

TR-069 Support for RDKB RPI Reference Platform

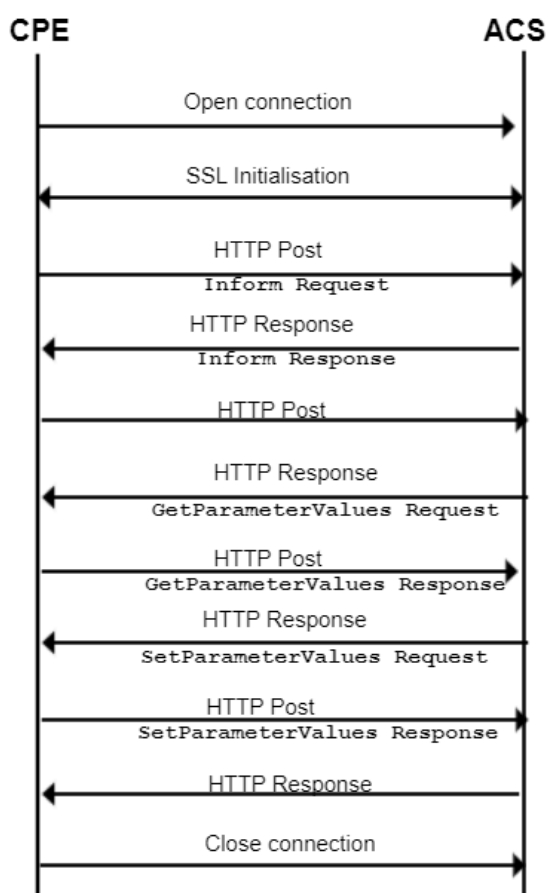
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Introduction

TR-069 is a technical specification that defines an application layer protocol for remote management of end-user devices. It was published by the Broadband Forum and was entitled CPE WAN Management Protocol (CWMP). It provides the communication between CPE and Auto Configuration Servers (ACS). An ACS can manage a device, trouble shoot, configure, upgrade etc. TR-69 uses common web protocols such as HTTP, TCP-IP, SOAP, XML-RPCs to exchange information.

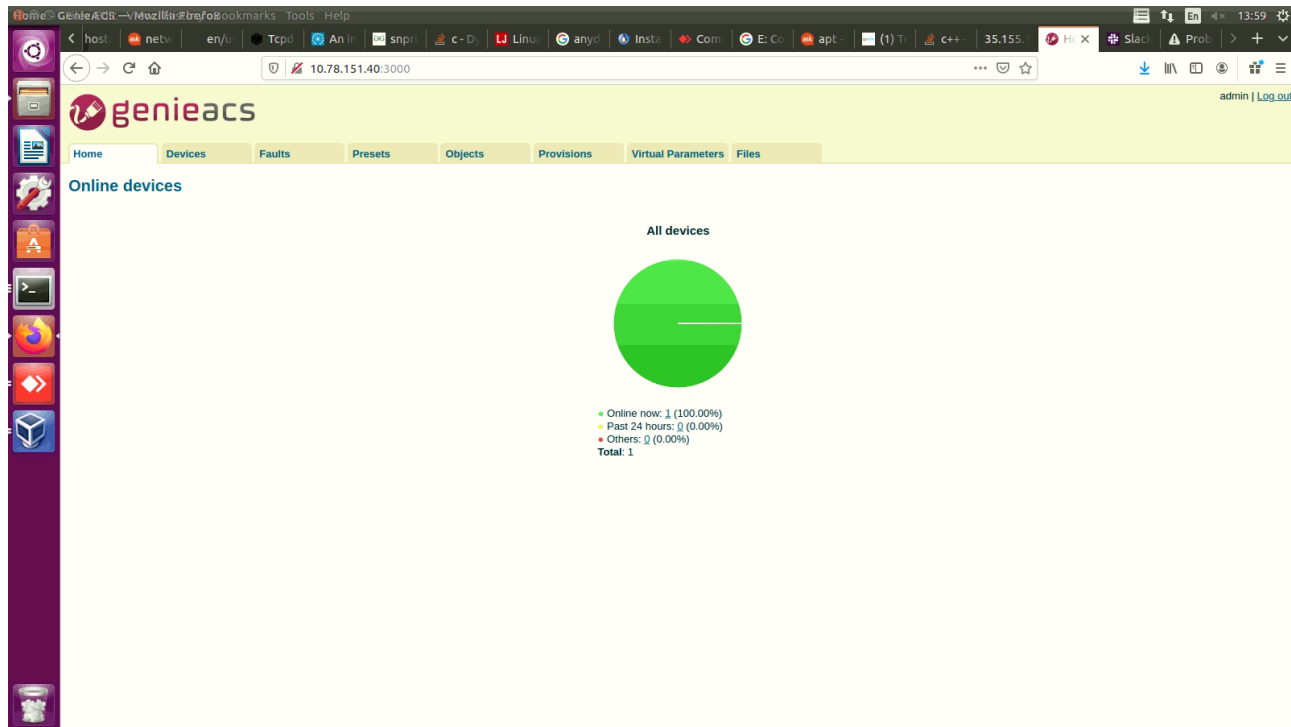
GenieACS Server and Client Rpi communication

The CPE is responsible for establishing the session to the server. The CPE keeps sending HTTP POST requests during the session. The session is closed as soon as both CPE & GenieACS have indicated that they have nothing more to send (response or new RPC)



GenieACS Server

Ensure the GenieACS Server Setup is launched and running to establish the Client-Server communication
GenieACS server home page:



Test Procedure

Client RPI set-up

Steps to be followed:

1. Flash the RDK-Broadband image where the Tr069 Protocol Agent is enabled
2. Check for the CcspTr069PaSsp is active and listening to port 7547

```
user@BLTSP01242:~/genieacs$ cd
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user@BLTSP01242:~/genieacs$ cd
user@BLTSP01242:~/genieacs$ cd
user@BLTSP01242:~/genieacs$ ssh root@10.78.151.169
root@raspberrypi-Gateway:~#
root@raspberrypi-Gateway:~# ls
etc node_modules
root@raspberrypi-Gateway:~#
root@raspberrypi-Gateway:~# netstat -ltnu
netstat: showing only processes with your user ID
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 127.0.0.1:1101         0.0.0.0:*               LISTEN      156/snmppd
tcp        0      0 0.0.0.0:5355          0.0.0.0:*               LISTEN      163/systemd-resolve
tcp        0      0 0.0.0.0:180           0.0.0.0:*               LISTEN      3854/lighttpd
tcp        0      0 0.0.0.0:53            0.0.0.0:*               LISTEN      4376/dnsmasq
tcp        0      0 10.78.151.169:22      0.0.0.0:*               LISTEN      2836/dropbear
tcp        0      0 0.0.0.0:7547          0.0.0.0:*               LISTEN      1637/CcspTr069PaSsp
tcp        0      0 127.0.0.1:705         0.0.0.0:*               LISTEN      156/snmppd
tcp        0      0 :::21515              :::*                    LISTEN      3854/lighttpd
tcp        0      0 :::5355               :::*                    LISTEN      163/systemd-resolve
tcp        0      0 :::52367              :::*                    LISTEN      369/syseventd
tcp        0      0 :::8080               :::*                    LISTEN      3854/lighttpd
tcp        0      0 :::53                :::*                    LISTEN      4376/dnsmasq
udp        0      0 0.0.0.0:10161         0.0.0.0:*               LISTEN      156/snmppd
udp        0      0 0.0.0.0:10163         0.0.0.0:*               LISTEN      156/snmppd
udp        0      0 0.0.0.0:53           0.0.0.0:*               LISTEN      4376/dnsmasq
udp        0      0 0.0.0.0:53           0.0.0.0:*               LISTEN      4376/dnsmasq
udp        0      0 10.78.151.169:123     0.0.0.0:*               LISTEN      280/ntpd
udp        0      0 127.0.0.1:123         0.0.0.0:*               LISTEN      280/ntpd
udp        0      0 0.0.0.0:161           0.0.0.0:*               LISTEN      156/snmppd
udp        0      0 0.0.0.0:5355          0.0.0.0:*               LISTEN      163/systemd-resolve
udp        0      0 :::10161              :::*                    LISTEN      156/snmppd
udp        0      0 fe80::ba27:ebff:feb4:8eba:546 :::*                    2133/dibbler-client
udp        0      0 fe80::ba27:ebff:feb4:8eba:123 :::*                    4376/dnsmasq
udp        0      0 :::1153               :::*                    280/ntpd
udp        0      0 :::161                :::*                    156/snmppd
udp        0      0 :::5355               :::*                    163/systemd-resolve
root@raspberrypi-Gateway:~#
```

3. Then, set the parameters,

```
$ dmccli eRT setv Device.ManagementServer.EnableCWMP bool true

$ dmccli eRT setv Device.ManagementServer.URL string http://10.78.151.40:7547/

$ dmccli eRT setv Device.DeviceInfo.X_RDKCENTRAL-COM_Syndication.TR69CertLocation string "/etc/cacert.pem"
```

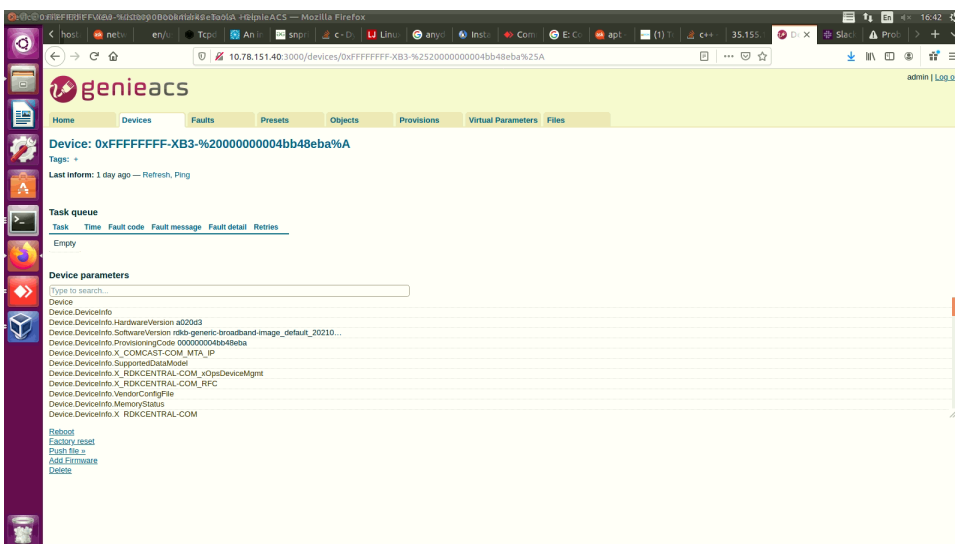
Following are the parameters needed to be checked for TR69

Parameter Name	Expected Value
Device.ManagementServer.EnableCWMP	true
Device.ManagementServer.URL	ACS Server URL: http://10.78.151.40:7547/
Device.DeviceInfo.X_RDKCENTRAL-COM_Syndication.TR69CertLocation	/etc/cacert.pem

Now, from the GenieACS Server try to fetch the Connected Devices details

GenieACS Server Login & Initial check

1. Visit the GenieACS Server page
2. Click on "Devices" that displays the connected devices information and the device parameters available



Limitations

Only Basic communication has been enabled, GPV, SPV, GPN and others will be achieved further