



ARIS PROCESS PERFORMANCE MANAGER

PPM MIGRATION 9.X AND 10.X TO 10.5

VERSION 10.5.1

April 2020

This document applies to ARIS Process Performance Manager Version 10.5.1 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 Text conventions

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

- Menu items, key combinations, dialogs, file names, entries, etc. are displayed in **bold**.
- User-defined entries are shown as **<bold text in angle brackets>**.
- Example texts that are too long to fit on a single line, such as a long directory path, are wrapped to the next line by using ↵ at the end of the line.
- File extracts are shown in this font format:
This paragraph contains a file extract.
- Warnings have a colored background:

Warning

This paragraph contains a warning.

2 General

This manual describes the process for migration of a PPM client from **PPM 9.7** and higher and **PPM 10.x** to **PPM 10.5.1**.

If you want to migrate an existing PPM 10.5 version to a new Service Release, please use the PPM installation program (setup.exe).

The procedure described is based on Windows systems with the corresponding Windows specifications. The process can also be used on a **Linux** operating system.

There are some specific differences in handling between Windows and Linux systems:

- No program groups are available under Linux. Instead, you can use scripts to start and stop the required PPM components (for example, a PPM client) and infrastructure components (for example, ARIS Cloud Controller). Information on using the required scripts can be found in the **PPM Installation Guide**.
- Under Linux, you can use an appropriate file manager instead of Windows Explorer.
- Use a slash / instead of a backslash \.
- Under Linux, script files have the extension **.sh** instead of **.bat** under Windows.
- To execute scripts, under Linux you reference the directory **bin** instead of **bat** under Windows.

The Migration Guide is aimed at the PPM user who acts as the **system administrator**.

Tip

For general information on installing PPM, please refer to the **PPM Installation Guide**.

3 Version and directory references

The following PPM versions and directories play a key role in migration of a client from the previous PPM versions to the current PPM version and are referenced in the following order:

PPM VERSIONS

- Previous PPM version: PPM 9.x or PPM 10.x
- Current PPM version: PPM 10.5.1

DIRECTORIES

- <PPM_PREVIOUS_HOME> - Installation directory of the previous PPM installation (9.x or 10.x)
- <PPM_PREVIOUS_DATA> - Data directory of the previous PPM installation (9.x or 10.x)
<PPM_PREVIOUS_HOME>\ppm[mashzone]\server\bin\work\data_ppm
- <PPM_PREVIOUS_CLIENT_RUN> - PPM 9.x or 10.x directory
<PPM_PREVIOUS_HOME>\ppm\server\bin\agentLocalRepo\.unpacked\<installation_time>_ppm-client-run-prod-10.0-runnable.zip\ppm
- <PPM_CURRENT_HOME> - Installation directory of the 10.5.1 installation
- <PPM_CURRENT_DATA> - Data directory of the PPM 10.5.1 installation
<PPM_CURRENT_HOME>\ppm\server\bin\work\data_ppm
- <PPM_CURRENT_CLIENT_RUN> - PPM 10.5.1 directory
<PPM_CURRENT_HOME>\ppm\server\bin\agentLocalRepo\.unpacked\<installation_time>_ppm-client-run-prod-<VERSION>-runnable.zip\ppm

4 Before migration

Please note the following prerequisites for migration.

PPM version 9.7 or higher and PPM 10.5.1 are installed. You can only migrate clients from version PPM 9.7 or higher to PPM 10.5.1.

We recommend that you migrate a client to PPM 10.5.1 supported by a product consultant.

4.1 Back up the database system

Before migrating, create a backup (dump) of your database.

For information on backing up the database, please contact your database administrator.

If you abort the converter (runppmconverter) the database tables used by PPM may be damaged permanently. If you start the converter again, it aborts with the following error message:

I: 22.07.09 20:44:09: [CNV] database schema version: -1.0

E: 22.07.09 20:44:09: [CNV] The database was not converted completely. Please restore the database.

Restore the database (dump).

Note the database platforms supported by PPM 10.5.1. Further information can be found in the Software AG System Requirements or in the PPM Database Systems.pdf.

You must upgrade the database platform to a supported platform before you start the migration.

For detailed information on supported databases, refer to document **PPM Database Systems**.

Tip




To test the migration outside the productive system you can back up a database dump of the productive system into the database of a test client. For testing purposes, you can perform the migration from there.

4.2 Back up the user data

Before migrating, back up the user data of the previous PPM version central user management.

To obtain information on backing up data of central user management please contact your system administrator or proceed as follows.

Procedure

1. Log in to central user management as a user with administration privileges.
2. Display the  **User management** tab.
3. Click  Additional functions >  Back up data.
4. Enter the password required.
5. Enable the **Include photos** option, if required.
6. Click **OK**.

7. Click **Save**.

The user data of central User Management are saved in the download folder.



4.3 Back up the user management configuration

If relevant configuration settings have been changed for PPM in central User Management you can back up these changes of the previous PPM version central user management before migrating.

Note that only the changed settings will be exported.

To obtain information on backing up data of central user management please contact your system administrator or proceed as follows.

Procedure

1. Log in to central user management as a user with administration privileges.
2. Display the  **Configuration** tab.
3. Click  **Export configuration**.
4. Select **Save File** and click **Ok**.

The configuration changes of central User Management are saved in the download folder.

4.4 Clients based on the "wm_process" template (only versions before PPM 9.9)

The **ProcessInstanceChange** and **ProcessStepInstanceChange** event types used in the **wm_process** template are used in version **2.0** from previous version. To migrate a client that is based on this template from a version earlier than PPM 9.9, you first need to import all data still based on version **1.0** event types into the PPM version 9.9.

Procedure

1. Start previous version.
2. Extract all data of the channel **Event::WebM::Process::V1_0::ProcessStepInstanceChange** of the **PROCESS_STEP** Universal Messaging data source.
3. Extract all data of the channel **Event::WebM::Process::V1_0::ProcessInstanceChange** of the **PROCESS** Universal Messaging data source.
4. Make sure that no new data will be written to these two Universal Messaging channels after the extraction.
5. Then import all data extracted from the two data sources into PPM version 9.9.

5 Migrate MashZone NextGen custom widgets

The migration of custom widgets is not mandatory when PPM is migrated.

If you want to use upgraded or new custom widgets of PPM 10.5.1 you must upgrade your MashZone NextGen version as well. Detailed information on how to upgrade your MashZone NextGen version can be found in the document **Upgrading Software AG Products**, chapter **Migrate MashZone NextGen**.

If you have upgraded your MashZone NextGen version, it is necessary to install the custom widgets again. For details, see document **PPM Widgets for MashZone NextGen**.

6 Migrate the database system

If you also want to migrate your current database to new a version or a new database system, for example, from Oracle 12c to Oracle 19, you must perform your database migration before you migrate your PPM installation (page 8).

For information on migrating your database, please contact your database administrator.

Procedure

1. Back up your current database before you start migrating your database system.
For details, see [Back up the database system \(page 4\)](#).
2. Migrate your database system.
3. Specify your new database settings for the PPM client migration.
For details, see [Specify database settings \(page 13\)](#).
4. Convert the PPM database into the new version.

Your database is migrated and your existing data is available in the migrated PPM installation.

7 Migrate the PPM installation

This chapter describes how to migrate your PPM installation. It contains all aspects that are not related to the client configuration and have to be migrated manually (not supported by the CTK).

7.1 Migrate the user management

To transfer all users and user groups from a previous PPM version installation's central user management to the central user management of a PPM 10.5.1 installation, please proceed as follows.

If you backed up the central user management data as described in chapters 3.2 (page 4) and 3.3 (page 5) before the installation of PPM 10.5.1 or before the migration, you can skip steps 1 to 12.

Procedure

1. Stop the PPM infrastructure by clicking **Stop ARIS PPM Core 10.5.1** in the **ARIS > PPM 10.5.1 > Stop Servers** Windows program group.
2. Start the Windows service.
 - a. For migrating from PPM 9.7 go to Windows Services administration and start the service **Software AG PPM and MashZone 9.7**.
 - b. For migrating from previous PPM version go to Windows Services administration and start the service **Software AG PPM <previous version>**.
3. Start the PPM infrastructure.

For migrating from PPM 9.7 and above start the PPM infrastructure by clicking **Start ARIS PPM Core <Version>** in the **Software AG > Start Servers** Windows program group.
4. Close and re-open the central user management of the version to be migrated.
5. In central user management, switch to **Configuration**.
6. Export the configuration to a file.
7. In central user management, switch to **User management**.
8. In user management, click **Additional functions** and select **Back up data**.
9. The **Back up user management data** dialog opens. Enter a password and specify whether you want to include images.
10. Click **Start** to export user management to a file.
11. Exit central user management.
12. Stop the PPM infrastructure.
 - a. For PPM 9.7, click **Stop PPM 9.7** in the **Software AG > Stop Servers** Windows program group. Then, go to Windows Services administration and stop the service **Software AG PPM and MashZone 9.7**.

- b. For previous PPM version up to version 10.1, click **Stop ARIS PPM Core <version>** in the **Software AG > Stop Servers** Windows program group. Then, go to Windows Services administration and stop the service **Software AG PPM <previous version>**.
 - c. For PPM version 10.2, click **Stop ARIS PPM Core <previous version>** in the **ARIS PPM 10.5.1 > Stop Servers** Windows program group.
13. Start the PPM infrastructure by clicking **Start ARIS PPM Core 10.5.1** in the **ARIS > PPM 10.5.1 > Start Servers** Windows program group.
14. Open central user management version **PPM 10.5.1**.
15. In central user management, switch to **Configuration**.
16. Import the configuration from the file previously saved.
17. In central user management, switch to **User management**.
18. In user management, click **Additional functions** and select **Restore data**.
The **Restore data** dialog box opens.
19. Select the file previously saved, enter the password you selected, and click **Start**.
User management of the previous PPM version is migrated.

7.2 Migrate the customized SSO

If you have set up a custom SSO mechanism in your system, you need to enable the **ppm_web** component again for the custom SSO. To do so, enter the following command in the ARIS Cloud Controller and restart the **ppm_web** component, if required.

```
reconfigure ppm_web +JAVA-Dcom.aris.umc.sso.plugins.active=true
```

7.3 Migrate customized cloud controller settings

If there are customized settings for the load balancer configuration or registry addresses in the previous PPM version this settings have to be reconfigured for PPM 10.5.1 as well. For detailed information about reconfiguring see document **PPM Operations Guide** (chapter **Configuration**).

7.4 Migrate Kerberos_settings.properties

If the entry **DISABLE_NATIVE_PROVIDERS** is customized in the **Kerberos_settings.properties** file of the previous PPM version you have to customize the entry in PPM 10.5.1 too.

Alternatively the **Kerberos_settings.properties** file can be copied from **<PPM_PREVIOUS_HOME>/server/bin/work/data_ppm/config**.

8 Migrate PPM clients

The following chapters describe how to perform the PPM client migration. There are two ways to migrate a PPM version:

- Automated migration using CTK (page 10)
- Manual migration (page 17)

The procedure after a conversion is in both cases the same.

8.1 Perform automated migration

The following chapters describe how to perform the PPM migration using CTK.

Warning

You must stop the previous PPM components (server, registry, etc.) and the previous PPM infrastructure before starting the migration to avoid possible data loss. Make sure that all components are in status **STOPPED**. Shutting down the services does not stop the components.

Prerequisites

- You have installed PPM 10.5.1 in parallel to previous the PPM version before the migration.
- You have started the PPM 10.5.1 infrastructure (Windows program group **ARIS > PPM 10.5.1 > Start Servers > Start ARIS PPM Core 10.5.1**).

8.1.1 Select clients

Use PPM Customizing Toolkit to automatically migrate the configuration of your PPM clients from previous PPM version to version 10.5.1.

Prerequisite

A prerequisite for carrying out the migration is an installation of a previous PPM version, which includes at least one non-migrated client in the **<PPM_PREVIOUS_DATA>\config** directory.

Procedure

1. Start PPM Customizing Toolkit via **ARIS PPM Customizing Toolkit 10.5.1** in the **ARIS > PPM 10.5.1 > Administration** Windows program group.

You need to run PPM Customizing Toolkit as an administrator.

2. In the **Actions** area, click **Migrate PPM clients from a previous PPM version**.

The **Migrate PPM clients from a previous PPM version** dialog is displayed.

3. Select the version you want to migrate and specify the path to the previous PPM version installation.
4. Click **OK**.

The dialog **Migrate PPM clients** opens in the list of existing previous PPM version clients. Clients that exist only in the **custom** directory in previous PPM version are not included in the list.

If no clients that can be migrated are found an error message is displayed instead of the dialog.

5. Select a client to be migrated.
6. Click **OK**.

The **Migrate Client Wizard** opens.

Use the wizard to configure your client for PPM 10.5.1.

If there already exists a folder with the same name in the custom directory of PPM version 10.5.1, a warning dialog is displayed, that this folder has to be saved back and deleted, before a migration is possible.

8.1.2 Create custom directory

To transfer or create the custom directory please proceed as follows.

Procedure

1. On the **Basic settings** wizard page enable the option **Create customizing files (custom directory)** if not already preselected.

If the client to be migrated already exists in the **custom** directory of the previous PPM version, you cannot specify any settings here. Existing settings are transferred as they are.

2. If required, specify more settings.
3. Click **Next**.

The client directory is created under **Custom** and any existing settings of the previous PPM version client are transferred.

On the following wizard pages you specify the settings required for PPM 10.5.1.

8.1.3 Specify server settings

You can transfer the server settings from the previous PPM version to version **10.5.1** and adapt them, if required.

With version **9.6**, the analysis server needs more main memory than in earlier versions. The analysis server memory settings are automatically adapted by CTK. We recommend that you use the new settings because they are required for percentile calculation and Data analytics. If you made changes to the **Additional settings** in the previous PPM version, they have been adapted by CTK. You can verify the changes and restore individual parameters, if required.

New import scenarios are available from version **10.2**. Each scenario contains a specific set of parameter values. The parameter values are optimized for the system environment.

- **Small** - Optimized configuration for server systems with at least 1 GB available main memory for import programs.
- **Medium** - Optimized configuration for server systems with at least 4 GB available main memory for import programs.

- **Large** - Optimized configuration for server systems with at least 8 GB available main memory for import programs.

Select an import scenario to set the memory settings of the programs. Depending on your selection, the programs **runxmlimport**, **runppmimport**, **runpikidata**, and **runppmcompress** automatically take the appropriate memory settings from the **_vmparam.bat** file and the corresponding import settings from the **EpkiImport_settings.properties** file.

If you have adapted the values in a previous version or if you want to set other settings, you can edit the **_vmparam.bat** file in the directory **<PPM_CURRENT_DATA>/config/<client>/bin** and the **EPKIImport_settings.properties** file in the directory **<PPM_CURRENT_DATA>/config/<client>**.

If you want to specify additional VM options, you can edit the following parameters in the **_vmparam.bat** file:

- LOCAL_PPM5_VM_OTHERS_RT_XMLIMPORT
- LOCAL_PPM5_VM_OTHERS_RT_PPMIMPORT
- LOCAL_PPM5_VM_OTHERS_RT_PIKIDATA
- LOCAL_PPM5_VM_OTHERS_RT_PPMCOMPRESS

Further details about import scenarios can be found in the **PPM Data Import.pdf**.

Procedure

1. Specify your settings.
2. Click **Next**.

Your settings are applied.

8.1.4 Specify language and e-mail settings

All language and coding settings are transferred from the previous PPM version and cannot be changed. E-mail settings are also transferred, but can be adapted.

From version **9.8**, you can additionally specify the sender of generated e-mails. The default sender is **noreply@softwareag.com** if no other settings have been configured. The settings for this will be transferred for later migrations.

Procedure

1. Specify your settings.
2. Click **Next**.

Your settings are applied.

8.1.5 Specify database settings

You can adapt most previous PPM version database settings to version **10.5.1**.

The current version of the database management system originally used is applied.

After you exit the wizard, you can convert the PPM database into the new version.

Procedure

1. Specify your settings.
2. Click **Next**.

Your settings are applied.

If you do not wish to request data from PPM via a query request you can now close the wizard. Click **Finish**.

8.1.6 Set up a MashZone NextGen connection

You can configure a connection between PPM and MashZone NextGen.

See document **PPM Installation** for details.

Procedure

1. Specify your settings.
2. Click **Finish**.

Your settings are applied. The wizard closes and the client configuration is transferred and automatically adapted from the previous PPM version to PPM 10.3.

8.1.7 PPM variant feature

If you have successfully finished the **Migrate client wizard**, CTK checks the availability of the PPM variants feature in the migrated client configuration. If the variants feature is not available a dialog informs you about the variant feature and how to add it to the client configuration in a post migration step. See chapter Enable process variants in process analysis (page 30).

8.1.8 Complete the migration

The migrated client is displayed as a regular PPM 10.5.1 client in the client overview. The status window on the PPM Customizing Toolkit start page documents the individual migration steps and displays any error messages.

Use PPM Customizing Toolkit to edit client properties and customizing. This client cannot be selected for another migration.

8.1.8.1 The custom directory

If a client configuration existed under <PPM_PREVIOUS_DATA>\custom\<Client>, it was copied to <PPM_CURRENT_DATA>\custom\<Client>. (With the exception of files within <PPM_PREVIOUS_DATA>\custom\<client>\data and its subdirectories because it may contain major data volumes or archives.)

In all transferred files of the bat, properties, and xml type, the absolute paths of the previous PPM version installation have been automatically changed to the relative paths of the PPM 10.5.1 installation.

8.1.8.2 Patch files

If you have installed previous PPM version patches, a patch directory exists under <PPM_PREVIOUS_DATA>\custom\<client> containing the patch files of the jar type. The files were automatically copied to <PPM_CURRENT_DATA>\custom\<client>\patch. To find out whether the current versions are still compatible or if newer versions are available for PPM 10.5.1 please contact Software AG customer support.

8.1.8.3 Configuration programs (batch files)

The previous PPM version configuration programs (batch files) have been updated based on template and language (for example, base_en), copied to the <PPM_CURRENT_DATA>\custom\<client>\bat directory and supplemented with new version 10.5.1 programs.

The programs are available in the Programs component of the Client module.

Programs not available by default, such as custom batch files, have been saved to the previous PPM version subdirectory in the **bat** directory and can be edited (for example, to adjust paths) and added to the **Programs** component later.

The programs were not tested for configuration validity. The configuration can be updated after the migration by editing it in PPM Customizing Toolkit or exporting it from PPM after a previous import.

8.1.8.4 Report definitions

Your report definitions were automatically copied to the new folder. The folder is stated in the entry Reports.BaseDirectory in the file templates_settings.properties file in the directory <PPM_CURRENT_DATA>/config/<client>. Existing files were not overwritten. The default directory is <PPM_CURRENT_DATA>/config/<client>/report/reportdefinitions.

8.1.8.5 PPM database

Use the **Convert PPM database** program in the **Programs** component to convert the database of the previous PPM version client. If you run the program with the

PPM_CONF_CONVERTER_CHECK=-check parameter first, you can check whether the database needs to be converted or is up to date. See chapter **Convert PPM database**.

8.1.8.6 Client settings

Depending on template and language (for example, base_en), the client settings have been copied to the <PPM_CURRENT_DATA>/config/<client> directory. Settings for the previous PPM version that did not exist in the client settings for version 10.5.1 have been added. For settings existing in the previous PPM version and version 10.5.1, the client settings for version 10.5.1 have been used.

If the **wm_bpms** client template was used for the migrated client in the previous PPM version, you need to adjust the following files manually.

- Chart_settings.properties

Adjust the value for GANNT_CHART_MAX_SCALE_STEPS in the file by applying the value from your previous PPM version.

- EpkImport_settings.properties

For PPM version 10.2, the parameters are replaced by parameters that depend on an import scenario selected. The previous parameter names have been extended by the **<import_scenario>_** prefix, for example, SMALL_XML_IMPORT_PREMERGER_CACHE_SIZE. The value of the new parameters must match the value selected for the memory settings, see Specify server settings (page 11). XML_IMPORT_PREMERGER_CACHE_SIZE, XML_IMPORT_COMMIT_RATE and XML_IMPORT_WRITE_BUFFER are not used anymore.

If you have adapted the values in a previous version, you can use one of the new import scenarios or adapt one of them to the values of your previous PPM version manually.

Please note that some settings of **Database_settings.properties** have been moved to **EpkImport_settings.properties** and are now part of the import scenarios. For example, COMMIT_RATE_MERGER is now available as <IMPORT_SCENARIO>_COMMIT_RATE_MERGER.

The following settings are moved from **DBSettings.properties** to **EpkImport_settings.properties**:

COMMIT_RATE_MERGER
COMMIT_FACTOR_READ_WRITE_MERGER
COMMIT_RATE_EPC
COMMIT_FACTOR_READ_WRITE_EPC
COMMIT_RATE_DELETE_EPK
COMMIT_RATE_EVENT_MERGE
EVENT_MERGE_WRITE_BUFFER_SIZE
EVENT_MERGE_READ_BUFFER_SIZE

COMMIT_RATE_DELETE_CALCULATED_EPCS

KEYINDICATOR_RECALC_COMMIT_RATE
KI_REFILL_READ_BLOCK_SIZE
KI_COMMIT_BLOCK_SIZE
KI_EPC_BUFFER_SIZE
KI_EPC_BUFFER_PRELOAD_RATE
KI_EPC_BUFFER_USE_MULTITHREADING

KI_PRECISEVARIANT_BUFFER_SIZE
KI_COMBINEDVARIANT_BUFFER_SIZE
KI_VARIANT_BUFFER_USE_MULTITHREADING
KI_DIM_CACHE_SIZE
KI_NEW_DIM_BUFFER_SIZE

For PPM version 10.2 and higher, the only value that is updated automatically is the type of import scenario (SMALL, MEDIUM, LARGE). If you have adapted other values in a previous version, you must adapt them to the values of your previous PPM version manually.

Further details about import scenarios can be found in the **PPM Data Import.pdf**.

If you have made more changes to one or multiple files, you can transfer them as described in chapter Migrate client settings (page 24).

8.1.8.7 Migrate measures documentation

If a measures documentation has already been created for a previous PPM version for the migrated client you need to publish that again. The documentation is stored in the client directory under `<PPM_CURRENT_DATA>/custom/<client>/docu` and has been included in the client migration. You can use the **Publishing documentation** application in the Programs component to republish the measures documentation.

If the program does not exist under Run program, switch to the Configure programs tab and check the Display option for **publish.bat**.

8.1.8.8 Job automation

If one or more job automations exist for the client to be migrated, they are located in the `<PPM_CURRENT_DATA>/custom/<client>/automation` client directory. Existing automations were deactivated during migration and need to be reactivated via the Automations component in CTK, if they are planned to be used in the new version. For previous PPM versions, this requires login information that may be requested in a dialog.

Before you activate the job automation, please check if all required batch files are available. If required, add missing batch files manually to CTK (see section on **Configuration programs (batch files)**).

8.2 Perform manual migration

The following chapters describe how to perform the PPM client migration manually.

Before you perform the migration, you need to

- stop running previous PPM version components (server, registry, etc.)
- stop the previous PPM version infrastructure
- Install PPM 10.5.1 in parallel to previous PPM version
- Start the PPM 10.5.1 infrastructure (Windows program group **ARIS > PPM 10.5.1 > Start Servers > Stop ARIS PPM Core 10.5.1**)

8.2.1 Overview

Perform the following steps to manually migrate your PPM system. They are described in the following chapters.

Overview

1. Installation of a client in PPM Customizing Toolkit
See chapter Create client
2. Migration of client customizing
See chapter Migrate client customizing
3. Migration of client settings
See chapter Migrate client settings
4. Conversion of the PPM database
See chapter Convert PPM database (page 25)
5. Migration of user management
See Migrate user management (page 8)
6. Migrate reports
See chapter Migrate report definitions ff.
7. Initialization of the analysis server
See chapter Procedure after conversion (PPM 10.5.1)

8.2.2 Create client

You can create a PPM client using PPM Customizing Toolkit version 10.5.1.

Prerequisite

The PPM infrastructure is started.

Procedure

1. Start PPM Customizing Toolkit 10.5.1 by clicking **PPM Customizing Toolkit 10.5.1** in the Windows program group **ARIS > PPM 10.5.1 > Administration >**.
2. Click the **Create client** button in the CTK client overview.

3. Specify the basic settings.
 - a. Specify the name of the client. The source and target clients must have the same name.
 - b. Enable the **Create customizing files** option.
 - c. Enable the **Select client template** option and select a base client matching the client to be migrated (for example, base_en for English clients, base_de for German clients). If you do not find a suitable base client, select base_en.
4. Click **Next**.
5. Specify the server settings.

- a. The import scenarios are available from version **10.2** onwards. Each scenario contains a specific set of parameter values. The parameter values are optimized for the system environment.

Small - Optimized configuration for server systems with at least 1 GB available main memory for import programs.

Medium - Optimized configuration for server systems with at least 4 GB available main memory for import programs.

Large - Optimized configuration for server systems with at least 8 GB available main memory for import programs.

Select an import scenario to set the memory settings of the programs. Depending on your selection, the programs **runxmlimport**, **runppmimport**, **runpikidata**, and **runppmcompress** automatically take the appropriate memory settings from the **_vmparam.bat** file and the corresponding import settings from the **EpkiImport_settings.properties** file.

If you have adapted the values in a previous version or if you want to set other settings, you can edit the **_vmparam.bat** file in the directory

<PPM_CURRENT_DATA>/config/<client>/bin and the

EPKIImport_settings.properties file in the directory

<PPM_CURRENT_DATA>/config/<client>.

If you want to specify additional VM options, please edit the following parameters in the **_vmparam.bat** file:

LOCAL_PPM5_VM_OTHERS_RT_XMLIMPORT

LOCAL_PPM5_VM_OTHERS_RT_PPMIMPORT

LOCAL_PPM5_VM_OTHERS_RT_PIKIDATA

LOCAL_PPM5_VM_OTHERS_RT_PPMCOMPRESS

Further details about import scenarios can be found in the **PPM Data Import.pdf**.

- b. From PPM 9.6, more temporary memory is required for the analysis server. The temporary memory will always be drawn from the overall main memory of the analysis server. Therefore, the size of the main memory in version **10.5.1** should be larger overall than in version 9.6 or older.

1. Enter the value used in the previous PPM version for the main memory settings.
2. Click **Additional settings**.
3. Set the value for **Temporary memory**.

If the old value is larger, transfer it to the settings of the new client.

If the old value is smaller, remember the difference between the old and the new value and close the **Additional settings** dialog. Increase the main memory for the analysis server by this difference multiplied by 1.1. Enter the rounded value, that is with no decimal places.

- c. If you made changes to the **Additional settings** in the previous PPM version, you must check if any parameters from the previous version must be transferred.
6. Click **Next**.
7. Specify the corresponding settings in the **Language and e-mail settings** dialog. The settings need to match those of the client to be migrated.
8. Click **Next**.
9. In the **Database settings** dialog, specify the parameters of the database used by the client to be migrated. Note the database platforms supported by PPM 10.5.1. Further information can be found in the Software AG System Requirements or in the PPM Database Systems.pdf.
10. Click **Next**.
11. Enter the relevant program integration settings in the dialog **Program integrations**.
12. Click **Finish**.

A new client is created with the name you specified (<client>).

13. Close PPM Customizing Toolkit.

The following directories are created in the data directory of the PPM 10.5.1 installation.

<PPM_CURRENT_DATA>/config/<client> contains the configuration files for the new client.

<PPM_CURRENT_DATA>/custom/<client> contains the customizing for the new client.

8.2.3 Migrate client customizing

This chapter describes how to migrate the customizing of a previous PPM client to a PPM 10.5.1 client with the same name. It is assumed that the customizing of the previous PPM client is located in the directory **<PPM_PREVIOUS_DATA>/custom/<client>** with <client> being the variable for the client name.

In the first step, the directories or files are migrated which can be transferred the previous PPM customizing without any changes. Then, more directories and files are migrated that need to be adapted after their transfer.

8.2.3.1 Transfer "custom" directory without changes

You can transfer the **custom** directory without changing anything.

Note that `<PPM_CURRENT_DATA>/custom/<client>/xml/<client>_CTK.xml` file contains the settings of the current PPM version including, for example, descriptions of batch files, which were added in the new PPM version. We recommend backing up this file for a later merge.

Procedure

1. Open Windows Explorer and go to the directory `<PPM_CURRENT_DATA>/custom/<client>.`
2. Delete the **config**, **xml**, and **data** directories.
3. Switch to the `<PPM_PREVIOUS_DATA>/custom/<client>` directory.
4. Copy all directories from this directory to the clipboard except for the **bat**, **config**, **log**, and **patch** directories.
5. Go to the directory `<PPM_CURRENT_DATA>/custom/<client>` and paste the copied files.

8.2.3.2 Migrate the "xml" directory

The data source files are stored in subdirectories of the respective client. Each data source has its own `<DATASOURCE>` folder.

You must adjust the path specifications in the file

`<PPM_CURRENT_DATA>/custom/<client>/xml/<client>_CTK.xml` and for each file `<PPM_CURRENT_DATA>/custom/<client>/xml/<DATASOURCE>/<DATASOURCE>.xml` so that they correspond to the new directory structure (see chapter Transfer "custom" directory without changes (page 20)).

Procedure

1. Go to the directory `<PPM_CURRENT_DATA>/custom/<client>/xml.`
2. Edit the file `<client>_CTK.xml` using a text editor and adjust the paths contained, if there are absolute paths used. Make sure that you use relative paths and `/` or `\` as separators between the individual path parts. If you have been using absolute paths, note that the home directory is now `<PPM_CURRENT_CLIENT_RUN>/bin`. This means that you must replace `<PPM_PREVIOUS_HOME>/ppmmashzone/server/bin/work/data_ppm/` with `../../../../../work/data_ppm/`.
3. To continue using the data sources you need to adapt the data source files. Proceed as follows for each data source.
 - a. Switch to the directory `<PPM_CURRENT_DATA>/custom/<client>/xml/<DATASOURCE>.`

- b. Edit the file **<DATASOURCE>.xml** using a text editor and adjust the paths contained, if required. Make sure that you use relative paths and **/** or **** as separators between the individual path parts.

If you have been using absolute paths, note that the home directory is now **<PPM_CURRENT_CLIENT_RUN>/bin**. This means that you need to replace **<PPM_PREVIOUS_HOME>/ppmmashzone/server/bin/work/data_ppm/** by **../../../../work/data_ppm/**.

8.2.3.3 Migrate the "bat" directory

Batch files from previous PPM versions may no longer function and require adaptation.

The directory **<PPM_CURRENT_DATA>/custom/<client>/bat** generated when the client was created contains a number of default batch files that are not to be changed or deleted.

An exception is the file **_param.bat**. This file contains settings required for using in the batch files. Whereas the current file contains the list of all available settings of the latest PPM version, the **_param.bat** file of the previous PPM version client contains the settings that were used there. If you want to use some or all of the settings of a previous PPM version client in the current PPM version, please proceed as follows.

Procedure

1. Switch to the **<PPM_PREVIOUS_DATA>/custom/<client>/bat** directory and open the file **_param.bat** for editing using a text editor.
2. Copy the settings that you want to continue to use in the current PPM version.
3. Switch to the directory **<PPM_CURRENT_DATA>/custom/<client>/bat** and open the file **_param.bat** for editing using a text editor.
4. Merge the copied settings from step 2 into the current file **_param.bat** and replace the possibly existing previous PPM version paths in the file, for example, **<PPM_PREVIOUS_HOME>**, with the corresponding paths in the current PPM version installation. Assure that each settings entry is unique.

To transfer more batch files from a previous PPM version client to a PPM 10.5.1 client on which the files do not exist, the procedure is as follows.

Procedure

1. Switch to the **<PPM_PREVIOUS_DATA>/custom/<client>/bat** directory and copy the relevant batch files to the clipboard.
Switch to the directory **<PPM_CURRENT_DATA>/custom/<client>/bat** and paste the copied batch files.
2. Check if referenced batch files have already been migrated. If this is not the case you need to migrate them, too.

8.2.3.4 Migrate the "config" directory

The **config** subdirectory in the **custom\<client>** directory contains properties files referencing configuration data in the **xml** subdirectory. The procedure for transferring these configuration files from a previous PPM version client to a PPM 10.5.1 client is as follows.

Procedure

1. Switch to the **<PPM_PREVIOUS_DATA>/custom/<client>/** directory and copy the **config** directory to the clipboard.
2. Switch to the directory **<PPM_CURRENT_DATA>/custom/<client>/** and paste the directory.
3. Switch to the directory **<PPM_CURRENT_DATA>/custom/<client>/config/**. Use a text editor to open the individual properties files and adapt the paths so that they reference the relevant files in the **xml** directory, which is located at the same level as the **config** directory.

Make sure that you use relative paths and **/** or **** as separators between the individual path parts.

If you have been using absolute paths, note that the home directory is now **<PPM_CURRENT_CLIENT_RUN>/bin**. This means that you need to replace **<PPM_PREVIOUS_HOME>/ppmmashzone/server/bin/work/data_ppm/** with **../..../..../work/data_ppm/**.

8.2.3.5 Migrate the "patch" directory

If customer-specific calculation classes or other Java classes were used in the client to be migrated, these may need to be transferred to the new client, as well.

To check if customer-specific calculation classes were used in the client to be migrated, check whether the **patch** directory exists in the **<PPM_PREVIOUS_DATA>/custom/<client>/** directory and if it contains files of the **jar** type. If this is the case, please contact Software AG Customer Support to obtain suitable versions of the customer-specific calculation classes for your current PPM 10.5.1 version.

8.2.3.6 Migrate the "automation" directory


The **Automation** component has been available since PPM version 9.7. The automation subdirectory in the **custom\<client>** directory contains the job automations of a client and is included in the migration of the custom directory.

For further information, please see chapter Job automation (page 28).

8.2.3.7 Adapt settings in file <client>_CTK.xml

You can add and edit names, descriptions and parameters of batch files that were not part of the original PPM version from where the client was migrated.

Procedure

1. Start PPM Customizing Toolkit.
2. Click **Configure process analysis** to open the client you created or migrated.
3. Switch to the **Programs** component of the **Client** module and open the **Configure programs** tab.
4. Click on  **Edit** to activate the edit mode.
5. You can edit the names of batch files that were added in this version. You can easily find them by checking the name column for entries that end with *.bat. To reduce typing effort you can refer to the previously saved file **<client>_CTK.xml** from chapter Transfer "custom" directory without changes (page 20) which contains the missing text entries.
6. Open to the **Configure parameters** tab. Add and edit the parameters using the same approach as described in step 4.
7. Save your changes.

Your changes are applied.



8.2.3.8 Migrate the "keyfiles" directory

If you use pseudonymization, the **custom** directory contains a **keyfiles** directory. Ensure that the contents of this directory is copied unchanged to the **custom** directory of the new PPM version.

Pseudonymization is supported in PPM version **10.5** and higher.

You can use CTK to check whether pseudonymization is enabled.

Procedure

1. Start CTK.
2. Select the client you created or migrated in the **Client overview** area.
3. Click **Configure process analysis** in the **Actions** area.
4. Click  **Edit** to activate the edit mode.
5. Open the **Properties** component of the **Client** module.
6. Click  **Edit client properties** in the **Basic settings** area.
7. Click **Data sources** on the **Selection** tab.
8. Check whether the **Use pseudonymization during data extraction** option is enabled.

Warning

If you select this option before you enable pseudonymization and migrate the **keyfiles** directory, CTK creates a new **pseudonymization.key** file. The existing data is lost because new data is pseudonymized with a different key.

9. Click **OK**.

Your changes are applied.

Tip

If the **pseudonymization.key** file is overwritten, you can copy and recover the **pseudonymization.key** file from the old PPM version.

8.2.4 Migrate client settings

The **config** directory of the client directory contains the settings of a client. To migrate the settings for a previous PPM version client to PPM 10.5.1, you need to migrate the settings files (properties files) for the client as well as the other settings.

The settings files of a previous PPM version client are located in the directory **<PPM_PREVIOUS_DATA>/config/<client>/**. If you have made changes in one or more files, you must proceed as follows to transfer them to a PPM 10.5.1 client (directory **<PPM_CURRENT_DATA>/config/<client>**).

Additionally, the values of the parameters **ERROR_NODE.STR**, **NOT_TYPIFIED.STR**, **WRONG_TYPIFIED.STR** located in

<PPM_PREVIOUS_DATA>/config/<client>/Database_settings.properties must be copied to **<PPM_CURRENT_DATA>/config/<client>/Database_settings.properties**.

If you have made changes to one of the following settings files in the previous PPM version client, you need to transfer these changes individually to the corresponding settings files for the PPM 10.5.1 client in the directory **<PPM_CURRENT_DATA>/config/<client>**.

- AnalysisServer_Log_settings.properties (if it exists)
- AnalysisServer_settings.properties
- Chart_settings.properties
- EPK_settings.properties
- EpkImport_settings.properties
- Database_settings.properties

Please note that in PPM version 10.2 some settings of **Database_settings.properties** have been moved to **EpkImport_settings.properties**.

- Keyindicator_settings.properties
- Report_settings.properties
- Server_Log_settings.properties (if it exists)
- Server_settings.properties
- SysMon_settings.properties

If you have made changes to one of the following settings files in the previous PPM version client, you can migrate them by copying the corresponding file to the **config** directory for the PPM 10.5.1 client and replacing the existing file.

- AdapterConfig_settings.properties
- CNet_settings.properties
- Mail_settings.properties
- MT_Export_settings.properties

- RE_settings.properties

From version 9.8, the entry **EMAIL_FROM=<sender of generated e-mails>** must exist in the file **Mail_settings.properties**.

Add this entry to the file **Mail_settings.properties** and specify the required e-mail address. If you do not want to enter a specific sender, please write

EMAIL_FROM=noreply@softwareag.com.

The files for initializing the system take on a special role.

- Initdb_settings.properties
- InitSystem_settings.properties

These files usually reference xml files in the custom directory of the client installation. Copy these files from the directory **<PPM_PREVIOUS_DATA>/config /<client>** to the current directory **<PPM_CURRENT_DATA>/config/<client>**.

Edit the files using a text editor and adjust the paths contained. Make sure that you use relative paths and **/** or **** as separators between the individual path parts.

If you have been using absolute paths, note that the home directory is now **<PPM_CURRENT_CLIENT_RUN>/bin**. This means that you need to replace **<PPM_PREVIOUS_HOME>/ppmmashzone/server/bin/work/data_ppm/** with **../../../../../work/data_ppm/**.

Then copy the changed files to the directory

<PPM_CURRENT_DATA>/custom/<client>/config/.

Do not change any of the other settings files (Help_settings.properties, RMIServer_settings.properties, Template_settings.properties) located in the directory **<PPM_CURRENT_DATA>/config/<client>**.

8.2.4.1 Adapt parameters for server programs in the file **_vmparam.bat**

If you made changes to the parameters of the server programs in the previous PPM version, you must adapt the values in the **_vmparam.bat** file. The file is located in the directory **<PPM_CURRENT_DATA>/config/<client>/bin**.

8.2.5 Convert PPM database

8.2.5.1 Converter test run

Before you start converting the PPM database, perform a converter test run to identify possible problems.

Procedure

Execute the following command in the bin directory of your PPM 10.5.1 installation

<PPM_CURRENT_CLIENT_RUN>/bin.

runppmconverter -client <client> -user system -password <password> -check

If warnings occur during the converter test run (log output starting with W:) you can usually perform the conversion without taking any action.

8.2.5.2 Start the converter

Use the **runppmconverter** program to convert your PPM database.

Procedure

Execute the following command line in the directory **<PPM_CURRENT_CLIENT_RUN>\bin**.
runppmconverter.bat -client <client> -user system -password <password>

8.2.6 Migrate recovery files

The **recovery** directory contains the analysis server recovery files. The procedure for transferring these recovery files from a previous PPM version client to a PPM 10.5.1 client is as follows.

Procedure

1. Identify the directory in which the files of the client of the previous PPM version installation are stored.
To do so, open the file **AnalysisServer_settings.properties** in the directory **<PPM_PREVIOUS_DATA>/config/<client>** and find the setting **RECOVERY_FOLDER**.
2. Switch to the directory specified (by default, **<PPM_PREVIOUS_DATA>/recovery**) and copy the content of the **<client>** directory to the clipboard.
3. Identify the directory in which the files for the PPM 10.5.1 installation client are stored.
To do this, open the file **AnalysisServer_settings.properties** in the directory **<PPM_CURRENT_DATA>/config/<client>** and find the setting **RECOVERY_FOLDER**.
4. Switch to the directory specified there and paste the files on the clipboard into it.

8.2.7 Migrate report definitions

The procedure for transferring report definitions from a previous PPM version client to PPM 10.5.1 is as follows.

Procedure

1. Identify the directory in which the report definitions of the client of the previous PPM version installation are stored. To do so, open the file **Templates_settings.properties** in the directory **<PPM_PREVIOUS_DATA>/config/<client>** and find the setting **Reports.BaseDirectory**.
2. Now, identify the directory in which the report definitions for the PPM 10.5.1 installation are stored. To do this, open the file **Templates_settings.properties** in the directory **<PPM_CURRENT_DATA>/config/<client>** and find the setting **Reports.BaseDirectory**.

3. Copy the content from the base report directory for the previous PPM version installation client to the base report directory for the PPM 10.5.1 installation, where the content does not yet exist.
4. Identify the directory in which the report images of the client of the previous PPM version installation are stored. To do so, open the file **Report_settings.properties** in the directory **<PPM_PREVIOUS_DATA>/config/<client>** and find the setting **reports.images_directory**. The images for the **umg_en** client are stored in the directory **/config/umg_en/report/images**.
5. Now, identify the directory in which the report images for the PPM 10.5.1 installation are stored. To do this, open the file **Report_settings.properties** in the directory **<PPM_CURRENT_DATA>/config/<client>** and find the setting **reports.images_directory**.
6. Copy the content from the directory for the previous PPM version installation client to the directory for the PPM 10.5.1 installation client, where the content does not yet exist.
7. If required, also copy the following directories if you have made any changes to any of their content. The directories are created during PPM installation with the default content. The corresponding paths are specified in the file **Report_settings.properties** in the relevant directory of PPM 10.5.1.
 - /config/<client>/report/templates**
 - /config/<client>/report/xsl**
 - /config/<client>/report/resources** (used for some table representations)
 - /config/<client>/report/styles** (used for creating e-mail of runppmanalytics-results)

8.2.8 Migrate measures documentation

If a measures documentation has already been created under previous PPM version for the migrated client you need to publish that again. The documentation is located in the client directory under **<PPM_CURRENT_DATA>/custom/<client>/docu** and has been included in the client migration. Proceed as follows to republish the measures documentation created.


Procedure

1. Start PPM Customizing Toolkit 10.5.1 by clicking **PPM Customizing Toolkit 10.5.1** in the Windows program group **ARIS > PPM 10.5.1 > Administration**.
2. Open the client you created or migrated by clicking **Configure process analysis**.
3. Switch to the **Programs** component of the **Client** module and open the **Configure programs** tab and switch to Edit mode.

Under Linux, you need to set the execution privileges for the **../custom/<client>/bin** directory before executing the programs.
4. Now select the **publish.bat** program and enable the check box in the **Display** column. The program is now available under **Run program**.
5. Open the **Run program** tab and run the **Publish documentation** application. The documentation is transferred to PPM.

8.2.9 Job automation

If one or more job automations exist for the client to be migrated, they are located in the **<PPM_PREVIOUS_DATA>/custom/<client>/automation** client directory.

After a restart of the **ppm_web** component, all job automations from version **10.5.1** are scheduled again like in the migrated version. It is recommended deactivating all job automations via the  **Deactivate all job automations** button in the **Automations** component in CTK (to do so, **ppm_web** must have been started), and – if they are to be used in the new version – to reactivate them.

Before you activate the job automation, please check if all required batch files are available. If required, add missing batch files manually to CTK (see chapter Migrate the "bat" directory (page 21)). From version **9.8**, this requires login information that may be requested in a dialog.

8.3 Business data of the "ProcessStepInstanceChange" EDA event type

If you extract a channel in a client using PPM Process Extractor Universal Messaging-2-PPM on which EDA events of the **ProcessStepInstanceChange (PSIC)** type are published, you should perform the following steps.

Procedure

1. Check whether you have assigned business data from the event in the **Data import** module to PPM attributes. If this is the case, proceed to the next step.
2. Check whether the business data that you have assigned to PPM attributes has a different XML namespace than the default namespace in the EDA events that are published on the channel. If this is the case, proceed to the next step.
3. As PPM Process Extractor Universal Messaging-2-PPM supports XML namespaces for business data in EDA events of the **PSIC** type, you need to adapt the attribute mapping and the transformations accordingly. Support for XML namespaces is described in the **Process Extractors** document in chapter **PPM Process Extractor Universal Messaging-2-PPM**.

8.4 Procedure after conversion (PPM 10.5.1)

After a successful conversion, you proceed as follows:

Procedure

1. Stop the PPM infrastructure by clicking **Stop ARIS PPM Core 10.5.1** in the Windows program group **ARIS > Stop Servers**.
2. Restart the PPM infrastructure by clicking **Start ARIS PPM Core 10.5.1** in the Windows program group **ARIS > Start Servers**.
3. Start the PPM 10.5.1 server and the analysis server in PPM Customizing Toolkit 10.5.1.

If the PPM 10.5.1 server is unable to establish a connection to central user administration, update the central user administration connection data. To do so go to the directory **<PPM_CURRENT_CLIENT_RUN>/bin** and execute the following command in the command line.

```
runppmumcadmin -user system -password <password> -client <client> -
resetinternalsessions
```

4. Export the configuration.

a. Go to the directory **<PPM_CURRENT_CLIENT_RUN>/bin**.

b. Execute **runppmconfig** with the following command:

```
runppmconfig -client <client> -user system -password <password> -mode export -
system <PPM_CURRENT_DATA>/custom/<client>/xml
```

c. Execute **runppmconfig** with the following command:

```
runppmconfig -client <client> -user system -password <password> -mode export -
locales <PPM_CURRENT_DATA>/custom/<client>/xml/<client>_locales.xml
```

Configurations that you did not export in this manner (for example, report automations) can be exported individually by means of the batch file **runppmconfig**.

5. If the internal computer name of the sub-server is unknown, the URL of the sub-server RMI registry can be exported from the log file **rmi_system.out.log** for the RMI registry in the directory **<Sub-Server_Installation>\ppm\server\bin\work\work_ppm_core\defaultLog** as follows:

The RMI registry has been started on "<local host name>:17500".

Information on how to change the registry address can be found in the corresponding chapter **Changing the registry addresses** in the **PPM Operation Guide**.

6. For clients that contain Data Analytics analysis realms and have been migrated from PPM version before **9.7**, you must re-import the data in the tables for these analysis realms to PPM. As long as you have not reimported the data, an error message will be output for queries in Data analytics or Cross analytics.

a. If you have not done so already, start the client's server and analysis server.

b. Start CTK by clicking **PPM Customizing Toolkit 10.5.1** in the Windows program group **ARIS > PPM 10.5.1 > Administration**.

c. Select a client.

d. Click **Configure Data analytics**.

e. Open all analysis realms one by one, and in the respective analysis realm overview on the top right, click **Import data**.

If you are using CSV data sources, check if the file reference is still valid.

The data is now saved persistently in the new database introduced in PPM 10.5.1.

You can use the migrated clients in PPM now. When migrating from a previous PPM version to 10.5.1 the analysis server does not need to be reinitialized. The recovery files are copied during migration.

If you had Data analytics analysis realms in the version to be migrated and want to calculate the standard deviation for measures in these analysis realms, you need to manually adapt the configuration accordingly. The corresponding procedure is described in chapter Enable standard deviation for Data analytics (page 31).


8.5 Conformance configuration

During migration, you can only transport the imported configuration from one PPM version to another using the same database. You cannot migrate the entire conformance configuration from one database to another. If a new database is to be used, you must manually transfer the conformance configuration from ARIS to PPM one after the other.

8.6 Enable process variants in process analysis

You can add the process variants feature to your PPM client. If the information dialog described in chapter Presentation of new variants feature (page 13) is displayed during the automated migration, the migrated client configuration does not contain the variant configuration that is needed to use the new process variants feature.

Procedure

1. Open the client you created or migrated by clicking **Configure process analysis**.
2. Click on  **Edit** to activate the edit mode.
3. Click **Edit > Select configuration wizard** in the main menu bar.
4. Select the wizard **Add variant configuration**.
5. Confirm the proposed configuration changes.
6. If the variant configuration is added successfully, open the **Configure programs** tab of the **Programs** component in the **Client** module and activate the **Activate configuration of 'Processes' module group** program
7. Open the **Run program** tab and run the **Activate configuration of 'Processes' module group** program.

The variant configuration is imported to PPM and process variant analysis can be used now for process data that is imported from now on.

Additionally, you can run the **Recalculate measures** application to analyze the process variants of existing data. This process is performance-intensive and can take a longer time.

8.7 Enable standard deviation for Data analytics

From version **9.7** the standard deviation for analysis realms can be calculated. For clients that have been migrated from PPM **< 9.7** and had Data Analytics analysis realms, you can calculate the standard deviation by manually adapting the configuration accordingly.

Procedure

1. Close CTK.
2. If required, start the client's servers.
3. For each analysis realm to be adapted, open the corresponding XML configuration file from the directory `<PPM_CURRENT_DATA>/custom/<client>/xml` in a text editor.
4. For the measures you want to calculate the standard deviation for, remove the entry **standarddeviation="FALSE"** from the respective `<kidef>` element.
5. Save the file.
6. Import the changed configuration of the analysis realm into PPM. Go to the directory `<PPM_CURRENT_CLIENT_RUN>/bin` and execute the following command in the command line.

```
runppmconfig -client <client> -user system -password <password> -mode import -  
overwrite -realm <PPM_CURRENT_DATA>/custom/<client>/xml/<name of file>
```

The option for calculating the standard deviation is now available in Data analytics.

Example

```
<kidef name="amount_payment" table="payment"  
column="amount" distribution="TRUE" standarddeviation="FALSE"  
retrieveertype="KEYINDICATOR" kigroup="KI_GROUP_TIME"  
assessment="POS" scale="HOURL">  
<description name="Amount" language="en" />  
</kidef>
```

becomes

```
<kidef name="amount_payment" table="payment"  
column="amount" distribution="TRUE"  
retrieveertype="KEYINDICATOR" kigroup="KI_GROUP_TIME"  
assessment="POS" scale="HOURL">  
<description name="Amount" language="en" />  
</kidef>
```

9 Legal information

9.1 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.

If a description refers to a specific ARIS product, the product is named. If this is not the case, names for ARIS products are used as follows:

Name	Includes
ARIS products	Refers to all products to which the license regulations of Software AG standard software apply.
ARIS Client	Refers to all programs that access shared databases by using ARIS Server.
ARIS Download Client	Refers to an ARIS Client that can be accessed using a browser.

9.2 Data protection

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

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