REVISED: FEBRUARY 2024

The following release notes contain information regarding new enhancements and patches that were deployed to the VisibilityIQ platform. We continuously improve the usefulness and usability of VisibilityIQ OneCare and Foresight, so if you have identified an additional issue or improvement suggestion, please do bring these to our attention by contacting the <u>Zebra's Portal Support Team</u>. For additional information about VisibilityIQ, including training resources, FAQs, and a schedule of available training sessions, visit the <u>Zebra VisibilityIQ Support</u> page on Zebra.com.

February 2024 Release 7.3.0

What's New in this Release?

Release 7.3.0 introduces enhancements to VisibilityIQ Foresight with the following:

1. WWAN Utilization

New tiles have been added to WWAN Utilization Insights.

- Carriers Impacted (Poor Performance) The data in the Carries Impacted (Poor Performance) tile show carrier performance based on signal strength and plots the poor signal strength areas on a corresponding map with zoom capabilities to view regions affected, or in to see details down to the street level.
- Faulty SIM Card This tile shows the percentage of devices with a faulty SIM.

*Please note that this release only supports English language. Additional language support will be included in a future release.

*In addition, non-default ZDS configurations need to be enabled to receive this insight. Instructions available on VIQ User Guide.

2. Date Filters

Found under filters, users now can change the date selections for WWAN Utilization and Memory by App Insights. Users can only select one of the below options. Dates with no supported data are grayed out.

- Year, Quarter, Month, Week, Day, Hour**, or 15-Minute** Period
- Last specified number of Years, Quarters, Months, Weeks, or Days
- This or Next** Year, Quarter, Month, Week, or Day
- A specific date range
- NOT being part of a selected Year, Quarter, Month, Week, Day, Hour**, or 15-Minute** period
- Being within a specific number of Years, Quarters, Months, Weeks, or Days BEFORE or AFTER** a specified date
- TOP** or BOTTOM** Year, Quarter, Month, Week, or Day

*Please note that this release only supports English language. Additional language support and date picker will be included in a future release.

** Filters selected where data is unavailable will show as blank on the tiles.

December 2023 Release 7.2.0

What's New in this Release?

Release 7.2.0 introduces enhancements to VisibilityIQ Foresight with the following:

3. WWAN Utilization

Found under Utilization, VisibilityIQ has added WWAN Utilization Insights. This new dashboard aggregates the last 90 days of Cellular usage activity and shows the following insights for the previous day:

- Total Device Data Usage.
- High Cellular Data Usage by Applications breaking down by top business apps and non-business applications.
- High Cellular Data Usage by Devices showing top devices sorted by highest data usage.
- High Cellular Data Usage by Sites- showing top sites sorted by highest data usage.

*Please note that this release only supports English language and a snapshot of usage activity for the previous day. Additional language support and date picker will be included in a future release.

4. Memory (RAM) Utilization by Applications

Found under Utilization, VisibilityIQ has added Memory (RAM) Utilization by App Insights. This new dashboard aggregates the last 90 days of memory usage activity and shows the following insights:

- High RAM consumption by top business applications.
- High RAM consumption by top non-business applications.
- High RAM consumption by top utility applications.

*Please note that this release only supports English language and a snapshot of usage activity for the previous day. Additional language support and date picker will be included in a future release.

*In addition, non-default ZDS configurations need to be enabled to receive this insight. Instructions available on VIQ User Guide.

December 2023 Release 7.0.0

What's New in this Release?

Release 7.0.0 introduces enhancements to VisibilityIQ Foresight with the following:

1. Application Health Reports

A correction to total device count has been made by adding in devices that were Out of Contact for last 30 days. This corrects Application Health percentages, which had reported over 100% previously.

August 2023 Release 6.8.0

What's New in this Release?

Release 6.8.0 introduces enhancements to VisibilityIQ Foresight with the following:

2. Application Analytics and Application Health Reports

A new algorithm to categorize applications more accurately into business, non-business and utility has been implemented. This impacts the Application Analytics and Application Health reports.

July 2023 Release 6.7.0

What's New in this Release?

Release 6.7.0 introduces enhancements to VisibilityIQ Foresight with the following:

1. Devices In Operation report

Under Operational Devices Trend bar chart, when "Last 12 Months" or "Last 3 Months" is selected, each monthly bar has been updated to use average daily value calculation for the displayed month.

April 2023 Release 6.6.0

What's New in this Release?

Release 6.6.0 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

2. <u>Proactive Battery Replacement report</u>

A new tab, called Contracts, has been added to the Proactive Battery Replacement report. It shows the user how many batteries have been shipped vs how many batteries are entitled for the purchased contract. This allows for better management of their battery needs. Additionally, a new tab showing the same has been added to the monthly PBR Report Notification email.

February 2023 Release 6.3.0

What's New in this Release?

Release 6.3.0 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

3. Smart Battery Health Report

Our patented Remaining Useful Life algorithm has been enhanced to differentiate PS devices. Some devices may see change in RUL status after this update.

December 2022 Release 6.0.0

What's New in this Release?

Release 6.0.0 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Scanner Data added to three inventory reports

Customers can now add scanners to their fleet of devices on VIQF. This can be seen in three inventory reports:

- Device in Operations
- Total Devices
- Out of Contact

In addition, a new Scanner Details page has been added to provide additional details on a particular scanner when you click on the scanner serial number on the above reports.

A new set of SKUs/part numbers are available for customers to order this service to add scanner data on their VisibilityIQ dashboard. Please contact your Account Manager for more details.

2. Scanner Option Added to Device Filter

Users will now see a new option under device type selection filter. This defaults to "All Devices" which will now include scanners where applicable. Users can select scanners on the device filter to see only scanner data available in fleet.

November 2022 Release 5.5.0

What's New in this Release?

Release 5.5.0 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

- 1 Proactive Battery Replacement Replaced Battery In Use Email
 - Sends an email to user with a list of all batteries that have been marked for replacement but are still in use beyond the Warning threshold days set in VIQ
 - Email is sent the 3rd Monday of the month.
 - User is Opted-In to this feature by default, but can disable the email through Email Notifications feature under VIQ Administration

October 2022 Release 5.4.0

What's New in this Release?

Release 5.4.0 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

- 1 Proactive Battery Replacement Cosmetic Changes and Enhancements
 - Orderable Part Number and Hierarchy added to all PBR tabs
 - Order Status added to Ordered tab provides shipment status of orders that have shipped or have exceeded 15 days since the order was placed.
 - Batteries "Still In Use" threshold setting added that <u>alerts</u> users on the Replaced tab to dispose of bad batteries based on time specified in threshold.

September 2022 Release 5.3.0

What's New in this Release?

Release 5.3.0 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1 MAC Address added to Total Devices and Devices in Operations Data Grid

Static MAC Address has been added to Total Devices and Devices in Operations reports that is hidden by default.

2. Fastrack Language Translations

Non-English language translations of the Fastrack tab within the Repair Lifecycle report will be available with the October release.

August 2022 Release 5.2.0

What's New in this Release?

Release 5.2.0 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Fastrack Tab Added to Repair Lifecycle

Only visible to customers with onboarded Fastrack contracts, the Fastrack tab is a focused view of repairs that have been submitted specifically with the Fastrack service and provides the user with visibility into how many Fastrack repairs have been created and shipped over a period of time. Graphs show a trend of calls made over the time period, the top 5 False Call Reasons, the shipping timeliness of Successful Calls and a breakdown by reason code of the False Calls.

2. <u>VisibilityIQ Device Health – Application Health</u>

Introducing a new suite of reports VisibilityIQ Device Health designed to provide proactive insights and recommended actions to stay on top of the health of your device fleet. There are three report groups

under this suite, namely Application Health, Battery Health, and Performance Health. Application Health will be the first to be released with the following three Insights:

- Application Versions
- Application Inventory
- Applications with the most ANRs

3. Site and Sub-site Management

Customers can now choose to use Access Points (AP) instead of IP address ranges for site auto Relocation.

To use AP instead of IP ranges, a file with the below fields is required to be uploaded into VIQ.

- AP Name
- BaseRadio MAC Address
- Map Location
- AP Group Name

To add an additional hierarchy of subsite, Map Location field can be created in this format: "Area>Site>Subsite". The map location field will be mapped with "Site>Subsite" to Site field in VIQ reports.

*This applies only to users where this feature was made available.

4. Additional fields on Total Devices and Devices in Operations Data Grid

Total Devices

- IMEI Number
- Network Connection Type
- LifeGuard Version
- Contract Number

Devices in Operations

- IMEI Number
- Network Connection Type
- LifeGuard Version
- First See Date
- Contract Number

*All new fields are hidden by default and can be unhidden by going to Show/Hide Column

5. Translation of Graph Legends and Advance Filters

All reports that support native languages are updated to include translations for graph legends, title, mouse-over text, and advanced filters text in the respective selected languages.

June 2022 Release 5.1.0

What's New in this Release?

Release 5.1.0 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Report Date Change

To improve accuracy in calculation and display of battery counts on a few battery reports, the default date has been rolled back by a day to provide full view of the last day. Users who log in will see report for the previous day for the following reports:

- Smart Battery Health
- Smart Battery Overview
- Proactive Battery Replacement (Where applicable)

2. <u>Site Management Feature</u>

Allows VIQF IOT and Proactive Battery Replacement users to upload site information, such as address and IP address information to the dashboard. This is primarily needed for the Proactive Battery Replacement offer to provide for accurate shipment of a replacement battery to the correct address. VIQF IOT customers will benefit as it enables them to have more delineated site information in their dashboard.

April 2022 Release 5.0.0

What's New in this Release?

Release 5.0.0 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Printer Alert Clearing

The feature gives specific users the ability to visualize and track Uncleared Printer Alerts in the last 72 hours since these were generated.

- Printer Alerts Report Added Uncleared Alerts Tab
- Flow for Clearing the Alerts
- Alert Clearing Effect on Printers Alerts Response Rate/Exceptions Tabs
- Printer Alert Report Added Uncleared Alerts Tab to Excel Report

2. Utilization Criteria Enhancement

This feature gives specific users the ability to make changes to the utilization criteria. Users can select from the list of utilization criteria to match their utilization needs.

Mobile Computer

- Battery Discharge Rate
- Scan counts
- Successful Scan counts
- Scan counts of Business Applications
- Successful Scan counts of Business Applications
- Backlight Duration while on/off charger

<u>Printer</u>

• Printer Length

*This applies only to users where this feature was made available.

3. <u>Printer battery remaining useful life (RUL) algorithm update</u>

The Printer battery RUL algorithm has been updated to align reason categories and reason codes with the Mobile Computer battery RUL algorithm.

4. Click to RMA Feature

Assignable feature that provides the user with a shortcut, allowing them to go from the Device Details page in VIQ to the Repair Order Portal where they can create a Repair Order.

- User must have already registered for the Repair Order Portal to be automatically logged into the portal
- Access to the VIQ feature must be requested through mscustomeronboarding@zebra.com

February 2022 Release 4.5.3

What's New in this Release?

Release 4.5.3 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Additional insights in Devices in Operation report and Repair Lifecycle report

• Devices in Operation Report:

The following new columns are added to the data grid in Devices in Operation report for customer to access more data points for their mobile computer devices:

- Phone number
- o Access Point BSSID
- o IP Address
- o GPS Coordinates

These new columns will be hidden by default as they are not applicable to all customers. Customers can unhide these columns when they need to access the data. The data will be displayed if received from devices.

• Repair Lifecycle Report:

The following new column is added to the data grid in Repair Lifecycle report for customer to access more data points for their devices in repair workflow:

• Problem Description

This new column is added to the data grid in the following tabs within the report:

- OPEN ORDERS
- o IN REPAIR
- o **REPAIRED**

2. Three new languages available for user selection

The following languages are now available in VisibilityIQ.

- Hungarian
- Portuguese (LATAM)
- o Thai

Users can select these languages via existing Settings feature from the dashboard.

3. <u>New public API</u>

New public APIs are being added to the VisibilityIQ API product bundle:

 Contracts (Contract Details) – Provide insight on VIQ contract details including device info, start/end date, coverage status, entitlement, etc. Please refer to the link below for the full list of APIs. <u>https://developer.zebra.com/apis/visibilityiq</u>

- 4. Enhanced battery health predictive algorithm for more accurate battery health status
- 5. <u>Security enhancements to VisibilityIQ with fixes to potential security vulnerability issues</u>

January 2022 Release 4.5.2

What's New in this Release?

Release 4.5.2 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Date Picker Enhancements

• The date picker in VisibilityIQ OneCare and Foresight reports now has a new look for users to easily pick date(s) from the date options (if applicable) as well as from calendar to view insights accordingly. The date options, when available, are also aligned so similar reports have same date option values to ensure consistency throughout reports.

2. <u>Device Type updates</u>

• The "Device Type" column in VisibilityIQ Foresight reports applicable now shows "Mobile Computer" instead of "Device" for mobile computer devices to avoid confusion and ensure consistency.

November 2021 Release 4.5.1

What's New in this Release?

Release 4.5.1 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Proactive Battery Replacement (PBR) Email Notifications

• An email notification feature was added for the Proactive Battery Replacement report allowing users to subscribe to a monthly export of the report via email. The email is sent the first Monday of each month and can be accessed from the Administrative section within VisibilityIQ. It is disabled by default.

October 2021 Release 4.5

What's New in this Release?

Release 4.5 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

6. <u>Proactive Battery Replacement (PBR)</u>

- New view available to customers who purchase the Proactive Battery Replacement service, which provides replacement batteries to customers as dictated by the battery's remaining useful life (RUL).
- Provides a view into batteries that are ready for replacement, those that have been replaced, and the order information related to the replacement batteries that were shipped.
- Track replacement battery shipments.

7. Enhancements to Smart Battery Insight

• New version of Remaining Useful Life (RUL) algorithm

The Smart Battery Overview and Smart Battery Health report leverage Zebra's proprietary machine learning algorithm to calculate the remaining useful life of a battery based on the key parameters received from the battery, hence to provide valuable insight to battery health status in customer's fleet.

Zebra continues to refine the algorithm since first introduction in 2019. The latest version of the algorithm (version 4) is implemented with VisibilityIQ Release 4.5, which features better accuracy and more granular categorization of health insights.

• Enhancements to Smart Battery Overview and Smart Battery Health report

Action based insights are introduced with the new version of RUL algorithm to provide not only the insight to battery health, but also the recommended actions, e.g., Replace Now, Replace Soon, etc. for customers to better manage their battery fleet.

8. <u>New Public APIs:</u>

New public APIs are being added to the VisibilityIQ API product bundle:

- **Printer Setting Changes** –insight on printer setting changes that potentially impact printer performance.
- **Printer Details** insights to individual printer including printer basic info, settings, utilizations, etc.

Please refer to the link below for the full list of APIs. <u>https://developer.zebra.com/apis/visibilityiq</u>

September 2021 Release 4.4.2

What's New in this Release?

Release 4.4.2 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. New Public APIs:

New public APIs are being added to the VisibilityIQ API product bundle:

- **Printer Alerts Response Rate Method:** insight on number and type of alerts from printers that are cleared within the threshold set by customer.
- **Printer Alerts Exception Method:** insight on number and type of alerts from printers that are NOT cleared within the threshold set by customer.
- **Printer Utilization** printer utilization insight including the length printed and the number of labels printed from customer's printer fleet.
- **Device Disruptions Device Breakdown Method:** device level disruption insight including types and numbers of disruptions as well as device details.
- **Device Disruptions Absolute vs. Normalized Method:** insight on types and numbers of disruptions from all devices or at per device level during the specified time frame.
- **Device Disruptions ANR Method:** insight on number of ANRs (application not responding) from each application reporting ANRs.
- Device Disruptions Threads State Method: insight on threads states details for ANRs from each application reporting ANRs.

Please refer to the link below for the full list of APIs. https://developer.zebra.com/apis/visibilityig

August 2021 Release 4.4.1

What's New in this Release?

Release 4.4.1 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

3. Additional data points in Total Devices report

The following new columns are added to the data grid in Total devices report for customer to access more data points for their mobile computer devices –

- Phone number
- Access Point BSSID
- IP Address
- GPS Coordinates

These new columns will be hidden by default as they are not applicable to all customers. Customer can unhide these columns when they need to access the data. The data will be displayed if received from devices.

4. New Public APIs:

New public APIs are being added to the VisibilityIQ API product bundle:

- Utilization Rightsizing: insight on device utilization at site level
- Battery Level: device battery level insight at company, site, model and individual device level.
- **Battery Discharge:** device battery hourly discharge rate at company, site, model, and individual device level.
- Storage Memory Utilization: insight on top sites with devices having storage memory issues
- **Physical Memory (RAM) Utilization:** insight on top sites with devices having physical memory issues.
- **Predictive States-Insight:** insight and alerts on Site, Model and Device health as determined by Predictive Analytics algorithms.
- **Predictive States-Insight on Category method:** Details on each insight category and impacted devices.
- **Printer Alerts All Alerts method:** insight on number and type of alerts received from printers in customer's fleet.

Please refer to the link below for the full list of APIs. <u>https://developer.zebra.com/apis/visibilityiq</u>

5. Onsite Repair Data added to Repair Lifecycle Report

For those customers subscribing to Central Onsite repairs, this data will now show in the Repair Lifecycle report in the Open Orders, In Repair and Repaired tabs. Additional columns for Installed SR. No. and Repair Type will be hidden by default but can be enabled by users.

6. Column Additions to Repair Lifecycle report

- Expected tab will now include columns for Shipped SR No. and Shipped Date
- Shipped tab will now include columns for Open Date and Received Date

August 2021 Release 4.4

What's New in this Release?

Release 4.4 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Printer Insight Summary View

The Printer Insight summary provides a one-page view with multiple insights derived from all relevant reports applicable to printers including inventory, utilization, alerts, setting changes, battery performance, etc., and presented in an easy-to-understand format with data visualization including numbers and graphs. This view helps users to understand the key operational aspects of their device fleet across the entire enterprise or at different grouping levels (site, model, etc.), and evaluate criteria for comparison.

User can access this view from left hand side navigation bar, and drill down the next level details by following the link or clicking on each metrics widget to individual insight report applicable to printers.

The printer Insight summary view empowers both technical and non-technical users to understand and leverage business intelligence for printers to make more informed decisions.

June 2021 Release 4.3

What's New in this Release?

Release 4.3 introduces enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Hourly visualization for utilization in Devices in Operation report (VisibilityIQ Foresight customer only)

The trending chart in Devices in Operation report now shows hourly views for device utilization insight when user selects "Last 7 Days", "Yesterday" and "Today" option from the date picker on the chart.

Daily and monthly device utilization will continue to be shown when the user selects other options.

- 2. Enhanced utilization algorithm now include more factors such as number of successful scans and device backlight on duration.
- 3. Global header enhancement (VisibilityIQ OneCare and Foresight customers)

Dashboard view has been updated to enhance user navigation experience including:

- Displaying partner logo (if available) and customer name
- Indicating which insight report is currently being viewed by the user
- Re-organization of icons and dropdowns for settings, notifications, help / resources, feedbacks, and user profile on top of the UI.
- 4. New and enhanced APIs (VisibilityIQ Foresight customer only)
 - Two new APIs are being added to the VisibilityIQ API product bundle:
 - Scan Metrics: insight on total number of scans, successful scans, and symbology
 - o LifeGuard Analytics: identify whether devices are up to date with security patches
 - One API is enhanced with printer insight when applicable:
 - Total Devices: overview of total device fleet with operational state insight for devices.

Please refer to the link below for the full list of APIs.

https://developer.zebra.com/apis/visibilityiq

June 2021 Release 4.2

What's New in this Release?

Release 4.2 introduced enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. New and enhanced operational insight for Zebra's Link-OS[™] networked printers.

VisibilityIQ Release 4.2 continue extending support to Zebra's Link-OS[™] networked printers with operational insights including:

• New Printer Utilization Report

This new report provides printer utilization insight including the length printed and the number of labels printed from customer's printer fleet, which helps customers to understand the utilization status of their printers.

• New Printer Setting Changes Report

This new report provides the insight of setting changes from customer's printers. The insight will help customer identify printer settings that may be outside their normal patterns hence impacting the performance of the printers, or the consumption of media.

• New Printer Alerts Report

This new report provides number of alerts received from customer's printers, as well as the insight on whether the time to clear an alert is exceeding the threshold values by default or set by users. The insight will help customers to identify printers' issues from the number of alerts and alert types, as well as identify printer user behavior or process issues if the clearing of alerts is taking longer than expected.

• Updated Predictive States Report

This existing report is updated to include printer related insight. Possible issues with printer utilization, settings, batteries, etc. will be identified with actionable suggestions.

• Updated Printer Details page

The printer details page is updated with the following insight added at individual printer level:

- Action(s) and rationale for issues identified from predictive states report.
- Printer utilization chart and statistics
- 2. Smart Battery Overview Page

The Smart Battery Overview page shows the summary insight of smart battery inventory and health status. It also allows user to remove batteries from the battery inventory, referred as "decommission" in VisibilityIQ.

3. Exclusion of devices not applicable to battery insight

The devices with no battery or vehicle mounted, e.g., CC6XX, VCXX, etc., showed up previously due to source data issue. Now these devices are removed from battery related insight.

Known issues:

There are 2 known issues with Printer Utilization report due to issues from source data.

- Inconsistency between Length printed data and Labels printed data Currently the Length printed data is reported hourly from printers, but the labels printed data is only reported once a day. Therefore, user may see inconsistencies between the two data points. This will be resolved when label data reporting frequency is changed to hourly in the near future.
- High value in length printed due to printers with duplicate serial number It's identified there are very rare cases that 2 printers may have the same serial number due to MLB board replacement in repair, which may cause abnormally high length printed value. User may want to check if

they have printers with duplicate serial number in their fleet when they observe such behavior in this report.

April 2021 Release 4.1.3

What's New in this Release?

Release 4.1.3 introduced enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

6. Enhanced predictive algorithm for battery remaining useful life (RUL)

The RUL algorithm has been deployed in the Smart Battery Health report to predict the remaining useful life of the smart batteries in customers' Zebra Android mobile computers leveraging machine learning technologies.

The enhanced version of the RUL algorithm with release 4.1.3 captures the degradation rates of smart batteries based on multiple factors including cell info, manufacturer recommendations, historical battery data, usage pattern, average charge cycle per day, etc., to produce more precise results across a greater number of batteries.

One major improvement with the new RUL algorithm is the significant reduction of the number of batteries in the "unable to predict" category versus previous versions of the algorithm. This significant increase in reporting batteries helps customers better understand the status of their batteries and plan for battery replacement accordingly to reduce the interruption to their operations due to bad batteries.

7. Persistent filter toggle settings

Persistent filters were introduced in the end of 2020 to help customers customize their view with filters they select which do not change often. However, However, some customers do not need filters to be persistent, and would like to change their view frequently by selecting different filters or filter values each time when they view the report(s).

Release 4.1.3 introduces the persistent filter settings on the left-hand menu bar allowing users to easily select if they want the filters to be persistent or not by enabling or disabling the feature. The persistent filter setting is enabled by default. Users can disable persistent filters, making all filters selected in all reports during a session to be cleared and the reports will show the default view when users access the report during the next session.

Please note the Global Model Preference, which was under "User Settings", is also moved to the left-hand side bar with the persistent filter setting in release 4.1.3.

March 2021 Release 4.1.2

What's New in this Release?

Release 4.1.2 introduced enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

- 1. The following bugs are fixed:
 - The dropdown list of "Models" filter in Devices in Operation report included models not in customer's device inventory.
 - Battery Level report showed average battery level more than 100% in tile and expanded view.
 - The 500 error: "Internal Server Error" shows up when user sorts the "Cycle Count", "RUL in Day" and "Health % Indicator" columns in data grid of Smart Battery Health report.

• UI not working correctly when grouping data grid with site and/or model in Smart Battery Health report.

February 2021 Release 4.1

What's New in this Release?

Release 4.1 introduced new features and enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. Enhanced battery insight for Zebra's Link-OS[™] networked mobile printers.

VisibilityIQ Foresight Release 4.1 continue extending device support to Zebra's Link-OS[™] networked printers with operational insights including:

- Battery Level insight for mobile printers VisibilityIQ Foresight now supports battery level insight if customers have Zebra Link-OS networked mobile printers in their device fleet and have purchased VisibilityIQ Foresight Printer service. The insight is available at company, model and individual printer level in Battery Level report.
- Battery Discharge Rate insight for mobile printers VisibilityIQ Foresight now supports battery discharge rate insight if customers have Zebra Link-OS networked mobile printers in their device fleet and have purchased VisibilityIQ Foresight Printer service. The insight is available at company, model, and individual printer level in Battery Discharge Rate report.
- 2. Three new APIs are being added to the VisibilityIQ API product bundle:
 - WLAN Signal Strength: Identify site areas and access points with poor signal strength
 - **Newly Added Devices:** Identify dates when devices are first seen and first used for new device rollouts and devices returning from repair
 - Battery Swap Activity: Discover battery, charger, or business process issues based on number of times batteries are changed in devices

Prior to VisibilityIQ release 4.1, 18 APIs have been introduced in the VisibilityIQ API product bundle to enable programmatic integration with VisibilityIQ insights. Please refer to the link below for the full list of APIs.

https://developer.zebra.com/apis/visibilityiq

- 3. The following bugs are fixed:
 - The 500 Exception issue when applying user tags to all devices.
 - The OS filter missing in export file for reports with OS filter.
 - Export for Predictive States report missing "Full Model No." column values in device listing tab.
 - Apply Filters button still active when click on different tab in Lifeguard Analytics report.
- 4. Security enhancement to VisibilityIQ with fixes to security vulnerability issues.

January 2021 Release 4.0

What's New in this Release?

Release 4.0 introduced new features and enhancements to VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

1. New VisibilityIQ Foresight Printer offer

VisibilityIQ Foresight Release 4.0 extends device support to Zebra's Link-OS[™] networked printers with key features and operational insights including:

Printer Visibility – total inventory view, printer operational status (utilized, un-utilized or out of contact), smart battery data, and detailed view at the individual printer level, which will be available in the following 6 VisibilityIQ Foresight reports:

Total Devices, Devices in Operation, Out of Contact, Newly Activated Devices, Critical Battery Events, Smart Battery Health.

Printer contract information will also be available in the Contracts Report.

- A toggle feature allowing the user to switch their view of certain reports between mobile computers and printers or 'all device' type view by selecting from the drop-down of the device type filter if the customer have both mobile computers and Zebra Link-OS printers.
- Additionally, the Models filter and the Model Preference filter will now include printer models for customers who purchased the VisibilityIQ printer service.
- A new set of SKUs/part numbers are available for customers to order the service so they can display printer data on their VisibilityIQ dashboard. The ordering, onboarding and support processes remain the same as existing VisibilityIQ Foresight offers.
- 2. User configurable threshold for Critical Battery Events report

Previously, the threshold for Critical battery events is pre-set at 30% of device's battery level hence whenever the battery level is below the threshold a critical battery event will be reported. Now user is able to set the threshold per their organization's requirement in report setting for Critical Battery Report if they have admin privilege.

Please note the threshold change will be effective starting from the next data load, and historical data for the report before the change happens will remain unchanged.

3. Available to all VIQ customers, Click to Solve is a feature that allows a user to click on the model of a Zebra device from within the Device Details page and be taken to the either the product page for the selected Zebra model or the support and downloads page for the selected Zebra model. In some cases, the link will take the user to the main support and downloads page to continue their search.

December 2020 Release 3.1.1

What's New in this Release?

An update was deployed to the VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

New Enhancements

- 1. Enhancements to apply and clear filters & date picker at report level.
 - The Date picker is now relocated to the top right in the report view. A new Change Date Range confirmation pop-up window will display when the user changes date from date picker, so user can select not to show the pop-up window during the rest of the session.
 - The Clear All and Reset to Default buttons are available to easily clear selected filters.

December 2020 Release 3.1

What's New in this Release?

An update was deployed to the VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

New Enhancements

1. 42Gears SureMDM Introduced as an additional MDM alternative

VisibilityIQ Foresight is adding 42Gears SureMDM as a supported MDM alternative for both bundled and connect solutions. This provides a new alternative to customers for accessing the insights that VisibilityIQ Foresight provides. All of the insight, reporting and notification capabilities currently provided by VisibilityIQ are available via this new offering and all of the existing access methods continue to be available.

November 2020 Release 3.0.3

What's New in this Release?

An update was deployed to the VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

New Enhancements

1. More time duration options are available in the chart area for Total Devices and Devices in Operation reports

In Total Devices and Devices in Operation reports, a drop-down menu is added to the chart area for users to select "12 months", "30 days", "14 days", and "7 days" so they can view the trending data in different time durations. The default selection is "12 months" as in previous release.

Please note, the selected filter (other than "12 months") does not remain in place when you log-out or navigate away from the report.

October 2020 Release 3.0.2

What's New in this Release?

An update was deployed to the VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

New Enhancements

1. Platform Availability Performance Indicator

This performance indicator shows the percentage of time that VisibilityIQ is available for user log-in over the previous month.

Please note, the percentage value will not display until the system acquires a full month of data thus from November 1 onward, the performance indicator will reflect true platform availability over the previous month.

2. Data Availability Performance Indicator

This performance indicator shows the percentage of time customer data is made available on time (9:30 am UTC) for the previous month.

Please note, the percentage value will not display until the system acquires a full month of data thus beginning December 1 onward, the performance indicator will reflect true data availability over the previous month.

October 2020 Patch Releases

What's New?

On a regular basis, Zebra will introduce new features to enhance user experience when they access VisibilityIQ portal. Please see below to learn about key new enhancements available to you.

1. New process to apply and clear filters at top level and report level.

Now when a user selects a global model preference or report filter (e.g. site hierarchy, models, system tag, user tag, or date picker), the filter remains even after log-out. The new "Apply Filter" button must be clicked after you have a selected a filter(s) or after you have cleared (or deselected) a filter(s).

2. Filters on data grid column headers remains selected until manually cleared.

If a user enters a filter at a column header of the data grid in a report, the filter will remain selected until the user clears it.

3. Navigate report pages quickly with new jump to page option.

A user may now quickly view a report page by typing the page number in the Jump to Page field and clicking enter. The page selection will remain persistent until the user selects another page.

4. Row number selection remains selected until manually cleared.

A user can select the number of rows (10, 20, 50) of the data grid to display in current page, now the selection will remain persistent until the user selects a different number.

5. The Application Analytics Report now groups by application name.

The tile view and chart in report view are now showing applications by application names. If a user would like to update this new default view in the report and aggregate the data by application name version as before, he/she can simply access the report details view and select "By App Version" on the right-hand side of the screen top right side of the chart. Please note the tile view cannot be modified.

6. Out of Contact report enhancements

- The report now allows a user select percentage or absolute numbers to display in graph
- The report now has additional column showing absolute number in addition to percentage if user groups the data grid by model or site.
- The threshold settings allow a user to select out of contact date range to 181 days instead of 61 days.

7. New repair details on device details page

On device details page, the "Repair Details" tab now allows a user to click on the repair ticket number to access the details of the repair info in a popup window.

8. Large File Data Exports

The "Export Report" feature in each report is enhanced to allow the export of large excel file including up to 1 million rows.

July 2020 Release 3.0

What's New in this Release?

An update was deployed to the VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

New Enhancements

1. New VisibilityIQ Foresight IoT offer

The VisibilityIQ Foresight 3.0 release provides a new offer called VisibilityIQ Foresight IoT, specifically designed for customers who need visibility to operational analytics insight of their Zebra Android devices in an MDM-independent environment.

The service draws device information through the Zebra Data Services (ZDS) agent, a utility pre-installed on all current Zebra Android Mobile computers, as well as other data sources such as contract, case management and repair systems.

By eliminating the requirement of running a compatible MDM, this service offer saves the significant expense of licensing, integrating or connecting to an MDM, and allows customers to select any MDM that meets their needs for device management, while still having full access to the powerful business intelligence tool with the same user experience that existing VisibilityIQ Foresight offers provide.

Please note the offer supports Zebra Android mobile computing devices with ZDS agent enabled.

VisibilityIQ Foresight IoT replaces the previous Asset Visibility Service (AVS), which has been discontinued upon the availability of this new service and existing AVS customer will be migrated to VisibilityIQ Foresight IoT with no additional charge.

2. Near real-time data refresh

The VisibilityIQ Foresight 3.0 release enables more frequent data upload for VisibilityIQ reports instead of once a day as in previous releases.

- VisibilityIQ Foresight reports data is refreshed on an hourly basis.
- VisibilityIQ OneCare reports data is refreshed every 12 hours (around 6 am and 6pm UTC time).

This new capability will significantly reduce data delays for all regions, so users can access more robust and up-to-date operational insight to their devices. It also enables the users to take actions or respond to events or issues more quickly based on timely information.

Note:

- The devices may send data at different points in time and/or interval based on the specific configuration and utilization status for each device, hence the refreshed reports may include devices with data not updated in the most recent data load.
- There will be 1 -2 hours delay from data upload to data being displayed on the dashboard due to data processing time needed.
- 3. New battery reports
 - a. Battery Level Report

This report provides insight to the average battery level reported by Site, Device Model and Individual Device for the specified date range.

b. Battery Discharge Report

This report provides insight to the average battery hourly discharge rate reported by Site, Device Model and Individual Device for the specified date range.

Note: these 2 reports are available for VisibilityIQ Foresight customers only.

- 4. Auto Site Relocation
 - a. This feature allows Zebra VisibilityIQ IoT customers to enter site information which cannot be provided by ZDS agent.
- 5. Ship to Site info for VisibilityIQ OneCare reports
 - a. Site information within the VisibilityIQ OneCare reports will be based solely on the Ship to Site information from the RMA to provide more reliable and accurate information. It will not include the Received From site information.

Known Issues

The following provides a list of known issues impacting some VisibilityIQ Foresight insights and reports as a result of the system update that occurred on Monday, July 27. This document will continue to be updated, as new information is available.

1. Smart Battery Health Report: Possible Inaccurate Smart Battery Inventory Information

Issue: Smart battery inventory information for the current day may not be accurate. This data will be accurate when the report is run for any previous date.

Expected Resolution Time: Monday, August 3, 2020.

2. Application Analytics Report: Application May Report Inaccurate Usage

Issue: An application may show that it has been used for over 24 hours on one device, in a single day.

Expected Resolution Time: Monday, August 3rd

3. Devices in Operation and Out of Contact Reports: Possible Inaccurate Number of Out of Contact Devices

Issue: The number of out of contact devices for the current day shown in the Devices in Operation and Out of Contact Reports may not be accurate. This data will be accurate when the reports are run for any previous date.

Expected Resolution Time: Monday, August 3rd

4. Devices in Operation Report: The BSP Field Does Not Display in the Report Export

Issue: The BSP field displays when the devices in operation report is viewed in VisibilityIQ Foresight, however when the report is exported, the BSP field does not display in the exported file.

Expected Resolution Time: To be confirmed at a later time.

5. Newly Activated Device Report: The BSP Field Does Not Display in the Report

Issue: The BSP field does not display in the newly activated device report, however this field does display in the Devices in Operation report.

Expected Resolution Time: To be confirmed at a later time.

May 2020 Release 2.9

What's New in this Release?

An update was deployed to the VisibilityIQ OneCare and VisibilityIQ Foresight with the following:

New Enhancements

- 1. Device Geo Location Map (Available only to VisibilityIQ Foresight users)
 - a. A geographic map shows the last known GPS location of devices reporting GPS data.
 - b. User can zoom in on the map to see where devices are located across a country, region, city, or customer site and click on the icon for an individual device to view the GPS data details.
 - c. To take advantage of this new feature, devices must be GPS-enabled and successfully transmitting data via MDM or Zebra IoT agent.
- 2. Communications Hub
 - a. Upon logging in, user will see a new landing page, called the Communications Hub.
 - b. The Communications Hub will allow user to:
 - i. Watch a short introduction video for quick overview of VisibilityIQ
 - ii. Get activity feed to understand what is new with VisibilityIQ
 - iii. Click on quick links to access the learning resources
 - iv. Provide feedbacks on VisibilityIQ
 - v. Go to documentation repository to access documentations available for VisibilityIQ
 - vi. Go to multiple support pages to access tools, portals, etc.
 - vii. Launch dashboard to access the VIQ dashboard and reports.
- 3. Model Preference
 - a. This new global model filter enables users to select which device models should display (or be hidden) for all reports and can be accessed from User Settings.
- 4. New Organization of the Left-Hand Navigation Bar
 - a. The navigation bar on the left-hand side has been reorganized to display reports for OneCare separately from the business intelligence of Foresight.
- 5. VisibilityIQ Branding in Email Notifications
 - a. Email notifications will now include the VisibilityIQ logo.
- 6. Select Due Back Email Notification
 - a. This feature will send an email every Monday to users, which have a "Partner Role" access or anyone that has opted in, which contains the Due Back serial numbers that are in Warning state (more than 14 days due) and Critical state (more than 30 days due), at that time, for each of their customers. This feature is accessed via Administrative settings and is not available to users with "End Customer" access.

- 7. Data Grid Column Header Changes
 - a. Column header changes were implemented in 13 VisibilityIQ reports to better align names across the VIQ reports. The reports impacted are Newly Activated Devices, Physical Memory (RAM) Utilization, Storage Memory Utilization, Utilization Rightsizing, WLAN Signal, Scan Metrics, Device Disruptions, Case Lifecycle, Lifeguard analytics, Contracts, On time Delivery Repair Repeat rate reports.. Be aware that if you were utilizing an export of these reports to feed additional reporting, you may need to make a change to your scripts. A future release will align the remaining 13 reports. More details can be found at [URL]

February 2020 Patch Release 2.7.6

What's New in this Release?

An update was deployed to the VisibilityIQ OneCare dashboard with the following:

New Enhancements – All VIQ

- 1. LifeGuard Analytics Report
 - a. Within the LifeGuard analytics report you now have the ability to expand a row in the Updates Recommended tab to see the list of serial numbers contained in the group. Hover over the row to show the "View Details" button where you can click to expand the row and see the applicable serial numbers. From here, the list can be exported to excel if desired.
- 2. Sortable Aggregation for Grouping Feature
 - a. The Grouping feature in the data grid has been expanded to not only allow you to group the data grid by particular columns, but also sort by those columns in ascending or descending order.
- 3. Data Grid Column Header Changes
 - a. Column header changes were implemented in 10 VisibilityIQ reports to better align names across the VIQ reports. The 10 reports impacted were Repair Lifecycle, Repair Return Rate, Total Devices, Devices in Operation, Out of Contact, Predictive States, Application Analytics, Smart Battery, Battery Swaps, Scan Metrics and Critical Battery Events. Be aware that if you were utilizing an export of these reports to feed additional reporting, you may need to make a change to your scripts. A future release will align the remaining 13 reports. More details can be found at [URL]

January 2020 Release 2.7

What's New in this Release?

On January 10th, an update was deployed to the VisibilityIQ OneCare dashboard with the following:

New Enhancements

- 1. Repair Return Rate report
 - a. The Repair Return Rate report was updated with two new views: Return vs Failure Rate and Damage Rate. Return vs Failure Rate compares the Return Rate to the Failure Rate as a percentage of units under contract over a 12-month period. Damage Rate shows the damage rate for a specific product against the product's units under contract cumulatively over a calendar year. Note: these values may not be accurate prior to January 2020.
- 2. Repair Lifecycle
 - a. To the Repair tab, a column was added to show the Remedy associated to the repair
 - b. To the Shipped tab, columns were added to show the Expected Serial Number and the Received Serial Number.

March 2019 Release 2.12

What's New in this Release?

On March 5th, an update was deployed to the Support Dashboard with the following:

New Enhancements

- 1. User Tags
 - a. User tags are a feature available to all dashboard users. It allows a user to select a device or group of devices and assign a user tag to those devices. The user tag can then be utilized for filtering within reports that allow for filtering. All user tags are visible and available to all users of the dashboard. See attached documentation.
- 2. Email Notifications
 - a. Email notifications allow a user to receive a daily email summarizing the changes in threshold alerting for each applicable report. The notifications can be turned on/off for any report for which a threshold is available up to a maximum of 8 thresholds. By default, Email Notification is disabled. See attached documentation.
- 3. Advanced Filtering
 - a. Advanced filtering is a redesigned way of applying a filter at the report level. The new drop down allows the user to apply multiple filters to a single report.
- 4. Excel Export Filter Enhancement
 - a. When exporting a report to excel, the excel title page will now show the system tags, user tags and column filters that have been applied to the report.

Notable Changes

- 1. Corrected an issue where in the Case Lifecycle report the search for site function was not showing all sites listed in the report.
- 2. Fixed an issue where there was a Case Lifecycle count mismatch between the graph and the data grid.
- 3. Resolved an issue where Case Lifecycle was not populating Model Number for some customers.
- 4. Corrected an issue for some Site Assignment users where a site would remain highlighted after it was unselected.
- 5. Fixed an issue that was causing company logos to be distorted when a report was exported
- 6. Corrected an issue where for some Essential customers, the Repair Lifecycle Expected tab was showing a "Y" in Replacement Shipped column, when it should have shown "N" for a Repair and Return customer.
- 7. Fixed an issue in Lifeguard Analytics report where some devices were not getting updated with the correct update recommendations.
- 8. Corrected an issue experienced by some customers where the Open Orders and Expected tabs did not have data populated in the data grid up first opening of the report.

Known Issues

1. In Case Lifecycle report, Repair Reference field displays the Service Order number instead of a Y/N value.

- 2. In Case Lifecycle report, when using the Search by Site function, site names other than the searched site name may show in addition to the desired site.
- 3. In the Contract report, the Contract Details tab when grouped by contract shows a blank grouping value for some customers.
- 4. In Contracts report, when exported to excel, the contract number is formatted as text instead of numeric.

February 2019 Patch Release

What's New in this Release?

On February 28th, a patch was deployed to the Support Dashboard

Notable Changes

- 1. Fixed an issue where certain contract expiration categories were not adding up the contracts correctly in the Contracts report.
- 2. Fixed an issue where the Contracts report summary tab did not display the contract expiration category in the graph.
- 3. Fixed an issue where the Contract report when exported would not show data for all tabs in excel.
- 4. Fixed an issue where some company logos were being distorted within the excel export title page.
- 5. Outage Notification banners will now remain on the screen when the user scrolls down the page.

November 2018 Release

What's New in this Release?

On November 19, Zebra's existing Repair Dashboard re-launched with a <u>new look and feel, new and enhanced</u> <u>reports, and a new name</u> – the **Zebra OneCare Support Dashboard**. Zebra's powerful, configurable, web-based, self-service tool is a <u>benefit available to all Zebra OneCare</u> Essential, Select, & SV for TC2X contract holders. Prior to the re-launch, current users of both the former Repair Dashboard and the Operational Visibility Service (OVS) Dashboard received separate email notification of the changes

Notable Changes for Repair Dashboard Users

- 1. Partners and Customers have access to a series of dynamic repair, support, contract, and device reports.
- A new Lifeguard[™] Analytics Report helps ensure devices are protected with the latest security updates. The LifeGuard Analytics Report supports visibility of devices and recommended updates for devices with Android version N and above.
- 3. New dashboard features including a customizable dashboard home screen, modular reporting tiles with color-coded status indicators, intuitive navigation, and custom report views and filters

Notable Changes for OVS Dashboard Users

- 4. Have access to the same <u>repair</u>, <u>support</u>, <u>contract</u>, <u>and device reports</u> as Repair Dashboard users, which are temporarily accessible through the Support Dashboard
- 5. Coming in 2019, a refreshed OVS Dashboard will launch with additional enhanced and new reports, and all reports will be in one place again

Known Issues:

- 1. The Contract Report, summary tab, currently displays the count of part numbers shown in the data grid. This will be corrected to display the count of unique contract numbers.
- 2. Duplicate site names may appear in the Site Assignment feature as a result of different Zebra sources using the same naming convention for the site.

- **3.** Currently, utilizing the refresh button while viewing a dashboard will cause an "Access Denied" error message. You will need to start a new login session to view the dashboard.
- 4. Currently the Expected tab of the Repair Lifecycle Report includes repairs that are classified as Ship Only.
- 5. Contracts report does not export the Quantity field as a number format in excel. <u>Workaround:</u> User will need to change the cell format manually in the excel export.
- 6. The same value is incorrectly used for Problem Code 1 and 2 in the Open Orders tab and the In Repair tab of the Repair Lifecycle report.
- 7. Currently dashboard will timeout after 30 minutes of inactivity. This will be lengthened to 60 minutes.
- 8. In the Case Lifecyle report, the Repair Reference column is not getting consistently populated.
- 9. In the Repair Lifecycle report, the Replacement Ship column is showing a value of "Yes" for customers with Essential contracts. This is incorrect.