PPTAM
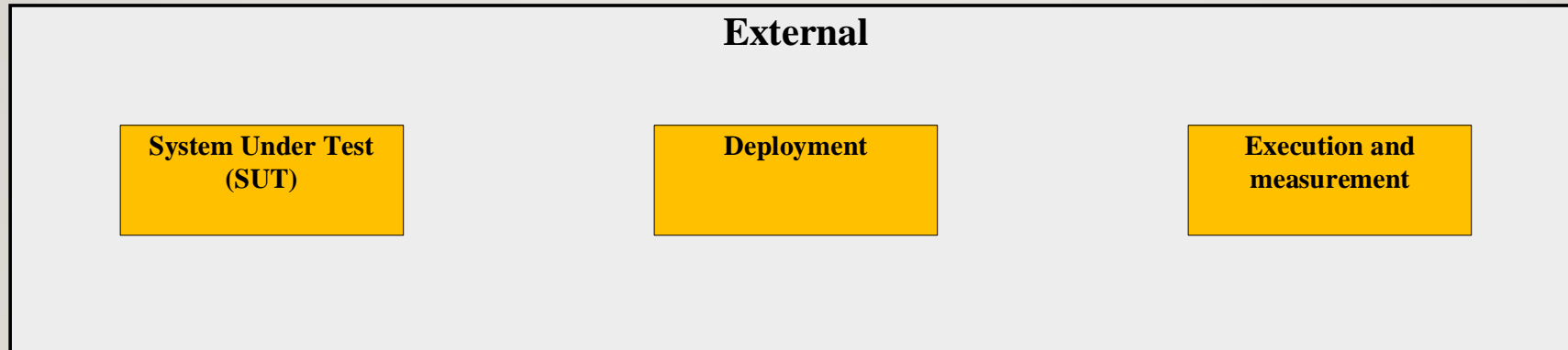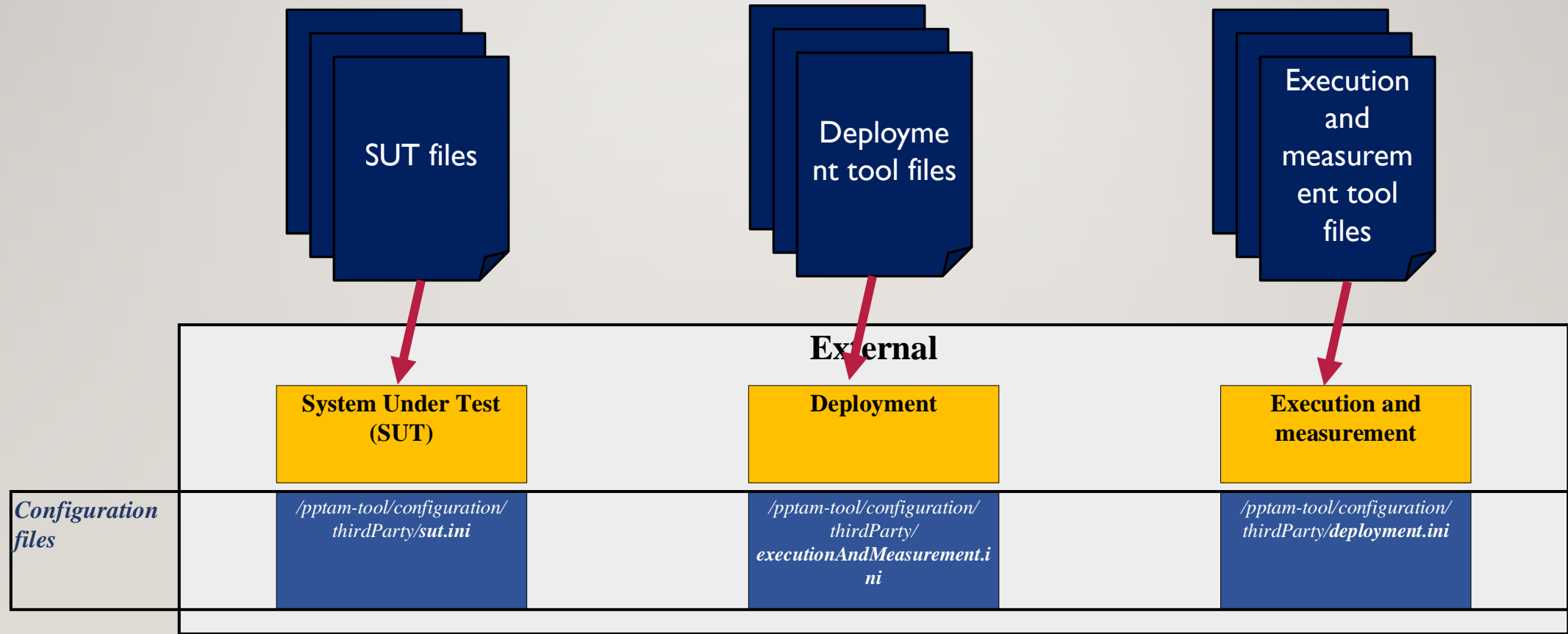
PPTAM EXTERNAL

- Main external components:
  - System under test (e.g., Train Ticket)
  - A tool for deployment (e.g., Docker)
  - A tool for execution and measurement of the tests (e.g., Faban)

External

| System Under Test (SUT) | Deployment | Execution and measurement |

PPTAM EXTERNAL CONFIGURATION

PPTAM EXTERNAL CONFIGURATION

- Add configuration place holders in tool's files (e.g., ${CARTS_CPUS_LIMITS})

```
resources:
  limits:
    cpus: '${CARTS_CPUS_LIMITS}'
    memory: ${CARTS_RAM_LIMITS}
```

- Add values to these place holders and the path to these files to FILE_TO_CHANGE of the corresponding ini *configuration files*.

```
[SOCKS2]
FILE_TO_CHANGE = templates/deployment_descriptor/template/docker-compose.yml
CARTS_CPUS_LIMITS=0.25
```
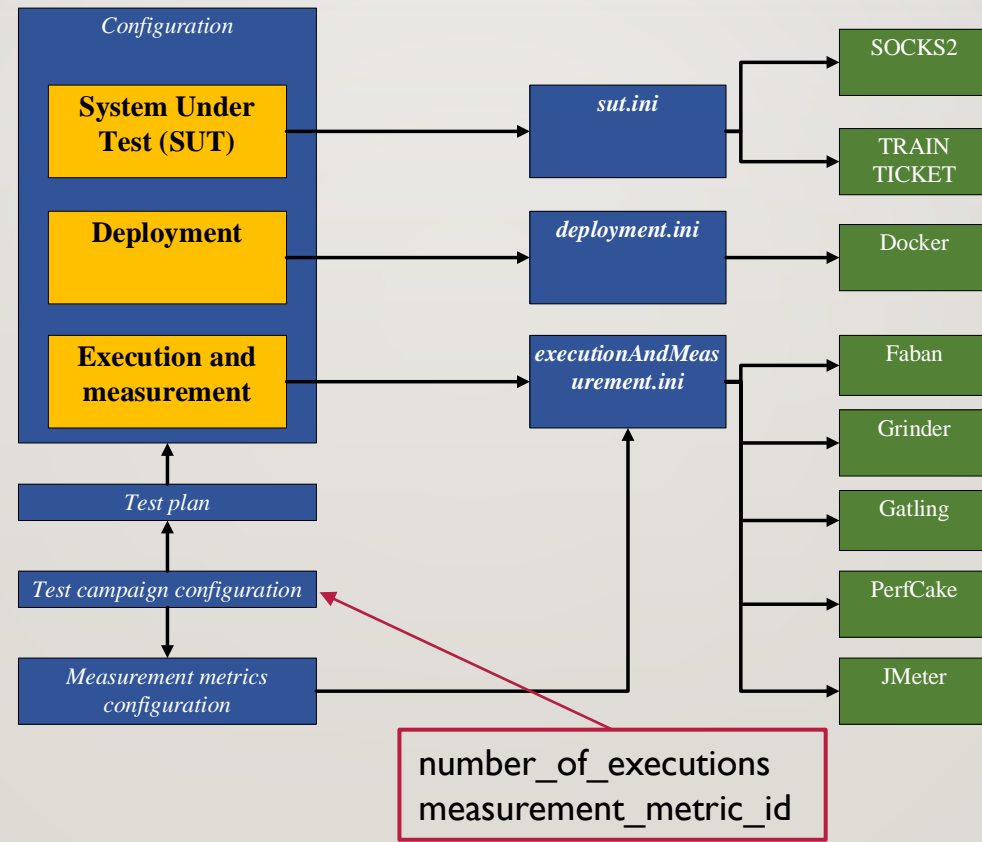
- For example: In suit.ini, add to FILE_TO_CHANGE and set value to CARTS_CPUS_LIMITS. templates/deployment_descriptor/template/docker-compose.yml

	External					
	System Under Test (SUT)		**Deployment**		**Execution and measurement**	
Configuration files		*/pptam-tool/configuration/ thirdParty/sut.ini*		*/pptam-tool/configuration/ thirdParty/ executionAndMeasurement.ini*		*/pptam-tool/configuration/ thirdParty/deployment.ini*

CONFIGURATION OF PPTAM

PPTAM EXTERNAL CONFIGURATION

```
sut.ini ⊠
 1 [SOCKS2]
 2 ; FILE_TO_CHANGE: Path to the files to change. Files should be separated by comma (,), relevant to the create.py.
 3
 4 FILE_TO_CHANGE = templates/deployment_descriptor/template/docker-compose.yml
 5
 6 ; SUT specific settings
 7 ; The following settings are specific to the software currently tested.
 8 ; - SUT_HOSTNAME: the hostname of the server on which the system under test (SUT) is deployed
 9
10 CARTS_CPUS_LIMITS=0.25
11 CARTS_CPUS_RESERVATIONS=0.25
12 CARTS_RAM_LIMITS=500M
13 CARTS_RAM_RESERVATIONS=500M
14 CARTS_REPLICAS=1
15 SUT_HOSTNAME=socks2
16
17 [TRAIN_TICKET]
18
```
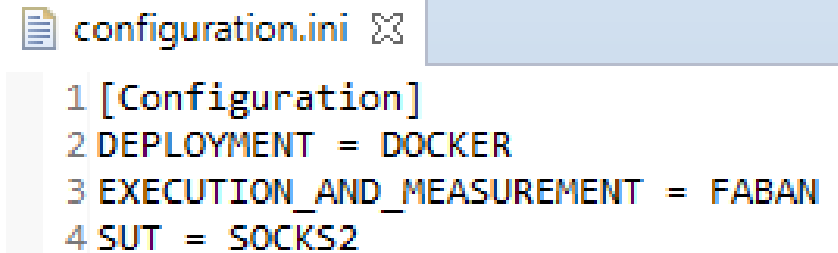
PPTAM CONFIGURATION

- /pptam-tool/configuration/configuration.ini
    - [Configuration]
    - DEPLOYMENT = DOCKER
    - EXECUTION_AND_MEASUREMENT = FABAN
    - SUT = **SOCKS2**

- /pptam-tool/configuration/thirdParty/sut.ini
    - [**SOCKS2**]
    - FILE_TO_CHANGE = templates/deployment_descriptor/template/docker-compose.yml
    - CARTS_CPUS_LIMITS=0.25
    - …

```
configuration.ini
1 [Configuration]
2 DEPLOYMENT = DOCKER
3 EXECUTION_AND_MEASUREMENT = FABAN
4 SUT = SOCKS2
```

GENERATE TEST PLAN

Generate a test plan
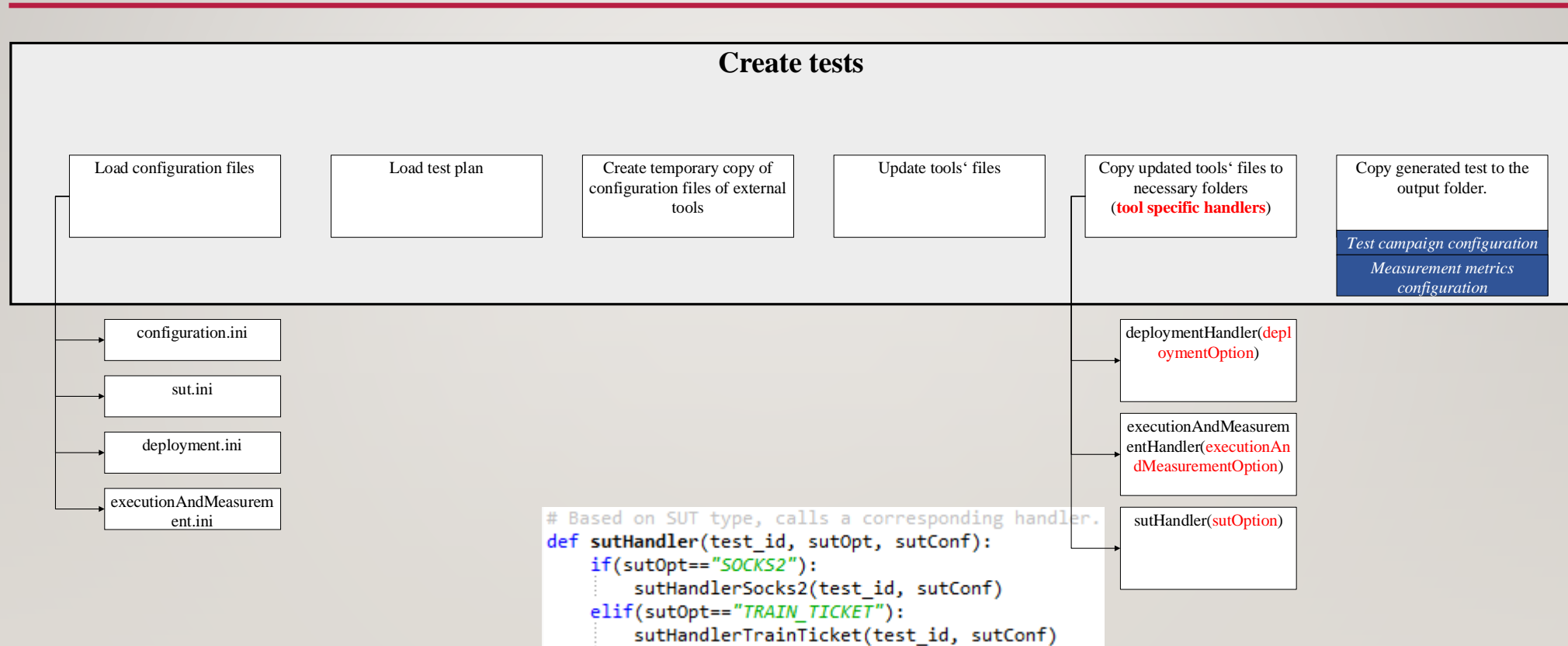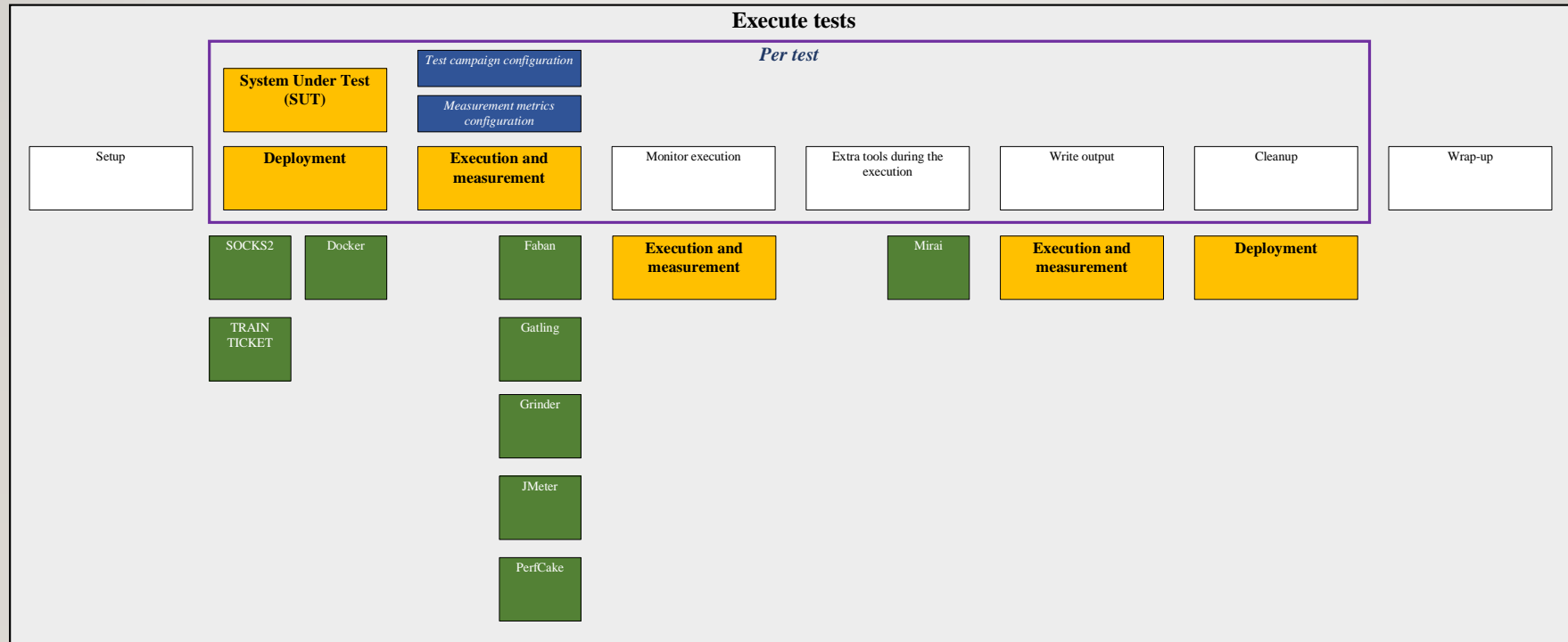
| Load configuration files | Set number of tests. | Generate test plan (with parameters of the tool chain for every test) | Edit test plan manually (if necessary) |

configuration.ini

sut.ini

deployment.ini

executionAndMeasurement.ini

CREATE TESTS

Create tests

Load configuration files	Load test plan	Create temporary copy of configuration files of external tools	Update tools' files	Copy updated tools' files to necessary folders (**tool specific handlers**)	Copy generated test to the output folder.
					Test campaign configuration
					Measurement metrics configuration

configuration.ini

sut.ini

deployment.ini

executionAndMeasurement.ini

deploymentHandler(deploymentOption)

executionAndMeasurementHandler(executionAndMeasurementOption)

sutHandler(sutOption)

```
# Based on SUT type, calls a corresponding handler.
def sutHandler(test_id, sutOpt, sutConf):
    if(sutOpt=="SOCKS2"):
        sutHandlerSocks2(test_id, sutConf)
    elif(sutOpt=="TRAIN_TICKET"):
        sutHandlerTrainTicket(test_id, sutConf)
```
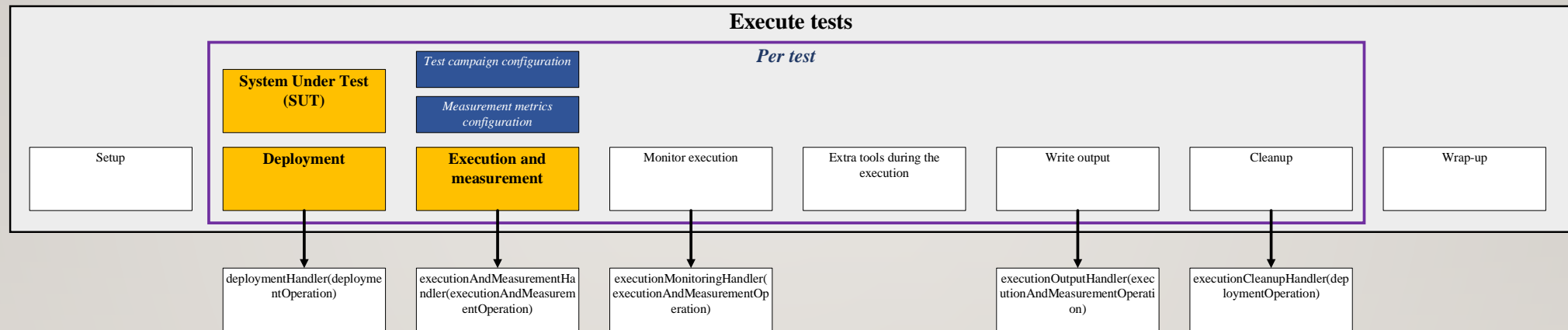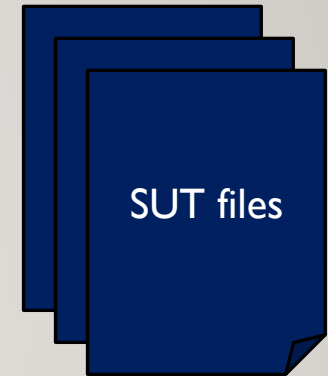
EXECUTE TESTS

EXECUTE TESTS
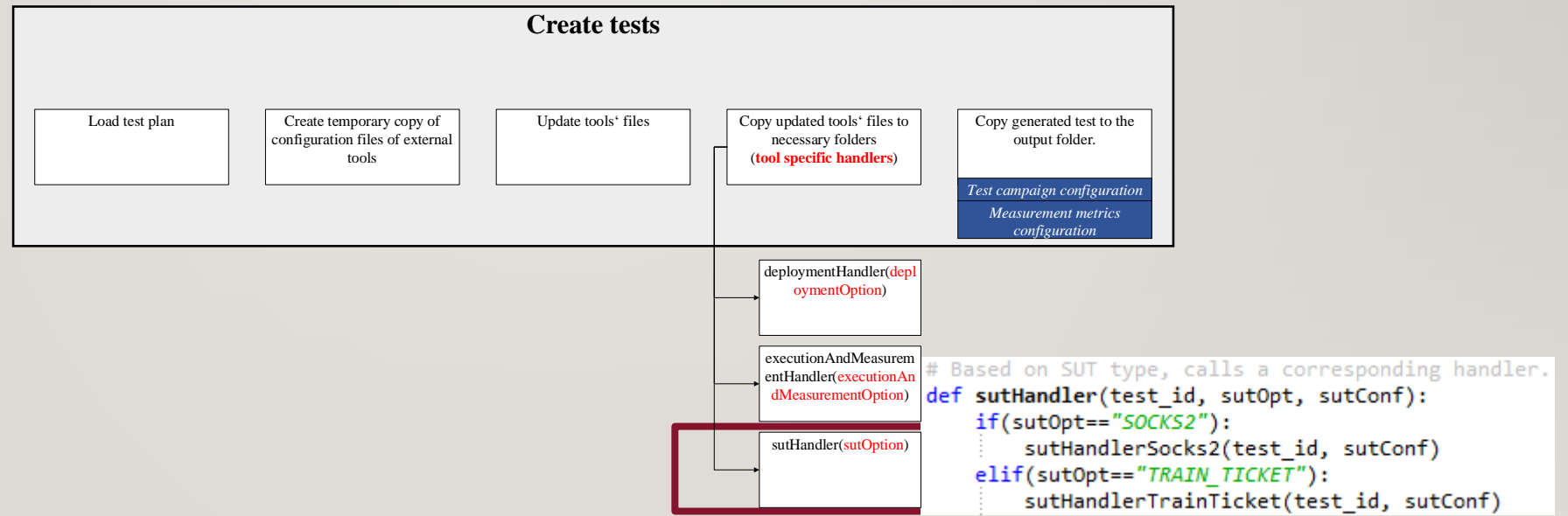
EXAMPLE: ADDING A NEW SUT

- Edit SUT configuration files: add place holders.

- Add entry to /pptam-tool/configuration/thirdParty/sut.ini
  - Path to files of SUT where placeholders are added (FILE_TO_CHANGE).
  - Placeholders and their values.

- Edit PPTAM configuration (/pptam-tool/configuration/configuration.ini)

SUT files


```
configuration.ini  ⊠
1 [Configuration]
2 DEPLOYMENT = DOCKER
3 EXECUTION_AND_MEASUREMENT = FABAN
4 SUT = SOCKS2
```

EXAMPLE: ADDING A NEW SUT

- For test creation, change sutHandler(sutOption) – if necessary.
  - Usually, it is not necessary.

EXAMPLE WITH FABAN