Telemetry - configurations , working procedure

1. **Required equipment's**

- Raspberry pi device
- Ethernet cable
- SD card
- Standard USB keyboard
- TV/Monitor with HDMI input

2. **Telemetry**

Telemetry is the automatic recording and transmission of data from remote or inaccessible sources to an IT system in a different location for monitoring and analysis.

3. **Telemetry Components**

- Xconf Server
- Rpi Board with RDK Broadband image
- Tftp Server

4. **Steps to build code**

- repo init -u https://code.rdkcentral.com/r/manifests -b rdk-next -m rdkb-extsrc.xml
- repo sync -j4 --no-clone-bundle
- source meta-cmf-raspberrypi/setup-environment
- choose option 8: meta-*cmf-raspberrypi/conf/machine/raspberrypi-rdk-broadband.conf*
- bitbake rdk-generic-broadband-image

5. **Steps to flash image**

- The image will be available under *build-raspberrypi-rdk-broadband/tmp/deploy/images/raspberrypi-rdk-broadband*
- Copy the image *"rdkb-generic-broadband-image_default_<xx>.rootfs.rpi-sdimg"* to your server.
- To flash the image
  dmesg
  mount

```
umount <partition-mountpoint>
sudo dd if=<rpi sdimg> of=/dev/sdb bs=1M
```

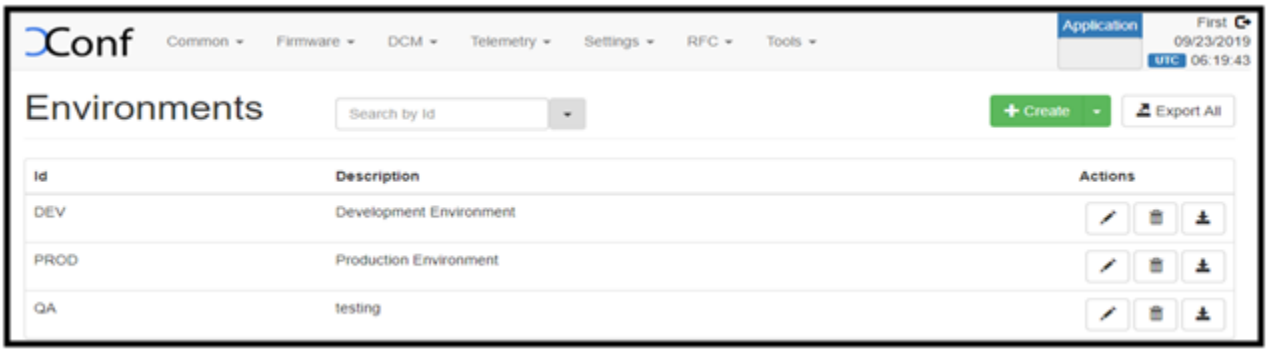
- Remove the SD card and insert it to the Raspberry Pi SD card slot
- Bring up the device

6. **Xconf server**

- Refer XConf Server for XCONF Server setup details.
- Server is already configured and hosted in the AWS VM : **35.155.171.121**
- Xconf server page : http://35.155.171.121:9093/admin/ux/#/
- Common configurations in UI

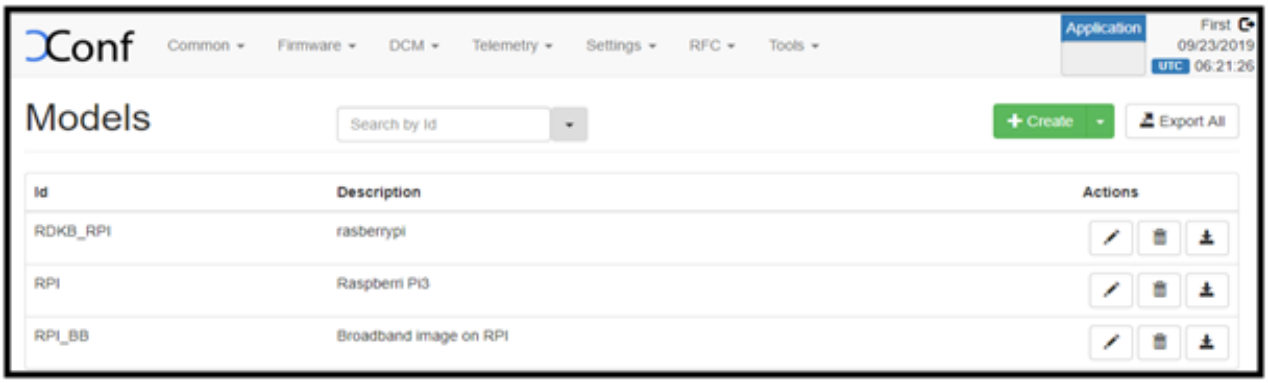
6.1.1. Define Environments

URL : http://35.155.171.121:9093/admin/ux/#/environment/all
Flow : Xconf-server -> Common -> Environments



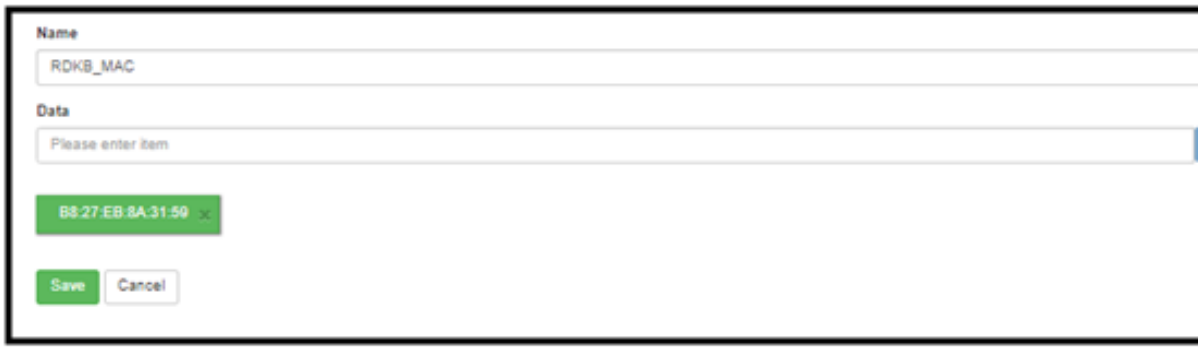
6.1.2. Define Models

URL : http://35.155.171.121:9093/admin/ux/#/model/all
Flow : Xconf-server -> Common -> Models



6.1.3. Define MAC List

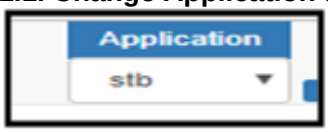
URL : http://35.155.171.121:9093/admin/ux/#/namespacedlist/MAC_LIST
Flow : Xconf-server -> Common -> MAC Lists -> Select the Id -> Add your MAC



7. Configuring Telemetry on Xconf server

7.1. Log upload

- **7.1.1. Change Application to stb in top right corner of the window**

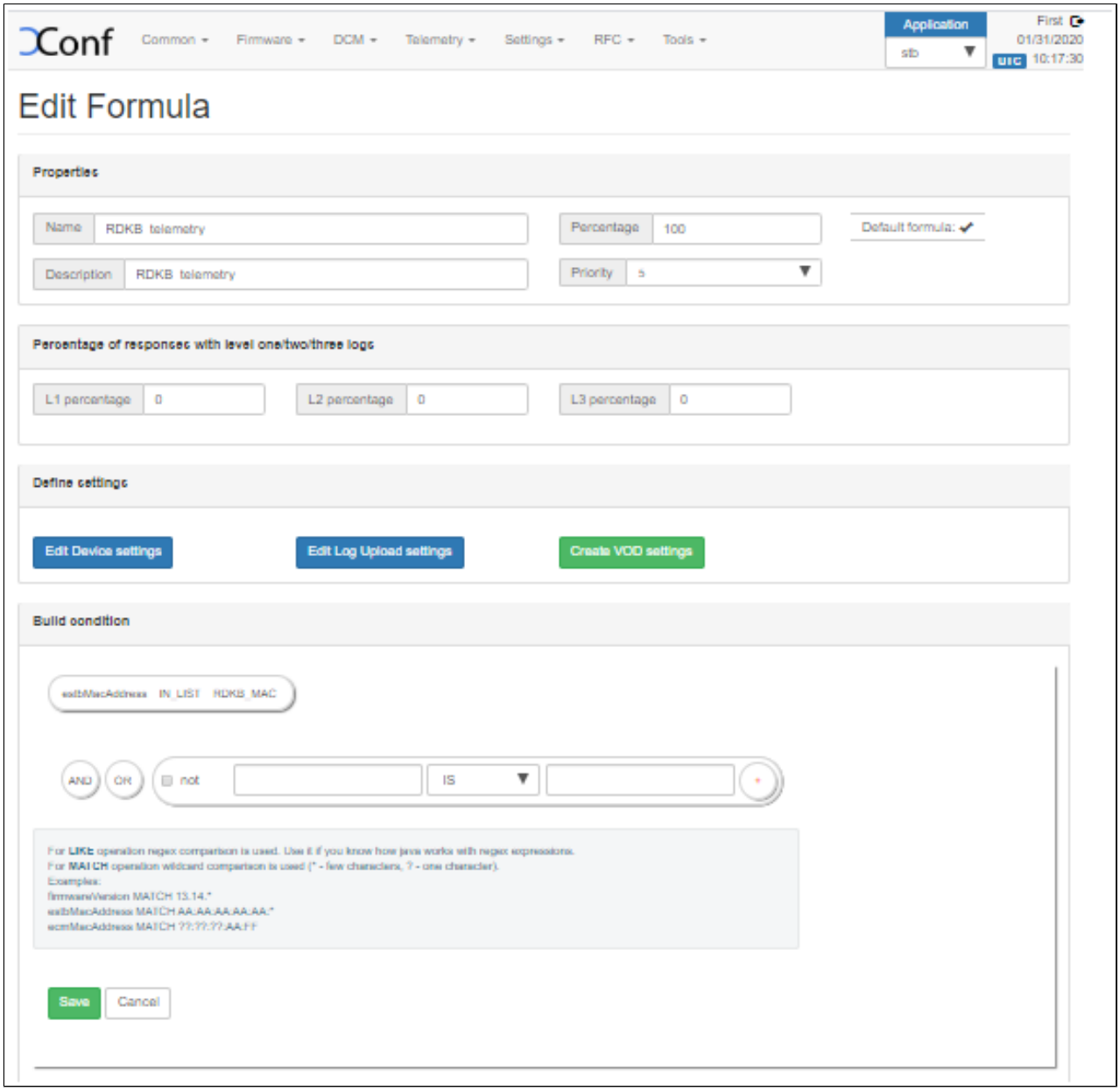


- **7.1.2. Defining the formula**

URL	http://35.155.171.121:9093/admin/ux/#/formulas/all		
Flow	Xconf-server ->DCM -> Formulas -> Create		
Name	<Unique name for log upload >		
Description	<Enter a short description>		
Percentage	100	Priority	4
Build condition	estbMacAddress is <MAC-Address>		

Sample

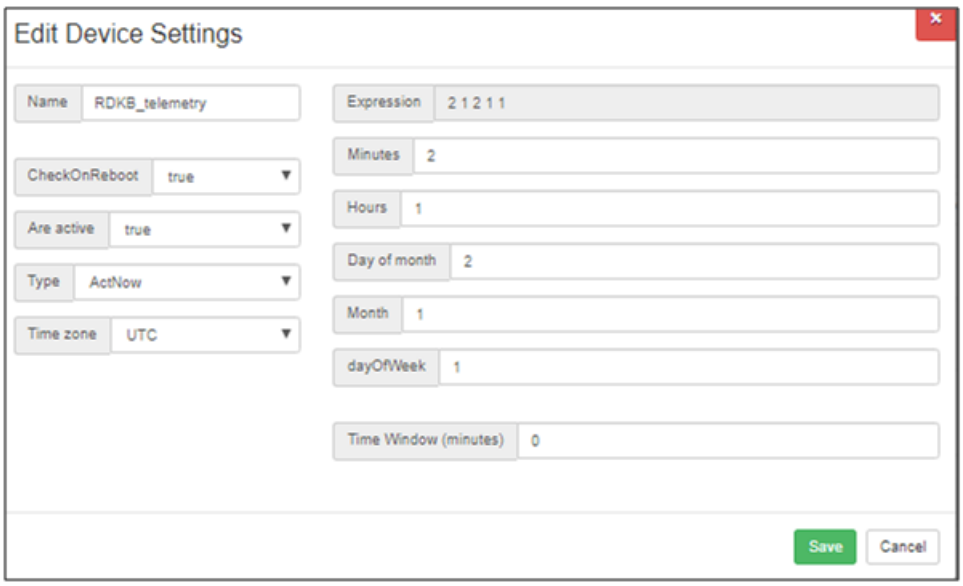

Conf
Common
Firmware
DCM
Telemetry
Settings
RFC
Tools
Application
stb
Formulas
Device Settings
Log Upload Settings
VOD Settings
Upload repository
Test page
Formulas
Create
Export All
Description
Conditions
View Settings
Name: RDK-V
Percentage: 100
Name: N_FORMULA
Percentage: 100
Name: BOBS_FORMULA
Percentage: 100
Name: test
Percentage: 100
Name: RDKB_telemetry
Percentage: 100
Device
LogUpload
Items per page:


Conf
Common
Firmware
DCM
Telemetry
Settings
RFC
Tools
Application
stb
First
01/31/2020
UTC 10:17:30
Edit Formula
Properties
Name
RDKB_telemetry
Percentage
100
Default formula:
Description
RDKB_telemetry
Priority
5
Percentage of responses with level one/two/three logs
L1 percentage
0
L2 percentage
0
L3 percentage
0
Define settings
Edit Device settings
Edit Log Upload settings
Create VOD settings
Build condition
estbMacAddress IN_LIST RDKB_MAC
AND
OR
not
IS
For LIKE operation regex comparison is used. Use it if you know how java works with regex expressions.
For MATCH operation wildcard comparison is used (* - few characters, ? - one character).
Examples:
firmwareVersion MATCH 13.14.*
estbMacAddress MATCH AA:AA:AA:AA:AA:*
ecmMacAddress MATCH ??:??:??:AA:FF
Save
Cancel

- As soon as the formula is saved , displays the device settings and Log upload settings options

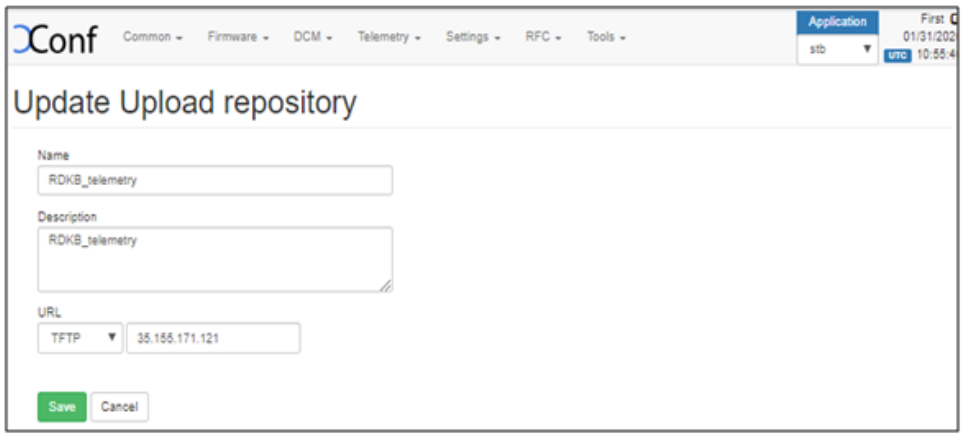
- ### 7.1.3. Device settings

Name	RDKB_telemetry
CheckOnReboot	true
Are active	true
Expression	2 1 2 1 1



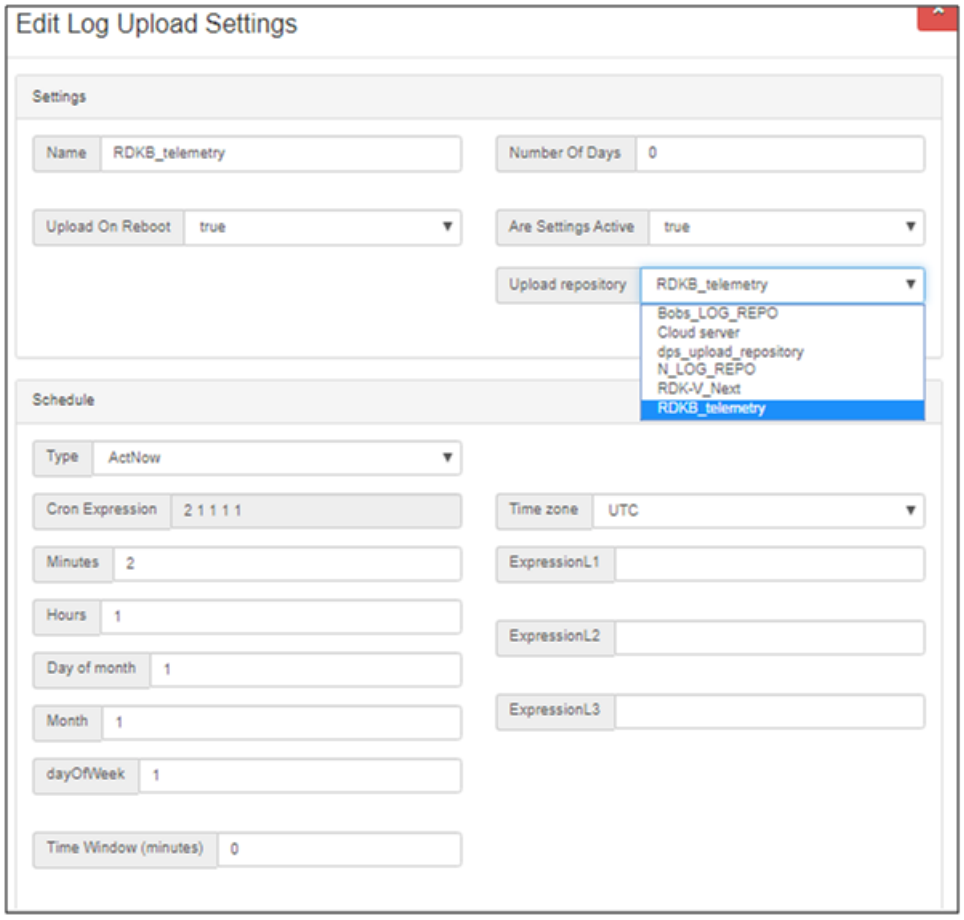
7.1.4. Defining the Upload repositories

URL	http://35.155.171.121:9093/admin/ux/#/uploadrepository
Flow	Xconf-server ->DCM -> Upload repositories
Name	RDKB_telemetry
Description	RDKB_telemetry
URL	tftp : 35.155.171.121 HTTP : http://35.155.171.121/xconf/logupload.php



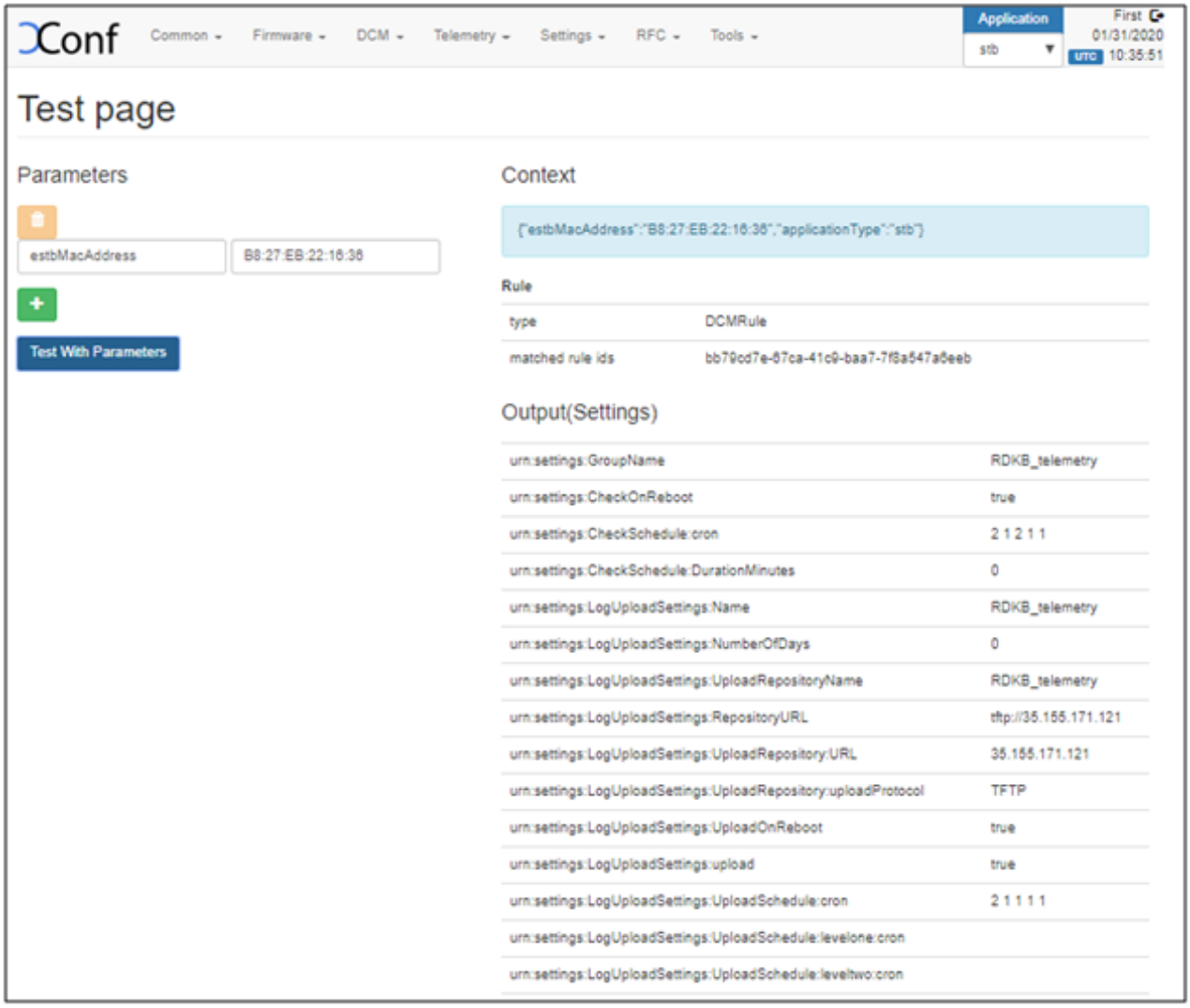
7.1.5. Log upload settings

Name	<Enter the name given during Log upload formula creation>
Upload On Reboot	true
Number of Days	1
Are settings active	true
Upload Repository	RDKB_telemetry
Cron Expression	2 1 1 1 1



7.1.6. Test Page

URL	http://35.155.171.121:9093/admin/ux/#/formulas/all
Path	Xconf-server-> DCM -> Test Page

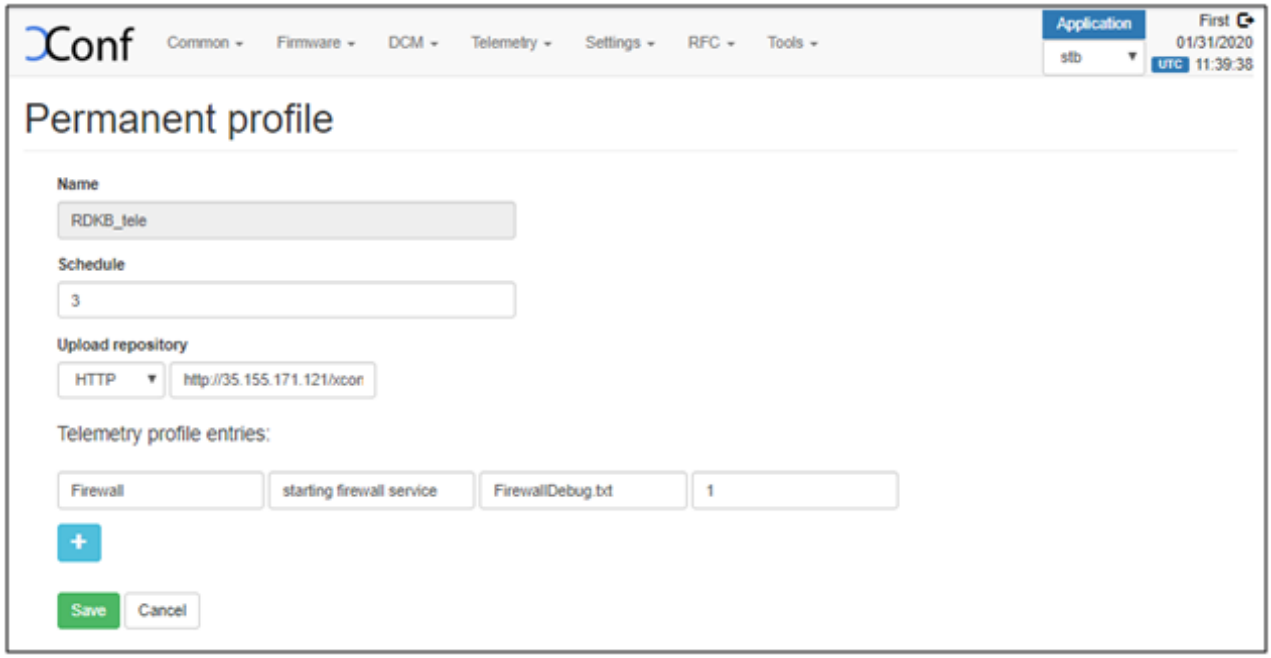


7.2. **Telemetry**

7.2.1. Defining Telemetry profile

URL	**http://35.155.171.121:9093/admin/ux/#/formulas/all**
Path	**Xconf-server-> Telemetry->Permanent Profiles -> Create**

Sample :



7.2.2. Create Targeting rule

URL	**http://35.155.171.121:9093/admin/ux/#/formulas/all**
Path	**Xconf-server-> Telemetry->Targeting rule -> Create**

1. Give the Unique rule name
2. Select the rule. Here , used estbMacAddress as the rule
3. Select the Bound profile (Telemetry Permanent Profile Name)

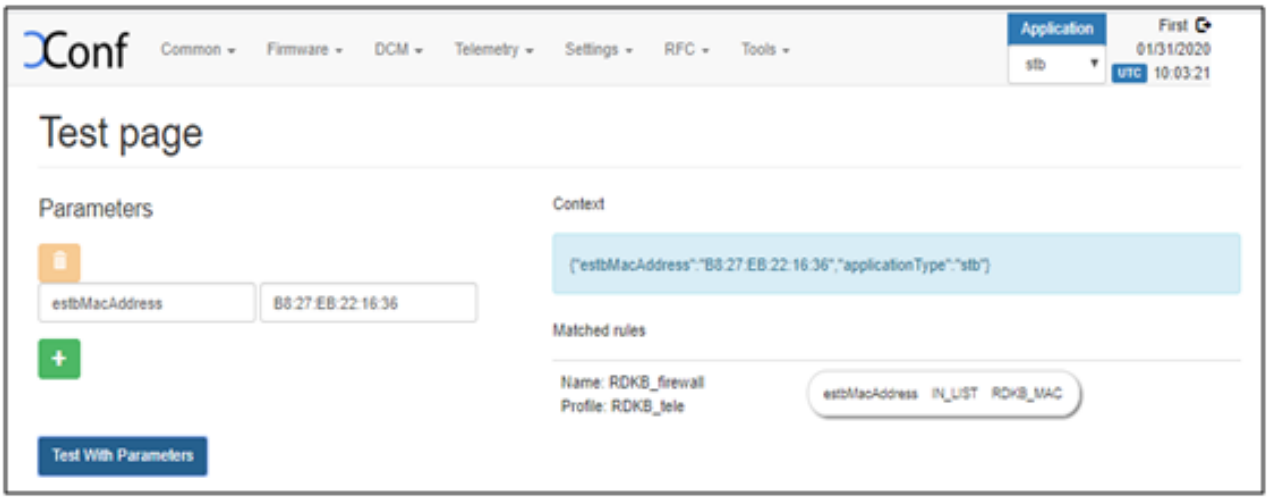
Sample

7.2.3. Test Page

URL	**http://35.155.171.121:9093/admin/ux/#/formulas/all**
Path	**Xconf-server-> Telemetry->Test Page**

1. To test whether the configured profile details are retrieved properly from xconf-server
2. Give the rule specified in “Targeting Rule” section i.e., estbMacAddress here

Sample:



8. **Configuring Telemetry on Raspberry pi**

- Once the board is up , go to **/etc/dcm.properties** and add the below details

```
LOG_SERVER=35.155.171.121

DCM_LOG_SERVER=http://35.155.171.121/xconf/logupload.php

DCM_LOG_SERVER_URL=http://35.155.171.121:9092/loguploader/getSettings

DCM_SCP_SERVER=35.155.171.121

DCM_HTTP_SERVER_URL=http://35.155.171.121/xconf/telemetry_upload.php

DCM_LA_SERVER_URL=http://35.155.171.121/xconf/logupload.php
```

- Restart the dcm-log service using "**systemctl restart dcm-log**"
- To check the status of the service "**systemctl status dcm-log**"
- By triggering the service , rpi starts uploading the logs to the xconf-server
- The log upload and Telemetry markers can be uploaded via tftp and http
- The profile can be verified using curl, conf file , through logs and in server as below

1. CURL

- **Syntax** : curl -i 'http://<ip>:9092/loguploader/getSettings?estbMacAddress=<MAC>'

Sample: 1 TFTP

```
root@RaspberryPi-Gateway:~# ifconfig erouter0
erouter0  Link encap:Ethernet  HWaddr B8:27:EB:22:16:36
          inet addr:192.168.30.125  Bcast:0.0.0.0  Mask:255.255.255.0
          inet6 addr: fe80::ba27:ebff:fe22:1636/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:18748 errors:0 dropped:0 overruns:0 frame:0
          TX packets:3081 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2614475 (2.4 MiB)  TX bytes:590848 (577.0 KiB)

root@RaspberryPi-Gateway:~# curl -i 'http://35.155.171.121:9092/loguploader/getSettings?estbMacAddress=B8:27:EB:22:16:36'
HTTP/1.1 200 OK

Date: Fri, 31 Jan 2020 10:59:09 GMT
Content-Type: application/json
Transfer-Encoding: chunked
Server: Jetty(9.2.1.v20140609)

{"urn:settings:GroupName":"RDKB_telemetry","urn:settings:CheckOnReboot":true,"urn:settings:CheckSchedule:cron":"2 1 2 1 1","urn:settings:
CheckSchedule:DurationMinutes":0,"urn:settings:LogUploadSettings:Message":null,"urn:settings:LogUploadSettings:Name":"RDKB_telemetry","urn:
settings:LogUploadSettings:NumberOfDays":0,"urn:settings:LogUploadSettings:UploadRepositoryName":"RDKB_telemetry","urn:settings:
LogUploadSettings:RepositoryURL":"tftp://35.155.171.121","urn:settings:LogUploadSettings:UploadOnReboot":true,"urn:settings:LogUploadSettings:
UploadImmediately":false,"urn:settings:LogUploadSettings:upload":true,"urn:settings:LogUploadSettings:UploadSchedule:cron":"2 1 1 1 1","urn:settings:
LogUploadSettings:UploadSchedule:levelone:cron":null,"urn:settings:LogUploadSettings:UploadSchedule:leveltwo:cron":null,"urn:settings:
LogUploadSettings:UploadSchedule:levelthree:cron":null,"urn:settings:LogUploadSettings:UploadSchedule:DurationMinutes":0,"urn:settings:
```

VODSettings:Name":null,"urn:settings:VODSettings:LocationsURL":null,"urn:settings:VODSettings:SRMIPList":null,"urn:settings:TelemetryProfile":{"id":"72ac2ca9-b248-4a5e-b120-27ff37382564","telemetryProfile":[{"header":"Firewall","content":"starting firewall service","type":"FirewallDebug.txt","pollingFrequency":"1"}],"schedule":"3","expires":0,"telemetryProfile:name":"RDKB_tele","uploadRepository:URL":"35.155.171.121","uploadRepository:uploadProtocol":"TFTP"}}

Sample: 2 HTTP

root@RaspberryPi-Gateway:~# curl -i 'http://35.155.171.121:9092/loguploader/getSettings?estbMacAddress=B8:27:EB:22:16:36'
HTTP/1.1 200 OK

Date: Fri, 31 Jan 2020 12:15:26 GMT
Content-Type: application/json
Transfer-Encoding: chunked
Server: Jetty(9.2.1.v20140609)

{"urn:settings:GroupName":"RDKB_telemetry","urn:settings:CheckOnReboot":true,"urn:settings:CheckSchedule:cron":"2 1 2 1 1","urn:settings:CheckSchedule:DurationMinutes":0,"urn:settings:LogUploadSettings:Message":null,"urn:settings:LogUploadSettings:Name":"RDKB_telemetry","urn:settings:LogUploadSettings:NumberOfDays":0,"urn:settings:LogUploadSettings:UploadRepositoryName":"RDKB_telemetry","urn:settings:LogUploadSettings:RepositoryURL":"http://35.155.171.121/xconf/logupload.php","urn:settings:LogUploadSettings:UploadOnReboot":true,"urn:settings:LogUploadSettings:UploadImmediately":false,"urn:settings:LogUploadSettings:upload":true,"urn:settings:LogUploadSettings:UploadSchedule:cron":"2 1 1 1 1","urn:settings:LogUploadSettings:UploadSchedule:levelone:cron":null,"urn:settings:LogUploadSettings:UploadSchedule:leveltwo:cron":null,"urn:settings:LogUploadSettings:UploadSchedule:levelthree:cron":null,"urn:settings:LogUploadSettings:UploadSchedule:DurationMinutes":0,"urn:settings:VODSettings:Name":null,"urn:settings:VODSettings:LocationsURL":null,"urn:settings:VODSettings:SRMIPList":null,"urn:settings:TelemetryProfile":{"id":"72ac2ca9-b248-4a5e-b120-27ff37382564","telemetryProfile":[{"header":"Firewall","content":"starting firewall service","type":"FirewallDebug.txt","pollingFrequency":"1"}],"schedule":"3","expires":0,"telemetryProfile:name":"RDKB_tele","uploadRepository:URL":"http://35.155.171.121/xconf/telemetry_upload.php","uploadRepository:uploadProtocol":"HTTP"}}

2. Configuration file

- Once the profile details are successfully retrieved , the **conf** file will be created under **/tmp** which has the server configurations
- The telemetry markers are compared with the corresponding log files and if the match is found then the markers are uploaded to the http://35.155.171.121/xconf/upload/

Sample 1: tftp
root@RaspberryPi-Gateway:~# cat /tmp/DCMSettings.conf

urn:settings:GroupName=RDKB_telemetry
urn:settings:CheckOnReboot=true
urn:settings:CheckSchedule:cron=2 1 2 1 1
urn:settings:CheckSchedule:DurationMinutes=0
urn:settings:LogUploadSettings:Message=null
urn:settings:LogUploadSettings:Name=RDKB_telemetry
urn:settings:LogUploadSettings:NumberOfDays=0
urn:settings:LogUploadSettings:UploadRepositoryName=RDKB_telemetry
urn:settings:LogUploadSettings:RepositoryURL=tftp://35.155.171.121
urn:settings:LogUploadSettings:UploadOnReboot=true
urn:settings:LogUploadSettings:UploadImmediately=false
urn:settings:LogUploadSettings:upload=true
urn:settings:LogUploadSettings:UploadSchedule:cron=2 1 1 1 1
urn:settings:LogUploadSettings:UploadSchedule:levelone:cron=null
urn:settings:LogUploadSettings:UploadSchedule:leveltwo:cron=null
urn:settings:LogUploadSettings:UploadSchedule:levelthree:cron=null
urn:settings:LogUploadSettings:UploadSchedule:DurationMinutes=0
urn:settings:VODSettings:Name=null
urn:settings:VODSettings:LocationsURL=null
urn:settings:VODSettings:SRMIPList=null
"urn:settings:TelemetryProfile":{"id":"72ac2ca9-b248-4a5e-b120-27ff37382564","telemetryProfile":[{"header" : "Firewall","content" : "staring firewall service","type" : "FirewallDebug.txt","pollingFrequency":"1"}],"schedule":"3","expires":0,"telemetryProfile:name":"RDKB_tele,"uploadRepository:URL":"35.155.171.121","uploadRepository:uploadProtocol":"TFTP"}

Sample 2: http

root@RaspberryPi-Gateway:~# cat /tmp/DCMSettings.conf

urn:settings:GroupName=RDKB_telemetry
urn:settings:CheckOnReboot=true
urn:settings:CheckSchedule:cron=2 1 2 1 1
urn:settings:CheckSchedule:DurationMinutes=0
urn:settings:LogUploadSettings:Message=null
urn:settings:LogUploadSettings:Name=RDKB_telemetry
urn:settings:LogUploadSettings:NumberOfDays=0
urn:settings:LogUploadSettings:UploadRepositoryName=RDKB_telemetry
urn:settings:LogUploadSettings:RepositoryURL=http://35.155.171.121/xconf/logupload.php
urn:settings:LogUploadSettings:UploadOnReboot=true
urn:settings:LogUploadSettings:UploadImmediately=false
urn:settings:LogUploadSettings:upload=true

urn:settings:LogUploadSettings:UploadSchedule:cron=2 1 1 1 1
urn:settings:LogUploadSettings:UploadSchedule:levelone:cron=null
urn:settings:LogUploadSettings:UploadSchedule:leveltwo:cron=null
urn:settings:LogUploadSettings:UploadSchedule:levelthree:cron=null
urn:settings:LogUploadSettings:UploadSchedule:DurationMinutes=0
urn:settings:VODSettings:Name=null
urn:settings:VODSettings:LocationsURL=null
urn:settings:VODSettings:SRMIPList=null
"urn:settings:TelemetryProfile":{"id":"72ac2ca9-b248-4a5e-b120-27ff37382564","telemetryProfile":[{"header" : "Firewall","content" : "starting firewall service","type" : "FirewallDebug.txt","pollingFrequency":"1"}],"schedule":"3","expires":0,"telemetryProfile:name":"RDKB_tele"," uploadRepository:URL":"http://35.155.171.121/xconf/telemetry_upload.php","uploadRepository:uploadProtocol":"HTTP"}

3. Logs

- Log file to monitor and analyze the files which are uploaded to server
- /rdklogs/logs/dcmscript.log

TFTP

```
Uploading Logs with DCM UploadOnReboot set to true
200131-09:23:25.892859 dca  : Direct Connection HTTP RESPONSE CODE :
200131-09:23:25.899693 dca: Direct connection success - ret:0
200131-09:23:25.908621 dca: Json message successfully submitted.
01-31-20-09-23AM-ArmConsolelog.txt.0
01-31-20-09-23AM-BootTime.log
01-31-20-09-23AM-CRlog.txt.0
01-31-20-09-23AM-Consolelog.txt.0
01-31-20-09-23AM-FirewallDebug.txt
01-31-20-09-23AM-LM.txt.0
01-31-20-09-23AM-MnetDebug.txt
01-31-20-09-23AM-PAMlog.txt.0
01-31-20-09-23AM-PARODUSlog.txt.0
01-31-20-09-23AM-PSMlog.txt.0
01-31-20-09-23AM-TDMlog.txt.0
01-31-20-09-23AM-TR69log.txt.0
01-31-20-09-23AM-WEBPAlog.txt.0
01-31-20-09-23AM-WiFilog.txt.0
01-31-20-09-23AM-dcmscript.log
01-31-20-09-23AM-swupdate.log
01-31-20-09-23AM-version.txt
01-31-20-09-23AM-wifihealth.txt
Uploading logs 01-31-20-09-23AM.tgz  onto 35.155.171.121
Uploading logs 01-31-20-09-23AM.tgz  onto 35.155.171.121
Moving to Previous Logs Backup Folder
```

HTTP

```
Uploading Logs with DCM UploadOnReboot set to true
200131-11:22:00.729982 dca: Sleeping for 10 before upload.
200131-11:22:11.392670 dca: Direct connection success - ret:0
200131-11:22:11.399931 dca: Json message successfully submitted.
01-31-20-11-22AM-Consolelog.txt.0
01-31-20-11-22AM-dcmscript.log
01-31-20-11-22AM-version.txt
01-31-20-11-22AM-wifihealth.txt
Uploading logs 01-31-20-11-21AM.tgz  onto http://35.155.171.121/xconf/logupload.php
Moving to Previous Logs Backup Folder
```

- /rdklogs/logs/telemetry.log
  TFTP

```
TFTPIP:35.155.171.121
200131-09:23:15.165431 dca: Using Direct commnication
number of proUPdel1:42
Upload protocol telemetry is:TFTP
before TFTP load-----------
number of delim:17
tftp ip is :35.155.171.121
rtl_json.txt available,going for tftp upload
0
TFTP Telemetry succeded !!!
call uploadLogOnReboot
Sleeping for seven minutes
Done sleeping prev logpath /rdklogs/logs//PreviousLogs
ckp100-------------prev log path-------------/rdklogs/logs//PreviousLogs
ckp101----------------------upload log-----true
total 390
drwxr-xr-x    2 root     root          1024 Jan 31 09:23 .
drwxr-xr-x    4 root     root          1024 Jan 31 09:23 ..
-rw-r--r--    1 root     root         15510 Jan 31 03:48 01-31-20-09-23AM-ArmConsolelog.txt.0
-rw-r--r--    1 root     root           214 Jan 31 09:12 01-31-20-09-23AM-BootTime.log
-rw-r--r--    1 root     root         18632 Jan 31 09:12 01-31-20-09-23AM-CRlog.txt.0
-rw-r--r--    1 root     root         73531 Jan 31 09:23 01-31-20-09-23AM-Consolelog.txt.0
-rw-r--r--    1 root     root         50543 Jan 31 09:12 01-31-20-09-23AM-FirewallDebug.txt
-rw-r--r--    1 root     root         20141 Jan 31 09:23 01-31-20-09-23AM-LM.txt.0
-rw-r--r--    1 root     root         17514 Jan 31 09:12 01-31-20-09-23AM-MnetDebug.txt
-rw-r--r--    1 root     root         46715 Jan 31 03:48 01-31-20-09-23AM-PAMlog.txt.0
-rw-r--r--    1 root     root         16562 Jan 31 09:20 01-31-20-09-23AM-PARODUSlog.txt.0
-rw-r--r--    1 root     root         50662 Jan 31 03:48 01-31-20-09-23AM-PSMlog.txt.0
-rw-r--r--    1 root     root          1478 Jan 31 09:12 01-31-20-09-23AM-TDMlog.txt.0
-rw-r--r--    1 root     root         12187 Jan 31 09:12 01-31-20-09-23AM-TR69log.txt.0
-rw-r--r--    1 root     root          6687 Jan 31 09:23 01-31-20-09-23AM-WEBPAlog.txt.0
-rw-r--r--    1 root     root         29083 Jan 31 09:12 01-31-20-09-23AM-WiFilog.txt.0
-rw-r--r--    1 root     root           460 Jan 31 09:23 01-31-20-09-23AM-dcmscript.log
-rw-r--r--    1 root     root          2079 Jan 31 09:16 01-31-20-09-23AM-swupdate.log
-rw-r--r--    1 root     root           176 Jan 31 09:23 01-31-20-09-23AM-version.txt
-rw-r--r--    1 root     root         12418 Jan 31 09:22 01-31-20-09-23AM-wifihealth.txt
ckp101-------------------------
number of proUPdel2:42
Upload protocol logupload is:TFTP
0
Done Uploading Logs and removing rtl_json.txt file
```

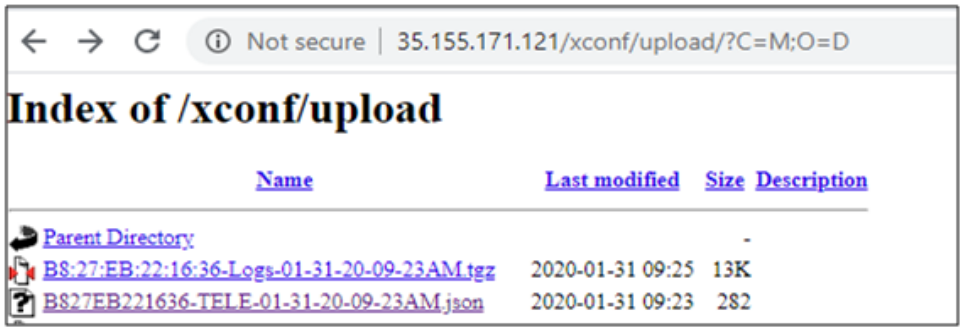
HTTP

```
Upload protocol is:HTTP
HTTPURL:http://35.155.171.121/xconf/logupload.php
call uploadLogOnReboot
Sleeping for seven minutes
Done sleeping prev logpath /rdklogs/logs//PreviousLogs
ckp100-------------prev log path-------------/rdklogs/logs//PreviousLogs
ckp101----------------------upload log-----true
total 13
drwxr-xr-x    2 root     root          1024 Jan 31 11:22 .
drwxr-xr-x    4 root     root          1024 Jan 31 11:21 ..
-rw-r--r--    1 root     root           283 Jan 31 11:21 01-31-20-11-22AM-Consolelog.txt.0
-rw-r--r--    1 root     root          1340 Jan 31 11:21 01-31-20-11-22AM-dcmscript.log
-rw-r--r--    1 root     root           176 Jan 31 11:21 01-31-20-11-22AM-version.txt
-rw-r--r--    1 root     root          6207 Jan 31 11:18 01-31-20-11-22AM-wifihealth.txt
200131-11:22:10.747442 dca: Using Direct commnication
number of proUPdel1:42
Upload protocol telemetry is:HTTP
before HTTP upload
number of httpdel1:42
HTTPTELEMETRYURL:http://35.155.171.121/xconf/telemetry_upload.php
------CURL_CMD:curl --tlsv1.2 -w '%{http_code}\n' -H "Accept: application/json" -H "Content-type: application/json" -X POST -d @/nvram/rtl_json.txt 'http://35.155.171.1
21/xconf/telemetry_upload.php' --connect-timeout 30 -m 30
http code in telemetry is :200
HTTP telemetry curl upload succeded!!!!!!!!!!!!!!!!!
ckp101-------------------------
number of proUPdel2:42
Upload protocol logupload is:HTTP
before HTTP log upload
HTTPLOGUPLOADURL:http://35.155.171.121/xconf/logupload.php
upload log file is:01-31-20-11-21AM.tgz
------CURL_CMD2:curl -w '%{http_code}\n' -F filename=@/rdklogs/logs//PreviousLogs/B8:27:EB:22:16:36-Logs-01-31-20-11-21AM.tgz 'http://35.155.171.121/xconf/logupload.php
' --connect-timeout 100 -m 100
http_code is :200
HTTP log upload succeded!!!!!!!!!!!!!!!!!
Done Uploading Logs and removing rtl_json.txt file
```

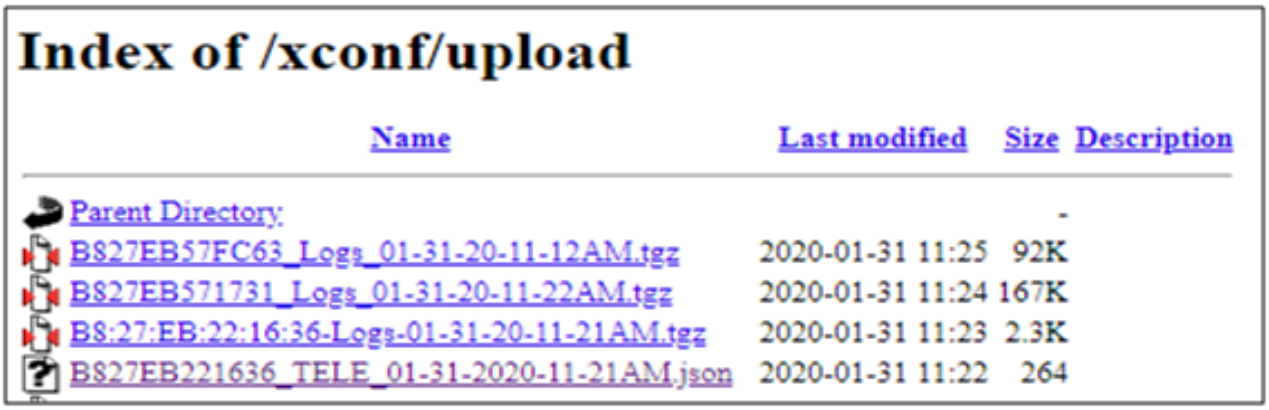
4. Xconf-Server

- URL : http://35.155.171.121/xconf/upload/
- The tar file (of all logs) and JSON file of telemetry will be uploaded
- Sample

TFTP

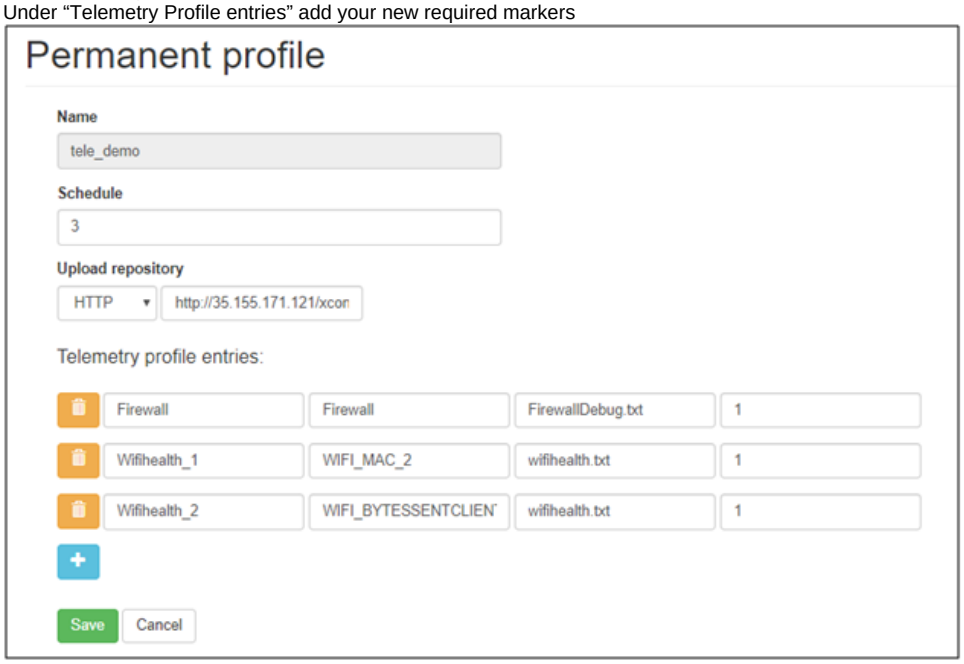


HTTP



9. **Configuring more entries to a profile**

- Go to Telemetry -> Permanent Profile
- Under “Telemetry Profile entries” add your new required markers



- Here, added 2 new markers for wifihealth.txt file

  1. **WIFI_MAC_2** with the profile name as “Wifihealth_1” and polling frequency as 1
  2. **WIFI_BYTESSENTCLIENTS** with the profile name as “Wifihealth_2” and polling frequency as 1

- Save
- In Rpi , make sure that you stopped the rdkbLogMontior service , in order to stop the log rotation process (**systemctl stop rdkbLogMonitor)**
- Now restart the dcm-log service using **systemctl restart dcm-log**
- With successful response , tar file and JSON file gets uploaded to the xconf-server
- Open the upload JSON file in the browser
- We could see the profile entries with the number of times the specified marker has appeared in the file.

Sample:

{"searchResult":[{"Firewall":"1"},{"Wifihealth_1":"2"},{"Wifihealth_2":"2"},{"Profile":"RDKB"},{"mac":"B8:27:EB:22:16:36"},{"erouterIpv4":"192.168.30.125"},{"erouterIpv6":"null"},{"PartnerId":"RDKM"},{"AccountId":"Unknown"},{"Version":"rdkb-generic-broadband-image_default_20200224150713"},{"Time":"2020-02-26 12:23:51"}]}

NOTE : JSON file holds only the number of times the particular marker has appeared in the respective log file. To see the complete log file, need to download the tar file uploaded and extract the files to see the complete logs or value of the parameters

10. Observations :

- Pushing script from XConf

  Currently pushing the script from xconf to the target device is not possible due to the security issue , as it may lead to downloading the licensed file to the vulnerable device. The pushing may also lead to removal of file from rootfs , so this is not advised to do for now. Wh ereas , we can initiate the download from device through tftp/curl command either from the script or from console.

- telemetry target type

  Target type is provided to handle dynamic parameters change . We have 4 target types .

  1. *# 0 if as part of normal execution*
  2. *# 1 if initiated due to an XCONF update*
  3. *# 2 if forced execution before log upload*
  4. *# 3 if modify the cron schedule*

  During boot-up or service start , target type update will be initiated .

  On each initiation , Whenever it finds the markers in the log files , it provides the search results with marker details , when it doesn't find , it just provides the basic RDKB profile details(without markers). It all depends on the markers availability in the log files.

  Currently Type 1 and 2 are supported .

- Empty JSON message

  On having the Schedule type in DCM either as "ActNow" or "CronExpression" , with the expression in schedule under telemetry profile . JSON messages are seen with generic RDKB profile details on every 5 min / 10 mins (Expression : /5 * * * * or */10 * * * *) . Once in a day uploads JSON with markers to the server .

  This is seen due to the schedule expression . As a workaround , we can give the schedule in numbers (Example : 2 / 5 / 10)

  The ticket is in place to implement the cron expression support in RPi. Once it is in place , the empty JSON messages will not be seen .