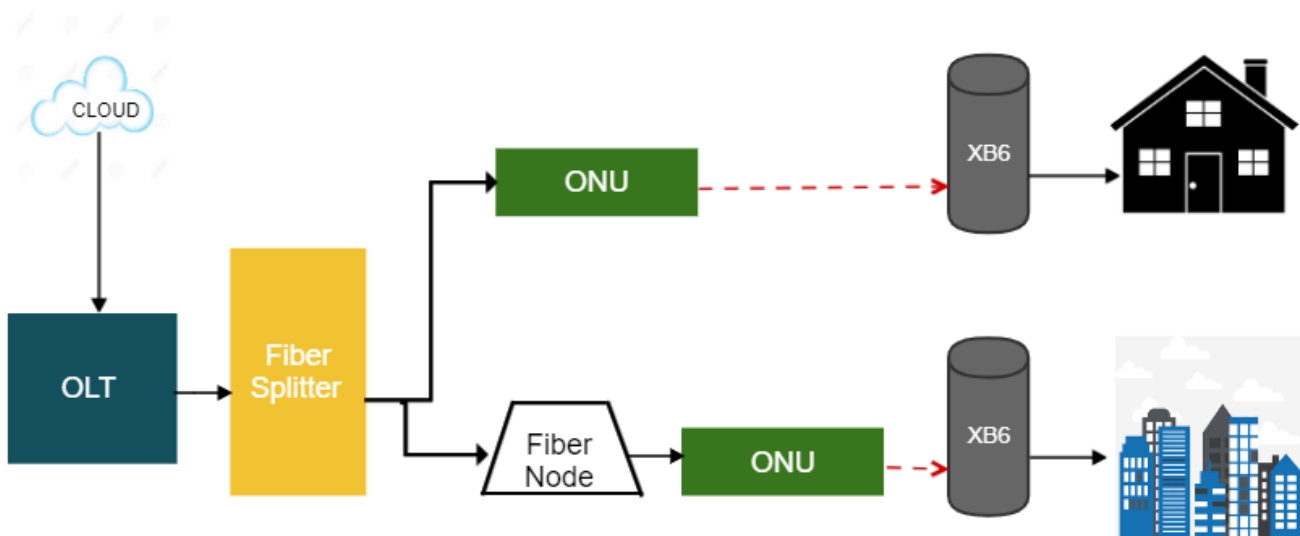# EthWAN

Introduction

- EthWAN provides the functionality to enable wan side connection through Ethernet port.
- The functionality is being used in deployments with ONU and Gateways.
- It can co-exist with DOCSIS, so that the WAN source can switch between EthWAN or DOCSIS
- If syndication partners want to deploy Comcast gateway and Wi-Fi solution for customers who have fiber connection, they will require this EthWAN feature.
- In other words this feature allows our syndication partners to offer service to their fiber customers.

Differences between Docsis and EthWAN

EthWAN	Docsis
GwProvApp-EthWan is used for EthWan configuration	GwProvApp is used for Docsis configuration
Default CR device profile used is cr-ethwandeviceprofile.xml	There is a dependency on CM agent.
parodus2ccsp, xsmart ,ccsp LM lite and webpa are not having dependencies on CM agent	DML is used to verify in which MODE the box is currently operating
WEBPA & Reverse SSH is working over WAN MAC assigned to ifconfig erouter0 interface	The Device is using CM MAC as defined in hardware system
XB6 Ethernet Port 1 must not be available for LAN side connections	Ethernet Port 1 must be usable for LAN side client connectivity
The Cable Modem is not active and there is no active CM IP address	Cable Modem is active and there is active CM IP Address

Architecture

- Once enabled in device all internet data traffic including voice and device management will be done through Ethernet Port of the device.
- In Ethernet WAN mode device will connect to ONU (Optical Network Unit) at the customer premises, before it connects to Internet.
  Network < -- > ONU < -- > EthWAN

- Adds two new components to RDK-B

1. CcspEthAgent   – Ccsp component to control EthWAN feature along with data model support
2. Gw-prov-app-EthWAN   – Gateway provisioning component for EthWAN

Objects

DM	Description
Device.Ethernet.X_RDKCENTRALCOM_WAN.Enabled	The DML is used to ON/OFF the EthWan Feature. The default value is OFF.
Device.Ethernet.X_RDKCENTRALCOM_WAN.Port	The DML provides the port number that is configured if the feature is ENABLED with Device.Ethernet.X_RDKCENTRAL-COM_WAN.Enabled
Device.DeviceInfo.X_RDKCENTRALCOM_EthernetWAN.CurrentOperationalMode	The DML is used to verify in which MODE the box is currently operating

How to Enable EthWan

- TR-69 Data model:

```
dmcli eRT setv Device.Ethernet.X_RDKCENTRAL-COM_WAN.Enabled bool True
dmcli eRT setv Device.Ethernet.X_RDKCENTRAL-COM_WAN.Port uint 0
```

- WebUI:

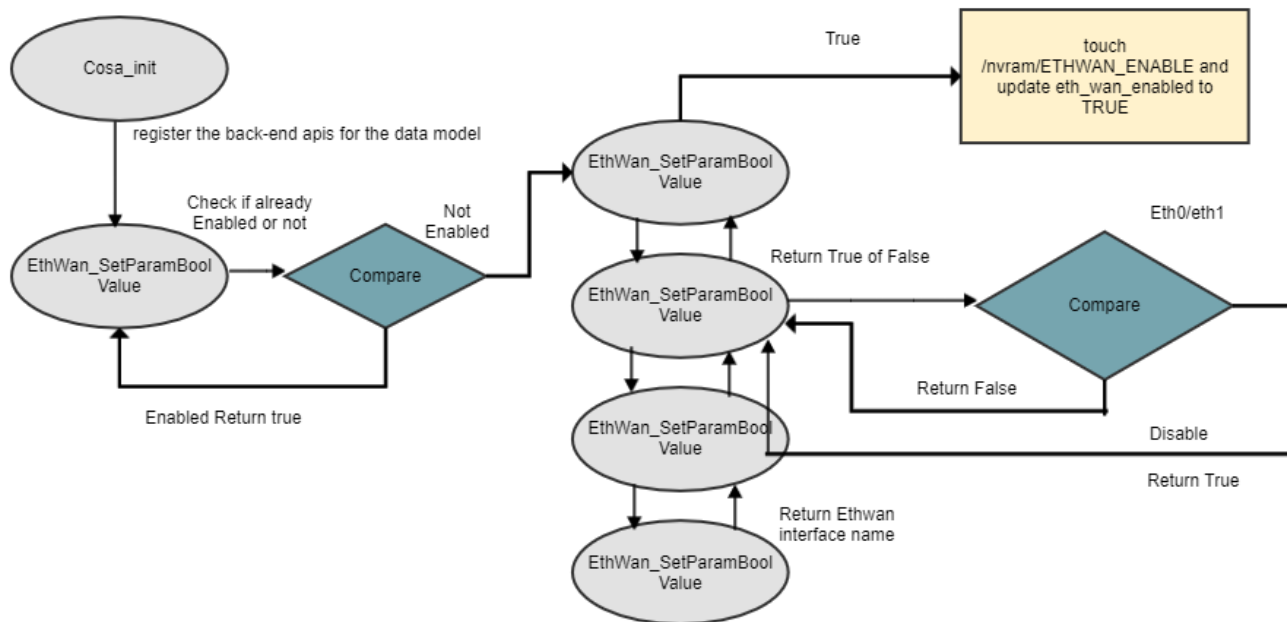To support manual configuration via local GUI (user side) to change configuration to Ethernet WAN or DOCSIS WAN.
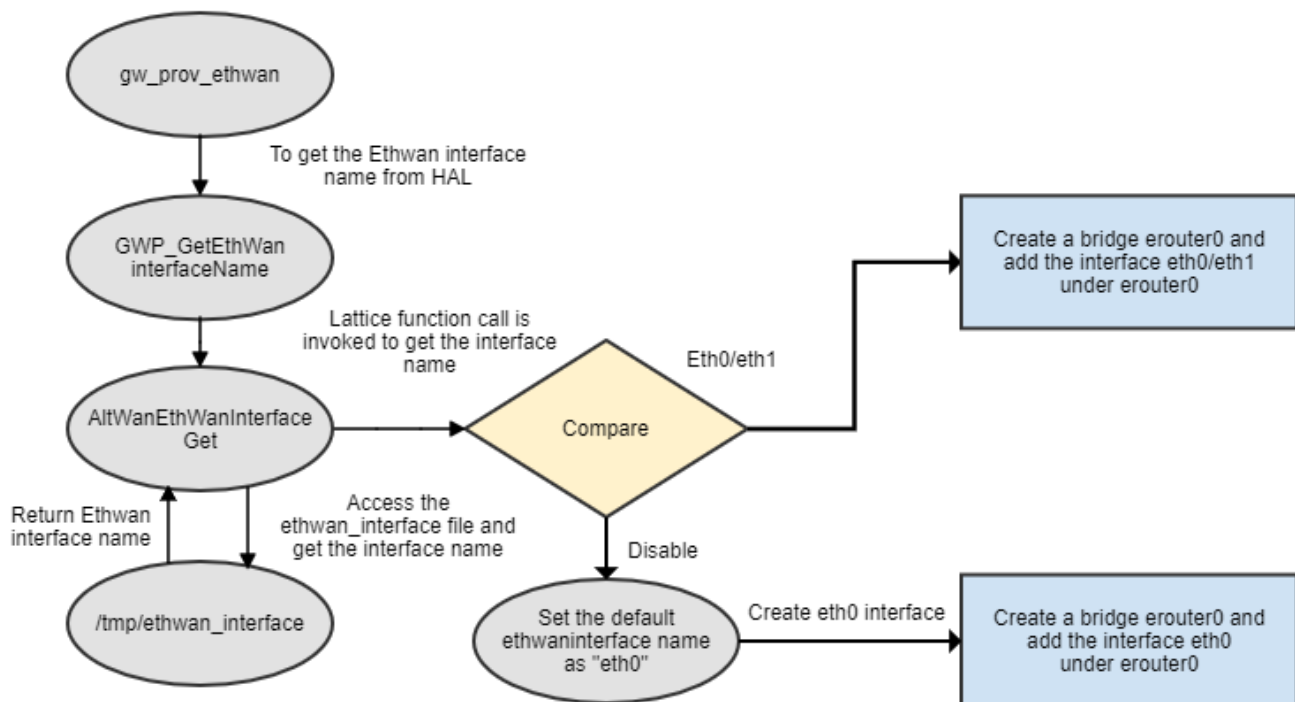
```
Gateway> Connection > WAN Network
```

Code Flow

Ccsp EthAgent Dmcli Code flow

GW Prov Ethwan Code flow

APIs

Commands to get EthWAN info from hal

Command	Description

hal_test ethwan enableEthwan	To enable EthWan
hal_test ethwan disableEthwan	To disable EthWan
hal_test ethwan GetEthWanInterfaceName	To get the EthWan Interface name
hal_test ethwan getEthWanEnabled	To get the EthWan status (enabled or disabled)
hal_test ethwan getEthWanPort	To know which port is enabled for EthWan feature

References

https://wiki.rdkcentral.com/courses/playcourse.action?course=90113230&capsule=3