DATACOM - Embedded C/C++ Developer Challenge

1.0

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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protocol::state::State 12
protocol::state::LinkDown 8
protocol::state::SendingKeepAlive 9
protocol::state::SendingStart 10
protocol::state::StartReceivedSendConfiguration 11

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

protocol::context::Context 7
protocol::state::LinkDown 8
protocol::state::SendingKeepAlive 9
protocol::state::SendingStart 10
protocol::state::StartReceivedSendConfiguration 11
protocol::state::State 12

Chapter 3

File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

include/context.hpp
Context class headers 15
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Chapter 4

Class Documentation

4.1 protocol::context::Context Class Reference

Public Member Functions

- Context (std::unique_ptr< protocol::state::State > state)

  Construct a new protocol::context::Context::Context object.
- ~Context ()

  Destroy the protocol::context::Context::Context object.
- void TransitionTo (std::unique_ptr< protocol::state::State > state)
- void **Event** (protocol::event::Event event)

4.1.1 Constructor & Destructor Documentation

4.1.1.1 Context()

```
protocol::context::Context::Context (
            std::unique_ptr< protocol::state::State > state )
```

Construct a new protocol::context::Context::Context object.

Parameters

state	

4.1.2 Member Function Documentation

4.1.2.1 TransitionTo()

```
void protocol::context::Context::TransitionTo (
            std::unique_ptr< protocol::state::State > state )
```

Parameters

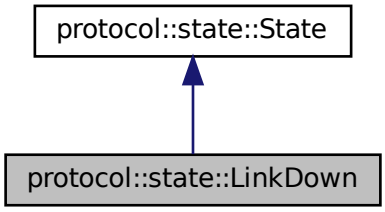
state	

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

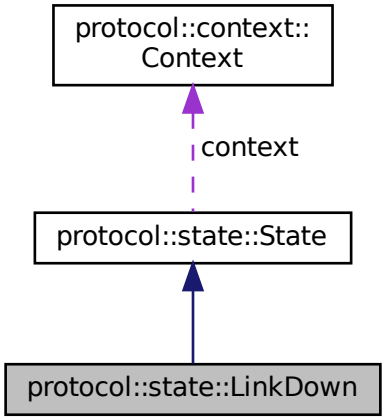
- include/context.hpp
- src/context.cpp

4.2 protocol::state::LinkDown Class Reference

Inheritance diagram for protocol::state::LinkDown:



Collaboration diagram for protocol::state::LinkDown:



Public Member Functions

- void **Handle** (protocol::event::Event event) override

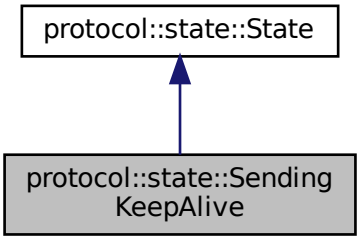
Additional Inherited Members

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

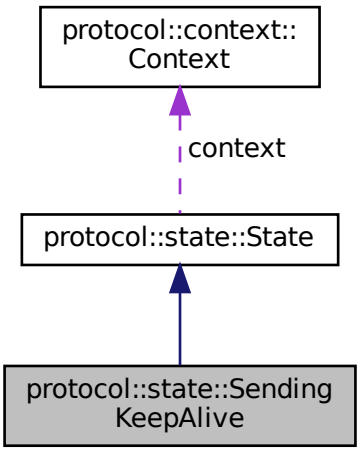
- include/state.hpp
- src/state.cpp

4.3 protocol::state::SendingKeepAlive Class Reference

Inheritance diagram for protocol::state::SendingKeepAlive:



Collaboration diagram for protocol::state::SendingKeepAlive:



Public Member Functions

- void **Handle** (protocol::event::Event event) override

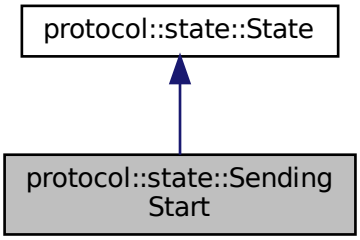
Additional Inherited Members

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

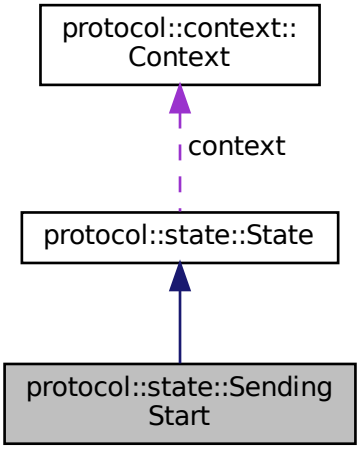
- include/state.hpp
- src/state.cpp

4.4 protocol::state::SendingStart Class Reference

Inheritance diagram for protocol::state::SendingStart:



Collaboration diagram for protocol::state::SendingStart:



Public Member Functions

- void **Handle** (protocol::event::Event event) override

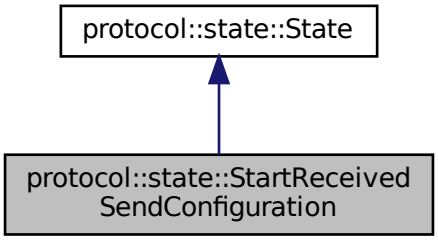
Additional Inherited Members

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

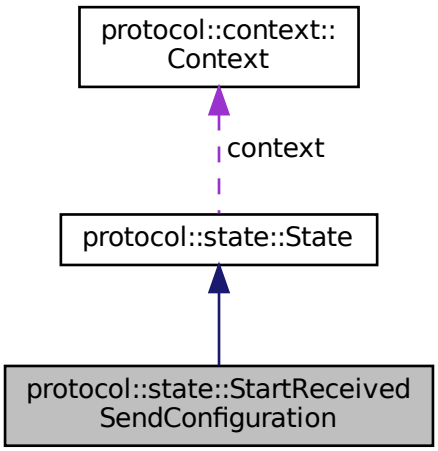
- include/state.hpp
- src/state.cpp

4.5 protocol::state::StartReceivedSendConfiguration Class Reference

Inheritance diagram for protocol::state::StartReceivedSendConfiguration:



Collaboration diagram for protocol::state::StartReceivedSendConfiguration:



Public Member Functions

- void **Handle** (protocol::event::Event event) override

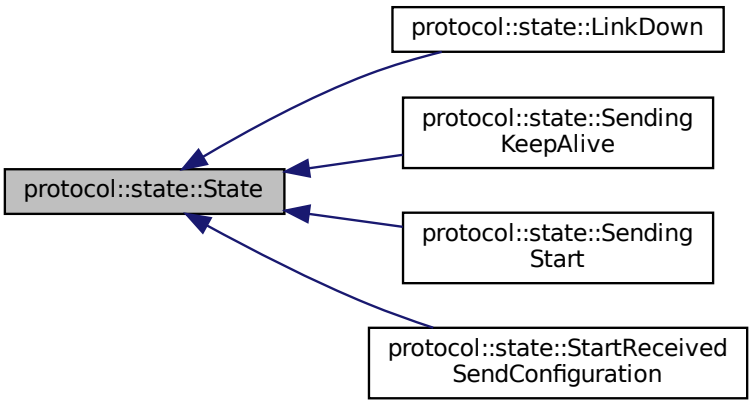
Additional Inherited Members

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

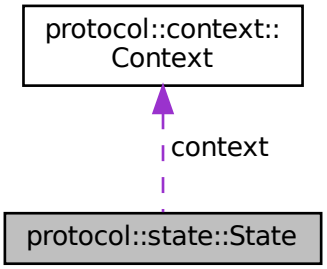
- include/state.hpp
- src/state.cpp

4.6 protocol::state::State Class Reference

Inheritance diagram for protocol::state::State:



Collaboration diagram for protocol::state::State:



Public Member Functions

- virtual ~State ()

  Destroy the protocol::state::State::State object.
- void SetContext (context::Context *context)
- virtual void **Handle** (protocol::event::Event event)=0

Protected Attributes

- context::Context * **context**

4.6.1 Member Function Documentation

4.6.1.1 SetContext()

```
void protocol::state::State::SetContext (
            context::Context * context )
```

Parameters

context	

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

- include/state.hpp
- src/state.cpp

Chapter 5

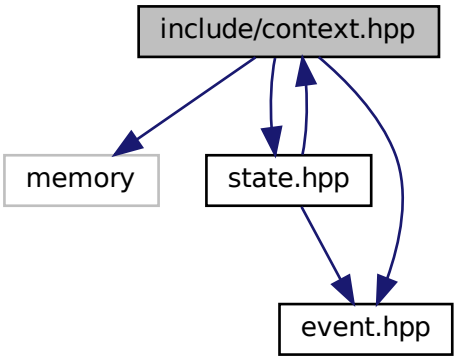
File Documentation

5.1 include/context.hpp File Reference

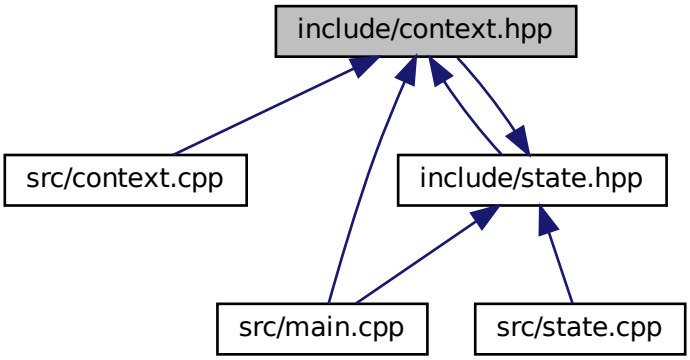
Context class headers.

```
#include <memory>
#include "state.hpp"
#include "event.hpp"
```

Include dependency graph for context.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class protocol::context::Context

5.1.1 Detailed Description

Context class headers.

Author

Mateus Lima Alves (mateuslima.ti@gmail.com)

Version

0.1

Date

2022-09-28

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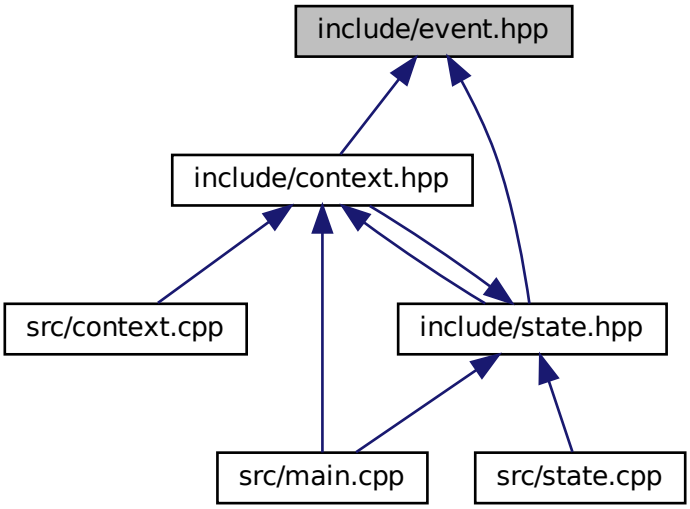
5.2 include/event.hpp File Reference

Event class headers.

This graph shows which files directly or indirectly include this file:



Enumerations

- enum class **Event** : char { **InterfaceNok** , **InterfaceOk** , **OkReceivedPacket** , **NokReceivedPacket** , **NotReceivedAnswer** }

5.2.1 Detailed Description

Event class headers.

Author

Mateus Lima Alves (mateuslima.ti@gmail.com)

Version

0.1

Date

2022-09-28

Copyright

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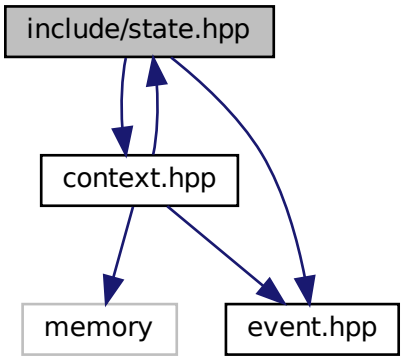
5.3 include/state.hpp File Reference

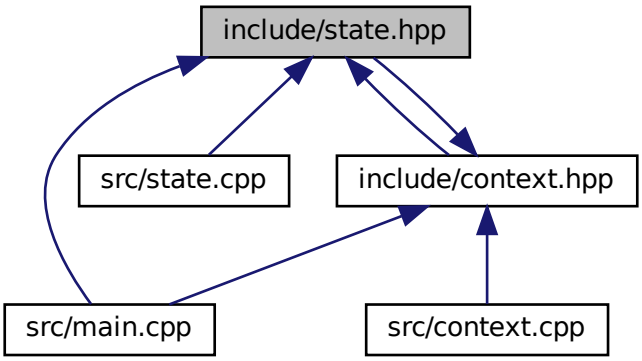
State class methods.

```
#include "context.hpp"
#include "event.hpp"
```

Include dependency graph for state.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class protocol::state::State
- class protocol::state::LinkDown
- class protocol::state::SendingStart
- class protocol::state::StartReceivedSendConfiguration
- class protocol::state::SendingKeepAlive

5.3.1 Detailed Description

State class methods.

Author

Mateus Lima Alves (mateuslima.ti@gmail.com)

Version

0.1

Date

2022-09-28

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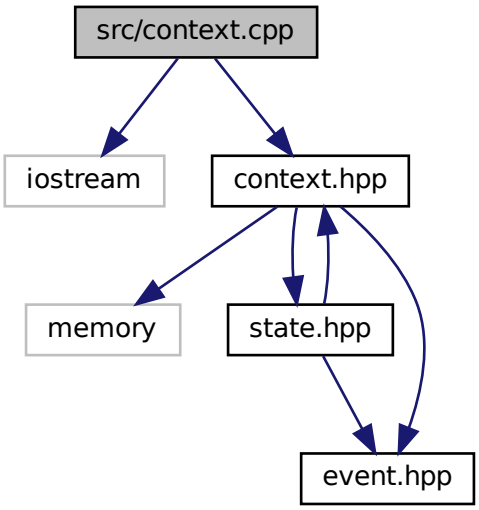
5.4 src/context.cpp File Reference

Context class methods.

```
#include <iostream>
#include "context.hpp"
```

Include dependency graph for context.cpp:



5.4.1 Detailed Description

Context class methods.

Author

Mateus Lima Alves (mateuslima.ti@gmail.com)

Version

0.1

Date

2022-09-28

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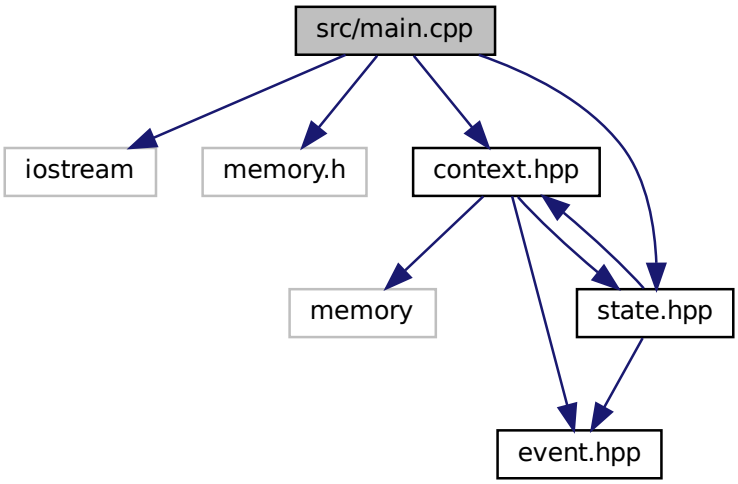
5.5 src/main.cpp File Reference

Service main file.

```
#include <iostream>
#include <memory.h>
#include "context.hpp"
#include "state.hpp"
```

Include dependency graph for main.cpp:



Functions

- int main (int argc, char const *argv[])
  service main function.

5.5.1 Detailed Description

Service main file.

Author

Mateus Lima Alves (mateuslima.ti@gmail.com)

Version

0.1

Date

2022-09-28

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5.5.2 Function Documentation

5.5.2.1 main()

```
int main (
            int argc,
            char const * argv[] )
```

service main function.

Parameters

in	*argc*	argument count
in	*argv*	argument vector

Returns

int

Start the context setting the machine to state LinkDown.

Set the associated event to InterfaceOk. After that the machine state change to SendingStart.

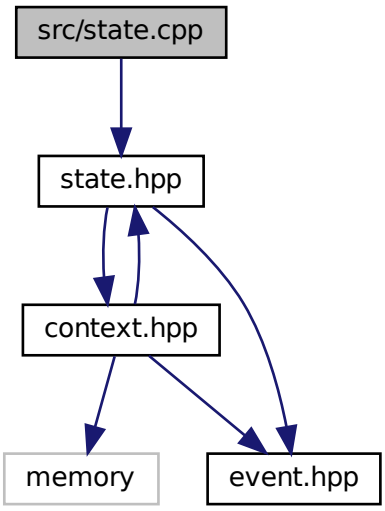
Set the associated event to OkReceivedPacket. After that the machine state change to StartReceivedSend↩ Configuration.

Set the associated event to OkReceivedPacket. After that the machine state change to SendingKeepAlive.

5.6 src/state.cpp File Reference

State class methods.

`#include "state.hpp"`
Include dependency graph for state.cpp:



5.6.1 Detailed Description

State class methods.

Author

Mateus Lima Alves (mateuslima.ti@gmail.com)

Version

0.1

Date

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