



V1
Document
Management

Invoice Automation for Microsoft Dynamics NAV

Solution Guide

09th August 2018

Contents

Copyright and ownership	3
Introduction	4
Purpose of the Document	4
Portal	4
Table of Functionality in the Standard Solution	5
Authorisation	7
Security.....	7
EDM	7
Invoice Automation	8
DbLogin	9
DbArchive	9
DbCapture	9
PDF Pickup	9
DbArchive Document Types.....	10
Outbound	11
Inbound.....	11
Barcoded.....	11
V1 SmartDeposit	11
EDMImport.....	12
Native Dynamics NAV Attachments	13
Retrieval – Dynamics NAV - Drilldowns.....	14
Retrieval – V1 SmartRetrieve	15
Links.....	16
DbCapture Purchase Invoice Processing	17
Overview	17
Profiles	18
NON POP	19
Coding Lines	19
Example Scenario	19
POP	20
Order Matching	20
Example Scenario	20
Hold Codes	21
Example Scenario.....	21
Out of Scope\Limitations.....	22

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Introduction

This document details the integration between Dynamics Navision 2017 and V1 Document Management 4.5.

The integration covers the archiving of in-bound documents in DbArchive (EDM), the distribution and archiving of outbound documents via email in bulk and the processing of NON POP and POP Invoices through DbCapture (Invoice Automation).

Purpose of the Document

The purpose of this document is to detail the Solution Design of the standard delivery. It illustrates the functionality of the proposed delivery in detail and can be built upon should changes be required for the benefit of the customer prior to sign off and implementation.

Portal

The Invoice Automation for Dynamics Navision 2017 portal is a one stop area for everything from documentation, demos and downloads.

Users are encouraged to bookmark the portal as it is updated regularly with new content.

It has contact details for the support team, an enhancement request form for a simple way to request more features in a controlled and professional context:

The url is: <http://support.wearev1.com/software/NAV/>

Table of Functionality in the Standard Solution

Functionality	Included in this Standard
Document Archiving Inbound / Outbound	
Scan documents via Kofax VRS	✓
Print Barcode for Batch Scanning	✓
Out bound Document Capture to archive	✓
Document Drill Down	✓
Document Searching independently	✓
Associated Document deposit/input	✓
PDF import from folder	✓
PDF import direct from email	✓
Associated Document deposit/input	✓
Conversion and feed of ad hoc documents as PDF for OCR	✓

Document OCR	
Header level OCR	✓
Real Time Verification of Supplier Details	✓
Real Time Invoice Duplicate Check	✓
Multi Company Capable	✓
PO Verification	✓
PO line retrieval	✓
Automated actions for invoices on hold	✓
Credit Note OCR	X
Document Archive	
Document Drill Down	✓
Document Searching independent	✓
Ability to store supporting documentation	✓
Document Authorisation	
Ability to code invoices	✓
Dynamic creation of coding structure based on live lookups	✓
Authorisation and coding via desktop client	*
Authorisation via email	*
Storage of authorisation audit in document archive	*
Storage of authorisation email in document archive	*
Authorisation report	*

* see the Authorisation chapter

Authorisation

The standard solution for NON POP Invoices complements the in-built authorisation system by creating the Invoices in the usual Invoice register.

These invoices can then go on to be authorised via the built in Dynamics NAV authorisation system.

As a professional services engagement, a stage prior to the Invoice register upload can further add to this by providing the following authorise functions in the form of V1's authorisation module, DbAuthorise:

- ▶ Finance User to code the invoice then perform a "Change Route"
- ▶ Approver 1 accepts the document
- ▶ Based on the net value of the document either the next approver gets the document or it goes back to finance for upload into Navision
- ▶ Finance User uploads the document to Navision

Security

Dynamics NAV has separate companies per instance beneath which are configured those users who can use each one.

The integration will not use any security present in native Dynamics NAV database, instead a Company structure will be set up and securable as follows:

EDM

- ▶ A special table is present in the DbArchive database called DBA_FILTER_MAP controls the accessibility of users and companies (explained in a later chapter.)
- ▶ DbScanner is configured manually with profiles for each Company. Each profile will prompt for which company to which the document relates. Barcodes printed from any supported Dynamics NAV page are affixed to the paper copy and when scanned, read for the transactional details and indexed accordingly.

Invoice Automation

- ▶ A state will be set up representing each Company so that the DbCapture state security can be used. The state will show the Company code and name. This will be done as part of the connector install.
- ▶ PDF Pickup will be configured to have directories representing each Company (using the company code) that will feed documents into the relevant state queue. This will be done as part of the connector install. New companies created in NAV will have their respective PDF Pickup directories created automatically.
There are 2 ambiguous directories to cover if a PDF has no company assigned:
 - ▶ !NONPOP
 - ▶ Any PDF's copied into this directory are copied to the NONPOP DbCapture profile and added to the generic 'To be checked' queue. When the company is selected, it will be moved to the relevant queue state.
 - ▶ !POP
 - ▶ Any PDF's copied into this directory are copied to the POP DbCapture profile and added to the generic 'To be checked' queue. When the company is selected, it will be moved to the relevant queue state.
- ▶ Smart Mail is configured manually with either a generic email address for an ambiguous directory, or for each Company. In either case, output to the relevant PDF Pickup folder.
- ▶ DbScanner is configured manually with profiles for each Company. Each profile will automatically set the relevant Company field which in turn will route it to the relevant state queue.

When processing a document in DbCapture the Company field will be available and will default from the folder\queue\state that it has been picked up from.

It will be possible to change the Company and process the document into any other Company that the user has authority to (through state security).

It will also be possible to move the document to a queue\state that the User doesn't have authority to, however that user will then not be able to see it.

DbLogin

The integration is configured to only allow DbLogin user's access to the V1 SmartSuite and DbCapture.

Single sign on and similar technologies is not permitted in the standard solution, but can be implemented as a Professional Services engagement.

DbArchive

Each DbLogin user is assigned access to DbArchive giving them access to those functions it relates to.

Each user can be assigned an access level to dictate which document types they can see / archive against.

Each user is configured to be allowed access to each Dynamics NAV company by way of a specific DbArchive Table (DBA_FILTER_MAP) with 2 fields

UNAME – DbLogin User

KEY – NAV Company to which they have access

The DBA_FILTERMAP_MAP DbArchive table is administrated by the Connector.

DbCapture

The queue states (equating to the Dynamics NAV Company) users have access to be configured during the implementation and DbLogin users are assigned those states they are permitted to see replicating the same security as Dynamics NAV.

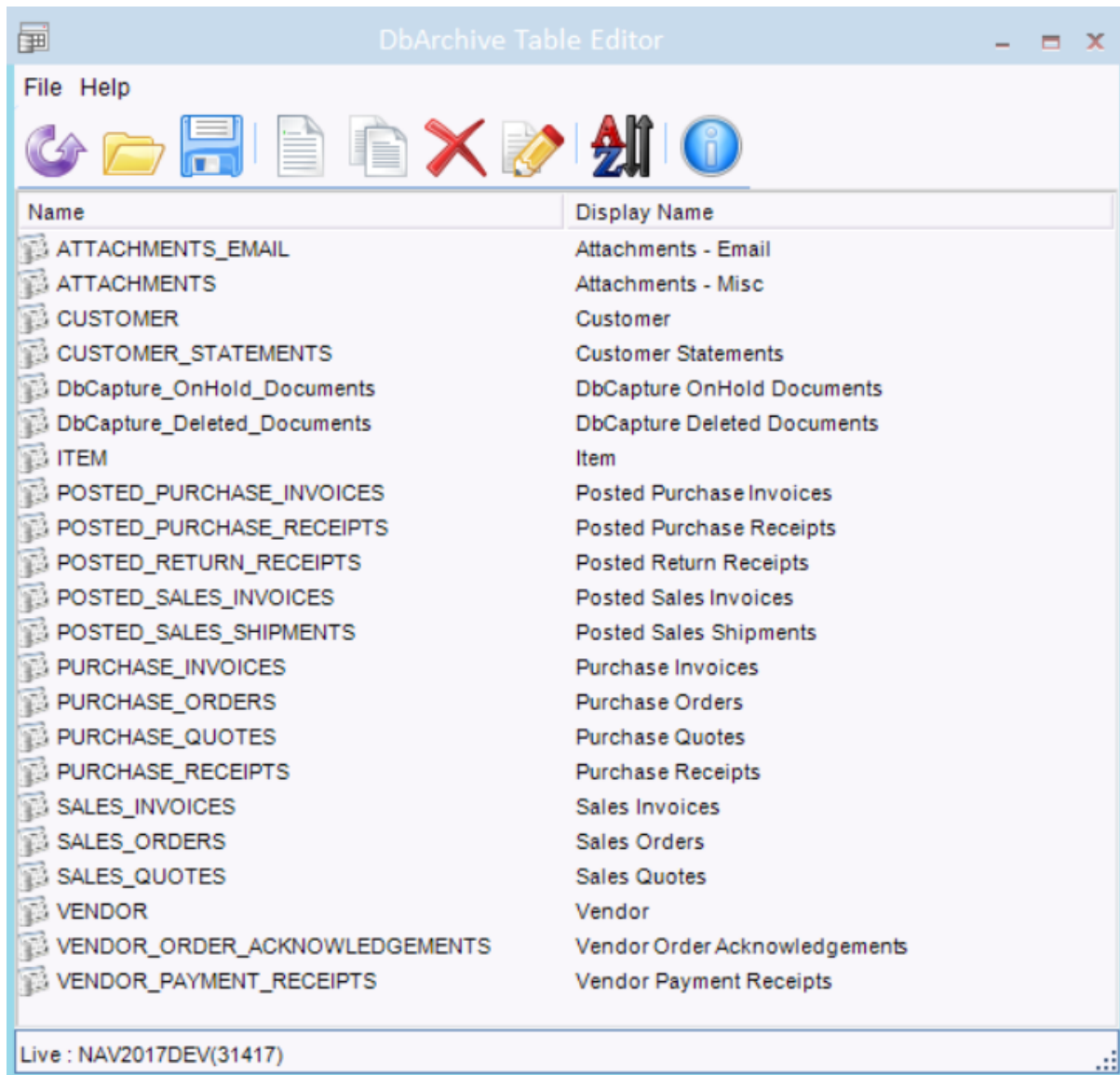
PDF Pickup

Users are given access to a mapped drive on the V1 server containing all the directories for the companies found.

The I.T department must only give access to the share / dir of those companies the user has access to in Dynamics NAV so as to only allow them to see / process documents for that Company.

DbArchive Document Types

The following DbArchive document types are in the standard solution.



The screenshot shows the 'DbArchive Table Editor' window. The title bar reads 'DbArchive Table Editor'. Below the title bar is a menu bar with 'File' and 'Help'. Underneath the menu bar is a toolbar with icons for undo, save, print, delete, insert, and help. The main area contains a table with two columns: 'Name' and 'Display Name'. The table lists various document types. At the bottom of the window, there is a status bar that reads 'Live : NAV2017DEV(31417)'.

Name	Display Name
ATTACHMENTS_EMAIL	Attachments - Email
ATTACHMENTS	Attachments - Misc
CUSTOMER	Customer
CUSTOMER_STATEMENTS	Customer Statements
DbCapture_OnHold_Documents	DbCapture OnHold Documents
DbCapture_Deleted_Documents	DbCapture Deleted Documents
ITEM	Item
POSTED_PURCHASE_INVOICES	Posted Purchase Invoices
POSTED_PURCHASE_RECEIPTS	Posted Purchase Receipts
POSTED_RETURN_RECEIPTS	Posted Return Receipts
POSTED_SALES_INVOICES	Posted Sales Invoices
POSTED_SALES_SHIPMENTS	Posted Sales Shipments
PURCHASE_INVOICES	Purchase Invoices
PURCHASE_ORDERS	Purchase Orders
PURCHASE_QUOTES	Purchase Quotes
PURCHASE_RECEIPTS	Purchase Receipts
SALES_INVOICES	Sales Invoices
SALES_ORDERS	Sales Orders
SALES_QUOTES	Sales Quotes
VENDOR	Vendor
VENDOR_ORDER_ACKNOWLEDGEMENTS	Vendor Order Acknowledgements
VENDOR_PAYMENT_RECEIPTS	Vendor Payment Receipts

* Note: solution requires barcode production on delivery notes, so barcode fonts should be available for the standard reporting environment and/or the printer. Alternative methods can be implemented, please contact V1 Ltd for more detail.

** Note: There is no direct interface for POD's within the NAV interface, but they can be linked to from the Despatch Note from within WebQuery / Query and the barcode produced.

Outbound

The outbound facility is the means to distribute documents directly from with the Dynamics NAV interface via email.

The standard solution will provide 1 pre-configured standard report, this is the Sales Invoice. Printing this report 'in bulk' allows for all those customers to receive their Sales Invoices electronically.

As a professional services engagement, any outbound document can be added as a Custom Layout to then be used in conjunction with the outbound facility.

Inbound

Received / on disk documents added to the Invoice Automation database DbArchive. There are several ways in which in-bound documents can be archived:

Barcoded

In an organisation with lower volumes of Purchase Invoices or distributed invoice processing, the automated data capture component may not make business sense. However, the electronic image archive will certainly deliver justifiable business benefits.

In these circumstances, implementing an invoice scanning and archiving solution, with access to images from Dynamics NAV and facilitating workflows is likely to be a better option.

On receipt of invoices a unique human readable barcode label is stuck onto each invoice. Invoice data will continue to be manually keyed into Dynamics NAV in conjunction with the barcode number.

This barcode contains a unique number that will automatically link the scanned image to the transaction.

The invoices are then batched and scanned, with the system automatically reading the barcode.

V1 SmartDeposit

V1 SmartDeposit allows the adhoc deposit of on disk images against any of the standard DbArchive tables. See the portal Crib Sheet and video for more details of usage.

EDMImport

For users that do not have access to the V1 SmartPortal and want to archive documents, a directory is automatically created beneath the V1 home directory called EDMIMPORT.

Subdirectories are automatically created beneath the EDMIMPORT directory, one for each NAV company.

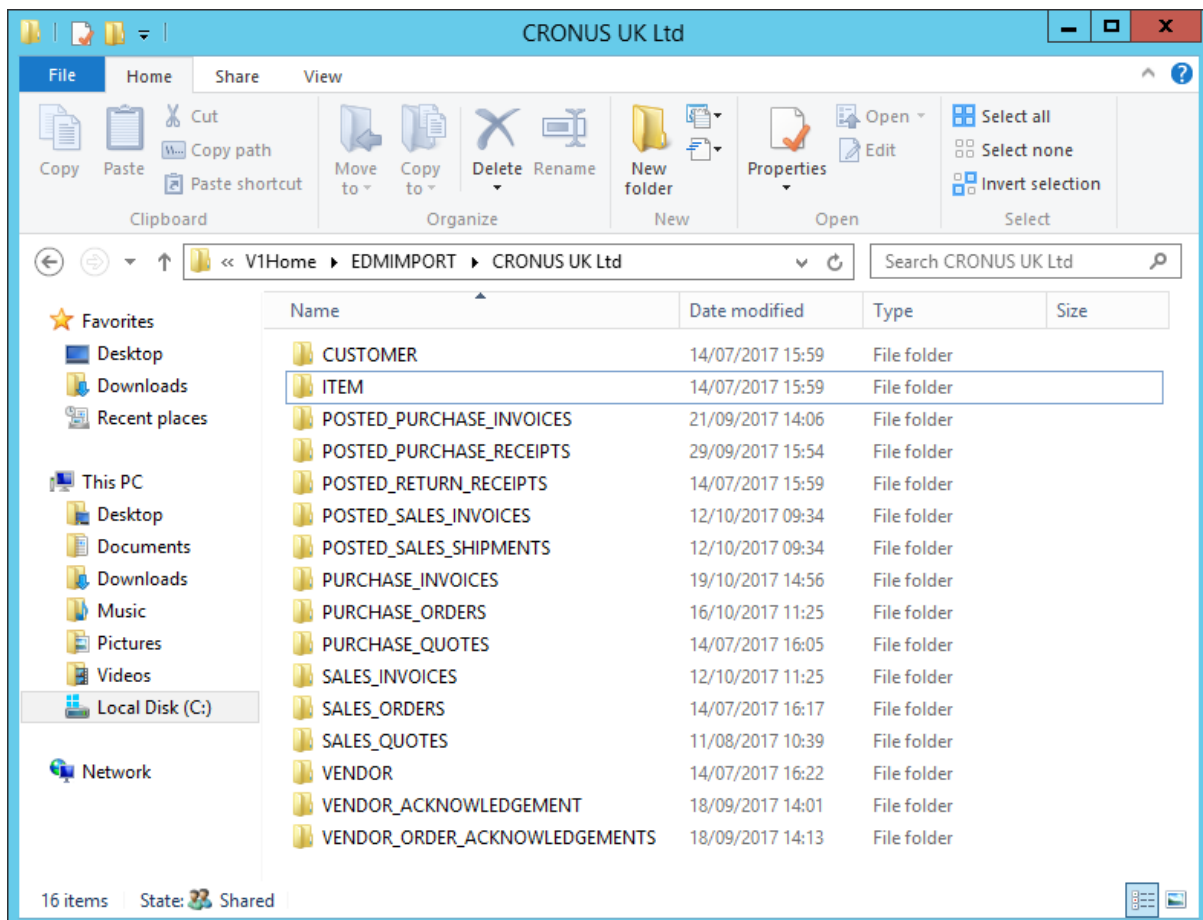
Beneath each company directory is each one for each of the supported DbArchive tables.

Beneath each Table directory are all transactions for each document type to which they are associated.

Any image copied and pasted in this directory is archived automatically against that transaction.

Example: User has a PDF called quotefile.pdf they wish to associate to the Purchase Quote 1107 in the CRONUS UK Ltd company.


They navigate to \\NAVSERVER\EDMIMPORT\CRONUS UK Ltd\PURCHASE_QUOTES\1107 and copy quotefile.pdf in to it. 30 seconds later, the pdf disappears which is an indication it has been archived.




Native Dynamics NAV Attachments

Dynamics Navision 2017 has the concept of an Incoming attachment.

These attachments can be associated with one or more transactions:

Incoming Document ... ^	
 Attach File >>	
Name	Type
Progress 06210	PDF

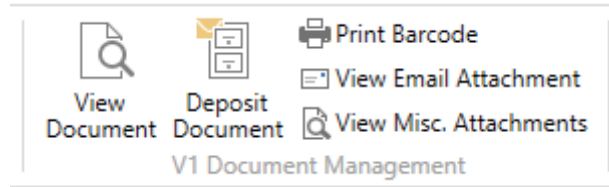
As part of the integration, a background service is installed:

 **DbArchive: Native Document Archiving**

This is monitoring the NAV attachments database and when it finds a new attachment, it will automatically archive the attachment to the transaction to which it relates meaning the same drilldown can be used to see both native attachments and those committed using the V1 methods.

Retrieval – Dynamics NAV - Drilldowns

A 'drilldown' is a means to view an archived image by clicking the associated button from within the Dynamics NAV interface, either via the Role Tailored client, or web client:

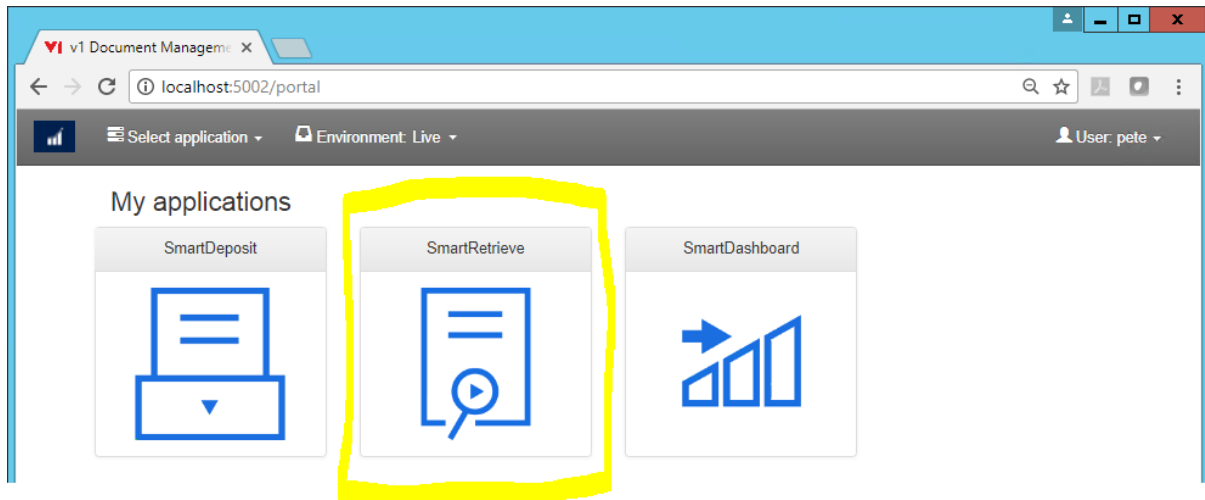


As part of the standard installation, a new V1 Document Management ribbon is created on every Page required which when clicked, opens a web browser and if archived, displays the image associated with that transaction or attachment to it.

The image is displayed using V1 SmartRetrieve, more details in the following chapter.

Retrieval – V1 SmartRetrieve

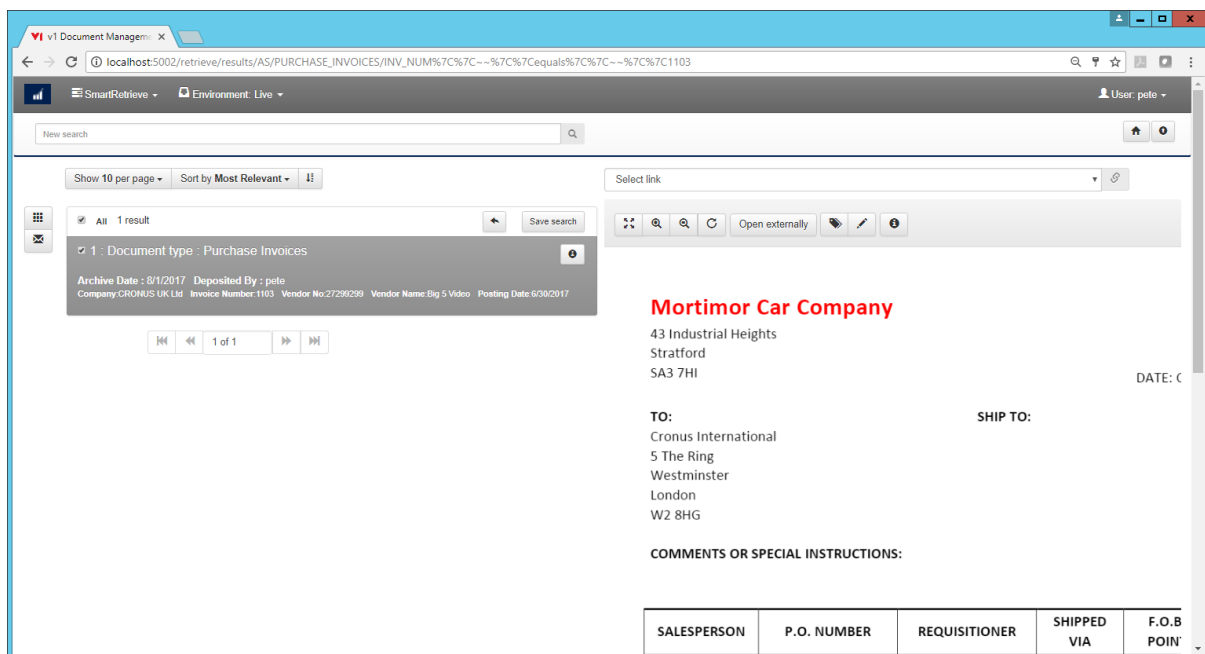
DM4.5 of the core V1 software against which this integration is optimized introduced the V1 SmartPortal:



This contains a suite of 3 capabilities:

- V1 SmartDeposit – The adhoc depositing of images
- **V1 SmartRetrieve – The viewing of archived images**
- V1 SmartDashboard – See reports and KPI's of the DM system

V1 SmartRetrieve is accessed via the V1 Smart Portal url e.g. <http://NAVDATABASESERVER:5002> and log in using the configured DbLogin credentials.



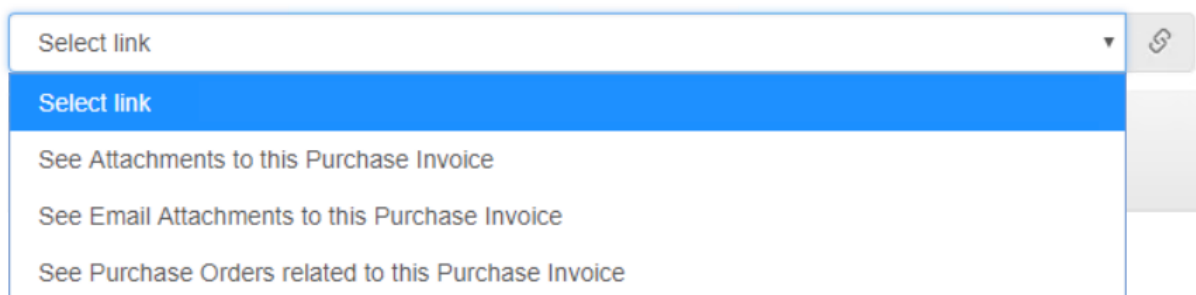
Links

The following DbArchive document types are in the standard solution.

Description	Source Table	Source Field	Destination Table	Destination Field
See Attachments to this Purchase Invoice	PURCHASE_INVOICES	INV_NUM	ATTACHMENTS	TRANS_NUM
See Purchase Invoices related to this Attachment	ATTACHMENTS	TRANS_NUM	PURCHASE_INVOICES	INV_NUM
See Email Attachments to this Purchase Invoice	PURCHASE_INVOICES	INV_NUM	ATTACHMENTS_EMAIL	TRANS_NUM
See Purchase Invoices related to this Email Attachment	ATTACHMENTS_EMAIL	TRANS_NUM	PURCHASE_INVOICES	INV_NUM
See Purchase Invoices related to this Purchase Order	PURCHASE_ORDERS	VENDOR_NO	PURCHASE_INVOICES	VENDOR_INV_NO
See Attachments to this Purchase Order	PURCHASE_ORDERS	ORDER_NUM	ATTACHMENTS	TRANS_NUM
See Purchase Orders related to this Attachment	ATTACHMENTS	TRANS_NUM	PURCHASE_ORDERS	ORDER_NUM
See Email Attachments to this Purchase Order	PURCHASE_ORDERS	ORDER_NUM	ATTACHMENTS_EMAIL	TRANS_NUM
See Purchase Orders related to this Purchase Invoice	PURCHASE_INVOICES	VENDOR_INV_NO	PURCHASE_ORDERS	VENDOR_NO
See Purchase Quotes related to this Email Attachment	ATTACHMENTS_EMAIL	TRANS_NUM	PURCHASE_QUOTES	QUOTE_NUM
See Purchase Orders related to this Email Attachment	ATTACHMENTS_EMAIL	TRANS_NUM	PURCHASE_ORDERS	ORDER_NUM
See Sales Invoices related to this Email Attachment	ATTACHMENTS_EMAIL	TRANS_NUM	SALES_INVOICES	INV_NUM
See Sales Orders related to this Email Attachment	ATTACHMENTS_EMAIL	TRANS_NUM	SALES_ORDERS	ORD_NUM
See Sales Quotes related to this Email Attachment	ATTACHMENTS_EMAIL	TRANS_NUM	SALES_QUOTES	QUOTE_NUM
See Purchase Quotes related to this Attachment	ATTACHMENTS	TRANS_NUM	PURCHASE_QUOTES	QUOTE_NUM
See Sales Invoices related to this Attachment	ATTACHMENTS	TRANS_NUM	SALES_INVOICES	INV_NUM
See Sales Orders related to this Attachment	ATTACHMENTS	TRANS_NUM	SALES_ORDERS	ORD_NUM
See Sales Quotes related to this Attachment	ATTACHMENTS	TRANS_NUM	SALES_QUOTES	QUOTE_NUM
See Sales Invoices for this Customer	CUSTOMER	CUST_NO	SALES_INVOICES	CUST_NO
See Sales Orders for this Customer	CUSTOMER	CUST_NO	SALES_ORDERS	ORD_NUM
See Sales Quotes for this Customer	CUSTOMER	CUST_NO	SALES_QUOTES	CUST_NO
See Statements for this Customer	CUSTOMER	CUST_NO	CUSTOMER_STATEMENTS	CUSTOMER_NO
See Email Attachments to this Purchase Quote	PURCHASE_QUOTES	QUOTE_NUM	ATTACHMENTS_EMAIL	TRANS_NUM
See Attachments to this Purchase Quote	PURCHASE_QUOTES	QUOTE_NUM	ATTACHMENTS	TRANS_NUM
See Purchase Orders related to this Purchase Quote	PURCHASE_QUOTES	QUOTE_NUM	PURCHASE_QUOTES	VENDOR_ORDER_NO
See Email Attachments for this Sales Invoice	SALES_INVOICES	INV_NUM	ATTACHMENTS_EMAIL	TRANS_NUM
See Attachments for this Sales Invoice	SALES_INVOICES	INV_NUM	ATTACHMENTS	TRANS_NUM

Live : NAV2017DEV(31417)

They are accessed when using V1 SmartRetrieve, for example when viewing a Purchase Invoice, a user will be given the following options:



Links can be added at any-time using the DbLogin Admin Consoles link editor, but in order to link documents, data must be in common in a field in each table.

A professional services engagement may be required if further lookups are needed to achieve this beyond the standard.

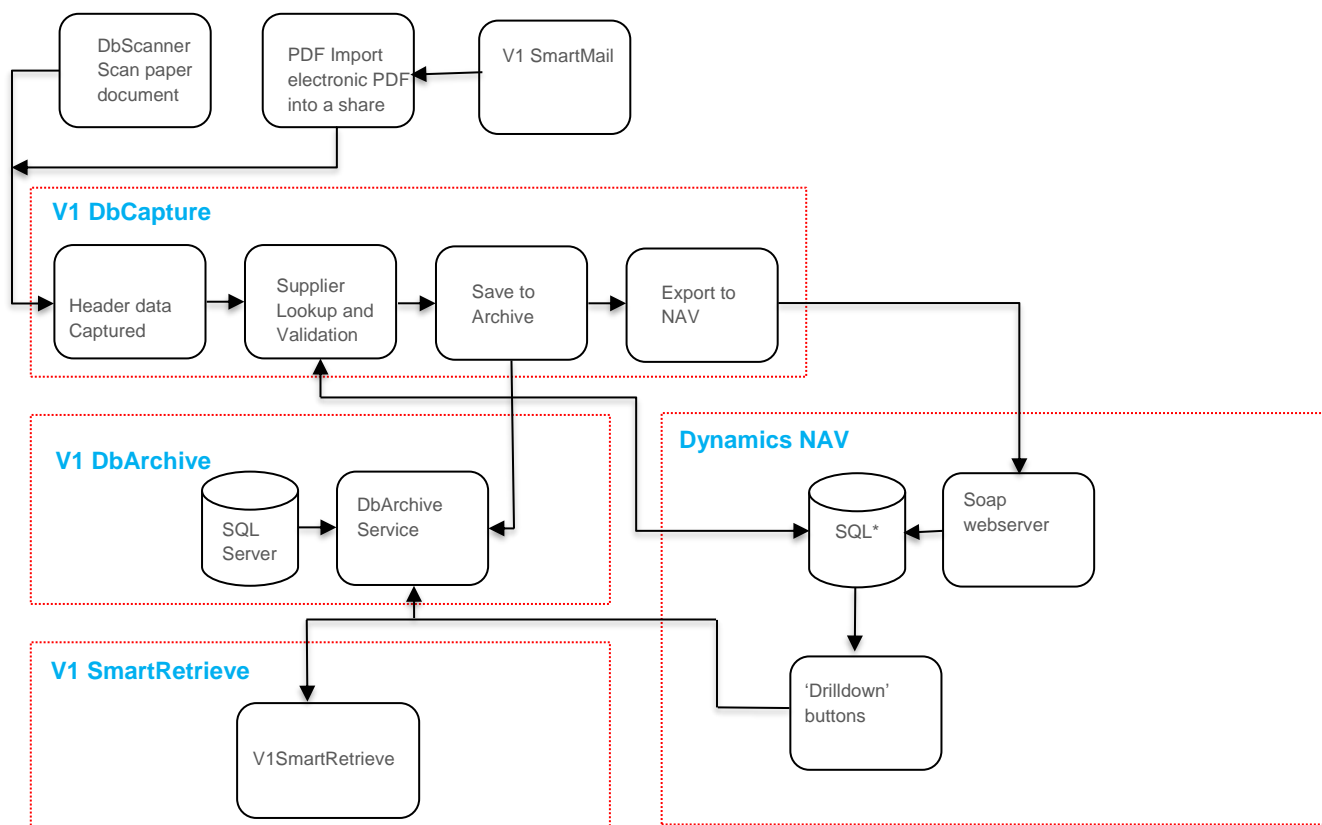
DbCapture Purchase Invoice Processing

Overview

Dynamics NAV has the concept of 2 types of Invoices, a NONPOP Invoice which has no order but requires 'coding' so it can be added to the ledger.

A POP Invoice is one that does have an order to which it is matched against.

Below is an example of the end to end process:



*If a NONPOP Invoice, it is created in the Invoice Register

*If a POP Invoice, the Order is converted to a Posted Purchase Invoice

There are 3 principal ways to get a document into DbCapture for processing:

1. Scanning the paper copy via DbScanner and importing in to the DbCapture system
2. Copying an electronic Invoice (*.PDF) in to the pre-designated directory for the company
3. If received as an email attachment, is automatically extracted from the email and imported in to a catch all DbCapture queue for a company to then be assigned.

A video demo on the portal explains each of these methods step-by-step.

Profiles

A DbCapture profile is the description of the header and grid values necessary to identify and capture sufficient data from the Invoice so that it can then be automatically created in the Dynamics NAV database.

The standard integration features 2 DbCapture profiles:

- Dynamics Navision 2017 – NON POP Profile
- Dynamics Navision 2017 – POP Profile

How each are used and the documents they process are covered in the following chapters.

NON POP

A NON POP Invoice is one that has no order associated to it.

The integration supports the capability to create a NON POP Invoice in the Dynamics NAV invoice register with or without coding lines.

Coding Lines

DbCapture is used to 'code' the Invoice.

The DbCapture grid populates the columns with the same information as if using Dynamics NAV natively.

Single / multiple lines can be added (the user is prompted how many lines they wish to add) at any time based on the type.

The following types can be coded by default:

- ▶ Item
- ▶ G/L Account
- ▶ Fixed Asset
- ▶ Charge (Item)

Example Scenario

- Progressive Home Furnishings send an electronic invoice via email as a PDF attachment for 2 items, a sofa and a cushion.
- The email is automatically picked up via V1 SmartMail, the attachment extracted and imported in to the catch all DbCapture queue.
- Ray one of the AP Clerks logs in to DbCapture and opens the Invoice, identifying it as one for the CRONUS Dynamics NAV company and assigns it. The document is then OCR'ed for its header information.
- Where prompted in the dropdowns, Ray picks the open for Item and 2 lines, clicks the Check button.
- 2 lines are then created in the grid, pre-populated with those items available. Based on the Invoice, Ray quickly picks off the Item, quantity and the price is then automatically calculated.
- The lines total the header, Ray accepts it.
- 5 seconds later, the Invoice is created in the Dynamics NAV database in the CRONUS Company with all the relevant information populated in the Invoice register ready to be authorized. The image is accessible via the View Document button in the V1 Document Management ribbon.

POP

A POP Invoice is one that has an order and lines for that Order associated to it.

The integration supports the capability to create a POP Invoice, converting the Order in to a Posted Purchase Invoice.

If a partial match, only the received lines are created as a posted Purchase Invoice, the remaining quantity to Invoice stays on the original order.

When the Invoice is processed for the remaining quantity, that is created as a separate Posted Purchase Invoice and when a total match.

Order Matching

There are 2 ways the order(s) are identified.

1. The user can search for partially / fully received orders in the DbCapture Client for the supplier
2. The system will OCR the order number, in doing so validates it is from the company and supplier and if so, return the received lines it finds and populate the grid with the information.

Example Scenario

- Ray one of the AP Clerks makes an order to Progressive Home Furnishings for 5 picture frames.
- The frames arrive 2 days later.
- Ray is emailed the Invoice as a PDF attachment at the end of the week, he copies it to the CRONUS PDF Pickup sub-directory.
- 30 seconds later, it appears in the DbCapture Admin client.
- Ray quoted the order number when he placed the order which Progressive Home Furnishings added to the Invoice as usual (they're a regular supplier).
- The order number is OCR'ed, the lines retrieved from the Dynamics NAV database.
- The sum of the lines add up to the header, the Invoice is a match. Ray accepts the Invoice.
- 5 seconds later, the order is converted to a Posted Purchase Invoice and created in the Dynamics NAV database in the CRONUS Company with all the relevant information populated. The image is accessible via the View Document button in the V1 Document Management ribbon.

Hold Codes

In DbCapture, putting a document ‘On Hold’ is a workflow event allowing for a department to be informed of an anomaly, moving it to another profile or waiting for an action to be performed.

The portal has a document outlining in detail each OnHold scenario and the role it performs.

As a professional services engagement, more OnHold scenarios can be added to perform any number of tasks based on the workflow of the document not present in the standard.

Example Scenario

- Sally one of the AP Clerks and new to the team sends an email to the pre-designated email address for electronic Invoices. It’s a PDF of a Sales Order.
- 30 seconds later, it appears in the DbCapture Admin client.
- Ray one of the AP Clerks logs in to DbCapture and opens the document seeing it isn’t an Invoice, puts it on hold giving it a reason of ‘Document not an Invoice’.
- The action of doing this archives the document to the Smart EDM database and an email sent to the AP Department.
- Email is received and reviewed by Tommy the AP Department team leader. Tommy isn’t a DbCapture user, but via the link in the email open the image in V1 Smart Retrieve and can see it isn’t a Purchase Invoice.
- He phones Ray and confirms it’s OK to delete the document from DbCapture.
- Ray deletes the document, in doing so it’s archived to the Smart EDM database.
- At the end of the week, Tommy runs his V1 Smart Retrieve report to see what documents have been deleted for that week and their reason for deletion.
- Sally is reminded to only send Invoices to the pre-designated email address for electronic Invoices, it doesn’t happen again.

Out of Scope\Limitations

The following areas are out of scope for the *standard* integration, however with analysis of the requirement can be considered as a V1 Professional Services Engagement:

- ▶ DbAuthorise is not included in the standard in favor of the native Dynamics NAV approval system
- ▶ Processing Credit notes in DbCapture
- ▶ Single sign on is not supported