_ireceive_request::has_attached_data () const` `[inline]`
- 9.138.2.3 `uint64_t otf2::event::mpi_ireceive_request::msg_length () const` `[inline]`
- 9.138.2.4 `uint32_t otf2::event::mpi_ireceive_request::msg_tag () const` `[inline]`
- 9.138.2.5 `uint64_t otf2::event::mpi_ireceive_request::request_id () const` `[inline]`
- 9.138.2.6 `uint32_t otf2::event::mpi_ireceive_request::sender () const` `[inline]`

9.138.3 Friends And Related Function Documentation

- 9.138.3.1 `friend class buffer` `[friend]`

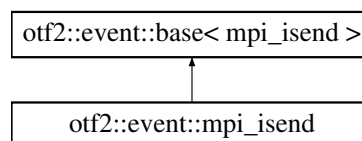
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_ireceive_request.hpp](#)

9.139 otf2::event::mpi_isend Class Reference

```
#include <mpi_isend.hpp>
```

Inheritance diagram for otf2::event::mpi_isend:



Public Member Functions

- `mpi_isend (otf2::chrono::time_point timestamp, uint32_t receiver, otf2::definition::comm comm, uint32_t msg_tag, uint64_t msg_length, uint64_t request_id)`
- `mpi_isend (const otf2::event::mpi_isend &other, otf2::chrono::time_point timestamp)`
- `uint32_t receiver () const`
- `otf2::definition::comm comm () const`
- `uint32_t msg_tag () const`
- `uint64_t msg_length () const`
- `uint64_t request_id () const`

9.139.1 Constructor & Destructor Documentation

9.139.1.1 `otf2::event::mpi_isend::mpi_isend (otf2::chrono::time_point timestamp, uint32_t receiver, otf2::definition::comm comm, uint32_t msg_tag, uint64_t msg_length, uint64_t request_id)` `[inline]`

9.139.1.2 `otf2::event::mpi_isend::mpi_isend (const otf2::event::mpi_isend & other, otf2::chrono::time_point timestamp)` `[inline]`

9.139.2 Member Function Documentation

9.139.2.1 `otf2::definition::comm otf2::event::mpi_isend::comm () const` `[inline]`

9.139.2.2 `uint64_t otf2::event::mpi_isend::msg_length () const` `[inline]`

9.139.2.3 `uint32_t otf2::event::mpi_isend::msg_tag () const` `[inline]`

9.139.2.4 `uint32_t otf2::event::mpi_isend::receiver () const` `[inline]`

9.139.2.5 `uint64_t otf2::event::mpi_isend::request_id () const` `[inline]`

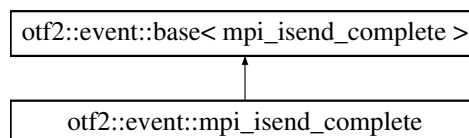
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_isend.hpp](#)

9.140 otf2::event::mpi_isend_complete Class Reference

```
#include <mpi_isend_complete.hpp>
```

Inheritance diagram for `otf2::event::mpi_isend_complete`:



Public Member Functions

- [mpi_isend_complete \(otf2::chrono::time_point *timestamp*, uint64_t *request_id*\)](#)
- [mpi_isend_complete \(const otf2::event::mpi_isend_complete &*other*, otf2::chrono::time_point *timestamp*\)](#)
- [uint64_t request_id \(\) const](#)

9.140.1 Constructor & Destructor Documentation

9.140.1.1 `otf2::event::mpi_isend_complete::mpi_isend_complete (otf2::chrono::time_point timestamp, uint64_t request_id)` `[inline]`

9.140.1.2 `otf2::event::mpi_isend_complete::mpi_isend_complete (const otf2::event::mpi_isend_complete & other, otf2::chrono::time_point timestamp)` `[inline]`

9.140.2 Member Function Documentation

9.140.2.1 `uint64_t of2::event::mpi_isend_complete::request_id() const [inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/of2xx/event/mpi_isend_complete.hpp](#)

9.141 nitro::log::filter::mpi_master_filter< Record > Class Template Reference

```
#include <mpi_master_filter.hpp>
```

Public Types

- typedef Record [record_type](#)

Public Member Functions

- bool [filter](#) (Record &r) const

9.141.1 Member Typedef Documentation

9.141.1.1 `template<typename Record > typedef Record nitro::log::filter::mpi_master_filter< Record >::record_type`

9.141.2 Member Function Documentation

9.141.2.1 `template<typename Record > bool nitro::log::filter::mpi_master_filter< Record >::filter (Record & r) const [inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/filter/mpi_master_filter.hpp](#)

9.142 nitro::log::mpi_rank_attribute Class Reference

```
#include <mpi_rank.hpp>
```

Public Member Functions

- [mpi_rank_attribute](#) ()
- int [mpi_rank](#) () const

9.142.1 Constructor & Destructor Documentation

9.142.1.1 `nitro::log::mpi_rank_attribute::mpi_rank_attribute() [inline]`

9.142.2 Member Function Documentation

9.142.2.1 `int nitro::log::mpi_rank_attribute::mpi_rank() const [inline]`

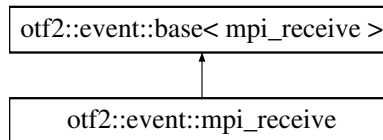
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/attribute/mpi_rank.hpp](#)

9.143 otf2::event::mpi_receive Class Reference

```
#include <mpi_receive.hpp>
```

Inheritance diagram for otf2::event::mpi_receive:



Public Member Functions

- [mpi_receive](#) (otf2::chrono::time_point timestamp, uint32_t sender, otf2::definition::comm comm, uint32_t msg_tag, uint64_t msg_length)
- [mpi_receive](#) (const otf2::event::mpi_receive &other, otf2::chrono::time_point timestamp)
- uint32_t sender () const
- otf2::definition::comm comm () const
- uint32_t msg_tag () const
- uint64_t msg_length () const

9.143.1 Constructor & Destructor Documentation

9.143.1.1 [otf2::event::mpi_receive::mpi_receive](#) (otf2::chrono::time_point timestamp, uint32_t sender, otf2::definition::comm comm, uint32_t msg_tag, uint64_t msg_length) [inline]

9.143.1.2 [otf2::event::mpi_receive::mpi_receive](#) (const otf2::event::mpi_receive & other, otf2::chrono::time_point timestamp) [inline]

9.143.2 Member Function Documentation

9.143.2.1 [otf2::definition::comm otf2::event::mpi_receive::comm](#) () const [inline]

9.143.2.2 [uint64_t otf2::event::mpi_receive::msg_length](#) () const [inline]

9.143.2.3 [uint32_t otf2::event::mpi_receive::msg_tag](#) () const [inline]

9.143.2.4 [uint32_t otf2::event::mpi_receive::sender](#) () const [inline]

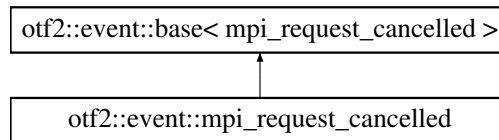
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_receive.hpp](#)

9.144 otf2::event::mpi_request_cancelled Class Reference

```
#include <mpi_request_cancelled.hpp>
```

Inheritance diagram for otf2::event::mpi_request_cancelled:



Public Member Functions

- [mpi_request_cancelled](#) (otf2::chrono::time_point timestamp, uint64_t request_id)
- [mpi_request_cancelled](#) (const otf2::event::mpi_request_cancelled &other, otf2::chrono::time_point timestamp)
- [uint64_t request_id](#) () const

9.144.1 Constructor & Destructor Documentation

9.144.1.1 [otf2::event::mpi_request_cancelled::mpi_request_cancelled](#) (otf2::chrono::time_point timestamp, uint64_t request_id) [inline]

9.144.1.2 [otf2::event::mpi_request_cancelled::mpi_request_cancelled](#) (const otf2::event::mpi_request_cancelled &other, otf2::chrono::time_point timestamp) [inline]

9.144.2 Member Function Documentation

9.144.2.1 [uint64_t otf2::event::mpi_request_cancelled::request_id](#) () const [inline]

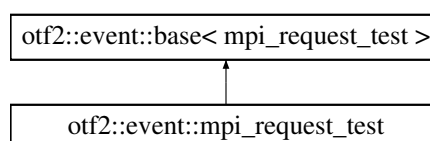
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_request_cancelled.hpp](#)

9.145 otf2::event::mpi_request_test Class Reference

```
#include <mpi_request_test.hpp>
```

Inheritance diagram for otf2::event::mpi_request_test:



Public Member Functions

- [mpi_request_test](#) (otf2::chrono::time_point timestamp, uint64_t request_id)
- [mpi_request_test](#) (const otf2::event::mpi_request_test &other, otf2::chrono::time_point timestamp)
- [uint64_t request_id](#) () const

9.145.1 Constructor & Destructor Documentation

9.145.1.1 [otf2::event::mpi_request_test::mpi_request_test](#) (otf2::chrono::time_point timestamp, uint64_t request_id) [inline]

9.145.1.2 `otf2::event::mpi_request_test::mpi_request_test (const otf2::event::mpi_request_test & other, otf2::chrono::time_point timestamp) [inline]`

9.145.2 Member Function Documentation

9.145.2.1 `uint64_t otf2::event::mpi_request_test::request_id () const [inline]`

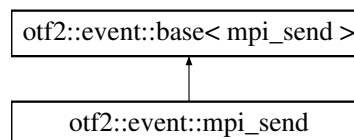
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_request_test.hpp](#)

9.146 otf2::event::mpi_send Class Reference

```
#include <mpi_send.hpp>
```

Inheritance diagram for `otf2::event::mpi_send`:



Public Member Functions

- `mpi_send (otf2::chrono::time_point timestamp, uint32_t receiver, otf2::definition::comm comm, uint32_t msg_tag, uint64_t msg_length)`
- `mpi_send (const otf2::event::mpi_send &other, otf2::chrono::time_point timestamp)`
- `uint32_t receiver () const`
- `otf2::definition::comm comm () const`
- `uint32_t msg_tag () const`
- `uint64_t msg_length () const`

9.146.1 Constructor & Destructor Documentation

9.146.1.1 `otf2::event::mpi_send::mpi_send (otf2::chrono::time_point timestamp, uint32_t receiver, otf2::definition::comm comm, uint32_t msg_tag, uint64_t msg_length) [inline]`

9.146.1.2 `otf2::event::mpi_send::mpi_send (const otf2::event::mpi_send & other, otf2::chrono::time_point timestamp) [inline]`

9.146.2 Member Function Documentation

9.146.2.1 `otf2::definition::comm otf2::event::mpi_send::comm () const [inline]`

9.146.2.2 `uint64_t otf2::event::mpi_send::msg_length () const [inline]`

9.146.2.3 `uint32_t otf2::event::mpi_send::msg_tag () const [inline]`

9.146.2.4 `uint32_t otf2::event::mpi_send::receiver () const [inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_send.hpp](#)

9.147 haec_sim::resource_manager::packet_component::name_type Struct Reference

```
#include <components.hpp>
```

Public Member Functions

- template<class Archive >
void [serialize](#) (Archive &ar, const unsigned int file_version)

Public Attributes

- std::string [name](#)

9.147.1 Member Function Documentation

9.147.1.1 template<class Archive > void haec_sim::resource_manager::packet_component::name_type::serialize (Archive &ar, const unsigned int *file_version*) [\[inline\]](#)

9.147.2 Member Data Documentation

9.147.2.1 std::string haec_sim::resource_manager::packet_component::name_type::name

The documentation for this struct was generated from the following file:

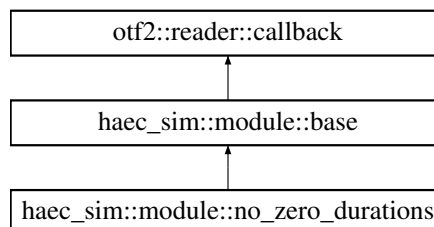
- /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/[components.hpp](#)

9.148 haec_sim::module::no_zero_durations Class Reference

{ A module, which ensures that there are no functions with a duration of zero }

```
#include <no_zero_durations.hpp>
```

Inheritance diagram for haec_sim::module::no_zero_durations:



Public Member Functions

- [no_zero_durations](#) (boost::mpi::communicator *comm*, haec_sim::topology::topology &t)
- virtual void [event](#) (otf2::definition::location location, const otf2::event::enter &evnt) override
- virtual void [event](#) (otf2::definition::location location, const otf2::event::leave &evnt) override

Additional Inherited Members

9.148.1 Detailed Description

{ A module, which ensures that there are no functions with a duration of zero }

9.148.2 Constructor & Destructor Documentation

9.148.2.1 `haec_sim::module::no_zero_durations::no_zero_durations (boost::mpi::communicator comm, haec_sim::topology::topology & t)` `[inline]`

Creates own constructor.

9.148.3 Member Function Documentation

9.148.3.1 `virtual void haec_sim::module::no_zero_durations::event (otf2::definition::location location, const otf2::event::enter & evnt)` `[inline]`, `[override]`, `[virtual]`

Copyhandler for given event.

Reimplemented from [haec_sim::module::base](#).

9.148.3.2 `virtual void haec_sim::module::no_zero_durations::event (otf2::definition::location location, const otf2::event::leave & evnt)` `[inline]`, `[override]`, `[virtual]`

Copyhandler for given event.

Reimplemented from [haec_sim::module::base](#).

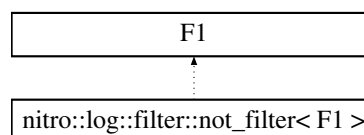
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/module/no_zero_durations.hpp](#)

9.149 nitro::log::filter::not_filter< F1 > Class Template Reference

```
#include <not_filter.hpp>
```

Inheritance diagram for `nitro::log::filter::not_filter< F1 >`:



Public Types

- typedef `F1::record_type` [record_type](#)

Public Member Functions

- bool [filter](#) ([record_type](#) &r) const

9.149.1 Member Typedef Documentation

9.149.1.1 `template<typename F1 > typedef F1::record_type nitro::log::filter::not_filter< F1 >::record_type`

9.149.2 Member Function Documentation

9.149.2.1 `template<typename F1 > bool nitro::log::filter::not_filter< F1 >::filter (record_type & r) const [inline]`

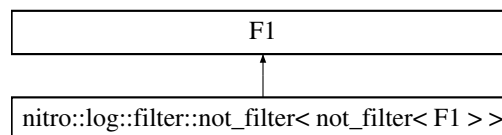
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/filter/not_filter.hpp](#)

9.150 nitro::log::filter::not_filter< not_filter< F1 > > Class Template Reference

```
#include <not_filter.hpp>
```

Inheritance diagram for nitro::log::filter::not_filter< not_filter< F1 > >:



The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/filter/not_filter.hpp](#)

9.151 nitro::log::sink::null Class Reference

```
#include <null.hpp>
```

Public Member Functions

- void `sink` (std::string)

9.151.1 Member Function Documentation

9.151.1.1 `void nitro::log::sink::null::sink (std::string) [inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/sink/null.hpp](#)

9.152 nitro::log::filter::null_filter< Record > Class Template Reference

```
#include <null_filter.hpp>
```

Public Types

- typedef Record [record_type](#)

Public Member Functions

- constexpr bool [filter](#) (Record &) const

9.152.1 Member Typedef Documentation

9.152.1.1 `template<typename Record > typedef Record nitro::log::filter::null_filter< Record >::record_type`

9.152.2 Member Function Documentation

9.152.2.1 `template<typename Record > constexpr bool nitro::log::filter::null_filter< Record >::filter (Record &) const`
`[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/filter/null_filter.hpp](#)

9.153 nitro::log::detail::null_stream Class Reference

```
#include <stream.hpp>
```

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/stream.hpp](#)

9.154 nitro::log::omp_thread_id_attribute Class Reference

```
#include <omp_thread_id.hpp>
```

Public Member Functions

- [omp_thread_id_attribute](#) ()
- int [omp_thread_id](#) () const

9.154.1 Constructor & Destructor Documentation

9.154.1.1 `nitro::log::omp_thread_id_attribute::omp_thread_id_attribute ()` `[inline]`

9.154.2 Member Function Documentation

9.154.2.1 `int nitro::log::omp_thread_id_attribute::omp_thread_id () const` `[inline]`

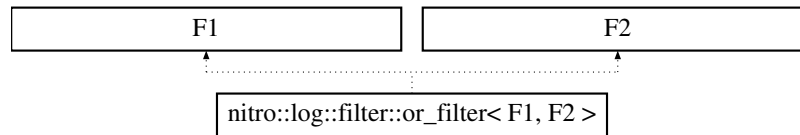
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/attribute/omp_thread_id.hpp](#)

9.155 nitro::log::filter::or_filter< F1, F2 > Class Template Reference

```
#include <or_filter.hpp>
```

Inheritance diagram for nitro::log::filter::or_filter< F1, F2 >:



Public Types

- typedef F1::record_type [record_type](#)

Public Member Functions

- bool [filter](#) ([record_type](#) &r) const

9.155.1 Member Typedef Documentation

9.155.1.1 `template<typename F1 , typename F2 > typedef F1::record_type nitro::log::filter::or_filter< F1, F2 >::record_type`

9.155.2 Member Function Documentation

9.155.2.1 `template<typename F1 , typename F2 > bool nitro::log::filter::or_filter< F1, F2 >::filter (record_type & r) const [inline]`

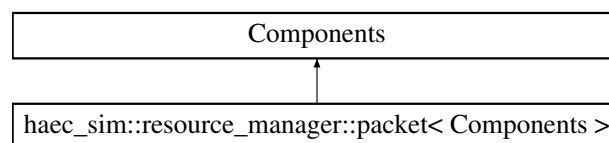
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/filter/or_filter.hpp](#)

9.156 haec_sim::resource_manager::packet< Components > Class Template Reference

```
#include <packet.hpp>
```

Inheritance diagram for haec_sim::resource_manager::packet< Components >:



Public Member Functions

- [packet](#) ()=default
- `template<class Archive > void serialize (Archive &ar, const unsigned int file_version)`

9.156.1 Constructor & Destructor Documentation

9.156.1.1 `template<typename... Components> haec_sim::resource_manager::packet< Components >::packet ()`
`[default]`

9.156.2 Member Function Documentation

9.156.2.1 `template<typename... Components> template<class Archive > void haec_sim::resource_↔
manager::packet< Components >::serialize (Archive & ar, const unsigned int file_version)`
`[inline]`

The documentation for this class was generated from the following file:

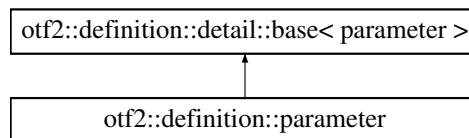
- `/home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/packet.hpp`

9.157 otf2::definition::parameter Class Reference

class for representing parameter definitions

```
#include <parameter.hpp>
```

Inheritance diagram for `otf2::definition::parameter`:



Public Types

- `typedef impl_type::parameter_type parameter_type`

Public Member Functions

- `parameter (otf2::reference< parameter > ref, string name, parameter_type type)`
- `parameter ()=default`
- `otf2::definition::string name () const`
returns the name of the paramter definion as a string definition
- `parameter_type type () const`
returns the type of the parameter defintion

Additional Inherited Members

9.157.1 Detailed Description

class for representing parameter definitions

9.157.2 Member Typedef Documentation

9.157.2.1 `typedef impl_type::parameter_type otf2::definition::parameter::parameter_type`

9.157.3 Constructor & Destructor Documentation

9.157.3.1 `otf2::definition::parameter::parameter (otf2::reference< parameter > ref, string name, parameter_type type)` `[inline]`

9.157.3.2 `otf2::definition::parameter::parameter ()` `[default]`

9.157.4 Member Function Documentation

9.157.4.1 `otf2::definition::string otf2::definition::parameter::name () const` `[inline]`

returns the name of the paramter definion as a string definition

Returns

a [string](#) definiton containing the name

9.157.4.2 `parameter_type otf2::definition::parameter::type () const` `[inline]`

returns the type of the parameter defintion

See also

[otf2::common::parameter_type](#)

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/parameter.hpp](#)

9.158 `otf2::definition::detail::parameter_impl` Class Reference

```
#include <parameter_impl.hpp>
```

Public Types

- `typedef otf2::common::parameter_type parameter_type`

Public Member Functions

- `parameter_impl (otf2::reference< parameter > ref, string name, parameter_type type)`
- `~parameter_impl ()`
- `parameter_impl (const parameter_impl &)=delete`
- `parameter_impl & operator= (const parameter_impl &)=delete`
- `parameter_impl (parameter_impl &&)=delete`
- `parameter_impl & operator= (parameter_impl &&)=delete`
- `string name () const`
- `parameter_type type () const`
- `otf2::reference< parameter > ref () const`

Static Public Member Functions

- `static std::shared_ptr< parameter_impl > undefined ()`

9.158.1 Member Typedef Documentation

9.158.1.1 `typedef otf2::common::parameter_type otf2::definition::detail::parameter_impl::parameter_type`

9.158.2 Constructor & Destructor Documentation

9.158.2.1 `otf2::definition::detail::parameter_impl::parameter_impl (otf2::reference< parameter > ref, string name, parameter_type type) [inline]`

9.158.2.2 `otf2::definition::detail::parameter_impl::~~parameter_impl () [inline]`

9.158.2.3 `otf2::definition::detail::parameter_impl::parameter_impl (const parameter_impl &) [delete]`

9.158.2.4 `otf2::definition::detail::parameter_impl::parameter_impl (parameter_impl &&) [delete]`

9.158.3 Member Function Documentation

9.158.3.1 `string otf2::definition::detail::parameter_impl::name () const [inline]`

9.158.3.2 `parameter_impl& otf2::definition::detail::parameter_impl::operator= (const parameter_impl &) [delete]`

9.158.3.3 `parameter_impl& otf2::definition::detail::parameter_impl::operator= (parameter_impl &&) [delete]`

9.158.3.4 `otf2::reference<parameter> otf2::definition::detail::parameter_impl::ref () const [inline]`

9.158.3.5 `parameter_type otf2::definition::detail::parameter_impl::type () const [inline]`

9.158.3.6 `static std::shared_ptr<parameter_impl> otf2::definition::detail::parameter_impl::undefined () [inline], [static]`

The documentation for this class was generated from the following file:

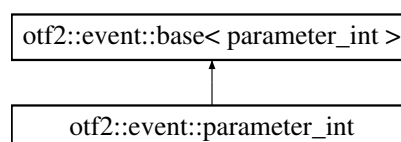
- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/parameter_impl.hpp](#)

9.159 otf2::event::parameter_int Class Reference

The class representing a [parameter_int](#) event.

```
#include <parameter_int.hpp>
```

Inheritance diagram for `otf2::event::parameter_int`:



Public Member Functions

- [parameter_int](#) ([otf2::chrono::time_point](#) timestamp, [otf2::definition::parameter](#) parameter, [std::int64_t](#) value)
default constructor
- [parameter_int](#) (const [otf2::event::parameter_int](#) &other, [otf2::chrono::time_point](#) timestamp)

- special copy constructor, taking an other object and a new timestamp*

 - `otf2::definition::parameter parameter () const`
returns the corresponding parameter definition
 - `std::int64_t value () const`
returns the value of the definition

9.159.1 Detailed Description

The class representing a [parameter_int](#) event.

9.159.2 Constructor & Destructor Documentation

9.159.2.1 `otf2::event::parameter_int::parameter_int (otf2::chrono::time_point timestamp, otf2::definition::parameter parameter, std::int64_t value) [inline]`

default constructor

Parameters

| | |
|------------------|--|
| <i>timestamp</i> | the timestamp, when the event has happen |
| <i>parameter</i> | the corresponding parameter definition |
| <i>value</i> | the value of the parameter |

9.159.2.2 `otf2::event::parameter_int::parameter_int (const otf2::event::parameter_int & other, otf2::chrono::time_point timestamp) [inline]`

special copy constructor, taking an other object and a new timestamp

Parameters

| | |
|------------------|------------------|
| <i>other</i> | the other object |
| <i>timestamp</i> | new timestamp |

9.159.3 Member Function Documentation

9.159.3.1 `otf2::definition::parameter otf2::event::parameter_int::parameter () const [inline]`

returns the corresponding parameter definition

Returns

the parameter definition

9.159.3.2 `std::int64_t otf2::event::parameter_int::value () const [inline]`

returns the value of the definition

Returns

the value

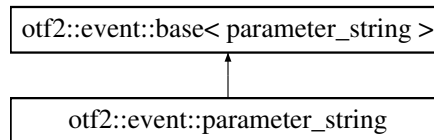
The documentation for this class was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/event/parameter_int.hpp`

9.160 otf2::event::parameter_string Class Reference

```
#include <parameter_string.hpp>
```

Inheritance diagram for otf2::event::parameter_string:



Public Member Functions

- [parameter_string](#) (otf2::chrono::time_point timestamp, otf2::definition::parameter parameter, otf2::definition::string value)
- [parameter_string](#) (const otf2::event::parameter_string &other, otf2::chrono::time_point timestamp)
- [otf2::definition::parameter](#) parameter () const
- [otf2::definition::string](#) value () const

9.160.1 Constructor & Destructor Documentation

9.160.1.1 [otf2::event::parameter_string::parameter_string](#) (otf2::chrono::time_point *timestamp*, otf2::definition::parameter *parameter*, otf2::definition::string *value*) [inline]

9.160.1.2 [otf2::event::parameter_string::parameter_string](#) (const otf2::event::parameter_string & *other*, otf2::chrono::time_point *timestamp*) [inline]

9.160.2 Member Function Documentation

9.160.2.1 [otf2::definition::parameter](#) otf2::event::parameter_string::parameter () const [inline]

9.160.2.2 [otf2::definition::string](#) otf2::event::parameter_string::value () const [inline]

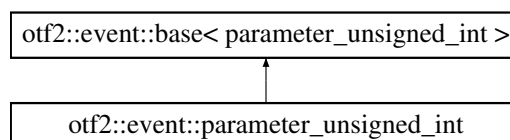
The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/event/[parameter_string.hpp](#)

9.161 otf2::event::parameter_unsigned_int Class Reference

```
#include <parameter_unsigned_int.hpp>
```

Inheritance diagram for otf2::event::parameter_unsigned_int:



Public Member Functions

- [parameter_unsigned_int](#) ([otf2::chrono::time_point](#) timestamp, [otf2::definition::parameter](#) parameter, [std::uint64_t](#) value)
- [parameter_unsigned_int](#) (const [otf2::event::parameter_unsigned_int](#) &other, [otf2::chrono::time_point](#) timestamp)
- [otf2::definition::parameter](#) parameter () const
- [std::uint64_t](#) value () const

9.161.1 Constructor & Destructor Documentation

9.161.1.1 [otf2::event::parameter_unsigned_int::parameter_unsigned_int](#) ([otf2::chrono::time_point](#) timestamp, [otf2::definition::parameter](#) parameter, [std::uint64_t](#) value) [\[inline\]](#)

9.161.1.2 [otf2::event::parameter_unsigned_int::parameter_unsigned_int](#) (const [otf2::event::parameter_unsigned_int](#) &other, [otf2::chrono::time_point](#) timestamp) [\[inline\]](#)

9.161.2 Member Function Documentation

9.161.2.1 [otf2::definition::parameter](#) [otf2::event::parameter_unsigned_int::parameter](#) () const [\[inline\]](#)

9.161.2.2 [std::uint64_t](#) [otf2::event::parameter_unsigned_int::value](#) () const [\[inline\]](#)

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/parameter_unsigned_int.hpp](#)

9.162 nitro::log::pid_attribute Class Reference

```
#include <pid.hpp>
```

Public Member Functions

- [pid_attribute](#) ()
- int [pid](#) () const

9.162.1 Constructor & Destructor Documentation

9.162.1.1 [nitro::log::pid_attribute::pid_attribute](#) () [\[inline\]](#)

9.162.2 Member Function Documentation

9.162.2.1 int [nitro::log::pid_attribute::pid](#) () const [\[inline\]](#)

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/attribute/pid.hpp](#)

9.163 algebra::polynomial< T > Class Template Reference

```
#include <polynomial.hpp>
```

Public Member Functions

- [polynomial](#) ()=default
- [polynomial](#) (boost::numeric::ublas::matrix< T > A, T p)
- T [operator](#)() (T s) const

9.163.1 Constructor & Destructor Documentation

9.163.1.1 `template<typename T > algebra::polynomial< T >::polynomial ()` [default]

9.163.1.2 `template<typename T > algebra::polynomial< T >::polynomial (boost::numeric::ublas::matrix< T > A, T p)` [inline]

9.163.2 Member Function Documentation

9.163.2.1 `template<typename T > T algebra::polynomial< T >::operator() (T s) const` [inline]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/algebra/[polynomial.hpp](#)

9.164 haec_sim::topology::position Class Reference

```
#include <position.hpp>
```

Public Types

- using [value_type](#) = int32_t

Public Member Functions

- [position](#) ()
- [position](#) (std::initializer_list< [value_type](#) > list)
- const [value_type](#) & [operator](#)[] (std::size_t i) const
- [value_type](#) & [operator](#)[] (std::size_t i)
- template<class Archive >
void [serialize](#) (Archive &ar, const unsigned int file_version)

Static Public Member Functions

- static auto [undefined](#) () -> [position](#)

Static Public Attributes

- static const uint32_t [dimensions](#) = 3

Friends

- std::istream & [operator](#)>> (std::istream &s, [position](#) &pos)
- bool [operator](#)!= (const [position](#) &a, const [position](#) &b)
- bool [operator](#)== (const [position](#) &a, const [position](#) &b)
- bool [operator](#)< (const [position](#) &a, const [position](#) &b)

9.164.1 Member Typedef Documentation

9.164.1.1 using haec_sim::topology::position::value_type = int32_t

9.164.2 Constructor & Destructor Documentation

9.164.2.1 haec_sim::topology::position::position () [inline]

9.164.2.2 haec_sim::topology::position::position (std::initializer_list< value_type > list) [inline]

9.164.3 Member Function Documentation

9.164.3.1 const value_type& haec_sim::topology::position::operator[] (std::size_t i) const [inline]

9.164.3.2 value_type& haec_sim::topology::position::operator[] (std::size_t i) [inline]

9.164.3.3 template<class Archive > void haec_sim::topology::position::serialize (Archive & ar, const unsigned int file_version) [inline]

9.164.3.4 static auto haec_sim::topology::position::undefined ()-> position [inline],[static]

9.164.4 Friends And Related Function Documentation

9.164.4.1 bool operator!= (const position & a, const position & b) [friend]

9.164.4.2 bool operator< (const position & a, const position & b) [friend]

9.164.4.3 bool operator== (const position & a, const position & b) [friend]

9.164.4.4 std::istream& operator>> (std::istream & s, position & pos) [friend]

9.164.5 Member Data Documentation

9.164.5.1 const uint32_t haec_sim::topology::position::dimensions = 3 [static]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/topology/position.hpp](#)

9.165 haec_sim::resource_manager::packet_component::position_type Struct Reference

```
#include <components.hpp>
```

Public Member Functions

- template<class Archive >
void [serialize](#) (Archive &ar, const unsigned int file_version)

Public Attributes

- [haec_sim::topology::position position](#)

9.165.1 Member Function Documentation

9.165.1.1 `template<class Archive > void haec_sim::resource_manager::packet_component::position_type::serialize (Archive & ar, const unsigned int file_version) [inline]`

9.165.2 Member Data Documentation

9.165.2.1 `haec_sim::topology::position haec_sim::resource_manager::packet_component::position_type::position`

The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp

9.166 haec_sim::resource_manager::process_pool Class Reference

```
#include <process_pool.hpp>
```

Static Public Member Functions

- static void `init` (boost::mpi::communicator world, boost::mpi::communicator workers)
{ initialize process pool with global communicator and on for workers }
- static void `enter` (boost::mpi::communicator local, `haec_sim::topology::topology` &t)
processes enter this function to wait until needed
- static boost::mpi::communicator `spawn` (`haec_sim::resource_manager::type` type, std::size_t num_↔ processes)
Allocates processes from process pool to be resource managers.
- static void `shutdown` ()
removes all remaining processes in process pool
- static boost::mpi::communicator & `world_comm` ()
Contains all workers and all remaining in process pool Valid on workers and processes in the process pool.
- static boost::mpi::communicator & `worker_comm` ()
Contains all workers.

9.166.1 Member Function Documentation

9.166.1.1 `static void haec_sim::resource_manager::process_pool::enter (boost::mpi::communicator local, haec_sim::topology::topology & t) [inline],[static]`

processes enter this function to wait until needed

Parameters

| | |
|--------------|---|
| <i>local</i> | the communicator between all idling processes |
| <i>conf</i> | the configuration for the idling processes |

9.166.1.2 `static void haec_sim::resource_manager::process_pool::init (boost::mpi::communicator world, boost::mpi::communicator workers) [inline],[static]`

```
{ initialize process pool with global communicator and on for workers }
```

9.166.1.3 `static void haec_sim::resource_manager::process_pool::shutdown () [inline],[static]`

removes all remaining processes in process pool

This is needed to have a clean exit

9.166.1.4 `static boost::mpi::communicator haec_sim::resource_manager::process_pool::spawn (haec_sim::resource_manager::type type, std::size_t num_processes) [inline],[static]`

Allocates processes from process pool to be resource managers.

This function can only be used for worker processes. This is a collective operation, so all processes have to enter this function

9.166.1.5 `static boost::mpi::communicator& haec_sim::resource_manager::process_pool::worker_comm () [inline],[static]`

Contains all workers.

Only valid on worker processes

9.166.1.6 `static boost::mpi::communicator& haec_sim::resource_manager::process_pool::world_comm () [inline],[static]`

Contains all workers and all remaining in process pool Valid on workers and processes in the process pool.

The documentation for this class was generated from the following file:

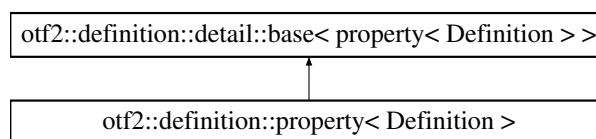
- /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/process_pool.hpp

9.167 otf2::definition::property< Definition > Class Template Reference

class for representing property definitions

```
#include <fwd.hpp>
```

Inheritance diagram for otf2::definition::property< Definition >:



Public Member Functions

- [property](#) (Definition [def](#), [string name](#), [string value](#))
- [property](#) ()=default
- [otf2::definition::string name](#) () const
returns the name of the property
- [otf2::definition::string value](#) () const
returns the value of the parameter definition
- [Definition def](#) () const
returns the referenced definition record

Additional Inherited Members

9.167.1 Detailed Description

```
template<class Definition>class otf2::definition::property< Definition >
```

class for representing property definitions

9.167.2 Constructor & Destructor Documentation

9.167.2.1 `template<class Definition> otf2::definition::property< Definition >::property (Definition def, string name, string value) [inline]`

9.167.2.2 `template<class Definition> otf2::definition::property< Definition >::property () [default]`

9.167.3 Member Function Documentation

9.167.3.1 `template<class Definition> Definition otf2::definition::property< Definition >::def () const [inline]`

returns the referenced definition record

9.167.3.2 `template<class Definition> otf2::definition::string otf2::definition::property< Definition >::name () const [inline]`

returns the name of the property

Returns

a [string](#) definiton containing the name

9.167.3.3 `template<class Definition> otf2::definition::string otf2::definition::property< Definition >::value () const [inline]`

returns the value of the parameter defintion

The documentation for this class was generated from the following files:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/fwd.hpp](#)
- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/property.hpp](#)

9.168 otf2::definition::detail::property_impl< Definition > Class Template Reference

```
#include <property_impl.hpp>
```

Public Member Functions

- [property_impl](#) (Definition def, string name, string value)
- [property_impl](#) (const [property_impl](#) &)=delete
- [property_impl](#) & operator= (const [property_impl](#) &)=delete
- [property_impl](#) ([property_impl](#) &&)=delete
- [property_impl](#) & operator= ([property_impl](#) &&)=delete
- [string name](#) () const

- [string value](#) () const
- Definition [def](#) () const
- [otf2::reference](#)< [property](#)< Definition > > [ref](#) () const

Static Public Member Functions

- static std::shared_ptr< [property_impl](#) > [undefined](#) ()

9.168.1 Constructor & Destructor Documentation

- 9.168.1.1 `template<typename Definition > otf2::definition::detail::property_impl< Definition >::property_impl (Definition def, string name, string value) [inline]`
- 9.168.1.2 `template<typename Definition > otf2::definition::detail::property_impl< Definition >::property_impl (const property_impl< Definition > &) [delete]`
- 9.168.1.3 `template<typename Definition > otf2::definition::detail::property_impl< Definition >::property_impl (property_impl< Definition > &&) [delete]`

9.168.2 Member Function Documentation

- 9.168.2.1 `template<typename Definition > Definition otf2::definition::detail::property_impl< Definition >::def () const [inline]`
- 9.168.2.2 `template<typename Definition > string otf2::definition::detail::property_impl< Definition >::name () const [inline]`
- 9.168.2.3 `template<typename Definition > property_impl& otf2::definition::detail::property_impl< Definition >::operator=(const property_impl< Definition > &) [delete]`
- 9.168.2.4 `template<typename Definition > property_impl& otf2::definition::detail::property_impl< Definition >::operator=(property_impl< Definition > &&) [delete]`
- 9.168.2.5 `template<typename Definition > otf2::reference<property<Definition> > otf2::definition::detail::property_impl< Definition >::ref () const [inline]`
- 9.168.2.6 `template<typename Definition > static std::shared_ptr<property_impl> otf2::definition::detail::property_impl< Definition >::undefined () [inline],[static]`
- 9.168.2.7 `template<typename Definition > string otf2::definition::detail::property_impl< Definition >::value () const [inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/property_impl.hpp](#)

9.169 nitro::log::pthread_id_attribute Class Reference

```
#include <pthread_id.hpp>
```

Public Member Functions

- [pthread_id_attribute](#) ()
- std::uint64_t [pthread_id](#) () const

9.169.1 Constructor & Destructor Documentation

9.169.1.1 `nitro::log::pthread_id_attribute::pthread_id_attribute ()` [`inline`]

9.169.2 Member Function Documentation

9.169.2.1 `std::uint64_t nitro::log::pthread_id_attribute::pthread_id () const` [`inline`]

The documentation for this class was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/nitro/log/attribute/pthread_id.hpp`

9.170 haec_sim::resource_manager::packet_component::rank_type Struct Reference

```
#include <components.hpp>
```

Public Member Functions

- `template<class Archive > void serialize (Archive &ar, const unsigned int file_version)`

Public Attributes

- `int rank`

9.170.1 Member Function Documentation

9.170.1.1 `template<class Archive > void haec_sim::resource_manager::packet_component::rank_type::serialize (Archive &ar, const unsigned int file_version)` [`inline`]

9.170.2 Member Data Documentation

9.170.2.1 `int haec_sim::resource_manager::packet_component::rank_type::rank`

The documentation for this struct was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp`

9.171 otf2::reader::reader Class Reference

the class for reading in trace files

```
#include <reader.hpp>
```

Public Member Functions

- `reader (const std::string &name)`
constructor Triggers initialization done callback
- `void read_definitions ()`
triggers the read of all definition records

- void `register_location` (`otf2::definition::location` location) const
tells the reader, that it should read the events of the given location
- void `read_events` ()
triggers the read of all event records
- `std::uint64_t num_locations` () const
returns the number of locations
- `otf2::reader::callback & callback` ()
returns the callback instance
- bool `has_callback` () const
returns true, if a callback was set
- void `set_callback` (`otf2::reader::callback &callback`, bool buffered=false)
set the given callback as callback for the reader
- `reader` (`reader &`)=delete
- `reader & operator=` (`reader &`)=delete
- `~reader` ()
destructor
- `map_type< otf2::definition::attribute > & attributes` ()
returns all attributes
- `map_type< otf2::definition::comm > & comms` ()
returns all comms
- `map_type< otf2::definition::location > & locations` ()
returns all locations
- const `map_type< otf2::definition::location > & locations` () const
returns all locations in a const context
- `map_type< otf2::definition::location_group > & location_groups` ()
returns all location_groups
- `map_type< otf2::definition::parameter > & parameters` ()
returns all parameters
- `map_type< otf2::definition::region > & regions` ()
returns all regions
- `map_type< otf2::definition::string > & strings` ()
returns all strings
- `map_type< otf2::definition::system_tree_node > & system_tree_nodes` ()
returns all system tree nodes
- `map_type< otf2::definition::locations_group > & locations_groups` ()
returns all groups of locations
- `map_type< otf2::definition::regions_group > & regions_groups` ()
returns all groups of regions
- `map_type< otf2::definition::comm_locations_group > & comm_locations_groups` ()
returns all group of comm locations
- `map_type< otf2::definition::comm_group > & comm_groups` ()
returns all group of comms
- `map_type< otf2::definition::comm_self_group > & comm_self_groups` ()
returns all group of comm selfs
- `map_type< otf2::definition::metric_member > & metric_members` ()
returns all metric members
- `map_type< otf2::definition::metric_class > & metric_classes` ()
returns all metric classes
- `map_type< otf2::definition::metric_instance > & metric_instances` ()
returns all metric instances
- `map_type< otf2::definition::location_property > & location_properties` ()

- returns all location properties*
- `map_type< otf2::definition::location_group_property > & location_group_properties ()`
returns all location group properties
- `map_type< otf2::definition::system_tree_node_property > & system_tree_node_properties ()`
returns all system tree node properties
- `otf2::chrono::ticks ticks_per_second () const`
returns the ticks per second
- `bool has_clock_properties () const`
returns if clock properties were read from the trace already
- `void set_clock_properties (std::unique_ptr< otf2::definition::clock_properties > &&cp)`
set the clock properties definition You shouldn't call this function
- `const otf2::definition::clock_properties & clock_properties () const`
returns clock properties definition

Friends

- OTF2_CallbackCode `detail::definition::global::location` (void *userData, OTF2_LocationRef self, OTF2_↔StringRef name, OTF2_LocationType locationType, uint64_t numberOfEvents, OTF2_LocationGroupRef locationGroup)

9.171.1 Detailed Description

the class for reading in trace files

9.171.2 Constructor & Destructor Documentation

9.171.2.1 `otf2::reader::reader::reader (const std::string & name) [inline]`

constructor Triggers initialization done callback

Parameters

| | |
|-------------|--|
| <i>name</i> | the path to the <code>otf2</code> anchor file. Usually <code>traces.otf2</code> in a score-p trace |
|-------------|--|

Exceptions

| | |
|-----------|------------------------------|
| <i>if</i> | it can't open the trace file |
|-----------|------------------------------|

9.171.2.2 `otf2::reader::reader::reader (reader &) [delete]`

9.171.2.3 `otf2::reader::reader::~~reader () [inline]`

destructor

Closes the OTF2_Reader

9.171.3 Member Function Documentation

9.171.3.1 `map_type<otf2::definition::attribute>& otf2::reader::reader::attributes () [inline]`

returns all attributes

This function returns every attribute definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.2 otf2::reader::callback& otf2::reader::reader::callback () [inline]

returns the callback instance

Returns

the instance of the callback

9.171.3.3 const otf2::definition::clock_properties& otf2::reader::reader::clock_properties () const [inline]

returns clock properties definition

9.171.3.4 map_type<otf2::definition::comm_group>& otf2::reader::reader::comm_groups () [inline]

returns all group of comms

This function returns every group definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.5 map_type<otf2::definition::comm_locations_group>& otf2::reader::reader::comm_locations_groups () [inline]

returns all group of comm locations

This function returns every group definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.6 map_type<otf2::definition::comm_self_group>& otf2::reader::reader::comm_self_groups () [inline]

returns all group of comm selfs

This function returns every group definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.7 `map_type<otf2::definition::comm>& otf2::reader::reader::comms () [inline]`

returns all comms

This function returns every comm definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.8 `bool otf2::reader::reader::has_callback () const [inline]`

returns true, if a callback was set

Returns

whether a callback was set

9.171.3.9 `bool otf2::reader::reader::has_clock_properties () const [inline]`

returns if clock properties were read from the trace already

9.171.3.10 `map_type<otf2::definition::location_group_property>& otf2::reader::reader::location_group_properties () [inline]`

returns all location group properties

This function returns every location property definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.11 `map_type<otf2::definition::location_group>& otf2::reader::reader::location_groups () [inline]`

returns all location_groups

This function returns every location group definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.12 `map_type<otf2::definition::location_property>& otf2::reader::reader::location_properties () [inline]`

returns all location properties

This function returns every location property definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.13 map_type<otf2::definition::location>& otf2::reader::reader::locations () [inline]

returns all locations

This function returns every location definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.14 const map_type<otf2::definition::location>& otf2::reader::reader::locations () const [inline]

returns all locations in a const context

This function returns every locations definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.15 map_type<otf2::definition::locations_group>& otf2::reader::reader::locations_groups () [inline]

returns all groups of locations

This function returns every group definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.16 map_type<otf2::definition::metric_class>& otf2::reader::reader::metric_classes () [inline]

returns all metric classes

This function returns every group definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.17 `map_type<otf2::definition::metric_instance>& otf2::reader::reader::metric_instances () [inline]`

returns all metric instances

This function returns every group definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.18 `map_type<otf2::definition::metric_member>& otf2::reader::reader::metric_members () [inline]`

returns all metric members

This function returns every metric member definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.19 `std::uint64_t otf2::reader::reader::num_locations () const [inline]`

returns the number of locations

9.171.3.20 `reader& otf2::reader::reader::operator=(reader &) [delete]`

9.171.3.21 `map_type<otf2::definition::parameter>& otf2::reader::reader::parameters () [inline]`

returns all parameters

This function returns every parameter definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.22 `void otf2::reader::reader::read_definitions () [inline]`

triggers the read of all definition records

For each definition the callback is called.

After all definitions are read, the method [otf2::reader::callback::definitions_done\(\)](#) is called.

9.171.3.23 `void otf2::reader::reader::read_events () [inline]`

triggers the read of all event records

For each event the callback is called.

After all events are read, the method [otf2::reader::callback::events_done\(\)](#) is called.

9.171.3.24 `map_type<otf2::definition::region>& otf2::reader::reader::regions () [inline]`

returns all regions

This function returns every regions definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.25 `map_type<otf2::definition::regions_group>& otf2::reader::reader::regions_groups () [inline]`

returns all groups of regions

This function returns every attribute definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a [otf2::definition::container](#) which contains all definitions

9.171.3.26 `void otf2::reader::reader::register_location (otf2::definition::location location) const [inline]`

tells the reader, that it should read the events of the given location

Call this method for every location you want to have the events read.

Defaults to no locations.

Parameters

| | | |
|-----------|-----------------|---|
| <i>in</i> | <i>location</i> | the location, for which the events should be read |
|-----------|-----------------|---|

9.171.3.27 `void otf2::reader::reader::set_callback (otf2::reader::callback & callback, bool buffered = false) [inline]`

set the given callback as callback for the reader

Parameters

| | |
|-----------------|--|
| <i>callback</i> | an otf2::reader::callback instance |
| <i>buffered</i> | if it's set to true, when internally use otf2::event::buffer |

9.171.3.28 `void otf2::reader::reader::set_clock_properties (std::unique_ptr< otf2::definition::clock_properties > && cp) [inline]`

set the clock properties definition You shouldn't call this function

Parameters

| | |
|-----------|--|
| <i>cp</i> | a <code>unique_ptr</code> to a clock properties definition |
|-----------|--|

9.171.3.29 `map_type<otf2::definition::string>& otf2::reader::reader::strings () [inline]`

returns all strings

This function returns every string definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a `otf2::definition::container` which contains all definitions

9.171.3.30 `map_type<otf2::definition::system_tree_node_property>& otf2::reader::reader::system_tree_node_↵
properties () [inline]`

returns all system tree node properties

This function returns every location property definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a `otf2::definition::container` which contains all definitions

9.171.3.31 `map_type<otf2::definition::system_tree_node>& otf2::reader::reader::system_tree_nodes ()
[inline]`

returns all system tree nodes

This function returns every system tree node definition, which was read until the call of the function. This means there could be missing some. On the other hand it is guaranteed, that any referenced definition is already there. So you are safe, when using a returned definition.

Returns

a `otf2::definition::container` which contains all definitions

9.171.3.32 `otf2::chrono::ticks otf2::reader::reader::ticks_per_second () const [inline]`

returns the ticks per second

You should check with `has_clock_properties()` if there was a clock properties definition before you rely on this. Otherwise you will get the default of 10^9 ticks per second.

9.171.4 Friends And Related Function Documentation

9.171.4.1 `OTF2_CallbackCode detail::definition::global::location (void * userData, OTF2_LocationRef self,
OTF2_StringRef name, OTF2_LocationType locationType, uint64_t numberOfEvents, OTF2_LocationGroupRef
locationGroup) [friend]`

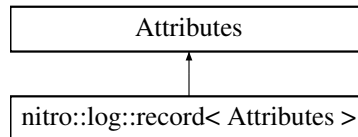
The documentation for this class was generated from the following file:

- `/home/tilsche/vc/haec-sim/include/otf2xx/reader/reader.hpp`

9.172 nitro::log::record< Attributes > Class Template Reference

```
#include <record.hpp>
```

Inheritance diagram for nitro::log::record< Attributes >:



The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/nitro/log/record.hpp

9.173 otf2::reference< Type > Class Template Reference

represents a reference number for definitions

```
#include <fwd.hpp>
```

Public Types

- typedef [traits::reference_type< Type >::type](#) [ref_type](#)
ref_type the underlying type of refernce numbers

Public Member Functions

- [reference](#) ()=delete
- [reference](#) ([ref_type](#) ref)
construct by value
- [ref_type](#) [get](#) () const
returns the reference number
- [~reference](#) ()=default
- bool [is_undefined](#) () const
returns if the number equals to OTF2_UNDEFINED_UINT64
- [operator ref_type](#) () const
operator ref_type

Static Public Member Functions

- [template<typename as_type = ref_type>](#)
[static ref_type undefined](#) ()
returns the undefined representing number

9.173.1 Detailed Description

```
template<typename Type>class otf2::reference< Type >
```

represents a reference number for definitions

For each definition should be an own reference type, so the address space is seperated in a typesafe manner.

Template Parameters

| | |
|-------------|---|
| <i>Type</i> | Used to separate address spaces for different definitions |
|-------------|---|

9.173.2 Member Typedef Documentation

9.173.2.1 `template<typename Type> typedef traits::reference_type<Type>::type otf2::reference< Type >::ref_type`

`ref_type` the underlying type of reference numbers

Mostly `uint64_t` or `uint32_t`

9.173.3 Constructor & Destructor Documentation

9.173.3.1 `template<typename Type> otf2::reference< Type >::reference () [delete]`

9.173.3.2 `template<typename Type> otf2::reference< Type >::reference (ref_type ref) [inline]`

construct by value

Parameters

| | |
|------------|------------|
| <i>ref</i> | the number |
|------------|------------|

9.173.3.3 `template<typename Type> otf2::reference< Type >::~~reference () [default]`

9.173.4 Member Function Documentation

9.173.4.1 `template<typename Type> ref_type otf2::reference< Type >::get () const [inline]`

returns the reference number

Returns

the reference number

9.173.4.2 `template<typename Type> bool otf2::reference< Type >::is_undefined () const [inline]`

returns if the number equals to `OTF2_UNDEFINED_UINT64`

Returns

true or false

9.173.4.3 `template<typename Type> otf2::reference< Type >::operator ref_type () const [inline]`

operator `ref_type`

implicitly convertible to `ref_type`

9.173.4.4 `template<typename Type> template<typename as_type = ref_type> static ref_type otf2::reference< Type >::undefined () [inline],[static]`

returns the undefined representing number

Returns

OTF2_UNDEFINED_UINT64

The documentation for this class was generated from the following files:

- [/home/tilsche/vc/haec-sim/include/otf2xx/fwd.hpp](#)
- [/home/tilsche/vc/haec-sim/include/otf2xx/reference.hpp](#)

9.174 otf2::reference_generator< RefType > Class Template Reference

gives a free reference number for a set of definitions

```
#include <fwd.hpp>
```

Public Types

- typedef RefType [ref_type](#)

Public Member Functions

- template<typename Definition >
void [register_definition](#) (Definition def)
- void [register_reference](#) ([ref_type](#) ref)
- [ref_type](#) [next](#) ()

9.174.1 Detailed Description

```
template<typename RefType>class otf2::reference_generator< RefType >
```

gives a free reference number for a set of definitions

This class generates free reference numbers for definitons. For this task, it needs to know every used reference number first.

Therefore you need to register every definition.

Note

The algorithm for generating a number is undefined.

Template Parameters

| | |
|-------------------|---|
| <i>Definition</i> | The definition for which it should generate numbers |
|-------------------|---|

9.174.2 Member Typedef Documentation

9.174.2.1 `template<typename RefType > typedef RefType otf2::reference_generator< RefType >::ref_type`

9.174.3 Member Function Documentation

9.174.3.1 `template<typename RefType > ref_type otf2::reference_generator< RefType >::next () [inline]`

9.174.3.2 `template<typename RefType > template<typename Definition > void otf2::reference_generator< RefType >::register_definition (Definition def) [inline]`

9.174.3.3 `template<typename RefType > void of2::reference_generator< RefType >::register_reference (ref_type ref) [inline]`

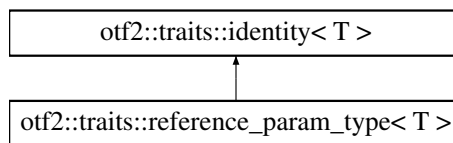
The documentation for this class was generated from the following files:

- [/home/tilsche/vc/haec-sim/include/otf2xx/fwd.hpp](#)
- [/home/tilsche/vc/haec-sim/include/otf2xx/reference_generator.hpp](#)

9.175 of2::traits::reference_param_type< T > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for `of2::traits::reference_param_type< T >`:



Additional Inherited Members

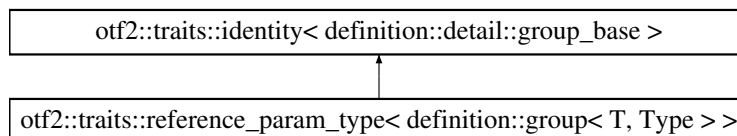
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.176 of2::traits::reference_param_type< definition::group< T, Type > > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for `of2::traits::reference_param_type< definition::group< T, Type > >`:



Additional Inherited Members

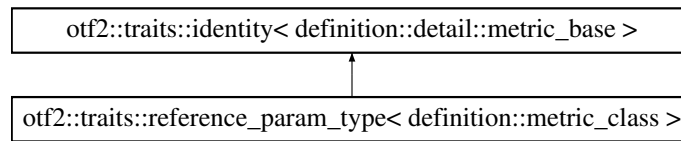
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.177 of2::traits::reference_param_type< definition::metric_class > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_param_type< definition::metric_class >:



Additional Inherited Members

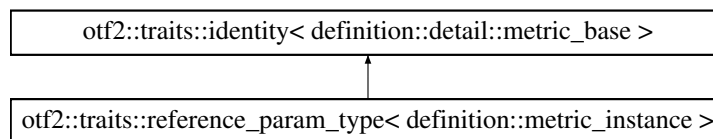
The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp

9.178 otf2::traits::reference_param_type< definition::metric_instance > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_param_type< definition::metric_instance >:



Additional Inherited Members

The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp

9.179 otf2::traits::reference_type< Type > Struct Template Reference

```
#include <reference.hpp>
```

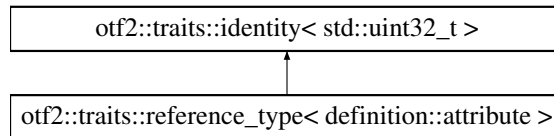
The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp

9.180 otf2::traits::reference_type< definition::attribute > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::attribute >:



Additional Inherited Members

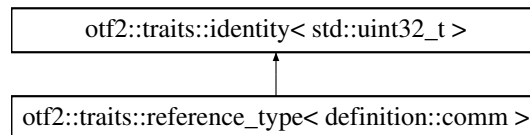
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.181 otf2::traits::reference_type< definition::comm > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::comm >:



Additional Inherited Members

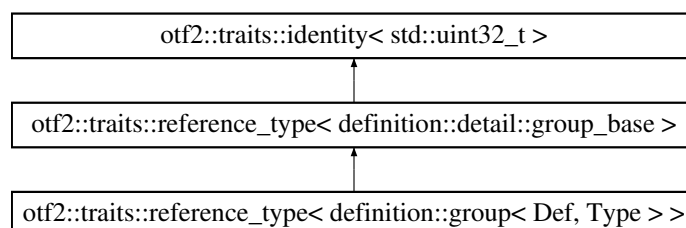
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.182 otf2::traits::reference_type< definition::detail::group_base > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::detail::group_base >:



Additional Inherited Members

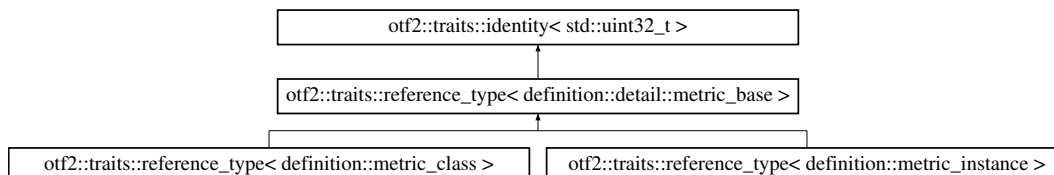
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.183 otf2::traits::reference_type< definition::detail::metric_base > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::detail::metric_base >:



Additional Inherited Members

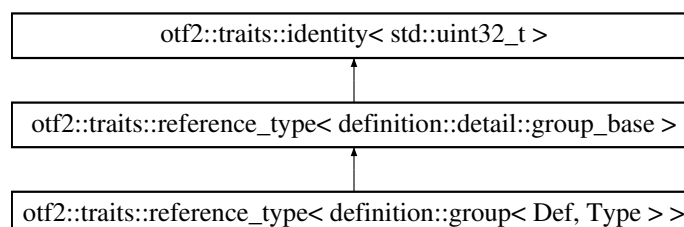
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp>

9.184 otf2::traits::reference_type< definition::group< Def, Type > > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::group< Def, Type > >:



Additional Inherited Members

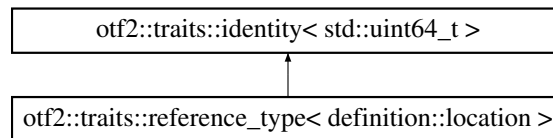
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp>

9.185 otf2::traits::reference_type< definition::location > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::location >:



Additional Inherited Members

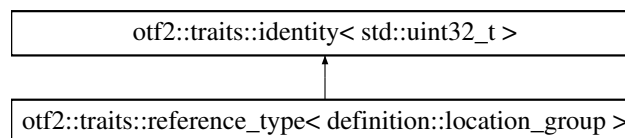
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.186 otf2::traits::reference_type< definition::location_group > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::location_group >:



Additional Inherited Members

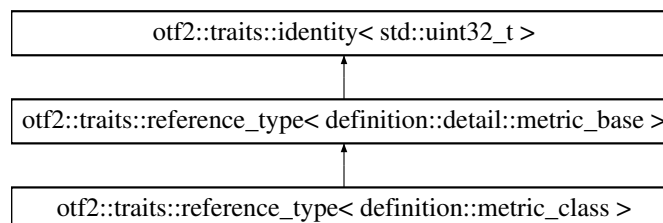
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.187 otf2::traits::reference_type< definition::metric_class > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::metric_class >:



Additional Inherited Members

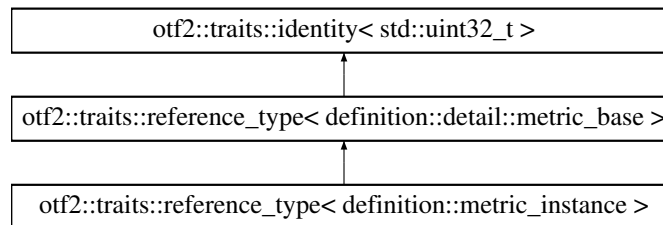
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.188 otf2::traits::reference_type< definition::metric_instance > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::metric_instance >:



Additional Inherited Members

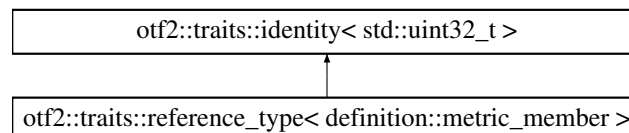
The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/traits/[reference.hpp](#)

9.189 otf2::traits::reference_type< definition::metric_member > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::metric_member >:



Additional Inherited Members

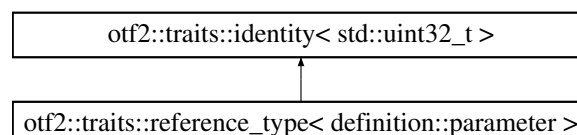
The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/traits/[reference.hpp](#)

9.190 otf2::traits::reference_type< definition::parameter > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::parameter >:



Additional Inherited Members

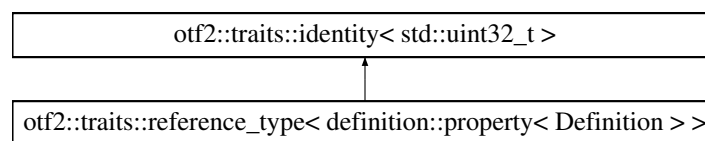
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.191 otf2::traits::reference_type< definition::property< Definition > > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::property< Definition > >:



Additional Inherited Members

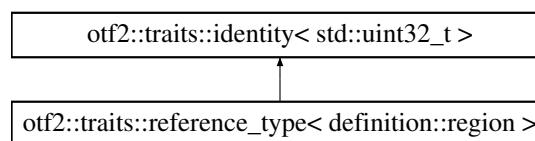
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.192 otf2::traits::reference_type< definition::region > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::region >:



Additional Inherited Members

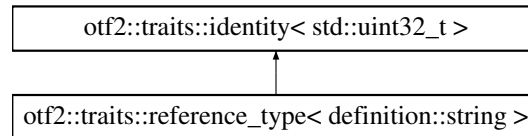
The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp](#)

9.193 otf2::traits::reference_type< definition::string > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::string >:



Additional Inherited Members

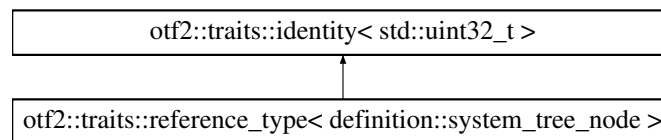
The documentation for this struct was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp>

9.194 otf2::traits::reference_type< definition::system_tree_node > Struct Template Reference

```
#include <reference.hpp>
```

Inheritance diagram for otf2::traits::reference_type< definition::system_tree_node >:



Additional Inherited Members

The documentation for this struct was generated from the following file:

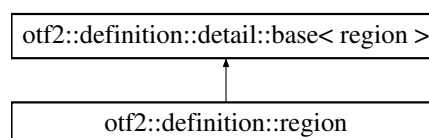
- </home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp>

9.195 otf2::definition::region Class Reference

class for representing a region definition

```
#include <region.hpp>
```

Inheritance diagram for otf2::definition::region:



Public Types

- typedef impl_type::role_type [role_type](#)
- typedef impl_type::paradigm_type [paradigm_type](#)
- typedef impl_type::flags_type [flags_type](#)

Public Member Functions

- [region](#) ([otf2::reference< region > ref](#), [otf2::definition::string name](#), [otf2::definition::string canonical_name](#), [otf2::definition::string description](#), [role_type role](#), [paradigm_type paradigm](#), [flags_type flags](#), [otf2::definition::string source_file](#), [uint32_t begin_line](#), [uint32_t end_line](#))
- [region](#) ()=default
- [otf2::definition::string name](#) () const
returns the name of the region definion as a string definition
- [otf2::definition::string canonical_name](#) () const
returns the canonical name of the region definition as a string definition e.g. demangled function name
- [otf2::definition::string description](#) () const
returns the description of the region definion as a string definition
- [role_type role](#) () const
returns the role of this region
- [paradigm_type paradigm](#) () const
returns the paradigm of this region
- [flags_type flags](#) () const
returns the flags of this region
- [otf2::definition::string source_file](#) () const
returns the name of file containing the region definion as a string definition
- [uint32_t begin_line](#) () const
returns the line number, where the region starts
- [uint32_t end_line](#) () const
returns the line number, where the region ends

Additional Inherited Members

9.195.1 Detailed Description

class for represening a region definition

9.195.2 Member Typedef Documentation

9.195.2.1 `typedef impl_type::flags_type otf2::definition::region::flags_type`

9.195.2.2 `typedef impl_type::paradigm_type otf2::definition::region::paradigm_type`

9.195.2.3 `typedef impl_type::role_type otf2::definition::region::role_type`

9.195.3 Constructor & Destructor Documentation

9.195.3.1 `otf2::definition::region::region (otf2::reference< region > ref, otf2::definition::string name, otf2::definition::string canonical_name, otf2::definition::string description, role_type role, paradigm_type paradigm, flags_type flags, otf2::definition::string source_file, uint32_t begin_line, uint32_t end_line) [inline]`

9.195.3.2 `otf2::definition::region::region () [default]`

9.195.4 Member Function Documentation

9.195.4.1 `uint32_t otf2::definition::region::begin_line () const [inline]`

returns the line number, where the region starts

9.195.4.2 `otf2::definition::string otf2::definition::region::canonical_name () const` `[inline]`

returns the canonical name of the region definition as a string definition e.g. demangled function name

Returns

a [string](#) definiton containing the canonical name

9.195.4.3 `otf2::definition::string otf2::definition::region::description () const` `[inline]`

returns the description of the region definion as a string definition

Returns

a [string](#) definiton containing the description

9.195.4.4 `uint32_t otf2::definition::region::end_line () const` `[inline]`

returns the line number, where the region ends

9.195.4.5 `flags_type otf2::definition::region::flags () const` `[inline]`

returns the flags of this region

See also

[otf2::common::flags_type](#)

9.195.4.6 `otf2::definition::string otf2::definition::region::name () const` `[inline]`

returns the name of the region definion as a string definition

Returns

a [string](#) definiton containing the name

9.195.4.7 `paradigm_type otf2::definition::region::paradigm () const` `[inline]`

returns the paradigm of this region

See also

[otf2::common::paradigm_type](#)

9.195.4.8 `role_type otf2::definition::region::role () const` `[inline]`

returns the role of this region

See also

[otf2::common::role_type](#)

9.195.4.9 `otf2::definition::string otf2::definition::region::source_file () const` `[inline]`

returns the name of file containing the region definion as a string definition

Returns

a [string](#) definiton containing the file name

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/region.hpp](#)

9.196 otf2::definition::detail::region_impl Class Reference

```
#include <region_impl.hpp>
```

Public Types

- typedef [otf2::common::role_type](#) [role_type](#)
- typedef [otf2::common::paradigm_type](#) [paradigm_type](#)
- typedef [otf2::common::flags_type](#) [flags_type](#)

Public Member Functions

- [region_impl](#) ([otf2::reference< region > ref](#), [string name](#), [string canonical_name](#), [string description](#), [role_type role](#), [paradigm_type paradigm](#), [flags_type flags](#), [string source_file](#), [uint32_t begin_line](#), [uint32_t end_line](#))
- [region_impl](#) (const [region_impl](#) &)=delete
- [region_impl](#) & [operator=](#) (const [region_impl](#) &)=delete
- [region_impl](#) ([region_impl](#) &&)=default
- [region_impl](#) & [operator=](#) ([region_impl](#) &&)=default
- [otf2::reference< region > ref](#) () const
- [string name](#) () const
- [string canonical_name](#) () const
- [string description](#) () const
- [role_type role](#) () const
- [paradigm_type paradigm](#) () const
- [flags_type flags](#) () const
- [string source_file](#) () const
- [uint32_t begin_line](#) () const
- [uint32_t end_line](#) () const

Static Public Member Functions

- static [std::shared_ptr< region_impl > undefined](#) ()

9.196.1 Member Typedef Documentation

9.196.1.1 typedef [otf2::common::flags_type](#) [otf2::definition::detail::region_impl::flags_type](#)

9.196.1.2 typedef [otf2::common::paradigm_type](#) [otf2::definition::detail::region_impl::paradigm_type](#)

9.196.1.3 `typedef otf2::common::role_type otf2::definition::detail::region_impl::role_type`

9.196.2 Constructor & Destructor Documentation

9.196.2.1 `otf2::definition::detail::region_impl::region_impl (otf2::reference< region > ref, string name, string canonical_name, string description, role_type role, paradigm_type paradigm, flags_type flags, string source_file, uint32_t begin_line, uint32_t end_line)` [inline]

9.196.2.2 `otf2::definition::detail::region_impl::region_impl (const region_impl &)` [delete]

9.196.2.3 `otf2::definition::detail::region_impl::region_impl (region_impl &&)` [default]

9.196.3 Member Function Documentation

9.196.3.1 `uint32_t otf2::definition::detail::region_impl::begin_line () const` [inline]

9.196.3.2 `string otf2::definition::detail::region_impl::canonical_name () const` [inline]

9.196.3.3 `string otf2::definition::detail::region_impl::description () const` [inline]

9.196.3.4 `uint32_t otf2::definition::detail::region_impl::end_line () const` [inline]

9.196.3.5 `flags_type otf2::definition::detail::region_impl::flags () const` [inline]

9.196.3.6 `string otf2::definition::detail::region_impl::name () const` [inline]

9.196.3.7 `region_impl& otf2::definition::detail::region_impl::operator= (const region_impl &)` [delete]

9.196.3.8 `region_impl& otf2::definition::detail::region_impl::operator= (region_impl &&)` [default]

9.196.3.9 `paradigm_type otf2::definition::detail::region_impl::paradigm () const` [inline]

9.196.3.10 `otf2::reference<region> otf2::definition::detail::region_impl::ref () const` [inline]

9.196.3.11 `role_type otf2::definition::detail::region_impl::role () const` [inline]

9.196.3.12 `string otf2::definition::detail::region_impl::source_file () const` [inline]

9.196.3.13 `static std::shared_ptr<region_impl> otf2::definition::detail::region_impl::undefined ()` [inline], [static]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/region_impl.hpp](#)

9.197 haec_sim::resource_manager::detail::serialize_helper< Args > Class Template Reference

```
#include <packet.hpp>
```

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/packet.hpp](#)

9.198 haec_sim::resource_manager::detail::serialize_helper< Packet, Archive > Class Template Reference

```
#include <packet.hpp>
```

Public Member Functions

- void [operator\(\)](#) (Packet &, Archive &, const unsigned int file_version)

9.198.1 Member Function Documentation

9.198.1.1 `template<typename Packet , typename Archive > void haec_sim::resource_manager::detail::serialize_helper< Packet, Archive >::operator() (Packet & , Archive & , const unsigned int file_version)` [`inline`]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/packet.hpp

9.199 haec_sim::resource_manager::detail::serialize_helper< Packet, Archive, Arg, Args...> Class Template Reference

```
#include <packet.hpp>
```

Public Member Functions

- void [operator\(\)](#) (Packet &r, Archive &ar, const unsigned int file_version)

9.199.1 Member Function Documentation

9.199.1.1 `template<typename Packet , typename Archive , typename Arg , typename... Args> void haec_sim::resource_manager::detail::serialize_helper< Packet, Archive, Arg, Args...>::operator() (Packet & r, Archive & ar, const unsigned int file_version)` [`inline`]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/packet.hpp

9.200 nitro::log::detail::set_severity< Attributes > Struct Template Reference

```
#include <set_attribute.hpp>
```

The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/nitro/log/detail/set_attribute.hpp

9.201 nitro::log::detail::set_severity< record< Attributes...> > Struct Template Reference

```
#include <set_attribute.hpp>
```

Public Member Functions

- void [operator\(\)](#) ([record](#)< [Attributes...](#)> &r, const [severity_level](#) &v)

9.201.1 Member Function Documentation

9.201.1.1 `template<typename... Attributes> void nitro::log::detail::set_severity< record< Attributes...> >::operator() (record< Attributes...> & r, const severity_level & v) [inline]`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/detail/set_attribute.hpp](#)

9.202 nitro::log::severity_attribute Class Reference

```
#include <severity.hpp>
```

Public Types

- typedef [severity_level](#) [severity_type](#)

Public Member Functions

- [severity_attribute](#) ()=default
- [severity_type](#) [severity](#) () const
- [severity_type](#) & [severity](#) ()

9.202.1 Member Typedef Documentation

9.202.1.1 `typedef severity_level nitro::log::severity_attribute::severity_type`

9.202.2 Constructor & Destructor Documentation

9.202.2.1 `nitro::log::severity_attribute::severity_attribute () [default]`

9.202.3 Member Function Documentation

9.202.3.1 `severity_type nitro::log::severity_attribute::severity () const [inline]`

9.202.3.2 `severity_type& nitro::log::severity_attribute::severity () [inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/attribute/severity.hpp](#)

9.203 nitro::log::filter::severity_filter< Record, N > Class Template Reference

```
#include <severity_filter.hpp>
```

Public Types

- typedef Record [record_type](#)

Public Member Functions

- bool [filter](#) (Record &r) const

Static Public Member Functions

- static void [set_severity](#) ([severity_level](#) new_sev)
- static [severity_level](#) [min_severity](#) ()

9.203.1 Member Typedef Documentation

9.203.1.1 `template<typename Record , unsigned N = 0> typedef Record nitro::log::filter::severity_filter< Record, N >::record_type`

9.203.2 Member Function Documentation

9.203.2.1 `template<typename Record , unsigned N = 0> bool nitro::log::filter::severity_filter< Record, N >::filter (Record & r) const [inline]`

9.203.2.2 `template<typename Record , unsigned N = 0> static severity_level nitro::log::filter::severity_filter< Record, N >::min_severity () [inline],[static]`

9.203.2.3 `template<typename Record , unsigned N = 0> static void nitro::log::filter::severity_filter< Record, N >::set_severity (severity_level new_sev) [inline],[static]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/filter/severity_filter.hpp](#)

9.204 haec_sim::mapping::simulation_rank Class Reference

class to map from simulation ranks to locations

```
#include <mappings.hpp>
```

Static Public Member Functions

- static [otf2::definition::location](#) [to_location](#) (int rank)

9.204.1 Detailed Description

class to map from simulation ranks to locations

This class implements an implicit identity mapping of simulation ranks to locations.

9.204.2 Member Function Documentation

9.204.2.1 `static otf2::definition::location haec_sim::mapping::simulation_rank::to_location (int rank) [inline], [static]`

The documentation for this class was generated from the following file:

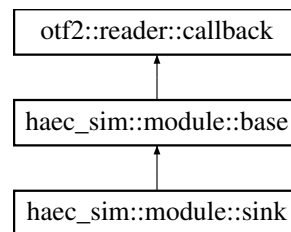
- `/home/tilsche/vc/haec-sim/include/haec_sim/mappings.hpp`

9.205 haec_sim::module::sink Class Reference

The sink class.

```
#include <sink.hpp>
```

Inheritance diagram for `haec_sim::module::sink`:



Public Member Functions

- `sink ()=delete`
- `sink (std::string path, std::string name, boost::mpi::communicator comm, haec_sim::topology::topology &t)`
constructor
- `otf2::writer::archive & archive ()`
returns underlying archive
- `const otf2::writer::archive & archive () const`
returns underlying archive
- `virtual void event (otf2::definition::location location, const otf2::event::buffer_flush &event)` override
event handler for buffer flush event
- `virtual void event (otf2::definition::location location, const otf2::event::enter &event)` override
event handler for enter event
- `virtual void event (otf2::definition::location location, const otf2::event::leave &event)` override
event handler for leave event
- `virtual void event (otf2::definition::location location, const otf2::event::measurement &event)` override
event handler for measurement event
- `virtual void event (otf2::definition::location location, const otf2::event::metric &event)` override
event handler for metric event
- `virtual void event (otf2::definition::location location, const otf2::event::mpi_send &event)` override
event handler for mpi send event
- `virtual void event (otf2::definition::location location, const otf2::event::mpi_receive &event)` override
event handler for mpi receive event
- `virtual void event (otf2::definition::location location, const otf2::event::mpi_isend &event)` override
event handler for mpi isend event
- `virtual void event (otf2::definition::location location, const otf2::event::mpi_isend_complete &event)` override
event handler for mpi isend complete event

- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_ireceive](#) &event) override
event handler for mpi ireceive event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_ireceive_request](#) &event) override
event handler for mpi ireceive complete event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_request_test](#) &event) override
event handler for mpi request test event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_request_cancelled](#) &event) override
event handler for mpi request cancelled event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_collective_begin](#) &event) override
event handler for mpi collective begin event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::mpi_collective_end](#) &event) override
event handler for mpi collective end event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::parameter_string](#) &event) override
event handler for parameter string event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::parameter_int](#) &event) override
event handler for paramter int event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::parameter_unsigned_int](#) &event) override
event handler for paramter unsigned int event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_fork](#) &event) override
event handler for thread fork event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_join](#) &event) override
event handler for thread join event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_team_begin](#) &event) override
event handler for thread team begin event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_team_end](#) &event) override
event handler for thread team end event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_acquire_lock](#) &event) override
event handler for thread acquire lock event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_release_lock](#) &event) override
event handler for thread release lock event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_task_create](#) &event) override
event handler for thread task switch event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_task_switch](#) &event) override
event handler for thread task switch event
- virtual void [event](#) ([otf2::definition::location](#) location, const [otf2::event::thread_task_complete](#) &event) override
event handler for thread task complete event
- virtual void [definition](#) ([otf2::definition::attribute](#) definition) override
definition handler for attribute definition
- virtual void [definition](#) ([otf2::definition::comm](#) definition) override
definition handler for comm definition
- virtual void [definition](#) ([otf2::definition::locations_group](#) definition) override
definition handler for group of locations definition
- virtual void [definition](#) ([otf2::definition::regions_group](#) definition) override
definition handler for group of regions definition
- virtual void [definition](#) ([otf2::definition::comm_locations_group](#) definition) override
definition handler for metric group definition
- virtual void [definition](#) ([otf2::definition::comm_group](#) definition) override
definition handler for comm group definition
- virtual void [definition](#) ([otf2::definition::comm_self_group](#) definition) override
definition handler for comm self group definition

- virtual void [definition](#) ([otf2::definition::location](#) location) override
definition handler for location definition
- virtual void [definition](#) ([otf2::definition::location_group](#) definition) override
definition handler for location group definition
- virtual void [definition](#) ([otf2::definition::parameter](#) definition) override
definition handler for parameter definition
- virtual void [definition](#) ([otf2::definition::region](#) definition) override
definition handler for region definition
- virtual void [definition](#) ([otf2::definition::string](#) definition) override
definition handler for string definition
- virtual void [definition](#) ([otf2::definition::system_tree_node](#) definition) override
definition handler for system tree node definition
- virtual void [definition](#) ([otf2::definition::clock_properties](#) definition) override
definition handler for clock properties definition
- virtual void [definition](#) ([otf2::definition::metric_class](#) definition) override
definition handler for metric class definition
- virtual void [definition](#) ([otf2::definition::metric_member](#) definition) override
definition handler for metric member definition
- virtual void [definition](#) ([otf2::definition::metric_instance](#) definition) override
definition handler for metric instance definition
- virtual void [definition](#) ([otf2::definition::system_tree_node_property](#) definition) override
definition handler for system tree node property definition
- virtual void [definition](#) ([otf2::definition::location_property](#) definition) override
definition handler for location property definition
- virtual void [definition](#) ([otf2::definition::location_group_property](#) definition) override
definition handler for location group property definition
- [otf2::definition::container](#)< [otf2::definition::location](#) > & [locations](#) ()
getter for all cached location definitions
- virtual void [definitions_done](#) (const [otf2::reader::reader](#) &rdr) override
- virtual void [events_done](#) (const [otf2::reader::reader](#) &) override
handler for the events read notification

Additional Inherited Members

9.205.1 Detailed Description

The sink class.

This class is the last one in the chain of [haec_sim](#) modules. It writes the incoming definitions and events to a new trace.

9.205.2 Constructor & Destructor Documentation

9.205.2.1 [haec_sim::module::sink::sink](#) () [[delete](#)]

9.205.2.2 [haec_sim::module::sink::sink](#) ([std::string path](#), [std::string name](#), [boost::mpi::communicator comm](#), [haec_sim::topology & t](#)) [[inline](#)]

constructor

Parameters

| | |
|-------------|--|
| <i>path</i> | The path of the new trace |
| <i>name</i> | The name of the new trace |
| <i>comm</i> | The Boost.MPI Communicator for this module |

9.205.3 Member Function Documentation

9.205.3.1 `otf2::writer::archive& haec_sim::module::sink::archive () [inline]`

returns underlying archive

Returns

the archive

9.205.3.2 `const otf2::writer::archive& haec_sim::module::sink::archive () const [inline]`

returns underlying archive

Returns

the archive

9.205.3.3 `virtual void haec_sim::module::sink::definition (otf2::definition::attribute definition) [inline], [override], [virtual]`

definition handler for attribute definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.4 `virtual void haec_sim::module::sink::definition (otf2::definition::comm definition) [inline], [override], [virtual]`

definition handler for comm definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.5 `virtual void haec_sim::module::sink::definition (otf2::definition::locations_group definition) [inline], [override], [virtual]`

definition handler for group of locations definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.6 `virtual void haec_sim::module::sink::definition (otf2::definition::regions_group definition) [inline], [override], [virtual]`

definition handler for group of regions definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.7 `virtual void haec_sim::module::sink::definition (otf2::definition::comm_locations_group definition) [inline], [override], [virtual]`

definition handler for metric group definition

Parameters

| | |
|-------------------|--|
| <i>definition</i> | the definition definition handler for comm location group definition |
| <i>definition</i> | the definition |

Reimplemented from [haec_sim::module::base](#).

9.205.3.8 `virtual void haec_sim::module::sink::definition (otf2::definition::comm_group definition) [inline], [override], [virtual]`

definition handler for comm group definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.9 `virtual void haec_sim::module::sink::definition (otf2::definition::comm_self_group definition) [inline], [override], [virtual]`

definition handler for comm self group definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.10 `virtual void haec_sim::module::sink::definition (otf2::definition::location location) [inline], [override], [virtual]`

definition handler for location definition

Parameters

| | |
|-----------------|-------------------------|
| <i>location</i> | the location definition |
|-----------------|-------------------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.11 `virtual void haec_sim::module::sink::definition (otf2::definition::location_group definition) [inline], [override], [virtual]`

definition handler for location group definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.12 `virtual void haec_sim::module::sink::definition (otf2::definition::parameter definition) [inline], [override], [virtual]`

definition handler for parameter definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.13 `virtual void haec_sim::module::sink::definition (otf2::definition::region definition) [inline], [override], [virtual]`

definition handler for region definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.14 `virtual void haec_sim::module::sink::definition (otf2::definition::string definition) [inline], [override], [virtual]`

definition handler for string definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.15 `virtual void haec_sim::module::sink::definition (otf2::definition::system_tree_node definition) [inline], [override], [virtual]`

definition handler for system tree node definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.16 virtual void haec_sim::module::sink::definition (otf2::definition::clock_properties *definition*)
[inline],[override],[virtual]

definition handler for clock properties definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.17 `virtual void haec_sim::module::sink::definition (otf2::definition::metric_class definition) [inline], [override], [virtual]`

definition handler for metric class definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.18 `virtual void haec_sim::module::sink::definition (otf2::definition::metric_member definition) [inline], [override], [virtual]`

definition handler for metric member definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.19 `virtual void haec_sim::module::sink::definition (otf2::definition::metric_instance definition) [inline], [override], [virtual]`

definition handler for metric instance definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.20 `virtual void haec_sim::module::sink::definition (otf2::definition::system_tree_node_property definition) [inline], [override], [virtual]`

definition handler for system tree node property definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.21 `virtual void haec_sim::module::sink::definition (otf2::definition::location_property definition) [inline], [override], [virtual]`

definition handler for location property definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.22 `virtual void haec_sim::module::sink::definition (otf2::definition::location_group_property definition)`
`[inline], [override], [virtual]`

definition handler for location group property definition

Parameters

| | |
|-------------------|----------------|
| <i>definition</i> | the definition |
|-------------------|----------------|

Reimplemented from [haec_sim::module::base](#).

9.205.3.23 `virtual void haec_sim::module::sink::definitions_done (const otf2::reader::reader & rdr)` `[inline],`
`[override], [virtual]`

This callback gets called after the `otf2::reader::reader` has finished reading all definition records

Reimplemented from [otf2::reader::callback](#).

9.205.3.24 `virtual void haec_sim::module::sink::event (otf2::definition::location location, const`
`otf2::event::buffer_flush & event)` `[inline], [override], [virtual]`

event handler for buffer flush event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.25 `virtual void haec_sim::module::sink::event (otf2::definition::location location, const otf2::event::enter &`
`event)` `[inline], [override], [virtual]`

event handler for enter event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.26 `virtual void haec_sim::module::sink::event (otf2::definition::location location, const otf2::event::leave &`
`event)` `[inline], [override], [virtual]`

event handler for leave event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.27 `virtual void haec_sim::module::sink::event (otf2::definition::location location, const otf2::event::measurement & event) [inline],[override],[virtual]`

event handler for measurment event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.28 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::metric & *event*) [inline],[override],[virtual]

event handler for metric event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.29 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::mpi_send & *event*) [inline],[override],[virtual]

event handler for mpi send event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.30 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::mpi_receive & *event*) [inline],[override],[virtual]

event handler for mpi receive event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.31 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::mpi_isend & *event*) [inline],[override],[virtual]

event handler for mpi isend event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.32 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::mpi_isend_complete & *event*) [inline],[override],[virtual]

event handler for mpi isend complete event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.33 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, **const otf2::event::mpi_ireceive & event**) [inline],[override],[virtual]

event handler for mpi ireceive event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.34 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, **const otf2::event::mpi_ireceive_request & event**) [inline],[override],[virtual]

event handler for mpi ireceive complete event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.35 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, **const otf2::event::mpi_request_test & event**) [inline],[override],[virtual]

event handler for mpi request test event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.36 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, **const otf2::event::mpi_request_cancelled & event**) [inline],[override],[virtual]

event handler for mpi request cancelled event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.37 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, **const otf2::event::mpi_collective_begin & event**) [inline],[override],[virtual]

event handler for mpi collective begin event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.38 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, const **otf2::event::mpi_collective_end** & *event*) `[inline]`, `[override]`, `[virtual]`

event handler for mpi collective end event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.39 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, const **otf2::event::parameter_string** & *event*) `[inline]`, `[override]`, `[virtual]`

event handler for parameter string event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.40 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, const **otf2::event::parameter_int** & *event*) `[inline]`, `[override]`, `[virtual]`

event handler for paramter int event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.41 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, const **otf2::event::parameter_unsigned_int** & *event*) `[inline]`, `[override]`, `[virtual]`

event handler for paramter unsigned int event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.42 virtual void haec_sim::module::sink::event (**otf2::definition::location** *location*, const **otf2::event::thread_fork** & *event*) `[inline]`, `[override]`, `[virtual]`

event handler for thread fork event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.43 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::thread_join & *event*) [inline],[override],[virtual]

event handler for thread join event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.44 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::thread_team_begin & *event*) [inline],[override],[virtual]

event handler for thread team begin event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.45 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::thread_team_end & *event*) [inline],[override],[virtual]

event handler for thread team end event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.46 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::thread_acquire_lock & *event*) [inline],[override],[virtual]

event handler for thread acquire lock event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.47 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::thread_release_lock & *event*) [inline],[override],[virtual]

event handler for thread release lock event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.48 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::thread_task_create & *event*) [inline],[override],[virtual]

event handler for thread task switch event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.49 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::thread_task_switch & *event*) [inline],[override],[virtual]

event handler for thread task switch event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.50 virtual void haec_sim::module::sink::event (otf2::definition::location *location*, const otf2::event::thread_task_complete & *event*) [inline],[override],[virtual]

event handler for thread task complete event

Parameters

| | |
|-----------------|---------------------------|
| <i>location</i> | the location of the event |
| <i>event</i> | the event |

Reimplemented from [haec_sim::module::base](#).

9.205.3.51 virtual void haec_sim::module::sink::events_done (const otf2::reader::reader &) [inline],[override],[virtual]

handler for the events read notification

This handler is called, after all events has passed the pipeline

Reimplemented from [haec_sim::module::base](#).

9.205.3.52 otf2::definition::container<otf2::definition::location>& haec_sim::module::sink::locations () [inline]

getter for all cached location definitions

Locations must be cached, as they depends on the number of events, which could be changed during the runtime of the simulator.

Returns

a map of all cached locations

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/module/sink.hpp](#)

9.206 nitro::log::detail::smart_stream< Record, Formatter, Sink, Filter, Severity > Class Template Reference

```
#include <stream.hpp>
```

Public Member Functions

- [smart_stream \(\)](#)
- [smart_stream \(smart_stream &&ss\)](#)
- [~smart_stream \(\)](#)
- Record & [record \(\)](#)
- [std::stringstream & sstr \(\)](#)

9.206.1 Constructor & Destructor Documentation

9.206.1.1 `template<typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter, severity_level Severity> nitro::log::detail::smart_stream< Record, Formatter, Sink, Filter, Severity >::smart_stream () [inline]`

9.206.1.2 `template<typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter, severity_level Severity> nitro::log::detail::smart_stream< Record, Formatter, Sink, Filter, Severity >::smart_stream (smart_stream< Record, Formatter, Sink, Filter, Severity > && ss) [inline]`

9.206.1.3 `template<typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter, severity_level Severity> nitro::log::detail::smart_stream< Record, Formatter, Sink, Filter, Severity >::~smart_stream () [inline]`

9.206.2 Member Function Documentation

9.206.2.1 `template<typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter, severity_level Severity> Record& nitro::log::detail::smart_stream< Record, Formatter, Sink, Filter, Severity >::record () [inline]`

9.206.2.2 `template<typename Record, template< typename > class Formatter, typename Sink, template< typename > class Filter, severity_level Severity> std::stringstream& nitro::log::detail::smart_stream< Record, Formatter, Sink, Filter, Severity >::sstr () [inline]`

The documentation for this class was generated from the following file:

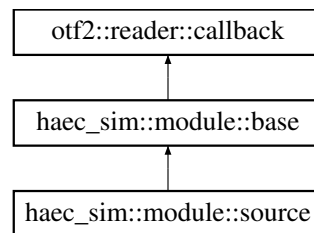
- [/home/tilsche/vc/haec-sim/include/nitro/log/stream.hpp](#)

9.207 haec_sim::module::source Class Reference

This first module in the chain of modules processing trace files.

```
#include <source.hpp>
```

Inheritance diagram for haec_sim::module::source:



Public Member Functions

- `source` (`boost::mpi::communicator comm`, `haec_sim::topology::topology &t`)
usual constructor
- virtual void `definition` (`otf2::definition::location definition`) override
callback for location definitions
- virtual void `definitions_done` (`const otf2::reader::reader &rdr`) override
This callback gets called after the otf::reader::reader has finished reading all definition records.
- virtual void `definition` (`otf2::definition::unknown`) override
- virtual void `event` (`otf2::definition::location loc`, `const otf2::event::unknown &e`) override

Additional Inherited Members

9.207.1 Detailed Description

This first module in the chain of modules processing trace files.

This class tells the `otf2::reader::reader` the locations, for which it should read the events. It also checks for the correct number of simulation processes, such that each location has its own process

9.207.2 Constructor & Destructor Documentation

9.207.2.1 `haec_sim::module::source::source (boost::mpi::communicator comm, haec_sim::topology::topology &t)`
[inline]

usual constructor

Parameters

| | |
|-------------------|--|
| <code>comm</code> | - the desired communicator for this module |
|-------------------|--|

9.207.3 Member Function Documentation

9.207.3.1 virtual void `haec_sim::module::source::definition (otf2::definition::location definition)` [inline],
[override], [virtual]

callback for location definitions

Parameters

| | |
|-------------------|-------------------------|
| <i>definition</i> | the location definition |
|-------------------|-------------------------|

Reimplemented from [haec_sim::module::base](#).

9.207.3.2 `virtual void haec_sim::module::source::definition (otf2::definition::unknown) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

9.207.3.3 `virtual void haec_sim::module::source::definitions_done (const otf2::reader::reader & rdr) [inline], [override], [virtual]`

This callback gets called after the `otf2::reader::reader` has finished reading all definition records.

Tells the `otf2::reader::reader` which local event reader should be opened.

Reimplemented from [otf2::reader::callback](#).

9.207.3.4 `virtual void haec_sim::module::source::event (otf2::definition::location loc, const otf2::event::unknown & e) [inline], [override], [virtual]`

Reimplemented from [otf2::reader::callback](#).

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/module/source.hpp](#)

9.208 nitro::log::std_thread_id_attribute Class Reference

```
#include <std_thread_id.hpp>
```

Public Member Functions

- [std_thread_id_attribute \(\)](#)
- `std::thread::id std_thread_id () const`

9.208.1 Constructor & Destructor Documentation

9.208.1.1 `nitro::log::std_thread_id_attribute::std_thread_id_attribute () [inline]`

9.208.2 Member Function Documentation

9.208.2.1 `std::thread::id nitro::log::std_thread_id_attribute::std_thread_id () const [inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/attribute/std_thread_id.hpp](#)

9.209 nitro::log::sink::stdout Class Reference

```
#include <stdout.hpp>
```

Public Member Functions

- void [sink](#) (std::string formatted_record)

9.209.1 Member Function Documentation

9.209.1.1 void nitro::log::sink::stdout::sink (std::string *formatted_record*) [inline]

The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/nitro/log/sink/stdout.hpp

9.210 nitro::log::sink::stdout_mt Class Reference

```
#include <stdout_mt.hpp>
```

Public Member Functions

- void [sink](#) (std::string formatted_record)

9.210.1 Member Function Documentation

9.210.1.1 void nitro::log::sink::stdout_mt::sink (std::string *formatted_record*) [inline]

The documentation for this class was generated from the following file:

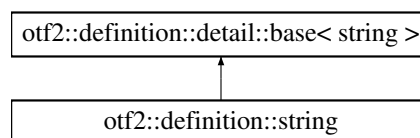
- /home/tilsche/vc/haec-sim/include/nitro/log/sink/stdout_mt.hpp

9.211 otf2::definition::string Class Reference

The string definiton class.

```
#include <string.hpp>
```

Inheritance diagram for otf2::definition::string:



Public Member Functions

- [string](#) (otf2::reference< string > ref, const std::string &str)
value constructor
- [string](#) ()=default
- const std::string & [str](#) () const
returns string value as const ref
- [operator std::string](#) () const
operator std::string

Additional Inherited Members

9.211.1 Detailed Description

The string definiton class.

This class represents an OTF2 string definition.

9.211.2 Constructor & Destructor Documentation

9.211.2.1 `otf2::definition::string::string (otf2::reference< string > ref, const std::string & str)` `[inline]`

value constructor

Takes the reference number and value for this definition.

Parameters

| | |
|------------|------------------|
| <i>ref</i> | reference number |
| <i>str</i> | string value |

9.211.2.2 `otf2::definition::string::string ()` `[default]`

9.211.3 Member Function Documentation

9.211.3.1 `otf2::definition::string::operator std::string () const` `[inline]`, `[explicit]`

operator `std::string`

A string definition is explicit convertible to a `std::string`

9.211.3.2 `const std::string& otf2::definition::string::str () const` `[inline]`

returns string value as const ref

Returns

the value

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/string.hpp](#)

9.212 otf2::definition::detail::string_impl Class Reference

```
#include <string_impl.hpp>
```

Public Member Functions

- [string_impl \(otf2::reference< string > ref, const std::string &str\)](#)
- [string_impl \(const string_impl &\)=delete](#)
- [string_impl & operator= \(const string_impl &\)=delete](#)
- [string_impl \(string_impl &&\)=default](#)
- [string_impl & operator= \(string_impl &&\)=default](#)

- [otf2::reference< string > ref \(\) const](#)
- [const std::string & str \(\) const](#)
- [~string_impl \(\)](#)

Static Public Member Functions

- [static std::shared_ptr< string_impl > undefined \(\)](#)

9.212.1 Constructor & Destructor Documentation

9.212.1.1 [otf2::definition::detail::string_impl::string_impl \(otf2::reference< string > ref, const std::string & str \)](#) [\[inline\]](#)

9.212.1.2 [otf2::definition::detail::string_impl::string_impl \(const string_impl & \)](#) [\[delete\]](#)

9.212.1.3 [otf2::definition::detail::string_impl::string_impl \(string_impl && \)](#) [\[default\]](#)

9.212.1.4 [otf2::definition::detail::string_impl::~string_impl \(\)](#) [\[inline\]](#)

9.212.2 Member Function Documentation

9.212.2.1 [string_impl& otf2::definition::detail::string_impl::operator= \(const string_impl & \)](#) [\[delete\]](#)

9.212.2.2 [string_impl& otf2::definition::detail::string_impl::operator= \(string_impl && \)](#) [\[default\]](#)

9.212.2.3 [otf2::reference<string> otf2::definition::detail::string_impl::ref \(\) const](#) [\[inline\]](#)

9.212.2.4 [const std::string& otf2::definition::detail::string_impl::str \(\) const](#) [\[inline\]](#)

9.212.2.5 [static std::shared_ptr<string_impl> otf2::definition::detail::string_impl::undefined \(\)](#) [\[inline\]](#), [\[static\]](#)

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/string_impl.hpp](#)

9.213 nitro::dl::symbol< T > Class Template Reference

Class for holding and calling a handler to a dynamically loaded symbol in a typesafe way.

```
#include <symbol.hpp>
```

9.213.1 Detailed Description

```
template<typename T>class nitro::dl::symbol< T >
```

Class for holding and calling a handler to a dynamically loaded symbol in a typesafe way.

This nice trick to get return and argument types out of the instantiation with 'symbol<Ret(Args...)>' is copied from `std::function :-)`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/dl/symbol.hpp](#)

9.214 nitro::dl::symbol< Ret(Args...)> Class Template Reference

Class for holding and calling a handler to a dynamically loaded symbol in a typesafe way.

```
#include <symbol.hpp>
```

Public Member Functions

- [symbol](#) (std::shared_ptr< void > library, const std::string &name)
Constructor for a symbol.
- Ret [operator\(\)](#) (Args...args)
Typesafe call of dynamic loaded function.

9.214.1 Detailed Description

```
template<typename Ret, typename... Args>class nitro::dl::symbol< Ret(Args...)>
```

Class for holding and calling a handler to a dynamically loaded symbol in a typesafe way.

Attention

Don't let the parental object of type [nitro::dl::dl](#) go out of scope. This will fuck up everything.

9.214.2 Constructor & Destructor Documentation

9.214.2.1 `template<typename Ret , typename... Args> nitro::dl::symbol< Ret(Args...)>::symbol (std::shared_ptr< void > library, const std::string & name)` [`inline`]

Constructor for a symbol.

This constructor gets called by the parental dl instance. You should not call it yourself.

Parameters

| | |
|----------------|---|
| <i>library</i> | the pointer to the nitro::dl::dl instance |
| <i>name</i> | the name of the symbol which is to be called |

9.214.3 Member Function Documentation

9.214.3.1 `template<typename Ret , typename... Args> Ret nitro::dl::symbol< Ret(Args...)>::operator() (Args... args)` [`inline`]

Typesafe call of dynamic loaded function.

The documentation for this class was generated from the following file:

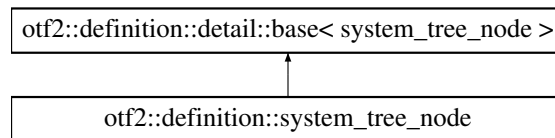
- </home/tilsche/vc/haec-sim/include/nitro/dl/symbol.hpp>

9.215 otf2::definition::system_tree_node Class Reference

class for representing system tree node definitions

```
#include <system_tree_node.hpp>
```

Inheritance diagram for otf2::definition::system_tree_node:



Public Member Functions

- [system_tree_node](#) ([reference< system_tree_node > ref](#), [otf2::definition::string name](#), [otf2::definition::string class_name](#), [otf2::definition::system_tree_node parent](#))
- [system_tree_node](#) ([reference< system_tree_node > ref](#), [otf2::definition::string name](#), [otf2::definition::string class_name](#))
- [system_tree_node](#) ()=default
- [otf2::definition::string name](#) () const
returns the name of the system tree node definion as a string definition
- [otf2::definition::string class_name](#) () const
returns the class name of the system tree node definion as a string definition
- [bool has_parent](#) () const
returns whether the definition has got a parent or not
- [otf2::definition::system_tree_node parent](#) () const
returns the parent

Additional Inherited Members

9.215.1 Detailed Description

class for representing system tree node definitions

9.215.2 Constructor & Destructor Documentation

9.215.2.1 `otf2::definition::system_tree_node::system_tree_node (reference< system_tree_node > ref, otf2::definition::string name, otf2::definition::string class_name, otf2::definition::system_tree_node parent)` [`inline`]

9.215.2.2 `otf2::definition::system_tree_node::system_tree_node (reference< system_tree_node > ref, otf2::definition::string name, otf2::definition::string class_name)` [`inline`]

9.215.2.3 `otf2::definition::system_tree_node::system_tree_node ()` [`default`]

9.215.3 Member Function Documentation

9.215.3.1 `otf2::definition::string otf2::definition::system_tree_node::class_name () const` [`inline`]

returns the class name of the system tree node definion as a string definition

Returns

a string definiton containing the class name

9.215.3.2 `bool otf2::definition::system_tree_node::has_parent () const` [`inline`]

returns whether the definition has got a parent or not

9.215.3.3 `otf2::definition::string otf2::definition::system_tree_node::name () const [inline]`

returns the name of the system tree node definion as a string definition

Returns

a string definiton containing the name

9.215.3.4 `otf2::definition::system_tree_node otf2::definition::system_tree_node::parent () const [inline]`

returns the parent

Returns

[otf2::definition::system_tree_node](#)

Exceptions

| | |
|-----------|--------------------|
| <i>if</i> | there is no parent |
|-----------|--------------------|

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/system_tree_node.hpp](#)

9.216 otf2::definition::detail::system_tree_node_impl Class Reference

```
#include <system_tree_node_impl.hpp>
```

Public Member Functions

- [system_tree_node_impl](#) (reference< [system_tree_node](#) > ref, string name, string class_name, std::shared_ptr< [system_tree_node_impl](#) > parent)
- [system_tree_node_impl](#) (reference< [system_tree_node](#) > ref, string name, const string &class_name)
- [system_tree_node_impl](#) (const [system_tree_node_impl](#) &)=delete
- [system_tree_node_impl](#) & operator= (const [system_tree_node_impl](#) &)=delete
- [system_tree_node_impl](#) ([system_tree_node_impl](#) &&)=default
- [system_tree_node_impl](#) & operator= ([system_tree_node_impl](#) &&)=default
- reference< [system_tree_node](#) > ref () const
- string name () const
- string class_name () const
- bool has_parent () const
- std::shared_ptr< [system_tree_node_impl](#) > parent () const

Static Public Member Functions

- static std::shared_ptr< [system_tree_node_impl](#) > undefined ()

9.216.1 Constructor & Destructor Documentation

9.216.1.1 `otf2::definition::detail::system_tree_node_impl::system_tree_node_impl (reference< system_tree_node > ref, string name, string class_name, std::shared_ptr< system_tree_node_impl > parent) [inline]`

9.216.1.2 `otf2::definition::detail::system_tree_node_impl::system_tree_node_impl (reference< system_tree_node > ref, string name, const string & class_name) [inline]`

9.216.1.3 `otf2::definition::detail::system_tree_node_impl::system_tree_node_impl (const system_tree_node_impl &) [delete]`

9.216.1.4 `otf2::definition::detail::system_tree_node_impl::system_tree_node_impl (system_tree_node_impl &&) [default]`

9.216.2 Member Function Documentation

9.216.2.1 `string otf2::definition::detail::system_tree_node_impl::class_name () const [inline]`

9.216.2.2 `bool otf2::definition::detail::system_tree_node_impl::has_parent () const [inline]`

9.216.2.3 `string otf2::definition::detail::system_tree_node_impl::name () const [inline]`

9.216.2.4 `system_tree_node_impl& otf2::definition::detail::system_tree_node_impl::operator= (const system_tree_node_impl &) [delete]`

9.216.2.5 `system_tree_node_impl& otf2::definition::detail::system_tree_node_impl::operator= (system_tree_node_impl &&) [default]`

9.216.2.6 `std::shared_ptr<system_tree_node_impl> otf2::definition::detail::system_tree_node_impl::parent () const [inline]`

9.216.2.7 `reference<system_tree_node> otf2::definition::detail::system_tree_node_impl::ref () const [inline]`

9.216.2.8 `static std::shared_ptr<system_tree_node_impl> otf2::definition::detail::system_tree_node_impl::undefined () [inline],[static]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/system_tree_node_impl.hpp](#)

9.217 haec_sim::resource_manager::packet_component::tag_type< N > Struct Template Reference

```
#include <components.hpp>
```

Public Member Functions

- `template<class Archive > void serialize (Archive &, const unsigned int)`

Static Public Attributes

- `static const int tag = N`

9.217.1 Member Function Documentation

9.217.1.1 `template<int N> template<class Archive > void haec_sim::resource_manager↔
::packet_component::tag_type< N >::serialize (Archive & , const unsigned int)
[inline]`

9.217.2 Member Data Documentation

9.217.2.1 `template<int N> const int haec_sim::resource_manager::packet_component::tag_type< N >::tag = N
[static]`

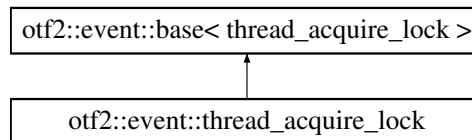
The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp

9.218 otf2::event::thread_acquire_lock Class Reference

```
#include <thread_acquire_lock.hpp>
```

Inheritance diagram for `otf2::event::thread_acquire_lock`:



Public Member Functions

- [thread_acquire_lock](#) (`otf2::chrono::time_point timestamp`, `otf2::common::paradigm_type paradigm`, `uint32_t lock_id`, `uint32_t order`)
- [thread_acquire_lock](#) (`const otf2::event::thread_acquire_lock &other`, `otf2::chrono::time_point timestamp`)
- [otf2::common::paradigm_type paradigm](#) () const
- [uint32_t order](#) () const
- [uint32_t lock_id](#) () const

9.218.1 Constructor & Destructor Documentation

9.218.1.1 `otf2::event::thread_acquire_lock::thread_acquire_lock (otf2::chrono::time_point timestamp,
otf2::common::paradigm_type paradigm, uint32_t lock_id, uint32_t order) [inline]`

9.218.1.2 `otf2::event::thread_acquire_lock::thread_acquire_lock (const otf2::event::thread_acquire_lock & other,
otf2::chrono::time_point timestamp) [inline]`

9.218.2 Member Function Documentation

9.218.2.1 `uint32_t otf2::event::thread_acquire_lock::lock_id () const [inline]`

9.218.2.2 `uint32_t otf2::event::thread_acquire_lock::order () const [inline]`

9.218.2.3 `otf2::common::paradigm_type otf2::event::thread_acquire_lock::paradigm () const [inline]`

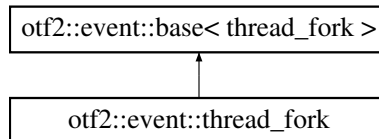
The documentation for this class was generated from the following file:

- /home/tilsche/vc/haec-sim/include/otf2xx/event/thread_acquire_lock.hpp

9.219 otf2::event::thread_fork Class Reference

```
#include <thread_fork.hpp>
```

Inheritance diagram for otf2::event::thread_fork:



Public Member Functions

- [thread_fork](#) (otf2::chrono::time_point timestamp, otf2::common::paradigm_type paradigm, uint32_t num_threads)
- [thread_fork](#) (const otf2::event::thread_fork &other, otf2::chrono::time_point timestamp)
- [otf2::common::paradigm_type paradigm](#) () const
- [uint32_t num_threads](#) () const

9.219.1 Constructor & Destructor Documentation

9.219.1.1 [otf2::event::thread_fork::thread_fork](#) (otf2::chrono::time_point *timestamp*, otf2::common::paradigm_type *paradigm*, uint32_t *num_threads*) [inline]

9.219.1.2 [otf2::event::thread_fork::thread_fork](#) (const otf2::event::thread_fork & *other*, otf2::chrono::time_point *timestamp*) [inline]

9.219.2 Member Function Documentation

9.219.2.1 [uint32_t otf2::event::thread_fork::num_threads](#) () const [inline]

9.219.2.2 [otf2::common::paradigm_type otf2::event::thread_fork::paradigm](#) () const [inline]

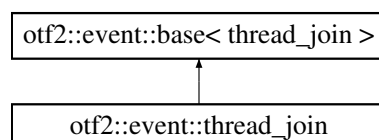
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_fork.hpp](#)

9.220 otf2::event::thread_join Class Reference

```
#include <thread_join.hpp>
```

Inheritance diagram for otf2::event::thread_join:



Public Member Functions

- [thread_join](#) (otf2::chrono::time_point timestamp, otf2::common::paradigm_type paradigm)

- [thread_join](#) (const [otf2::event::thread_join](#) &other, [otf2::chrono::time_point](#) timestamp)
- [otf2::common::paradigm_type](#) paradigm () const

9.220.1 Constructor & Destructor Documentation

9.220.1.1 [otf2::event::thread_join::thread_join](#) ([otf2::chrono::time_point](#) timestamp, [otf2::common::paradigm_type](#) paradigm) [inline]

9.220.1.2 [otf2::event::thread_join::thread_join](#) (const [otf2::event::thread_join](#) & other, [otf2::chrono::time_point](#) timestamp) [inline]

9.220.2 Member Function Documentation

9.220.2.1 [otf2::common::paradigm_type](#) [otf2::event::thread_join::paradigm](#) () const [inline]

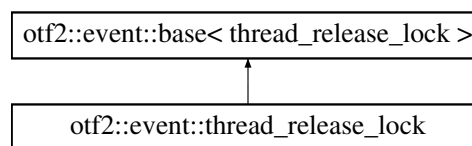
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_join.hpp](#)

9.221 otf2::event::thread_release_lock Class Reference

```
#include <thread_release_lock.hpp>
```

Inheritance diagram for [otf2::event::thread_release_lock](#):



Public Member Functions

- [thread_release_lock](#) ([otf2::chrono::time_point](#) timestamp, [otf2::common::paradigm_type](#) paradigm, [uint32_t](#) lock_id, [uint32_t](#) order)
- [thread_release_lock](#) (const [otf2::event::thread_release_lock](#) &other, [otf2::chrono::time_point](#) timestamp)
- [otf2::common::paradigm_type](#) paradigm () const
- [uint32_t](#) order () const
- [uint32_t](#) lock_id () const

9.221.1 Constructor & Destructor Documentation

9.221.1.1 [otf2::event::thread_release_lock::thread_release_lock](#) ([otf2::chrono::time_point](#) timestamp, [otf2::common::paradigm_type](#) paradigm, [uint32_t](#) lock_id, [uint32_t](#) order) [inline]

9.221.1.2 [otf2::event::thread_release_lock::thread_release_lock](#) (const [otf2::event::thread_release_lock](#) & other, [otf2::chrono::time_point](#) timestamp) [inline]

9.221.2 Member Function Documentation

9.221.2.1 [uint32_t](#) [otf2::event::thread_release_lock::lock_id](#) () const [inline]

9.221.2.2 `uint32_t otf2::event::thread_release_lock::order () const` `[inline]`

9.221.2.3 `otf2::common::paradigm_type otf2::event::thread_release_lock::paradigm () const` `[inline]`

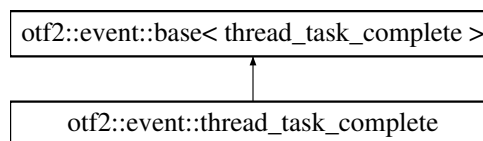
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_release_lock.hpp](#)

9.222 otf2::event::thread_task_complete Class Reference

```
#include <thread_task_complete.hpp>
```

Inheritance diagram for otf2::event::thread_task_complete:



Public Member Functions

- `thread_task_complete` (`otf2::chrono::time_point timestamp`, `otf2::definition::comm team`, `uint32_t thread`, `uint32_t generation`)
- `thread_task_complete` (`const otf2::event::thread_task_complete &other`, `otf2::chrono::time_point timestamp`)
- `otf2::definition::comm team` () `const`
- `uint32_t generation` () `const`
- `uint32_t thread` () `const`

9.222.1 Constructor & Destructor Documentation

9.222.1.1 `otf2::event::thread_task_complete::thread_task_complete (otf2::chrono::time_point timestamp, otf2::definition::comm team, uint32_t thread, uint32_t generation)` `[inline]`

9.222.1.2 `otf2::event::thread_task_complete::thread_task_complete (const otf2::event::thread_task_complete & other, otf2::chrono::time_point timestamp)` `[inline]`

9.222.2 Member Function Documentation

9.222.2.1 `uint32_t otf2::event::thread_task_complete::generation () const` `[inline]`

9.222.2.2 `otf2::definition::comm otf2::event::thread_task_complete::team () const` `[inline]`

9.222.2.3 `uint32_t otf2::event::thread_task_complete::thread () const` `[inline]`

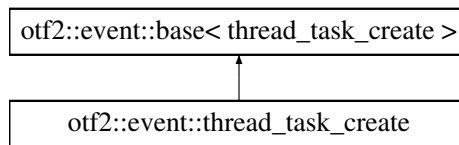
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_task_complete.hpp](#)

9.223 otf2::event::thread_task_create Class Reference

```
#include <thread_task_create.hpp>
```

Inheritance diagram for `otf2::event::thread_task_create`:



Public Member Functions

- `thread_task_create` (`otf2::chrono::time_point timestamp`, `otf2::definition::comm team`, `uint32_t thread`, `uint32_t generation`)
- `thread_task_create` (`const otf2::event::thread_task_create &other`, `otf2::chrono::time_point timestamp`)
- `otf2::definition::comm team` () const
- `uint32_t generation` () const
- `uint32_t thread` () const

9.223.1 Constructor & Destructor Documentation

9.223.1.1 `otf2::event::thread_task_create::thread_task_create (otf2::chrono::time_point timestamp, otf2::definition::comm team, uint32_t thread, uint32_t generation) [inline]`

9.223.1.2 `otf2::event::thread_task_create::thread_task_create (const otf2::event::thread_task_create & other, otf2::chrono::time_point timestamp) [inline]`

9.223.2 Member Function Documentation

9.223.2.1 `uint32_t otf2::event::thread_task_create::generation () const [inline]`

9.223.2.2 `otf2::definition::comm otf2::event::thread_task_create::team () const [inline]`

9.223.2.3 `uint32_t otf2::event::thread_task_create::thread () const [inline]`

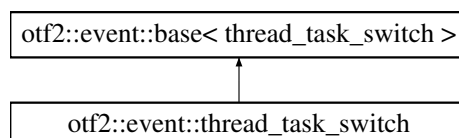
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_task_create.hpp](#)

9.224 otf2::event::thread_task_switch Class Reference

```
#include <thread_task_switch.hpp>
```

Inheritance diagram for `otf2::event::thread_task_switch`:



Public Member Functions

- `thread_task_switch` (`otf2::chrono::time_point timestamp`, `otf2::definition::comm team`, `uint32_t thread`, `uint32_t generation`)

- [thread_task_switch](#) (const [otf2::event::thread_task_switch](#) &other, [otf2::chrono::time_point](#) timestamp)
- [otf2::definition::comm team](#) () const
- [uint32_t generation](#) () const
- [uint32_t thread](#) () const

9.224.1 Constructor & Destructor Documentation

9.224.1.1 [otf2::event::thread_task_switch::thread_task_switch](#) ([otf2::chrono::time_point](#) timestamp, [otf2::definition::comm team](#), [uint32_t thread](#), [uint32_t generation](#)) [[inline](#)]

9.224.1.2 [otf2::event::thread_task_switch::thread_task_switch](#) (const [otf2::event::thread_task_switch](#) & other, [otf2::chrono::time_point](#) timestamp) [[inline](#)]

9.224.2 Member Function Documentation

9.224.2.1 [uint32_t otf2::event::thread_task_switch::generation](#) () const [[inline](#)]

9.224.2.2 [otf2::definition::comm otf2::event::thread_task_switch::team](#) () const [[inline](#)]

9.224.2.3 [uint32_t otf2::event::thread_task_switch::thread](#) () const [[inline](#)]

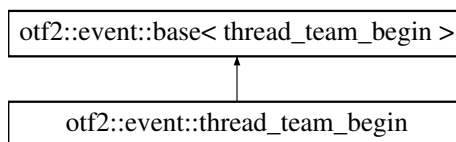
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_task_switch.hpp](#)

9.225 otf2::event::thread_team_begin Class Reference

```
#include <thread_team_begin.hpp>
```

Inheritance diagram for [otf2::event::thread_team_begin](#):



Public Member Functions

- [thread_team_begin](#) ([otf2::chrono::time_point](#) timestamp, [otf2::definition::comm](#) comm)
- [thread_team_begin](#) (const [otf2::event::thread_team_begin](#) &other, [otf2::chrono::time_point](#) timestamp)
- [otf2::definition::comm team](#) () const

9.225.1 Constructor & Destructor Documentation

9.225.1.1 [otf2::event::thread_team_begin::thread_team_begin](#) ([otf2::chrono::time_point](#) timestamp, [otf2::definition::comm comm](#)) [[inline](#)]

9.225.1.2 [otf2::event::thread_team_begin::thread_team_begin](#) (const [otf2::event::thread_team_begin](#) & other, [otf2::chrono::time_point](#) timestamp) [[inline](#)]

9.225.2 Member Function Documentation

9.225.2.1 `otf2::definition::comm otf2::event::thread_team_begin::team () const` `[inline]`

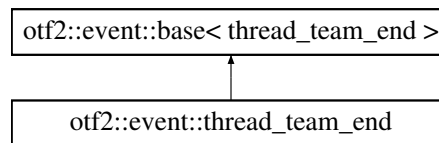
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_team_begin.hpp](#)

9.226 otf2::event::thread_team_end Class Reference

```
#include <thread_team_end.hpp>
```

Inheritance diagram for `otf2::event::thread_team_end`:



Public Member Functions

- [thread_team_end \(otf2::chrono::time_point timestamp, otf2::definition::comm comm\)](#)
- [thread_team_end \(const otf2::event::thread_team_end &other, otf2::chrono::time_point timestamp\)](#)
- [otf2::definition::comm team \(\) const](#)

9.226.1 Constructor & Destructor Documentation

9.226.1.1 `otf2::event::thread_team_end::thread_team_end (otf2::chrono::time_point timestamp, otf2::definition::comm comm)` `[inline]`

9.226.1.2 `otf2::event::thread_team_end::thread_team_end (const otf2::event::thread_team_end & other, otf2::chrono::time_point timestamp)` `[inline]`

9.226.2 Member Function Documentation

9.226.2.1 `otf2::definition::comm otf2::event::thread_team_end::team () const` `[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_team_end.hpp](#)

9.227 otf2::chrono::ticks Class Reference

representing ticks in a typesafe manner

```
#include <ticks.hpp>
```

Public Member Functions

- [ticks \(std::uint64_t count\)](#)
- [std::uint64_t count \(\) const](#)

9.227.1 Detailed Description

representing ticks in a typesafe manner

9.227.2 Constructor & Destructor Documentation

9.227.2.1 `otf2::chrono::ticks::ticks (std::uint64_t count) [inline],[explicit]`

See also

[count\(\)](#)

Parameters

| | |
|--------------|---------------------|
| <i>count</i> | the number of ticks |
|--------------|---------------------|

9.227.3 Member Function Documentation

9.227.3.1 `std::uint64_t otf2::chrono::ticks::count () const [inline]`

Returns

number of ticks

The documentation for this class was generated from the following file:

- </home/tilsche/vc/haec-sim/include/otf2xx/chrono/ticks.hpp>

9.228 haec_sim::resource_manager::packet_component::time_duration_type Struct Reference

```
#include <components.hpp>
```

Public Member Functions

- `template<class Archive > void serialize (Archive &ar, const unsigned int file_version)`

Public Attributes

- [otf2::chrono::duration duration](#)

9.228.1 Member Function Documentation

9.228.1.1 `template<class Archive > void haec_sim::resource_manager::packet_component::time_duration_type::serialize (Archive & ar, const unsigned int file_version) [inline]`

9.228.2 Member Data Documentation

9.228.2.1 `otf2::chrono::duration haec_sim::resource_manager::packet_component::time_duration_type::duration`

The documentation for this struct was generated from the following file:

- /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp

9.229 `time_point` Class Reference

typedef of the time point

```
#include <time_point.hpp>
```

9.229.1 Detailed Description

typedef of the time point

See also

[otf2::chrono::clock](#)

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/chrono/time_point.hpp](#)

9.230 `haec_sim::resource_manager::packet_component::time_range_type` Struct Reference

```
#include <components.hpp>
```

Public Member Functions

- `template<class Archive > void serialize (Archive &ar, const unsigned int file_version)`

Public Attributes

- [otf2::chrono::time_point](#) from
- [otf2::chrono::time_point](#) to

9.230.1 Member Function Documentation

9.230.1.1 `template<class Archive > void haec_sim::resource_manager::packet_component::time_range_type::serialize (Archive & ar, const unsigned int file_version) [inline]`

9.230.2 Member Data Documentation

9.230.2.1 `otf2::chrono::time_point` `haec_sim::resource_manager::packet_component::time_range_type::from`

9.230.2.2 `otf2::chrono::time_point` `haec_sim::resource_manager::packet_component::time_range_type::to`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp](#)

9.231 `nitro::log::timestamp_attribute` Class Reference

```
#include <timestamp.hpp>
```

Public Member Functions

- [timestamp_attribute](#) ()
- `std::chrono::nanoseconds` [timestamp](#) () const

9.231.1 Constructor & Destructor Documentation

9.231.1.1 `nitro::log::timestamp_attribute::timestamp_attribute()` [`inline`]

9.231.2 Member Function Documentation

9.231.2.1 `std::chrono::nanoseconds` `nitro::log::timestamp_attribute::timestamp()` const [`inline`]

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/nitro/log/attribute/timestamp.hpp](#)

9.232 haec_sim::resource_manager::packet_component::timestamp_type Struct Reference

```
#include <components.hpp>
```

Public Member Functions

- `template<class Archive >`
void [serialize](#) (Archive &ar, const unsigned int file_version)

Public Attributes

- `otf2::chrono::time_point` [timestamp](#)

9.232.1 Member Function Documentation

9.232.1.1 `template<class Archive > void` `haec_sim::resource_manager::packet_component::timestamp_type::serialize (Archive &ar, const unsigned int file_version)` [`inline`]

9.232.2 Member Data Documentation

9.232.2.1 `otf2::chrono::time_point` `haec_sim::resource_manager::packet_component::timestamp_type::timestamp`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp](#)

9.233 haec_sim::topology::topology Class Reference

The topology class represents the layout of positions in a 3D-Mesh.

```
#include <topology.hpp>
```

Public Types

- enum `topology_type` { `topology_type::mesh`, `topology_type::torus` }

Public Member Functions

- `topology` (`haec_sim::config::config` *conf*)
topology constructor
- `topology` (`haec_sim::topology::position` *size*, `topology_type` *type*)
- `size_t num_nodes` () const
returns the number of nodes in the current topology
- `position_iterator begin` () const
returns an iterator to the first node in the topology
- `position_iterator end` () const
returns an iterator past the last node in the topology
- `bool contains` (`position` *pos*) const
Returns true if the given position is a valid position inside the topology.
- `haec_sim::topology::position size` () const
returns the size of the topology
- `haec_sim::topology::position get_position` (`otf2::definition::location` *loc*) const
returns the position of a given location
- `haec_sim::topology::position add` (`otf2::definition::location` *loc*)
Adds a location to the topology.
- `haec_sim::path::data_transfer_path get_path` (`const haec_sim::topology::position` *fromPos*, `const haec_sim::topology::position` *toPos*) const
returns a path between given positions
- `template<typename Manager , typename... Args>`
`void replace_manager` (`Args...args`)
replaces the current manager
- `haec_sim::path::data_transfer_path get_path` (`otf2::definition::location` *from*, `otf2::definition::location` *to*) const
returns a path between given positions
- `topology_type` *type* () const

9.233.1 Detailed Description

The topology class represents the layout of positions in a 3D-Mesh.

9.233.2 Member Enumeration Documentation

- 9.233.2.1 enum `haec_sim::topology::topology::topology_type` [`strong`]

Enumerator

mesh

torus

9.233.3 Constructor & Destructor Documentation

- 9.233.3.1 `haec_sim::topology::topology::topology` (`haec_sim::config::config` *conf*) [`inline`]

`topology` constructor

Parameters

| | |
|-------------|--------------------------|
| <i>size</i> | the size of the topology |
|-------------|--------------------------|

It will also try to initialize the SimulatorTopologyManager

9.233.3.2 `haec_sim::topology::topology (haec_sim::topology::position size, topology_type type)`
`[inline]`

9.233.4 Member Function Documentation

9.233.4.1 `haec_sim::topology::position haec_sim::topology::topology::add (of2::definition::location loc)`
`[inline]`

Adds a location to the topology.

Parameters

| | |
|------------|--------------------|
| <i>loc</i> | the added location |
|------------|--------------------|

Returns

the position for the given location

This function relies on the choosed SimulatorTopologyManager. This might be the MappingFileSimulatorTopology↔ Manager, then position mapping will be loaded from the postions.map file. Or it could be the DepthFirstSimulator↔ TopologyManager, then locations will be mapped in a depth first order.

9.233.4.2 `position_iterator haec_sim::topology::topology::begin () const` `[inline]`

returns an iterator to the first node in the topology

Note

: Be adviced, that there's no garanty for a certain order

9.233.4.3 `bool haec_sim::topology::topology::contains (position pos) const` `[inline]`

Returns true if the given position is a valid position inside the topology.

Parameters

| | |
|------------|---------------------------|
| <i>pos</i> | the postion to be checked |
|------------|---------------------------|

Returns

true, if the position is part of the topology

9.233.4.4 `position_iterator haec_sim::topology::topology::end () const` `[inline]`

returns an iterator past the last node in the topology

Note

: Be adviced, that there's no garanty for a certain order

9.233.4.5 `haec_sim::path::data_transfer_path` `haec_sim::topology::topology::get_path` (`const haec_sim::topology::position fromPos`, `const haec_sim::topology::position toPos`) `const` [`inline`]

returns a path between given positions

Parameters

| | |
|----------------|-----------------------|
| <i>fromPos</i> | the starting position |
| <i>toPos</i> | the endpoint |

Returns

the path

9.233.4.6 `haec_sim::path::data_transfer_path haec_sim::topology::topology::get_path (otf2::definition::location from, otf2::definition::location to) const [inline]`

returns a path between given positions

Parameters

| | |
|-------------|-----------------------|
| <i>from</i> | the starting location |
| <i>to</i> | the end location |

Returns

the path

9.233.4.7 `haec_sim::topology::position haec_sim::topology::topology::get_position (otf2::definition::location loc) const [inline]`

returns the position of a given location

Parameters

| | |
|------------|--------------|
| <i>loc</i> | the location |
|------------|--------------|

Returns

the position for the location

9.233.4.8 `size_t haec_sim::topology::topology::num_nodes () const [inline]`

returns the number of nodes in the current topology

Returns

the number of nodes

9.233.4.9 `template<typename Manager , typename... Args> void haec_sim::topology::topology::replace_manager (Args... args) [inline]`

replaces the current manager

Parameters

| | |
|----------------|--|
| <i>args</i> | The arguments to the constructor of <code>Manager</code> |
| <i>Manager</i> | the type of the manager |

9.233.4.10 `haec_sim::topology::position haec_sim::topology::topology::size () const` `[inline]`

returns the size of the topology

Returns

the size of the topology

9.233.4.11 `topology_type haec_sim::topology::topology::type () const` `[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/topology/topology.hpp](#)

9.234 haec_sim::trace_file Class Reference

an abstraction of traces

```
#include <environment.hpp>
```

Public Member Functions

- [trace_file](#) (std::string directory, std::string filename)
- [trace_file](#) (std::string full_path)
- const std::string & [folder](#) () const
returns absolut path of trace folder
- std::string [anchor_file](#) () const
returns absolut path of trace anchor file
- std::string [anchor_name](#) () const
returns name of the anchor file, without extension
- std::string [file](#) (std::string filename) const
returns absolute path of a given filename in the trace directory

9.234.1 Detailed Description

an abstraction of traces

9.234.2 Constructor & Destructor Documentation

9.234.2.1 `haec_sim::trace_file::trace_file (std::string directory, std::string filename)` `[inline]`

9.234.2.2 `haec_sim::trace_file::trace_file (std::string full_path)` `[inline]`

9.234.3 Member Function Documentation

9.234.3.1 `std::string haec_sim::trace_file::anchor_file () const` `[inline]`

returns absolut path of trace anchor file

9.234.3.2 `std::string haec_sim::trace_file::anchor_name () const` `[inline]`

returns name of the anchor file, without extension

9.234.3.3 `std::string haec_sim::trace_file::file (std::string filename) const` `[inline]`

returns absolute path of a given filename in the trace directory

e.g. if your trace anchor file is `/home/foo/trace/traces.otf2` then `file("bar.txt")` will return `/home/foo/trace/bar.txt`

9.234.3.4 `const std::string& haec_sim::trace_file::folder () const` `[inline]`

returns absolut path of trace folder

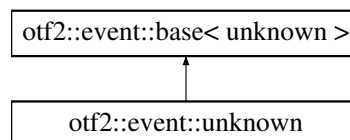
The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/environment.hpp](#)

9.235 otf2::event::unknown Class Reference

```
#include <unknown.hpp>
```

Inheritance diagram for `otf2::event::unknown`:



Public Member Functions

- [unknown](#) (`otf2::chrono::time_point timestamp`)
- [unknown](#) (`const otf2::event::unknown &other, otf2::chrono::time_point timestamp`)

9.235.1 Constructor & Destructor Documentation

9.235.1.1 `otf2::event::unknown::unknown (otf2::chrono::time_point timestamp)` `[inline]`

9.235.1.2 `otf2::event::unknown::unknown (const otf2::event::unknown & other, otf2::chrono::time_point timestamp)` `[inline]`

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/unknown.hpp](#)

9.236 otf2::definition::unknown Class Reference

class for representing an unknown definition

```
#include <unknown.hpp>
```

9.236.1 Detailed Description

class for representing an unknown definition

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/definition/unknown.hpp](#)

9.237 otf2::event::metric::value_container Class Reference

```
#include <metric.hpp>
```

Public Member Functions

- double [as_double](#) () const
- std::int64_t [as_int64](#) () const
- std::uint64_t [as_uint64](#) () const
- template<typename T >
void [set](#) (T x)

Public Attributes

- [otf2::definition::metric_member](#) [metric](#)
- OTF2_MetricValue [value](#)

9.237.1 Member Function Documentation

9.237.1.1 double [otf2::event::metric::value_container::as_double](#) () const [\[inline\]](#)

9.237.1.2 std::int64_t [otf2::event::metric::value_container::as_int64](#) () const [\[inline\]](#)

9.237.1.3 std::uint64_t [otf2::event::metric::value_container::as_uint64](#) () const [\[inline\]](#)

9.237.1.4 template<typename T > void [otf2::event::metric::value_container::set](#) (T x) [\[inline\]](#)

9.237.2 Member Data Documentation

9.237.2.1 [otf2::definition::metric_member](#) [otf2::event::metric::value_container::metric](#)

9.237.2.2 OTF2_MetricValue [otf2::event::metric::value_container::value](#)

The documentation for this class was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/otf2xx/event/metric.hpp](#)

9.238 haec_sim::resource_manager::packet_component::value_type< T > Struct Template Reference

```
#include <components.hpp>
```

Public Member Functions

- `template<class Archive >`
`void serialize (Archive &ar, const unsigned int file_version)`

Public Attributes

- `T value`

9.238.1 Member Function Documentation

9.238.1.1 `template<typename T > template<class Archive > void haec_sim::resource_manager::packet_↔
_component::value_type< T >::serialize (Archive & ar, const unsigned int file_version)
[inline]`

9.238.2 Member Data Documentation

9.238.2.1 `template<typename T > T haec_sim::resource_manager::packet_component::value_type< T >::value`

The documentation for this struct was generated from the following file:

- [/home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp](#)

Chapter 10

File Documentation

10.1 `/home/tilsche/vc/haec-sim/include/algebra/algebra.hpp` File Reference

```
#include <algebra/fwd.hpp>
#include <algebra/polynomial.hpp>
```

10.2 `/home/tilsche/vc/haec-sim/include/algebra/fwd.hpp` File Reference

```
#include <cstdint>
```

Namespaces

- [algebra](#)

10.3 `/home/tilsche/vc/haec-sim/include/haec_sim/topology/fwd.hpp` File Reference

```
#include <iostream>
```

Namespaces

- [haec_sim](#)
- [haec_sim::topology](#)

Functions

- `std::istream & haec_sim::topology::operator>> (std::istream &s, position &pos)`

10.4 `/home/tilsche/vc/haec-sim/include/otf2xx/definition/fwd.hpp` File Reference

```
#include <otf2xx/common.hpp>
#include <otf2xx/definition/container.hpp>
#include <otf2xx/traits/definition.hpp>
```

Classes

- class [otf2::definition::detail::group_impl](#)< MemberType, GroupType >
- class [otf2::definition::detail::property_impl](#)< Definition >
- class [otf2::definition::group](#)< MemberType, GroupType >
class template for representing groups
- class [otf2::definition::container](#)< Definition >
- class [otf2::definition::property](#)< Definition >
class for representing property definitions
- class [otf2::definition::detail::base](#)< Def, Impl >
CRTP base class for definition references.

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

Typedefs

- using [otf2::definition::locations_group](#) = group< [otf2::definition::location](#), [otf2::common::group_type](#)↔
[::locations](#) >
- using [otf2::definition::regions_group](#) = group< [otf2::definition::region](#), [otf2::common::group_type::regions](#) >
- using [otf2::definition::comm_locations_group](#) = group< [otf2::definition::location](#), [otf2::common::group_type](#)↔
[::comm_locations](#) >
- using [otf2::definition::comm_group](#) = group< [otf2::definition::location](#), [otf2::common::group_type::comm](#)↔
[group](#) >
- using [otf2::definition::comm_self_group](#) = group< [otf2::definition::location](#), [otf2::common::group_type](#)↔
[::comm_self](#) >
- using [otf2::definition::location_property](#) = property< [location](#) >
- using [otf2::definition::location_group_property](#) = property< [location_group](#) >
- using [otf2::definition::system_tree_node_property](#) = property< [system_tree_node](#) >

10.5 /home/tilsche/vc/haec-sim/include/otf2xx/event/fwd.hpp File Reference

Classes

- class [otf2::event::base](#)< Event >
CRTP base class for all events.

Namespaces

- [otf2](#)
- [otf2::event](#)

Typedefs

- typedef [mpi_ireceive](#) [otf2::event::mpi_ireceive_complete](#)
- typedef [mpi_isend](#) [otf2::event::mpi_isend_request](#)

10.6 /home/tilsche/vc/haec-sim/include/otf2xx/fwd.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/event/fwd.hpp>
#include <otf2xx/writer/fwd.hpp>
#include <otf2xx/reader/fwd.hpp>
```

Classes

- class [otf2::reference< Type >](#)
represents a reference number for definitions
- class [otf2::reference_generator< RefType >](#)
gives a free reference number for a set of definitions

Namespaces

- [otf2](#)

10.7 /home/tilsche/vc/haec-sim/include/otf2xx/reader/fwd.hpp File Reference

```
#include <otf2/OTF2_Reader.h>
```

Namespaces

- [otf2](#)
- [otf2::reader](#)
- [otf2::reader::detail](#)
- [otf2::reader::detail::event](#)
- [otf2::reader::detail::definition](#)
- [otf2::reader::detail::definition::global](#)

Functions

- OTF2_CallbackCode [otf2::reader::detail::event::buffer_flush](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_TimeStamp stopTime)
- OTF2_CallbackCode [otf2::reader::detail::event::enter](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributes, OTF2_RegionRef regionID)
- OTF2_CallbackCode [otf2::reader::detail::event::leave](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_RegionRef region)
- OTF2_CallbackCode [otf2::reader::detail::event::measurement](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_MeasurementMode measurementMode)
- OTF2_CallbackCode [otf2::reader::detail::event::metric](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_MetricRef metric, uint8_t numberOfMetrics, const OTF2_Type *typeIDs, const OTF2_MetricValue *metricValues)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_collective_begin](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_collective_end](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CollectiveOp collectiveOp, OTF2_CommRef communicator, uint32_t root, uint64_t sizeSent, uint64_t sizeReceived)

- OTF2_CallbackCode [otf2::reader::detail::event::mpi_irecv](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t sender, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_irecv_request](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_isend](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t receiver, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_isend_complete](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_recv](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t sender, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_request_cancelled](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_request_test](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_send](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t receiver, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength)
- OTF2_CallbackCode [otf2::reader::detail::event::parameter_int](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_ParameterRef parameter, int64_t value)
- OTF2_CallbackCode [otf2::reader::detail::event::parameter_string](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_ParameterRef parameter, OTF2_StringRef string)
- OTF2_CallbackCode [otf2::reader::detail::event::parameter_unsigned_int](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_ParameterRef parameter, uint64_t value)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_acquire_lock](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model, uint32_t lockID, uint32_t acquisitionOrder)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_fork](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model, uint32_t numberOfRequestedThreads)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_join](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_release_lock](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model, uint32_t lockID, uint32_t acquisitionOrder)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_task_complete](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_task_create](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_task_switch](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_team_begin](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_team_end](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam)
- OTF2_CallbackCode [otf2::reader::detail::event::unknown](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::attribute](#) (void *userData, OTF2_AttributeRef self, OTF2_StringRef name, OTF2_StringRef description, OTF2_Type type)

- OTF2_CallbackCode [otf2::reader::detail::definition::global::clock_properties](#) (void *userData, uint64_t timerResolution, uint64_t globalOffset, uint64_t traceLength)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::comm](#) (void *userData, OTF2_CommRef self, OTF2_StringRef name, OTF2_GroupRef group, OTF2_CommRef parent)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::group](#) (void *userData, OTF2_GroupRef self, OTF2_StringRef name, OTF2_GroupType groupType, OTF2_Paradigm paradigm, OTF2_GroupFlag groupFlags, uint32_t numberOfMembers, const uint64_t *members)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::location](#) (void *userData, OTF2_LocationRef self, OTF2_StringRef name, OTF2_LocationType locationType, uint64_t numberOfEvents, OTF2_LocationGroupRef locationGroup)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::location_group](#) (void *userData, OTF2_LocationGroupRef self, OTF2_StringRef name, OTF2_LocationGroupType locationGroupType, OTF2_SystemTreeNodeRef systemTreeParent)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::metric_class](#) (void *userData, OTF2_MetricRef self, uint8_t numberOfMetrics, const OTF2_MetricMemberRef *metricMembers, OTF2_MetricOccurrence metricOccurrence, OTF2_RecorderKind recorderKind)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::metric_instance](#) (void *userData, OTF2_MetricRef self, OTF2_MetricRef metricClass, OTF2_LocationRef recorder, OTF2_MetricScope metricScope, uint64_t scope)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::metric_member](#) (void *userData, OTF2_MetricMemberRef self, OTF2_StringRef name, OTF2_StringRef description, OTF2_MetricType metricType, OTF2_MetricMode metricMode, OTF2_Type valueType, OTF2_MetricBase metricBase, int64_t exponent, OTF2_StringRef unit)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::parameter](#) (void *userData, OTF2_ParameterRef self, OTF2_StringRef name, OTF2_ParameterType parameterType)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::region](#) (void *userData, OTF2_RegionRef self, OTF2_StringRef name, OTF2_StringRef canonicalName, OTF2_StringRef description, OTF2_RegionRole regionRole, OTF2_Paradigm paradigm, OTF2_RegionFlag regionFlags, OTF2_StringRef sourceFile, uint32_t beginLineNumber, uint32_t endLineNumber)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::string](#) (void *userData, OTF2_StringRef self, const char *string)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::system_tree_node](#) (void *userData, OTF2_SystemTreeNodeRef self, OTF2_StringRef name, OTF2_StringRef className, OTF2_SystemTreeNodeRef parent)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::system_tree_node_property](#) (void *userData, OTF2_SystemTreeNodeRef systemTreeNode, OTF2_StringRef name, OTF2_StringRef value)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::location_property](#) (void *userData, OTF2_LocationRef location, OTF2_StringRef name, OTF2_StringRef value)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::location_group_property](#) (void *userData, OTF2_LocationGroupRef locationGroup, OTF2_StringRef name, OTF2_StringRef value)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::unknown](#) (void *userData)

10.8 /home/tilsche/vc/haec-sim/include/otf2xx/writer/fwd.hpp File Reference

```
#include <otf2/OTF2_Callbacks.h>
```

Namespaces

- [otf2](#)
- [otf2::writer](#)
- [otf2::writer::detail](#)
- [otf2::writer::detail::callbacks](#)
- [otf2::writer::detail::callbacks::collective](#)

Functions

- OTF2_FlushType [otf2::writer::detail::pre_flush](#) (void *userData, OTF2_FileType fileType, OTF2_LocationRef location, void *callerData, bool final)
- OTF2_TimeStamp [otf2::writer::detail::post_flush](#) (void *userData, OTF2_FileType fileType, OTF2_LocationRef location)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::barrier](#) (void *userData, OTF2_CollectiveContext *commContext)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::broadcast](#) (void *userData, OTF2_CollectiveContext *commContext, void *data, uint32_t numberElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::gather](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, void *outData, uint32_t numberElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::gatherv](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, uint32_t inElements, void *outData, const uint32_t *outElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::get_rank](#) (void *userData, OTF2_CollectiveContext *commContext, std::uint32_t *rank)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::get_size](#) (void *userData, OTF2_CollectiveContext *commContext, std::uint32_t *size)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::scatter](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, void *outData, uint32_t numberElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::scatterv](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, const uint32_t *inElements, void *outData, uint32_t outElements, OTF2_Type type, uint32_t root)
- `template<typename Record >`
local & [otf2::writer::operator<<](#) (local &wrt, Record evt)
- `template<typename Definition >`
local & [otf2::writer::operator<<](#) (local &wrt, const [otf2::definition::container](#)< Definition > &c)
- `template<typename Definition >`
global & [otf2::writer::operator<<](#) (global &wrt, Definition def)
- `template<typename Anything >`
global & [otf2::writer::operator<<](#) (archive &ar, Anything any)

10.9 /home/tilsche/vc/haec-sim/include/algebra/polynomial.hpp File Reference

```
#include <algebra/util.hpp>
#include <boost/numeric/ublas/matrix.hpp>
#include <boost/numeric/ublas/vector.hpp>
```

Classes

- class [algebra::polynomial< T >](#)

Namespaces

- [algebra](#)

10.10 /home/tilsche/vc/haec-sim/include/algebra/util.hpp File Reference

```
#include <boost/numeric/ublas/vector.hpp>
#include <cmath>
```

Namespaces

- [algebra](#)

Functions

- `template<typename T >`
`boost::numeric::ublas::vector< T >` [algebra::get_pow_vec](#) (`std::size_t N`, `T x`)

10.11 /home/tilsche/vc/haec-sim/include/haec_sim/config/config.hpp File Reference

```
#include <json/json.h>
#include <haec_sim/environment.hpp>
#include <haec_sim/exception.hpp>
#include <haec_sim/log/log.hpp>
#include <string>
#include <fstream>
#include <vector>
#include <map>
```

Classes

- class [haec_sim::config::detail::convert_helper< T >](#)
- class [haec_sim::config::detail::convert_helper< double >](#)
- class [haec_sim::config::detail::convert_helper< float >](#)
- class [haec_sim::config::detail::convert_helper< bool >](#)
- class [haec_sim::config::detail::convert_helper< int64_t >](#)
- class [haec_sim::config::detail::convert_helper< uint64_t >](#)
- class [haec_sim::config::detail::convert_helper< int >](#)
- class [haec_sim::config::detail::convert_helper< unsigned int >](#)
- class [haec_sim::config::detail::convert_helper< std::string >](#)
- class [haec_sim::config::config](#)

Namespaces

- [haec_sim](#)
- [haec_sim::config](#)
- [haec_sim::config::detail](#)

10.12 /home/tilsche/vc/haec-sim/include/haec_sim/doc/main.hpp File Reference

10.13 /home/tilsche/vc/haec-sim/include/haec_sim/environment.hpp File Reference

```
#include <cstdlib>
#include <string>
```

Classes

- class [haec_sim::trace_file](#)
an abstraction of traces
- class [haec_sim::environment](#)
A class to provide information about the environment of the run.

Namespaces

- [haec_sim](#)

10.14 /home/tilsche/vc/haec-sim/include/haec_sim/exception.hpp File Reference

```
#include <otf2xx/exception.hpp>
```

Classes

- struct [haec_sim::exception](#)

Namespaces

- [haec_sim](#)

Functions

- `template<typename... Args>`
void [haec_sim::make_exception](#) (Args...args)

10.15 /home/tilsche/vc/haec-sim/include/nitro/dl/exception.hpp File Reference

```
#include <stdexcept>
```

Classes

- class [nitro::dl::exception](#)

Namespaces

- [nitro](#)
- [nitro::dl](#)

10.16 /home/tilsche/vc/haec-sim/include/otf2xx/exception.hpp File Reference

```
#include <otf2/OTF2_ErrorCodes.h>
#include <stdexcept>
#include <string>
#include <sstream>
```

Classes

- struct [otf2::exception](#)
- class [otf2::detail::make_exception< Arg, Args >](#)
- class [otf2::detail::make_exception< Arg >](#)

Namespaces

- [otf2](#)
- [otf2::detail](#)

Functions

- template<typename... Args>
void [otf2::make_exception](#) (Args...args)
- template<typename... Args>
void [otf2::check](#) (OTF2_ErrorCode code, Args...args)

10.17 /home/tilsche/vc/haec-sim/include/haec_sim/log/log.hpp File Reference

```
#include <nitro/log/log.hpp>
#include <nitro/log/sink/stdout_mt.hpp>
#include <nitro/log/attribute/message.hpp>
#include <nitro/log/attribute/timestamp.hpp>
#include <nitro/log/attribute/severity.hpp>
#include <nitro/log/attribute/mpi_rank.hpp>
#include <nitro/log/filter/and_filter.hpp>
#include <nitro/log/filter/severity_filter.hpp>
#include <nitro/log/filter/mpi_master_filter.hpp>
```

Classes

- class [haec_sim::log::detail::haec_log_formatter< Record >](#)

Namespaces

- [haec_sim](#)
- [haec_sim::log](#)
- [haec_sim::log::detail](#)

Typedefs

- typedef `nitro::log::record` < `nitro::log::message_attribute`, `nitro::log::timestamp_attribute`, `nitro::log::severity_↵_attribute`, `nitro::log::mpi_rank_attribute` > `haec_sim::log::detail::record`
- template<typename Record >
using `haec_sim::log::detail::haec_log_filter` = `nitro::log::filter::severity_filter` < Record >
- typedef `nitro::log::logger` < `detail::record`, `detail::haec_log_formatter`, `nitro::log::sink::stdout_mt`, `detail::haec_↵_log_filter` > `haec_sim::log::logging`

Functions

- void `haec_sim::log::set_min_severity_level` (`nitro::log::severity_level` sev)

10.18 /home/tilsche/vc/haec-sim/include/nitro/log/log.hpp File Reference

```
#include <nitro/log/severity.hpp>
#include <type_traits>
#include <nitro/log/record.hpp>
#include <nitro/log/logger.hpp>
```

Macros

- #define `NITRO_LOG_MIN_SEVERITY` trace

10.18.1 Macro Definition Documentation

10.18.1.1 #define `NITRO_LOG_MIN_SEVERITY` trace

10.19 /home/tilsche/vc/haec-sim/include/haec_sim/mappings.hpp File Reference

```
#include <otf2xx/definition/location.hpp>
#include <otf2xx/definition/compare.hpp>
#include <haec_sim/log/log.hpp>
#include <limits>
#include <cassert>
```

Classes

- class `haec_sim::mapping::detail::lsl_mapping`
- class `haec_sim::mapping::location`
class to map from locations to simulation ranks
- class `haec_sim::mapping::simulation_rank`
class to map from simulation ranks to locations

Namespaces

- `haec_sim`
- `haec_sim::mapping`
- `haec_sim::mapping::detail`

Functions

- detail::lsr_mapping & [haec_sim::mapping::lsr_mapping](#) ()

10.20 /home/tilsche/vc/haec-sim/include/haec_sim/module/base.hpp File Reference

Contains the class base.

```
#include <haec_sim/mappings.hpp>
#include <haec_sim/topology/topology.hpp>
#include <otf2xx/reader/callback.hpp>
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/event/events.hpp>
#include <boost/mpi.hpp>
```

Classes

- class [haec_sim::module::base](#)
Base class for modules.

Namespaces

- [haec_sim](#)
- [haec_sim::module](#)

10.20.1 Detailed Description

Contains the class base.

10.21 /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/base.hpp File Reference

```
#include <haec_sim/resource_manager/packet.hpp>
#include <haec_sim/log/log.hpp>
#include <haec_sim/topology/topology.hpp>
#include <boost/mpi/communicator.hpp>
#include <boost/mpi/collectives/all_gather.hpp>
#include <cassert>
#include <vector>
#include <map>
```

Classes

- class [haec_sim::resource_manager::base](#)< [Client](#) >

Namespaces

- [haec_sim](#)
- [haec_sim::resource_manager](#)

10.22 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/base.hpp File Reference

```
#include <otf2xx/traits/traits.hpp>
#include <otf2xx/definition/fwd.hpp>
#include <memory>
#include <cassert>
```

Classes

- class [otf2::definition::detail::base](#)< Def, Impl >
CRTP base class for definition references.

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

Functions

- template<typename Def , typename Impl >
bool [otf2::definition::detail::operator==](#) (const base< Def, Impl > &a, const base< Def, Impl > &b)

10.23 /home/tilsche/vc/haec-sim/include/otf2xx/event/base.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/attribute_list.hpp>
#include <otf2xx/chrono/chrono.hpp>
```

Classes

- class [otf2::event::base](#)< Event >
CRTP base class for all events.

Namespaces

- [otf2](#)
- [otf2::event](#)

10.24 /home/tilsche/vc/haec-sim/include/haec_sim/module/no_zero_durations.hpp File Reference

{ A module, which ensures that there are no functions with a duration of zero }

```
#include <haec_sim/module/base.hpp>
```

Classes

- class [haec_sim::module::no_zero_durations](#)
{ A module, which ensures that there are no functions with a duration of zero }

Namespaces

- [haec_sim](#)
- [haec_sim::module](#)

10.24.1 Detailed Description

{ A module, which ensures that there are no functions with a duration of zero }

10.25 /home/tilsche/vc/haec-sim/include/haec_sim/module/sink.hpp File Reference

```
#include <haec_sim/module/base.hpp>
#include <otf2xx/writer/archive.hpp>
#include <boost/mpi.hpp>
#include <haec_sim/log/log.hpp>
#include <string>
#include <map>
```

Classes

- class [haec_sim::module::sink](#)
The sink class.

Namespaces

- [haec_sim](#)
- [haec_sim::module](#)

10.26 /home/tilsche/vc/haec-sim/include/haec_sim/module/source.hpp File Reference

```
#include <haec_sim/module/base.hpp>
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/event/events.hpp>
#include <otf2xx/exception.hpp>
#include <haec_sim/mappings.hpp>
#include <haec_sim/log/log.hpp>
#include <boost/mpi.hpp>
#include <map>
#include <cassert>
```

Classes

- class [haec_sim::module::source](#)
This first module in the chain of modules processing trace files.

Namespaces

- [haec_sim](#)
- [haec_sim::module](#)

10.27 /home/tilsche/vc/haec-sim/include/haec_sim/path/data_transfer_hop.hpp File Reference

```
#include <cstdint>
```

Classes

- class [haec_sim::path::data_transfer_hop](#)

Namespaces

- [haec_sim](#)
- [haec_sim::path](#)

Functions

- `data_transfer_hop` [haec_sim::path::wireless_data_transfer_hop](#) ()
returns a `data_transfer_hop` with values for wireless connections
- `data_transfer_hop` [haec_sim::path::optical_data_transfer_hop](#) ()
returns a `data_transfer_hop` with values for optical connections

10.28 /home/tilsche/vc/haec-sim/include/haec_sim/path/data_transfer_path.hpp File Reference

```
#include <haec_sim/path/data_transfer_hop.hpp>  
#include <vector>  
#include <stdexcept>
```

Classes

- class [haec_sim::path::data_transfer_path](#)

Namespaces

- [haec_sim](#)
- [haec_sim::path](#)

10.29 /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/components.hpp File Reference

```
#include <haec_sim/topology/position.hpp>
#include <otf2xx/chrono/chrono.hpp>
```

Classes

- struct [haec_sim::resource_manager::packet_component::timestamp_type](#)
- struct [haec_sim::resource_manager::packet_component::time_range_type](#)
- struct [haec_sim::resource_manager::packet_component::time_duration_type](#)
- struct [haec_sim::resource_manager::packet_component::end_process_type](#)
- struct [haec_sim::resource_manager::packet_component::is_manager_type](#)
- struct [haec_sim::resource_manager::packet_component::rank_type](#)
- struct [haec_sim::resource_manager::packet_component::value_type< T >](#)
- struct [haec_sim::resource_manager::packet_component::name_type](#)
- struct [haec_sim::resource_manager::packet_component::position_type](#)
- struct [haec_sim::resource_manager::packet_component::tag_type< N >](#)

Namespaces

- [haec_sim](#)
- [haec_sim::resource_manager](#)
- [haec_sim::resource_manager::packet_component](#)

Typedefs

- using [haec_sim::resource_manager::packet_component::response_tag](#) = tag_type< 101 >
- using [haec_sim::resource_manager::packet_component::request_tag](#) = tag_type< 100 >

10.30 /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/info.hpp File Reference

Classes

- struct [haec_sim::resource_manager::info](#)

Namespaces

- [haec_sim](#)
- [haec_sim::resource_manager](#)

Enumerations

- enum [haec_sim::resource_manager::type](#) { [haec_sim::resource_manager::type::shutdown](#), [haec_sim::resource_manager::type::cpu](#), [haec_sim::resource_manager::type::metric_collector](#), [haec_sim::resource_manager::type::energy](#) }

10.31 /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/link.hpp File Reference

```
#include <haec_sim/resource_manager/packet.hpp>
#include <haec_sim/log/log.hpp>
#include <boost/mpi/communicator.hpp>
#include <boost/mpi/collectives/all_gather.hpp>
#include <vector>
```

Classes

- class [haec_sim::resource_manager::link](#)

Namespaces

- [haec_sim](#)
- [haec_sim::resource_manager](#)

10.32 /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/packet.hpp File Reference

```
#include <haec_sim/resource_manager/components.hpp>
```

Classes

- class [haec_sim::resource_manager::detail::serialize_helper< Args >](#)
- class [haec_sim::resource_manager::detail::serialize_helper< Packet, Archive, Arg, Args...>](#)
- class [haec_sim::resource_manager::detail::serialize_helper< Packet, Archive >](#)
- class [haec_sim::resource_manager::packet< Components >](#)

Namespaces

- [haec_sim](#)
- [haec_sim::resource_manager](#)
- [haec_sim::resource_manager::detail](#)

10.33 /home/tilsche/vc/haec-sim/include/haec_sim/resource_manager/process_pool.hpp File Reference

```
#include <haec_sim/config/config.hpp>
#include <haec_sim/topology/topology.hpp>
#include <haec_sim/resource_manager/info.hpp>
#include <cpu_resource_manager/manager.hpp>
#include <metric_collector_resource_manager/manager.hpp>
#include <energy_resource_manager/manager.hpp>
#include <haec_sim/log/log.hpp>
#include <boost/mpi.hpp>
#include <limits>
```

Classes

- class [haec_sim::resource_manager::process_pool](#)

Namespaces

- [haec_sim](#)
- [haec_sim::resource_manager](#)

10.34 /home/tilsche/vc/haec-sim/include/haec_sim/topology/depth_first_manager.hpp File Reference

```
#include <haec_sim/topology/manager.hpp>
```

Classes

- class [haec_sim::topology::depth_first_manager](#)

Namespaces

- [haec_sim](#)
- [haec_sim::topology](#)

10.35 /home/tilsche/vc/haec-sim/include/haec_sim/topology/manager.hpp File Reference

```
#include <haec_sim/topology/position.hpp>  
#include <otf2xx/definition/location.hpp>
```

Classes

- class [haec_sim::topology::manager](#)

Abstract base class for simulator topology managers. This class places processes on cores on specific boards.

Namespaces

- [haec_sim](#)
- [haec_sim::topology](#)

10.36 /home/tilsche/vc/haec-sim/include/haec_sim/topology/mapping_file_manager.hpp File Reference

```
#include <haec_sim/topology/mapping_file_parser.hpp>
#include <haec_sim/topology/position.hpp>
#include <haec_sim/topology/manager.hpp>
#include <haec_sim/environment.hpp>
#include <haec_sim/exception.hpp>
```

Classes

- class [haec_sim::topology::mapping_file_manager](#)

Namespaces

- [haec_sim](#)
- [haec_sim::topology](#)

10.37 /home/tilsche/vc/haec-sim/include/haec_sim/topology/mapping_file_parser.hpp File Reference

```
#include <haec_sim/topology/position.hpp>
#include <haec_sim/exception.hpp>
#include <haec_sim/log/log.hpp>
#include <fstream>
#include <sstream>
#include <map>
#include <string>
```

Classes

- class [haec_sim::topology::mapping_file_parser](#)

Namespaces

- [haec_sim](#)
- [haec_sim::topology](#)

10.38 /home/tilsche/vc/haec-sim/include/haec_sim/topology/position.hpp File Reference

```
#include <haec_sim/topology/fwd.hpp>
#include <boost/serialization/array.hpp>
#include <array>
#include <iostream>
#include <cassert>
#include <algorithm>
```


Classes

- class [haec_sim::topology::position](#)

Namespaces

- [haec_sim](#)
- [haec_sim::topology](#)

Functions

- `std::istream & haec_sim::topology::operator>> (std::istream &s, position &pos)`
- `std::ostream & haec_sim::topology::operator<< (std::ostream &s, const position &pos)`
- `bool haec_sim::topology::operator< (const position &a, const position &b)`
- `bool haec_sim::topology::operator== (const position &a, const position &b)`
- `bool haec_sim::topology::operator!= (const position &a, const position &b)`

10.39 /home/tilsche/vc/haec-sim/include/haec_sim/topology/topology.hpp File Reference

```
#include <haec_sim/topology/manager.hpp>
#include <haec_sim/topology/depth_first_manager.hpp>
#include <haec_sim/topology/mapping_file_manager.hpp>
#include <haec_sim/path/data_transfer_path.hpp>
#include <otf2xx/definition/location.hpp>
#include <otf2xx/definition/compare.hpp>
#include <haec_sim/log/log.hpp>
#include <haec_sim/exception.hpp>
#include <haec_sim/config/config.hpp>
#include <cstdlib>
#include <map>
#include <utility>
#include <array>
#include <memory>
#include <sstream>
#include <cassert>
#include <iostream>
#include <boost/concept_check.hpp>
```

Classes

- class [haec_sim::topology::topology](#)

The topology class represents the layout of positions in a 3D-Mesh.

Namespaces

- [haec_sim](#)
- [haec_sim::topology](#)

10.40 /home/tilsche/vc/haec-sim/include/nitro/dl/dl.hpp File Reference

```
#include <nitro/dl/symbol.hpp>
#include <nitro/dl/exception.hpp>
#include <dlfcn.h>
#include <string>
#include <sstream>
#include <memory>
```

Classes

- class [nitro::dl::dl](#)
Class for dynamically loading libraries.

Namespaces

- [nitro](#)
- [nitro::dl](#)

10.41 /home/tilsche/vc/haec-sim/include/nitro/dl/symbol.hpp File Reference

```
#include <nitro/dl/exception.hpp>
#include <dlfcn.h>
#include <string>
#include <sstream>
#include <memory>
```

Classes

- class [nitro::dl::symbol< T >](#)
Class for holding and calling a handler to a dynamically loaded symbol in a typesafe way.
- class [nitro::dl::symbol< Ret\(Args...\) >](#)
Class for holding and calling a handler to a dynamically loaded symbol in a typesafe way.

Namespaces

- [nitro](#)
- [nitro::dl](#)

10.42 /home/tilsche/vc/haec-sim/include/nitro/log/attribute/message.hpp File Reference

```
#include <string>
```

Classes

- class [nitro::log::message_attribute](#)

Namespaces

- [nitro](#)
- [nitro::log](#)

10.43 /home/tilsche/vc/haec-sim/include/nitro/log/attribute/mpi_rank.hpp File Reference

```
#include <boost/mpi/environment.hpp>
#include <boost/mpi/communicator.hpp>
#include <boost/mpi/intercommunicator.hpp>
```

Classes

- class [nitro::log::mpi_rank_attribute](#)

Namespaces

- [nitro](#)
- [nitro::log](#)

10.44 /home/tilsche/vc/haec-sim/include/nitro/log/attribute/omp_thread_id.hpp File Reference

```
#include <omp.h>
```

Classes

- class [nitro::log::omp_thread_id_attribute](#)

Namespaces

- [nitro](#)
- [nitro::log](#)

10.45 /home/tilsche/vc/haec-sim/include/nitro/log/attribute/pid.hpp File Reference

```
#include <sys/types.h>
#include <unistd.h>
```

Classes

- class [nitro::log::pid_attribute](#)

Namespaces

- [nitro](#)
- [nitro::log](#)

10.46 /home/tilsche/vc/haec-sim/include/nitro/log/attribute/pthread_id.hpp File Reference

```
#include <pthread.h>
```

Classes

- class [nitro::log::pthread_id_attribute](#)

Namespaces

- [nitro](#)
- [nitro::log](#)

10.47 /home/tilsche/vc/haec-sim/include/nitro/log/attribute/severity.hpp File Reference

```
#include <string>
#include <nitro/log/severity.hpp>
```

Classes

- class [nitro::log::severity_attribute](#)

Namespaces

- [nitro](#)
- [nitro::log](#)

10.48 /home/tilsche/vc/haec-sim/include/nitro/log/severity.hpp File Reference

Namespaces

- [nitro](#)
- [nitro::log](#)

Enumerations

- enum [nitro::log::severity_level](#) : char {
[nitro::log::severity_level::trace](#), [nitro::log::severity_level::debug](#), [nitro::log::severity_level::info](#), [nitro::log::severity_level::warn](#),
[nitro::log::severity_level::error](#), [nitro::log::severity_level::fatal](#) }

Functions

- `template<typename S >`
`S & nitro::log::operator<< (S &s, severity_level sev)`

10.49 /home/tilsche/vc/haec-sim/include/nitro/log/attribute/std_thread_id.hpp File Reference

```
#include <thread>
```

Classes

- class `nitro::log::std_thread_id_attribute`

Namespaces

- `nitro`
- `nitro::log`

10.50 /home/tilsche/vc/haec-sim/include/nitro/log/attribute/timestamp.hpp File Reference

```
#include <chrono>
```

Classes

- class `nitro::log::timestamp_attribute`

Namespaces

- `nitro`
- `nitro::log`

10.51 /home/tilsche/vc/haec-sim/include/nitro/log/detail/has_attribute.hpp File Reference

```
#include <nitro/meta/variadic.hpp>
```

Classes

- struct `nitro::log::detail::has_attribute< Attributes >`
- struct `nitro::log::detail::has_attribute< Attribute, Record< Attributes...> >`

Namespaces

- `nitro`
- `nitro::log`
- `nitro::log::detail`

10.52 /home/tilsche/vc/haec-sim/include/nitro/log/detail/set_attribute.hpp File Reference

```
#include <nitro/log/detail/has_attribute.hpp>
#include <nitro/log/severity.hpp>
#include <nitro/log/attribute/severity.hpp>
#include <nitro/log/record.hpp>
```

Classes

- struct [nitro::log::detail::assign_severity](#)< bool, Record, Attributes >
- struct [nitro::log::detail::assign_severity](#)< false, Record, Attributes...>
- struct [nitro::log::detail::set_severity](#)< Attributes >
- struct [nitro::log::detail::set_severity](#)< record< Attributes...> >

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::detail](#)

10.53 /home/tilsche/vc/haec-sim/include/nitro/log/filter/and_filter.hpp File Reference

```
#include <type_traits>
```

Classes

- class [nitro::log::filter::and_filter](#)< F1, F2 >

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::filter](#)

10.54 /home/tilsche/vc/haec-sim/include/nitro/log/filter/mpi_master_filter.hpp File Reference

Classes

- class [nitro::log::filter::mpi_master_filter](#)< Record >

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::filter](#)

10.55 /home/tilsche/vc/haec-sim/include/nitro/log/filter/not_filter.hpp File Reference

Classes

- class [nitro::log::filter::not_filter](#)< F1 >
- class [nitro::log::filter::not_filter](#)< not_filter< F1 > >

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::filter](#)

10.56 /home/tilsche/vc/haec-sim/include/nitro/log/filter/null_filter.hpp File Reference

Classes

- class [nitro::log::filter::null_filter](#)< Record >

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::filter](#)

10.57 /home/tilsche/vc/haec-sim/include/nitro/log/filter/or_filter.hpp File Reference

Classes

- class [nitro::log::filter::or_filter](#)< F1, F2 >

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::filter](#)

10.58 /home/tilsche/vc/haec-sim/include/nitro/log/filter/severity_filter.hpp File Reference

```
#include <nitro/log/severity.hpp>
```

Classes

- class [nitro::log::filter::severity_filter](#)< Record, N >

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::filter](#)

10.59 /home/tilsche/vc/haec-sim/include/nitro/log/logger.hpp File Reference

```
#include <nitro/log/severity.hpp>  
#include <nitro/log/stream.hpp>
```

Classes

- class [nitro::log::logger](#)< [Record](#), [Formater](#), [Sink](#), [Filter](#) >

Namespaces

- [nitro](#)
- [nitro::log](#)

10.60 /home/tilsche/vc/haec-sim/include/nitro/log/record.hpp File Reference

```
#include <nitro/log/detail/has_attribute.hpp>  
#include <nitro/log/attribute/message.hpp>
```

Classes

- class [nitro::log::record](#)< [Attributes](#) >

Namespaces

- [nitro](#)
- [nitro::log](#)

10.61 /home/tilsche/vc/haec-sim/include/nitro/log/sink/null.hpp File Reference

```
#include <string>
```

Classes

- class [nitro::log::sink::null](#)

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::sink](#)

10.62 /home/tilsche/vc/haec-sim/include/nitro/log/sink/stdout.hpp File Reference

```
#include <string>
#include <iostream>
```

Classes

- class [nitro::log::sink::stdout](#)

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::sink](#)

10.63 /home/tilsche/vc/haec-sim/include/nitro/log/sink/stdout_mt.hpp File Reference

```
#include <string>
#include <iostream>
#include <mutex>
```

Classes

- class [nitro::log::sink::stdout_mt](#)

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::sink](#)

10.64 /home/tilsche/vc/haec-sim/include/nitro/log/stream.hpp File Reference

```
#include <sstream>
#include <memory>
#include <nitro/log/severity.hpp>
#include <nitro/log/detail/set_attribute.hpp>
```

Classes

- class [nitro::log::logger](#)< Record, Formater, Sink, Filter >
- class [nitro::log::detail::smart_stream](#)< Record, Formatter, Sink, Filter, Severity >
- class [nitro::log::detail::null_stream](#)
- struct [nitro::log::detail::actual_stream](#)< bool, Record, Formatter, Sink, Filter, Severity >
- struct [nitro::log::detail::actual_stream](#)< false, Record, Formatter, Sink, Filter, Severity >
- struct [nitro::log::actual_stream](#)< Severity, Record, Formatter, Sink, Filter >

Namespaces

- [nitro](#)
- [nitro::log](#)
- [nitro::log::detail](#)

Functions

- [template](#)<typename Record , [template](#)< typename > class Formatter, typename Sink , [template](#)< typename > class Filter, typename T , severity_level Severity>
[smart_stream](#)< Record, Formatter, Sink, Filter, Severity > [nitro::log::detail::operator](#)<< ([smart_stream](#)< Record, Formatter, Sink, Filter, Severity > &&s, const T &t)
- [template](#)<typename Record , [template](#)< typename > class Formatter, typename Sink , [template](#)< typename > class Filter, typename T , severity_level Severity>
[smart_stream](#)< Record, Formatter, Sink, Filter, Severity > & [nitro::log::detail::operator](#)<< ([smart_stream](#)< Record, Formatter, Sink, Filter, Severity > &s, const T &t)
- [template](#)<typename T >
[null_stream](#) [nitro::log::detail::operator](#)<< ([null_stream](#) &&s, const T &)

10.65 /home/tilsche/vc/haec-sim/include/nitro/meta/variadic.hpp File Reference

```
#include <type_traits>
```

Classes

- struct [nitro::meta::is_variadic_member](#)< U, Attributes >
meta function to check if a variadic type pack contains a given type.
- struct [nitro::meta::is_variadic_member](#)< U, first, Attributes...>
meta function to check if a variadic type pack contains a given type.
- struct [nitro::meta::is_variadic_member](#)< U >
meta function to check if a variadic type pack contains a given type.

Namespaces

- [nitro](#)
- [nitro::meta](#)

10.66 /home/tilsche/vc/haec-sim/include/otf2xx/attribute_list.hpp File Reference

```
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/exception.hpp>
#include <otf2/OTF2_AttributeList.h>
#include <memory>
```

Classes

- struct [otf2::detail::add_attribute< Type >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::attribute >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::comm >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::Double >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::Float >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int8 >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int16 >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int32 >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::int64 >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::location >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::metric >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::parameter >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::region >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::string >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint8 >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint16 >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint32 >](#)
- struct [otf2::detail::add_attribute< otf2::definition::attribute::attribute_type::uint64 >](#)
- class [otf2::attribute_list](#)

Namespaces

- [otf2](#)
- [otf2::detail](#)

Typedefs

- using [otf2::detail::attribute_type](#) = [otf2::definition::attribute::attribute_type](#)

Functions

- [OTF2_AttributeList * otf2::detail::OTF2_AttributeList_Clone](#) ([OTF2_AttributeList](#) const *const list)

10.67 /home/tilsche/vc/haec-sim/include/otf2xx/chrono/chrono.hpp File Reference

```
#include <otf2xx/chrono/clock.hpp>
#include <otf2xx/chrono/convert.hpp>
#include <otf2xx/chrono/duration.hpp>
#include <otf2xx/chrono/ticks.hpp>
#include <otf2xx/chrono/time_point.hpp>
```

10.68 /home/tilsche/vc/haec-sim/include/otf2xx/chrono/clock.hpp File Reference

```
#include <otf2xx/chrono/duration.hpp>
```

Classes

- struct [otf2::chrono::clock](#)
simulated clock

Namespaces

- [otf2](#)
- [otf2::chrono](#)

10.69 /home/tilsche/vc/haec-sim/include/otf2xx/chrono/convert.hpp File Reference

```
#include <otf2xx/chrono/time_point.hpp>  
#include <otf2xx/chrono/clock.hpp>  
#include <otf2xx/chrono/ticks.hpp>  
#include <cassert>  
#include <limits>
```

Classes

- class [otf2::chrono::convert](#)
class to convert between ticks and time points

Namespaces

- [otf2](#)
- [otf2::chrono](#)

Functions

- `template<typename Clock, typename Duration >
otf2::chrono::time_point otf2::chrono::convert_time_point (std::chrono::time_point< Clock, Duration > tp)`
converts from std::chrono::timepoint to otf2::chrono::time_point

10.70 /home/tilsche/vc/haec-sim/include/otf2xx/chrono/duration.hpp File Reference

```
#include <boost/serialization/split_free.hpp>  
#include <chrono>  
#include <iostream>
```

Namespaces

- [otf2](#)
- [otf2::chrono](#)
- [std](#)
- [std::chrono](#)
- [boost](#)
- [boost::serialization](#)

Typedefs

- typedef `std::chrono::duration< int64_t, std::ratio< 1, 1000000000000 > >` [otf2::chrono::picoseconds](#)
typedef for duration of length picosecond
- typedef `std::chrono::nanoseconds` [otf2::chrono::nanoseconds](#)
typedef for duration of length nanosecond
- typedef `std::chrono::microseconds` [otf2::chrono::microseconds](#)
typedef for duration of length microseconds
- typedef `std::chrono::milliseconds` [otf2::chrono::milliseconds](#)
typedef for duration of length milliseconds
- typedef `std::chrono::seconds` [otf2::chrono::seconds](#)
typedef for duration of length seconds
- typedef `std::chrono::minutes` [otf2::chrono::minutes](#)
typedef for duration of length minutes
- typedef `std::chrono::hours` [otf2::chrono::hours](#)
typedef for duration of length hours
- typedef `picoseconds` [otf2::chrono::duration](#)
otf2::chrono::duration defaults to picoseconds

Functions

- `template<typename FromDuration , typename ToDuration = otf2::chrono::duration>`
`constexpr ToDuration otf2::chrono::duration_cast (const FromDuration &dt)`
convert between durations
- `std::ostream & std::chrono::operator<< (std::ostream &s, nanoseconds dur)`
- `std::ostream & std::chrono::operator<< (std::ostream &s, microseconds dur)`
- `std::ostream & std::chrono::operator<< (std::ostream &s, milliseconds dur)`
- `std::ostream & std::chrono::operator<< (std::ostream &s, seconds dur)`
- `std::ostream & std::chrono::operator<< (std::ostream &s, minutes dur)`
- `std::ostream & std::chrono::operator<< (std::ostream &s, hours dur)`
- `template<class Archive >`
`void boost::serialization::save (Archive &ar, const otf2::chrono::duration &dur, const unsigned int)`
- `template<class Archive >`
`void boost::serialization::load (Archive &ar, otf2::chrono::duration &dur, const unsigned int)`
- `template<class Archive >`
`void boost::serialization::serialize (Archive &ar, otf2::chrono::duration &dur, const unsigned int file_version)`

10.71 /home/tilsche/vc/haec-sim/include/otf2xx/chrono/ticks.hpp File Reference

Classes

- class [otf2::chrono::ticks](#)
representing ticks in a typesafe manner

Namespaces

- [otf2](#)
- [otf2::chrono](#)

10.72 /home/tilsche/vc/haec-sim/include/otf2xx/chrono/time_point.hpp File Reference

```
#include <otf2xx/chrono/clock.hpp>
#include <boost/serialization/split_free.hpp>
#include <iostream>
#include <limits>
```

Namespaces

- [otf2](#)
- [otf2::chrono](#)
- [boost](#)
- [boost::serialization](#)

Typedefs

- typedef clock::time_point [otf2::chrono::time_point](#)

Functions

- std::ostream & [otf2::chrono::operator<<](#) (std::ostream &s, [time_point](#) tp)
- [time_point](#) [otf2::chrono::armageddon](#) ()
returns latest representable [time_point](#)
- [time_point](#) [otf2::chrono::genesis](#) ()
returns the first representable [time_point](#)
- template<class Archive >
void [boost::serialization::save](#) (Archive &ar, const [otf2::chrono::time_point](#) &tp, const unsigned int)
- template<class Archive >
void [boost::serialization::load](#) (Archive &ar, [otf2::chrono::time_point](#) &tp, const unsigned int)
- template<class Archive >
void [boost::serialization::serialize](#) (Archive &ar, [otf2::chrono::time_point](#) &tp, const unsigned int file_version)

10.73 /home/tilsche/vc/haec-sim/include/otf2xx/common.hpp File Reference

Classes

- class [otf2::common::both](#)< [timing](#), [property](#) >

Namespaces

- [otf2](#)
- [otf2::common](#)

Enumerations

- enum `otf2::common::type` {
`otf2::common::type::none`, `otf2::common::type::uint8`, `otf2::common::type::uint16`, `otf2::common::type::uint32`,
`otf2::common::type::uint64`, `otf2::common::type::int8`, `otf2::common::type::int16`, `otf2::common::type::int32`,
`otf2::common::type::int64`, `otf2::common::type::Float`, `otf2::common::type::Double`, `otf2::common::type::string`,
`otf2::common::type::attribute`, `otf2::common::type::location`, `otf2::common::type::region`, `otf2::common::type::group`,
`otf2::common::type::metric`, `otf2::common::type::comm`, `otf2::common::type::parameter` }
- enum `otf2::common::system_tree_node_domain` {
`otf2::common::system_tree_node_domain::machine`, `otf2::common::system_tree_node_domain::shared_memory`, `otf2::common::system_tree_node_domain::numa`, `otf2::common::system_tree_node_domain::socket`,
`otf2::common::system_tree_node_domain::cache`, `otf2::common::system_tree_node_domain::core`, `otf2::common::system_tree_node_domain::pu` }
- enum `otf2::common::group_type` {
`otf2::common::group_type::unknown`, `otf2::common::group_type::locations`, `otf2::common::group_type::regions`, `otf2::common::group_type::metric`,
`otf2::common::group_type::comm_locations`, `otf2::common::group_type::comm_group`, `otf2::common::group_type::comm_self` }
- enum `otf2::common::group_flag_type` { `otf2::common::group_flag_type::none`, `otf2::common::group_flag_type::global_members` }
- enum `otf2::common::location_type` { `otf2::common::location_type::unknown`, `otf2::common::location_type::cpu_thread`, `otf2::common::location_type::gpu`, `otf2::common::location_type::metric` }
- enum `otf2::common::parameter_type` { `otf2::common::parameter_type::string`, `otf2::common::parameter_type::int64`, `otf2::common::parameter_type::uint64` }
- enum `otf2::common::location_group_type` { `otf2::common::location_group_type::unknown`, `otf2::common::location_group_type::process` }
- enum `otf2::common::role_type` {
`otf2::common::role_type::unknown`, `otf2::common::role_type::function`, `otf2::common::role_type::wrapper`, `otf2::common::role_type::loop`,
`otf2::common::role_type::code`, `otf2::common::role_type::parallel`, `otf2::common::role_type::sections`, `otf2::common::role_type::section`,
`otf2::common::role_type::workshare`, `otf2::common::role_type::single`, `otf2::common::role_type::single_sblock`, `otf2::common::role_type::master`,
`otf2::common::role_type::critical`, `otf2::common::role_type::critical_sblock`, `otf2::common::role_type::atomic`, `otf2::common::role_type::barrier`,
`otf2::common::role_type::implicit_barrier`, `otf2::common::role_type::flush`, `otf2::common::role_type::ordered`, `otf2::common::role_type::ordered_sblock`,
`otf2::common::role_type::task`, `otf2::common::role_type::task_create`, `otf2::common::role_type::task_wait`, `otf2::common::role_type::coll_one2all`,
`otf2::common::role_type::coll_all2one`, `otf2::common::role_type::coll_all2all`, `otf2::common::role_type::coll_other`, `otf2::common::role_type::file_io`,
`otf2::common::role_type::point2point`, `otf2::common::role_type::rma`, `otf2::common::role_type::data_transfer`, `otf2::common::role_type::artificial`,
`otf2::common::role_type::thread_create`, `otf2::common::role_type::thread_wait` }
- enum `otf2::common::paradigm_type` {
`otf2::common::paradigm_type::unknown`, `otf2::common::paradigm_type::user`, `otf2::common::paradigm_type::compiler`, `otf2::common::paradigm_type::openmp`,
`otf2::common::paradigm_type::mpi`, `otf2::common::paradigm_type::cuda`, `otf2::common::paradigm_type::measurement_system`, `otf2::common::paradigm_type::pthread`,
`otf2::common::paradigm_type::hmpp`, `otf2::common::paradigm_type::ompss`, `otf2::common::paradigm_type::hardware`, `otf2::common::paradigm_type::gaspi`,
`otf2::common::paradigm_type::upc`, `otf2::common::paradigm_type::shmem` }
- enum `otf2::common::flags_type` { `otf2::common::flags_type::none`, `otf2::common::flags_type::dynamic`, `otf2::common::flags_type::phase` }

- enum `otf2::common::collective_type` {
`otf2::common::collective_type::barrier`, `otf2::common::collective_type::broadcast`, `otf2::common::collective_↵`
`_type::gather`, `otf2::common::collective_type::gatherv`,
`otf2::common::collective_type::scatter`, `otf2::common::collective_type::scatterv`, `otf2::common::collective_↵`
`type::all_gather`, `otf2::common::collective_type::all_gatherv`,
`otf2::common::collective_type::all_to_all`, `otf2::common::collective_type::all_to_allv`, `otf2::common_↵`
`::collective_type::all_to_allw`, `otf2::common::collective_type::all_reduce`,
`otf2::common::collective_type::reduce`, `otf2::common::collective_type::reduce_scatter`, `otf2::common_↵`
`::collective_type::scan`, `otf2::common::collective_type::exscan`,
`otf2::common::collective_type::reduce_scatter_block`, `otf2::common::collective_type::create_handle`, `otf2_↵`
`::common::collective_type::destroy_handle`, `otf2::common::collective_type::allocate`,
`otf2::common::collective_type::deallocate`, `otf2::common::collective_type::create_handle_and_allocate`,
`otf2::common::collective_type::destroy_handle_and_deallocate` }
- enum `otf2::common::metric_type` { `otf2::common::metric_type::other`, `otf2::common::metric_type::papi`, `otf2_↵`
`::common::metric_type::rusage`, `otf2::common::metric_type::user` }
- enum `otf2::common::metric_timing` { `otf2::common::metric_timing::start` = 0, `otf2::common::metric_timing_↵`
`::point` = 1 << 4, `otf2::common::metric_timing::last` = 2 << 4, `otf2::common::metric_timing::next` = 3 << 4
}
- enum `otf2::common::metric_occurence` { `otf2::common::metric_occurence::strict`, `otf2::common::metric_↵`
`occurence::sync`, `otf2::common::metric_occurence::async` }
- enum `otf2::common::metric_scope` { `otf2::common::metric_scope::location`, `otf2::common::metric_scope_↵`
`::location_group`, `otf2::common::metric_scope::system_tree_node`, `otf2::common::metric_scope::group` }
- metric scope*
- enum `otf2::common::metric_value_property` { `otf2::common::metric_value_property::accumulated` = 0, `otf2_↵`
`::common::metric_value_property::absolute` = 1, `otf2::common::metric_value_property::relative` = 2 }
- enum `otf2::common::metric_base` { `otf2::common::metric_base::binary`, `otf2::common::metric_base::decimal`
}
- enum `otf2::common::metric_mode` {
`otf2::common::metric_mode::accumulated_start` = both<`metric_timing::start`, `metric_value_property_↵`
`::accumulated`>::value, `otf2::common::metric_mode::accumulated_point` = both<`metric_timing::point`,
`metric_value_property::accumulated`>::value, `otf2::common::metric_mode::accumulated_last` = both<`metric_↵`
`_timing::last`, `metric_value_property::accumulated`>::value, `otf2::common::metric_mode::accumulated_next`
= both<`metric_timing::next`, `metric_value_property::accumulated`>::value,
`otf2::common::metric_mode::absolute_point` = both<`metric_timing::point`, `metric_value_property_↵`
`::absolute`>::value, `otf2::common::metric_mode::absolute_last` = both<`metric_timing::last`, `metric_value_↵`
`_property::absolute`>::value, `otf2::common::metric_mode::absolute_next` = both<`metric_timing::next`,
`metric_value_property::absolute`>::value, `otf2::common::metric_mode::relative_point` = both<`metric_↵`
`timing::point`, `metric_value_property::relative`>::value,
`otf2::common::metric_mode::relative_last` = both<`metric_timing::last`, `metric_value_property::relative_↵`
`::value`, `otf2::common::metric_mode::relative_next` = both<`metric_timing::next`, `metric_value_property_↵`
`::relative`>::value }
- enum `otf2::common::recorder_kind` { `otf2::common::recorder_kind::unknown`, `otf2::common::recorder_kind_↵`
`::abstract`, `otf2::common::recorder_kind::cpu`, `otf2::common::recorder_kind::gpu` }
- enum `otf2::common::event_type` {
`otf2::common::event_type::buffer_flush`, `otf2::common::event_type::enter`, `otf2::common::event_type::leave`,
`otf2::common::event_type::measurement`,
`otf2::common::event_type::metric`, `otf2::common::event_type::mpi_collective_begin`, `otf2::common::event_↵`
`type::mpi_collective_end`, `otf2::common::event_type::mpi_ireceive`,
`otf2::common::event_type::mpi_ireceive_request`, `otf2::common::event_type::mpi_isend`, `otf2::common_↵`
`::event_type::mpi_isend_complete`, `otf2::common::event_type::mpi_receive`,
`otf2::common::event_type::mpi_request_cancelled`, `otf2::common::event_type::mpi_request_test`, `otf2_↵`
`::common::event_type::mpi_send`, `otf2::common::event_type::parameter_int`,
`otf2::common::event_type::parameter_string`, `otf2::common::event_type::parameter_unsigned_int`, `otf2_↵`
`::common::event_type::thread_acquire_lock`, `otf2::common::event_type::thread_fork`,
`otf2::common::event_type::thread_join`, `otf2::common::event_type::thread_release_lock`, `otf2::common_↵`
`::event_type::thread_task_complete`, `otf2::common::event_type::thread_task_create`,
`otf2::common::event_type::thread_task_switch`, `otf2::common::event_type::thread_team_begin`, `otf2_↵`
`::common::event_type::thread_team_end` }

10.74 /home/tilsche/vc/haec-sim/include/otf2xx/definition/attribute.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/attribute_impl.hpp>
#include <memory>
```

Classes

- class [otf2::definition::attribute](#)
class for representing a attribute definition

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.75 /home/tilsche/vc/haec-sim/include/otf2xx/definition/clock_properties.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/chrono/chrono.hpp>
```

Classes

- class [otf2::definition::clock_properties](#)
class for representing a clock properties definition

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.76 /home/tilsche/vc/haec-sim/include/otf2xx/definition/comm.hpp File Reference

```
#include <otf2xx/exception.hpp>
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/group.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/comm_impl.hpp>
#include <sstream>
```

Classes

- class [otf2::definition::comm](#)
class for representing a comm definition

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.77 /home/tilsche/vc/haec-sim/include/otf2xx/definition/compare.hpp File Reference

```
#include <otf2xx/traits/definition.hpp>
#include <functional>
#include <memory>
```

Classes

- struct [otf2::definition::comp](#)< [Definition](#) >

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.78 /home/tilsche/vc/haec-sim/include/otf2xx/definition/container.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/traits/definition.hpp>
#include <map>
#include <vector>
```

Classes

- class [otf2::definition::container](#)< [Definition](#) >
- class [otf2::definition::container](#)< [otf2::definition::property](#)< [Definition](#) > >

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.79 /home/tilsche/vc/haec-sim/include/otf2xx/definition/definitions.hpp File Reference

```
#include <otf2xx/definition/container.hpp>
#include <otf2xx/definition/attribute.hpp>
#include <otf2xx/definition/clock_properties.hpp>
#include <otf2xx/definition/comm.hpp>
#include <otf2xx/definition/group.hpp>
#include <otf2xx/definition/location.hpp>
#include <otf2xx/definition/location_group.hpp>
#include <otf2xx/definition/parameter.hpp>
#include <otf2xx/definition/region.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/system_tree_node.hpp>
#include <otf2xx/definition/metric_member.hpp>
#include <otf2xx/definition/metric_class.hpp>
#include <otf2xx/definition/metric_instance.hpp>
#include <otf2xx/definition/unknown.hpp>
#include <otf2xx/definition/property.hpp>
```

10.80 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/attribute_impl.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <memory>
```

Classes

- class [otf2::definition::detail::attribute_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.81 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/comm_impl.hpp File Reference

```
#include <otf2xx/exception.hpp>
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/group.hpp>
#include <sstream>
```

Classes

- class [otf2::definition::detail::comm_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.82 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/group_impl.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/traits/definition.hpp>
#include <vector>
#include <memory>
```

Classes

- class [otf2::definition::detail::group_base](#)
- class [otf2::definition::detail::group_impl](#)< MemberType, GroupType >

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.83 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/location_group_impl.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/system_tree_node.hpp>
```

Classes

- class [otf2::definition::detail::location_group_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.84 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/location_impl.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/location_group.hpp>
#include <memory>
```

Classes

- class [otf2::definition::detail::location_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.85 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/metric_base.hpp File Reference

Classes

- class [otf2::definition::detail::metric_base](#)
Dummy class to have metric instances and metric classes in the same id space.

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.86 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/metric_class_impl.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <memory>
#include <vector>
```

Classes

- class [otf2::definition::detail::metric_class_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.87 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/metric_instance_impl.hpp

File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/location.hpp>
#include <otf2xx/definition/location_group.hpp>
#include <otf2xx/definition/system_tree_node.hpp>
#include <otf2xx/definition/group.hpp>
#include <otf2xx/definition/metric_class.hpp>
#include <memory>
#include <vector>
```

Classes

- class [otf2::definition::detail::metric_instance_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.88 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/metric_member_impl.hpp

File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <memory>
#include <boost/concept_check.hpp>
```

Classes

- class [otf2::definition::detail::metric_member_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.89 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/parameter_impl.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <memory>
```

Classes

- class [otf2::definition::detail::parameter_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.90 /home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/property_impl.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <memory>
```

Classes

- class [otf2::definition::detail::property_impl](#)< [Definition](#) >

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.91 `/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/region_impl.hpp` File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <memory>
```

Classes

- class [otf2::definition::detail::region_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.92 `/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/string_impl.hpp` File Reference

```
#include <otf2xx/reference.hpp>
#include <string>
#include <memory>
```

Classes

- class [otf2::definition::detail::string_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.93 `/home/tilsche/vc/haec-sim/include/otf2xx/definition/detail/system_tree_node_↔_impl.hpp` File Reference

```
#include <otf2xx/exception.hpp>
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/definition/string.hpp>
#include <memory>
```


Classes

- class [otf2::definition::detail::system_tree_node_impl](#)

Namespaces

- [otf2](#)
- [otf2::definition](#)
- [otf2::definition::detail](#)

10.94 /home/tilsche/vc/haec-sim/include/otf2xx/definition/group.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/traits/definition.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/group_impl.hpp>
```

Classes

- class [otf2::definition::group](#)< MemberType, GroupType >
class template for representing groups

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.95 /home/tilsche/vc/haec-sim/include/otf2xx/definition/location.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/location_group.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/location_impl.hpp>
```

Classes

- class [otf2::definition::location](#)
class for representing location definitions

Namespaces

- [otf2](#)
- [otf2::definition](#)

Functions

- `std::ostream & otf2::definition::operator<<` (`std::ostream &s`, `location loc`)
- `bool otf2::definition::operator==` (`otf2::definition::location lhs`, `otf2::definition::location rhs`)

10.96 /home/tilsche/vc/haec-sim/include/otf2xx/definition/location_group.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/system_tree_node.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/location_group_impl.hpp>
```

Classes

- class `otf2::definition::location_group`
class for representing a location group definition

Namespaces

- `otf2`
- `otf2::definition`

10.97 /home/tilsche/vc/haec-sim/include/otf2xx/definition/metric_class.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/metric_class_impl.hpp>
#include <otf2xx/definition/detail/metric_base.hpp>
```

Classes

- class `otf2::definition::metric_class`
class for representing metric class definitions

Namespaces

- `otf2`
- `otf2::definition`

10.98 /home/tilsche/vc/haec-sim/include/otf2xx/definition/metric_instance.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/metric_instance_impl.hpp>
#include <otf2xx/definition/detail/metric_base.hpp>
```

Classes

- class [otf2::definition::metric_instance](#)
class for representing metric instance definitions

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.99 /home/tilsche/vc/haec-sim/include/otf2xx/definition/metric_member.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/metric_member_impl.hpp>
```

Classes

- class [otf2::definition::metric_member](#)
class representing a metric member definition

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.100 /home/tilsche/vc/haec-sim/include/otf2xx/definition/parameter.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/parameter_impl.hpp>
```

Classes

- class [otf2::definition::parameter](#)
class for representing parameter definitions

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.101 /home/tilsche/vc/haec-sim/include/otf2xx/definition/property.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/property_impl.hpp>
```

Classes

- class [otf2::definition::property](#)< [Definition](#) >
class for representing property definitions

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.102 /home/tilsche/vc/haec-sim/include/otf2xx/definition/region.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/region_impl.hpp>
```

Classes

- class [otf2::definition::region](#)
class for representing a region definition

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.103 /home/tilsche/vc/haec-sim/include/otf2xx/definition/string.hpp File Reference

```
#include <otf2xx/reference.hpp>
#include <string>
#include <iostream>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/string_impl.hpp>
```

Classes

- class [otf2::definition::string](#)

The string definiton class.

Namespaces

- [otf2](#)
- [otf2::definition](#)

Functions

- `std::ostream & otf2::definition::operator<< (std::ostream &s, otf2::definition::string str)`

operator<< for easily printing out string definitions

10.104 /home/tilsche/vc/haec-sim/include/otf2xx/definition/system_tree_node.hpp File Reference

```
#include <otf2xx/exception.hpp>
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/system_tree_node_impl.hpp>
```

Classes

- class [otf2::definition::system_tree_node](#)

class for representing system tree node definitions

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.105 /home/tilsche/vc/haec-sim/include/otf2xx/definition/unknown.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/reference.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/definition/string.hpp>
#include <otf2xx/definition/detail/base.hpp>
#include <otf2xx/definition/detail/attribute_impl.hpp>
#include <memory>
```

Classes

- class [otf2::definition::unknown](#)
class for representing an unknown definition

Namespaces

- [otf2](#)
- [otf2::definition](#)

10.106 /home/tilsche/vc/haec-sim/include/otf2xx/event/unknown.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/event/base.hpp>
#include <otf2xx/chrono/chrono.hpp>
```

Classes

- class [otf2::event::unknown](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.107 /home/tilsche/vc/haec-sim/include/otf2xx/event/buffer.hpp File Reference

```
#include <otf2xx/event/events.hpp>
#include <otf2xx/reader/callback.hpp>
#include <otf2xx/definition/location.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/exception.hpp>
#include <deque>
#include <cassert>
```

Classes

- struct [otf2::event::detail::buffer_node](#)
- class [otf2::event::buffer](#)

This class isn't an event, but a buffer for events.

Namespaces

- [otf2](#)
- [otf2::event](#)
- [otf2::event::detail](#)

10.108 /home/tilsche/vc/haec-sim/include/otf2xx/event/buffer_flush.hpp File Reference

```
#include <otf2xx/event/base.hpp>
#include <otf2xx/chrono/chrono.hpp>
```

Classes

- class [otf2::event::buffer_flush](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.109 /home/tilsche/vc/haec-sim/include/otf2xx/event/enter.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/event/base.hpp>
#include <otf2xx/chrono/chrono.hpp>
```

Classes

- class [otf2::event::enter](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.110 /home/tilsche/vc/haec-sim/include/otf2xx/event/events.hpp File Reference

```
#include <otf2xx/event/buffer_flush.hpp>
#include <otf2xx/event/enter.hpp>
#include <otf2xx/event/leave.hpp>
#include <otf2xx/event/measurement.hpp>
#include <otf2xx/event/metric.hpp>
#include <otf2xx/event/mpi_send.hpp>
#include <otf2xx/event/mpi_receive.hpp>
#include <otf2xx/event/mpi_isend.hpp>
#include <otf2xx/event/mpi_isend_complete.hpp>
#include <otf2xx/event/mpi_ireceive.hpp>
#include <otf2xx/event/mpi_ireceive_request.hpp>
#include <otf2xx/event/mpi_request_cancelled.hpp>
#include <otf2xx/event/mpi_request_test.hpp>
#include <otf2xx/event/mpi_collective_begin.hpp>
#include <otf2xx/event/mpi_collective_end.hpp>
#include <otf2xx/event/parameter_int.hpp>
#include <otf2xx/event/parameter_unsigned_int.hpp>
#include <otf2xx/event/parameter_string.hpp>
#include <otf2xx/event/thread_fork.hpp>
#include <otf2xx/event/thread_join.hpp>
#include <otf2xx/event/thread_team_begin.hpp>
#include <otf2xx/event/thread_team_end.hpp>
#include <otf2xx/event/thread_acquire_lock.hpp>
#include <otf2xx/event/thread_release_lock.hpp>
#include <otf2xx/event/thread_task_create.hpp>
#include <otf2xx/event/thread_task_switch.hpp>
#include <otf2xx/event/thread_task_complete.hpp>
#include <otf2xx/event/unknown.hpp>
```

10.111 /home/tilsche/vc/haec-sim/include/otf2xx/event/leave.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/event/base.hpp>
#include <otf2xx/chrono/chrono.hpp>
```

Classes

- class [otf2::event::leave](#)
The class representing a leave event.

Namespaces

- [otf2](#)
- [otf2::event](#)

10.112 /home/tilsche/vc/haec-sim/include/otf2xx/event/measurement.hpp File Reference

```
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```


Classes

- class [otf2::event::measurement](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.113 /home/tilsche/vc/haec-sim/include/otf2xx/event/metric.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/definition/metric_member.hpp>
#include <otf2xx/event/base.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2/OTF2_Events.h>
#include <otf2xx/exception.hpp>
#include <cstdint>
#include <vector>
#include <complex>
#include <cmath>
```

Classes

- class [otf2::event::metric](#)
- class [otf2::event::metric::value_container](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.114 /home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_collective_begin.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::mpi_collective_begin](#)
The class representing the [mpi_collective_begin](#) event.

Namespaces

- [otf2](#)
- [otf2::event](#)

10.115 /home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_collective_end.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/definition/comm.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
#include <otf2xx/common.hpp>
```

Classes

- class [otf2::event::mpi_collective_end](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.116 /home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_ireceive.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::mpi_ireceive](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.117 /home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_ireceive_request.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::mpi_receive_request](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.118 /home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_isend.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::mpi_isend](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.119 /home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_isend_complete.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::mpi_isend_complete](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.120 /home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_receive.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::mpi_receive](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.121 [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_request_cancelled.hpp](#) File Reference

```
#include <otf2xx/definition/fwd.hpp>  
#include <otf2xx/chrono/chrono.hpp>  
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::mpi_request_cancelled](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.122 [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_request_test.hpp](#) File Reference

```
#include <otf2xx/definition/fwd.hpp>  
#include <otf2xx/chrono/chrono.hpp>  
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::mpi_request_test](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.123 [/home/tilsche/vc/haec-sim/include/otf2xx/event/mpi_send.hpp](#) File Reference

```
#include <otf2xx/definition/fwd.hpp>  
#include <otf2xx/chrono/chrono.hpp>  
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::mpi_send](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.124 /home/tilsche/vc/haec-sim/include/otf2xx/event/parameter_int.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::parameter_int](#)
The class representing a [parameter_int](#) event.

Namespaces

- [otf2](#)
- [otf2::event](#)

10.125 /home/tilsche/vc/haec-sim/include/otf2xx/event/parameter_string.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::parameter_string](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.126 /home/tilsche/vc/haec-sim/include/otf2xx/event/parameter_unsigned_int.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::parameter_unsigned_int](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.127 /home/tilsche/vc/haec-sim/include/otf2xx/event/thread_acquire_lock.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::thread_acquire_lock](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.128 /home/tilsche/vc/haec-sim/include/otf2xx/event/thread_fork.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::thread_fork](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.129 /home/tilsche/vc/haec-sim/include/otf2xx/event/thread_join.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::thread_join](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.130 /home/tilsche/vc/haec-sim/include/otf2xx/event/thread_release_lock.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::thread_release_lock](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.131 /home/tilsche/vc/haec-sim/include/otf2xx/event/thread_task_complete.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::thread_task_complete](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.132 `/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_task_create.hpp` File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::thread_task_create](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.133 `/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_task_switch.hpp` File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::thread_task_switch](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.134 `/home/tilsche/vc/haec-sim/include/otf2xx/event/thread_team_begin.hpp` File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::thread_team_begin](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.135 /home/tilsche/vc/haec-sim/include/otf2xx/event/thread_team_end.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2xx/event/base.hpp>
```

Classes

- class [otf2::event::thread_team_end](#)

Namespaces

- [otf2](#)
- [otf2::event](#)

10.136 /home/tilsche/vc/haec-sim/include/otf2xx/otf2.hpp File Reference

```
#include <otf2xx/fwd.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/writer/archive.hpp>
#include <otf2xx/writer/global.hpp>
#include <otf2xx/writer/local.hpp>
#include <otf2xx/reader/reader.hpp>
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/event/events.hpp>
```

10.137 /home/tilsche/vc/haec-sim/include/otf2xx/reader/callback.hpp File Reference

```
#include <otf2xx/reader/fwd.hpp>
#include <otf2xx/event/fwd.hpp>
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/common.hpp>
#include <otf2xx/chrono/time_point.hpp>
```

Classes

- class [otf2::reader::callback](#)
base class for [otf2](#) reader callbacks.

Namespaces

- [otf2](#)
- [otf2::reader](#)

Macros

- `#define` [NOT_IMPLEMENTED_YET](#)

10.137.1 Macro Definition Documentation

10.137.1.1 `#define` NOT_IMPLEMENTED_YET

10.138 `/home/tilsche/vc/haec-sim/include/otf2xx/reader/callback_funcs.hpp` File Reference

```
#include <otf2xx/reader/detail/callback_event_funcs.hpp>
#include <otf2xx/reader/detail/callback_global_def_funcs.hpp>
```

10.139 `/home/tilsche/vc/haec-sim/include/otf2xx/reader/detail/callback_event_funcs.hpp` File Reference

```
#include <otf2xx/reader/reader.hpp>
#include <otf2xx/reader/callback.hpp>
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/event/events.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2/OTF2_GeneralDefinitions.h>
#include <otf2/OTF2_Definitions.h>
#include <memory>
#include <vector>
```

Namespaces

- [otf2](#)
- [otf2::reader](#)
- [otf2::reader::detail](#)
- [otf2::reader::detail::event](#)

Functions

- OTF2_CallbackCode [otf2::reader::detail::event::buffer_flush](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_TimeStamp stopTime)
- OTF2_CallbackCode [otf2::reader::detail::event::enter](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributes, OTF2_RegionRef regionID)
- OTF2_CallbackCode [otf2::reader::detail::event::leave](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_RegionRef region)

- OTF2_CallbackCode [otf2::reader::detail::event::measurement](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_MeasurementMode measurementMode)
- OTF2_CallbackCode [otf2::reader::detail::event::metric](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_MetricRef metric, uint8_t numberOfMetrics, const OTF2_Type *typeIDs, const OTF2_MetricValue *metricValues)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_collective_begin](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_collective_end](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CollectiveOp collectiveOp, OTF2_CommRef communicator, uint32_t root, uint64_t sizeSent, uint64_t sizeReceived)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_irecv](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t sender, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_irecv_request](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_isend](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t receiver, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_isend_complete](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_recv](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t sender, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_request_cancelled](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_request_test](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint64_t requestID)
- OTF2_CallbackCode [otf2::reader::detail::event::mpi_send](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, uint32_t receiver, OTF2_CommRef communicator, uint32_t msgTag, uint64_t msgLength)
- OTF2_CallbackCode [otf2::reader::detail::event::parameter_int](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_ParameterRef parameter, int64_t value)
- OTF2_CallbackCode [otf2::reader::detail::event::parameter_string](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_ParameterRef parameter, OTF2_StringRef string)
- OTF2_CallbackCode [otf2::reader::detail::event::parameter_unsigned_int](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_ParameterRef parameter, uint64_t value)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_acquire_lock](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model, uint32_t lockID, uint32_t acquisitionOrder)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_fork](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model, uint32_t numberOfRequestedThreads)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_join](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_release_lock](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_Paradigm model, uint32_t lockID, uint32_t acquisitionOrder)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_task_complete](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_task_create](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber)

- OTF2_CallbackCode [otf2::reader::detail::event::thread_task_switch](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam, uint32_t creatingThread, uint32_t generationNumber)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_team_begin](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam)
- OTF2_CallbackCode [otf2::reader::detail::event::thread_team_end](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList, OTF2_CommRef threadTeam)
- OTF2_CallbackCode [otf2::reader::detail::event::unknown](#) (OTF2_LocationRef locationID, OTF2_TimeStamp time, void *userData, OTF2_AttributeList *attributeList)

10.140 /home/tilsche/vc/haec-sim/include/otf2xx/reader/detail/callback_global_def_funcs.hpp File Reference

```
#include <otf2xx/reader/reader.hpp>
#include <otf2xx/reader/callback.hpp>
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/event/events.hpp>
#include <otf2xx/chrono/chrono.hpp>
#include <otf2/OTF2_GeneralDefinitions.h>
#include <otf2/OTF2_Definitions.h>
#include <memory>
```

Namespaces

- [otf2](#)
- [otf2::reader](#)
- [otf2::reader::detail](#)
- [otf2::reader::detail::definition](#)
- [otf2::reader::detail::definition::global](#)

Functions

- OTF2_CallbackCode [otf2::reader::detail::definition::global::attribute](#) (void *userData, OTF2_AttributeRef self, OTF2_StringRef name, OTF2_StringRef description, OTF2_Type type)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::clock_properties](#) (void *userData, uint64_t timerResolution, uint64_t globalOffset, uint64_t traceLength)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::comm](#) (void *userData, OTF2_CommRef self, OTF2_StringRef name, OTF2_GroupRef group, OTF2_CommRef parent)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::group](#) (void *userData, OTF2_GroupRef self, OTF2_StringRef name, OTF2_GroupType groupType, OTF2_Paradigm paradigm, OTF2_GroupFlag groupFlags, uint32_t numberOfMembers, const uint64_t *members)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::location](#) (void *userData, OTF2_LocationRef self, OTF2_StringRef name, OTF2_LocationType locationType, uint64_t numberOfEvents, OTF2_LocationGroupRef locationGroup)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::location_group](#) (void *userData, OTF2_LocationGroupRef self, OTF2_StringRef name, OTF2_LocationGroupType locationGroupType, OTF2_SystemTreeNodeRef systemTreeParent)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::metric_class](#) (void *userData, OTF2_MetricRef self, uint8_t numberOfMetrics, const OTF2_MetricMemberRef *metricMembers, OTF2_MetricOccurrence metricOccurrence, OTF2_RecorderKind recorderKind)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::metric_instance](#) (void *userData, OTF2_MetricRef self, OTF2_MetricRef metricClass, OTF2_LocationRef recorder, OTF2_MetricScope metricScope, uint64_t scope)

- OTF2_CallbackCode [otf2::reader::detail::definition::global::metric_member](#) (void *userData, OTF2_Metric↔ MemberRef self, OTF2_StringRef name, OTF2_StringRef description, OTF2_MetricType metricType, OT↔ F2_MetricMode metricMode, OTF2_Type valueType, OTF2_MetricBase metricBase, int64_t exponent, OT↔ F2_StringRef unit)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::parameter](#) (void *userData, OTF2_ParameterRef self, OTF2_StringRef name, OTF2_ParameterType parameterType)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::region](#) (void *userData, OTF2_RegionRef self, OTF2_StringRef name, OTF2_StringRef canonicalName, OTF2_StringRef description, OTF2_Region↔ Role regionRole, OTF2_Paradigm paradigm, OTF2_RegionFlag regionFlags, OTF2_StringRef sourceFile, uint32_t beginLineNumber, uint32_t endLineNumber)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::string](#) (void *userData, OTF2_StringRef self, const char *string)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::system_tree_node](#) (void *userData, OTF2_↔ SystemTreeNodeRef self, OTF2_StringRef name, OTF2_StringRef className, OTF2_SystemTreeNodeRef parent)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::system_tree_node_property](#) (void *userData, OTF2_SystemTreeNodeRef systemTreeNode, OTF2_StringRef name, OTF2_StringRef value)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::location_property](#) (void *userData, OTF2_↔ LocationRef location, OTF2_StringRef name, OTF2_StringRef value)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::location_group_property](#) (void *userData, OT↔ F2_LocationGroupRef locationGroup, OTF2_StringRef name, OTF2_StringRef value)
- OTF2_CallbackCode [otf2::reader::detail::definition::global::unknown](#) (void *userData)

10.141 /home/tilsche/vc/haec-sim/include/otf2xx/reader/reader.hpp File Reference

```
#include <otf2xx/reader/fwd.hpp>
#include <otf2xx/reader/callback.hpp>
#include <otf2xx/event/buffer.hpp>
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/exception.hpp>
#include <otf2/OTF2_Reader.h>
#include <otf2/OTF2_GlobalDefReader.h>
#include <otf2/OTF2_GlobalEvtReader.h>
#include <string>
#include <map>
#include <memory>
#include <otf2xx/reader/callback_funcs.hpp>
```

Classes

- class [otf2::reader::reader](#)
the class for reading in trace files

Namespaces

- [otf2](#)
- [otf2::reader](#)

10.142 /home/tilsche/vc/haec-sim/include/otf2xx/reference.hpp File Reference

```
#include <otf2xx/traits/reference.hpp>
#include <cassert>
```

Classes

- class [otf2::reference< Type >](#)
represents a reference number for definitions

Namespaces

- [otf2](#)

10.143 /home/tilsche/vc/haec-sim/include/otf2xx/traits/reference.hpp File Reference

```
#include <otf2xx/definition/fwd.hpp>
#include <otf2xx/traits/traits.hpp>
#include <cstdint>
```

Classes

- struct [otf2::traits::reference_type< Type >](#)
- struct [otf2::traits::reference_type< definition::location >](#)
- struct [otf2::traits::reference_type< definition::location_group >](#)
- struct [otf2::traits::reference_type< definition::system_tree_node >](#)
- struct [otf2::traits::reference_type< definition::string >](#)
- struct [otf2::traits::reference_type< definition::detail::group_base >](#)
- struct [otf2::traits::reference_type< definition::group< Def, Type > >](#)
- struct [otf2::traits::reference_type< definition::comm >](#)
- struct [otf2::traits::reference_type< definition::attribute >](#)
- struct [otf2::traits::reference_type< definition::parameter >](#)
- struct [otf2::traits::reference_type< definition::region >](#)
- struct [otf2::traits::reference_type< definition::detail::metric_base >](#)
- struct [otf2::traits::reference_type< definition::metric_class >](#)
- struct [otf2::traits::reference_type< definition::metric_instance >](#)
- struct [otf2::traits::reference_type< definition::metric_member >](#)
- struct [otf2::traits::reference_type< definition::property< Definition > >](#)
- struct [otf2::traits::reference_param_type< T >](#)
- struct [otf2::traits::reference_param_type< definition::group< T, Type > >](#)
- struct [otf2::traits::reference_param_type< definition::metric_class >](#)
- struct [otf2::traits::reference_param_type< definition::metric_instance >](#)

Namespaces

- [otf2](#)
- [otf2::traits](#)

10.144 /home/tilsche/vc/haec-sim/include/otf2xx/reference_generator.hpp File Reference

```
#include <otf2xx/reference.hpp>
#include <otf2xx/traits/reference.hpp>
#include <otf2xx/exception.hpp>
#include <cassert>
```

Classes

- class [otf2::reference_generator< RefType >](#)
gives a free reference number for a set of definitions

Namespaces

- [otf2](#)

10.145 /home/tilsche/vc/haec-sim/include/otf2xx/traits/definition.hpp File Reference

```
#include <type_traits>
#include <otf2xx/traits/traits.hpp>
#include <otf2xx/definition/fwd.hpp>
```

Classes

- struct [otf2::traits::is_definition< Type >](#)
- struct [otf2::traits::is_definition< otf2::definition::attribute >](#)
- struct [otf2::traits::is_definition< otf2::definition::comm >](#)
- struct [otf2::traits::is_definition< otf2::definition::group< T, GroupType > >](#)
- struct [otf2::traits::is_definition< otf2::definition::location >](#)
- struct [otf2::traits::is_definition< otf2::definition::location_group >](#)
- struct [otf2::traits::is_definition< otf2::definition::parameter >](#)
- struct [otf2::traits::is_definition< otf2::definition::region >](#)
- struct [otf2::traits::is_definition< otf2::definition::string >](#)
- struct [otf2::traits::is_definition< otf2::definition::system_tree_node >](#)
- struct [otf2::traits::is_definition< otf2::definition::metric_class >](#)
- struct [otf2::traits::is_definition< otf2::definition::metric_instance >](#)
- struct [otf2::traits::is_definition< otf2::definition::metric_member >](#)
- struct [otf2::traits::is_definition< otf2::definition::property< Definition > >](#)
- struct [otf2::traits::definition_impl_type< T >](#)
- struct [otf2::traits::definition_impl_type< otf2::definition::attribute >](#)
- struct [otf2::traits::definition_impl_type< otf2::definition::comm >](#)
- struct [otf2::traits::definition_impl_type< otf2::definition::group< T, GroupType > >](#)
- struct [otf2::traits::definition_impl_type< otf2::definition::location >](#)
- struct [otf2::traits::definition_impl_type< otf2::definition::location_group >](#)
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- struct [otf2::traits::definition_impl_type< otf2::definition::metric_instance >](#)
- struct [otf2::traits::definition_impl_type< otf2::definition::property< Definition > >](#)

Namespaces

- [otf2](#)
- [otf2::traits](#)

10.146 /home/tilsche/vc/haec-sim/include/otf2xx/traits/event.hpp File Reference

```
#include <type_traits>
#include <otf2xx/event/fwd.hpp>
```

Classes

- struct [otf2::traits::is_event](#)< Type >
- struct [otf2::traits::is_event](#)< otf2::event::enter >
- struct [otf2::traits::is_event](#)< otf2::event::leave >

Namespaces

- [otf2](#)
- [otf2::traits](#)

10.147 /home/tilsche/vc/haec-sim/include/otf2xx/traits/traits.hpp File Reference

Classes

- struct [otf2::traits::identity](#)< Type >
identity type trait

Namespaces

- [otf2](#)
- [otf2::traits](#)

10.148 /home/tilsche/vc/haec-sim/include/otf2xx/writer/archive.hpp File Reference

```
#include <otf2/OTF2_Archive.h>
#include <otf2/OTF2_Callbacks.h>
#include <otf2xx/fwd.hpp>
#include <otf2xx/exception.hpp>
#include <otf2xx/writer/global.hpp>
#include <otf2xx/writer/local.hpp>
#include <boost/mpi.hpp>
#include <string>
#include <vector>
#include <functional>
#include <otf2xx/writer/detail/collective.hpp>
```


Classes

- class [otf2::writer::archive](#)

Namespaces

- [otf2](#)
- [otf2::writer](#)
- [otf2::writer::detail](#)

Functions

- template<typename Anything >
global & [otf2::writer::operator<<](#) (archive &ar, Anything any)
- template<typename Definition >
global & [otf2::writer::operator<<](#) (archive &ar, const [otf2::definition::container](#)< Definition > &c)
- OTF2_FlushType [otf2::writer::detail::pre_flush](#) (void *userData, OTF2_FileType fileType, OTF2_LocationRef location, void *callerData, bool final)
- OTF2_TimeStamp [otf2::writer::detail::post_flush](#) (void *userData, OTF2_FileType fileType, OTF2_Location↔Ref location)

10.149 /home/tilsche/vc/haec-sim/include/otf2xx/writer/detail/collective.hpp File Reference

```
#include <otf2xx/exception.hpp>
#include <otf2xx/writer/archive.hpp>
#include <otf2/OTF2_Callbacks.h>
#include <otf2/OTF2_Archive.h>
#include <otf2/OTF2_GeneralDefinitions.h>
#include <mpi.h>
#include <cstdlib>
```

Namespaces

- [otf2](#)
- [otf2::writer](#)
- [otf2::writer::detail](#)
- [otf2::writer::detail::callbacks](#)
- [otf2::writer::detail::callbacks::collective](#)

Functions

- MPI_Datatype [otf2::writer::detail::callbacks::collective::runtime_type_cast](#) (OTF2_Type type)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::barrier](#) (void *userData, OTF2_Collective↔Context *commContext)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::broadcast](#) (void *userData, OTF2_Collective↔Context *commContext, void *data, uint32_t numberElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::gather](#) (void *userData, OTF2_Collective↔Context *commContext, const void *inData, void *outData, uint32_t numberElements, OTF2_Type type, uint32_t root)

- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::gatherv](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, uint32_t inElements, void *outData, const uint32_t *outElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::get_rank](#) (void *userData, OTF2_CollectiveContext *commContext, std::uint32_t *rank)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::get_size](#) (void *userData, OTF2_CollectiveContext *commContext, std::uint32_t *size)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::scatter](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, void *outData, uint32_t numberElements, OTF2_Type type, uint32_t root)
- OTF2_CallbackCode [otf2::writer::detail::callbacks::collective::scatterv](#) (void *userData, OTF2_CollectiveContext *commContext, const void *inData, const uint32_t *inElements, void *outData, uint32_t outElements, OTF2_Type type, uint32_t root)

10.150 /home/tilsche/vc/haec-sim/include/otf2xx/writer/global.hpp File Reference

```
#include <otf2/OTF2_GlobalDefWriter.h>
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/exception.hpp>
```

Classes

- class [otf2::writer::global](#)

Namespaces

- [otf2](#)
- [otf2::writer](#)

Functions

- `template<typename Definition >`
`global & otf2::writer::operator<< (global &wrt, Definition def)`

10.151 /home/tilsche/vc/haec-sim/include/otf2xx/writer/local.hpp File Reference

```
#include <otf2/OTF2_EvtWriter.h>
#include <otf2/OTF2_DefWriter.h>
#include <otf2xx/event/events.hpp>
#include <otf2xx/definition/definitions.hpp>
#include <otf2xx/exception.hpp>
#include <otf2xx/chrono/chrono.hpp>
```

Classes

- class [otf2::writer::local](#)

Namespaces

- [otf2](#)
- [otf2::writer](#)

Functions

- `template<typename Record >`
`local & otf2::writer::operator<< (local &wrt, Record evt)`
- `template<typename Definition >`
`local & otf2::writer::operator<< (local &wrt, const otf2::definition::container< Definition > &c)`

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