



# **ARIS Guidelines** **FOR TECHNICAL DOCUMENTS**

Version 10.0 - Service Release 3

December 2017

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.

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# 1 Folder structure

The technical manuals supplied with ARIS are provided in a folder structure that represents typical deployment scenarios (page 6). The folders are numbered so that you can easily identify the described scenarios area. Thus, you know, e. g., that you access to installation documents, when you navigate to a subfolder of the folder **3 Installation**. Every folder contains a folder description with sufficient information about the described area. The top-level hierarchy represents the access point to the deployment scenarios:

## 1 OVERVIEW

This area provides you with general information about ARIS products, e.g., about ARIS features.

## 2 SYSTEM REQUIREMENTS

Here you can look up the basic system requirements or requirements for specific installation scenarios.

## 3 INSTALLATION

In this area (page 8) you will find information about client and server installations, updates, and upgrades.

## 4 ADMINISTRATION

To administrate an installed system, you obtain necessary information in this area (page 7).

## 5 CUSTOMIZING

This area (page 7) provides you with information how to adapt the installed system to meet company-specific needs.

## 6 USING ARIS

Here you can find manuals that support users to use ARIS quickly.

## 7 LEGAL AND LIFECYCLE INFORMATION

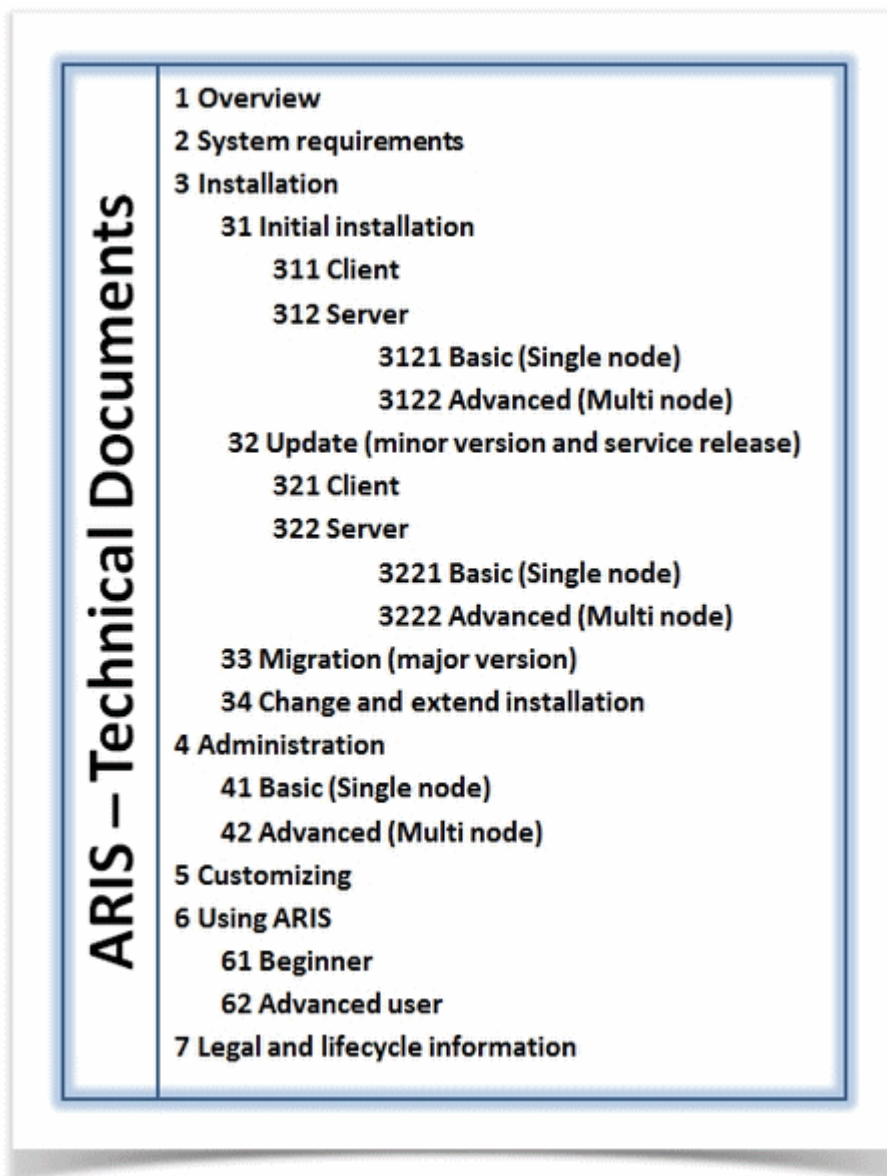
Here you can find information about product support and legal notices.

If you want to know, how several terms regarding the folder structure are used, you can open the glossary (page 7). There you can learn how, e.g., a distinction is made between the terms **Update** and **Upgrade**.

If required: All documents can be downloaded from Empower (<https://empower.softwareag.com/>), where a login is required, or from the ARIS Download Center ([aris.softwareag.com](https://aris.softwareag.com)).

## 1.1 Folder structure overview

This is the folder structure for technical ARIS documents:



Every folder is described (page 3) in order to inform you about the purpose of the documents stored. In general, the folders reflect deployment scenarios (page 6). Based on the technical documents that are stored in a folder the tasks of the applicable deployment scenario can be performed.

## 1.2 Folder descriptions

These are the complete folder descriptions for the folders of the technical ARIS documents:

### 1 OVERVIEW

The documents contained provide an overview of the features of the ARIS system.

### 2 SYSTEM REQUIREMENTS

The documents contained provide information about the fundamental principles, the architecture, and the capabilities of the ARIS system. They show, which system requirements must be fulfilled to run certain expansion stages.

### 3 INSTALLATION

The documents contained provide information about the installation (page 8) of the ARIS Client software and the ARIS Servers. A distinction is made between the initial installation, an update (page 16) (minor version and service release), and a migration (page 9) (major version). In addition, you obtain information to modify a running system (Change and extend installation).

#### 31 INITIAL INSTALLATION

The documents contained provide information about the first ARIS installations pertaining to ARIS Client and ARIS Server.

##### 311 CLIENT

The documents contained provide information about the installation of the ARIS Client. In this case you use the Client installation program. Installing the ARIS client means that you install all program files on your local computer.

The ARIS Client can also be started as download client (page 8) that is installed if you install an ARIS Server (see folder **312 Server**). In this case, only some user specific files are stored on the local computer, but no program files.

##### 312 SERVER

The documents contained provide information about the installation of an ARIS Server. The installation contains the ARIS Client as download client (page 8).

##### 3121 BASIC (SINGLE NODE)

The documents contained provide information about the installation of an ARIS Server on one node (page 11) with the Server installation program.

##### 3122 ADVANCED (MULTI NODE)

The documents contained provide information about the installation of ARIS Servers on multiple nodes (page 9). This kind of installation requires several manual steps.

Please note that documents provided in the **Single node** area also apply to the multi node installation. In other words, the **Multi node** area contains only these documents that apply in addition to the documents provided in the **Single node** area.

### 32 UPDATE (MINOR VERSION AND SERVICE RELEASE)

The documents contained provide information about the update of an existing version, in other words, a running version is adapted to a revised version.

#### 321 CLIENT

The documents contained provide information about the update of an existing version, in other words, a previous version is adapted to a revised version. In this case you use the Client installation program. In this case you use the Client installation program.

#### 322 SERVER

The documents contained provide information about the update of a previous ARIS Server version to a revised version.

##### 3221 BASIC (SINGLE NODE)

The documents contained provide information about the update of an ARIS Server to a revised version on one node. In this case you use the Server installation program.

##### 3222 ADVANCED (MULTI NODE)

The documents contained provide information about the update of ARIS Servers to a revised version on multiple nodes. This kind of installation requires several manual steps.

Please note that documents provided in the **Single node** area also apply to the multi node installation. In other words, the **Multi node** area contains only these documents that apply in addition to the documents provided in the **Single node** area.

### 33 MIGRATION (MAJOR VERSION)

The documents contained provide information about the migration (page 9) to another major version. This means that besides or instead of the previous version a new version is installed (side-by-side installation). Existing data, scripts, etc. have to be transferred to the new major version.

### 34 CHANGE AND EXTEND INSTALLATION

The documents contained provide information about some major use cases to adjust a running server installation.

## 4 ADMINISTRATION

The documents contained provide information about how to adjust and maintain an ARIS system.

#### 41 BASIC (SINGLE NODE)

The documents contained provide information about how to adjust and maintain an ARIS system installed on a single node (page 11).

## 42 ADVANCED (MULTI NODE)

The documents contained provide information about how to adjust and maintain an ARIS system installed on multiple nodes (page 9).

Please note that documents provided in the **Single node** area also apply to the multi node installation. In other words, the **Multi node** area contains only these documents that apply in addition to the documents provided in the **Single node** area.

## 5 CUSTOMIZING

The documents contained provide information about how to user-specific adjust an ARIS system.

Please note, that as consequence of user-specific adjustments, based on the usual update process, the ARIS system cannot be updated and user-specific adjustments are not supported by Software AG.

## 6 USING ARIS

The documents contained provide information about using an ARIS Client.

## 61 BEGINNER

The documents contained provide information for users without much experience to use ARIS.

## 62 ADVANCED USER

The documents contained provide information for experienced ARIS users.

## 7 LEGAL AND LIFECYCLE INFORMATION

The documents contained provide information for the legal context of ARIS products and the product support.



## 1.3 Typical scenarios

The folder structure supports you to perform the tasks of the applicable deployment scenarios. Each folder has its own folder description that provides information about the kind of the documents contained. The following scenarios show exemplary how to select a folder for specific deployment scenarios.

### SCENARIO 1

You want to know what kind of documents the folder **34 Change and extend installations** offers.

Appropriate folder/file:

34 Change and extend installations: **34 Change and extend installation.txt**

### SCENARIO 2

You want to know how much main memory is recommended for a download client.

Appropriate folder/file:

2 **System requirements: ARIS System Requirements.pdf**

### SCENARIO 3

You want to install an **ARIS Server on a Windows** system for the **first time** on **one computer** or **one virtual machine**.

Appropriate folder/file:

3 **Installation** > 31 **Initial** installation > 312 **Server** > 3121 Basic (**Single node**): **ARIS Server Installation - Windows.pdf**

### SCENARIO 4

You want to **configure the ARIS Download client** supplied with an installed ARIS Server in a **multiple node** installation environment.

Please note that documents provided in the **Single node** area also apply to the multi node installation. In other words, the **Multi node** area contains only these documents that apply in addition to the documents provided in the **Single node** area.

Appropriate folder/file:

4 **Administration** > 41 Basic (**Single node**): **ARIS Download Client Configuration.pdf**

### SCENARIO 5

You want to **adapt** Process Governance to provide executable governance processes for users who use ARIS without Process Governance extension pack.

Appropriate folder/file:

5 **Customizing**: **ARIS Process Governance Customization.pdf**

## 2 Glossary

Here you can find the definitions of the technical terms used in the technical ARIS manuals.

### A

#### Administration (Documentation structure)

This area contains manuals that describe, how to adapt an installed system regarding the available system environment, e.g., increasing the size of the main memory or how to change a port number.

#### ARIS Agent

Required service on every machine (node) on which an ARIS server component (runnable) runs. It allows the remote installation, configuration, operation of ARIS runnables.

#### ARIS Cloud Controller (ACC)

ACC is a command-line tool for administrating and configuring an ARIS installation. It communicates with ARIS Agents on all nodes.

#### 'arisservice' user

The user **arisservice** is created automatically. By default, this user is assigned the **Database administrator** and **Process Governance administrator** function privileges. This user only uses up a license if a license privilege is activated for this user. The default password is **arisservice**. You should change the default password to prevent unauthorized access. You can change all user data except for the user name.

### C

#### Collaboration database

The **postgresECP\_<s,m or l>** runnable handles the internal database storing Collaboration content available in ARIS Connect.

#### Customizing (Documentation structure)

This area contains manuals that describe, how to adapt an installed system to meet company-specific needs that changes a standard system to an individual system. The result of these changes is that the standard update process no longer works. An update to the next minor version has to be done manually, because executing setup programs would overwrite the individual adjustments: they would have been lost.

## D

### Distributed installation

Byword for multi node installation. Using installation programs and performing manual tasks to establish an executable system on several servers.

Multi node installation, i.e., an installation spanning across several computers/VMs. Such a specific scenario requires profound knowledge of the technical ARIS infrastructure and environment. This cannot be provided in the product documentation. The required know-how can be acquired only by attending the training course **ARIS Server Installation**, available via Global Education Services (<http://softwareag.com/training>). For this type of installation Software AG strongly recommends that you request an installation service by Global Consulting Services. You can order that service from your Software AG sales representative.

### Download client

Client that is started via browser link.

If ARIS Server is installed, all authorized users can start ARIS Download Client within their browsers. All necessary files are downloaded from the ARIS Server to a local directory. Users do not need a local ARIS Client installation.

Depending on the browser used, the ARIS Download Client is started or a program icon is saved on your computer that you can use to start the ARIS Client.

## G

### 'guest' user

The user **guest** is created automatically. By default, no function or license privileges are assigned to this user. This user serves technical purposes only. It is not for use by end users. Logging in to ARIS Connect or other Software AG products with this user is not allowed. Further information is available in the Software AG license terms (<http://softwareag.com/licenses> (<http://softwareag.com/licenses>)).

### GUID

Globally **U**nique **I**dentifier (GUID).

The GUID is a character set that uniquely identifies elements worldwide.

## I

### Installation

Using installation programs and performing manual tasks to establish an executable system on one (single node) or several (multi node) servers.

## J

### JAAS

**Java Authentication and Authorization Service (JAAS).**

This is a Java interface, which provides services for the authentication and for the access in Java programs. JAAS supports a user based authentication.

## L

### Load balancer

In ARIS the **loadbalancer** runnable distributes the workload across the installed components.

In computing, load balancing distributes workloads across multiple computing resources, such as computers, a computer cluster, network links, central processing units or disk drives. Load balancing aims to optimize resource use, maximize throughput, minimize response time, and avoid overload of any single resource. Using multiple components with load balancing instead of a single component may increase reliability and availability through redundancy. Load balancing usually involves dedicated software or hardware, such as a multilayer switch or a Domain Name System server process.

## M

### Migration

Installing a new major version and including the previous content.

Example: Upgrade from version **9.8 Service Release 7** to version **10.0**.

### Modeling database

The **postgres\_<s,m or l>** runnable manages the internal standard database system storing all ARIS databases (modeling data) and the system databases (ARIS method, filters, templates, languages, fonts, font formats and script data).

This database can be replaced by an external Oracle® or Microsoft® SQL database.

### Multi node installation

Using installation programs and performing manual tasks to establish an executable system on several servers.

Distributed ARIS installation extending across several computers, delivered by manual provisioning.

Such a specific scenario requires profound knowledge of the technical ARIS infrastructure and environment. This cannot be provided in the product documentation. The required know-how can be acquired only by attending the training course **ARIS Server Installation**, available via Global Education Services (<http://softwareag.com/training>).

## N

### Node

Virtual or physical machine on which ARIS Agent is installed to host ARIS runnables.

## O

### OTP

**One-Time Pad (OTP).**

This one-time pad is a symmetric encryption method for transferring secret messages. This encryption method is characterized by the fact that it uses a key of the same length as the message itself.

The OTP is information-theoretically secure and has proven to be impossible to crack – provided that it is used properly.

## P

### Provisioning

Setting up an installed system via ARIS Cloud Controller (ACC) commands.

## R

### Runnable

ARIS server component providing functionality to the ARIS clients. Runnables are physically installed on a node.

Depending on the ARIS server type different runnables are used in order to provide full functionality. Runnables can be managed using ARIS Cloud Controller (ACC). The InstanceID of the ARIS Server program component is used as the name for the runnable.

## S

### SAML

**Security Assertion Markup Language (SAML).**

Standard for exchanging authentication data between security domains. SAML is an XML-based protocol that uses security tokens containing assertions to pass information about a user between an identity provider and a service provider and enables web-based authentication scenarios including single sign-on across all ARIS runnables.

### Service registry

The **zoo\_<s,m or l>** runnable is a server component managing the communication, configuration and status information of all available runnables and external services.

## Single node installation

Using installation programs and performing manual tasks to establish an executable system on several servers.

### <s, m or l>

Free variable parameter used in ACC expressions.

Indicator for the three memory sizings **small (s)**, **medium (m)** and **large (l)**. This indicator is part of standard runnable names (runnables). It indicates the maximum size of the Java heap. The **S** sizing which at the time of this writing has a maximum heap size of 1152MB should be used for demonstration reasons (laptop) only. The **M** sizing sets the maximum heap size to 8GB, the **L** sizing to 16GB. You can always change this memory setting later with a **reconfigure** command.

## SSL

**Secure Socket Layer (SSL)**.

Security software to encrypt data that are exchanged between programs.

## SSO

**Single Sign-on**.

Using SSO has the advantage that a user only has to log in once to the network. The user need only one login name and password to access all computers, services and programs whose usage is allowed.

## 'superuser' user

The user **superuser** is created automatically. By default, this user is assigned the **User management**, **License management**, and **Configuration administrator** function privileges. This user can also activate this function privilege for other users. Users of the **superuser** type do not use up a license. They manage the system administration, but cannot use ARIS products due to license restrictions. The default password is **superuser**. You should change the default password to prevent unauthorized access. The password of the superuser is very important, as it is the only user who cannot be deleted. You can change all user data except for the user name.

## System database

This database manages the content of the **configuration** and **evaluations** nodes displayed on ARIS Architect's **ARIS Administration** tab, e. g. filters, templates and font formats as well as ARIS method content and scripts.

The database is created during the first ARIS Client login of a user. This content is available in all ARIS databases within this tenant. The system database can be backed up and restored.

## System language and locale IDs

The locale ID (LCID (<http://msdn.microsoft.com/en-us/global/bb964662.aspx>)) designates a language within a language group.

Language groups and code page are also represented by a number, e.g., code page=1252.

The language group is preceded by a minus sign (-), e.g., -1252.

Examples are listed in the table below. For more information please refer to:

[http://msdn.microsoft.com/en-us/library/0h88fahh\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/0h88fahh(VS.85).aspx)

([http://msdn.microsoft.com/en-us/library/0h88fahh\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/0h88fahh(VS.85).aspx)).

System language	LCID
Afrikaans - South Africa	1078
Albanian - Albania	1052
Arabic - Algeria	5121
Arabic - Bahrain	15361
Arabic - Egypt	3073
Arabic - Iraq	2049
Arabic - Jordan	11265
Arabic - Kuwait	13313
Arabic - Lebanon	12289
Arabic - Libya	4097
Arabic - Morocco	6145
Arabic - Oman	8193
Arabic - Qatar	16385
Arabic - Saudi Arabia	1025
Arabic - Syria	10241
Arabic - Tunisia	7169
Arabic - U.A.E.	14337
Arabic - Yemen	9217
Basque - Spain	1069
Belarusian - Belarus	1059
Bulgarian - Bulgaria	1026
Catalan - Spain	1027
Chinese - Hong Kong	3076
Chinese - PRC	2052

System language	LCID
Chinese - Singapore	4100
Chinese - Taiwan	1028
Croatian - Croatia	1050
Czech - Czech Republic	1029
Danish - Denmark	1030
Dutch - Belgium	2067
Dutch - Netherlands	1043
English - Australia	3081
English - Belize	10249
English - Canada	4105
English - Caribbean	9225
English - Ireland	6153
English - Jamaica	8201
English - New Zealand	5129
English - South Africa	7177
English - Trinidad	11273
English - United Kingdom	2057
English - United States	1033
Estonian - Estonia	1061
Faeroese - Faeroe Islands	1080
Farsi - Iran	1065
Finnish - Finland	1035
French - Belgium	2060
French - Canada	3084
French - France	1036
French - Luxembourg	5132
French - Switzerland	4108
German - Austria	3079
German - Germany	1031
German - Liechtenstein	5127



System language	LCID
German - Luxembourg	4103
German - Switzerland	2055
Greek - Greece	1032
Hebrew - Israel	1037
Hungarian - Hungary	1038
Icelandic - Iceland	1039
Indonesian - Indonesia	1057
Italian - Italy	1040
Italian - Switzerland	2064
Japanese - Japan	1041
Korean - Korea	1042
Latvian - Latvia	1062
Lithuanian - Lithuania	1063
Norwegian - Norway (Bokmal)	1044
Norwegian - Norway (Nynorsk)	2068
Polish - Poland	1045
Portuguese - Brazil	1046
Portuguese - Portugal	2070
Romanian - Romania	1048
Russian - Russia	1049
Serbian - Serbia (Cyrillic)	3098
Serbian - Serbia (Latin)	2074
Slovak - Slovakia	1051
Slovene - Slovenia	1060
Spanish - Argentina	11274
Spanish - Bolivia	16394
Spanish - Chile	13322
Spanish - Colombia	9226
Spanish - Costa Rica	5130
Spanish - Dominican Republic	7178

System language	LCID
Spanish - Ecuador	12298
Spanish - El Salvador	17418
Spanish - Guatemala	4106
Spanish - Honduras	18442
Spanish - Mexico	2058
Spanish - Nicaragua	19466
Spanish - Panama	6154
Spanish - Paraguay	15370
Spanish - Peru	10250
Spanish - Puerto Rico	20490
Spanish - Spain (Modern Sort)	3082
Spanish - Spain (Traditional Sort)	1034
Spanish - Uruguay	14346
Spanish - Venezuela	8202
Swedish - Finland	2077
Swedish - Sweden	1053
Thai - Thailand	1054
Turkish - Turkey	1055
Ukrainian - Ukraine	1058
Vietnamese - Vietnam	1066

## 'system' user

The **system** user is created automatically. By default, the system user has all function privileges. This user can log in to process administration, ARIS Administration, User Management, and ARIS Process Board. In ARIS Architect and ARIS Designer, this user has all access privileges for all database groups of all databases. This user only uses up a license if a license privilege is activated for this user. The default password is manager. You should change the default password to prevent unauthorized access. You can change all user data except for the user name.

- Having more than one system user can avoid problems, if, e. g., your single system user has forgotten his password. You can create additional system users or copy the existing system user. If your only system user was deleted accidentally, create a new one by using the superuser.

## T

### Tenant

A tenant is a container having its own set of ARIS data.

After the installation two tenants are available. The infrastructure **master** tenant manages administrative users and all other tenants. The **default** tenant is available for operational use. It manages databases, documents, users/user groups, licenses etc. A single physical ARIS installation can host multiple operational tenants. Users of a specific tenant can't access data from other tenants. A tenant is a kind of logical ARIS installation. Tenants do not share any data.

### TLS

Transport Layer Security (**TLS**).

TLS is known under the name of **Secure Sockets Layer (SSL)**. It is an encryption protocol to ensure a secure data transfer through the Internet.

## U

### Update

Adjusting an installed system to the next minor version including the previous content.

Example: Update the version **10.3** to version **10.4**.

### Upgrade

Synonym for Migration:

Installing a new major version and including the previous content.

Example: Upgrade from version **9.8 Service Release 7** to version **10.0**.

### 3 Disclaimer

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, e.g., if custom reports are integrated.

ARIS document storage was tested with 40.000 documents. We recommend monitoring the number and overall size of stored documents and if needed some documents should be archived.