

msaSDK Module

`.models.service`

Classes

MSAServiceDefinition

Bases: `MSAAppSettings`

MSAApp Settings (Service Definitions)

This class enables the configuration of your MSAApp instance through the use of environment variables.

Any of the instance attributes can be overridden upon instantiation by either passing the desired value to the initializer, or by setting the corresponding environment variable.

Attribute `xxx_yyy` corresponds to environment variable `API_XXX_YYY`. So, for example, to override `openapi_prefix`, you would set the environment variable `API_OPENAPI_PREFIX`.

Note that assignments to variables are also validated, ensuring that even if you make runtime-modifications to the config, they should have the correct types.

Attributes

`abstract_fs` class-attribute

```
abstract_fs: bool = True
```

Enables internal Abstract Filesystem.

`abstract_fs_url` class-attribute

```
abstract_fs_url: str = '.'
```

Set's Filesystem URL

`allow_credentials` class-attribute

```
allow_credentials: bool = True
```

CORSMiddleware. Bool. Allow (True) Credentials (Authorization headers, Cookies, etc).

allow_headers class-attribute

```
allow_headers: List[str] = ['*']
```

CORSMiddleware. List[str]. Specific HTTP headers or all of them with the wildcard `*`.

allow_methods class-attribute

```
allow_methods: List[str] = ['*']
```

CORSMiddleware. List[str]. Specific HTTP methods (POST, PUT) or all of them with the wildcard `*`.

allow_origins class-attribute

```
allow_origins: List[str] = ['*']
```

CORSMiddleware. List[str]. List of allowed origins (as strings) or all of them with the wildcard `*`.

context class-attribute

```
context: bool = False
```

Enable Context Middleware.

CORS class-attribute

```
cors: bool = True
```

Enable CORS Middleware.

csrf class-attribute

```
csrf: bool = True
```

Enable CSRF Forms Protection Middleware.

graphql class-attribute

```
graphql: bool = False
```

Enable initiation of Strawberry GraphQLRouter (/graphql).

gzip class-attribute

```
gzip: bool = False
```

Enable GZIP Middleware.

healthdefinition class-attribute

```
healthdefinition: MSAHealthDefinition = (  
    MSAHealthDefinition()  
)
```

Healthdefinition Instance.

host class-attribute

```
host: str = '127.0.0.1'
```

Host/IP which the service runs on.

httpception class-attribute

```
httpception: bool = True
```

Enable the HTTP Exception Handler, which provides HTML Error Pages instead of JSONResponse.

httpception_exclude class-attribute

```
httpception_exclude: List[int] = [307]
```

List of HTTP Exception Codes which are excluded and just forwarded by the HTTP Exception Handler.

httpsredirect class-attribute

```
httpsredirect: bool = False
```

Enable HTTPS Redirect Middleware.

instrument class-attribute

```
instrument: bool = True
```

Enable Prometheus Instrumentation for the instance.

json_db class-attribute

```
json_db: bool = True
```

Enables internal NoSQL/TinyDB DB.

json_db_memory_only class-attribute

```
json_db_memory_only: bool = False
```

JSON DB only in memory, don't store to file/db url

json_db_url class-attribute

```
json_db_url: str = './msa_sdk.json'
```

Set's DB URL, compatibility with async and SQLAlchemy is required.

language class-attribute

```
language: str = ''
```

Set's internal Admin Dashboard language (`zh_CN` or `en_US` =default if empty).

limiter class-attribute

```
limiter: bool = False
```

Enables Rate Limiter (slowapi).

msgpack class-attribute

```
msgpack: bool = False
```

Enable Messagepack Negotiation Middleware.

name class-attribute

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

Service Name, also used as Title.

pages class-attribute

```
pages: bool = True
```

Enable the Pages Routes (/profiler, /testpage), if site is Off also (/ , /monitor, /monitor_inline).

pagination class-attribute

```
pagination: bool = False
```

Enable FastAPI Pagination.

port class-attribute

```
port: int = 8090
```

Port which the service binds to.

profiler class-attribute

```
profiler: bool = False
```

Enable Profiler Middleware.

profiler_output_type class-attribute

```
profiler_output_type: str = 'html'
```

Set the Profiler Output Type, should be html or text, html is needed if you want to use the profiler on the Admin Site.

profiler_single_calls class-attribute

```
profiler_single_calls: bool = True
```

Enable to Track each Request by the Profiler.

profiler_url class-attribute

```
profiler_url: str = '/profiler'
```

Set the URL to reach the profiler result html, /profiler.

root_path class-attribute

```
root_path: str = '/admin'
```

Set's internal Admin Dashboard Root Path, normally /admin.

scheduler class-attribute

```
scheduler: bool = True
```

Enables MSA Scheduler Engine.

scheduler_debug class-attribute

```
scheduler_debug: bool = False
```

Enables MSA Scheduler debug messages.

servicerouter class-attribute

```
servicerouter: bool = True
```

Enable the Service Routes defined by the MSAApp (/scheduler, /status, /defintion, /settings, /schema, /info, ...).

session class-attribute

```
session: bool = False
```

Enable Session Middleware.

site class-attribute

```
site: bool = True
```

Enables internal Admin Site Dashboard.

site_auth class-attribute

```
site_auth: bool = False
```

Extends internal Admin Dashboard with Auth.

site_copyright class-attribute

```
site_copyright: str = 'Copyright © 2022 by u2d.ai'
```

Set's internal Admin Dashboard copyright information.

site_icon class-attribute

```
site_icon: str = '/msastatic/img/favicon.png'
```

Set's internal Admin Dashboard Favicon.

site_title class-attribute

```
site_title: str = 'Admin'
```

Set's internal Admin Dashboard Titel.

site_url class-attribute

```
site_url: str = ''
```

Set's internal Admin Dashboard Site URL, normally empty.

sqlite_db class-attribute

```
sqlite_db: bool = True
```

Enables internal Asynchron SQLite DB.

sqlite_db_crud class-attribute

```
sqlite_db_crud: bool = True
```

Enables CRUD API creation of the provided SQLModels.

sqlite_db_debug class-attribute

```
sqlite_db_debug: bool = False
```

Enables internal DB Debug output.

sqlite_db_meta_create class-attribute

```
sqlite_db_meta_create: bool = True
```

Enables internal DB Metadata creation from defined SQLModels at Startup.

sqlite_db_meta_drop class-attribute

```
sqlite_db_meta_drop: bool = False
```

If True, all existing Data and Schemas in internal DB get's deleted at Startup.

sqlite_db_url class-attribute

```
sqlite_db_url: str = "sqlite+aiosqlite:///msa_sdk.sqlite_db?check_same_thread=True"
```

Set's DB URL, compatibility with async and SQLAlchemy is required.

starception class-attribute

```
starception: bool = True
```

Enable Starception Middleware.

static class-attribute

```
static: bool = True
```

Enable the internal Static Folder (msastatic) and Mount to instance.

sysrouter class-attribute

```
sysrouter: bool = True
```

Enable the System Routes defined by router.system module (/sysinfo, /sysgpuinfo, /syserror, ...).

tags class-attribute

```
tags: List[str] = []
```


Optional Metadata: Use this to carry some variables through the service instance.

templates class-attribute

```
templates: bool = True
```

Enable the internal Templates and mount the directory.

templates_dir class-attribute

```
templates_dir: List[str] = [
    "msatemplates",
    "msatemplates/errors",
]
```

Set the List of Directories for the MSAUITemplate Engine to look for the requested template.

timing class-attribute

```
timing: bool = False
```

Enables Timing Middleware, reports timing data at the granularity of individual endpoint calls.

ui_justpy class-attribute

```
ui_justpy: bool = True
```

Enables internal justpy mounting.

ui_justpy_demos class-attribute

```
ui_justpy_demos: bool = True
```

Enables justpy demos

uvloop class-attribute

```
uvloop: bool = True
```

Use UVLoop instead of asyncio loop.

validationception class-attribute

```
validationception: bool = True
```

Enable Validation Exception Handler.

version class-attribute

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

Version of the Service.

Functions

valid_url

```
valid_url(url: str)
```

Internal Validator for `root_path` and `site_url` to remove ending `/`.

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.

Functions

get_msa_app_settings cached

```
get_msa_app_settings() -> MSAServiceDefinition
```

This function returns a cached instance of the MSAServiceDefinition object.



Note



Caching is used to prevent re-reading the environment every time the API settings are used in an endpoint.

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