
events-protocol

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Guiabolso

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CONTENTS

1	Installation	3
2	Basic Usage	5
2.1	Client	5
2.2	Server	6
2.3	Content	7
2.3.1	Client	7
2.3.2	Server	8
2.3.3	Python API Reference	9
2.3.4	events_protocol	10
	Python Module Index	33
	Index	35



Library to be a Client and Server using [Guiabolso's Events Protocol Specification](#), the especification of this implementation can be found [here](#)

INSTALLATION

To install stable version, just download it from PyPI:

```
pip install events-protocol
```

To install from source code execute the following command:

```
pip install git+https://github.com/GuiaBolso/events-protocol-python#egg=events-  
↪protocol
```


BASIC USAGE

2.1 Client

The essential information to send an event is:

Field	Description
<i>url</i>	URL that was exposed from Event Server
<i>name</i>	Event name registred on Event Server source
<i>version</i>	Event's version
<i>payload</i>	Payload with necessary event information

With this informatons we can send an event.

Instantiate the client:

```
from events_protocol.client import EventClient

client = EventClient(url="http://example.com/events/")
```

Send event:

```
# Exemplo passando apenas as informações essenciais
response = client.send_event(
    name="event:example",
    version=1,
    payload={
        "example": "example"
    },
)
```

Or you can send the event passing all of the informatons:

```
response = client.send_event(
    name="event:example",
    version=1,
    id="9230c47c-3bcf-11ea-b77f-2e728ce88125",
    flow_id="a47830ca-3bcf-11ea-a232-2e728ce88125",
    payload={
        "example": "example"
    },
    identity={
        "userId": "USER_ID",
    },
)
```

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```

metadata={
    "date": "00-00-0000",
},
timeout=1000,
)

```

2.2 Server

An Event Server is composed by:

Component	Description
<i>handler</i>	Class that will receive and process the event
<i>register</i>	Class that will register the handler to Event Discovery
<i>EventSchema</i>	Event Schema will be accepted in the <i>payload</i> attribute

Example:

```

from events_protocol.server.handler.event_handler_registry import EventRegister
from events_protocol.core.builder import EventBuilder, Event
from events_protocol.core.model.base import CamelPydanticMixin
from events_protocol.core.model.event import Event, ResponseEvent
from events_protocol.server.handler.event_handler import EventHandler
from events_protocol.server.parser.event_processor import EventProcessor

class MyEventSchema(CamelPydanticMixin):
    example: str

class MyHandler(EventHandler):
    _SCHEMA = MyEventSchema

    @classmethod
    def handle(cls, event: Event) -> ResponseEvent:
        payload = cls.parse_event(event)
        response = {"MyEventPayload": payload.example}
        return EventBuilder.response_for(event, response)

class MyEventRegister(EventRegister):
    event_name = "get:event:example"
    event_version = 1
    event_handler = MyHandler

MyEventRegister.register_event()

event_input = Event(
    name="get:event:example",
    version=1,
    id="9230c47c-3bcf-11ea-b77f-2e728ce88125",
    flow_id="a47830ca-3bcf-11ea-a232-2e728ce88125",
    payload={

```

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```

        "example": "example"
    },
    identity={
        "userId": "USER_ID",
    },
    metadata={
        "date": "00-00-0000",
    },
)
input_body = event_input.to_json()

response = EventProcessor.process_event(input_body)

```

2.3 Content

2.3.1 Client

The essential information to send an event is:

Field	Description
<i>url</i>	URL that was exposed from Event Server
<i>name</i>	Event name registered on Event Server source
<i>version</i>	Event's version
<i>payload</i>	Payload with necessary event information

With this informations we can send an event.

Instantiate the client:

```

from events_protocol.client import EventClient

client = EventClient(url="http://example.com/events/")

```

Send event:

```

# Exemplo passando apenas as informações essenciais
response = client.send_event(
    name="event:example",
    version=1,
    payload={
        "example": "example"
    },
)

```

Or you can send the event passing all of the informations:

```

response = client.send_event(
    name="event:example",
    version=1,
    id="9230c47c-3bcf-11ea-b77f-2e728ce88125",

```

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```

    flow_id="a47830ca-3bcf-11ea-a232-2e728ce88125",
    payload={
        "example": "example"
    },
    identity={
        "userId": "USER_ID",
    },
    metadata={
        "date": "00-00-0000",
    },
    timeout=1000,
)

```

2.3.2 Server

An Event Server is composed by:

Component	Description
<i>handler</i>	Class that will receive and process the event
<i>register</i>	Class that will register the handler to Event Discovery
<i>EventSchema</i>	Event Schema will be accepted in the <i>payload</i> attribute

Example:

```

from events_protocol.server.handler.event_handler_registry import EventRegister
from events_protocol.core.builder import EventBuilder, Event
from events_protocol.core.model.base import CamelPydanticMixin
from events_protocol.core.model.event import Event, ResponseEvent
from events_protocol.server.handler.event_handler import EventHandler
from events_protocol.server.parser.event_processor import EventProcessor

class MyEventSchema(CamelPydanticMixin):
    example: str

class MyHandler(EventHandler):
    _SCHEMA = MyEventSchema

    @classmethod
    def handle(cls, event: Event) -> ResponseEvent:
        payload = cls.parse_event(event)
        response = {"MyEventPayload": payload.example}
        return EventBuilder.response_for(event, response)

class MyEventRegister(EventRegister):
    event_name = "get:event:example"
    event_version = 1
    event_handler = MyHandler

```

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```
MyEventRegister.register_event()

event_input = Event(
    name="get:event:example",
    version=1,
    id="9230c47c-3bcf-11ea-b77f-2e728ce88125",
    flow_id="a47830ca-3bcf-11ea-a232-2e728ce88125",
    payload={
        "example": "example"
    },
    identity={
        "userId": "USER_ID",
    },
    metadata={
        "date": "00-00-0000",
    },
)
input_body = event_input.to_json()

response = EventProcessor.process_event(input_body)
```

2.3.3 Python API Reference

Client

Events are sent through the *EventClient*, so far we can just use HTTP Layer to transport the event.

HTTP Layer

For now we just have Event transport over HTTP, we just use *HttpClient*.

Server

Event Register

EventRegister: *EventRegister*

Event Handler

EventHandler: *EventHandler*

Event Processor

EventProcessor: *EventProcessor*

2.3.4 events_protocol

Subpackages

`events_protocol.client`

Subpackages

`events_protocol.client.exception`

Submodules

`events_protocol.client.exception.request_exception`

Module Contents

exception `events_protocol.client.exception.request_exception.BaseRequestException` (*message: str*)

Bases: `Exception`

exception `events_protocol.client.exception.request_exception.TimeoutException`

Bases: `events_protocol.client.exception.request_exception.BaseRequestException`

exception `events_protocol.client.exception.request_exception.FailedDependencyException`

Bases: `events_protocol.client.exception.request_exception.BaseRequestException`

exception `events_protocol.client.exception.request_exception.BadProtocolException`

Bases: `events_protocol.client.exception.request_exception.BaseRequestException`

Submodules

`events_protocol.client.event_client`

Module Contents

class `events_protocol.client.event_client.EventClient` (*url: str*)

send_event (*self, name: str, version: int, payload: Optional[Dict] = {}, id: str = None, flow_id: str = None, identity: Dict = {}, auth: Dict = {}, metadata: Dict = {}, timeout: Optional[int] = None*)

send_request_event (*self, request_event: RequestEvent, timeout: Optional[int] = None*)

parse_event (*self, raw_response: str*)

```
build_request_event (self, name: str, version: int, payload: Dict, id: str = None, flow_id: str = None, identity: Dict = {}, auth: Dict = {}, metadata: Dict = {})
```

```
events_protocol.client.http
```

Module Contents

```
class events_protocol.client.http.HttpClient
```

```
    post (self, url: str, headers: Dict[str, str], payload: str, timeout: int)
```

Package Contents

```
class events_protocol.client.EventClient (url: str)
```

```
    send_event (self, name: str, version: int, payload: Optional[Dict] = {}, id: str = None, flow_id: str = None, identity: Dict = {}, auth: Dict = {}, metadata: Dict = {}, timeout: Optional[int] = None)
```

```
    send_request_event (self, request_event: RequestEvent, timeout: Optional[int] = None)
```

```
    parse_event (self, raw_response: str)
```

```
    build_request_event (self, name: str, version: int, payload: Dict, id: str = None, flow_id: str = None, identity: Dict = {}, auth: Dict = {}, metadata: Dict = {})
```

```
events_protocol.core
```

Subpackages

```
events_protocol.core.logging
```

Subpackages

```
events_protocol.core.logging.mixins
```

Submodules

```
events_protocol.core.logging.mixins.loggable
```

Module Contents

```
class events_protocol.core.logging.mixins.loggable.LoggableMixin
```

```
    logger
```

Package Contents

```
class events_protocol.core.logging.mixins.LoggableMixin
```

```
    logger
```

Submodules

```
events_protocol.core.logging.logger
```

Module Contents

```
class events_protocol.core.logging.logger.Logger(log_name: str, log_format: str
                                                = '$BOLD%(asctime)s$RESET
                                                %(name)-12s %(levelname)-18s
                                                %(message)s', date_format: str =
                                                '%Y-%m-%d %H:%M:%S', level: int
                                                = logging.INFO, _custom_formatter:
                                                logging.Formatter = None)
```

Bases: logging.LoggerAdapter

This class is responsible to be an interface for other classes and modules use the logging with the Events Protocol format.

Events Protocol.package.utils.Logger This class is responsible to be an interface for other classes and modules use the logging with the Events Protocol format

HANDLERS :List[StreamHandler]

static _create_log (log_name: str)
Creates the logger object.

log_name [str] The name of the logger.

logging.Logger return the logging.Logger with the logger name provided.

add_handler (self, handler: logging.Handler, set_formatter: bool = True, formatter: logging.Formatter = None)
Method to add a new handler to the logger with the defined formatter and level.

handler [Handler] The handler class to be added in the logger.

set_formatter [bool, optional] If the level and Formatter should be applied, by default True

formatter: logging.Formatter, optional The custom formatter to be set in the handler.

__add_default_handlers (self)
Method to add the default handlers.

classmethod get_logger (cls, log_name: str, log_format: str = '\$BOLD%(asctime)s\$RESET
 %(name)-12s %(levelname)-18s %(message)s', date_format: str = '%Y-
 %m-%d %H:%M:%S', level: int = logging.INFO, _custom_formatter:
 logging.Formatter = None)

Get a logger object with Events Protocol Colored Formatter.

log_name [str] Name of the logger instance

log_format [str, optional] Format of the logger message, by default “\$BOLD%(asctime)s\$RESET
%(name)-12s %(levelname)-18s %(message)s”

date_format [str, optional] Date format of the logger message, by default “%Y-%m-%d %H:%M:%S”

level [int, optional]

The logger level, you can use the ones predefined inside the logging module, or provide an int according to the following pattern: CRITICAL/FATAL = 50, ERROR = 40, WARNING = 30, INFO = 20, DEBUG = 10, NOTSET = 0. For more information: <https://docs.python.org/3/library/logging.html#levels>, by default 20 (INFO).

_custom_formatter [logging.Formatter, optional] Replaces the Events Protocol ColoredFormatter by the formatter provided and will ignore the log_format parameter.

logging.Logger The formatted logger.

```
class events_protocol.core.logging.logger.ColoredFormatter(msg: str, datefmt:
                                                         str = '%Y-%m-%d %H:%M:%S',
                                                         use_color: bool =
                                                         True)
```

Bases: logging.Formatter

Events Protocol’s Custom Colored Formatter for Logging.

Events Protocol.package.utils.ColoredFormatter This class is responsible for setting the format for Events Protocol Loggings, by the default set timestamp and the module name with bold and will use the following color scheme:

GREEN: DEBUG BLUE: INFO YELLOW: WARNING RED: ERROR MAGENTA:
CRITICAL

RESET_SEQ = [0m

COLOR_SEQ = [%dm

BOLD_SEQ = [1m

COLORS

format (self, record: logging.LogRecord)

Method responsible for formatting the record.

record: logging.LogRecord The LogRecord with the message to be printed out.

str The message formatted.

classmethod formatter_message (cls, message: str, use_color: bool = True)

The method to parse the Events Protocol format string.

message [str] The message to be formatted.

use_color [bool] Flag to signalize if the output should be colored or not.

str The message formatted.

```
events_protocol.core.logging.logger.logger_monitor(package_name: str = None, level:
                                                    int = logging.INFO)
```

A logging decorator to monitor legacy methods and functions.

package_name [str, optional.] The name of the package where the function or method is located. To get automatically use the `__name__` variable.

level [int, optional.] The level of logger to be shown, by default: `logging.INFO`

`events_protocol.core.logging.picpay_logger`

Module Contents

```
class events_protocol.core.logging.picpay_logger.PicpayLogger(cls, level: int
                                                           = logging.INFO,
                                                           environment: str
                                                           = 'PRD')
```

Bases: `logging.Logger`

Create and format loggers in the PicPay standard format

level: int Logging level. Set using the enum defined in the logging std library

logging.Logger Interface to use the logs of the logging library

logger_name = `events_protocol`

version :str = `UNDEFINED`

is_production_environment :bool = `True`

internal_logger :logging.Logger

classmethod set_version (*cls*, *version*: str)

Set application version that will be logged

version: str Application version

__create_logger_with_environment (*self*, *name*: str = 'events_protocol', *environment*: str = 'PRD')

Creates the logger using the desired environment

name: str Application version

environment: str Set the current environment that will be used in the application. If it's PRD or HML it will format the logger in the PicPay application standards. Otherwise it'll use development settings
Default PRD

__dev_log (*self*, *level*, *message*, **args*, ***kawrgs*)

Default logger. Used for development environment.

level: int Logging level. Set using the enum defined in the logging std library

message: str Message that will be send to the logger

__prod_log (*self*, *level*, *message*, **args*, ***kwargs*)

Production format logger. Used for production and QA environment.

level: int Logging level. Set using the enum defined in the logging std library

message: str Message that will be send to the logger

_log (*self*, *level*, *message*, **args*, ***kwargs*)

Overrides log method of the logging library

level: int Logging level. Set using the enum defined in the logging std library

message: str Message that will be send to the logger

`events_protocol.core.logging.supressor`

Module Contents

`events_protocol.core.logging.supressor.supress_log(f)`

`events_protocol.core.logging.supressor.disable_logs(log_names: typing.List[str] = []) → None`

Package Contents

class `events_protocol.core.logging.Logger` (`log_name: str, log_format: str = '$BOLD%(asctime)s$RESET %(name)-12s %(levelname)-18s %(message)s', date_format: str = '%Y-%m-%d %H:%M:%S', level: int = logging.INFO, _custom_formatter: logging.Formatter = None`)

Bases: `logging.LoggerAdapter`

This class is responsible to be an interface for other classes and modules use the logging with the Events Protocol format.

Events Protocol.package.utils.Logger This class is responsible to be an interface for other classes and modules use the logging with the Events Protocol format

HANDLERS :`List[StreamHandler]`

static `_create_log(log_name: str)`
Creates the logger object.

log_name [str] The name of the logger.

logging.Logger return the logging.Logger with the logger name provided.

add_handler (`self, handler: logging.Handler, set_formatter: bool = True, formatter: logging.Formatter = None`)
Method to add a new handler to the logger with the defined formatter and level.

handler [Handler] The handler class to be added in the logger.

set_formatter [bool, optional] If the level and Formatter should be applied, by default True

formatter: logging.Formatter, optional The custom formatter to be set in the handler.

__add_default_handlers (`self`)
Method to add the default handlers.

classmethod `get_logger(cls, log_name: str, log_format: str = '$BOLD%(asctime)s$RESET %(name)-12s %(levelname)-18s %(message)s', date_format: str = '%Y-%m-%d %H:%M:%S', level: int = logging.INFO, _custom_formatter: logging.Formatter = None)`
Get a logger object with Events Protocol Colored Formatter.

log_name [str] Name of the logger instance

log_format [str, optional] Format of the logger message, by default “\$BOLD%(asctime)s\$RESET %(name)-12s %(levelname)-18s %(message)s”

date_format [str, optional] Date format of the logger message, by default “%Y-%m-%d %H:%M:%S”

level [int, optional]

The logger level, you can use the ones predefined inside the logging module, or provide an int according to the following pattern: CRITICAL/FATAL = 50, ERROR = 40, WARNING = 30, INFO = 20, DEBUG = 10, NOTSET = 0. For more information: <https://docs.python.org/3/library/logging.html#levels>, by default 20 (INFO).

_custom_formatter [logging.Formatter, optional] Replaces the Events Protocol ColoredFormatter by the formatter provided and will ignore the log_format parameter.

logging.Logger The formatted logger.

```
class events_protocol.core.logging.ColoredFormatter(msg: str, datefmt: str = '%Y-%m-%d %H:%M:%S', use_color: bool = True)
```

Bases: logging.Formatter

Events Protocol’s Custom Colored Formatter for Logging.

Events Protocol.package.utils.ColoredFormatter This class is responsible for setting the format for Events Protocol Loggings, by the default set timestamp and the module name with bold and will use the following color scheme:

GREEN: DEBUG BLUE: INFO YELLOW: WARNING RED: ERROR MAGENTA:
CRITICAL

RESET_SEQ = [0m

COLOR_SEQ = [%dm

BOLD_SEQ = [1m

COLORS

format (*self, record: logging.LogRecord*)

Method responsible for formatting the record.

record: logging.LogRecord The LogRecord with the message to be printed out.

str The message formatted.

classmethod formatter_message (*cls, message: str, use_color: bool = True*)

The method to parse the Events Protocol format string.

message [str] The message to be formatted.

use_color [bool] Flag to signalize if the output should be colored or not.

str The message formatted.

```
events_protocol.core.logging.logger_monitor(package_name: str = None, level: int = logging.INFO)
```

A logger decorator to monitor legacy methods and functions.

package_name [str, optional.] The name of the package where the function or method is located. To get automatically use the `__name__` variable.

level [int, optional.] The level of logger to be shown, by default: logging.INFO

```

class events_protocol.core.logging.PicpayLogger (cls, level: int = logging.INFO, environ-
                                                ment: str = 'PRD')
    Bases: logging.Logger
    Create and format loggers in the PicPay standard format
    level: int Logging level. Set using the enum defined in the logging std library

    logging.Logger Interface to use the logs of the logging library

    logger_name = events_protocol
    version :str = UNDEFINED
    is_production_environment :bool = True
    internal_logger :logging.Logger

    classmethod set_version (cls, version: str)
        Set application version that will be logged
        version: str Application version

    __create_logger_with_environment (self, name: str = 'events_protocol', environment: str =
                                     'PRD')
        Creates the logger using the desired environment
        name: str Application version
        environment: str Set the current environment that will be used in the application. If it's PRD or HML it
            will format the logger in the PicPay application standards. Otherwise it'll use development settings
            Default PRD

    __dev_log (self, level, message, *args, **kwargs)
        Default logger. Used for development environment.
        level: int Logging level. Set using the enum defined in the logging std library
        message: str Message that will be send to the logger

    __prod_log (self, level, message, *args, **kwargs)
        Production format logger. Used for production and QA environment.
        level: int Logging level. Set using the enum defined in the logging std library
        message: str Message that will be send to the logger

    _log (self, level, message, *args, **kwargs)
        Overrides log method of the logging library
        level: int Logging level. Set using the enum defined in the logging std library
        message: str Message that will be send to the logger

```

`events_protocol.core.model`

Submodules

`events_protocol.core.model.base`

Module Contents

`events_protocol.core.model.base._to_camel` (*string: str*) → str

class `events_protocol.core.model.base.Field`

name :str

error_type :str

message :str

to_dict (*self*)

exception `events_protocol.core.model.base.ValidationError`

Bases: Exception

fields :typing.List[Field]

to_dict (*self*)

to_json (*self*)

class `events_protocol.core.model.base.BaseModel` (*__pydantic_self__, **data*)

Bases: pydantic.BaseModel

classmethod `from_object` (*cls, obj: BaseModel*)

to_dict (*self, *args, **kwargs*)

to_json (*self, *args, **kwargs*)

class `events_protocol.core.model.base.CamelPydanticMixin` (*by_alias=True, **data: typing.Any*)

Bases: `events_protocol.core.model.base.BaseModel`

class `Config`

alias_generator

classmethod `from_json` (*cls, data: str*)

`events_protocol.core.model.event`

Module Contents

`events_protocol.core.model.event.PayloadType`

class `events_protocol.core.model.event.Event`

Bases: `events_protocol.core.model.base.CamelPydanticMixin`

name :str

```

    version :int
    payload :PayloadType
    id :Optional[str]
    flow_id :Optional[str]
    identity :Optional[Dict[str, Any]]
    auth :Optional[Dict[str, Any]]
    metadata :Optional[Dict[str, Any]]
    payload_as (self, clazz: CamelPydanticMixin)
    identity_as (self, clazz: Generic)
    auth_as (self, clazz: Generic)
    property user_id (self)
    property user_type (self)
    property user (self)
    property origin (self)
class events_protocol.core.model.event.ResponseEvent
    Bases: events_protocol.core.model.event.Event
    static from_event (event: Event, event_type: EventType = EventSuccessType.SUCCESS)
    property is_success (self)
    property is_redirect (self)
    property is_error (self)
    property _event_name (self)
    property event_type (self)
    property error_type (self)
class events_protocol.core.model.event.RequestEvent
    Bases: events_protocol.core.model.event.Event
class events_protocol.core.model.event.EventMessage
    Bases: events_protocol.core.model.base.CamelPydanticMixin
    code :str
    parameters :Dict[str, Optional[Any]]

```

```
events_protocol.core.model.event_type
```

Module Contents

```

class events_protocol.core.model.event_type.EventType
    Bases: enum.Enum
    classmethod is_in (cls, item: typing.Any)
    __str__ (self)

```

```
class events_protocol.core.model.event_type.EventErrorType
    Bases: events_protocol.core.model.event_type.EventType

    GENERIC = error
    BAD_PROTOCOL = badProtocol
    BAD_REQUEST = badRequest
    UNAUTHORIZED = unauthorized
    NOT_FOUND = notFound
    FORBIDDEN = forbidden
    USER_DENIED = userDenied
    RESOURCE_DENIED = resourceDenied
    EXPIRED = expired
    UNKNOWN = unknown
    classmethod get_type(cls, error: str)

class events_protocol.core.model.event_type.EventSuccessType
    Bases: events_protocol.core.model.event_type.EventType

    SUCCESS = response
    REDIRECT = redirect
    classmethod get_type(cls, success: str)
```

`events_protocol.core.model.payload`

Module Contents

```
class events_protocol.core.model.payload.RedirectPayload

    url :str
    query_parameters :Dict[str, Any]
```

`events_protocol.core.model.user`

Module Contents

```
class events_protocol.core.model.user.User

    user_id :Optional[int]
    user_type :Optional[str]
    __hash__(self)
    __eq__(self, other)
```


`events_protocol.core.utils`

Submodules

`events_protocol.core.utils.config`

Module Contents

```
events_protocol.core.utils.config.config(config_name: str, default: typing.Any
                                         = None, cast: typing.Type = None,
                                         env_file=os.environ.get('APPLICATION_ENVIRONMENT')
                                         or 'dev')
```

`events_protocol.core.utils.encoder`

Module Contents

```
class events_protocol.core.utils.encoder.JSONEncoder
    Bases: json.JSONEncoder
    default(self, obj)
```

Package Contents

```
events_protocol.core.utils.config(config_name: str, default: typing.Any
                                   = None, cast: typing.Type = None,
                                   env_file=os.environ.get('APPLICATION_ENVIRONMENT')
                                   or 'dev')
```

`events_protocol.core.views`

Submodules

`events_protocol.core.views.aiohttp`

Module Contents

```
async events_protocol.core.views.aiohttp.init_app(routes: typing.List[typing.Tuple[View,
                                          str]], middlewares: typing.Iterable[AIOHTTPMiddleware]
                                                  = []) → Application
```

`events_protocol.core.views.aiohttp._NOT_ALLOWED_AIOHTTP`

```
class events_protocol.core.views.aiohttp.AIOHTTPView(*args, **kwargs)
    Bases: events_protocol.core.views.base.BaseView, aiohttp.web.View
    request : Request
    body : str
```

```
__iter__(self)
async get_body(self)
async get(self, *args, **kwargs)
async _get(self, *args, **kwargs)
async put(self, *args, **kwargs)
async _put(self, *args, **kwargs)
async post(self, *args, **kwargs)
async _post(self, *args, **kwargs)
async delete(self, *args, **kwargs)
async _delete(self, *args, **kwargs)
get_query_args(self)
async write_response(self, http_status: HTTPStatus, response_body: dict, headers: dict = {})
class events_protocol.core.views.aihttp.AIOHTTPHealthCheckView
    Bases: events_protocol.core.views.base.BaseHealth, events_protocol.core.
            views.aihttp.AIOHTTPView
```

`events_protocol.core.views.base`

Module Contents

```
class events_protocol.core.views.base.BaseView
```

```
    request
    _base_header
    async send_response(self, message: str = None, data: dict = None, description: str = None,
                        http_status: int = None, code: int = 1000, log_level=None)
    abstract get_query_args(self)
    abstract async write_response(self, http_status: int, description: str, response_body: dict,
                                log_level: str = None, headers: dict = {})
    async _treat_general_exception(self, exception: Exception)
class events_protocol.core.views.base.BaseHealth
    Bases: events_protocol.core.views.base.BaseView
    _checkers :typing.List[typing.Dict[str, typing.Union[typing.Awaitable[typing.Callable]
classmethod add_checker(cls, checker_name: str, checker_func: typing.Union[typing.Awaitable[typing.Callable], typing.Callable])
    async _get(self)
```

`events_protocol.core.views.event`

Module Contents

```
class events_protocol.core.views.event.DataDogAsyncEventProcessor
    Bases: events_protocol.server.parser.event_processor.AsyncEventProcessor

    async classmethod process_event (cls, raw_event: str, request)

class events_protocol.core.views.event.EventView
    Bases: events_protocol.core.views.aiohttp.AIOHTTPView

    async _post (self)
```

Package Contents

```
class events_protocol.core.views.BaseHealth
    Bases: events_protocol.core.views.base.BaseView

    _checkers :typing.List[typing.Dict[str, typing.Union[typing.Awaitable[typing.Callable]
    classmethod add_checker (cls, checker_name: str, checker_func: typing.Union[typing.Awaitable[typing.Callable], typing.Callable])
    async _get (self)

class events_protocol.core.views.BaseView

    request
    _base_header

    async send_response (self, message: str = None, data: dict = None, description: str = None,
        http_status: int = None, code: int = 1000, log_level=None)

    abstract get_query_args (self)

    abstract async write_response (self, http_status: int, description: str, response_body: dict,
        log_level: str = None, headers: dict = {})

    async _treat_general_exception (self, exception: Exception)

class events_protocol.core.views.JSONEncoder
    Bases: json.JSONEncoder

    default (self, obj)

async events_protocol.core.views.init_app (routes: typing.List[typing.Tuple[View,
    str]], middlewares: typing.Iterable[AIOHTTPMiddleware] = [])
    → Application

events_protocol.core.views._NOT_ALLOWED_AIOHTTP

class events_protocol.core.views.AIOHTTPView (*args, **kwargs)
    Bases: events_protocol.core.views.base.BaseView, aiohttp.web.View

    request :Request
    body :str
    __iter__ (self)
```

```
    async get_body (self)
    async get (self, *args, **kwargs)
    async _get (self, *args, **kwargs)
    async put (self, *args, **kwargs)
    async _put (self, *args, **kwargs)
    async post (self, *args, **kwargs)
    async _post (self, *args, **kwargs)
    async delete (self, *args, **kwargs)
    async _delete (self, *args, **kwargs)
    get_query_args (self)
    async write_response (self, http_status: HTTPStatus, response_body: dict, headers: dict = {})

class events_protocol.core.views.AIOHTTPHealthCheckView
    Bases: events_protocol.core.views.base.BaseHealth, events_protocol.core.
           views.aiohttp.AIOHTTPView

class events_protocol.core.views.AIOHTTPView (*args, **kwargs)
    Bases: events_protocol.core.views.base.BaseView, aiohttp.web.View

    request :Request
    body :str
    __iter__ (self)
    async get_body (self)
    async get (self, *args, **kwargs)
    async _get (self, *args, **kwargs)
    async put (self, *args, **kwargs)
    async _put (self, *args, **kwargs)
    async post (self, *args, **kwargs)
    async _post (self, *args, **kwargs)
    async delete (self, *args, **kwargs)
    async _delete (self, *args, **kwargs)
    get_query_args (self)
    async write_response (self, http_status: HTTPStatus, response_body: dict, headers: dict = {})

class events_protocol.core.views.DataDogAsyncEventProcessor
    Bases: events_protocol.server.parser.event_processor.AsyncEventProcessor

    async classmethod process_event (cls, raw_event: str, request)

class events_protocol.core.views.EventView
    Bases: events_protocol.core.views.aiohttp.AIOHTTPView

    async _post (self)

class events_protocol.core.views.EventContextHolder
```

```

    static get()

    static set(event_context: EventContext)

    static clean()

    classmethod with_context(cls, context_id: IdType, context_flow_id: IdType, event_name: str,
                             event_version: int, user_id: str = None, user_type: str = None)

    async classmethod with_async_context(cls, context_id: IdType, context_flow_id: IdType,
                                          event_name: str, event_version: int, user_id: str
                                          = None, user_type: str = None)

exception events_protocol.core.views.EventException(parameters: Dict[str, Op-
                                                    tional[Any]], expected: bool =
                                                    False)

    Bases: RuntimeError

    _CODE :str =

    _TYPE :EventErrorType

    property code(self)

    property event_error_type(self)

exception events_protocol.core.views.EventParsingException
    Bases: events_protocol.core.exception.EventException

    _CODE = INVALID_COMMUNICATION_PROTOCOL

    _TYPE

class events_protocol.core.views.LoggableMixin

    logger

exception events_protocol.core.views.ValidationError
    Bases: Exception

    fields :typing.List[Field]

    to_dict(self)

    to_json(self)

class events_protocol.core.views.Event
    Bases: events_protocol.core.model.base.CamelPydanticMixin

    name :str

    version :int

    payload :PayloadType

    id :Optional[str]

    flow_id :Optional[str]

    identity :Optional[Dict[str, Any]]

    auth :Optional[Dict[str, Any]]

    metadata :Optional[Dict[str, Any]]

    payload_as(self, clazz: CamelPydanticMixin)

    identity_as(self, clazz: Generic)

```

```
    auth_as (self, clazz: Generic)
    property user_id (self)
    property user_type (self)
    property user (self)
    property origin (self)

class events_protocol.core.views.ResponseEvent
    Bases: events_protocol.core.model.event.Event
    static from_event (event: Event, event_type: EventType = EventSuccessType.SUCCESS)
    property is_success (self)
    property is_redirect (self)
    property is_error (self)
    property _event_name (self)
    property event_type (self)
    property error_type (self)

class events_protocol.core.views.EventHandler
    Bases: abc.ABC
    event_name :str
    event_version :typing.Union[None, int]
    _SCHEMA :CamelPydanticMixin
    __post_init__ (self)
    abstract handle (cls, event: RequestEvent)
    classmethod parse_event (cls, event: Event)

class events_protocol.core.views.AsyncEventHandler
    Bases: events_protocol.server.handler.event_handler.EventHandler, abc.ABC
    _SCHEMA :CamelPydanticMixin
    abstract async handle (cls, event: RequestEvent)

class events_protocol.core.views.EventDiscovery
    Bases: events_protocol.core.logging.mixins.loggable.LoggableMixin
    _events :typing.Dict[typing.Tuple[str, int], typing.Union[EventHandler, AsyncEventHandl
    _EVENT_NAME_STD :str = [a-z_]+[a-z]:[a-z_]+[a-z](:[a-z]+[a-z])*
    classmethod add (cls, event_name: str, event_handler: EventHandler, version: int = 1)
    classmethod get (cls, event_name: str, event_version: int = 1)

class events_protocol.core.views.EventBuilder
    Bases: events_protocol.core.logging.mixins.loggable.LoggableMixin
    classmethod error_for (cls, exception: EventException, event: typing.Optional[Event] =
        Event(name="", version=1, id=str(uuid4())), id_flow=str(uuid4()), log-
        gable=True)
    classmethod response_for (cls, event: Event, payload: PayloadType, event_type: EventSuc-
        cessType = EventSuccessType.SUCCESS, loggable=True)
```

```

class events_protocol.core.views.EventProcessor
    Bases: events_protocol.core.logging.mixins.loggable.LoggableMixin

    event_discovery
    event_validator

    classmethod process_event (cls, raw_event: str)
    classmethod parse_event (cls, str_event: str)

class events_protocol.core.views.AsyncEventProcessor
    Bases: events_protocol.server.parser.event_processor.EventProcessor

    async classmethod process_event (cls, raw_event: str)

```

Submodules

`events_protocol.core.builder`

Module Contents

```

class events_protocol.core.builder.EventBuilder
    Bases: events_protocol.core.logging.mixins.loggable.LoggableMixin

    classmethod error_for (cls, exception: EventException, event: typing.Optional[Event] =
        Event(name="", version=1, id=str(uuid4())), id_flow=str(uuid4()), log-
        gable=True)

    classmethod response_for (cls, event: Event, payload: PayloadType, event_type: EventSuc-
        cessType = EventSuccessType.SUCCESS, loggable=True)

```

`events_protocol.core.context`

Module Contents

```

events_protocol.core.context.IdType

class events_protocol.core.context.EventContext
    Bases: events_protocol.core.model.base.BaseModel

    id :typing.Optional[IdType]
    flow_id :typing.Optional[IdType]
    event_name :typing.Optional[str]
    event_version :typing.Optional[int]
    user_id :typing.Optional[str]
    user_type :typing.Optional[str]

events_protocol.core.context._context :ContextVar[EventContext]

class events_protocol.core.context.EventContextHolder

    static get ()
    static set (event_context: EventContext)

```

```
static clean()

classmethod with_context(cls, context_id: IdType, context_flow_id: IdType, event_name: str,
                        event_version: int, user_id: str = None, user_type: str = None)

async classmethod with_async_context(cls, context_id: IdType, context_flow_id: IdType,
                                     event_name: str, event_version: int, user_id: str
                                     = None, user_type: str = None)
```

`events_protocol.core.exception`

Module Contents

```
exception events_protocol.core.exception.EventException(parameters: Dict[str,
                                                                    Optional[Any]], expected:
                                                                    bool = False)
```

Bases: `RuntimeError`

`_CODE` :str =

`_TYPE` :`EventErrorType`

property `code` (*self*)

property `event_error_type` (*self*)

```
exception events_protocol.core.exception.MessagebleEventException(message:
                                                                    str)

Bases: events_protocol.core.exception.EventException
```

```
exception events_protocol.core.exception.EventNotFoundException
```

Bases: `events_protocol.core.exception.MessagebleEventException`

`_CODE` = `EVENT_NOT_FOUND`

`_TYPE`

```
exception events_protocol.core.exception.MissingEventInformationException
```

Bases: `events_protocol.core.exception.EventException`

`_CODE` = `MISSING_FIELDS`

`_TYPE`

```
exception events_protocol.core.exception.EventParsingException
```

Bases: `events_protocol.core.exception.EventException`

`_CODE` = `INVALID_COMMUNICATION_PROTOCOL`

`_TYPE`

```
exception events_protocol.core.exception.EventFailedDependencyException
```

Bases: `events_protocol.core.exception.MessagebleEventException`

`_CODE` = `FAILED_DEPENDENCY`

```
exception events_protocol.core.exception.EventTimeoutException
```

Bases: `events_protocol.core.exception.MessagebleEventException`

`_CODE` = `EVENT_TIMEOUT`

`events_protocol.core.urls`

Module Contents

`events_protocol.core.urls.URL_PATTERNS = [None, None]`

`events_protocol.server`

Subpackages

`events_protocol.server.handler`

Submodules

`events_protocol.server.handler.event_handler`

Module Contents

```
class events_protocol.server.handler.event_handler.EventHandler
    Bases: abc.ABC
    event_name :str
    event_version :typing.Union[None, int]
    _SCHEMA :CamelPydanticMixin
    __post_init__(self)
    abstract handle(cls, event: RequestEvent)
    classmethod parse_event(cls, event: Event)

class events_protocol.server.handler.event_handler.AsyncEventHandler
    Bases: events_protocol.server.handler.event_handler.EventHandler, abc.ABC
    _SCHEMA :CamelPydanticMixin
    abstract async handle(cls, event: RequestEvent)
```

`events_protocol.server.handler.event_handler_discovery`

Module Contents

```
class events_protocol.server.handler.event_handler_discovery.EventDiscovery
    Bases: events_protocol.core.logging.mixins.loggable.LoggableMixin
    _events :typing.Dict[typing.Tuple[str, int], typing.Union[EventHandler, AsyncEventHandl
    _EVENT_NAME_STD :str = [a-z_]+[a-z]:[a-z_]+[a-z](:[a-z]+[a-z])*
    classmethod add(cls, event_name: str, event_handler: EventHandler, version: int = 1)
    classmethod get(cls, event_name: str, event_version: int = 1)
```

`events_protocol.server.handler.safe_event_handler`

Module Contents

class `events_protocol.server.handler.safe_event_handler.SafeEventHandler`

Bases: `events_protocol.server.handler.event_handler.AsyncEventHandler`

Defines a safe event handler

event_name [str]

Event endpoint. It should contain only letters and respect the following format:

- `{{name}}:{{name}}`

event_version [int] Event version

Change the `__safe_event_handler` to contain the calls to the desired service The run method will be override to create a new handler

SafeHandler

event_name :str

event_version :typing.Union[None, int]

async classmethod handle (*cls, event: Event*)

Method that will safely handle the current event in the events_protocol library

event: Event Event sent by the user

ResponseEvent Response event containing the result of the service

async classmethod run (*cls, event: Event*)

async classmethod __safe_event_handler (*cls, event: Event*)

Implements the integrity verification of the payload and runs the service

event: Event Event sent by the user

ResponseEvent Response event containing the result of the service

Package Contents

class `events_protocol.server.handler.SafeEventHandler`

Bases: `events_protocol.server.handler.event_handler.AsyncEventHandler`

Defines a safe event handler

event_name [str]

Event endpoint. It should contain only letters and respect the following format:

- `{{name}}:{{name}}`

event_version [int] Event version

Change the `__safe_event_handler` to contain the calls to the desired service The run method will be override to create a new handler

SafeHandler

event_name :str

```

event_version :typing.Union[None, int]

async classmethod handle (cls, event: Event)
    Method that will safely handle the current event in the events_protocol library

    event: Event Event sent by the user

    ResponseEvent Response event containing the result of the service

async classmethod run (cls, event: Event)

async classmethod __safe_event_handler (cls, event: Event)
    Implements the integrity verification of the payload and runs the service

    event: Event Event sent by the user

    ResponseEvent Response event containing the result of the service

```

```

class events_protocol.server.handler.EventHandler
    Bases: abc.ABC

    event_name :str

    event_version :typing.Union[None, int]

    _SCHEMA :CamelPydanticMixin

    __post_init__ (self)

    abstract handle (cls, event: RequestEvent)

    classmethod parse_event (cls, event: Event)

```

```
events_protocol.server.parser
```

Submodules

```
events_protocol.server.parser.event_processor
```

Module Contents

```

class events_protocol.server.parser.event_processor.EventProcessor
    Bases: events_protocol.core.logging.mixins.loggable.LoggableMixin

    event_discovery

    event_validator

    classmethod process_event (cls, raw_event: str)

    classmethod parse_event (cls, str_event: str)

class events_protocol.server.parser.event_processor.AsyncEventProcessor
    Bases: events_protocol.server.parser.event_processor.EventProcessor

    async classmethod process_event (cls, raw_event: str)

```

Package Contents

events_protocol.__version__ = 0.3.2

- search

PYTHON MODULE INDEX

e

- events_protocol, 10
- events_protocol.client, 10
 - events_protocol.client.event_client, 10
 - events_protocol.client.exception, 10
 - events_protocol.client.exception.request_exception, 10
- events_protocol.client.http, 11
- events_protocol.core, 11
 - events_protocol.core.builder, 27
 - events_protocol.core.context, 27
 - events_protocol.core.exception, 28
 - events_protocol.core.logging, 11
 - events_protocol.core.logging.logger, 12
 - events_protocol.core.logging.mixins, 11
 - events_protocol.core.logging.mixins.loggable, 11
 - events_protocol.core.logging.picpay_logger, 14
 - events_protocol.core.logging.supressor, 15
- events_protocol.core.model, 18
 - events_protocol.core.model.base, 18
 - events_protocol.core.model.event, 18
 - events_protocol.core.model.event_type, 19
- events_protocol.core.model.payload, 20
- events_protocol.core.model.user, 20
- events_protocol.core.urls, 29
- events_protocol.core.utils, 21
 - events_protocol.core.utils.config, 21
 - events_protocol.core.utils.encoder, 21
- events_protocol.core.views, 21
 - events_protocol.core.views.aiohttp, 21
 - events_protocol.core.views.base, 22
 - events_protocol.core.views.event, 23
- events_protocol.server, 29
 - events_protocol.server.handler, 29
 - events_protocol.server.handler.event_handler, 29
 - events_protocol.server.handler.event_handler_discovery, 29
 - events_protocol.server.handler.safe_event_handler, 30
 - events_protocol.server.parser, 31
 - events_protocol.server.parser.event_processor, 31

Symbols

<code>_CODE (events_protocol.core.exception.EventException attribute), 28</code>	<code>_TYPE (events_protocol.core.views.EventException attribute), 25</code>
<code>_CODE (events_protocol.core.exception.EventFailedDependencyException attribute), 28</code>	<code>_TYPE (events_protocol.core.views.EventParsingException attribute), 25</code>
<code>_CODE (events_protocol.core.exception.EventNotFoundException attribute), 28</code>	<code>add_default_handlers() (events_protocol.core.logging.Logger method), 15</code>
<code>_CODE (events_protocol.core.exception.EventParsingException attribute), 28</code>	<code>__add_default_handlers() (events_protocol.core.logging.logger.Logger method), 12</code>
<code>_CODE (events_protocol.core.exception.EventTimeoutException attribute), 28</code>	<code>create_logger_with_environment() (events_protocol.core.logging.PicpayLogger method), 17</code>
<code>_CODE (events_protocol.core.exception.MissingEventInformationException attribute), 28</code>	<code>__create_logger_with_environment() (events_protocol.core.logging.picpay_logger.PicpayLogger method), 14</code>
<code>_CODE (events_protocol.core.views.EventException attribute), 25</code>	<code>dev_log() (events_protocol.core.logging.PicpayLogger method), 17</code>
<code>_CODE (events_protocol.core.views.EventParsingException attribute), 25</code>	<code>handler_log() (events_protocol.core.logging.picpay_logger.PicpayLogger method), 14</code>
<code>_EVENT_NAME_STD (events_protocol.core.views.EventDiscovery attribute), 26</code>	<code>__eq__() (events_protocol.core.model.user.User method), 20</code>
<code>_EVENT_NAME_STD (events_protocol.server.handler.event_handler_discovery.EventDiscovery attribute), 29</code>	<code>__hash__() (events_protocol.core.model.user.User method), 20</code>
<code>_NOT_ALLOWED_AIOHTTP (in module events_protocol.core.views), 23</code>	<code>__iter__() (events_protocol.core.views.AIOHTTPView method), 23, 24</code>
<code>_NOT_ALLOWED_AIOHTTP (in module events_protocol.core.views.aiohttp), 21</code>	<code>__iter__() (events_protocol.core.views.aiohttp.AIOHTTPView method), 21</code>
<code>_SCHEMA (events_protocol.core.views.AsyncEventHandler attribute), 26</code>	<code>__post_init__() (events_protocol.core.views.EventHandler method), 26</code>
<code>_SCHEMA (events_protocol.core.views.EventHandler attribute), 26</code>	<code>__post_init__() (events_protocol.server.handler.EventHandler method), 31</code>
<code>_SCHEMA (events_protocol.server.handler.EventHandler attribute), 31</code>	<code>__post_init__() (events_protocol.server.handler.event_handler.EventHandler method), 29</code>
<code>_SCHEMA (events_protocol.server.handler.event_handler.AsyncEventHandler attribute), 29</code>	<code>__prod_log__() (events_protocol.core.logging.PicpayLogger method), 17</code>
<code>_SCHEMA (events_protocol.server.handler.event_handler.EventHandler attribute), 29</code>	<code>__prod_log__() (events_protocol.core.logging.picpay_logger.PicpayLogger method), 14</code>
<code>_TYPE (events_protocol.core.exception.EventException attribute), 28</code>	<code>safe_event_handler() (events_protocol.server.handler.SafeEventHandler class method), 31</code>
<code>_TYPE (events_protocol.core.exception.EventNotFoundException attribute), 28</code>	
<code>_TYPE (events_protocol.core.exception.EventParsingException attribute), 28</code>	
<code>_TYPE (events_protocol.core.exception.MissingEventInformationException attribute), 28</code>	

__safe_event_handler() (events_protocol.server.handler.safe_event_handler.SafeEventHandler (in module events_protocol.core.model.base), 30
 __str__() (events_protocol.core.model.event_type.EventType (in module events_protocol.core.model.base), 18
 __version__ (in module events_protocol), 32
 _base_header (events_protocol.core.views.BaseView (in module events_protocol.core.views), 23
 _base_header (events_protocol.core.views.base.BaseView (in module events_protocol.core.views.base), 22
 _checkers (events_protocol.core.views.BaseHealthCheckView (in module events_protocol.core.views), 23
 _checkers (events_protocol.core.views.base.BaseHealthCheckView (in module events_protocol.core.views.base), 22
 _context (in module events_protocol.core.context), 27
 _create_log() (events_protocol.core.logging.Logger (in module events_protocol.core.logging), 15
 _create_log() (events_protocol.core.logging.logger.Logger (in module events_protocol.core.logging), 12
 _delete() (events_protocol.core.views.AIOHTTPView (in module events_protocol.core.views), 24
 _delete() (events_protocol.core.views.aiohttp.AIOHTTPView (in module events_protocol.core.views.aiohttp), 22
 _event_name() (events_protocol.core.model.event.ResponseEvent (in module events_protocol.core.model), 19
 _event_name() (events_protocol.core.views.ResponseEvent (in module events_protocol.core.views), 26
 _events (events_protocol.core.views.EventDiscovery (in module events_protocol.core.views), 26
 _events (events_protocol.server.handler.event_handler_discovery.EventDiscovery (in module events_protocol.server.handler.event_handler_discovery), 29
 _get() (events_protocol.core.views.AIOHTTPView (in module events_protocol.core.views), 24
 _get() (events_protocol.core.views.BaseHealthCheckView (in module events_protocol.core.views), 23
 _get() (events_protocol.core.views.aiohttp.AIOHTTPView (in module events_protocol.core.views.aiohttp), 22
 _get() (events_protocol.core.views.base.BaseHealthCheckView (in module events_protocol.core.views.base), 22
 _log() (events_protocol.core.logging.PicpayLogger (in module events_protocol.core.logging), 17
 _log() (events_protocol.core.logging.picpay_logger.PicpayLogger (in module events_protocol.core.logging), 14
 _post() (events_protocol.core.views.AIOHTTPView (in module events_protocol.core.views), 24
 _post() (events_protocol.core.views.EventView (in module events_protocol.core.views), 24
 _post() (events_protocol.core.views.aiohttp.AIOHTTPView (in module events_protocol.core.views.aiohttp), 22
 _post() (events_protocol.core.views.event.EventView (in module events_protocol.core.views.event), 23
 _put() (events_protocol.core.views.AIOHTTPView (in module events_protocol.core.views), 24
 _put() (events_protocol.core.views.aiohttp.AIOHTTPView (in module events_protocol.core.views.aiohttp), 22
 add() (events_protocol.core.views.EventDiscovery (in module events_protocol.core.views), 26
 add() (events_protocol.server.handler.event_handler_discovery.EventDiscovery (in module events_protocol.server.handler.event_handler_discovery), 29
 add_checker() (events_protocol.core.views.base.BaseHealthCheckView (in module events_protocol.core.views.base), 22
 add_checker() (events_protocol.core.views.BaseHealthCheckView (in module events_protocol.core.views), 23
 add_handler() (events_protocol.core.logging.Logger (in module events_protocol.core.logging), 15
 add_handler() (events_protocol.core.logging.logger.Logger (in module events_protocol.core.logging), 12
 aiohttp_health_check_view (class in events_protocol.core.views), 24
 aiohttp_health_check_view (class in events_protocol.core.views.aiohttp), 22
 AIOHTTPView (class in events_protocol.core.views), 23, 24
 aiohttp_event_discovery (class in events_protocol.core.views.aiohttp), 21
 alias_generator (events_protocol.core.model.base.CamelPydanticModel (in module events_protocol.core.model.base), 18
 AsyncEventHandler (class in events_protocol.core.views), 26
 AsyncEventHandler (class in events_protocol.server.handler.event_handler), 29
 AsyncEventProcessor (class in events_protocol.core.views), 27
 AsyncEventProcessor (class in events_protocol.server.parser.event_processor), 31
 auth (events_protocol.core.model.event.Event (in module events_protocol.core.model.event), 19
 auth (events_protocol.core.views.Event (in module events_protocol.core.views), 25
 auth_as() (events_protocol.core.model.event.Event (in module events_protocol.core.model.event), 19
 auth_as() (events_protocol.core.views.Event (in module events_protocol.core.views), 25
 BAD_PROTOCOL (events_protocol.core.model.event_type.EventType (in module events_protocol.core.model.event_type), 20

BAD_REQUEST (*events_protocol.core.model.event_type.EventMessageType* (in module *events_protocol.core.utils*), 21
 attribute), 20
 BadProtocolException, 10
 BaseHealth (class in *events_protocol.core.views*), 23
 BaseHealth (class in *events_protocol.core.views.base*), 22
 BaseModel (class in *events_protocol.core.model.base*), 18
 BaseRequestException, 10
 BaseView (class in *events_protocol.core.views*), 23
 BaseView (class in *events_protocol.core.views.base*), 22
 body (*events_protocol.core.views.aiohttp.AIOHTTPView* attribute), 21
 body (*events_protocol.core.views.AIOHTTPView* attribute), 23, 24
 BOLD_SEQ (*events_protocol.core.logging.ColoredFormatter* attribute), 16
 BOLD_SEQ (*events_protocol.core.logging.logger.ColoredFormatter* attribute), 13
 build_request_event () (*events_protocol.client.event_client.EventClient* method), 10
 build_request_event () (*events_protocol.client.EventClient* method), 11

C

CamelPydanticMixin (class in *events_protocol.core.model.base*), 18
 CamelPydanticMixin.Config (class in *events_protocol.core.model.base*), 18
 clean () (*events_protocol.core.context.EventContextHolder* static method), 27
 clean () (*events_protocol.core.views.EventContextHolder* static method), 25
 code (*events_protocol.core.model.event.EventMessage* attribute), 19
 code () (*events_protocol.core.exception.EventException* property), 28
 code () (*events_protocol.core.views.EventException* property), 25
 COLOR_SEQ (*events_protocol.core.logging.ColoredFormatter* attribute), 16
 COLOR_SEQ (*events_protocol.core.logging.logger.ColoredFormatter* attribute), 13
 ColoredFormatter (class in *events_protocol.core.logging*), 16
 ColoredFormatter (class in *events_protocol.core.logging.logger*), 13
 COLORS (*events_protocol.core.logging.ColoredFormatter* attribute), 16
 COLORS (*events_protocol.core.logging.logger.ColoredFormatter* attribute), 13
 config () (in module *events_protocol.core.utils.config*), 21
 D
 DataDogAsyncEventProcessor (class in *events_protocol.core.views*), 24
 DataDogAsyncEventProcessor (class in *events_protocol.core.views.event*), 23
 default () (*events_protocol.core.utils.encoder.JSONEncoder* method), 21
 default () (*events_protocol.core.views.JSONEncoder* method), 23
 delete () (*events_protocol.core.views.aiohttp.AIOHTTPView* method), 22
 delete () (*events_protocol.core.views.AIOHTTPView* method), 24
 disable_logs () (in module *events_protocol.core.logging.supressor*), 15
 E
 error_for () (*events_protocol.core.builder.EventBuilder* class method), 27
 error_for () (*events_protocol.core.views.EventBuilder* class method), 26
 error_type (*events_protocol.core.model.base.Field* attribute), 18
 error_type () (*events_protocol.core.model.event.ResponseEvent* property), 19
 error_type () (*events_protocol.core.views.ResponseEvent* property), 26
 Event (class in *events_protocol.core.model.event*), 18
 Event (class in *events_protocol.core.views*), 25
 event_discovery (*events_protocol.core.views.EventProcessor* attribute), 27
 event_discovery (*events_protocol.server.parser.event_processor.EventProcessor* attribute), 31
 event_error_type () (*events_protocol.core.exception.EventException* property), 28
 event_error_type () (*events_protocol.core.views.EventException* property), 25
 event_name (*events_protocol.core.context.EventContextHolder* attribute), 27
 event_name (*events_protocol.core.views.EventHandler* attribute), 26
 event_name (*events_protocol.server.handler.event_handler.EventHandler* attribute), 29
 event_name (*events_protocol.server.handler.EventHandler* attribute), 31
 event_name (*events_protocol.server.handler.safe_event_handler.SafeEventHandler* attribute), 30

event_name (events_protocol.server.handler.SafeEventHandler	attribute), 30	EventNotFoundException, 28
event_type () (events_protocol.core.model.event.ResponseEventProcessor	property), 19	EventParsingException, 25, 28
event_type () (events_protocol.core.views.ResponseEventProcessor	property), 26	events_protocol.core.views), 26
event_validator (events_protocol.core.views.EventProcessor	attribute), 27	events_protocol.server.parser.event_processor, 31
event_validator (events_protocol.server.parser.event_processor.EventProcessor	attribute), 31	events_protocol (module), 10
event_version (events_protocol.core.context.EventContext	attribute), 27	events_protocol.client.event_client (module), 10
event_version (events_protocol.core.views.EventHandler	attribute), 26	events_protocol.client.exception (module), 10
event_version (events_protocol.server.handler.event_handler.EventHandler	attribute), 29	events_protocol.client.exception.request_exception (module), 10
event_version (events_protocol.server.handler.EventHandler	attribute), 31	events_protocol.client.http (module), 11
event_version (events_protocol.server.handler.safe_event_handler.SafeEventHandler	attribute), 30	events_protocol.core (module), 11
event_version (events_protocol.server.handler.SafeEventHandler	attribute), 30	events_protocol.core.builder (module), 27
EventBuilder (class in events_protocol.core.builder),	27	events_protocol.core.context (module), 27
EventBuilder (class in events_protocol.core.views),	26	events_protocol.core.exception (module), 10
EventClient (class in events_protocol.client), 11		events_protocol.core.logging (module), 11
EventClient (class in events_protocol.client.event_client), 10		events_protocol.core.logging.logger (module), 12
EventContext (class in events_protocol.core.context),	27	events_protocol.core.logging.mixins (module), 11
EventContextHolder (class in events_protocol.core.context), 27		events_protocol.core.logging.mixins.loggable (module), 11
EventContextHolder (class in events_protocol.core.views), 24		events_protocol.core.logging.picpay_logger (module), 14
EventDiscovery (class in events_protocol.core.views), 26		events_protocol.core.logging.supressor (module), 15
EventDiscovery (class in events_protocol.server.handler.event_handler_discovery), 29		events_protocol.core.model (module), 18
EventErrorType (class in events_protocol.core.model.event_type), 19		events_protocol.core.model.base (module), 18
EventException, 25, 28		events_protocol.core.model.event (module), 18
EventFailedDependencyException, 28		events_protocol.core.model.event_type (module), 19
EventHandler (class in events_protocol.core.views), 26		events_protocol.core.model.payload (module), 20
EventHandler (class in events_protocol.server.handler), 31		events_protocol.core.model.user (module), 20
EventHandler (class in events_protocol.server.handler.event_handler), 29		events_protocol.core.urls (module), 29
EventMessage (class in events_protocol.core.model.event), 19		events_protocol.core.utils (module), 21
		events_protocol.core.utils.config (module), 21
		events_protocol.core.utils.encoder (module), 21
		events_protocol.core.views (module), 21
		events_protocol.core.views.aiohttp (module), 21
		events_protocol.core.views.base (module), 22

events_protocol.core.views.event (module), 23
 events_protocol.server (module), 29
 events_protocol.server.handler (module), 29
 events_protocol.server.handler.event_handler (module), 29
 events_protocol.server.handler.event_handler_discovery (module), 29
 events_protocol.server.handler.safe_event_handler (module), 30
 events_protocol.server.parser (module), 31
 events_protocol.server.parser.event_processor (module), 31
 EventSuccessType (class in events_protocol.core.model.event_type), 20
 EventTimeoutException, 28
 EventType (class in events_protocol.core.model.event_type), 19
 EventView (class in events_protocol.core.views), 24
 EventView (class in events_protocol.core.views.event), 23
 EXPIRED (events_protocol.core.model.event_type.EventErrorType attribute), 20
F
 FailedDependencyException, 10
 Field (class in events_protocol.core.model.base), 18
 fields (events_protocol.core.model.base.ValidationError attribute), 18
 fields (events_protocol.core.views.ValidationError attribute), 25
 flow_id (events_protocol.core.context.EventContext attribute), 27
 flow_id (events_protocol.core.model.event.Event attribute), 19
 flow_id (events_protocol.core.views.Event attribute), 25
 FORBIDDEN (events_protocol.core.model.event_type.EventErrorType attribute), 20
 format () (events_protocol.core.logging.ColoredFormatter method), 16
 format () (events_protocol.core.logging.logger.ColoredFormatter method), 13
 formatter_message () (events_protocol.core.logging.ColoredFormatter class method), 16
 formatter_message () (events_protocol.core.logging.logger.ColoredFormatter class method), 13
 from_event () (events_protocol.core.model.event.ResponseEvent static method), 19
 from_event () (events_protocol.core.views.ResponseEvent static method), 26
 from_json () (events_protocol.core.model.base.CamelPydanticMixin class method), 18
 from_object () (events_protocol.core.model.base.BaseModel class method), 18
G
 generic_discovery (events_protocol.core.model.event_type.EventErrorType attribute), 20
 get () (events_protocol.core.context.EventContextHolder static method), 27
 get () (events_protocol.core.views.aiohttp.AIOHTTPView method), 22
 get () (events_protocol.core.views.AIOHTTPView method), 24
 get () (events_protocol.core.views.EventContextHolder static method), 24
 get () (events_protocol.core.views.EventDiscovery class method), 26
 get () (events_protocol.server.handler.event_handler_discovery.EventDiscovery class method), 29
 get_body () (events_protocol.core.views.aiohttp.AIOHTTPView method), 22
 get_body () (events_protocol.core.views.AIOHTTPView method), 23, 24
 get_logger () (events_protocol.core.logging.Logger class method), 15
 get_logger () (events_protocol.core.logging.logger.Logger class method), 12
 get_query_args () (events_protocol.core.views.aiohttp.AIOHTTPView method), 22
 get_query_args () (events_protocol.core.views.AIOHTTPView method), 24
 get_query_args () (events_protocol.core.views.base.BaseView method), 22
 get_query_args () (events_protocol.core.views.BaseView method), 23
 get_type () (events_protocol.core.model.event_type.EventErrorType class method), 20
 get_type () (events_protocol.core.model.event_type.EventSuccessType class method), 20
H
 handle () (events_protocol.core.views.AsyncEventHandler method), 26
 handle () (events_protocol.core.views.EventHandler method), 26
 handle () (events_protocol.server.handler.event_handler.AsyncEventHandler method), 29
 handle () (events_protocol.server.handler.event_handler.EventHandler method), 29
 handle () (events_protocol.server.handler.EventHandler method), 31

[handle\(\) \(events_protocol.server.handler.safe_event_handler.SafeEventHandler class method\), 30](#)
[handle\(\) \(events_protocol.server.handler.SafeEventHandler class method\), 31](#)
[HANDLERS \(events_protocol.core.logging.Logger attribute\), 15](#)
[HANDLERS \(events_protocol.core.logging.logger.Logger attribute\), 12](#)
[HttpClient \(class in events_protocol.client.http\), 11](#)

I

[id \(events_protocol.core.context.EventContext attribute\), 27](#)
[id \(events_protocol.core.model.event.Event attribute\), 19](#)
[id \(events_protocol.core.views.Event attribute\), 25](#)
[identity \(events_protocol.core.model.event.Event attribute\), 19](#)
[identity \(events_protocol.core.views.Event attribute\), 25](#)
[identity_as\(\) \(events_protocol.core.model.event.Event method\), 19](#)
[identity_as\(\) \(events_protocol.core.views.Event method\), 25](#)
[IdType \(in module events_protocol.core.context\), 27](#)
[init_app\(\) \(in module events_protocol.core.views\), 23](#)
[init_app\(\) \(in module events_protocol.core.views.aiohttp\), 21](#)
[internal_logger \(events_protocol.core.logging.picpay_logger.PicpayLogger attribute\), 14](#)
[internal_logger \(events_protocol.core.logging.PicpayLogger attribute\), 17](#)
[is_error\(\) \(events_protocol.core.model.event.ResponseEvent property\), 19](#)
[is_error\(\) \(events_protocol.core.views.ResponseEvent property\), 26](#)
[is_in\(\) \(events_protocol.core.model.event_type.EventType class method\), 19](#)
[is_production_environment \(events_protocol.core.logging.picpay_logger.PicpayLogger attribute\), 14](#)
[is_production_environment \(events_protocol.core.logging.PicpayLogger attribute\), 17](#)
[is_redirect\(\) \(events_protocol.core.model.event.ResponseEvent property\), 19](#)
[is_redirect\(\) \(events_protocol.core.views.ResponseEvent property\), 26](#)
[is_success\(\) \(events_protocol.core.model.event.ResponseEvent property\), 19](#)
[is_success\(\) \(events_protocol.core.views.ResponseEvent property\), 26](#)

J

[JSONEncoder \(class in events_protocol.core.views\), 23](#)

L

[LoggableMixin \(class in events_protocol.core.logging.mixins\), 12](#)
[LoggableMixin \(class in events_protocol.core.logging.mixins.loggable\), 11](#)
[LoggableMixin \(class in events_protocol.core.views\), 25](#)
[Logger \(class in events_protocol.core.logging\), 15](#)
[Logger \(class in events_protocol.core.logging.logger\), 12](#)
[logger \(events_protocol.core.logging.mixins.loggable.LoggableMixin attribute\), 11](#)
[logger \(events_protocol.core.logging.mixins.LoggableMixin attribute\), 12](#)
[logger \(events_protocol.core.views.LoggableMixin attribute\), 25](#)
[logger_monitor\(\) \(in module events_protocol.core.logging\), 16](#)
[logger_monitor\(\) \(in module events_protocol.core.logging.logger\), 13](#)
[logger_name \(events_protocol.core.logging.picpay_logger.PicpayLogger attribute\), 14](#)
[logger_name \(events_protocol.core.logging.PicpayLogger attribute\), 17](#)

M

[message \(events_protocol.core.model.base.Field attribute\), 18](#)
[MessagebleEventException, 28](#)
[metadata \(events_protocol.core.model.event.Event attribute\), 19](#)
[metadata \(events_protocol.core.views.Event attribute\), 25](#)
[MissingEventInformationException, 28](#)

N

[name \(events_protocol.core.model.base.Field attribute\), 18](#)
[name \(events_protocol.core.model.event.Event attribute\), 18](#)
[name \(events_protocol.core.views.Event attribute\), 25](#)
[NOT_FOUND \(events_protocol.core.model.event_type.EventErrorType attribute\), 20](#)

O

[origin\(\) \(events_protocol.core.model.event.Event property\), 19](#)

[origin\(\)](#) (*events_protocol.core.views.Event* property), [26](#)
P
[parameters](#) (*events_protocol.core.model.event.EventMessage* attribute), [19](#)
[parse_event\(\)](#) (*events_protocol.client.event_client.EventClient* method), [10](#)
[parse_event\(\)](#) (*events_protocol.client.EventClient* method), [11](#)
R
[parse_event\(\)](#) (*events_protocol.core.views.EventHandler* class method), [26](#)
[parse_event\(\)](#) (*events_protocol.core.views.EventProcessor* class method), [27](#)
[parse_event\(\)](#) (*events_protocol.server.handler.event_handler.EventHandler* class method), [29](#)
[parse_event\(\)](#) (*events_protocol.server.handler.EventHandler* class method), [31](#)
[parse_event\(\)](#) (*events_protocol.server.parser.event_processor.EventProcessor* class method), [31](#)
[payload](#) (*events_protocol.core.model.event.Event* attribute), [19](#)
[payload](#) (*events_protocol.core.views.Event* attribute), [25](#)
[payload_as\(\)](#) (*events_protocol.core.model.event.Event* method), [19](#)
[payload_as\(\)](#) (*events_protocol.core.views.Event* method), [25](#)
[PayloadType](#) (in *events_protocol.core.model.event*), [18](#)
[PicpayLogger](#) (class in *events_protocol.core.logging*), [16](#)
[PicpayLogger](#) (class in *events_protocol.core.logging.picpay_logger*), [14](#)
[post\(\)](#) (*events_protocol.client.http.HttpClient* method), [11](#)
[post\(\)](#) (*events_protocol.core.views.aiohttp.AIOHTTPView* method), [22](#)
[post\(\)](#) (*events_protocol.core.views.AIOHTTPView* method), [24](#)
[process_event\(\)](#) (*events_protocol.core.views.AsyncEventProcessor* class method), [27](#)
[process_event\(\)](#) (*events_protocol.core.views.DataDogAsyncEventProcessor* class method), [24](#)
[process_event\(\)](#) (*events_protocol.core.views.event.DataDogAsyncEventProcessor* class method), [23](#)
[process_event\(\)](#) (*events_protocol.core.views.EventProcessor* class method), [27](#)
[process_event\(\)](#) (*events_protocol.server.parser.event_processor.AsyncEventProcessor* class method), [31](#)
[process_event\(\)](#) (*events_protocol.server.parser.event_processor.EventProcessor* class method), [31](#)
Q
[query_parameters](#) (*events_protocol.core.model.payload.RedirectPayload* attribute), [20](#)
R
[REDIRECT](#) (*events_protocol.core.model.event_type.EventSuccessType* attribute), [20](#)
[RedirectPayload](#) (class in *events_protocol.core.model.payload*), [20](#)
[request](#) (*events_protocol.core.views.aiohttp.AIOHTTPView* attribute), [21](#)
[request](#) (*events_protocol.core.views.AIOHTTPView* attribute), [23](#), [24](#)
[request](#) (*events_protocol.core.views.base.BaseView* attribute), [22](#)
[request](#) (*events_protocol.core.views.BaseView* attribute), [23](#)
[RequestEvent](#) (class in *events_protocol.core.model.event*), [19](#)
[RESET_SEQ](#) (*events_protocol.core.logging.ColoredFormatter* attribute), [16](#)
[RESET_SEQ](#) (*events_protocol.core.logging.logger.ColoredFormatter* attribute), [13](#)
[RESOURCE_DENIED](#) (*events_protocol.core.model.event_type.EventErrorType* attribute), [20](#)
[response_for\(\)](#) (*events_protocol.core.builder.EventBuilder* class method), [27](#)
[response_for\(\)](#) (*events_protocol.core.views.EventBuilder* class method), [26](#)
[ResponseEvent](#) (class in *events_protocol.core.model.event*), [19](#)
[ResponseEvent](#) (class in *events_protocol.core.views*), [26](#)
[run\(\)](#) (*events_protocol.server.handler.safe_event_handler.SafeEventHandler* class method), [30](#)
[run\(\)](#) (*events_protocol.server.handler.SafeEventHandler* class method), [31](#)
S
[SafeEventHandler](#) (class in *events_protocol.server.handler*), [30](#)
[SafeEventHandler](#) (class in *events_protocol.server.handler.safe_event_handler*), [30](#)
[send_event\(\)](#) (*events_protocol.client.event_client.EventClient* method), [10](#)
[send_event\(\)](#) (*events_protocol.client.EventClient* method), [11](#)

send_request_event () (events_protocol.client.event_client.EventClient method), 10
 send_request_event () (events_protocol.client.EventClient method), 11
 send_response () (events_protocol.core.views.base.BaseView method), 22
 send_response () (events_protocol.core.views.BaseView method), 23
 set () (events_protocol.core.context.EventContextHolder static method), 27
 set () (events_protocol.core.views.EventContextHolder static method), 25
 set_version () (events_protocol.core.logging.picpay_logger.PicpayLogger class method), 14
 set_version () (events_protocol.core.logging.PicpayLogger class method), 17
 SUCCESS (events_protocol.core.model.event_type.EventSuccessType attribute), 20
 supress_log () (in module events_protocol.core.logging.supressor), 15
T
 TimeoutException, 10
 to_dict () (events_protocol.core.model.base.BaseModel method), 18
 to_dict () (events_protocol.core.model.base.Field method), 18
 to_dict () (events_protocol.core.model.base.ValidationError method), 18
 to_dict () (events_protocol.core.views.ValidationError method), 25
 to_json () (events_protocol.core.model.base.BaseModel method), 18
 to_json () (events_protocol.core.model.base.ValidationError method), 18
 to_json () (events_protocol.core.views.ValidationError method), 25
U
 UNAUTHORIZED (events_protocol.core.model.event_type.EventErrorType attribute), 20
 UNKNOWN (events_protocol.core.model.event_type.EventErrorType attribute), 20
 url (events_protocol.core.model.payload.RedirectPayload attribute), 20
 URL_PATTERNS (in module events_protocol.core.urls), 29
 User (class in events_protocol.core.model.user), 20
 user () (events_protocol.core.model.event.Event property), 19
 user () (events_protocol.core.views.Event property), 26
 USER_DENIED (events_protocol.core.model.event_type.EventErrorType attribute), 20
 user_id (events_protocol.core.context.EventContext attribute), 27
 user_id (events_protocol.core.model.user.User attribute), 20
 user_id () (events_protocol.core.model.event.Event property), 19
 user_id () (events_protocol.core.views.Event property), 26
 user_type (events_protocol.core.context.EventContext attribute), 27
 user_type (events_protocol.core.model.user.User attribute), 20
 user_type () (events_protocol.core.views.Event property), 26
 ValidationError, 18, 25
 version (events_protocol.core.logging.picpay_logger.PicpayLogger attribute), 14
 version (events_protocol.core.logging.PicpayLogger attribute), 17
 version (events_protocol.core.model.event.Event attribute), 18
 version (events_protocol.core.views.Event attribute), 25
V
 with_async_context () (events_protocol.core.context.EventContextHolder class method), 28
 with_async_context () (events_protocol.core.views.EventContextHolder class method), 25
 with_context () (events_protocol.core.context.EventContextHolder class method), 28
 with_context () (events_protocol.core.views.EventContextHolder class method), 25
 write_response () (events_protocol.core.views.aiohttp.AIOHTTPView method), 22
 write_response () (events_protocol.core.views.AIOHTTPView method), 24
 write_response () (events_protocol.core.views.base.BaseView method), 22
 write_response () (events_protocol.core.views.BaseView method), 23
W