sage

Sage XRT Business Exchange

Version 12.3

Contents

Environments

Compatibility Chart

Environment	Prerequisite Type	Prerequisite
Sage Software	These prerequisites are designed for	**Sage XRT Business Exchange** 12.3 **Sage Common Services** 5.0 **Bank Format Library** 4.4 **Sage View & Sign** 3.0 **Sage EIDSign** 2.0
	Build No.	12.3.0.1778
	Available Languages	French – English – Spanish
Client Station	Operating System	Windows 8.1 64 bits Windows 10 64 bits
	Minimum Sizing	Processor: 2Ghz Bi-pro/Dual Core RAM: 8GB - Dsik space: 2GB
	Other required products	Microsoft .NET Framework 4.5.2 minimum DBMS Client (see *DB Connectivity*) Microsoft.IIS.PowerShell
	Optional products	JRE 8.0. 1410 (64 bits) Required if the station processes XML files (edition, conversion, generation)
	Validated browsers for Microsoft O.S.	Microsoft Windows 8 &10: • Edge (IE 11 not suitable) • Chrome 70 and later • Firefox 63 and later
	Validated Browsers for MAC OS (see the note on Mac OS)	MAC OS X High Sierra, Sierra & El Capitan: • Safari • Chrome 70 and later • Firefox 63 and later

Environments

Environment	Prerequisite Type	Prerequisite
Application and Publication Server	Operating Systems	Windows Server 2016 Windows Server 2012 R2 Windows 10 64 bits
	Other Required Components	Microsoft .NET Framework 4.5.2 minimum Internet Information Service: IIS 8.5, 10 (see *IIS Appendices*) <serverSideInclude> element must be installed (see *IIS Appendices*). Java Execution Environment: JRE 8.0. 1410 (64 bits)
	Minimum Sizing	Processor: 4 vCPU 2Ghz or equivalent RAM: 8 GB Disk Space: 3 GB (Programs)
Server and Database **Important!** For migrations from SXBE V11 to SXBE V12, the size of the database is at most doubled because of the Unicode Management.	Operating Systems	Windows Server 2016 Windows Server 2012 R2
	Minimum Sizing	Processor: 4 vCPU 2Ghz or equivalent RAM: 8 GB
	Compatible Microsoft Databases	SQL Server 2014 SQL Server 2016 SQL Server 2017
	64-bit Microsoft DB Connectivity	MS-SQL components: minimum SQL Server 2014: • Client Connectivity Tools • Complete Management Tools
	Compatible Oracle Databases	Oracle 12c **Important!** version **12.1.0.2** contains regressions impeding the proper operation of certain options in SXBE 12.0, particularly the signature station optimization.
	64-bit Oracle Connectivity	Client Oracle (x64) 12.2.0.1.0 minimum Oracle Components to install: • SQL*Plus • Oracle Net • Oracle Connection Manager • Oracle ODBC drivers • Oracle Provider for OLE DB

Environments

Environment	Prerequisite Type	Prerequisite
Virtualization and Publication Tool (See chapter: *Appendices*)	Remote Desktop Services	Windows Server 2012 R2 and 2016
	XenApp	V6 and later
	vSphere	V5 and later
	Hyper-V	Windows Server 2012 R2 and 2016
Sage View & Sign (smartphones & tablets) (See chapter: *Appendices*)	Operating Systems	Apple: iOS 12.2 minimum Android: Android 5.1 minimum
	Validated Terminals	Apple: • iPhone 6 • iPhone 7 • iPhone 10

Flow Opening

Source to Target	Port No.	Editable	Flow Details
Rich Client to Database	1434 (Oracle)	Yes	The setup can be adapted so that only one port is open, with another value than the default one.
	1521 (SQL)		
Rich Client to Files Server (SXBE Files)	SMB	No	Data Exports/Imports, bank format files to edit, application logs May include the following ports: 137, 138, 139 and 445 May be used for remote files access
Rich Client to Files Server (SXBE Files)	DFS	No	Data Exports/imports, bank format files to edit, accounting files, remote sharing Ports for domain controller: 135, 137, 138, 139, 389 and 445 Ports for other servers: 135, 137, 138, 139 and 445
Rich Client to Files Server (other Files)	SMB	No	Only if files are to be exchanged with remote sharing Data Exports/Imports, bank format files to edit, application logs
Rich Client to Active Directory	MS	No	User Authentication (using Base Class Libraries for namespace System.DirectoryServices of Framework .NET)
Rich Client to XDLO Server	5151	Yes	*Sage* proprietary protocol
	MS-DTC	Yes	Port range, dynamic or static (1024-65535), range of 20 minimum
	DCOM	No	Access to parameters for System Administration module
Rich Client to LDAP Server	389	Yes	Only for LDAP authentication Default ports, with editable absolute values
	636	Yes	
Rich Client to SXBE Servers (Registry)	139	No	Access to parameters for System Administration module
Rich Client to SXBE Servers (Windows Services)	135	No	Access to Windows Services (RPC)

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View & Sign

To use HTTPS (TLS), the web server must use a certificate issued by a trusted authority accepted by the device.

Auto-signed certificates are not accepted by Android OS or iOS.

Virtualization

Important! Virtualization may have negative impacts on the applications processing times.

Some functions linked to Bank Communication Management can only be executed on an application server.

Before any deployment, the architecture and the size of your configuration may be validated by *Sage* consultants.

EBICS TS tokens drivers must be available for bank files transfer by Electronic Signature.

Microsoft Windows Patches

Windows Server

KB	Must be	Download on
KB2655192	**Exists**	https://support.microsoft.com/en-us/help/2655192 *Manual installation only*
KB2919355	**Exists**	https://support.microsoft.com/en-us/kb/2919355
KB2919442	**Exists**	https://support.microsoft.com/en-us/kb/2919442
KB2999226	**Exists**	https://support.microsoft.com/en-us/kb/2999226
KB3072630	**Missing**	https://support.microsoft.com/en-us/kb/3072630
KB3102429	**Missing**	https://support.microsoft.com/en-us/kb/3102429

Remote Desktop Services KB2655192

On RDS environments (W2012 R2, and later) for which the **Remote Desktop Service** (RDS) role is selected, the **Sage XRT Common Services** installation keeps the MSI Installer
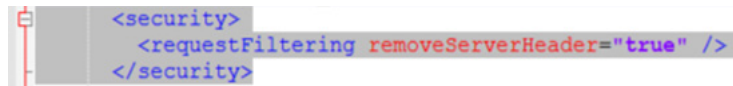
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Coordinator looping and fails. To solve this problem, it is recommended to enable the deactivation parameter of the **RDS Compatibility** for *Windows Installer*:

Computer Configuration - Administrative Templates - Windows Components - Remote Desktop Services - Remote Desktop Session Host - Application Compatibility

IIS

In the web.config file for OnlineBanking, delete the security tag if IIS <= 8.50.

```
<security>
    <requestFiltering removeServerHeader="true" />
</security>
```
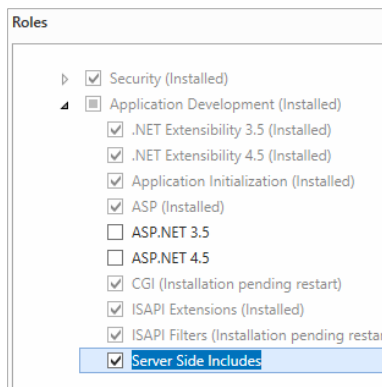
<serverSideInclude> element is not installed by default with versions IIS 8.5 and later. To install this component, follow this *Microsoft* procedure below.

WINDOWS SERVER 2012 OR WINDOWS SERVER 2016

1. On the taskbar, click **Server Manager**.

2. In **Server Manager**, click the **Manage** menu, and then click **Add Roles and Features**.

3. In the **Add Roles and Features** wizard, click **Next**. Select the installation type and click **Next**. Select the destination server and click **Next**.

4. On the **Server Roles** page, expand **Web Server (IIS)**, expand **Web Server**, expand **Application Development**, and then select **Server Side Includes**. Click **Next**.

Source : *https://docs.microsoft.com/en-us/iis/configuration/system.webserver/serversideinclude*

> Note: For more information on the signature component installation under Mac OS, refer to this document: *Sage Eb_ eIDSign_TechnicalScope_MACOSX*.

Web Application Firewall

Measures have been set up to protect you from vulnerabilities like SQL injection attacks, cross-site scripting, and cross-site forgery requests.

However, we highly recommend web application firewalls (WAF) to minimize those attacks.

On this page you can find a WAFs list:

https://www.iis.net/downloads/category/secure

CloudFlare does not require any deployment:

https://www.cloudflare.com/waf/

Office Installation

In case of **Office** installation, check the version for the *ACE ODBC* drivers.

During the installation, **DSN CERG_TXT** 64 bits is positioned with *ACE ODBC Driver v°14*.

After the installation of **Office x64**, make sure you use the relevant driver version.

Database Unicode Management

SXBE version 12.0 was tested and validated with **AL32UTF8** and **UTF8** code pages under *Oracle*, **Latin1_CI_AS**, **Modern_Spanish_CI_AS**, **French CI_AS** under *SQL Server*.

Important! Any modification of character set must be performed by an *Oracle* DBA or a *Sage* consultant, this modification has an impact on all the database schemas.

Note: For migrations from **SXBE** V11 to **SXBE** V12, the size of the database is at most doubled because of the Unicode Management.

Windows Unicode Management

The reporting application process using Unicode characters (Chinese, etc.) requires ARIAL UNICODE MS.

But this font is not part of the default ones for every Windows versions and its use depends on the license.

Its installation can be done through the installation of **Microsoft Office** 2010 or 2013 (32 or 64 bits) or through the specific download of the font.

Important! Office 2016 and Windows 10 do not natively include this font.

Managing Double Authentication

Initiating double authentication requires using an app compatible with **TOTP** (smartphone or tablet).

Here are the tested apps:

- FreeOTP (Android)

- Microsoft Authenticator (Windows Phone)

- Google Authenticator (Android, iOS)

Activation of Database Encryption

Transparent Data Encryption (TDE) encrypts the sensitive data in the database and protect the keys that are used to encrypt the data with a certificate. This prevents anyone without the keys from using the data, but this kind of protection must be planned in advance.

It actually involves changes in performances and backups management (backups are encrypted). The encryption key must be stored in the database to perform the relevant actions. You will not be able to open the database without this key.

Note: Tests were run on **Microsoft SQL Server 2016 TDE**, **Microsoft SQL Server 2014 TDE** and **Oracle 12c TDE**.

Note that only Enterprise versions for SQL Server use TDE.

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Microsoft SQL Server

Example of TDE setup on Microsoft SQL Server:

```
// go onto MASTER

USE master;

GO


// create a passphrase

CREATE MASTER KEY ENCRYPTION BY PASSWORD = 'MyPassword entered SXCS';

GO


// create the certificate to encrypt the symmetric key

CREATE CERTIFICATE MyTDECert WITH SUBJECT = 'MyTDECert Certificate';

GO


// go onto SXBE database

USE SBE;

GO


// create the key for database encryption (for example in AES 128) and encrypt this key with the certificate created
in MASTER

CREATE DATABASE ENCRYPTION KEY WITH ALGORITHM = AES_128  ENCRYPTION BY SERVER
CERTIFICATE MyTDECert;

GO


// activate encryption

ALTER DATABASE TDE SET ENCRYPTION ON;

GO
```

For more information: https://docs.microsoft.com/en-us/sql/relational-databases/security/encryption/transparent-data-encryption

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Oracle

Example of TDE setup on Oracle:

```
orapki wallet create -wallet "C:\app\your_user\admin\your_service\wallet" -auto_login -pwd "P@ssword"


ALTER SYSTEM SET ENCRYPTION KEY IDENTIFIED BY "MyPassword entered in SXCS";

/


CREATE TABLESPACE ENC_XRT_DATA DATAFILE
'C:\app\your_user\oradata\your_service\ENC_XRT_DATA.dbf' SIZE 150 M AUTOEXTEND ON NEXT 100

ENCRYPTION using 'AES192'

DEFAULT STORAGE(ENCRYPT);

/


CREATE TABLESPACE ENC_XRT_INDEX DATAFILE
'C:\app\your_user\oradata\your_service\ENC_XRT_INDEX.dbf' SIZE 150 M AUTOEXTEND ON NEXT 100 M

ENCRYPTION using 'AES192'

DEFAULT STORAGE(ENCRYPT);

/


ALTER USER SCS QUOTA UNLIMITED ON ENC_XRT_DATA;

/


ALTER USER SCS QUOTA UNLIMITED ON ENC_XRT_INDEX;

/


DECLARE

  strStatement varchar2(512);

  recCount INTEGER:=-1;

  CURSOR code_objects IS select object_name,object_type from all_objects where owner='your_schema' and
object_type = 'TABLE' and temporary='N';

  code_object_rec code_objects%rowtype;
BEGIN

  FOR code_object_rec IN code_objects

  LOOP
```

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```
    strStatement :=  'ALTER TABLE your_schema.' || code_object_rec.object_name || ' MOVE TABLESPACE
ENC_XRT_DATA';

    DBMS_OUTPUT.PUT_LINE (strStatement);

    EXECUTE IMMEDIATE strStatement;

  END LOOP;

END;

/


DECLARE

   strStatement varchar2(512);

   recCount INTEGER:=-1;

   CURSOR code_objects IS select object_name,object_type from all_objects where owner='your_schema' and
object_type = 'INDEX' and temporary='N';

   code_object_rec code_objects%rowtype;

BEGIN

  FOR code_object_rec IN code_objects

  LOOP

    strStatement :=  'ALTER INDEX your_schema.' || code_object_rec.object_name || ' REBUILD TABLESPACE
ENC_XRT_INDEX';

    DBMS_OUTPUT.PUT_LINE (strStatement);

    EXECUTE IMMEDIATE strStatement;

  END LOOP;

END;

/
```