

Package ‘smdocker’

July 23, 2025

Title Build 'Docker Images' in 'Amazon SageMaker Studio' using 'Amazon Web Service CodeBuild'

Version 0.1.4

Description

Allows users to easily build custom 'docker images' <<https://docs.docker.com/>> from 'Amazon Web Service Sagemaker' <<https://aws.amazon.com/sagemaker/>> using 'Amazon Web Service CodeBuild' <<https://aws.amazon.com/codebuild/>>.

License MIT + file LICENSE

URL <https://github.com/DyfanJones/sm-docker>

BugReports <https://github.com/DyfanJones/sm-docker/issues>

Encoding UTF-8

Imports jsonlite, paws.compute, paws.developer.tools,
paws.machine.learning, paws.management, paws.storage,
paws.security.identity, zip, stats, utils, uuid

Suggests covr, crayon, mockery, testthat (>= 3.0.0)

RoxygenNote 7.2.3

Collate 'utils.R' 'logs.R' 'code_build.R' 'builder.R' 'config.R'
'logging.R' 'sm_role.R' 'main.R' 'zzz.R'

Config/testthat/edition 3

NeedsCompilation no

Author Dyfan Jones [aut, cre]

Maintainer Dyfan Jones <dyfan.r.jones@gmail.com>

Repository CRAN

Date/Publication 2023-06-07 09:50:02 UTC

Contents

sagemaker_get_execution_role	2
smdocker_config	2
smdocker_log	3
sm_build	5

sagemaker_get_execution_role	<i>Return the AWS ARN execution role from AWS SageMaker</i>
------------------------------	---

Description

Return the **AWS ARN execution role** from AWS SageMaker

Usage

```
sagemaker_get_execution_role()
```

Value

Character containing the AWS ARN role retrieved from AWS SageMaker

smdocker_config	<i>Set paws config across smdocker package</i>
-----------------	--

Description

This function sets up paws client config list for all AWS calls. This function only needs to be used when changing default settings when connecting to AWS.

Usage

```
smdocker_config(  
    aws_access_key_id = NULL,  
    aws_secret_access_key = NULL,  
    aws_session_token = NULL,  
    region_name = NULL,  
    profile_name = NULL,  
    disable_ssl = FALSE,  
    anonymous = FALSE,  
    refresh = FALSE,  
    ...  
)
```

Arguments

aws_access_key_id (character): AWS access key ID

aws_secret_access_key (character): AWS secret access key

aws_session_token (character): AWS temporary session token

region_name (character): Default region when creating new connections

profile_name (character): The name of a profile to use. If not given, then the default profile is used.

disable_ssl (logical): Whether or not to use SSL. By default, SSL is used.

anonymous (logical): Set up anonymous credentials when connecting to AWS.

refresh (logical): Refresh cached smdocker config

... Other parameters within paws client.

Value

Invisible list, containing credentials for paws clients.

See Also

[ecr codebuild sagemaker cloudwatchlogs iam sts s3](#)

Examples

```
# Set up connection using profile
smdocker_config(profile_name = "smdocker_example")

# Reset connection to connect to a different region
smdocker_config(
  profile_name = "smdocker_example",
  region_name = "us-east-1",
  refresh = TRUE
)
```

smdocker_log

smdocker logging system

Description

Ability to configure smdocker logging system, through the use of smdocker helper function `smdocker_log` or R:base options function. options configurable parameters:

- `smdocker.log_level` (integer): The minimum log level that should be tracked
- `smdocker.log_file` (character): path for logs to populate, default output logs to console.
- `smdocker.log_timestamp_fmt` (character): see [format.POSIXct\(\)](#)

Usage

```
smdocker_log(  
  level = 3L,  
  file = "",  
  timestamp_fmt = "%Y-%m-%d %H:%M:%OS3"  
)
```

Arguments

level	(integer): the level logging threshold. • 4L : DEBUG • 3L : INFO • 2L : WARNING • 1L : ERROR
file	(character): path for logs to populate, default output logs to console.
timestamp_fmt	(character): timestamp format, see format.POSIXct() .

Value

NULL invisible

Examples

```
## Not run:  
# log to a file  
temp_file <- tempfile()  
smdocker_log(file = temp_file)  
  
# change log threshold to INFO  
smdocker_log(level = 3L)  
  
# reset to default config  
smdocker_log()  
  
# options() equivalents:  
  
# log to a file  
temp_file <- tempfile()  
options(smdocker.log_file = temp_file)  
  
# change log threshold to INFO  
options(smdocker.log_level = 3L)  
  
## End(Not run)
```

sm_build	Use AWS CodeBuild to build docker images and push them to Amazon ECR
----------	--

Description

This function takes a directory containing a **dockerfile**, and builds it on **AWS CodeBuild**. The resulting image is then stored in **AWS ECR** for later use.

Usage

```
sm_build(
  repository = NULL,
  compute_type = c("BUILD_GENERAL1_SMALL", "BUILD_GENERAL1_MEDIUM",
    "BUILD_GENERAL1_LARGE", "BUILD_GENERAL1_2XLARGE"),
  role = NULL,
  dir = ".",
  bucket = NULL,
  vpc_id = NULL,
  subnet_ids = list(),
  security_group_ids = list(),
  log = TRUE,
  ...
)
```

Arguments

repository	(character): The ECR repository:tag for the image (default: sagemaker-studio-\${domain_id}:latest)
compute_type	(character): The CodeBuild compute type (default: BUILD_GENERAL1_SMALL)
role	(character): The IAM role name for CodeBuild to use (default: the Studio execution role).
dir	(character): Directory to build
bucket	(character): The S3 bucket to use for sending data to CodeBuild (if None, use the SageMaker SDK default bucket).
vpc_id	(character): The Id of the VPC that will host the CodeBuild Project (such as vpc-05c09f91d48831c8c).
subnet_ids	(list): List of subnet ids for the CodeBuild Project (such as subnet-0b31f1863e9d31a67)
security_group_ids	(list): List of security group ids for the CodeBuild Project (such as sg-0ce4ec0d0414d2ddc).
log	(logical): Show the logs of the running CodeBuild build
...	docker build parameters https://docs.docker.com/engine/reference/commandline/build/#options (NOTE: use "_" instead of "-" for example: docker optional parameter build-arg becomes build_arg)

Value

invisible character vector of AWS ECR image uri.

Examples

```
## Not run:
# Execute on current directory.
sm_build()

# Execute on different directory.
sm_build(dir = "my-project")

# Add extra docker arguments
sm_build(
  file = "/path/to/Dockerfile",
  build_arg = "foo=bar"
)

## End(Not run)
```

Index

cloudwatchlogs, [3](#)
codebuild, [3](#)

ecr, [3](#)

format.POSIXct(), [3](#), [4](#)

iam, [3](#)

s3, [3](#)
sagemaker, [3](#)
sagemaker_get_execution_role, [2](#)
sm_build, [5](#)
smdocker_config, [2](#)
smdocker_log, [3](#)
sts, [3](#)