



QAD Adaptive Applications

Administration Guide

Delivery Exception Management

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QAD Precision 19
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Change Summary

The following table summarizes significant differences between this document and previous versions.

| Date/Version | Description | Reference |
|-------------------------------------|---|------------------|
| September 2021/DEM 19 | Expanded Menu options. | Page 2 |
| | Added section on Extracts. | Page 8-9 |
| | Added new entries to the Create Supplier Fields table. | Page 21 |
| | Expanded Admin Settings to include Extract and Job Queue. | Page 31-33 |
| | Added a section for Database. | Page 47 |
| | Added a sub-section for Extract to the DEM YAML Configuration File section. | Page 57 |
| March 2021/DEM 18 - Revision 3.0 | Updated Admin Settings image. | Page 31 |
| | Added section on Additional References. | Page 33-34 |
| | Added section on Archive Settings. | Page 35 |
| | Added Utilities section. | Page 47 |
| | Added Archive section. | Page 48 |
| | Added Shipment History Update Precedence section. | Page 49-50 |
| December 2020/DEM 18 - Revision 2.0 | Background Jobs section is expanded. | Page 3 |
| | Added section on TE Sources. | Pages 24-27 |
| | Added section on Integrating QAD Precision TE and DEM. | Pages 28-30 |
| | Admin Settings is expanded. | Pages 31-33 |
| | Added Options section. | Pages 58 |
| June 2020/DEM 18 - Revision 1.0 | Background Jobs section is expanded. | Page 3 |
| | Added section on Job Queue. | Page 5 |
| | Added section on Job Queue Criteria. | Page 6 |
| | Added section on Supplier Account Status Activity. | Page 22 |

| | | |
|------------------|--|---------|
| | Added section on Admin Settings. | Page 24 |
| | Added section on Import File. | Page 25 |
| | Added section on User Views. | Page 35 |
| | Replaced DEM Precision Properties with section on DEM YAML Configuration File. | Page 37 |
| January 2019/6.3 | Initial version | -- |

Overview

This administration guide describes the application configuration you must perform to enable user access to the DEM Portal. The guide also explains how to set up the carrier integrations that will power DEM.

The configuration ensures:

- User visibility of specific deliveries for tracking purposes.
- Management of exceptions.
- User authorization to run tasks or actions to help resolve problems with deliveries.

Introduction to DEM

During the transit of parcel shipments from origin to destination, deliveries can be delayed, damaged, or lost in a carrier network. To manage the exceptions that occur when parcels do not arrive at their destination within prescribed carrier service levels, you need visibility of all shipments. The DEM Portal is a tool for managing these logistics exceptions and monitoring carrier network performance.

The key functions of DEM are to:

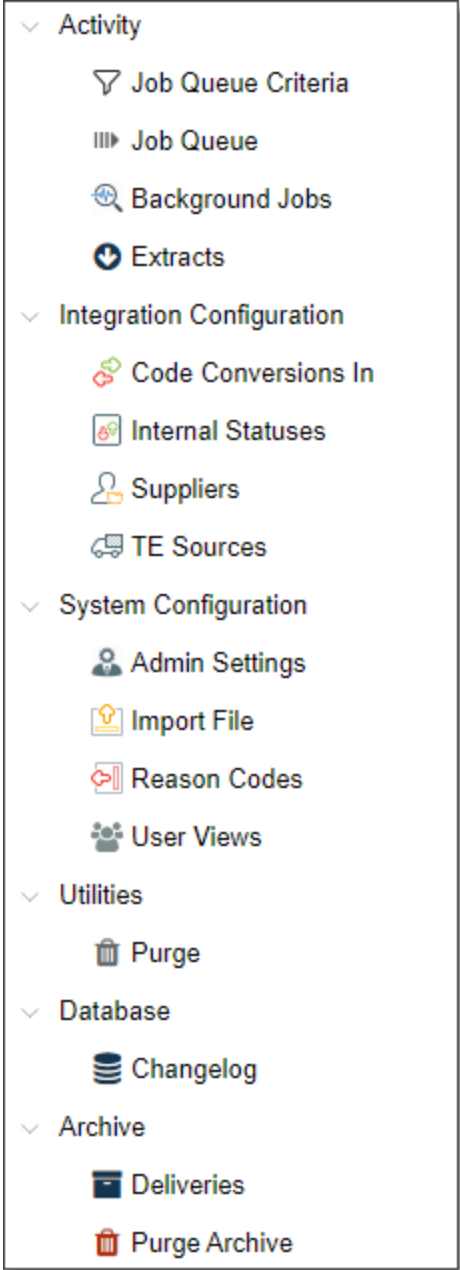
- Allow you to proactively manage the exceptions for shipments and resolve issues relating to delivery.
- Facilitate the management of carrier network and lane performance. Use DEM to identify areas where a carrier actual service level does not meet service level agreements (SLAs).
- Support multiple carriers, regions, and time zones.
- Map carrier-prescribed delivery tracking statuses to a generic set of user-defined statuses.
- Download and interpret electronic messages and load this data through the status-mapping engine.
- Identify deliveries that appear to be falling outside the defined SLAs.



Menu

The menu in DEM that is visible to administrators contains seven sections. For more information on the first section, Delivery Exception Management, see the *DEM User Guide*. The remaining three sections are visible only to administrators. They are: [Activity](#), [Integration Configuration](#), [System Configuration](#), [Utilities](#), [Database](#), and [Archive](#).

Fig. 1
Administrator View of Menu

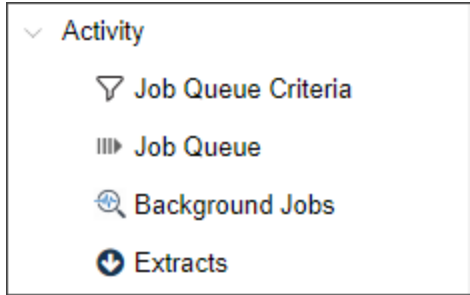


Activity

The Activity section of the menu contains four options: [Job Queue](#), [Job Queue Criteria](#), [Background Jobs](#) and [Extracts](#).

Fig. 2

Activity Section of DEM Menu



Background Jobs

This section allows you to view the background jobs in the application. Background jobs are details of the processing activity performed for a particular part of the application. The jobs indicate the success or failure of a unit of work. They also allow you to track the timing of jobs, and to identify causes of problems for units of processing work.

You can search Background Jobs by Job Name at the top of the page.

Fig. 3

Background Jobs Page

The screenshot shows the 'Background Jobs' page. At the top, there is a search bar with 'Id:' and 'Search By: Job Name' dropdown. Below the search bar is a table with columns: S, Id ↓, Job Name, Start Time, End Time, Status, Exit Code, and Exit Message. The table contains 10 rows of job data. At the bottom, there is a pagination bar showing 'Per Page: 25'.

| S | Id ↓ | Job Name | Start Time | End Time | Status | Exit Code | Exit Message |
|-----|-------|---------------------------------|---------------------|---------------------|-----------|-----------|--------------|
| ... | 50403 | No Activity Management | 24/05/2020 20:40:02 | | STARTED | UNKNOWN | |
| ... | 50402 | Missed Delivery Date Management | 24/05/2020 20:40:02 | 24/05/2020 20:40:02 | COMPLETED | COMPLETED | Input Para |
| ... | 50401 | No Activity Management | 24/05/2020 20:40:01 | 24/05/2020 20:40:02 | COMPLETED | COMPLETED | Input Para |
| ... | 50400 | Missed Delivery Date Management | 24/05/2020 20:40:00 | 24/05/2020 20:40:01 | COMPLETED | COMPLETED | Input Para |
| ... | 50399 | No Activity Management | 24/05/2020 20:40:00 | 24/05/2020 20:40:00 | COMPLETED | COMPLETED | Input Para |
| ... | 50398 | Purge | 24/05/2020 20:40:00 | 24/05/2020 20:40:00 | COMPLETED | COMPLETED | Input Para |
| ... | 50397 | Missed Delivery Date Management | 24/05/2020 20:30:05 | 24/05/2020 20:30:05 | COMPLETED | COMPLETED | Input Para |
| ... | 50396 | No Activity Management | 24/05/2020 20:30:04 | 24/05/2020 20:30:05 | COMPLETED | COMPLETED | Input Para |
| ... | 50395 | Delivery Evaluation Management | 24/05/2020 20:30:04 | 24/05/2020 20:30:04 | COMPLETED | COMPLETED | Input Para |
| ... | 50394 | Missed Delivery Date Management | 24/05/2020 20:30:03 | 24/05/2020 20:30:03 | COMPLETED | COMPLETED | Input Para |



Table 1

| Background Job | Description |
|-----------------------------------|--|
| Carrier Status | This job covers the processing of the supplier tracking status message. The supplier's message is translated from the supplier's proprietary message structure format to the generic XML structure format used by DEM. The generic XML structure is updated to create and/or update Deliveries. |
| Carrier Status Generic | This job writes the generic XML tracking status message structure in DEM. This message structure creates or updates a Delivery. If required, it writes additional Delivery history information for the Delivery. |
| Delivered Notification Management | This job determines what deliveries need to run the Delivered Notification background job, and locks them so that the job can be carried out. |
| Delivered Notification | This job sends a delivery notification JSON file to the highway endpoint DEM_NOTIFICATION_DELIVERED. Highway can then be configured to store this file on a server directory or send to a third party application. |
| Delivery Evaluation Management | This job determines what deliveries need to run the Delivery Evaluation background job, and locks them so that the job can be carried out. |
| Delivery Evaluation | This job evaluates on a number of deliveries and updates these deliveries if required. |
| Polling Tracking Updates USPS | This job polls USPS for status updates for deliveries that are in DEM but have not yet been delivered. |
| Missed Delivery Date Management | This job determines the deliveries that have a Missed Delivery Date, and locks them so the background job can be carried out. |
| Missed Delivery Date | <p>This job determines whether a delivery has missed its targeted delivered date. This is a system-driven process. An exception is raised against a delivery that has not yet been delivered, and where the Comparison ETA date has been passed.</p> <p>Note The Missed Delivery Date exception is only raised if there is not already an Exception of a higher severity open against the Delivery.</p> |
| No Activity Management | This job determines the deliveries that have No Activity, and locks them so the background job is carried out. |
| No Activity | <p>This job is activated when a Delivery does not have tracking status update for a specified period of time. This is a system-driven process. An Exception is raised when an undelivered Delivery has not received an update in a set number of hours, and there is not already an Exception of a higher severity open against the Delivery.</p> <p>The default number of hours of No Activity required to initiate an Exception is 2 hours. You can configure the prescribed time period for what should be deemed as a No Activity by configuring it in the dem.yml file.</p> <pre>No_activity_job: Number_of_hours: 2.</pre> <p>For more information on configuring properties, see DEM YAML Configuration File.</p> |



| | |
|---------------------|--|
| Purge | This job deletes old background job data and job queue records to reduce the memory required to run DEM. To configure how often this job is run, go to Admin Settings . |
| Unassign Delivery | There is an Unassign Delivery button on the Job Queue page. This button allows administrators to manually unlock deliveries that have been locked to perform a background job, but a problem has occurred and the background job has failed to complete. |
| Validate Deliveries | Backgrounds jobs can fail because of incomplete code conversions. Administrators can complete these conversions, and manually validate those deliveries. |

Job Queue

DEM automatically processes some Background Jobs using the Job Queue function. The order that Background Jobs are processed in can be configured in the Job Queue Criteria page. DEM processes jobs in the job queue based first on the time and date the deliveries are uploaded, and secondly on the Priority number.

Background Jobs are always added to Job Queue in the following order: Delivery Evaluation, No Activity Management, and Missed Delivery Date Management. If there are already Background Jobs in the Job Queue they will be run before any new Background Jobs are added to the Job Queue, regardless of job type.

Fig. 4
Job Queue Page

| Evaluation Type | Status | Created Date ↓ | Start Time | End Time | Elapsed Time | Transaction Count |
|----------------------|-----------|---------------------|---------------------|---------------------|--------------|-------------------|
| NO ACTIVITY | COMPLETED | 03/06/2020 15:00:05 | 03/06/2020 15:02:00 | 03/06/2020 15:02:14 | 00:00:14.375 | 41 |
| DELIVERY EVALUATION | COMPLETED | 03/06/2020 14:50:08 | 03/06/2020 14:52:00 | 03/06/2020 14:52:07 | 00:00:07.938 | 64 |
| NO ACTIVITY | COMPLETED | 20/05/2020 10:40:02 | 20/05/2020 10:42:00 | 20/05/2020 10:42:01 | 00:00:01.641 | 1 |
| MISSED DELIVERY DATE | COMPLETED | 20/05/2020 09:40:03 | 20/05/2020 09:42:00 | 20/05/2020 09:42:03 | 00:00:03.078 | 3 |
| MISSED DELIVERY DATE | COMPLETED | 20/05/2020 09:30:03 | 20/05/2020 09:32:00 | 20/05/2020 09:32:01 | 00:00:01.906 | 1 |
| NO ACTIVITY | COMPLETED | 20/05/2020 09:30:02 | 20/05/2020 09:32:00 | 20/05/2020 09:32:03 | 00:00:03.265 | 3 |
| NO ACTIVITY | COMPLETED | 20/05/2020 09:20:02 | 20/05/2020 09:20:04 | 20/05/2020 09:20:06 | 00:00:01.689 | 1 |
| MISSED DELIVERY DATE | COMPLETED | 20/05/2020 08:50:03 | 20/05/2020 08:52:00 | 20/05/2020 08:52:02 | 00:00:02.440 | 2 |
| DELIVERY EVALUATION | COMPLETED | 20/05/2020 08:40:03 | 20/05/2020 08:42:00 | 20/05/2020 08:42:02 | 00:00:02.110 | 4 |
| MISSED DELIVERY DATE | COMPLETED | 19/05/2020 04:20:02 | 19/05/2020 04:22:00 | 19/05/2020 04:22:02 | 00:00:01.969 | 1 |
| NO ACTIVITY | COMPLETED | 19/05/2020 04:10:02 | 19/05/2020 04:10:04 | 19/05/2020 04:10:07 | 00:00:02.785 | 1 |
| NO ACTIVITY | COMPLETED | 19/05/2020 04:10:01 | 19/05/2020 04:10:04 | 19/05/2020 04:10:07 | 00:00:02.818 | 1 |
| NO ACTIVITY | COMPLETED | 14/05/2020 21:20:02 | 14/05/2020 21:22:00 | 14/05/2020 21:22:03 | 00:00:03.625 | 2 |
| NO ACTIVITY | COMPLETED | 14/05/2020 15:20:02 | 14/05/2020 15:22:00 | 14/05/2020 15:22:03 | 00:00:03.219 | 2 |
| MISSED DELIVERY DATE | COMPLETED | 14/05/2020 13:50:02 | 14/05/2020 13:52:00 | 14/05/2020 13:52:01 | 00:00:01.891 | 1 |
| DELIVERY EVALUATION | COMPLETED | 14/05/2020 13:40:02 | 14/05/2020 13:42:00 | 14/05/2020 13:42:02 | 00:00:02.453 | 3 |
| DELIVERY EVALUATION | COMPLETED | 14/05/2020 13:20:02 | 14/05/2020 13:22:00 | 14/05/2020 13:22:01 | 00:00:01.094 | 1 |
| MISSED DELIVERY DATE | COMPLETED | 12/05/2020 15:20:06 | 12/05/2020 15:22:00 | 12/05/2020 15:22:05 | 00:00:05.735 | 2 |
| MISSED DELIVERY DATE | COMPLETED | 12/05/2020 15:10:06 | 12/05/2020 15:12:00 | 12/05/2020 15:12:05 | 00:00:05.687 | 2 |
| MISSED DELIVERY DATE | COMPLETED | 12/05/2020 14:40:06 | 12/05/2020 14:42:00 | 12/05/2020 14:42:09 | 00:00:09.703 | 4 |

Table 2

| Column Header | Explanation |
|-----------------|---|
| Evaluation Type | There are three Evaluation Type options. They are: <ul style="list-style-type: none"> • Delivery |



| | |
|--------------------|--|
| | <ul style="list-style-type: none"> • Missed Delivery Date • No Activity |
| Status | This field indicates the stage in the process the job has reached. For more information see below. |
| Created Date | The date and time the job was created. |
| Start Time | The exact time and date a job started, to the nearest second. |
| End Time | The exact time and date a job ended, to the nearest second. |
| Transaction Count | The number of deliveries included in a single job. |
| Background Job | A link to the Step Executions window in the Background Jobs page for the specific job. |
| Priority | A number between 1 and 100 that indicates the order jobs are processed in. This is specified in the Job Queue Criteria page. |
| Supplier | The supplier of the delivery being processed. |
| Supplier Account | The supplier account of the delivery being processed. |
| Last Modified Date | The date the job was last modified. |
| Last Modified User | The user that last modified the date. |
| Id | This is the identification number for this job. |

The possible values for Status are:

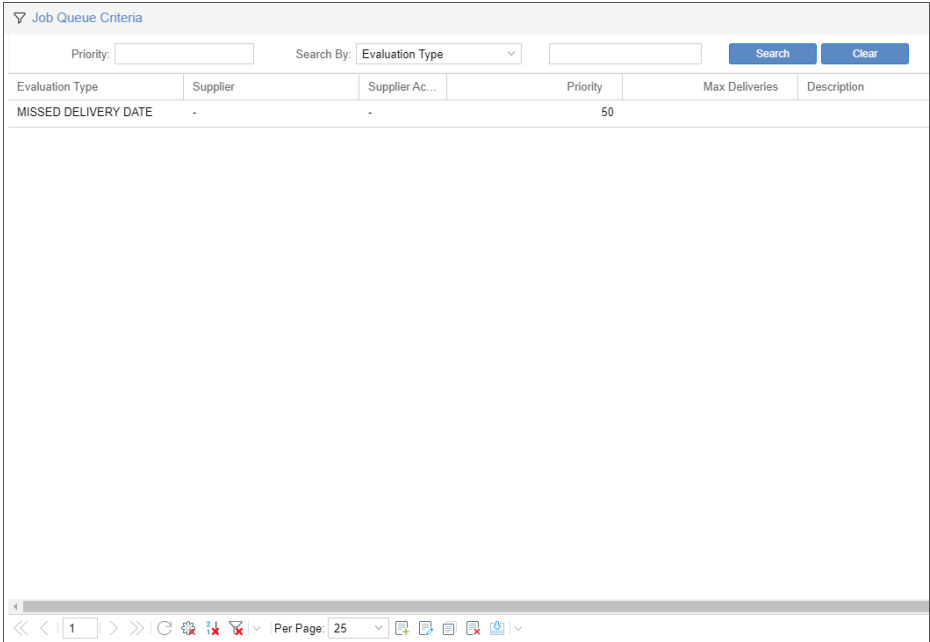
- Created.* The job queue record is being created but is not yet ready to be picked up by the queue.
- Ready.* The job has completed the first step and is ready to be processed.
- Waiting.* The job is waiting in the queue to be processed, but has not started yet.
- Processing.* The job is currently being carried out.
- Failed.* There was a problem with the job and it has failed.
- Completed.* The job is complete.

Job Queue Criteria

You can configure DEM to perform Background Jobs in a certain order by setting up priorities in the Job Queue Criteria page. There is a job queue created for each job criteria. There is also a job created for all deliveries that do not fit any of the job queue criteria. This job has the lowest priority in the queue and is performed last. This ensures that all deliveries are processed.

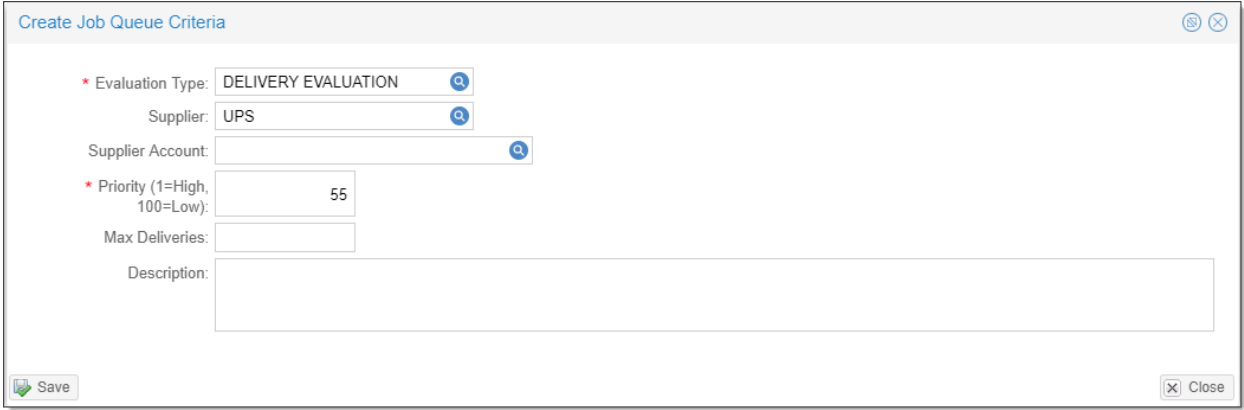


Fig. 5
Job Queue Criteria Page



To set up a new Job Queue Criteria, click the Create Record icon. This opens the Create Job Queue Criteria window.

Fig. 6
Create Job Queue Criteria window



Evaluation Type. This is a mandatory field. You must select one of the Evaluation Types from the look-up menu. The three possible evaluation types are Delivery Evaluation, Missed Delivery Date, and No Activity.



Supplier. An optional field to specify what supplier you want this Criteria to apply to. If you leave this field blank, the criteria applies to all suppliers.

Supplier Account. An optional field to specify what supplier account you want this Criteria to apply to. If you leave this field blank, the criteria applies to all supplier accounts for the supplier you entered in the Supplier field.

Priority. This is a mandatory field. You must select a number between 1 and 100 to specify the place jobs with this criteria will take in the job queue. 1 is the highest possible priority, and 100 is the lowest possible priority.

Max Deliveries. This is an optional field. You can specify the maximum number of deliveries to be processed in a single background job here. If you do not fill in this field the number will be set as the default number of deliveries, as specified in the Admin Settings page.

Description. This is an optional description field. You can use this to add more information to the job criteria.

Fill in the fields, and click Save.

Extracts

A RESTful API is available to request all changes to tracking updates, comments, exceptions, and incidents. Administrators can request RESTful API extracts from the Extracts pages.

Administrators can specify default values for DEM Extracts in the `dem.yml` file, see [Extract](#).



Fig. 7

Extracts Page

| Id ↓ | Total Extracted | Last Requested | Background Job | Created Date |
|------|-----------------|---------------------|------------------------|---------------------|
| 413 | 10 | 2021/08/07 07:59:56 | 916982 | 2021/08/07 07:58:23 |
| 412 | 1000 | | 916980 | 2021/08/07 07:57:16 |
| 411 | 10 | 2021/08/05 07:49:20 | 912453 | 2021/08/05 07:47:45 |
| 410 | 1000 | | 912451 | 2021/08/05 07:46:40 |
| 409 | 10 | 2021/08/04 07:40:31 | 909767 | 2021/08/04 07:38:56 |
| 408 | 1000 | | 909764 | 2021/08/04 07:37:50 |
| 407 | 10 | 2021/08/03 07:36:42 | 907102 | 2021/08/03 07:35:07 |
| 406 | 1000 | | 907101 | 2021/08/03 07:34:00 |
| 405 | 10 | 2021/08/01 07:40:18 | 902979 | 2021/08/01 07:38:44 |
| 404 | 1000 | | 902977 | 2021/08/01 07:37:37 |
| 403 | 10 | 2021/07/31 07:55:16 | 900738 | 2021/07/31 07:53:42 |
| 402 | 1000 | | 900737 | 2021/07/31 07:52:35 |
| 401 | 10 | 2021/07/30 07:40:18 | 898155 | 2021/07/30 07:38:43 |
| 400 | 1000 | | 898153 | 2021/07/30 07:37:37 |
| 399 | 10 | 2021/07/29 07:46:30 | 895617 | 2021/07/29 07:44:57 |
| 398 | 1000 | | 895615 | 2021/07/29 07:43:51 |
| 397 | 10 | 2021/07/28 07:36:20 | 892219 | 2021/07/28 07:34:45 |
| 396 | 1000 | | 892216 | 2021/07/28 07:33:38 |
| 395 | 10 | 2021/07/27 07:36:39 | 889491 | 2021/07/27 07:35:05 |
| 394 | 1000 | | 889490 | 2021/07/27 07:33:59 |
| 393 | 10 | 2021/07/25 07:40:03 | 885417 | 2021/07/25 07:38:27 |
| 392 | 1000 | | 885416 | 2021/07/25 07:37:22 |
| 391 | 10 | 2021/07/24 07:46:27 | 883209 | 2021/07/24 07:44:53 |

Table 3

| Column Header | Explanation |
|-----------------|--|
| Id | This is a number that specifies the Extract. Administrators can use this Id to search for previously requested Extracts. |
| Total Extracted | This is the total number of extracts requested. |
| Last Requested | This is the date the specified extract was last requested. |
| Background Job | The Background Job Id associated with the Extract request. |
| Created Date | The date the current Extract request was made. |

Previously requested extracts can be requested again by the client by specifying an extract id in the search panel.

Fig. 8

Extracts Search Panel



Integration Configuration

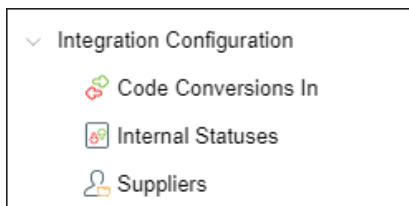
In the Integration Configuration section of the DEM menu, there are three options.

- Code Conversions In
- Internal Statuses
- Suppliers

These options specify the configuration settings that convert external codes to a consistent set of values that can be easily interpreted by users.

Fig. 9

Integration Configuration Section of DEM Menu



Code Conversions In

Each TE source system and supplier uses their own codes for tracking status information, and the issues that they track within their systems. Code Conversions are used to translate these external codes, specific to the different suppliers and source systems, into a uniform set of codes. These uniform codes are referred to as internal codes.

Code Conversions for different suppliers and TE sources can be created, updated, viewed, and deleted from here.

Fig. 10

Code Conversions In

| Code Conversions In | | | | | |
|---------------------------------------|-----------------|---|-------------------------------------|---------------------------------------|--------------------------------------|
| Conversion Code: <input type="text"/> | | Search By: <input type="text" value="Description"/> | | <input type="button" value="Search"/> | <input type="button" value="Clear"/> |
| | Conversion Code | Description | Allow Stub Fields | Last Modified User | Last Modified Date |
| <input type="checkbox"/> | DHL_DEM | DEM Code conversions for DHL status updates | <input checked="" type="checkbox"/> | J6F | 18/09/2018 10:46:57 |
| <input type="checkbox"/> | EXDO_DEM | DEM Code conversions for Expeditors status updates | <input checked="" type="checkbox"/> | J6F | 18/09/2018 10:47:01 |
| <input type="checkbox"/> | FEDEX_DEM | DEM Code conversions for FedEx status updates | <input checked="" type="checkbox"/> | J6F | 18/09/2018 10:47:01 |
| <input type="checkbox"/> | UPS_DEM | | <input type="checkbox"/> | KFT | 26/10/2018 08:57:22 |
| <input type="checkbox"/> | UPS_DEM | DEM code conversions for UPS status updates | <input checked="" type="checkbox"/> | M3P | 01/10/2018 15:33:46 |



Create New Code Conversions


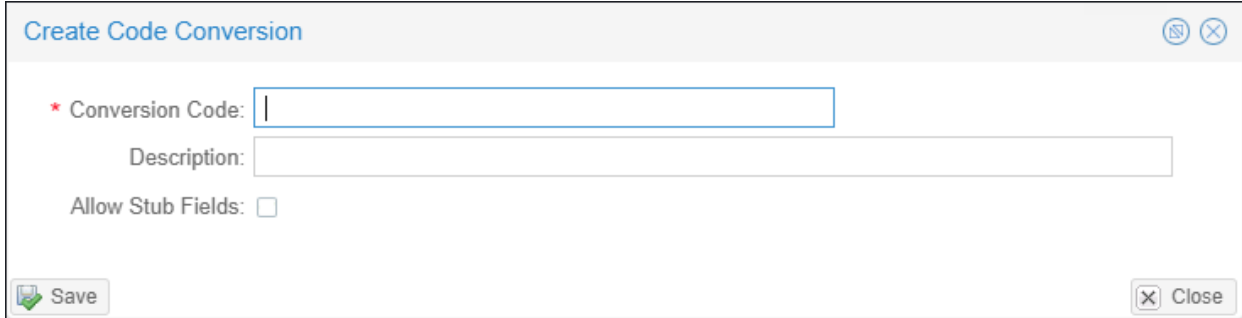
To create a new Code Conversion, select the Create Record  icon at the bottom of the page. This opens the Create Code Conversion window.

Fig. 11

Create Code Conversions



Conversion Code. A mandatory field for the title of the code conversion record.

Description. An optional field to insert a description of the purpose of the new code conversion.

Allow Stub Fields. If selected, any missing external codes are automatically created for this Code Conversion, which you can then review and update. Otherwise, any missing external codes must be created manually.

Finally, click the Save icon.

Updating a Code Conversion


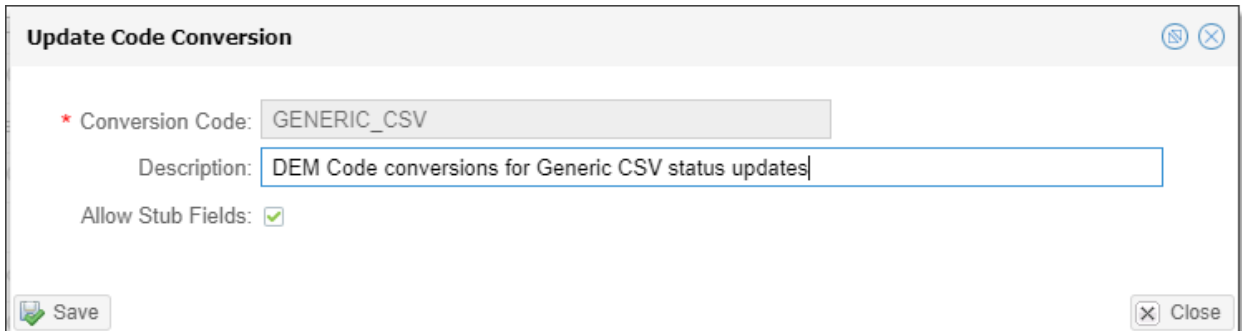

Select the code conversion you want to update, and click the Update Record  icon at the bottom of the page. Alternatively, you can double-click the code conversion you want to update. Both of these options open the Update Code Conversion window. In this window, edit the fields that require an update. Finally, click the Save icon.

Fig. 12

Update Code Conversion Window



Deleting Code Conversions

To delete a Code Conversion, select the Delete Record  icon at the bottom of the page. This prompts a pop-up window asking you to confirm that you would like to delete the record. If you click Yes, the code conversion is then removed from the page. If you click No, the window is closed and the Code Conversion is not removed.

Code Mappings


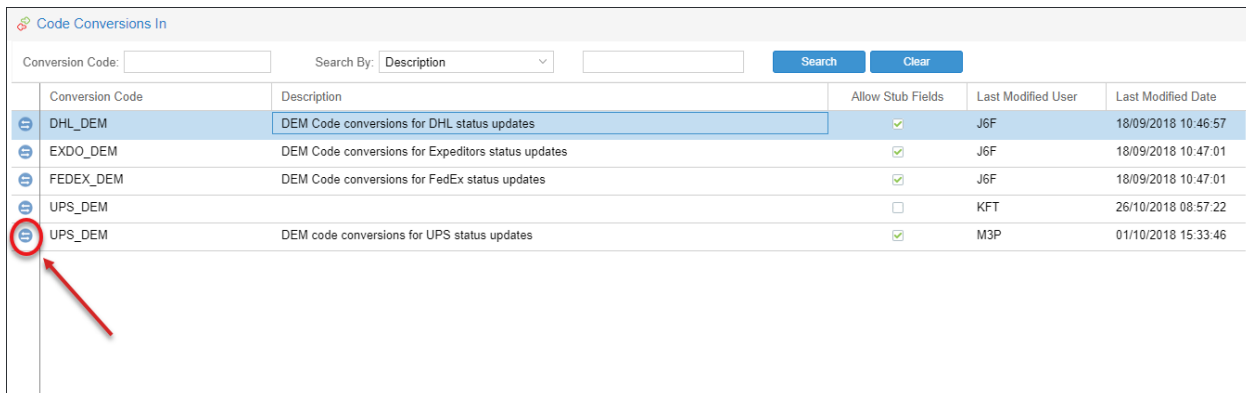
To the left of each code conversion, there is a Code Mappings  icon. If you click this icon, you can review the code mappings for code conversion.

Fig. 13
Code Conversions In



| Conversion Code | Description | Allow Stub Fields | Last Modified User | Last Modified Date |
|-----------------|--|-------------------------------------|--------------------|---------------------|
| DHL_DEM | DEM Code conversions for DHL status updates | <input checked="" type="checkbox"/> | J6F | 18/09/2018 10:46:57 |
| EXDO_DEM | DEM Code conversions for Expeditors status updates | <input checked="" type="checkbox"/> | J6F | 18/09/2018 10:47:01 |
| FEDEX_DEM | DEM Code conversions for FedEx status updates | <input checked="" type="checkbox"/> | J6F | 18/09/2018 10:47:01 |
| UPS_DEM | DEM code conversions for UPS status updates | <input type="checkbox"/> | KFT | 26/10/2018 08:57:22 |
| UPS_DEM | DEM code conversions for UPS status updates | <input checked="" type="checkbox"/> | M3P | 01/10/2018 15:33:46 |

This opens a Code Mappings window for this Code Conversion. The Code Mappings window shows the set of code mappings for the external codes to the internal codes.



Fig. 14
Code Mappings Window

| Conversion Type | External Code | Internal Code ↑ | Description | In Use | Last Modified User | Last Modified Date |
|-----------------|---------------|-----------------|---------------------------------|--------------------------|--------------------|---------------------|
| COUNTRY | CTY | - | | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | ADV-AP-Y7 | - | THE PACKAGE IS BEING HELD FO... | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | ADV-XB-5E | - | | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | ADV-XB-KO | - | WE VE CONTACTED THE RECEIVER. | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | ADV-XB-LW | - | | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | ADV-XB-PD | - | | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | EVI-AJ-HL | - | YOUR PACKAGE WAS PROCESSE... | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | EVI-BG-DM | - | | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | EVI-BG-DV | - | | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | EVI-BG-ZO | - | THE UPS ACCESS POINT LOCATIO... | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | EVI-T1-G3 | - | THE RECEIVING BUSINESS WAS C... | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | RSS-A3-24 | - | MERCHANDISE MISSING BALANC... | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | RSS-D1-TH | - | YOUR DELIVERY HAS BEEN RESC... | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |
| INTERNAL STATUS | RSS-X2-3D | - | WE RE WORKING TO DELIVER YO... | <input type="checkbox"/> | M3P | 01/10/2018 15:33:46 |

Table 4
Code Mappings Column Headers

| Header | Description |
|--------------------|--|
| Conversion Type | This field describes the type of information to be converted from an external code to an internal code. For Conversion Types applicable to DEM, see Conversion Type . |
| External Code | This is the value of the code used by the external application. For example, supplier tracking status values. |
| Internal Code | This is the value of the standardized code used by DEM. |
| Description | The description of the external code supplied by the carrier. |
| In Use | This field contains a box. If the code mapping is in use, the box is checked. If the code mapping is not in use, the box is cleared. This field allows a code mapping to be disabled without the need to delete the entry. |
| Last Modified User | The last user to modify the code mapping. |
| Last Modified Date | The date and time the code mapping was last modified. |

If the conversion code mapping record is marked as not in use, or if a conversion code does not exist, then this will mean that the Delivery history will be in draft status at the time of processing and will need to be reviewed. You can update the Code Mapping field by double-clicking it, and editing the relevant fields. Alternatively, you can select the Code Mapping to be updated, and click the Update Record icon. Finally, select Save to save the update.



Create New Code Mapping

To create a new Code Mapping, select the Create Record icon at the bottom of the Code Mapping window. This opens the Create Code Mapping window.

Fig. 15

Create Code Mapping Window

The screenshot shows a window titled "Create Code Mapping" with the following fields and controls:

- Conversion Type:** A dropdown menu currently showing "INTERNAL STATUS".
- External Code:** An empty text input field.
- Internal Code:** An empty text input field with a search icon (magnifying glass) to its right.
- Description:** A larger empty text input field.
- In Use:** A checkbox that is checked.
- Buttons:** "Save" (with a floppy disk icon) and "Close" (with an 'X' icon) are located at the bottom of the window.

You should complete all the relevant fields in the window. The Conversion Type, External Code, and Internal Code fields are mandatory. The Description field allows you to add extra information about the purpose of the Code Mapping; this is optional. Finally, click Save.

Update Code Mapping

From the Code Mappings window, select the code mapping you want to update, and click the Update Record icon at the bottom of the window. Alternatively, you can double-click the Code Mapping you want to update. Both of these options open the Update Code Mapping window. In this window, edit the fields that require an update. Finally, click Save.

Fig. 16

Update Code Mapping Window

The screenshot shows a window titled "Update Code Mapping" with the following fields and controls:

- Module:** A text input field containing "DEM".
- Conversion Code:** A text input field containing "FEDEX_DEM".
- Conversion Type:** A dropdown menu showing "INTERNAL STATUS".
- External Code:** A text input field containing "A2".
- Internal Code:** A text input field containing "ADDRESS PROBLEM" with a search icon to its right.
- Description:** A text input field containing "Incorrect Address".
- In Use:** A checkbox that is checked.
- Buttons:** "Save" (with a floppy disk icon) and "Close" (with an 'X' icon) are located at the bottom of the window.

Delete Code Mapping

To delete a Code Mapping, select the Delete Record icon at the bottom of the window. The system prompts you to confirm. If you click Yes, the Code Mapping is then removed from the window. If you click No, the window is closed and the Code Mapping is not removed.

Internal Statuses

The Internal Statuses page lists each of the status codes possible for a delivery. These codes are a short form description of the status of the Delivery at a point in time. The status codes can represent a movement or an exception that has occurred. Movement statuses update the user on the status of the delivery and require no action. Exception statuses may require action by the user to allow the Delivery to be carried out. Supplier tracking status codes are mapped to these internal status codes through the Code Conversion mappings, and simplify the user experience. There are also internal statuses for the handling of the system-driven exceptions.

Fig. 17
Internal Statuses

| Status Code | Description | Source System | Last Modified User | Last Modified Date |
|----------------------|--------------------------------|---------------|--------------------|---------------------|
| ADDRESS PROBLEM | | 2 SUPPLIER | | |
| AWAITING COLLECTION | | 3 SUPPLIER | | |
| CANCELLED | | 2 SUPPLIER | | |
| CHANGE IN DELIVERY | | SUPPLIER | | |
| COLLECTION FAILED | | 1 SUPPLIER | | |
| CUSTOMS ISSUE | | 1 SUPPLIER | | |
| DELAY EXPECTED | | 3 SUPPLIER | | |
| DELIVERED | | SUPPLIER | | |
| DELIVERY ATTEMPTED | | 2 SUPPLIER | | |
| DELIVERY FAILED | | 1 SUPPLIER | | |
| DELIVERY ON HOLD | | 1 SUPPLIER | | |
| DELIVERY REFUSED | | 1 SUPPLIER | | |
| EN ROUTE | | SUPPLIER | | |
| EXCEPTION | | 2 SUPPLIER | | |
| LATE DELIVERY | | 2 SUPPLIER | | |
| LOST DAMAGED | | 1 SUPPLIER | | |
| MANIFEST COMPLETE | | SUPPLIER | | |
| MISSED DELIVERY DATE | Delivery was not completed ... | 2 DEM | M3P | 01/10/2018 15:34:01 |
| NO ACTIVITY | No updates received from th... | 3 DEM | M3P | 01/10/2018 15:34:01 |
| OUT FOR DELIVERY | | SUPPLIER | | |
| PICKUP FAILED | | 1 SUPPLIER | | |
| SHIPMENT RETURNED | | 1 SUPPLIER | | |
| SHIPPER APPROVAL | | 1 SUPPLIER | | |



Movements

The internal status codes that indicate movement track the history of the package as it moves from its origin to its destination. No action is required from the user for these statuses because these are informational only. Each supplier can have their own specific codes to communicate this information, and those external codes are translated into the uniform internal status codes.

Table 5

Example Movement Internal Statuses

| Status Code | Source System |
|--------------------|---------------|
| Change in Delivery | Supplier |
| Delivered | Supplier |
| En Route | Supplier |
| Manifest Complete | Supplier |
| Out For Delivery | Supplier |

Exceptions

The internal status codes that indicate an exception are used to track issues during the movement of the Delivery from its origin to destination. The occurrence of an exception status might require action to be taken by the user to correct the exception.

A supplier can communicate details of exceptions to the user through their tracking status update messages. Each supplier has their own specific codes to communicate. In DEM, this information and those external codes are translated into the uniform internal status codes.

The severity of the internal status code determines whether the status is an exception. The severity also determines how this exception is presented to the user in the UI.



Table 6

Exception Internal Statuses

| Status Code | Status Severity | Source System |
|----------------------|-----------------|---------------|
| Address Problem | 2 - Medium | Supplier |
| Awaiting Collection | 3 - Low | Supplier |
| Cancelled | 2 - Medium | Supplier |
| Collection Failed | 1 - High | Supplier |
| Customs Issue | 1 - High | Supplier |
| Delay Expected | 3 - Low | Supplier |
| Delivery Attempted | 2 - Medium | Supplier |
| Delivery Failed | 1 - High | Supplier |
| Delivery On Hold | 1 - High | Supplier |
| Delivery Refused | 1 - High | Supplier |
| Exception | 2 - Medium | Supplier |
| Late Delivery | 2 - Medium | Supplier |
| Lost Damaged | 1 - High | Supplier |
| Missed Delivery Date | 2 - Medium | DEM |
| No Activity | 3 - Low | DEM |
| Pickup Failed | 1 - High | Supplier |
| Shipment Returned | 1 - High | Supplier |
| Shipper Approval | 1 - High | Supplier |

Create New Internal Status Codes

To create a new internal status code, select the Internal Statuses option under the Integration Configuration menu. Click the Create Record icon at the bottom of the page. This opens a new window where you can create a new internal status.



Fig. 18

Create Internal Status

Status Code. This field is mandatory. You must indicate the name of the internal status code here. This should be a short description of the status applicable to the Delivery.

Description. This field is optional. You can provide a longer description of the function of the internal status code here.

Status Severity. If the new internal status code is to be treated as an Exception, you should indicate the severity of the Exception here. If the new internal status code represents a Delivery movement, you should leave this field blank.

Source System. In this field you should indicate whether the source of the information for the new internal status code is from the Supplier or DEM itself. If DEM is indicated as the source system, the internal status cannot be deleted from the system.

Note. Internal statuses with the source system set to DEM are managed by QAD Precision. It is not envisaged that administrators will need to create such entries as DEM needs to have specific logic in place to identify when such exceptions occur. Administrators have access to such entries in case the status severity needs to be changed.

When all of the fields are complete, click Save at the bottom of the window. Newly created Internal Status codes appear on the Internal Statuses page.

Update Internal Status Code

From the Internal Statuses page, select the Internal Status you want to update, and click the Update Record icon at the bottom of the page. Alternatively, you can double-click the Internal Status that you want to update. Both of these actions open the Update Internal Status window. In this window, edit the fields that require an update. Finally, select Save.

Delete Internal Status Code

To delete an Internal Status, select the Delete Record icon at the bottom of the page. This prompts a pop-up window asking you to confirm that you would like to delete the record. If you click Yes, the Internal Status is then removed from the window. If you click No, the window is closed and the Internal Status is not removed. If the source system of an Internal Status is listed as DEM, then the Internal Status cannot be deleted.

Suppliers

The Suppliers page lists all of the Suppliers currently available on DEM. You can add, update, or delete Supplier records from this page.

Fig. 19
Suppliers Page

| Id | Supplier Code | Supplier Name | Tracking Code Conversions | Tracking URL | Billable Volume UOM | Volume UOM | Billable Weight UOM | Weight UOM |
|----|----------------------|----------------------------------|---------------------------|--|---------------------|------------|---------------------|------------|
| | CACHE_TEST | CACHE_TEST test supplier | | | | | | |
| | CARRIER_A | Carrier A | | | | | | |
| | CIBLEX | Ciblex | | | | | | |
| | DEM_TST | | | | | | | |
| | DHL | DHL Express | DHL_DEM | http://www.dhl.com/en/express/track... | | | | |
| | DHL_4010 | DHL US | | | | | | |
| | DHL_FREIGHT | DHL Freight | | | | | | |
| | DHL_TD | DHL Time Definite | | | | | KG | KG |
| | DHL_US | DHL US | | | | | | |
| | DPD | | | | | | KG | KG |
| | DPD_XML | DPD | | | | | | |
| | EWA | EWALS | | | | | | |
| | EXDO | Expeditors International | EXDO_DEM | http://expo.expeditors.com/expo/SQG... | | | | |
| | FEDEX | FedEx Express | FEDEX_DEM | https://www.fedex.com/apps/fedextra... | | | | |
| | GENERATE_DELIMITED | GENERATE_DELIMITED test supplier | | | | | | |
| | GENERATE_DHLTD | GENERATE_DHLTD test supplier | | | | | | |
| | GENERATE_ED1104010 | GENERATE_ED1104010 test supplier | | | | | | |
| | GENERATE_ED2104010 | GENERATE_ED2104010 test supplier | | | | | | |
| | GENERATE_ED2104030 | GENERATE_ED2104030 test supplier | | | | | | |
| | GENERATE_ED2104060 | GENERATE_ED2104060 test supplier | | | | | | |
| | GENERATE_ED2105010 | GENERATE_ED2105010 test supplier | | | | | | |
| | GENERATE_EDIFACT | GENERATE_EDIFACT test supplier | | | | | | |
| | JTS_PEM | | | | CM3 | M3 | LB | KG |
| | JUNIT_BLANK_TRACKING | JUNIT_BLANK_TRACKING test sup... | | | | | | |



Create New Supplier

To create a new supplier, select the Suppliers option under the Integration Configuration menu.

Select the Create Record icon at the bottom of the page. This opens a new window where you can create a new supplier.

Fig. 20

Create Supplier Window

The screenshot shows a 'Create Supplier' window with the following fields and sections:

- Supplier Code:** A required text input field with an asterisk.
- Supplier Name:** A text input field.
- Logo:** A text input field with a 'Select File...' button.
- Tracking URL:** A text input field.
- Supplier Feed:** A section containing:
 - Tracking Code Conversions:** A dropdown menu with a search icon.
 - Feed Format:** A dropdown menu with a search icon.
 - Consignment Level Tracking:** A checkbox.
 - Default Direction:** A dropdown menu with an information icon.
 - Delivery Lifespan (days):** A text input field with an information icon.
- Polling:** A section containing:
 - Polling Endpoint:** A text input field.
 - Polling Endpoint Tokens:** A large text area.
 - Polling Max Age (days):** A text input field with an information icon.

At the bottom of the window, there are 'Save' and 'Close' buttons.



Table 7

Create Supplier Fields

| Column | Description |
|----------------------------|--|
| Supplier Code | This is a mandatory field. It should contain the supplier code. |
| Supplier Name | The name of the supplier. |
| Logo | An image of the Supplier's logo. File types supported are bmp, wbmp, gif, png, jpg, and jpeg. The file must not be greater than 500,000 bytes. The file name must contain less than 100 characters. |
| Tracking URL | A link to the supplier's tracking webpage. The URL contains a token that is replaced by a tracking number when used within the application. The token that is required for the tracking URL field is [tracking-no]. When the URL is displayed on the Tracking History page, the token is replaced with the delivery tracking number. This tracking number contains a hyperlink that takes the user to the tracking page on the supplier's website. |
| Tracking Code Conversions | The code conversions that convert the supplier tracking status codes to the internal status codes. For more information, see Code Conversions In . |
| Feed Format | Specify the feed format that applies to files from this supplier. |
| Consignment Level Tracking | Check this box if you want to enable Consignment Level Tracking for this Supplier. |
| Default Direction | The default direction to be used for deliveries when no account information is provided by the supplier. |
| Delivery Lifespan (days) | The Lifespan of a delivery. This figure is used to determine if a delivery is still active. The default number is 180 days. |
| Polling Endpoint | For suppliers that require polling, DEM requests updates from the address input here. |
| Polling Endpoint Tokens | This field contains the tokens that are replaced when DEM is implemented. |
| Polling Max Age (days) | Deliveries that are older than the number of days specified here are not polled. |

When all fields are completed, click the Save icon at the bottom of the window.

Update Supplier

On the Suppliers page, select the supplier you want to update, and click the Update Record icon at the bottom of the page. Alternatively, you can double-click the supplier you want to update. Both of these options open the Update Supplier window. In this window, edit the fields that require an update. Finally, click Save.

Delete Supplier

To delete a supplier, select the Delete Record icon at the bottom of the page. This prompts a pop-up window asking you to confirm that you would like to delete the record. If you click Yes, the supplier is then removed from the window. If you click No, the window is closed and the supplier is not removed.

Supplier Accounts window


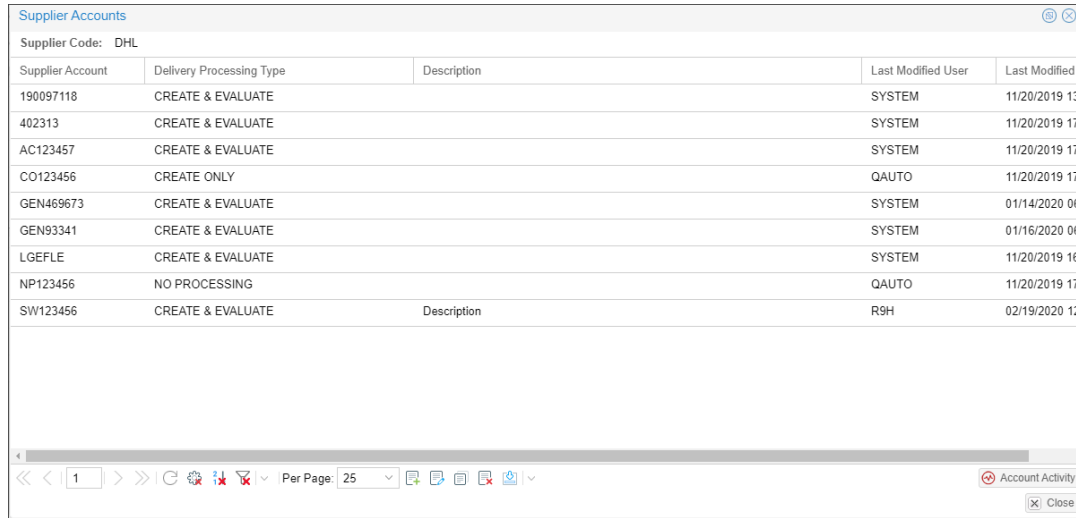
To view the Supplier Accounts associated with a Supplier, click the Supplier Accounts icon  next to the Supplier. This opens the Supplier Accounts window.

Fig. 21
Supplier Accounts Window



| Supplier Account | Delivery Processing Type | Description | Last Modified User | Last Modified Date |
|------------------|--------------------------|-------------|--------------------|--------------------|
| 190097118 | CREATE & EVALUATE | | SYSTEM | 11/20/2019 13:... |
| 402313 | CREATE & EVALUATE | | SYSTEM | 11/20/2019 17:... |
| AC123457 | CREATE & EVALUATE | | SYSTEM | 11/20/2019 17:... |
| CO123456 | CREATE ONLY | | QAUTO | 11/20/2019 17:... |
| GEN469673 | CREATE & EVALUATE | | SYSTEM | 01/14/2020 06:... |
| GEN93341 | CREATE & EVALUATE | | SYSTEM | 01/16/2020 06:... |
| LGEFLE | CREATE & EVALUATE | | SYSTEM | 11/20/2019 16:... |
| NP123456 | NO PROCESSING | | QAUTO | 11/20/2019 17:... |
| SW123456 | CREATE & EVALUATE | Description | R9H | 02/19/2020 12:... |

You can add, update, or delete Supplier Account records from this window.

Table 8
Supplier Accounts Fields

| Column | Description |
|--------------------------|--|
| Supplier Account | This is the account number associated with the Supplier Account. This is a mandatory field. |
| Delivery Processing Type | This is a mandatory field that indicates the level of processing you want DEM to perform. The options are: <ul style="list-style-type: none"> • Create Only • Create and Evaluate • No Processing |
| Description | This field is optional, you can enter more information about a Supplier Account here. |
| Last Modified User | This is the user created or most recently updated the Supplier Account. |
| Last Modified Date | This is the date and time the Supplier Account was created or most recently updated. |

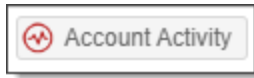
Supplier Account Status Activity

There is an Account Activity button on the Suppliers page, and in the Supplier Accounts window. Clicking it opens the Supplier Account Status Activity window.



Fig. 22

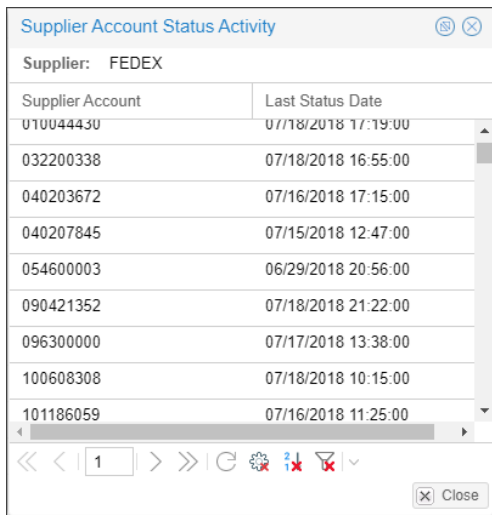
Account Activity Icon



If you click the Account Activity button in the Supplier page you can see the status activity information for all Supplier Accounts for the selected Supplier. If you click the button from the Supplier Accounts window, it will display Supplier Account information for the selected Supplier Account only.

Fig. 23

Supplier Account Status Activity



In this window you can view the date and time DEM last received an update for the selected Supplier Accounts.

TE Sources

TE Sources allows you to specify the source systems from which DEM receives shipment history information. You can then assign an appropriate code conversion to the source. A code conversion details the mapping of codes in the external TE source system to internal DEM codes.

You can Create, Update, Delete, and Export TE sources using the Information Panel Toolbar. TE Sources can also be imported using the [Import File](#) page.



Fig. 24
TE Sources page

TE Sources

Source System: Search By: Source Name

| Source System | Source Name | Conversion Code | Last Modified User | Last Modified Date |
|---------------|---|-----------------|--------------------|---------------------|
| PRECISION | TMS Source for QAD Precision | PRECISION_TMS | QCONFIG | 26/09/2020 15:13:15 |
| TE_Source | External Transportation Execution So... | TE_Source | ABC | 29/09/2020 11:14:20 |

Page: 1 | Per Page: 25

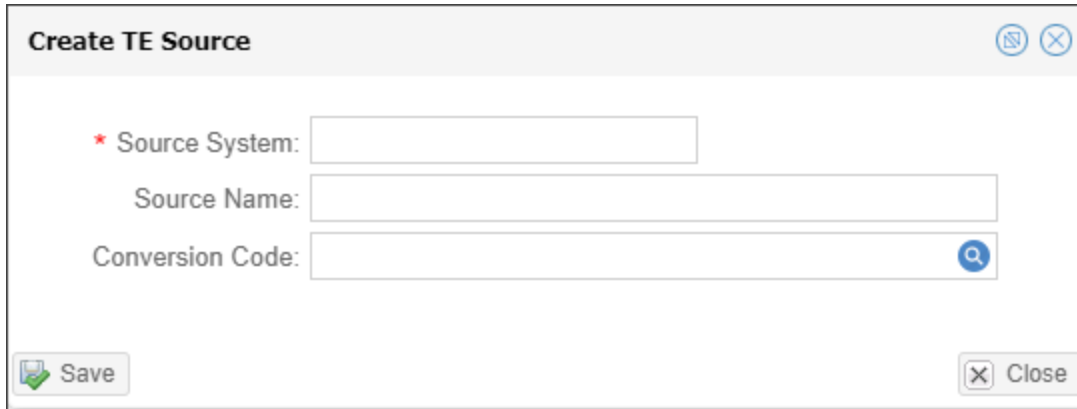
Setting up TE Sources

To create a record to represent an external system: click the Create Record button in the Information Panel Toolbar; the Create TE Sources pop-up window appears.



Fig. 25

Create TE Sources window



This window contains the following fields:

Source System. Specify a code to represent the TE source system. This code must be the same as the code specified in the generic XML file. This is a mandatory field. This field cannot be updated once it is saved.

Source Name. Specify the name of the source system.

Conversion Code. Associate this TE source system with the code conversion for the system. For more information on creating a code conversion for a source system, see [Code Conversions In](#).

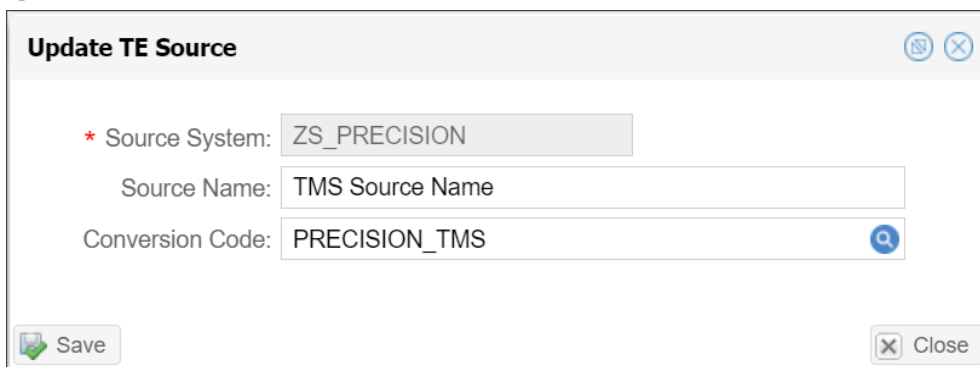
Finally, click the Save icon.

Updating TE Sources

To update an existing TE Source: click the Update Record button in the Information Panel Toolbar; the Update TE Sources pop-up window appears.

Fig. 26

Update TE Source window



This window contains the following fields:



Source System. This field contains the code specified in the generic XML file. This is a mandatory field. This field cannot be updated.

Source Name. This field specifies the name of the source system. You can update this field.

Conversion Code. The code conversion associated with the TE source system can be updated. For more information on creating a code conversion for a source system, see [Code Conversions In.](#)

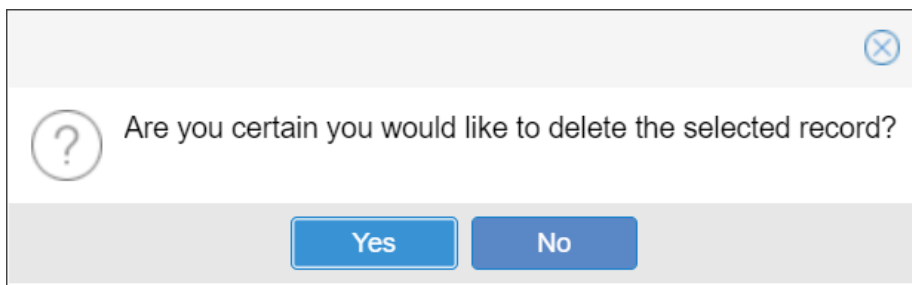
To confirm updates, click the Save icon.

Deleting TE Sources

To update an existing TE Source: click the Delete Record button in the Information Panel Toolbar; the following pop-up window appears.

Fig. 27

Are you certain you would like to delete the selected record?



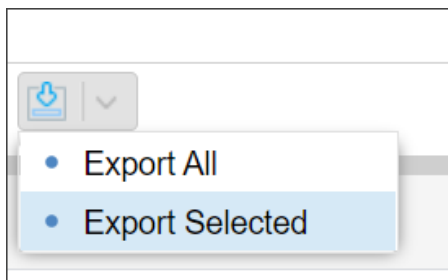
If you are certain that you want to delete the TE Source record, click Yes. If you are not certain that you want to delete the record, click No.

Export TE Sources

To export a TE Souce, click the Export Records button in the Information Panel Toolbar.

Fig. 28

Export Records



Export All Select this option to export all TE Source records currently visible on this page.



Export Selected Select this option to export the highlighted TE Source records only.

The TE Source record or records that are exported are downloaded as a JSON file.



Integrating QAD Precision TE and DEM

QAD Precision Transportation Execution (TE) shipment data can be extracted and pushed to DEM as an XML message. This data is used to create or update Delivery transactions in DEM. This transaction is used to manage the tracking of packages to their ship to destination. This must be configured from the QAD Precision Transportation Execution system, and sent to the Delivery Exception Management system.

TE can push data to DEM in two ways.

- At the time of shipping for a single shipment.
- At End of Day after the data is communicated to the carrier for a batch of shipments.

Configuring End of Day

To extract end of day data from QAD Precision TE as a Shipment History XML file, follow the following steps:

1. Open QAD Precision Transportation Execution system.
2. From the QAD Precision header search bar, navigate to the Configure End of Day (CFGEOD) page.

Fig. 29

Configure End of Day page

3. Specify the following fields:

Carriers / Packing Locations To Use

Next Pickup Number

Work Folder

Archive Folder

DEM Polling Folder

For more information about how to fill in these fields, click the tooltips icon next to the relevant field.

System Values

Table 9
DEM System Keys for TE Integration

| Category | Key | Value | Description |
|-----------|----------------------------|--|---|
| SHIP-HIST | DEM: CARRIER IN USE | <Carrier1>=<Location1>, <Location2>,....,<LocationM> <Carrier2>=<Location1>, <Location2>,....,LocationM> <CarrierN>=<Location1>, <Location2>,....,LocationM> | Carriers / Packing Locations To Use For all carriers and all locations, use: ALL=ALL For one carrier, for all locations, use: <Carrier>=ALL |
| SHIP-HIST | DEM: PICKUP NUMBER | <Unique Number: For next DEM processing for any carrier and location pair> | Next Pickup Number This number is used by the Shipment History XML file generation for the unique identification of the batch/file created. By default, it is set to 0. |
| SHIP-HIST | DEM: PLD ACTIVE DIRECTORY | <Main directory for DEM file creation> | Work Folder This is the directory that the Shipment History XML file is generated into. |
| SHIP-HIST | DEM: PLD ARCHIVE DIRECTORY | <Archive directory for DEM file creation> | Archive Folder This is the directory that the Shipment History XML file is archived in after it is successfully transmitted to target. |
| SHIP-HIST | DEM: PLD POLL DIRECTORY | <Poll directory for DEM file creation> | DEM Polling Folder This is the directory that the Shipment History XML file is copied into after archiving. It can be used as a destination directory instead of using FTP. |
| SHIP-HIST | DEM: PLD CONNECTION | <FTP site> <User> <Password> <Mode> | FTP Connection Details This is the target FTP site, user, password and transmission mode for the destination of the Shipment History XML file. <Mode> can be set to either PASSIVE or ACTIVE |
| SHIP-HIST | DEM: PLD DEST DIR | <Destination directory (FTP,SFTP,..etc)> | FTP Folder This is the destination directory within the FTP site that the Shipment History XML file is sent to. |
| SHIP-HIST | DEM: PLD STOP UPLOAD | YES or NO. Set to NO as default. | Stop FTP Upload Indicates if a transmission of the Shipment History XML file is to be attempted or not. If you want to submit the file, set to NO. If you do not want to transmit the file, set to YES. |



You can configure the Shipment History XML in two ways, dependent on Stop FTP Upload field:

- If Stop Upload is set to yes, the file is created in the work folder, then it is transmitted to an FTP location and archived.
- If Stop Upload is set to no, the file is created in the work folder, moved to the polling folder and archived.

The following example shows the possible Configure End of Day settings to send the shipment history information for two carriers, for all locations, to DEM.

Fig. 30

Example values of a Configure End of Day for DEM

Configure End of Day

Shipment History Extract

DEM

Carriers / Packing Locations To Use: UPS=ALL|DHLTD=ALL

Next Pickup Number: 1

Work Folder: E:\apps\PRECISION\WebUI\DEM\EOD\Active\

Archive Folder: E:\apps\PRECISION\WebUI\DEM\EOD\Archive\

DEM Polling Folder: E:\apps\PRECISION\WebUI\DEM\Supplier\GenericXML\EXTERNAL_STATUSREAD\

FTP Connection Details:

FTP Folder:

Stop FTP Upload: Yes No



System Configuration

Admin Settings

The following settings can be configured in the Admin Settings page:

- Job Queue Criteria
- Job Queue
- Purge
- Trigger Event
- Extract
- POD Destination
- Additional References
- No Activity Configuration
- Archive Settings

Fig. 31
Admin Settings

The screenshot displays the 'Admin Settings' page with the following sections and values:

- Job Queue Criteria:** Default Max. Deliveries Per Job Queue: 300
- Job Queue:** Unassign Limit (Hours): 2; Cleanup Timeout (Hours): 16
- Purge:** Purge: Job Age (days): 10
- Trigger Event:** Trigger on Delivered: On Off
- Extract:** Enable Extract: On Off
- POD Destination:** C:\PRECISIONWEBUI\DEM\PROOFOFDELIVERY
- Additional References:**
 - Reference 1: Reference Type: EODBATCH
 - Reference 2: Reference Type: ORDERNO
 - Reference 3: Reference Type: CUSTOMERREF
- No Activity Configuration:** No Activity Time (Hours): 4
- No Activity Schedule:**

| Day | All Day | From | To |
|---|-------------------------------------|------|----|
| <input type="checkbox"/> Monday | <input checked="" type="checkbox"/> | | |
| <input checked="" type="checkbox"/> Tuesday | <input checked="" type="checkbox"/> | | |



Job Queue Criteria

Set the default number of deliveries to be processed in a single job in the job queue here. You can set a custom maximum number of deliveries per Job Queue in the Job Queue Criteria page when you create or update a Job Queue Criteria entry.

Fig. 32

Job Queue Criteria



The screenshot shows a form titled "Job Queue Criteria". Inside the form, there is a label "Default Max. Deliveries Per Job Queue:" followed by a text input field containing the number "100".

Job Queue

You can set the number of hours of inactivity before a user can unassign a delivery from the job queue by filling in the Unassign Limit (Hours) field. Fill the Cleanup Timeout (Hours) field to specify the number of hours before jobs in the queue that have failed are released and can be run again.

Fig. 33

Job Queue



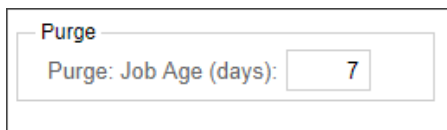
The screenshot shows a form titled "Job Queue". It contains two fields with red asterisks indicating they are required: "Unassign Limit (Hours):" with a value of "2", and "Cleanup Timeout (Hours):" with a value of "16".

Purge

DEM stores Background Jobs data. You can select how often this data is automatically purged in the Admin Settings page. Enter the number of days you want Background Jobs data to be stored before it is purged, and click Save. To purge Deliveries and Exceptions or Incidents,, see [Purge](#).

Fig. 34

Purge Settings



The screenshot shows a form titled "Purge". It contains a single field labeled "Purge: Job Age (days):" with a value of "7".

Trigger Event

Set Trigger on Delivered to On if you want a JSON file to be sent to a highway endpoint when a delivery is complete. Set Trigger on Delivered to Off if you do not want to send a JSON file.

Fig. 35

Trigger Event

The following is an example of a JSON file that is sent to the highway endpoint:

```
[
  {
    "version": "2.0.0",
    "client": "TGL",
    "messageCreateDate": "Jun 26, 2020, 11:10:00 AM",
    "supplier": "-",
    "supplierAccount": "-",
    "deliveryCount": 0,
    "deliveries": [
      {
        "client": "TGL",
        "supplierId": "DHL",
        "supplierAccount": "190097118",
        "supplierTrackingNumber": "DHL20200626110155DEM",
        "lastStatusCode": "DELIVERED",
        "lastDeliveryStatusCode": "DELIVERED",
        "supplierLastStatusDate": "Jun 25, 2020, 5:01:00 PM",
        "supplierDeliveryDate": "Jun 25, 2020, 5:01:00 PM"
      }
    ]
  }
]
```

Extract

In the Enable Extract section, select On to enable extracts from the RESTful API system. Select Off to disable extracts.

Fig. 36

Extract

POD Destination

In the POD Destination field, set the address you want to save the Proof of Delivery files uploaded from the Tracking History page.



Fig. 37

POD Destination

The screenshot shows a configuration window titled "POD Destination". Inside, there is a label "POD Destination:" followed by a text input field containing the path "E:\APPS\PRECISION\WEBUI\DEM\PROOFOFDELIVERY".

Additional References

There are three additional reference fields in the deliveries page. To specify the data to fill these fields, fill the Additional References with the name of the field from the source data you want to use. Possible values that can be used in these fields include; End of Day Batch number, Shipment Order number, and Customer Reference number.

Fig. 38

Additional References

The screenshot shows a configuration window titled "Additional References". It contains three sections, each with a "Reference Type:" label and a text input field:

- Reference 1: Reference Type: EODBATCH
- Reference 2: Reference Type: ORDERNO
- Reference 3: Reference Type: CUSTOMERREF

No Activity Configuration

Administrators can configure how often DEM runs the No Activity Background Job in Admin Settings. You must set the number of hours of inactivity required to trigger a No Activity exception by filling in the No Activity Time (Hours) field. You can select what days No Activity exceptions apply to by checking the box in the Day column. Check the All Day box if you want the No Activity exception settings to apply all day, or specify the hours required in the From and To columns.



Fig. 39
No Activity Configuration

No Activity Configuration

* No Activity Time (Hours):

No Activity Schedule

| Day | All Day | From | To |
|---|-------------------------------------|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> Monday | <input checked="" type="checkbox"/> | <input type="text"/> | <input type="text"/> |
| <input checked="" type="checkbox"/> Tuesday | <input checked="" type="checkbox"/> | <input type="text"/> | <input type="text"/> |
| <input checked="" type="checkbox"/> Wednesday | <input checked="" type="checkbox"/> | <input type="text"/> | <input type="text"/> |
| <input checked="" type="checkbox"/> Thursday | <input checked="" type="checkbox"/> | <input type="text"/> | <input type="text"/> |
| <input checked="" type="checkbox"/> Friday | <input checked="" type="checkbox"/> | <input type="text"/> | <input type="text"/> |
| <input checked="" type="checkbox"/> Saturday | <input type="checkbox"/> | <input type="text" value="03:00 PM"/> | <input type="text" value="05:00 PM"/> |
| <input type="checkbox"/> Sunday | <input type="checkbox"/> | <input type="text"/> | <input type="text"/> |

Archive Settings

Deliveries that are no longer receiving updates are archived after a configurable period of time. This improves performance for current deliveries, and improves the data presented to users in the Tracking History and Dashboards pages. Administrators can configure the age of deliveries to be archived based on the date they were last updated.

To configure Archive Settings first fill the Last Updated older than (days) field. This field is mandatory. Specify how many days since a delivery’s last update must have passed to include it for archiving. You can also check the box if you want to restrict archiving to Closed records.

Fig. 40
Archive Settings

Archive Settings

* Last Updated older than (days):

Only include Closed records

Import File

DEM provides an import facility that allows you to import a number of settings in JSON format from another DEM environment. This is useful for replicating and identifying issues in a separate environment.



To import a file:

1. Select the Import File menu option under System Configuration.
2. Click the Upload File icon in the toolbar and select a JSON file. Alternatively, drag and drop a file into the grid.
3. The selected file processes until it reaches Ready status. Click the Import button in the toolbar to load the data into the environment.

Note Dragging the file into the Import File area automatically uploads it to DEM.

An error appears and the upload fails if duplicate data is found, which is data that already exists in the DEM database. If this happens, it is possible to review the data, and manually select the records that you want the imported file to override.

1. Select the file that is pending review, and click the Review button. The Duplicate Records window is displayed.

Fig. 41

Review File Import

| Review | Name | Size | Status |
|--------|--|------|----------------|
| | ExternalConversionHeader_20200203155708.json | 2 KB | Pending Review |

Review

Fig. 42

Duplicate Records

Duplicate Records

0 records have been created and there are 1 pending to review.

| statusCode | |
|--------------------------|------------------|
| <input type="checkbox"/> | SHIPPER APPROVAL |

Override Records Close

2. Click the View Details icon to expand the details of each record.
3. The Record Comparison window is displayed. It shows the record ID, the existing value in the DEM database, and the new value contained in the JSON file. A warning icon also indicates whether the value in the JSON file is identical or different to the existing value.



Fig. 43
Record Comparison

| Description | Old | New |
|----------------|------------------|------------------|
| Description | | |
| StatusCode | SHIPPER APPROVAL | SHIPPER APPROVAL |
| SourceSystem | SUPPLIER | SUPPLIER |
| StatusSeverity | 1 | 1 |

Note You can filter the results to show only identical or different values.

Fig. 44
Filter Results With Identical Values

| Description | Old | New |
|----------------|------------------|------------------|
| Description | | |
| StatusCode | SHIPPER APPROVAL | SHIPPER APPROVAL |
| SourceSystem | SUPPLIER | SUPPLIER |
| StatusSeverity | 1 | 1 |

- If you want this data to override existing data, select the record in the Duplicate Records window, and click the Override Records button at the bottom of the list. The status of the file will change to Complete when the override process is complete.

Reason Codes

When a user creates a comment in the Deliveries page, the user is given the option of adding a Reason Code from a lookup browse menu. This facilitates the quick entry of commonly used comments, and ensures that standard text is used. You can create new reason codes, update existing ones, and delete reason codes from the Reason Codes page.



Fig. 45
Reason Codes Page

The screenshot shows a web interface titled "Reason Codes". At the top, there is a search bar with "Reason Code:" followed by an input field, "Search By:" with a dropdown menu set to "Description", and another empty input field. To the right are "Search" and "Clear" buttons. Below this is a table with the following data:

| Reason Code | Description | Last Modified User | Last Modified Date |
|--------------------|--|--------------------|---------------------|
| CUSTOMS_DOCS | The customs documentation was prepared incorrectly. The following information was missing: [ins... | QAUTO | 03/08/2018 11:16:37 |
| DELAY_AT_SHIPPI... | The calculated ETA date was incorrect - the shipment did not get picked up on the original ship dat... | QAUTO | 03/08/2018 11:16:37 |
| INCORRECT_ADD... | The address in our party address book was incorrect for this recipient. The address needs to be co... | QAUTO | 03/08/2018 11:16:37 |

Table 10
Reason Codes

| Field | Description |
|--------------------|--|
| Reason Code | A short code that briefly describes the Reason Code. |
| Description | A longer description of the Reason Code. |
| Last Modified User | The last user to edit the Reason Code. |
| Last Modified Date | The date the Reason Code was last edited. |

Create New Reason Codes

Go to the System Configuration section of the DEM menu. Choose Reason Codes. In the control panel, click the Create Record icon. This opens the Create Reason Code window.

Fig. 46
Create Reason Code Window

The screenshot shows a window titled "Create Reason Code" with a close button in the top right corner. It contains two input fields: a mandatory field labeled "* Reason Code:" with a small blue box around it, and an optional field labeled "Description:". At the bottom left is a "Save" button with a green checkmark icon, and at the bottom right is a "Close" button with a red 'X' icon.

There are two fields in the Create Reason Code window. The first field is the Reason Code field, this is a mandatory field. This should be a shorthand indicator of the main purpose of your reason code. There is also an optional Description field. Here you can provide a longer description of your reason code. When the relevant fields are completed, click the Save icon at the bottom of the window.



Update Reason Code

From the Reason Codes page, select the reason code you want to update, and click the Update Record icon at the bottom of the page. Alternatively, you can double-click the reason code you want to update. Both of these options open the Update Reason Code window. In this window, edit the fields that require an update. Finally, click Save.

Delete Reason Code

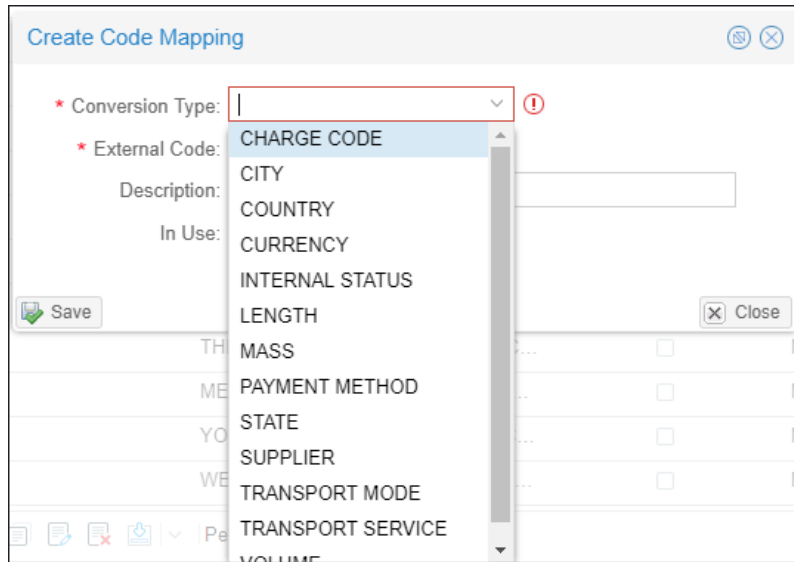
To delete a reason code, select the Delete Record icon at the bottom of the page. The system prompts you to confirm. If you click Yes, the reason code is then removed from the window. If you click No, the window is closed and the reason code is not removed.

System Codes

System codes are used in other areas of DEM to create drop-down lists. In all areas of DEM where you select options from a drop-down list, the items on the list are created here. For example, in the Create Code Mappings window, all of the Conversion Types are codes from the System Codes page.

Fig. 47

Example of System Codes in Use in DEM



System Codes can be viewed, created, updated, and deleted in the System Codes page. To access System Codes, navigate to Foundations in the Web UI.

Fig. 48
System Codes Page

| System Codes | | | | | | |
|--------------------------------------|--------------------------|--|----------|---------------------------------------|--------------------------------------|---------------------|
| System Code ID: <input type="text"/> | | Search By: System Code Type <input type="text"/> | | <input type="button" value="Search"/> | <input type="button" value="Clear"/> | |
| System Code ID | System Code Type | Description | Position | Value | Last Modified User | Last Modified Date |
| 1,000.00 | NUMBER FORMAT | 1,000.00 | 1 | 1,000.00 | P6B | 27/09/2018 16:22:14 |
| 1,000.00 | NUMBER FORMAT | 1,000.00 | 1 | 1,000.00 | P6B | 27/09/2018 16:22:14 |
| ACCOUNT_CORR... | CHARGE CODE | ACCOUNT CORRECTION | 0 | ACCOUNT_CORRECTION | P6B | 27/09/2018 16:22:14 |
| ACTION | MAINTENANCE COLUMN TYPE | | | ACTION | P6B | 27/09/2018 16:22:14 |
| ACTUAL_WEIGHT | FEED QUALIFIER TYPE | Actual Weight Qualifiers | | ACTUAL_WEIGHT | P6B | 27/09/2018 16:22:14 |
| ADDR_CORRECTI... | CHARGE CODE | ADDRESS CORRECTION | 0 | ADDR_CORRECTION | P6B | 27/09/2018 16:22:14 |
| ADJUSTMENT | CHARGE CODE | ADJUSTMENT (Non matchable char... | | ADJUSTMENT | P6B | 27/09/2018 16:22:14 |
| ADJUSTMENT_BIL... | FEED QUALIFIER TYPE | Adjustment Billed Weight | | ADJUSTMENT_BILLED_WEIGHT | P6B | 27/09/2018 16:22:14 |
| ADJUSTMENT_CH... | FEED QUALIFIER TYPE | Adjustment Charge | | ADJUSTMENT_CHARGE | P6B | 27/09/2018 16:22:14 |
| ADMINISTRATION | CHARGE CODE | ADMINISTRATION FEE | | ADMINISTRATION | P6B | 27/09/2018 16:22:14 |
| AIR | TRANSPORT MODE | AIR | 0 | AIR | P6B | 27/09/2018 16:22:14 |
| ALL SHIPMENTS | RATING REQUIRED TYPE | All Shipments | | ALL SHIPMENTS | P6B | 27/09/2018 16:22:14 |
| AUDITED_WEIGHT | FEED QUALIFIER TYPE | Audited Weight Qualifiers | | AUDITED_WEIGHT | P6B | 27/09/2018 16:22:14 |
| AUTOTST_IMP | CHARGE CODE | import test | 4 | AUTOTST_IMP | QAUTO | 22/10/2018 11:37:10 |
| AWAITING FEEDB... | INCIDENT STATUS TYPE | Awaiting Feedback | 2 | AWAITING FEEDBACK | P6B | 27/09/2018 16:22:14 |
| BIGDECIMAL | MAINTENANCE FILTER TYPE | | | BIGDECIMAL | P6B | 27/09/2018 16:22:14 |
| BILL_ACCOUNT | FEED QUALIFIER TYPE | Bill Account Qualifiers | | BILL_ACCOUNT | P6B | 27/09/2018 16:22:14 |
| BILLED_VOLUME | FEED QUALIFIER TYPE | Billed Volume Qualifiers | | BILLED_VOLUME | P6B | 27/09/2018 16:22:14 |
| BILLED_WEIGHT | FEED QUALIFIER TYPE | Billed Weight Qualifiers | | BILLED_WEIGHT | P6B | 27/09/2018 16:22:14 |
| BILLPARTY_REFE... | FEED QUALIFIER TYPE | Billparty Reference | | BILLPARTY_REFERENCE | P6B | 27/09/2018 16:22:14 |
| BOOLEAN | MAINTENANCE COLUMN CLASS | boolean | | BOOLEAN | P6B | 27/09/2018 16:22:14 |
| BOOLEAN | MAINTENANCE COLUMN TYPE | | | BOOLEAN | P6B | 27/09/2018 16:22:14 |
| BOOLEAN | MAINTENANCE FILTER TYPE | | | BOOLEAN | P6B | 27/09/2018 16:22:14 |
| BOOLEAN_NULLA... | MAINTENANCE COLUMN TYPE | | | BOOLEAN_NULLABLE | P6B | 27/09/2018 16:22:14 |
| BROKERAGE | CHARGE CODE | BROKERAGE | | BROKERAGE | P6B | 27/09/2018 16:22:14 |

System codes with the following System Code Types are applicable to DEM:

- Conversion Type
- Date Format
- Exception Severity
- Incident Type
- Number Format
- Time Format



Conversion Type

Conversion Type system codes are used in the maintenance of code conversions.

Table 11
Conversion Type System Codes

| System Code ID | Description | Value |
|-------------------|------------------------------|-------------------|
| Charge Code | Charge Code Conversion Type | Charge Code |
| City | City Conversion Type | City |
| Country | Country Conversion Type | Country |
| Currency | Currency Conversion Type | Currency |
| Internal Status | Internal Status Code | Internal Status |
| Length | Length Conversion Type | Length |
| Mass | Mass Conversion Type | Mass |
| Payment Method | Payment Method Conversion | Payment Method |
| State | State Code Conversion Type | State |
| Supplier | Supplier Conversion Type | Supplier |
| Transport Mode | Transport_Mode Conversion | Transport Mode |
| Transport Service | Transport Service Conversion | Transport Service |
| Volume | Volume Conversion Type | Volume |

Date Format

Date Format System Codes are used in the maintenance of Supplier and Supplier Accounts fields.

Table 12
Date Format System Codes

| System Code ID | Description | Value |
|----------------|-------------------------|------------|
| DD/MM/YYYY | Date format: dd/MM/yyyy | dd/MM/yyyy |
| MM/DD/YYYY | Date format: MM/dd/yyyy | MM/dd/yyyy |
| YYYY/MM/DD | Date format: yyyy/MM/dd | yyyy/MM/dd |

Exception Severity

Exception Severity System Codes are used in the internal status page to determine the level of severity of an exception.



Table 13

Exception Severity System Codes

| System Code ID | Description | Value |
|----------------|-------------|-------|
| High | 1 High | 1 |
| Medium | 2 Medium | 2 |
| Low | 3 Low | 3 |

Incident Type

Incident Type System Codes are used when creating a New Incident in the Exceptions page.

Table 14

Incident Type System Codes

| System Code ID | Description | Value |
|----------------|-----------------|---------|
| Damaged | Damaged Package | Damaged |
| Late | Late Package | Late |
| Lost | Lost Package | Lost |

Number Format

Number Format System Codes are used in the maintenance of Supplier and Supplier Account fields.

Table 15

Number Format System Codes

| System Code ID | Description | Value |
|----------------|-------------|----------|
| 1,000.00 | 1,000.00 | 1,000.00 |
| 1.000,00 | 1.000,00 | 1.000,00 |

Time Format

Time Format System Codes are used in the maintenance of Supplier and Supplier Account fields.

Table 16

Time Format Type System Codes

| System Code ID | Description | Value |
|----------------|-----------------------|----------|
| HH:MM | Time format: hh:mm | hh:mm |
| HH:MM 2 | Time format: HH:mm | HH:mm |
| HH:MM:SS | Time format: HH:mm:ss | HH:mm:ss |



Create New System Code

To create a new system code, go to the System Configuration section of the Foundations menu. Choose System Codes. In the control panel, click the Create Record icon. This opens the Create System Code window.


Fig. 49
Create System Code Window

Table 17
Create System Code Window Fields

| Field | Description |
|------------------|--|
| System Code ID | A short description of the system code. |
| System Code Type | The type information the system code displays. |
| Description | This is a longer description of the function of the system code than the System Code ID. |
| Position | This is a number which indicates the order of priority of the System Code. |
| Value | This indicates what the system code means. This is often the same as the System Code ID field. |

When the relevant fields are completed, click the Save icon at the bottom of the window.

Update System Code

On the System Codes page, select the system code you want to update, and click the Update Record  icon at the bottom of the page. Alternatively, you can double-click the reason code you want to update. Both of these options open the Update System Code window. In this window, edit the fields that require an update. Finally, click Save.



Delete System Code

To delete a system code, select the Delete Record icon at the bottom of the page. The system prompts you to confirm. If you click Yes, the system code is then removed from the window. If you click No, the window is closed and the system code is not removed.

User Views

This option allows administrators to configure the information a User has access to. Administrators can limit Users views to specific Suppliers or Supplier Accounts. To view all User Views, go to the User Views page. Here you can view, update, create, and delete User Views accounts.

Fig. 50
User Views page

| Name | Description | Last Modified User | Last Modified Date |
|------------|------------------------|--------------------|---------------------|
| [Redacted] | View for all Suppliers | QAUTO | 01/05/2020 19:07:05 |
| [Redacted] | [Redacted] | QCONFIG | 15/04/2020 00:58:57 |
| [Redacted] | [Redacted] | QCONFIG | 15/04/2020 00:59:22 |
| [Redacted] | [Redacted] | QCONFIG | 15/04/2020 00:59:50 |
| [Redacted] | [Redacted] | QCONFIG | 15/04/2020 01:02:36 |
| [Redacted] | [Redacted] | QCONFIG | 15/04/2020 01:03:02 |
| [Redacted] | [Redacted] | QCONFIG | 15/04/2020 01:03:24 |
| [Redacted] | [Redacted] | QCONFIG | 15/04/2020 01:04:02 |
| [Redacted] | [Redacted] | QCONFIG | 28/04/2020 08:05:23 |
| [Redacted] | [Redacted] | QAUTO | 01/05/2020 19:08:24 |
| [Redacted] | [Redacted] | QAUTO | 01/05/2020 19:09:05 |
| [Redacted] | [Redacted] | [Redacted] | 13/05/2020 15:18:57 |

To view an existing User View, double click on the entry. The Update User View window is opened. The Name and Description of the User View is shown at the top of the window. You can select Account/Supplier or User view.

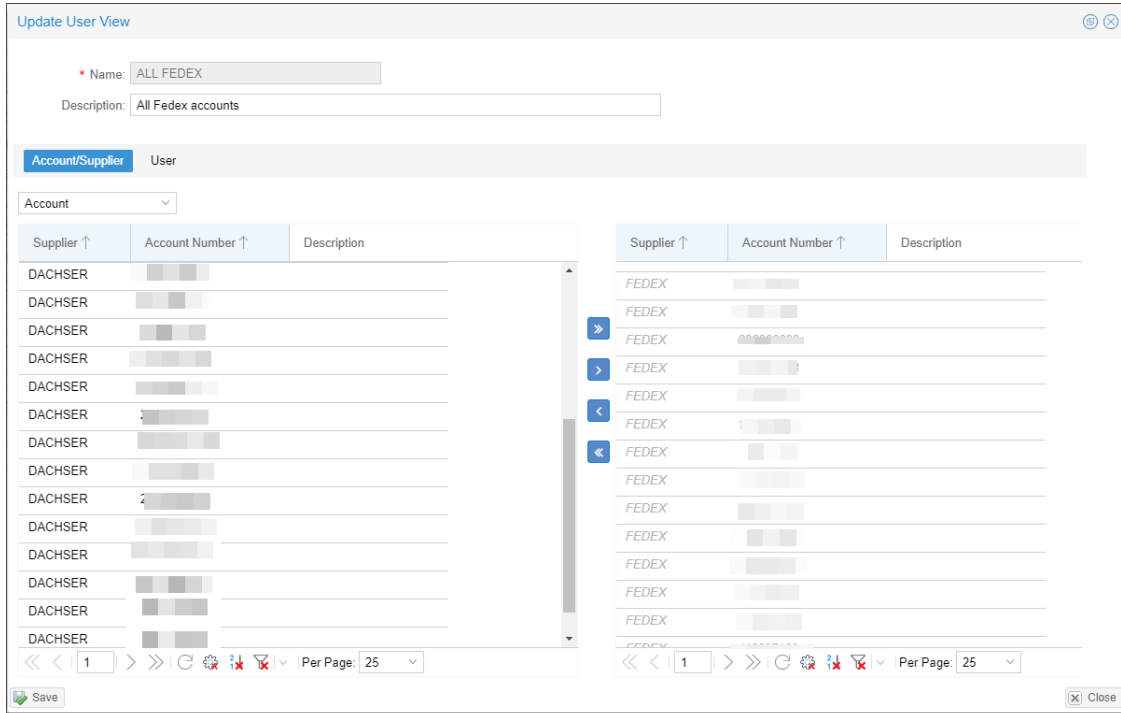
To configure the Suppliers and Supplier Accounts associated with a User View, select the Account/Supplier view. You can toggle between Accounts and Suppliers in the drop down menu. If all accounts are configured at a Supplier lever, the Account view appears in read-only mode. On the left side of the window all of the Suppliers or Supplier Accounts are listed. On the right side all of the Suppliers and Supplier Accounts associated with this User View are shown. To add all records to the User View account, click the double right arrow icon. To remove them all, click the double left arrow. To add individual records, click each supplier and then click the single right arrow icon. To remove a supplier or supplier account from the User View, click the record, and then click the single right arrow.

To configure the Users associated with a User View, select the User view option. All available Users are listed on the right side of the window. To add all records to the User View account, click the double right arrow icon. To remove them all, click the double left arrow. To add individual records, click each supplier



and then click the single right arrow icon. To remove a user from the User View, click the record, and then click the single right arrow.

Fig. 51
Update User View



Utilities

Purge

To purge data related to deliveries, go to the Purge page.

Fig. 52

Purge page

1. Select the type of data you want to purge. You can select either or Deliveries and Exceptions, or Incidents. Alternatively, you can purge All records.
2. Select the age records must be to be purged. You can specify this by the number of days since a record has been updated, or the date a record was updated on.
3. If you want to restrict purging to Closed records only, check the box. If you want to purge all records older than the specified date; uncheck the box.
4. Click Purge Records to complete.

Database

Changelog

For information about this page, please contact QAD Precision.

Fig. 53
Changelog

| Id | File Name | Date Executed | Order Executed | Status | md5sum | Description |
|---|---|---------------------|----------------|----------|------------------------|-------------|
| 8.0.12.2_store_event_location_timezone | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 14/07/2021 03:50:48 | 39 | EXECUTED | 8d875b4f6e0d653916... | sql |
| 8.0.11.7_Reporting_Late_Deliveries_by_No_of_days | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 07/07/2021 04:33:24 | 38 | EXECUTED | 8df130cadf63c04d52... | sql |
| 8.0.11.8_Update_Missed_Delivery_Exceptions_Logic_to_use_timezones | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 05/07/2021 07:59:48 | 37 | EXECUTED | 80467b6767877e848... | sql |
| 8.0.11.7_Update_Missed_Delivery_Exceptions_Logic_to_use_timezones | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 05/07/2021 02:02:55 | 36 | EXECUTED | 88a2a3e4ae44ec589... | sql |
| 8.0.10.2_store_ship_to_timezone_on_delivery | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 11/06/2021 04:31:07 | 35 | EXECUTED | 8342738b6ca3d9818... | sql |
| 8.0.10.0_allow_configuration_of_delivery_lifespan | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 10/06/2021 03:09:33 | 34 | EXECUTED | 8587b392c475e050... | sql |
| 8.0.9.6_add_index_for_open_exception | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 10/06/2021 02:18:48 | 33 | EXECUTED | 818681dda5b38daa2... | sql |
| 8.0.9.2_add_index_for_polling_job | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 01/06/2021 09:50:07 | 32 | EXECUTED | 874719e9025e5a855... | sql |
| 8.0.9.2_allow_configuration_of_max_polling_age | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 01/06/2021 01:38:14 | 31 | EXECUTED | 8b1016b9c4b0e2179... | sql |
| 8.0.8.17_add_unique_constraint_over_delivery_created_date | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 27/05/2021 03:32:18 | 30 | EXECUTED | 8490441b2af55251bd... | sql |
| 8.0.8.11_dashboard_issues_at_WL_Gore | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 19/05/2021 08:17:38 | 29 | EXECUTED | 854a5eb0d4bfa578c... | sql |
| 8.0.8.7_dashboard_issues_at_WL_Gore | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 19/05/2021 08:17:38 | 28 | EXECUTED | 82bf54e7067add9a8... | sql |
| 8.0.8.4_reduce_number_of_table_reads_on_dm_exception_hdr | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 18/05/2021 03:53:16 | 27 | EXECUTED | 88ebc69cd97ab6cc4... | sql |
| 8.0.8.4_update_index_idx_deli_eval_pending | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 18/05/2021 03:53:16 | 26 | EXECUTED | 8d37429ca4a4d00ea... | sql |
| 8.0.5-10_dm_delivery_indexes | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 18/05/2021 03:53:16 | 25 | EXECUTED | 886954ba475d4f73f... | sql |
| 8.0.4-3_last_updated_date_indexes | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 18/05/2021 03:53:16 | 24 | EXECUTED | 852156f14e6a08148... | sql |
| 8.0.4-2_current_comparison_eta | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 18/05/2021 03:53:16 | 23 | EXECUTED | 8faa828bf95de1ebdd... | sql |
| 8.0.4-1_supplier_default_direction | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 18/05/2021 03:53:16 | 22 | EXECUTED | 8a1fb8c812c722a4d72... | sql |
| 8.0.3-2_dem_extract_schema_changes | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 18/05/2021 03:53:16 | 21 | EXECUTED | 8d54c0638a109aa59... | sql |
| 8.0.3-1_open_incident_id_on_exception | database/changelog/sql/mdb/core/MD8_CREATE_TABLES.sql | 18/05/2021 03:53:16 | 20 | EXECUTED | 8cef9da956cc2d75d... | sql |
| 8.0.2-5_last_status_code_indexes | database/changelog/sql/mdb/core/MDR_CREATE_TABLES.sql | 18/05/2021 03:53:16 | 19 | FXFLUTED | 85a576ca5a9a0d646... | sql |



Archive

Deliveries

To view information about an archived delivery, go to the Archives Deliveries page.

Fig. 54
Archive Deliveries Page

| Supplier | Supplier Tracking Number | Open | Open | Evaluate | Enabled | Closed | Closed Date | Draft M... | Mis... | Job Queue Process | Job Queue... | Account Number | Last Supplier ... | Last Delivery ... | Last Statu |
|----------|--------------------------|------|------|----------|---------|--------|-------------|------------|--------|-------------------|--------------|----------------|-------------------|-------------------|------------|
| 9R86A7 | 129R86A70354926376 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 9R86A7 | EN ROUTE | NO ACTIVITY | 126254 |
| 3786W8 | 123786W8033565574 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 3786W8 | EN ROUTE | NO ACTIVITY | 126411 |
| 9R86A7 | 129R86A70354972996 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 9R86A7 | EN ROUTE | NO ACTIVITY | 126469 |
| X30718 | 12X307180336206769 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | X30718 | EN ROUTE | NO ACTIVITY | 126563 |
| X30718 | 12X307180336340211 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | X30718 | EN ROUTE | NO ACTIVITY | 125981 |
| X30718 | 12X307180336227522 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | X30718 | EN ROUTE | NO ACTIVITY | 126019 |
| 45X874 | 1245X8740379290652 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 45X874 | EN ROUTE | NO ACTIVITY | 126162 |
| 3786W8 | 123786W80335831876 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 3786W8 | EN ROUTE | NO ACTIVITY | 126163 |
| 3786W8 | 123786W80335832026 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 3786W8 | EN ROUTE | NO ACTIVITY | 126020 |
| 9R86A7 | 129R86A70354905808 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 9R86A7 | EN ROUTE | NO ACTIVITY | 126412 |
| V3300R | 12V3300R0332663328 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | V3300R | EN ROUTE | NO ACTIVITY | 126470 |
| X30718 | 12X307180336230456 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | X30718 | EN ROUTE | NO ACTIVITY | 126565 |
| V3300R | 12V3300R0332855380 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | V3300R | EN ROUTE | NO ACTIVITY | 125980 |
| W2111X | 12W2111X0390595256 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | W2111X | EN ROUTE | NO ACTIVITY | 126165 |
| 89371W | 1289371W0380787460 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 89371W | EN ROUTE | NO ACTIVITY | 126255 |
| W2111X | 12W2111X0390709507 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | W2111X | EN ROUTE | NO ACTIVITY | 126021 |
| 466814 | 124668140302971018 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 466814 | EN ROUTE | NO ACTIVITY | 126413 |
| W2111X | 12W2111X0390696101 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | W2111X | EN ROUTE | NO ACTIVITY | 126566 |
| 9R86A7 | 129R86A70354985179 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 9R86A7 | EN ROUTE | NO ACTIVITY | 126471 |
| 3786W8 | 123786W80335833641 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | | | | | | 3786W8 | FN ROUTE | NO ACTIVITY | 126023 |


Here you can view all of the information about a delivery that was stored in the main Deliveries page, but you cannot update it. Information about the Tracking History, Exceptions, Incidents can be viewed via the delivery sub-options menu but users cannot link to the relevant pages as they can for unarchived deliveries.

Purge Archive

Archived deliveries can be purged from the system. To do this, go to the Purge Archive page. To purge archived records by day; select Day and the number of days since a record has been archived. To purge archived records by date; select date and choose the latest date of archived deliveries to be purged. Finally, click Purge Archived Records.



Fig. 55
Purge Archive Page

 **Purge Archive**

Purge Criteria: Days Date

* Archived Date Older Than (Days):



Shipment History Update Precedence

DEM receives Shipment History updates from both the Transport Execution and the Carrier. This section outlines which updates are given precedence by the system.

If DEM receives a message to create a new delivery from both the TE, and the Carrier; the first message DEM consumes takes precedence. If the message from the Carrier is consumed first; the Carrier message creates the delivery. If the message from the TE is consumed first; the TE message creates the delivery.

The table below outlines whether a field takes its information from the Carrier, the Transportation Execution, or both.

Table 18
Shipment History Updates

| Data Field Element | Carrier | Transportation Execution |
|-----------------------|---|---|
| Actual Weight | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |
| Billable Weight | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |
| Client | Information is never taken from the Carrier. If no TE information is available, the field is blank. | Information is always updated from TE. |
| Despatch | Information is never taken from the Carrier. If no TE information is available, the field is blank. | Information is always updated from TE. |
| Despatch Date | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |
| Dimensional Height | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |
| Dimensional Length | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |
| Dimensional Width | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |
| Hold At Location Date | Information is always updated from the Carrier. | Information is never taken from TE. If no Carrier information is available, the field is blank. |
| Rating Zone | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |
| Service | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |

| | | |
|--------------------------------|---|---|
| Shipment Direction | Carrier updates this field if no TE value is available. | Information is taken from TE if available. |
| Shipment Reference | Information is never taken from the Carrier. If no TE information is available, the field is blank. | Information is always updated from TE. |
| Ship To Address | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |
| Shipper Address | Information is taken from the Carrier if available. | TE updates this field if no Carrier value is available. |
| Shipper ETA Date | Information is never taken from the Carrier. If no TE information is available, the field is blank. | Information is always updated from TE. |
| Shipper Promise Date From / To | Information is never taken from the Carrier. If no TE information is available, the field is blank. | Information is always updated from TE. |
| Source System | Information is never taken from the Carrier. If no TE information is available, the field is blank. | Information is always updated from TE. |
| Supplier Current ETA Date | Information is always updated from the Carrier. | Information is never taken from TE. If no Carrier information is available, the field is blank. |
| Supplier Manifested Date | Information is always updated from the Carrier. | Information is never taken from TE. If no Carrier information is available, the field is blank. |
| Supplier Original ETA Date | Information is always updated from the Carrier. | Information is never taken from TE. If no Carrier information is available, the field is blank. |
| Supplier Pickup Date | Information is always updated from the Carrier. | Information is never taken from TE. If no Carrier information is available, the field is blank. |



DEM YAML Configuration File

Properties can be configured on the `dem.yml` file. To access these properties, open the `dem.yml` file.

Warning: Changing this file can cause DEM to stop working. A YAML file has a simple syntax, however if this is not maintained correctly, it could cause DEM to fail to start. It is recommended that any changes applied to `dem.yml` file are validated in a YAML validator before being saved.

This YAML file contains a number of properties that control technical features in DEM. The properties are either core framework properties provided by a third party framework dependency, or are application specific introduced by QAD Precision.

The core framework properties are responsible for configuring the database connection, log output level, and other web container specific configuration. The precision properties fall under the Precision section and are responsible for DEM specific features. These refer mostly to the background jobs DEM uses to process status update messages.

This section contains information about configuring the Precision section of the file only.

Fig. 56

Precision dem.yml properties

```
##### Precision #####
precision:
  scheduling:
    dem:
      enabled: true
  springbatch:
    carrierStatusLauncher:
      threads: 1
      jobs: 3
    evaluationLauncher:
      threads: 3
      jobs: 3
    systemLauncher:
      threads: 3
      jobs: 1
```

```
scheduling:
  dem:
    enabled: true
```

This is a global property that enables DEM to schedule background jobs. If it is set to true, background jobs will be run on the schedule configured in the `scheduler` section of the `DEM.YML`. Set this value to false to disable scheduling. For information about scheduling background jobs, see [Scheduler](#).

Spring Batch

Administrators can configure how many background jobs DEM processes at once by configuring the following values:

```
springbatch:
  carrierStatusLauncher:
    threads: 1
    jobs: 3
  evaluationLauncher:
    threads: 1
    jobs: 3
  systemLauncher:
    threads: 1
    jobs: 3
```

For optimal performance, these values should remain unchanged from the recommended values.

Retry Limit

The number of times DEM attempts to retry a failed background job is configurable in the following value:

```
dem:
  batch:
    step:
      retry limit: 5
```

Note It is recommended that this value is not changed.

EDI File Storage

Administrators can set the maximum size an EDI file can be. If the EDI file exceeds this value, the EDI file will be split. The size of the EDI file is measured in Kilobytes. To configure this, change the following value:

```
edi:
  maxLength: 500
```

Administrators can configure the file where the generic XML file converted from carriers EDI files is stored in the following value:

```
genericxml:
  path: $(WEBUI_HOME)/dem/GenericXML
```

Note This option should only be enabled when troubleshooting. Generic XML files are generated for each carrier status update that is received, this can use a large amount of memory on the hard disk.



Fig. 57

Generic XML path

```

dem:
  batch:
    step:
      retry_limit: 5
  edi:
    # max length in KB
    maxLength: 500
  genericxml:
    path: ${WEBUI_HOME}/dem/GenericXML

```

Background Session Information

Administrators can configure the information background jobs write into the system in the following value:

```

background:
  sessioninfo:
    loginclient: TGL
    loginuser: SYSTEM
    dateformat: dd/MM/yyyy

```

Fig. 58

Background Session information

```

background:
  sessioninfo:
    loginclient: TGL
    loginuser: SYSTEM
    dateformat: dd/MM/yyyy

```

Chunk Size

Values that include `chunk_size` determine the number of deliveries that are processed in each transaction. These values control the size of data that is locked and processed in a block.

If you increase the value, the number of records locked at a time, as well as database connections needed, increases. There is a value relating to this for each background job.

```

No_activity_job:
  Number_of_hours: 2
carrier_status:
  chunk_size: 5
delivery_evaluation_management:
  chunk_size: 5
missed_delivery_date_management:
  chunk_size: 5
no_activity_management:
  chunk_size: 5

```

```

delivery_evaluation:
  chunk_size: 5
missed_delivery_date:
  chunk_size: 5
no_activity:
  chunk_size: 5
purge:
  chunk_size: 5
usps_tracking_polling:
  chunk_size: 5
unassing_delivery:
  chunk_size: 5
validate_deliveries:
  chunk_size: 5

```

If you reduce the value, the performance can drop. It is recommended that the values be left unchanged for all values, except `No_activity_job`. This value should be configured based on the expected frequency of carrier updates.

Fig. 59

Chunk Size

```

no_activity_job:
  number_of_hours: 2
carrier_status:
  chunk_size: 5
delivery_evaluation_management:
  chunk_size: 5
missed_delivery_date_management:
  chunk_size: 5
no_activity_management:
  chunk_size: 5
delivery_evaluation:
  chunk_size: 5
missed_delivery_date:
  chunk_size: 5
no_activity:
  chunk_size: 5
purge:
  chunk_size: 5
usps_tracking_polling:
  chunk_size: 5
unassign_delivery:
  chunk_size: 5
validate_deliveries:
  chunk_size: 5

```

Scheduler

Administrators can configure how often DEM runs some background jobs. The following values can be scheduled.

```
delivery_queue_management: 0 0/10 * * * ?
delivery_queue_evaluation: 0 0/10 * * * ?
polling:
  usps: '-'
purge: 0 0/10 * * * ?
```

Jobs are scheduled using a cron notation. For example, to schedule a background job to run at second 00, every ten minutes, of every hour, set the cron notation to 0 0/10 * * * ?.

Set the value to '-' to disable the scheduled task.

Fig. 60

Scheduler

```
scheduler:
# use '-' to disable scheduled task. Example:
# delivery_queue_management: '-'
delivery_queue_management : 0 0/10 * * * ?
#At second :00, every 10 minutes starting at minute :00, of every hour
delivery_queue_evaluation: 0 0/2 * * * ?
#At second :00, every 2 minutes starting at minute :00, of every hour
# At second :00, at minute :30, every hour starting at 00am, of every day
polling:
  usps: '-'
purge: 0 0/10 * * * ?
```

Delivery Queue

To schedule how often DEM creates a job queue, and performs the background jobs in the queue, configure the following values:

```
delivery_queue_management: 0 0/10 * * * ?
delivery_queue_evaluation: 0 0/10 * * * ?
```

For some carriers, DEM must poll the carriers for information, to schedule how often this happens, configure the following value:

Polling

```
polling:
  usps: '-'
```



Note This option is specific to carrier USPS and can be disabled entirely for some integrations.

Purge

To schedule regular purging of Background Jobs data, configure the following value:

```
purge: 0 0/10 * * * ?
```

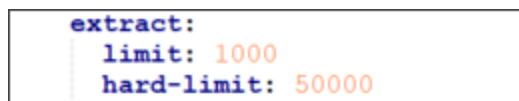
Extract

Administrators can configure default limits for DEM Extract APIs. The following values can be scheduled:

```
extract:
  limit: 1000
  hard limit: 10000
```

Fig. 61

Extract



```
extract:
  limit: 1000
  hard-limit: 50000
```

To set the default size of a DEM Extract, configure the following value:

```
limit: 1000
```

To set the largest possible size of a DEM Extract, configure the following value:

```
hard limit: 50000
```

Highway Configuration

Highway is a system that DEM uses to communicate information to and from external sources, allowing the user access to information from all carriers and deliveries with the DEM interface. There are three uses for Highway within DEM. They are:

- To read carrier status updates and transfer this information to DEM. DEM can then present this information in a single interface for the user.
- To connect to the mail server that allows DEM users to send e-mails when using the comments function.
- To read and send e-mails from the carrier to DEM.

Carrier Status Updates

Highway locates the carrier status update files and sends them to DEM. Highway can read EDI, CSV, and fixed-length files, and communicate the information from them to DEM. All of the Tier 1 carriers use an EDI format.

There are four endpoints for each carrier. The first one defines where Highway can retrieve messages from the carrier. The second endpoint defines where Highway can send messages to DEM for the carrier. The third endpoint allows messages read by Highway to be archived in a folder on the server. The final endpoint allows Highway to send replies from DEM to a reply location.

Table 19

Sample Carrier Status Update Endpoints

| Purpose | Endpoint |
|---------|--|
| Read | DEM_SUPP_ <i>[Carrier]</i> _STATUS_READ_ <i>[Format]</i> _FILE |
| Write | DEM_SUPP_ <i>[Carrier]</i> _STATUS_WRITER |
| Archive | DEM_SUPP_ <i>[Carrier]</i> _STATUS_ARCH |
| Reply | DEM_SUPP_ <i>[Carrier]</i> _STATUS_WRITER_REPLY |



Table 20

UPS Status Update Endpoints

| Purpose | Endpoint |
|---------|--------------------------------------|
| Read | DEM_SUPP_UPS_STATUS_READ_EDI240_FILE |
| Write | DEM_SUPP_UPS_STATUS_WRITER |
| Archive | DEM_SUPP_UPS_STATUS_ARCH |
| Reply | DEM_SUPP_UPS_STATUS_WRITER_REPLY |

Table 21

FEDEX Status Update Endpoints

| Purpose | Endpoint |
|---------|--|
| Read | DEM_SUPP_FEDEX_STATUS_READ_EDI214_FILE |
| Write | DEM_SUPP_FEDEX_STATUS_WRITER |
| Archive | DEM_SUPP_FEDEX_STATUS_ARCH |
| Reply | DEM_SUPP_FEDEX_STATUS_WRITER_REPLY |

Table 22

DHL Status Update Endpoints

| Purpose | Endpoint |
|---------|--------------------------------------|
| Read | DEM_SUPP_DHL_STATUS_READ_EDI240_FILE |
| Write | DEM_SUPP_DHL_STATUS_WRITER |
| Archive | DEM_SUPP_DHL_STATUS_ARCH |
| Reply | DEM_SUPP_DHL_STATUS_WRITER_REPLY |

By default, the Read endpoints are configured to direct to folders on the server. These must be modified to direct to the FTP server and FTP directory. You should use the specific FTP credentials provided by the carrier for each customer.

Rules are used to send messages received on the Read endpoint to the Archive and Write endpoints. The Write endpoint details a property that communicates to DEM what endpoint it should send the reply to. This endpoint property is called `reply.endpoint`. When a message is read from the Read endpoint it is assigned the message ID `DEM_SUPP_Carrier_STATUSREAD`, with the stated carrier replacing the word Carrier. The rules for this message ID are predefined.



Fig. 62
DEM_SUPP_UPS_STATUS_WRITER Writer Endpoint Definition in Highway

PRECISION HIGHWAY Configuration Console

Home Monitor Message Centre System Definition Data Documentation Links

Servers Endpoints Monitor Patterns Users Partners Payload Types Message Ids Program Params Key Stores

Endpoint id: DEM_SUPP_UPS_STATUS_WRITER

Description: DEM - Supplier - UPS Status Update

Type: Input (Reader) Output (Writer) Reference (Writer) System

Storage: JMS Queue WebSphere MQ AS/400 DataQueue Folder FTP E-Mail SOAP HTTP

Target name: /dem/UPS

Sub target name:

Server: DEM_MICROSERVICE

Reference endpoint id:

Default message id:

Overwrite message id:

Payload spy plugin:

Number of readers: 0

Return message endpoint:

Property key 1: reply.synchronous

Property key value 1: YES

Property key 2: reply.endpoint

Property key value 2: DEM_SUPP_UPS_STATUS_WRITER_REPLY

Property key 3:

Property key value 3:

Fig. 63
Rules Defined in Highway To Send UPS Status Update Messages to DEM, and To Archive These Messages

PRECISION HIGHWAY Configuration Console

Home Monitor Message Centre System Definition Data Documentation Links

Endpoint View Rules

New Copy Delete Delete All

| Message id | Sequence | Description | Write endpoint | Transform plugin | XSL file | Disable rule |
|--|----------|--|----------------------------|------------------|----------|--------------------------|
| <input checked="" type="radio"/> DEM_SUPP_UPS_STATUSREAD | 10 | Send UPS Status Update Messages to ... | DEM_SUPP_UPS_STATUS_ARCH | | | <input type="checkbox"/> |
| <input type="radio"/> DEM_SUPP_UPS_STATUSREAD | 20 | Send UPS Status Update Messages to ... | DEM_SUPP_UPS_STATUS_WRITER | | | <input type="checkbox"/> |
| <input type="radio"/> | | | | | | <input type="checkbox"/> |



Sending E-mails

DEM employs the standard method of using Highway to perform the task of e-mailing messages.

The following properties in the `precision.properties` file tell DEM what endpoint to send e-mail messages to:

```
precision.highway.mail.server=http://highwayservername
precision.highway.mail.port=8080
precision.highway.mail.queue=MAIL
```

These properties detail where to send e-mail requests to Highway. They provide both the server and port to communicate with Highway, as well as the endpoint that defines the SMTP mail server and e-mail address.

Fig. 64

MAIL Endpoint Definition in Highway

PRECISION
HIGHWAY
A DIVISION OF LEAD

Configuration Console

Home Monitor Message Centre System Definition Data Documentation Links

Servers Endpoints Monitor Patterns Users Partners Payload Types Message Ids Program Params Key Stores

Endpoint id: MAIL

Description: SMTP endpoint. Use for sending emails.

Type: Input (Reader) Output (Writer) Reference (Writer) System

Storage: JMS Queue WebSphere MQ AS/400 DataQueue Folder FTP E-Mail SOAP HTTP

Target name:

Sub target name:

Server: MAIL

Fig. 65

MAIL Server Definition in Highway

The screenshot shows the Precision Highway Configuration Console. At the top, there are navigation tabs: Home, Monitor, Message Centre, System Definition, Data, Documentation, and Links. Below these are sub-tabs: Servers, Endpoints, Monitor Patterns, Users, Partners, Payload Types, Message Ids, Program Params, and Key Stores. The main content area is titled 'MAIL Server Definition' and contains the following fields:

- Server id: MAIL
- Description: SMTP Mail Server
- Hostname: smtp. .com
- Port: 25
- Username: (empty)
- Password: (empty)

The SMTP hostname and port are implementation specific. The e-mail address used by DEM when sending mail is chosen from a system value. E-mails sent by DEM through Highway are usually anticipating a response. This response is then processed by DEM as incident updates. The system value that overwrites the e-mail address that is specified in the precision.property file is precision.highway.mail.from.

Table 23

System Value

| Key | Category | Value |
|-----|--------------------|------------------|
| DEM | INCIDENT MAIL FROM | [e-mail address] |

Reading E-mails

DEM can send delivery comments through e-mail. Users can also e-mail details of an incident to a carrier through DEM.. DEM connects to the mail server using Highway and sends these e-mails.

The DEM_INCIDENT_READER endpoint is responsible for polling an inbox of the e-mail address being used for DEM incidents. E-mails read from this endpoint are then posted to the DEM_INCIDENT_WRITER endpoint. This is configured using a message ID and rule. The default message ID associated with messages read from the e-mail inbox is DEM_INCIDENT_MAIL. There is a rule that routes messages with this message ID to DEM_INCIDENT_WRITER.

Table 24

Incident Endpoints

| Purpose | Endpoint |
|---|---------------------|
| To read e-mail incident responses from carriers. | DEM_INCIDENT_READER |
| To send incident e-mails to the DEM microservice. | DEM_INCIDENT_WRITER |



The endpoint DEM_INCIDENT_READER is an e-mail endpoint that Highway reads from. By default, the target is Inbox, but this is dependant on the e-mail provider. This endpoint references a DEM_MAIL_READ server record that details the connection details and credentials you can use to connect and read messages.

Fig. 66

DEM_INCIDENT_READER Endpoint Definition in Highway

The screenshot displays the Precision Highway Configuration Console. At the top, there is a navigation bar with the following items: Home, Monitor, Message Centre, System Definition, Data, Documentation, and Links. Below this is the 'PRECISION HIGHWAY' logo and the text 'Configuration Console'. A secondary navigation bar contains tabs for Servers, Endpoints, Monitor Patterns, Users, Partners, Payload Types, Message Ids, Program Params, and Key Stores. The main configuration area is titled 'Endpoint id: DEM_INCIDENT_READER'. Below this, the 'Description' is 'Read email incident responses from carrier.'. The 'Type' is set to 'Input (Reader)'. The 'Storage' is set to 'E-Mail'. The 'Target name' is 'inbox'. The 'Sub target name' is empty. The 'Server' is 'DEM_MAIL_READ'. The 'Reference endpoint id' is empty. The 'Default message id' is 'DEM_INCIDENT_MAIL'. The 'Overwrite message id' checkbox is unchecked. The 'Payload spy plugin' is empty. The 'Number of readers' is '1'.



Fig. 67

DEM_MAIL_READ Server Definition in Highway

The screenshot shows the 'Configuration Console' for 'PRECISION HIGHWAY'. The 'Servers' tab is active. The server definition for 'DEM_MAIL_READ' is as follows:

- Server id: DEM_MAIL_READ
- Description: Mail server for POP3 or IMAP
- Hostname: pop.gmail.com
- Port: 995
- Username: dem_incidents_release@gmail.com
- Password: [Redacted]
- Property key 1: payload.source
- Property key value 1: HTMLBODY
- Property key 2: read.remove
- Property key value 2: TRUE
- Property key 3: read.protocol
- Property key value 3: POP3S
- Property key 4: polling.interval
- Property key value 4: 10000

The endpoint DEM_INCIDENT_WRITER is an HTTP endpoint that Highway writes to. The target is the URL in DEM that Highway can POST to. This should always be set to /dem/incident/email. This endpoint references the common DEM_MICROSERVICE server record that details the server and HTTP port where the DEM service is running.



Fig. 68

DEM_INCIDENT_WRITER Endpoint Definition in Highway

The screenshot shows the 'Configuration Console' for Precision Highway. The 'Endpoints' tab is selected. The endpoint 'DEM_INCIDENT_WRITER' is defined with the following details:

- Endpoint id:** DEM_INCIDENT_WRITER
- Description:** Send incident emails to DEM Microservice
- Type:** Output (Writer) (selected)
- Storage:** HTTP (selected)
- Target name:** /dem/incident/email
- Sub target name:** (empty)
- Server:** DEM_MICROSERVICE
- Reference endpoint id:** (empty)
- Default message id:** (empty)
- Overwrite message id:** (checkbox unchecked)
- Payload spy plugin:** (empty)
- Number of readers:** 0

Fig. 69

DEM_MICROSERVICE Server Definition in Highway

The screenshot shows the 'Configuration Console' for Precision Highway. The 'Servers' tab is selected. The server 'DEM_MICROSERVICE' is defined with the following details:

- Server id:** DEM_MICROSERVICE
- Description:** DEM - Microservice
- Hostname:** localhost
- Port:** 38080
- Username:** (empty)
- Password:** (empty)
- Property key 1:** http.retry.errorcodes
- Property key value 1:** 500
- Property key 2:** content.payload.envelope
- Property key value 2:** multipart
- Property key 3:** monitor.disable
- Property key value 3:** yes

The content payload is set to multipart. It is expected that the request to DEM is a multipart request. This is necessary so that Highway can post multiple data elements to DEM in a single request.

The hostname and port are implementation specific.



Options

All pages in Delivery Exception Management can be accessed using the Menu. Alternatively, users can use the Menu Search function from the QAD Precision Header. All of the Option Codes listed below are applicable to Delivery Exception Management Administrators.

Table 25

DEM options

| Option Code | Page |
|-------------|----------------------------|
| DEM | Deliveries Page |
| DEMEX | Exceptions Page |
| DEMIN | Incidents Page |
| DEMPH | Tracking History Page |
| DEMSE | Status Update History Page |
| DEMDH | Dashboards Page |
| DEMADS | Admin Settings Page |
| DEMJM | Background Jobs Page |
| DEMCC | Code Conversions Page |
| DEMIF | Import Files Page |
| DEMIS | Internal Statuses Page |
| DEMJQ | Job Queue Page |
| DEMJQC | Job Queue Criteria Page |
| DEMRC | Reason Codes Page |
| DEMSU | Suppliers Page |
| DEMTS | TE Sources Page |
| DEMUUV | User Views |

