



ARIS

TENANT MANAGEMENT

VERSION 10.0 - SERVICE RELEASE 14

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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 Manage tenants

You can manage the tenants for ARIS Connect. Tenants are containers that provide their own ARIS Administration and ARIS data set, such as configuration, ARIS method, databases, scripts, and so on. A server may have multiple tenants installed that access the functionality of the server, but their data is independent of each other.

After the installation of ARIS Server two tenants are available.

The infrastructure **master** tenant manages administrative users and all other tenants.

The **default** tenant is available for operational use. If you need additional operational tenants to provide different sets of databases, users, configurations or ARIS methods you can easily create them. Additional tenants require a new set of ARIS licenses. Licenses must be unique in all tenants.

If you have installed an ARIS Server using an external database management system, all additionally created tenants are available as well. If you are going to create additional tenants for ARIS10.0 to migrate data from ARIS 9.8.7 or later, make sure to use identical names in both ARIS versions.

Administrators can manage tenants in different ways:

- Manage tenants using the Tenant Management tool (page 2)
- Tenant management using command line tools (page 68)
- Create tenants using ACC (page 55)
- Backup tenants using ACC (page 56)
- Restore tenants using ACC (page 60)
- Copy tenants using ACC (page 62)
- Delete tenants using ACC (page 64)

Please make sure to manage users and licenses for all tenants.

1.1 Tenant Management tool

Tenant Management enables users (page 33) to centrally manage all of a company's ARIS tenants on the infrastructure tenant.

All tenant data (page 43) can be backed up from the running system manually or using a schedule.

Users with appropriate privileges can back up all data (page 43) from tenants using schedules. They thus create restore points. All data from the tenant is saved in a backup list.

Any number of schedules can be created for each tenant. If you create a large number of schedules and backups, make sure the storage medium has sufficient capacity.

Prerequisites

- The user name and password have been entered in the backup options (page 29).
- The default location for saving backup files was changed (page 27) to a different folder on a physical drive to prevent that files stored in the default location are automatically deleted when you perform an update setup.

Warning

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Procedure

1. Click **Schedules**. The schedules for all tenants are displayed.
2. Click **+ Create schedule**. The **Create schedule** dialog opens.
3. Enter the description for the backup. This text makes it easier to select the relevant backup when restoring the tenant.
4. Select the time for the automatic backup. You can set an automatic backup daily or on a particular day of the week. Select a time on the hour as the start time.
5. Select the maximum number of backups to be saved in the tenant backup list for this schedule. If you select **10**, a maximum of the 10 last versions can be restored.
6. Select the tenant to be backed up.
7. Click **OK**.

The schedule is created.

An additional backup is added to the tenant backup list (page 48) at the specified time. If the selected number of backups already exists, the oldest is removed to free up space for the new backup.

If no content is displayed, add a node to manage tenants.

The Tenant Management user interface has been installed using the ARIS Server setup program. It is run automatically with the user account of the **superuser** user. In order for

other users to be able to log in (page 3), you have to configure the infrastructure tenant infrastructure tenant (page 34). This assigns users in the infrastructure tenant privileges for impersonation (page 42), along with additional function privileges.

Once all operational tenants are configured (page 36), impersonation enables users to assume the account of the **superuser** system user in order to perform administration tasks. After the ARIS Server was updated, for all operational tenants make sure to specify **superuser** in the **Impersonation target users** field again.

If you want existing tenants that were not created using Tenant Management to be managed centrally, you have to adjust the configuration of these tenants (page 38).

1.1.1 Open Tenant Management

System users and users (page 33) to whom the required privileges are assigned can log in to Tenant Management on the infrastructure tenant.

- They know the passwords for the system users **system** or **superuser**.
- They have login privileges (page 33).

Procedure

1. Click the link that was provided to you or that you have saved as a bookmark in your browser (syntax: <server name>:<port>/tm). The Tenant Management login dialog opens.

The name of the infrastructure tenant is displayed. You cannot select any other.

2. Select the interface language. You cannot change the language once you have logged in.
3. Enter your user name and your password.

Clicking **Forgot password** enables you to reset the password.

Warning

If you reset the password for the user **system** or **superuser**, other users can no longer log in with these user names. Automated processes, for example, automatic backups, can no longer be performed.

4. Click **Log in**.

You can manage all tenants in the system.

1.1.2 Manage tenants

All tenants in the system are managed on the **Tenants** page (page 44).

1.1.2.1 Create tenant

Create tenants centrally.

Procedure

1. Click **Tenants**.
2. Click **+ Create tenant**. The dialog opens.
3. Enter the name using lowercase letters or numbers.

For tenant names please only use up to 25 lowercase ASCII characters and numbers. The name must begin with a character. Special characters, such as _ and characters, for example, in Chinese, Cyrillic or Arabic cannot be used.

4. Click **OK**.

The tenant has been created.

If it is not displayed, click  **Refresh**.

1.1.2.2 Lock tenant

Deactivate tenants. This means that users whose licenses are managed on that tenant can no longer log in to the programs. All databases are locked.

Procedure

1. Click **Tenants**.
2. At the end of the row for the tenant, click **⋮ More > Lock**.

The tenant is locked. It is no longer available to users and its status is shown in the list as  **Locked**. If the change is not displayed, click  **Refresh**.

1.1.2.3 Activate tenant

Activate locked tenants. This means that users with appropriate privileges whose licenses are managed on that tenant can log in to all programs again. All data is available again.

Procedure

1. Click **Tenants**.
2. At the end of the row for the tenant, click **⋮ More > Activate**.

The tenant is activated. It is available to users again and its status is shown in the list as  **Active**. If the change is not displayed, click  **Refresh**.

1.1.2.4 Allow access

Add missing permissions to the superuser, if impersonation (page 42) failed. This can occur, if tenants were added by ARIS Cloud Controller (ACC) but functional privileges are missing.

Procedure

1. Click **Tenants**. The status of the tenants is displayed. If the  **Impersonation failed** status is shown, the tenant is not accessible for users.
2. At the end of the row for the tenant, click  **More > Allow access**. The **Allow access** dialog opens.
3. Enter the user credentials of a user with sufficient privileges, for example, **system**.
4. Click **OK**.

The missing privileges are applied to the superuser. Impersonation should work and the  **Active** state is shown. If the change is not displayed, click  **Refresh**.

1.1.2.5 Copy tenant

Copy tenants, for example, to create new tenants based on existing ones. Licenses are no longer valid in copied tenants as licenses have to be uniquely assigned to a specific tenant.

Procedure

1. Click **Tenants**.
2. At the end of the row for the tenant, click  **More > Copy**. The **Copy tenant** dialog opens.
3. Enter the name using lowercase letters or numbers.

For tenant names please only use up to 25 lowercase ASCII characters and numbers. The name must begin with a character. Special characters, such as _ and characters, for example, in Chinese, Cyrillic or Arabic cannot be used.

4. Select a valid license file for this tenant.
5. Click **OK**.

The tenant is copied. It contains all the content of the tenant you have copied.

1.1.2.6 Back up tenant

Users with appropriate privileges can manually back up all data (page 43) from tenants. They thus create a restore point. All information about the tenant is saved in a backup list. If you want to include the user statistics, the property **User statistics in backup** (**com.aris.umc.user.statistics.backup**) must be enabled in the configuration (see ARIS help: ARIS Administration >  Configuration > User management > Security > Advanced settings).

Warning

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Prerequisite

The default location for saving backup files was changed (page 27) to a different folder on a physical drive to prevent that files stored in the default location are automatically deleted when you perform an update setup.

Procedure

1. Click **Tenants**.
2. At the end of the row for the tenant you want to back up, click  **More > Backup**. The **Back up tenant** dialog opens.
3. Select the content to be included in the backup and enter a description for the backup version. This text makes it easier to select the relevant version when restoring (page 9) the tenant.
The **Now** option is enabled by default. It means that the backup is performed once after you have closed the dialog.
4. Select another option if you want to define a backup schedule (page 30).
5. Click **OK**. The tenant is backed up. During backup, the  **Backup in progress** symbol is displayed in the **Last backup** column.

The selected content of the tenant (page 43) was saved in the backup list if a  check mark and timestamp appear in the **Last backup** column. The system administrator is informed by e-mail whether the action was completed successfully or whether warnings or errors occurred. If a tenant backup containing Process Governance data takes a long time to complete, Process Governance downtime is likely to be long. To reduce Process Governance downtime while the backup is in process, you can set the **Use snapshot-based backup mode** property in the Process Governance configuration. For details, refer to the ARIS Connect online help (Manage ARIS Connect > Set up Process Governance > Valuable information > What infrastructure properties are available?)

You can restore (page 9) the tenant with this data at any time.

1.1.2.7 Download last backup file

You can save individual versions of backup files from backup lists locally, in order to restore tenants (page 9). To download the current version, proceed as follows:

Prerequisite

The tenant has been backed up (page 6).

Procedure

1. Click **Tenants**.
2. At the end of the row for the tenant, click **⋮ More > ↓ Download**.
3. If you want to encrypt the backup file, enter a password. The password must be at least 8 characters long and contain at least 3 out of the 4 following character classes:
 - lower-case letter
 - upper-case letter
 - digit
 - special character (such as any non-whitespace, non-letter, non-digit character).

The latest backup version of the tenant is downloaded to the directory you have specified as the download directory in your browser settings.

1.1.2.8 Download specific backup file

You can save individual backup files from backup lists (page 48) locally, in order to restore tenants (page 9).

Prerequisite

The tenant has been backed up (page 6).

Procedure

1. Click **Backups**.
2. At the end of the row for the relevant tenant, click **i Open backup list**. The **Backup list - <tenant>** dialog opens.
3. Select the relevant backup based on the description and the backup date.
4. At the end of the row, click **⋮ More > Download**.
5. If you want to encrypt the backup file, enter a password. The password must be at least 8 characters long and contain at least 3 out of the 4 following character classes:
 - lower-case letter
 - upper-case letter
 - digit
 - special character (such as any non-whitespace, non-letter, non-digit character).

The backup file is downloaded to the directory you have specified as the download directory in your browser settings.

1.1.2.9 Restore tenants

Users with appropriate privileges can restore all data (page 43) for backed up tenants based on either a backup list saved in the ARIS installation directory or a locally saved backup file (page 7).

1.1.2.9.1 Restore tenant from backup file

You can restore the tenant based on a backup file that you have downloaded from its backup list.

Prerequisites

- The tenant has been backed up (page 6).
- Make sure you have downloaded (page 7) the required backup file.
- Make sure that changes made since the last backup have been manually backed up (databases, configuration, system database).

Warning

No user can work on this tenant during the restore process. All current data of a running tenant will be deleted and replaced by the data of the backup file. Data related to ARIS Administration will not be deleted but merged. The tenant name and current user data will be untouched. If users were deleted after the tenant has been backed up, these users will be available again. Make sure to delete those users.

Process Governance backup archives greater than 2 GB might lead to insufficient TEMP space issue when restoring them into ARIS with Oracle back end. For such large backups, extend the temp tablespace size before restoring operation executed.

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Procedure

1. Click **Tenants**.
2. Back up the current status of the tenant. If changes made since the last backup have not been entirely saved, you can restore them.
3. At the end of the row for the tenant you want to restore, click **More > Restore**. A dialog of the same name opens.
4. Click **OK** in the **Warning** dialog. The **Restore tenant** dialog opens.
5. Click **File**.
6. Click **Select**.
7. Navigate to the directory to which you have downloaded the backup file.

8. Double-click the archive file you want to use to restore the tenant. The **.crypt** extension indicates encrypted backup files. For these files the related encryption password is required to restore a tenant.
9. If you have selected an encrypted backup file, enter the password used for encryption.
10. Click **Next** and select the content to be restored.
11. Click **OK**.

The tenant is restored. All data is overwritten with the data version from the backup (page 43). Changes made and data added since the last backup are lost.

Administrators can restore lost data if the data has been manually backed up before restoring the tenant (see Prerequisites).

If you have restored a tenant from an ARIS 10 SR5 backup file or earlier containing ARIS document storage data, you must adjust the timestamps manually (page 39) (see **y-admintool.bat** command-line tool).

1.1.2.9.2 Restore tenant from backup list (from Tenants page)

Users with appropriate privileges can restore all data (page 43) for backed up tenants based on a backup list saved in the ARIS installation directory.

Prerequisites

The tenant has been backed up (page 6).

Warning

No user can work on this tenant during the restore process. All current data of a running tenant will be deleted and replaced by the data of the backup file. Data related to ARIS Administration will not be deleted but merged. The tenant name and current user data will be untouched. If users were deleted after the tenant has been backed up, these users will be available again. Make sure to delete those users.

Process Governance backup archives greater than 2 GB might lead to insufficient TEMP space issue when restoring them into ARIS with Oracle back end. For such large backups, extend the temp tablespace size before restoring operation executed.

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Procedure

1. Click **Tenants**.
2. At the end of the row for the tenant, click **More > Restore**. A warning is displayed.
3. Click **OK** in the **Warning** dialog. The **Restore tenant** dialog opens.
4. Select **Backup**.

5. Select the relevant backup based on the description and the backup date.

Move the mouse over the individual entries to show a description. The description lists all components whose data has been backed up in square brackets. You can find the relevant backup using the description and the timestamp.

6. Click **Next**.
7. Select the content to be restored.
8. Click **OK**.

The tenant is restored. All data is overwritten with the data version from the backup (page 43). Administrators can restore manually backed up data.

If you have restored a tenant from an ARIS 10 SR5 backup file or earlier containing ARIS document storage data, you must adjust the timestamps manually (page 39) (see **y-admintool.bat** command-line tool).

1.1.2.9.3 Restore tenant from backup list (from Backups page)

Users with appropriate privileges can restore all data (page 43) for the tenant from its backup list.

Prerequisite

The tenant has been backed up (page 6).

Warning

No user can work on this tenant during the restore process. All current data of a running tenant will be deleted and replaced by the data of the backup file. Data related to ARIS Administration will not be deleted but merged. The tenant name and current user data will be untouched. If users were deleted after the tenant has been backed up, these users will be available again. Make sure to delete those users.

Process Governance backup archives greater than 2 GB might lead to insufficient TEMP space issue when restoring them into ARIS with Oracle back end. For such large backups, extend the temp tablespace size before restoring operation executed.

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Procedure

1. Click **Backups**.
2. At the end of the row for the tenant, click  **Open backup list**. The **Backup list - <tenant>** dialog opens.
3. At the end of the row for the relevant backup, click  **More > Restore**.

4. Click **OK** in the **Warning** dialog. The **Restore tenant** dialog opens.
5. Select **Backup**.
6. Select the relevant backup based on the description and the backup date.
Move the mouse over the individual entries to show a description. The description lists all components whose data has been backed up in square brackets. You can find the relevant backup using the description and the timestamp.
7. Click **Next**.
8. Select the content to be restored.
9. Click **OK**.

The tenant is restored based on the backup.

If you have restored a tenant from an ARIS 10 SR5 backup file or earlier containing ARIS document storage data, you must adjust the timestamps manually (page 39) (see **y-admintool.bat** command-line tool).

1.1.2.10 Delete tenant

Delete tenants when they are no longer required. You cannot delete infrastructure tenants, for example, the **master** tenant.

You can delete tenants immediately that are in the  **Prepared for deletion** state and the  **Failed** state. Tenants in the  **Active** state and the  **Locked** state must be prepared for deletion first.

Warning

All data is deleted. Make sure the tenant has been backed up (page 6). You can then restore it if required.

Procedure

1. Click **Tenants**.
2. At the end of the row for the tenant you want to delete, click  **More > Prepare for deletion** or **Delete**.

A warning is displayed to inform you that all data will be deleted.

3. Click **OK**. If the tenant was in the state  **Prepared for deletion** or  **Failed**, the tenant is deleted. The state  **Being deleted** is displayed until the tenant is removed from the list.

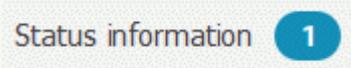
If it was in the state  **Active** or  **Locked**, the tenant is now in the state  **Being prepared for deletion**. Because this process takes some time, the tenant is locked for the duration. You must wait until it is in state  **Prepared for deletion** to delete it.

1.1.2.11 Manage filters

All filters (page 14) of this tenant can be managed on the **Assets** page.

On this page you can copy, import and export filters, templates, report scripts and databases (page 4).

Status information is available.

Actions are logged as  and all logged pieces of information can be displayed if required.

To open logged information, click **Open** . If you close  the section, the number of logged status information is set to . All messages are available until they are deleted .

1.1.2.11.1 Copy filters

Copy filters (page 14) to different tenants immediately.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Filters**. All filters are listed.
5. Activate the controls of the filters to be copied. To activate all at once, click the control in the **Filters** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and  **Export assets** action buttons.
6. Click  **Copy assets**. The **Copy assets to tenants** dialog opens. All tenants are listed to which the filters can be copied. If the list is too long, you can specify the tenant name in the field next to the source tenant.
7. Activate the controls of all target tenants the filters are to be copied to.
8. Click **OK**.

If the filters already exist, they are overwritten in the target.

The filters are copied to the selected tenants.

1.1.2.11.2 Export filters

Export filters (page 14) from this tenant to a filter export archive.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Filters**. All current filters are listed.
5. Activate the controls of the filters to be exported. To activate all at once, click the control in the **Filters** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and  **Export assets** action buttons.
6. Click  **Export assets**. The filters are zipped to an archive file. The name of the archive file has the format:
<source tenant name><time stamp>.zip
7. Select the next action. You can either open the file or save it.
8. Click **OK**.

The filters are downloaded from the tenant and saved to the archive file.

You can import filters from this file to different tenants (page 14).

1.1.2.11.3 Import filters

Import filters (page 14) to this tenant from a filter export archive.

Prerequisites

You have access to a filter archive file created by a filter export (page 13), or to a filter export file created in ARIS Architect.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Filters**. All current filters are listed.
5. Click  **Import assets**. The **Import assets to tenant** dialog opens.
6. Click **Select**. The file browser opens.
7. Navigate to the source file. Select either a filter archive file (*.zip) or a filter export file (*.filter), and click **Open**. The file browser closes.
8. Click **OK**.

If filters with the same GUID already exist in the tenant, they are overwritten.

The filters are imported from the filter archive to the tenant.

1.1.2.11.4 What are filters?

Filters are divided into method filters and evaluation filters (page 14) and provide restricted and user-specific method contents. Filters are an effective way to support uniform modeling and accelerated evaluation. They make it possible to provide users with only the information and methods relevant to them. If you log in using a specific method filter and create a model, for example, only the model types relevant to your work are offered to you for selection.

Filters are contained in the configuration. There is one configuration for each tenant, and its content can be used by all databases of the tenant. Only configuration administrators can create, edit, export, or import filters. To have access to user-defined method extensions you must assign them to a filter. Users who log in with this filter can use the method extensions for modeling and evaluation.

METHOD FILTER

Subset of ARIS Method, which the configuration administrator can define for specific users, user groups or for a specific task. If you log in using a specific method filter and want to create a new model, only the relevant model types contained in that method filter are offered to you for selection. When modeling, all object, connection, and attribute types are available for the model type that are contained in the method filter. Thus, the content offered is exactly the content you need for performing your tasks. Method filters are an effective means of

supporting uniform modeling and make it possible to provide users with only the information and methods relevant to them.

EVALUATION FILTER

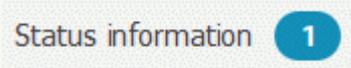
Filter that restricts the method contents. The method content is restricted to the content that is activated in both the method filter you used when logging in to the database and the evaluation filter you selected. The advantage of evaluation filters is that only relevant content is included in the case of comprehensive processes.

1.1.2.12 Manage templates

All templates (page 18) of this tenant are managed on the **Assets** page.

On this page you can copy, import and export filters, templates, report scripts and databases (page 4).

Status information is available.

Actions are logged as  and all logged pieces of information can be displayed if required.

To open logged information, click **Open** . If you close  the section, the number of logged status information is set to . All messages are available until they are deleted .

1.1.2.12.1 Copy templates

Copy templates to different tenants immediately.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Templates**. All current templates are listed.
5. Activate the controls of the templates to be copied. To activate all at once, click the control in the **Templates** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and  **Export assets** action buttons.
6. Click  **Copy assets**. The **Copy assets to tenants** dialog opens. All tenants are listed to which the templates can be copied. If the list is too long, you can specify the tenant name in the field next to the source tenant.
7. Activate the controls of all target tenants the templates are to be copied to.
8. Click **OK**.

If the templates already exist, they are overwritten in the target.

The templates are copied to the selected tenants.

1.1.2.12.2 Export templates

Export templates from this tenant to a template backup archive.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Templates**. All templates are listed.
5. Activate the controls of the templates to be exported. To activate all at once, click the control in the **Templates** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and  **Export assets** action buttons.
6. Click  **Export assets**. The templates are zipped to an archive file. The name of the archive file has the format:
<source tenant name><time stamp>.zip
7. Select the next action. You can either open the file or save it.
8. Click **OK**.

The templates are downloaded from the tenant and saved to the archive file.

You can import templates from this file to different tenants (page 18).

1.1.2.12.3 Import templates

Import templates to this tenant from a template export archive.

Prerequisites

You have access to a template archive file created by a template export (page 17), or to a template export file created in ARIS Architect.

Warning

If templates with the same GUID already exist in the tenant, they are overwritten.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Templates**. All current templates are listed.
5. Click  **Import assets**. The **Import assets to tenant** dialog opens.
6. Click **Select**. The file browser opens.
7. Navigate to the source file. Select either a template archive file (*.zip) or a template export file (*.template), and click **Open**. The file browser closes.
8. Click **OK**.

The templates are imported from the archive file to the tenant.

1.1.2.12.4 Use templates

Using the Template Wizard in ARIS Architect, administrators can create (page 18) templates to enhance your models with individual graphic designs. Use a template to specify the graphic properties of object symbols and connections. For symbols, you can change the size, color and shading as well as the line color, weight, and style. For connections, you can change the color, style, arrow heads and line weight. You can also specify which attribute is displayed where on a connection or symbol and in which font format.

You can assign templates to any model. ARIS uses the settings of the assigned template to display the model. To assign a template to a model, users need the **Write** access privilege for the group containing the model. If templates are assigned, text is displayed using the font defined in the font format that is used in the template. Template settings overrule settings only related to the database, such as individual font formats.

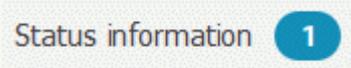
You can manage templates in ARIS Architect (for detailed information ([../abs/help/en/handling/ba/index.htm#58990.htm](http://..../abs/help/en/handling/ba/index.htm#58990.htm)), see ARIS Architect online help).

1.1.2.13 Manage reports and related files

All reports of this tenant are managed on the **Assets** page.

On this page you can copy, import and export filters, templates, report scripts and databases (page 4).

Status information is available.

Actions are logged as  and all logged pieces of information can be displayed if required.

To open logged information, click **Open** . If you close  the section, the number of logged status information is set to . All messages are available until they are deleted .

1.1.2.13.1 Copy reports

Copy reports (page 23) to different tenants immediately.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Evaluations > Reports > <report category>**. All current reports of this report category are listed.
5. Activate the controls of the reports to be copied. To activate all at once, click the control in the **Reports** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and  **Export assets** action buttons.
6. Click  **Copy assets**. The **Copy assets to tenants** dialog opens. All tenants are listed to which the reports can be copied. If the list is too long, you can specify the tenant name in the field next to the source tenant.
7. To copy the reports from this category to the same category on the target tenants, activate the controls of all target tenants the reports are to be copied to.
To copy the reports from this category to several categories on the target tenants, activate the **Select target category for the report on each tenant** option, and specify the target categories on the different tenants.
8. Click **OK**.

If the reports with the same GUID already exist, they are overwritten in the target.

The reports are copied to the selected tenants.

Make sure that all common files used by these reports are available (page 22) as well.

1.1.2.13.2 Export reports

Export reports (page 23) from this tenant to a report backup archive.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Evaluations > Reports > <report category>**. All current reports of this report category are listed.
5. Activate the controls of the reports to be exported. To activate all at once, click the control in the **Reports** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and  **Export assets** action buttons.
6. Click  **Export assets**. The reports are zipped to an archive file. The name of the archive file has the format:
<source tenant name><time stamp>.zip
7. Select the next action. You can either open the file or save it.
8. Click **OK**.

The reports are downloaded from the tenant and saved in the archive file.

You can import reports from this file to different tenants (page 21).

1.1.2.13.3 Import reports

Import reports (page 23) to this tenant from a report archive.

Prerequisites

You have access to a report archive file created by a report export (page 20), or to a report export file created in ARIS Architect.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Evaluations > Reports > <report category>**. All current reports of this report category are listed.
5. Click  **Import assets**. The **Import assets to tenant** dialog opens.
6. Click **Select**. The file browser opens.
7. Navigate to the source file. Select either a report archive file (*.zip) or a filter export file (*.arx), and click **Open**. The file browser closes.
8. Click **OK**.

If reports with the same GUID already exist on the tenant, they are overwritten.

The reports are imported from the export file to the tenant.

1.1.2.13.4 Copy files

Copy all relevant files used by reports directly to different tenants.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Evaluations > Common files**. All current files are listed.
5. Activate the controls of the files to be copied. To activate all at once, click the control in the **Files** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and **Export**  **assets** action buttons.
6. Click  **Copy assets**. The **Copy assets to tenants** dialog opens. All operational tenants are listed to which the files can be copied. If the list is too long, you can specify the tenant name in the field next to the source tenant.
7. Activate the controls of all target tenants the files are to be copied to.
8. Click **OK**.

If identical files already exist, they are overwritten in the target.

The files are copied to the selected tenants.

1.1.2.13.5 Export files

Export all relevant files used by reports from this tenant to a file archive.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Evaluations > Common files**. All current files are listed.
5. Activate the controls of the files to be exported. To activate all at once, click the control in the **Files** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and  **Export assets** action buttons.
6. Click  **Export assets**. The files are zipped to an archive file. The name of the archive file has the format:
<source tenant name><time stamp>.zip
7. Select the next action. You can either open the file or save it.
8. Click **OK**.

The files are downloaded from the tenant and saved to the archive file.

You can import common files from this file to different tenants (page 23).

1.1.2.13.6 Import files

Import all relevant files used by reports to this tenant from a file archive. If you copy reports to different tenants (page 19) make sure that all common files used by these reports are copied as well.

Prerequisites

You have access to the archive file created by a file export (page 22), or to a file exported from ARIS Architect.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Evaluations > Common files**. All current files are listed.
5. Click  **Import assets**. The **Import assets to tenant** dialog opens.
6. Click **Select**. The file browser opens.
7. Navigate to the source file. Select either a file archive (*.zip) or a single file (*.js or *.xml), and click **Open**. The file browser closes.
8. Click **OK**.

If identical files already exist on the tenant, they are overwritten.

The files are imported to the tenant.

1.1.2.13.7 What is an ARIS report?

With reports, you evaluate any number of similar database items. You can analyze processes and document the results taking into account various aspects. To start a report, select the content in the Explorer tree, in models, or in search results, etc., and click either a report or  **Start report** on the **Evaluate** tab bar. The Report Wizard always offers you those reports that enable plausible evaluations. Depending on the output format selected, the data is automatically transferred to the locally installed programs, such as Microsoft® Word, Microsoft® Excel, or Microsoft® Internet Explorer, and Adobe® Acrobat®.

The Report Wizard assists you in outputting a report. It accesses report scripts that are included in the package. Information on the reports is located in the **Description** box in the wizard. For example, you can automatically output content for translation and insert the translated text back into the database.

A report includes only those models, objects, relationships and attributes that are allowed in the current evaluation filter.

Reports are opened in the program that is linked to the result format. For example, if you have selected the **DOC** output format, the result is displayed in Microsoft® Word on the computer where ARIS Designer is installed. If Microsoft Word® is not installed, the report is displayed in your Internet browser.

Write your own scripts or adapt copies of existing scripts. To do this, you require knowledge of the **JavaScript** and **ARIS Script** programming languages. If you have no experience in writing scripts, you can create simple report scripts as template-based reports.

ARIS is supplied with numerous standard scripts. We generally recommend documenting all changes to scripts externally so that the documentation can be used to ensure that they are incorporated correctly during the update process.

REPORTS/MACROS/REPORT TEMPLATES AND FILES

Do not make any changes to the standard scripts we supply. Always adapt copies of report, macro, and JS files, and any other files. There are exceptions, for example, the file **atsall<language code>.js**.

When updating ARIS, all ARIS standard scripts and files are overwritten and customer-specific changes to these files are discarded. Copied scripts and files and those you have created yourself are not overwritten.

If you have changed files we supplied but not copied them, before the update (updatesystemdb) they must be exported and then imported after the update. This enables you to retain your adapted standard scripts from the previous version. However, in this case you do not receive any corrections or updates to the files we supplied.

SEMANTIC CHECKS

We recommend creating custom rule types and custom profiles for semantic checks, in which the ARIS standard rule types and rules are referenced.

This is not possible for configurable rule types (relationship attribute rules, model attribute rules, object attribute rules, existence rules, and allocation rules). If you have added rules to these rule types, you must export the rule types before the update and then import them after the update.

Further information and scripting tutorials are available in the ARIS Community at:

- <http://www.ariscommunity.com/group/reports-macros-aris>
(<http://www.ariscommunity.com/group/reports-macros-aris>)
- <http://www.ariscommunity.com/users/eva-klein/2010-04-27-aris-scripting-tutorials>
(<http://www.ariscommunity.com/users/eva-klein/2010-04-27-aris-scripting-tutorials>)

1.1.2.14 Manage databases

Databases contain all models and objects, classified in groups. If you are using versioned databases, you can open defined database versions. You can back up databases so that a particular version can be restored at a later date or to provide databases on other tenants. If you back up versioned databases, all versions of the database are included.

On each tenant different sets of databases can be managed.

You can manage all databases of this tenant on the **Assets** page.

On this page you can copy, import and export filters, templates, report scripts and databases (page 4).

Status information is available.

Actions are logged as  and all logged pieces of information can be displayed if required.

To open logged information, click **Open** . If you close  the section, the number of logged status information is set to . All messages are available until they are deleted .

1.1.2.14.1 Copy databases

Copy databases to different tenants immediately.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Databases**. All databases are listed.
5. Activate the controls of the databases to be copied. To activate all at once, click the control in the **Databases** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and  **Export assets** action buttons.
6. Click  **Copy assets**. The **Copy assets to tenants** dialog opens. All operational tenants are listed to which the database can be copied. If the list is too long, you can specify the tenant name in the field next to the source tenant.
7. Activate the controls of all target tenants the databases are to be copied to.
8. Click **OK**.

If databases already exist, they are overwritten in the target.

The databases are copied to the selected tenants.

1.1.2.14.2 Export databases

Export databases from this tenant to a database export archive.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click Databases. All filters are listed.
5. Activate the controls of the databases to be exported. To activate all at once, click the control in the **Databases** heading. The number of selected items is displayed along with the  **Copy assets**,  **Import assets** and  **Export assets** action buttons.
6. Click  **Export assets**. The databases are zipped to an archive file. The name of the archive file has the format:
<source tenant name><time stamp>.zip
7. Select the next action. You can either open the file or save it.
8. Click **OK**.

The databases are downloaded from the tenant and saved to the archive file.

You can import databases from this file to different tenants (page 26).

1.1.2.14.3 Import databases

Import databases to this tenant from an export archive.

Prerequisites

You have access to a database archive file created by a database export (page 26), or to a database backup file (*.adb) created in ARIS Architect.

Procedure

1. Click **Tenants**.
2. Click the relevant tenant. The **Information** pages gives an overview of this tenant.
3. Click **Assets**. The navigation tree allows navigating to all filters, templates, reports, and related files, as well as to databases.
4. Click **Databases**. All current databases are listed.
5. Click  **Import assets**. The **Import assets to tenant** dialog opens.
6. Click **Select**. The file browser opens.
7. Navigate to the source file. Select either a database archive file (*.zip) or a database backup file (*.adb), and click **Open**. The file browser closes.
8. Click **OK**.

If databases with the same GUID already exist in the tenant, they are overwritten.

The databases are imported from the file to the tenant.

1.1.3 Manage backups

All backup lists for the tenants are managed on the **Backups** page (page 44).

1.1.3.1 Define backup folder

By default, backups are stored in the ARIS Server installation directory (`..\server\bin\work\work_umcadmin_<s, m, or l>\backup`). Define a different folder on a physical drive in order to keep data update-proof (page 51). As the default **backup** folder is overwritten by the update, all backups are lost.

Prerequisite

You have access to ARIS Cloud Controller (ACC)

Procedure

1. Start ARIS Cloud Controller (ACC) (page 65).
2. Enter, for example: **reconfigure umcadmin_m JAVA-Dtm.backup.folder = "C://backups"**

If you have blanks or special characters in the path, you must put it in quotes and use a double backslash instead of a single slash.

Make sure to use a physical drive. Mapped drives cannot be accessed.

3. Exit ACC.

All backup files are saved in the **backups** subfolder on drive **C**.

1.1.3.2 Open backup list

Display all backups of a tenant.

Prerequisite

The tenant has been backed up (page 6).

Procedure

1. Click **Backups**.
2. At the end of the row for the tenant, click  **Open backup list**.

The **Backup list - <tenant>** dialog opens. In addition to the file name and the backup time, all components (page 43) whose data has been backed up are displayed.

1.1.3.3 Delete backup file

If you want to reduce the number of saved backups, you can delete individual entries from backup lists.

Before deleting backups from backup lists, you can download (page 7) them, for example, for external storage.

Prerequisite

The tenant has been backed up (page 6).

Procedure

1. Click **Backups**.
2. At the end of the row for the tenant, click  **Open backup list**. The **Backup list - <tenant>** dialog opens.
3. Select the relevant backup based on the description and the backup date.
4. At the end of the row, click  **More > Delete**.

The selected backup file is deleted without prompting for confirmation.

1.1.4 Manage schedules

All automatically performed tenant backups are managed on the **Schedules** page.

1.1.4.1 Enter backup options

In order to create scheduled backups (page 30) and save them in the ARIS installation directory, you must enter the user data for the user with appropriate privileges.

Prerequisite

The default location for saving backup files was changed (page 27) to a different folder on a physical drive to prevent that files stored in the default location are automatically deleted when you perform an update setup.

Procedure

1. Click **Administrator > Options**. The **Enter backup options** dialog opens.
2. Enter the user name **superuser**. This user account can be used to perform all scheduled backups.
If you enter a different user name, make sure that this user has the required function privileges, so that all data (page 43) can be backed up.
3. Enter the associated password.
4. Click **OK**.

Your entries have been saved. By default, backups are stored in the ARIS Server installation directory (..\server\bin\work\work_umcadmin_<s, m or l>**backup**) on behalf of this user until the user credentials are changed.

If you have not yet defined a different folder (page 27) on a physical drive, make sure to save the backup folder before starting an update setup. As the default **backup** folder is overwritten, all backups are lost.

1.1.4.2 Create schedule

Users with appropriate privileges can back up all data (page 43) from tenants using schedules. They thus create restore points. All data from the tenant is saved in a backup list.

Any number of schedules can be created for each tenant. If you create a large number of schedules and backups, make sure the storage medium has sufficient capacity.

Prerequisites

- The user name and password have been entered in the backup options (page 29).
- The default location for saving backup files was changed (page 27) to a different folder on a physical drive to prevent that files stored in the default location are automatically deleted when you perform an update setup.

Warning

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Procedure

1. Click **Schedules**. The schedules for all tenants are displayed.
2. Click **+ Create schedule**. The **Create schedule** dialog opens.
3. Enter the description for the backup. This text makes it easier to select the relevant backup when restoring the tenant.
4. Select the time for the automatic backup. You can set an automatic backup daily or on a particular day of the week. Select a time on the hour as the start time.
5. Select the maximum number of backups to be saved in the tenant backup list for this schedule. If you select **10**, a maximum of the 10 last versions can be restored.
6. Select the tenant to be backed up.
7. Click **OK**.

The schedule is created.

An additional backup is added to the tenant backup list (page 48) at the specified time. If the selected number of backups already exists, the oldest is removed to free up space for the new backup.

1.1.4.3 Edit schedule

Change the settings for automatic tenant backups.

Procedure

1. Click **Schedules**. The schedules for all tenants are displayed.
2. At the end of the row for the relevant schedule, click  **More > Edit**. The **Edit schedule** dialog opens.
3. Change the settings.
4. Click **OK**.

The changes have been saved.

At the specified time, the backup is started and added to the tenant backup list (page 48).

1.1.4.4 Lock schedule

End automatic backup using a schedule.

Procedure

1. Click **Schedules**. The schedules for all tenants are displayed.
2. At the end of the row for the relevant schedule, click  **More > Lock**.

The schedule is no longer executed. It is displayed with the status  **Schedule locked**. The tenant is no longer backed up using this schedule.

1.1.4.5 Activate schedule

Activate automatic backup for locked schedules (page 31).

Procedure

1. Click **Schedules**. The schedules for all tenants are displayed. Locked schedules are indicated by the status  **Schedule locked**.
2. At the end of the row for the locked schedule, click  **More > Activate**.

The schedule is executed again. It is displayed with the status  **Schedule activated**. The tenant is backed up using this schedule again.

1.1.4.6 Delete schedule

Delete schedules that you no longer require for backing up tenants.

Procedure

1. Click **Schedules**. The schedules for all tenants are displayed.
2. At the end of the row for the relevant schedule, click  **More > Delete**.

The schedule is deleted without prompting for confirmation. The tenant is no longer backed up using this schedule.

1.1.5 Display charts

Charts represent accumulated statistics data graphically. For real-time monitoring, you can view statistics data in the form of charts for the **Users**, **Documents**, **Modeling**, and **Governance** areas.

Procedure

1. Click **Tenants**.

In the row for the relevant tenant, click **More > Display charts**. A warning informs you that you will automatically be logged out of Tenant Management.

2. Close the warning by clicking **OK**.

The charts for this tenant are displayed. You have been logged out of the infrastructure tenant.

1.1.6 Open user management

Centrally manage users, user groups, privileges, licenses, and configurations for all databases of a tenant.

Procedure

1. Click **Tenants**.

In the row for the relevant tenant, click **More > Open user management**. A warning informs you that you will automatically be logged out of Tenant Management.

2. Close the warning by clicking **OK**.

User management for this tenant opens. You have been logged out of the infrastructure tenant.

1.1.7 Open portal management

Configure the portal for a tenant.

Procedure

1. Click **Tenants**.

In the row for the relevant tenant, click **More > Open portal management**. A warning informs you that you will automatically be logged out of Tenant Management.

2. Close the warning by clicking **OK**.

Portal management for this tenant opens. You have been logged out of the infrastructure tenant.

1.1.8 Log out

When you have completed your management activities, click **Administrator > Log out**.

1.1.9 Configure Tenant Management

The Tenant Management user interface has been installed using the ARIS Server setup program. It is run automatically with the user account of the **superuser** user. In order for other users to be able to log in (page 3), you have to configure the infrastructure tenantinfrastructure tenant (page 34). This assigns users in the infrastructure tenant privileges for impersonation (page 42), along with additional function privileges.

Once all operational tenants are configured (page 36), impersonation enables users to assume the account of the **superuser** system user in order to perform administration tasks. After the ARIS Server was updated, for all operational tenants make sure to specify **superuser** in the **Impersonation target users** field again.

If you want existing tenants that were not created using Tenant Management to be managed centrally, you have to adjust the configuration of these tenants (page 38).

1.1.9.1 Configure infrastructure tenant

In order for users to be able to log in to Tenant Management, they must have been assigned **impersonation** privileges (page 42) by a system user in this node's infrastructure tenant and also require additional function privileges. Impersonation enables users to use the account of the system user **superuser** to perform administration tasks. If this node has been accidentally removed, please make sure to add it again.

Prerequisite

You are a system user or have the **User administrator** and **Impersonation** function privileges.

Procedure

1. Click the link that was provided to you or that you have saved as a bookmark in your browser, for example, **http://myServer:1080/umc**. The User Management login dialog opens.
2. Enter the name of the infrastructure tenant in the  **Tenant** field, for example, **master**.
3. Enter the user name **superuser** and the associated password.
4. Click **Log in**. The  **User management** tab is displayed.
5. Click the user **superuser**.
6. Enter a valid e-mail address. This assures that the system administrator is informed whether backups were completed successfully or whether warnings or errors occurred.
7. Click **Privileges**. The list of function privileges is displayed.
8. Make sure that in addition to the assigned privileges at least the following function privileges are activated:
 - User administrator
 - Impersonation
 - Tenant administrator
 - Technical configuration administrator

The user **superuser** now has the required privileges in the infrastructure tenant.

If necessary, create users as substitutes and assign them the required function privileges in the same way.

For users to be able to use Tenant Management, you must configure all operational tenants (page 36).

1.1.9.2 Configure user for impersonation

Impersonation enables a user to assume another user account. The user can then perform operations that are actually only permitted for the other account. This configuration must be set for each tenant.

Prerequisite

You have the **Technical configuration administrator** function privilege.

Procedure

1. Log in to User Management.
Click the link that was provided to you or that you have saved as a bookmark in your browser, for example, **http://myServer:1080/#myTenant/adminUsers**. The **Log in** dialog opens.
2. Enter the name of the infrastructure tenant in the  **Tenant** field, for example, **master**.
3. Enter your user name and your password.
4. Click the user for which you want to allow impersonation.
5. Click **Privileges**. The list of function privileges is displayed.
6. Click the user for which you want to allow impersonation.
7. Activate the **Impersonation** function privilege.
8. Log out.
9. Log in to ARIS Connect.
10. Click your name or the  **User menu** icon.
11. Click **Administration**.
12. Click  **Configuration**.
13. Click  **User management**.
14. Click the arrow next to **Users**.
15. Click **General**.
16. Click  **Edit**.
17. Click in the **Impersonation target users** field.
18. Enter the users for which you want to allow impersonation as a comma-separated list.

Warning

If the ARIS server was updated, make sure to reenter the user names for all operational tenants in the **Impersonation target users** field again.

19. Click  **Save**.

You have allowed users to use impersonation.

1.1.9.3 Configure operational tenants

Impersonation enables users to use the account of the system user **superuser** to perform administration tasks.

To enable Tenant Management to establish connections to tenants, the user **superuser** must have all function privileges required for backup and restore in all operational tenants and must be defined as a target for impersonation.

Prerequisite

You are a system user or have the **User administrator** and **Impersonation** function privileges.

Procedure

1. Open ARIS Administration for an operational tenant, for example, `http://<server name>:<port>/#default/home`).
2. Log in as a system user or a user with the **User administrator** and **Technical configuration administrator** function privileges.
3. Click your name > **Administration**. ARIS Administration opens.
4. Click  **Configuration**.
5. Click  **User management**.
6. Select the **Users** entry in the drop-down list.
7. Click **General**.
8. Click  **Edit**.
9. Click in the **Impersonation target users** field.
10. Enter the user name **superuser**.

If the ARIS server was updated, make sure to reenter the user name for all operational tenants in the **Impersonation target users** field again.

11. Click  **Save**. All users that have the **Impersonation** and **Tenant administrator** function privileges on the infrastructure tenant take on the identity of **superuser** and inherit all of the **superuser** privileges.
12. Click  **User management**.
13. Select the user **superuser**. The details will be displayed.
14. Click **Privileges**. The list of function privileges is displayed.
15. Activate the function privileges required for backing up and restoring:
 - Analysis administrator
 - ARCM administrator
 - Collaboration administrator
 - Database administrator
 - Dashboard administrator
 - Document administrator

- License administrator
- Portal administrator
- Process Governance administrator
- Server administrator
- Technical configuration administrator
- User administrator

The function privileges depend on the license. Therefore, you may not be able to assign all of the function privileges shown.

16. Log out of ARIS Administration.

The user **superuser** has the privileges to manage data for the **default** tenant.

17. Enter the user **superuser** under **Impersonation target users** in all other operational tenants in your system in turn, and assign the required function privileges.

The user **superuser** has the privileges to manage all data for the tenants (page 43). All substitutes can log in using their user name and manage tenants on behalf of the system user **superuser**.

1.1.9.4 Configure existing tenants

To enable Tenant Management to establish connections to tenants that were not created using Tenant Management, you must adjust the configuration of these tenants.

Add missing permissions to the superuser, if impersonation (page 42) failed. This can occur, if tenants were added by ARIS Cloud Controller (ACC) but functional privileges are missing.

Procedure

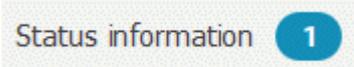
1. Click **Tenants**. The status of the tenants is displayed. If the  **Impersonation failed** status is shown, the tenant is not accessible for users.
2. At the end of the row for the tenant, click  **More > Allow access**. The **Allow access** dialog opens.
3. Enter the user credentials of a user with sufficient privileges, for example, **system**.
4. Click **OK**.

The missing privileges are applied to the superuser. Impersonation should work and the  **Active** state is shown. If the change is not displayed, click  **Refresh**.

1.1.10 Good to know

This section provides background information to assist you in carrying out the relevant procedures.

1.1.10.1 How to manage logged information

Actions are logged as  and all logged pieces of information can be displayed if required.

To open logged information, click **Open** . If you close  the section, the number of logged status information is set to . All messages are available until they are deleted .

1.1.10.2 How to adjust timestamps related to ARIS document storage

In previous ARIS versions, ARIS document storage stored timestamps, for example **Creation time** and **Update time**, referred to documents and folders in local server time and without any time zone information. If data was moved between ARIS Servers or if a tenant was restored from a backup file, timestamps were likely adjusted using a wrong time offset.

Since ARIS 10 SR6, **Coordinated Universal Time** (UTC) is mandatory for timestamps stored by ARIS document storage. Because time zone information in existing data is not available, the timestamps of existing documents and folders cannot be adjusted automatically. After the update to ARIS 10 SR6, you must manually adjust timestamps. In a Windows-based installation with local time UTC-2, for example, use the **y-admintool.bat** command-line tool and, considering UTC offset of your ARIS Servers>, enter the following:

```
y-admintool.bat -s https://localhost -t default adjustTimestamps -offset "-120" -u system -p manager
```

If you have restored a tenant from backup file created with ARIS 10 SR5 or earlier, you must adjust the timestamps as well.

1.1.10.3 Which users can manage tenants?

The user **superuser** and users to which the required privileges are assigned by the user **superuser** can manage tenants.

If users with appropriate privileges start Tenant Management, they do this as the user **superuser**. This is facilitated by the **Impersonation** function privilege, which is assigned to relevant users on the infrastructure tenant (page 42).

1.1.10.4 What privileges and settings does the user 'superuser' require?

The user account for the user **superuser** is used to automatically perform tenant management for each tenant. For this purpose, the user **superuser** requires appropriate function privileges in the infrastructure tenant and in all operational tenants, and must have been defined as a target for impersonation.

- Function privileges in infrastructure tenant

For tenant management, the user **superuser** requires the following additional function privileges in the infrastructure tenant/infrastructure tenant:

- User administrator
- Impersonation
- Tenant administrator
- Technical configuration administrator

The user has additional function privileges by default, for example, **License administrator**.

- Function privileges and settings in all operational tenants

The user **superuser** does not require any license privileges, but does require certain function privileges. To ensure that each operational tenant, for example, **default**, is completely backed up, the user **superuser** needs the following function privileges in each operational tenant:

- Analysis administrator
- ARCM administrator
- Collaboration administrator
- Database administrator
- Dashboard administrator
- Document administrator
- License administrator
- Portal administrator
- Process Governance administrator
- Server administrator
- Technical configuration administrator
- User administrator

If a function privilege is not assigned, for example, **Analysis administrator**, ad hoc analyses and queries for this tenant are not backed up. The number of function privileges depends on the relevant tenant's licenses. For this reason, not all of the specified function privileges may be displayed for every tenant.

SETTINGS IN THE USER CONFIGURATION

The user **superuser** must be defined as a target for impersonation (page 42) in every operational tenant, for example, **default**. Thus, all users that have the **Impersonation** function privilege in the infrastructure tenant inherit its privileges and can manage tenants.

1.1.10.5 What privileges and settings does an authorized user require?

Other users can also manage tenants if they are not created as users in operational tenants, because management is always carried out in the name of the user **superuser** using impersonation (page 42). The following requirements have to be met:

- The users must be created in the infrastructure tenant.
- The users have the required function privileges in the infrastructure tenant.
- The user 'superuser' has the required function privileges in the infrastructure tenant and in all operational tenants, and has been defined as a target for impersonation in all operational tenants.

The user account for the user **superuser** is used to automatically perform tenant management for each tenant. For this purpose, the user **superuser** requires appropriate function privileges in the infrastructure tenant and in all operational tenants, and must have been defined as a target for impersonation.

- Function privileges in infrastructure tenant

For tenant management, the user **superuser** requires the following additional function privileges in the infrastructure tenant:

- User administrator
- Impersonation
- Tenant administrator
- Technical configuration administrator

The user has additional function privileges by default, for example, **License administrator**.

- Function privileges and settings in all operational tenants

The user **superuser** does not require any license privileges, but does require certain function privileges. To ensure that each operational tenant, for example, **default**, is completely backed up, the user **superuser** needs the following function privileges in each operational tenant:

- Analysis administrator
- ARCM administrator
- Collaboration administrator
- Database administrator
- Dashboard administrator
- Document administrator
- License administrator
- Portal administrator

- Process Governance administrator
- Server administrator
- Technical configuration administrator
- User administrator

If a function privilege is not assigned, for example, **Analysis administrator**, ad hoc analyses and queries for this tenant are not backed up. The number of function privileges depends on the relevant tenant's licenses. For this reason, not all of the specified function privileges may be displayed for every tenant.

SETTINGS IN THE USER CONFIGURATION

The user **superuser** must be defined as a target for impersonation (page 42) in every operational tenant, for example, **default**. Thus, all users that have the **Impersonation** function privilege in the infrastructure tenant inherit its privileges and can manage tenants.

1.1.10.6 Impersonation

Users manage tenants on behalf of the user **superuser**. This requires the creation of these users in the user management for the infrastructure tenant, for example, master (page 35). To use impersonation, users require the **Impersonation** function privilege in the infrastructure tenant.

For Tenant Management, they also require the **User administrator**, **Tenant administrator**, and **Technical configuration administrator** function privileges.

In all other operational tenants, for example, **default**, the user **superuser** must be defined as the target for impersonation (page 33). Impersonation enables users to back up tenants in which they do not exist as a user.

To back up and restore the data, the **superuser** user requires the following function privileges in all operational tenants:

- Analysis administrator
- ARCM administrator
- Collaboration administrator
- Database administrator
- Dashboard administrator
- Document administrator
- License administrator
- Portal administrator
- Process Governance administrator
- Server administrator
- Technical configuration administrator
- User administrator

1.1.10.7 What data is backed up and restored?

If you back up tenants manually (page 6) or use a scheduled backup (page 30), the current state of the following data is saved in backup lists.

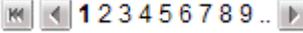
Tenant data is fully backed up only if the user executing the commands has sufficient privileges for all components in every tenant and if all components were selected for the backup. Extensions, for example, TLS/SSL certificates, SAP® Java Connector, and JDBC drivers, added using the **enhance** ACC command are not backed up. In ARIS 10 all started runnables are automatically taken into account when executing tenant backup/restore commands.

Content	Required function privileges	Component (runnable)
Data from ARIS Administration, for example, users, privileges. User statistics are not included by default. If you want to include the user statistics, the property User statistics in backup (com.aris.umc.user.statistics.backup) must be enabled in the configuration (see ARIS help: ARIS Administration >  Configuration > User management > Security > Advanced settings).	User administrator Technical configuration administrator	ARIS Administration/User Management (umcadmin_<s, m, or l>)
Licenses User administration audit events are not part of the tenant backup.	License administrator	
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>)

Content	Required function privileges	Component (runnable)
ARIS document storage data, including Process Governance archives 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>)
ARIS Risk & Compliance Manager data	ARCM administrator	ARIS Risk & Compliance Manager (arcm_<s, m, or l>)
Dashboards and feeds	Dashboard administrator	ARIS Aware (dashboarding_<s, m, or l>)
ARIS Connect portal views, modification sets, and configuration sets.	Portal administrator	ARIS Connect portal (copernicus_<s, m, or l>)

Make sure to save backup files on external media, such as a NAS or file servers (page 51). You require the same function privileges to restore (page 9) the data.

1.1.10.8 What is the Tenants page used for?

On this page you can manage all tenants in the system. If there are more than 100 tenants, the  **Page navigation** is displayed.

You can use the  **Search** function to reduce the number of tenants displayed, even while entering the name of the relevant tenant. You can also  **refresh the list** and  **create tenants** (page 4).

To resort the following list, click one of the column headings **Tenant**, **Status**, or **Last backup**.

Tenant

All tenants on all ARIS servers that are managed by this infrastructure tenant are listed. It provides an overview of each tenant. Click  **More** at the end of each row to see all available actions for each tenant.

If you click a tenant, the following pages are available:

- Information
 - Gives an overview of this tenant's information.
- Assets

Allows backup, restoring and copying of filters, templates, report scripts, and databases.

- Backups

Shows all backups of this tenant and provides all actions for tenant management.

- Schedules

Shows all schedules for this tenant and provides all actions for tenant management.

Status

Describes the status of the tenant:

- **Read-only**

This tenant cannot be managed. Infrastructure tenants are read-only so that they cannot be inadvertently locked or deleted. In this case, access to ARIS would no longer be possible.

- **Active**

This tenant is available to all users with appropriate privileges. Users can edit data they are authorized to use in the programs and function assigned to them.

You can manage active tenants.

- **Locked**

This tenant is not available. Users cannot log in.

You can manage locked tenants.

- **Tenant corrupt; deletion possible after cooldown**

A severe error occurred while this tenant was created or copied. This tenant cannot be used nor deleted. You must wait until it is in the ● **Failed** status to delete (page 11) it.

- **Failed**

This tenant was corrupted. You can delete (page 11) it now.

- **Access denied**

A connection to this tenant cannot be established. This may be due to any of the following:

- The ARIS server that manages this tenant is not available.
- The user you used to log in to Tenant Management has not been defined for impersonation (page 33) for the tenant.
- This tenant is the infrastructure tenant and cannot be managed.

- **Impersonation failed**

This tenant is not yet available due to missing functional privileges for impersonation. This status can occur if a tenant was created using ARIS Cloud Controller (ACC), but the superuser is lacking functional permissions.

- **Being prepared for deletion**

This tenant cannot be used anymore. It was prepared for deletion (page 11). The deletion of a tenant takes some time. This status is shown as long as the process is not completed. After the process is completed, the status switches to ● **Prepared for deletion**.

- **Prepared for deletion**

This tenant was prepared for deletion. You can delete (page 11) it now.

Utilization

Describes the average number of logins in the current week relative to the number of licenses.

✘ Unknown

The average utilization cannot be determined because the tenant is either locked or a connection has failed.

↓ Low

The average number of logins this week is lower than the number of licenses.

Average

The average number of logins this week is lower than three times the number of licenses.

↑ High

The average number of logins this week is three times the number of licenses or higher.

Licenses

Illustrates the percentage usage of all licenses using a progress bar.



It remains green until all licenses are used.

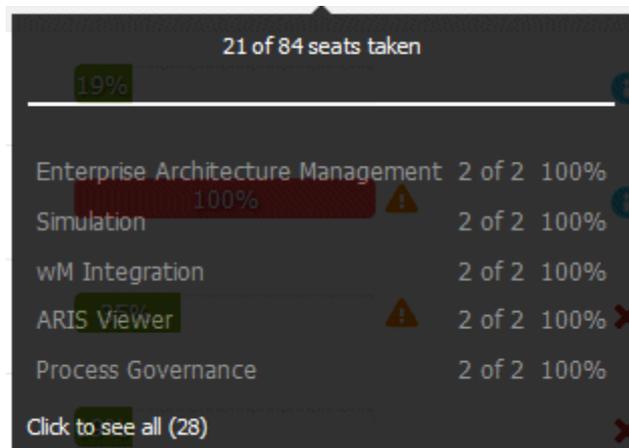


If all licenses are used, the bar turns red. No further users can log in on the tenant.



A **warning** is also displayed if at least one individual license from the total quantity of licenses is used up, for example, **Simulation**. In this example, all users can still use ARIS Architect. However, simulation is no longer available.

Moving the mouse over the bar displays the number of available and used licenses in a pop-up. Clicking the bar displays the information in a dialog.



Last backup

Indicates when the tenant was last backed up.

If there is no backup of a tenant, the message **Not yet backed up** is displayed.

During backup, the  **Backup in progress** symbol is displayed in this column.

Once the tenant has been backed up, the  **Tenant backup complete** symbol is displayed. The backup list on the **Backups** page is extended.

The times specified relate to the location of the ARIS server. If a tenant is managed by an ARIS server in another time zone, the date and time at the location is displayed in the language used at that location.

Clicking the link downloads the current backup file to your computer.

If an error occurs during the backup, the warning  **Backup failed** is displayed. Check whether the user account you used to perform the backup has the required privileges.

The user **superuser** and users to which the required privileges are assigned by the user **superuser** can manage tenants.

If users with appropriate privileges start Tenant Management, they do this as the user **superuser**. This is facilitated by the **Impersonation** function privilege, which is assigned to relevant users on the infrastructure tenant (page 42).

Status information

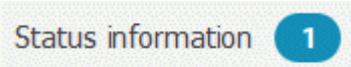
Actions are logged as  and all logged pieces of information can be displayed if required.

To open logged information, click **Open** . If you close  the section, the number of logged status information is set to . All messages are available until they are deleted .

1.1.10.9 What is the Assets page used for?

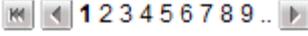
On this page you can copy, import and export filters, templates, report scripts and databases (page 4).

Status information is available.

Actions are logged as  and all logged pieces of information can be displayed if required.

To open logged information, click **Open** . If you close  the section, the number of logged status information is set to . All messages are available until they are deleted .

1.1.10.10 What is the Backups page used for?

On this page you can manage the backups for all tenants in the system. If there are more than 100 tenants, the  **Page navigation** is displayed.

You can use the  **Search** function to reduce the number of tenants displayed, even while entering the name of the relevant tenant. You can also  **refresh the list** and **+ create backups** (page 6).

To change the sorting of the list, click a column title.

Tenant

All backed up tenants are listed. In addition to the tenant name, the server name is displayed.

Number of backups

Shows the number of individual backups saved for this tenant. Each backup is entered in the backup list for the tenant. Both the scheduled backups and those started manually are listed.

Last backup

Indicates when the tenant was last backed up.

During backup, the  **Backup in progress** symbol is displayed in this column.

Once the tenant has been backed up, the  **Tenant backup complete** symbol is displayed.

If an error occurs during the backup, the warning  **Backup failed** is displayed. Check whether any privileges (page 43) for the backup are missing, that users have access privileges (page 39), and that all components (page 43) have been started.

The times specified relate to the location of the ARIS server. If a tenant is managed by an ARIS server in another time zone, the date and time at the location is displayed in the language used at that location.

Clicking  **Open backup list** at the end of the row lists all backups for the selected tenant. The backup file contains the following columns:

File

File name of the backup file.

The file name contains the date of the backup. The file contains the backed up data for the components that are listed in the description.

Description

Text that was entered when creating the backup or the schedule.

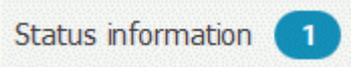
During the backup, all components (page 43) whose data has been backed up is added to the description in square brackets.

Created on

Date and timestamp showing when the backup file was created.

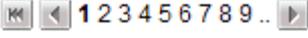
The times specified relate to the location of the ARIS server. If a tenant is managed by an ARIS server in another time zone, the date and time at the location is displayed in the language used at that location.

Status information

Actions are logged as  and all logged pieces of information can be displayed if required.

To open logged information, click **Open** . If you close  the section, the number of logged status information is set to . All messages are available until they are deleted .

1.1.10.11 What is the Schedules page used for?

On this page you can manage the schedules for all tenants. If there are more than 100 tenants, the  **Page navigation** is displayed.

You can use the  **Search** function to reduce the number of schedules displayed, even while entering the tenant name. You can also  **refresh the list** and **+ create schedules** (page 30).

To resort the list, click one of the column headings **Tenant**, **Status**, or **Last backup**.

Tenant

Lists all schedules for the tenants.

Any number of schedules can be created for each tenant. In addition to the tenant name, the server name is displayed.

If you create a large number of schedules and backups, make sure the storage medium has sufficient capacity.

Status

Displays the status of the schedule:

Schedule activated

This schedule is active and is performed on the specified dates.

Schedule locked

This schedule is deactivated. It will not be executed until it has been reactivated.

Frequency

Displays the times at which the backups are started.

A backup can be performed on the hour, daily, or on a particular day of the week.

Description

Text that was entered when creating the schedule.

During the backup, all components (page 43) whose data has been backed up is added to the description in square brackets.

Archived backups

Displays the maximum number of backups saved in the tenant backup list for this schedule.

For example, if you select 10, only the last ten backups are displayed and you can restore only these last ten backups.

Last backup

Indicates when the tenant was last backed up.

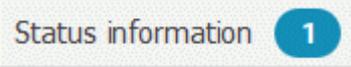
During backup, the  **Backup in progress** symbol is displayed in this column.

Once the tenant has been backed up, the  **Tenant backup complete** symbol is displayed.

If an error occurs during the backup, the warning  **Backup failed** is displayed. Check whether any privileges (page 43) for the backup are missing, that users have access privileges (page 39), and that all components (page 43) have been started.

The times specified relate to the location of the ARIS server. If a tenant is managed by an ARIS server in another time zone, the date and time at the location is displayed in the language used at that location.

Status information

Actions are logged as  and all logged pieces of information can be displayed if required.

To open logged information, click **Open** . If you close  the section, the number of logged status information is set to . All messages are available until they are deleted .

1.1.10.12 Where to save backup files?

Make sure to save backup files on external media, such as a NAS or file servers. To check the directory in use, click **Administration > Options**. If the default **backup** directory is still in use, change (page 27) the location for backup files before you backup a tenant (page 6).

Warning

If you store backup files on the same machine where ARIS Server is installed, the system will slow down because with each backup the free disk space will decrease.

You must not save backup files using ARIS document storage. ARIS document storage is a repository for documents used by end users in the portal. These files by default are accessible by all ARIS Connect users and can be downloaded. ARIS Connect designers with corresponding write permissions and document administrators have access to the document repository. These users can download, move, or delete files. This may lead to unauthorized access to backup files if stored in ARIS document storage. If you save a backup file, a database or other microservice backup in ARIS document storage, the next tenant backup also contains this content. This increases the amount of data per backup and does not comply with microservice architectural principles.

1.2 ARIS Cloud Controller (ACC)

ACC is a command-line tool (see ARIS Cloud Controller (ACC) Command-Line Tool.pdf (../..../documents/3 Installation/31 Initial installation/312 Server/3121 Basic (Single node)/ARIS Cloud Controller (ACC) Command-Line Tool.pdf)) for administrating and configuring an ARIS installation. It communicates with ARIS Agents on all nodes.

Warning

Using ACC commands will deeply affect your system. This requires profound knowledge of the technical ARIS infrastructure and environment. 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>). If you use ACC commands without this knowledge or without the services of Software AG, according to the standard Software AG software maintenance agreement, we cannot guarantee proper functioning.

ARIS Cloud Controller (ACC) can be used in three modes:

INTERACTIVE MODE (DEFAULT)

ACC runs with an interactive shell, allowing you to manually issue commands.

BATCH MODE

Activated by specifying a command file with the **-f** command line parameter (see ACC command line parameters below). ACC will execute the commands in the file in the given sequence and exit after execution or if one of the commands fails.

A command file line starting with **#** will be interpreted as a comment line and ignored by ACC.

COMMAND MODE

You can directly pass a single command to ACC as a command line parameter. The command will be executed and ACC will exit afterwards.

When passing commands directly as a command line parameter, you must be careful when escaping strings in your command, for example, double-quote-delimited parameters. The operating system command shell will consume the double quotes, leaving your string parameter un-escaped. So please escape the quote characters and special characters.

Examples

If you issue the command in command mode, for example:

```
set remote.repository.url="http://something.com/repo"
```

You must enter:

```
acc.bat -h localhost -u <user name> -pwd <remoteAccessPassword> set  
remote.repository.url=\"http://something.com/repo\"
```

If you enter:

```
acc.bat -h localhost -u <user name> -pwd <remoteAccessPassword> set  
remote.repository.url="http://something.com/repo"
```

ACC will return an error message, for example:

```
line 1:52 mismatched character '<EOF>' expecting '\n'
Invalid or erroneous command "set
remote.repository.url=http://something.com/repo ": line 1:30 extraneous
input ':' expecting EOF
Use "help" to display a list of available commands.
```

This also affects passwords and names containing special characters. If you try to back up your tenants using the following command, make sure to escape the quote characters and the special character **&** used in the password **User&12345**:

```
./acc.bat -h localhost -u Clous -pwd g3h31m -p 18011 -c
../generated.apptypes.cfg backup tenant default username=\"admin\"
password=\"User\&12345\"
```

To get information about the usage of ACC commands, enter **help** or **help <command>**.

WINDOWS OPERATING 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 user name and/or the password.

LINUX OPERATING SYSTEM

To start ACC under a Linux operating system, execute the **acc10.sh** shell script instead. To do so, enter: **su -c acc10.sh aris10**. After the ARIS Server installation has completed on a Linux operating system, the **aris10** user is locked and has no password. Command-line tools (**sh** files), such as **ARIS Server Administrator** or **ARIS Cloud Controller** can only be started by the **aris10** user related to the ARIS Agent.

- To unlock the **aris10** user, enter: **passwd -u aris10**
- To interactively enter a password, enter: **passwd aris10**
- To start the command-line tools, enter: **su -c acc10.sh aris10** or **su -c arisadm.sh aris10**
- To execute these command-line tools as an ARIS user that has no **root** privileges, you must enter the password of the **aris10** user.
- To copy files manually into the **ARIS** directory, as the **aris10** user use the commands: **su aris10** and **sudo aris10**

As an ARIS user that has no **root** privileges, you must make sure that the files have the correct ownership (**aris10**).

To lock the **aris10** user again enter: **passwd -l aris10**

1.2.1 How to handle special characters

If you pass a command to a command-line tool, such as ARIS Cloud Controller, special characters used in names, passwords, or user names may cause issues.

When passing commands directly as a command line parameter, you must be careful when escaping strings in your command, for example, double-quote-delimited parameters. The operating system command shell will consume the double quotes, leaving your string parameter un-escaped. So please escape the quote characters and special characters.

Examples

If you issue the command in command mode, for example:

```
set remote.repository.url="http://something.com/repo"
```

You must enter:

```
acc.bat -h localhost -u <user name> -pwd <remoteAccessPassword> set  
remote.repository.url=\"http://something.com/repo\"
```

If you enter:

```
acc.bat -h localhost -u <user name> -pwd <remoteAccessPassword> set  
remote.repository.url="http://something.com/repo"
```

ACC will return an error message, for example:

```
line 1:52 mismatched character '<EOF>' expecting '\n'  
Invalid or erroneous command "set  
remote.repository.url=http://something.com/repo ": line 1:30 extraneous  
input ':' expecting EOF  
Use "help" to display a list of available commands.
```

This also affects passwords and names containing special characters. If you try to back up your tenants using the following command, make sure to escape the quote characters and the special character **&** used in the password **User&12345**:

```
./acc.bat -h localhost -u Clous -pwd g3h31m -p 18011 -c  
../generated.apptypes.cfg backup tenant default username=\"admin\"  
password=\"User\&12345\"
```

1.2.2 Create a tenant

After the installation of ARIS Connect the **default** tenant is available. If you need additional tenants to provide different sets of databases, users, configurations or ARIS methods you can easily create tenants. If you are going to create additional tenants for ARIS10.0 to migrate data from ARIS 9.8.7 or later, make sure to use identical names in both ARIS versions. You can also create tenants using the ARIS Administration's command line tools (page 68) or Tenant Management (page 2).

Prerequisites

- ARIS Server installation
- Users need the **User administrator** function privilege.
- If you use an external database system that was configured using the delivered database scripts (see ARIS Server Installation Guide), assign the tenants to these schemes before running the command as described below.

Warning

For tenant names please only use up to 25 lowercase ASCII characters and numbers. The name must begin with a character. Special characters, such as _ and characters, for example, in Chinese, Cyrillic or Arabic cannot be used.

Procedure

1. Start ARIS Cloud Controller (ACC) (page 65).
2. Enter: **create tenant <tenant name> username=<user name of a user holding the required privileges> password=<this user's password>**.

Example: **create tenant test01 master.tenant.user.name = admin
master.tenant.user.pwd= tenantmanager123**

You can even change parameters for the new tenant. You must specify additional parameters in case you use an external database management system, for example (Oracle):

```
create tenant test01 database.admin.user="system"  
database.admin.password="manager" dbinstanceid="db0000000000"  
database.schema.tablespace.default="ARISDATA"  
database.schema.tablespace.temporary="TEMP"  
database.schema.name=aris_test01"  
database.schema.password="*ARIS!1dm9n#yy"
```

The tenant **test01** will be created.

3. The administrator must import licenses, create users and user groups and assign privileges and licenses for the **test01** tenant.
4. Start a ARIS client and log in using this tenant. The system database will be created for that tenant.

The tenant is created and can be backed up (page 56).

1.2.3 Back up a tenant

You can back up tenant data (page 58) using the ARIS Cloud Controller (ACC). If you want to include the user statistics, the property **User statistics in backup** (**com.aris.umc.user.statistics.backup**) must be enabled in the configuration (see ARIS help: ARIS Administration >  Configuration > User management > Security > Advanced settings). Please note that no user can work on this tenant during the backup process.

Prerequisites

- ARIS Server installation
- Users need the following function privileges. The function privileges depend on the license. Therefore, you may not be able to assign all of the function privileges shown.

▪ Analysis administrator	▪ License administrator
▪ ARCM administrator	▪ Portal administrator
▪ Collaboration administrator	▪ Process Governance administrator
▪ Database administrator	▪ Server administrator
▪ Dashboard administrator	▪ Technical configuration administrator
▪ Document administrator	▪ User administrator

Warning

Do not store backup files (page 51) in ARIS document storage.

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

User administration audit events are not part of the tenant backup.

Extensions, for example, TLS/SSL certificates, SAP® Java Connector, and JDBC drivers, added using the **enhance** ACC command are not backed up.

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Procedure

1. Start ARIS Cloud Controller (ACC) (page 65).
2. Enter: **backup tenant <tenant name> to <pathToBackUpFile> encryption.key <encryption password or encryption key> username=<user name of a user holding the required privileges>password=<this user's password>**
such as: **backup tenant default to "f:\\backupDefault.acbcrypt" encryption.key=str3ngG3h31m username=y1234 password=managery1234**. If values contain special characters, you must quote the strings and special characters. If a password for example is **User&12345**, you must enter **password="\User&12345\"**

Make sure to save the backup file on external media, such as a NAS or file server. Notice the double backslashes. Alternatively, use a single forward slash. If no file name is specified, the file name is generated as for unencrypted files, but with the file extension **acbcrypt** instead of **acb**. The encryption password must be at least 8 characters long and contain at least 3 out of the 4 following character classes: lower-case letter, upper-case letter, digit, special character (such as any non-whitespace, non-letter, non-digit character).

The backup is started. The complete backup is written to one single **acb** archive file. If you encrypted the backup file, the file extension is **acbcrypt**.

If a tenant backup containing Process Governance data takes a long time to complete, Process Governance downtime is likely to be long. To reduce Process Governance downtime while the backup is in process, you can set the **Use snapshot-based backup mode** property in the Process Governance configuration. For details, refer to the ARIS Connect online help (Manage ARIS Connect > Set up Process Governance > Valuable information > What infrastructure properties are available?).

You can restore (page 60) this tenant using the related archive file. Using the **restore tenant** command will copy the content to an existing tenant. Process Governance backup archives greater than 2 GB might lead to insufficient TEMP space issue when restoring them into ARIS with Oracle back end. For such large backups, extend the temp tablespace size before restoring operation executed.

You can manage tenants also using the ARIS Administration's command line tools (page 68) or Tenant Management tool (page 2).

1.2.3.1 What data is backed up and restored?

If you back up tenants, the current state of the following data is saved in different folders in the tenant backup zip file.

Tenant data is fully backed up only if the user executing the commands has sufficient privileges for all components in every tenant and if all components were selected for the backup. In ARIS 10 all started runnables are automatically taken into account when executing tenant backup/restore commands.

Warning

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Content	Required function privileges	Component (runnable)
Data from ARIS Administration, for example, users, privileges. User statistics are not included by default. If you want to include the user statistics, the property User statistics in backup (com.aris.umc.user.statistics.backup) must be enabled in the configuration (see ARIS help: ARIS Administration >  Configuration > User management > Security > Advanced settings).	User administrator Technical configuration administrator	ARIS Administration/User Management (umcadmin_<s, m, or l>)
Licenses User administration audit events are not part of the tenant backup.	License administrator	
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>)

Content	Required function privileges	Component (runnable)
ARIS databases	Database administrator	
Ad hoc analyses and queries	Analysis administrator	Analysis (octopus_<s, m, or l>)
ARIS document storage data, including Process Governance archives 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>)
ARIS Risk & Compliance Manager data	ARCM administrator	ARIS Risk & Compliance Manager (arcm_<s, m, or l>)
Dashboards and feeds	Dashboard administrator	ARIS Aware (dashboarding_<s, m, or l>)
ARIS Connect portal views, modification sets, and configuration sets.	Portal administrator	ARIS Connect portal (copernicus_<s, m, or l>)

1.2.4 Restore a tenant

You can restore tenant data (page 58) or copy the content of this tenant (page 62) to a different ARIS server. You need to have access to the relevant back-up archive file containing the data of a tenant:

Warning

No user can work on this tenant during the restore process. All current data of a running tenant will be deleted and replaced by the data of the backup file. Data related to ARIS Administration will not be deleted but merged. The tenant name and current user data will be untouched. If users were deleted after the tenant has been backed up, these users will be available again. Make sure to delete those users.

Process Governance backup archives greater than 2 GB might lead to insufficient TEMP space issue when restoring them into ARIS with Oracle back end. For such large backups, extend the temp tablespace size before restoring operation executed.

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Prerequisites

- You need access to the relevant back-up archive file.
- ARIS Server installation
- Users need the following function privileges. The function privileges depend on the license. Therefore, you may not be able to assign all of the function privileges shown.

▪ Analysis administrator	▪ License administrator
▪ ARCM administrator	▪ Portal administrator
▪ Collaboration administrator	▪ Process Governance administrator
▪ Database administrator	▪ Server administrator
▪ Dashboard administrator	▪ Technical configuration administrator
▪ Document administrator	▪ User administrator

Procedure

1. Start ARIS Cloud Controller (ACC) (page 65).
2. To restore the tenant, enter: **restore tenant <tenant name><tenant name> from <pathToBackUpFile> encryption.key <encryption password or encryption key> username=<user name of a user holding the required privileges> password=<this user's password>**

such as: **restore tenant default from "f:\backupDefault.acbcrypt" encryption.key=str3ngG3h31m username=y1234 password=managery1234**

or as an example for the use of an unencrypted **acb** file: **restore tenant default from "f:\\backupDefault.acb" username=y1234 password=managery1234**

Notice the double backslashes. Alternatively, use a single forward slash. If values contain special characters, you must quote the strings and special characters. If a password for example is **User&12345**, you must enter **password= \"User\&12345\"**

The tenant will be restored.

3. Make sure to change the standard user's passwords again.

The tenant is restored. You can also manage tenants using the Tenant Management tool (page 2) or the ARIS Administration's command line tools (page 68).

If you have restored a tenant from an ARIS 10 SR5 backup file or earlier containing ARIS document storage data, you must adjust the timestamps manually (page 39) (see **y-adminintool.bat** command-line tool).

1.2.5 Copy a tenant to a different server

You can copy the content of a backed up tenant to a different ARIS Server. This procedure can also be used to migrate data in case of an upgrade installation. You need to have access to the relevant back-up archive file containing the data of a tenant:

- All databases
- All user data (users, privileges and licenses)
- All ARIS document storage data including all access rights
- All Process Governance data
- All ad hoc analyses and queries

Extensions, for example, TLS/SSL certificates, SAP® Java Connector, and JDBC drivers, added using the **enhance** ACC command are not backed up.

Prerequisites

- You need access to the relevant back-up zip file
- ARIS Server installation
- Users need the following function privileges. The function privileges depend on the license. Therefore, you may not be able to assign all of the function privileges shown.

▪ Analysis administrator	▪ License administrator
▪ ARCM administrator	▪ Portal administrator
▪ Collaboration administrator	▪ Process Governance administrator
▪ Database administrator	▪ Server administrator
▪ Dashboard administrator	▪ Technical configuration administrator
▪ Document administrator	▪ User administrator

Procedure

1. Create a tenant (page 55) on the ARIS Server where the tenant will be copied to and import the licenses.
2. Start ARIS Cloud Controller (ACC) (page 65).
3. To restore Process Governance data, stop the Process Governance runnable first. To do so enter, for example: **stop apg_m**
4. Enter: **restore tenant <Tenant name> from <pathToBackUpFile> encryption.key <encryption password or encryption key> username=<user name of a user holding the required privileges> password=<this user's password>**
or as an example for the use of an unencrypted **acb** file: **restore tenant default from "f:\backupDefault.acb" username=y1234 password=managery1234**

Notice the double backslashes. Alternatively, use a single forward slash. If values contain special characters, you must quote the strings and special characters. If a password for example is **User&12345**, you must enter **password= \"User\&12345\"**. You must enter the user credentials of the server's ARIS Administration you have created the new tenant. If you are about to migrate data, you might use the standard name and password **system/manager**.

5. In case you restored Process Governance data, restart the Process Governance runnable. To do so enter, for example: **start apg_m**

All data of the backup file will be copied to the new tenant. Current data will be deleted except the name of the new tenant, as well as user credentials. The current user data will be untouched. If users were deleted after the tenant has been backed up, these users will be available again. Please make sure to delete those users.

In case of a migration process the default credentials will automatically be in use. To prevent unauthorized access to the ARIS system, after installation or data migration, always change the default passwords of the **arisservice** user, the **guest** user, the **system** user and the **superuser** user on all operational tenants, as well as on the infrastructure tenant (master).

You can also create tenants using the ARIS Administration's command line tools (page 68) or Tenant Management (page 2).

1.2.6 Delete a tenant

If you delete a tenant all tenant information are lost:

- Databases
- User data (users, privileges and licenses)
- ARIS document storage data including all access rights
- Process Governance data
- Ad hoc analyses and queries

Prerequisites

- ARIS Server installation
- Users need the following function privileges. The function privileges depend on the license. Therefore, you may not be able to assign all of the function privileges shown.

▪ Analysis administrator	▪ License administrator
▪ ARCM administrator	▪ Portal administrator
▪ Collaboration administrator	▪ Process Governance administrator
▪ Database administrator	▪ Server administrator
▪ Dashboard administrator	▪ Technical configuration administrator
▪ Document administrator	▪ User administrator

Warning

If you delete a tenant all tenant information are lost.

Procedure

1. Back up (page 56) the tenant in order to be able to restore (page 60) data again.
2. Start ARIS Cloud Controller (ACC) (page 65).
3. Enter: **delete tenant <Tenant name> username=<user name of a user holding the required privileges> password=<this user's password>**

Deletes the specified tenant and all its associated data from the system. User name and password of an administrative user have to be specified using the parameters **master.tenant.user.name** and **master.tenant.user.pwd**, respectively. If values contain special characters, you must quote the strings and special characters. If a password for example is **User&12345**, you must enter **password=\"User&12345\"**

Warning

If the optional **force** keyword is used, the security question **Are you sure?** is not displayed and the tenant and its data will be deleted without further prompting the user.

The tenant has been deleted.

You can also manage tenants using the ARIS Administration's command line tools (page 68) or Tenant Management (page 2).

1.2.7 How to start ARIS Cloud Controller (ACC)

ACC is a command-line tool (see ARIS Cloud Controller (ACC) Command-Line Tool.pdf (../..../documents/3 Installation/31 Initial installation/312 Server/3121 Basic (Single node)/ARIS Cloud Controller (ACC) Command-Line Tool.pdf)) for administrating and configuring an ARIS installation. It communicates with ARIS Agents on all nodes.

Warning

Using ACC commands will deeply affect your system. This requires profound knowledge of the technical ARIS infrastructure and environment. 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>). If you use ACC commands without this knowledge or without the services of Software AG, according to the standard Software AG software maintenance agreement, we cannot guarantee proper functioning.

ARIS Cloud Controller (ACC) can be used in three modes:

INTERACTIVE MODE (DEFAULT)

ACC runs with an interactive shell, allowing you to manually issue commands.

BATCH MODE

Activated by specifying a command file with the **-f** command line parameter (see ACC command line parameters below). ACC will execute the commands in the file in the given sequence and exit after execution or if one of the commands fails.

A command file line starting with **#** will be interpreted as a comment line and ignored by ACC.

COMMAND MODE

You can directly pass a single command to ACC as a command line parameter. The command will be executed and ACC will exit afterwards.

When passing commands directly as a command line parameter, you must be careful when escaping strings in your command, for example, double-quote-delimited parameters. The operating system command shell will consume the double quotes, leaving your string parameter un-escaped. So please escape the quote characters and special characters.

Examples

If you issue the command in command mode, for example:

```
set remote.repository.url="http://something.com/repo"
```

You must enter:

```
acc.bat -h localhost -u <user name> -pwd <remoteAccessPassword> set  
remote.repository.url="\http://something.com/repo\"
```

If you enter:

```
acc.bat -h localhost -u <user name> -pwd <remoteAccessPassword> set  
remote.repository.url="http://something.com/repo"
```

ACC will return an error message, for example:

```
line 1:52 mismatched character '<EOF>' expecting '\n'  
Invalid or erroneous command "set  
remote.repository.url=http://something.com/repo ": line 1:30 extraneous  
input ':' expecting EOF  
Use "help" to display a list of available commands.
```

This also affects passwords and names containing special characters. If you try to back up your tenants using the following command, make sure to escape the quote characters and the special character **&** used in the password **User&12345**:

```
./acc.bat -h localhost -u Clous -pwd g3h31m -p 18011 -c  
../generated.apptypes.cfg backup tenant default username=\"admin\"  
password=\"User\&12345\"
```

To get information about the usage of ACC commands, enter **help** or **help <command>**.

WINDOWS OPERATING 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 user name and/or the password.

LINUX OPERATING SYSTEM

To start ACC under a Linux operating system, execute the **acc10.sh** shell script instead. To do so, enter: **su -c acc10.sh aris10**. After the ARIS Server installation has completed on a Linux operating system, the **aris10** user is locked and has no password. Command-line tools (**sh** files), such as **ARIS Server Administrator** or **ARIS Cloud Controller** can only be started by the **aris10** user related to the ARIS Agent.

- To unlock the **aris10** user, enter: **passwd -u aris10**
- To interactively enter a password, enter: **passwd aris10**
- To start the command-line tools, enter: **su -c acc10.sh aris10** or **su -c arisadm.sh aris10**
- To execute these command-line tools as an ARIS user that has no **root** privileges, you must enter the password of the **aris10** user.

- To copy files manually into the **ARIS** directory, as the **aris10** user use the commands: **su aris10** and **sudo aris10**
As an ARIS user that has no **root** privileges, you must make sure that the files have the correct ownership (**aris10**).
- To lock the **aris10** user again enter: **passwd -l aris10**

1.3 y-tenantmgmt command-line tool

The batch file **y-tenantmgmt.bat** can be used to manage tenants. Enter the tool name followed by **/?** or **-?** to see the usage instructions, for example **y-tenantmgmt.bat -?**.

Please use **y-tenantmgmt.bat** for Windows® operating systems and **y-tenantmgmt.sh** for Unix operating systems.

Warning

To avoid data inconsistencies and possible data loss, you must not perform any of the following activities in parallel, neither manually nor scheduled:

- Deleting any Process Governance process instance, process version, or process
- Archiving Process Governance process instances
- Backup/restore tenant (containing Process Governance or ARIS document storage data)

Using some advanced ACC commands, you can create a tenant, import a license and restore a database in one step. If you do not use the standard database system, please make sure to create additional schemes in your Oracle or Microsoft SQL database management system and you have assigned the tenants to these schemes.

You must redirect the ports in case of a Linux operating system.

Prerequisites

- ARIS Server installation
- Users need the function privileges **License administrator**, **User administrator**, **Technical configuration administrator**.

Users need to login as **superuser** or they need either an **ARIS Architect** license or an **ARIS UML Designer** license. For LOCAL systems they need to login as system user **system**.

Procedure

1. Open a command prompt (**Start > Run > cmd**).
2. Enter **y-tenantmgmt.bat** followed by **/?** or **-?** to display the help, for example **y-tenantmgmt.bat -?**.

Enter **y-tenantmgmt.bat -t <tenant name> <command> -u <user name> -p <password>** to enter a command. Parameters may differ.

After creating a tenant, you must import the relevant license and create the users. You can do so from the command line or using the graphical user interface ARIS Administration.

You are recommended to change the password of the default user **system** immediately after the installation.

2 Legal information

2.1 Documentation scope

The information provided describes the settings and features as they were at the time of publishing. Since documentation and software are subject to different production cycles, the description of settings and features may differ from actual settings and features. Information about discrepancies is provided in the Release Notes that accompany the product. Please read the Release Notes and take the information into account when installing, setting up, and using the product.

If you want to install technical and/or business system functions without using the consulting services provided by Software AG, you require extensive knowledge of the system to be installed, its intended purpose, the target systems, and their various dependencies. Due to the number of platforms and interdependent hardware and software configurations, we can describe only specific installations. It is not possible to document all settings and dependencies.

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, contact your local Software AG sales organization. Please note that this type of manufacturer-specific or customer-specific customization is not covered by the standard Software AG software maintenance agreement and can be performed only on special request and agreement.

2.2 Support

If you have any questions on specific installations that you cannot perform yourself, contact your local Software AG sales organization (<https://www.softwareag.com/corporate/company/global/offices/default.html>). To get detailed information and support, use our websites.

If you have a valid support contract, you can contact **Global Support ARIS** at: **+800 ARISHelp**. If this number is not supported by your telephone provider, please refer to our Global Support Contact Directory.

ARIS COMMUNITY

Find information, expert articles, issue resolution, videos, and communication with other ARIS users. If you do not yet have an account, register at ARIS Community.

SOFTWARE AG EMPOWER PORTAL

You can find documentation on the Software AG Documentation website (<https://empower.softwareag.com/>). The site requires credentials for Software AG's Product

Support site **Empower**. If you do not yet have an account for **Empower**, send an e-mail to empower@softwareag.com (mailto:empower@softwareag.com) with your name, company, and company e-mail address and request an account.

If you have no account, you can use many links on the TECHcommunity website. For any questions, you can find a local or toll-free number for your country in our Global Support Contact Directory and give us a call.

TECHCOMMUNITY

On the **TECHcommunity** website, you can find documentation and other technical information:

- Use the online discussion forums, moderated by Software AG professionals, to ask questions, discuss best practices, and learn how other customers are using Software AG technology.
- Access articles, code samples, demos, and tutorials.
- Find links to external websites that discuss open standards and web technology.
- Access product documentation, if you have **TECHcommunity** credentials. If you do not, you will need to register and specify **Documentation** as an area of interest.

EMPOWER (LOGIN REQUIRED)

If you have an account for **Empower**, use the following sites to find detailed information or get support:

- You can find product information on the Software AG Empower Product Support website.
- To get information about fixes and to read early warnings, technical papers, and knowledge base articles, go to the Knowledge Center.
- Once you have an account, you can open Support Incidents online via the eService section of Empower.
- To submit feature/enhancement requests, get information about product availability, and download products, go to Products.

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Get more information and trainings to learn from your laptop computer, tablet or smartphone. Get the knowledge you need to succeed and make each and every project a success with expert training from Software AG.

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