Workday Integration

Reference Guide

Document Details

Document #: 160_WDRG_240927

System Requirements

- CES Version 10.20.00.xx or higher
- Workday version 38.0 or higher
- Cloud-hosted customer (not currently available for cruise or self-hosted customers)

Overview

This document describes the integration platform that allows customers to move data seamlessly between Crunchtime and Workday.

Download the latest version of this document here:
https://links.crunchtime.com/RG-WorkdayIntegrationReference

… or scan the QR code to the left.

Related Documentation

- Workday Integration Setup Guide: https://links.crunchtime.com/SG-WorkdayIntegrationSetup

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REFERENCE GUIDE

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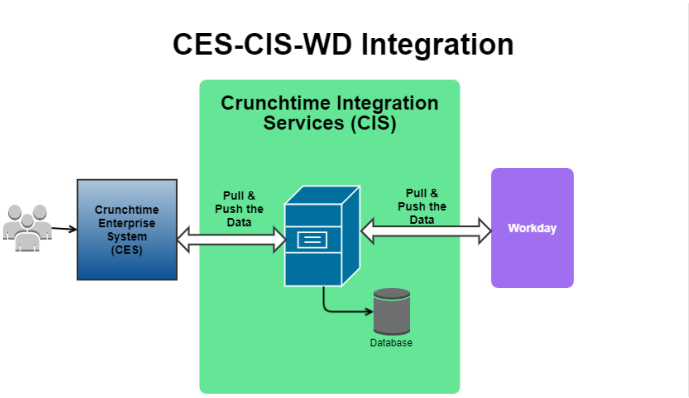
Overview

Crunchtime's Workday integration platform allows customers to move data seamlessly between Crunchtime and Workday. This integration will push accounts payable (invoices/vendors), inventory changes and sales summary data into the Workday application. Behind the scenes, the integration uses Simple Object Access Protocol (SOAP) API's. The service which enables this seamless, bi-directional data transfer is known as Crunchtime Integration Services (CIS).

- CIS is a microservice running on a Docker container.
- Deployment of CIS is independent from the Crunchtime application.
- The Crunchtime application runs on Java11, Spring framework, using an Oracle 19c database, running on a Tomcat server.



Features

- Customers can configure the integration record and all relevant values.
- Customers can define the recipient email address for each integration.
- The application is pre-configured with the exports that can be scheduled (see the list below).
- After the data is transferred, customers will be able to review integration errors and reprocess the export if necessary.

Use Cases & Data Flow

- *Accounts Payable (Reconciled Invoices)* – Vendor Orders, Vendor Returns, and Purchase By Invoice (PBI) transactions - GL level. Unidirectional, from Crunchtime to Workday.
- *Sales (Summary level)* – Journal entry to capture the reconciliation of Sales by Location/GL Account (Net Sales to Cash including Over/Shorts). Unidirectional, from Crunchtime to Workday.
- *Location Transfers (Inventory Changes)* – Journal entry to capture transfers from one physical Location to another (weekly based on post period). Unidirectional, from Crunchtime to Workday.
- *Period Ending Inventory Values* – Inventory Delta or "Closing Stock" values. Unidirectional, from Crunchtime to Workday.
- *Vendor Sync* – Depending on how one of the User Defined Attributes (UDAs) is configured in Crunchtime, this will either flow from Workday to Crunchtime or vice versa.
- *Commissary Orders* – Pushes Final Reconciled orders as Journal entries - GL level. Unidirectional, from Crunchtime to Workday.

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Customer Compatibility

- Currently these integrations are only available to Crunchtime cloud-hosted customers; they are not available for cruise or self-hosted customers.

Prerequisites

The following information must be configured in the Workday and Crunchtime systems before you begin integration setup:

- The Company record must be configured in both Crunchtime and Workday.
- The same locations must exist in both Crunchtime and Workday.
- Vendors must be created and synced between the 2 systems. If you choose to run the Vendor Sync process, this must be done prior to any transactions with vendors not yet synced.
  - Vendors should be maintained in either in Workday or Crunchtime (a single system of record). For example: If Workday is the system of record, the Vendor Sync process will sync from Workday to Crunchtime.



Tip: The Vendor Sync process is only recommended for customers who are new to either Crunchtime or Workday.

- GL Codes must match between systems. In Workday, GL Codes used for Supplier invoices must be classified as 'Spend Categories'. This enables the transfer of vendor invoice information between the two systems.
- In Crunchtime, the relevant User Group permissions must be enabled for the user configuring the User Defined Attributes (UDAs).
  - Specific permission is required for defining certain "Secret" UDA values, such as 'WD_Tenant_URL', 'WD_USERNAME, WD_PWD' etc, which are required for authentication and API connectivity. (*Please refer to attributes listed in the table starting on page 4.*)

Integration Setup – Process Overview

1. In Workday, create the CES Integration User & define the user's permissions.
2. In Crunchtime, configure the company-level User Defined Attributes (UDAs); see the *User Defined Attributes* section on the next page for more details.
3. If necessary, define related vendor-specific UDAs.
4. Map the General Ledger accounts.



Note: For detailed instructions to complete the steps above see the Workday Integration Setup Guide, found here: https://links.crunchtime.com/SG-WorkdayIntegrationSetup

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User Defined Attributes

- A User Defined Attribute (UDA) is a data element built in Crunchtime to support your data configuration. These UDA values are used when there is no other relevant mapping for the Company, Location, and/or Vendor fields in Crunchtime.
- The UDA values that start with "WD_" are those pertaining to Workday UDA configuration.
- You will need to configure the relevant UDAs with your specific data to facilitate the integration.
- Users need the appropriate permissions to modify UDA data in Crunchtime.

The following Company-level UDAs are required for Workday integration (listed alphabetically).

	Field	Description	Required for Integration
1	WD_INTEGRATION_ENABLED	Valid values are 'True' or 'False'. Enter 'True' to enable Workday integration.	Yes
2	WD_TENANT_URL	The tenant URL to which we will be sending the data. It should have the required permissions.	Yes
3	WD_USERNAME	Integration User ID that will be used for reading and writing to the tenant URL.	Yes
4	WD_PWD	The password for this Workday tenant account.	Yes
5	WD_COMPANY_CODE	"Company Code" for Workday. This will be used to match the Company in the Workday tenant.	Yes

The following Company-level UDAs are available for Workday integration (listed alphabetically).

	Field	Description	Required for Integration
6	WD_COMPANY_SUPPLIER_COMMUNICATION_TYPE	Communication type preferred by the supplier. This can be overridden by WD_SUPPLIER_COMMUNICATION_TYPE. Examples: 'Business', 'Corporate'.	No
7	WD_COMPANY_SUPPLIER_PAYMENT_TERM	Workday Supplier field for "Payment Terms". Determines how long before payment is due. This can be overridden by WD_SUPPLIER_PAYMENT_TERM. Examples: 'Net 30' (default), 'Net 15', 'Cash', etc.	No
8	WD_COMPANY_SUPPLIER_PAYMENT_TYPE	Workday Supplier field for "Payment Type". Mode of payment accepted by the supplier. This is a company-level setting for all suppliers. This can be overridden by WD_COMPANY_SUPPLIER_PAYMENT_TYPE. Examples: 'Cash', 'Check', 'Credit', etc.	No

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	Field	Description	Required for Integration
9	WD_COST_CENTER	Enter a “Cost_Center_Reference_ID” to ensure a Cost Center will be associated with the line items of a Journal transaction. Please fill in this value if using Journal Entry transactions; this will be the default value mapped and sent to Workday.	No
10	WD_INVENTORY_FAILURE_EMAIL	If inventory posts fail, notify these email address(es). Supports multiple emails separated by a comma. If you do not wish to be notified of a failed push, leave this field blank.	No
11	WD_INVENTORY_SUCCESS_EMAIL	After inventory posts are sent successfully, notify these email address(es). Supports multiple emails separated by a comma. If you do not wish to be notified of a successful push, leave this field blank.	No
12	WD_INVOICE_FAILURE_EMAIL	If the invoice push fails, notify these email address(es). Supports multiple emails separated by a comma. If you do not wish to be notified of a failed push, leave the field blank.	No
13	WD_INVOICE_SUBMIT	The “Invoice Submit” button determines whether invoices are submitted and approved. Valid values are ‘True’ or ‘False’. ‘True’ indicates invoices will be submitted and approved, ‘False’ indicates invoices are submitted in “Draft mode”.	No
14	WD_INVOICE_SUCCESS_EMAIL	After invoices are sent successfully, notify these email address(es). Supports multiple emails separated by a comma. If you do not wish to be notified of a successful push, leave this field blank.	No
15	WD_IS_SUPPLIER_SOR	Determines which system should be used as the system of record (SOR). Valid values are ‘True’ or ‘False’. ‘True’ indicates Workday is the SOR, while ‘False’ indicates Crunchtime is the SOR.	No
16	WD_JOURNAL_ADDONLY	Valid values are ‘True’ or ‘False’. If ‘True’, only new journal entries can be added to Workday. If ‘False’, updates to existing invoices are also allowed.	No
17	WD_JOURNAL_AUTOCOMPLETE	Valid values are ‘True’ or ‘False’. Set to ‘True’ to allow journals to bypass the approval process; set to ‘False’ to require manual approval.	No
18	WD_JOURNAL_SOURCE	Journal type preferred by client account categorization. Set to ‘Manual_Journal’.	No

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	Field	Description	Required for Integration
19	WD_JOURNAL_SUBMIT	The “Journal Submit” button determines whether journals are submitted and approved. Valid values are ‘True’ or ‘False’. ‘True’ indicates journals will be submitted and approved, ‘False’ indicates journals are submitted in “Draft mode”.	No
20	WD_JOURNAL_WORKDAYLOCK	Determines whether Workday users can update journals using the UI. Valid values are ‘True’ or ‘False’. Not used by Workday, so the default value will be ‘False’.	No
21	WD_LEDGER_REFERENCE_ID	Workday field for “Ledger” where a ledger type is associated with a company.	No
22	WD_LOCATION_TRANSFERS_FAILURE_EMAIL	If location transfer posts fail, notify these email address(es). Supports multiple emails separated by a comma. If you do not wish to be notified of a failed push, leave field blank.	No
23	WD_LOCATION_TRANSFERS_SUCCESS_EMAIL	After location transfer posts are sent successfully, notify these email address(es). Supports multiple emails separated by comma. If you do not wish to be notified of a successful push, leave field blank.	No
24	WD_PURCHASEITEM_ADDONLY	Determines whether items should be added as a new purchase item to Workday or are updates allowed to existing purchase items. Valid values are ‘True’ or ‘False’. If ‘True’, only adds new purchase items to Workday. If ‘False’, allows for updates to existing purchases items.	No
25	WD_SPEND_CATEGORY	Enter a “Spend Category” associated with the line items of a Journal transaction (Inventory Delta, Location Transfer, and Sales from Crunchtime).	No
26	WD_SUPPLIER_ADDONLY (*Only applicable when* WD_IS_SUPPLIER_SOR *is ‘False’ – i.e. Crunchtime is the system of record*)	Determines if suppliers exported out of Crunchtime will only add data to existing suppliers in Workday or if new entries are allowed to be created. Valid values are ‘True’ or ‘False’. Set to ‘True’ to only allow updates; set to ‘False’ to also allow new records to be created.	No
27	WD_SUPPLIER_AUTOCOMPLETE	Valid values are ‘True’ or ‘False’. Set to ‘True’ to allow supplier to bypass the approval process; set to ‘False’ to require manual approval.	No

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	Field	Description	Required for Integration
28	WD_SUPPLIER_CATEGORY	“Supplier Category” field in Workday. Categorizes suppliers into distinct groups.	No
29	WD_SUPPLIER_SUBMIT	Determines whether the supplier will be added in Approved mode or Draft mode. Valid values are ‘True’ (Approved mode) or ‘False’ (Draft mode). The default value will be ‘True’.	No
30	WD_SUPPLIERINVOICE_ADDONLY	Determines whether or not supplier invoices can be updated in Workday. Valid values are ‘True’ or ‘False’. If ‘True’, updates to existing invoices are allowed. If ‘False’, only new invoices can be created.	No
31	WD_SUPPLIERINVOICE_AUTOCOMPLETE	Valid values are ‘True’ or ‘False’. Set to ‘True’ to allow supplier invoice to bypass the approval process; set to ‘False’ to require manual approval.	No
32	WD_SUPPLIERINVOICE_WORKDAYLOCK	Determines whether Workday users can update supplier invoices using the UI. The default value will be ‘True’.	No
33	WD_VENDOR_SYNC_EMAILS	After vendors are synced with Workday in either direction, notify email address(es). Email will be sent irrespective of success or failure. Supports multiple emails separated by comma. If you do not wish to be notified for push, leave field blank.	No

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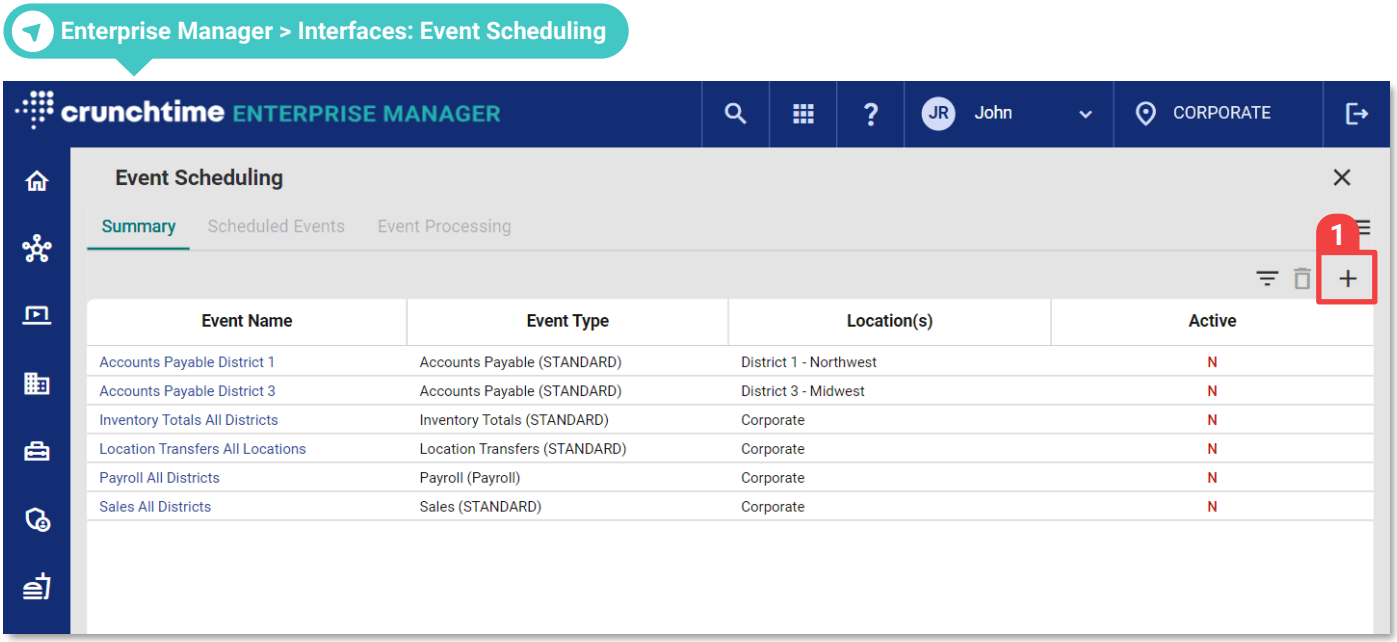
Launching and Scheduling Integrations

Prerequisites

- These integrations can only be scheduled and run if the “WD_INTEGRATION ENABLED” UDA = ‘True’.
- The relevant User Defined Attributes must be defined prior to scheduling exports.
- CIS will pull this UDA data from Crunchtime before it pushes the data to Workday.

Process Overview

In Crunchtime, depending on their business needs customers can schedule Workday integration exports to run on a daily, weekly, or monthly basis in the *Event Scheduling* screen.



1. In the Event Scheduling screen, select the *Plus* (Add) icon to create a new scheduled export.

Note: For detailed instructions on scheduling an export, see the related QuickStart Guide, found here: https://links.crunchtime.com/EMQS-ScheduleAnExport

2. When a scheduled export runs, the integration will pull data from Crunchtime and send it to Workday.
3. If there are any errors, they will appear in the Outbound Integrations screen in Crunchtime; see next page for troubleshooting details.
4. You can use the error logs to troubleshoot the issue.
5. Once the issue is resolved, you can reschedule the export.

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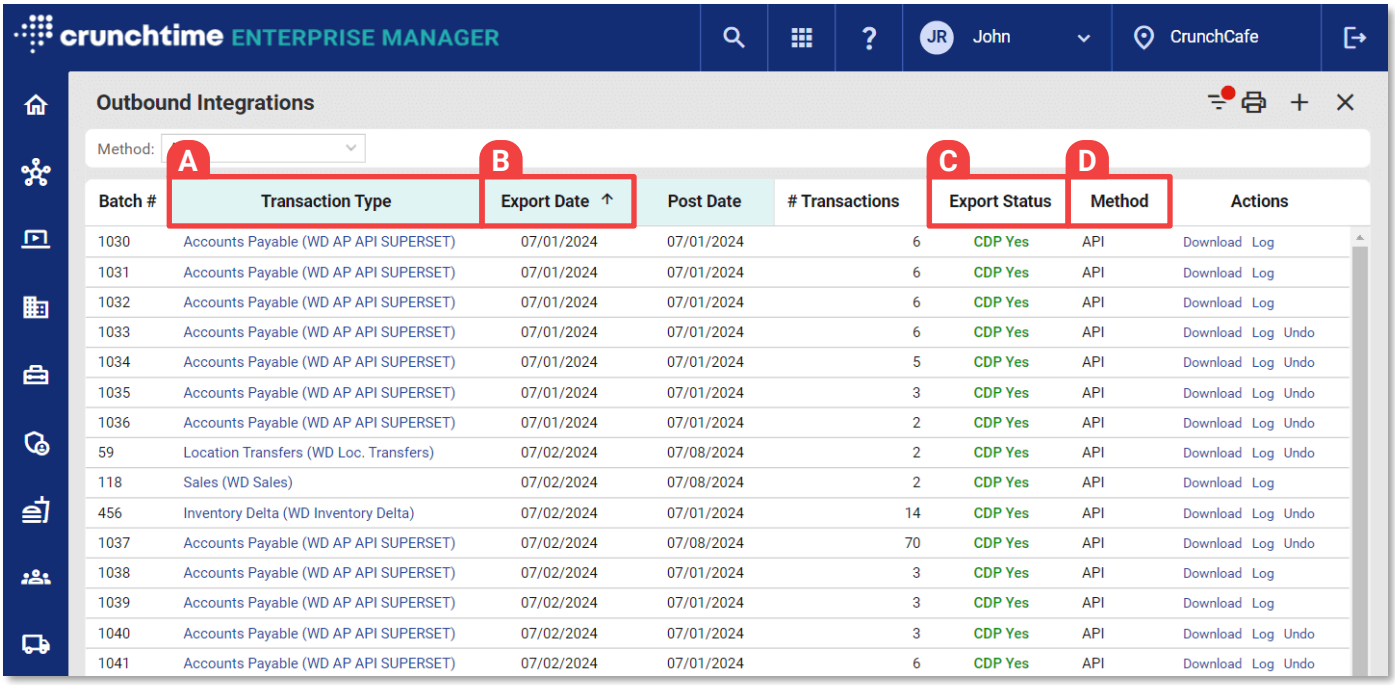
Error Remediation and Reprocessing

In Crunchtime, the *Outbound Integrations* screen is available to help you troubleshoot and resolve the issues, then reprocess the files.

Heads-Up: Currently, Vendor Sync process errors will *not* show up in this screen; you will only be able to track those via email.

Enterprise Manager > Interfaces: Outbound Integrations



Recommended Filter/Sort Options:

- **A** *Transaction Type* – Filter for Accounts Payable, Inventory Delta, Location Transfers, Sales, etc.
- **B** *Export Date* (default)– Filter by this column to show the most recent exports sent.
- **C** *Export Status* – Filter for 'CDP Yes' (Export successful), 'CDP No' (Not yet sent), or 'N/A' (Export failed).
- **D** *Method* – Sort by this column to group the 'API' integrations together.

Actions:

- *Download* – This downloads the original file that was submitted.
- *Log* (Only present for API integrations) – Opens the Error Log screen (shown on next page), in which you can check the status details (success/failure) of the selected transaction.
- *Undo* – This will flag the data as "unexported" so you can resolve the issue and re-export the data.

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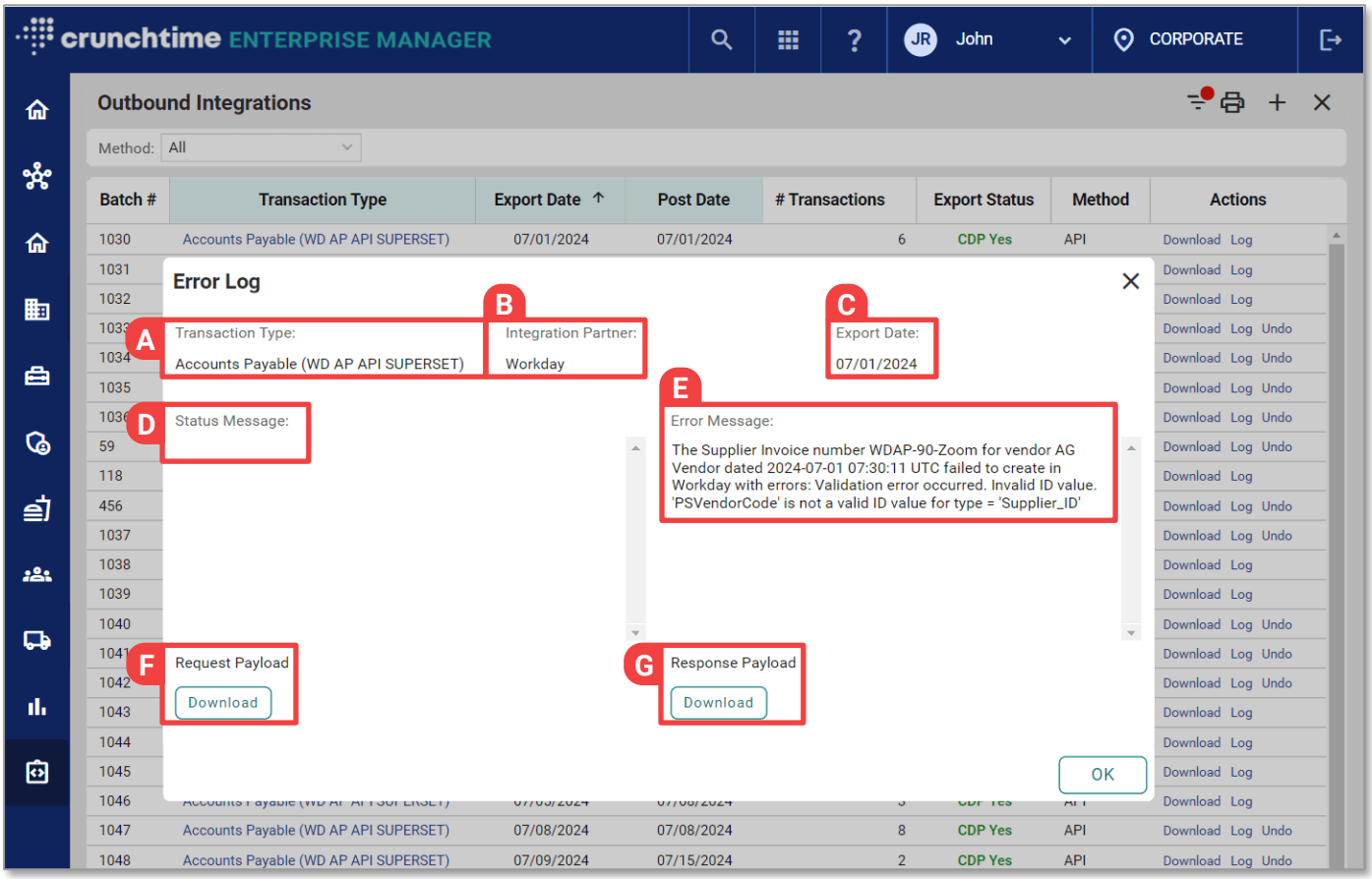
Log File Details



- **A** *Transaction Type* – The type of transaction that was submitted.
- **B** *Integration Partner* – Accounting system to which the transaction was submitted.
- **C** *Export Date* – Date the export was generated.
- **D** *Status Message* – Shows details for sucessful transactions.
- **E** *Error Message* – Shows details for failed transactions.
- **F** *Request Payload – Download* details of the Submitted transaction.
- **G** *Response Payload – Download* details of the Workday response message.

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Remediation Steps for Failed Transactions:

1. Validate the status of the transaction based on triggered emails. Emails can be sent for both success and failure of transactions submitted to Workday.

Tip: Once your integration is running successfully, you can remove the addresses from the "SUCCESS_EMAILS" attributes so you'll only receive notifications for failed transactions.

2. For the failed transactions, download the log file and review the error details.
3. Validate the data and review the issues mentioned in the email.
4. Undo the export, correct the data and re-export the file. This action creates a new export event.

Resubmit Limitation: Per Step 4 above, vendor invoices can only be resubmitted once. If the new (re-exported) file fails, then repeat the process above for *that* export file – do not attempt to undo and resubmit the original file.

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Process Flows & Related Details

AP – Invoice Integration

This integration will push reconciled Vendor Orders, Vendor Returns, and Purchase By Invoice (PBI) transactions from Crunchtime to Workday as Accounts Payable invoices. The information is captured at a summary level (by GL account). This will be a unidirectional push from Crunchtime to Workday.

Key Related UDAs:

- WD_INVOICE_FAILURE_EMAIL
- WD_INVOICE_SUBMIT
- WD_INVOICE_SUCCESS_EMAIL
- WD_PURCHASEITEM_ADDONLY
- WD_SPEND_CATEGORY
- WD_SUPPLIERINVOICE_ADDONLY
- WD_SUPPLIERINVOICE_AUTOCOMPLETE

Accounts Payable – Vendor Bills, Vendor Credits, & Purchases By Invoice

- In order for an AP transaction to be picked up in the WD integration, it must meet the following criteria:
  - Must be created with valid supplier.
  - Must contain 1 or more line items.
  - Must be reconciled.
- The sign of the Invoice Total will determine if the transaction is sent as a Bill or Credit (regardless of positive or negative line items).
  - When the Invoice Total is positive, the file is sent to Workday as a Vendor Bill.
  - When the Invoice Total is negative, the file is sent to Workday as a Vendor Credit.

Note: In Workday, the Invoice Total for a Vendor Credit is displayed as a positive value.

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Process Flows & Related Details (Continued)

Inventory Delta – Period Ending Values

This integration will push Period Ending Inventory Values from Crunchtime to Workday. This will be a unidirectional push.

- In Crunchtime, the GL Account should include a valid "GL for CGS" entry. (*These are the offset accounts used in these transactions and must match between Crunchtime and Workday*.)

Key Related UDAs:

- WD_COST_CENTER
- WD_INVENTORY_FAILURE_EMAIL
- WD_INVENTORY_SUCCESS_EMAIL
- WD_JOURNAL_ADDONLY
- WD_JOURNAL_AUTOCOMPLETE
- WD_JOURNAL_SOURCE
- WD_JOURNAL_SUBMIT
- WD_SPEND_CATEGORY

Inventory Location Transfers

This integration will push reconciled Location Transfers from Crunchtime to Workday as Journal Entries. The information is captured at a summary level (by GL account). This will be a unidirectional push from Crunchtime to Workday.

Key Related UDAs:

- WD_COST_CENTER
- WD_JOURNAL_ADDONLY
- WD_JOURNAL_AUTOCOMPLETE
- WD_JOURNAL_SOURCE
- WD_JOURNAL_SUBMIT
- WD_LOCATION_TRANSFERS_FAILURE_EMAIL
- WD_LOCATION_TRANSFERS_SUCCESS_EMAIL
- WD_SPEND_CATEGORY

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Workday Integration

Process Flows & Related Details (Continued)

Sales Report

This integration will push Sales data from Crunchtime to Workday as Journal Entries. The information is captured at a summary level (by GL account). This will be a unidirectional push from Crunchtime to Workday.

Key Related UDAs:

- WD_COST_CENTER
- WD_JOURNAL_ADDONLY
- WD_JOURNAL_AUTOCOMPLETE
- WD_JOURNAL_SOURCE
- WD_JOURNAL_SUBMIT
- WD_SALES_FAILURE_EMAIL
- WD_SALES_SUCCESS_EMAIL
- WD_SPEND_CATEGORY



Tip: We recommend running Sales weekly.

Vendor Sync Integration

This integration will synchronize Vendor records between Crunchtime and Workday. This will be a unidirectional push from whichever of them is the system of record to the other system. The UDA setting for WD_IS_SUPPLIER_SOR will determine which is the system of record.

Other Key Related UDAs:

- WD_SUPPLIER_AUTOCOMPLETE
- WD_SUPPLIER_CATEGORY
- WD_SUPPLIER_SUBMIT
- WD_VENDOR_FILTER_EXCLUDE
- WD_VENDOR_FILTER_INCLUDE
- WD_VENDOR_SYNC_CONFIG
- WD_VENDOR_SYNC_EMAILS

Crunchtime to Workday:

- When Crunchtime is the SOR for Suppliers, create a Vendor in Crunchtime and push it to Workday.
  - The Vendor Sync process can be initiated via Event Scheduling.

Workday to Crunchtime:

- When Workday is the SOR for Suppliers, create a Vendor in Workday and push it to Crunchtime.



Note: The Outbound Integrations screen in Crunchtime does not display logs for this process. Success or Failure Emails will be triggered once the process has completed for each run.

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Process Flows & Related Details (Continued)

Commissary Orders

This integration will push reconciled Commissary Orders from Crunchtime to Workday as Journal Entries. The information is captured at a summary level (by GL account). This will be a unidirectional push from Crunchtime to Workday.

- The order status must be "Final Reconciled" for these transactions to be eligible for export.
- When scheduled and exported, the "WD Com. Order" export file will be transformed and uploaded as a Workday Journal Entry.

Key Related UDAs:

- WD_JOURNAL_ADDONLY
- WD_JOURNAL_AUTOCOMPLETE
- WD_JOURNAL_SUBMIT

API Endpoints

For every Crunchtime API, "Customer Name", "Authorization Token" and "API Token" are passed as the header. Calls to the Crunchtime application are done through webservices.net-chef.com, which is our gateway to Crunchtime.

API	End Point	API Reference
AP - Invoices	submitSupplierInvoice	submit_Supplier_Invoice
Inventory Delta – Workday	Inventory Delta	Submit accounting Journal
Location Transfer – Workday	Location Transfer	Submit accounting Journal
Supplier Sync – Crunchtime	getSuppliers	get_Suppliers
Supplier sync – Workday	submitSupplier	submit_Supplier

Mapping

If you need additional information regarding field to field mapping between the applications, please contact Crunchtime Support at support@crunchtime.com.

Error Handling and Workday Response Codes

HTTP status codes are used to inform you about the success or failure of a request. The following status codes are used:

- 2xx status codes are used for successful requests.
- 4xx status codes are used for failures due to data or functionality error.
- 5xx status codes are used for failures due to system error, such as system unavailability.

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