



ARIS

MIGRATING DATA

Version 10.0

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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 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.

2 General notices

This manual describes the settings and features as they were at the time of print.

- The migration procedure assumes a basic ARIS 10 installation running on a separate computer. If your ARIS 9 Server is not addressed via DNS alias name and the ARIS 10 server is addressed via a different name as the ARIS 9 server, a new SSL certificate is needed matching the new server name.
- During migration the User Management configuration data, e.g., Kerberos settings, will be overwritten by ARIS9.8.7 (or later) data. These settings must be checked or specified again in ARIS 10 after migration is completed.
- Refer to additional documents on DVD, ARIS Download Center (aris.softwareag.com) or Empower (<https://empower.softwareag.com/>).
- In general, it is advisable to use up-to-date hardware taking into account the number of users who will be accessing the ARIS.
- When you combine various technologies, please observe the manufacturers' instructions, particularly announcements concerning releases on their Internet pages. We cannot guarantee proper functioning and installation of approved third-party systems and do not support them. Always follow the instructions provided in the installation manuals of the relevant manufacturers. If you experience difficulties, please contact the relevant manufacturer.
- If you need help installing third-party systems, please contact your local Software AG sales organization (page 24). Please note that this type of manufacturer-specific or customer-specific change is not subject to the standard Software AG software maintenance agreement and that these changes can only be performed if you requested and agreed on them.
- Please consider the legal notices (<http://softwareag.com/licenses/>).

3 Text conventions

Menu items, file names, etc. are indicated in texts as follows:

- Menu items, key combinations, dialogs, file names, entries, etc. are displayed in **bold**.
- User-defined entries are shown **<in bold and in angle brackets>**.
- Single-line example texts (e.g., a long directory path that covers several lines due to a lack of space) are separated by ↵ at the end of the line.
- File extracts are shown in this font format:
This paragraph contains a file extract.
- Warnings have a colored background:

Warning

This paragraph contains a warning.

4 Data Migration from ARIS 9.8.7 or later to ARIS 10

Use the **backup tenant** and **restore tenant** ARIS Cloud Controller (ACC) commands to migrate data from ARIS 9.8.7 or later versions to ARIS 10.x. If you back up tenants, the current state of the following data is saved in different folders in the tenant backup archive file.

Tenant data is fully backed up only if the user executing the commands has sufficient privileges for all components in every tenant.

Backup/restore	Required function privileges	Component (runnable)
Data from ARIS Administration, e.g., users, privileges, Licenses	User administrator Technical configuration administrator License administrator	ARIS Administration/User Management (umcadmin_<s, m, or l>)
System database Contains filters, templates, and font formats, but also ARIS Method and all evaluation scripts, macros and scheduled reports.	Server administrator	Modeling & Publishing (abs_<s, m, or l>)
ARIS databases	Database administrator	
Ad hoc analyses and queries	Analysis administrator	Analysis (octopus_<s, m, or l>)
ARIS document storage data Documents and access privileges	Document administrator Technical configuration administrator	ARIS document storage (adsadmin_<s, m, or l>)
Process Governance data	Process Governance administrator	Process Governance (apg_<s, m, or l>)
Collaboration data	Collaboration administrator	Collaboration (ecp_<s, m, or l>)

Data from the Tenant management tool will not be migrated.

MIGRATION SCENARIOS

In order to achieve predictable migration time (page 6) you need to check the size of tenant data, and choose the likely migration scenario.

- Migrating tenants where the sum of databases is smaller than 3 GB (page 7)
Just backup tenants in ARIS 9 and restore them on the ARIS 10 installation on a different computer. If ARIS Connect (page 21) was customized or ARIS Publisher still is in use, after migration you must perform some additional steps. Make sure to add required extensions again.
- Migrating tenants where the sum of all databases is bigger than 3 GB (page 11)
In order to achieve a predictable migration time and smaller tenant backup files, exclude all ARIS databases from the tenant backup. Thus, you can start the database migration separately. (page 14) If ARIS Connect (page 21) was customized or ARIS Publisher still is in use, after migration you must perform some additional steps. Make sure to add required extensions again.
- Migrating ARIS Connect modification sets and configuration sets manually (page 21)
You must backup portal views and restore them as modification sets if in ARIS 9 portal views were added or changed. Customized configurations must be adapted on file level.
- Migrating ARIS Publisher
There is no way of migrating exports. You must export your migrated database content using ARIS Publisher 10.
- Migrating ARIS Risk & Compliance Manager
For this migration scenario please refer to the **ARIS Risk & Compliance Manager Data Migration for customized data**.
- Migrating ARISclient> with server LOCAL.
Migrate these data manually using ARIS Architect.

Software AG recommends that you request a migration service by Global Consulting Services. You can order that service from your Software AG sales representative (page 24).

4.1 What influences the migration time?

In order to forecast migration time, you have to take several influencing factors into account:

- Hardware performance.

Hardware requirements must be fulfilled according to the ARIS System Requirements (see **ARIS System Requirements.pdf** on DVD, ARIS Download Center (aris.softwareag.com) or Empower (<https://empower.softwareag.com/>))

- The size of the tenant backup archive.

When backing up tenant data, all data is saved in one tenant archive file. It is plain to see, the bigger the file the longer migration will take.

The time needed for restoring an ARIS database in ARIS 9 can be roughly multiplied by 1.5 up to 3 in ARIS 10. If this takes, e. g., 30 minutes, migration can take from 45 to 90 minutes. If the size of all ARIS databases together is bigger than 3 GB, the **restore tenant** action can take longer than 24 hours. This large size can occur because of a high number of databases, documents stored in ARIS document storage. In this case migrate tenant data having all databases excluded (page 11), and migrate the databases manually (page 14).

4.2 Migrating all tenant data

Use the **backup tenant** and **restore tenant** ARIS Cloud Controller (ACC) commands to migrate data from ARIS 9.8.7 or later versions to ARIS 10.x.

If all databases together are bigger than 3 GB migrate tenants without databases (page 11) instead.

Warning

Tenant data is fully backed up only if the user executing the commands has sufficient privileges for all components in every tenant.

Extensions, e.g., SSL certificates, SAP® Java Connector, and JDBC drivers, added using the **enhance** ACC command are not backed up.

Prerequisites

- ARIS 9 installation (source system) to make backups. You need the agent user credentials to start ACC.
- ARIS 10, installed and configured on a second machine.
- You have access to the **United Motor Group** database on the ARIS 10 DVD.
- In the unlikely event of migration failure, it is a good advice to collect all log files in ARIS 9.8.7 or later (see **ARIS Logging.pdf** on DVD, ARIS Download Center (aris.softwareag.com) or Empower (<https://empower.softwareag.com/>)).

Procedure

1. In each of your ARIS 9 tenants, check the **system** user's functional privileges. If not revoked by an administrator, the **system** user has all required privileges by default:

- Analysis administrator
- Collaboration administrator
- Document administrator
- Database administrator
- License administrator
- Process Governance administrator
- Server administrator
- Technical configuration administrator

Only use the **system** user account to start the tenant backup with.

2. Rename the ARIS 9 **United Motor Group** example database to avoid name conflicts with the ARIS 10 example database.
3. Start ARIS Cloud Controller (ACC) on the **ARIS 9** system.

To start ACC under a Windows operating system click **Start > All Programs > ARIS > Administration > Start ARIS Cloud Controller**. If you have changed agent user credentials you must enter the password.

To start ACC under a Linux operating system, execute the **acc.sh** shell script instead. ACC is available if you have copied and installed the **aris-acc-`<number>`** deb or rpm file depending on the Linux operating system.

Enter **help** or **help <command>** to get information about the usage of the commands.

4. Reconfigure load balancer ports (page 18). This will prevent users to log on. User access is rejected due to changed ports.
5. Check Processboard to make sure that no Process Governance processes are running when starting the backup.
6. Run the following ACC command to include all ARIS Connect Server runnables in the tenant backup archive:

set acc config backup.restore.tenant.app.types = UMC, ABS, ADS, ECP, OCT, APG

If you use an ARIS Design Server, the command is:

set acc config backup.restore.tenant.app.types = UMC, ABS, ADS,OCT, APG.

In ARIS 10 all started runnables are automatically taken into account when executing tenant backup/restore commands.

7. Back-up all tenants after another, except the **master** tenant. Enter these ACC commands:

list tenants

All tenants to be backed-up are listed.

backup tenant <tenant name> to <pathToBackUpFile> username=<user name of a user holding the required privileges> password=<this user's password>

e. g:

backup tenant default to "D:\\backupARIS9\\default.zip" username=system password=manager

backup tenant custom1 to "D:\\backupARIS9\\custom1.zip" username=system password=manager

Notice the double backslashes. Alternatively, use a single forward slash (/).

The backup is started. Each backup is written to one single archive file.

8. Check the archive files when completed. You can open the archive, e. g., with WinZip® or 7zip. Make sure that there are subfolders for each runnable, containing all relevant data. In case of ARIS Connect, there must be 5 subfolders. ARIS Design Server only creates 4 subfolders.
9. Migrate the tenant data by starting ACC on the **ARIS 10** system. Enter:

restore tenant <tenant name> from <pathToBackUpFile> username=<user name of a user holding the required privileges> password=<this user's password>

e. g:

restore tenant default from "D:\\backupARIS10\\default.zip" username=system password=manager

All additional tenants must be created before you can restore them. If you use an external database management system, make sure to have created schemes and have assigned them to those tenants (see ARIS Server Installation Guide).

create tenant custom1

This command is mandatory for all additional tenants. Tenants can only be restored if they exist already. The **master** tenant and the **default** tenant are installed by default.

restore tenant custom1 from "D:\\backupARIS10\\custom1.zip" username=system password=manager.

10. If ARIS Connect (page 21) was customized or ARIS Publisher still is in use, after migration you must perform some additional steps. Make sure to add required extensions again.
11. Restore the **United Motor Group** database from DVD. This will make new content available mandatory for dashboards (ARIS Aware).

12. Restart all runnables (enter **stopall** and **startall**) and check the status (Enter **List tenants**). All data of the backup files are now restored on the ARIS 10 Server. The system databases are updated automatically.

If versioned databases were included, only the workspace content is optimized. You are recommended to optimize the change lists of versioned databases as well. To do so use the **prepareoptimizedb** ARIS Server Administrator command (page 16).

If ARIS document storage is in use, all migrated databases must be processed by a report (page 14).

The default user accounts are automatically reset to their default values. To prevent unauthorized access to the ARIS system, after data migration, change the passwords of the **arisservice** user, the **guest** user, the **system** user and the **superuser** user on all operational tenants (page 19), as well as on the infrastructure tenant (master).

If you are going to use ARIS Tenant Management Tool, in ARIS 10 make sure to configure the component and create schedules again (see **ARIS Tenant Management.pdf** or online help).

4.3 Migrating tenant data holding large databases

In order to achieve a predictable migration time and smaller tenant backup files, exclude all ARIS databases from the tenant backup. Thus, you can start the database migration separately. (page 14)

Warning

Tenant data is fully backed up only if the user executing the commands has sufficient privileges for all components in every tenant.

Extensions, e.g., SSL certificates, SAP® Java Connector, and JDBC drivers, added using the **enhance** ACC command are not backed up.

Prerequisites

- ARIS 9 installation (source system) to make backups. You need the agent user credentials to start ACC.
- ARIS 10, installed and configured on a second machine.
- You have access to the **United Motor Group** database on the ARIS 10 DVD.
- In the unlikely event of migration failure, it is a good advice to collect all log files in ARIS 9.8.7 or later (see **ARIS Logging.pdf** on DVD, ARIS Download Center (aris.softwareag.com) or Empower (<https://empower.softwareag.com/>)).

Procedure

1. In each of your ARIS 9 tenants, check the **system** user's functional privileges. If not revoked by an administrator, the **system** user has all required privileges by default:
 - Analysis administrator
 - Collaboration administrator
 - Document administrator
 - Database administrator
 - License administrator
 - Process Governance administrator
 - Server administrator
 - Technical configuration administrator

Only use the **system** user account to start the tenant backup with.

2. Rename the ARIS 9 **United Motor Group** example database to avoid name conflicts with the ARIS 10 example database.
3. Start ARIS Cloud Controller (ACC) on the **ARIS 9** system.

To start ACC under a Windows operating system click **Start > All Programs > ARIS > Administration > Start ARIS Cloud Controller**. If you have changed agent user credentials you must enter the password.

To start ACC under a Linux operating system, execute the **acc.sh** shell script instead. ACC is available if you have copied and installed the **aris-acc-<number>** deb or rpm file depending on the Linux operating system.

4. Enter **help** or **help <command>** to get information about the usage of the commands.
5. Exclude the **ABS** runnable from being backed up. If you back-up data from ARIS Connect, enter:

set acc config backup.restore.tenant.app.types = UMC, ADS, ECP, OCT, APG

If you use an ARIS Design Server, the command is:

set acc config backup.restore.tenant.app.types = UMC, ADS,OCT, APG

These commands exclude all databases from the backup. All data from the listed runnables will be saved.

6. Reconfigure load balancer ports (page 18). This will prevent users to log on. User access is rejected due to changed ports.
7. Check Processboard to make sure that no Process Governance processes are running when starting the backup.
8. Back-up all tenants after another, except the **master** tenant. Enter these ACC commands:

list tenants

All tenants to be backed-up are listed.

backup tenant <tenant name> to <pathToBackUpFile> username=<user name of a user holding the required privileges> password=<this user's password>

e. g:

backup tenant default to "D:\\backupARIS9\\default.zip" username=system password=manager

backup tenant custom1 to "D:\\backupARIS9\\custom1.zip" username=system password=manager

Notice the double backslashes. Alternatively, use a single forward slash (/).

The backup is started. Each backup is written to one single archive file.

9. Check the archive files when completed. You can open the archive, e. g., with WinZip® or 7zip. Make sure that there are subfolders for each runnable, containing all relevant data. In case of ARIS Connect, there must be 5 subfolders. ARIS Design Server only creates 4 subfolders.

10. Migrate the tenant data by starting ACC on the **ARIS 10** system. Enter:

restore tenant <tenant name> from <pathToBackUpFile> username=<user name of a user holding the required privileges> password=<this user's password>

e. g:

restore tenant default from "D:\\backupARIS10\\default.zip" username=system password=manager

All additional tenants must be created before you can restore them. If you use an external database management system, make sure to have created schemes and have assigned them to those tenants (see ARIS Server Installation Guide).

create tenant custom1

This command is mandatory for all additional tenants. Tenants can only be restored if they exist already. The **master** tenant and the **default** tenant are installed by default.

restore tenant custom1 from "D:\\backupARIS10\\custom1.zip" username=system password=manager.

11. If ARIS Connect (page 21) was customized or ARIS Publisher still is in use, after migration you must perform some additional steps. Make sure to add required extensions again.
12. Restore the **United Motor Group** database from DVD. This will make new content available mandatory for dashboards (ARIS Aware).
13. Restart all runnables (enter **stopall** and **startall**) and check the status (Enter **List tenants**).
14. Migrate the excluded databases (page 14).

All data of the ARIS 9.8.7 backup files are now restored on the ARIS 10 Server. The default user accounts are automatically reset to their default values. The system databases are updated automatically.

If ARIS document storage is in use, all migrated databases must be processed by a report (page 14).

The default user accounts are automatically reset to their default values. To prevent unauthorized access to the ARIS system, after data migration, change the passwords of the **arisservice** user, the **guest** user, the **system** user and the **superuser** user on all operational tenants (page 19), as well as on the infrastructure tenant (master).

If you are going to use ARIS Tenant Management Tool, in ARIS 10 make sure to configure the component and create schedules again (see **ARIS Tenant Management.pdf** or online help).

4.4 Migrate large databases manually

While migrating tenant data without ARIS databases, backup the databases separately. Administrators have multiple options for manually backing up databases: In ARIS Server Administrator using the **backup** or **backupasn** commands, in ARIS Architect using the  **Backup** functionality in the pop-up menu of a database.

When migrating data, the new database schema is applied and the content is migrated. The databases are optimized on the fly. As the optimization can be time-consuming, only the workspace content of databases will be optimized automatically. If required, change lists can be optimized later.

Prerequisite

You log in as a system user.

Procedure

1. Start ARIS Server Administrator in your ARIS 9 installation and connect to the tenant that contains the database.

You can start ARIS Server Administrator from any computer on which the ARIS Client or ARIS tools are installed either in interactive mode (**Start > Programs > ARIS > Administration > ARIS Server Administrator**) or command-line mode by opening the command prompt from the directory **<ARIS installation directory>\server\bin\work\work_abs_<s,m or l>\tools\arisadm\arisadm.bat**. In command-line mode you can perform actions automatically as there are no prompts in this mode.

2. Establish a connection to the server and tenant:

syntax: server <server name>:<port number> <tenant> <user name> <password>

e.g.

3. **server arissrv:1080 default system manager**

4. To back up a database **<dbname>** as an **adb** file in a directory **<archivedir>**, syntax:

**backup <dbname>|all <archivedir> [-p <password for encryption>]
[<alternatename>]**

e.g:

backup myARIS9database d:\backup

or, as recommended:

backup all d:\backup

5. To back up the state of a specified change list number **<asn>** from a versioned database **<dbname>** in an **adb** file in a directory **<archivedir>**. **head** or **work** can be used instead of **<asn>**. While **head** represents the last versioned state, **work** represents the current state that is not versioned yet. This command is recommended to reduce the size of large versioned databases. Syntax:

```
backupasn <dbname> |all <archivedir> <asn> |head|work [-p <password for encryption>] [<alternatename>]
```

The database is backed up. Back up all required databases on all tenants as well.

Make sure that the ARIS 10 relevant tenants have already been migrated (page 11), before restoring the databases.

6. Backup the system database in order to save your customized content, e. g. user defines scripts or ARIS method modifications. Enter:
- ```
backupsystemdb d:\backup
```
7. Backup the databases and system databases of all other tenants as described.
8. Start ARIS Server Administrator in your ARIS 10 installation and connect to the tenant that will manage the database.
9. To restore a database **<dbname>** from an **adb** file **<archive>** or all adb files from a directory, enter:

```
restore <dbname> |all <archivedir> [-p <password for encryption>] [<alternatename>], e.g.:
```

```
restore d:\backup\myARIS9database.adb
```

or, as recommended:

```
restore d:\backup
```

10. Restore the system database, enter, e. g.,:
- ```
restoresystemdb d:\backup\arissystemdb.adb
```
11. Restore the databases and system databases of all other tenants as described.
12. If ARIS document storage is in use, all migrated databases must be processed by a report (page 14).
13. Restore the **United Motor Group** database from DVD. This will make new content available mandatory for dashboards (ARIS Aware).

The database is migrated. If it is a versioned database the workspace content is optimized.

You are recommended to optimize the change lists of versioned databases as well. To do so use the **prepareoptimizedb** ARIS Server Administrator command (page 16).

4.5 Optimize versioned databases

While migrating tenant or single databases, the databases are optimized on the fly. As the optimization can be time-consuming, only the workspace content will be optimized automatically. In order to ensure database consistency for all change lists, you are recommended to optimize versioned databases after migration manually. During this procedure the database will not be available for users.

Prerequisite

You log in as a system user.

Procedure

1. Start ARIS Server Administrator from any client computer and access the databases on the server:

Click **Start > Programs > ARIS > Administration > ARIS Server Administrator** if you accepted the program group suggested by the installation program. Under a Linux operating system, execute the **arisadm.sh** shell script instead. The command prompt opens and ARIS Server Administrator is launched in interactive mode.

2. Establish a connection to the server and tenant:

syntax: server <server name>: <port number> <tenant> <user name> <password>

e.g.

server arissrv:1080 default system manager

ARIS Server Administrator is connected to the server.

3. Run the **prepareoptimizedb** command to check the versioned database. By default all change lists and the workspace are checked for issues. Enter, e. g.:

prepareoptimizedb my_migrated_database1

If no issue is detected the database is optimized already, and no further action is required.

If an issue is detected the **needs optimization** message is displayed. In this case a optimization file is generated and downloaded automatically. It is a good idea to copy the path and file name from the command prompt. Use this copied string later as parameter with the **optimizedb** command.

4. Lock the database. It is essential that nobody uses the database while optimizing. Enter, e. g.:

lockdb my_migrated_database1

The database is locked and ready for optimization.

5. Enter, e. g.:

optimizedb <copied path to optimization file>

The database are optimized. It can be made available for users again.

6. Enter, e. g.:

unlockdb my_migrated_database1

The database is optimized completely and available to authorized users. Every command's output can be retraced reading the **dboptimization.log** log file.

4.6 Reconfigure load balancer port

Change the load balancer port in order to prevent user access. This is mandatory when backing up tenants for migration.

Procedure

1. Start ARIS Cloud Controller (ACC) on the **ARIS 9** system.
2. Change the used ports, enter, e.g.:

reconfigure loadbalancer_m HTTPD.port=1081 HTTPD.ssl.port=1444

The ports are changed. As the users do not know the new ports, they cannot access.

4.7 Change passwords on tenants

On all tenants, change the passwords of **superuser** user, **system** user and the **guest** user. This will prevent unauthorized actions within the system. These users are created automatically for each tenant. The **system** user holds all function privileges and access for all databases. The **superuser** user holds all privileges to allow user and license management.

1. Log into the tenant's ARIS Administration.
2. Click  **User management**, and select **Users**. The list of users is displayed.
3. Enter **superuser** into the search box. The search result is shown.
4. Click **superuser**. The user data (details) is displayed.
5. Click  **Edit**.
6. Enable the **Change password** check box. The **Password** and **Confirm password** boxes are displayed.
7. Enter a new password, and reenter it. If you want to use the webMethods integration, passwords may not contain a colon.
8. Click **Save**.
9. Change the **system** user's password too.

The passwords are changed. The users receive e-mail notifications.

4.8 How to modify ARIS document storage links

If ARIS document storage is in use all ARIS document storage links must be adapted in ARIS Architect. As the ARIS Server URL is part of the links (highlighted), they will not work after migration. The **Modify ARIS document storage links** report adapts all links for the use with ARIS 10. The highlighted part of the links will be adapted as follows:

- **ARIS9.8.x ARIS document storage link**

https://aris9srv.eur.co.com:1080/documents/rest/links/afa43c5e-b225-4bd9-a4a9-71d5d23b4420?tenantid=default&revision=1

- **ARIS10 ARIS document storage link**

https://aris10srv.eur.co.com:1081/documents/rest/links/afa43c5e-b225-4bd9-a4a9-71d5d23b4420?tenantid=default&revision=1

The old ARIS Server URL is updated to the new ARIS 10 URL.

In ARIS Architect, execute the **Modify ARIS document storage Links** report for each database holding ARIS document storage Links. The report is available in the Administration report category (see ARIS Architect online help; Evaluate data > Use reports > ARIS reports > Administration).

4.9 How to migrate ARIS Connect portal views and configuration sets

The portal shows specific information for each user. Different views display information in different ways. By default, ARIS comes with two different views. The classic view and the default view. These views are defined in configuration sets, which cannot be changed. However, administrators can define multiple modified modification sets, based on these templates.

VIEWS AND MODIFICATION SETS

In ARIS 10, portal views are called modification sets. You must backup (page 22) portal views in ARIS 9.8.7 or later and restore modification sets (page 22) manually, if in ARIS 9 portal views were added or changed. The **default** and the **classic** configuration set must not be migrated. These sets, holding all new features, are used as template for all future modification sets, created in ARIS10.

CUSTOMIZED CONFIGURATION SETS

Customized configuration sets are configurations sets that have been created manually in ARIS 9.8.7 or later. They must be adapted on file level in ARIS 10.

This advanced configuration requires high knowledge on XML configuration, that can be acquired in the 742-**<ID>** ARIS Connect Portal Configuration training (<http://www.softwareag.com/education/>). Errors in XML configuration files may cause strong impact. You might not be able to start ARIS Connect again.

Therefore, all customized folders must be copied from **<ARIS 9.8.x installation path>\server\bin\work**:

- **work_copernicus_<s, m or l>**\base\webapps\ROOT\WEB-INF\config**<name of the view>**
- **work_abs_<s, m or l>**\base\webapps\abs\WEB-INF\config**<name of the view>**

into the **<ARIS 10 installation path>\server\bin\work** subfolders:

- **work_copernicus_<s, m or l>**\base\webapps\ROOT\WEB-INF\config**<name of the customized configuration set>**
- **work_abs_<s, m or l>**\base\webapps\abs\WEB-INF\config**<name of the customized configuration set>**

New ARIS 10 functionality will not be available in the copied configuration sets.

Depending to the level of customization, you are recommend to use a prepared customization package obtained by the original customizer. If you need help, contact Software AG (<https://empower.softwareag.com/>) for a customization request. Customization and training services are not subject to the standard Software AG software maintenance agreement. Configuration changes can only be performed by Software AG if you requested and agreed on them.

4.9.1 Save ARIS Connect modification sets

Save user-defined modification sets for data migration or before you modify them. You can restore saved modification sets at any time or provide them on other servers.

Prerequisite

You have the **Portal administrator** function privilege.

Procedure

1. Start ARIS Connect.
2. Click the arrow next to your user name.
3. Click **Administration**.
4. Click **Manage configuration sets**. All available configuration and modification sets are displayed. The current configuration or modification set is marked as **(active)**.
5. Move the mouse pointer over a user-defined modification set.
6. Click  **Backup**.
7. Save the file in any directory.

The **<name of the modification set>_bak.zip** backup file is downloaded.

8. Repeat this procedure for all other modification sets.

Based on these backups, you can restore the modification sets in ARIS 10 (page 22).

4.9.2 Restore ARIS Connect modificarion sets

Restore saved modification sets.

Prerequisite

- You have the **Portal administrator** function privilege.
- You have access to the backup file.

Procedure

1. Start ARIS Connect.
2. Click the arrow next to your user name.
3. Click **Administration**.
4. Click **Manage configuration sets**. All available configuration and modification sets are displayed. The current configuration or modification set is marked as **(active)**.
5. Click **Restore**. The file selection dialog opens.
6. Double-click the ZIP file (syntax: **<name of the modification set>_bak.zip**).

If a modification set with the same name exists, it is overwritten. If you want to keep the original modification set, you must define another name for restored one.

Repeat this procedure for all saved ARIS 9 modification sets.

4.10 How to back up data manually

Administrators have multiple alternatives for manually backing up data.

DATABASES

- On the **Administration** tab, using the  **Backup** functionality in the pop-up menu of a database.
- In ARIS Server Administrator, using the **Backup** or **backupasn** commands.

Currently, Java can only process files of up to a maximum of 4 GB safely. Thus, errors may occur with larger backup files (ADB) and during database recovery. If errors occur during backup or while restoring please use the backup mechanism in your database management system (DBMS). Make sure that sufficient disk space is available for restoring large databases. This may exceed the memory requirements stated in the document **ARIS System Requirements**.

FILTERS

- On the 'Administration' tab, use the function  **Export** in the pop-up menu of a filter (individual backup).
- In ARIS Server Administrator, using the **backupsystemdb** command.

METHOD, CONFIGURATION, AND QUERIES

In ARIS Server Administrator, using the **backupsystemdb** command.

SCRIPTS

- On the **Administration** tab, use the function **Export** in the pop-up menu of a script (individual backup).
- In ARIS Server Administrator, using the **backupsystemdb** command.

QUERIES AND AD HOC ANALYSES

On the **Administration** tab, use the function  **Back up analysis data**.

5 Contacting support

ONLINE

A valid support contract allows you to access the solution database.

Click <https://empower.softwareag.com/> (<https://empower.softwareag.com/>).

If you have any questions on specific installations that you cannot perform yourself, contact your local Software AG sales organization (https://empower.softwareag.com/public_directory.asp).

BY TELEPHONE

If you have a valid support contract, you can contact Global Support ARIS at:

+800 ARISHELP

"+" stands for the prefix required in a given country to dial an international connection.

Example for dialing within Germany with a direct extension line: 00 800 2747 4357

6 Glossary

A

ACC locale file

ACC expression.

local file <key> (<relativePath> | <absolutePath>)

Uses a file on the machine on which the ACC is running as input for an invoke command, by specifying the file either as absolute path or as a path relative to the ACC's current working directory.

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.

Absolute Path

ACC expression.

('/' | '\\ ' | [A-Z] ':') <relativePath>

An absolute path starting with either a forward or backward slash (on Linux) or a file letter (on Windows), where the individual path steps are separated by either forward or backward slashes, e. g.

"d:/ojdbc6-11.2.0.3.jar" or "d:\\ojdbc6-11.2.0.3.jar"

<absoluteZookeeperPath>

Free variable parameter used in ACC expressions.

Absolute zookeeper path.

('/' | '\\ ') <relativePath>

A path used in the zookeeper runnable.

<agentPort>

Free variable parameter used in ACC expressions.

Agent's Port number.

<appType>

Free variable parameter used in ACC expressions.

Application type.

umc | abs | ads | apg | ecp | cop | ...

A technical application type as defined by the zookeeper runnable.

<appTypeId>

Free variable parameter used in ACC expressions.

Application type ID

<ID>

An application type ID is used to uniquely identify a registered application type on the cloud controller. An application type ID can be any string without whitespace, starting with a letter or underscore character (`_`), and containing only letters, digits, or underscore characters.

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.

Artifact Enhancement

ACC expression.

```
<groupId>.<artifactId> <version> (classifier <ID>)? type <ID>
```

Enhances a runnable with an artifact from the repository, by specifying the Maven-esque groupId, artifactId, version, type, and optionally the classifier, of the artifact.

Artifact file

```
file <key> <groupId> . <artifactId> <version> (classifier <classifier>)? type <type>
```

Uses an artifact from the repository as input for an invoke command, by specifying the Maven-esque groupId, artifactId, version, type, and optionally the classifier, of the artifact.

Free variable parameter used in ACC expressions.

Artifact ID.

```
<ID>
```

The common Maven-esque artifact ID of the runnable.

B

<backupId>

Free variable parameter used in ACC expressions.

Backup ID.

```
<ID>
```

A backup ID is used to uniquely identify a runnable backup for an instance within one node. It is only unique for an instance on a node. A backup Id is an integer number and will be generated temporary by the **list backups** command.

C

Collaboration database

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

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.

E

<enhancement>

Free variable parameter used in ACC expressions.

Enhancement.

```
<enhancementPoint> (<artifactEnhancement> | <fileEnhancement> |  
<localFileEnhancement>) (options ( <key> <value> (, <value>)*)+ )?
```

Enhance a runnable with a file. There are two ways to specify the source file, as Maven repository artifact or as repository file. Optionally, parameters can be specified that are passed to the runnable's corresponding enhancement point.

Enhancement Point

ACC expression.

<ID>

The name of the runnable's enhancement point to which to send the file and the optional parameters to be used for enhancement.

G

ID

```
('a'..'z'|'A'..'Z'|'_' ) ('a'..'z'|'A'..'Z'|'0'..'9'|'_'|'-')*
```

An ID (identifier) is any string beginning with a letter or the underscore character (_), and containing only letters, digits, the underscore character (_), or a dash character (-).

Free variable parameter used in ACC expressions.

Group ID

`<ID> (. (<ID>|<INT>))+`

The common Maven-esque group ID of the runnable, i.e., a sequence of identifiers separated by dots (.).

GUID

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

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

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>)).

I

integer

`'-'? '0'..'9'+`

A positive or negative Integer number.

<instanceId>

Free variable parameter used in ACC expressions.

Instance ID.

`<ID>`

An instance ID is used to uniquely identify a runnable within one node. An instance ID can be any string without whitespace, starting with a letter or underscore character (`_`), and containing only letters, digits, or underscore characters.

Example

abs_m is the Instance ID representing the **abs** runnable. This runnable manages the Modeling & **Publishing** component.

<invocationFile>

Free variable parameter used in ACC expressions.

Invocation file.

`<artifactFile> | <repositoryFile> | <accLocalFile>`

Specifies a file to be used as input for the operation. The file can be specified using Maven artifact coordinates (GAV), as a relative path to a file in one of the repositories known to the respective agent, or as a file local to the machine on which the ACC is running.

<ipOrHostName>

Free variable parameter used in ACC expressions.

IP address or fully qualified name of the server to be connected.

J

JAAS

Java **A**uthentication and **A**uthorization **S**ervice (**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.

K

<key>

Free variable parameter used in ACC expressions.

Key

<ID> (. (<ID> | <INT>))+

A key can be any identifier i.e. any string without whitespace, starting with a letter or underscore character (), and containing only letters, digits, or underscore characters or a dotted identifier, i.e., a sequence of several identifiers integers as parts, separated by a . character, e.g.: **ShortId**, **ASimpleButLongerIdentifier12345**, **A.dotted.identifier.1**

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

Multi node

Distributed ARIS installation spanning 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>).

Modeling database

The **postgres_<s,m or l>** runnable handles 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.

N

Node

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

<nodeName>

Free variable parameter used in ACC expressions.

Node name.

A node name is a unique logical name given to a node registered by ACC. It can be any string without whitespace, starting with a letter or underscore character (`_`), and containing only letters, digits, or underscore characters.

<nodeSpec>

Free variable parameter used in ACC expressions.

Node specification.

on <nodeName>

All zookeeper ensemble management, lifecycle and agent configuration commands can optionally be prefixed with a node specification to send them to a node other than the current node or to determine the node if no current node has been set.

O

<operation>

Free variable parameter used in ACC expressions.

Operation.

<ID>

The name of the operation to invoke.

OTP

One-Time-Pad (OTP).

This one-time encryption is a symmetric encryption method to transfer messages. Its characteristic is that the length of the encryption key is at least as long as the message itself.

OTP is considered information technology secure and cannot be broken.

P

<password>

Free variable parameter used in ACC expressions.

Required user password. This might be the ARIS Agent user's password, a database user, the superuser or a system user.

Free variable parameter used in ACC expressions.

Port specification.

port <key> (<INT> | <INT>:<INT>) (';' (<INT> | <INT>:<INT>))* (default <INT>)?

A port specification indicates that the configuration parameter "key" represents a port, i.e. key is the actual port. Individual or ranges of ports that are reserved for this port parameter can be specified. Further, a default can be declared, which indicates the port that is used by the runnable if no explicit value is specified for this port parameter during configure.

R

Relative Path

(<ID> | <STRING>) (('/' | '\\') (<ID> | <STRING>))*

A relative path, where the individual path steps are separated by either forward or backward slashes.

Repository File

file <key> <relativePath>

Uses a file from the repository as input for an invoke command, by specifying the file's path relative to the repository's root.

Runnable

Name of ARIS server's program component.

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

S

SAML

Security **A**ssertion **M**arkup **L**anguage (**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.

Single node

An ARIS server installation delivered by an ARIS server setup.

<serviceId>

Free variable parameter used in ACC expressions.

Service ID.

<ID>

A service ID is used to uniquely identify a service. It is assigned automatically by the system when the service is registered. It can be used to refer to a specific service for updating or deregistering it.

<serviceType>

Free variable parameter.

Service type

db | smtp | proxy | postgresql-ecp | elasticsearch | rs | ...

A technical service type as defined by the zookeeper runnable. A service type specifies the type of an external or internal service to be registered.

This example shows how to register an external service db (Microsoft SQL) and the required configuration parameters (**bold**):

```
url="jdbc:sqlserver://<host name>:<port>;DatabaseName=<DATABASE NAME>"  
driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver"  
username="<user name>"  
password="<password>"  
maxIdle=15  
maxActive=300  
maxWait=10000  
removeAbandoned=false  
removeAbandonedTimeout=600  
logAbandoned=true  
defaultAutoCommit=false  
rollbackOnReturn=true  
host=<host name>  
jmxEnabled=true
```

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.

<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.

<state>

Free variable parameter used in ACC expressions.

State.

STOPPED | STARTED | STARTING | STOPPING | UNKNOWN | DOWN |

The possible runnable lifecycle states.

<string>

Free variable parameter used in ACC expressions.

`'' (<any character but '\\\' or '\ ')* ''`

An almost arbitrary sequence of characters, delimited by double quotes. To represent certain special characters, you can use the common escape sequence via the backslash character (\), e.g., `\n` for newline, `\\` for a backslash, `\t` for a tabulator, `\"` to obtain a double-quote as part of the string's content, etc.

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. The **superuser** user does not use up a license. The **superuser** user manages 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. You can change all user data except for the user name.

system user

The **system** user is created automatically. 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.

You can create additional system users. Alternatively, an existing **system** user can be copied. Having more than one system user can avoid problems if, e. g., one system user has forgotten his password.

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. By default, the **system** user has the following function privileges:

- ARCM administrator
- ARIS Connect administrator
- Analysis administrator
- Collaboration administrator
- Configuration administrator
- Dashboard administrator
- Database administrator
- Document administrator
- License administrator
- Portal administrator
- Process Governance administrator
- PPM user
- Publisher administrator
- Publishing administrator
- Script administrator
- Server administrator
- Technical configuration administrator
- UML Viewer
- User administrator

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.

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 while the first user logs in using an ARIS client. This content is available in all ARIS databases within this tenant. The system database can be backed up and restored.

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 handles 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.

<tenantId>

Free variable parameter used in ACC expressions.

Tenant ID.

<ID>

A tenant ID is used to uniquely identify a tenant. A tenant ID can be any string without whitespace, starting with a letter or underscore character (`_`), and containing only letters, digits, or underscore characters.

TLS

Transport **L**ayer **S**ecurity (**TLS**).

TLS is known under the name of **S**ecure **S**ockets **L**ayer (**SSL**). It is an encryption protocol to ensure a secure data transfer through the Internet.

U

<username>

Free variable parameter.

Required user name. This might be a remote access user, a database user, the superuser or a system user.

V

<value>

Free variable parameter used in ACC expressions.

Value.

<ID> | <INT> | <STRING>

A value can either be any identifier i.e., a string without whitespace, starting with a letter or underscore character (`_`), and containing only letters, digits, or underscore characters, and Integer number, or a string, i.e., an arbitrary, double-quote-delimited sequence of characters, e.g.: **ThisIsAnIdentifier435**, **_ThisIsAlsoAnIdentifier**, **12345**, **This is also a valid value!**.

<version>

Free variable parameter used in ACC expressions.

Version.

('a' .. 'z' | 'A' .. 'Z' | '0' .. '9' | '_' | '-' | '.')+

The common Maven-esque version of the runnable.