

# Captive Portal

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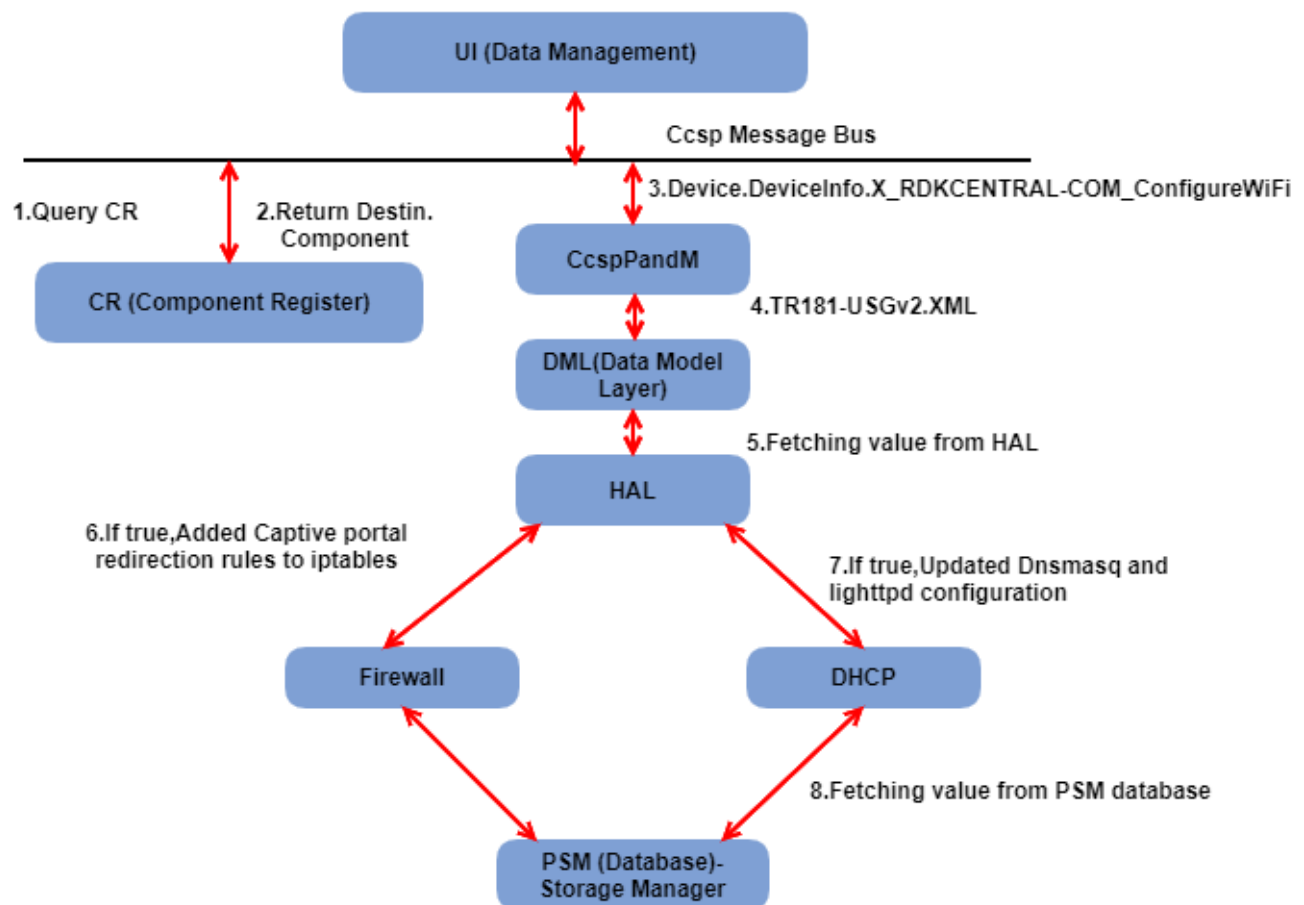
## Overview

- Captive portal is part of onboarding process which is presented to user once device is activated.
- It allows user to configure his/her WiFi credentials to be personalized which user can remember. It is presented to user if user does factory reset too.
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- On fresh boot-up and factory-reset, Captive Portal prompts to change the default ssid name and password for browsing on connected client's through Gateway network
- On fresh boot-up and factory-reset,, anything user tries in browser will redirect to local captive portal

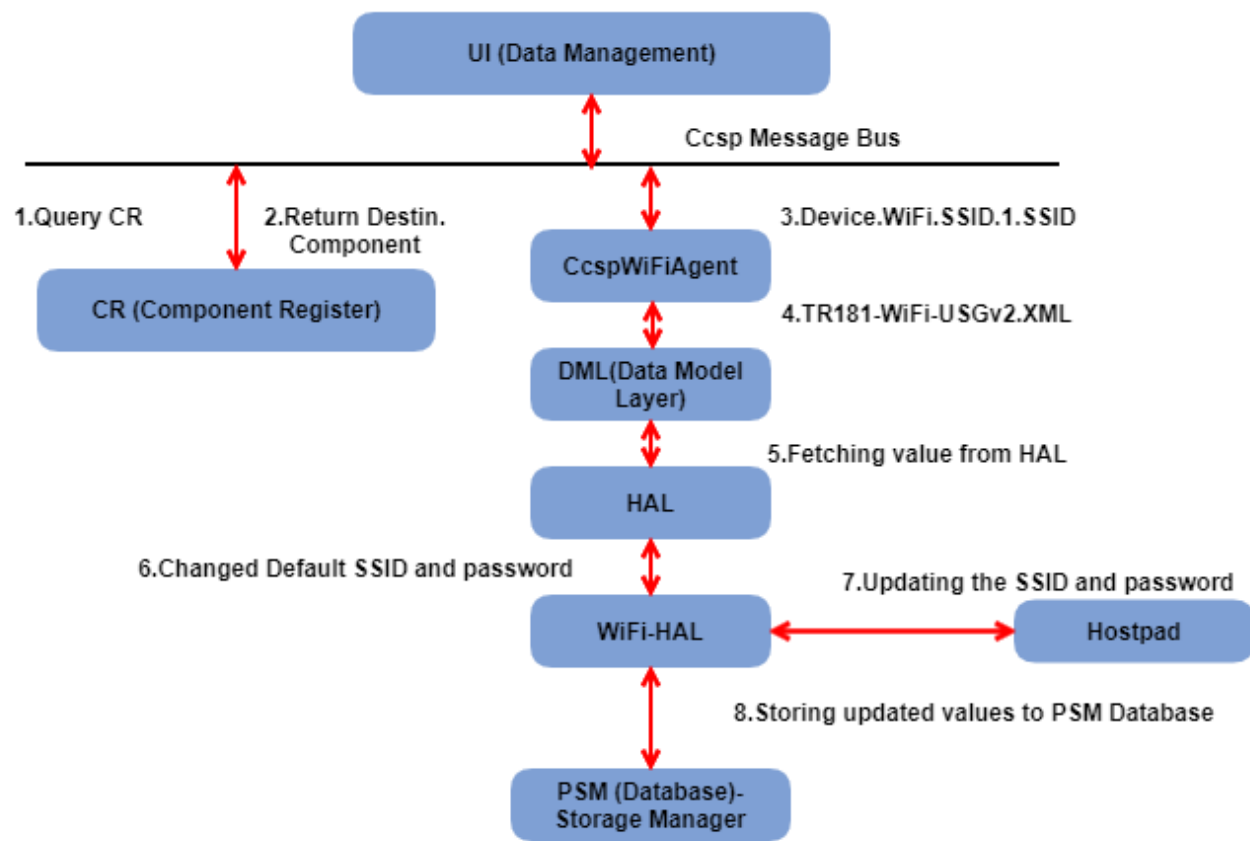
`https://<LAN IP >/captiveportal.php`

## Code Flow

The below diagram depicts the captive portal flow via CcspPandM module.



The below diagram depicts the captive portal flow via CcspWifiAgent module.

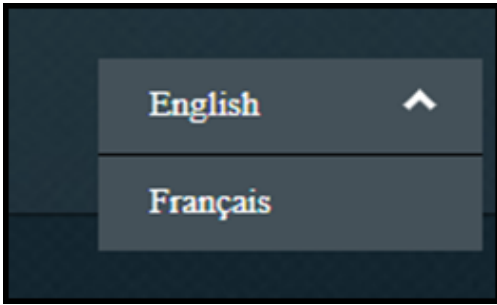


## Objects

| MODULE        | XML file             | PARAMETERS                                             |
|---------------|----------------------|--------------------------------------------------------|
| CcspPandM     | TR181-USGv2.XML      | Device.DeviceInfo.X_RDKCENTRAL-COM_CaptivePortalEnable |
|               |                      | Device.DeviceInfo.X_RDKCENTRAL-COM_ConfigureWiFi       |
| CcspWiFiAgent | TR181-WiFi-USGv2.XML | Device.WiFi.SSID.1.SSID                                |
|               |                      | Device.WiFi.SSID.2.SSID                                |
|               |                      | Device.WiFi.AccessPoint.1.Security.KeyPassphrase       |
|               |                      | Device.WiFi.AccessPoint.2.Security.KeyPassphrase       |

## Supported Languages

- Currently the supported languages are "English" , "French"
- The default language is "eng"



- The default language will be obtained as a string through "Device.DeviceInfo.X\_RDKCENTRAL-COM\_Syndication.RDKB\_UIBranding.DefaultLanguage".

## Trouble Shooting

- During any captive portal issues, verify the below commands .

### **syscfg get redirection\_flag**

To get value of redirection\_flag (true/false)

```
root@RaspberryPi-Gateway:~# syscfg get redirection_flag  
true
```

### **syscfg get HTTPS\_Server\_IP**

To get HTTPS\_Server\_IP to which it is connected.

```
root@RaspberryPi-Gateway:~# syscfg get HTTPS_Server_IP  
10.0.0.1
```

### **syscfg get PartnerID**

To get partern id of syndication partners

```
root@RaspberryPi-Gateway:~# syscfg get PartnerID  
RDKM
```

### **ifconfig erouter0 , brlan0**

```
root@RaspberryPi-Gateway:~# ifconfig erouter0
erouter0  Link encap:Ethernet  HWaddr B8:27:EB:50:C1:CF
          inet addr:192.168.0.4  Bcast:0.0.0.0  Mask:255.255.255.0
          inet6 addr: fe80::ba27:ebff:fe50:c1cf/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:238 errors:0 dropped:0 overruns:0 frame:0
          TX packets:276 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:38241 (37.3 KiB)  TX bytes:34078 (33.2 KiB)
```

```
root@RaspberryPi-Gateway:~# ifconfig brlan0
brlan0    Link encap:Ethernet  HWaddr B8:27:EB:05:94:9A
          inet addr:10.0.0.1  Bcast:10.0.0.255  Mask:255.255.255.0
          inet6 addr: fe80::e862:39ff:fe51:dde7/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:40 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:3811 (3.7 KiB)
```

#### dmcli eRT getv Device.DeviceInfo.X\_RDKCENTRAL-COM\_ConfigureWiFi

```
root@RaspberryPi-Gateway:~# dmcli eRT getv Device.DeviceInfo.X_RDKCENTRAL-COM_ConfigureWiFi
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_ConfigureWiFi
Execution succeed.
Parameter      1 name: Device.DeviceInfo.X_RDKCENTRAL-COM_ConfigureWiFi
                type:      bool,      value: false
```

#### dmcli eRT getv Device.DeviceInfo.X\_RDKCENTRAL-COM\_CaptivePortalEnable

```
root@RaspberryPi-Gateway:~# dmcli eRT getv Device.DeviceInfo.X_RDKCENTRAL-COM_CaptivePortalEnable
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_CaptivePortalEnable
Execution succeed.
Parameter      1 name: Device.DeviceInfo.X_RDKCENTRAL-COM_CaptivePortalEnable
                type:      bool,      value: true
```

#### ps | grep lighttpd // Lighttpd process should be running

```
root@RaspberryPi-Gateway:~# ps | grep lighttpd
 3562 root      0:00 lighttpd -f /var/lighttpd.conf
12172 root      0:00 grep lighttpd
```

#### /nvram/hostapd0.conf

```
root@RaspberryPi-Gateway:/nvram# cat /nvram/hostapd0.conf
# This is the name of the WiFi interface we configured above
interface=wlan0
```

```
#wlan0 is part of bridge br0
bridge=brlan0
```

```
# Use the nl80211 driver with the brcmfmac ( Broadcom BCM4334) driver
driver=nl80211
# This is the name of the network
ssid=RPi3_RDKB-AP0
# Use the 2.4GHz band
hw_mode=g
# Use channel 6
channel=06

# Enable 802.11n
ieee80211n=1

# Enable WMM
wmm_enabled=1

# Enable 40MHz channels with 20ns guard interval
#ht_capab=[HT40][SHORT-GI-20][DSSS-CCK-40]

# Accept all MAC addresses
macaddr_acl=0

# Use WPA authentication
auth_algs=1
# Require clients to know the network name
ignore_broadcast_ssid=0

# Use WPA2
wpa=2

# Use a pre-shared key
wpa_key_mgmt=WPA-PSK

# The network passphrase
wpa_passphrase=rdk@1234

# Use AES, instead of TKIP
wpa_pairwise=TKIP CCMP
rsn_pairwise=TKIP CCMP

#set the operating channel bandwidth to 20 MHz
vht_oper_chwidth=0

# The list of supported rates in units of 100kbps
supported_rates=10 20 55 110 60 90 120 180 240 360 480 540
```

```
# Basic rate set in units of 100kbps
basic_rates=10 20
```

```
#Interface for separate control program. hostapd_cli command will use it when trying to connect with hostapd.
ctrl_interface_group=0
ctrl_interface=/var/run/hostapd0
```

```
wpa_psk_file=/etc/hostapd/hostapd0.psk
eap_server=1
#wps_state=2
ap_setup_locked=1
ap_pin=45276453
wps_pin_requests=/var/run/hostapd0.pin-req
device_name=Raspberrypi
manufacturer=Broadcom
model_name=RPI-3B
model_number=BCM43438
serial_number=8965324
device_type=6-0050F204-1
os_version=01020300
config_methods=push_button keypad label display
```