**RHMSCLIENTAPP**

**&**

**FIRMWARE & APPLICATION UPGRADE**

**INTRODUCTION**

**Major Steps for New RHMS Application Management :**

Step 1: Need to Register POS device serial number into RHMS server, under a particular Project Name and required applications and firmware.

At the time of regitration we can give serial number and macid and we can select under which firmware and application it should register.

And the registered serial nnumber or macid should kept to the device to get the response.

Step 2: RHMSClientApp is request to server, and it will get information under which firmware and application it registered.

It will give the Current application type and application name and it’s application patch URL, current server version.

Step 3: If any update is found on registered application type, then automatically it will download.

Step 4: On the every boot one application is check for downloads, if any downloads present it will automatically update to the device

**Running of RHMSClientapp binary**

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RHMS is a technique, used to monitor the health status of a device remotely.It examines the device module wise peformance at that instant and reports to the server.

Server Registration is mandatory for the device to know the status or if it needs any updates from the server.

First server maintains the details of each and every device in server database .

Once the device gets registered , user can see the latest updates of health status of all the IO Modules of corresponding Device on the server GUI.

Each device gets identified by its unique serial number

1) Need to keep the serial serial number or macid to the device which is registered under any project.

2) Need to select the configuration in the configuration file in device */etc/.RHMS\_config.xml*

<?xml version="1.0" encoding="UTF-8"?>

<RHMS\_Settings>

<DOT>1</DOT>

<BatteryInfo>1</BatteryInfo>

<Iris\_or\_Biomat>1</Iris\_or\_Biomat>

<IrisRDVer\_and\_SNo>0</IrisRDVer\_and\_SNo>

<CamType>1</CamType>

<WSSN>1</WSSN>

<Pinpad>1</Pinpad>

<PinpadSN>1</PinpadSN>

<FPSRDVer>1</FPSRDVer>

<GPS>1</GPS>

<geo\_location>1</geo\_location>

<BarcodeSno>0</BarcodeSno>

<HWChanged>1</HWChanged>

<Bluetooth>1</Bluetooth>

<SAM1>1</SAM1>

<SAM2>1</SAM2>

<Printer>1</Printer>

<WIFI>1</WIFI>

<IFD1>1</IFD1>

<IFD2>1</IFD2>

<Camera>1</Camera>

<Two\_Simdetails\_Autoapn>1</Two\_Simdetails\_Autoapn>

</RHMS\_Settings>

Here ‘1’ indicates that the tag is enabled and ‘0’ indicates tag is disabled.

RHMS binary will run and it will fetch the details according to the selection in config file.

Examination of all the IO Modules is performed and the status is updated to an XML file i..

These are the xml files will generate on the succesful request of RHMS to server in the /opt/ folder.

BootTime\_Status.xml BootTime\_response.xml

Hardware\_response.xml Hardware\_Status.xml

Health\_Status.xml Health\_response.xml

Boot time information will place in /*opt*/BootTime\_Status.xml

Hardware information will place in /*opt*/Hardware\_Status.xml

Health information will place in /*opt*/Health\_Status.xml

External devices information is placed in *opt*/Hardware\_Status.xml.

Device Health information like RAM,jffs2... are placed in /*opt*/Health\_Status.xml

And in the first boot it will generate all the xml files.

Next time onwards Hardware\_Status.xml will generate when any change in hardware module .

BootTime\_Status.xml will generate at the boot time only.

Previously rhms will run once in a day in new RHMS we can change according to our requirement to run how many times in a day.

And in ***etc/Health\_response*** *you can see under which project serial number it registered*

*File Name :* ***etc/Health\_response***

***Data in file :***

*ProjectName:APPDS*

*UpdateFrequency:3*

*Units:Minutes*

ProjectName:APPDS means this device serial number is registered under APPDS project.

Here UpdateFrequency:3 means RHMS binary will run after every three minutes these time frequency we have to select at the time of project creation.

**Need of RHMS**

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To monitor the field devices on regular basis depends on user requirement.

To upgrade the devices with new softwares

To know the working functionality of the each and every module

**Firmware & Application Upgrade**

Mechanism to upgrade the kernel, Uboot, application and other files related to the rootfile system(Rootfs).

**Downloader Binary** :

1) Download binary is one application which is to download the any particular firmware or application .

2) And the firmware or application download also based on the serial number which you have registered in which project.

For Example :

Take serial number as 111817161509 and it is registered in particular project

and if that particular project haviing any firmware or application update the download binary will download the firmware or application package.

Download binary will maintain the download versions and the download package in the device seperately for both firmware and application download.

Download binary will donwload both application update and firmware at a time

You can see the firmware and application server response in *etc/vision/RHMS/ file*

*If device is having 1.1 version next time when download binary runs it will download the higher version than the previous version like 1.2 or 1.3 ..,*

*File Name :* ***etc/vision/RHMS/***

*in the file can see both Application and firmware folder*

*And in the application folder having application server response and in firmware folder having firmware server response*

Application server filename is **ServerApplicationsRelease.info**

Firmware server filename is **ServerFirmwareRelease.info**

And in both the server release file contains the latest download path of application in application folder and firmware in firmware folder .

Donwload binary will download from the path of server release files.

Downloading path is **/mnt/sysuser/Software-Upgrade/**

And again that folder contains different folders of Application downloads and firmware downloads

And in firmware downloads you can see the firmware downloaded patches and in applications donwloads you can see application download patches.

When you run download binary will get the response files of both Firmware and Application in opt folder

Application\_response.xml Firmware\_response.xml

**Installer Binary :**

1) The install binary will install the already downloaded software to the device .

Which is already downloaded

At the boot time install binary will check for any downloaded patches if any patch is found it will install the patches to the device.

Installer binary will install both application and firmware patches to the device

After succesful installation it will write latest patch version which it installed previously in *opt*/Boot\_Status.xml

To write into *opt*/Boot\_Status.xml RHMSClientapp binary should run it will fetch the installed versions and will place in tag.

In xml file both the application and firmware versions will present.

After installing the patch device will automatically reboot .

Before going for an firmware upgrade please ensure that battery is connected with adaquate charge. Firmware upgrade fails if battery is in low charge condition.

If we have three patches of firmware three reboots are required to apply the patches to the device

**In short summary:**

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RHMSClientapp is client binary which will fetch the all the details in the device and placed in a xml format and the server will display all the details in the server.

Download binary will download any firmware or application patch related to any project according to the serial number

Install binary will install the patch to device which is already download previously

**POS-SETUP**

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The POS machine must contain set of binaries scripts and files to be placed in their respective directories for the firmware upgrade or application upgrade mechanism to function effectively.For enabling this feature device specific software needs to be loaded in the POS device