Smart Metering Integrated Test Environment Lite

SMITEn Lite Tool

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Document Control

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Pedro Almeida		Critical Software Technical Manager	09/07/2020	4.1.0
Pedro Almeida		Critical Software Technical Manager	24/07/2020	4.2.0
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Pedro Almeida		Critical Software Technical Manager	18/08/2020	4.2.3
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Pedro Almeida		Critical Software Technical Manager	10/09/2020	4.2.5
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Pedro Almeida		Critical Software Technical Manager	18/09/2020	4.2.7
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Pedro Almeida		Critical Software Technical Manager	26/11/2020	4.2.9
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1 SMITEn Lite Tool

The SMITEn Lite Tool is a light version of the SMITEn platform that allows users to launch GFI tests using a GFI Scenario, a GFI Test and Service Request or Service Reference Variant as input. Furthermore, it will call the Parse service on each and every GBCS response/alert received by GFI and show a report containing all MMC responses to the user.

SMITEn Lite only supports one test case and one iteration per test file in order to allow the transformation of a DUIS request in the values of the test and the Parser service to deal with just one Service Rererence Variant.

1.1 Installation

Starting from GFI 2.0.1 the SMITEn Lite is installed with GFI and no separated installation is required.

1.2 Execution

The following steps show how to use SMITEn Lite with its default settings:

1) Open a Command Line Terminal.

2) In any location execute the following command with a DUIS service request:

```
smiten-lite <path to gfi scenario> <path to gfi test> <path to service request>
```

or with a service reference variant:

```
smiten-lite <path to gfi scenario> <path to gfi test> <service reference variant of the response to be parsed>
```

Figure 1 shows an example of running SMITEn Lite with a DUIS service request.

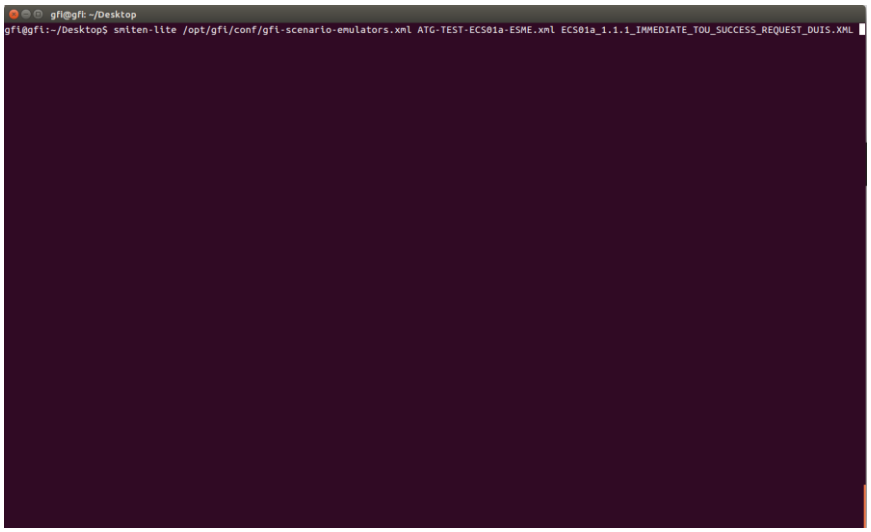

Figure 1 – Running the SMITEn Lite Tool

3) On start-up the tool will start the SMITEn Lite server if it is not already running and it will execute the procedure to return all MMC responses by returning a report with the status of this particular run Figure 2.

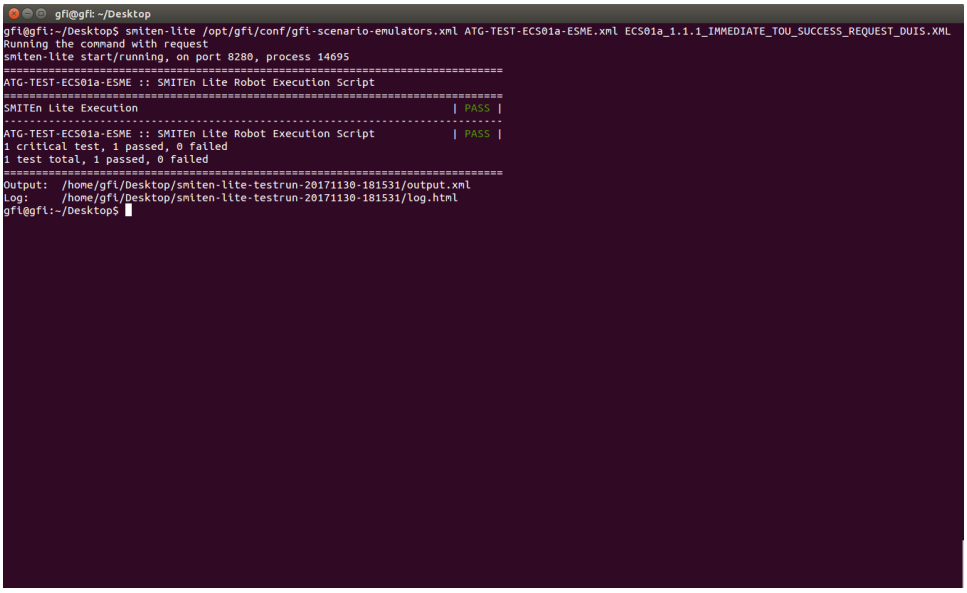

Figure 2 – SMITEn Lite Tool success run

4) After the run of SMITEn Lite has ended, it will display on the terminal it's status (**Pass** or **Fail**), and where the output files generated are located.

1.3 Arguments

The SMITEn Lite Tool can be configured using the following command line arguments:

- **-h, --help**

  Displays the instructions on how to run the SMITEn Lite Tool and the list of command line arguments.

- **-d, --outputdir <dir>**

  Defines the output directory (dir) for logs and reports generated by SMITEn Lite. By default, SMITEn Lite will generate four files: output.xml, log.xml, test-report.xml and server-logs.zip. If this option is not specified SMITEn Lite will create a folder with the name smiten-lite-testrun-YMD-HMS, in the same location where the command was executed from.

- **-t, --timeout**

  Defines the timeout time that SMITEn Lite will wait for a response from the GFI tool.

  If this timeout is reached and no response was received from the GFI tool, the SMITEn Lite report will show the error “Execution aborted because GFI took too long to process the test”.

1.4 SMITEn Lite Report Example

An example of a report generated by the SMITEn Lite tool (Figure 3)

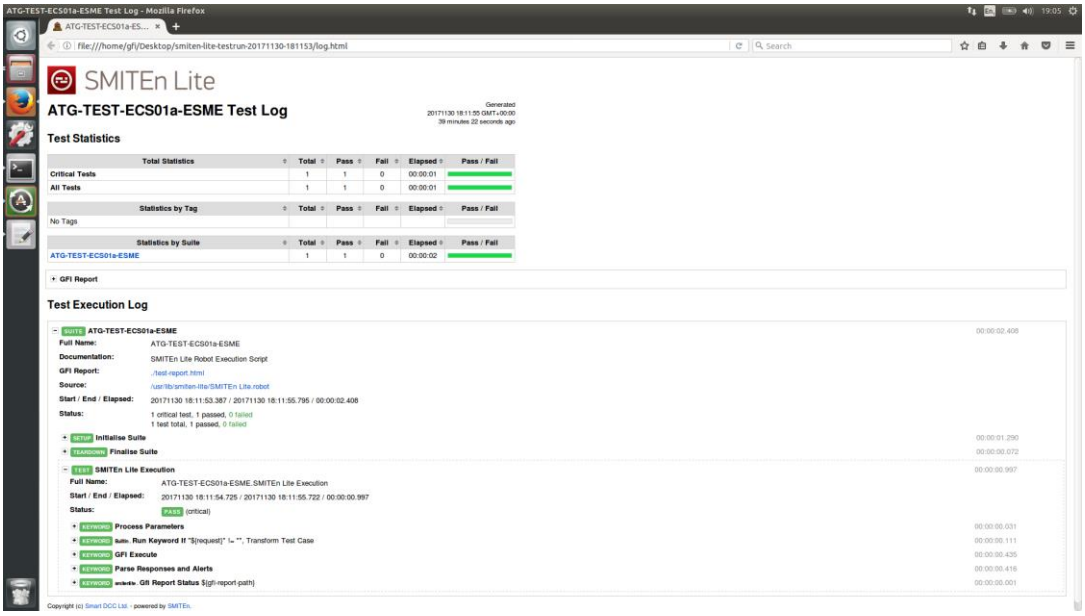

Figure 3 – SMITEn Lite Report Example

The SMITEn Lite report contains the GFI report generated by the GFI tool as shown in Figure 4.

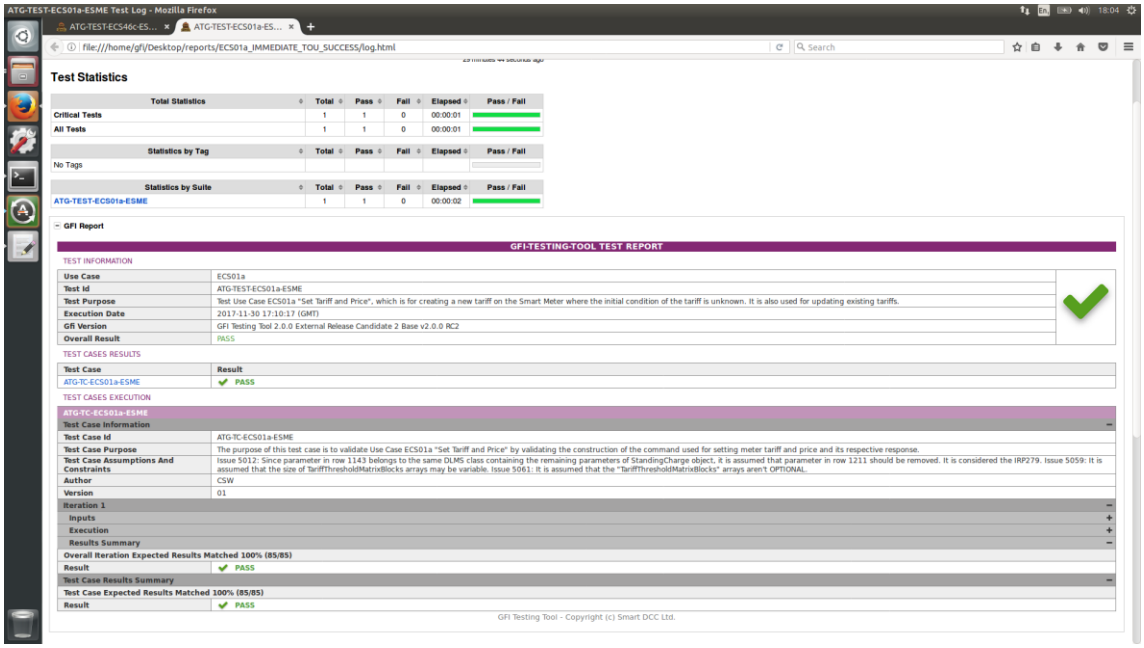

Figure 4 – GFI Report inside SMITEn Lite Report

It is also possible for the user to trace the process of the SMITEn Lite tool by analysing the report in greater detail (Figure 5):

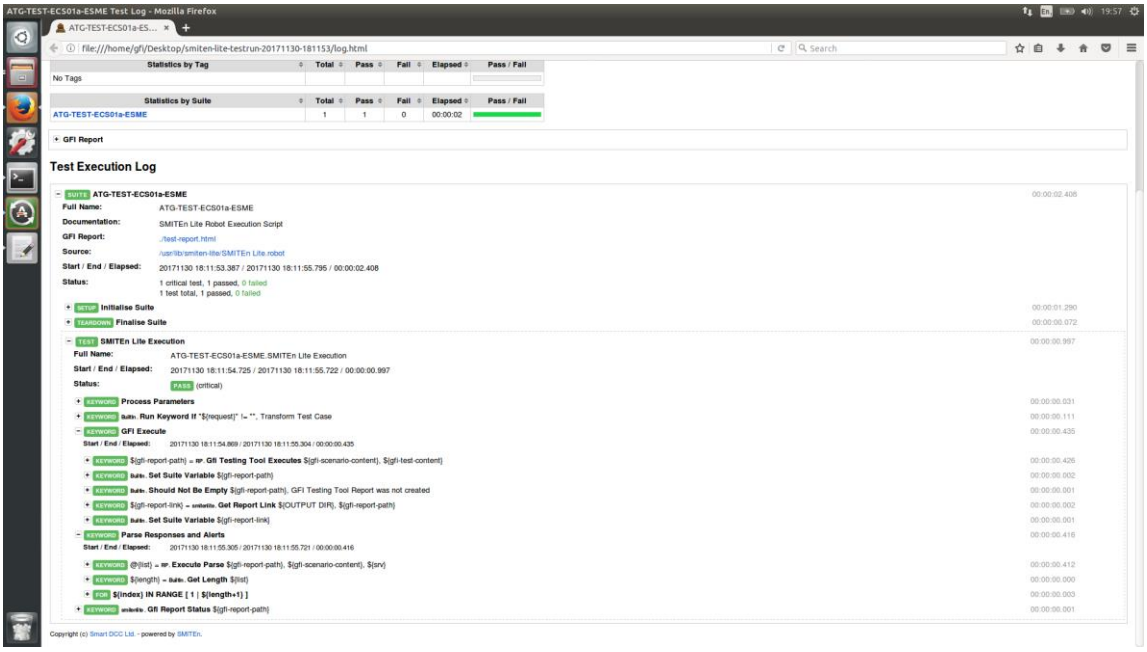

Figure 5 – SMITEn Lite Execution Steps as show in the Report

Finally, the report also displays the payloads found within the GFI test provided by the user (Figure 6):

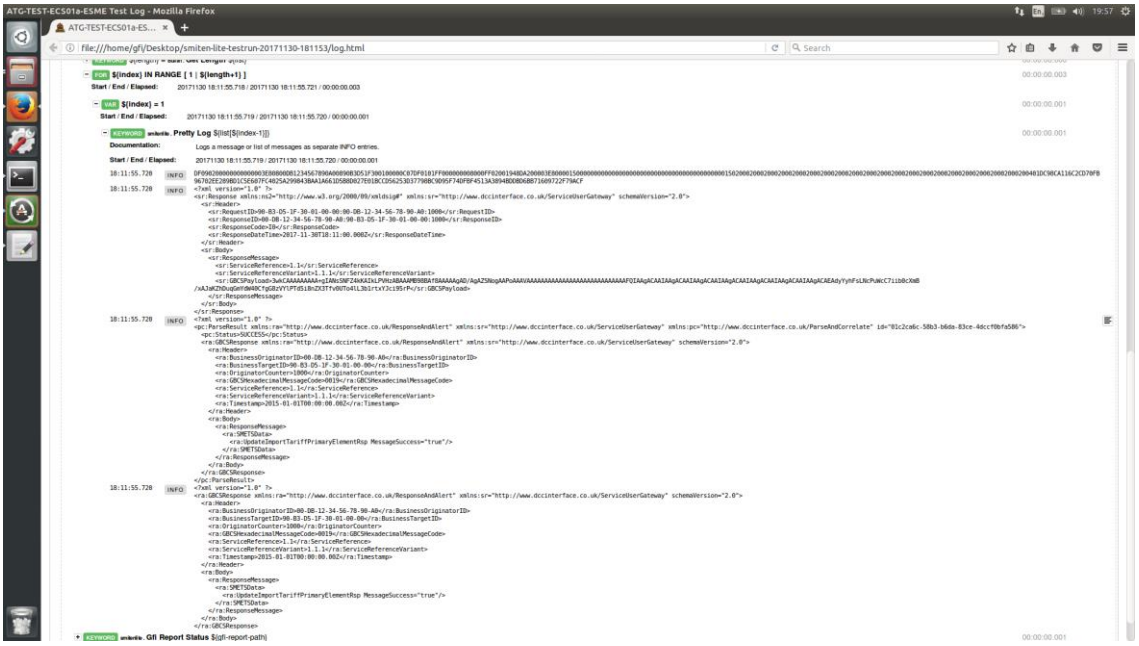

Figure 6 – GFI test payloads and SMITEn Lite transformation to MMC Responses

1.5 SMITEn Lite Run Example

For this example, we will run the SMITEn Lite Tool using the DUIS request ECS20a (as showed in this document in appendix section 3.1) and GFI sample scenario (gfi-scenario-emulators.xml).

1. Running SMITEn Lite, with a DUIS service request (`smiten-lite <path to gfi scenario> <path to gfi test> <path to service request>`), as shown in the following image:

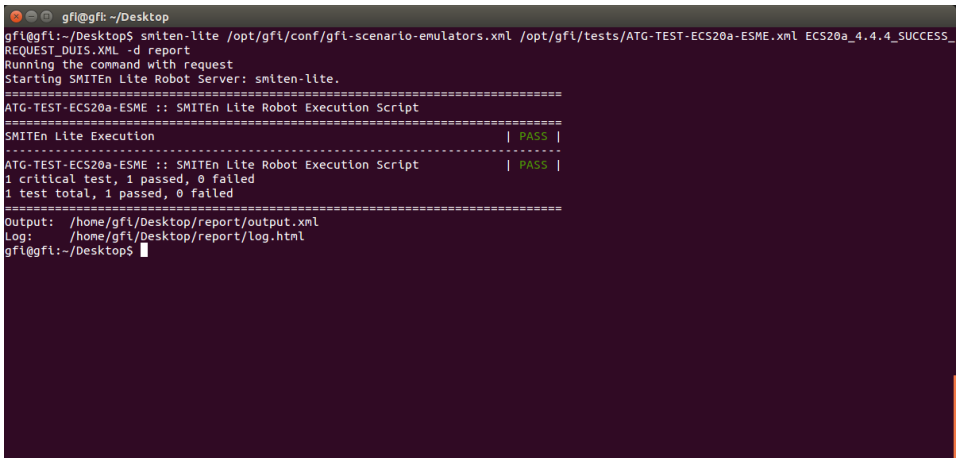

Figure 7 – Running ECS20a test in SMITEn Lite with a DUIS service request

2. Running SMITEn Lite, with the Service Reference Variant of the GFI test (`smiten-lite <path to gfi scenario> <path to gfi test> <srv>`), as shown in the following Figure 8. If the user does not use a DUIS service request as a parameter it must specify the Service Reference Variant. This reference is essential to allow SMITEn Lite tool to call the Parse service and correctly translate the response/alert into MMC.

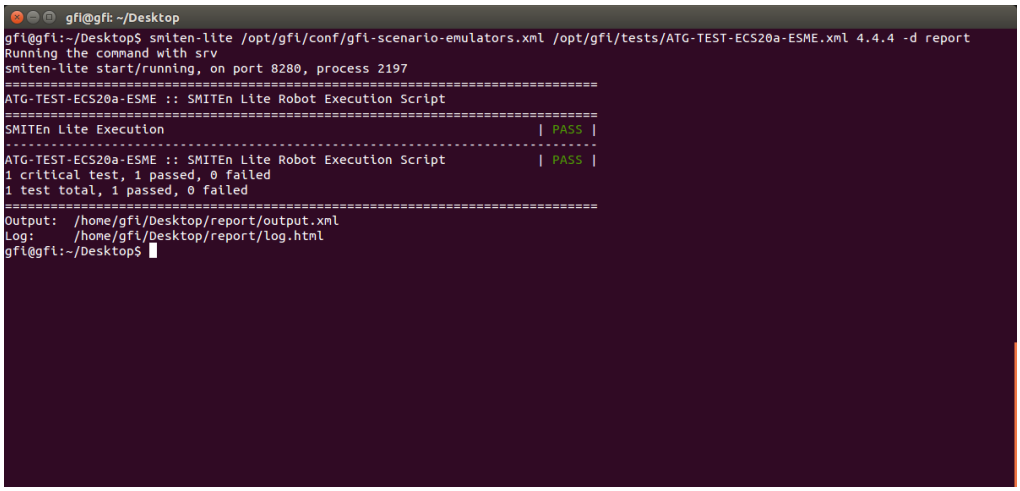

Figure 8 – Running ECS20a test in SMITEn Lite with a Service Reference Variant

3. After the run the SMITEn Lite tool will generate all the output resources: the HTML log file (that is the report of this tool), the XML output that contains the structured information of the log, the report of the GFI test and a zip file named server-logs. This zip file contains more detailed logs about the test execution.

2 Glossary

Table 1 presents the list of acronyms used throughout this document.

Acronym	Description
ACB	Access Control Broker
DUIS	DCC User Interface Specification
MMC	Message Mapping Catalogue
SMITEn	Smart Metering Integrated Test Environment
SRV	Service Reference Variant
XML	Extensible Markup Language

Table 1 – Acronyms.

3 Appendix

3.1 ECS20a ESME DUIS Request


```
<?xml version="1.0" encoding="UTF-8"?>
<sr:Request xmlns:ds="http://www.w3.org/2000/09/xmldsig#"
xmlns:sr="http://www.dccinterface.co.uk/ServiceUserGateway"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" schemaVersion="1.0">
  <sr:Header>
    <sr:RequestID>90-B3-D5-1F-30-01-00-00:00-DB-12-34-56-78-90-A0:1002</sr:RequestID>
    <sr:CommandVariant>1</sr:CommandVariant>
    <sr:ServiceReference>4.4</sr:ServiceReference>
    <sr:ServiceReferenceVariant>4.4.4</sr:ServiceReferenceVariant>
  </sr:Header>
  <sr:Body>
    <sr:RetrieveBillingDataLogDebtPayments>
      <sr:ReadLogPeriod>
        <sr:StartDateTime>2014-12-22T09:30:00.00Z</sr:StartDateTime>
        <sr:EndDateTime>2015-01-01T00:00:00.00Z</sr:EndDateTime>
      </sr:ReadLogPeriod>
    </sr:RetrieveBillingDataLogDebtPayments>
  </sr:Body>
  <ds:Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
    <!-- NOTE: The digest, signature and serial number values below are placeholders and
should not be used for actual authentication purposes. -->
    <ds:SignedInfo>
      <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
      <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#ecdsa-
sha256"/>
      <ds:Reference URI="">
        <ds:Transforms>
          <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
signature"/>
        </ds:Transforms>
        <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
        <ds:DigestValue>ZGVmYXVsdA==</ds:DigestValue>
      </ds:Reference>
    </ds:SignedInfo>
    <ds:SignatureValue>ZGVmYXVsdA==</ds:SignatureValue>
    <ds:KeyInfo>
      <ds:X509Data>
        <ds:X509IssuerSerial>
          <ds:X509IssuerName>CN=U1, OU=07</ds:X509IssuerName>
          <ds:X509SerialNumber>1234567890</ds:X509SerialNumber>
        </ds:X509IssuerSerial>
      </ds:X509Data>
    </ds:KeyInfo>
  </ds:Signature>
</sr:Request>
```