



QAD Adaptive Applications

Administration Guide Delivery Exception Management

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QAD GTTE v20
August 2022

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Change Summary

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

Date/Version	Description	Reference
August 2022 Rev1	Updated Contents	Page v
July 2022/DEM 20	Added two new exceptions to table.	Page 21
	Added and updated descriptions of fields in Create Supplier window.	Page 26-27
	Added new Create Supplier Wizard section.	Page 27-30
	Added and updated descriptions of fields on Configure End of Day page.	Page 37-38
	Updated Admin Settings section to describe new configuration options.	Pages 41-49
	Updated User Views section to include additional screenshots of UI elements.	Page 58-60
	Added new Additional Reference TE System Values appendix.	Page 88-92
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 Rev3	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	Page 49-50

	Precedence section.	
December 2020 Rev2	The 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 Rev1	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	--

Chapter 1

Introduction

This section provides an introduction to DEM for administrators.

Overview

Explains the key functions of DEM and how it can be configured to suit an organisation's needs.

Menu

Lists the DEM menu options that are available to administrators.



Overview

This guide describes how to configure the DEM Portal for user access and details the carrier integration setup process. By configuring DEM, you can ensure:

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

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 enables you to manage these logistics exceptions and monitor carrier network performance.

The key functions of DEM include:

- Allowing you to proactively manage the exceptions for shipments and resolve issues relating to delivery.
- Facilitating the management of carrier network and lane performance; for example, using DEM to determine whether a carrier's actual service level meets service level agreements (SLAs).
- Supporting multiple carriers, regions, and time zones.
- Mapping carrier-prescribed delivery tracking statuses to a generic set of user-defined statuses.
- Downloading and interpreting electronic messages and loading this data through the status-mapping engine.
- Identifying deliveries that appear to be falling outside the defined SLAs.



Menu

The DEM navigation menu can be found on the left and contains expandable menu items. Administrators can view and access all menu items, which are:

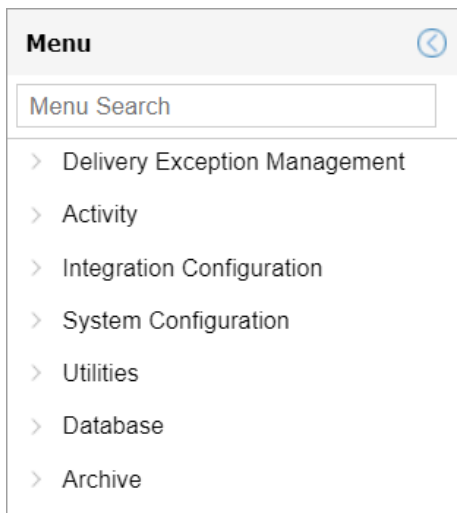
- Delivery Exception Management
- Activity
- Integration Configuration
- System Configuration
- Utilities
- Database
- Archive

Regular users typically only have access to the *Delivery Exception Management* menu and its sub-options. For more information on the *Delivery Exception Management* menu, see the *DEM User Guide*.

Note For information on configuring the menu, see the *Web UI Configuration* chapter in the *Base Administration Guide*.

Fig. 1.1

Administrator View of Menu



Chapter 2

Activity

This section describes the functionality available in the Activity menu.

Overview

List the options available in the Activity menu.

Background Jobs

Provides an overview of the Background Jobs page.

Job Queue

Provides an overview of the Job Queue page.

Job Queue Criteria

Describes how you can configure the order in which background jobs are processed.

Extracts

Describes how administrators can request RESTful API extracts on the Extracts page.

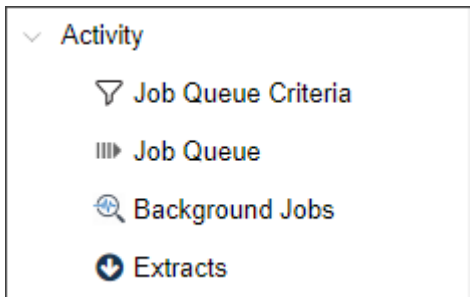


Overview

The *Activity* menu contains four items:

- Job Queue
- Job Queue Criteria
- Background Jobs
- Extracts.

Fig. 2.1
Expanded Activity Menu



Background Jobs

The *Background Jobs* page displays all background jobs within 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 duration of jobs and identify the cause of processing problems.

You can filter background jobs by job name in the search panel at the top of the page.

Fig. 2.2
Background Jobs Page

The screenshot shows the 'Background Jobs' page interface. At the top, there is a search panel with a search icon, a search input field, a 'Search By' dropdown menu set to 'Job Name', another search input field, and 'Search' and 'Clear' buttons. Below the search panel is a table with the following columns: S, Id, Job Name, Start Time, End Time, Status, Exit Code, and Exit Message. The table contains 11 rows of job data. At the bottom of the page, there is a pagination control showing 'Per Page: 25' and navigation arrows.

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 2.1
Background Jobs

Background Job	Description
Carrier Status	This job deals with the processing of the supplier tracking status message. The supplier's message is translated from the supplier's proprietary message structure format into the generic XML structure format that is 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 identifies the deliveries that need to run the <i>Delivered Notification</i> 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 identifies the deliveries that need to run the <i>Delivery Evaluation</i> 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 on deliveries that are in DEM but have not yet been delivered.
Missed Delivery Date Management	This job identifies the deliveries that have missed their delivery date and locks them so that the background job can be carried out.
Missed Delivery Date	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 if the Comparison ETA date has passed. Note The <i>Missed Delivery Date</i> exception is only raised if an exception of a higher severity is not already open against the delivery.
No Activity Management	This job identifies the deliveries that have no activity and locks them so that the job can be carried out.
No Activity	This job is activated when a delivery does not have a 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 if an exception of a higher severity is not already open against the delivery. The default period of no activity that is required to initiate an exception is 2 hours. You can configure this as follows in the <code>dem.yml</code> file: <pre>No_activity_job: Number_of_hours: 2.</pre> For more information on configuring properties, see <i>DEM YAML Configuration File</i> .
Purge	To improve DEM performance, this job deletes old background job data and job queue records. To configure how regularly this job runs, see <i>Admin Settings</i> .
Unassign Delivery	The <i>Unassign Delivery</i> button on the <i>Job Queue</i> page allows administrators to manually unlock deliveries that have been locked due to an active background job. This is useful if a problem occurs and a background job fails to complete.



Background Job	Description
Validate Deliveries	Backgrounds jobs can fail due to 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 feature.

The order in which background jobs are processed can be configured on the *Job Queue Criteria* page. DEM primarily processes jobs in the queue based on the time and date the deliveries are uploaded and, secondly, on the priority number.

Background jobs are always added to the job queue list in the following order:

1. Delivery Evaluation
2. No Activity Management
3. Missed Delivery Date Management

Existing background jobs in the job queue are run before newly added ones, regardless of job type.

Fig. 2.3
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



The table below describes the columns on the *Job Queue* page.

Table 2.2

Job Queue Page Columns

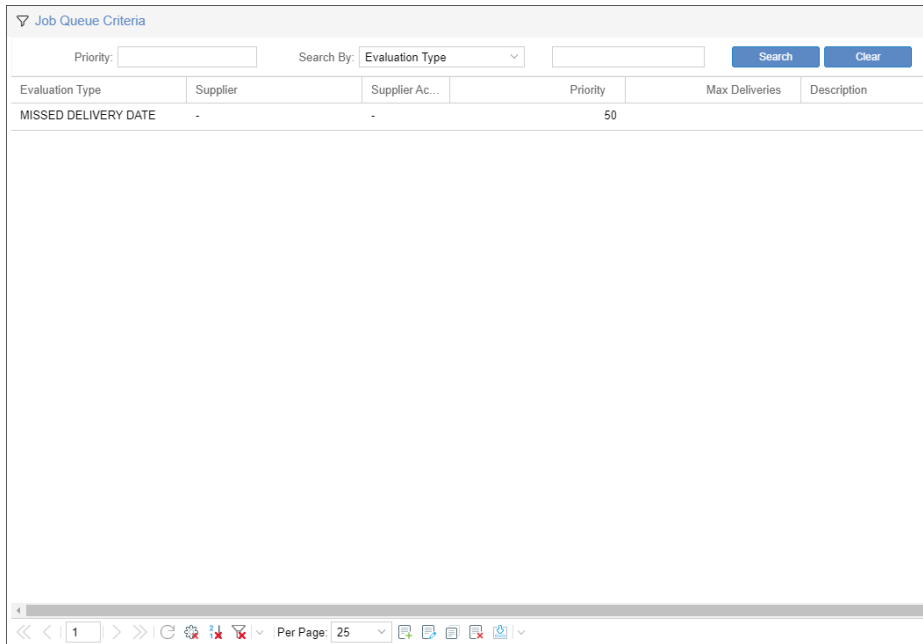
Column	Explanation
Evaluation Type	The value displayed in this column is one of three evaluation types: <ul style="list-style-type: none"> • Delivery • Missed Delivery Date • No Activity
Status	Indicates the stage in the process that the job has reached. The possible values are: <ul style="list-style-type: none"> • 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.
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	Click the link to access the <i>Step Executions</i> window on the <i>Background Jobs</i> page for the specific job.
Priority	A number between 1 and 100 that indicates the order in which jobs are processed. This is specified on the <i>Job Queue Criteria</i> page.
Supplier	The supplier of the delivery that is processing.
Supplier Account	The supplier account of the delivery that is processing.
Last Modified Date	The date the job was last modified.
Last Modified User	The user that last modified the date.
Id	The identification number for this job.



Job Queue Criteria

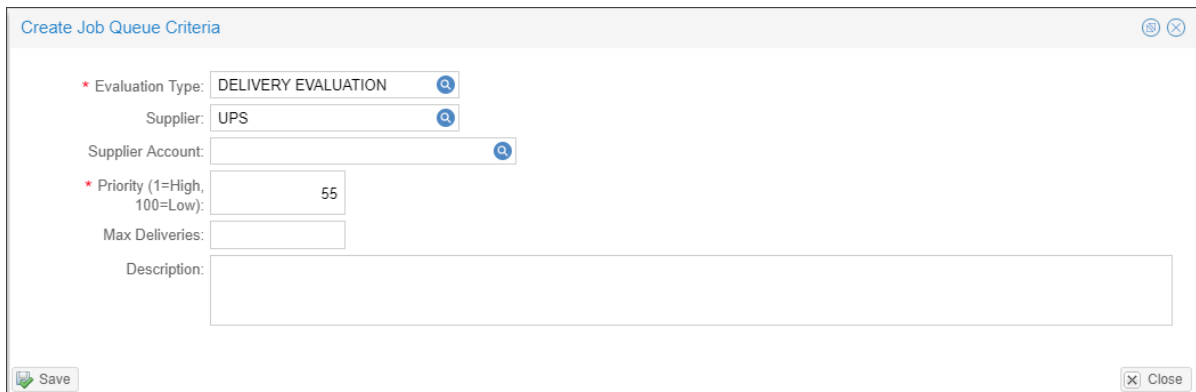
You can configure DEM to perform background jobs in a particular order by setting up priorities on the *Job Queue Criteria* page. A job queue is created for each job criteria. A job is also created for all deliveries that do not fit any of the job queue criteria. This job has the lowest priority in the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

Fig. 2.4
Job Queue Criteria Page



To set up a new Job Queue Criteria entry, click the *Create Record* button in the toolbar. The *Create Job Queue Criteria* window displays.

Fig. 2.5
Create Job Queue Criteria Window



Evaluation Type. This is a mandatory field. Use the lookup to specify one of three evaluation types; Delivery Evaluation, Missed Delivery Date, or No Activity.

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

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

Priority. This is a mandatory field. Select a number between 1 and 100 to indicate the job queue position that is assigned to jobs with this criteria. 1 is the highest possible priority, and 100 is the lowest possible priority.

Max Deliveries. This is an optional field. Specify the maximum number of deliveries to be processed in a single background job. If you do not complete this field, the number is set as the default number of deliveries, as specified on the *Admin Settings* page.

Description. This is an optional description field. If necessary, add more information to the job criteria.

To save the criteria, click *Save*.



Extracts

A RESTful API is available that requests all changes to tracking updates, comments, exceptions, and incidents. Administrators can request RESTful API extracts from the *Extracts* page. Administrators can specify default values for DEM extracts in the `dem.ym` file. For more information, see *Extract*.

Fig. 2.6
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

The columns on the *Extracts* page are described in the table below.

Table 2.3
Extracts Page Columns

Column Header	Explanation
Id	A number that identifies the extract. Administrators can use this ID number to search for previously requested extracts.
Total Extracted	The total number of extracts requested.
Last Requested	The date on which the specified extract was last requested.
Background Job	The background job ID that is associated with the extract request.
Created Date	The date on which 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. 2.7
Extracts Page Search Panel



Extracts

Id:

Search Clear

Chapter 3

Integration Configuration

This section describes the functionality available in the Integration Configuration menu.

Overview

List the options available in the Integration Configuration menu.

Code Conversions In

Describes how to create, update, view, and delete code conversions for different suppliers and TE sources.

Internal Statuses

Describes how to create, update, and delete each of the status codes possible for a delivery.

Suppliers

Describes how to add, update, or delete supplier records from the Suppliers page, or using the Create Supplier Wizard.

TE Sources

Describes how to configure the source systems from which DEM receives shipment history information.



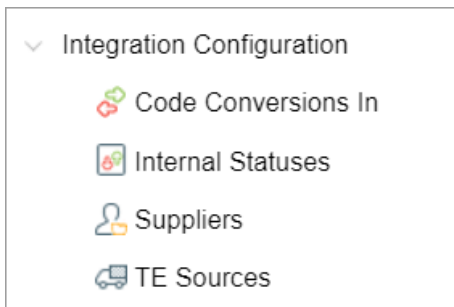
Overview

The *Integration Configuration* menu contains four sub-options:

- Code Conversions In
- Internal Statuses
- Suppliers
- TE Sources

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

Fig. 3.1
Expanded Integration Configuration 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. 3.2
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		<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



Create New Code Conversions

To create a new code conversion:


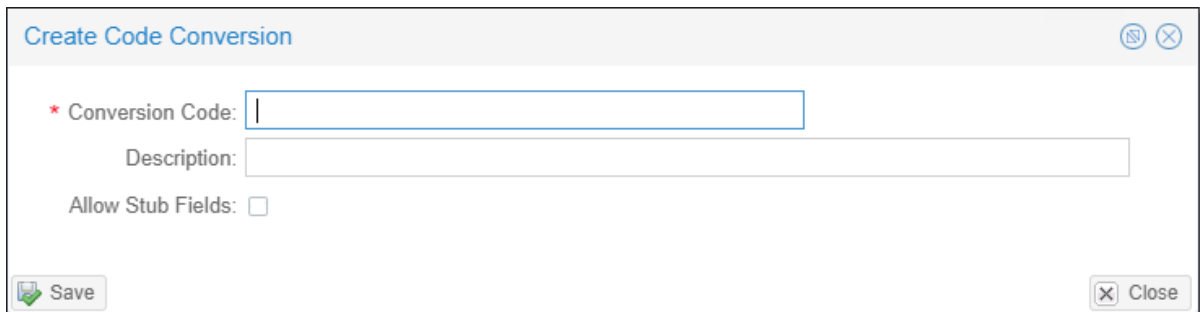
1. Click the *Create Record*  button in the toolbar. The *Create Code Conversion* window displays.

Fig. 3.3

Create Code Conversions



2. Complete the necessary fields in the *Create Code Conversion* window. These fields are described in the table below.

Table 3.1

Create Code Conversions Fields

Field	Description
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.

3. Finally, click *Save*.

Updating a Code Conversion


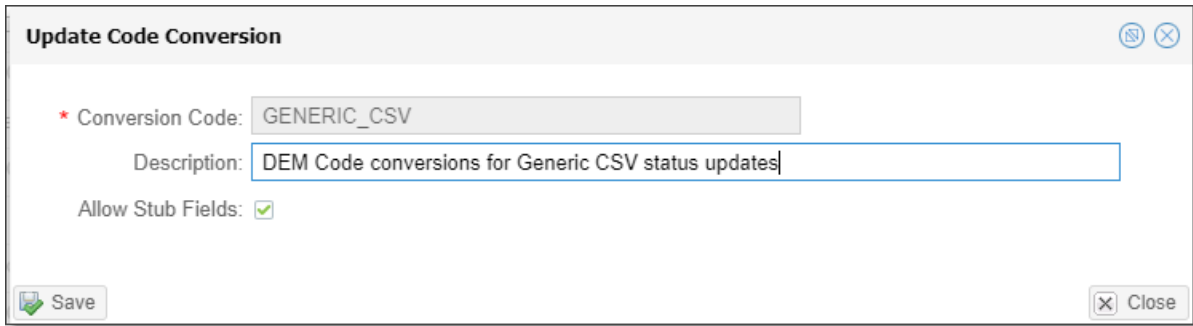

Select the code conversion record that you want to update and click the *Update Record*  button in the toolbar. Alternatively, double-click the code conversion that you want to update. The *Update Code Conversion* window displays. Apply the necessary edits and then click *Save*.

Fig. 3.4
Update Code Conversion Window



Deleting Code Conversions

To delete a code conversion record, select it and click the *Delete Record*  button in the toolbar. This prompts a pop-up window asking you to confirm that you want to delete the record.

Code Mappings


The *Code Mappings*  button to the left of each code conversion record enables you to access the *Code Mappings* window and review the details.

Fig. 3.5
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

The *Code Mappings* window shows the set of code mappings for the external codes to the internal codes.

Fig. 3.6
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 3.2
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 <i>Conversion Type</i> .
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.

Note If the *In Use* field is disabled on a conversion code mapping record, or if a conversion code does not exist, then the delivery history will be in draft status at the time of processing. As a result, it will need to be reviewed.

To update a code mapping record, double-click it and edit the relevant fields. Then click *Save*.



Create New Code Mapping

To create a new code mapping:


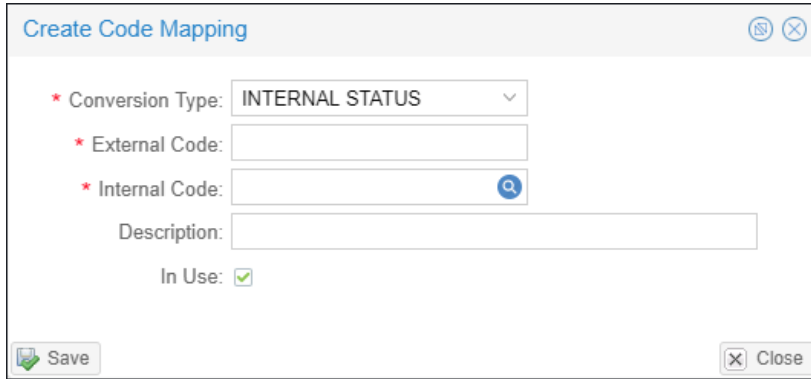
1. Click the *Create Record*  button at the bottom of the *Code Mapping* window.

Fig. 3.7

Create Code Mapping Window



2. Complete all of the relevant fields in the *Create Code Mapping* 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.

3. Click *Save*.

Update Code Mapping


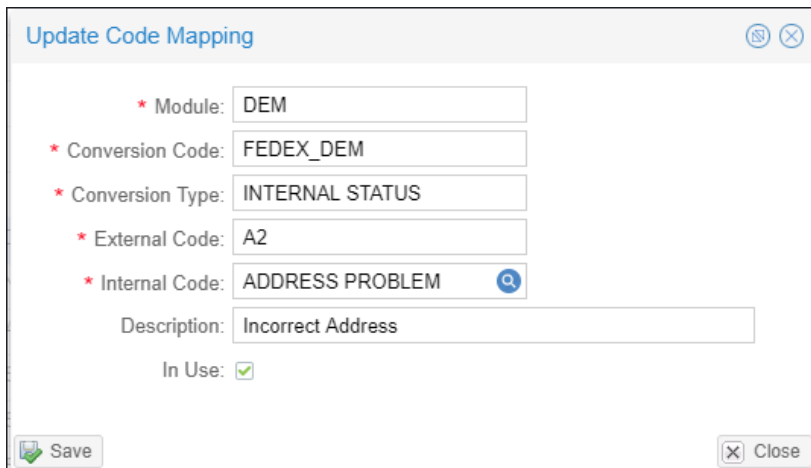

In the *Code Mappings* window, select the code mapping record that you want to update and click the *Update*  button at the bottom of the window. Alternatively, double-click the code mapping you want to update.

Fig. 3.8

Update Code Mapping Window



Delete Code Mapping

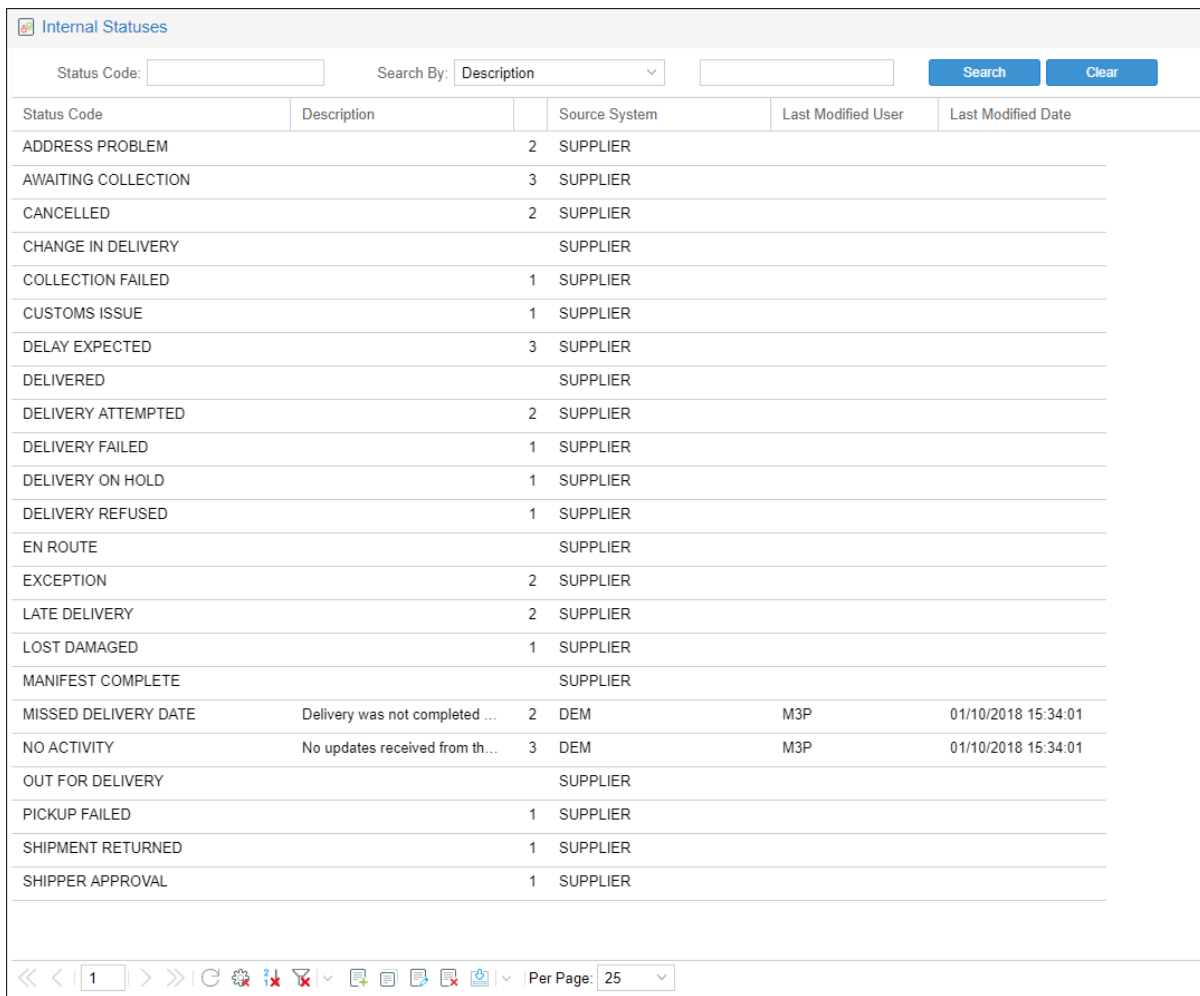
To delete a code mapping, select one in the grid and click the *Delete*  button at the bottom of the window. In the pop-up window that displays, click *Yes* to confirm the deletion, or *No* to cancel.

Internal Statuses

The *Internal Statuses* page lists each of the status codes possible for a delivery. These codes are a brief description of the status of the delivery at a point in time. The status codes can represent a movement or an exception. Movement statuses update the user on the status of the delivery and require no action. However, exception statuses may require action by the user to allow the delivery to proceed.

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. 3.9
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. These statuses are for reference purposes only and no action is required by the user.

Each supplier can have its own specific codes to communicate this information, and those external codes are translated into the uniform internal status codes.

Table 3.3

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 its 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 its own specific codes to communicate. In DEM, this information and those external codes are translated into 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 3.4

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
Zero Activity	2 - Medium	DEM
Unresolved	2 - Medium	DEM



Create New Internal Status Codes

To create a new internal status code:


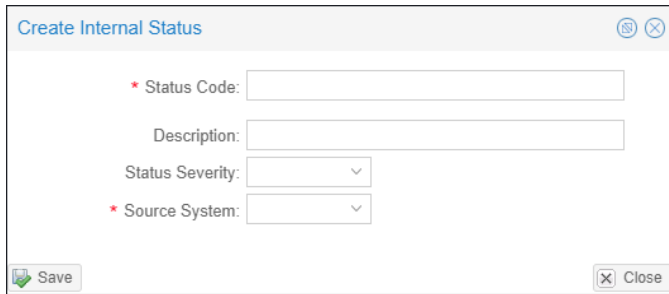
1. Select the *Internal Statuses* sub-option in the *Integration Configuration* menu.
2. Click the *Create Record*  button at the bottom of the page to access the *Create Internal Status* window.

Fig. 3.10

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 GTTE. 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.

3. When all fields are complete, click *Save*. Newly created internal status codes appear on the *Internal Statuses* page.

Update Internal Status Code

On the *Internal Statuses* page, select an internal status record, and click the *Update*  button at the bottom of the page. Alternatively, double-click the internal status that you want to update. In the *Update Internal Status* window, edit the fields that require an update. Finally, click *Save*.

Delete Internal Status Code

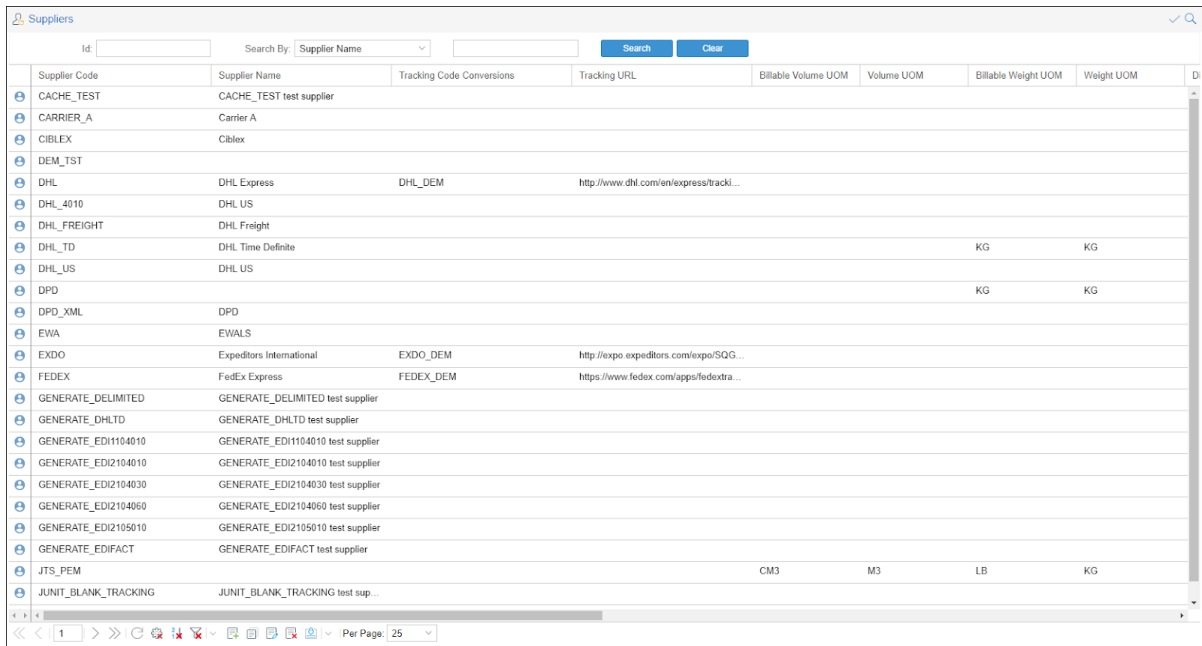
To delete an internal status, select an internal status record and click the *Delete*  button at the bottom of the page. In the pop-up window that displays, click *Yes* to confirm the deletion, or *No* to cancel.

Note If the source system of an Internal Status is listed as DEM, then the Internal Status cannot be deleted.

Suppliers

The *Suppliers* page lists every supplier that is currently available in DEM. You can add, update, or delete supplier records on this page.

Fig. 3.11
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/tracki...				
	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						
	EVA	EWALS						
	EXDO	Expeditors International	EXDO_DEM	http://expo.expeditors.com/expo/SGG...				
	FEDEX	FedEx Express	FEDEX_DEM	https://www.fedex.com/apps/fedextra...				
	GENERATE_DELIMITED	GENERATE_DELIMITED test supplier						
	GENERATE_DHLTD	GENERATE_DHLTD test supplier						
	GENERATE_EDI1104010	GENERATE_EDI1104010 test supplier						
	GENERATE_EDI2104010	GENERATE_EDI2104010 test supplier						
	GENERATE_EDI2104030	GENERATE_EDI2104030 test supplier						
	GENERATE_EDI2104060	GENERATE_EDI2104060 test supplier						
	GENERATE_EDI2105010	GENERATE_EDI2105010 test supplier						
	GENERATE_EDIFACT	GENERATE_EDIFACT test supplier						
	JTS_PEM				CM3	M3	LB	KG
	JUNIT_BLANK_TRACKING	JUNIT_BLANK_TRACKING test sup...						



Create Supplier

To create a new supplier:


1. Select the *Suppliers* sub-option in the *Integration Configuration* menu.
2. Click the *Create*  button at the bottom of the page. The *Create Supplier* window displays.



Fig. 3.12
Create Supplier Window

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

- Supplier Information:**
 - * Supplier Code:
 - Supplier Name:
 - Logo: - Tracking URL:
- Supplier Feed:**
 - Feed Format:
 - Feed Format Identifier:
 - Tracking Code Conversions:
 - Combine Status Codes:
 - Consignment Level Tracking:
 - Default Direction:
 - Delivery Lifespan (days):
 - Unresolved Threshold (days):
- Polling:**
 - Polling Endpoint:
 - Polling Endpoint Tokens:
 - Polling Max Age (days):
 - Enabled:
- No Activity:**
 - Enabled:
 - Time (Hours):

At the bottom of the window, there are buttons for 'Save', 'Create Another: ', and 'Close'.

The fields in this window are described in the table below.

Table 3.5
Create Supplier Fields

Section	Column	Description
	Supplier Code	This is a mandatory field. It should contain the supplier code.
	Supplier Name	The name of the supplier.
	File Name	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.
Supplier Feed	Feed Format	Specify the feed format that applies to files from this supplier
	Feed Format Identifier	This identifier provides a technical link to the underlying parser component. If the value is blank, a generic parser based on the feed format is used. If a value is set, this—as well as the feed format—is used to identify the necessary message parser. Note If this value is incorrectly set, DEM is unable to parse messages from the supplier.
	Tracking Code Conversions	The code conversions that convert the supplier tracking status codes to the internal status codes. For more information, see <i>Code Conversions In</i> .
	Combine Status Codes	Indicate whether the status codes should be combined or left as separate status fields. Only applicable for EDI integrations. Example: If checked: 11-21 If unchecked: Status 1: 11, Status 2: 21
	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 whether a delivery is still active. The default number is 180 days.
	Unresolved Threshold (days)	An unresolved delivery occurs when a delivery is currently assigned a Missed Delivery Date exception but there have been no updates for a long time. Specify how many days must pass before a Missed Delivery Date exception is converted to an Unresolved exception for this supplier. Note If a threshold is not specified at supplier level, the default value specified on the <i>Admin Settings</i> page is used.
Polling	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.
	Enabled	Select to enable polling for this supplier.
No Activity	Enabled	Select to enable the creation of No Activity exceptions for this supplier.
	Time (Hours)	Specify the number of hours of inactivity required to trigger a No Activity exception for this supplier. If blank, the system's default value is used. For example, this allows a longer No Activity time to be set for ocean freight carriers than parcel carriers.

3. When all fields are completed, click *Save*.

Create Supplier Wizard

The Create Supplier Wizard tool facilitates the quick setup of a new supplier in a single window, without the need to manually configure Highway. It provides a list of pre-configured suppliers with metadata that assists in setting up the correct connection and data feed details.

Using the supplied details, the Wizard creates records in DEM, makes folders on the server, and generates XML data that can be loaded into Highway to create the necessary endpoints. Highway then has the ability to transfer messages from a carrier location to DEM.

To create a new supplier using the Wizard:

1. Navigate to the *Suppliers* page.
2. Click the *Create Supplier Wizard* button in the toolbar.

Fig. 3.13

Create Supplier Wizard Button, Suppliers Toolbar



The *Create Supplier Wizard* window displays.

Fig. 3.14
Create Supplier Wizard Window

Create Supplier Wizard

1. Select a supplier for this DEM integration.

* Supplier Preset: ⓘ

2. Enter the supplier's identifier details.

* Supplier Code: ⓘ

* Supplier Name: ⓘ

* Short Code: ⓘ

Initial User View: ⓘ

3. Enter message delivery method and connection details.

Type: ⓘ

Create Test Folder: ⓘ

4. Specify the message file format to be used.

* Feed Format: ⓘ

Fig. 3.14
UPS Supplier Selected, Create Supplier Wizard Window

Create Supplier Wizard

1. Select a supplier for this DEM integration.

* Supplier Preset: ⓘ

2. Enter the supplier's identifier details.

* Supplier Code: ⓘ

* Supplier Name: ⓘ

* Short Code: ⓘ

Initial User View: ⓘ

3. Enter message delivery method and connection details.

Type: ⓘ

Create Test Folder: ⓘ

4. Specify the message file format to be used.

* Feed Format: ⓘ

5. Get shipment details as part of an EOD feed.

Enable EOD Feed: ⓘ

Shipping Carrier Code: ⓘ



3. Complete the necessary fields in the *Create Supplier Wizard* window. These fields are described in the table below.

Note The fields displayed in this window can vary depending on the selected supplier in the *Supplier Preset* field.

Fig. 3.6
Create Supplier Wizard Window

Column	Description
Supplier Preset	Select a specific supplier, or choose a generic option at the bottom of the list.
Supplier Code	Specify a code to identify the supplier. This is typically an SCAC code. Note This field may be automatically populated if a particular supplier is specified in the <i>Supplier Preset</i> field.
Supplier Name	Specify a description for the supplier. Note This field may be automatically populated if a particular supplier is specified in the <i>Supplier Preset</i> field.
Short Code	Specify the code to be used in Highway. This field has a 4 character limit. Note This field may be automatically populated if a particular supplier is specified in the <i>Supplier Preset</i> field.
Initial User View	Specify the default user view to assign to this supplier.
Type	Specify the method that DEM must use to fetch tracking updates for this supplier. Depending on the selected supplier, the options in this drop-down list include: <ul style="list-style-type: none"> • API • FOLDER • FTP • FTPS • SFTP • SMC3 Note This field may be automatically populated depending on the supplier specified in the <i>Supplier Preset</i> field.
Create Test Folder	Check this box to create folders for testing purposes.
User	Specify the user name.
Password	Specify the password.
Host	Specify the host to connect to. Note This field may be automatically populated if a particular supplier is specified in the <i>Supplier Preset</i> field.
Port	Specify the port number. Note This field may be automatically populated if a particular supplier is specified in the <i>Supplier Preset</i> field.
Folder	Specify the folder path.

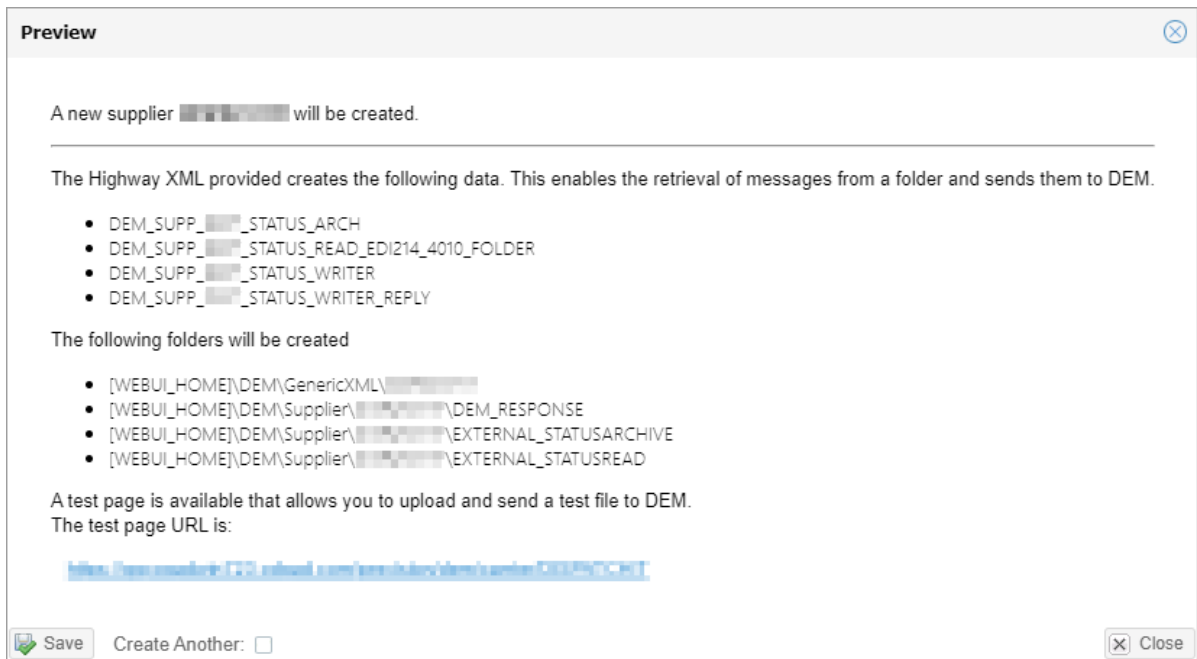


Feed Format	Specify the feed format that applies to files from this supplier. Note This field may be automatically populated if a particular supplier is specified in the <i>Supplier Preset</i> field.
-------------	---

- After completing the fields in the *Create Supplier Wizard* window, click *Preview* to proceed to the next step. The *Preview* window displays, outlining the data and folders that Highway will create when you click *Save*.


You are also provided with a test page hyperlink. The page at this URL allows you to upload and send a test file to DEM to confirm that it is working as expected.

Fig. 3.15
Create Supplier Wizard Preview Window




- Click *Save* to create the supplier.

Update Supplier

On the *Suppliers* page, select a supplier and click the *Update*  button at the bottom of the page. Alternatively, double-click the supplier that you want to update. In the *Update Supplier* window, edit the relevant fields and click *Save*.

Delete Supplier

To delete a supplier, select the *Delete*  button at the bottom of the page. In the pop-up window that displays, click *Yes* to confirm the deletion, or *No* to cancel.

Supplier Accounts Window


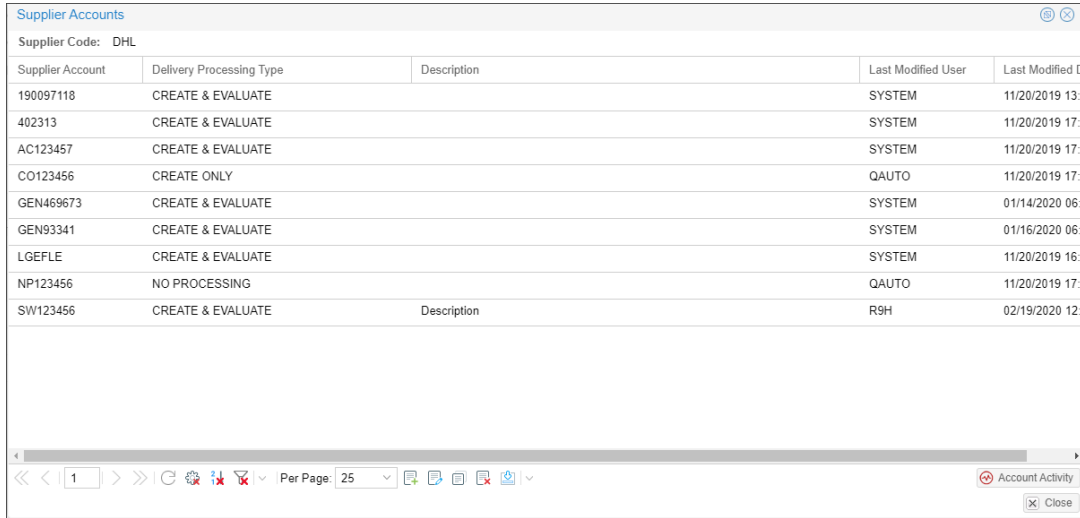
To view the supplier accounts associated with a supplier, click the corresponding *Supplier Accounts* icon . The *Supplier Accounts* window displays.

Fig. 3.16
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 in this window.

Table 3.7
Supplier Accounts Fields

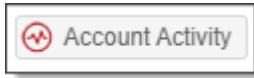
Column	Description
Supplier Account	This is the account number associated with the Supplier Account. This is a mandatory field.
Delivery Processing Type	This is a mandatory field that indicates the level of processing you want DEM to perform. The options are: <ul style="list-style-type: none"> • Create 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

An *Account Activity* button can be found on the *Suppliers* page and in the *Supplier Accounts* window.

Fig. 3.17

Account Activity Icon



If you click the *Account Activity* button on the *Suppliers* page, you can view the status activity information for all supplier accounts associated with the selected supplier.

If you click the *Account Activity* button in the *Supplier Accounts* window, it displays supplier account information for the selected supplier account only.

Fig. 3.18

Supplier Account Status Activity

Supplier Account Status Activity	
Supplier: FEDEX	
Supplier Account	Last Status Date
010044430	07/18/2018 17:19:00
032200338	07/18/2018 16:55:00
040203672	07/16/2018 17:15:00
040207845	07/15/2018 12:47:00
054600003	06/29/2018 20:56:00
090421352	07/18/2018 21:22:00
096300000	07/17/2018 13:38:00
100608308	07/18/2018 10:15:00
101186059	07/16/2018 11:25:00

In the *Supplier Account Status Activity* window, you can view the date and time that DEM last received an update for the selected supplier accounts.

TE Sources

The TE Sources feature 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 buttons in the toolbar.

Note TE sources can also be imported using the *Import File* page.



Fig. 3.19

TE Sources page

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

Setting Up TE Sources

To create a record to represent an external system:

1. Click the *Create* button in the toolbar. The *Create TE Source* window displays.

Fig. 3.20

Create TE Sources window

Create TE Source

* Source System:

Source Name:

Conversion Code:

The fields in this window are described below:



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*.

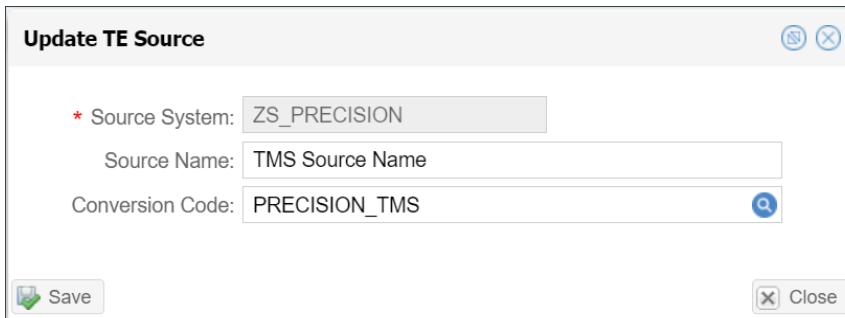
2. Click *Save*.

Updating TE Sources


To update an existing TE source: click the *Update*  button in the toolbar. After updating the relevant fields, click *Save*.

Fig. 3.21

Update TE Source window



Deleting TE Sources

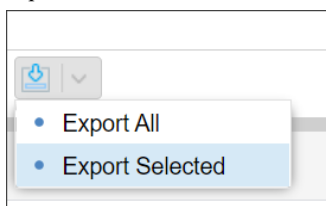
To delete a TE source, select a record and click the *Delete*  button in the toolbar. In the pop-up window that displays, click *Yes* to confirm the deletion, or *No* to cancel.

Export TE Sources

You can download TE source records as JSON files. To export a TE source, click the *Export* button in the toolbar. Select the *Export All* option to export all TE source records that are currently visible on this page. To export only the highlighted TE source records, click *Export Selected*.

Fig. 3.22

Export Records



Chapter 4

Integrating QAD GTTE TE and DEM

This section describes how to configure the QAD GTTE Transportation Execution (TE) system so that data can be extracted and sent to DEM as an XML message.

Overview

Provides an overview of how data is handled between the systems.

Configuring End of Day

Describes how to extract End of Day data from QAD GTTE TE as a Shipment History XML file.

System Values

Lists the DEM System Keys for TE Integration.



Overview

QAD GTTE Transportation Execution (TE) shipment data can be extracted and sent to DEM as an XML message. This data is used to create or update delivery transactions in DEM, which can then allow users to manage the tracking of packages to their destination. This must be configured from the QAD GTTE TE system and sent to the DEM system.

TE can send 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 GTTE TE as a Shipment History XML file, follow the following steps:

1. Open QAD TE system.
2. From the QAD GTTE header search bar, navigate to the *Configure End of Day* (CFGEOD) page.

Fig. 4.1
Configure End of Day Page

3. Complete the following fields:

Table 4.1
Configure End of Day Fields

Field	Description
Carriers/Packing Locations To Use	<p>Carriers / Packing Locations To Use:</p> <p>For all carriers and all locations use: ALL=ALL</p> <p>For 1 carrier, for all locations, use: [Carrier]=ALL</p> <p>Value: [Carrier1]=[Location1],[Location2],...,[LocationM] [Carrier2]=[Location1],[Location2],...,[LocationM] ... [CarrierN]=[Location1],[Location2],...,[LocationM]</p> <p>Example: TRANS=A9905 SDV=A9902 UPS=A9901 UKM=A9906 DHLTD=A9905 DAC=A9902</p>
Next Pickup Number	Used by the Shipment History XML file generation for the unique identification of the batch/file created for the next DEM processing for any carrier and location pair.
Work Folder	<p>Main directory for DEM file creation. Directory into which the Shipment History XML file is generated.</p> <p>Example: E:\apps\PRECISION\WebUI\DEM\EOD\Active\</p>
Archive Folder	<p>Archive directory for DEM file creation. Directory into which the Shipment History XML file is archived after successful transmission to target.</p> <p>Example: E:\apps\PRECISION\WebUI\DEM\EOD\Archive\</p>
DEM Polling Folder	<p>Directory into which the Shipment History XML file is copied after archiving (can be used as a destination directory instead of using FTP).</p> <p>Important This is a key setting that is required for exchanging data between shipping and DEM.</p> <p>Example: E:\apps\PRECISION\WebUI\DEM\Supplier\GenericXML\EXTERNAL_STATUSREAD</p>

The remaining *Configure End of Day* fields are related to FTP details.

Note These are advanced settings and are not typically required.



Table 4.2

Configure End of Day FTP Fields

Field	Description
FTP Connection Details	[FTP site],[User],[Password],[Mode] Target FTP site, user, password, and transmission mode for destination of the Shipment History XML file. Note [Mode] can be either 'PASSIVE' or 'ACTIVE'.
FTP Folder	Destination directory within the FTP site into which the Shipment History XML file will be stored.
Stop FTP Upload	Indicates whether or not a transmission of the Shipment History XML file should be attempted. If set to 'Yes', the file is created in the work folder, transmitted to an FTP location, and archived. If set to 'No', the file is created in the work folder, moved to the polling folder, and archived. The default value is 'No'.

System Values

Table 4.3

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.



Category	Key	Value	Description
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.

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

Fig. 4.2

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:

Work Folder: ⓘ 📄

Archive Folder: ⓘ 📄

DEM Polling Folder: ⓘ 📄

FTP Connection Details: ⓘ 📄 Create Value

FTP Folder: ⓘ 📄 Create Value

Stop FTP Upload: Yes No ⓘ 📄

Chapter 5

System Configuration

This section covers the various settings that enable administrators to configure the functionality of the DEM UI and the features that users have access to.

Admin Settings

Details the configuration options available on the Admin Settings page.

Import File

Describes how to import settings in JSON format from another DEM environment using the Import File facility.

Reason Codes

Describes how to maintain the reason codes that can be used when leaving comments on a delivery.

System Codes

Describes how to configure the system codes that are used in areas of DEM to create drop-down lists.

User Views

Describes how to configure the information that a user has access to.



Admin Settings

The following settings can be configured on the *Admin Settings* page:

- Job Queue Criteria
- Job Queue
- Purge
- Trigger Event
- Extract
- POD Destination
- Additional References
- No Activity Configuration
- Unresolved Deliveries
- Archive Settings
- Automatic Closing of Deliveries



Fig. 5.1
Admin Settings

Admin Settings

Job Queue Criteria

* Default Max. Deliveries Per Job Queue:

Job Queue

* Unassign Limit (Hours):

* Cleanup Timeout (Hours):

Purge

* Purge: Job Age (days):

Trigger Event

Trigger on Delivered: On Off

Extract

Enable Extract: On Off

POD Destination

POD Destination:

Additional References

Reference 1
Reference Type:

Reference 2
Reference Type:

Reference 3
Reference Type:

No Activity Configuration

* No Activity Time (Hours): ⓘ

* Time Zone: ⓘ

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 checked="" type="checkbox"/> Sunday	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>	ⓘ

Unresolved Deliveries

* Unresolved Threshold (days):

Archive Settings

* Last Updated older than (days):

Only include Closed records

Automatic Closing of Deliveries

* Days Since Created:

Close Deliveries with Open Incident

Deliveries with Exceptions:

Email:

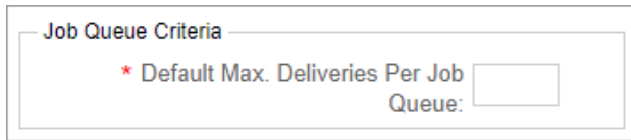
Comments? Go to goo.gl/MfwKHm

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 on the *Job Queue Criteria* page when you create or update a job queue criteria entry.

Fig. 5.2

Job Queue Criteria



Job Queue Criteria

* Default Max. Deliveries Per Job Queue:

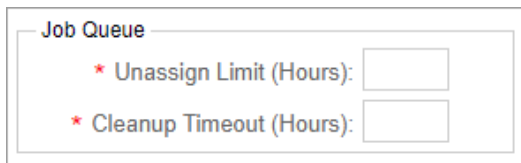
Job Queue

You can set the number of hours of inactivity before a user can unassign a delivery from the job queue by completing the *Unassign Limit (Hours)* field.

Complete 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. 5.3

Job Queue



Job Queue

* Unassign Limit (Hours):

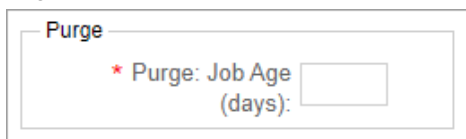
* Cleanup Timeout (Hours):

Purge

DEM stores background job data. You can select how often this data is automatically purged on 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 the *Purge* section.

Fig. 5.4

Purge



Purge

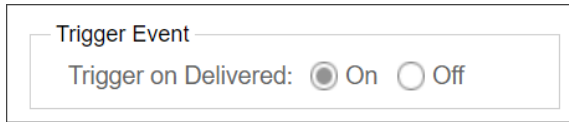
* Purge: Job Age (days):

Trigger Event

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

Fig. 5.5

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

Set the *Enable Extract* field to *On* to enable extracts from the RESTful API system. Select *Off* to disable extracts.

Fig. 5.6

Extract

The screenshot shows a rectangular input field with a light gray border. Inside the field, the word "Extract" is written in a small font at the top left. Below it, the text "Enable Extract:" is followed by two radio buttons. The first radio button is selected (filled with a dark gray circle) and is labeled "On". The second radio button is unselected (empty circle) and is labeled "Off".

POD Destination

In the *POD Destination* field, input the path to the location where you want to save the *Proof of Delivery* files that are uploaded on the *Tracking History* page.

Fig. 5.7

POD Destination

The screenshot shows a rectangular input field with a light gray border. Inside the field, the text "POD Destination:" is followed by a large, empty rectangular text input box.

Additional References

There are three additional reference fields on the *Deliveries* page. To specify the data that should populate these fields, fill the *Reference Type* fields in *Admin Settings* with the name of the field from the intended source data.

The following references are possible values as they are included by default in the QAD GTTE Transportation Execution (TE) EOD shipment history extract that sent is to DEM:

Table 5.1

Additional Reference Values

Reference	Description
EODBATCH	EOD Batch Number
PICKUP	EOD Batch Carrier Pickup Reference
EXTRACT	TE Extract reference number (this is a generated reference for the EOD batch if the DEM extract is per end-of-day, per the XMGRUP0.GRNTFY field - otherwise the extract reference number is the shipment reference XMSHDR0.SHSHIP if the DEM extract is per shipment)

Fig. 5.8
Additional References

Additional References

Reference 1
Reference Type:

Reference 2
Reference Type:

Reference 3
Reference Type:

The following values are also potential reference types that can be used if the DEM shipment history extract system values are configured.

Table 5.2
Transportation Execution Extract System Values

Value	Category	Key	Description
ORDER_NO	SHIP-HIST	DEM: REFERENCE TYPES	Shipment item order number (XMSITM0.SIORDN), if present, for the item within the package—otherwise the shipment order number (XMSHDR0.SHORDN).
BUYERS_REF	SHIP-HIST	DEM: REFERENCE TYPES	Shipment item buyer's reference (XMSITM0.SIBREF), if present, for the item within the package—otherwise the shipment buyer's reference (XMSHDR0.SHBREF).
OTHER_REF	SHIP-HIST	DEM: REFERENCE TYPES	Shipment Other Reference (XMSHDR0.SHOREF).
CUSTOMS_REF	SHIP-HIST	DEM: REFERENCE TYPES	Shipment Other Reference (XMSHDR0.SHCREF).
INVOICE_NO	SHIP-HIST	DEM: REFERENCE TYPES	Shipment item invoice number (XMSITM0.SIINVN), if present, for the item within the Package. Otherwise the shipment invoice number (XMSHDR0.SHINVN).

QAD GTTE Transportation Execution (TE) also attempts to extract any references that are configured for the shipment carrier, in accordance with the SPS reference Codes and system values listed in Appendix B, “Additional Reference TE System Values”.

No Activity Configuration

Using the *No Activity Time (Hours)* field on the *Admin Settings* page, administrators can configure how often DEM runs the No Activity background job. The value you enter is the number of hours of inactivity required to trigger a No Activity exception.



You can also specify days on which No Activity exceptions can be applied by enabling the relevant fields in the *Day* column. Enable the *All Day* field if you want the No Activity exception settings to apply all day, or specify the hours during which it can apply using the *From* and *To* fields.

In the example shown below, the administrator has allowed the No Activity exception to be applied all day, from Tuesday to Friday. On Saturdays, it can only be applied between 3pm and 5pm. It cannot be applied on Sundays or Mondays.

Fig. 5.9
No Activity Configuration

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

Note You can also configure the No Activity time for a particular supplier. For more information, see the *Create Supplier* section.

Unresolved Deliveries

An Unresolved exception occurs when a delivery is currently assigned a Missed Delivery Date exception but there have been no updates for a long period of time. This identifies items that were probably delivered but lack confirmation from the carrier.

On the *Admin Settings* page, specify how many days must pass before a Missed Delivery Date exception is converted to an Unresolved exception using the *Unresolved Threshold (days)* field. This is a global setting that applies by default for all suppliers.

Fig. 5.10

Unresolved Threshold Field, Admin Settings

Note You can also configure the Unresolved Threshold for a particular supplier. For more information, see the *Create Supplier* section.

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 on 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 the archive settings, complete the mandatory *Last Updated older than (days)* field. This allows you to specify how many days must pass since a delivery’s last update before it is included for archiving.

Enable the *Only include Closed records* field if you want to restrict archiving only to closed records.

Fig. 5.11

Archive Settings

Automatic Closing of Deliveries

The Delivery Auto Close background job closes deliveries based on settings applied on the *Admin Settings* page.

Fig. 5.12

Automatic Closing of Deliveries

The fields in the *Automatic Closing of Deliveries* area are described in the table below.



Table 5.3


Automatic Closing of Deliveries

Field	Description
Days Since Created	Specify the number of days that must pass before a delivery is automatically closed.
Close Deliveries with Open Incident	If enabled, the Delivery Auto Close background job can run on deliveries with open incidents. If not enabled, deliveries with open incidents cannot automatically close.
Deliveries with Exceptions	Using the drop-down list, specify the exceptions that must be raised against a delivery in order for the Delivery Auto Close background job to run. For example, if the Zero Activity exception is specified, only deliveries with a Zero Activity exception can be automatically closed.
Email	Input an email address to receive notifications about automatically closed deliveries. These notifications summarize the number of deliveries that were closed for each supplier.


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* sub-option in the *System Configuration* menu.
2. Click the *Upload File*  button in the toolbar and select a JSON file. Alternatively, drag and drop a file into the grid.

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

3. The selected file processes until it reaches Ready status. Click the *Import*  **Import** button in the toolbar to load the data into the environment.

An error appears and the upload fails if duplicate data is found. This 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.


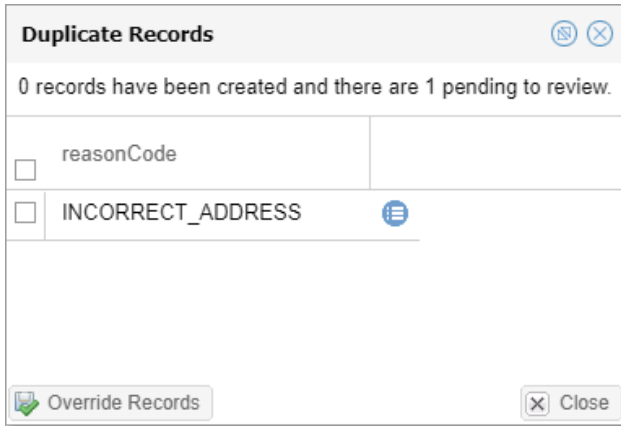

1. Select the file that is pending review in the grid, and click the corresponding *Review*  button. The *Duplicate Records* window displays.

Fig. 5.13

Duplicate Records Window

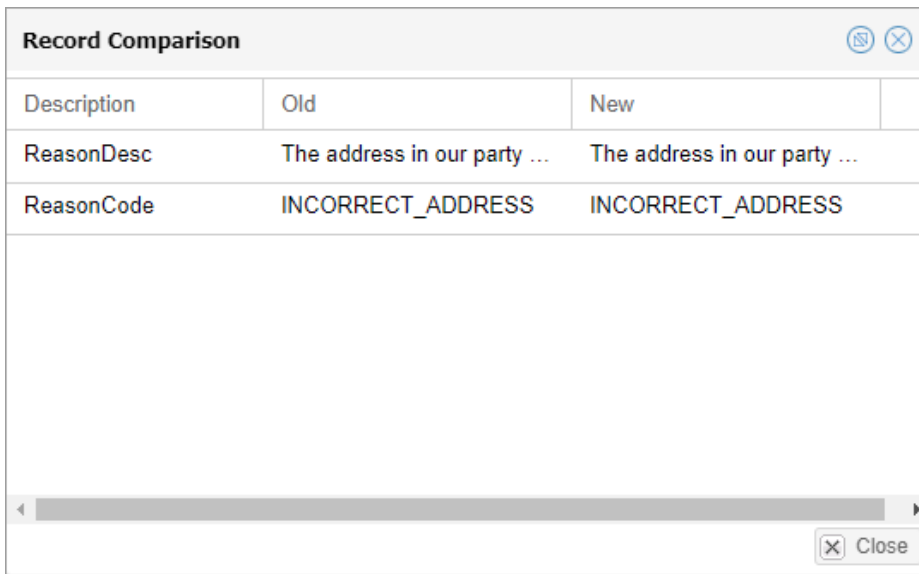


2. Click the *View Details*  button on a record in the window to view more details.
3. The *Record Comparison* window is displayed, detailing:
 - The ID of the existing data in the *Description* column.
 - The current value in the *Old* column.
 - The proposed new value from the uploaded JSON file in the *New* column.

Note A warning icon also indicates whether the value in the JSON file is identical or different to the existing value.

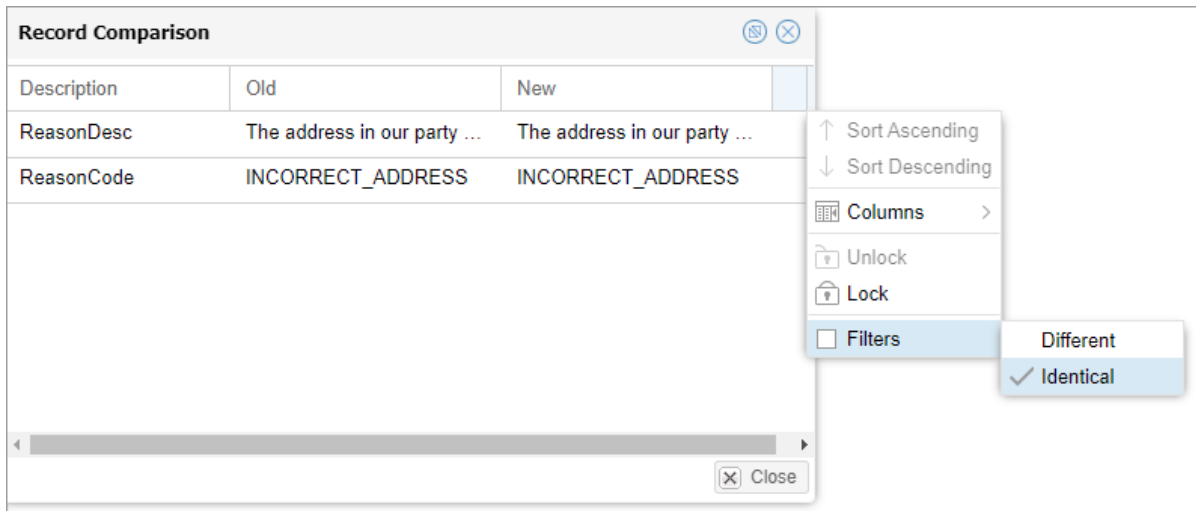
Fig. 5.14


Record Comparison Window



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

Fig. 5.15
Filter Results With Identical Values



4. Select a record in the *Record Comparison* window and click the *Override Records*  **Override Records** button if you want to override the existing data. The status of the file changes to *Complete* when the override process is complete.

Reason Codes

When a user adds a comment on the *Deliveries* page, they are 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, update, and delete reason codes on the *Reason Codes* page.

Fig. 5.16
Reason Codes Page

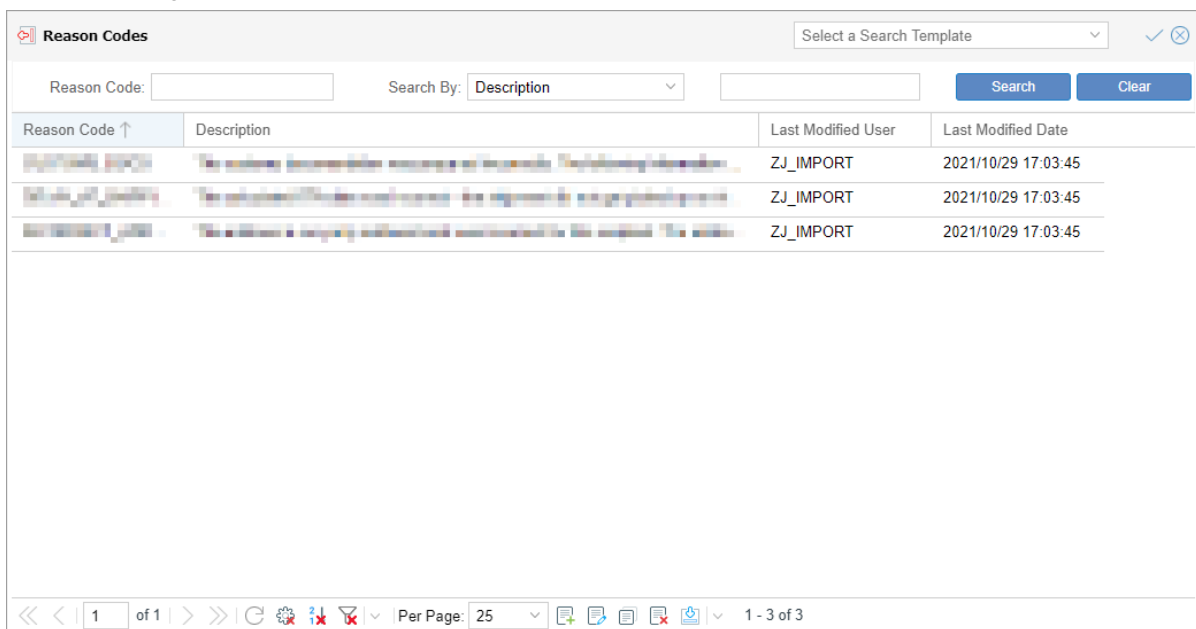


Table 5.4

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


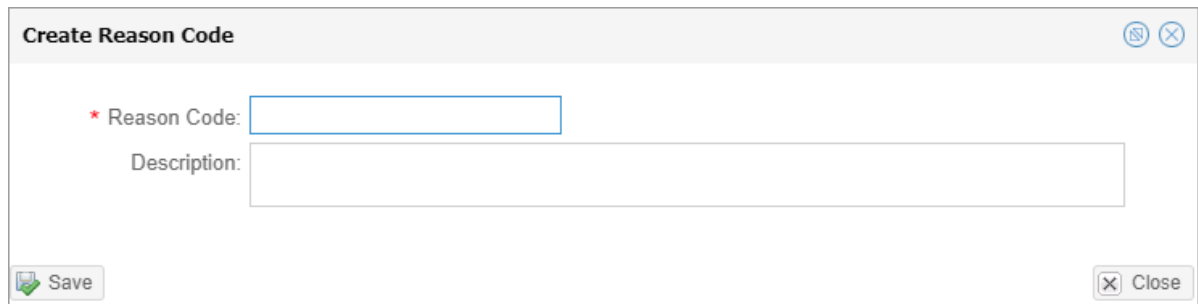
To create a new reason code, select the *Reason Codes* sub-option in the *System Configuration* menu. Then click the *Create*  button in the toolbar to access the *Create Reason Code* window.


Fig. 5.17

Create Reason Code Window




Complete the mandatory *Reason Code* field, which should be a shorthand indicator of the main purpose of the reason code. You also have the option of providing a longer description of the reason code in the *Description* field. Click *Save* to save the reason code.

Update Reason Code

To update a reason code, select a record in the grid and click the *Update*  button in the toolbar. Alternatively, double-click the reason code you want to update. After making the necessary edits, click *Save*.

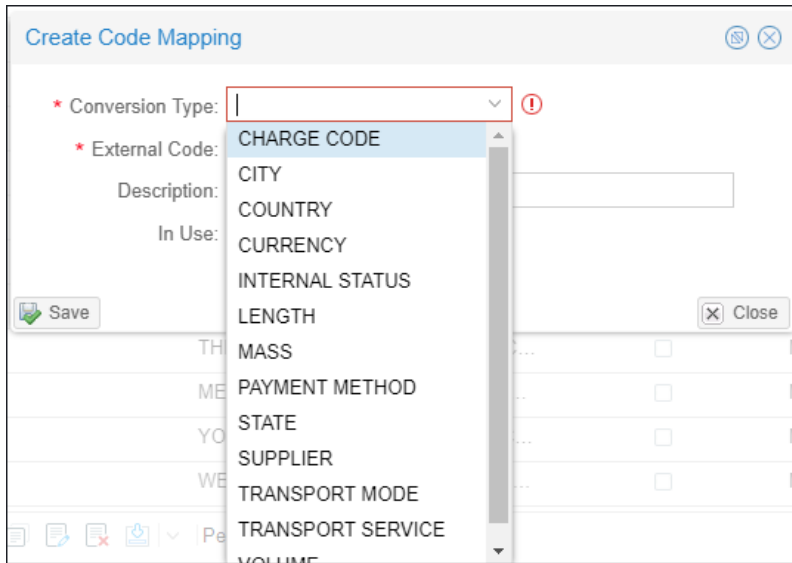
Delete Reason Code

To delete a reason code, select a record in the grid and click the *Delete*  button in the toolbar. In the pop-up window that displays, click *Yes* to confirm the deletion, or *No* to cancel.

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, the items listed in the *Conversion Type* field are codes from the *System Codes* page.

Fig. 5.18
Example of System Codes in Use in DEM



To access the *System Codes* page, first navigate to the *Foundation* page in the Web UI and select *System Codes* in the *System Configuration* menu.

Fig. 5.19
System Codes in System Configuration Menu, Foundation Page

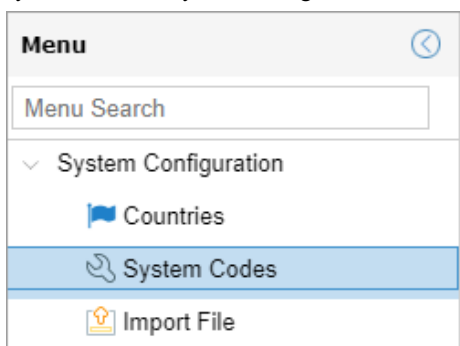


Fig. 5.20
System Codes Page

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 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 5.5

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 5.6

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 5.7
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 on the *Exceptions* page.

Table 5.8
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 5.9
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 5.10

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


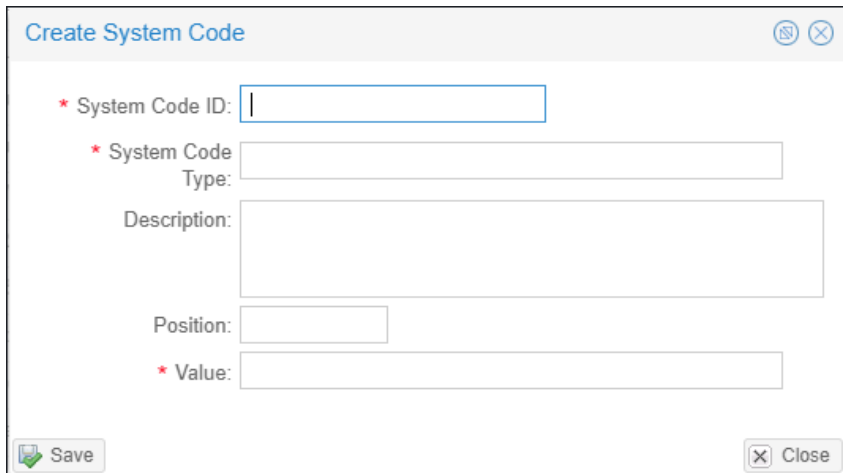
To create a new system code, click the *Create Record*  button in the toolbar of the *System Codes* page. The *Create System Code* window displays.

Fig. 5.21

Create System Code Window



The fields in this window are described in the table below.


Table 5.11

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.

After completing the relevant fields, click the *Save* button.

Update System Code

On the *System Codes* page, select a system code in the grid, and click the *Update Record*  button in the toolbar. Alternatively, double-click the reason code you want to update. Edit the relevant fields in the *Update System Code* window and click *Save*.

Delete System Code

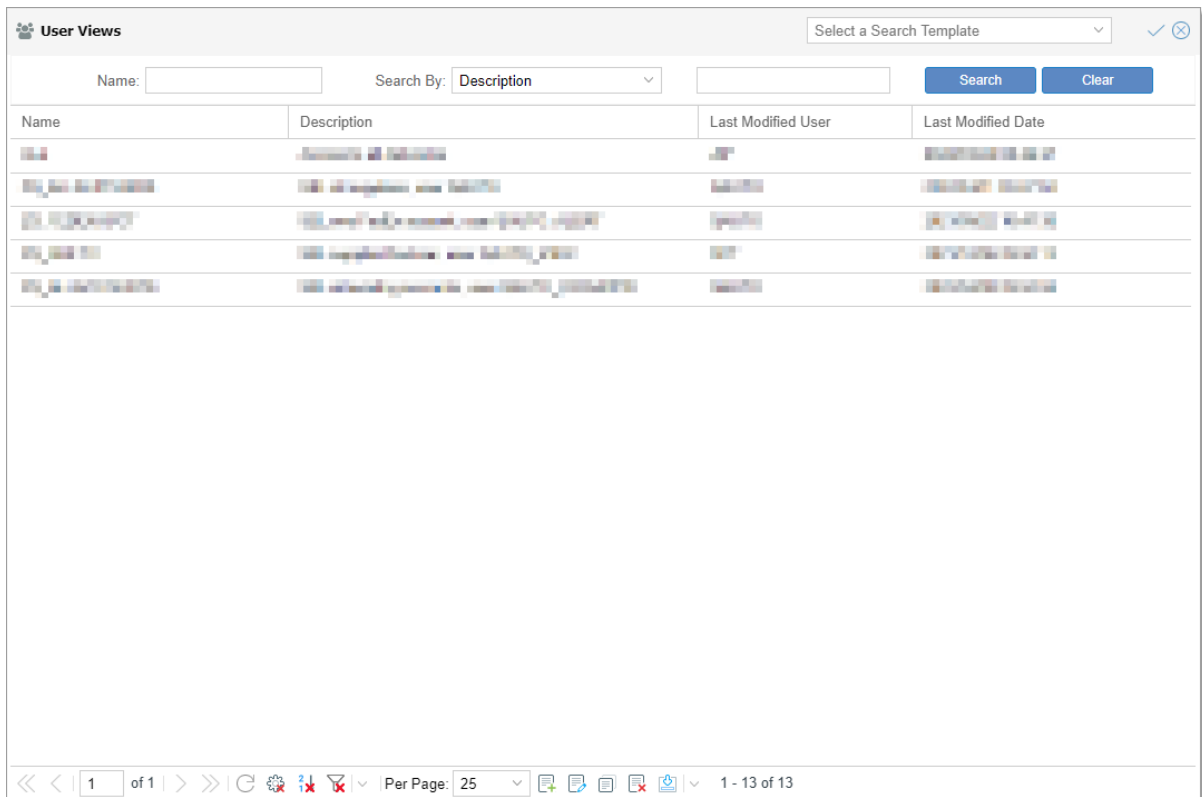
To delete a system code, select a record in the grid and click the *Delete Record*  button in the toolbar. In the pop-up window that displays, click *Yes* to confirm the deletion, or *No* to cancel.

User Views

The User Views feature allows administrators to configure the information that a user has access to. Administrators can limit a user’s views to specific suppliers or supplier accounts. To view, update, create, and delete user view records, access the *User Views* sub-option in the *System Configuration* menu.

Fig. 5.22

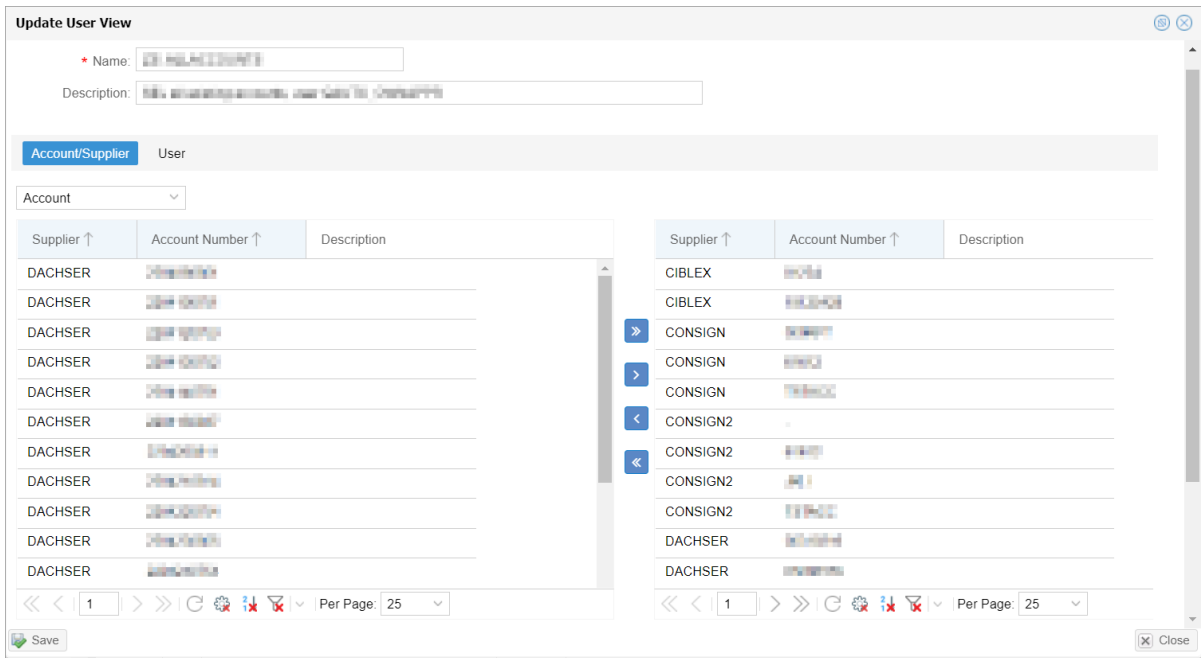
User Views Page



To view the details of an existing user view, double-click a record in the grid. The *Update User View* window displays.



Fig. 5.23
Update User View Window



Account/Supplier Tab

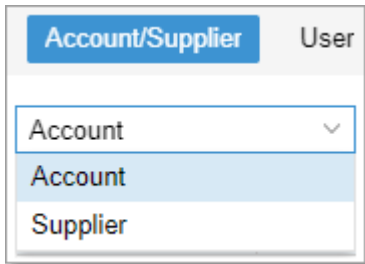
To maintain the suppliers and supplier accounts associated with a user view, select the *Account/Supplier* tab.

Fig. 5.24
Account/Supplier Tab, Update User View Window



To view either account or supplier information, use drop-down field located above the grid.

Fig. 5.25
Account/Supplier Drop-down Field



Note If all accounts are configured at a supplier lever, the account view appears in read-only mode.







The panel on the left contains all suppliers or supplier accounts. In the panel on the right, you can view all of the suppliers and supplier accounts associated only with the selected user view.

The purpose of each button between both panels is described in the table below.

Table 5.12

Account/Supplier Buttons, Update User View Window

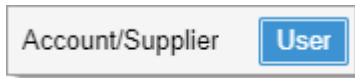
Button	Description
	Add all suppliers or supplier accounts to the user view.
	Add the selected supplier or supplier account to the user view.
	Remove the selected supplier or supplier account from the user view.
	Remove all supplier or supplier accounts from the user view.

User Tab

To maintain the users associated with a user view, select the *User* tab.

Fig. 5.26

User Tab, Update User View Window







The panel on the left contains all available users. In the panel on the right, you can view all of the users associated only with the selected user view.

The purpose of each button between both panels is described in the table below.

Table 5.13

User Buttons, Update User View Window

Button	Description
	Add all users to the user view.
	Add the selected user to the user view.
	Remove the selected user from the user view.
	Remove all users from the user view.

Chapter 6

Utilities

The Purge facility enables you to purge data related to deliveries. This section details the configuration process.

Purge

Describes how to configure the purge settings.



Purge

To purge data related to deliveries, navigate to the *Purge* sub-option in the *Utilities* menu.

Fig. 6.1

Purge Page

To configure the purge settings:

5. Select the type of data that you want to purge; *All*, *Deliveries and Exceptions*, or *Incidents*.
6. Configure the *Purge Criteria* fields:
 - Days*. Select this option if you want to input how many days must have passed since a delivery, exception, or incident was last updated. You can then specify the number of days in the *Last Updated Older Than (days)* field. For example, if 90 days is specified, any deliveries, exceptions, or incidents that were last updated more than 90 days ago are purged.
 - Date*. Select this option if you want to choose a particular date that a delivery, exception, or incident must have been last updated. You can then specify the date in the *Last Updated Older Than* field. For example, if the specified date is 2022/01/13, any deliveries, exceptions, or incidents that were last updated before this date are purged.
7. If you want to restrict purging to closed records only, enable the *Only Include Closed Records* field. If you want to purge all records, regardless of their closed status, leave this field blank.
8. To save the settings, click *Purge Records*.

Chapter 7

Database

This section mentions the Changelog option in the Database menu, which is used by QAD GTTE.

Changelog

Displays the Changelog page and how to find more information.



Changelog

For information about this page, please contact QAD GTTE.

Fig. 7.1
Changelog

Changelog						
Id: <input type="text"/>		Search By: <input type="text"/> File Name		<input type="button" value="Search"/>	<input type="button" value="Clear"/>	
Id	File Name	Date Executed	Order Executed	Status	md5sum	Description
8.0.12.2_store_event_location_timezone	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	14/07/2021 03:50:48	39	EXECUTED	8-d875b4f6e8d63916...	sql
8.0.11.7_Reporting_Late_Deliveries_by_No_of_days	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	07/07/2021 04:33:24	38	EXECUTED	8-df130cadf63c04d52...	sql
8.0.11.8_Update_Missed_Delivery_Exceptions_Logic_to_use_timezones	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	05/07/2021 07:59:48	37	EXECUTED	8-0467b67b787e848...	sql
8.0.11.7_Update_Missed_Delivery_Exceptions_Logic_to_use_timezones	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	05/07/2021 02:02:55	36	EXECUTED	8-8a2a3e4ae44ec589...	sql
8.0.10.2_store_ship_to_timezone_on_delivery	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	11/06/2021 04:31:07	35	EXECUTED	8-342738b6ca3d9818...	sql
8.0.10.0_allow_configuration_of_delivery_lifespan	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	10/06/2021 03:09:33	34	EXECUTED	8-587b392c4f75e050...	sql
8.0.9.6_add_index_for_open_exception	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	10/06/2021 02:18:48	33	EXECUTED	8-18681dda5b38daa2...	sql
8.0.9.2_add_index_for_polling_job	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	01/06/2021 09:50:07	32	EXECUTED	8-74719e9025e5a855...	sql
8.0.9.2_allow_configuration_of_max_polling_age	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	01/06/2021 01:38:14	31	EXECUTED	8-b1016b9c4b0e2179...	sql
8.0.8.12_add_unique_constraint_over_delivery_created_date	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	27/05/2021 03:32:18	30	EXECUTED	8-149041b2af55251bd...	sql
8.0.8.11_dashboard_issues_at_WL_Gore	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	19/05/2021 08:17:38	29	EXECUTED	8-54a5eb0d4bfa578c...	sql
8.0.8.7_dashboard_issues_at_WL_Gore	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	19/05/2021 08:17:38	28	EXECUTED	8-2b54e7067ad46a8...	sql
8.0.8.4_reduce_number_of_table_reads_on_dm_exception_hdr	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	18/05/2021 03:53:16	27	EXECUTED	8-8ebc69c97ab6cc4...	sql
8.0.8.4_update_index_idx_del_eval_pending	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	18/05/2021 03:53:16	26	EXECUTED	8-d37429ca4a4d00ea...	sql
8.0.5-10_dm_delivery_indexes	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	18/05/2021 03:53:16	25	EXECUTED	8-86954ba475dd773f...	sql
8.0.4.3_last_updated_date_indexes	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	18/05/2021 03:53:16	24	EXECUTED	8-52156f14e6a08148...	sql
8.0.4.2_current_comparison_eta	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	18/05/2021 03:53:16	23	EXECUTED	8-faa82b8f95de1ebd...	sql
8.0.4.1_supplier_default_direction	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	18/05/2021 03:53:16	22	EXECUTED	8-a1bc012c722a4d72...	sql
8.0.3-2_dem_extract_schema_changes	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	18/05/2021 03:53:16	21	EXECUTED	8-d54c0638a109aa59...	sql
8.0.3-1_open_incident_id_on_exception	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	18/05/2021 03:53:16	20	EXECUTED	8-ce9dad56cc2d75d...	sql
8.0.2-6_last_status_code_indexes	database/changelog/sql/mdb/core/MDB_CREATE_TABLES.sql	18/05/2021 03:53:16	19	EXECUTED	8-5a576ca5a9a0d646...	sql

Navigation: << 1 >> Per Page: 25 Download SQL



Chapter 8

Archive

This section describes the features available in the Archive menu option.

Deliveries

Describes how to view information about an archived delivery.

Purge Archive

Describes how to purge archived deliveries from the system.



Deliveries

To view information about an archived delivery, access the *Deliveries* option in the *Archive* menu.

Fig. 8.1
Archived Deliveries Page

Filters																
	Supplier	Supplier Tracking Number	Op...	Op...	Evaluat...	Enabled	Closed	Closed Date	Draft M...	Mis...	Job Queue Process	Job Queue...	Account Number	Last Supplier ...	Last Delivery ...	Last Statu
		129R86A70354926376			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				9R86A7	EN ROUTE	NO ACTIVITY	126254
		123786W80335855574			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				3786W8	EN ROUTE	NO ACTIVITY	126411
		129R86A70354972996			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				9R86A7	EN ROUTE	NO ACTIVITY	126469
		12X307180336206769			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				X30718	EN ROUTE	NO ACTIVITY	126563
		12X307180336340211			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				X30718	EN ROUTE	NO ACTIVITY	125981
		12X307180336227522			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				X30718	EN ROUTE	NO ACTIVITY	126019
		1245X8740379290652			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				45X874	EN ROUTE	NO ACTIVITY	126162
		123786W80335831876			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				3786W8	EN ROUTE	NO ACTIVITY	126163
		123786W80335832026			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				3786W8	EN ROUTE	NO ACTIVITY	126020
		129R86A70354905808			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				9R86A7	EN ROUTE	NO ACTIVITY	126412
		12V3300R0332663328			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				V3300R	EN ROUTE	NO ACTIVITY	126470
		12X307180336230456			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				X30718	EN ROUTE	NO ACTIVITY	126565
		12V3300R033285380			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				V3300R	EN ROUTE	NO ACTIVITY	125980
		12W2111X0390595256			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				W2111X	EN ROUTE	NO ACTIVITY	126165
		1289371W0380787460			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				89371W	EN ROUTE	NO ACTIVITY	126255
		12W2111X0390709507			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				W2111X	EN ROUTE	NO ACTIVITY	126021
		124668140302971018			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				466814	EN ROUTE	NO ACTIVITY	126413
		12W2111X0390696101			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				W2111X	EN ROUTE	NO ACTIVITY	126566
		129R86A70354985179			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				9R86A7	EN ROUTE	NO ACTIVITY	126471
		123786W80335833641			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>				3786W8	FN ROUTE	NO ACTIVITY	126023

Here you can view read-only information about a delivery that was stored on the main *Deliveries* page.

Note Using the delivery sub-options menu , it is possible to view information about each archived delivery’s tracking history, exceptions, and incidents. However, users cannot link to the relevant pages as they can for unarchived deliveries.

Purge Archive

It is possible to purge archived deliveries from the system. To access this feature, navigate to the *Purge Archive* sub-option of the *Archive* menu.

Configure the *Purge Criteria* fields:

Days. Select this option if you want to input how many days must have passed since a delivery was archived. You can then specify the number of days in the *Archived Date Older Than (days)* field. For example, if 90 days is specified, any archived deliveries that were archived over 90 days ago are purged.

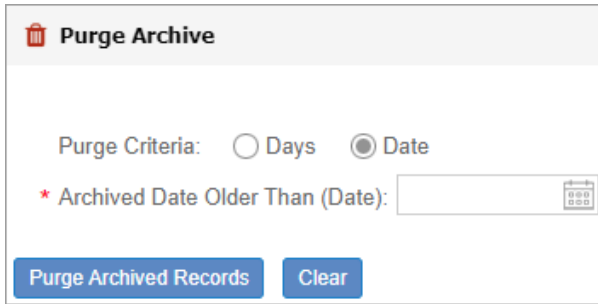
Date. Select this option if you want to choose a particular date that a delivery must have been archived before. You can then specify the date in the *Archived Date Older Than (Date)* field. For example, if the specified date is 2022/01/13, any deliveries that were archived before this date are purged.



Finally, click *Purge Archived Records*.

Fig. 8.2

Purge Archive Page



The screenshot shows a dialog box titled "Purge Archive" with a trash icon. It contains the following elements:

- Purge Criteria:** Two radio buttons, "Days" (unselected) and "Date" (selected).
- * Archived Date Older Than (Date):** A text input field with a calendar icon to its right.
- Buttons:** Two blue buttons at the bottom: "Purge Archived Records" and "Clear".

Chapter 9

Shipment History Updates

DEM receives shipment history updates from both transportation execution (TE) application and the carrier. This section outlines which updates are given precedence by DEM.

Shipment History Update Precedence

Details whether a field takes its information from the carrier, TE, or both.



Shipment History Update Precedence

If DEM receives a message to create a new delivery from both the TE application and the carrier; the first message that 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 application is consumed first, the TE message creates the delivery.

The table below outlines whether a field takes its information from the carrier, TE, or both.

Table 9.1
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

This section details the configuration of the DEM YAML file, which contains a number of properties that control technical features in DEM.

Overview

Provides an overview of the purpose of the YAML file.

Spring Batch

Describes the properties that apply to Spring Batch.

Retry Limit

Describes the properties that control the number of times DEM attempts to retry a failed background job.

EDI File Storage

Describes how to set the maximum size of an EDI file.

Background Session Information

Describes how to configure the information that background jobs write into the system.

Chunk Size

Describes how to configure the size of data that is locked and processed in a block.

Scheduler

Describes how to configure how often DEM runs some background jobs.

Extract

Describes how to configure default limits for DEM extract APIs.



Overview

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 simple syntax. However, if this is not maintained correctly, it may prevent DEM from starting. 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 application-specific properties introduced by QAD GTTE.

The core framework properties are responsible for configuring the database connection, log output level, and other web container-specific configurations. The QAD GTTE properties are contained in 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. 10.1

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 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 the *Scheduler* section.



Spring Batch

Administrators can configure how many background jobs DEM processes at the same time 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 of an EDI file. If the EDI file exceeds this size, it is 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 using the following value:



```
genericxml:
    path: ${WEBUI_HOME}/dem/GenericXML
```

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

Fig. 10.2

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 that background jobs write into the system in the following value:

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

Fig. 10.3

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 one time—as well as necessary database connections—increases. The relevant value for each background job is detailed below.



```
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, with the exception of `No_activity_job`. This value should be configured based on the expected frequency of carrier updates.



Fig. 10.4
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. 10.5
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 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. 10.6

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
```

Chapter 11

Highway Configuration

This section describes the methods used by Highway to communicate with external sources.

Overview

Provides an overview about the Highway system.

Carrier Status Updates

Describes carrier endpoint configuration for Highway.

Sending Emails

Describes how DEM uses Highway to perform the task of emailing messages.

Reading Emails

Describes how Highway reads messages.



Overview

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. Highway is used in three ways by DEM:

- 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 emails when using the comments function.
- To read and send emails 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 communicates the information from them to DEM. All Tier 1 carriers use 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 11.1
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 11.2

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 11.3

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 11.4

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 `[Carrier]`. The rules for this message ID are predefined.



Fig. 11.1

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. 11.2

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
DEM_SUPP_UPS_STATUSREAD	10	Send UPS Status Update Messages to ...	DEM_SUPP_UPS_STATUS_ARCH			<input type="checkbox"/>
DEM_SUPP_UPS_STATUSREAD	20	Send UPS Status Update Messages to ...	DEM_SUPP_UPS_STATUS_WRITER			<input type="checkbox"/>

Sending Emails

DEM employs the standard method of using Highway to perform the task of emailing messages.

The following properties in the `precision.properties` file indicate the endpoint to which DEM must send email messages:

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

These properties detail where to send email 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 email address.

Fig. 11.3
MAIL Endpoint Definition in Highway

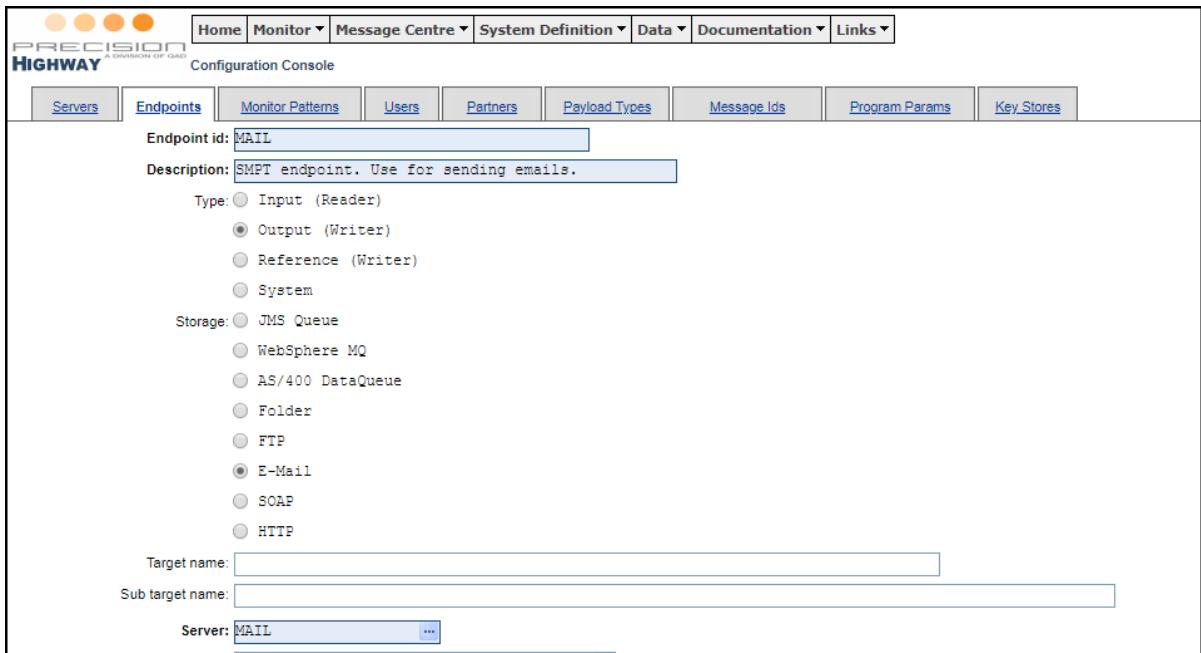
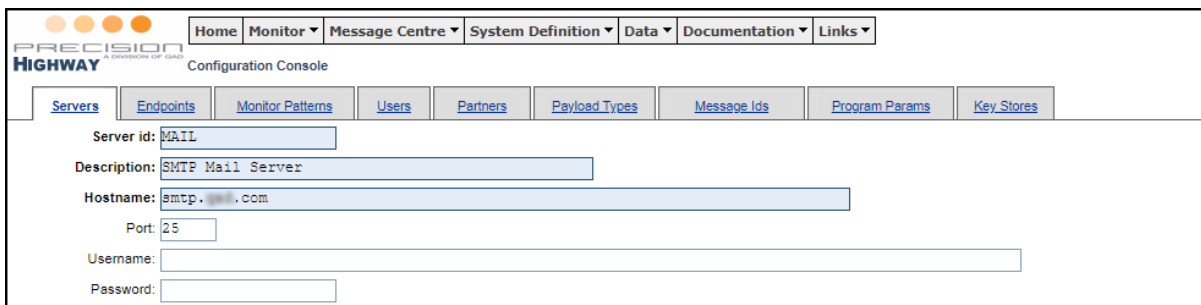


Fig. 11.4
MAIL Server Definition in Highway



The SMTP hostname and port are implementation specific. The email address used by DEM when sending mail is chosen from a system value. Emails 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 email address that is specified in the `precision.property` file is `precision.highway.mail.from`.

Table 11.5

System Value

Key	Category	Value
DEM	INCIDENT MAIL FROM	[email address]

Reading Emails

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

The `DEM_INCIDENT_READER` endpoint is responsible for polling an inbox of the email address being used for DEM incidents. Emails 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 email inbox is `DEM_INCIDENT_MAIL`. There is a rule that routes messages with this message ID to `DEM_INCIDENT_WRITER`.

Table 11.6

Incident Endpoints

Purpose	Endpoint
To read email incident responses from carriers.	<code>DEM_INCIDENT_READER</code>
To send incident emails to the DEM microservice.	<code>DEM_INCIDENT_WRITER</code>

The endpoint `DEM_INCIDENT_READER` is an email endpoint that Highway reads from. By default, the target is `Inbox`, but this is dependent on the email 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. 11.5
DEM_INCIDENT_READER Endpoint Definition in Highway

Fig. 11.6
DEM_MAIL_READ Server Definition in Highway

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. 11.7
DEM_INCIDENT_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_INCIDENT_WRITER

Description: Send incident emails to DEM Microservice

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/incident/email

Sub target name:

Server: DEM_MICROSERVICE

Reference endpoint id:

Default message id:

Overwrite message id:

Payload spy plugin:

Number of readers: 0

Fig. 11.8
DEM_MICROSERVICE Server 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

Server id: DEM_MICROSERVICE

Description: DEM - Microservice

Hostname: localhost

Port: 38080

Username:

Password:

Property key 1: noretry.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.



Appendix A

Menu Options

Users and administrators can use the Menu Search feature to navigate to specific DEM pages. The option codes can be found in this section.

Menu Option Codes

Lists the menu option codes that can be used to access pages in DEM.



Menu Option Codes

All pages in DEM can be accessed using the menu. Alternatively, users can use the Menu Search feature, located in the top horizontal menu. All of the option codes listed below are applicable to DEM Administrators.

Table A.1

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
DEMUV	User Views



Appendix B

Additional Reference TE System Values

QAD GTTE Transportation Execution (TE) attempts to extract any references that are configured for the shipment carrier, in accordance with the SPS reference Codes and system values listed in this appendix.

Additional Reference TE System Values

Describes reference codes that are possible values for the *Additional Reference* fields in DEM.



Note This information is subject to change as more reference codes are implemented. For the latest codes, see QAD GTTE Knowledge Base number AA-57296.

Table B.1

Transportation Execution Extract SPS System Values

Value	Category	Key	Description
TN	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Transaction Reference - XMSHDR0.SHSHIP
RQ	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Purchase Requisition - XMSITM0.SIBREF
PO	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Purchase Order number - XMSITM0.SIORDN
EI	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Employers Id Number - XMNREF0.NREIN (of shipper)
IK	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Invoice Number - XMSHDR0.SHINVN
3Q	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	FDA Product Code - Taken to be commodity code of product (not quite correct)
AE	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	AES filing reference - AES transaction reference in TRAX as per AES processing (XMS2DR0.S2AESITN)
AJ	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Accounts receivable Customer account - XMSHDR0.SHFNCL (probably not correct either)

AT	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Appropriation number - XMSITM0.SIBREF (not correct)
BM	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Bill of landing number - XMSHDR0.SHBLNO
DP	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Department number - XMSHDR0.SHOREF (not correct)
MJ	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Model Number - XMSITM0.SIPROD (possibly incorrect)
MK	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Manifest Key number - XMSHDR0.SHHAWB (probably incorrect - in hindsight this might possibly use the pickup number)
ON	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Dealer Order number - XMSITM0.SIBREF (probably incorrect)
PC	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Production code - XMSITM0.SIPROD (probably incorrect)
PM	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Part Number - XMSITM0.SIPROD
SA	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Sales Rep - XMSHDR0.SHSREP
SE	SPS	[global carrier]: SHIP REFERENCES -	Serial number - XMSSRL0.SSRSLN from first

		[packing location] Or, if generic: [global carrier]: SHIP REFERENCES	XMSSRL0 of item line
ST	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Store number - Packing location per shipment rated
SY	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Social Security number - XMNREF0.NRSSN (of shipper)
TJ	SPS	[global carrier]: SHIP REFERENCES - [packing location] Or, if generic: [global carrier]: SHIP REFERENCES	Federal Tax Payers ID code - XMNREF0.NRVATN (of shipper)



Product Information Resources

QAD offers a number of online resources to help you get more information about using QAD products.

[QAD Forums \(community.qad.com\)](https://community.qad.com)

Ask questions and share information with other members of the user community, including QAD experts.

[QAD Knowledgebase \(knowledgebase.qad.com\)*](https://knowledgebase.qad.com)

Search for answers, tips, or solutions related to any QAD product or topic.

[QAD Document Library \(documentlibrary.qad.com\)](https://documentlibrary.qad.com)

Get browser-based access to user guides, release notes, training guides, and so on; use powerful search features to find the document you want, then read online, or download and print PDF.

[QAD Learning Center \(learning.qad.com\)*](https://learning.qad.com)

Visit QAD's one-stop destination for all courses and training materials.

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