

# Saperion

## Technical Specifications

Version: 8.1.x

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Date: April 2020



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## About Saperion technical specifications

The technical specifications in this document are specific to Saperion version 8.1.0.

### End of Life dates

Saperion Versions	Date
Version 7.5	December 2019 Extended support: December 2020

### Obligations concerning upgrades

Saperion version 8.1.0 supports only a 64-bit core server. If you are updating from a 32-bit Saperion version to a 64-bit Saperion version, seek assistance from the Professional Services team.

### Recommendations concerning upgrades

- Updates to version 8.1.0 are only possible from versions 7.5.6, 8.0.0, and 8.1.0.
- While upgrading from 7.5.x, we strongly recommend planning an update as a project due to the reworking of the user management structure in version 8.0.1 and above. If your user management system is larger or more complex, it may require manual modification. For further information, see the “Migrate User Management” section of the Update Guide on the Product Documentation portal at [docs.hyland.com](https://docs.hyland.com).

### Compatibility mode

When you update to Saperion version 8.1.0 from a pre-8.0 version, you must update the clients as well as the servers.

### Discontinued components and platforms

Product/ Component	Comment
All 32-bit Core Servers	Use a 64-bit Java Core Server. Non-Java Core Servers are no longer supported.
Snowbound applet viewer	Use the Snowbound VirtualViewer HTML5 (default) for the Web Client and SAP
Java applets (Viewer, Mailer, Upload)	These components are no longer supported.
Signavio Process Modeler	This component is no longer available.
C/Link for SAP	This component is no longer available.
Authenticate	This component is no longer available.
Encrypt	This component is no longer available.

iSaperion	Support for this mobile app is discontinued.
Saperion Web Services	Beginning with version 8.0, use ECM Services for new projects.
Saperion App Services	No longer supported with version 8.0.1.
Business Rules Server	Beginning with version 8.0, use the Integration Server for new projects.

## Planned discontinuations

Product/ Component	Comment
UBI	Beginning with version 8.0, use ECM Services for new projects.
Classic Connector	<p>Classic Connector functionality is deprecated. Currently, some extensions, such as those in Web Client Events or in the Integration Server, may still be easier to implement when the events include the Classic Connector.</p> <p>Other than these exceptions, use the ECM Services for new projects.</p>

## Saperion 8.1.0 Specifications

For version 8.1.0, the following operating systems are certified to work.

Operating systems	Description
<b>Server</b>	<p>Windows Server 2008 R2 SP1 (Build 7601) for Intel 64/AMD64 (not IA-64)</p> <p>Windows Server 2012 Standard Edition (64-bit) (Build 6.2.9200)</p> <p>Windows Server 2012 R2</p> <p>Windows Server 2016</p> <p>Windows Server 2019</p> <p><b>Note</b> Saperion is not supported in server clusters unless it is implemented by Professional Services or a qualified partner.</p>
<b>Clients</b>	<p>Windows 7 and 7 SP1, 32-bit, 64-bit in 32-bit mode</p> <p>Windows 8.1. No support for RT.</p> <p>Windows 10</p>

Operating systems	Description
<b>Virtualization Software</b>	<p>Hyland Software Germany GmbH confirms that we support customers running Saperion software on supported Operating Systems in a VMware virtual machine environment.</p> <p>Hyland Software Germany GmbH provides unqualified support for Hyland Software Germany GmbH software products running in a VMware virtual environment in an identical manner as with Saperion software products running on any other major x86-based systems without initially requiring reproduction of issues on native hardware.</p> <p>Should Hyland Software Germany GmbH suspect that the virtualization layer is the root cause of an incident, the customer will be required to contact the appropriate VMware support provider to resolve the VMware issue.</p> <p>While Hyland Software Germany GmbH products are expected to function properly in a VMware virtual environment, there may be performance implications which can invalidate Saperion software typical sizing and recommendations.</p> <p>Using the Saperion Client on Windows Terminal Server is supported. Hyland Software Germany GmbH products are likewise expected to function properly with Citrix XenDesktop.</p> <p><b>Note</b> Application virtualization is not supported. Desktop virtualization is supported.</p> <p>To inquire about the availability of supported operating systems, contact Support.</p>
<b>Cloud</b>	<p>Hyland Software Germany GmbH support customers running Saperion instances on supported Operating Systems on a Cloud environment.</p> <p>Hyland Software Germany GmbH provides unqualified support for Hyland Software Germany GmbH software products running on a Cloud environment in an identical manner as with Saperion software products running on any other supported Windows systems without initially requiring reproduction of issues on native hardware.</p> <p>Should Hyland Software Germany GmbH suspect that the Cloud environment is the root cause of an incident, the customer will be required to contact the appropriate cloud service provider to resolve the issue.</p> <p>While Hyland Software Germany GmbH products are expected to function properly in a Cloud environment, there may be performance implications which can invalidate Saperion software typical sizing and recommendations.</p> <p>To inquire about the availability of supported operating systems, contact Support.</p>

## Databases

For version 8.1.0 of Saperion ECM, the following databases are certified to work. To inquire about the availability of support for other databases, contact Support.

DBMS	Description
Microsoft SQL Server	2012 R2
	2014
	2016
	2017
	2019
Oracle	12c 32-bit/64-bit
	<p><b>Prerequisites</b> Installation of the desired ODBC driver on all Core Servers. Check the functionality of the ODBC driver with a simple test program before installing Saperion.</p> <p><sup>1</sup> We recommend using MS SQL Server with an isolation level of UNCOMMITTED_READ</p> <p><sup>2</sup> SQL Server Native Client ODBC driver must not be used with fulltext</p> <p><sup>3</sup> To use Oracle 12c with XML files, you must modify them to CLOB. In addition, the MAX_STRING_SIZE instance parameter must be set to STANDARD. See the Setup chapter in the Installation manual for more information.</p>
	<p><b>Fulltext support</b></p> <p>Fulltext search is supported by use of the database functionality of Oracle DB or Microsoft SQL Server, or by use of the dtSearch Engine Version 7.</p> <p>All file types that dtSearch generally supports are listed on the dtSearch support site. dtSearch can only be used on Windows and in non-distributed environments.</p>
	<p><b>ECM Services</b></p> <p>The ECM Services are supported for MS SQL Server and Oracle.</p>

## Storage

For version 8.1.0 of Saperion ECM, the following storage systems are supported in a Windows environment.

**Note** Only storage systems that are 100% compatible with the plug-ins listed below can be used with those plug-ins.

### Path-based plug-ins

Storage type	Supported systems	Saperion plug-in
NetApp (CIFS)	NetApp ONTAP/SnapLock and other compatible systems that include an extended date range mechanism for the range 2038 to 2071.  For more information about the extended date range mechanism, see TR-3738, "SnapLock Record Retention Date Implementation Strategy", on the NetApp website (registration required).	pnetapp.dll
Isilon (CIFS)	EMC Isilon OneFS and other compatible systems.	psilon.dll
GenericNAS	NAS / Windows file system	pgennas.dll
HCP (REST)	Hitachi Data Systems via HTTP	com.saperion.storage.ConnectorHCP

### Object-based plug-ins

Storage type	Supported systems	Saperion plug-in
CAS (CLIP)	EMC Centera CentraStar, EMC Elastic Cloud Storage	pcentera.dll
S3 (REST)	All S3 compatible systems, such as Amazon S3, NetApp StorageGrid via HTTP/HTTPS	com.saperion.storage.ConnectorS3
IBMCM (REST)	IBM Content Manager via HTTP/HTTPS	com.saperion.storage.ConnectorICM



## Comparison of storage system vs. records management functions:

Storage system	Storage system vs Records Management Functions	Fixed Retention	Prolongation	Event-based Retention	Litigation Hold	Disposition	Privileged Delete	Electronic Shredding	Duplicate Write
EMC2 Centera*	Governance	X	X	S	S	X	O		X
	Governance advanced retention feature	X	X	X	X	X	O	V	X
	Compliance plus advanced retention feature	X	X	X	X	X	-	V	X
NetApp SnapLock™	Compliance/Enterprise	X	X	S	S	S	O	O	O
EMC Isilon	Compliance/Enterprise	X	X	S	S	S	O	O	O
Hitachi Content Platform	via HTTP	X	X	X	X	S	-	V	-
	via Generic NAS	X	X	S	S	S	-	V	-
IBM SSAM/TSM	IBM DR550	X	X	S	S	X	°	V	-
KOM Networks KOMpliance	KOM Networks KOMpliance	X	X	S	S	S	-		-
Generic NAS		S	S	S	S	S	-		-
Amazon S3		S	S	S	S	S			

Legend: "X" = supported by storage and Saperion

"S" = not supported by storage but simulated by Saperion

"O" = supported by storage but not by Saperion

"V" = supported by storage, independent from Saperion

\*ECM Service is not supported

## Web servers & browsers

**Note** For version 8.1.0 of Saperion ECM Web Client, the following browsers are certified to work with Saperion.

Operating System	IE <sup>1</sup>	Firefox	Chrome
Windows	10.0, 11.0	31 ESR, 45 ESR, 46, 48, 49, 60.2.2 ESR	70.0.3538.77
<p><b>Note</b> Browsers of other vendors and on other platforms may also work. The ECM Web Client also includes a multi-format viewer supporting annotations. For more information about supported formats, consult the Snowbound Software website.</p> <p>Customers using the additional ViewOne or ViewOne prof viewer from Deaja offered for Version 7 can use this as well.</p> <p><sup>1</sup> The HTML5 viewer in the Web Client does not work with Internet Explorer's Compatibility View.</p>			

## Oracle Java for Clients and Server

Specification	Description								
<b>Software</b>	<p>Oracle JDK, version 8 and 11</p> <p>AdoptOpenJDK, version 8 and 11</p> <p><b>Note</b></p> <ul style="list-style-type: none"><li>• AdoptOpenJDK 11 is only supported with the HotSpot JVM.</li><li>• Saperion Integration Server only supports AdoptOpenJDK 8 and Oracle JDK 8.</li><li>• AdoptOpenJDK 8 support for Amazon S3 is only available with AdoptOpenJDK 8 build number 192 and higher.</li></ul> <p>You must install the operating specific ODBC driver to support Oracle JDK 11 and AdoptOpenJDK 11. The following table lists the compatible drivers according to the operating system.</p> <table><tr><th>Operating system</th><th>Driver name in ODBC Data Source Administrator</th><th>Version</th><th>File</th></tr><tr><td>Windows Server 2019 Version 1809</td><td>SQL Server</td><td>10.00.17763.01</td><td>SQLSRV32.DLL</td></tr></table>	Operating system	Driver name in ODBC Data Source Administrator	Version	File	Windows Server 2019 Version 1809	SQL Server	10.00.17763.01	SQLSRV32.DLL
Operating system	Driver name in ODBC Data Source Administrator	Version	File						
Windows Server 2019 Version 1809	SQL Server	10.00.17763.01	SQLSRV32.DLL						

Specification	Description			
	Windows Server 2016 Version 1607	SQL Server	10.00.14393.00	SQLSRV32.DLL
	Windows Server 2012 R2 Version 6.3 (Build 9600)	SQL Server	6.03.9600.17415	SQLSRV32.DLL
<p><b>JRE Expiration Date</b></p> <p>The Java Runtime Environment (JRE) relies on periodic checks with an Oracle Server to determine whether the JRE is still up-to-date with all available security fixes above the security baseline. If the JRE is unable to contact the Oracle Server, it still behaves as though it is the most recent version with regard to security, until it is expired. For more information about the expiration date, see the Oracle web site for the release notes for your Java version.</p> <p><b>Other Saperion ECM Java Core Server requirements:</b></p> <p>The following Web Application Server can be used as containers:</p> <p>Apache Tomcat 64-bit, version 9.0.12.</p>				

## .NET Framework

To install version 8.1.0 of Saperion ECM, .NET Framework version 4.0 is required.

## Visual C++ redistributable

To enable Saperion Internal Viewer to render a PDF file to PNG file format, Visual C++ redistributable 2015 is required. For new http RPC communication in x86 and x64, Server and Client, Visual C++ 2012 Redistributable v11.0 is required.

## FineReader integration

For version 8.1.0 of Saperion ECM, version 10 of FineReader Engine for OCR and Barcode recognition is integrated.

## Jadice Viewer

Saperion version 8.1.0 includes a trial version of the Jadice Viewer, which can be used in the Web Client to view SAP print lists. If you would like to upgrade to a licensed version, contact Support.

## Capture & scanner support

The Saperion Rich Client (no Web Client support) connects to scanners through TWAIN or preferably through a native ISIS interface or a Kofax Adrenaline board.

High-quality scanners already have ISIS drivers included; otherwise they are available from Pixel Translations.

To allow connectivity to scanners that do not have an ISIS driver, Pixel Translations and LEADTOOLS provide developer toolkits. Saperion supports Kofax Software VRS and Adrenaline Boards as well. Based on positive feedback, the use of scanners from Kodak, Fujitsu or Canon is recommended, in addition to all certified scanners by Kofax. For more information about LEAD Technologies, check their web site.

The Saperion ECM Release Script for Kofax Capture 10 has been successfully implemented and tested by various partners.

## LDAP support

Specification	Description
<b>Software</b>	<p>For version 8.1.0 of Saperion ECM, synchronization is supported with Microsoft directory service AD DS<sup>1</sup>, for Windows Server 2008 R2 2008 and Windows Server 2012.</p> <p><sup>1</sup>Active Directory® Domain Services (AD DS) is required for directory-enabled applications, such as Microsoft® Exchange Server, and for other Windows Server® technologies, such as Group Policy.</p> <p><b>Note</b></p> <p>LDAP is a standard with a wide range of possibilities, and there are many configurations which may not work in combination with the synchronization implementation of Saperion. We therefore recommend scheduling time for a detailed analysis of the requirements for using the synchronization with Saperion. The use of OpenLDAP in projects in particular needs expertise in complex environments. This must be accounted for in your planning. Contact Support for assistance.</p>

## Language support

Specification	Description																																																												
Language	For version 8.1.0 of Saperion ECM, the following languages are supported as shown.																																																												
	<table><tr><th>Language</th><th>User Interface</th><th>Workflow Inbox</th><th>Manuals (PDF)</th><th>Online Help</th><th>Standard</th></tr><tr><td>Arabic</td><td>X</td><td>X</td><td>-</td><td>-</td><td>X</td></tr><tr><td>English</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td></tr><tr><td>German</td><td>X</td><td>X</td><td>-</td><td>-</td><td>X</td></tr><tr><td>Polish</td><td>X</td><td>X</td><td>-</td><td>-</td><td>X</td></tr><tr><td>Russian</td><td>X</td><td>X</td><td>-</td><td>-</td><td>X</td></tr><tr><td>Spanish</td><td>X</td><td>X</td><td>-</td><td>-</td><td>X</td></tr><tr><td>Turkish</td><td>X</td><td>X</td><td>-</td><td>-</td><td>X</td></tr><tr><td>French</td><td>X</td><td>X</td><td>-</td><td>-</td><td>X</td></tr><tr><td>Italian</td><td>X</td><td>X</td><td>-</td><td>-</td><td>X</td></tr></table>	Language	User Interface	Workflow Inbox	Manuals (PDF)	Online Help	Standard	Arabic	X	X	-	-	X	English	X	X	X	X	X	German	X	X	-	-	X	Polish	X	X	-	-	X	Russian	X	X	-	-	X	Spanish	X	X	-	-	X	Turkish	X	X	-	-	X	French	X	X	-	-	X	Italian	X	X	-	-	X
	Language	User Interface	Workflow Inbox	Manuals (PDF)	Online Help	Standard																																																							
	Arabic	X	X	-	-	X																																																							
	English	X	X	X	X	X																																																							
	German	X	X	-	-	X																																																							
	Polish	X	X	-	-	X																																																							
	Russian	X	X	-	-	X																																																							
	Spanish	X	X	-	-	X																																																							
	Turkish	X	X	-	-	X																																																							
	French	X	X	-	-	X																																																							
	Italian	X	X	-	-	X																																																							
	Legend:																																																												
-	The documentation and online help is in English.																																																												
<sup>1</sup>	The Workflow Inbox User Interface can be configured individually.																																																												
Standard: X	This language is included with every new version.																																																												
Standard: o	This language is not standard but is currently available. The delivery with the next version is not guaranteed. If you need this language, contact us.																																																												

## Saperion products

### Saperion ECM ContentLink for Microsoft SharePoint

Saperion InterServer 2.7.3.0 (20130801) for SharePoint 2010-2016 is currently not supported for Saperion ECM version 8.1.0. SharePoint Online is not supported.

### Saperion Office Integration

Specification	Description								
<b>Software</b>	For version 8.1.0 of Saperion ECM, the following Microsoft Office products are certified to work.								
	<table><tr><th>Office System</th><th>Version</th><th>Component</th><th>Operating System</th></tr><tr><td>Microsoft Office (Word, Excel, Powerpoint, Outlook)</td><td>2007, 2010<sup>*2</sup>, 2013<sup>*3</sup>, 2016, Office 365 Pro Plus only 32-bit</td><td>Office Integration 3<sup>*1</sup></td><td>All client systems as listed above.</td></tr></table>	Office System	Version	Component	Operating System	Microsoft Office (Word, Excel, Powerpoint, Outlook)	2007, 2010 <sup>*2</sup> , 2013 <sup>*3</sup> , 2016, Office 365 Pro Plus only 32-bit	Office Integration 3 <sup>*1</sup>	All client systems as listed above.
	Office System	Version	Component	Operating System					
	Microsoft Office (Word, Excel, Powerpoint, Outlook)	2007, 2010 <sup>*2</sup> , 2013 <sup>*3</sup> , 2016, Office 365 Pro Plus only 32-bit	Office Integration 3 <sup>*1</sup>	All client systems as listed above.					
	<sup>*1</sup> The Office Integration is independent of the Saperion version used.								
<sup>*2</sup> Mapping only works with the legacy forms from older MS Office versions.									
<sup>*3</sup> Microsoft Office Professional Plus 2013, Microsoft Office Professional 2013, Microsoft Office Home and Business 2013, Microsoft Office 2013 Standard. OEM and volume licenses.									

### Saperion E-Mail Lifecycle Management (ELM)

For Saperion ECM 8.1.0, the following components are certified to work.

Operating System	ELM 3 for Notes
Windows Workstation	Notes 8 and higher
Windows Server	Notes 8 and higher

#### Note

- Saperion 8.1.0 is compatible with ELM 6.6 for Exchange when SAPERION Store Access x64 6.6.72 is installed.
- For compatibility of other components, such as Microsoft Exchange, see the release notes in the Saperion ELM Online Help available at [docs.hyland.com](http://docs.hyland.com).

## Saperion ECM Suite for SAP Solutions

For version 8.1.0 of Saperion ECM, the following components are certified for SAP.

Component	Version	Comments
Saperion ECM DATA Archiving for SAP	1.0	Available from Saperion V7.1 SP1 SAP Certified – BC-ILM 3.0 WEBDAV Storage Interface
Saperion ECM R/Indexer for SAP	1.0	Available from Saperion V7.1 SP 1 Needs Saperion Java Server (Classic Connector Application) available for SAP ERP 6.0
Saperion ECM R/Link	-	All operating systems supported by Saperion SAP certified – BC 7.20 Certification
R/Indexer (Procomp)	5.0.1	Microsoft® Windows
MDS Extractor	1.0	Independent from Saperion ECM. Microsoft SQL Server Native Client or Oracle 10 or higher is required. A project approval from Saperion is required.
FastLink	2.1.0.0	All Microsoft Windows operating systems supported by Saperion
Migration Tool	2.1	SAP ERP 6.0 Supported SAP objects: Incoming documents (FAX / TIF) Outgoing documents (PDF) Drag & Drop Documents as DOC / XLS / TXT / JPG / GIF / BMP / PPT / FAX / TIF Archive files out of SAP ADK (REO data) Printlists (ALF)
Sap Web Viewer		Saperion version 7.5 SP3 and higher SAP ERP 6.0 and higher (earlier versions on request) Internet Explorer version 11

Saperion components use RLink and the RFC Interface of SAP. The Saperion components for SAP work properly with all SAP versions that support these interfaces as supported in SAP ERP 6.0.