



Class Scheduler

Table of contents

Inheritance Relationships

Class Documentation

- Defined in [File scheduler.hpp](#)

Inheritance Relationships

Base Type

- `public holoscan::Component` ([Class Component](#))

Derived Type

- `public holoscan::gxf::GXFScheduler` ([Class GXFScheduler](#))

Class Documentation

class Scheduler : public holoscan::Component

Base class for all schedulers.

This class is the base class for all schedulers including

`holoscan::MultiThreadScheduler`, `holoscan::GreedyScheduler` and `holoscan::EventBasedScheduler`. It is used to define the common interface for all schedulers.

Subclassed by [holoscan::gxf::GXFScheduler](#)

Public Functions

Scheduler() = default

Scheduler(Scheduler&&) = default

```
template<typename ArgT, typename ...ArgsT, typename =
std::enable_if_t<!std::is_base_of_v<::holoscan::Scheduler, std::decay_t<ArgT>>> &&
(std::is_same_v<::holoscan::Arg, std::decay_t<ArgT>> ||
std::is_same_v<::holoscan::ArgList, std::decay_t<ArgT>>>>
inline explicit Scheduler(ArgT &&arg, ArgsT&&... args)
```

Construct a new [Scheduler](#) object.

~Scheduler() override = default

inline Scheduler &id(int64_t id)

Set the Scheduler ID.

Parameters

id – The ID of the scheduler.

Returns

The reference to this scheduler.

inline Scheduler &name(const std::string &name) &

Set the name of the scheduler.

Parameters

name – The name of the scheduler.

Returns

The reference to the scheduler.

inline Scheduler &&name(const std::string &name) &&

Set the name of the scheduler.

Parameters

name – The name of the scheduler.

Returns

The reference to the scheduler.

inline Scheduler &fragment(Fragment *fragment)

Set the fragment of the scheduler.

Parameters

fragment – The pointer to the fragment of the scheduler.

Returns

The reference to the scheduler.

```
inline Scheduler &spec(const std::shared_ptr<ComponentSpec> &spec)
```

Set the component specification to the scheduler.

Parameters

spec – The component specification.

Returns

The reference to the scheduler.

```
inline ComponentSpec *spec()
```

Get the component specification of the scheduler.

Returns

The pointer to the component specification.

```
inline std::shared_ptr<ComponentSpec> spec_shared()
```

Get the shared pointer to the component spec.

Returns

The shared pointer to the component spec.

```
inline void add_arg(const std::shared_ptr<Resource> &arg)
```

Add a resource to the scheduler.

Parameters

arg – The resource to add.

```
inline void add_arg(std::shared_ptr<Resource> &&arg)
```

Add a resource to the scheduler.

Parameters

arg – The resource to add.

```
inline std::unordered_map<std::string, std::shared_ptr<Resource>> &resources()
```

Get the resources of the scheduler.

Returns

The resources of the scheduler.

```
inline virtual void setup(ComponentSpec &spec)
```

Define the scheduler specification.

Parameters

spec – The reference to the component specification.

```
virtual void initialize() override
```

Initialize the scheduler.

This function is called after the scheduler is created by [holoscan::Fragment::make_scheduler\(\)](#).

```
virtual YAML::Node to_yaml_node() const override
```

Get a YAML representation of the scheduler.

Returns

YAML node including the base component properties, component spec and resources.

Protected Functions

```
virtual void reset_graph_entities() override
```

Reset the GXF GraphEntity of any components associated with the scheduler.

Protected Attributes

`std::unordered_map<std::string, std::shared_ptr<Resource>> resources_`

The resources used by the scheduler.

© Copyright 2022-2024, NVIDIA.. PDF Generated on 06/06/2024