



HOW TO ADD NEW ORIGINATION TEST CASE (VOICE AUTOMATION TOOL)

Abstract

This document is a guide for adding new Origination test cases, to test Voice calls from Carrier towards Customer, in Voice Automation Tool

Author: Calvin Fernando
cfernando@bandwidth.com

The Test Cases are majorly classified into two major Test Suites

1. Origination(Inbound)
2. Termination(Outbound)

As of Sep 20, 2017:

The Test cases under Origination(Inbound) Test Suite are the ones highlighted in green

Test#	Call Flow Type	
1	BW7/BW9	Origination call to through CASBC to BW7/WRAP to 10 digit number
2	Edge Proxy	Origination call to through CASBC to Edge/WRAP to 10 digit number
3	SBC	Origination call to through CASBC to SBC proxy then CUSBC to 10 digit number
4	SBC	Origination call to through CASBC to SBC proxy then CUSBC to Toll Free number
5		Origination call test DTMF functionality
6		Origination call, test 711u
7		Origination call, test 729a
8		Origination call, T.38 fax (reINVITE from customer)
9		Origination call, forwarded call in portal
10		Origination call, CNAM
11		Origination call, transcoding 711/729
12		Origination call, BYE from customer
13		Origination call, CANCEL after 18x
14		Origination call, Long duration call over 30 minutes
15		Origination call, set CAC low and verify that 486 sent to carrier
16		Origination call, set CASBC direct media enabled

Steps to Add a Origination Test Case (Carrier → Customer)
(Carrier:192.168.100.107:5095 & Customer:192.168.100.110:5061)

- 1. Configuration in Customer CentOS VM(192.168.100.110)**
- 2. Configuration in Carrier CentOS VM(192.168.100.107)**
- 3. Configuration changes in .robot file located in 192.168.100.110**

1. Configuration in Customer CentOS VM(192.168.100.110)

- ✓ Create <new test-case>.xml scenario file
- ✓ Create <new test-case>.txt result file
- ✓ Create <new test-case>.py script file
- ✓ Change rwx permissions of each of the created files

- SSH into Customer CentOS VM(192.168.100.110)

```
Connecting to 192.168.100.110:22...
Connection established.
To escape to local shell, press 'Ctrl+Alt+J'.

Last login: Wed Jun 28 14:39:27 2017 from clecvoip-02.lab1.bandwidthclec.local
[cfernando@clecvoip-02.lab1 ~]$
```

- Change directory to /home/Origination/

```
[cfernando@clecvoip-02.lab1 ~]$ cd /home/Origination/
[cfernando@clecvoip-02.lab1 Origination]$
```

- The “Origination” directory includes the robot files, test case scenarios, scripts and results

```
[cfernando@clecvoip-02.lab1 Origination]$ ls -alrht
total 588K
drwxr-xr-x. 6 root root  74 Jun 26 15:11 ..
drwxrwxrwx. 2 root root 4.0K Jun 28 16:19 Results
-rwxrwxrwx. 1 root root 12K Jun 28 18:00 Origination.robot
drwxrwxrwx. 5 root root 4.0K Jun 28 18:12 .
drwxrwxrwx. 2 root root 4.0K Jun 28 18:38 Scenarios
drwxrwxrwx. 2 root root 4.0K Jun 28 18:42 Scripts
-rwxrwxrwx. 1 root root 223K Jun 28 18:58 log.html
-rwxrwxrwx. 1 root root 208K Jun 28 18:58 report.html
-rwxrwxrwx. 1 root root  73K Jun 28 19:07 output.xml
[cfernando@clecvoip-02.lab1 Origination]$
```

✓ Create <new test-case>.xml scenario file

- The “Scenarios” directory includes all the uac.xml files for OC(Origination Cases). Create and add the new Test Case UAS scenario in this location

```
[cfernando@clecvoip-02.lab1 Scenarios]$ ls -arlth
total 140K
-rwxrwxrwx. 1 root      root      5.8K Jun 28 16:18 OC10-uas.xml
-rwxrwxrwx. 1 root      root      2.0K Jun 28 16:18 newUAC.xml
-rwxrwxrwx. 1 root      root      6.1K Jun 28 16:18 Calvin-200.xml
-rwxrwxrwx. 1 root      root      6.5K Jun 28 16:18 uac-robust.xml
-rwxrwxrwx. 1 root      root      2.1K Jun 28 16:18 UAC1.xml
-rwxrwxrwx. 1 root      root      6.1K Jun 28 16:18 OC7-uas.xml
-rwxrwxrwx. 1 root      root      6.0K Jun 28 16:18 OC5-uas.xml
-rwxrwxrwx. 1 root      root      6.1K Jun 28 16:18 OC15-uas.xml
-rwxrwxrwx. 1 root      root      19K Jun 28 16:18 UAS.xml
-rwxrwxrwx. 1 root      root      20K Jun 28 16:18 uas-proxytesting.xml
-rwxrwxrwx. 1 root      root      6.1K Jun 28 16:18 uas-bye-200.xml
-rwxrwxrwx. 1 root      root      815 Jun 28 16:18 UAS1.xml
-rwxrwxrwx. 1 root      root      6.7K Jun 28 16:18 UAC.xml
-rwxrwxr-x. 1 cfernando cfernando 6.1K Jun 28 17:52 OC11-uas.xml
drwxrwxrwx. 5 root      root      4.0K Jun 28 18:12 ..
-rwxrwxrwx. 1 root      root      6.1K Jun 28 18:38 OC13-uas.xml
drwxrwxrwx. 2 root      root      4.0K Jun 28 18:38 .
[cfernando@clecvoip-02.lab1 Scenarios]$
```

✓ Create <new test-case>.txt result file

- Before heading on to create a script, first create a result (.txt) file for the OC(Origination Case).

Type `vim <name of the text file>`

Then hit `ESC` key followed by `:wq` keys

```
[cfernando@clecvoip-02.lab1 Origination]$ cd Results/
[cfernando@clecvoip-02.lab1 Results]$ ls -alrht
total 876K
-rwxrwxrwx. 1 root root 3.4K Jun 28 16:19 MEDIA.txt
-rwxrwxrwx. 1 root root 18K Jun 28 16:19 LICENSE.txt
-rwxrwxrwx. 1 root root 2.2K Jun 28 16:19 README.txt
-rwxrwxrwx. 1 root root 522 Jun 28 16:19 Ping.txt
drwxrwxrwx. 2 root root 4.0K Jun 28 16:19 .
drwxrwxrwx. 5 root root 4.0K Jun 28 18:12 ..
-rwxrwxrwx. 1 root root 68K Jun 28 19:03 OC3.txt
-rwxrwxrwx. 1 root root 66K Jun 28 19:04 OC4.txt
-rwxrwxrwx. 1 root root 62K Jun 28 19:04 OC5.txt
-rwxrwxrwx. 1 root root 66K Jun 28 19:05 OC6.txt
-rwxrwxrwx. 1 root root 66K Jun 28 19:06 OC7.txt
-rwxrwxrwx. 1 root root 4.9K Jun 28 19:06 OC10.txt
-rwxrwxrwx. 1 root root 66K Jun 28 19:07 OC11.txt
-rwxrwxrwx. 1 root root 43K Jun 28 19:07 OC12.txt
-rwxrwxrwx. 1 root root 5.5K Jun 28 19:07 OC13.txt
-rwxrwxrwx. 1 root root 66K Jun 28 19:08 OC15.txt
[cfernando@clecvoip-02.lab1 Results]$ █
```

✓ Create <new test-case>.py script file

- The “Scripts” directory includes all the uas.py files for OC(Origination Cases).

```
[cfernando@clecvoip-02.lab1 Origination]$ cd Scripts/
[cfernando@clecvoip-02.lab1 Scripts]$ ls -alrth
total 1.6M
-rwxrwxrwx. 1 root root 87 Jun 28 16:18 Calvin_uas.py
-rwxrwxrwx. 1 root root 702 Jun 28 16:18 Calvin_uac.py
-rwxrwxrwx. 1 root root 364 Jun 28 16:18 Calvin_ping.py
-rwxrwxrwx. 1 root root 131 Jun 28 16:18 test.py
-rwxrwxrwx. 1 root root 1.6M Jun 28 16:18 get-pip.py
-rwxrwxrwx. 1 root root 468 Jun 28 17:47 OC3_uas.py
-rwxrwxrwx. 1 root root 468 Jun 28 17:47 OC4_uas.py
-rwxrwxrwx. 1 root root 478 Jun 28 17:47 OC5_uas.py
-rwxrwxrwx. 1 root root 468 Jun 28 17:48 OC6_uas.py
-rwxrwxrwx. 1 root root 463 Jun 28 17:48 OC7_uas.py
-rwxrwxrwx. 1 root root 475 Jun 28 17:50 OC12_uas.py
-rwxrwxrwx. 1 root root 467 Jun 28 17:50 OC15_uas.py
-rwxrwxrwx. 1 root root 465 Jun 28 17:53 OC11_uas.py
drwxrwxrwx. 5 root root 4.0K Jun 28 18:12 .
-rwxrwxrwx. 1 root root 467 Jun 28 18:34 OC10_uas.py
-rwxrwxrwx. 1 root root 473 Jun 28 18:42 OC13_uas.py
drwxrwxrwx. 2 root root 4.0K Jun 28 18:42 .
[cfernando@clecvoip-02.lab1 Scripts]$
```

- To add a new Test Case script, simply make a copy of an existing .py, rename and change the below highlighted fields

```
/[2]+ " -sf /home/Origination/Scenarios/Calvin-200.xml -r /home/Origination/Results/OC3.txt"
```

✓ Change rwx permissions of each of the created files

- After having created the three files, viz *.xml*, *.txt* and *.py*

Execute the below commands

- *sudo chmod +x /home/Origination/Scripts/<name of the news script>.py*

```
[cfernando@clecvoip-02.lab1 Origination]$ sudo chmod +x /home/Origination/Scripts/OC3_uas.py
```

- *sudo chmod 777 /home/Origination/Scenarios/**

```
[cfernando@clecvoip-02.lab1 Origination]$ sudo chmod 777 /home/Origination/Scenarios/*
```

- *sudo chmod 777 /home/Origination/Results/**

```
[cfernando@clecvoip-02.lab1 Origination]$ sudo chmod 777 /home/Origination/Results/*
```


2. Configuration in Carrier CentOS VM(192.168.100.107)

- ✓ Create <new test-case>.xml scenario file
- ✓ Create <new test-case>.txt result file
- ✓ Create <new test-case>.py script file
- ✓ Change rwx permissions of each of the created files

- ✓ Create <new test-case>.xml scenario file

Repeat the steps as performed for Customer CentOS VM(stated earlier).

The only change is that the path for the Test Case files is /etc/sipp/proxytesting/

- ✓ Create <new test-case>.txt scenario file

Repeat the steps as performed for Customer CentOS VM(stated earlier).

The only change is that the path for the Test Case files is /etc/sipp/proxytesting/

In addition, Make sure the UAC scenario has a “response time flag(rtd)” set to “true” . This ensures that the SIPp result displays Response Time and the logic in the scripts(.py) works fine

```
<recv response="200" rtd="true" rrs="true">
  <action>
    <ereg regexp="<(.*)>"
      search_in="hdr"
      header="Contact"
      checkit="true"
      assign_to="2,2"/>
  </action>
</recv>
```

Statistics Screen			[1-9]: Change Screen --^M
Start Time	2017-06-28 14:32:02:511	1498660322.511594	^M
Last Reset Time	2017-06-28 14:32:26:786	1498660346.786661	^M
Current Time	2017-06-28 14:32:26:787	1498660346.787209	^M
Counter Name	Periodic value	Cumulative value^M	
Elapsed Time	00:00:00:000	00:00:24:275	^M
Call Rate	0.000 cps	0.041 cps	^M
Incoming call created	0	0	^M
OutGoing call created	0	1	^M
Total Call created		1	^M
Current Call	0		^M
Successful call	0	1	^M
Failed call	0	0	^M
Response Time 1	00:00:00:000	00:00:10:105	^M
Call Length	00:00:00:000	00:00:24:149	^M
Test Terminated			^M

✓ Create <new test-case>.py scenario file

Repeat the steps as performed for Customer CentOS VM(stated earlier).

The only change is that the path for the Test Case files is /etc/sipp/proxytesting/

✓ Change rwx permissions of each of the created files

Repeat the steps as performed for Customer CentOS VM(stated earlier).

The only change is that the path for the Test Case files is /etc/sipp/proxytesting/

3. Configuration changes in .robot file located in 192.168.100.110

- SSH into 192.168.100.110

```
Connecting to 192.168.100.110:22...
Connection established.
To escape to local shell, press 'Ctrl+Alt+J'.

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[cfernando@clecvoip-02.lab1 ~]$
```

- Change directory to /home/Origination/

```
[cfernando@clecvoip-02.lab1 ~]$ cd /home/Origination/
[cfernando@clecvoip-02.lab1 Origination]$
```

- The “Origination” directory includes the robot files, test case scenarios, scripts and results

```
[cfernando@clecvoip-02.lab1 Origination]$ ls -alrht
total 588K
drwxr-xr-x. 6 root root  74 Jun 26 15:11 ..
drwxrwxrwx. 2 root root 4.0K Jun 28 16:19 Results
-rwxrwxrwx. 1 root root 12K Jun 28 18:00 Origination.robot
drwxrwxrwx. 5 root root 4.0K Jun 28 18:12 .
drwxrwxrwx. 2 root root 4.0K Jun 28 18:38 Scenarios
drwxrwxrwx. 2 root root 4.0K Jun 28 18:42 Scripts
-rwxrwxrwx. 1 root root 223K Jun 28 18:58 log.html
-rwxrwxrwx. 1 root root 208K Jun 28 18:58 report.html
-rwxrwxrwx. 1 root root  73K Jun 28 19:07 output.xml
[cfernando@clecvoip-02.lab1 Origination]$
```

- Open the “Termination.robot” file using a vim editor

```
[cfernando@clecvoip-02.lab1 Origination]$ vim Origination.robot
```

```
Test10: Origination call, set CAC low and verify that 486 sent to carrier
  Open Connection    ${UAS_IP}
  Login    ${USERNAME}    ${PASSWORD}
  write    sudo su
  ${outputS}= Read Until    :
  Should Contain    ${outputS}    [sudo] password for cfernando:
  write    ${PASSWORD}
  sleep    0.5s

  write    ${PATH_S}OC15_uas.py ${UAS_IP} ${PORT}

  [Documentation]    Running UAC that accepts SBC IP(216.x.x.x) and Client IP(192.168.x.x)
  [Tags]    Origination/Inbound

  Open Connection    ${UAC_IP}
  Login    ${USERNAME}    ${PASSWORD}

  write    sudo su
  ${outputC}= Read Until    :
  Should Contain    ${outputC}    [sudo] password for cfernando:
  write    ${PASSWORD}
  sleep    0.5s

  write    ${PATH_C}OC15_uac.py ${SIG_IP} ${UAC_IP} 3
  Set Client Configuration    prompt=#
  Set Client Configuration    timeout=10000
  ${output1}= read until prompt
  Should End With    ${output1}    ]#
  Log    ${output1}
  Should Not Contain Any    ${output1}    Fail

  close all connections

  ${SLEEPTIMER}= Evaluate    ${COUNT}+ ${COUNT}
  sleep    ${SLEEPTIMER}
```

- Copy and paste a complete existing Test Case in the existing file. Increment the Test Case number so that it remains unique in the file. Proceed to the next modification step

```
Test10: Origination call, set CAC low and verify that 486 sent to carrier
Open Connection    ${UAS_IP}
Login    ${USERNAME}    ${PASSWORD}
write     sudo su
${outputS}= Read Until    :
Should Contain    ${outputS}    [sudo] password for cfernando:
write     ${PASSWORD}
sleep    0.5s

write    ${PATH_S}OC15_uas.py ${UAS_IP} ${PORT}

[Documentation] Running UAC that accepts SBC IP(216.x.x.x) and Client IP(192.168.x.x)
[Tags]    Origination/Inbound

Open Connection    ${UAC_IP}
Login    ${USERNAME}    ${PASSWORD}

write     sudo su
${outputC}= Read Until    :
Should Contain    ${outputC}    [sudo] password for cfernando:
write     ${PASSWORD}
sleep    0.5s

write    ${PATH_C}OC15_uac.py ${SIG_IP} ${UAC_IP} 3
Set Client Configuration    prompt=#
Set Client Configuration    timeout=10000
${output1}= read until prompt
Should End With    ${output1}    ]#
Log    ${output1}
Should Not Contain Any    ${output1}    Fail

close all connections

${SLEEPTIMER}= Evaluate    ${COUNT}+ ${COUNT}
sleep    ${SLEEPTIMER}
```

- Modify the below highlighted fields, in the new Test Case, with the names of the newly created scripts for both Carrier(_uas.py) and Customer(_uac.py)

```

Test10: Origination call, set CAC low and verify that 486 sent to carrier
Open Connection    ${UAS_IP}
Login    ${USERNAME}    ${PASSWORD}
write    sudo su
${outputS}= Read Until    :
Should Contain    ${outputS}    [sudo] password for cfernando:
write    ${PASSWORD}
sleep    0.5s

write    ${PATH_S}OC15_uas.py ${UAS_IP} ${PORT}

[Documentation]    Running UAC that accepts SBC IP(216.x.x.x) and Client IP(192.168.x.x)
[Tags]    Origination/Inbound

Open Connection    ${UAC_IP}
Login    ${USERNAME}    ${PASSWORD}

write    sudo su
${outputC}= Read Until    :
Should Contain    ${outputC}    [sudo] password for cfernando:
write    ${PASSWORD}
sleep    0.5s

write    ${PATH_C}OC15_uac.py ${SIG_IP} ${UAC_IP} 3
Set Client Configuration    prompt=#
Set Client Configuration    timeout=10000
${output1}= read until prompt
Should End With    ${output1}    ]#
Log    ${output1}
Should Not Contain Any    ${output1}    Fail

close all connections

${SLEEPTIMER}= Evaluate    ${COUNT}+ ${COUNT}
sleep    ${SLEEPTIMER}

```

- Hit *ESC* key followed by *:wq* keys and then run the .robot file as below to check if the newly integrated test case is successful.

NOTE: No extra configuration is required to reflect the changes on Jenkins

```

[cfernando@clecvoip-02.lab1 Origination]$ pybot Origination.robot
=====
Origination :: Voice Automation Tool
=====
Test1: Origination call to through CASBC to SBC proxy then CUSBC t... | PASS |
-----
Test2: Origination call to through CASBC to SBC proxy then CUSBC t... | PASS |
-----
Test3: Origination call test DTMF functionality :: Running UAC tha... | PASS |
-----
Test4: Origination call, test 71lu :: Running UAC that accepts SBC... .

```