

This Hot Sheet provides critical information to understand prior to installing or upgrading to 25.x. Please consult the appropriate product documentation for additional details. Significant notices from previous releases have been included for reference if upgrading from older versions.

25.3.0 Notices

DateTime Controls Updated

DateTime controls will only show 12/24 hours based on the settings of the device used to access Web Modules. Time is no longer a stand-alone field and is now embedded in the DateTime field.

EAM Mobile New Minimum Supported Versions

EAM Mobile has been migrated from Xamarin to MAUI (Multi-platform APP UI) which has increased the minimum supported versions for Windows, Android, and iOS platforms. Minimum supported versions are as follows:

- Android: Android 12
- iOS: iOS 15
- Windows: Windows 10 Build 26100

Service Request Center Portal Added

A new portal has been added to Web Modules called Service Request Center. This portal facilitates the entry of Service Requests into the system and will identify existing service requests already in the system that may be duplicates. This allows users to update the existing Service Request instead of creating a duplicate.

As part of the new Service Request workflows, a new Service Request Detail page has been created. This allows users to create a Service Request without leaving the page and allows them to view similar Service Requests at the same time. This new Service Request Detail page can also be accessed through the Technician and Work Management portals.

25.2.0 Notices

Dropdown List Controls Have Been Improved

Dropdown list controls across the EAM Web pages have been improved to allow for setting highlighted or required flags like many other control types in EAM. These controls will appear as textboxes when using Admin Mode on the Enterprise Portal screens to configure UI Information.

Log-In Page Updated

The look and feel of EAM's log-in page has been refreshed. Customers who have their own logos shown in the Web Modules banner should review their sizes to ensure they display properly on the newly styled banner.

25.1.0 Notices

Legacy OT Time Code Functionality Removed

Legacy OT time code functionality has been removed, and a new option has been added. Time codes now have the option to “use employee overtime rate and ignore rate multiplier.” This replaces the legacy OT time code functionality, meaning that when determining the labor rate this option will be checked instead of the time code OT. As part of the conversion, instances of the legacy OT time code will be automatically updated to use the new option and change the multiplier rate to 1.0.

SSO Option Names to Match Protocol

Users now see SSO protocols instead of vendors and it is now alphabetized.

Old Name	New Name
Active Directory Federation Services (ADFS)	ADFS - Active Directory Federation Services
Integrated Windows Authentication (NTLM or Kerberos)	Kerberos or NTLM - Integrated Windows Authentication
LDAP Authentication	LDAP - Lightweight Directory Access Protocol
Microsoft Entra ID (formerly Azure Active Directory)	OAuth 2.0 - Open Authorization 2.0

OpenID Connect	OIDC - OpenID Connect
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25.0 Notices

SMTP Configurator Settings Updated

A setting has been added to the Web Modules and MAXQueue Configurators to allow unsecure connections to the SMTP server. The “Enable TLS” setting is found on the Options tab of Web Modules Configurator. If disabled, EAM will not attempt to secure the connection to the SMTP server using TLS. If enabled, EAM will require that the specified SMTP server has the TLS capability, enabled and proper TLS certificates installed.

Work Order Details Page Redesigned

The Work Order Details web page has been rebuilt from the ground up to improve performance, responsiveness, and ease of use. This page will now display on phone form factors. All the same features and functionality still exist. The other Work Order Main page will be removed in a future version to reduce user confusion over which page to use. The following information details some of the features and enhancements of the new Work Order Details page.

1. The Table of Contents section on the left side has been restyled for improved readability. The Work Order Details page now supports fading table of contents sections and presenting counts based on the content inside of that section. This helps to identify what sections on the page have data for the user to look at without having to scroll through every section to find out.
2. The Work Order Details page now displays the Work Order Title more prominently. This is to support identifying the purpose of the work order at-a-glance.
3. The action buttons in the top-right corner on the Work Order Details page have been moved into their respective sections on the page. This may require user training to teach users the new location of these buttons.
4. PM Checklists are now accessed on the Work Order Details page via a dropdown on the Tasks section titled “Checklists”. The icons next to the button dropdown show the combined state of all the checklists on the work order. This supports knowing if checklist work still needs to be done at-a-glance. Each checklist listed in the dropdown also presents its own icon to inform the user of its state.
5. Some of the sections on the Work Order Details page have been reorganized to present relevant information higher on the page.

6. The Work Order Details page no longer groups Service Requests, Tasks, and Labor/Parts/Commercial Postings in the same section. These have been split out into their own sections to support Task Reordering.
7. Removed the following settings from the Work Order Details page:
 - i. The Location Profile setting “Show Assignment Contacts on Work Order Postings” has been removed.
 - ii. The PM Checklist report button is no longer available. If access to the PM Checklist report is desired, open the Checklist page for that specific task.

24.x Notices

Crystal Reports Connection Method Changed for Oracle DB

Replaced Crystal Reports connection method for Oracle DB users. Connection will now be obtained using TNS Name instead of ODBC. It is mandatory to have a full Oracle Client Installation on the same server where RAS is running.

EAM Mobile Now Supports OpenID Connect SSO

OPEN ID Connect SSO support has been added to EAM Mobile.

- For Android, Callback URL will need to be set to “mobilefocus.openid://callback” in Data Service configurator.
- For IOS, Callback URL will need to be set to “mobilefocus://callback” in Data Service configurator.

Employee Chooser Now Uses New Version of Full Calendar

The Employee Chooser has been updated to use the newest version of Full Calendar, v6.1.15. If you have a Content Security Policy (CSP) applied to your environment (viewable on the “Web” tab in the Configurator), you will want to re-apply EAM's default CSP to pick up new changes required by the EAM software.

Enterprise Purchasing Vendor & Purchase Types Enhanced

Enterprise Purchasing - Purchasing Types have been enhanced to allow specification of supported vendor types for that purchasing type. Individual vendor types can be specified or the checkbox “Supports all vendor types” can be enabled for the purchasing type.

When configured, vendors used on Requisitions, Purchase orders, Requests for Bid/Quote/Proposal, and Responses to RFB/Q/P must have a supported vendor type for the purchasing type used. Note that vendors *without* vendor types are *always* supported for all purchasing types regardless of configuration.

Examples:

- Purchasing type “A” has no supported vendor types listed and supports all vendor types is *unchecked*. Only vendors with NO vendor type can be used with purchasing type “A”.
- Purchasing type “B” has no supported vendor types listed and supports all vendor types is *checked*. All vendors can be used for purchasing type “B”, regardless of whether they have a vendor type or not.
- Purchasing type “C” has supported vendor types “VEND-E” and “VEND-F” listed. Vendors with NO vendor type, as well as vendors with vendor type “VEND-E” or “VEND-F” can be used with purchasing type “C”. Vendors with other vendor types may not be used.

When a part request line item is actioned to ORDER parts via a Requisition, Purchase Order, or Request for Bid/Quote/Proposal, the vendor listed on that line must be supported by either the Location default purchasing type or the system default purchasing type when there is no Location default. If the vendor is not supported, an error will be shown.

➡ Upon upgrade to 24.1.0, all existing purchase types will be marked as “Supports all vendor types” to ensure no validation errors on existing data. Going forward, any new purchase types will need to be configured for supported vendor types, or they will only support vendors without vendor types. Vendors without listed vendor types are supported and usable by any purchasing type regardless of configuration.

External Reporting No Longer Supported

Support for External Reporting has been removed from EAM. Any environments upgrading to 24.0.0 that still use External Reporting will need to remove it and reconfigure their environment to use Traditional Reporting.

PM Projections

Automatic PM Projections

The PM Projections feature has been expanded in this version. The intent is for customers to migrate from using the old Service/Inspection Due for PM - By Location screens to the

Scheduled Services/PM Projection screens. When upgrading to v24.0.0, Admins should use the “Equipment - Setup - Options” screen to run projections for all scheduled services.

PM Projection Asset Viewer Visibility

PM Projections can be shown on the calendar in Asset Viewer. There is now a new Location Profile setting to display these projections on the Asset Viewer and Service/Inspection Due calendars. By default, this setting is disabled. It will need to be turned on if you want to display PM Projections on these calendars.

State of Good Repair Tracks Asset Criticality & Risk Scores

New fields have been added to the Asset Primary, Linear Asset, and Component screens to track Criticality and Risk scores, as well as allowing entry of Condition scores. Previously, only a Condition rating ID could be entered. These fields can be found on the Capital tab of these screens.

When entering either a Condition rating ID or a Condition score, the corresponding value will be filled into the other fields depending on configuration. Condition rating changes made directly on the Equipment Condition Reading screen do not update those fields on the Asset.

Two new columns have been added to Asset Portal’s Asset Summary page to display the asset’s Criticality score and Risk score.

Condition score, Criticality score, and Risk score fields were also added to Assets and AssetAdditionalInfo API endpoints.

Work Assignment Profiles

Work Assignment Profile ID has been removed from all Asset Primary screens including Asset, Linear Asset, Stationary Asset, and Components. The mapping between an asset and a work assignment profile is now done on the Work Assignment Profiles screen. Existing profile assignments will automatically be moved over to the new configuration structure.

When “shop scheduling” is disabled on your work order’s location, only the first matching work assignment profile for an asset and task will be assigned. It is recommended that “Shop scheduling active” be enabled for any shop location (regular, mobile, external) so multiple employees can be assigned to a single work order. Disabling “Shop scheduling active” is deprecated and will be removed in a future version of EAM.

23.x Notices

Ad Hoc Query Portal (Izenda BI) No Longer Supported

The new Ad Hoc Query portal (IzendaBI) added in version 19.1 has been removed from EAM due to lack of customer adoption and technical complexity to maintain. The old Ad Hoc Query portal (Izenda6), formerly called Legacy Ad Hoc Query Portal, is still available for use. It has been renamed from Legacy Ad Hoc Query to Ad Hoc Query. Existing module configurations will retain the “Legacy Ad Hoc Query” name, but Admins can edit this name if desired.

Additionally, the settings pertaining to this portal in the portal options (under Admin Center) have been updated to remove the word Legacy.

App Server Files Deleted during Install or Upgrade

During a reinstall or upgrade of the application server, existing AppServer folders will be completely deleted and recreated to remove unused files from older installations. It is recommended to not store any customized script files in the AppServer folder. Any such files should be moved out of their existing installations prior to upgrading or reinstalling the server.

Azure Active Directory Relabeled to Microsoft Entra ID

Microsoft renamed Azure Active Directory (ADS) to Microsoft Entra ID, so it has been relabeled throughout EAM.

Core Software Updated to .NET Framework 4.8.0

.NET 4.8.0 or higher is required for use with the 23.x release. This is not shipped as part of many windows operating systems so an installer will likely need to be downloaded from Microsoft’s website in order to install.

Data Incoming to EAM Application to be Trimmed

EAM core application will trim incoming data’s leading and trailing spaces. If you have existing data with leading spaces, it is recommended that this data is renumbered or deleted before upgrading to v23.0. Recommend reviewing assets and tasks at a minimum.

DataLoader Minimum Server Requirements

DataLoader is version dependent and not backwards compatible with older EAM applications. DataLoader minimum Application Server version is 23.0.0. It will not work with older versions of EAM application server.

Data Services Required as Part of Core Installation

Data Services is now required to use Web Modules. This ensures expansion capabilities are available for API functionality.

External Reporting Deprecated

External Reporting is no longer supported in 23.x and will be removed from EAM beginning with version 24.0.

External Validations Library Deprecated

The deprecated External Validations library, which allowed dynamic loading of DLLs for custom screen validations, has been removed from the App Server.

GUI Updates

GUI Client Install Removed

GUI Client Install will no longer be provided in v23.0 as the GUI is deprecated. All forms of the GUI (FleetFocus, RailFocus, DataAdmin, etc.) have been consolidated into a single version of the GUI called EAMGui.exe. The renamed EAMGui.exe will be installed alongside App Server installations.

Query Report Generator Removed from Application

Query Report Generator reports, tables, and views have been removed from the product and are no longer maintained. The Queries / Report menu has been removed from the GUI along with any screens that could be accessed via this menu.

HTML Module Text Editor Upgraded

The text editor used in the HTML and Welcome Modules has been upgraded to a new version. This version upgrade has breaking changes and existing content saved may not display the same way. Please review any data and update where needed. Some features from the old version do not exist in the new version.

Job Scheduler Not Automatically Started During Install

When upgrading or installing Web Modules, the Job Scheduler service (FASuite.Scheduler) is installed and set to start automatically upon system start, but it will no longer be started by the install process. Manual start of the service after install or a restart of the system is required.

Linear Work Order Updates

Linear Work Orders Expand to Enclose Service Requests

When a service request is assigned to a linear work order, or a service request that is currently assigned to a linear work order has its range updated, the linear range of the work order will be expanded to contain the service request if needed.

Additionally, upon saving a linear work order, the work order's bounds will automatically expand to enclose any assigned service requests, whether newly assigned or not. This is to prevent a linear work order from having service requests assigned to it outside of its bounds.

A new Shop Activity setting, "Show warning when Work Order bounds will be expanded by Service Request assignment," is available with default set to OFF. When enabled, actions that expand the bounds of an existing Work order due to service request assignment or update will show a confirmation dialog to the user requiring them to click OK to continue.

Linear Work Orders Use New Linear Reference Column

The Work Order Management page Work Order List no longer shows a child row showing the linear Segment, Marker, Offset (SMO) information for linear work orders. The Work Order List now supports a Linear Reference column that contains this information. It can be unhidden, reordered, and used for sorting.

If your organization uses linear work orders, it is recommended to show this new Linear Reference column. It is accessible by clicking any of the work order summary buttons which will load the page and show the Work Order List. Right-click on any column in the Work Order List to launch the table options, scroll to the Linear Reference column, and enable the checkbox to show the column.

MAXQueue Updates

MAXQueue Documoto Module Now Uses Documoto API

The MAXQueue out-of-box service that syncs manufacturers to EAM from Documoto has been updated to support a new communication layer. The existing service will no longer work and needs to be re-configured.

MAXQueue Integration Designer Drops Oracle AQ Support

Oracle AQ Reader and Oracle AQ Writer adapters are no longer supported in Integration Designer. Any existing services that use these adapters will no longer function.

MAXQueue Update Required for Email Adapter

MAXQueue Email Adapter has been updated to send processed emails to a specific folder where they are not automatically deleted. If you have any service that sends out emails, after upgrading MAXQueue to 23.0+, open the MAXQueue Configurator and save to update all dependent services.

Network Restriction History Purging and Archiving

EAM Purging has a new functional area for EQUIPMENT ATTRIBUTE HISTORY and NETWORK RESTRICTIONS so this data can be purged or archived from the EAM tables. This is disabled by default and can be enabled through the table management screen on the retention tab where other functional areas are managed for record retention.

The archive table, ARCHIVE_SLA_REQT_PERIOD_PRI_PE is no longer used, and a new table called ARCHIVE_SLA_REQT_PERIOD_PRI_PERF will be generated during upgrade. Keeping both tables will not present any issues for the application or archival processes, but a script can be obtained from the EAM development team via Customer Care to combine these two archive tables if that is desired for reporting purposes.

Oracle Users Must Re-configure if Upgrading to 23.x

EAM has been updated to use Managed Oracle Data Access. All Oracle customers upgrading to this version will need to re-configure their connections to Oracle databases in the various EAM Configurators. Database connection information will need to be updated.

Use the details from your TNS connection to populate the fields in the various EAM Configurators: Web Modules, Data Services, MAXQueue, and Integration Designer.

Python and 32-bit Builds No Longer Supported

EAM no longer supports the 32-bit Application Server as well as any 32-bit utility applications. Due to this removal, custom Python scripting is also no longer supported.

Service Request Management Page Deprecated

Version 23.x is the last supported version for the Service Request Management page (accessed by clicking one of the count buttons in the Service Request Summary gadget). It will be

discontinued in v24.0. Customers should migrate to using the new Service Request Review page, which replaces the Service Request Management workflows. This page can be opted into in v23.0 by enabling the “Use the Service Request Review page for reviewing service requests” location profile setting.

SMTP Configuration Changes

All SMTP support in EAM has been refreshed to support Basic Authentication and other authentication methods through Microsoft Graph API.

SMTP sever configuration for MAXQueue interfaces now happens in the MAXQueue Configurator. MAXQueue interfaces using SMTP to send emails will need to be reconfigured with their SMTP information specified in the MAXQueue Configurator.

SMTP configuration for Reservations Portal now uses the base SMTP configuration in the Configurator. Customers using Reservations Portal should ensure their settings are populated on the EAM Configurator.

SQL Log File Updates

For Application SQL Calls logging, the file name of the calls log has been changed to help identify which log belongs to which user. The SQL log for the System is now called "sqlcalls-ApplicationServerSystem.log"

Supervisor Portal Deprecated

Version 23.x is the last supported version for Supervisor Portal. Customers should migrate to Work Management Portal which replaces Supervisor Portal workflows.

Windows Authentication SSO Requirement

The Windows Authentication SSO method in Web Modules now requires that Forms Authentication is disabled in IIS. Saving the site on the IIS tab in the Configurator will apply this change.

Work Assignment Field Removed from Asset Primary Screen

The Work Assignment Profile ID field has been removed from the Asset Primary screen and other equipment/asset screens. The data in this field has been moved to the asset list of the specific profile to preserve the relationship between the assets and profiles to which they were assigned. This data will be mapped to the new tables during database conversions before the column is removed.

If the new work order's "Shop scheduling active" location option is unchecked, only the first matching work assignment profile for an asset and task will be assigned. It is recommended that "Shop scheduling active" be enabled for any shop location so multiple employees can be assigned to a single work order. The ability to disable "Shop scheduling active" is deprecated and will be removed in a future version of EAM.

22.x Notices

ACM Portal Settings Changes

ACM portal has been updated to use the ACM Setup Options screen when populating defaults for portal options. Take note of the current settings of the ACM portal before upgrading and reconfigure the portal post upgrade of any version beyond 22.1.0.

Apple VPP Replaced by Apple Business Manager (ABM)

Previously Apple provided two separate portals for device and app management, Device Enrollment Program (DEP) and Volume Purchasing Program (VPP). Apple's DEP and VPP programs have been upgraded and combined into Apple Business Manager (ABM) for businesses. Therefore, MobileFocus no longer supports Apple VPP and uses Apple Business Manager (ABM) instead. Trapeze still requires Organization Name and Organization ID to release MobileFocus to their account.

Crystal Reporting Version Upgrade

The supported version of Crystal reporting has been upgraded to 2020 SP1. If your organization uses Crystal Reports, you must upgrade. In this upgrade, the Crystal Report Application Server (RAS) has been upgraded from 32-bit to 64-bit. This will require changing the ODBC connection defined for reporting in the Configurator to a 64-bit ODBC Connection.

Please contact Customer Care to receive the installer package and license key.

 Crystal 2016 SP9 is no longer supported.

FuelFocus Updates

Fuel Transactions No Longer Use Master Fuel Tanks

Corrected issue so fuel tanks that are master tanks are no longer allowed to be used in fuel transactions. Master tanks are intended to be a total sum of the sub-tank, so sub-tank transactions that receive and issue fuel will continue to update the master tank with the total across all sub-tanks.

Created new option to allow transactions against master tanks. These transactions will not update the quantity or value on hand in the master tank. Sub-tank transactions still drive master tanks being updated using the sum of the sub-tanks. The new option is called: Allow fuel transactions against master tanks (tanks that have sub-tanks). The master tank transactions will not affect tank inventory values. Sub-tank transactions will continue to affect master tank inventory values.

Recommendation: If master tanks were used in transactions or listed on fuel pumps, this new option should be enabled.

Fuel Price Tracking on Tanks

EAM's internal tracking of the price of fuel or fluid in a tank has been improved when using the setting "Price comes from fuel/fluid type" on a tank. This setting is now called "Tank uses static price from fuel/fluid type". Workflows which add or remove fuel or fluids from tanks, like internal fuel tickets, fuel receipts, or stock transfers, will no longer adjust the average price of fuel or fluid in a tank when this setting is checked. The value on hand will always represent the quantity in the tank and the price shown on the fuel/fluid type.

Actions which change the price on a fuel or fluid type, or which change the fuel/fluid type used on a tank that is using static pricing will automatically insert NEW UNIT PRICE tank readings on the tank affected to keep them up to date with their respective fuel/fluid types.

During the conversion process while upgrading, fuel tanks with this setting enabled will automatically be updated to have a unit price and a value on hand based on their fuel/fluid type. With this setting enabled, the following workflows have changed:

- Issuing Fuel/Fluid – Quantity on hand will be adjusted based on what was issued. Value on hand will be recalculated based on new quantity unit price from fuel/fluid type. This ignores the actual issue price which will be recorded on the issue.
- Receiving Fuel/Fluid – Quantity on hand will be adjusted based on what was issued. Value on hand will be recalculated based on new quantity unit price from fuel/fluid type. This ignores the actual receipt price which will be recorded on the receipt.

- Transferring Fuel/Fluid – Tanks that use static pricing will have quantity adjusted and value on hand will be recalculated based on unit price from the type.

Identity Port No Longer Needed

Two separate ports are no longer required when connecting clients for API, MAXQueue, or MobileFocus. The identity service now runs on the same port as the respective service. MobileFocus no longer allows configuration of identity port.

Newtonsoft Json Package Vulnerability Addressed

A high-severity vulnerability warning was issued for the Newtonsoft.Json package which is the primary Json serialization assembly used by EAM. This security advisory has been addressed.

Oracle 19c LTS Now Supported

Oracle has discontinued support for Oracle 12c. EAM now supports Oracle 19c LTS.

Service Request Portal Now Allows Contact Info Editing

The portal option "Default Guest Contact Info from Employee or Operator Entry" has been removed from the Service Request portal. Contact info fields have been added to the individual Employee and Operator sections, so the defaulting behavior is no longer necessary. When entering an Employee or Operator ID, the contact info fields from those sections will be carried to the Service Request.

Test Results Automatic Header Status Improvements

The Test Result Test Type Configuration setting "Update header status based on element results" has been enhanced to use more header status values based on the test element data entry or result values. When enabled:

- Set status to IN PROGRESS when some elements have been entered and others are awaiting data entry.
- Set status to FAIL when any test element result value is FAIL.
- Set status to NOT PERFORMED when all elements are marked as NOT PERFORMED.
- Set status to PERFORMED when any test element exists that does not require a result value and the remaining tests are PASS, PASS CORR, or NOT PERFORMED.
- Set status to PASS CORRECTED when all results are PASS or CORR values.
- Set status to PASS when all test elements' result value is PASS.

Test Types now have a new test element configuration option for "Show not performed." When disabled, you will no longer be able to select "Not Performed" on a test element of a test result. .

The "Allow" options for test type element configurations have been renamed to "Show" to clarify the functionality and indicate that the associated fields will not be visible in web modules or mobile clients. For example, when "Allow comments" is disabled it does not show the user the test element comments fields. So now the configuration option is called "Show comments." This still behaves the same and does not show the user the comments field when disabled.

Work Orders Now Track User ID That Opened the Work Order

Work orders now track the user ID that opened the work order. Users will notice field name changes, including Inserted by and Opened by, on the More Info tabs of the following screens: Internal Rebuilds, Linear Work Orders, Work Order Center, and Work Order Planning

The work order control labeled "User order opened by" was referencing a column named inserted_by on the JOB_MAIN table. This column has been renamed to usr_opened_by to better reflect what this value is used to track. The _x_userid_insert_ will continue to track the user that inserts a work order.

21.x Notices

Linear Asset Work Order Creation

Linear asset work order creation will now consider the Location screen setting "Default segment/marker/offset from the linear asset on a linear work order" to determine if it should default the entire asset range. This is to allow consistency between the Enterprise Portal screens and Web workflows. Previously, the entire asset range was defaulted.

Map Services

Data services has been improved to use the mapping client secret from the database without decrypting the value. The UI no longer needs to encrypt the data client mapping secret. If the database value needs to be protected, then a database vendor data at rest solution should be used.

Map Services for ESRI ArcGIS online mapping layer client secret has been cleared and will have to be reconfigured to use ESRI ArcGIS.

MobileFocus - Downloading Data

When downloading data in MobileFocus, the IOS app needs to be in the foreground in order to avoid pausing of the download.

Oracle Customers - Rebuild Custom Indexes

Oracle databases have been updated to use CLOB data types instead of LONG data types. Any custom indexes in the EAM schema must be rebuilt to ensure proper performance. This is only required for indexes on tables that had LONG columns that were converted to CLOB columns.

Pocket PC and Windows CE No Longer Supported

Support for Pocket PC and Windows CE devices has been dropped as of 21.0 and all future versions.

Telematics Alerts

Telematic alerts or fault instances previously defaulted occurrence count to 0 when a new alert or fault was captured. If these features are being used, an optional script has been added that should be run as part of the upgrade process to version 21.0. The script is called

TMAAlertsOccurencesFix.sql and it will add one to the occurrence count on every existing telematic alert or fault instance record.



Note: If there is another process manually setting the occurrence count number then do not run this script. This script should only be used when the workflow process for creating these telematic alerts or faults relied on the default value for occurrence count and never manually overrode that with another value.

URL Gadget Removed

The URL Gadget has been removed for security reasons. It will no longer display in the following gadgets:

- Allocation Assignment
- Asset Configuration Management
- Asset Performance Assessment
- Asset Portal
- Billing
- Capital Planning
- Capital Projects
- Storekeeper
- Storeroom
- Work Management

20.x and Prior Notices

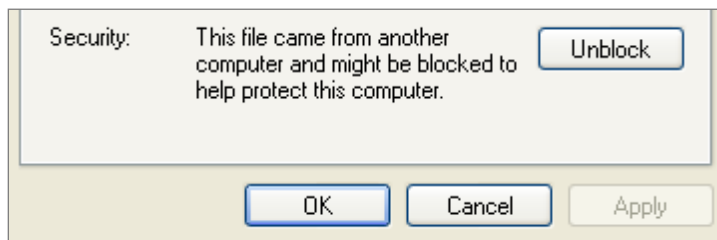
If you are updating from a version prior to 21.x, please review the following notices.

Blocked Files

Windows may have blocked some files in the downloaded .zip file. You may need to unblock the downloaded .zip file prior to extracting the files.

To unblock the file:

1. Right-click the .zip file, click **Properties**.
2. In the Properties dialog box, click the **General** tab.
3. If Windows has blocked files, the **Unblock** button will be visible in the Security section in the lower right area of the **General** tab.



4. Click **Unblock**, **Apply**, and **OK** to exit the dialog box.

Installer Has Moved to 64-bit Installs

5. Any existing customer environments that upgrade to v19.0 or higher need to do a 64-bit installation for all products except the Application Server.
6. Oracle 32-bit client installations are predominantly affected. Customers will need to install a 64-bit Oracle client and configure the necessary TNS entries to allow the software to access the database.

Missing Filter Troubleshooting

If there is a user-created filter missing after updating to 20.1, the following steps can help locate and isolate the problem.

7. Run the following query against the database:

```
select * from emsdba.USR_PROFILE where section in  
(('SA:GADGET:COMMON:FILTER:ASSET','SA:GADGET:COMMON:FILTER:WO','SA:GADGET:  
COMMON:FILTER:SR', 'AssetChooser','AssetPortal:AssetFilter') and value_key not in ('options'))
```

This query will return filters that have not been converted to the new setup.

8. Copy the information from the value_2 column for any records that remain in USR_PROFILE.
9. Manually recreate the filter using the labels in the data.

NTD Reporting

Reports supporting the National Transit Database requirements (NTD) have been improved to meet new standards. Changes include:

- Equipment attributes added for NTD 2019 asset inventory reporting requirements. Run the latest load script to add: Deployment>\AppServer\dbobjects\LOAD\Intd.sql.
- Modifications in support of requirement clarifications and changes to reporting elements with NTD 2019.
- Changes to report locations where all reports are now available at the root of the NTD folder location.

The NTD2018 and NTD2012 folders were removed and now a single set of reports is maintained under NTD in the reporting structure. Updates to the reports will be made against this base set of reports. Small updates to choices and reporting data points were made for most reports. Subsystem and properties received minor changes from 2018 based on refined choices defined by NTD. The subsystems, properties, and data points are different from the 2012 script.

Suggested steps to migrate from 2018:

1. Run the new <Deployment>\AppServer\dbobjects\LOAD\Intd.sql script.

This removes and recreates the subsystems and properties that the Intd2018.sql originally created. All 2018 NTD subsystem/properties are recreated in the new script.

Password Security Minimum Requirements

New databases will automatically set minimal password complexity requirements as follows:

- Password may not be the same as User ID
- Minimum of 8 characters
- Combination of letters and numbers required

- One special character required
- User passwords must be changed every 60 days
- Minimum number of days between password changes is one
- Number of password changes required before reuse 6

This only applies to a new database installation. If your organization chooses to reduce requirements, they can be manually disabled via the Security - Setup - Options screen. If upgrading, these new requirements will not take effect, but it is recommended to enable them to meet current security protocols. An optional script can be run to enforce these password complexity requirements.

Primary Keys

Primary keys have been introduced to database tables and can be implemented via conversion. The conversion process may take additional time to compare to more recent conversions.

Primary Keys are used to uniquely identify a record in a relational database. They do the following:

- Enforce that data in key columns is unique.
- Enforce that data in key columns is not null.
- Some databases automatically create an index or can be associated with an existing index for the key columns.

Recommendation:

- Test running the conversion before applying to a production system to identify potential bad data conditions.
- If questions arise while performing the conversion process, please work with Customer Care to resolve.

Known Limitation:

- Archive tables do not get primary keys and cannot be replicated. This still functions the same in the primary database and can be used to archive data.

Trouble-Shooting Conversion Issues:

Primary keys cannot be added when the target column meets the following conditions:

- Contains a null value as the conversion will make the column not null so it can be used as primary key.

- Potential Solution - Set a unique ID within the column that requires a unique value that is a non-null value.
 - Potential Solution - For non-row ID situations, delete the records that have a null value as an ID.
- Contains duplicate value as the primary key's enforced IDs must be unique.
 - Potential Solution - Review duplicate data and renumber or remove the duplicate row.
- Custom primary key constraint was applied to the column.
 - Potential Solution - Remove the custom primary key constraint.

Python Scripting Functionality No Longer Supported

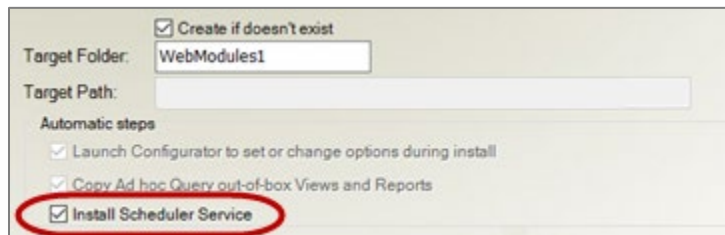
Python is limited to a 32-bit installation and is becoming more limited in use cases supported within our application. The python scripting client send email functionality, using Common Messaging Calls (CMC) from Messaging Application Program Interface (MAPI) code, is no longer supported. The Simple MAPI code still exists, but is not maintained any further, and it is recommended to migrate away from use of this feature.

Responsible Location

Location security has been applied to work order responsible location. Users will need access to work order responsible location to view record, modify or post to existing work orders. Users will need location access rights to set the responsible location to a specific location. If location security is enabled, it will now be applied to work orders via the new responsible location field.

Scheduler Installation Moved

The Scheduler is now installed when installing Web Modules with a checkbox that is checked by default.



A Scheduler section has been added to the Reporting tab in the Configurator. It contains the fields used for SMTP Server/Port and three buttons that allow starting, stopping, and removing the service.

The screenshot shows the 'Reporting' configuration window. The 'Reporting' tab is selected and highlighted with a red circle. The window contains the following sections:

- Reporting:** Root Path to reports (text box), Reporting Logo button.
- Crystal Reports Settings:**
 - Reporting Type: Traditional (dropdown)
 - Report Server: (text box)
 - ODBC Name: CRfa (text box)
 - Database User: emsview (text box)
 - Password: (password field)
 - Reporting Request Timeout: 110 seconds (spinner)
 - Report expiration window: 30 seconds (spinner)
- Scheduler Settings:** (highlighted with a red circle)
 - SMTP Server: localhost (text box)
 - SMTP Port: 25 (text box)
 - Start Scheduler button
 - Stop Scheduler button
 - Remove Service button

At the bottom are 'Exit' and 'Save and Restart Web Application' buttons.

The Scheduler and its associated functionality now run under the web modules bin directory which allows the removal of the public web service reducing impact on the web server and eliminating issues with SSO and security.

Installation or upgrade is required to use the new functionality.

Note the following when installing or upgrading:

- Do not click **Start Scheduler** when performing the install or upgrade process. This will cause errors when the Installer tries to copy files over. The Scheduler service should start automatically after the install or upgrade process.
- Enter the SMTP Server/Port data in the configurator when upgrading. It will not copy over the configuration from the old Scheduler.
- The old Scheduler must be removed when upgrading. This can be done via the Installer:
 - i. Launch the Installer.
 - ii. Click the **Remove** button, then click **Yes** to confirm removal.

Do the following to manually remove the service if it is still running after a new install:

- i. Click the Windows shortcut on the bottom left window and type **Services**.
- ii. Navigate to the Scheduler you want to remove, right click on it, and select **Properties**.
- iii. Copy the service name.

- iv. Open a command prompt as an administrator and type **sc delete <service name>**. If the service name has spaces with the name use quotes around the service name.
- After the new Scheduler has been installed, if another upgrade is required it is recommended that you stop the Scheduler service prior to starting the upgrade. This will prevent Installer errors when attempting to copy over files.

Security Notice: TLS 1.3 Now Supported

TLS 1.3 is now supported throughout EAM. This is a security protocol that supports secure web connections using HTTPS. Best practice is to ensure that secure software runs using TLS 1.2 at a minimum. This may be constrained by browser versions. Refer to the following support article for additional information: [Transport Layer Security](#).

Telematics Upgrade Scripts

Previously the TM_ALERTS creation/load process was handled by running custom scripts included with the Telematics MaxQueue package. This process is now folded into the base table creation/load process.

If the TM_ALERTS table was created prior to 15.x or manual scripts were not run during previous upgrades, there is a chance two columns may not get checked in the 20.x standard base table create/load process: alert_id and service_request_id

A script should be run prior to upgrading to 20.1 to prevent problems in Telematics services. The following scripts have been added to the upgrade folders for MSSQL and Oracle:

MSSQL: <Deployment>\AppServer\dbobjects\conv\TM_ALERTS CHECK FOR 20.0+ UPGRADES.SQL

Oracle: <Deployment>\AppServer\dbobjects\conv\TM_ALERTS_CHECK_20.0+.SQL

This potentially affects five Telematics-related MAXQueue services: Telematics Cloud, NetworkFleet, KeyValet, Vehicle Data Collector, and Zonar.