V1
Document Management

EDD for Sage X3
Electronic **D**ocument **D**elivery

EDM for Sage X3
Electronic **D**ocument **M**anagement

PIA for Sage X3
Purchase **I**nvoice **A**utomation

SOA for Sage X3
Sales **O**rder **A**utomation

What's New with R13

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Contact Details
Please address any queries regarding this document to:

V1 Limited
No 4, Booths Park
Chelford Road
Knutsford
WA16 8GS
United Kingdom

Telephone: +44 1625 856505
Email: hello@WeAreV1.com

Contents

1. Introduction

1.1 Background

"R13" is the biggest update to the V1 Electronic Document Management (EDM) solution for Sage X3 since its launch. With this release all of the V1 components have been updated to use the latest generic V1 products. In addition there have been a number of changes to the integration with the Sage system. The objectives of the upgrade are:

- Support for a wider range of architectures
- Improved security
- Simplified integration with Sage
- Improved performance
- Additional functionality

While the functionality provided by the EDM solution is broadly the same as with earlier releases with some additions. There have inevitably been some changes to the way the system works. This release is best considered a new solution rather than an upgrade to R12 and will require some familiarisation for staff implementing and supporting it.

This document is aimed at experienced Sage EM business partners and aims to bring together details of what is new in the new release, what has changed and what the implications might be.

Please note that R13 should only be installed as part of a new implementation of the EDM solution system that has not previously had the EDM installed. R13 is not currently suitable for in-place upgrades on servers which have already had an earlier release installed.

It is recommended that existing EDM users are upgraded to R13 the next time that a new version of Sage EM is installed on a new server. In most cases this will be done as users move to V11 or V12. The existing archive database of documents can of course be migrated to the new system at the point of going live.

This document is based on R13 prior to Patch 1 and on V1 DM suite 4.5.1.1

1.2 Overview of R13

▶ **The core V1 components have been updated from 2.x to 4.x** and the hardware requirements updated accordingly. Windows Server 2008 is no longer supported.

▶ **The EDM solution no longer needs to be installed on the Sage EM application server.** This simplifies support for a wider range of EM architectures, but it also means there are changes to the way the system is configured.

▶ The integration has been largely rewritten and **simplified for improved performance and ease of maintenance**.

▶ The initial release of **R13 is for English-speaking customers only**. The installation and the new web components have not yet been translated into other languages. The translation process is expected to start in conjunction with Sage partners around the world later in 2018.

▶ **The retrieval and display of documents is now done using a new web component** known as SmartRetrieveERP rather than DbWebQuery. This allows for improved security as well as additional functionality. Viewing documents from Sage no longer passes credentials in the URL, so **users will need to login the first time they use the function**.

▶ **The Electronic Document Delivery (EDD) functionality no longer uses a webservice** and the document delivery process has been separated from the archiving process. This improves performance and simplifies support, but it does mean that **all Crystal Report layouts will need to be updated for use with R13**.

▶ Some document types that were deprecated several years ago are no longer present in the system and some **new document types have been added including Journals, Payments and Bills of Lading**.

▶ For external users, ie users who do not use Sage EM, there is a new portal, known as the Smart Portal, with more functionality and a **new option to manage retention rules and document deletion.**

▶ **The DbDeposit client has been replaced by SmartDeposit**, a web application available through the Smart Portal. There are some minor differences in functionality, but the DbDeposit client is still available for backward compatibility if required.

▶ **The Purchase Invoice Automation (PIA) solution has accordingly been updated to use release 4.x of V1 Capture and a new OCR engine**. A new improved configuration is available which handles both Purchasing Invoices (PIH object) and Supplier BP Invoices (BIS object) in a single profile and also adds a number of other enhancements.

2. Changes to the EDM Solution

2.1 Architectural Changes

Please note: R13 of the EDM solution only supports Sage X3 PU9 onwards as it is dependent on Syracuse. Release 12.1 remains available for users on V6.5 and later and those installing in French, Spanish and Portuguese.

Prior to R13, the EDM solution had to be installed on the Sage Application Server. This is no longer the case and now most medium to large sites will probably elect to install the EDM solution on a dedicated server. The server should be running Windows Server 2012 R2 or later. Please see the Hardware Requirements document for further details of the supported platforms for release 4.5 of the V1 Document Management suite.

The database can still be located on the same database server as Sage EM. Supported databases are:

Microsoft SQL Server 2014
Microsoft SQL Server 2016.

As a result of this change it is now no longer possible to add and update archiving parameters from within the X3 Parameters/Setup menu. These now need to be configured in the V1 Admin Console. The default tables are still preconfigured. There have been some updates to the table structures, see below.

2.2 Improved Security

While the EDM solution has always used a browser to viewer documents, prior to R13 the web client functionality, known as DbWebQuery, was not considered secure enough for deployment on the Internet without the use of a VPN. In R13 a new document retrieval function, known as SmartRetrieveERP, is used to view documents. This is both more secure and more functional than DbWebQuery. SmartRetrieveERP is based on the full SmartRetrieve interface available through the Smart Portal to External users, but it only allows documents to be viewed.

The new web interface has been hardened from a security point of view and can be used over the public Internet. The Smart Portal can be installed on a separate server to the rest of the EDM solution in a DMZ where appropriate.

The Smart Portal can be used over http or https. We strongly encourage the use of https. The customer or whoever is providing the platform is responsible for providing the certificates. For backwards compatibility for partners and users who have integrated the EDM solution with other applications, it is still possible to pass user credentials in a URL to view a document, but

this is now discouraged. If you do need to pass credentials in this way, we recommend that they are encoded. Contact V1 for more details.

2.3 User Setup

Previously each X3 user had to be allocated an 'EDM Profile' in order to view documents in the EDM repository. However, the vast majority of customers did not want to configure additional security for X3 users, so typically all X3 users used a single EDM profile of X3EDM. Often this profile was left assigned to the only V1 user created by default – the Administrator user. Using the Administrator user to view documents anonymously is a very bad thing from a security point of view. The Administrator user should only be used to configure the V1 user authentication and administration system (DbLogin) and the Smart Portal.

With R13, the EDM Profile field on the Sage user window is not currently used and no credentials are passed to the SmartRetrieve in the URL. It is recommended that at least one new non-Administrator user is created in the V1 Admin console for use accessing documents from Sage EM. If partners want to allocate different access levels to different users, additional users can be defined in the V1 Admin Console and given to specific users to log in with. Once logged in users stay logged in until their session expires. Users can configure their browsers to remember their credentials to avoid having to enter them repeatedly.

V1 is continuing discussions with Sage and business partners to investigate options for single sign-on with Sage EM in the future.

2.4 Standard Tables

There have been a number of changes to the standard tables provided with the EDM solution by default and to the columns required within them.

2.4.1 Deprecated Document Types

There were a small number of document types included with the EDM solution which have not been used since Release 2. These tables will no longer be created for new installations. If the tables contain any documents, the documents should not be lost during an upgrade.
The tables are:

V1X3_V1DOC
V1X3_V1XLS
V1X3_V1JPG
V1X3_V1TIF
V1X3_V1XML
V1X3_V1NUL

These tables are not required because any format of document can be stored in any table. It generally makes more sense to have tables based on the nature of the document or

transaction rather than the file format. This makes it easier to have metadata appropriate to the document.

2.4.2 New Document Types

A number of new document types matched to Sage objects have been added to the solution. These are:

Bills of Lading (BOL)
Customer BP Invoices (BIC)
Journals (GAS)
Payments (PAY)
Supplier BP Invoices (BIS)

The FRM object, which is labelled in Sage EM as 'Remittances', has been supported for some time and some users use this to archive their remittance advices. However, the FRM object actually relates to batches of instructions going to a bank account. Now in R13, the PAY object can be used so that individual remittance advices can now be associated with the individual payments. There is no need to update any existing documents stored again the FRM object. The FRM object can still be used to archive documents that relate to the batch as a whole, this would be items like signed BACS listings, bank paying in slips, etc. The PAY object can be used for customer receipts and other payments as well as supplier payments.

2.4.3 New Tables

There are a number of new (non document type) tables in the EDM solution database. The updated software should create these tables automatically as required.

The default name for the EDM solution database is now 'DbArchive' rather than 'EDM_DB', although that can be changed.

2.4.4 New Columns

There are a number of new columns in some of the tables. This are required to support some of the new functionality. There are scripts provided to complete certain columns in existing tables when migrating a database from an earlier release to a new system running R13. For example, if retention rules are applied to an existing archive migrated from an earlier release, the retention rules will need to be applied retrospectively.

2.5 Coding Simplified

For X3 developers customising the EDM solution, the coding has been simplified. XV1COMMON has been deprecated in favour of individual processes for each job. This reduces the chances of customisations having unintended consequences in other areas of the system.

All processes, subprograms and webservices now follow a more consistent naming convention:

All names start with 'XV1' which is followed by the object name and then an instruction:

>LU = A single lookup based on a transaction
>LIST = Return a list of values from which to choose
>CHK = Check a value is valid

For example:

The webservice XV1SIHLU does a lookup for details of a Sales Invoice. The subprogram and process have the same name.

The webservice XV1BPSLIST is a lookup returning a list of Suppliers based on criteria passed in the payload, again the subprogram and process are the same name.

The webservice XV1BISCHK checks for the existence of a BIS Supplier Invoice.

2.6 New Background Service

A new EDMIMPORT service is provided to handle the archiving of files in the background. The same service handles files from the EDD function and from the new Archive Document button and can potentially be used to archive documents from other sources too. By default the new service archives files once a minute rather than instantly. This reduces the load on the server and helps the interface to appear more responsive, but there will be a brief delay before documents appear in the indexes queried by SmartRetrieve and the View Document buttons.

Two levels of error detection are built in. The system checks that the Archive service is up and responding and that Syracuse has been properly patched. If either check fails, an email is sent to email address provided for the ITDEPT user in the V1 Admin Console and archiving is suspended until the issue is resolved. This should mean that no documents are lost skipped if a system failure occurs.

3. EDM Functionality for Sage users

3.1 Archiving documents

Prior to R13, Sage users could archive documents by printing reports to ARCHIVE destination or one of the EDD destinations or by using the Sage attachments button and selecting an EDM archiving rule.

Unfortunately the attachments button proved to be one of the main problem areas of the EDM solution: users found it complicated to use to archive documents; there was confusion between the EDM and native attachments functionality; there is a finite limit on the number of attachments that the button can support; and patches from Sage and other developers disabled the functionality on a number of occasions.

From R13 onwards, the EDM solution no longer integrates with the Sage attachments button. Instead we now provide buttons that can be added to various windows to archive documents in a much simpler way. Files can be selected from the local file system or dragged and dropped into the new option and there is no need to select an archiving rule nor to make any manual entry. Unfortunately at the present time you cannot enter a description of the file being archived, but the original filename is preserved.

Two new button functions are available to add to windows: XV1ARCT is used to attach a document to the current record, eg an externally generated quotation to a quotation entry; XV1ARCA is used to archive supporting documents to the current record, eg calculation spreadsheets to an order or a journal.

The way that documents are archived has been simplified. The button copies the documents to a folder structure on the server and a background process polls the folder structure and archives the files. This makes the user interface more responsive, but there will be a brief delay before documents appear in the archive indexes.

The same folder structure can be used to automatically import other documents. This provides a good way to automatically archive sales invoices created using an external application, for example.

When the EDM solution is first implemented, a facility is provided to automate the transfer of documents from Sage's native attachments to the EDM Archive.

3.2 Viewing documents

Buttons can still be added to windows with the XV1IMAGE function to view documents – and in R13 more document types and more windows are supported without the need for coding, but since the integration with the Sage attachments button has been removed, there is no longer an 'EDM Query' option available from the attachments button.

From R13 more document types now support a second button to display supporting documents and additional functionality is available through the document viewer. See tables below.

The new document viewer used in R13 now allows a document to be opened in a separate window. This can be useful for users with a second monitor who want to keep a document open on their second screen and open another document. Sage users can also now view annotations added by external users. If a user is an external user as well as a Sage user additional functionality will be available in the viewer, see below.

4. EDM Functionality for External users

The term external user here refers to users of the document management system who are not users of Sage. When the EDM solution is purchased with Sage EM, the functionality available within Sage is potentially available to all Sage users, although certain functions or document types may be restricted from certain users. Optionally a customer can purchase additional user licences for staff who do not use Sage. These may also be referred to as Full EDM users or Deposit client users.

A Sage user can be an external user as well and use the EDM solution outside of Sage and also enjoy a higher level of functionality when retrieving documents.

4.1 Archiving documents

Prior to R13, external users needed a small Windows client application known as the Deposit client or DbDeposit installed on their desktop in order to deposit files into the EDM repository without logging into Sage EM. This client has now been replaced by the SmartDeposit web application which is part of the Smart Portal. SmartDeposit offers a few important advantages over the Deposit client:

- No software needs to be installed on the user's desktop
- Common file types, such as PDF files and images, can be viewed in SmartDeposit while they are being deposited
- Multiple documents can be deposited at the same time, eg a number of digital photos or multiple receipts or supporting documents for an invoice
- As a web application, SmartDeposit can be used from a tablet or smartphone.

At the present time there are a couple of features of the Deposit client that are not available in SmartDeposit.

1. You can drag an email from Outlook directly into the Deposit client in order to archive it complete with all of its attachments. SmartDeposit does not recognize emails being dropped – only files. So with SmartDeposit you would need to drop the email onto your desktop, which should create a .msg file, and then drop the .msg file into SmartDeposit. This will archive the complete email along with any attachments, but the system won't be able to access email metadata to use in tag fields in the same way as with the Deposit client.

2. The Deposit client can be used with the V1 Printer Driver to create and archive PDF files from applications that don't output documents in common file types or from live web pages. This functionality is not included as standard with the EDM solution for Sage EM, but can be purchase separately where needed, for example with Sage Payroll.

If your customer needs either of the these features, the Deposit client is still available for use with the 4.5 software. You can use SmartDeposit and the Deposit client side by side if necessary.

For full details of the SmartDeposit, please refer to the User Manual provided with the software.

4.2 Retrieving Documents

With R13 external users can access documents stored in the EDM archive through SmartRetrieve which is part of the Smart Portal. DbWebQuery is no longer provided.

SmartRetrieve provides three ways to locate documents:

1. **The Quick Search box**
   If you know the reference of document that you want to see, you can simply type it into the Quick Search box and SmartRetrieve will display all matching documents. Quick Search uses the Elastic search engine as used within the Sage EM interface itself. It searches across all document types and displays the documents that the user has permission to access. Entering a Sage invoice number will normally return the invoice and any supporting documents from the transactional attachments table. Entering an order number could potential return many documents of different types.

   You need to be fairly specific when using the Quick Search box. Entering a supplier code could return thousands of documents from contracts to orders, receipts, invoices, payments and other correspondence. Entering a site code could return millions of documents.

2. **Advanced Search**
   Advanced Search works in a very similar way to DbWebQuery. You select the document type to search for and enter the search parameters against specific tags within the metadata. There are some new search options available such as using macros such as @LastMonth or @ThisCalendarYear rather than having to enter explicit date ranges.

3. **Saved Searches**
   Saved Searches can be used in a few different ways. You can enter search criteria into the Advanced Search section and then save the search for your own future use or an Admin user can publish searches for all users to use. Saved Searches can be used to provide a 'one-click search' facility or they can be used to customise the Advanced Search screen. For example with a Saved Search you can pre-populate certain tag fields, such as the Sage Endpoint or Site code; you can hide unused tags; and you can change the default match type, eg from 'Equals' to 'Begins' for code fields and from 'Equals' to 'Contains' for name fields.

The Smart Portal uses a responsive layout, so the layout and size of the screen will adapt to the size of the users screen. On a very small screen, such as mobile phone, the full Advanced search section may not be visible so Saved Searches can be used to make it easier for mobile phone users to find the documents that they need.

When a document or set of documents is returned by a search, the user can view them, export the tag data to csv/Excel or email them. SmartRetrieve allows users to email links to the documents (for recipients who have access to the archive) or the documents themselves. The number of documents that can be emailed at once is subject to limits which need to be aligned with the customers email server.

If the SmartRetentions facility has been provided and configured, external users can potentially delete certain documents from SmartRetrieve too.

For full details of the SmartRetrieve, please refer to the User Manual provided with the software.

4.3 Viewing Documents

With SmartRetrieve, external users will have a similar document viewing facility to that provided for Sage users, but they can have a few additional features too.

1. **Document Links**
    From the document viewer external users can access any linked documents. For example, from an invoice a user could link to any supporting documents. Or from a Payment Run Listing a user to link to the individual remittance advice notes.

2. **Deposit Related Documents**
    As well as linking to related documents, external users can deposit related documents through the browser. A new button on the document viewer takes the user to the SmartDeposit screen with certain fields pre-populated. This would allow an external user to deposit an order acknowledgement from a supplier against a purchase order document, for example.

3. **Annotations**
    External users can add text annotations to documents. These are displayed in a list with the user name and date and are visible to other users including Sage users when they access the document from within Sage.

5. Electronic Document Delivery (EDD) Functionality

Electronic Document Delivery (EDD), ie automated emailing and/or faxing, is a function of the EDM solution. In some markets the V1 EDD functionality is available without the full EDM functionality, ie the system can be used to email documents without archiving them. Customers should be aware that it is their responsibility to retain permanent copies of documents emailed to business partners in order to comply with local legislation.

5.1 Webservice removed

Previously the default behaviour for EDD was to call a webservice to lookup the email addresses and/or fax numbers for each business partner. However, many users preferred not to use the default email addresses and overrode these in the Crystal Report layout. Other customers requested more flexibility to use multiple email addresses for the To, Cc and Bcc fields. After reviewing this with a number of Sage partners, we decided to remove the webservice call and to require the email addresses or fax number to be added to the Crystal Report layout in all cases. Removing the webservice call has improved the performance of the EDD functionality and we have made it much easier to use multiple email addresses.

This does mean that all Crystal Reports layouts making use of the EDD functionality will need to be updated for R13. However, the tags that need to be added to layouts are now the same for all document types. The documentation on the R13 portal has been updated and a new annotated example SBONFACAUTO is included with the R13 software.

5.2 Scripts updated and simplified

The dbpdf.def script that controlled the EDD functionality in earlier releases has been replaced by a new EDDOUTBOUNDMANAGMENT.def script. This script only handles the distribution of the documents. If documents are to be archived to, the archiving is now handled by the same EDMIMPORT function used by other parts of the EDM solution. This further improves performance.

Enhancements to the EDD scripts include:

- ▶ Support for multiple email addresses separated with semi-colons
- ▶ The distribution and archiving are both managed by background services improving the responsiveness of the interface
- ▶ If the full EDM solution is deployed, all distribution activity is archived in a new EDD Audit Report table available to SmartRetrieve users as well as a global log file (EDDOutboundManagement.log)
- ▶ All formulae fields are standard for all document types, ie Sales Invoices, Purchase Orders, Statements, etc all use the same formulae fields, only the content has to change based on the customer's requirements

5.3 Destinations Retained

In the first beta release of R13, we tried a further simplification by removing the EDD destinations from Sage EM.

However, partners felt that this made the solution more complicated for users to understand, so the same Destinations have been retained, but their descriptions have been updated to be clearer.

Destinations

⇅ₓ Cancel sort

Code	Description ↑	Type	Destination	Format
ARCHIVE	[EDM] Archive documents		Archiving	Adobe Acrobat (*.pdf)
AUTO	[EDM] Automatic Destination		Archiving	Adobe Acrobat (*.pdf)
EMAIL	[EDM] Email Destination		Archiving	Adobe Acrobat (*.pdf)
EMAILONLY	[EDM] Email Only Destination		Archiving	Adobe Acrobat (*.pdf)
FAX	[EDM] Fax Destination		Archiving	Adobe Acrobat (*.pdf)
FAXONLY	[EDM] Fax Only Destination		Archiving	Adobe Acrobat (*.pdf)
PRINT	[EDM] Print Destination		Archiving	Adobe Acrobat (*.pdf)
PRINTONLY	[EDM] Print Only Destination		Archiving	Adobe Acrobat (*.pdf)

6. The Purchase Invoice Automation (PIA) solution

The Purchase Invoice Automation (PIA) solution is an optional add-on solution to the EDM solution. As with the EDM solution itself, the V1 components including V1 Capture have been updated to release 4.x. The OCR engine has been updated to a new version with several new facilities and the DbMailExtractor service has been replaced by SmartMail.

With R13 a completely new data capture profile for Supplier Invoices has been provided. Among the many enhancements are:

- Both Purchasing Invoices (PIH object) and Supplier BP Invoices (BIS object) can be created from the same profile

- A system for intelligently identifying the financial site from the invoice details has been included

For more details of the enhanced PIA solution, please refer to the Solution Document. However, please note that if a customer is happy with their existing implementation of the PIA solution – particularly if the data capture profile has already been customised for them – they can keep their existing configuration with the enhanced software. The system is fully backwardly compatible and the PIA Patches from 12.1 can co-exist with the R13 Patches. Please refer to V1 for advice before upgrading a PIA site with a customised profile.