

Feature Validation : Xconf Server

- Pre-requisite

Admin UI: Common Configuration

Feature Validation: LogUpload

Feature Validation: Telemetry

Feature Validation: Telemetry2_0

Feature Validation: Remote Feature Control (RFC)

Firmware Upgradation for RPI using Xconf Server

Pre-requisite

- Access to Raspberry Pi terminal.
- Access to Xconf server from browser <https://xconf.rdkcentral.com:19093/admin/ux/loginForm>
 - For Admin mode(read and writ permission) -> username : admin, password: RdkXcadm\$2120
 - For User mode(only read mode) -> username: user, password: RdkXcusr@2210

Admin UI: Common Configuration

- Define Environments

Flow: Xconf-server -> Common -> Environments

Click on Create Button.

Id	Description	Actions
AH212-AMLOGIC	image upgrade	[edit] [delete] [download]
AUSA-TEST	Altice-USA Validation Test	[edit] [delete] [download]
AX061AEI	RT1319	[edit] [delete] [download]
CI	CI environmet	[edit] [delete] [download]

Click on Create, Enter the ID and Description fields, click on Save.

ID : <Unique Identifier> ; Description : <Description>

Environment

Id

Description

Save Cancel

- Define Models

Flow: Xconf-server -> Common -> Models

Click on Create, Enter the ID and Description fields, click on Save.

Id	Description	Actions
AH212	AH212-Amlogic Reference Device	[edit] [delete] [download]
ARMv7	ARMv7/RPI	[edit] [delete] [download]
ARRIS	Docsis3.1 GW	[edit] [delete] [download]

Model

Id: RPI4B_TEST_2023

Description: Xconf Feature Validation

[Save] [Cancel]

- Define Mac List

Flow: Xconf-server -> Common -> MAC Lists -> Create -> Add your Device MAC address -> Save.

Add MAC List

Name: RPI4B_TEST_2023

Data: E4-5F-01-FB:13:4B

[+]

[Save] [Cancel]

- Define IP List

Flow: Xconf-server -> Common -> IP Lists -> Create-> Create -> Add your device IP address -> Save.

xconf.rdkcentral.com:19093/admin/ux/?#/namespacedlist/edit//CREATE/IP_LIST

Xconf Common Firmware DCM Telemetry Settings RFC Tools Changes Application admin 04/11/2023 UTC 05:35:13

Add IP List

Choose File Browse

Name
RPI4B_TEST_2023

Data
192.168.225.58

Save Cancel

Feature Validation: LogUpload

- In Raspberry Board, add the server details for log upload.
- Configure the Bellow details to dcm.properties and comment out the other details .

File : /etc/dcm.properties

LOG_SERVER=xconf.rdkcentral.com
 DCM_LOG_SERVER=<https://xconf.rdkcentral.com/xconf/logupload.php>
 DCM_LOG_SERVER_URL=<https://xconf.rdkcentral.com:19092/loguploader/getSettings>
 DCM_SCP_SERVER=xconf.rdkcentral.com
 HTTP_UPLOAD_LINK=https://xconf.rdkcentral.com/xconf/telemetry_upload.php
 DCA_UPLOAD_URL=xconf.rdkcentral.com

DCM_HTTP_SERVER_URL=https://xconf.rdkcentral.com/xconf/telemetry_upload.php
 DCM_LA_SERVER_URL=<https://xconf.rdkcentral.com/xconf/logupload.php>

- In Xconf UI Change Application to stb in top right corner of the window.

Xconf Common Firmware DCM Telemetry Settings RFC Tools Changes Application admin 11/09/2021 UTC 10:02:53

- Defining the Upload repositories

Flow: Xconf-server -> DCM -> Upload repository -> create -> save

Name: <Unique Identifier>

Description: <Unique Identifier>

URL: HTTPS: <https://xconf.rdkcentral.com/xconf/logupload.php>

Update Upload repository

Name: RPI4-RDKB-XCONF_Repository

Description: RPI4-RDKB xconf server Log upload Repository

URL: HTTPS https://xconf.rdkcentral.com

Save Cancel

- Defining the formula

Flow: Xconf-server -> DCM -> Formulas -> Create

Name: <unique name for log upload>

Description: <Short description for log upload>

Percentage: 100

Build condition: estbMacAddress IS <MAC Address> OR estbIP IS <IP Address>

(or) estbMacAddress IS <MAC Address> AND model is <Model Name> (Model name is already configured under Common Tab)

Create Formula

Properties

Name: RPI4B_TEST_2023 Percentage: 100 Default formula: ✓

Description: Verification of log upload Priority: 64

Percentage of responses with level one/two/three logs

L1 percentage: 0 L2 percentage: 0 L3 percentage: 0

Build condition

estbMacAddress IS E4:5F:01:FB:13:4B

OR estbIP IN_LIST RPI4B_TEST_2023

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:AA.*
estbMacAddress MATCH 77:77:77:AA:FF

Save Cancel

- As soon as the formula is saved, then a 'define Settings' tab with 'Create Device Settings', 'Create log settings', 'Create VOD settings' will be available.

Define settings

Create Device settings

Create Log Upload settings

Create VOD settings

- Click on 'Create Device Settings' tab and edit the Device Settings.

Create Device Settings

Name

RPI4B_TEST_2023

CheckOnReboot

true

▼

Are active

true

▼

Type

ActNow

▼

Time zone

UTC

▼

Expression

2 1 1 1 1

Minutes

2

Hours

1

Day of month

1

Month

1

dayOfWeek

1|

Time Window (minutes)

0

Save

Cancel

- Click on 'Create Log Update setting' and Edit the Log upload Setting (Create schedule & add the upload repository created beforehand).

Name: Enter the name given during Log Upload Formula Creation.

Note: The formula will be effective only if we select 'Are Settings Active' option to 'true' in 'Create Device Settings' and 'Log Upload settings'.

Edit Log Upload Settings

Settings

NameRPI4-RDKB-XCONF

Number Of Days1

Upload On Reboottrue

Are Settings Activetrue

Upload repositoryRPI4-RDKB-XCONF_Repository

Schedule

TypeActNow

Cron Expression2 1 1 1 1

Minutes2

Hours1

Day of month1

Month1

dayOfWeek1

Time Window (minutes)0

Time zoneUTC

ExpressionL1

ExpressionL2

ExpressionL3

Verification at Xconf UI.

- Test Page for Log Upload
Flow: Xconf-Server -> DCM ->Test Page
- Parameters: give a parameter that will match the one of the formulas that you have created.
 - estbMacAddress < MAC Address> or
 - estbIP <IP Address>
 - model <Model Name>

xconf.rdkcentral.com:19093/admin/ux/?#/dcm/testpage

Conf Common Firmware DCM Telemetry Settings RFC Tools Changes Application admin 04/11/2023 06:01:37

Test page

Enter context parameters like estbMacAddress or envmodel. Hit 'Test with parameters' button to see results.

Parameters

estbIP 192.168.225.58

Test With Parameters

Context

("estbIP":"192.168.225.58","applicationType":"stb")

Rule

type	DCMGenericRule
matched rule ids	4c5bcbef-3277-43bc-8b07-a65a88d983fb

Output(Settings)

urn:settings:GroupName	RPI4-RDKB-XCONF
urn:settings:CheckOnReboot	true
urn:settings:CheckSchedule.cron	2 1 1 1 1
urn:settings:CheckSchedule.DurationMinutes	0
urn:settings:LogUploadSettings.Name	RPI4-RDKB-XCONF
urn:settings:LogUploadSettings.NumberOfDays	1
urn:settings:LogUploadSettings.UploadRepositoryName	RPI4-RDKB-XCONF_Repository
urn:settings:LogUploadSettings.RepositoryURL	https://xconf.rdkcentral.com/xconf/logupload.php
urn:settings:LogUploadSettings.UploadRepositoryURL	https://xconf.rdkcentral.com/xconf/logupload.php
urn:settings:LogUploadSettings.UploadRepository.uploadProtocol	HTTPS
urn:settings:LogUploadSettings.UploadOnReboot	true
urn:settings:LogUploadSettings.upload	true
urn:settings:LogUploadSettings.UploadSchedule.cron	2 1 1 1 1
urn:settings:LogUploadSettings.UploadSchedule.levelone.cron	
urn:settings:LogUploadSettings.UploadSchedule.leveltwo.cron	
urn:settings:LogUploadSettings.UploadSchedule.levelthree.cron	

Log Upload: Client End Verification (In RPI)

- Remove already existing DCM Settings config files under /tmp
rm -rf /tmp/DCM*
- Restart the log upload service in Raspberry Pi using the command
systemctl restart CcspTelemetry.service
root@RaspberryPi-Gateway:~# systemctl restart CcspTelemetry.service
- Verify through CURL command
curl -i 'https://xconf.rdkcentral.com:19092/loguploader/getSettings?estbIP=<IP ADDRESS>'
or
curl -i 'https://xconf.rdkcentral.com:19092/loguploader/getSettings?estbMacAddress=<MAC-Address>'

Sample Output:

```
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# curl -i 'https://xconf.rdkcentral.com:19092/loguploader/getSettings?estbMacAddress=E4:5F:01:FB:13:4B'
HTTP/1.1 200 OK
Content-Type: application/json; charset=utf-8
Transfer-Encoding: chunked
Server: Jetty(9.4.37.v20210219)

{"urn:settings:GroupName":"RPI4-RDKB-XCONF","urn:settings:CheckOnReboot":true,"urn:settings:CheckSchedule:cron":"2 1 1 1 1","urn:settings:CheckSchedule:DurationMinutes":0,"urn:settings:LogUploadSettings:Message":null,"urn:settings:LogUploadSettings.Name":"RPI4-RDKB-XCONF","urn:settings:LogUploadSettings.NumberOfDays":1,"urn:settings:LogUploadSettings:UploadRepositoryName":"RPI4-RDKB-XCONF_Repository","urn:settings:LogUploadSettings.RepositoryURL":"https://xconf.rdkcentral.com/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:SRMIFList":null}root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# curl -i 'https://xconf.rdkcentral.com:19092/loguploader/getSettings?estbIP=192.168.225.58'
HTTP/1.1 200 OK
Content-Type: application/json; charset=utf-8
Transfer-Encoding: chunked
Server: Jetty(9.4.37.v20210219)

{"urn:settings:GroupName":"RPI4-RDKB-XCONF","urn:settings:CheckOnReboot":true,"urn:settings:CheckSchedule:cron":"2 1 1 1 1","urn:settings:CheckSchedule:DurationMinutes":0,"urn:settings:LogUploadSettings:Message":null,"urn:settings:LogUploadSettings.Name":"RPI4-RDKB-XCONF","urn:settings:LogUploadSettings.NumberOfDays":1,"urn:settings:LogUploadSettings:UploadRepositoryName":"RPI4-RDKB-XCONF_Repository","urn:settings:LogUploadSettings.RepositoryURL":"https://xconf.rdkcentral.com/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:SRMIFList":null}root@RaspberryPi-Gateway:~#
```

- On successful Log upload, conf file will be created under /tmp directory. This file contains the details of log upload settings which are already configured in the server.

File : /tmp/DCMSettings.conf

```
root@RaspberryPi-Gateway:~# cat /tmp/DCMSettings.conf
urn:settings:GroupName=RPI4-RDKB-XCONF
urn:settings:CheckOnReboot=true
urn:settings:CheckSchedule:cron=2 1 1 1 1
urn:settings:CheckSchedule:DurationMinutes=0
urn:settings:LogUploadSettings:Message=null
urn:settings:LogUploadSettings:Name=RPI4-RDKB-XCONF
urn:settings:LogUploadSettings:NumberOfDays=1
urn:settings:LogUploadSettings:UploadRepositoryName=RPI4-RDKB-XCONF_Repository
urn:settings:LogUploadSettings:RepositoryURL=https://xconf.rdkcentral.com/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
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
```

- Verify the logs in /rdklogs/logs/dcmscript.log file
- The log file contains the details of
 - Service status, tftp details, reboot flag , check on reboot flag ,
 - Upload settings details – location, protocol.
- Shows list of files which are to be uploaded to the server as a tar file (logs will be zipped and creates a tar file on every bootup/service restart), Backup folder details (/rdklogs/logs/PreviousLogs_backup)
- HTTP request processing status.
- Log files are stored in .tgz format and markers are stored in <mac_address>-TELE-<date>.json

Log Portal

Show entries

Search:

File Name	Date
E45F01FB134B-Logs-04-11-23-07-01AM.tgz	April 11 2023 07:03 AM UTC
E45F01FB134B-Logs-04-11-23-07-04AM.tgz	April 11 2023 07:06 AM UTC
E45F01FB134B-Logs-04-11-23-07-05AM.tgz	April 11 2023 07:06 AM UTC
E45F01FB134B-Logs-04-11-23-07-10AM.tgz	April 11 2023 07:11 AM UTC

Showing 1 to 4 of 4 entries (filtered from 18,927 total entries)

Previous Next

Last cleanup done: February 18 2021 23:06

- Json response on server

```

xconf.rdkcentral.com/xconf/upload/E45F01FB134B_TELE_04-11-2023-07-10AM.json

{"searchResult":[{"Profile":"RDKB"}, {"mac": "E45F01FB134B"}, {"routerIpv4": "192.168.225.58"}, {"routerIpv6": "<#>XROUTER_IPV6<#>"}, {"PartnerId": "RDKB"}, {"AccountId": "Unknown"}, {"Version": "rdkb-generic-broadband-image_rdk-next_20230405075111"}, {"Time": "2023-04-11 07:10:09"}]}
```

- Sample log

```

root@RaspberryPi-Gateway:~# tail -f dcmscript.log &
[1] 6839
root@RaspberryPi-Gateway:~# Starting execution of DCMscript.sh
TFTP_SERVER: xconf.rdkcentral.com
Telemetry Profile File Being Used : /tmp/DCMSettings.conf
230411-07:01:54.887232 dca upload url from dcmresponse is https://xconf.rdkcentral.com/xconf/telemetry_upload.php
Build Type: dev Log file: 04-11-23-07-01AM.tgz TFTP Server: https://xconf.rdkcentral.com/xconf/logupload.php Protocol: 0
UploadHttpLink: 0
The Previous Logs folder is missing
```

230411-07:01:55.237896 dca : Only Direct connection is available
230411-07:01:55.259956 dca: Sleeping for 9 before upload.
Uploading Logs with DCM UploadOnReboot set to true
Build Type: dev Log file: 04-11-23-07-01AM.tgz TFTP Server: <https://xconf.rdkcentral.com/xconf/logupload.php> Protocol: 0
UploadHttpLink: 0
Uploading Logs with DCM UploadOnReboot set to true
230411-07:02:05.562055 dca: Direct connection success - ret:0
230411-07:02:05.574482 dca: Json message successfully submitted.
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-ArmConsolelog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-BootTime.log
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-CRlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-Consolelog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-FirewallDebug.txt
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-LM.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-MnetDebug.txt
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-PAMlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-PARODUSlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-PSMlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-TDMlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-TR69log.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-WEBPAllog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-WiFillog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-dcmscript.log
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-swupdate.log
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-02AM-version.txt
04-11-23-07-02AM-ArmConsolelog.txt.0
04-11-23-07-02AM-BootTime.log
04-11-23-07-02AM-CRlog.txt.0
04-11-23-07-02AM-Consolelog.txt.0
04-11-23-07-02AM-FirewallDebug.txt
04-11-23-07-02AM-LM.txt.0
04-11-23-07-02AM-MnetDebug.txt
04-11-23-07-02AM-PAMlog.txt.0
04-11-23-07-02AM-PARODUSlog.txt.0
04-11-23-07-02AM-PSMlog.txt.0
04-11-23-07-02AM-TDMlog.txt.0
04-11-23-07-02AM-TR69log.txt.0
04-11-23-07-02AM-WEBPAllog.txt.0
04-11-23-07-02AM-WiFillog.txt.0
04-11-23-07-02AM-dcmscript.log
04-11-23-07-02AM-swupdate.log
04-11-23-07-02AM-version.txt
Uploading logs 04-11-23-07-01AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>
tar: 04-11-23-07-01AM.tgz: file is the archive; skipping
04-11-23-07-02AM-ArmConsolelog.txt.0
04-11-23-07-02AM-BootTime.log
04-11-23-07-02AM-CRlog.txt.0
04-11-23-07-02AM-Consolelog.txt.0
04-11-23-07-02AM-FirewallDebug.txt
04-11-23-07-02AM-LM.txt.0
04-11-23-07-02AM-MnetDebug.txt
04-11-23-07-02AM-PAMlog.txt.0
04-11-23-07-02AM-PARODUSlog.txt.0
04-11-23-07-02AM-PSMlog.txt.0
04-11-23-07-02AM-TDMlog.txt.0
04-11-23-07-02AM-TR69log.txt.0
04-11-23-07-02AM-WEBPAllog.txt.0
04-11-23-07-02AM-WiFillog.txt.0
04-11-23-07-02AM-dcmscript.log
04-11-23-07-02AM-swupdate.log

04-11-23-07-02AM-version.txt
Uploading logs 04-11-23-07-01AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>
Moving to Previous Logs Backup Folder
Moving to Previous Logs Backup Folder
tail: dcmscript.log: file truncated
Uploading Logs with DCM UploadOnReboot set to true
Telemetry Profile File Being Used : /tmp/DCMSettings.conf
230411-07:05:11.424110 dca upload url from dcmresponse is https://xconf.rdkcentral.com/xconf/telemetry_upload.php
Build Type: dev Log file: 04-11-23-07-05AM.tgz TFTP Server: <https://xconf.rdkcentral.com/xconf/logupload.php> Protocol: 0
UploadHttpLink: 0
230411-07:05:11.667428 dca : Only Direct connection is available
230411-07:05:11.685759 dca: Sleeping for 9 before upload.
Uploading Logs with DCM UploadOnReboot set to true
230411-07:05:22.145133 dca: Direct connection success - ret:0
230411-07:05:22.154718 dca: Json message successfully submitted.
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-ArmConsolelog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-BootTime.log
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-CRlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-Consolelog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-FirewallDebug.txt
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-LM.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-MnetDebug.txt
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-PAMlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-PARODUSlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-PSMlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-TDMlog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-TR69log.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-WEBPAllog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-WiFillog.txt.0
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-dcmscript.log
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-swupdate.log
/lib/rdk/uploadSTBLogs.sh: line 167: /bin/timestamp: No such file or directory
Processing file...04-11-23-07-05AM-version.txt
04-11-23-07-05AM-ArmConsolelog.txt.0
04-11-23-07-05AM-BootTime.log
04-11-23-07-05AM-CRlog.txt.0
04-11-23-07-05AM-Consolelog.txt.0
04-11-23-07-05AM-FirewallDebug.txt
04-11-23-07-05AM-LM.txt.0
04-11-23-07-05AM-MnetDebug.txt
04-11-23-07-05AM-PAMlog.txt.0
04-11-23-07-05AM-PARODUSlog.txt.0
04-11-23-07-05AM-PSMlog.txt.0
04-11-23-07-05AM-TDMlog.txt.0
04-11-23-07-05AM-TR69log.txt.0
04-11-23-07-05AM-WEBPAllog.txt.0
04-11-23-07-05AM-WiFillog.txt.0
04-11-23-07-05AM-dcmscript.log
04-11-23-07-05AM-swupdate.log
04-11-23-07-05AM-version.txt
Uploading logs 04-11-23-07-04AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>
04-11-23-07-04AM.tgz
04-11-23-07-05AM-ArmConsolelog.txt.0
04-11-23-07-05AM-BootTime.log
04-11-23-07-05AM-CRlog.txt.0
04-11-23-07-05AM-Consolelog.txt.0
04-11-23-07-05AM-FirewallDebug.txt
04-11-23-07-05AM-LM.txt.0
04-11-23-07-05AM-MnetDebug.txt
04-11-23-07-05AM-PAMlog.txt.0
04-11-23-07-05AM-PARODUSlog.txt.0

04-11-23-07-05AM-PSMlog.txt.0
04-11-23-07-05AM-TDMlog.txt.0
04-11-23-07-05AM-TR69log.txt.0
04-11-23-07-05AM-WEBPAllog.txt.0
04-11-23-07-05AM-WiFillog.txt.0
04-11-23-07-05AM-dcmscript.log
04-11-23-07-05AM-swupdate.log
04-11-23-07-05AM-version.txt
Uploading logs 04-11-23-07-05AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>
Moving to Previous Logs Backup Folder
Moving to Previous Logs Backup Folder
Telemetry Profile File Being Used : /tmp/DCMSettings.conf
230411-07:10:11.594295 dca upload url from dcmresponse is https://xconf.rdkcentral.com/xconf/telemetry_upload.php
Build Type: dev Log file: 04-11-23-07-10AM.tgz TFTP Server: <https://xconf.rdkcentral.com/xconf/logupload.php> Protocol: 0
UploadHttpLink: 0
230411-07:10:11.968455 dca : Only Direct connection is available
230411-07:10:11.997319 dca: Sleeping for 9 before upload.
Uploading Logs with DCM UploadOnReboot set to true
230411-07:10:22.212030 dca: Direct connection success - ret:0
230411-07:10:22.222547 dca: Json message successfully submitted.
04-11-23-07-10AM-ArmConsolelog.txt.0
04-11-23-07-10AM-BootTime.log
04-11-23-07-10AM-CRlog.txt.0
04-11-23-07-10AM-Consolelog.txt.0
04-11-23-07-10AM-FirewallDebug.txt
04-11-23-07-10AM-LM.txt.0
04-11-23-07-10AM-MnetDebug.txt
04-11-23-07-10AM-PAMlog.txt.0
04-11-23-07-10AM-PARODUSlog.txt.0
04-11-23-07-10AM-PSMlog.txt.0
04-11-23-07-10AM-TDMlog.txt.0
04-11-23-07-10AM-TR69log.txt.0
04-11-23-07-10AM-WEBPAllog.txt.0
04-11-23-07-10AM-WiFillog.txt.0
04-11-23-07-10AM-dcmscript.log
04-11-23-07-10AM-swupdate.log
04-11-23-07-10AM-version.txt
Uploading logs 04-11-23-07-10AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>
Moving to Previous Logs Backup Folder
Moving to Previous Logs Backup Folder
Telemetry Profile File Being Used : /tmp/DCMSettings.conf
230411-07:15:11.910473 dca upload url from dcmresponse is https://xconf.rdkcentral.com/xconf/telemetry_upload.php
Build Type: dev Log file: 04-11-23-07-15AM.tgz TFTP Server: <https://xconf.rdkcentral.com/xconf/logupload.php> Protocol: 0
UploadHttpLink: 0
230411-07:15:12.207803 dca : Only Direct connection is available
230411-07:15:12.235454 dca: Sleeping for 9 before upload.
Uploading Logs with DCM UploadOnReboot set to true
230411-07:15:22.507326 dca: Direct connection success - ret:0
230411-07:15:22.516624 dca: Json message successfully submitted.
04-11-23-07-15AM-ArmConsolelog.txt.0
04-11-23-07-15AM-BootTime.log
04-11-23-07-15AM-CRlog.txt.0
04-11-23-07-15AM-Consolelog.txt.0
04-11-23-07-15AM-FirewallDebug.txt
04-11-23-07-15AM-LM.txt.0
04-11-23-07-15AM-MnetDebug.txt
04-11-23-07-15AM-PAMlog.txt.0
04-11-23-07-15AM-PARODUSlog.txt.0
04-11-23-07-15AM-PSMlog.txt.0
04-11-23-07-15AM-TDMlog.txt.0
04-11-23-07-15AM-TR69log.txt.0
04-11-23-07-15AM-WEBPAllog.txt.0
04-11-23-07-15AM-WiFillog.txt.0
04-11-23-07-15AM-dcmscript.log
04-11-23-07-15AM-swupdate.log
04-11-23-07-15AM-version.txt
04-11-23-07-15AM-wifihealth.txt
Uploading logs 04-11-23-07-15AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>
Moving to Previous Logs Backup Folder
Moving to Previous Logs Backup Folder
Telemetry Profile File Being Used : /tmp/DCMSettings.conf
230411-07:20:11.916415 dca upload url from dcmresponse is https://xconf.rdkcentral.com/xconf/telemetry_upload.php
Build Type: dev Log file: 04-11-23-07-20AM.tgz TFTP Server: <https://xconf.rdkcentral.com/xconf/logupload.php> Protocol: 0
UploadHttpLink: 0
230411-07:20:12.155150 dca : Only Direct connection is available
230411-07:20:12.173850 dca: Sleeping for 9 before upload.
Uploading Logs with DCM UploadOnReboot set to true
230411-07:20:22.367094 dca: Direct connection success - ret:0
230411-07:20:22.375902 dca: Json message successfully submitted.

04-11-23-07-20AM-ArmConsolelog.txt.0
04-11-23-07-20AM-BootTime.log
04-11-23-07-20AM-CRlog.txt.0
04-11-23-07-20AM-Consolelog.txt.0
04-11-23-07-20AM-FirewallDebug.txt
04-11-23-07-20AM-LM.txt.0
04-11-23-07-20AM-MnetDebug.txt
04-11-23-07-20AM-PAMlog.txt.0
04-11-23-07-20AM-PARODUSlog.txt.0
04-11-23-07-20AM-PSMlog.txt.0
04-11-23-07-20AM-TDMlog.txt.0
04-11-23-07-20AM-TR69log.txt.0
04-11-23-07-20AM-WEBPAllog.txt.0
04-11-23-07-20AM-WiFillog.txt.0
04-11-23-07-20AM-dcmscript.log
04-11-23-07-20AM-swupdate.log
04-11-23-07-20AM-version.txt
04-11-23-07-20AM-wifihealth.txt
Uploading logs 04-11-23-07-20AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>
Moving to Previous Logs Backup Folder
Telemetry Profile File Being Used : /tmp/DCMSettings.conf
230411-07:25:16.689426 dca upload url from dcmresponse is https://xconf.rdkcentral.com/xconf/telemetry_upload.php
Build Type: dev Log file: 04-11-23-07-25AM.tgz TFTP Server: <https://xconf.rdkcentral.com/xconf/logupload.php> Protocol: 0
UploadHttpLink: 0
230411-07:25:16.919765 dca : Only Direct connection is available
230411-07:25:16.938127 dca: Sleeping for 9 before upload.
Uploading Logs with DCM UploadOnReboot set to true
230411-07:25:27.298600 dca: Direct connection success - ret:0
230411-07:25:27.307538 dca: Json message successfully submitted.
04-11-23-07-25AM-ArmConsolelog.txt.0
04-11-23-07-25AM-BootTime.log
04-11-23-07-25AM-CRlog.txt.0
04-11-23-07-25AM-Consolelog.txt.0
04-11-23-07-25AM-FirewallDebug.txt
04-11-23-07-25AM-LM.txt.0
04-11-23-07-25AM-MnetDebug.txt
04-11-23-07-25AM-PAMlog.txt.0
04-11-23-07-25AM-PARODUSlog.txt.0
04-11-23-07-25AM-PSMlog.txt.0
04-11-23-07-25AM-TDMlog.txt.0
04-11-23-07-25AM-TR69log.txt.0
04-11-23-07-25AM-WEBPAllog.txt.0
04-11-23-07-25AM-WiFillog.txt.0
04-11-23-07-25AM-dcmscript.log
04-11-23-07-25AM-swupdate.log
04-11-23-07-25AM-version.txt
04-11-23-07-25AM-wifihealth.txt
Uploading logs 04-11-23-07-25AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>
Moving to Previous Logs Backup Folder
Telemetry Profile File Being Used : /tmp/DCMSettings.conf
230411-07:30:11.690231 dca upload url from dcmresponse is https://xconf.rdkcentral.com/xconf/telemetry_upload.php
Build Type: dev Log file: 04-11-23-07-30AM.tgz TFTP Server: <https://xconf.rdkcentral.com/xconf/logupload.php> Protocol: 0
UploadHttpLink: 0
230411-07:30:11.924824 dca : Only Direct connection is available
230411-07:30:11.943922 dca: Sleeping for 9 before upload.
Uploading Logs with DCM UploadOnReboot set to true
230411-07:30:22.136394 dca: Direct connection success - ret:0
230411-07:30:22.145563 dca: Json message successfully submitted.
04-11-23-07-30AM-ArmConsolelog.txt.0
04-11-23-07-30AM-BootTime.log
04-11-23-07-30AM-CRlog.txt.0
04-11-23-07-30AM-Consolelog.txt.0
04-11-23-07-30AM-FirewallDebug.txt
04-11-23-07-30AM-LM.txt.0
04-11-23-07-30AM-MnetDebug.txt
04-11-23-07-30AM-PAMlog.txt.0
04-11-23-07-30AM-PARODUSlog.txt.0
04-11-23-07-30AM-PSMlog.txt.0
04-11-23-07-30AM-TDMlog.txt.0
04-11-23-07-30AM-TR69log.txt.0
04-11-23-07-30AM-WEBPAllog.txt.0
04-11-23-07-30AM-WiFillog.txt.0
04-11-23-07-30AM-dcmscript.log
04-11-23-07-30AM-swupdate.log
04-11-23-07-30AM-version.txt
04-11-23-07-30AM-wifihealth.txt
Uploading logs 04-11-23-07-30AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>

Moving to Previous Logs Backup Folder
 Telemetry Profile File Being Used : /tmp/DCMSettings.conf
 230411-07:35:13.203201 dca upload url from dcmresponse is https://xconf.rdkcentral.com/xconf/telemetry_upload.php
 Build Type: dev Log file: 04-11-23-07-35AM.tgz TFTP Server: <https://xconf.rdkcentral.com/xconf/logupload.php> Protocol: 0
 UploadHttpLink: 0
 230411-07:35:13.427803 dca : Only Direct connection is available
 230411-07:35:13.446079 dca: Sleeping for 9 before upload.
 Uploading Logs with DCM UploadOnReboot set to true
 230411-07:35:24.082882 dca: Direct connection success - ret:0
 230411-07:35:24.092352 dca: Json message successfully submitted.
 04-11-23-07-35AM-ArmConsolelog.txt.0
 04-11-23-07-35AM-BootTime.log
 04-11-23-07-35AM-CRlog.txt.0
 04-11-23-07-35AM-Consolelog.txt.0
 04-11-23-07-35AM-FirewallDebug.txt
 04-11-23-07-35AM-LM.txt.0
 04-11-23-07-35AM-MnetDebug.txt
 04-11-23-07-35AM-PAMlog.txt.0
 04-11-23-07-35AM-PARODUSlog.txt.0
 04-11-23-07-35AM-PSMlog.txt.0
 04-11-23-07-35AM-TDMlog.txt.0
 04-11-23-07-35AM-TR69log.txt.0
 04-11-23-07-35AM-WEBPAllog.txt.0
 04-11-23-07-35AM-WiFillog.txt.0
 04-11-23-07-35AM-dcmscript.log
 04-11-23-07-35AM-swupdate.log
 04-11-23-07-35AM-version.txt
 04-11-23-07-35AM-wifihealth.txt
 Uploading logs 04-11-23-07-35AM.tgz onto <https://xconf.rdkcentral.com/xconf/logupload.php>
 Moving to Previous Logs Backup Folder

Attaching sample file : [B8_27_EB_22_16_36-Logs-11-10-21-07-00AM.tgz](#)

Feature Validation: Telemetry

- Telemetry configuration can be done by adding a permanent profile which contains below objects
 - Upload repository
 - Profile options (Header, content, frequency etc.)
- Creating a targeting rule which is basically mapping the profile to a set of MAC/IP/Device etc
- Note: DCM settings should be already done for the devices that you are going to set telemetry configuration.
- Create a new Telemetry Profile.
 Flow: X-conf-server -> Telemetry -> Permanent Profiles -> Create button

Name	Schedule	Upload repository	Action
*****Chris*****	*/5 * * *	http://192.168.1.18:8080/fileupload/telemetry-upload	[Edit] [Delete] [Download]
Adaptor-test	*/3 * * *	http://data-capture-telemetry-adapters-shared.dev.rdk.yo-digital.com/v1/data/event	[Edit] [Delete] [Download]

- The permanent profile must have the below entries
 - Name of the RPI device profile
 - Upload Repository (HTTP/TFTP, HTTPS)([HTTPS:https://xconf.rdkcentral.com/xconf/telemetry_upload.php](https://xconf.rdkcentral.com/xconf/telemetry_upload.php))
 - Telemetry profile Entries(We can add multiple telemetry profiles using "+" button.
 - In the Telemetry Permanent Profile page, there will be a 5th column that allows a component name to be entered. The component name is optional and may be present for only some of the entries in the Telemetry profile.

xconf.rdkcentral.com:19093/admin/ux/?#/permanentprofile/edit/bdd232de-75ff-47d4-afd1-1ca9904c1e07

XConf Common Firmware DCM Telemetry Settings RFC Tools Changes

Application: admin 04/11/2023
stb UTC 06:26:09

Permanent profile

Name
RPI4-RDKB-XCONF

Schedule
*/5 * * * *

Upload repository
HTTPS https://xconf.rdkcentral.com/x

Telemetry profile entries:

Total_Online_Client	RDKB_CONNECTED_CLIENTS	event	2
Component (optional)			
PAM	enteredhotspot_update_circu	event	1
Component (optional)			
Total_online_clients_split	RDKB_CONNECTED_CLIENTS	LM.txt	0
Component (optional)			
Firewall	starting firewall service	FirewallDebug.txt	0
Component (optional)			

[+](#)

- Once you save the permanent profile, you will get a message overlay 'Profile added to the pending changes'. Then go to Changes -> select the profile you create -> Click on "Approve selected changes".

xconf.rdkcentral.com:19093/admin/ux/?#/changes

XConf Common Firmware DCM Telemetry Settings RFC Tools Changes

Application: admin 04/11/2023
stb UTC 06:28:36

Telemetry Profile Changes

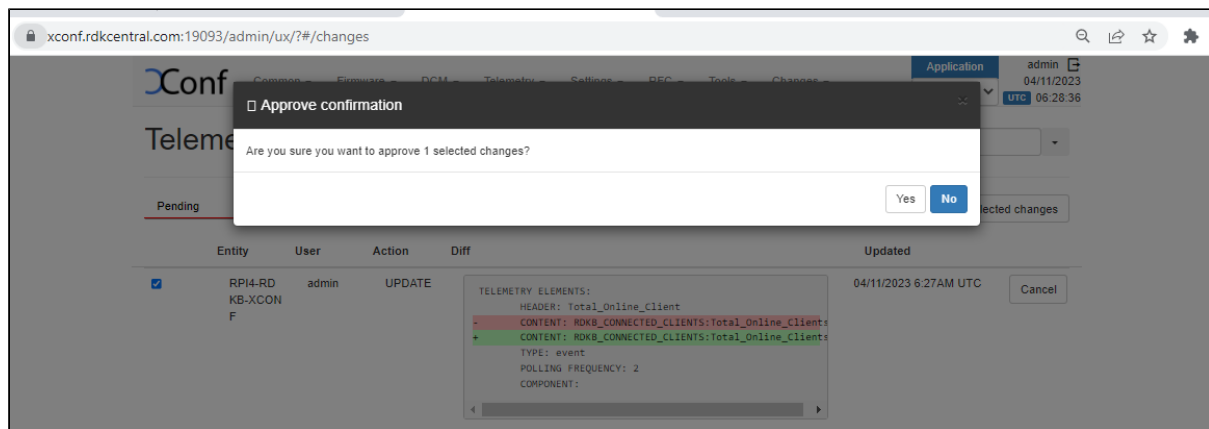
Search by Entity

Pending 21 History 4

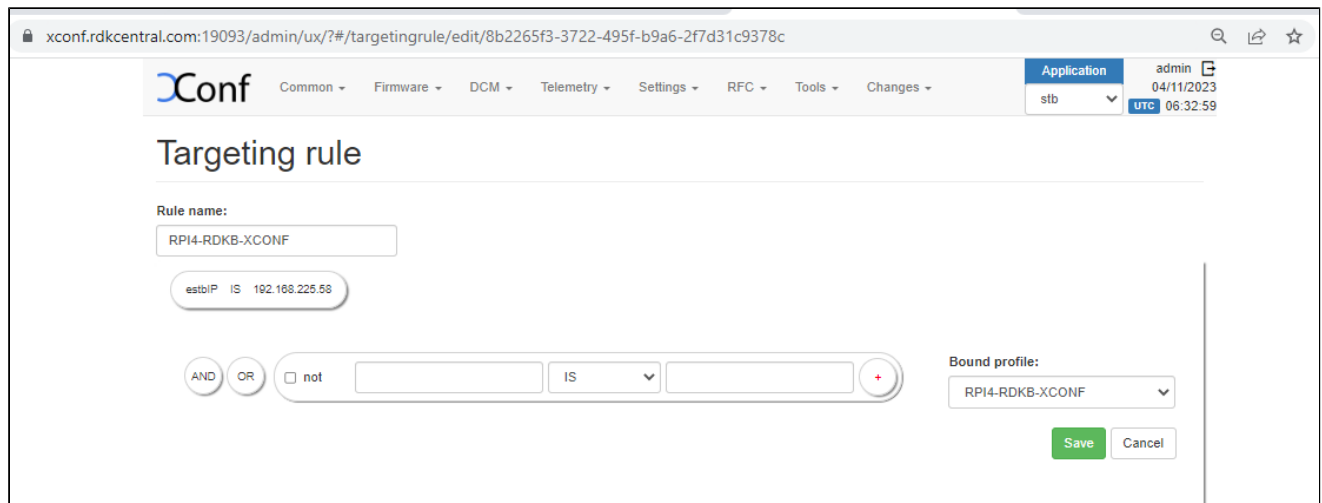
Approve selected changes

	Entity	User	Action	Diff	Updated
☒	RPI4-RDKB-XCONF	admin	UPDATE	TELEMETRY ELEMENTS: HEADER: Total_Online_Client - CONTENT: RDKB_CONNECTED_CLIENTS:Total_Online_Clients + CONTENT: RDKB_CONNECTED_CLIENTS:Total_Online_Clients TYPE: event POLLING FREQUENCY: 2 COMPONENT:	04/11/2023 6:27AM UTC

Cancel



- Then the permanent profile will be listed under Telemetry -> Permanent profiles.
- Creating targeting rules for RPI
 - Flow: X-conf-server -> Telemetry -> Targeting rules -> Create
 - Name : Name of the Targeting Rule
 - Rule : ex : estbMacAddress IS <MAC Address>
 - Bound Profile : Choose the Permanent Profile



- Verification of telemetry test page.
After creating the permanent profile and targeting rules, go to Telemetry->Test page and give a parameter that will match the one of the rules that you have created. Then matched rule will be displayed like below.


```

root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# cat /tmp/DCMSettings.conf
urn:settings:GroupName=RPI4-RDKB-XCONF
urn:settings:CheckOnReboot=true
urn:settings:CheckSchedule:cron=2 1 1 1 1
urn:settings:CheckSchedule:DurationMinutes=0
urn:settings:LogUploadSettings:Message=null
urn:settings:LogUploadSettings:Name=RPI4-RDKB-XCONF
urn:settings:LogUploadSettings:NumberOfDays=1
urn:settings:LogUploadSettings:UploadRepositoryName=RPI4-RDKB-XCONF_Repository
urn:settings:LogUploadSettings:RepositoryURL=https://xconf.rdkcentral.com/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:VOISettings:Name=null
urn:settings:VOISettings:LocationsURL=null
urn:settings:VOISettings:SRMPList=null
"urn:settings:TelemetryProfile":{"id":"dd232de-75ff-47d4-afdl-1ea9904c1e07","telemetryProfile":[{"header":"Total Online Client","content":"RDKB_CONNECTED_CLIENTS:
Total Online Clients","type":"event","pollingFrequency":"*2*"},{"header":"FAM","content":"EnteredHotspot_update_circuit_ids","type":"event","pollingFrequency":"*1
*"},{"header":"Total online_clients_split","content":"RDKB_CONNECTED_CLIENTS:Total Online Clients","type":"LM.txt","pollingFrequency":"0*"},{"header":"Firewall
","content":"Starting firewall service","type":"FirewallDebug.txt","pollingFrequency":"0*"}],"schedule":"*/5 * * * *","expires":0,"telemetryProfile:name":"RPI4-RDKB-
XCONF","uploadRepository:URL":"https://xconf.rdkcentral.com/xconf/telemetry_upload.php","uploadRepository:uploadProtocol":"HTTPS"}
root@RaspberryPi-Gateway:~#

```

- Logs and Telemetry markers are uploaded via HTTPS to the xconf server <https://xconf.rdkcentral.com/xconf/upload/> (To view the page : <https://xconf.rdkcentral.com/xconf/upload/display.php>)
- Log files are stored in .tgz format and markers are stored in <mac_address>-TELE-<date>.json
- Sample Log is as below

```

opensource platforms-----
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-06:59:32.843185 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-06:59:42.866790 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-06:59:52.890779 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:00:02.914375 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:00:12.937990 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:00:22.961802 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:00:32.986518 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:00:43.011579 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:00:53.035361 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:01:03.059069 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:01:13.083146 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:01:23.107606 waiting for previous log done file
TELEMETRY_PREVIOUS_LOG_COMPLETE-----/tmp/telemetry_previous_log_done
230411-07:01:33.131361 waiting for previous log done file
230411-07:01:43.146667 Max wait for previous log done file reached. Proceeding with new config from xconf
before calling dca_utility start of TELEMETRY LOGIC-----
inside dca_utility script with 1 as value for arguments
No dca-utility pid -----
230411-07:01:43.329827 First dca execution after bootup. Clearing all markers.
230411-07:01:43.360777 Telemetry Folder does not exist . Creating now
230411-07:01:43.383522 dca: Trigger type is :1
triggertype-----1
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 1890 0 1890 0 0 1231 0 --:--:-- 0:00:01 --:--:-- 1230
sleep for :-----
770
calling processJsonResponse-----
after calling processJsonResponse-----
after calling clearTelemetryConfig-----
after calling generateTelemetryConfig-----
schedulecronjob!!
after calling scheduleCron-----
dcaoutputjson-----!!!!!!-----{"searchResult":[{"Firewall":"9"},{"<remaining_keys>":"<remaining_values>"}]}
230411-07:01:52.295101 getAccountld() called from: /lib/rdk/dca_utility.sh - partner_id retrieved from syscfg.db : RDKM

```

```

230411-07:01:52.423759 getAccountid() called from: /lib/rdk/dca_utility.sh - account_id is not available from syscfg.db or tr181
param, defaulting to Unknown...
outputjson-----{"Profile":"RDKB"},"mac":"E4:5F:01:FB:13:4B"},"erouterIpv4":"192.168.225.58"},"erouterIpv6":"
<#=#>EROUTER_IPV6<#=#>"},"PartnerId":"RDKM"},"Accountid":"Unknown"},"Version":"rdkb-generic-broadband-image_rdk-
next_20230405075111"},"Time":"2023-04-11 07:01:52"}
outputjson1-----{"searchResult":{"Firewall":"9"},"Profile":"RDKB"},"mac":"E4:5F:01:FB:13:4B"},"erouterIpv4":"
192.168.225.58"},"erouterIpv6":"<#=#>EROUTER_IPV6<#=#>"},"PartnerId":"RDKM"},"Accountid":"Unknown"},"Version":"rdkb-
generic-broadband-image_rdk-next_20230405075111"},"Time":"2023-04-11 07:01:52"}}
TELEMETRY_JSON_RESPONSE file is -----/nvram/rtl_json.txt
number of proUPdel:90
Upload protocol is:HTTPS
HTTPURL:https://xconf.rdkcentral.com/xconf/logupload.php
ifconfig: eth0: error fetching interface information: Device not found
ifconfig: eth0: error fetching interface information: Device not found
=====Telemetry has file only one upload=====
call uploadLogOnReboot
Sleeping for seven minutes
ifconfig: eth0: error fetching interface information: Device not found
grep: /etc/syslog.conf: No such file or directory
grep: /etc/syslog.conf: No such file or directory
call uploadLogOnReboot
Sleeping for seven minutes
230411-07:02:04.286149 dca: Using Direct commnication
number of proUPdel:90
Upload protocol telemetry is:HTTPS
before HTTP upload
number of httpdeli:90
HTTPTELEMETRYURL:https://xconf.rdkcentral.com/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 'https://xconf.rdkcentral.com/xconf/telemetry\_upload.php' --connect-timeout 30 -m 30
% Total % Received % Xferd Average Speed Time Time Current
Dload Upload Total Spent Left Speed
100 299 0 0 100 299 0 263 0:00:01 0:00:01 --:--: 263
http code in telemetry is :200
HTTP telemetry curl upload succeeded!!!!!!!!!!!!!!
Done sleeping prev logpath /rdklogs/logs//PreviousLogs
ckp100-----prev log path-----/rdklogs/logs//PreviousLogs
rm: cannot remove `04-11-23-07-01AM.tgz': No such file or directory
ckp101-----upload log-----true
total 563
drwxr-xr-x 2 root root 1024 Apr 11 07:02 .
drwxr-xr-x 4 root root 3072 Apr 11 07:01 ..
-rw-r--r-- 1 root root 9240 Apr 11 07:02 04-11-23-07-02AM-ArmConsolelog.txt.0
-rw-r--r-- 1 root root 529 Apr 11 07:01 04-11-23-07-02AM-BootTime.log
-rw-r--r-- 1 root root 13541 Apr 11 07:02 04-11-23-07-02AM-CRlog.txt.0
-rw-r--r-- 1 root root 63697 Apr 11 07:02 04-11-23-07-02AM-Consolelog.txt.0
-rw-r--r-- 1 root root 85613 Apr 11 07:01 04-11-23-07-02AM-FirewallDebug.txt
-rw-r--r-- 1 root root 2659 Apr 11 07:02 04-11-23-07-02AM-LM.txt.0
-rw-r--r-- 1 root root 17456 Apr 11 07:01 04-11-23-07-02AM-MnetDebug.txt
-rw-r--r-- 1 root root 89703 Apr 11 07:02 04-11-23-07-02AM-PAMlog.txt.0
-rw-r--r-- 1 root root 7557 Apr 11 07:02 04-11-23-07-02AM-PARODUSlog.txt.0
-rw-r--r-- 1 root root 152586 Apr 11 07:02 04-11-23-07-02AM-PSMlog.txt.0
-rw-r--r-- 1 root root 2967 Apr 11 07:02 04-11-23-07-02AM-TDMlog.txt.0
-rw-r--r-- 1 root root 10988 Apr 11 07:02 04-11-23-07-02AM-TR69log.txt.0
-rw-r--r-- 1 root root 67106 Apr 11 07:02 04-11-23-07-02AM-WEBPAllog.txt.0
-rw-r--r-- 1 root root 36328 Apr 11 07:02 04-11-23-07-02AM-WiFillog.txt.0
-rw-r--r-- 1 root root 730 Apr 11 07:01 04-11-23-07-02AM-dcmscript.log
-rw-r--r-- 1 root root 1094 Apr 11 07:01 04-11-23-07-02AM-swupdate.log
-rw-r--r-- 1 root root 203 Apr 11 07:02 04-11-23-07-02AM-version.txt
Done sleeping prev logpath /rdklogs/logs//PreviousLogs
ckp100-----prev log path-----/rdklogs/logs//PreviousLogs
rm: cannot remove `04-11-23-07-01AM.tgz': No such file or directory
ckp101-----upload log-----true
total 563
drwxr-xr-x 2 root root 1024 Apr 11 07:02 .
drwxr-xr-x 4 root root 3072 Apr 11 07:01 ..
-rw-r--r-- 1 root root 9240 Apr 11 07:02 04-11-23-07-02AM-ArmConsolelog.txt.0
-rw-r--r-- 1 root root 529 Apr 11 07:01 04-11-23-07-02AM-BootTime.log
-rw-r--r-- 1 root root 13541 Apr 11 07:02 04-11-23-07-02AM-CRlog.txt.0
-rw-r--r-- 1 root root 63697 Apr 11 07:02 04-11-23-07-02AM-Consolelog.txt.0
-rw-r--r-- 1 root root 85613 Apr 11 07:01 04-11-23-07-02AM-FirewallDebug.txt
-rw-r--r-- 1 root root 2659 Apr 11 07:02 04-11-23-07-02AM-LM.txt.0
-rw-r--r-- 1 root root 17456 Apr 11 07:01 04-11-23-07-02AM-MnetDebug.txt
-rw-r--r-- 1 root root 89703 Apr 11 07:02 04-11-23-07-02AM-PAMlog.txt.0
-rw-r--r-- 1 root root 7557 Apr 11 07:02 04-11-23-07-02AM-PARODUSlog.txt.0
-rw-r--r-- 1 root root 152586 Apr 11 07:02 04-11-23-07-02AM-PSMlog.txt.0
-rw-r--r-- 1 root root 2967 Apr 11 07:02 04-11-23-07-02AM-TDMlog.txt.0

```

```

-rw-r--r-- 1 root root 10988 Apr 11 07:02 04-11-23-07-02AM-TR69log.txt.0
-rw-r--r-- 1 root root 67106 Apr 11 07:02 04-11-23-07-02AM-WEBPAllog.txt.0
-rw-r--r-- 1 root root 36328 Apr 11 07:02 04-11-23-07-02AM-WiFillog.txt.0
-rw-r--r-- 1 root root 730 Apr 11 07:01 04-11-23-07-02AM-dcmscript.log
-rw-r--r-- 1 root root 1094 Apr 11 07:01 04-11-23-07-02AM-swupdate.log
-rw-r--r-- 1 root root 203 Apr 11 07:02 04-11-23-07-02AM-version.txt
ckp101-----
ckp101-----
Image Upgrade During Bootup ...!
Main APP of devinitFWDNLD---
2023-04-11 07:03:31 version = rdkb-generic-broadband-image_rdk-next_20230405075111
2023-04-11 07:03:31 buildtype = dev
Mac in jsonstr:E4:5F:01:FB:13:4B&model=RPI&capabilities=RCDL&capabilities=supportsFullHttpRequest
2023-04-11 07:03:31 JSONSTR: E4:5F:01:FB:13:4B&model=RPI&capabilities=RCDL&capabilities=supportsFullHttpRequest
Trying to communicate with XCONF server
URL_CMD: curl -w '%{http_code}' 'https://xconf.rdkcentral.com:19092/xconf/swu/stb?eStbMac=E4:5F:01:FB:13:4B&model=RPI&capabilities=RCDL&capabilities=supportsFullHttpRequest' -o /rdklogs/logs/response.txt >> /rdklogs/logs
/xconf_curl_httpcode
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 529 0 529 0 0 344 0 --:-- 0:00:01 --:-- 344
CKP: error from cloud exiting,check in upcoming reboot-----
number of proUPdel2:90
Upload protocol logupload is:HTTPS
before HTTP log upload
HTTPLOGUPLOADURL:https://xconf.rdkcentral.com/xconf/logupload.php
upload log file is:04-11-23-07-01AM.tgz
-----CURL_CMD2:curl -w '%{http_code}' -F filename=@/rdklogs/logs/PreviousLogs/E4:5F:01:FB:13:4B-Logs-04-11-23-07-01AM.
tgz 'https://xconf.rdkcentral.com/xconf/logupload.php' --connect-timeout 100 -m 100
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 65042 100 30 100 65012 15 33719 0:00:02 0:00:01 0:00:01 33735
http_code is :200
HTTP log upload succeeded!!!!!!!!!!!!!!
number of proUPdel2:90
Upload protocol logupload is:HTTPS
before HTTP log upload
HTTPLOGUPLOADURL:https://xconf.rdkcentral.com/xconf/logupload.php
upload log file is:04-11-23-07-01AM.tgz
-----CURL_CMD2:curl -w '%{http_code}' -F filename=@/rdklogs/logs/PreviousLogs/E4:5F:01:FB:13:4B-Logs-04-11-23-07-01AM.
tgz 'https://xconf.rdkcentral.com/xconf/logupload.php' --connect-timeout 100 -m 100
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 65042 100 30 100 65012 16 36198 0:00:01 0:00:01 --:-- 36214
http_code is :200
HTTP log upload succeeded!!!!!!!!!!!!!!
230411-07:04:32.736994 Log size max reached
230411-07:04:32.821587 UPLOAD_LOGS val is false
230411-07:04:32.829339 Log upload is disabled. Removing indicator in regular upload
/rdklogger/rdkbLogMonitor.sh: line 884: cd: /tmp/logs/: No such file or directory
/rdklogger/rdkbLogMonitor.sh: line 894: cd: OLDPWD not set
230411-07:04:32.932390 Get all parameters to create sysDescr...
230411-07:04:33.351295 RDKB_SYSDSCR : Raspberry Pi 3 device HW_REV: b03115; VENDOR: Raspberry Pi Foundation ;
BOOTR: BootloaderVersion; SW_REV: NotSupported_rdkb-generic-broadband-image_rdk-next_20230405075111; MODEL: RPI
230411-07:04:33.359898 sync logs to nvram2
tail: error reading `/rdklogs/logs/PreviousLogs': Is a directory
tail: error reading `/rdklogs/logs/PreviousLogs_backup': Is a directory
cat: /sys/class/net/eth0/address: No such file or directory
230411-07:04:37.763248 [DEBUG] ++IN function backupnvram2logs
230411-07:04:37.786904 [DEBUG] /rdklogger/rdkbLogMonitor.sh Notify telemetry to execute now before log upload !!!
inside dca_utility script with 1 as value for arguments
No dca-utility pid -----
cp: cannot stat `/nvram/telemetry/rtl_*': No such file or directory
230411-07:04:37.947660 dca: Trigger type is :2
triggertype-----2
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 1890 0 1890 0 0 1279 0 --:-- 0:00:01 --:-- 1280
Done Uploading Logs and removing rtl_json.txt file
sleep for :-----
dcaoutputjson----!!!!!!!!!!!!----{"searchResult":{"<remaining_keys>":"<remaining_values>"}}
230411-07:04:44.693759 getAccountid() called from: /lib/rdk/dca_utility.sh - partner_id retrieved from syscfg.db : RDKM
230411-07:04:44.814488 getAccountid() called from: /lib/rdk/dca_utility.sh - account_id is not available from syscfg.db or tr181
param, defaulting to Unknown...
outputjson-----{"Profile":"RDKB"},{"mac":"E4:5F:01:FB:13:4B"},{"erouterIpv4":"192.168.225.58"},{"erouterIpv6":"null"},
{"PartnerId":"RDKM"},{"Accountid":"Unknown"},{"Version":"rdkb-generic-broadband-image_rdk-next_20230405075111"},{"Time":
2023-04-11 07:04:44"}

```

```
outputjson1-----{"searchResult":{"Profile":"RDKB"},"mac":"E4:5F:01:FB:13:4B"},"erouterIpv4":"192.168.225.58"}, {"erouterIpv6":"","null"},"PartnerId":"RDKM"},"Accountid":"Unknown"},"Version":"rdkb-generic-broadband-image_rdk-next_20230405075111"},"Time":"2023-04-11 07:04:44"}}}
Done Uploading Logs and removing rtl_json.txt file
mv: cannot stat `*': No such file or directory
TELEMETRY_JSON_RESPONSE file is -----/nvram/rtl_json.txt
tail: Consolelog.txt.0: file truncated
call uploadLogOnReboot
Sleeping for seven minutes
No dca-utility pid -----
230411-07:05:00.716689 Telemetry Folder does not exist . Creating now
230411-07:05:00.737089 dca: Trigger type is :1
triggertype-----1
% Total % Received % Xferd Average Speed Time Time Time Current
      Dload Upload Total Spent Left Speed
0 0 0 0 0 0 0 0 --::-- --::-- --::-- 0Done sleeping prev logpath /rdklogs/logs//PreviousLogs
ckp100-----prev log path-----/rdklogs/logs//PreviousLogs
rm: cannot remove `04-11-23-07-04AM.tgz': No such file or directory
100 1890 0 1890 0 0ckp101-----upload log-----true0
    1323   0 --::-- 0:00:01 --::-- 1323
total 574
drwxr-xr-x 2 root root 1024 Apr 11 07:05 .
drwxr-xr-x 4 root root 3072 Apr 11 07:04 ..
-rw-r--r-- 1 root root 9240 Apr 11 07:04 04-11-23-07-05AM-ArmConsolelog.txt.0
-rw-r--r-- 1 root root 529 Apr 11 07:04 04-11-23-07-05AM-BootTime.log
-rw-r--r-- 1 root root 0 Apr 11 07:04 04-11-23-07-05AM-CRlog.txt.0
-rw-r--r-- 1 root root 74166 Apr 11 07:04 04-11-23-07-05AM-Consolelog.txt.0
-rw-r--r-- 1 root root 85613 Apr 11 07:04 04-11-23-07-05AM-FirewallDebug.txt
-rw-r--r-- 1 root root 0 Apr 11 07:04 04-11-23-07-05AM-LM.txt.0
-rw-r--r-- 1 root root 17456 Apr 11 07:04 04-11-23-07-05AM-MnetDebug.txt
-rw-r--r-- 1 root root 89703 Apr 11 07:04 04-11-23-07-05AM-PAMlog.txt.0
-rw-r--r-- 1 root root 9681 Apr 11 07:04 04-11-23-07-05AM-PARODUSlog.txt.0
-rw-r--r-- 1 root root 152586 Apr 11 07:04 04-11-23-07-05AM-PSMlog.txt.0
-rw-r--r-- 1 root root 2967 Apr 11 07:04 04-11-23-07-05AM-TDMlog.txt.0
-rw-r--r-- 1 root root 10988 Apr 11 07:04 04-11-23-07-05AM-TR69log.txt.0
-rw-r--r-- 1 root root 71226 Apr 11 07:04 04-11-23-07-05AM-WEBPAllog.txt.0
-rw-r--r-- 1 root root 44372 Apr 11 07:04 04-11-23-07-05AM-WiFilog.txt.0
-rw-r--r-- 1 root root 4932 Apr 11 07:04 04-11-23-07-05AM-dcmscript.log
-rw-r--r-- 1 root root 1555 Apr 11 07:04 04-11-23-07-05AM-svupdate.log
-rw-r--r-- 1 root root 203 Apr 11 07:04 04-11-23-07-05AM-version.txt
sleep for :-----
770
calling processJsonResponse-----
after calling processJsonResponse-----
after calling clearTelemetryConfig-----
after calling generateTelemetryConfig-----
schedulecronjob!!
after calling scheduleCron-----
dcaoutputjson-----{"searchResult":{"<remaining_keys>":"<remaining_values>"}}
230411-07:05:08.918136 getAccountid() called from: /lib/rdk/dca_utility.sh - partner_id retrieved from syscfg.db : RDKM
230411-07:05:09.025552 getAccountid() called from: /lib/rdk/dca_utility.sh - account_id is not available from syscfg.db or tr181
param, defaulting to Unknown...
outputjson-----{"Profile":"RDKB"},"mac":"E4:5F:01:FB:13:4B"},"erouterIpv4":"192.168.225.58"},"erouterIpv6":""
<##=>EROUTER_IPV6<##=>>"},"PartnerId":"RDKM"},"Accountid":"Unknown"},"Version":"rdkb-generic-broadband-image_rdk-
next_20230405075111"},"Time":"2023-04-11 07:05:09"}
outputjson1-----{"searchResult":{"Profile":"RDKB"},"mac":"E4:5F:01:FB:13:4B"},"erouterIpv4":"192.168.225.58"}, {"erouterIpv6":"","<##=>EROUTER_IPV6<##=>>"},"PartnerId":"RDKM"},"Accountid":"Unknown"},"Version":"rdkb-generic-
broadband-image_rdk-next_20230405075111"},"Time":"2023-04-11 07:05:09"}}}
TELEMETRY_JSON_RESPONSE file is -----/nvram/rtl_json.txt
number of proUPdel:90
Upload protocol is:HTTPS
HTTTPURL:https://xconf.rdkcentral.com/xconf/logupload.php
ifconfig: eth0: error fetching interface information: Device not found
ifconfig: eth0: error fetching interface information: Device not found
=====Telemetry has file only one upload=====
call uploadLogOnReboot
Sleeping for seven minutes
230411-07:05:20.709032 dca: Using Direct commnication
number of proUPdel:190
Upload protocol telemetry is:HTTPS
before HTTP upload
number of httpdeli:90
HTTPTelemetryURL:https://xconf.rdkcentral.com/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 'https://xconf.rdkcentral.com/xconf/telemetry\_upload.php' --connect-timeout 30 -m 30
% Total % Received % Xferd Average Speed Time Time Time Current
      Dload Upload Total Spent Left Speed
```

```

100 282 0 0 100 282 0 218 0:00:01 0:00:01 --:--: 218
http code in telemetry is :200
HTTP telemetry curl upload succeded!!!!!!!!!!!!!!
Done sleeping prev logpath /rdklogs/logs/PreviousLogs
ckp100-----prev log path-----/rdklogs/logs/PreviousLogs
rm: cannot remove `04-11-23-07-05AM.tgz': No such file or directory
ckp101-----upload log-----true
total 17
drwxr-xr-x 2 root root 3072 Apr 11 07:05 .
drwxr-xr-x 4 root root 3072 Apr 11 07:04 ..
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-ArmConsolelog.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-BootTime.log
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-CRlog.txt.0
-rw-r--r-- 1 root root 4176 Apr 11 07:05 04-11-23-07-05AM-Consolelog.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-FirewallDebug.txt
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-LM.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-MnetDebug.txt
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-PAMlog.txt.0
-rw-r--r-- 1 root root 121 Apr 11 07:05 04-11-23-07-05AM-PARODUSlog.txt.0
-rw-r--r-- 1 root root 175 Apr 11 07:05 04-11-23-07-05AM-PSMlog.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-TDMlog.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-TR69log.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-WEBPAllog.txt.0
-rw-r--r-- 1 root root 1236 Apr 11 07:05 04-11-23-07-05AM-WiFillog.txt.0
-rw-r--r-- 1 root root 485 Apr 11 07:05 04-11-23-07-05AM-dcmscript.log
-rw-r--r-- 1 root root 0 Apr 11 07:05 04-11-23-07-05AM-swupdate.log
-rw-r--r-- 1 root root 203 Apr 11 07:05 04-11-23-07-05AM-version.txt
ckp101-----
ckp101-----
number of proUPdel2:90
Upload protocol logupload is:HTTPS
before HTTP log upload
HTTPLOGUPLOADURL:https://xconf.rdkcentral.com/xconf/logupload.php
upload log file is:04-11-23-07-04AM.tgz
-----CURL_CMD2:curl -w '%{http_code}' -F filename=@/rdklogs/logs/PreviousLogs/E4:5F:01:FB:13:4B-Logs-04-11-23-07-04AM.
tgz 'https://xconf.rdkcentral.com/xconf/logupload.php' --connect-timeout 100 -m 100
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 2675 100 30 100 2645 24 2189 0:00:01 0:00:01 --:--: 2216
http_code is :200
HTTP log upload succeded!!!!!!!!!!!!!!
number of proUPdel2:90
Upload protocol logupload is:HTTPS
before HTTP log upload
HTTPLOGUPLOADURL:https://xconf.rdkcentral.com/xconf/logupload.php
upload log file is:04-11-23-07-05AM.tgz
-----CURL_CMD2:curl -w '%{http_code}' -F filename=@/rdklogs/logs/PreviousLogs/E4:5F:01:FB:13:4B-Logs-04-11-23-07-05AM.
tgz 'https://xconf.rdkcentral.com/xconf/logupload.php' --connect-timeout 100 -m 100
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 5432 100 30 100 5402 25 4554 0:00:01 0:00:01 --:--: 4583
http_code is :200
HTTP log upload succeded!!!!!!!!!!!!!!
Done Uploading Logs and removing rtl_json.txt file
Done Uploading Logs and removing rtl_json.txt file
mv: cannot stat `*': No such file or directory
230411-07:08:48.518731 RDK_LOGGER: Syncing every 10 minutes for initial 30 minutes
230411-07:08:48.527724 sync logs to nvram2
tail: error reading `/rdklogs/logs/PreviousLogs': Is a directory
tail: error reading `/rdklogs/logs/PreviousLogs_backup': Is a directory
killall: mldproxy: no process killed
mldproxy not found
No dca-utility pid -----
cp: cannot stat `nvram/telemetry/rtl_*': No such file or directory
230411-07:10:00.749149 dca: Trigger type is :1
triggertype-----1
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 1890 0 1890 0 1276 0 --:--: 0:00:01 --:--: 1275
sleep for :-----
770
calling processJsonResponse-----
after calling processJsonResponse-----
after calling clearTelemetryConfig-----
after calling generateTelemetryConfig-----
schedulecronjob!!
after calling scheduleCron-----

```

```

dcaoutputjson-----!!!!!!-----{"searchResult":{"<remaining_keys>":"<remaining_values>"}}
230411-07:10:09.023676 getAccountid() called from: /lib/rdk/dca_utility.sh - partner_id retrieved from syscfg.db : RDKM
230411-07:10:09.132621 getAccountid() called from: /lib/rdk/dca_utility.sh - account_id is not available from syscfg.db or tr181
param, defaulting to Unknown...
outputjson-----{"Profile":"RDKB"},{"mac":"E4:5F:01:FB:13:4B"},{"erouterIpv4":"192.168.225.58"},{"erouterIpv6":"
<#=#>EROUTER_IPV6<#=#>"},{"PartnerId":"RDKM"},{"Accountid":"Unknown"},{"Version":"rdkb-generic-broadband-image_rdk-
next_20230405075111"},{"Time":"2023-04-11 07:10:09"}
outputjson1-----{"searchResult":{"Profile":"RDKB"},{"mac":"E4:5F:01:FB:13:4B"},{"erouterIpv4":"192.168.225.58"},
{"erouterIpv6":"<#=#>EROUTER_IPV6<#=#>"},{"PartnerId":"RDKM"},{"Accountid":"Unknown"},{"Version":"rdkb-generic-
broadband-image_rdk-next_20230405075111"},{"Time":"2023-04-11 07:10:09"}}
TELEMETRY_JSON_RESPONSE file is -----/nvram/rtl_json.txt
number of proUPdel:90
Upload protocol is:HTTPS
HTTPTURL:https://xconf.rdkcentral.com/xconf/logupload.php
ifconfig: eth0: error fetching interface information: Device not found
ifconfig: eth0: error fetching interface information: Device not found
=====Telemetry has file only one upload=====
call uploadLogOnReboot
Sleeping for seven minutes
230411-07:10:21.023097 dca: Using Direct commnication
number of proUPdel1:90
Upload protocol telemetry is:HTTPS
before HTTP upload
number of httpdeli:90
HTTPTELEMETRYURL:https://xconf.rdkcentral.com/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 'https://xconf.rdkcentral.com/xconf/telemetry_upload.php' --connect-timeout 30 -m 30
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 282 0 0 100 282 0 262 0:00:01 0:00:01 --:-- 262
http code in telemetry is :200
HTTP telemetry curl upload succeded!!!!!!!!!!!!!!
Done sleeping prev logpath /rdklogs/logs/PreviousLogs
ckp100-----prev log path-----/rdklogs/logs/PreviousLogs
rm: cannot remove `04-11-23-07-10AM.tgz': No such file or directory
ckp101-----upload log-----true
total 43
drwxr-xr-x 2 root root 3072 Apr 11 07:10 .
drwxr-xr-x 4 root root 3072 Apr 11 07:07 ..
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-ArmConsolelog.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-BootTime.log
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-CRlog.txt.0
-rw-r--r-- 1 root root 11314 Apr 11 07:10 04-11-23-07-10AM-Consolelog.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-FirewallDebug.txt
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-LM.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-MnetDebug.txt
-rw-r--r-- 1 root root 433 Apr 11 07:10 04-11-23-07-10AM-PAMlog.txt.0
-rw-r--r-- 1 root root 981 Apr 11 07:10 04-11-23-07-10AM-PARODUSlog.txt.0
-rw-r--r-- 1 root root 175 Apr 11 07:10 04-11-23-07-10AM-PSMlog.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-TDMlog.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-TR69log.txt.0
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-WEBPAllog.txt.0
-rw-r--r-- 1 root root 15798 Apr 11 07:10 04-11-23-07-10AM-WiFillog.txt.0
-rw-r--r-- 1 root root 4635 Apr 11 07:10 04-11-23-07-10AM-dcmscript.log
-rw-r--r-- 1 root root 0 Apr 11 07:10 04-11-23-07-10AM-swupdate.log
-rw-r--r-- 1 root root 203 Apr 11 07:10 04-11-23-07-10AM-version.txt
ckp101-----
number of proUPdel2:90
Upload protocol logupload is:HTTPS
before HTTP log upload
HTTPLOGUPLOADURL:https://xconf.rdkcentral.com/xconf/logupload.php
upload log file is:04-11-23-07-10AM.tgz
-----CURL_CMD:curl -w '%{http_code}\n' -F filename=@/rdklogs/logs/PreviousLogs/E4:5F:01:FB:13:4B-Logs-04-11-23-07-10AM.
tgz 'https://xconf.rdkcentral.com/xconf/logupload.php' --connect-timeout 100 -m 100
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 5200 100 30 100 5170 26 4535 0:00:01 0:00:01 --:-- 4565
http_code is :200
HTTP log upload succeded!!!!!!!!!!!!!!
grep: /etc/syslog.conf: No such file or directory
grep: /etc/syslog.conf: No such file or directory
Done Uploading Logs and removing rtl_json.txt file

```

- Telemetry Log Markers

xconf.rdkcentral.com/xconf/upload/display.php

Log Portal

ies

Search

E45F01FB134B-Logs.x

File Name	Date
E45F01FB134B-Logs-04-11-23-07-01AM.log	April 11 2023 07:03 AM UTC
E45F01FB134B-Logs-04-11-23-07-04AM.log	April 11 2023 07:06 AM UTC
E45F01FB134B-Logs-04-11-23-07-05AM.log	April 11 2023 07:06 AM UTC
E45F01FB134B-Logs-04-11-23-07-10AM.log	April 11 2023 07:11 AM UTC

File Name

Date

4 entries (filtered from 18,927 total entries)

Previous

1

Next

Last cleanup done: February 18 2021 23:06

- Content of json Response

xconf.rdkcentral.com/xconf/upload/E45F01FB134B_TELE_04-11-2023-07-10AM.json	
{"searchResult":[{"Profile":"RDKB"}, {"mac":"E45F01FB134B"}, {"routerIpv4":"192.168.225.58"}, {"routerIpv6":"c#=#ROUTER_IPV6=#"}, {"PartnerId":"RDKB"}, {"AccountId":"Unknown"}, {"Version":"rdkb-generic-broadband-image_rdk-next_20230405075111"}, {"Time":"2023-04-11 07:10:09"}]}	

Feature Validation: Telemetry2_0

Pre- requisites for enabling Telemetry2_0

Telemetry Version: 2.0.1 (by default telemetry version as 1)

- Configure the below details to dcm.properties and comment out the other details .
File: /etc/dcm.properties
LOG_SERVER=xconf.rdkcentral.com
DCM_LOG_SERVER=<https://xconf.rdkcentral.com/xconf/logupload.php>
DCM_LOG_SERVER_URL=<https://xconf.rdkcentral.com:19092/loguploader/getSettings>
DCM_SCP_SERVER=xconf.rdkcentral.com
DCM_LA_SERVER_URL=<https://xconf.rdkcentral.com/xconf/logupload.php>

```
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# cat /etc/dcm.properties
LOG_SERVER=xconf.rdkcentral.com
DCM_LOG_SERVER=https://xconf.rdkcentral.com/xconf/logupload.php
DCM_LOG_SERVER_URL=https://xconf.rdkcentral.com:9092/loguploader/getSettings
DCM_SCP_SERVER=xconf.rdkcentral.com
DCM_LA_SERVER_URL=https://xconf.rdkcentral.com/xconf/logupload.php

root@RaspberryPi-Gateway:~#
```

- Below are the steps for enabling telemetry 2.0.1 in RPI
1. dmcli eRT setv Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.Enable bool true
 2. dmcli eRT setv Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.Version string 2.0.1
 3. dmcli eRT setv Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.ConfigURL string <https://xconf.rdkcentral.com:19092/loguploader/getT2Settings>
 4. touch /nvram/enable_t2_debug
 5. reboot the device
 6. pidof "telemetry2_0" - check the running status of telemetry2
 7. T2 DataModel will be loaded

- Below screenshot for enabling the T2 process of version 2.0.1 in RPI

```
root@RaspberryPi-Gateway:~# dmcli eRT setv Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.Enable bool true
CR component name is: eRT.com.cisco.spvtg.ccsp.CR
subsystem_prefix eRT.
setv from/to component(eRT.com.cisco.spvtg.ccsp.pam): Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.Enable
Execution succeed.

root@RaspberryPi-Gateway:~# dmcli eRT setv Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.Version string 2.0.1
CR component name is: eRT.com.cisco.spvtg.ccsp.CR
subsystem_prefix eRT.
setv from/to component(eRT.com.cisco.spvtg.ccsp.pam): Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.Version
Execution succeed.

root@RaspberryPi-Gateway:~# dmcli eRT setv Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.ConfigURL string https://xconf.rdkcentral.com:9092/logupl
oader/getT2Settings
CR component name is: eRT.com.cisco.spvtg.ccsp.CR
subsystem_prefix eRT.
setv from/to component(eRT.com.cisco.spvtg.ccsp.pam): Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.ConfigURL
Execution succeed.

root@RaspberryPi-Gateway:~# touch /nvram/enable_t2_debug
root@RaspberryPi-Gateway:~# reboot
root@RaspberryPi-Gateway:~#
```

- After reboot the device

```
root@RaspberryPi-Gateway:~# dmcli eRT getv Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.
CR component name is: eRT.com.cisco.spvtg.ccsp.CR
subsystem prefix eRT.
getv from/to component(eRT.com.cisco.spvtg.ccsp.pam): Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.
Execution succeed.
Parameter 1 name: Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.Enable
type: bool, value: true
Parameter 2 name: Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.ConfigURL
type: string, value: https://xconf.rdkcentral.com:9092/loguploader/getT2Settings
Parameter 3 name: Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.Version
type: string, value: 2.0.1
Parameter 4 name: Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.MessageBusSource.Enable
type: bool, value: true

root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# pidof "telemetry2_0"
2451
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# dmcli eRT getv Device.X_RDKCENTRAL-COM_T2.
CR component name is: eRT.com.cisco.spvtg.ccsp.CR
subsystem prefix eRT.
getv from/to component(eRT.com.cisco.spvtg.ccsp.telemetry): Device.X_RDKCENTRAL-COM_T2.
Execution succeed.
Parameter 1 name: Device.X_RDKCENTRAL-COM_T2.ReportProfiles
type: string, value:
Parameter 2 name: Device.X_RDKCENTRAL-COM_T2.ReportProfilesMsgPack
type: string, value:

root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# cd /nvram/.t2
.t2persistentfolder/ .t2reportprofiles/
root@RaspberryPi-Gateway:~# cd /nvram/.t2reportprofiles/
root@RaspberryPi-Gateway:/nvram/.t2reportprofiles# ls
root@RaspberryPi-Gateway:/nvram/.t2reportprofiles#
root@RaspberryPi-Gateway:/nvram/.t2reportprofiles#
```

- **Telemetry 2.0 Report Profiles**
Telemetry 2 adds support for RDK Components to send their telemetry data to the T2 component for reporting. This allows for moving away from the CPU-intensive process of searching through log files for telemetry strings.
Telemetry 2.0 allows for an RDK device to be updated with a set of T2 profiles at any time.

- T2 DataModel

There are 2 parameters under T2 report profiles,

	DM	Description
1	Device.X_RDKCENTRAL-COM_T2.ReportProfilesMsgPack	Value must be JSON configuration blob in base 64 encoded msgpack format


```

root@RaspberryPi-Gateway:/nvram/.t2reportprofiles# ls
RDKB CCSPWiFi Profile  RDKB SelfHeal Profile
root@RaspberryPi-Gateway:/nvram/.t2reportprofiles# cat RDKB CCSPWiFi Profile
{"Name":"RDKB_CCSPWiFi_Profile","Description":"Report to check WiFi Parameters","Version":"1","Protocol":"HTTP","EncodingType":"JSON","ReportingInterval":180,"TimeReference":"0001-01-01T00:00:00Z","ActivationTimeout":1800,"Parameter":[{"type":"dataModel","reference":"Profile.Name"}, {"type":"dataModel","reference":"Profile.Version"}, {"type":"dataModel","name":"UPTIME", "reference":"Device.DeviceInfo.UpTime", "use":"absolute"}, {"type":"dataModel","reference":"Device.DeviceInfo.UpTime", "use":"absolute"}, {"type":"event", "eventName":"2GclientMac_split", "component":"wifihealth", "use":"absolute"}, {"type":"event", "eventName":"5GclientMac_split", "component":"wifihealth", "use":"absolute"}, {"type":"event", "name":"wifiradio_WIFI_COUNT", "eventName":"WIFI_MAC_1_TOTAL_COUNT:0", "component":"wifiradio", "use":"count", "reportEmpty":false}, {"type":"dataModel", "name":"UPTIME", "reference":"Device.DeviceInfo.UpTime", "use":"absolute"}], "HTTP":{"URL":"http://35.161.239.220/xconf/telemetry_upload.php", "Compression":"None", "Method":"POST", "RequestURIParameter":[{"Name":"deviceId", "Reference":"Device.DeviceInfo.X_COMCAST-COM_CM_MAC"}, {"Name":"reportName", "Reference":"Profile.Name"}]}, "JSONEncoding":{"ReportFormat":"NameValuePair", "ReportTimestamp":"None", "Hash":"hash1"}}root@RaspberryPi-Gateway:/nvram/.t2reportprofiles#
root@RaspberryPi-Gateway:/nvram/.t2reportprofiles# cat RDKB SelfHeal Profile
{"Name":"RDKB SelfHeal_Profile","Description":"Report to check SelfHeal Parameters","Version":"2","Protocol":"HTTP","EncodingType":"JSON","ReportingInterval":180,"TimeReference":"0001-01-01T00:00:00Z","ActivationTimeout":1800,"Parameter":[{"type":"dataModel","reference":"Profile.Name"}, {"type":"dataModel","reference":"Profile.Version"}, {"type":"dataModel","name":"UPTIME", "reference":"Device.DeviceInfo.UpTime", "use":"absolute"}, {"type":"dataModel","reference":"Device.DeviceInfo.UpTime", "use":"absolute"}, {"type":"event", "eventName":"SYS_ERROR_AdvSecurity_NotRunning", "component":"SELF_HEAL", "use":"absolute"}, {"type":"event", "eventName":"SYS_SH_lighttpdCrash", "component":"test-and-diagnostic", "use":"count", "reportEmpty":false}, {"type":"dataModel", "name":"WAN_SSH_STATUS", "reference":"Device.DeviceInfo.X_RDKCENTRAL-COM_Syndication.WANsideSSH.Enable", "use":"absolute"}, {"type":"event", "eventName":"SYS_SH_lighttpdCrash", "component":"test-and-diagnostic", "use":"count", "reportEmpty":false}, {"type":"dataModel", "name":"WAN_SSH_STATUS", "reference":"Device.DeviceInfo.X_RDKCENTRAL-COM_Syndication.WANsideSSH.Enable", "use":"absolute"}], "HTTP":{"URL":"http://35.161.239.220/xconf/telemetry_upload.php", "Compression":"None", "Method":"POST", "RequestURIParameter":[{"Name":"deviceId", "Reference":"Device.DeviceInfo.X_COMCAST-COM_CM_MAC"}, {"Name":"reportName", "Reference":"Profile.Name"}]}, "JSONEncoding":{"ReportFormat":"NameValuePair", "ReportTimestamp":"None", "Hash":"hash2"}}root@RaspberryPi-Gateway:/nvram/.t2reportprofiles#
root@RaspberryPi-Gateway:/nvram/.t2reportprofiles#
root@RaspberryPi-Gateway:/nvram/.t2reportprofiles#

```

- **Telemetry 2.0 Report Profiles Generation in xconf,**
Flow: xconf Server UI -> Telemetry -> Telemetry 2.0 Profiles -> create



Common
Firmware
DCM
Telemetry
Settings
RFC
Tools
Changes

Application: admin
11/11/2021
UTC 07:27:27

Telemetry 2.0 Profile

Name

RPI_RDKB_TEST_Telemetry_2

JSON Config

```

{
  "Name": "Telemetry 2.0 Test Profile",
  "Version": "0.1",
  "Protocol": "HTTP",
  "EncodingType": "JSON",
  "ReportingInterval": 1800,
  "TimeReference": "0001-01-01T00:00:00Z",
  "Parameter": [
    {
      "type": "dataModel", "name": "CmMacT1",
      "reference": "Device.DeviceInfo.X_COMCAST-COM_CM_MAC"
    },
    {
      "type": "dataModel", "name": "ClearResetCount",
      "reference": "Device.DeviceInfo.ClearResetCount"
    },
    {
      "type": "dataModel", "name": "Desc",

```

Choose File No file chosen

Save Cancel

- Once you save the Telemetry 2.0 profile, you will get a message overlay 'Profile added to the pending changes'. Then go to Changes -> select the profile you create -> Click on "Approve selected changes".

Common
Firmware
DCM
Telemetry
Settings
RFC
Tools
Changes

Application: stb
admin
11/11/2021 07:39:09 UTC

Telemetry 2.0 Profile Changes

Pending 1
History 0

Approve selected changes

	Entity	User	Action	Diff	Updated
☒	RPI_RDKB_TEST_Telemetry_2	admin	CREATE	<pre> +NAME: RPI_RDKB_TEST_Telemetry_2 +JSON_CONFIG: { + "Name": "Telemetry 2.0 Test Profile", + "Version": "0.1", + "Protocol": "HTTP", + "EncodingType": "JSON", + "ReportingInterval": 1800, + "TimeReference": "0001-01-01T00:00:00Z", + "Parameter": [{ + "type": "dataModel", "name": "CmMacT1", + "reference": "Device.DeviceInfo.X_COMCAST-CO </pre>	11/11/2021 7:37AM UTC

Cancel

- Create Telemetry 2.0 Targeting Rule
Flow: Xconf Server -> Telemetry > Telemetry 2.0 Rules > create

Common
Firmware
DCM
Telemetry
Settings
RFC
Tools
Changes

Application: stb
admin
11/11/2021 07:45:02 UTC

Telemetry 2.0 Targeting rule

Rule and Telemetry 2.0 profile details

Rule Name: RPI_RDKB_TEST_Telemetry_2

Telemetry 2.0 profiles: RPI_RDKB_TEST_Telemetry_2

Rule condition

estbMacAddress IS B8:27:EB:22:16:36

OR

estbIP IS 192.168.1.4

AND

OR

☐ not
IS
+

Save

Cancel

- Verification
Flow: Xconf -Server -> Telemetry > Telemetry 2.0 Test page

Parameters

	estbIP	192.168.1.4
		

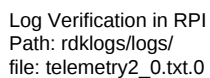
Context

Matched rules

estblP IS 192.168.1.4

- ## Sample SingleTelemetryProfiles

<https://xconf.rdkcentral.com:19092/loguploader/getTelemetryProfiles?estbMacAddress=B8:27:EB:22:16:36>



```
211111-07:19:38.313949 [mod=T2, lvl=DEBUG] [tid=9312] cospGetParameterValues --out
211111-07:19:38.314120 [mod=T2, lvl=DEBUG] [tid=9312] Device.DeviceInfo.X_COMCAST-COM_CM_MAC = B8:27:EB:22:16:36
211111-07:19:38.314244 [mod=T2, lvl=DEBUG] [tid=9312] getCCSPParamVal --out
211111-07:19:38.314373 [mod=T2, lvl=DEBUG] [tid=9312] getParameterValue --out
211111-07:19:38.314605 [mod=T2, lvl=DEBUG] [tid=9312] prepareHttpRequest: Modified URL: http://35.161.239.220/xconf/telemetry_upload.php?deviceId=B8%3A27%3AEB%3A
211111-07:19:38.314842 [mod=T2, lvl=DEBUG] [tid=9312] sendReportOverHTTP ++in
211111-07:19:38.314982 [mod=T2, lvl=DEBUG] [tid=9312] setHeader ++in
211111-07:19:38.315101 [mod=T2, lvl=DEBUG] [tid=9312] setHeader DEST URL http://35.161.239.220/xconf/telemetry_upload.php?deviceId=B8%3A27%3AEB%3A22%3A16%3A3
211111-07:19:38.317728 [mod=T2, lvl=DEBUG] [tid=9312] Address fe80::ba27:ebff:fe22:1636%erouter0 is link local or localhost . Cannot be considered as valid I
211111-07:19:38.320041 [mod=T2, lvl=DEBUG] [tid=9312] Address fe80::ba27:ebff:fe22:1636%erouter0 is link local or localhost . Cannot be considered as valid I
211111-07:19:38.320160 [mod=T2, lvl=DEBUG] [tid=9312] setHeader --out
211111-07:19:38.320262 [mod=T2, lvl=DEBUG] [tid=9312] getParameterValue ++in
211111-07:19:38.320360 [mod=T2, lvl=DEBUG] [tid=9312] getCCSPParamVal ++in
211111-07:19:38.320459 [mod=T2, lvl=DEBUG] [tid=9312] cospGetParameterValues ++in
211111-07:19:38.320575 [mod=T2, lvl=DEBUG] [tid=9312] findDestComponent ++in for paramName : Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.MTLS.En
211111-07:19:38.322828 [mod=T2, lvl=ERROR] [tid=9312] Failed to get component for Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.MTLS.Enable ret: 2
211111-07:19:38.329230 [mod=T2, lvl=ERROR] [tid=9312] Unable to find supporting component for parameter : Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Tele
211111-07:19:38.329358 [mod=T2, lvl=DEBUG] [tid=9312] cospGetParameterValues --out
211111-07:19:38.329461 [mod=T2, lvl=ERROR] [tid=9312] Unable to get Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.MTLS.Enable
211111-07:19:38.329559 [mod=T2, lvl=DEBUG] [tid=9312] getParameterValue --out
211111-07:19:38.330637 [mod=T2, lvl=ERROR] [tid=9312] getParameterValue failed
211111-07:19:38.597841 [mod=T2, lvl=INFO] [tid=9313] Report Sent Successfully over HTTP : 200
211111-07:19:38.598482 [mod=T2, lvl=DEBUG] [tid=9313] sendReportOverHTTP --out
211111-07:19:38.598607 [mod=T2, lvl=INFO] [tid=9313] Elapsed Time for : RDKB_SelfHeal_Profile = 0.596483041 (Sec.NanoSec)
211111-07:19:38.598707 [mod=T2, lvl=INFO] [tid=9313] CollectAndReport --out
211111-07:19:39.097916 [mod=T2, lvl=INFO] [tid=9312] Report Sent Successfully over HTTP : 200
211111-07:19:39.098566 [mod=T2, lvl=DEBUG] [tid=9312] sendReportOverHTTP --out
211111-07:19:39.098694 [mod=T2, lvl=INFO] [tid=9312] Elapsed Time for : RDKB_CCSPWiFi_Profile = 1.96471456 (Sec.NanoSec)
211111-07:19:39.098858 [mod=T2, lvl=INFO] [tid=9312] CollectAndReport --out
211111-07:22:38.000194 [mod=T2, lvl=INFO] [tid=4101] TIMEOUT for profile - RDKB_CCSPWiFi_Profile
211111-07:22:38.000211 [mod=T2, lvl=INFO] [tid=4100] TIMEOUT for profile - RDKB_SelfHeal_Profile
211111-07:22:38.000440 [mod=T2, lvl=INFO] [tid=4101] ReportProfiles_TimeoutCb ++in
211111-07:22:38.000530 [mod=T2, lvl=INFO] [tid=4100] ReportProfiles_TimeoutCb ++in
211111-07:22:38.000622 [mod=T2, lvl=DEBUG] [tid=4101] NotifyTimeout ++in
211111-07:22:38.000690 [mod=T2, lvl=DEBUG] [tid=4100] NotifyTimeout ++in
211111-07:22:38.000729 [mod=T2, lvl=DEBUG] [tid=4101] getProfile ++in
211111-07:22:38.000878 [mod=T2, lvl=DEBUG] [tid=4101] getProfile --out
211111-07:22:38.000995 [mod=T2, lvl=INFO] [tid=4101] NotifyTimeout: profile RDKB_CCSPWiFi_Profile is in Enabled state
211111-07:22:38.001015 [mod=T2, lvl=DEBUG] [tid=4100] getProfile ++in
211111-07:22:38.001179 [mod=T2, lvl=DEBUG] [tid=4100] getProfile --out
211111-07:22:38.001251 [mod=T2, lvl=DEBUG] [tid=4101] NotifyTimeout --out
211111-07:22:38.001295 [mod=T2, lvl=INFO] [tid=14177] CollectAndReport ++in profileName : RDKB_CCSPWiFi_Profile
211111-07:22:38.001353 [mod=T2, lvl=INFO] [tid=4101] ReportProfiles_TimeoutCb --out
- telemetry2_0.txt.0 1039/3127 33%
```

```

211111-07:58:54.055556 [mod=T2, lvl=DEBUG] [tid=12484] processPattern --out
211111-07:58:54.055654 [mod=T2, lvl=DEBUG] [tid=12484] Updating logseek after processPattern for WiFilog.txt.0
211111-07:58:54.055750 [mod=T2, lvl=DEBUG] [tid=12484] updateLogSeek ++in
211111-07:58:54.055850 [mod=T2, lvl=DEBUG] [tid=12484] Adding seekvalue of 92083 for WiFilog.txt.0 to logSeekMap
211111-07:58:54.055952 [mod=T2, lvl=DEBUG] [tid=12484] updateLogSeek --out
211111-07:58:54.056049 [mod=T2, lvl=DEBUG] [tid=12484] parseMarkerList --out
211111-07:58:54.056152 [mod=T2, lvl=DEBUG] [tid=12484] getDCAResultsInVector --out
211111-07:58:54.056249 [mod=T2, lvl=DEBUG] [tid=12484] getGrepResults --out
211111-07:58:54.056347 [mod=T2, lvl=INFO] [tid=12484] Grep complete for 4 markers
211111-07:58:54.056443 [mod=T2, lvl=DEBUG] [tid=12484] encodeGrepResultInJSON ++in
211111-07:58:54.056545 [mod=T2, lvl=DEBUG] [tid=12484] encodeGrepResultInJSON --Out
211111-07:58:54.056646 [mod=T2, lvl=DEBUG] [tid=12484] encodeEventMarkersInJSON ++in
211111-07:58:54.056744 [mod=T2, lvl=DEBUG] [tid=12484] encodeEventMarkersInJSON --Out
211111-07:58:54.056840 [mod=T2, lvl=DEBUG] [tid=12484] prepareJSONReport ++in
211111-07:58:54.056960 [mod=T2, lvl=DEBUG] [tid=12484] prepareJSONReport --Out
211111-07:58:54.057100 [mod=T2, lvl=INFO] [tid=12484] cJSON Report = {"searchResult":{"T2":"1.0"}, {"Profile":"RDKB"}, {"Time":"2021-11-11 07:58:53"}, {"mac":"
211111-07:58:54.057207 [mod=T2, lvl=INFO] [tid=12484] Report Size = 295
211111-07:58:54.057307 [mod=T2, lvl=DEBUG] [tid=12484] sendReportOverHTTP ++in
211111-07:58:54.057441 [mod=T2, lvl=DEBUG] [tid=12484] setHeader ++in
211111-07:58:54.057542 [mod=T2, lvl=DEBUG] [tid=12484] setHeader DEST URL http://35.161.239.220/xconf/telemetry_upload.php
211111-07:58:54.060140 [mod=T2, lvl=DEBUG] [tid=12484] Address fe80::ba27:ebff:fe22:1636%erouter0 is link local or localhost . Cannot be considered as valid
211111-07:58:54.062403 [mod=T2, lvl=DEBUG] [tid=12484] Address fe80::ba27:ebff:fe22:1636%erouter0 is link local or localhost . Cannot be considered as valid
211111-07:58:54.062526 [mod=T2, lvl=DEBUG] [tid=12484] setHeader --out
211111-07:58:54.062628 [mod=T2, lvl=DEBUG] [tid=12484] getParameterValue ++in
211111-07:58:54.062726 [mod=T2, lvl=DEBUG] [tid=12484] getCCSPParamVal ++in
211111-07:58:54.062824 [mod=T2, lvl=DEBUG] [tid=12484] ccspGetParameterValues ++in
211111-07:58:54.062982 [mod=T2, lvl=DEBUG] [tid=12484] findDestComponent ++in for paramName : Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.MTLS.E
211111-07:58:54.065114 [mod=T2, lvl=ERROR] [tid=12484] Failed to get component for Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.MTLS.Enable ret:
211111-07:58:54.065291 [mod=T2, lvl=ERROR] [tid=12484] Unable to find supporting component for parameter : Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Tel
211111-07:58:54.065409 [mod=T2, lvl=DEBUG] [tid=12484] ccspGetParameterValues --out
211111-07:58:54.065525 [mod=T2, lvl=ERROR] [tid=12484] Unable to get Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.Telemetry.MTLS.Enable
211111-07:58:54.065633 [mod=T2, lvl=DEBUG] [tid=12484] getParameterValue --out
211111-07:58:54.065737 [mod=T2, lvl=ERROR] [tid=12484] getParameterValue failed
211111-07:58:54.593891 [mod=T2, lvl=INFO] [tid=12484] Report Sent Successfully over HTTP : 200
211111-07:58:54.594437 [mod=T2, lvl=DEBUG] [tid=12484] sendReportOverHTTP --out
211111-07:58:54.594564 [mod=T2, lvl=INFO] [tid=12484] Elapsed Time for : RPI_RDKB_TEST_Telemetry = 0.593239250 (Sec.NanoSec)
211111-07:58:54.594731 [mod=T2, lvl=DEBUG] [tid=12484] CollectAndReportXconf --out
211111-07:58:56.434147 [mod=T2, lvl=DEBUG] [tid=2455] T2ER_PushDataWithDelim ++in
211111-07:58:56.434330 [mod=T2, lvl=DEBUG] [tid=2455] Received eventInfo : CHUTIL_1 split<#=#>0,0,20
211111-07:58:56.434446 [mod=T2, lvl=DEBUG] [tid=2455] Adding eventName : CHUTIL_1 split eventValue : 0,0,20 to t2event queue
211111-07:58:56.434561 [mod=T2, lvl=DEBUG] [tid=2455] T2ER_PushDataWithDelim --out
211111-07:58:56.434607 [mod=T2, lvl=DEBUG] [tid=23511] Received signal from T2ER_Push
211111-07:58:56.435037 [mod=T2, lvl=DEBUG] [tid=23511] Checking for events in event queue , event count = 1

```

- Verification via curl command
curl -i 'https://xconf.rdkcentral.com:19092/loguploader/getTelemetryProfiles?estbMacAddress=B8:27:EB:22:16:36'

```

root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# curl -i 'https://xconf.rdkcentral.com:9092/loguploader/getTelemetryProfiles?estbMacAddress=B8:27:EB:22:16:36'
HTTP/1.1 200 OK
Content-Type: application/json;charset=utf-8
Transfer-Encoding: chunked
Server: Jetty(9.4.37.v20210219)

{"profiles":[{"name":"RPI RDKB TEST Telemetry 2","versionHash":"7a94d8b3","value":{"Name":"Telemetry 2.0 Test Profile","Version":"0.1","Protocol":"HTTP","EncodingType":"JSON","ReportingInterval":1800,"TimeReference":"0001-01-01T00:00:00Z","Parameter":[{"type":"dataModel","name":"CmMacT1","reference":"Device.DeviceInfo.X_COMCAST-COM_CM_MAC"}, {"type":"dataModel","name":"ClearResetCount","reference":"Device.DeviceInfo.ClearResetCount"}, {"type":"dataModel","name":"Desc","reference":"Device.DeviceInfo.Description"}, {"type":"dataModel","reference":"Device.DeviceInfo.FactoryResetCount"}, {"type":"dataModel","name":"MemFree","reference":"Device.DeviceInfo.Hardware_MemFree"}, {"type":"dataModel","name":"MemUsed","reference":"Device.DeviceInfo.Hardware_MemUsed"}, {"type":"dataModel","name":"HwVer","reference":"Device.DeviceInfo.HardwareVersion"}, {"type":"dataModel","name":"MemStatFree","reference":"Device.DeviceInfo.MemoryStatus.Free"}, {"type":"dataModel","name":"MemStatTotal","reference":"Device.DeviceInfo.MemoryStatus.Total"}, {"type":"dataModel","name":"MemStatUsed","reference":"Device.DeviceInfo.MemoryStatus.Used"}, {"type":"dataModel","name":"FrMemThrsld","reference":"Device.DeviceInfo.MemoryStatus.X_RDKCENTRAL-COM_FreeMemThreshold"}, {"type":"dataModel","name":"CpuUsage","reference":"Device.DeviceInfo.ProcessStatus.CPUUsage"}, {"type":"dataModel","name":"Uptime","reference":"Device.DeviceInfo.Uptime"}]}, {"HTTP":{"URL":"http://35.161.239.220/xconf/telemetry_upload.php","Compression":"None","Method":"POST","RequestURIParameter":{"Name":"device","Reference":"Device.DeviceInfo.X_COMCAST-COM_CM_MAC"}, {"Name":"reportName","Reference":"Profile.Name"}, {"Name":"reportVersion","Reference":"Profile.Version"}}, {"JSONEncoding":{"ReportFormat":"NameValuePair","ReportTimestamp":"None"}}]}]root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#

```

Note : For T2 the profile validation using dmcli is available at the moment , For Configuring T2 profiles in XCONF UI ,webconfig support is mandatory.

Feature Validation: Remote Feature Control (RFC)

Note : For RFC Validation Webconfig cloud server support is needed ,Below details includes Client and Xconf Server side configurations only.

- Configuration In RPI
configure the xconf server URL in below path
File: /etc/rfc.properties
URL : RFC_CONFIG_SERVER_URL=<https://xconf.rdkcentral.com:19092/featureControl/getSettings>

```
root@RaspberryPi-Gateway:~# cat /etc/rfc.properties
# For CI Xconf replace URL "https://ci.xconfds.coast.xcal.tv/featureControl/getSettings"
# For Automation Xconf replace URL "https://rdkautotool.ccp.xcal.tv/featureControl/getSettings"
# For CI replace RFC_SLOT to 16, for automation replace slot with value 19

RFC_CONFIG_SERVER_URL="https://xconf.rdkcentral.com:19092/featureControl/getSettings"
RFC_RAM_PATH="/tmp/RFC"
RFC_LIST_FILE_NAME_PREFIX=.RFC_
RFC_LIST_FILE_NAME_SUFFIX=.list
RFC_WRITE_LOCK="/tmp/.rfcWriteLock"
RFC_WHITELIST_TOOL="rfctool"
RFC_POSTPROCESS="/lib/rdk/RFCpostprocess.sh"
TR181_STORE_FILENAME="/opt/secure/RFC/tr181store.ini"
TR181_LOCAL_STORE_FILENAME="/opt/secure/RFC/tr181localstore.ini"
TR181_LOCAL_STORE_AMLOGIC_FILENAME="/opt/persistent/tr181localstore.ini"
RFC_VAR_FILENAME="/opt/secure/RFC/rfcVariable.ini"
BS_STORE_FILENAME="/opt/secure/RFC/bootstrap.ini"
BS_JOURNAL_FILENAME="/opt/secure/RFC/bootstrap.journal"
RFC_SERVICE_LOCK="/tmp/.rfcServiceLock"
RFC_PATH="/opt/secure/RFC"

OLD_RFC_BASE="$PERSISTENT_PATH"
RFC_BASE="/opt/secure"
RFC_SLOT="8"
RFC_VIDEO_INITIAL_WAIT=2
root@RaspberryPi-Gateway:~#
```

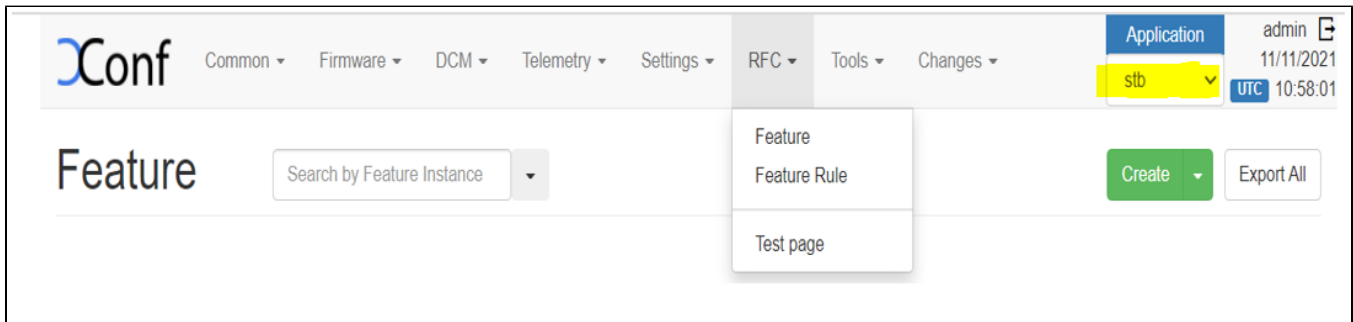
- Verify the existing(default) value of TR181 parameters

```
root@RaspberryPi-Gateway:~# dmcli eRT getv Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.TR069support.Enable
CR component name is: eRT.com.cisco.sptvg.ccsp.CR
subsystem_prefix eRT.
getv from/to component(eRT.com.cisco.sptvg.ccsp.pam): Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.TR069support.Enable
Execution succeed.
Parameter 1 name: Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.TR069support.Enable
type: bool, value: true
```

```
root@RaspberryPi-Gateway:~# dmcli eRT getv Device.X_Comcast_com_ParentalControl.ManagedSites.Enable
CR component name is: eRT.com.cisco.sptvg.ccsp.CR
subsystem_prefix eRT.
getv from/to component(eRT.com.cisco.sptvg.ccsp.pam): Device.X_Comcast_com_ParentalControl.ManagedSites.Enable
Execution succeed.
Parameter 1 name: Device.X_Comcast_com_ParentalControl.ManagedSites.Enable
type: bool, value: false
```

```
root@RaspberryPi-Gateway:~# dmcli eRT getv Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.PresenceDetect.Enable
CR component name is: eRT.com.cisco.sptvg.ccsp.CR
subsystem_prefix eRT.
getv from/to component(eRT.com.cisco.sptvg.ccsp.pam): Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.PresenceDetect.Enable
Execution succeed.
Parameter 1 name: Device.DeviceInfo.X_RDKCENTRAL-COM_RFC.Feature.PresenceDetect.Enable
type: bool, value: false
```

- Xconf Server UI Configuration
Change Application to stb in top right corner of the window.



- Define the Feature
 Flow : Xconf-Server -> RFC -> Feature -> Create
 Feature Instance: <Unique Identifier>
 Name: <Unique Identifier>
 Config Data: < tr181 parameter with its new value>
 Effective immediate: true
 Enable: true

The screenshot shows the 'Edit Feature' form in the XConf web interface. The form includes the following fields and controls:

- Feature Instance:** RPI_RDKB_RFC_TEST
- Name:** RPI_RDKB_RFC_TEST
- Effective immediate:** true (checked)
- Enable:** true (checked)
- Config Data:**
 - tr181.Device.DeviceInfo.X_f: false
- whitelisted:** ☐
- Buttons:** Save, Cancel

The screenshot shows the 'Edit Feature' form in the XConf web interface for a different feature. The form includes the following fields and controls:

- Feature Instance:** RPI_deepika
- Name:** testing rfcc
- Effective immediate:** true (checked)
- Enable:** true (checked)
- Config Data:**
 - tr181.Device.X_Comcast_cc: true
 - tr181.Device.DeviceInfo.X_f: true
- whitelisted:** ☐
- Buttons:** Save, Cancel

- Define the Feature Rule
 Flow: Xconf-server -> RFC -> Feature Rule -> Create
 Name : <Unique Identifier>

Priority: 1

Feature : choose your RFC feature (Previously created)

Rule : estbMacAddress IS <MAC Address>

OR

estbIP IS <IP Address>

https://xconf.rdkcentral.com:19093/admin/ux/7#/featurerule/edit/b304838c-862b-4c77-b549-b190a3772187?featureRules...

Application: admin, 04/17/2023, 10:50:40

Edit Feature Rule

Define properties

Name: RPI_RDKB_RFC_TEST Priority: 3

Features: RPI_RDKB_RFC_TEST

Rule

estbIP IS 192.168.225.58

OR

estbMacAddress IS E4:5F:01:FB:13:4B

OR

estbIP IS 192.168.225.85

OR

estbMacAddress IS B8:27:EB:22:16:36

AND OR ☐ not IS

Save Cancel

- RFC- Test Page

Flow: Xconf-server -> RFC -> Test Page

Parameter : estbMacAddress IS <MAC Address>

OR

estbIP IS <IP Address>

https://xconf.rdkcentral.com:19093/admin/ux/7#/rfc/testpage

Test page

Parameters

Enter content parameters like estbMacAddress or any model. Hit "Test with parameters" button to see results.

estbIP: 192.168.225.58

Test with Parameters

Content

["estbIP","192.168.225.58"]

Matched rules

Name: RPI_RDKB_RFC_TEST

estbIP IS 192.168.225.58

OR

estbMacAddress IS E4:5F:01:FB:13:4B

OR

estbIP IS 192.168.225.85

OR

estbMacAddress IS B8:27:EB:22:16:36

Name: RPI_deepika

estbIP IS 192.168.225.58

OR

estbIP IS 192.168.225.85

OR

estbMacAddress IS E4:5F:01:FB:13:4B

FeatureControl

```
{
  "features": [
    {
      "name": "RPI_RDKB_RFC_TEST",
      "effectiveImmediately": true,
      "enabled": true,
      "configData": {
        "trf8.Device.DeviceInfo.X_RDKCENTRAL_CP_RFC.Feature.1080support.disable": "false"
      },
      "featureInstance": "RPI_RDKB_RFC_TEST"
    },
    {
      "name": "trf8-rfc",
      "effectiveImmediately": true,
      "enabled": true,
      "configData": {
        "trf8.Device.X_Concat_Con_ParentalControl.ManagedStatus.disable": "true",
        "trf8.Device.DeviceInfo.X_RDKCENTRAL_CP_RFC.Feature.Promobroadcast.disable": "true"
      },
      "featureInstance": "RPI_deepika"
    }
  ]
}
```

- Verification through Curl command

Restart the rfc service: **systemctl restart rfc.service**

curl -i 'http://<IP>:19092/featureControl/getSettings?estbMacAddress=<MAC-Address>&model=RDKB_RPI'

Example : curl -i 'https://xconf.rdkcentral.com:19092/featureControl/getSettings?estbMacAddress=E4:5F:01:FB:13:4B&estbIP=192.168.225.58'

```

root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# curl -i 'https://xconf.rdkcentral.com:19092/featureControl/getSettings?estbMacAddress=E4:5F:01:FB:13:4B&estbIP=192.168.225.58'
HTTP/1.1 200 OK
configSetHash: 14vPynJZvwg3dEmmXT4zqpsu7jKAT2RwG5
Content-Type: application/json;charset=utf-8
Transfer-Encoding: chunked
Server: Jetty(9.4.37.v20210219)

{"featureControl":{"features":[{"name":"RPI_RDKB RFC_TEST","effectiveImmediate":true,"enable":true,"configData":{"tr181.Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.TR069support.Enable":"false"},"featureInstance":"RPI_RDKB RFC_TEST"}, {"name":"testing rfcc","effectiveImmediate":true,"enable":true,"configData":{"tr181.Device.X_Comcast_com_ParentalControl.ManagedSites.Enable":"true"},"featureInstance":"RPI_deepika"}]}}root@RaspberryPi-Gateway:~#

```

- Once it is successful, rfc-parsed.txt will be created under /tmp directory.
- Configured data's that are parsed to the client can be verified at **/tmp/rfc_configdata.txt**

```

root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# cat /tmp/rfc
rfc-parsed.txt      rfc_configdata.txt
root@RaspberryPi-Gateway:~# cat /tmp/rfc_configdata.txt
tr181.Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.TR069support.Enable#-false#-1
tr181.Device.X_Comcast_com_ParentalControl.ManagedSites.Enable#-true#-1
tr181.Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.PresenceDetect.Enable#-true#-1
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# cat /tmp/rfc-parsed.txt

" featureControl " : {
  " features " : [ {
    " name " : " RPI_RDKB RFC_TEST " ,
    " effectiveImmediate " : true ,
    " enable " : true ,
    " configData " : {
      " tr181. Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.TR069support.Enable " : " false "
    } ,
    " featureInstance " : " RPI_RDKB RFC_TEST "
  } ,

  " name " : " testing rfcc " ,
  " effectiveImmediate " : true ,
  " enable " : true ,
  " configData " : {
    " tr181. Device.X_Comcast_com_ParentalControl.ManagedSites.Enable " : " true " ,
    " tr181. Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.PresenceDetect.Enable " : " true "
  } ,
  " featureInstance " : " RPI_deepika "
} ]
root@RaspberryPi-Gateway:~#

```

- Verify with DM

```

root@RaspberryPi-Gateway:~# dmcli eRT getv Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.PresenceDetect.Enable
CR component name is: eRT.com.cisco.spvtg.ccsp.CR
subsystem prefix eRT.
getv from/to component(eRT.com.cisco.spvtg.ccsp.pam): Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.PresenceDetect.Enable
Execution succeed.
Parameter      1 name: Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.PresenceDetect.Enable
                type:      bool,      value: true

root@RaspberryPi-Gateway:~# dmcli eRT getv Device.X_Comcast_com_ParentalControl.ManagedSites.Enable
CR component name is: eRT.com.cisco.spvtg.ccsp.CR
subsystem prefix eRT.
getv from/to component(eRT.com.cisco.spvtg.ccsp.pam): Device.X_Comcast_com_ParentalControl.ManagedSites.Enable
Execution succeed.
Parameter      1 name: Device.X_Comcast_com_ParentalControl.ManagedSites.Enable
                type:      bool,      value: true

root@RaspberryPi-Gateway:~# dmcli eRT getv Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.TR069support.Enable
CR component name is: eRT.com.cisco.spvtg.ccsp.CR
subsystem prefix eRT.
getv from/to component(eRT.com.cisco.spvtg.ccsp.pam): Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.TR069support.Enable
Execution succeed.
Parameter      1 name: Device.DeviceInfo.X_RDKCENRAL-COM RFC.Feature.TR069support.Enable
                type:      bool,      value: false

root@RaspberryPi-Gateway:~#

```

- Verify the logs in **/rdklogs/logs/dcmrfc.log** file
Attaching the log file : [dcmrfc_log.txt](#)

Firmware Upgradation for RPI using Xconf Server

- Introduction
The Firmware upgrade will upgrade higher or lower version of the current image in RPI target with the help of Xconf server and TFTP/HTTP protocol.
- Pre-requisite
 - Access to Raspberry Pi terminal.
 - Locally installed HTTP/TFTP Server.
 - Access to Xconf server from browser <https://xconf.rdkcentral.com:19093/admin/>
- TFTP Server Setup
STEP 1:
Install xinetd and tftpd-hpa application in your local PC to setup tftp server by using below command
sudo apt-get install xinetd
sudo apt-get install tftpd-hpa

STEP 2:
Create new folder ,for example "tftphome" in your PC home directory to maintain checksum file and upgrading image file.

```
elxsi@elxsi-VirtualBox:~$
elxsi@elxsi-VirtualBox:~$
elxsi@elxsi-VirtualBox:~$ mkdir tftphome
```

STEP 3:
Check tftp file is there or not in /etc/xinetd.d/ directory. if it is not there then create tftp file under this /etc/xinetd.d/ direcotry and add below content.

vi /etc/xinetd.d/tftp

```
service tftp
{
  protocol    = udp
  port        = 69
  socket_type = dgram
  wait        = yes
  user        = nobody
  server       = /usr/sbin/in.tftpd
  server_args = -c -v -s /home/xyz/tftphome ( Give upgrading file and checksum file maintained directory )
  disable     = no
}
```

File : /etc/xinetd.d/tftp

```
elxsi@elxsi-VirtualBox: ~
service tftp
{
  protocol    = udp
  port        = 69
  socket_type = dgram
  wait        = yes
  user        = nobody
  server       = /usr/sbin/in.tftpd
  server_args = -c -v -s /home/elxsi/tftphome
  disable     = no
}
~
~
~
~
```

- Verify /etc/default/tftpd-hpa file content

vi /etc/default/tftpd-hpa

```
# /etc/default/tftpd-hpa

TFTP_USERNAME="tftp"
TFTP_DIRECTORY="/home/xyz/tftphome" ( Give upgrading file and checksum file maintained directory )
TFTP_ADDRESS="0.0.0.0:69"
TFTP_OPTIONS="--secure"
```

File: /etc/default/tftpd-hpa

```
elxsi@elxsi-VirtualBox: ~
# /etc/default/tftpd-hpa

TFTP_USERNAME="tftp"
TFTP_DIRECTORY="/home/elxsi/tftphome"
TFTP_ADDRESS="0.0.0.0:69"
TFTP_OPTIONS="--secure"
~
~
~
~
~
~
```

STEP 5: Start tftp server and xinetd server using below commands.

sudo service tftpd-hpa restart

sudo /etc/init.d/xinetd restart

- Procedure for image flashing
 - Have 2 different broadband images and copy to the linux machine
- Flash a image to the SD card(SD card Minimum size should be 8GB)
 - for Morty version
 - sudo dd if=<image> of=/dev/sdb bs=4M
 - Example : \$ sudo dd if=rdkb-generic-broadband-image_default_20190808132609.rootfs.rpi-sdimg of=/dev/sdb bs=1M
 - For dunfell version
 - bzip2 -d <image>
 - sudo -E bmaptool copy --nobmap <image> /dev/sdb
 - Example:
 - \$ bzip2 -d rdk-generic-broadband-image-raspberrypi-rdk-broadband.wic.bz2
 - \$ sudo -E bmaptool copy --nobmap rdk-generic-broadband-image-raspberrypi-rdk-broadband.wic /dev/sd

```
elxsi@elxsi-VirtualBox: ~/XConf_firmware
elxsi@elxsi-VirtualBox:~/XConf_firmware$ ls
rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic      rdkb-generic-broadband-image_rdk-next_20211118174413.txt
rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic.bz2  rdkb-generic-broadband-image_rdk-next_20211118184509.rootfs.wic.bz2
elxsi@elxsi-VirtualBox:~/XConf_firmware$
elxsi@elxsi-VirtualBox:~/XConf_firmware$
elxsi@elxsi-VirtualBox:~/XConf_firmware$ bzip2 -d rdkb-generic-broadband-image_rdk-next_20211118184509.rootfs.wic.bz2
elxsi@elxsi-VirtualBox:~/XConf_firmware$ ls
rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic      rdkb-generic-broadband-image_rdk-next_20211118174413.txt
rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic.bz2  rdkb-generic-broadband-image_rdk-next_20211118184509.rootfs.wic
elxsi@elxsi-VirtualBox:~/XConf_firmware$
elxsi@elxsi-VirtualBox:~/XConf_firmware$
elxsi@elxsi-VirtualBox:~/XConf_firmware$ sudo -E bmaptool copy --nobmap rdkb-generic-broadband-image_rdk-next_20211118184509.rootfs.wic /dev/sdb
[sudo] password for elxsi:
bmaptool: info: no bmap given, copy entire image to '/dev/sdb'
bmaptool: info: 100% copied
bmaptool: info: synchronizing '/dev/sdb'
bmaptool: info: copying time: 1m 12.4s, copying speed 4.4 MiB/sec
elxsi@elxsi-VirtualBox:~/XConf_firmware$
```


xconf.rdkcentral.com:9093/admin/ux/#/namespacedlist/edit//CREATE/MAC_LIST

XConf Common Firmware DCM Telemetry Settings RFC Tools Changes Application admin 11/20/2021 UTC 06:45:32

Add MAC List

Choose File Browse

Name

RPI_RDKB_TEST

Data

B8:27:EB:22:16:3d

Save Cancel

- Create Firmware config
Flow: Xconf-Server->Firmware->Firmware Configs
After entered Firmware Configs page press create button to add your device firmware configuration detail.
Give Description, File name, Version and select your model name and save the details in xconf server.
Description: <unique Identifier>
File Name :<Upgrading image name>
Version: <Upgrading image name without .rootfs.rpi.sdimg or .bz2.wic>
Model: <Model name configured under Common Tab>

xconf.rdkcentral.com:9093/admin/ux/#/firmwareconfig/edit/

Common
Firmware
DCM
Telemetry
Settings
RFC
Tools
Changes

Application: admin
stb
11/20/2021
UTC 06:58:15

Firmware config

Description

RPI_RDKB_TEST

File name

rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic

Version

rdkb-generic-broadband-image_rdk-next_20211118174413

Models:

AH212

ARMV7

ARRIS

AUSA-TEST

AX061AEI

COGMATION_BB

COGMATION_ENV

DEV

DHA2332

EMU-ENV

EMULATOR

EMULATOR1

EMURDKV

ENV13

FWUPG_DEMO

HP40A

HP40A-DEV

HP44H

HX44X-TEST

NEWTEST

PP_MODEL

PROD

QA

QAENV

QAMODEL

RDK-B

RDK-C_T

RDK-C_TEST

RDK-C_TEST1

RDK-C_TEST2

RDK-V_TEST

RDK-V_TEST1

RDK_B_HEN

RDK_BROADBAND

RDKB-64BIT

RDKB-RPI-TEST

RDKB-TECHSUMMIT

RDKB_19

RDKB_RPI

RDKB_RPI_5J

RDKB_TURRIS

RDKSERVICE_RPI_TEST

RDKV-RPI3

RDKV_IPSTB

RDKV_RPI

RDKVA

RPI

RPI-3

RPI-TEST

RPI0

RPI4-FIRMWARE

RPI_BB

RPI_DEEPIKA

RPI_MAK

RPI_RDKB_TELEMETRY

RPI_RDKB_TEST

RPI_RDKM

TDK-B

TDKB-TEST

TEST-12

TESTCPE

TESTCPEFOR1212

TESTENV

TESTENVFOR2222

TESTENVFOR2255

VA-7802

VIP7802

XYZ123

YS4000

ZXK-AH212

ZZZ-AH212

Properties:

Key

Value

+

Save

Cancel

- Create Firmware Rule
Flow: Xconf-Server->Firmware->Firmware Rules
After entered Firmware Rule page press create button to add your device firmware Rule detail.
Please Select a Template : <MAC_RULE>
Name : <Name difined during firmware configs creation>
Type : <MAC_RULE>
Build Conditions:eStbMac IN_LIST <List-Id> AND model is <Model_Name>
Firmware Config:<select the same name defined during configs creation>

xconf.rdkcentral.com:9093/admin/ux/#/firmwarerule/add/RULE/

XConf Common Firmware DCM Telemetry Settings RFC Tools Changes

Application: stb admin 11/20/2021 07:05:52 UTC

Add Firmware Rule

Please Select a Template

ENV_MODEL_RULE
HP44H-Template
IP_RULE
IV_RULE
MAC_RULE
MIN_CHECK_RULE
zzz-RULE

xconf.rdkcentral.com:9093/admin/ux/#/firmwarerule/add/RULE/

XConf Common Firmware DCM Telemetry Settings RFC Tools Changes

Application: stb admin 11/20/2021 07:05:52 UTC

Add Firmware Rule

PROPERTIES

Name: RPI_RDKB_TEST Type: MAC_RULE

BUILD CONDITIONS

eStbMac IN_LIST RPI_RDKB_TEST

AND OR ☐ not model IS RPI_RDKB_TEST +

Please provide value for each condition in the rule:
 click condition, enter fixedArg value, then click Plus button to save that condition.
 Note: Key value in condition can be modified. It's not allowed to add new conditions.

ACTION

Action Type: RULE

NoOp: false ☐

Firmware Config: -

Save Cancel

- Edit Download Location Round Robin Filter
 Flow: Xconf-server -> Firmware -> Download Location Filter -> Edit
 After entered Download Location Filter page press Edit button to add your Download Location detail.

Location (FQDN) : <xconf.rdkcentral.com>
 Location (full HTTP Location) : <<https://xconf.rdkcentral.com/xconf/upload/>>
 TFTP :< Tftp server IPv4 and IPv6 Address>

- Add TFTP location
 An HTTP location will be returned by default to all devices. To enable tftp(If you have the download location of the firmware as tftp, then only you need to setup this)as download location for a particular set of devices, we need to override it from firmware rules.
 Flow : Xconf-server -> Firmware ->Firmware Rules -> Define Properties -> Create

Name	Rule	Bypass Filters	Properties
Ah212_Firmware_rule_ocal_server	eStbMac IS D4:CF:F9:49:E8:C5		firmwareLocation: 192.168.1.63 firmwareDownloadProtocol: tftp
FirmwareRule_AH212_http_local_server	eStbMac IS 02:00:00:00:0C:00		firmwareLocation: http://192.168.43.168 firmwareDownloadProtocol: http

- A page will be displayed with options to select the template. Select 'DOWNLOAD_LOCATION_FILTER' from the list.

xconf.rdkcentral.com:9093/admin/ux/#/firmwarerule/add/DEFINE_PROPERTIES/

XConf Common Firmware DCM Telemetry Settings RFC Tools Changes

Application: admin 11/20/2021 09:07:27 UTC

Add Firmware Rule

Please Select a Template

DOWNLOAD_LOCATION_FILTER
MIN_CHECK_RI
REBOOT_IMMEDIATELY_FILTER
RPI_RDKB_TEST_new_rule

- In this 'firmware rule' page with type 'DOWNLOAD_LOCATION_FILTER', we need to specify the 'Build Conditions' and 'Action'. The build condition should be same as that we used to set rule actions(which will set rules for our intended devices). In 'Properties' option under 'Action', add 'firmwareDownloadProtocol' as 'tftp', 'firmwareLocation' as 'your tftp location IPV4 address'. This property will override the default value set from 'Download Round Robin location filter'.

xconf.rdkcentral.com:9093/admin/ux/#/firmwarerule/add/DEFINE_PROPERTIES/

XConf Common Firmware DCM Telemetry Settings RFC Tools Changes

Application: admin 11/20/2021 09:07:27 UTC

Add Firmware Rule

PROPERTIES

Name: RPI_RDKB_TEST_firmware Type: DOWNLOAD_LOCATION_FILTER

BUILD CONDITIONS

eStbMac IS BB:27:EB:22:10:30

AND OR ☐ not IS

Please provide value for each condition in the rule:
 click condition, enter fixedArg value, then click Plus button to save that condition.
 Note: Key value in condition can't be modified. It's not allowed to add new conditions.

ACTION

Action Type: DEFINE_PROPERTIES

Bypass Filters:

Properties

Key	Value	ValidationTypes
ipv6FirmwareLocation	fe80::cd5e:a664:8549:545b%4	STRING ☒
* firmwareLocation	192.168.1.4	STRING ☒
* firmwareDownloadProtocol	tftp	STRING ☒

* - required field

- Note: Setting up IPV4 locations via 'Download Location Round Robin Filter' is not supported. This can be set only by the property 'firmwareLocation' from the 'Define Properties' firmware rule page. Just like we added tftp location and protocol here, we can also override the default value with http as well. For firmwareDownloadProtocol, add 'http' and for the 'firmwareLocation', add http location.
- Response example for https://{xconf-ip}:{port}/xconf/swu/stb?eStbMac={mac}. Here the 'firmwareLocation' and 'firmwareDownloadProtocol' are overridden at 'Define Properties' firmware rule.
- The 'ipv6' addresses will be one of the addresses mentioned in the 'Download Filter' page. If you don't want "ipv6FirmwareLocation", then don't setup it in 'Define Properties' or in the 'Download location filter' pages and you will get only "firmwareLocation" in the response.

← → ↻ xconf.rdkcentral.com:9092/xconf/stb?eStbMac=B8:27:EB:22:16:36 🔍 ☆ ⚙️ 👤 ⋮

```
{ "firmwareDownloadProtocol": "tftp", "firmwareFilename": "rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic", "firmwareLocation": "192.168.1.4", "firmwareVersion": "rdkb-generic-broadband-image_rdk-next_20211118174413", "ipv6FirmwareLocation": "fe80::cd6e:a664:8549:545b/64", "rebootImmediately": false, "mandatoryUpdate": false }
```

- Verification of Firmware test page
Flow : Xconf-server -> Firmware -> Test Page
Parameters : eStbMac <MAC-Address>

🔒 xconf.rdkcentral.com:9093/admin/ux/#/firmware/testpage

STB ▼ UTC 15:56:10

Firmware Test page

Parameters

Enter context parameters like eStbMac or envmodel. Use toggle near plus sign to add predefined capabilities (RCDL, rebootDecoupled, supportsFullHttpUrl). Hit 'Test with parameters' button to see results.

🏠

eStbMac

B8:27:EB:22:16:36

+

-

Test With Parameters

Context

```
{"eStbMac":"B8:27:EB:22:16:36","applicationType":"stb","time":"2021-11-20T15:56:00.000","ipAddress":"1.1.1.1","timeZone":"UTC"}
```

Matched Rule

type:	MAC_RULE
name:	RPI_RDKB_TEST
id:	bfb7676-3575-4719-9787-a420772fcbaf
blocked:	false

eStbMac IN_LIST RPI_RDKB_TEST

Firmware Config

description:	RPI_RDKB_TEST
id:	24724cd7-96d5-4c28-b594-da23e050b73f
firmwareDownloadProtocol:	tftp
firmwareFilename:	rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
firmwareVersion:	rdkb-generic-broadband-image_rdk-next_20211118174413
rebootImmediately:	false
supportedModelIds:	["RPI_RDKB_TEST"]

Applied Filters

- DOWNLOAD_LOCATION_ROUND_ROBIN_FILTER_VALUE
- RPI_RDKB_TEST_firmware

- Client end Configurations and verification (in RPI)
Change the CLOUDURL URL in /etc/include.properties File
CLOUDURL=<https://xconf.rdkcentral.com:19092/xconf/swu/stb?eStbMac=>

```
root@RaspberryPi-Gateway:~# cat /etc/include.properties
LOG_PATH=/rdklogs/logs
CRON_SPOOL=/var/spool/cron/crontabs
CRON_FIFO_FILE=/etc/cron.d/FIFO
PERSISTENT_PATH=/nvram
RAMDISK_PATH=/tmp
TEMP_LOG_PATH=/var/logs
UTILITY_PATH=/lib/rdk
RDK_PATH=/lib/rdk
EROUTER_INTERFACE=erouter0
TELEMETRY_JSON_RESPONSE=/nvram/rtl_json.txt

CLOUDURL=https://xconf.rdkcentral.com:19092/xconf/swu/stb?eStbMac=
root@RaspberryPi-Gateway:~#
```

- Change the Contents of /etc/dcm.properties File
LOG_SERVER=xconf.rdkcentral.com
DCM_LOG_SERVER=<https://xconf.rdkcentral.com/xconf/logupload.php>
DCM_LOG_SERVER_URL=<https://xconf.rdkcentral.com:19092/loguploader/getSettings>
DCM_SCP_SERVER=xconf.rdkcentral.com
DCM_LA_SERVER_URL=<https://xconf.rdkcentral.com/xconf/logupload.php>

```
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# cat /etc/dcm.properties
LOG_SERVER=xconf.rdkcentral.com
DCM_LOG_SERVER=https://xconf.rdkcentral.com/xconf/logupload.php
DCM_LOG_SERVER_URL=https://xconf.rdkcentral.com:19092/loguploader/getSettings
DCM_SCP_SERVER=xconf.rdkcentral.com
HTTP_UPLOAD_LINK=https://xconf.rdkcentral.com/xconf/telemetry_upload.php
DCA_UPLOAD_URL=xconf.rdkcentral.com

DCM_HTTP_SERVER_URL=https://xconf.rdkcentral.com/xconf/telemetry_upload.php
DCM_LA_SERVER_URL=https://xconf.rdkcentral.com/xconf/logupload.php
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
```

- Change the TFTP address in /etc/device.properties



```
DEVICE_TYPE=broadband
BUILD_TYPE=dev
MOCA_INTERFACE=eth0
ETHERNET_INTERFACE=eth0
BUILD_VERSION=
MANUFACTURE=
LOG_PATH=/rdklogs/logs/
CORE_PATH=/mnt/memory/corefiles/
PROCESS_RESTART_LOG=/dev/null
MESH_SUPPORTED=false
WAN_TYPE=DOCSIS
BOX_TYPE=rpi
ARM_INTERFACE=erouter0
MODEL_NAME=RPI
ATOM_INTERFACE=br0
ATOM_INTERFACE_IP=192.168.101.3
ATOM_PROXY_SERVER=192.168.101.3
PARODUS_URL=tcp://127.0.0.1:6666
WEBPA_CLIENT_URL=tcp://192.168.101.3:6667
NVRAM2_SUPPORTED=yes
TFTP_SERVER_IP=192.168.1.4
PART_SIZE_OFFSET=4194304
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
- /etc/device.properties [Modified] 21/22 95%
```

- Check the image version using “cat /version.txt”

```
192.168.1.5 - PuTTY
login as: root
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# cat /version.txt
imagenam:rdkb-generic-broadband-image_rdk-next_20211118184509
BRANCH=rdk-next
YOCTO_VERSION=dunfell
VERSION=4.11.18.21
SPIN=0
BUILD_TIME="2021-11-18 18:45:09"
Generated on Thu Nov 18 18:45:09 UTC 2021
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# █
```

- Restart the service using below command
root@RaspberryPi-Gateway:~# systemctl restart swupdate.service
else reboot the board.
Note: For the 1st time board go for automatic reboot when we give restart of swupdate service and creates 2 more partitions in sd card.
- Check the response, xconf_curl_httpcode and swupdate log files under /rdklogs/logs/
- This log file contains the below details
service status, http code , MAC address , JSONSTR, cloud prototype (TFTP), cloud version , RPI version , Checksum ,Number of partitions
Device type, Active and Passive bank partitions ,Upgrade successful message.

```
root@RaspberryPi-Gateway:/rdklogs/logs# cat xconf_curl_httpcode
200root@RaspberryPi-Gateway:/rdklogs/logs#
root@RaspberryPi-Gateway:/rdklogs/logs# cat response.txt
{"firmwareDownloadProtocol":"tftp","firmwareFilename":"rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic","firmwareLocation":"192.168.1.4","firmwareVersion":"rdkb-generic-broadband-image_rdk-next_20211118174413","ipv6FirmwareLocation":"fe80::cd6e:a664:8549:545b/64","rebootImmediately":false,"mandatoryUpdate":false}root@RaspberryPi-Gateway:/rdklogs/logs#
root@RaspberryPi-Gateway:/rdklogs/logs#
root@RaspberryPi-Gateway:/rdklogs/logs#
root@RaspberryPi-Gateway:/rdklogs/logs# cat swupdate.log
Started executing swupdate_utility.sh and device type is :broadband
Main app & Triggering deviceInitiatedFWDnld.sh
URL_CMD: curl -w %{http_code} 'https://xconf.rdkcentral.com:9092/xconf/swu/stb?eStbMac=B8:27:EB:22:16:36' -o /tmp/cloudurl.txt >> /tmp/cloudhttpresp.txt
Trying to Retry connection with XCONF server...
```

- Sample Log
- root@RaspberryPi-Gateway:/rdklogs/logs#
root@RaspberryPi-Gateway:/rdklogs/logs# cat swupdate.log

```

Started executing swupdate_utility.sh and device type is :broadband
Main app & Triggering deviceInitiatedFWDnld.sh
URL_CMD: curl -w %{http_code} 'https://xconf.rdkcentral.com:9092/xconf/swu/stb?eStbMac=B8:27:EB:22:16:36' -o /tmp/cloudurl.
txt >> /tmp/cloudhttpresp.txt
No error in curl command and curl http code is:200
cloud version is rdkb-generic-broadband-image_rdk-next_20211118174413
RPI version is rdkb-generic-broadband-image_rdk-next_20211118184509
Active bank is:2
rpiimageModel in dev is :rdkb
cloudimageModel is :rdkb
no of parts is :4
active bank is 0 so fetch info from passive and partition is:2
rpiimageModel in dev is :rdkb
passivebankVersion:
since bank1 p3 is broadband and pass bank is rdkv cloud is broadband check broadband version and upgrade if mismatches
check broadband versions and upgrade if mismatches !!
Device type is broadband !!
Image Upgrade During Bootup ...!
Main APP of devinitFWDnld.sh
2021-11-22 07:15:14 version = rdkb-generic-broadband-image_rdk-next_20211118184509
2021-11-19 07:15:14 buildtype = dev
Mac in jsonstr:B8:27:EB:22:16:36&model=RPI&capabilities=RCDL&capabilities=supportsFullHttpUrl
2021-11-22 07:15:14 JSONSTR: B8:27:EB:22:16:36&model=RPI&capabilities=RCDL&capabilities=supportsFullHttpUrl
Trying to communicate with XCONF server
URL_CMD: curl -w %{http_code} 'https://xconf.rdkcentral.com:19092/xconf/swu/stb?eStbMac=B8:27:EB:22:16:
36&model=RPI&capabilities=RCDL&capabilities=supportsFullHttpUrl' -o /rdklogs/logs/response.txt >> /rdklogs/logs
/xconf_curl_httpcode
CKP: got no error in curl command!!!!!!!!!!!!!!200
Curl return code : 0
ret = 0, http_code = 200 for XCONF communication
2021-11-22 07:15:15 HTTP request success. Processing response..
OUTPUT1 :
2021-11-22 07:15:16 cloudFWFile: rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
2021-11-22 07:15:16 cloudFWLocation: 192.168.1.4
2021-11-22 07:15:16 cloudFWVersion: rdkb-generic-broadband-image_rdk-next_20211118174413
2021-11-22 07:15:16 cloudProto: tftp
2021-11-22 07:15:16 cloudImmediateRebootFlag: false
2021-11-22 07:15:16 myFWVersion = rdkb-generic-broadband-image_rdk-next_20211118184509
2021-11-22 07:15:16 myFWFile =
2021-11-22 07:15:16 lastDnldFile:
2021-11-22 07:15:16 cloudFWVersion: rdkb-generic-broadband-image_rdk-next_20211118174413
2021-11-22 07:15:16 cloudFWFile: rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
Xconf image Check
Firmware versions are different myFWVersion : rdkb-generic-broadband-image_rdk-next_20211118184509 cloudFWVersion : rdkb-
generic-broadband-image_rdk-next_20211118174413
cloudFWLocation192.168.1.4
cloudfile :rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
protocol1
2021-11-22 07:15:16 Starting Image Flashing ...
2021-11-22 07:15:16 Upgrade Server = 192.168.1.4
2021-11-22 07:15:16 Upgrade File = rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
2021-11-22 07:15:16 Reboot Flag = 0
2021-11-22 07:15:16 Upgrade protocol = 1
2021-11-22 07:15:16 PDRI Upgrade =
CKP !!!!!!! calling rpi_sw_install
Checking available partition for bank switch and image upgrade...
Creating additional partition for storage area and box will go for reboot...
storage partition mmcblk0p4 is available
file system type check count partition p3 is 0
Creating ext4 file system for partition mmc0blkp3...
Discarding device blocks: done
Creating filesystem with 524288 4k blocks and 131072 inodes
Filesystem UUID: 2fbcfc3a-6b84-48b0-a171-86dd13cbf82b
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done
file system type check count partition p4 is 0
Creating ext4 file system for partition mmc0blkp4...
Discarding device blocks: done
Creating filesystem with 524288 4k blocks and 131072 inodes
Filesystem UUID: 1c2075c1-9de9-4fb0-b9ab-f9ca277f54d7
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912

```

```

cloud proto is :1
set IPtable rules for tftp !!
cloudfile is:rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
cloudlocation is:192.168.1.4
Downloading already deployed checksum file from server rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
tftp download checksum file
checksum file to download is rdkb-generic-broadband-image_rdk-next_20211118174413.txt
Downloading rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic ...

```

- Verify the tftp download is happening by noticing the change of file size using below command:
ls /extblock/tftpimage/imagewndls -sh (use this command frequently to verify the file size change)

```

root@RaspberryPi-Gateway:/# ls
192.168.1.4  crontabs  extblock  home      media     nvram2    rdklogctrl  run       sys       var
bin          dev       fbank3    lib       mnt       opt       rdklogger   sbin      tmp       version.txt
boot        etc       fss       lost+found nvram     proc      rdklogs     srv       usr       www
root@RaspberryPi-Gateway:/# ls /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic -sh
155512 /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
root@RaspberryPi-Gateway:/#
root@RaspberryPi-Gateway:/# ls /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic -sh
162248 /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
root@RaspberryPi-Gateway:/# ls /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic -sh
172968 /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
root@RaspberryPi-Gateway:/# ls /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic -sh
186188 /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
root@RaspberryPi-Gateway:/# ls /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic -sh
221896 /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
root@RaspberryPi-Gateway:/# ls /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic -sh
224484 /extblock/tftpimage/imagewnd/rdkb-generic-broadband-image_rdk-next_20211118174413.rootfs.wic
root@RaspberryPi-Gateway:/# █

```

- Once image download completed, the RPI board will auto reboot and come up with downloaded image.
- Once the board comes up, check the image loaded in the box using "cat /version.txt" command .It will be upgraded with the image from xconf-server.

```

login as: root
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# cat /version.txt
imagename:rdkb-generic-broadband-image_rdk-next_20211118174413
BRANCH=rdk-next
YOCTO_VERSION=dunfell
VERSION=4.11.18.21
SPIN=0
BUILD_TIME="2021-11-18 17:44:13"
Generated on Thu Nov 18 17:44:13 UTC 2021
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~#
root@RaspberryPi-Gateway:~# █

```

- NOTE : Every time need to flash the different images . Because, here they are using the bank switching approach (<https://wiki.rdkcentral.com/display/RDK/RDKB+RPI+Firmware+Upgrade+-+Design+-+2019+M7>) where the images will be stored in the cloud. So for the next time, when you try to flash the same image to SD card , the firmware upgrade will not happen . The reason is, it will check in the bank (cloud – active and passive banks). If the image is already available in any one of the bank, then it will not go for image upgrade.

Sample Log:

```
After retries...No error in curl command and curl http code is:200
cloud version is rdkb-generic-broadband-image_rdk-next_20211118174413
RPI version is rdkb-generic-broadband-image_rdk-next_20211118174413
Active bank is:2
rpiimageModel in dev is :rdkb
cloudimageModel is :rdkb
no of parts is :4
active bank is 0 so fetch info from passive and partition is:2
rpiimageModel in dev is :rdkb
passivebankVersion:rdkb-generic-broadband-image_rdk-next_20211118174413
since both banks has broadband alone and cloud also has broadband-compare versions with cloud
atleast one bank matches broadband
root@RaspberryPi-Gateway:/rdklogs/logs# tail -f swupdate.log
RPI version is rdkb-generic-broadband-image_rdk-next_20211118174413
Active bank is:2
rpiimageModel in dev is :rdkb
cloudimageModel is :rdkb
no of parts is :4
active bank is 0 so fetch info from passive and partition is:2
rpiimageModel in dev is :rdkb
passivebankVersion:rdkb-generic-broadband-image_rdk-next_20211118174413
since both banks has broadband alone and cloud also has broadband-compare versions with cloud
atleast one bank matches broadband
```