# Integration of SNMP - RDKB RPI - Design - 2020 M7

Introduction

- SNMP Protocol Agent (PA) provides the solution for SNMP Protocol to access CCSP Data Model.
- Externally, SNMP protocol agent works like a regular SNMP agent. It takes coming SNMP requests and sends back the corresponding results or errors.
- Internally, SNMP protocol agent processes the SNMP requests and translates those into CCSP Messages. Those messages go on to CCSP Message Bus and come back with response messages. SNMP protocol agent processes the response messages and response to SNMP requests accordingly.
- In order to translate between SNMP requests and CCSP Messages, SNMP protocol agent loads the XML files describing how MIB objects are mapped to Data Model objects.

Design Considerations

1. Added snmpSubAgent systemd services to bring up the SnmpSubAgent component in RPI.
2. Added device specific snmpd.conf
3. Removed the MoCA MIB file from CcspRDKBMibList.xml
4. Removed resource leak function calls to avoid the run time errors of snmp module.
5. Added snmpd systemd service to bring up the snmpd in RPI

Architecture
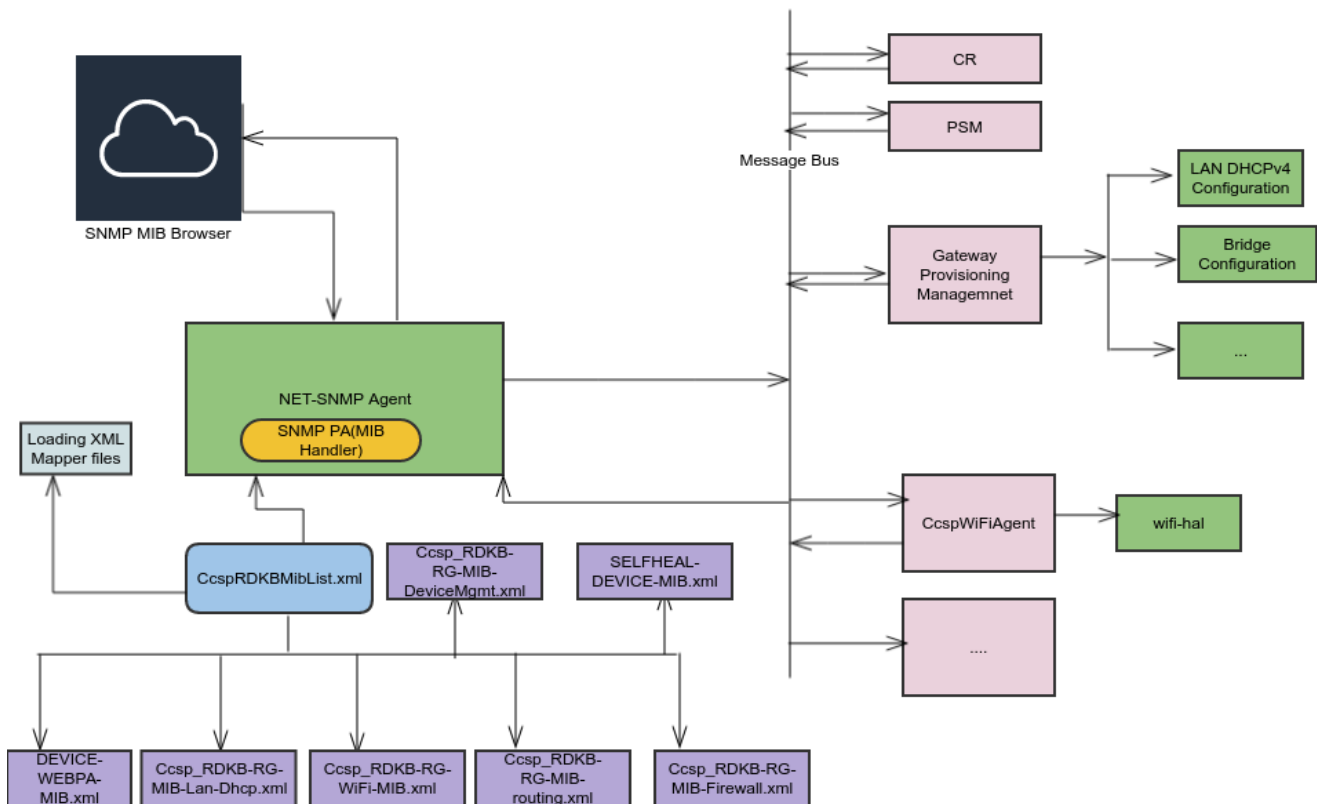
CCSP SNMP Protocol Agent is implemented as a NET-SNMP MIB handler. During startup, it loads all the XML files defining the following:

- MIB object – Data Model object mapping
- Custom callback APIs

After it is up, CCSP SNMP Protocol Agent processes the SNMP requests handed to it by NET- SNMP agent, send the translated CCSP Messages to the destination components, processes the responses and provide the result back to SNMP agent.

Root Node

The root node is named as "mib2DM". It is constructed with a set of scalar mib groups, mib tables and some informational nodes.