5 software AG

ARIS SYSTEM REQUIREMENTS

VERSION 10.0 - SERVICE RELEASE 21 DECEMBER 2022

This document applies to ARIS Version 10.0 and to all subsequent releases. Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

Copyright © 2010 - 2022 Software AG, Darmstadt, Germany and/or Software AG USA Inc., Reston, VA, USA, and/or its subsidiaries and/or its affiliates and/or their licensors.

The name Software AG and all Software AG product names are either trademarks or registered trademarks of Software AG and/or Software AG USA Inc. and/or its subsidiaries and/or its affiliates and/or their licensors. Other company and product names mentioned herein may be trademarks of their respective owners. Detailed information on trademarks and patents owned by Software AG and/or its subsidiaries is located at http://documentation.softwareag.com/legal/. Use of this software is subject to adherence to Software AG's licensing conditions and terms. These terms are part of the product documentation, located at http://documentation.softwareag.com/legal/ and/or in the root installation directory of the licensed product(s).

This software may include portions of third-party products. For third-party copyright notices and license terms, please refer to "License Texts, Copyright Notices and Disclaimers of Third Party Products". This document is part of the product documentation, located at http://documentation.softwareag.com/legal/ and/or in the root installation directory of the licensed product(s).

Supported Server Operating System Platforms													
Operating System (1) (only 64 bit) (3)			Windows Server 2019	Windows Server 2022	Linux RedHat ES 8.x(5)	Linux RedHat ES 9.x(6)	Linux CentOS 7.x(7)	Linux CentOS 8.x (8)	SUSE Linux ES 12	SUSE Linux ES 15	Hosted Software (Microsoft Azure)	Hosted Software (Amazon EC2 with Windows / Linux)	
ARIS Connect Server	10.0	YCS	✓ (11)	√	✓	~	✓	✓		✓	✓	✓	✓
ARIS Design Server	10.0	YDS	✓ (11)	~	✓	~	\checkmark	~		✓	~	✓	√
ARIS Process Performance Manager (9)	10.5.5	YPI	✓ (11)	~	~	~	\checkmark	~		✓	~	✓	√(4)
Process Extractor for ARIS Process Mining SaaS (10)	10.0.20	YMS	√ (11)	✓	\checkmark	✓	✓			\checkmark	✓	✓	\checkmark
ARIS Risk and Compliance Manager	10.0	YRC	√ (11)	√	√	✓	√	√				✓	\checkmark

Legend	
✓	Supported / Released
	Not supported / Not released / Not planned
1	Including all manufacturer's service packs & updates
2	Planned for next Release (April 2023)
3	x86_64 platforms
4	ARIS Process Performance Manager only supports Windows based Images on Amazon EC2
5	Tested with Linux RedHat ES 8.5
6	Tested with Linux RedHat ES 9.0
7	Tested with Linux CentOS 7.9. End of support announced for 2024-06-30. We recommend to use other Linux versions.
8	Linux CentOS 8: End of support announced for 2021-12-31
9	SAP-2-PPM Extractor supports the following SAP components: SAP R/3 >= 4.6C or SAP System with BASIS component >= 620 or S/4HANA Requires SAP connector >=JCO 3.0.9
10	Process Extractor for ARIS Process Mining SaaS supports SAP Systems with SAP BASIS component >= 700 or S/4HANA Requires SAP connector >=JCO 3.1
11	Windows Server 2016 will no longer be supported after the next version (2023Apr)

Supported Client Operating System Platfo	orms												
Or	Operating System (1) (only 64 bit) (4) 10.0 YAD 10.0 YAA			Windows 11	Windows Server 2016	Windows Server 2019	Windows Server 2022	Linux RedHat ES 8.x / 9.x	Linux CentOS 7.x / 8.x	SUSE Linux ES 12 7 ES 15	MacOS 10.13 / 10.14 (3)	Hosted Software (Microsoft Azure)	Hosted Software (Amazon EC2 with Windows)
ARIS Designer (6)	10.0	YAD	✓	✓	√ (7)	\checkmark	✓					\checkmark	\checkmark
ARIS Architect (6)	10.0	YAA	~	~	√ (7)	✓	~					✓	✓
UML Designer (6)			✓	✓	√ (7)	~	✓					~	✓
ARIS Connect Viewer (5) (6)			✓	✓	√ (7)	~	✓				~	~	✓
ARIS Connect Designer (5) (6)	10.0	YCSDC	✓	✓	√ (7)	✓	✓				~	✓	✓
ARIS PPM Analysis GUI (6)	10.5.5	YPI	✓	✓	√ (7)	\checkmark	\checkmark					√	\checkmark

Legend	
\checkmark	Supported / Released
	Not supported / Not released / Not planned
1	Including all manufacturer's service packs & updates
2	Planned for next Release (April 2023)
3	Tested with MacBook Pro
4	x86_64 platforms
5	Supported minimal resolution size: 1152 x Y or higher
6	To increase ARIS security, the TLS 1.0 protocol is not supported. TLS 1.2 is supported.
7	Windows Server 2016 will no longer be supported after the next version (2023Apr)

Supported Database Systems										
C	Patabase S	ystem (1)	Standard database system	Oracle 12.2	Oracle 19.x(8)	MS SQL Server 2016 Service Pack 2	MS SQL Server 2017	MS SQL Server 2019	IBM DB2 UDB 10.5	IBM DB2 UDB 11
ARIS Connect Server	10.0	YCS	√ (3)	✓ (5)	√ (5)	√ (6)	✓ (6)	✓ (6)		
ARIS Design Server	10.0	YDS	✓ (3)	√ (5)	√ (5)	√ (6)	√ (6)	√ (6)		
ARIS Process Performance Manager	IIS Process Performance Manager 10.5.5 YP			√ (5)	√ (5)	✓ (6, 7)	✓ (6, 7)	✓ (6, 7)	✓	~
ARIS Process Extractor JDBC-2-PPM	Process Extractor JDBC-2-PPM 10.5.5 YPI			✓	~	~	✓	✓	✓	~
ARIS Risk and Compliance Manager				√ (5)	√ (5)	√ (6)	√ (6)	√ (6)		

Legend	
✓	Supported / Released
	Not supported / Not released / Not planned
1	Including all manufacturer's service packs & updates
2	Planned for next Release (April 2023)
3	Only for demo scenarios or small number of users
4	Installation only with support from Software AG
5	Supported JDBC driver: 12.2.0.0 and higher.
6	Supported JDBC driver: 6.4.0 and higher. SQL Server Standard and Enterprise Editions are supported.
7	It is mandatory with Java to use the sqljdbc jre8 based driver. PPM supports SQL Server databases set up for collation Latin1_General_BIN - other collations are not supported. You can assign the collation at the database level. If you use MS SQL Server on a single database instance and plan to set up a scaled PPM system with one master server and several sub-servers to connect to that instance, you need to ensure that the individual servers access different databases within the instance.
8	Oracle JDBC driver ojdbc10 is not supported. Oracle JDBC driver ojdbc8 is supported.

Supported Web Browser & JAVA version									
	Web Browser (1	↔ Microsoft Edge (5)	Firefox (6)	Google Chrome (7)	Safari 13 or higher	JAVA version	Java 8.x (4)	Java 11.x	Java 17.x
ARIS Designer	10.0 YAD	~	~	✓			√ (3)	√ (3)	√ (3)
ARIS Architect	10.0 YAA	~	✓	✓			√ (3)	√ (3)	√ (3)
UML Designer	10.0 YUD	~	~	✓			√ (3)	√ (3)	√ (3)
ARIS Connect Viewer	10.0 YCSCC	~	~	~	~		n.a.	n.a.	n.a.
ARIS Connect Designer	10.0 YCSDC	✓	~	✓	~		n.a.	n.a.	n.a.
ARIS Process Performance Manager	10.5.5 YPI	✓	✓	✓				✓	
ARIS Process Mining SaaS	10.0.20 YPM	✓	✓	✓	✓		n.a.	n.a.	n.a.
ARIS Risk and Compliance Manager	10.0 YRC	✓	~	✓			n.a.	n.a.	n.a.

Legend	
✓	Supported / Released
	Not supported / Not released / Not planned
n.a.	Not applicable
1	Including all manufacturer's service packs & updates
2	Planned for next Release (April 2023)
3	The download clients use Java 11 per default. The download can also be started using Java 8 or Java 17, but in that case, a JRE 11 is downloaded into the user's profile and used to start the ARIS client.
4	Minimum version for Java 8.x: 8u141
5	Chromium-based version 96 or higher is recommended.
6	Firefox 107 or higher is recommended.
7	Google Chrome 106 or higher is recommended.

Supported Web Application Server												
Web Ap	plication S	Server (1)	Tomcat 8.5.x									
ARIS Connect Server (3)	10.0	YCS	\checkmark									
ARIS Process Performance Manager	~											
ARIS Risk and Compliance Manager	\checkmark											

Legend	
\checkmark	Supported / Released
	Not supported / Not released / Not planned
1	Including all manufacturer's service packs & updates
2	Planned for next Release (April 2023)
2	ARIS Connect Applications are running within Apache Tomcat 8.5.x. Deployment within other Application Server is currently not
5	supported.

Supported Mobile Platforms	Supported Mobile Platforms												
	Mobile OS (1												
			iOS 12.x	iOS 13.x									
ARIS Connect Viewer	10.0	YCSCC	\checkmark	√									

Tested Mobile D	Devices	iPad 6 th generation (3)	iPhone					
RIS Connect Viewer10.0YCSCC		✓						

Legend	
\checkmark	Supported / Released
	Not supported / Not released / Not planned
1	Including all manufacturer's service packs & updates
2	Planned for next Release (April 2023)
3	Tested with iPad 6th generation (2019)

Supported LDAP systems											
Other LDAP systems have to be configure	her LDAP systems have to be configured by Software AG Global Consulting Services (GCS).										
	LDAP s	ystem (1)	Active Directory Domain Services Windows 2012 Server	Active Directory Domain Services Windows 2016 Server	Active Directory Domain Services Windows 2019 Server	Net IQ eDirectory 8.8 SP8	Oracle Directory Server Enterprise Edition 11g	IBM Tivoli Directory Server 6.1			
ARIS Connect Server	10.0	YCS	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark			
ARIS Design Server	10.0	YDS	✓	✓	✓	✓	✓	✓			
ARIS Process Performance Manager	10.5.5	YPI	✓	✓	✓	√	✓	√			
ARIS Risk and Compliance Manager	10.0	YRC	√	√	√	\checkmark	\checkmark	√			

Legend	
\checkmark	Supported / Released
	Not supported / Not released / Not planned
1	Including all manufacturer's service packs & updates
2	Planned for next Release (April 2023)

Supported Single Sign-On Technologie								
	Single Si	gn-On (1)	Kerberos	SAML 2.0 (3)				
ARIS Designer	10.0	YAD	✓	\checkmark				
ARIS Architect	10.0	YAA	✓	✓				
UML Designer	10.0	YUD	✓					
ARIS Connect Viewer	10.0	YCSCC	✓	✓				
ARIS Connect Designer	10.0	YCSDC	✓	✓				
ARIS Process Performance Manager	10.5.5	YPI	✓					
ARIS Risk and Compliance Manager	10.0	YRC	✓	✓				

Legend								
\checkmark	Supported / Released							
	Not supported / Not released / Not planned							
1	Including all manufacturer's service packs & updates							
2	Planned for next Release (April 2023)							
3	For more details see "ARIS SSO, LDAP, KERBEROS, SAML, SCIM.pdf"							

Supported External Systems									
Exte	ernal Syste	em (1) (3)	Microsoft SharePoint 2016	Microsoft SharePoint 2019	Microsoft SharePoint Online	Matomo			
ARIS Connect Server	10.0	YCS	\checkmark	\checkmark	\checkmark	√ (4)			
ARIS Design Server	10.0	YDS	✓	\checkmark	\checkmark	√ (4)			

Legend	
\checkmark	Supported / Released
	Not supported / Not released / Not planned
1	Including all manufacturer's service packs & updates
2	Planned for next Release (April 2023)
3	Provided by the SharePoint Adapter for ARIS (SAA). Requires ARIS version 10.0 SR10 and additional license
4	Tested with version 4.11

ARIS Compatibility with other Software AG Products											
Software AG Products	Alfabet 10.0	API Portal 10.0	ARIS 10.0	ARIS Process Performance Manager 10.5.5	ARIS Risk and Compliance Manager 10.0	CentraSite / webMethods 9.8	CentraSite / webMethods 9.9	CentraSite / webMethods 9.10	CentraSite / webMethods 9.12	CentraSite / webMethods 10.x	MashZone NextGen 10.15
ARIS 10.0	~	\checkmark		√ (4)	~	√ (1)	√ (1)	√ (1)	✓ (1,3)	\checkmark	
ARIS Process Performance Manager 10.5			✓								√ (5)
ARIS Risk and Compliance Manager 10.0			~								\checkmark

Legend	
\checkmark	Supported / Released
	Not supported / Not released / Not planned
1	M2E Use case
2	Planned for next Release (April 2023)
3	Support of REST service in service request szenario between ARIS and CentraSite
4	Compatible with ARIS 10.0 SR13 and higher for full functionality
5	Compatible with PPM 10.5.2 and higher for full functionality

Languages																				
		Languages	Arabic	Chinese (Simplified Chinese)	Czech	Danish	Dutch	English	French	German	Hungarian	Korean	Italian	Japanese	Polish	Portuguese (Brazilian Portuguese)	Russian	Spanish	Swedish	Turkish
ARIS Connect Server	10.0	YCS	√ (1)	√ (1)	√ (1)		√ (1)	~	~	✓	✓ (1)	✓ (1)	√ (1)	~	✓ (1)	√ (1)	✓ (1)	✓ (1)		√ (1)
ARIS Design Server	10.0	YDS	✓ (1)	✓ (1)	✓ (1)		✓ (1)	~	✓	~	✓ (1)	✓ (1)	✓ (1)	~	✓ (1)	✓ (1)	✓ (1)	✓ (1)		✓ (1)
ARIS Viewer	10.0	YBU	✓ (1)	√ (1)	√ (1)		√ (1)	~	~	\checkmark	✓ (1)	✓ (1)	✓ (1)	~	✓ (1)	✓ (1)	✓ (1)	✓ (1)		✓ (1)
ARIS Designer	10.0	YAD	✓ (1)	√ (1)	√ (1)		√ (1)	~	~	\checkmark	√ (1)	✓ (1)	√ (1)	~	✓ (1)	√ (1)	✓ (1)	✓ (1)		✓ (1)
ARIS Architect	10.0	YAA	√ (1)	√ (1)	√ (1)		√ (1)	~	~	~	✓ (1)	✓ (1)	√ (1)	~	✓ (1)	✓ (1)	✓ (1)	✓ (1)		✓ (1)
UML Designer	10.0	YUD	√ (1)	√ (1)	√ (1)		√ (1)	~	~	✓	✓ (1)	✓ (1)	✓ (1)	~	✓ (1)	✓ (1)	✓ (1)	✓ (1)		✓ (1)
ARIS Connect Viewer	10.0	YCSCC	✓ (1)	√ (1)	√ (1)	√ (1)	√ (1)	~	~	~	✓ (1)	✓ (1)	✓ (1)	~	✓ (1)	✓ (1)	✓ (1)	✓ (1)	✓ (1)	✓ (1)
ARIS Connect Designer	10.0	YCSDC	✓ (1)	✓ (1)	√ (1)	✓ (1)	✓ (1)	~	~	~	✓ (1)	✓ (1)	✓ (1)	~	✓ (1)	✓ (1)	✓ (1)	✓ (1)	✓ (1)	✓ (1)
ARIS Process Performance Manager	10.5.5	YPI		✓ (1)				~	√ (1)	~				~		~	✓ (1)			
Process Extractor for ARIS Process Mining SaaS	10.0.20	YMS						✓ (1)												
ARIS Risk and Compliance Manager	10.0	YRC	√ (3)	√ (1)				~	~	~	✓ (1)		√ (1)	~		√ (1)		~		

Legend	
✓	Supported / Released
	Not supported / Not released / Not planned
1	Documentation and online help in English
2	Planned for next Service Release (April 2023)
3	No RTL layout, translation only

Scenario	# Conc. Users	Single Server	Distributed / Fail safe
commended Hardware Configuration A		•	
		7 GB (free RAM) / 6 CPU Cores	
Demo scenario	only for demo	>= 50GB free HD Space	
Medium	1-50	24 GB (free RAM) / 12 CPU Cores >= 100GB free HD Space (2)	
Large (Oracle or MS SQL recommended)	50-200	36 GB (free RAM) / >= 16 CPU Cores >= 200GB free HD Space (2)	(Individual) Configuration (1)
XL, XXL, (Custom) (only with Oracle or MS SQL)	>200		ndividual) iguration (1)
commended Hardware Configuration A	RIS Design / Connect	Server (with Dashboarding)	
Demo scenario	only for demo	8 GB (free RAM) / 6 CPU Cores >= 50GB free HD Space	
Medium	1-50	28 GB (free RAM) / 12 CPU Cores >= 100GB free HD Space (2)	
Large (Oracle or MS SQL recommended)	50-200	44 GB (free RAM) / >= 16 CPU Cores >= 200GB free HD Space (2)	(Individual) Configuration (1)
XL, XXL, (Custom) (only with Oracle or MS SQL)	>200		ndividual) iguration (1)
commended Hardware Configuration A	RIS Design / Connect	Server (with ARIS Risk & Compliancer Manager w	vithout ARIS Aware)
Demo scenario	only for demo	9 GB (free RAM) / 8 CPU Cores >= 50GB free HD Space	
Medium	1-50	28 GB (free RAM) / 16 CPU Cores >= 100GB free HD Space (2)	
Large (Oracle or MS SQL recommended)	50-200	44 GB (free RAM) / >= 24 CPU Cores >= 200GB free HD Space (2)	(Individual) Configuration (1)
XL, XXL, (Custom) (only with Oracle or MS SQL)	>200		ndividual) riguration (1)
commended Hardware Configuration A	RIS Design / Connect	Server (with ARIS Risk & Compliancer Manager &	ARIS Aware)
Demo scenario	only for demo	10 GB (free RAM) / 8 CPU Cores >= 50GB free HD Space	
Medium	1-50	32 GB (free RAM) / 16 CPU Cores >= 100GB free HD Space (2)	
Large (Oracle or MS SQL recommended)	50-200	52 GB (free RAM) / >= 24 CPU Cores >= 200GB free HD Space (2)	(Individual) Configuration (1)
XL, XXL, (Custom) (only with Oracle or MS SQL)	>200		ndividual) riguration (1)
commended Hardware Configuration D	atabase Server (Orac	le or MS SQL)	
Large (Oracle or MS SQL recommended)	50-200	64 GB (free RAM) / >= 24 CPU Cores >= 1TB free HD Space (2)	(Individual) Configuration (1)
XL, XXL, (Custom) (only with Oracle or MS SQL)	>200		ndividual) riguration (1)
commended Hardware Configuration A	RIS Clients		
Scenario	# Users	Hardware	Network
ARIS Client	1	4 CPU Cores / 4GB (free RAM) >= 2GB free HD Space	Recommended bandwidth: >100 Mbit/s Lower bandwidths can result in reduced performance Recommended latency: <150ms
			Higher latency can result in reduced performance.
) Please contact ARIS Support			
	installation For an up	date, we recommend more free HD space (at least 10	10GB plus size of current work space)
•	•		ood plus size of current work space).
We recommend to use SSD (> 5.000 IOPS) for best performance	•	

Software AG recommends to install ARIS 10.0 not on the same host together with ARIS 9.x. Due to additional functionality, hardware requirements are higher as ARIS 9.8.

Software AG recommends to monitor utilization (of RAM & CPU Cores) in productive environment. Due to the number of users / databases, complexity of databases and other influencing factors, hardware recommendation could be higher. Software AG recommends to run ARIS on dedicated hardware (no other application systems than ARIS on the same host).

The database server (MSSQL/Oracle) must be installed, configured and sized according to the manufacturer's instructions.

To avoid performance issues, the following is recommended:

- A dedicated Oracle database instance should be provided to host ARIS data only

- ARIS Servers and the DBMS server should be on different hosts

- The DMBS server should be on a physical host

- ARIS servers and the DBMS server have to be connected with a high performance network (> 1Gbit/s, very low latency). Network bandwidth and latency should be monitored and have to be ensured at all times, independent from the load on the ARIS servers or other systems that might share the same network connection.

Concerning the sizing of an Oracle database server we recommend to set the memory_target to a minimum value of 4 GB or 10% of the total size of all segments in all schemas, whichever is higher.

Concerning the sizing of a SQL Server instance we recommend to set the "max server memory (MB)" parameter to a minimum of 4000 or 10% of the space that is used in the SQL Server database for ARIS, whichever is higher. In case the SQL server is not dedicated to host only ARIS as application, the value has to be increased in the respective sense.

Virtual Machine Support

Software AG provides for all its software the definitions of supported, documented platform configurations (referred to here just as 'supported platform') which will include specific Operating System (OS) and hardware configurations, and may include Java Virtual Machine (JVM) and database versions. Customers can use a commercially available virtualization environment for a Software AG production environment if it accurately and completely emulates one of the supported platforms.

Customers who use virtual environments are required to comply fully with their contractual terms and conditions for licensing.

Software AG tests its software for operation on the supported platforms and not specifically against all possible combinations of hardware that might be comprised that operating system (for example, file system, disk controllers, memory configuration, display devices and so on). Therefore, the correct expertise, provision and management of a hardware configuration to support the platform remain the responsibility of our customers, whether directly using physical hardware or a virtualization environment. Software AG recommends physical hardware or, if ARIS products are used in a virtual environment, sufficient resources must be available in order to avoid the risk of overbooking.

Software AG tests and supports certain products on the specific virtualized environments listed in the system requirements section of the product documentation. Customers can use a different virtualized environment that accurately and completely emulates one of the supported platforms; however, if they encounter an issue that Software AG judges might be caused by the virtualized environment, then the customer is responsible for reproducing the issue on an actual supported platform before further analysis can take place. Software AG Global Support will refer customers to the Global Consulting Services group for guidance or recommendation about the use of virtualization software, or, if required, the best approaches for copying a system to a supported platform.

Legal information

Data protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR).

Where applicable, appropriate steps are documented in the respective administration documentation.

Restrictions

ARIS products are intended and developed for use by persons. Automated processes, such as the generation of content and the import of objects/artifacts via interfaces, can lead to an outsized amount of data, and their execution may exceed processing capacities and physical limits. For example, processing capacities are exceeded if models and diagrams transcend the size of the modeling area or an extremely high number of processing operations is started simultaneously. Physical limits may be exceeded if the memory available is not sufficient for the execution of operations or the storage of data.

Proper operation of ARIS products requires the availability of a reliable and fast network connection. Networks with insufficient response time will reduce system performance and may cause timeouts.

If ARIS products are used in a virtual environment, sufficient resources must be available there in order to avoid the risk of overbooking.

The system was tested using scenarios that included 100,000 groups (folders), 100,000 users, and 1,000,000 modeling artifacts. It supports a modeling area of 25 square meters.

If projects or repositories are larger than the maximum size allowed, a powerful functionality is available to break them down into smaller, more manageable parts.

Some restrictions may apply when working with process administration, ARIS Administration ARIS document storage, and ARIS Process Board, and when generating executable processes. Process Governance has been tested and approved for 1000 parallel process instances. However, the number may vary depending on process complexity, for example, if custom reports are integrated.

Versioning: Length of a changelist description is limited to 1000 chars.

'Export user statistics' procedure: Ensure that the maximum number of entries included do not exceed 500.000.

ARIS document storage was tested with 40.000 document items. This includes documents, document versions or folders. We recommend monitoring the number and overall size of stored document items and archiving some document items if needed.

Using software or hardware that directly creates, reads, updates, or deletes data in the underlying database systems or data storage services instead of using the officially documented application level APIs is not supported. It could lead to a loss of data, malfunction of the product, or data security breaches.

Web Application Firewall (WAF) with "blocking mode" is not officially supported.