

User Manual

Procore Integration with Business Central

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Introduction

What is Procore?

Procore is a cloud-based construction management software platform designed to help construction professionals manage projects and collaborate with team members. It provides a centralized hub for project information, allowing users to streamline communication, track project progress, manage documents, and facilitate collaboration among various stakeholders in the construction industry.

Key features of Procore include:

1. **Project Management:** Procore allows users to create and manage construction projects, including tasks, schedules, and budgets.
2. **Document Management:** It provides a centralized repository for storing and managing project-related documents, drawings, and other files.
3. **Communication:** Procore facilitates communication among project team members by providing tools for discussions, comments, and notifications.
4. **Quality and Safety:** The platform often includes features for tracking and managing quality control and safety processes on construction sites.
5. **Bidding and Tendering:** Some versions of Procore include tools for managing the bidding and tendering process for construction projects.
6. **Integration:** Procore can integrate with other software and tools commonly used in the construction industry, such as accounting software, scheduling tools, and more.

We will be integrating the Procore portal with Business Central enabling users to effortlessly access various features of Business Central through Procore. This integration aims to provide a user-friendly interface for efficient construction management, ensuring a smooth and unified experience for our users.

Setup Preparation

Procore Setup in Business Central

Procore setup in business central is available on the sales order role center:

The screenshot shows the Dynamics 365 Business Central interface. The top navigation bar includes 'CRONUS USA, Inc.', 'Sales', 'Procore', 'Purchasing', 'Inventory', 'Posted Documents', 'Shopify', and 'All Reports'. A dropdown menu for 'Procore Setup' is open, showing options: 'Request', 'Masters', 'Transactions', and 'Error log'. Below the menu is a table of sales orders with columns: Responsibility Center, Location Code, Phone No., Contact, Balance (\$), Balance Due (\$), Sales (\$), Payments (\$), and CF.

Responsibility Center	Location Code	Phone No.	Contact	Balance (\$)	Balance Due (\$)	Sales (\$)	Payments (\$)	CF
01905893	Yellow's Furnishings	YELLOW	Mr. Mike Nash	0.00	0.00	0.00	0.00	
01905899	Live Home Furnishings	YELLOW	Mr. Scott Mitchell	2,461.00	0.00	2,461.00	0.00	
01905902	new concepts Furniture	YELLOW	Ms. Tammy L. McDonald	0.00	0.00	0.00	0.00	
10000	Candoxy Canada Inc.	YELLOW	Mr. Rob Young	0.00	0.00	0.00	0.00	
20000	Elkhorn Airport	YELLOW	Mr. Ryan Danner	0.00	0.00	0.00	0.00	
20309920	London Candoxy Storage Cam...	YELLOW	Mr. John Kane	0.00	0.00	0.00	0.00	
20312912	The Cannon Group PLC	BIRMINGHAM BLUE	Mr. Andy Teal	255,797.35	-382.86	26,324.08	221,721.19	
20339921	Selangorian Ltd.		Mr. Mark McArthur	147,258.97	76,771.80	10,007.97	189,115.13	
	Metatorad Malaysia Sdn Bhd	YELLOW	Mrs. Azleen Samat	0.00	0.00	0.00	0.00	
	Highlights Electronics Sdn Bhd	GREEN	Mr. Mark Darrell Boland	0.00	0.00	0.00	0.00	
	TraxTonic Sdn Bhd	YELLOW	Mrs. Rubina Usman	0.00	0.00	0.00	0.00	

Procore Setup Card

Click on 'New' and populate the following fields:

- **Code:** Identifying the Procore Code, this serves as the primary key for reference.
- **Description:** A concise overview of the Procore code for easy identification and reference.
- **Application/Client ID:** This unique identifier is generated on the Azure portal and furnished by Procore to establish a secure connection.
- **Client Secret:** The Client Secret serves as a confidential key (password) generated on the Azure portal by Procore, enhancing the security of the authentication process.
- **Grant Type:** Specifies the type of web services supported by Procore, influencing the nature of interactions and operations permitted within the system.
- **Redirect URL:** It is the URL where the authorization server redirects the user's browser after the user has granted or denied permissions to the application.
- **Scope:** It is a parameter used during the authorization process to specify the level of access that the application is requesting.
- **Authorization URL:** The Authorization URL in the Azure portal typically refers to the endpoint where users initiate the OAuth 2.0 authorization process to obtain access tokens for a particular application or API.
- **Access Token URL:** It is the token endpoint where an application can exchange an authorization code for an access token.
- **Parent URL:** Common prefix URL for all the APIs used in the data exchange with Procore.
- **Access Token API:** It is the token endpoint where an application can exchange an authorization code for an access token.
- **Fetch Companies Data API:** API to fetch Companies data from Procore.
- **Fetch Projects Data API:** API to fetch Projects list data from Procore.
- **Fetch Line Item Type API:** API to fetch Line item types data from Procore.
- **Fetch Vendor Data API:** API to fetch Vendor list data from Procore.
- **Fetch Commitments Data API:** API to fetch commitments data from Procore.
- **Fetch Commitment Line API:** API to fetch commitment lines data from Procore.
- **Fetch Prime Contracts API:** API to fetch prime contracts data from Procore.
- **Fetch Prime Contract Lines API:** API to fetch prime contract lines data from Procore.
- **Post Purchase Invoices API:** API to post the posted purchase invoices to Procore.
- **Fetch Sales Invoices API:** API to post the posted sales invoices to Procore.
- **Post Purchase Payments API:** API to post the purchase payments to Procore.
- **Post Sales Payments API:** API to post the sales payments to Procore.

Work Date: 1/23/2025

ProConnect Setup

Request Access Token Refresh Access Token

Azure Client ID ██████████ Company ID in Use 4269406

Azure Secret ID ██████████ Company Name in Use Netsmartz2.0

Endpoints

Authorization URL	https://sandbox.procore.com/o...	Fetch Commitments ...	/rest/v1.0/purchase_order_cont...
Access Token URL	https://sandbox.procore.com/o...	Fetch Commitment Li...	/rest/v1.0/purchase_order_cont...
Parent URL	https://sandbox.procore.com	Fetch Prime Contract...	/rest/v1.0/prime_contracts/?
Access Token API	https://login-sandbox.procore...	Fetch Prime Contract ...	/rest/v1.0/prime_contracts/%1/...
Fetch Companies Dat...	https://sandbox.procore.com/r...	Post Purchase Invoice...	/rest/v1.0/requisitions?
Fetch Projects Data API	/rest/v1.0/projects	Fetch Sales Invoices ...	/rest/v1.0/prime_contracts/
Fetch Line Item Type ...	/rest/v1.0/line_item_types	Post Purchase Payme...	/rest/v1.0/contract_payments?
Fetch Vendor Data API	/rest/v1.0/vendors	Post Sales Payment API	/rest/v1.0/contract_payments?

Generation of Access Token

- Click on 'Request Access Token' action button to generate the access token which will be used in the transactions which will be pushed/pulled from Procore.

OAuth 2.0 Application | Work Date: 1/23/2025

PROCORE

Step 1

Request Access Token Refresh Access Token

General

Code PROCORE Grant Type Client Credentials

Description Step 2 Access Token updated successfully.

Application / Client ID host

Client Secret

Endpoints

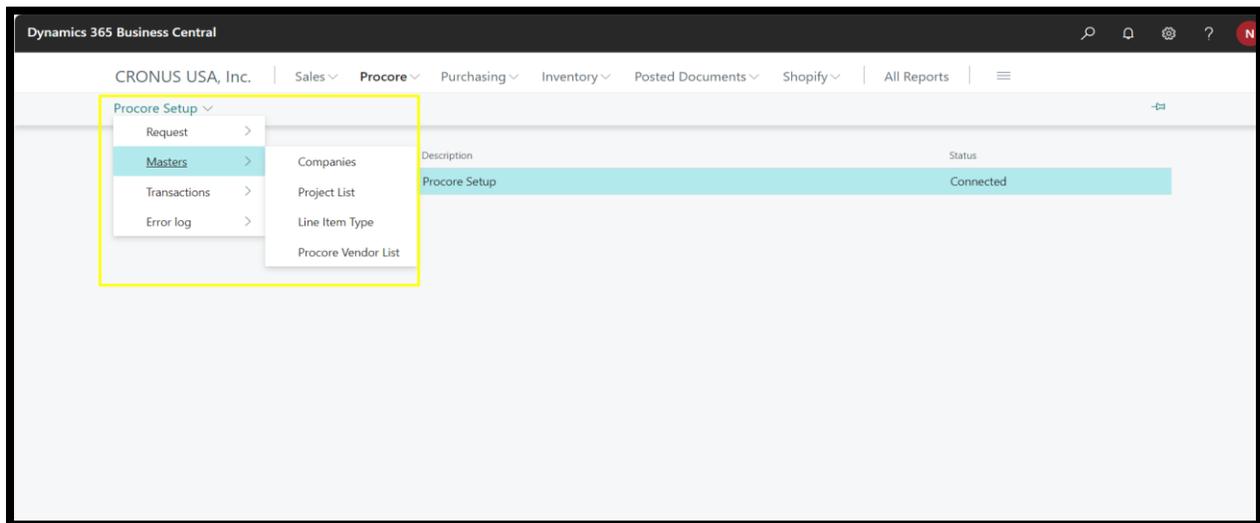
Authorization URL https://sandbox.procore.com/oaui Access Token URL https://sandbox.procore.com/oaui

Creation of Master Setups

The Procore Integration encompasses four primary master tables essential for seamless functionality, as outlined below:

- Companies
- Project List
- Line Item Type
- Procore Vendor List

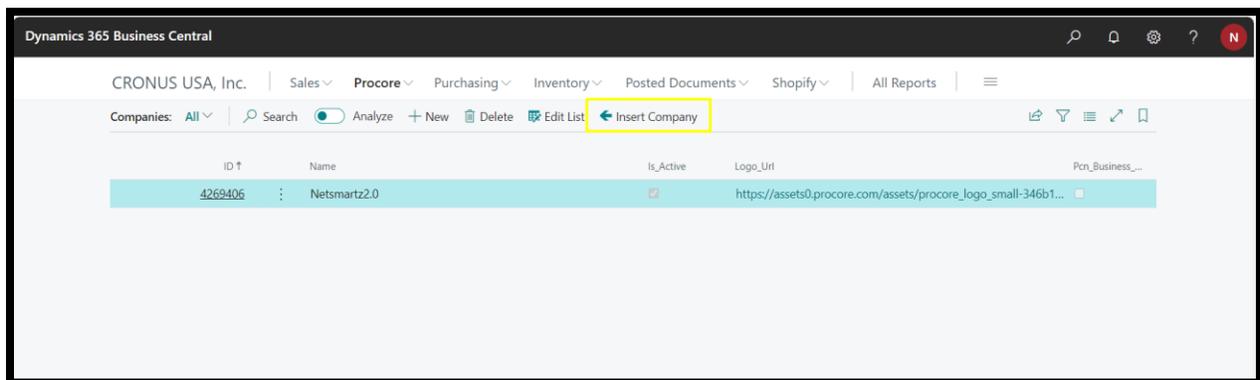
These master tables serve as foundational components, playing pivotal roles in organizing and managing critical data to enhance the effectiveness of the Procore Integration.



1. Companies:

The Company Directory allows people to create, import, and store an unlimited amount of user information in Procore. Procore Admins can also invite people to join Procore as users, as well as set user access permissions to different Procore tools.

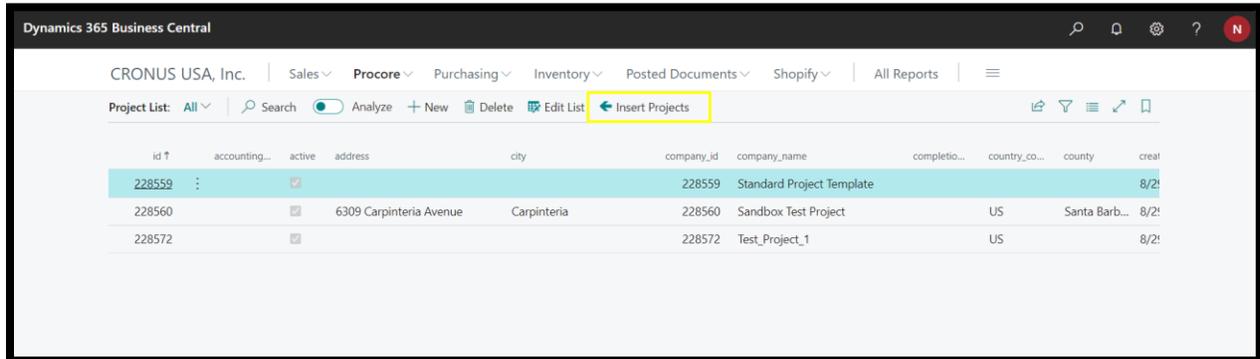
To insert the company data in Business Central, tap on 'Insert Company' action button on the 'Companies' page:



2. Projects:

Projects store all contact data for project team members and vendors. Invite project collaborators and control which tools they can access as well as their tool-specific permissions.

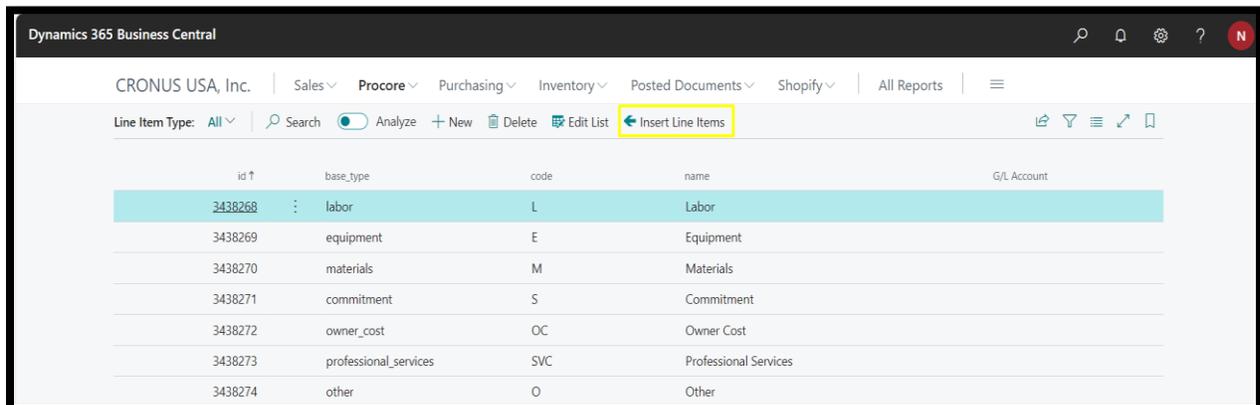
To insert the projects in Business Central, tap on 'Insert Projects' action button on the 'Project List' page:



3. Line Items:

Line items consists of the schedule of values which are mapped with the General Ledger accounts in Business Central and can be used as item lines in the orders.

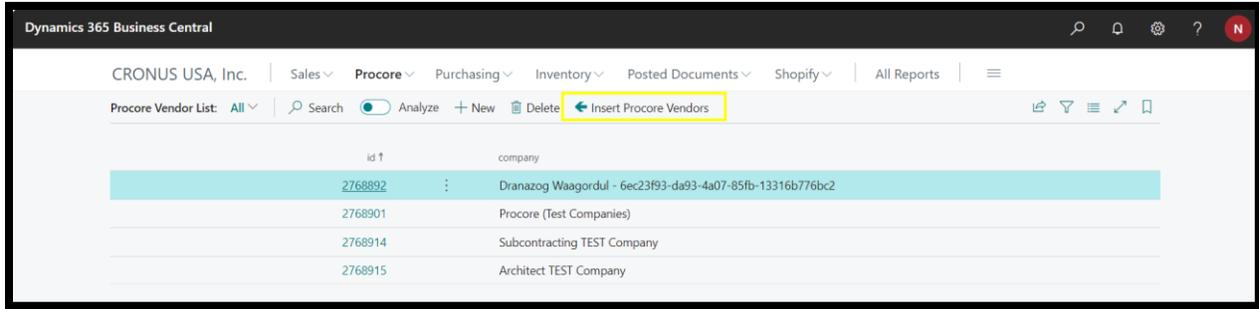
To insert the line items in Business Central, tap on 'Insert Line Items' action button on the 'Line Item Type' page:



4. Vendors:

Vendors represent the roster of suppliers who offer products and seamlessly synchronize their information with Business Central.

To insert the line items in Business Central, tap on 'Insert Vendors' action button on the 'Procure Vendors List' page:

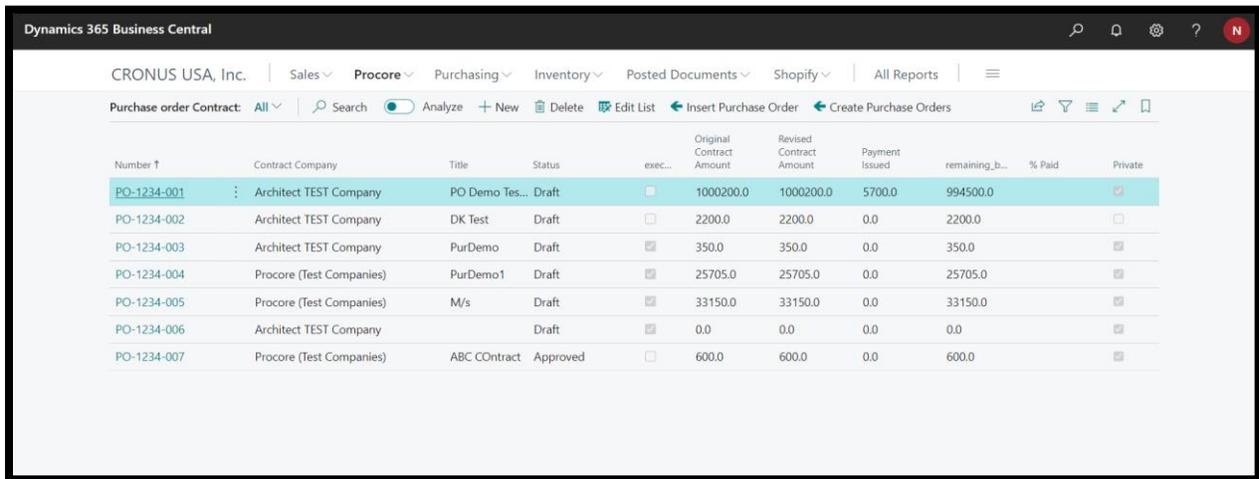


Transactions

Syncing Transactions in Business Central

Business Central meticulously manages two types of transactions, ensuring a streamlined flow of data:

1. **Inbound Transactions:** Pulled from Procure into Business Central.
 - a. Purchase Order Contracts



- b. Sales Order Lists

Dynamics 365 Business Central

CRONUS USA, Inc. | Sales | Procure | Purchasing | Inventory | Posted Documents | Shopify | All Reports

Sales order List: All | Search | Analyze | + New | Delete | Edit List | Insert Sales Order | Insert SO Line

Number ↑	Owner/Client	Title	Status	Exec...	Original Contract Amount	Remaining Balance Amount	Revised Contract Amount	Payment Received	% Paid
1	Subcontracting TEST Company	Dk	Approved	<input checked="" type="checkbox"/>	11,100.00	11,000.00	11,100.00	100.00	0.90
2	Architect TEST Company	M/S	Draft	<input type="checkbox"/>	1,200.00	1,200.00	1,200.00	0.00	0.00
3	Architect TEST Company	Dem0	Draft	<input type="checkbox"/>	38,000.00	38,000.00	38,000.00	0.00	0.00
4	Procure (Test Companies)	Demo1	Draft	<input type="checkbox"/>	100,000.00	100,000.00	100,000.00	0.00	0.00
5	Architect TEST Company	Demo3	Draft	<input type="checkbox"/>	10,000.00	10,000.00	10,000.00	0.00	0.00
6	Subcontracting TEST Company	ABC Owner Contr...	Draft	<input type="checkbox"/>	5,800.00	5,800.00	5,800.00	0.00	0.00
7	Architect TEST Company	Netsmartz Owner...	Out For Bid	<input type="checkbox"/>	3,000.00	3,000.00	3,000.00	0.00	0.00
8	Architect TEST Company	Owner Netsmartz	Draft	<input type="checkbox"/>	11,000.00	11,000.00	11,000.00	0.00	0.00
9	Procure (Test Companies)	PrimContractABC	Draft	<input type="checkbox"/>	300.00	300.00	300.00	0.00	0.00

2. Outbound Transactions: Pushed from Business Central to Procore.

a. Payment Vouchers

Dynamics 365 Business Central

CRONUS USA, Inc. | Sales | Procure | Purchasing | Inventory | Posted Documents | Shopify | All Reports

Payment Voucher: Custom filtered | Search | Analyze | + New | Delete | Edit List | Sync Payments | Download Payments

Account Type	ID ↑	Project_id	contract_id	Transaction_num... date	draw_requ...	invoice_date	invoice_number	amount	payment_...	payment_n...	notes
G/L Account	1	0	0								

b. Sales Invoice List

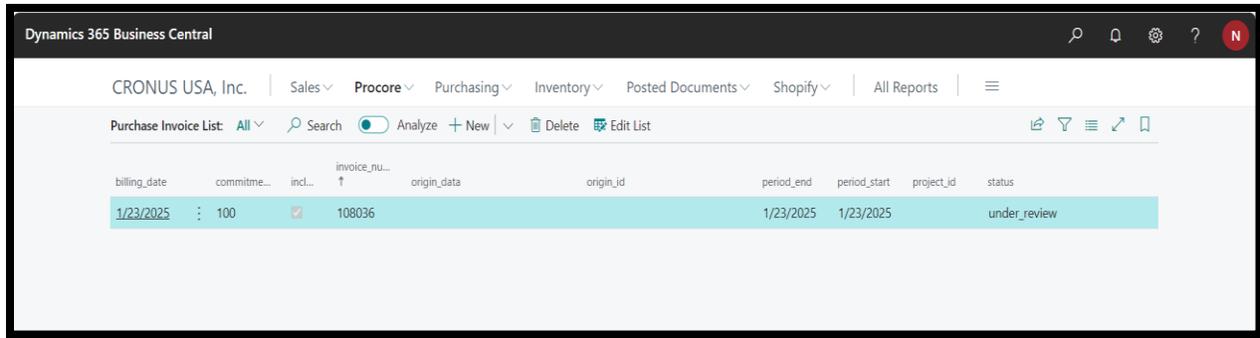
Dynamics 365 Business Central

CRONUS USA, Inc. | Sales | Procure | Purchasing | Inventory | Posted Documents | Shopify | All Reports

Sales Invoice List: All | Search | Analyze | + New | Delete | Edit List

billing_date	commitme...	incl...	invoice_nu... ↑	origin_data	origin_id	period_end	period_start	project_id	status
1/23/2025	100	<input checked="" type="checkbox"/>	103027			1/23/2025	1/15/2025		under_review

c. Purchase Invoice List



The screenshot shows the Dynamics 365 Business Central interface. At the top, it displays 'Dynamics 365 Business Central' and 'CRONUS USA, Inc.' with various navigation menus like Sales, Procure, Purchasing, Inventory, Posted Documents, Shopify, and All Reports. Below this is a 'Purchase Invoice List' section with a search bar and options for 'Analyze', '+ New', 'Delete', and 'Edit List'. A table is displayed with the following columns: 'billing_date', 'commitme...', 'incl...', 'invoice_nu...', 'origin_data', 'origin_id', 'period_end', 'period_start', 'project_id', and 'status'. A single row is highlighted in light blue with the following values: '1/23/2025', '100', a checked checkbox, '108036', empty cells for 'origin_data' and 'origin_id', '1/23/2025', '1/23/2025', empty cells for 'project_id', and 'under_review'.

billing_date	commitme...	incl...	invoice_nu...	origin_data	origin_id	period_end	period_start	project_id	status
1/23/2025	100	<input checked="" type="checkbox"/>	108036			1/23/2025	1/23/2025		under_review

This dual transactional approach ensures comprehensive coordination and data integrity between the two systems.

This synchronization is orchestrated through job queues, executing on a daily basis to efficiently transfer data to and from Procure into staging tables created in Business Central, ensuring accuracy and consistency. Then, the data from staging tables are moved to the base tables. For instance, the data in 'Purchase order contracts' table is moved to Purchase header and purchase lines.

Error Handling

Creation of Error logs for each process:

1. **Contract Order Log**
2. **Prime Contract Log**
3. **Payment Log**
4. **API Error Log**