Battery Health Monitor

Administrator Guide

ZEBRA

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About This Guide

This guide explains how to access battery health logs and configure the Battery Health Monitor app.

Notational Conventions

The following conventions are used in this document:

- **Bold** text is used to highlight the following:
  - Dialog box, window, and screen names
  - Drop-down list and list box names
  - Checkbox and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen
- Bullets (•) indicate:
  - Action items
  - List of alternatives
  - Lists of required steps that are not necessarily sequential.
- Sequential lists (for example, those that describe step-by-step procedures) appear as numbered lists.

Icon Conventions

The documentation set is designed to give the reader more visual clues. The following graphic icons are used throughout the documentation set.

NOTE: The text here indicates information that is supplemental for the user to know and that is not required to complete a task.The text here indicates information that is important for the user to know.

IMPORTANT: The text here indicates information that is important for the user to know.

CAUTION: If the precaution is not heeded, the user could receive a minor or moderate injury.

WARNING: If danger is not avoided, the user CAN be seriously injured or killed.

DANGER: If danger is not avoided, the user WILL be seriously injured or killed.

Battery Health Monitor

Battery Health Monitor is a Windows app available on select Zebra tablets that allows users to view battery health, manufacture date, and serial number.

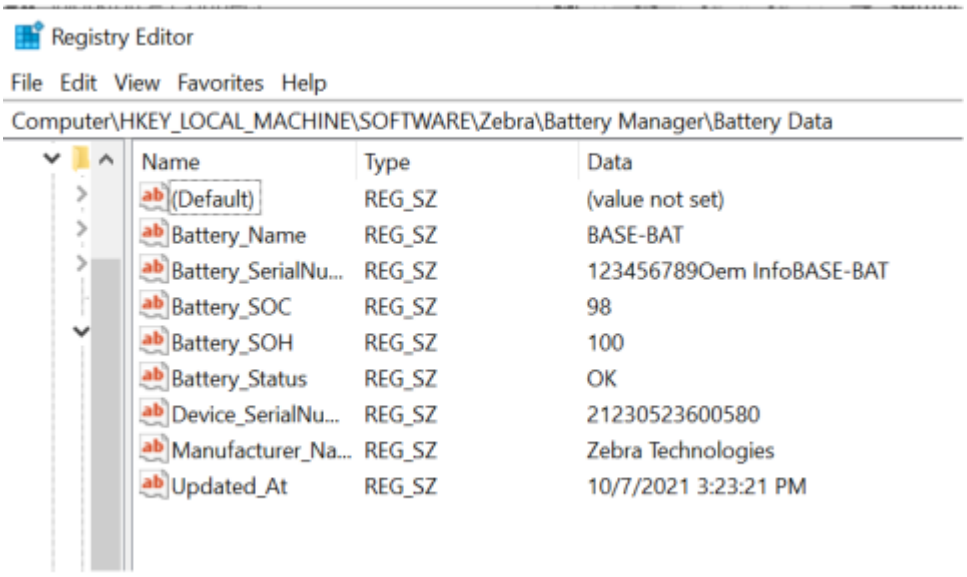
The Battery Health Monitor app saves reports to the Windows registry every 24 hours. The registry data allows administrators to monitor the State of Health (SOH) of batteries in deployed devices and provides messages to end users when the battery is worn or needs replacement. The messages, warning triggers, and other app settings are configurable.

Battery Data

Mobile Device Management (MDM) software can use the data saved by the Battery Health Monitor app to generate a battery health dashboard for device deployments.

The battery data is stored in the device Windows registry at `HKEY_LOCAL_MACHINE\SOFTWARE\Zebra\Battery Manager\Battery Data`.

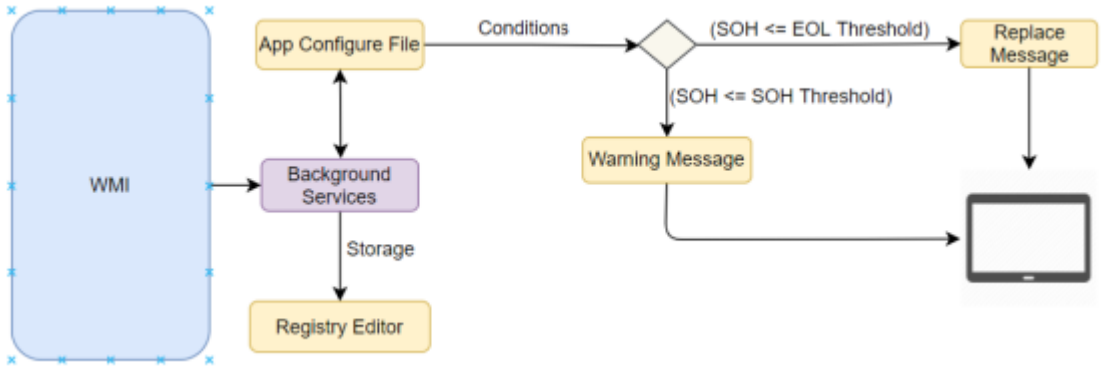
Figure 1 Battery Data



Flow Chart

The following flow chart illustrates how the background service retrieves motherboard and battery data for the device through Windows Management Instrumentation (WMI). Battery health and warnings display to the end user based on conditions set in the configuration file.

Figure 2 Battery Health Monitor Flow Chart



Debug Log

The debug log contains all events that occur while the Battery Health Manager is running.

The log is located on the device at: `C:\ZebraBatteryDebug.txt`.

Configuration

The Battery Health Manager configuration file stores all the warning and replacement messages that display in the app. The configuration file also contains default values for battery configuration.

The configuration file is read each time the application starts. After making changes to this file, you can restart the tablet or the app. To restart the app, go to the system tray and select **Battery Health Monitor** > **Exit**, and then **Start** > **Battery Health Monitor**.

The configuration file is located on the device at `C:\ProgramData\Zebra Technologies \BatteryManager\AppSetting_ConfigInfo.ini`.

Detailed comments inside the file describe each of the default values.

NOTE: Because device temperature and workload affect battery SOH, systems running in extreme temperatures or heavy device workloads may require different default thresholds.

Sample Configuration File

The following sample shows default configuration settings. The configuration file is read each time the application starts.

```
******************** AppSetting_ConfigInfo.ini *********************
[BatteryManager]
// Set integer value for Battery State of health warning.
// The default threshold shall be 85% and Max value can't be greater
// than 90%.
SOH_Warning_Threshold=85

// Set integer value for Battery State of health end-of-life.
// This value can't be less than 75% and Max value can't be greater
// than SOH Warning Threshold value.
EOL_Threshold=75

// Set message{Max 255 characters} to show event warning notifications
// when the battery has reached/or is below the SOH Warning threshold.
SOH_Warning_Msg=The Currently installed battery is nearing it's end of life,
 you may experience decreased run time.

// Set message{Max 255 characters} to show  event end of life
// notifications when the battery has reached/or is below the EOL threshold.
EOL_Warning_Msg=The Currently installed battery is past it's end of life,
 please replace the battery.

// Set Value to show Battery State of health notification event
// Acceptable values are "OnBootUP" And Time of the day in 24Hr.
// Example { Notification_Event=OnBootUP Or  Notification_Event="14:00" }
Notification_Event=OnBootUP

// If UI_Notification value is enabled then only user will be able to
// see battery SOH warning Pop Up message as per notification_event setting.
// (default value is enabled). And Acceptable values are {Enabled,Disabled}.
UI_Notification=Enabled

// Set value to Enabled/Disabled to write debug log
// If this option is enabled, then you can see application logs in
// ZebraBatteryDebug.txt which in created in C drive.
// Path of file is : "C:\ZebraBatteryDebug.txt"
Debug_Option=Enabled

// Supported Languages{ English=en,French=fr,Japanese=ja,German=de and
// Spanish=es}.English shall be the default language.
// Ex. if you want to change application language from English to Spanish,
// then change below value to es .. {language = es}
language=en

*****************************************************************
*****************************************************************
```