msaSDK Module

`.service`

Main Service Module for MSAApp.

Initialize with a MSAServiceDefintion Instance to control the features and functions of the MSAApp.

Attributes

__version__ module-attribute

```
__version__ = '0.1.1'
```

> str: Module Version

password_helper module-attribute

```
password_helper = PasswordHelper(security_context)
```

> Password Helper Instance

security module-attribute

```
security = getMSASecurity()
```

> MSASecurity instance

security_context module-attribute

```
security_context = CryptContext(
    schemes=["bcrypt"], deprecated="auto"
)
```

> Security Context for Password Helper

Classes

MSAApp

Bases: `MSAFastAPI`

Creates an application msaSDK instance.

Note

As with FastApi the MSAApp provides two events: `startup`: A list of callables to run on application startup. Startup handler callables do not take any arguments, and may be be either standard functions, or async functions. `shutdown`: A list of callables to run on application shutdown. Shutdown handler callables do not take any arguments, and may be be either standard functions, or async functions. Those are also used internally, which are triggered before the external events.

Do not include the `self` parameter in the `Args` section.

PARAMETER	DESCRIPTION
`settings`	MSAServiceDefinition (Must be provided), instance of a service definition with all settings **TYPE:** `MSAServiceDefinition`
`timers`	MSATimers instance Default None, provide a MSATimers instance and it will start the scheduler internaly **TYPE:** `MSATimers` **DEFAULT:** `None`
`sql_models`	List of SQLModel Default None, provide list of your SQLModel Classes and the instance can create CRUD API and if site is enabled also UI for CRUD **TYPE:** `List[SQLModel]` **DEFAULT:** `None`
`auto_mount_site`	Default True, if site is enabled in settings and this is true, mounts the site in internal startup event. **TYPE:** `bool` **DEFAULT:** `True`

ATTRIBUTE	DESCRIPTION
`logger`	loguru logger instance

ATTRIBUTE	DESCRIPTION
`auto_mount_site`	bool auto_mount_site **TYPE:** `bool`
`settings`	MSAServiceDefinition settings instance.
`timers`	MSATimers = timers **TYPE:** `MSATimers`
`healthdefinition`	MSAHealthDefinition settings.healthdefinition **TYPE:** `MSAHealthDefinition`
`limiter`	Limiter = None **TYPE:** `Limiter`
`db_engine`	AsyncEngine = Db Engine instance **TYPE:** `AsyncEngine`
`sql_models`	List[SQLModel] = sql_models **TYPE:** `List[SQLModel]`
`sql_cruds`	List[MSASQLModelCrud] = [] **TYPE:** `List[MSASQLModelCrud]`
`scheduler`	MSAScheduler = None **TYPE:** `MSAScheduler`
`site`	AdminSite Admin/Auth Site instance.
`scheduler_task`	The Task instance that runs the Scheduler in the Background **TYPE:** `Task`
`ROOTPATH`	str os.path.join(os.path.dirname(**file**))

Attributes

Base `instance-attribute`

```
Base: DeclarativeMeta = declarative_base()
```

ROOTPATH instance-attribute

```
ROOTPATH = os.path.join(os.path.dirname(__file__))
```

auto_mount_site instance-attribute

```
auto_mount_site: bool = auto_mount_site
```

db_engine instance-attribute

```
db_engine: AsyncEngine = None
```

graphql_app instance-attribute

```
graphql_app: GraphQLRouter = None
```

graphql_schema instance-attribute

```
graphql_schema: schema = None
```

healthcheck instance-attribute

```
healthcheck: health.MSAHealthCheck = None
```

healthdefinition instance-attribute

```
healthdefinition: MSAHealthDefinition = (
    self.settings.healthdefinition
)
```

limiter instance-attribute

```
limiter: Limiter = None
```

logger instance-attribute

```
logger = logger
```

scheduler instance-attribute

```
scheduler: MSAScheduler = None
```

scheduler_task instance-attribute

```
scheduler_task: Task = None
```

settings instance-attribute

```
settings = settings
```

site instance-attribute

```
site = None
```

sql_cruds instance-attribute

```
sql_cruds: List[MSASQLModelCrud] = []
```

sql_models instance-attribute

```
sql_models: List[SQLModel] = sql_models
```

templates instance-attribute

```
templates = Jinja2Templates(
    directory=self.settings.templates_dir
)
```

timers instance-attribute

```
timers: MSATimers = timers
```

Functions

__init__

```
__init__(
    settings: MSAServiceDefinition,
    timers: MSATimers = None,
    sql_models: List[SQLModel] = None,
    auto_mount_site: bool = True,
    *args,
```

```
    **kwargs
) -> None
```

get_healthcheck async

```
get_healthcheck(request: Request) -> ORJSONResponse
```

> Get Healthcheck Status

get_scheduler_status async

```
get_scheduler_status(
    request: Request,
) -> MSASchedulerStatus
```

> Get Service Status Info

get_services_definition

```
get_services_definition(
    request: Request,
) -> MSAServiceDefinition
```

> Get Service Definition Info

get_services_openapi_info

```
get_services_openapi_info(
    request: Request,
) -> MSAOpenAPIInfo
```

> Get Service OpenAPI Info

get_services_openapi_schema

```
get_services_openapi_schema(
    request: Request,
) -> ORJSONResponse
```

> Get Service OpenAPI Schema

get_services_settings

```
get_services_settings(request: Request) -> ORJSONResponse
```

> Get Service OpenAPI Schema

get_services_status async

```
get_services_status(request: Request) -> MSAServiceStatus
```

> Get Service Status Info

index_page

```
index_page(request: Request) -> _TemplateResponse
```

> Get Service Index.html Page

monitor async

```
monitor(request: Request) -> _TemplateResponse
```

> Simple Service Monitor Page. Only works if pages is enabled in MSAServiceDefinition :param request: :return:

monitor_inline async

```
monitor_inline(request: Request) -> _TemplateResponse
```

> Simple Monitor Page as Inline without head and body tags. Only works if pages is enabled in MSAServiceDefinition :param request: :return:

mount_site

```
mount_site() -> None
```

msa_exception_handler async

```
msa_exception_handler(request: Request, exc: HTTPException)
```

> Handles all HTTPExceptions if enabled with HTML Response or forward error if the code is in the exclude settings list. :param request: :type request: :param exc: :type exc: :return: :rtype:

msa_exception_handler_disabled async

```
msa_exception_handler_disabled(
    request: Request, exc: HTTPException
) -> JSONResponse
```

> Handles all HTTPExceptions if Disabled with JSON Response. :param request: :type request: :param exc: :type exc: :return: :rtype:

profiler

```
profiler(request: Request) -> _TemplateResponse
```

> Simple Profiler Page. Only works if pages is enabled in MSAServiceDefinition :param request: :return:

shutdown_event async

```
shutdown_event() -> None
```

startup_event async

```
startup_event() -> None
```

> :return: :rtype:

testpage

```
testpage(request: Request) -> _TemplateResponse
```

> Simple Testpage to see if the Micro Service is up and running. Only works if pages is enabled in MSAServiceDefinition :param request: :return:

validation_exception_handler async

```
validation_exception_handler(
    request: Request, exc: RequestValidationError
) -> JSONResponse
```

MSAOpenAPIInfo

> Bases: `SQLModel`
>
> **MSAOpenAPIInfo** Pydantic Response Class
>
> **Attributes**
>
> name class-attribute

```
name: str = 'msaSDK Service'
```

Service Name.

tags class-attribute

```
tags: Optional[List[str]] = None
```

OpenAPI Tags.

url class-attribute

```
url: str = '/openapi.json'
```

OpenAPI URL.

version class-attribute

```
version: str = '0.0.0'
```

API Version.

MSASchedulerStatus

Bases: `SQLModel`

MSASchedulerStatus Pydantic Response Class

Attributes

message class-attribute

```
message: Optional[str] = 'None'
```

Optional Message Text

name class-attribute

```
name: Optional[str] = 'msaSDK Service'
```

Service Name.

timers class-attribute

```
timers: Optional[List[MSATimerStatus]] = []
```

Optional MSATimerStatus List

MSAServiceStatus

Bases: `SQLModel`

MSAServiceStatus Pydantic Response Class

Attributes

healthy `class-attribute`

```
healthy: Optional[str] = 'None'
```

Health status

message `class-attribute`

```
message: Optional[str] = 'None'
```

Optional Message Text

name `class-attribute`

```
name: Optional[str] = 'msaSDK Service'
```

Service Name.

MSATimerStatus

Bases: `SQLModel`

MSATimerStatus Pydantic Response Class

Attributes

func `class-attribute`

```
func: Optional[str] = None
```

Timer Handler Function.

mark_HH_MM class-attribute

```
mark_HH_MM: Optional[str] = None
```

Mark for Schedule

mode class-attribute

```
mode: Optional[str] = None
```

Timer Mode.

Functions

getSecretKey

```
getSecretKey()
```

Get Secret Key for Token creation from OS Environment Variable **SECRET_KEY_TOKEN**

RETURNS	DESCRIPTION
`key`	The SECRET_KEY_TOKEN.

getSecretKeyCSRF

```
getSecretKeyCSRF() -> str
```

Get Secret Key for CSRF Middleware from OS Environment Variable **SECRET_KEY_CSRF**

RETURNS	DESCRIPTION
`key`	The SECRET_KEY_CSRF. **TYPE:** `str`

getSecretKeySessions

```
getSecretKeySessions()
```

Get Secret Key for Session Middleware from OS Environment Variable **SECRET_KEY_SESSIONS**

RETURNS	DESCRIPTION
`key`	The SECRET_KEY_SESSIONS.

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