

Middleware Features

1. eMTA

- RDK-B supports embedded Multimedia Terminal Adapter (MTA stack itself not included as part of RDK-B - provided by OEM)
- Various OEM's can use their own MTA modules in collaboration with RDK-B middle ware
- RDK-B provides various monitoring metrics and a data model parameters to enable and monitor the MTA module provided by the OEM

2. Routing Information Protocol (RIP)

- RDK-B uses RIP as the routing mechanism
- RIP is a distance-vector routing protocols which employ the hop count as a routing metric. RIP prevents routing loops by implementing a limit on the number of hops allowed in a path from source to destination

2.1. Protocol

- RIP routes are redistributed into primary Routing table.
- RIPv2 runs as PE-CE routing protocol between CM and CMTS. In order to have the RIP routes into main routing table, RIP routes are further redistributed into Main routing table.

2.2. RIP protocol usage in RDK-B

In RDK-B the RIP protocol is used to exchange the routing information between the gateway and headend.

- Support for RIPv2 (RFC 2453) on the WAN
- Needed for static provisioning support
- If RIP is enabled on WAN
 - Need to allow multicast udp port 520 and unicast
- Object in it's DML Layer: Device.Routing.RIP.

3. Self Heal

- Continuously monitors the running CCSP processes and takes necessary actions
- Monitors and restarts processes when required
- For more details on feature [SelfHeal](#)

4. RDK Feature Control

- Enables quicker roll out of features
- Enables a secure channel for delivering runtime configurations to the device
- Ability to control when the feature needs to be enabled/disabled ? Disable now/ Disable during reboot
- For more details on feature [RDK Feature Control](#)

5. RDK Telemetry

- Telemetry is required to have more timely data about device health and status.
- The log and telemetry upload process is controlled through dcm-log service
- For more refer [Telemetry](#)

6. WEBPA

- WEBPA protocol provides this functionality of read/write access to device management parameters in an efficient manner as compared to TR-69 or SNMP.
- For more details on feature [WebPA](#)

7. MoCA

- Supports MoCA 2.0 for WiFi extenders
- Multimedia over Coax Alliance (MoCA) supports networking over coaxial cable. For more refer [CcspMoCA](#)

8. WiFi

- WPS support for WiFi connectivity
- Easy monitoring of WiFi credentials through UI
- WiFi Air Time Management feature helps the user to assign weight and prioritize the bandwidth allocation based on SSID
- WiFi Spectrum Analyzer feature provides the real time metrics for the WiFi radio spectrum
- Band Steering feature helps the device to smartly switch the connected devices between 2.4 GHz and 5 GHz frequency band
- WiFi Range Extender support
- For more refer [CcspWifiAgent](#)