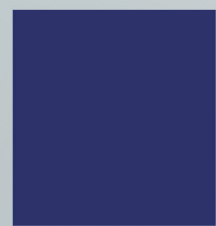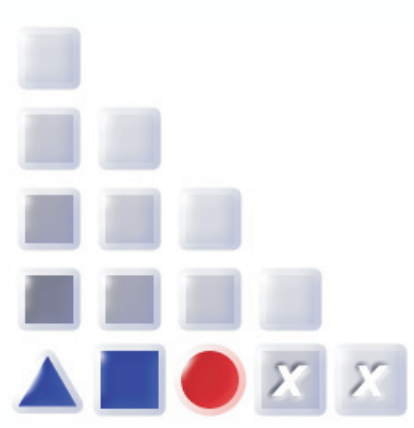# ADOxx®

# Version 1.0

## Installation and Database Management

Books included in this documentation:

Introduction

User Manual

Administration Manual

Method Manual

**Installation and Database Management**

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# Table of Contents

**Table of Contents**

# Preface

Welcome to



is the extensible, multi-lingual, multi-os platform for product development from the **Management Office** of the BOC Group. The ADOxx platform provides fundamental core functionality and a constantly growing library of product building blocks which can be assembled into a final product.

**ADOxx** is a client/server multi-user system, which has an object-oriented structure. Additionally, **ADOxx** has a remarkable adaptation possibility, so it can be configured according to your needs and developed according to your requirements ("ADOxx-customising").

We hope that our tool meets your requirements and that you have a lot of fun working with ADOxx.

*Your BOC Team*

Vienna, 2008

# 1. Using the ADOxx Manuals

Three different user groups who use ADOxx can be distinguished:

- **System Administrators**, (in particular **Database Administrators**),
- **ADOxx Administrators** and
- **ADOxx Users**.

**System Administrators** install ADOxx and create the ADOxx databases. Additionally they can save and restore ADOxx databases. For database administration please refer to ADOxx Database Administration manual.

**ADOxx Administrators** are responsible for the configuration of ADOxx ("customising"), as well as for the administration of users, libraries, models and components.

**ADOxx Users** work with the ADOxx Business Process Management Toolkit. They acquire information, model and document their Business Processes and Working Environment (Organisational structures). In addition, the Business Process and Working Environment models constructed can be analysed, simulated, evaluated and if necessary transformed into an operative basis.

If ADOxx is installed as a stand-alone version, one person may carry out all the above roles.

The following ADOxx manuals exist for the different user groups:

- System-Administrators: **"Installation and Database Administration manual"**
- ADOxx-Administrators:
    - **Administration manual**
    - **Method manual**
- ADOxx Users:
    - **Introduction**
    - **User's manual**
    - **Method manual**

# 2. About this Manual

The following manual describes the installation of ADOxx version 1.0. as well as the ADOxx Database Administration. Using this manual, it will be possible for you to install ADOxx and create an ADOxx database.

It is assumed, that the user of this manual possesses basic knowledge of the use of graphical operating systems and the handling of the mouse.

## 2.1 Structure of the Manual

The manual is split into several parts. Each part consists of chapters and subchapters, which are numbered using the Arabic system. A link to a (sub)chapter consists of the number of the corresponding chapter and the corresponding page number.

The title of the actual part is quoted in the headlines of each page. The pages of the manual are continuously in Arabic numerals (the table of contents in roman numerals).

Each picture in the manual is also numbered. Within the manual a reference to any picture will include its number and corresponding page number.

## 2.2 Contents of the Manual

The installation and database administration manual consists of the following sections:

- ADOxx
- Installation
- Uninstalling
- Database administration
- Appendix

General hints as well as an overview of ADOxx and its features can be found in the "ADOxx" section.

The "Installation" section provides a description of the installation of ADOxx and the steps that have to be executed after the installation. The "Uninstalling" section contains information on uninstalling ADOxx.

Within the "Database Administration" section, the administration of ADOxx databases is outlined.

The "Appendix" contains additional information on installation and database administration.

# 3.    New Features in ADOxx Version 1.0

If you have already used ADOxx version 1.0, you will find below a short description:

- of the innovations in ADOxx Modelling Toolkit (see chap. 3.1, p. 4),

- of the innovations in Administration Toolkit (see chap. 3.2, p. 6),

More detailed information can be found in the PDF file "`News in ADOxx 39.pdf`" which can be found on the ADOxx installation CD in the folder "`books`".

## 3.1    New Features in the Modelling Toolkit

### 3.1.1    General Innovations

- When using ADOxx 1.0 in Windows XP environments, all graphical elements of the user interface are now shown in the **"XP Look"**.

- ADOxx 1.0 can either be **launched with a German or an English user interface**. An appropriate option can be found in the login dialogue (and as a parameter `-lang` for the command line).

    *Note:* When using application libraries originating from older ADOxx versions, a library extension is necessary for enabling a multilingual view and unleashing all new possibilities.

- Because of an internal switch to MVC Architecture, **several views at a time of one model** are possible. Furthermore, the model view is now always consistent with the real model contents - it is no longer necessary to refresh the model view manually. The resulting performance gain allows for keeping the model view up-to-date at all times without burdening older computer systems unnecessarily - manual refreshing is no longer necessary. As a consequence, the dialogue "Overview Representation" was removed. All preview windows are now instantly drawn or refreshed.

- With ADOxx 1.0, the traditional "ADOxx Standard Application Library" is replaced with the new **"ADOxx BPMS Modelling Method"**. This library, as its predecessor, is based on the BPMS Paradigm, but contains some new model types and special features.

    *Note:* Models based on the "ADOxx Standard Application Library" can be transferred trouble-free and effortless to the "ADOxx BPMS Modelling Method" using the import option "Import objects from different library".

- The new tool **"ADOxx Navigator"** shows an overview of the active model in a so-called "docking window" (can be moved across the user interface and docked to special areas of the application window). The part of the model, which is currently visible in the model window, is highlighted an can be used for navigating through the model.

    *Note:* The Navigator replaces the function "Viewable Area" from the zoom dialogue. At the same time, the accuracy of the preview was improved.

- The new tool **"ADOxx Inspector"** (another "docking window") supplies the user with various details about the active modelling environment.

- **The functional range of the ADOxx Explorer was substanially extended**:

    - Models can be copied via the functions "Copy" (Ctrl+C) and "Paste" (Ctrl+V). This creates a copy of the model, the references pointing to the model remain with the original copy.

    - Model groups can be copied via the functions "Copy" (Ctrl+C) and "Paste" (Ctrl+V).

- Model references can be copied to other model groups via the function "Model reference(s) -> Copy".

- Model references can be removed from model groups via the function "Model reference(s) -> Delete".

- Model groups and models can be moved via the functions "Cut" (Ctrl+X) and "Paste" (Ctrl+V).

- The last model reference of a model can no longer be deleted, to prevent models being moved to the model pool unintentionally. Of course, the model itself can be deleted as ever; this naturally removes the model reference too. (Note: The Pool contains all models not accessible via model groups. They can be moved to the model group structure by the ADOxx administrator.)

- **Editing browser cells in the ADOxx browser is now more comfortable**: For simple attributes (numbers, strings) editing can be simply started by navigating to the cell and starting typing (without preceding double click).

- In the menu "Model", a new menu entry **"Recent models"** provides a list of all models recently opened by the active user.

- Performance has been improved in different areas.

## 3.1.2 Modelling

- The "Undo" functionality was extended and now offers both **multiple undo and redo** steps. In addition, the scope of undo-able functions was extended; creating objects and connectors and changing the view mode is now also included.

- **Some new functions in the Graphical Model Editor**:

  - The maximum size of the drawing area was increased to 50m x 50m (until now 4,5m x 4,5m).

  - During moving or resizing objects, now the actual state of the object is shown (no longer only a silhouette). This e.g. enables to see during resizing, how the text in a Note will look.

  - The model view was redesigned to prevent jittering during refresh operations.

- **Showing submodels**: An object containing a reference to a different model (e.g. a Subprocess object) can be "expanded". This means that instead of the object, a view of the drawing area of the referenced model is shown.

  - With the "show submodels" function all subordinated models over an arbitrary number of levels can be sown (even recursive!).

  - Showing/hiding submodels is possible both for single objects and for whole models.

  - Submodels can be shown even if they belong to a different model type than the main model.

  - Expanded objects are still accessible (e.g. for opening the notebook).

  - Changes to a model are instantly refreshed in all models having the changed model shown as submodel.

  - Printing and generating graphics from the expanded view is possible.

  - The expanded submodel view can be reset via the context menu or a special hotspot (upper right corner of the expanded view).

- **New features in the Modelling Bar**: Swimlanes are now shown in the Modelling Bar like all other modelling objects. There they can be selected and used as usual. Furthermore, the context menu of the Modelling Bar was substantially extended: View modes can be changed here as well (up to now only via the menu "View") and parts of the contents of the Modelling Bar (e.g. swimlanes or connectors) can now explicitly be hidden without changing the view mode.

- The **search algorithm** was extended and now allows, apart from the classic search for visualised attribute values, **searching all attribute values** (model and object attributes) either in the active or in all loaded models. The search result is shown in a "docking window" (with additional features). On clicking on a search result, the appropriate model is shown and the object containing the searched pattern is highlighted. In addition, all attribute values contained in the search result can be edited directly. The search results remain available as search history. This enables navigating based on different results.

- **Connector representation**: The dialogues "Connector marks" and "Representation of connector edges" from earlier ADOxx versions are now united in one dialogue "Connector representation". Thus, all connector settings are accessible at the same time.

- Now it is possible to **assign Attribute Profile References** in the tabular modelling too.

## 3.1.3 Import/Export

- **New ADL 3.9 code**: "Class Attributes" of relations (graphical representation, Notebook definition etc.) are no longer exported with the standard ADL export. If this redundant attribute information is needed for some reasons, it is still possible to export in ADL 3.81 code (as it is in ADL 3.0 code).

- The ADL Import can now handle **over-long reference attributes** without problems.

- The XML files generated by the XML Export are now **UTF-8 coded** (Unicode).

## 3.2 New Functionality in the Administration Toolkit

New features in Administration Toolkit are included in the following components or functions:

- **General news and improvements** (see chap. 3.2.1, p. 6)

- **User Management** (see chap. 3.2.2, p. 6)

- **Library Management** (see chap. 3.2.3, p. 7)

- **Model Managemet** (see chap. 3.2.4, p. 7)

- **LEO, AdoScript and Expressions** (see chap. 3.2.5, p. 8)

## 3.2.1 General news and improvements

- When using ADOxx 1.0 in Windows XP environments, all graphical elements of the user interface are now shown in the **"XP Look"**.

- ADOxx 1.0 can either be **launched with a German or an English user interface**. The available languages can be found in the file `lang.ini` listed as Windows Language IDs. The first entry is always the default language. This ensures that e.g. in a German version English can be determined as the default language. Via command line a language can be determined using the parameter `-lang` together with either an ISO-639 code or a Windows Language ID.

  _Examples:_ `-langen` for English or `-lang1031` for German.

- Performance has been improved in different areas.

## 3.2.2 User Management

- Before starting the import of all system user groups and their users of a selected domain, it is now possible to **select certain system user groups** via a new option. Afterwards, only the users of

the selected groups are imported. Especially in large domains with many system user groups this speeds things considerably up.

### 3.2.3 Library Management

- It is now possible to define **restriction rules for passwords** (e.g. "at least six characters"). This rule is checked when a user changes his password.

- The **definition possibilities for page layouts** were substantially enhanced. Now a lot of new elements, like lines or multiple bitmaps, can be used.

- **Incrementing the change counter** in referencing models after renaming (pool) objects can be disabled.

- Because of the multilingualism feature, **self-made menu entries can be made multilingual** too.

- Set **filters in administration queries** can now be seen via the button text in the settings.

- **The GraphRep features were substantially extended**:

  - In **PEN** elements, pen style (dashed, dotted) and line thickness can now be combined. Furthermore, various styles for line end caps and joints are available.

  - In addition to Bitmaps, the following **graphic file formats** can now be visualised:

    GIF, JPEG, ICO, PNG, TARGA, TIFF, WBMP, XPM.

  - Basic shapes can now be transformed into arbitrary forms using **clipping commands** (CLIP_RECT, CLIP_ROUNDRECT, CLIP_POLY, CLIP_ELLIPSE) and combining operators.

  - **Colour gradients** can now be painted.

  - Using the BEZIER element **Bézier curves** can be drawn.

  - **Loops** (WHILE, FOR) can be programmed.

  - The two **connector marks** of a pair can now be displayed differently - depending on being at the outgoing or the ingoing side of the connector.

  - Direct access to certain **information from Record attributes** now allows for displaying whole tables on the drawing area or showing different attribute content depending on the current context.

  - Displaying different attribute values depending on the user interface language is possible.

- The same attribute can now appear in more than one chapter of a **Notebook**. Furthermore, the Notebook structure can now be made language-dependent: Depending on the chosen user interface language, different attributes can be shown.

- For the **Predefined Analysis/Evaluation Queries**, there now is a new type of input field: the "Relation field", containing all relations of the model type in question.

### 3.2.4 Model Management

- **New ADL 3.9 code**: "Class Attributes" of relations (graphical representation, Notebook definition etc.) are no longer exported with the standard ADL export. If this redundant attribute information is needed for some reasons, it is still possible to export in ADL 3.81 code (as it is in ADL 3.0 code).

- The ADL Import can now handle **over-long reference attributes** without problems.

# 3.2.5　LEO, AdoScript and Expressions

- **New Events:** `AfterEditAttributeValue`, `BeforeCreateModel`, `DiscardRelationInstance`.

- **Extended Event:** `RenameModelThread`.

- The **AdoScript** command `REBUILD_DRAWING_AREA` is no longer needed, as the drawing area is now always refreshed automatically whenever necessary. Existing commands in old scripts are ignored.

- It is now possible to **get the current user interface language** via AdoScript in order to deduce language-specific reactions.

- Extensions to the **MessagePort "AdoScript":** `CREATE_OUTPUT_WIN`, `OUT`, `SET_OUTPUT_WIN_SUBTITLE`, `FILE_EXISTS`, `SERVICE`.

- Extensions to the **MessagePort "Core":** `MOVE_INCOMING_INTERREFS`.

- Extensions to the **MessagePort "CoreUI":** `SET_OBJ_FOREGROUND`, `SET_OBJ_BACKGROUND`, `RESET_OBJ_FOREGROUND`, `RESET_OBJ_BACKGROUND`.

- Extensions to the **MessagePort "Application":** `SET_MENU_ITEM_HDL`, `REMOVE_CONTEXT_MENU_ITEM`.

- Extensions to the **MessagePort "Modeling":** `SET_ATTR_ACCESS_MODE`, `GEN_GFX_STR`, `GEN_GFX_FILE`, `GENERATE_GFX`, `COMPUTE_REGION_IMAGE_MAP`, `SET_REPRESENTATION`, `GET_REPRESENTATION`, `CLEAR_UNDO_REDO`.

# 4. Note

**Designation of people within this documentation:**

We would like to explicitly state here that wherever the third person singular is used within this manual, this is intended to include female as well as male persons. The use of the male form of description is not intended to be discriminatory in any way but is simply used in order to ensure consistent descriptions.

**Pictures within this documentation:**

The pictures within this documentation were created using ADOxx 1.0 for Windows 2000 and Windows XP. If you are using different operating system, the appearance of some screens may be slightly different.

> **ATTENTION:** **Further publication of this documentation in any form (including copies) is not permitted without the expressed permission of the BOC Group.**

# Part I

# ADOxx

Successful and dynamic enterprises can achieve decisive competitive advantage through the ability to adapt their Business Processes quickly to the rapidly changing market conditions and through the active arrangement of their core competencies. The increasing dynamic, globalisation and increasing competition make efficient Business Process Management an essential goal.

To enable this, the Procedural Modelling, Analysis, Simulation and Evaluation of Business Processes is a decisive success factor. The goals of Business Process Management are the optimisation of both the processes of an enterprise as well as the resources and technology which execute those processes.

The ADOxx Modelling Toolkit, which was developed by BOC in co-operation with the University of Vienna offers essential tool support for re-engineering and reorganisation of projects.

ADOxx was specifically designed for the particular needs of financial services organisations and provides functionality primarily for the following application areas:

- Business Process Optimisation / Business Process Re-engineering (BPR)

- Quality Management / ISO 9000 Certification and Maintenance

- Controlling (Process Costing)

- Personnel Management (Personnel and Resource planning)

- Organisation Management (Enterprise documentation, Job descriptions etc.)

- Information Management (Creation of technical concepts for IT systems, Interfaces to Workflow and CASE systems, Introduction of ERP Systems)

- Creation of electronic handbooks which can be made available over an intranet with the use of powerful multi media functionality

- Evaluation of Business Processes (Benchmarking, Monitoring, "Should-be" comparison)
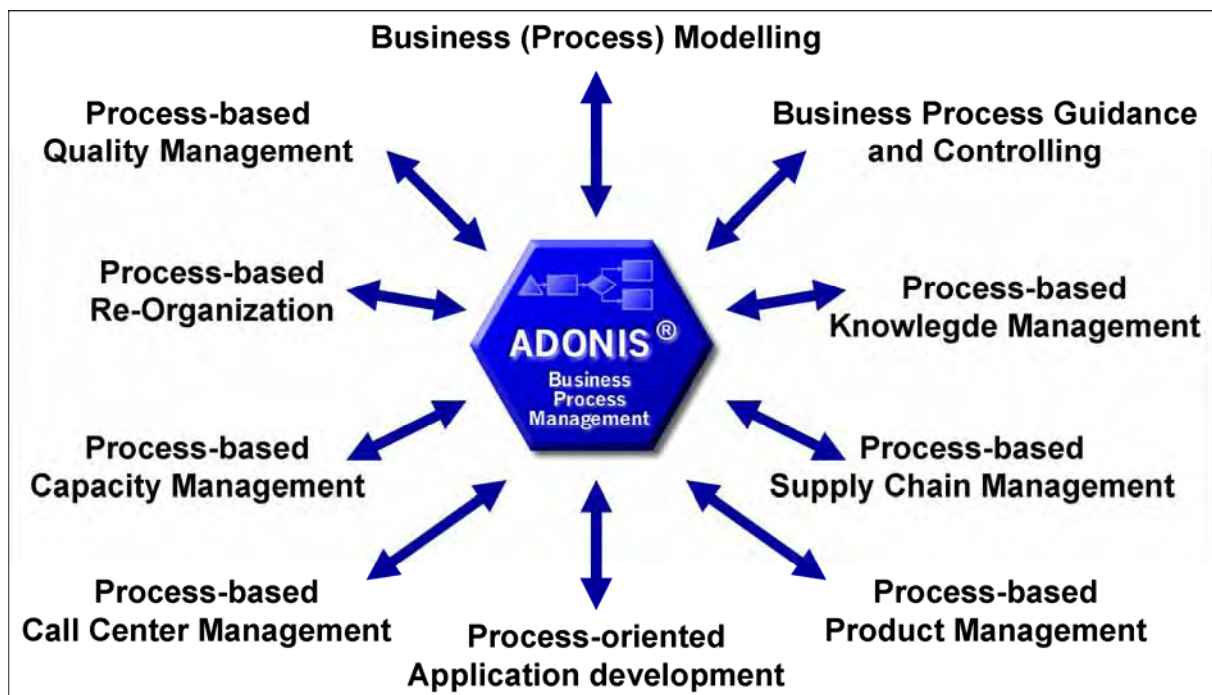
Figure 1: Modelling using ADOxx

The "Meta-concept" of ADOxx means that through customising, the tool can be configured to optimally suit the particular requirements of any user. The ADOxx user can decide by himself how he should build the processes and how he can best use the ADOxx mechanisms. As ADOxx is method independent, the management of Business Processes on different levels is guaranteed.

# 1.    General Notes

The use of the ADOxx software is primarily subject to the conditions of the licence agreement. Insofar as not agreed otherwise in the licence agreement, the following terms and conditions for usage of the ADOxx software apply:

The customer is informed that all rights relating to the ADOxx software, in particular the copyright and inclusion of all documents and information supplied in the course of contract negotiation as well as any which are currently pending belong to BOC.

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The customer is not permitted to wholly or partially translate back into source code, reverse engineer or decompile the software.

The customer agrees not to make the ADOxx software, including any copies thereof, available to third parties at any time.

**ADOxx is a registered trademark of BOC. Copyright BOC Group 1996-2008. All rights reserved.**

All product and companies names (see chap. 2., p. 13) are subject to the copyright law of each company. The usage of product and brand names in this manual may not be construed as permitting third parties free usage of such names in breach of copyright legislation

> **Hint:** The program ADOxx contains some software, which has been developed by the Apache Software Foundation (http://www.apache.org/).

As outlined in the terms and conditions of the licence agreement, BOC guarantees the functionality of the software. In so far as not agreed otherwise in the licence agreement, the guarantee period extends six months from the end of the software purchase period.

The liability of BOC is as outlined in the licence agreement. Insofar as legally permitted, BOC will not accept liability for atypical damage, solely financial damage, loss or damage to recorded data, direct or indirect damage, lost profits, expected but unachieved savings or for damages arising from third party claims against the customer.

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| | *LOVEM*, |
| | *MQSeries*, |
| | *Notes*, |
| | *OS/2 Warp*, |
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**Part I**

| | |
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# 3.   ADOxx Administration Toolkit

The ADOxx Administration Toolkit supports the effective use of ADOxx. The administration of ADOxx users and user groups, ADOxx libraries as well as ADOxx models and model groups is carried out within the ADOxx Administration Toolkit.

More detailed information on the Administration Toolkit can be found in the Administration manual as well as in the online documentation of the toolkit.

The ADOxx Administration Toolkit consists of the following components:

### User Management

The User Management component allows the ADOxx administrator to create and authorise ADOxx users. By assigning ADOxx users to ADOxx user groups, the access rights of the users to model groups and models can be defined. The creation, alteration and deletion of users and user groups is also possible within this component. In addition, it is possible to export ADOxx users and user groups into **UDL files** as well as to **import them from UDL files**. UDL stands for **U**ser **D**efinition **L**anguage. With the help of UDL Import/Export it is possible to transfer ADOxx users and user groups between ADOxx databases. UDL export can also be used as a backup mechanism for your ADOxx users and user groups.

### Library Management

In ADOxx every user has access to an ADOxx application library with which he can create models. The ADOxx-Default-Library is the default group of objects and relations that support modelling. Within the Library Management component, ADOxx application libraries can be imported, exported and deleted. Library and class attributes can also be altered (customised) within this component.

Editing and checking the library and class attributes of the application libraries takes place within this component. Additionally, application libraries can be exported into ABL files and ABL files can be imported into the ADOxx database. (ABL = **A**DONIS **B**inary **L**anguage). With the help of ABL import and export, application libraries can be transferred to different ADOxx databases. ABL export can also serve as a method of backing up your application libraries.

### Model Management

Within the Model Management component, the ADOxx administrator can import, export and delete ADOxx models, model groups and application models. In addition, model groups can be created and altered. The access rights of user groups (and therefore users) are assigned to ADOxx model groups. Model management allows you to set up the access rights to the models of the ADOxx database.

### Attribute Profile Management

In the Attribute Profile Management, the ADOxx administrator may add, delete, edit, export, or import the ADOxx attribute profiles and attribute profile groups. Attribute profiles represent the repository concept in ADOxx. The attribute profile represents one or more attributes, that may be reused for any

object and can be centrally maintained. Attribute profiles are embedded in the user rights system, to enable unified and controlled care over the attribute profiles.

##  Component Management

Using the Component Management, additional components of **ADOxx** can be made available to the ADOxx users. Furthermore, the current configuration of the Modelling Toolkit can be checked within this component.

> **Hint:** A more detailed description of the ADOxx Administration Toolkit can be found in the ADOxx Administration manual.

# 4. ADOxx Modelling Toolkit

You can construct your models using the ADOxx Business process management Toolkit.

The Modelling Toolkit provides a large number of components and modules, which enable yout to enrich, analyse, simulate and evaluate your models.

The ADOxx Modelling Toolkit consists of the following components:

### Information Acquisition

Information Acquisition supports you in gathering information, which is important (or necessary) to successfully model your Business Processes and Working Environments. One of the methods provided is the use of the **acquisition tables or HOMER component**, which runs through a link to Microsoft Excel. Data can be entered in these tables (excel sheets) and this data can then be exported to an ADL file and imported into the ADOxx Modelling Toolkit.

### Modelling

The Modelling Component is the heart of the ADOxx Business Process Management Toolkit. It allows you to build the models you require (e.g. Business Process or Working Environments). You can create and amend your own models (and the attribute values of the objects used) using the graphical editor (**model editor**) provided. Additionally, it is also possible to input attribute values through a tabular view of the model.

If you have never modelled business processes before, we recommend that you read the section "Fundamentals of Modelling" in the user manual. Some basic tips to ensure the clarity and quality of your models can be found there.

### Analysis

Within the Analysis Component, **queries** on your ADOxx models can be run and **relation tables** or **predefined charts** can be produced. Both predefined and user-definable queries are provided in ADOxx. The query language in ADOxx is AQL (**A**DONIS **Q**uery **L**anguage). Creation of queries will be defined by the ADOxx administrator and will be provided to an ADOxx user.

The results of a query can be displayed either as a table or graphically. The results can also be exported to an ASCII file. In this way you can process the results further in another application (e.g. spreadsheet, word processor etc.).

An **Analytical Evaluation** of business process models can also be carried out.

### Simulation

The Simulation of Business Processes and Working Environments is executed in the Simulation Component. Four simulation algorithms are available in ADOxx: **Path Analysis** simulates the Business Process models only, while the **Capacity Analysis, Workload Analysis (steady state),**

**and Workload Analysis (fixed time period)** simulate the Business Process models *and* the corresponding Working Environment models.

With the help of **ADOxx agents** it is possible to calculate non-standard results during simulation.

#  Evaluation

The Evaluation Component offers mechanisms for the Evaluation of "should-be" models as real running processes.

The Evaluation Component provides the following areas of functionality **comparative representation of results**, **Evaluation of real-time audit trails of the workflow management system MQSeries Workflow / WebSphere MQ** (IBM) and **pre-defined evaluation queries**.

As an <u>additional</u> option, the **ADOxx Process Costing** component as well as the **dynamic Evaluation modules** can be integrated with the toolkit.

The ADOxx Process Costing Component supports the optimisation of costs, especially overhead costs and supports the identification and evaluation of possibilities for savings. Dynamic Evaluation Modules, based on the simulation algorithm "Capacity Analysis", enable the period-related evaluation (e.g. Human Resource Management), for which the calculation algorithms can be customised.

#  Import/Export

The Import/Export Component provides the option of **exporting** ADOxx models, model groups and application models **into ADL or XML files** as well as **importing** them into the ADOxx database from such files. ADL stands for **A**DONIS **D**efinition **L**anguage. With the help of this component you can transfer ADOxx models, model groups and application models into a different ADOxx database. Additionally, ADL or XML Export can serve as a back-up mechanism for your models, model groups and application models.

The **Documentation** (part of the Import/Export Component) provides you with the possibility to transfer your ADOxx models into an electronic model documentation (e.g. HTML, XML data) or in a paper documentation (e.g. DOC files for Microsoft Word). In this way it is possible to distribute the contents of your models either in document format (through a word processing program) or over an Intranet.

> **Hint:** You will find a detailed description of the ADOxx Modelling Toolkit within the section "Modelling Toolkit" in the ADOxx user manual.

# 5. ADOxx Product Palette

**ADOxx version 1.0** is offered as:

- ADOxx Business Edition (see chap. 5.1, p. 19) or

- ADOxx Professional Edition (see chap. 5.2, p. 20).

The following **additional components** are not contained in the standard configuration of ADOxx (Business or Professional Edition) and can be acquired additionally and integrated into ADOxx (into any existing modelling method):

- "Process Cost Analysis" (see chap. 5.3.1, p. 20)

- "Personnel and Capacity Management" (see chap. 5.3.2, p. 20)

- "Call Centre Management" (see chap. 5.3.3, p. 21)

- "case/4/0 interface" (see chap. 5.3.4, p. 21)

To use ADOxx (Business and Professional Edition) a set of different **modelling methods** (see chap. 5.4, p. 22) is available.

By utilising our **interfaces** (see chap. 5.5, p. 22) data from various applications can be exchanged with ADOxx (Business and Professional Edition).

Additionally ADOxx supports further **standards und management methods** (see chap. 5.6, p. 24) for the process management.

> **Hint:** For further information regarding products and services of the BOC Group please contact your ADOxx consultant.

## 5.1 ADOxx Business Edition

Within the "**ADOxx Business Edition**" the following components of the ADOxx Modelling Toolkit are available:

- Modelling

- Analysis

- Documentation

- Import/Export

> **Hint:** The components "Process Cost Analysis (Process Costing Component)", "Personal- and Capacity Management", "Call Centre Management" as well as "case/4/0 interface" are additional components and therefore they are not contained in the ADOxx Business Edition.

When needed it is possible to acquire new components or further modules within a component of the ADOxx Modelling Toolkit, which then can be provided for the ADOxx users by entering a new licence key. Alternatively it is also possible to further restrict the composition of the ADOxx Business Edition.

> **Hint:** When using the ADOxx Business Edition the smart-icons of unsupported components will not be displayed in the component bar. The same applies to smart-icons in the quick-access bars. If the ADOxx user or the ADOxx administrator did not change the configuration, only the smart icons corresponding to the functionality of ADOxx Business Edition will be displayed.

## 5.2    ADOxx Professional Edition

Within the "**ADOxx Professional Edition**" all components of the ADOxx Modelling Toolkit are available.

> **Hint:** The components "Process Cost Analysis (Process Costing Component)", "Personal- and Capacity Management", "Call Centre Management" as well as "case/4/0 interface" are additional components and therefore are not contained in the ADOxx Professional Edition.

## 5.3    Additional ADOxx Components

The additional components:

- "Process Cost Analysis"
- "Personnel and Capacity Management"
- "Call Centre Management"
- "Case/4/0 interface"
- "ObjectiF interface"

can be integrated into your existing ADOxx installation. They are not contained in the default configuration of ADOxx (Business or Professional Edition).

### 5.3.1    ADOxx Process Cost Analysis

The **Process Cost Analysis** supports cost optimisation, especially overhead costs. The system is capable to set informative analysis on the available savings possibilities.

The ADOxx Process Cost Analysis simulates the Business Process models. This identifies further potential for analysis and optimisation of the process costs - the course of the control structure can contain decisions and some parallel structures and above this many optional process levels are allowed.

### 5.3.2    Personnel and Capacity Management

The **Personnel and Capacity Management** supports the time period based evaluation of Business Processes and Working Environments. In particular the periods of validity assigned in the period-related versioning will be used.

The **key figures** determined in the Personnel and Capacity Management **can be corporate-specific configured**. Besides quantitative evaluation **quality evaluation** will also be supported. For instance, questions such as "What are the roles and skills that I need to realise my Business Processes?" can be answered.

### 5.3.3 Call Centre Management

The **Call Centre Management Component** supports personnel planning (FTEs) and skills management within Call and Multimedia Service Centres.

The processes in these centres are used as the basis and input for crucial information regarding time, costs and knowledge. For instance:

● How long does a helpdesk query or an address change take?

● What capacity is needed for a given time interval and which costs do arise?

● How do you document for your employees which actions to take in different scenarios?

### 5.3.4 case/4/0 Interface

Through the coupling of **case/4/0** from **microTOOL GmbH**, **Business Process oriented application development** is possible, to create the required building blocks for a new system in case/4/0 from ADOxx and to maintain consistent links to the specific activities of the Business Processes. The link is established online from special Business Process models to an Application Development environment.

Through this direct integration from specialised Business Process models to IT models before the construction of an application system, it is possible to identify the Business Process **affected** by the new system. The functionality of ADOxx allowing personnel capacity and cycle time to be calculated is very useful for deriving the qualifications necessary to carry out the Business Processes. This means that when changing existing applications, we already have an effective **qualification system**.

The **IT company map** together with the Business Processes provide comprehensive documentation. As a result of the links between the two toolkits, changes to either the applications or the Business Processes can be accurately described and evaluated. In this way modern **Information and Migration Management** is possible.

ADOxx and case/4/0 also offers components for **the generation of documentation** which can then be distributed over the Internet or an Intranet. Through the coupling with case/4/0 Business Process and application documentation can be integrated and distributed to target groups within the enterprise.

### 5.3.5 objectiF Interface

Through the coupling of **objectiF** from **microTOOL GmbH Business Process oriented application development** is possible, to create the required building blocks for a new system in objectiF from ADOxx and to maintain consistent links to the specific activities of the Business Processes. The link is established online from specialised Business Process models to an Application Development environment.

Through this direct integration from specialised Business Process models to IT models before the realisation of an application system, it is possible to identify the Business Processes **affected** by the new system. The functionality of ADOxx allowing personnel capacity and cycle time to be calculated is very useful for deriving the qualifications necessary to carry out the Business Processes. This means that when changing existing applications, we already have an effective **qualification system**.

The **IT company map** together with the Business Processes provide comprehensive documentation. Because of the links between the two toolkits, changes to either the applications or the Business Processes can be accurately described and evaluated. In this way modern **Information and Migration Management** is possible.

ADOxx and objectiF also offers components for **the generation of documentation**, which can then be distributed over the Internet or an Intranet. Through the coupling with case/4/0 Business Process and Application Documentation can be integrated and distributed to target groups within the enterprise.

## 5.4    ADOxx Modelling Methods

The modelling in ADOxx (Business or Professional Edition) is effected applying a defined methodology (= application library). Within one ADOxx database several methods can be administered and provided to the users.

In addition to the possibility to adapt the modelling methodology to the needs of the customer the ADOxx BPMS modelling method  (ADOxx-Default-Library) is contained within ADOxx (Business or Professional Edition).

The following (de-facto standards) for modelling methodologies are offered in addition:

● UML method

● LOVEM method

● E-Business method

● EPC method

● QM method (ISO9000/2000)

> **Hint:** For further information regarding customer-specific ADOxx modelling methods please contact your ADOxx consultant.

In addition to the modelling methods mentioned above, ADOxx supports further standards and management methods (see chap. 5.6, p. 24) for the process management.

## 5.5    ADOxx Interfaces

Using the interfaces to/from ADOxx (Business and Professional Edition) data can be

1. imported from other applications into ADOxx,

2. edited in ADOxx and

3. exported from ADOxx into other applications.

For the tools listed below interfaces already have been realised and can be integrated and adapted for your modelling method (application library) if required:

● Data acquisition:
    - Excel (Microsoft Corporation)
    - HOMER (BOC Asset Management GmbH) - contained in the ADOxx Professional Edition
    - Visio (Microsoft Corporation)

● Workflow Management and Enterprise Integration systems:
    - BizTalk Server (Microsoft Corporation)
    - EasyFlow (Heyde AG/ TOPAS InformationsTechnologien GmbH)
    - Fabasoft Components (Fabasoft)
    - IBM MQSeries Workflow (IBM)
    - IBM WebSpere MQ Workflow (IBM)
    - ORACLE BPEL Process Manager (Oracle)

- Staffware 2000 (TIBCO Software Inc.)
- TIBCO Staffware i10 (TIBCO Software Inc.)
- Unisys Workflow (Unisys)
- WPDL (WfMC - Workflow Management Coalition)
- XPDL export

- Simulation:
  - ARENA (Rockwell Software Corporation

- CASE tools:
  - case/4/0 (microTOOL) - interfaces provided directly in ADOxx (see chap. 5.3.4, p. 21)
  - IBM Rational Rose (IBM)
  - objectiF (microTOOL) - interfaces provided directly in ADOxx (see chap. 5.3.5, p. 21)
  - XMI Import/Export

- Software Engineering:
  - SQS-TEST (SQS Software Quality Systems AG)

- ERP systems:
  - R/3 (SAP) - reference models
  - R/3 (SAP) - Online interface to integrate R/3 calls
  - R/3 (SAP) - HR integration
  - JuraPack (PELI) - Claims management

- Groupware systems:
  - IBM Lotus Notes (IBM) - Export interface for company documentation
  - IBM Lotus Notes (IBM) - Online interface to call and integrate Notes documents
  - SharePoint Team Services für Microsoft Project 2002 Server (Microsoft Corporation)

- BPM tools:
  - ibo (ibo)

- Relational databases:
  - via an ODBC interface

- Document management systems (DMS):
  - DOMEA (OpenText Corporation)
  - IBM Lotus Notes (IBM)
  - PCDOCS (Hummingbird)
  - SharePoint Team Services for Microsoft Project 2002 Server (Microsoft Corporation)
  - Document management systems supporting ODMA

  **Hint:** For further information regarding customer-specific ADOxx interfaces please contact your ADOxx consultant.

# 5.6    Support of Standards and Management Methods

ADOxx supports the following standards and management methods.

> **Hint:** Supporting these standards and management methods is performed by extension and adaption of existing modelling methods (ADOxx application libraries). For detailed information please contact your ADOxx consultant.

- Management methods:
  - TQM (Total Quality Management)
  - BSC (Balanced Scorecards)
  - ERM (Enterprise Risk Management)
  - Six Sigma
  - HL7 (Health Level Seven)
  - Basel II
- Business process management/Business modelling:
  - SOX (Sarbanes-Oxley-Act)
  - BPMN (Business Process Modelling Notation)
  - eEPK (Ereignisgesteuerte Prozeßketten)
  - ISO 900x
  - Zachmann Framework
- Enterprise Application Integration (EAI) and Workflow systems:
  - BPEL (Business Process Execution Language)
  - BPMN (Business Process Modelling Notation)
  - WPDL (Workflow Process Definition Language)
  - XPDL (XML Process Definition Language)
- Software development:
  - MDA (Model Driven Architecture)
  - UML2 (Unified Modelling Language)
  - XMI (XML Metadata Interchange)
- Standards for data exchange:
  - XML (Extensible Markup Language)
  - ODBC (Open Database Conectivity)
  - ODMA (Open Document Management API)

# Part II
# Installation

# 1.   Overview

## 1.1      ADOxx Components

ADOxx (Client and Stand-alone) version 1.0 consists of the following two ADOxx components:

●   ADOxx Administration Toolkit (see chap. 3., p. 15) and

●   ADOxx Modelling Toolkit (see chap. 4., p. 17).

ADOxx (Server) version 1.0 also includes the installation of the ADOxx database administration (see Part IV., p. 74)  to be used for creating and maintaining ADOxx databases.

The ADOxx Database maintenance will be automatically installed for ADOxx (Stand-alone) version 1.0.

The ADOxx Online Documentation for the ADOxx components as well as database administration is automatically installed.

The ADOxx Online Documentation provides the user with information and hints on, as well as explanations of, the ADOxx components.

The ADOxx Database maintenance enables the database administrator to create ADOxx databases, backup ADOxx databases (DB2 only) and restore ADOxx databases (DB2 only). The programs for the ADOxx Database maintenance can be found, together with the online help in the ADOxx program folder.

## 1.2      Preparation for Installation

Please read the following section carefully before starting the installation of ADOxx version 1.0.

## 1.2.1        Hardware Recommendations

> **Hint:** The Hardware recommendations for creating ADOxx databases can be found in the appropriate section in the "Database administration" (see Part IV., p. 74) chapter.

### 1.2.1.1      Stand-alone

The following hardware configuration is recommended for the installation of ADOxx 1.0 as a stand-alone system:

●   min. PII/comparable processor 450 MHz (PIII 800 MHz/comparable processor or higher recommended)

●   min. 256 MB RAM (512 MB recommended)

    min. 512 MB total available memory (physical and virtual)

●   min. 15" screen (17" recommended)

    Notebook/Laptop: min. 13,3" (14,1" recommended)

- SVGA graphic card with a resolution of 1024x768x65.536 (1280x1024x16 million recommended)

- 55 MB empty space on the hard disk for ADOxx

- at least 40 MB empty space is required on the hard disk for an empty ADOxx database (the size cannot be specified exactly as it depends on the database system use and the settings required by the database system). The ADOxx database can either be set to be dynamically enlarged or must be enlarged by the database administrator (depending on the settings of the database system).

## 1.2.1.2     Server

The following hardware configuration is recommended for the server when installing ADOxx version 1.0 in a Client/Server environment:

**ADOxx Server:**

- min. PII/comparable processor 500 MHz (PIII 800 MHz/comparable processor or higher recommended)

- min. 128 MB RAM (256 MB recommended)

- 17 MB empty space on the hard disk for ADOxx Database maintenance

**Database Server:**

- Processor according to the specification of DBMS provider

- CPU frequency according to the specification of DBMS provider

- Memory according to the specification of DBMS provider

- at least 40 MB empty space is required on the hard disk for an empty ADOxx database (the size cannot be specified exactly as it depends on the database system use and the settings required by the database system). The ADOxx database can either be set to be dynamically enlarged (DB2 and ORACLE) or must be enlarged by the database administrator (INFORMIX and Microsoft SQL Server).

   **Hint:** A substantial improvement in performance in Client/Server mode can be obtained if the server is equipped with adequate hardware (processor, RAM size).

## 1.2.1.3     Client

The following Hardware configuration is recommended for the client when installing ADOxx version 1.0 in a Client/Server-environment:

- min. PII/comparable processor 450 MHz (PIII 800 MHz/comparable processor or higher recommended)

- min. 256 MB RAM (512 MB recommended)

   min. 512 MB total available memory (physical and virtual)

- min. 15" screen (17" recommended)

   Notebook/Laptop: min. 13,3" (14,1" recommended)

- SVGA graphic card with a resolution of 1024x768x65.536 (1280x1024x16 million recommended)

- 55 MB empty space on the hard disk for ADOxx (full installation)

## 1.2.2     Software Requirements

> **Hint:** The software requirements for creating ADOxx databases can be found in the appropriate section in the "Database administration" (see Part IV., p. 74) chapter.

## 1.2.2.1     Stand-alone

Software requirements for the stand-alone version of ADOxx:

● Installation CD-ROM "ADOxx version 1.0"

● Operating system

  - Windows XP

  - Windows 2000

  - Windows NT Version 4.0 (Server or Workstation)

● Database systems for **Windows NT 4.0/2000/XP**

  - IBM DB2 Universal Database 5.2/6.x/7.x/8.x PE or Server

  - Informix Dynamic Server 7.22 PE or Server

  - Informix Dynamic Server 10.0

  - Oracle7 7.3.3 (or higher) Server

  - Oracle8 and Oracle8i (Version 8.0 or higher) Server

  - Oracle9i (Version 9.0.1) Server

  - Oracle9i Release 2 (Version 9.2.0.x) Server only with Oracle9i Release 2 (Version 9.2.0.x) Net9 Client

  - Oracle10g (Version 10.0.1) Server

  - Oracle10g Release 2 (Version 10.2.x)

  - Microsoft SQL Server (Version 7)

  - Microsoft SQL Server 2000

  - Microsoft SQL Server 2005 or 2005 Express Edition

  - Microsoft Data Engine (MSDE) 1.0 or 2000

● Database systems for **Windows XP Home Edition**

  - IBM DB2 Universal Database 5.2/6.x/7.x/8.x Personal Edition

  - Informix Dynamic Server 7.22 (or higher) Personal Edition

  - Microsoft SQL Server 7.0 Desktop

  - Microsoft Data Engine (MSDE) 1.0 or 2000

● Microsoft Excel 2003/XP/2000/97 (for Windows) when using the Acquisition Component HOMER

> **ATTENTION:**     Microsoft Excel must be correctly installed and all system paths concerning Microsoft Excel must be up-to-date.

> **ATTENTION:**     When installing **under Windows NT 4.0** the ServicePack SP6a must be installed.

> **ATTENTION:**     When using the **Single-Sign-on functionality with Windows NT 4.0** the ServicePack SP6a with ADSI-Client extensions must be installed.

ATTENTION:    With **Windows XP Home Edition** the **Single-Sign-on functionality is not supported**!

Hint: For installing InstallShield version 7.4.262.0 with ISScript engine version 7.7.0.262 is used. If there is an older version of ISScript engine installed already the ISScript engine has to be updated by running the isscript.msi file from the installation CD-ROM (setup directory).

## 1.2.2.2     Server

Software requirements for the server in a Client/Server environment:

- Installation CD-ROM "ADOxx version 1.0"

- Operating system

  - Windows 2003

  - Windows XP

  - Windows 2000

  - Windows NT 4.0 (Server or Workstation)

  - a Server operating system supported by the chosen DBMS (e.g. UNIX) if the Windows-Clients can access the DBMS with Call Level Interfaces (DB2: "CLI"; Oracle: "OCI") respectively using ODBC (Informix, SQL Server).

- Database systems for **Windows NT/2000/XP/2003**

  - IBM DB2 Universal Database 5.2/6.x/7.x/8.x

  - Informix Dynamic Server 7.22 (or higher)

  - Informix Dynamic Server 10.0

  - Oracle7 7.3.3 (or higher)

  - Oracle8 and Oracle8i (version 8.0.5 or higher)

  - Oracle9i (version 9.0.1)

  - Oracle9i Release 2 (version 9.2.0.x) Server

  - Oracle10g (Version 10.0.1) Server

  - Oracle10g Release 2 (Version 10.2.x)

  - Microsoft SQL Server (Version 7)

  - Microsoft SQL Server 2000

  - Microsoft SQL Server 2005 or 2005 Express Edition

  - Microsoft SQL Server (version 7 or higher)

- A network protocol which is compatible with the database system used (e.g. APPC, NetBIOS, IPX/SPX, TCP/IP etc.)

  Hint: Within the manual "Database administration" further information regarding Software requirements for Informix-Server (see chap. 2.1.2, p. 84) can be found.

  Hint: For installing InstallShield version 7.4.262.0 with ISScript engine version 7.7.0.262 is used. If there is an older version of ISScript engine installed already the ISScript engine has to be updated by running the isscript.msi file from the installation CD-ROM (setup directory).

## 1.2.2.3    Client

Software requirements for the client in a Client/Server environment:

● Installation CD-ROM "ADOxx version 1.0"

● Operating system:

   - Windows XP.

   - Windows 2000.

   - Windows NT Version 4.0 (Server or Workstation).

● Database systems for **Windows**

   - IBM DB2 Client Application Enabler (up to version 5.2) or DB2 Run-Time Client or DB2 Administration Client (version 6 or higher)

   - Informix/INTERSOLV ODBC driver (version 2.12 or higher) or Informix ODBC driver (version 3.32; or higher included in Informix Connect 2.5)

   - Oracle Net Client (version 2.3.3 or higher)

   - Oracle Net9 Client Release 2 (Oracle9i Release 2 (version 9.2.0.x) Server)

   - Oracle Net10 Client Release 2 (Oracle10g Release 2 (Version 10.2.x))

   - Microsoft SQL Server ODBC (version 7 or higher)

● Microsoft Excel 2003/XP/2000/97 (for Windows) when using the Acquisition Component HOMER

>   **ATTENTION:**    Microsoft Excel must be correctly installed and all system paths concerning Microsoft Excel must be up-to-date.

>   **ATTENTION:**    When installing **under Windows NT 4.0** the ServicePack SP6a must be installed.

>   **ATTENTION:**    When using the **Single-Sign-on functionality with Windows NT 4.0** the ServicePack SP6a with ADSI-Client extensions must be installed.

>   **ATTENTION:**    With **Windows XP Home Edition** the **Single-Sign-on functionality is not supported**!

>   Hint: For installing InstallShield version 7.4.262.0 with ISScript engine version 7.7.0.262 is used. If there is an older version of ISScript engine installed already the ISScript engine has to be updated by running the isscript.msi file from the installation CD-ROM (setup directory).

>   Hint: Within the manual "Database administration" further information regarding Software requirements for Informix-Clients (see chap. 2.1.2, p. 84) can be found.

## 1.2.3    Installation Prerequisites

## 1.2.3.1    Stand-alone

The prerequisites (in addition to the Hardware recommendations (see chap. 1.2.1.1, p. 26) and the Software requirements (see chap. 1.2.2.1, p. 28)), which must be fulfilled if ADOxx is to be installed without problems, are:

● Installation CD-ROM "ADOxx version 1.0".

● Valid customer number.

- Operating system is set up.

- A user "ADONIS" with the password "BPMS" must exist within the Windows user administration. This user needs no administration rights.

  **ATTENTION:**  This password must not be changed.

- For the installation of **ADOxx for Windows NT** Admin rights are necessary, i.e. you must be logged on as an administrator.

- For the **installation of the Acquisition Component HOMER version 3.7** Microsoft Excel 2003/XP/2000/97 as well as Microsoft Internet Explorer version 4.01 SP 1 or higher has to be installed. Furthermore Administrator rights are required for the HOMER installation when system files have to be modified.

  (This is the case if the version of the Microsoft Data Access Components (MDAC) is less than version 2.5.)

- Please close all other applications before commencing with the installation.

## 1.2.3.2    Server

The prerequisites (in addition to the Hardware recommendations (see chap. 1.2.1.1, p. 26) and the Software requirements (see chap. 1.2.2.1, p. 28)), which must be fulfilled if ADOxx is to be installed without problems, are:

- Installation CD-ROM "ADOxx version 1.0".

- Valid customer number.

- Database system is installed (Database server).

- Windows 2003/XP/2000/NT 4.0 is installed (ADOxx server).

- Within the database operating system respectively database management system a user "ADONIS" with the password "BPMS" exists. This user needs no administration rights.

  **ATTENTION:**  This password must not be changed!

- For the installation of **ADOxx for Windows NT** Admin rights are necessary, i.e. you must be logged on as an administrator.

## 1.2.3.3    Client

The prerequisites (in addition to the Hardware recommendations (see chap. 1.2.1.1, p. 26) and the Software requirements (see chap. 1.2.2.1, p. 28)), which must be fulfilled if ADOxx is to be installed without problems, are:

- Installation CD-ROM "ADOxx version 1.0".

- Valid customer number.

- Windows XP/2000/NT 4.0 is installed correctly.

- For the **installation of the Acquisition Component HOMER version 3.7** Microsoft Excel 2003/XP/2000/97 as well as Microsoft Internet Explorer version 4.01 SP 1 or higher has to be installed. Furthermore Administrator rights are required for the HOMER installation when system files have to be modified.

  (This is the case if the version of the Microsoft Data Access Components (MDAC) is less than version 2.5.)

## 1.3 Advice for users of old ADOxx versions (before 3.5)

If you have already been working with ADOxx version 3.0x we recommend to proceed according to the following checklist to migrate the content of your old ADOxx-3.0x database into the new ADOxx 1.0 database.

> **ATTENTION:** For ADOxx version 1.0 a new ADOxx database has to be created as the database scheme changed since the old version.

> **Hint:** If you have questions please contact your ADOxx consultant.

**Check list for switching to ADOxx 1.0:**

- before the installation of ADOxx 1.0 (see chap. 1.3.1, p. 32)

- installation of ADOxx database (see chap. 1.3.2, p. 32)

- installation of ADOxx 1.0 (see chap. 1.3.3, p. 32)

- after the installation of ADOxx 1.0 (see chap. 1.3.4, p. 33)

## 1.3.1 Before the installation of ADOxx 1.0

1. **Export** your **specific application libraries** from the existing ADOxx 3.0x database to one (several) ABL file(s) (*ADOxx Administration Toolkit* - **Library management**).

2. **Export** all **users** and **user groups** from the existing ADOxx database to an UDL file (*ADOxx Administration Toolkit* - **User management**).

   For this select the main user groups only and activate the options "Including users" and "Including user groups".

3. **Export** all **models** and **model groups** from the existing ADOxx 3.0x database to an ADL file (*ADOxx Administration Toolkit* - **User administration**).

   For this select the main model groups only and activate the options "Including models", "Including model groups" and "Recursive (model groups)".

4. If necessary save the folder with the files for your application library (such as BMP and DSL files).

   In general you will find this folder in the ADOxx installation directory (for instance `C:\Program files\BOC\ADOXX\`<name of folder>).

## 1.3.2 Installation of ADOxx database

Prepare the ADOxx database; please pay attention to the instructions in the chapter "Database administration" (see Part IV., p. 74).

## 1.3.3 Installation of ADOxx 1.0

Insert the installation CD. The installation wizard for ADOxx 1.0 (see chap. 2., p. 36) will be started automatically.

## 1.3.4　　　After the installation of ADOxx 1.0

1.  Start the "ADOxx Administration Toolkit" with the default user "Admin" (password: "password") and the name of the previously installed ADOxx 1.0 database.

    **Note:** Change the password (see chap. 2.4.5, p. 58) of the default user "Admin" after the first ADOxx login.

2.  If necessary copy the folder with the files for your application library (such as BMP and DSL files) into the ADOxx 1.0 installation directory (for instance `C:\Program files\BOC\ADOXX\`<name of folder>).

3.  **Import** your **application library** (ABL file) into the new ADOxx 1.0 database (**Library management - Management**).

4.  **Import** your **models** and **model groups** (ADL file) into the new ADOxx 1.0 database (**Model Management - ADL Import - Models/Attribute profiles**). (Select your specific application library before importing the ADL file.)

    **Note:** When importing ADOxx-3.0x models you have to activate the option "Import objects from different library".

    To create a protocol of the import procedure, activate the option "Generate protocol" and enter a path and a name for the protocol file.

5.  **Import** your **users** and **user groups** into the new ADOxx 1.0 database (**User management - User import**).

    If necessary check the access rights of the user groups to the model groups (Model Management - Model group management).

## 1.4　　　Advice for users of ADOxx version 3.5x to 1.0

If you have already been working with an ADOxx version between 3.5x and 1.0 you can install ADOxx 1.0 and continue your work with the existing ADOxx-3.5x database, i.e. a data migration is not required to work with the new version of ADOxx.

> **ATTENTION:**　　When using a library specific subdirectory in the ADOxx installation directory you have to copy this subdirectory into the new installation directory of ADOxx 1.0.

> **ATTENTION:**　　If the acquisition tool HOMER was installed simultaneously with the previous version of ADOxx 1.0 and if HOMER acquisition scenarios were edited or added see the advice for users of HOMER (see chap. 1.5, p. 33).

Should you nevertheless wish to create a new ADOxx 1.0 database we recommend you follow the steps as outlined in the chapter "Advice for users of old ADOxx versions" (see chap. 1.3, p. 32).

> **Hint:** If you have questions please contact your ADOxx consultant.

## 1.5　　　Advice for users of HOMER 3.7

If you have edited existing HOMER scenarios or added new HOMER scenarios it is recommended to export these scenarios to a XLS file or to backup the file HOMER.XLS from the HOMER installation directory (default directory `c:\Program files\ADOxx`*<Version>*`\HOMER`) as these scenarios will be deleted when de-installing HOMER.

> **Hint:** If you have questions please contact your ADOxx consultant.

## 1.6 Installation Program

Depending on the licence type, for the installation of ADOxx 1.0 the following options exist:

- Stand-alone version or
- Client/Server version.

### 1.6.1 Stand-alone

The installation will be started from the installation CD. During the stand-alone installation the ADOxx Administration and Modelling Toolkit and the ADOxx Database maintenance are installed.

The **installation program** is started by selecting "Run" ("Start" - menu "Run") and typing the command "<Drive>:\setup\setup.exe" (replace <Drive> with the name of the CD-ROM drive containing the installation CD-ROM).

Detailed instructions for the installation can be found in the chapter "Installation" (see chap. 2., p. 36).

During the installation you will have to provide the ADOxx installation directory, the Microsoft-Excel installation directory and the customer number. Please also pay attention to the Hardware recommendations (see chap. 1.2.1.1, p. 26), Software requirements (see chap. 1.2.2.1, p. 28) and Installation prerequisites (see chap. 1.2.3.1, p. 30), before commencing with the installation.

> **Hint:** When performing the installation of ADOxx with MSDE (see chap. 2.1.1, p. 41) the database system MSDE can be installed and a new ADOxx database can be created.

### 1.6.2 Client/Server

The installation will be started from the installation CD. During the Server installation the ADOxx Database maintenance utility will be installed on the database server.

> **Hint:** The ADOxx Database maintenance can alternatively also be installed on a Client PC.

The Client installation installs the ADOxx applications (i.e. the ADOxx Administration and/or Modelling Toolkit).

The **installation program** is started by selecting "Run" ("Start" - menu "Run") and typing the command "<Drive>:\setup\setup.exe" (replace <Drive> with the name of the CD-ROM drive containing the installation CD-ROM).

During the installation you will have to provide the ADOxx installation directory, the Microsoft-Excel installation directory and the customer number. Please also pay attention to the Hardware recommendations (Server (see chap. 1.2.1.2, p. 27) or Client (see chap. 1.2.1.3, p. 27)), Software requirements (Server (see chap. 1.2.2.2, p. 29) or Client (see chap. 1.2.2.3, p. 30)) and Installation prerequisites (Server (see chap. 1.2.3.2, p. 31) or Client (see chap. 1.2.3.3, p. 31)), before commencing with the installation.

## 1.7 After the Installation (Overview)

### 1.7.1 Stand-alone

After a successful stand-alone installation, the following should be carried out to guarantee a smooth introduction to ADOxx:

- create an ADOxx database.
- the ADOxx administrator should carry out the following tasks in the Administration Toolkit:
  - change the password of the user "Admin" (for security reasons) and
  - define ADOxx users.

For a detailed description please see chapter "After the installation" (see chap. 2.4, p. 56).

## 1.7.2        Client/Server

After a successful Client/Server installation, the following should be carried out to guarantee a smooth introduction to ADOxx

- Create and initialise the ADOxx database on the database server
- **Only when using DB2:**

  Define the node of the ADOxx server on the clients and update the database catalogue for the ADOxx databases on the client. (This can only be performed by a database administrator.)
- the ADOxx administrator should carry out the following tasks in the Administration Toolkit:
  - change the password of the user "Admin" (for security reasons) and
  - define ADOxx users.

For a detailed description please see chapter "After the installation" (see chap. 2.4, p. 56).

## 1.8     Uninstall ADOxx (Overview)

To uninstall ADOxx go to the Windows program "Software" within the Windows control panel.

# 2.    Installation

Before installing ADOxx you should read the section Preparation for installation (see chap. 1.2, p. 26) for the stand-alone version and the Client/Server version carefully.

> **Hint:** The actual numbers (e.g. available disk storage space, time settings, etc.) in the figures in the following chapters might differ from those on the screen during the installation. The description of the installation below always relates to the installation of all possible components.

**Description of the installation:**

- Stand-alone installation (see chap. 2.1, p. 36)

- MSDE Stand-alone installation (see chap. 2.1.1, p. 41)

- Server installation (see chap. 2.2, p. 46) and

- Client installation (see chap. 2.3, p. 51).

During the server installation the ADOxx Database maintenance program is installed on the server. The other ADOxx components are installed on the client as part of the client installation.

## 2.1    Stand-alone Installation

The installation is started by inserting the installation CD-ROM "ADOxx version 1.0" into the CD-ROM drive and selecting from the **Start menu** the command "Run". Then type the command "<Drive>:\setup\setup.exe"   (replace <Drive> with the name of the CD-ROM drive containing the installation CD-ROM) into the field "Open".

First select the language for the Setup (see fig. 2) and click "OK" to proceed.



Figure 2: ADOxx stand-alone installation - select language

The installation program will be loaded and the welcome screen (see fig. 3) with hints for the installation will be shown.

Figure 3: ADOxx stand-alone installation - welcome screen

Click **"Next >"** to proceed with the installation. In the next window "User information" (see fig. 4) please enter your user name and organization.
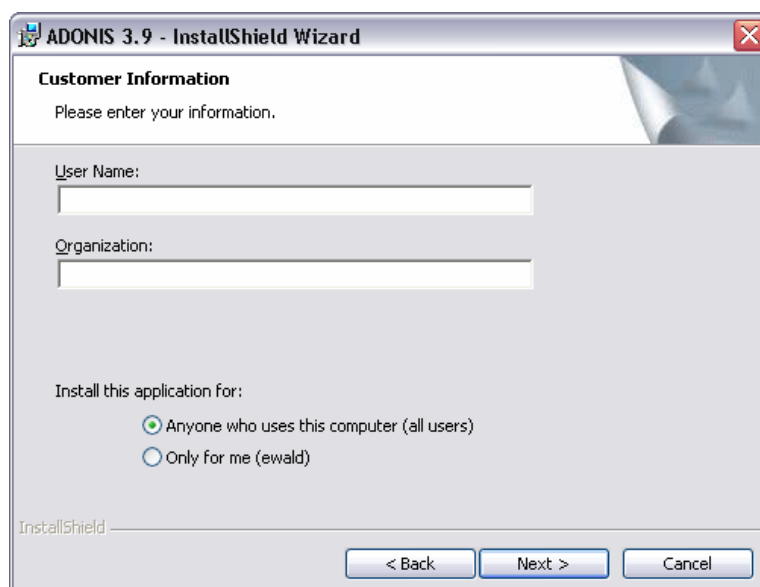


Figure 4: ADOxx stand-alone installation - User information

Furthermore you can define for whom ADOxx will be installed. Click **"Next >"** to proceed.

Within the window "Custom setup" (see fig. 5) you can select the Acquisition Component HOMER to be installed as well as change the installation directory.
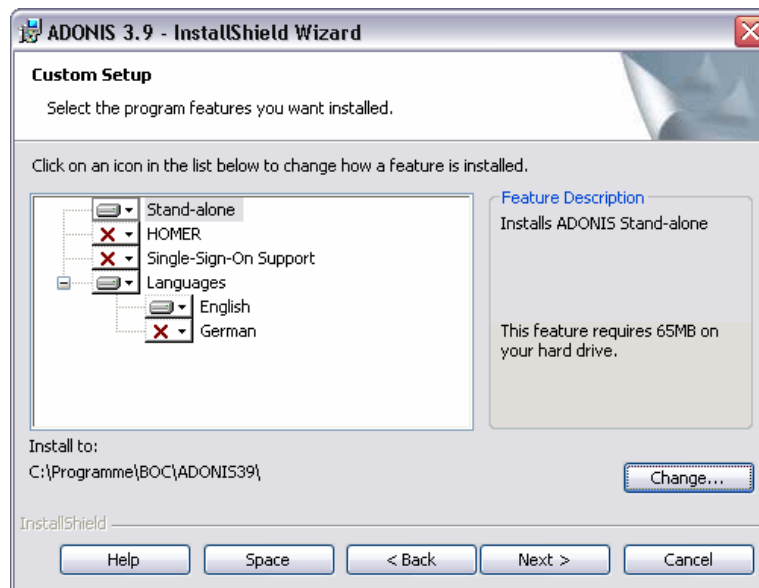
Figure 5: ADOxx stand-alone installation - Custom setup

The components selected for installation are marked with the symbol [icon], while components which will not be installed are marked by [X icon]. You can change this selection by clicking on the respective symbol and selecting the required action from the popup menu (see fig. 6).

The component "Language" contains all languages which are available for the user interface of ADOxx as a subcomponent. If you select more than one language you can run ADOxx in one of these languages.

> **Hint:** Running ADOxx in more than one language requires a corresponding licence number. For further information please contact your ADOxx consultant.
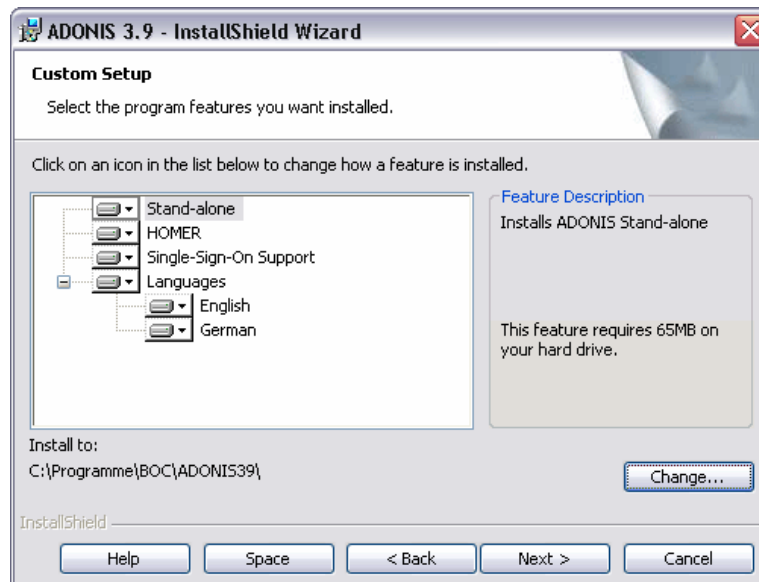


Figure 6: ADOxx stand-alone installation - Component selection

> **Hint:** The default directory for the installation of ADOxx is "c:\Program files\BOC\ADOxx10\".

> To install ADOxx into a different directory click on the button **"Change"** and select the desired directory.

Continue with the installation by clicking on the button **"Next >"**.

In the window "Enter licence data" (see fig. 7) please provide the customer number and the licence key and then click on the OK button.



Figure 7: ADOxx stand-alone installation - Enter licence information

In the window "Default language selection" (see fig. 8) choose the default language for ADOxx.



Figure 8: ADOxx stand-alone installation - Select default language

> **Hint:** After the successful installation ADOxx will be started with the selected language.
>
> You can switch the language in the ADOxx login (see fig. 43, p. 60). Alternatively, you can enter an argument for the language when starting ADOxx from a command line (areena.exe).

The preparations for the installation are now complete and within the window "Ready to install application" (see fig. 9) you can start the installation or verify the installation settings as well as change them (button "< Back").

Figure 9: ADOxx stand-alone installation - Ready for installation

Click **"Install"** to start the installation with the defined settings.

During the installation the window "Installation of ADOxx 1.0" (see fig. 10) indicating the progress will be shown.



Figure 10: ADOxx stand-alone installation - Status

The successful ADOxx installation will be confirmed with the message (see fig. 11).
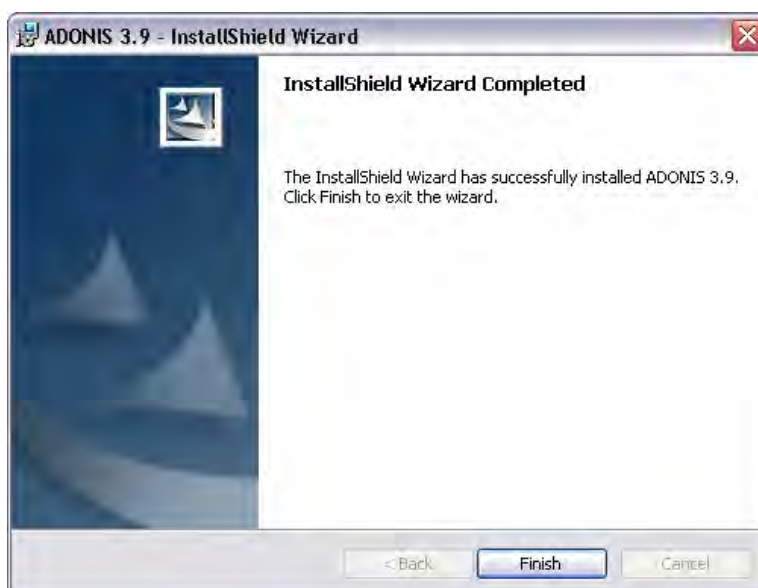
Figure 11: ADOxx stand-alone installation - Installation complete

Click **"Finish"** to complete the installation and exit the installation program.


## 2.1.1 MSDE Stand-alone Installation

The installation is started by inserting the installation CD-ROM "ADOxx version 1.0" into the CD-ROM drive and selecting from the **Start menu** the command "Run". Then type the command "<Drive>:\setup\setup.exe" (replace <Drive> with the name of the CD-ROM drive containing the installation CD-ROM) into the field "Open".

First select the language for the Setup (see fig. 12) and click "OK" to proceed.



Figure 12: ADOxx MSDE installation - Select language

The installation program will be loaded and the welcome screen (see fig. 13) with hints for the installation will be shown.

Figure 13: ADOxx MSDE installation - Welcome

Click **"Next >"** to proceed with the installation. In the next window "User information" (see fig. 14) please enter your user name and organization.



Figure 14: ADOxx MSDE installation - User information

Furthermore you can define for whom ADOxx will be installed. Click **"Next >"** to proceed.

Within the window "Custom setup" (see fig. 15) you can select the Acquisition Component HOMER to be installed as well as change the installation directory.

Figure 15: ADOxx MSDE installation - User-defined installation

The components selected for installation are marked with the symbol [icon], while components which will not be installed are marked by [icon]. You can change this selection by clicking on the respective symbol and selecting the required action from the popup menu (see fig. 16).

The component "Language" contains all languages which are available for the user interface of ADOxx as a subcomponent. If you select more than one language you can run ADOxx in one of these languages.

> **Hint:** Running ADOxx in more than one language requires a corresponding licence number. For further information please contact your ADOxx consultant.



Figure 16: ADOxx MSDE installation - Component selection

> **Hint:** The default directory for the installation of ADOxx is "c:\Program files\BOC\ADOxx39EN\".

> To install ADOxx into a different directory click on the button **"Change"** and select the desired directory.

Continue with the installation by clicking on the button **"Next >"**.

In the window "Enter licence data" (see fig. 17) please provide the customer number and the licence key and then click on the OK button.
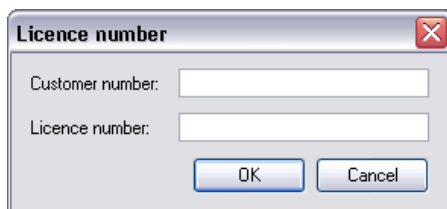


Figure 17: ADOxx MSDE installation - Enter licence information

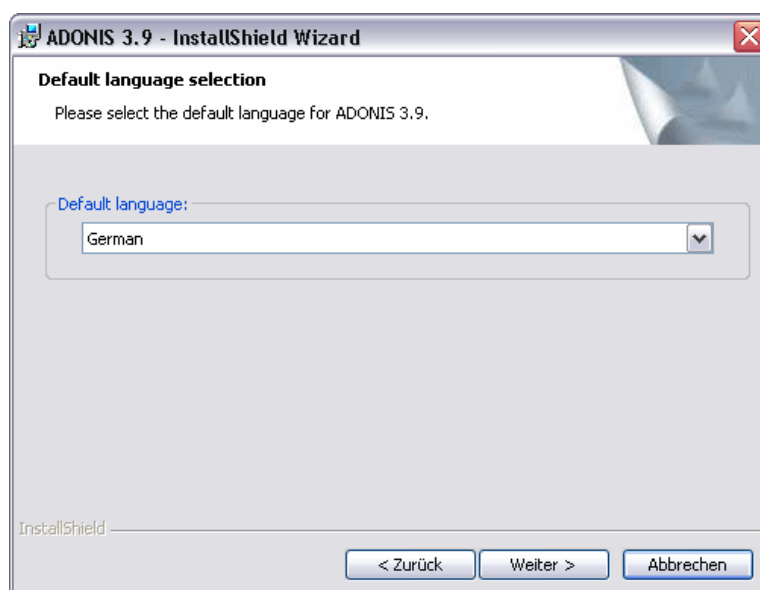In the window "Default language selection" (see fig. 18) choose the default language for ADOxx.



Figure 18: ADOxx MSDE installation - Select default language

> **Hint:** After the successful installation ADOxx will be started with the selected language.
>
> You can switch the language in the ADOxx login (see fig. 43, p. 60). Alternatively, you can enter an argument for the language when starting ADOxx from a command line (areena.exe).

The preparations for the installation are now complete and within the window "Ready to install application" (see fig. 19) you can start the installation or verify the installation settings as well as change them (button "< Back").
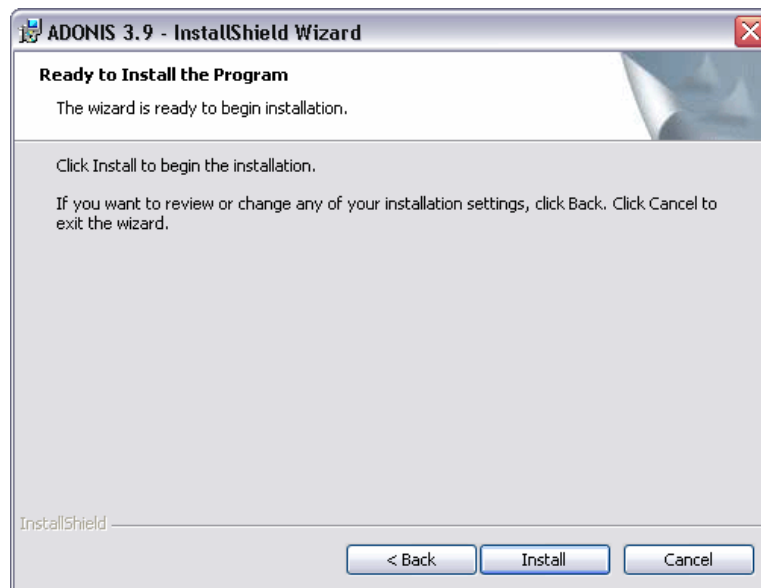
Figure 19: ADOxx MSDE installation - Ready for installation

Click **"Install"** to start the installation with the defined settings.

During the installation the window "Installation of ADOxx 1.0" (see fig. 20) indicating the progress will be shown.



Figure 20: ADOxx MSDE installation - Status

Should you also create a database during the installation this database will be named "ADOxxDB". In case this name is already taken you will be prompted to enter a name for the MSDE database (see fig. 21). This name has to be made up of at least three characters.
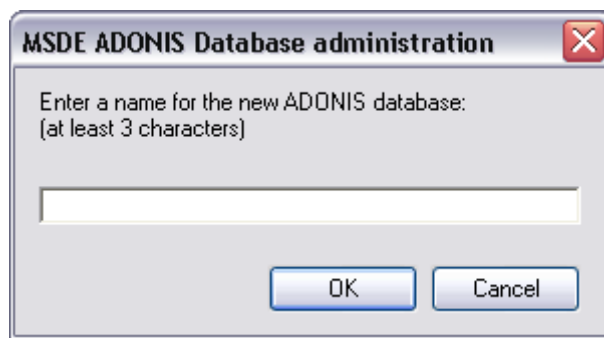
Figure 21: Enter database name

The successful creation of the database will be confirmed with the following message:
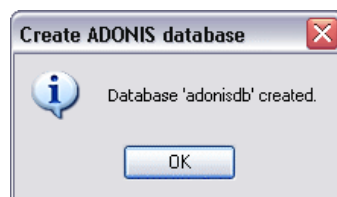


Figure 22: ADOxx MSDE installation - Database created

The installation will now be completed. The successful ADOxx installation will be confirmed with the message (see fig. 23).



Figure 23: ADOxx MSDE installation - Completion

Click **"Finish"** to complete the installation and exit the installation program.

## 2.2 Server Installation

The installation is started by inserting the installation CD-ROM "ADOxx version 1.0" into the CD-ROM drive and selecting from the **Start menu** the command "Run". Then type the command "<Drive>:\setup\setup.exe" (replace <Drive> with the name of the CD-ROM drive containing the installation CD-ROM) into the field "Open".

First select the language for the Setup (see fig. 24) and click "OK" to proceed.

Figure 24: ADOxx Server installation - Select language

The installation program will be loaded and the welcome screen (see fig. 25) with hints for the installation will be shown.

Figure 25: ADOxx Server installation - Welcome

Click **"Next >"** to proceed with the installation. In the next window "User information" (see fig. 26) please enter your user name and organization.

Figure 26: ADOxx Server installation - User information

Furthermore you can define for whom ADOxx will be installed. Click **"Next >"** to proceed.

Within the window "Custom setup" (see fig. 27) you can select the Acquisition Component HOMER to be installed as well as change the installation directory.
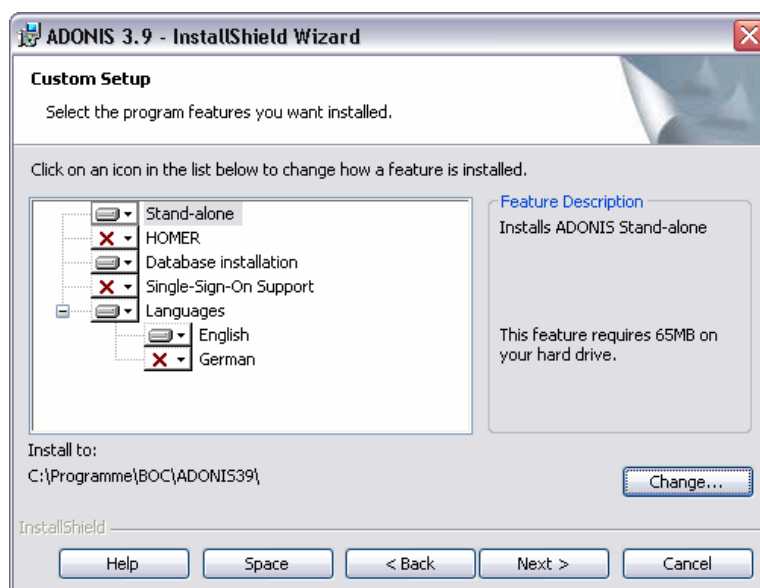


Figure 27: ADOxx Server installation - Custom setup

The components selected for installation are marked with the symbol [symbol], while components which will not be installed are marked by [symbol]. You can change this selection by clicking on the respective symbol and selecting the required action from the popup menu (see fig. 28).

The component "Language" contains all languages which are available for the user interface of ADOxx as a subcomponent. If you select more than one language you can run ADOxx in one of these languages.

Hint: Running ADOxx in more than one language requires a corresponding licence number. For further information please contact your ADOxx consultant.
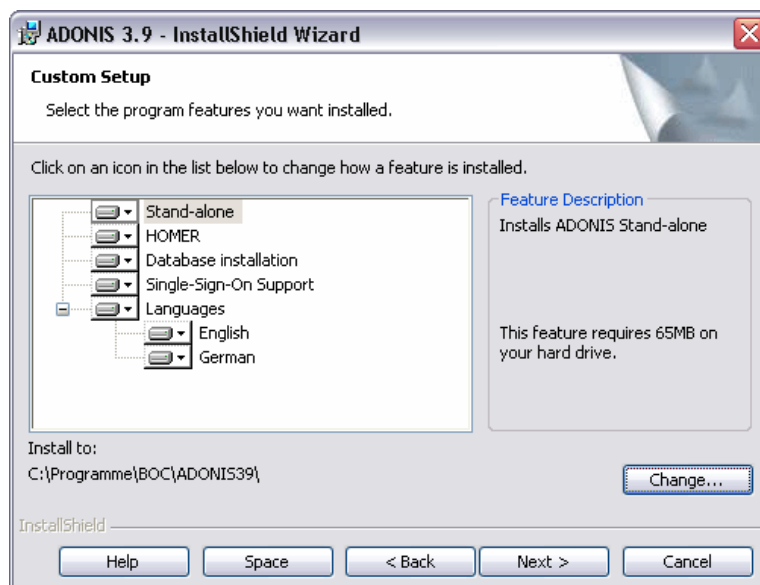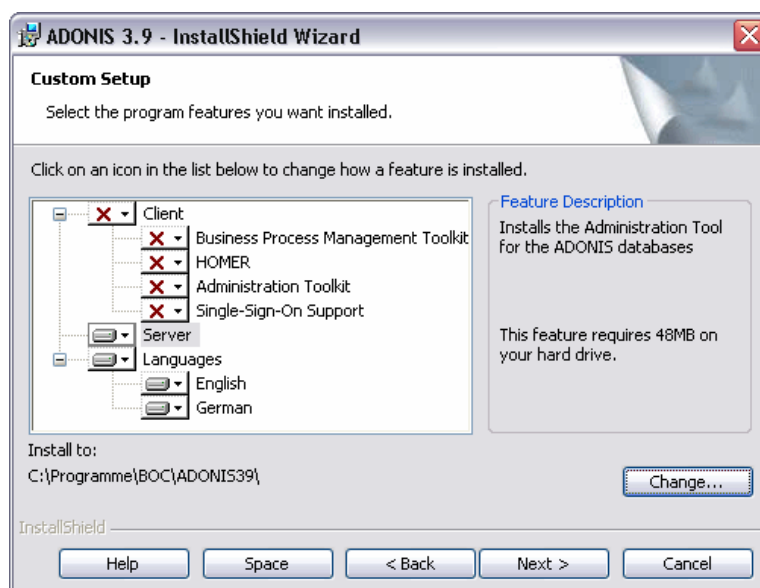
Figure 28: ADOxx Server installation - Component selection

>   **Hint:** The default directory for the installation of ADOxx is "c:\Program files\BOC\ADOxx39EN\".
>
>   To install ADOxx into a different directory click on the button **"Change"** and select the desired directory.

Continue with the installation by clicking on the button **"Next >"**.

In the window "Enter licence data" (see fig. 29) please provide the customer number and the licence key and then click on the OK button.
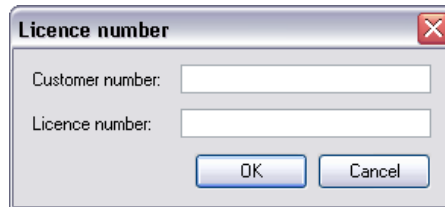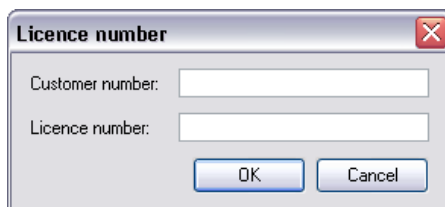


Figure 29: ADOxx Server installation - Enter licence information

In the window "Default language selection" (see fig. 30) choose the default language for ADOxx.

Figure 30: ADOxx Server installation - Select default language

**Hint:** After the successful installation ADOxx will be started with the selected language.

You can switch the language in the ADOxx login (see fig. 43, p. 60). Alternatively, you can enter an argument for the language when starting ADOxx from a command line (areena.exe).

The preparations for the installation are now complete and within the window "Ready to install application" (see fig. 31) you can start the installation or verify the installation settings as well as change them (button "< Back").
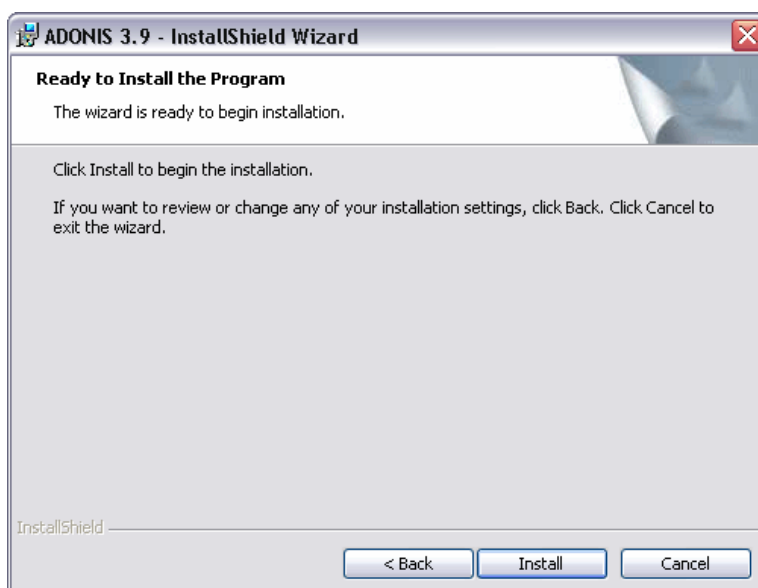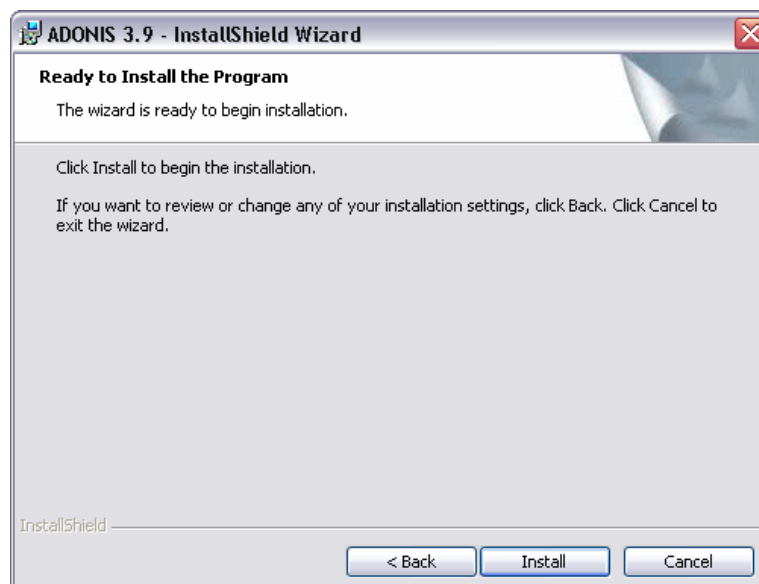


Figure 31: ADOxx Server installation - Ready for installation

Click **"Install"** to start the installation with the defined settings.

During the installation the window "Installation of ADOxx 1.0" (see fig. 32) indicating the progress will be shown.
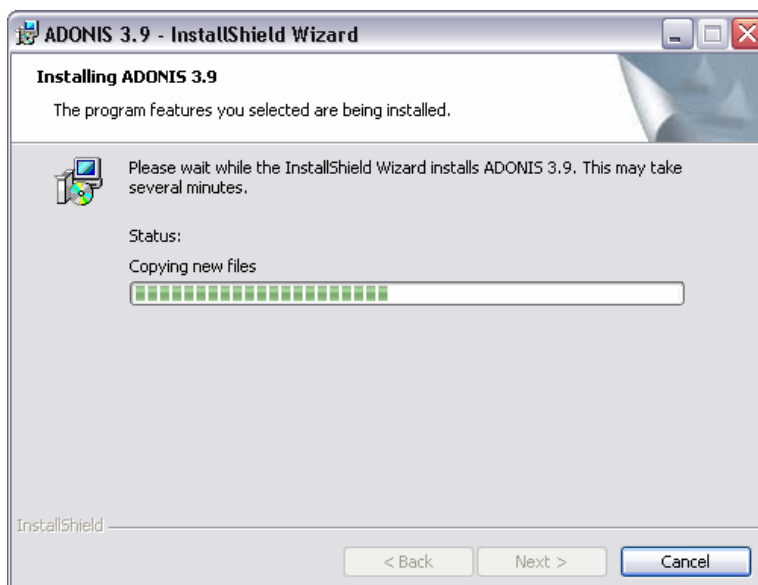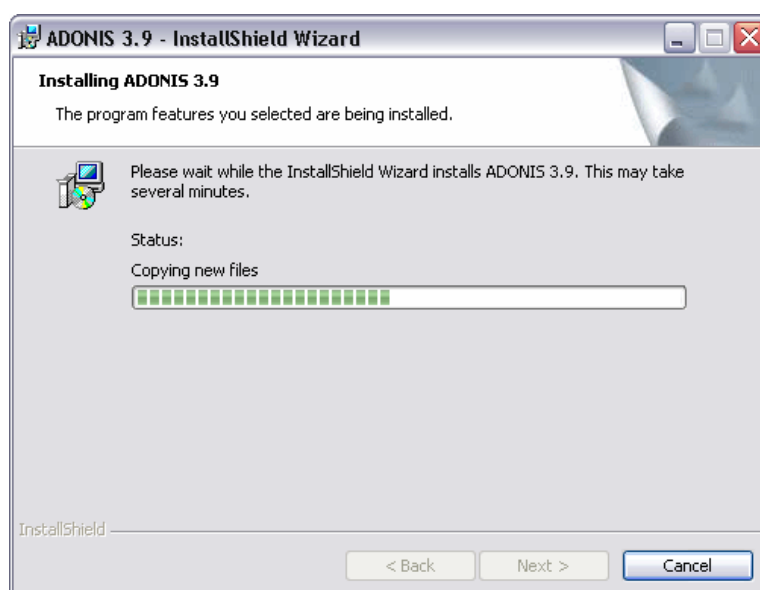
Figure 32: ADOxx Server installation - Status

The successful ADOxx installation will be confirmed with the message  (see fig. 33).
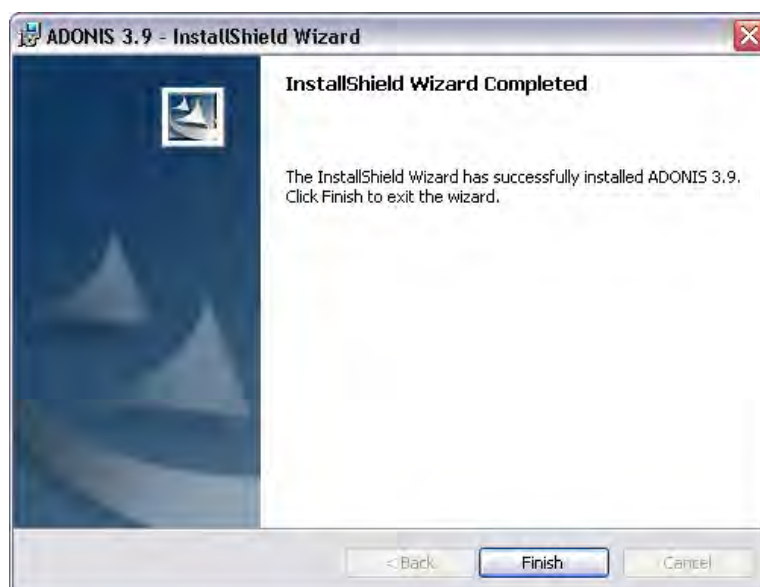


Figure 33: ADOxx Server installation - Installation complete

Click **"Finish"** to complete the installation and exit the installation program.

## 2.3    Client Installation

The installation is started by inserting the installation CD-ROM "ADOxx version 1.0" into the CD-ROM drive and selecting from the **Start menu** the command "Run". Then type the command "<Drive>:\setup\setup.exe"   (replace <Drive> with the name of the CD-ROM drive containing the installation CD-ROM) into the field "Open".

First select the language for the Setup (see fig. 34) and click "OK" to proceed.
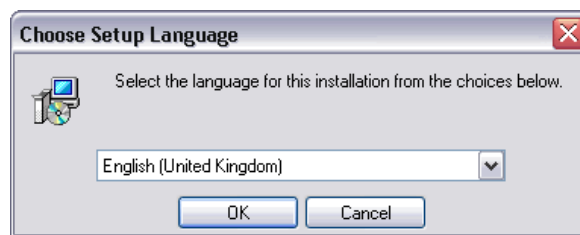
Figure 34: ADOxx Client installation - Select language

The installation program will be loaded and the welcome screen (see fig. 35) with hints for the installation will be shown.



Figure 35: ADOxx Client installation - Welcome

Click **"Next >"** to proceed with the installation. In the next window "User information" (see fig. 36) please enter your user name and organization.
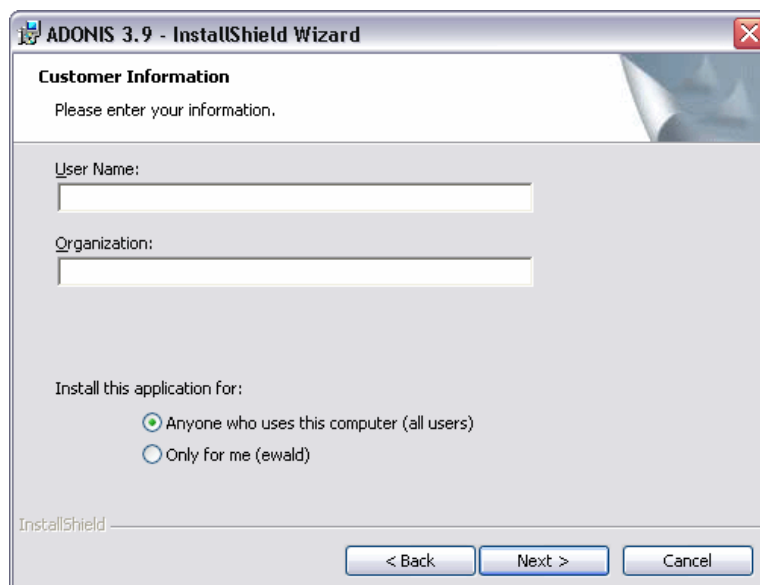


Figure 36: ADOxx Client installation - User information

Furthermore you can define for whom ADOxx will be installed. Click **"Next >"** to proceed.

Within the window "Custom setup" (see fig. 37) you can select the Acquisition Component HOMER to be installed as well as change the installation directory.



Figure 37: ADOxx Client installation - Custom setup

The components selected for installation are marked with the symbol ⬚▾, while components which will not be installed are marked by ✗▾. You can change this selection by clicking on the respective symbol and selecting the required action from the popup menu (see fig. 38).

The component "Language" contains all languages which are available for the user interface of ADOxx as a subcomponent. If you select more than one language you can run ADOxx in one of these languages.

> **Hint:** Running ADOxx in more than one language requires a corresponding licence number.
> For further information please contact your ADOxx consultant.
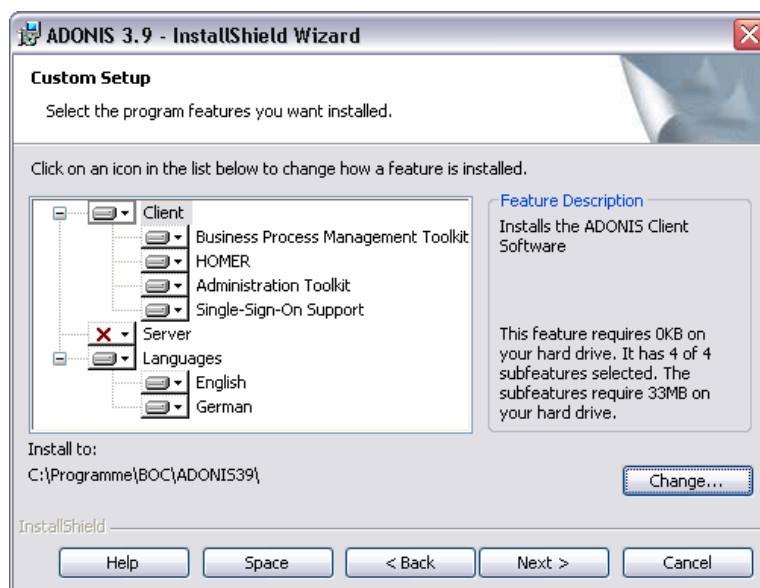


Figure 38: ADOxx Client installation - Component selection

> **Hint:** The default directory for the installation of ADOxx is "c:\Program files\BOC\ADOxx39EN\".
>
> To install ADOxx into a different directory click on the button **"Change"** and select the desired directory.

Continue with the installation by clicking on the button **"Next >"**.

In the window "Default language selection" (see fig. 39) choose the default language for ADOxx.
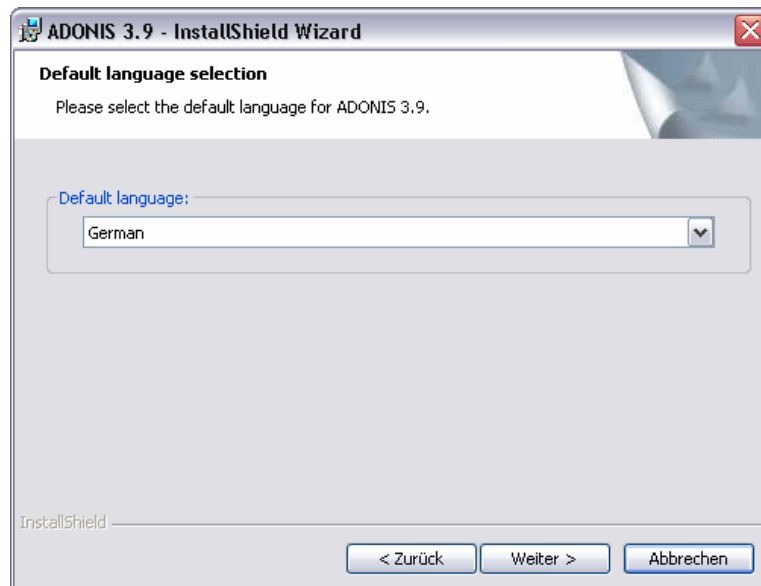


Figure 39: ADOxx Client installation - Select default language

> **Hint:** After the successful installation ADOxx will be started with the selected language.
>
> You can switch the language in the ADOxx login (see fig. 43, p. 60). Alternatively, you can enter an argument for the language when starting ADOxx from a command line (areena.exe).

The preparations for the installation are now complete and within the window "Ready to install application" (see fig. 40) you can start the installation or verify the installation settings as well as change them (button "< Back").

Figure 40: ADOxx Client installation - Ready for installation

Click **"Install"** to start the installation with the defined settings.

During the installation the window "Installation of ADOxx 1.0" (see fig. 41) indicating the progress will be shown.



Figure 41: ADOxx Client installation - Status

The successful ADOxx installation will be confirmed with the message (see fig. 42).
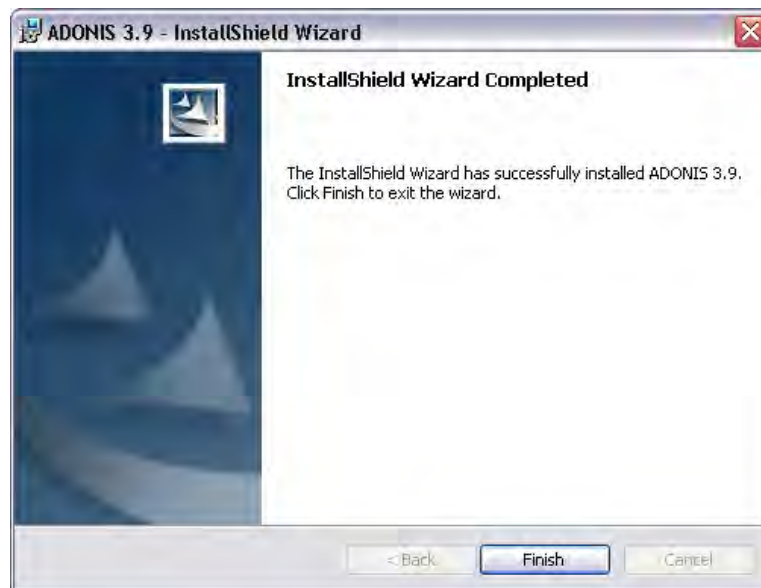
Figure 42: ADOxx Client installation - Installation complete

Click **"Finish"** to complete the installation and exit the installation program.

# 2.4     After the Installation

After having installed the required ADOxx components successfully you should proceed with the following steps:

- Create ADOxx database (see chap. 2.4.1, p. 56) respectively create database connections (see chap. 2.4.2, p. 56) (Client only)

- Enter command line parameters (see chap. 2.4.3, p. 57)

- Create database selection list (see chap. 2.4.4, p. 58)

- Change password (see chap. 2.4.5, p. 58)

- Add new ADOxx users (see chap. 2.4.6, p. 58)

## 2.4.1     Create ADOxx Database

During the installation of ADOxx version 1.0 no ADOxx database will be created. As you will need an ADOxx database for your work with ADOxx you will have to create one (or several) ADOxx databases. A detailed description can be found in the chapter  "Database administration" (see Part IV., p. 74). The Database administration appendix (see chap. 3., p. 157) explains how to create databases for each database system.

> **Hint:** To create an ADOxx database you will need your licence number, which has been delivered together with the customer number.

## 2.4.2     Create ADOxx Database Connection (Client)

> **Hint:** A connection must only be created on the client!

In the Database administration appendix (see chap. 3., p. 157) a description of how to set up ADOxx database connections can be found for the database systems:

● DB2 (see chap. 3.1.1, p. 157)

● INFORMIX (see chap. 3.4.1, p. 165)

● ORACLE (see chap. 3.5.1, p. 168)

● Microsoft SQL Server (see chap. 3.6.1.1, p. 173)

## 2.4.3      Enter Command Line Arguments

By entering arguments containing the parameters user name, password, and database name for the Administration or Modelling Toolkit no log-in screen will be shown during the start of ADOxx.

The arguments are entered in the program properties in the field "Target" after the program name.

The following arguments can be used:

| | |
|---|---|
| **-u<*User name*>** | replace <*User name*> with the name of the ADOxx/system user. |
| **-p<*Password*>** | replace <*Password*> with the password of the ADOxx/system user. |
| **-d<*DB-Name*>** | replace <*DB name*> with the name of the ADOxx database. |
| **-lang<*Language code*>** | replace <*Language code*> either with the Windows Language ID or the ADOxx code of the desired language (see chap. 2., p. 151) for the user interface. |
| | *Note:* For being able to use -lang<*Language code*>, your ADOxx installation must provide this language. If this parameter is not used, ADOxx will start in the basic language "German". |
| **-f<*Font type name*>** | replace <*Font type name*> with the name of the font to be used inADOxx. |
| | The default font for Windows is "MS Sans Serif". |
| **-h<*Font size*>** | replace <*Font size*> with a number between 4 and 48 for the size of the font in ADOxx. |
| | The default font size is 12pt. |
| **-x** | causes that the ADOxx login screen will be shown despite the fact that parameters for the user name (**-u**), the password (**-p**) and the database name (**-d**) are shown. |
| **-winlogin** | commands to log in as the currently active system user. |
| | *Note:* To use the parameter -winlogin the Single-Sign-on functionality has to be installed. |
| **-no_login_screen** | determines that in the case of an unsuccessful login the login screen will not be displayed after the error message. |
| | *Note:* An unsuccessful login means that all the parameters for the user name (**-u**), the password (**-p**) and the database name (**-d**) have been stated but at least one of the parameters was incorrect. |
| **-no_printer_warning** | causes that the error message "No default printer installed" will <u>not</u> be displayed in the case of no default printer being installed. |

**Hint:** If you pass on the user name (-u), the password (-p) and the database name (-d) correctly as parameters, the ADOxx login screen will not be shown.

> **ATTENTION:** Should the user name, password, database name, or font type names contain spaces, the entire parameter has to be put within quotation marks (e.g. "-uUser 1" for the user "User 1").

> **ATTENTION:** User name and password are case sensitive!

> **Hint:** If one of the arguments has not been entered correctly, an appropriate message will be shown as the ADOxx component is started. Then the login window, in which the correct parameters can be entered, will be displayed.

> **Hint:** The argument **-winlogin** can only be used for the log-in as a system user and having ensured that within the respective ADOxx database the Single-Sign-on functionality is enabled.

## 2.4.4 Create Database Selection List

Using a database selection drop-down list you can view all the ADOxx databases available in the ADOxx database Server as an INI file. The advantage is that during the login to ADOxx, a list of all the available databases will be provided and the user can select a database from this list.

The availability of such a list is indicated by the symbol [v] at the end of the input field "Database name".

Create the database selection list by creating a file with the name `adblist.ini` in the ADOxx installation directory and include the names of the databases for the list as follows:

```
<Database name1>;
<Database name2>;
...
```

> **Hint:** Each database name has to be entered into a separate line and the line has to end with a ";" (semi-colon). It is recommended to avoid empty lines.

## 2.4.5 Change Password

> **Hint:** In a Client/Server environment the password can be changed in either the Administration or the Business Process Management Toolkit! The ADOxx administrator should change the password of the default user "Admin".

As the ADOxx administrator you should change the password of the standard user "Admin" (password "password" after the installation) for security reasons in order to avoid unauthorised access to the ADOxx components.

Every user can change his/her password at any time in the ADOxx Administration Toolkit or in the ADOxx Modelling Toolkit.

A description of how passwords can be changed can be found in the appendix to the Administration manual and the appendix to the User manual.

## 2.4.6 Add New ADOxx Users

> **Hint:** Adding new users can only be done by the ADOxx administrator in the Administration Toolkit!

New ADOxx users should be added directly after the installation. During the installation a standard user (user name "Admin", password "password", user group "ADOxx"), is created with all ADOxx rights.

Detailed information of how to add new ADOxx users can be found in the chapter "User Administration" in the administration manual.

## 2.5 Possible Installation Problems

Problems during the installation may occur, if the prerequisites and requirements (see chap. 1.2, p. 26 ) are not (fully) fulfilled (e.g. operating system is not Windows NT Version 4.0, there is not sufficient hard disk storage place, etc.). Therefore please pay attention to the installation prerequisites (see chap. 1.2.3, p. 30), the hardware recommendations (see chap. 1.2.1, p. 26) and the software requirements (see chap. 1.2.2, p. 28), in order to avoid such problems.

Any errors occurring during the installation of ADOxx will be displayed at the time. Please see the online help of the installation software for information on how to handle such errors.

# 3. Starting and Exiting ADOxx

Within the ADOxx program folder you will find the installed ADOxx components:

● Administration Toolkit (Stand-alone/Client installation) and/or

● Modelling Toolkit (Stand-alone/Client installation) as well as

● Database administration (Stand-alone/Server installation).

In addition the ADOxx program folder contains the online documentation for the installed ADOxx components.

The login to ADOxx depends on the settings of the ADOxx database:

● exclusively as ADOxx user (see chap. 3.1, p. 60) or

● alternatively as ADOxx user or as system user with Single-Sign-on functionality (see chap. 3.2, p. 62).

The login to ADOxx WebService is described in chapter "Start ADOxx WebService" (see chap. 3.3, p. 64).

## 3.1 Start ADOxx

Start the Administration or Modelling Toolkit by selecting the corresponding program from the "Start" menu. If you have not previously entered parameters (see chap. 2.4.3, p. 57) in the program settings, the login window (see fig. 43) will appear.
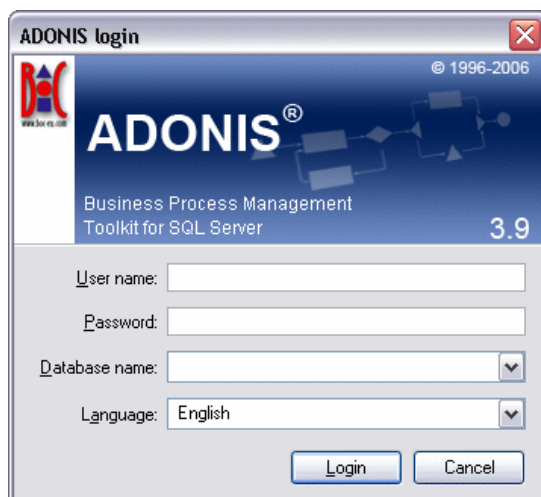


Figure 43: ADOxx login

Enter your user name, your password, the name of the ADOxx database with which you intend to work and click on the button "Login".

**Hint:** Depending on the settings of your ADOxx installation it might be possible to select the name of the database from a list of possible values in a drop-down list. The availability of such a list is indicated by the symbol ⌄ at the end of the input field.

As an alternative, the ADOxx application can be started from a **command line window** (Windows command line prompt). For that, change to the ADOxx installation directory.

By entering "aadma" for the ADOxx Administration Toolkit or "areena" for the ADOxx Modelling Toolkit respectively, the corresponding toolkit is started.

The following parameters can be used:

**-u<*User name*>**   replace <*User name*> with the name of the ADOxx/system user.

**-p<*Password*>**   replace <*Password*> with the password of the ADOxx/system user.

**-d<*DB-Name*>**   replace <*DB name*> with the name of the ADOxx database.

**-lang<*Language code*>** replace <*Language code*> either with the Windows Language ID or the ADOxx code of the desired language (see chap. 2., p. 151) for the user interface.

        <u>*Note:*</u> For being able to use -lang<*Language code*>, your ADOxx installation must provide this language. If this parameter is not used, ADOxx will start in the basic language "German".

**-f<*Font type name*>**  replace <*Font type name*> with the name of the font to be used inADOxx.

        The default font for Windows is "MS Sans Serif".

**-h<*Font size*>**   replace <*Font size*> with a number between 4 and 48 for the size of the font in ADOxx.

        The default font size is 12pt.

**-x**       causes that the ADOxx login screen will be shown despite the fact that parameters for the user name (**-u**), the password (**-p**) and the database name (**-d**) are shown.

**-winlogin**    commands to log in as the currently active system user.

        <u>*Note:*</u> To use the parameter -winlogin the Single-Sign-on functionality has to be installed.

**-no_login_screen**  determines that in the case of an unsuccessful login the login screen will not be displayed after the error message.

        <u>*Note:*</u> An unsuccessful login means that all the parameters for the user name (**-u**), the password (**-p**) and the database name (**-d**) have been stated but at least one of the parameters was incorrect.

**-no_printer_warning** causes that the error message "No default printer installed" will <u>not</u> be displayed in the case of no default printer being installed.

  **Hint:** If you pass on the user name (-u), the password (-p) and the database name (-d) correctly as parameters, the ADOxx login screen will not be shown.

  **ATTENTION:** Should the user name, password, database name, or font type names contain spaces, the entire parameter has to be put within quotation marks (e.g. "-uUser 1" for the user "User 1").

  **ATTENTION:** User name and password are case sensitive!

**Examples:**

```
-uAdmin -ppassword -dadoxxdb
```

logs in the user "Admin" with the password "password" to the ADOxx database "adoxxdb".

```
-uAdmin -ppassword -dadoxxdb -x
```

shows the ADOxx login screen (see fig. 43) where the field "User name" contains the value "Admin", the field "Password" the encrypted string "password" and the field "Database name" the value "adoxxdb".

```
"-uUser 1" "-pUser 1" -ddatabase -h14
```

logs in the user "User 1" with the password "User 1" to the ADOxx database "database" using a font size of 14 pt in the ADOxx application window.

## 3.2    Start ADOxx (Single-Sign-on)

> **Hint:** The functionality for Single-Sign-on, i.e. the login to ADOxx as a system user without providing your username and password is only possible with Windows XP/2000/NT 4.0 and has to be enabled for the respective ADOxx database. For further information please contact your ADOxx consultant.

Start the Administration or Modelling Toolkit by selecting the corresponding program from the "Start" menu.



Figure 44: ADOxx login (Single-Sign-on)

To log into ADOxx you can choose from the following options:

1.    as the **current system user**,

2.    as a **different system user** or

3.    as ordinary **ADOxx user**.

As a **current system user** enter the name of the ADOxx database you want to work with, select your desired user interface language and the option "as system user" and click on the button "Login" (it is not necessary to provide a user name or password).

As **different system user** enter your system user name, your system password and the name of the ADOxx database you want to work with. Then choose your desired user interface language, select the option "as system user" and click on the button "Login".

> **Hint:** The login as a different system user is only possible within the current domain.

> **Hint:** To log-in as a system user you will have to arrange for your system user information to be imported into the ADOxx user management. Please contact your ADOxx administrator if necessary.

As **ADOxx user** enter your ADOxx user name, your ADOxx password and the name of the ADOxx database you want to work with. Choose a user interface language, select the option "as ADOxx user" and click on the button "Login".

As an alternative, the ADOxx application can be started from a **command line window** (command line prompt when using Windows). For that, change to the ADOxx installation directory.

By entering "aadma" for the ADOxx Administration Toolkit or "areena" for the ADOxx Modelling Toolkit respectively, the corresponding toolkit is started.

The following parameters can be used:

| | |
|---|---|
| **-u<*User name*>** | replace <*User name*> with the name of the ADOxx/system user. |
| **-p<*Password*>** | replace <*Password*> with the password of the ADOxx/system user. |
| **-d<*DB-Name*>** | replace <*DB name*> with the name of the ADOxx database. |
| **-lang<*Language code*>** | replace <*Language code*> either with the Windows Language ID or the ADOxx code of the desired language (see chap. 2., p. 151) for the user interface. |
| | *Note:* For being able to use -lang<*Language code*>, your ADOxx installation must provide this language. If this parameter is not used, ADOxx will start in the basic language "German". |
| **-f<*Font type name*>** | replace <*Font type name*> with the name of the font to be used inADOxx. |
| | The default font for Windows is "MS Sans Serif". |
| **-h<*Font size*>** | replace <*Font size*> with a number between 4 and 48 for the size of the font in ADOxx. |
| | The default font size is 12pt. |
| **-x** | causes that the ADOxx login screen will be shown despite the fact that parameters for the user name (**-u**), the password (**-p**) and the database name (**-d**) are shown. |
| **-winlogin** | commands to log in as the currently active system user. |
| | *Note:* To use the parameter -winlogin the Single-Sign-on functionality has to be installed. |
| **-no_login_screen** | determines that in the case of an unsuccessful login the login screen will not be displayed after the error message. |
| | *Note:* An unsuccessful login means that all the parameters for the user name (**-u**), the password (**-p**) and the database name (**-d**) have been stated but at least one of the parameters was incorrect. |
| **-no_printer_warning** | causes that the error message "No default printer installed" will <u>not</u> be displayed in the case of no default printer being installed. |

> **Hint:** If you pass on the user name (-u), the password (-p) and the database name (-d) correctly as parameters, the ADOxx login screen will not be shown.

> **ATTENTION:** Should the user name, password, database name, or font type names contain spaces, the entire parameter has to be put within quotation marks (e.g. "-uUser 1" for the user "User 1").

> **ATTENTION:** User name and password are case sensitive!

**Examples:**

```
-dadoxxdb -winlogin
```

logs in the current system user to the ADOxx database "adoxxdb".

```
-uAdministrator -ppassword -dadoxxdb -winlogin
```

logs in a different system user "Administrator" with the system password "password" to the ADOxxdatabase "adoxxdb".

```
-uAdmin -ppassword -dadoxxdb
```

logs in the user "Admin" with the password "password" to the ADOxx database "adoxxdb".

```
-uAdmin -ppassword -dadoxxdb -x
```

shows the ADOxx login screen (see fig. 43) where the field "User name" contains the value "Admin", the field "Password" the encrypted string "password" and the field "Database name" the value "adoxxdb".

```
"-uUser 1" "-pUser 1" -ddatabase -h14
```

logs in the user "User 1" with the password "User 1" to the ADOxx database "database" using a font size of 14 pt in the ADOxx application window.

# 3.3 Start ADOxx WebService

Start the ADOxx WebServer application from a **command line window** (Windows command line prompt) out of the ADOxx installation directory with the following command:

```
  echo CC "AdoScript" SERVICE start port:80 | areena -u<user name> -p<password> -
d<DB name> -e -no_dialogs
```

Replace *<user name>* with the name of the ADOXX/system user, *<password>* with the password of the ADOXX/system user and *<DB name>* with the name of the ADOXX database.

> **Hint:** This command only starts the ADOxx WebServcie. Additional functionality for applying the ADOxx WebServe has to be implemented accordingly.

# 3.4 Exit ADOxx

To exit the Administration or Business Process Management Toolkit double-click the Exit button (left hand side in the window bar) or click the "x" button on the top right hand side. Alternatively you can select the menu on the left hand side of the menu bar and choose the item "Exit ADOxx". After a query to confirm your choice ADOxx will be closed.

# 4. Install Additional Components

If not all components have been installed during the initial installation, it is possible to install additional ADOxx components (in both the Administration and the Business Process Management Toolkit) at any time.

> **Hint:** The installation of additional components in a Client/Server environment is only possible on the client.

To install additional components you will need the installation medium "ADOxx version 1.0".

The installation of additional components follows the same pattern as a new installation of ADOxx. Therefore please follow the instructions in the chapter "Client installation" (see chap. 2.3, p. 51).

> **Hint:** The additional installation of the Single-Sign-on support for ADOxx MSDE databases is described in chapter "Install Single-Sign-on functionality later" (see chap. 5.3, p. 102).

# 5.   Install HOMER

The installation is started by inserting the installation CD-ROM "ADOxx version 1.0" into the CD-ROM drive and selecting from the **Start menu** the command "Run". Then type the command `<Drive>:\setup\homsetup.exe`" (replace <Drive> with the name of the CD-ROM drive containing the installation CD-ROM) into the field "Open" and click the OK button .

> **Hint:** If HOMER is already installed on the Client the message "The system administrator has set guidelines to prevent this installation" will be shown. Before re-installing HOMER you should uninstall the already existing version of HOMER.

The installation program will be loaded and the welcome screen (see fig. 45) with hints for the installation will be shown.



Figure 45: ADOxx HOMER installation - Welcome

Click **"Next >"** to proceed with the installation. In the next window "Customer information" (see fig. 46) please enter your user name and organization.
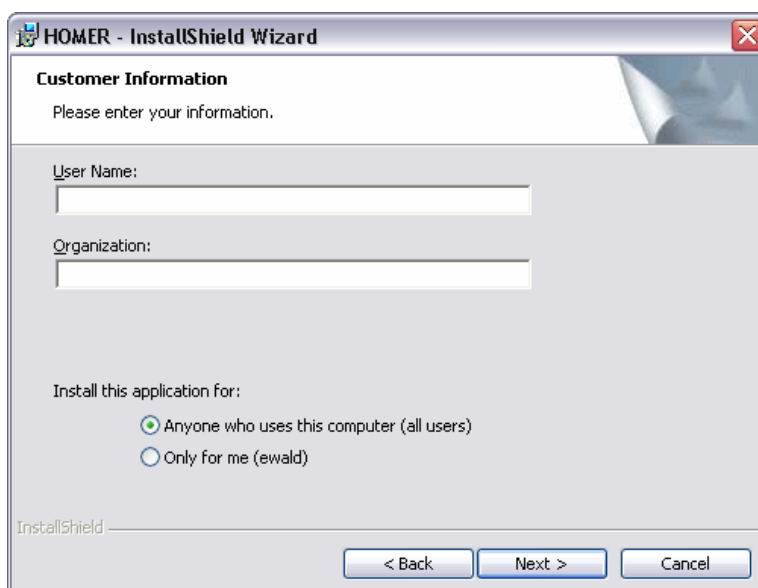
Figure 46: ADOxx HOMER installation - Customer information

Furthermore you can define for whom HOMER will be installed. Click **"Next >"** to proceed.

The window "Custom setup" (see fig. 47) appears:
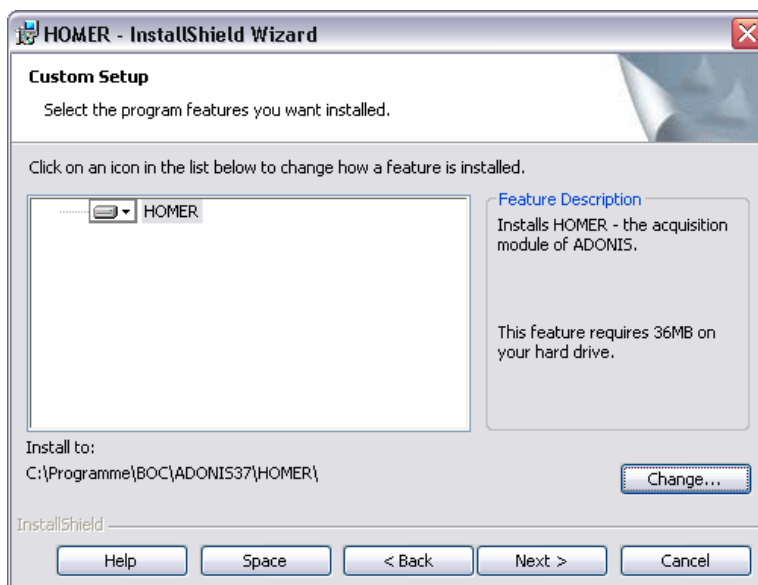


Figure 47: ADOxx HOMER installation - Custom setup

> **Hint:** The default directory for the installation of HOMER is "c:\Program files\BOC\ADOxx39EN\HOMER\".
>
> To install HOMER into a different directory click on the button **"Change"** and select the desired directory.

Continue with the installation by clicking on the button **"Next >"**.

The preparations for the installation are now complete and within the window "Ready to install application" (see fig. 48) you can start the installation or verify the installation settings as well as change them (button "< Back").

Figure 48: ADOxx HOMER installation - Ready for installation

Click **"Install"** to start the installation with the defined settings.

During the installation the window "Installation of HOMER" (see fig. 49) indicating the progress will be shown.



Figure 49: ADOxx HOMER installation  - Status

The successful HOMER installation will be confirmed with the message  (see fig. 50).
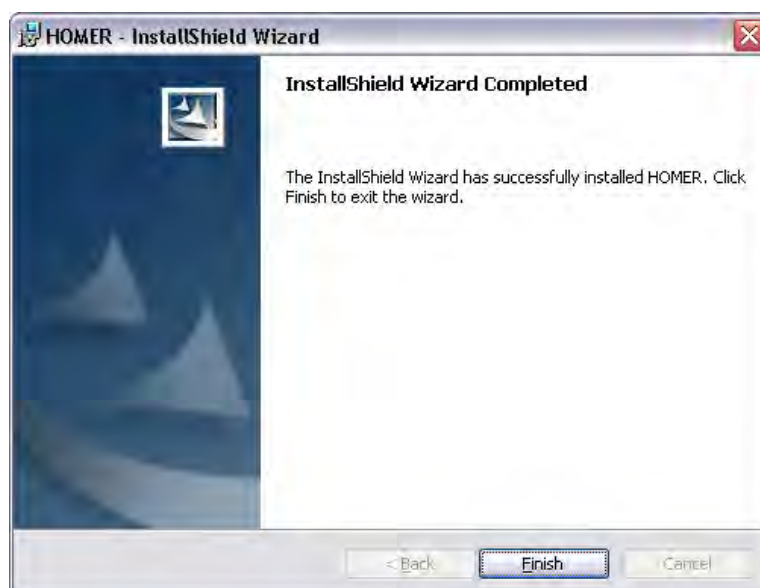
Figure 50: ADOxx HOMER installation - Installation complete

Click **"Finish"** to complete the installation and exit the installation program.

# Part III
# Uninstalling

ADOxx offers the possibility to uninstall ADOxx version 1.0 with the program "Uninstall". This might be necessary when using ADOxx on a different PC and ADOxx is not needed any more on the current PC.

# 1.     Preparation for Uninstalling

**Preparation for un-installation (Stand-alone)**

The following steps are recommended when uninstalling ADOxx (stand-alone version), as once the un-installation has been completed, no access to the ADOxx users, application libraries and ADOxx models in the ADOxx database will be possible.

- Export any user-specific application libraries within the ADOxx database into ABL files. After a new installation of ADOxx (stand-alone) version 1.0 you will be able to re-import them (see Administration manual, chapter "Library Management").

- Export all models and application models within the ADOxx databases into ADL files. This ensures all your models are saved and can be re-imported after a new installation of ADOxx (stand-alone) version 1.0, be re-imported (see Administration manual, chapter "Model Management").

- Export all users within ADOxx databases into UDL files. This ensures that all ADOxx users are saved and can be re-imported after a new installation of ADOxx (stand-alone) version 1.0 (see Administration manual, chapter "User administration").

- Export all changed or newly created HOMER 3.7 scenarios into XLS files or save the file HOMER.XLS from the HOMER installation directory. This ensures that all HOMER 3.7 acquisition scenarios are saved and can be re-imported after a new installation of HOMER (see User's manual, chapter "HOMER scenarios administration").

- Start the un-installation according to the steps described in the chapter "Uninstall ADOxx for Windows (Stand-alone)" (see chap. 2., p. 72).

  **ATTENTION:**     After ADOxx version 1.0 has been uninstalled, the ADOxx Database maintenance services will no longer be available.

**Preparation for un-installation (Client/Server)**

Uninstalling the <u>client version</u> of ADOxx has no influence on the ADOxx database. Therefore, all data will remain in the ADOxx database and it will still be possible to access models from another computer where ADOxx is still installed.

  **Hint:** If ADOxx is only installed on the client the preparatory steps described above must be carried out before un-installation.

  **Hint:** If HOMER scenarios were changed or newly created with the HOMER 3.7 version installed on the client these scenarios should be saved into XLS files.

While uninstalling a <u>server version</u> the programs of the ADOxx Database maintenance are deleted. However any previously created ADOxx databases will remain.

  **Hint:** The ADOxx databases can only be deleted by the database administrator.

  **ATTENTION:**     If you uninstall ADOxx on the ADOxx server, it will no longer be possible to use the ADOxx database administration services.

# 2. Uninstall ADOxx

Open the folder "Software" in the Windows control panel.

All installed applications will now be listed (see fig. 51).
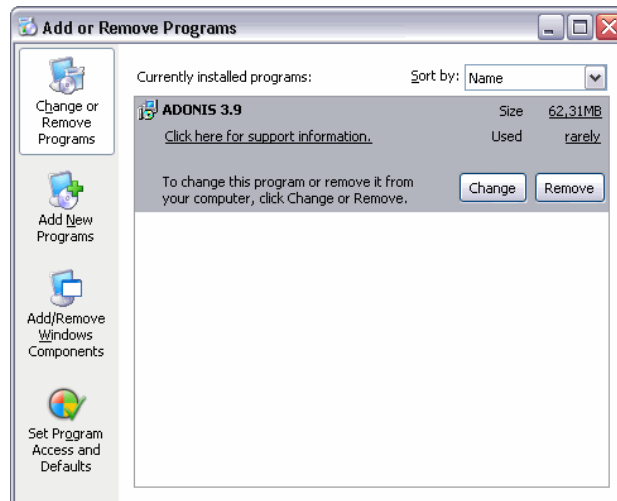


Figure 51: ADOxx uninstall - Windows control panel

Select the program "ADOxx", the item is expanded and the buttons "Change" and "Remove" are shown. Click on the button **"Remove"** to start with the un-installation.

Confirm the security query with **"Yes"**. After ADOxx has been uninstalled the list in the window "Software" will be updated.

Select **"Close"** to close the window.

> **Hint:** Uninstalling ADOxx has no impact on the existing ADOxx databases, i.e. the ADOxx databases are not deleted and the models in your ADOxx database will not be affected.

> **Hint:** If HOMER had been installed during the ADOxx installation HOMER will also be automatically uninstalled during this process.

> **Hint:** If MSDE had been installed during the ADOxx MSDE installation it will also be automatically uninstalled during this process.

# 3.    Uninstall HOMER

Open the folder "Software" in the Windows control panel.

All installed applications will now be listed (see fig. 52).
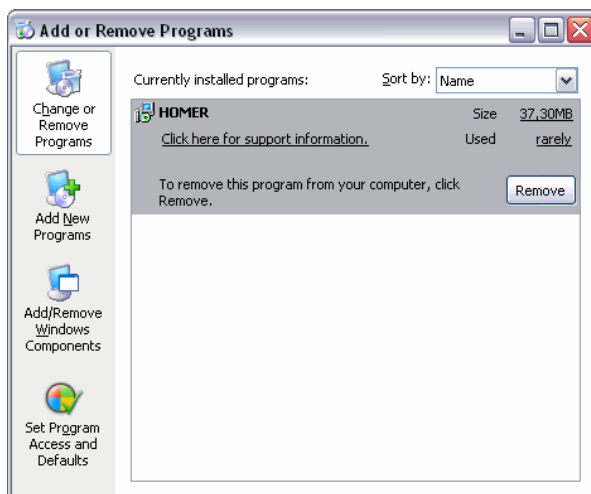


Figure 52: HOMER uninstall - Windows control panel

> **Hint:** HOMER will be listed only when HOMER was installed separately (not within the ADOxx installation).

Select the program "HOMER", the item is expanded and the button "Remove" is shown. Click on the button **"Remove"** to start with the un-installation.

Confirm the security query with **"Yes"**. After HOMER is uninstalled the list in the window "Software" will be updated.

Select **"Close"** to close the window.

> **Hint:** When uninstalling HOMER the HOMER acquisition scenarios will also be automatically un-installed during this process.

# Part IV

# Database Administration

ADOxx enables you to install several ADOxx databases. This means for example that you can create an ADOxx database for each individual project on which you are working.

By using the ADOxx Database maintenance software, the database administrator can:

- create ADOxx databases for the database systems:
    - DB2 (see chap. 1.1, p. 75)
    - INFORMIX (see chap. 2.1, p. 84)
    - ORACLE (see chap. 3.1, p. 88)
    - Microsoft SQL Server (see chap. 4.1, p. 92)
- backup DB2 Databases (see chap. 1.2, p. 81), and
- restore DB2 Databases (see chap. 1.3, p. 82)

The functions of the ADOxx Database maintenance will be started when starting the appropriate program in the ADOxx program folder.

The online documentation is also found in the ADOxx program folder beneath the programs for the database administration.

# 1. Database system "DB2"

When using the database system "DB2" it is possible to set up (see chap. 1.1.3, p. 76) an ADOxx database in an existing (empty) DB2 database.

Alternatively you can create (see chap. 1.1.4, p. 79) both a DB2 database and the ADOxx database by using applications provided with ADOxx.

In addition an ADOxx DB2 database can be backed up (see chap. 1.2, p. 81) and restored (see chap. 1.3, p. 82) using the ADOxx Database maintenance.

## 1.1 Creating an ADOxx DB2 Database

Before creating an ADOxx database, please read the Hardware recommendations (see chap. 1.1.1, p. 75) concerning the buffer space on the hard disk. Additionally ensure that the Software Requirements (see chap. 1.1.2, p. 75) are met.

The ADOxx DB2 database can be

- created in a previously prepared DB2 database (see chap. 1.1.3, p. 76) or

- a completely new database (see chap. 1.1.4, p. 79).

### 1.1.1 Hardware Recommendations

A successful ADOxx database installation requires at least 20 MB of empty buffer space on the DB2 Server. The space needed when generating ADOxx objects and data (models, users and libraries) cannot be specified more accurately as the ADOxx database extends dynamically when ADOxx is used. The range of extension depends on the number and size of the models. For 1000 models about 400-700 MB are needed, depending on the model type definition and the average model size.

### 1.1.2 Software Requirements

<u>Server</u>

The DB2 UDB software (version 5.2/6.x/7.x/8.x) must be installed on the server.

A user with the name "ADONIS" and the password "BPMS" must be created. This password must not be changed in the future. Therefore system-specific options such as "User has to change password on first login" (Windows XP/2000/NT) must be deactivated.

> **Hint:** The password for DB login can be changed with the program "ACLOG.EXE" (in directory \TOOLS on the installation CD-ROM). For more details please refer to the documentation in the file "ACLOG for DB2.PDF (also in directory \TOOLS).

The database configuration parameter "AUTHENTICATION" must be set to the value "SERVER" (as per the standard settings).

To enable database access from remote clients, the DB2 manager must be configured to support the transport protocol used (see Set-up network connections (see chap. 3.1.1, p. 157)).

### Client

The DB2 Client Application Enabler (up to version 5.2) or DB2 Run-Time Client or DB2 Administration Client (version 6 or higher) in a version corresponding to the version used on the DB2 server (see above) must be installed on the client.

For the multi-user installation or when the ADOxx software and DB2 server will be running on separate computers, the DB2 server must be catalogued as a node (see chap. 3.1.1.2, p. 158); initially on the computer on which the database installation program will be started, afterwards on all clients.

If the DB2 Server is located on a remote computer, the DB2 manager must be catalogued as a node on the client, i.e. the network connection has to be set up (see chap. 3.1.1, p. 157).

### Stand-alone

The DB2 UDB software (5.2/6.x/7.x/8.x - PE or Server) must be installed.

For information concerning the DB2 database for Windows NT/95 please see chapters "DB2 for Windows NT - Stand-alone" (see chap. 3.2, p. 164) and "DB2 for Windows 95 - Stand-alone" (see chap. 3.3, p. 165).

## 1.1.3    Creating an ADOxx database within a previously prepared DB2 database

> **Hint:** Alternatively to the described procedure, the DB2 database can be created and configured automatically using the ADOxx Database installation program. (See next chapter "Creating a new ADOxx DB2 database" (see chap. 1.1.4, p. 79).)

### Prerequisites:

It is highly recommended that an empty DB2 database is used for the ADOxx database installation (i.e. this database should contain no tables or data belonging to any other database applications). The approach for creating a DB2 database and preparing it for an ADOxx database installation is described in the appendix "Database setup" (see chap. 3.1.2, p. 159).

The DB2 database used for the ADOxx DB installation must be catalogued on the client. Information related to the cataloguing of a database can be found in the appendix "Catalogue a database" (see chap. 3.1.2.1, p. 160).

At least two concurrent connections to the database are necessary for the ADOxx database installation. Two connections to the database are needed for each active ADOxx application. Therefore the DB configuration parameter "MAXAPPLS" (pre-set value 20) must be set to a value equalling twice the number of ADOxx users.

A list of recommended settings for additional database configuration parameters can be found in the appendix "Recommended database configuration parameters" (see chap. 3.1.3, p. 161).

When using version 2.1.1 or 2.1.2 of the DB2 products, the CLI-packages must be created and bound and the user "ADONIS" must be given rights to execute them. This can be done with the following statement:

```
BIND <db2path>\BND\@DB2CLI.LST GRANT ADONIS
```

For further details please see the appendix "Binding CLI packages" (see chap. 3.1.2.2, p. 160).

### Create the ADOxx database:

Once the program "Create an ADOxx database" has been started, the window "Create ADOxx database" (see fig. 53) will appear.

Figure 53: Create ADOxx DB2 database within a previously prepared DB

To create an ADOxx database within a previously prepared DB2 database, the option "Create new database" must be deactivated. The following steps should be carried out:

**Database name:** Input the catalogued name of the DB2 database which had been prepared for the ADOxx database installation.

**Licence number:** Input the licence number. You can find the licence number together with the customer number on an information sheet that has been delivered with the installation kit.

**Database system:** The pre-selected entry "DB2" in the field "Database system" does not need to be changed.

   **Hint:** If you are using more than one database system with ADOxx then a list of all those database systems will be found in this listbox.

**Single-Sign-on installation:** Select whether the ADOxx database should support Single-Sign-on.

**"Without Single-Sign-on"** creates a new ADOxx database without Single-Sign-on functionality.

**"With Single-Sign-on"** creates a new ADOxx database supporting Single-Sign-on functionality.

**"Install now"** extends an existing ADOxx database (created with ADOxx 3.5x or 3.6) to support Single-Sign-on. In addition functionality in the ADOxx User management in the ADOxx Administration Toolkit (temporarily deletion of ADOxx users, show the date of last login of ADOxx users) will be enabled.

**Single-Sign-on type:** Within this field please select the type of user administration in your system environment.

**"WINNT"** has to be selected when the domain control and the user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used).

**"Active-Directory"** has to be selected when the domain control and the user administration in the Windows network are based on an Active Directory system.

**Create new database:** The check-box must be empty.

**Create tables:** Determines whether tables and other database objects shall be created by the program (check-box ticked) or if they are required

and the initialisation of the database is started immediately (check-box not enabled).

**Hint:** Please pay attention to the software prerequisites in order to use **Single-Sign-on functionality** in ADOxx.

**Hint:** If the **Option "Create tables"** is not activated, then the ADOxx database objects must previously have been created per SQL (DDL) script. For this, the files "adonis37.ddl" and "adonis37.dcl" are provided in the sub directory "dbinfo" of the installation CD. This type of installation installs the database objects initially without the functionality allowing to create operating system users in ADOxx and use them to login to ADOxx. To enable the Single-Sign-on functionality with this type of installation the program "Create ADOxxDB" has to be run with the Single-Sign-on installation set to "Single-Sign-on ONLY".

After all necessary entries have been completed, click on the OK button to start creating the ADOxx database.

It is also possible to install the ADOxx database from a command line window. Change into the directory into which ADOxx has been installed. Then enter the following statement:

```
adbinst [-d<database name>] [-l<licence number>]

        [-c-]

        [-i<Single-Sign-on installation>] [-y<Single-Sign-on type>]

        [-lang<language code>]
```

Replace **<database name>** with the name of the ADOxx database to be created and **<licence number>** with the licence number delivered.

With the parameter **-c** it is possible to distinguish between the case of creating the ADOxx database within an existing DB2 database ("-c-") and creating a new DB2 database ("-c+") for this purpose.

Replace **<Single-Sign-on installation>** with **"SSO"** to create a new ADOxx database supporting Single-Sign-on, **"NO_SSO"** to create a new ADOxx database without Single-Sign-on functionality or **"ONLY_SSO"** to extend an existing ADOxx database with Single-Sign-on functionality.

Replace **<Single-Sign-on type>** with **"WINNT"**, if the domain control and user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used) or **"AD"**, if the domain control and user administration in the Windows network are based on an Active Directory system.

Replace **<language code>** with the Windows language ID or Windows locale of the corresponding language (see chap. 2., p. 151) to show the window "Create ADOxx database" using the selected language.

**Hint:** If you enter fewer parameters than expected or invalid parameters, the window "Create ADOxx database" (see fig. 53, p. 77) will be shown and you will be able to make the required changes.

**ATTENTION:** The typed language code had to be selected during the ADOxx installation and the ADOxx licence number had to be configured accordingly to consider this language.

Once the installation has been successfully completed an appropriate message will be shown.

**Hint:** During the installation of an ADOxx database the ADOxx-Default-Library with the standard user "Admin" and the standard user group "ADOxx" will be automatically installed. A detailed description of the ADOxx-Default-Library can be found in the BPMS modelling method manual.

# 1.1.4 Creating a new ADOxx DB2 database

Once the program "Create an ADOxx database" has been started, the window "Create ADOxx database" (see fig. 54) will appear.



Figure 54: Create new ADOxx DB2 database

Enter the following information into the corresponding fields in the dialogue window:

**SYSADM user:**        Enter the name of a user, who has DB2 system administration rights both on the server and the client.

**Password:**        Enter the password of the user.

**Database name:**        Enter a name for the new ADOxx database. The name must be unique and must consist of at least three and at most eight characters.

        If the ADOxx DB installation program is not started from the server, you will have to put the catalogued name of the node followed by a colon (**:**) in front of the database name.

        **Example:** The entry "DB2:ADOxxDB" creates a database named "ADOxxDB" on the server. The server is catalogued as a node with the name "DB2".

**Licence number:**        Enter your licence number. You will find the licence number together with the customer number on an information sheet that has been delivered with the installation kit.

**Database system:**        The pre-selected entry "DB2" in the field "Database system" does not need to be changed.

    **Hint:** If you are using more than one database system with ADOxx, those database systems will also be found within the list.

**Single-Sign-on installation:**  Select whether the ADOxx database should support Single-Sign-on.

        **"Without Single-Sign-on"** creates a new ADOxx database without Single-Sign-on functionality.

        **"With Single-Sign-on"** creates a new ADOxx database supporting Single-Sign-on functionality.

        **"Install now"** extends an existing ADOxx database (created with ADOxx 3.5x or 3.6) to support Single-Sign-on. In addition functionality in the ADOxx User management in the ADOxx Administration Toolkit

(temporarily deletion of ADOxx users, show the date of last login of ADOxx users) will be enabled.

**Single-Sign-on type:** Within this field please select the type of user administration in your system environment.

**"WINNT"** has to be selected when the domain control and the user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used).

**"Active-Directory"** has to be selected when the domain control and the user administration in the Windows network are based on an Active Directory system.

**Create new database:** The check-box must be activated (enabled).

Once all necessary entries have been completed, click on the OK button to start creating the ADOxx database.

It is also possible to create the ADOxx database from a command-line window. Change into the directory in which ADOxx has been installed. Then enter the following statement:

```
adbinst [-u<user name>] [-p<password>]

        [-d<database name>] [-l<licence number>]

        [-c-]

        [-i<Single-Sign-on installation>] [-y<Single-Sign-on type>]

        [-lang<language code>]
```

Replace **<user>** with the name of the user possessing DB2 system administration rights, **<password>** with the password of the user, **<database name>** with the name of the ADOxx database to be created and **<licence number>** with the licence number delivered.

Using the parameter **-c,** it is possible to distinguish between the case of creating the ADOxx database within an existing DB2 database ("-c-") and creating a new database ("-c+") for this purpose. The parameter "-c+" for creating an ADOxx database and a DB2 database can be omitted, as this is the default.

Replace **<Single-Sign-on installation>** with **"SSO"** to create a new ADOxx database supporting Single-Sign-on, **"NO_SSO"** to create a new ADOxx database without Single-Sign-on functionality or **"ONLY_SSO"** to extend an existing ADOxx database with Single-Sign-on functionality.

Replace **<Single-Sign-on type>** with **"WINNT"**, if the domain control and user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used) or **"AD"** if the domain control and user administration in the Windows network are based on an Active Directory system.

Replace **<language code>** with the Windows language ID or Windows locale of the corresponding language (see chap. 2., p. 151) to show the window "Create ADOxx database" using the selected language.

> **Hint:** If you enter fewer parameters than expected or invalid parameters, the window "Create ADOxx database" (see fig. 54, p. 79) will be shown and you will be able to make the required changes.

> **ATTENTION:** The typed language code had to be selected during the ADOxx installation and the ADOxx licence number had to be configured accordingly to consider this language.

Once the installation has been successfully completed an appropriate message will be shown.

Hint: During the installation of an ADOxx database the ADOxx-Default-Library with the standard user "Admin" and the standard user group "ADOxx" will be automatically installed. A detailed description of the ADOxx-Default-Library can be found in the BPMS modelling method manual.

# 1.2    Backing up an ADOxx DB2 database

You can backup an ADOxx database by starting the program "Backup an ADOxx database".

The window "Backup ADOxx database" will now appear (see fig. 55).



Figure 55: Backup ADOxx DB2 database

Enter the following information into the corresponding fields in the dialogue window:

**SYSADM user:**          Enter the name of a user, who has DB2 system administration rights on the database server.

**Password:**            Enter the password of the user.

**Database name:**       Enter the name of the ADOxx database to be backed up.

**Path:**                Enter the drive and directory to which the ADOxx database should be saved.

Once all necessary entries have been completed, click the OK button to start backing up the ADOxx database.

It is also possible to backup the ADOxx database from the command line. Change into the directory in which ADOxx was installed. Then enter the following statement:

```
adbback [<database name>] [<user>] [<password>] [<path>]

        [-lang<language code>]
```

Replace **<database name>** with the name of the ADOxx database to be saved, **<user>** with the name of a user possessing administration rights on the server and **<password>** with the password of the user. Instead of **<path>** enter the drive and directory in which the backup should be stored.

Replace **<language code>** with the Windows language ID or Windows locale of the corresponding language (see chap. 2., p. 151) to show the window "Backup ADOxx database" using the selected language.

Hint: Mind the correct order of the parameters (i.e. database name - user - password - path). If you enter fewer than these expected four parameters or invalid parameters than the window "Backup ADOxx database" (see fig. 55, p. 81) will be shown where you will be able to make any changes required.

ATTENTION: The typed language code had to be selected during the ADOxx installation and the ADOxx licence number had to be configured accordingly to consider this language.

During the backup a status window will be displayed to keep you informed about progress.

After the backup has been completed successfully an appropriate message will be shown - this message will include a time-stamp which identifies the backup.

Write down the time-stamp shown (14-digit number) and close the window by clicking the OK button or pressing "Enter".

ATTENTION: If necessary, the backed up database can be restored (see chap. 1.3, p. 82 ) using the program "ADOxx Restore a database".

The backup of the ADOxx database can be found in the following directory:

```
<path>\<database name>.0\db2.0\<date>\<time>.001
```

<path> represents the path (drive and possibly directory), which was previously entered into the field "Path", <database name> stands for the name of the ADOxx database backed up, <date>equals the system date (format: YYYYMMDD) as at the day of the backup and <time> the system time (format: hhmmss) at the moment of the backup.

Hint: The time-stamp is composed of <date> and <time>.

For example, the time-stamp 20000621174137 implies, that the backup of the ADOxx database was carried out on June 21st 2000 at 17:41:37. Therefore the backup file has the name 174137.001 and is situated in the path as entered by the user within the directories:

\ADOxxDB.0\db2.0\20000621\

## 1.3 Restoring an ADOxx DB2 database

An ADOxx database can be restored by using the program "Restore an ADOxx database".

The window "Restore ADOxx database" appears once the above program has been started (see fig. 56).
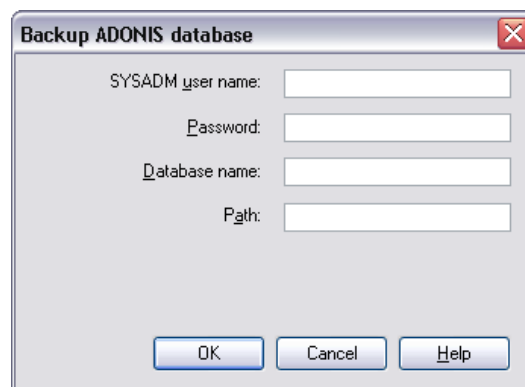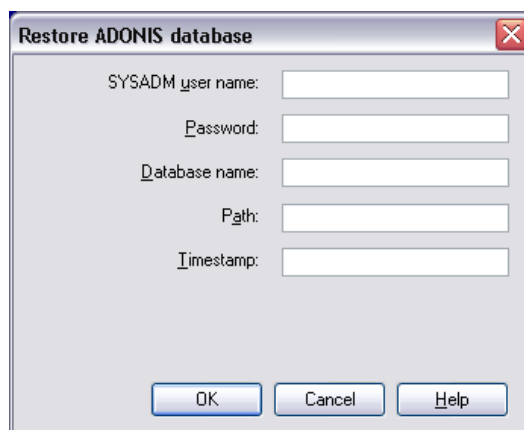


Figure 56: Restore ADOxx DB2 database

The following information should be entered into the corresponding fields in the dialogue window:

**SYSADM user:**                Enter the name of a user, who has administration rights on the database server.

**Password:**                Enter the password of the user.

**Database name:**           Enter the name of the ADOxx database to be restored.

**Path:**                Enter the drive and directory in which the backup can be found.

**Timestamp:**             Enter the time-stamp that was displayed after the backup (see chap. 1.2, p. 81) of the ADOxx database.

This time-stamp can be easily derived from the date and time of the saved ADOxx database (time stamp = date and time; format: YYYYMMDDhhmmss). The backup file of the ADOxx database is located in the path that was entered by the user within the following directory structure:

```
<path>\<database name>.0\db2.0\<date>\<time>.001
```

<path> represents the path (drive and possibly directory), which was previously entered into the field "Path", <database name> stands for the name of the ADOxx database which was backed up, <date> equals the system date (format: YYYYMMDD) of the day of the backup and <time> the system time (format: hhmmss) at the moment of the backup (see chap. 1.2, p. 81).

Once the necessary information has been entered, click the OK button to start restoring the ADOxx database.

It is also possible to restore the ADOxx database from a command line window. Change into the directory in which ADOxx was installed. Then enter the following statement:

```
adbrest [<database name>] [<user>] [<password>]

        [<path>] [<time-stamp>]

        [-lang<language code>]
```

Replace **<database name>** with the name of the ADOxx database to be restored, **<user>** with the name of a user with administration rights on the server and **<password>** with the password of the user. Instead of **<path>** enter the drive and path in which the backup can be found. Replace **<time-stamp>** with the time-stamp shown after the backup and press "Enter" to confirm.

Replace **<language code>** with the Windows language ID or Windows locale of the corresponding language (see chap. 2., p. 151) to show the window "Restore ADOxx database" using the selected language.

    **Hint:** Mind the correct order of the parameters (i.e. database name - user - password - path - time-stamp). If you enter fewer than these expected five parameters or invalid parameters than the window "Restore ADOxx database" (see fig. 56, p. 82) will be shown where you will be able to make any changes required.

    **ATTENTION:**    The typed language code had to be selected during the ADOxx installation and the ADOxx licence number had to be configured accordingly to consider this language.

While the restore is running, a status window will inform you of progress

    **ATTENTION:**    While restoring an ADOxx database existing ADOxx databases of the same name can be over-written! In such cases a query will be displayed for safety reasons and the user will have to confirm that the existing databases should be overwritten.

Once the ADOxx database has been successfully restored, an appropriate message will be displayed.

Close the window by clicking the OK button or pressing "Enter".

# 2. Database System "Informix"

In order to use the "Informix" database system, an Informix database must first be prepared in which the ADOxx database can then be created.

> **Hint:** The Informix tools must be used for the preparation of an Informix database.

## 2.1 Creating an ADOxx Informix Database

Before creating an ADOxx database, please read the Hardware recommendations (see chap. 2.1.1, p. 84) concerning the buffer space on the hard disk. Additionally ensure that the Software Requirements (see chap. 2.1.2, p. 84) are met.

## 2.1.1 Hardware Recommendations

Please refer to the hardware recommendations for Informix database.

We recommend a size of at least 30 MB of empty buffer space for the Informix database to be created.

## 2.1.2 Software Requirements

**Server:**

The Informix DBMS software (Informix Dynamic Server 7.22 up to 10.0) must be installed on the server.

Furthermore a user with the name "ADONIS" and the password "BPMS" (capital letters!) must be created. The password must not be changed in the future. Therefore certain system-specific options such as "User has to change password on first login" (Windows XP/2000/NT) must be deactivated.

Database rights "CONNECT" and "RESOURCE" must be given to the user "ADONIS".

> **Hint:** To authorise the user "ADONIS" in Windows, the user name must be put in apostrophes in the GRANT assignments (e.g. "GRANT RESOURCE TO 'ADONIS';"). Each GRANT statement must contain a trailing semicolon ("**;**").

> **Hint:** The password for DB login can be changed with the program "ACLOG.EXE" (in directory \TOOLS on the installation CD-ROM). For more details please refer to the documentation in the file "ACLOG for Informix.PDF" (also in directory \TOOLS).

The value of the Informix server configuration parameter "LOCKS" in the file "<Informix folder>\ETC\ONCONFIG" must be 20000 or higher.

Either the option "Logging buffered" or "Logging unbuffered" should be selected for the Informix database used by ADOxx. It is further recommended that the option "Continuous Logical Log Backup" should be activated and, if consistent with internal data security conventions, the corresponding backup device should be set to "NUL" (no Log-backup). For a detailed description of how to prepare an Informix database please see the appendix "Database setup" (see chap. 3.4.2, p. 166).

**Client**

As a pre-condition for the setup of the network connection (see chap. 3.4.1, p. 165) the network operating system must be configured for one of the protocols used by Informix and an ODBC data source has to be created for all clients. The data source must not be longer than 8 characters.

> **ATTENTION:**   Notice for Informix clients version 7.3:
>
> For the installation of Informix clients version 7.3, only the ODBC driver "INTERSOLV 3.x 32 BIT" is supported. The driver "INFORMIX 2.80 32 BIT" must not be used for the definition of the data source.

An example of the data source configuration is described in the chapter "Configure ODBC data source" (see chap. 3.4.1.1, p. 165).

**Stand-alone**

To run ADOxx in stand-alone mode with an Informix database the Informix server and client software must be installed on the stand-alone computer.

For information concerning a stand-alone installation on a Windows 2000/NT DB server please see the chapter "Install Loopback connection on Windows 2000/NT" (see chap. 3.4.1.2, p. 166) in the appendix.

## 2.1.3    Creating an ADOxx database within a previously prepared Informix database

When the program "ADOxx Create database" is started, the window "Create ADOxx database" (see fig. 57) will appear.



Figure 57: Create ADOxx Informix database

Enter the following information into the corresponding fields in the dialogue window:

**SYSADM user:**   Enter the name of a user, who has database administration rights ("DBA") for the prepared database. In most cases this is true for users possessing system administration rights on the database server.

**Password:**   Enter the password of the user.

**Database name:**   Enter the name of the previously prepared database.

| | |
|---|---|
| **Licence number:** | Enter your licence number. You can find the licence number together with the customer number on an information sheet that had been delivered with the installation kit. |
| **Database system:** | The pre-selected entry "INFORMIX" in the field "Database system" does not need to be changed. |

> **Hint:** If you are using more than one database system with ADOxx then a list of all those database systems will be found in this listbox.

| | |
|---|---|
| **Single-Sign-on installation:** | Select whether the ADOxx database should support Single-Sign-on. |
| | **"Without Single-Sign-on"** creates a new ADOxx database without Single-Sign-on functionality. |
| | **"With Single-Sign-on"** creates a new ADOxx database supporting Single-Sign-on functionality. |
| | **"Install now"** extends an existing ADOxx database (created with ADOxx 3.5x or higher) to support Single-Sign-on. In addition functionality in the ADOxx User management in the ADOxx Administration Toolkit (temporarily deletion of ADOxx users, show the date of last login of ADOxx users) will be enabled. |
| **Single-Sign-on type:** | Within this field please select the type of user administration in your system environment. |
| | **"WINNT"** has to be selected when the domain control and the user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used). |
| | **"Active-Directory"** has to be selected when the domain control and the user administration in the Windows network are based on an Active Directory system. |

> **Hint:** Please pay attention to the software prerequisites in order to use **Single-Sign-on functionality** in ADOxx.

After all necessary entries have been made, click on the OK button to begin the ADOxx database installation.

It is also possible to install the ADOxx database from a command line window. Change into the directory in which ADOxx has been installed and enter the following statement:

```
adbinst [-u<user>] [-p<password>]

        [-d<database name>] [-l<licence number>]

        [-i<Single-Sign-on installation>] [-y<Single-Sign-on type>]

        [-lang<language code>]
```

Replace **<user>** with the name of a user possessing DBA rights, replace **<password>** with the password of this user, **<database name>** with the name of the prepared database and **<licence number>** with the licence number delivered.

Replace **<Single-Sign-on installation>** with **"SSO"** to create a new ADOxx database supporting Single-Sign-on, **"NO_SSO"** to create a new ADOxx database without Single-Sign-on functionality or **"ONLY_SSO"** to extend an existing ADOxx database with Single-Sign-on functionality.

Replace **<Single-Sign-on type>** with **"WINNT"**, if the domain control and user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used). or **"AD"** if the domain control and user administration in the Windows network are based on an Active Directory system.

Replace **<language code>** with the Windows language ID or Windows locale of the corresponding language (see chap. 2., p. 151) to show the window "Create ADOxx database" using the selected language.

> **Hint:** If you enter fewer parameters than expected or invalid parameters, the window "Create ADOxx database" (see fig. 57, p. 85) will be shown and you will be able to make the required changes.

> **ATTENTION:**   The typed language code had to be selected during the ADOxx installation and the ADOxx licence number had to be configured accordingly to consider this language.

A status window will inform you of progress during database creation.

Once the installation has been successfully completed an appropriate message will be shown.

Close the window by mouse-clicking the OK button or pressing Enter.

> **Hint:** During the installation of an ADOxx database the ADOxx-Default-Library with the standard user "Admin" and the standard user group "ADOxx" will be automatically installed. A detailed description of the ADOxx-Default-Library can be found in the BPMS modelling method manual.


## 2.2    Backing up and restoring an ADOxx Informix database

It is recommended that ADOxx databases should be backed up and restored according to the INFORMIX guidelines. A detailed description of how to backup and restore INFORMIX databases can be found in the INFORMIX manual "Administrator's Guide". These tasks will usually be carried out regularly by the database administrator.

# 3. Database system: Oracle

The instructions in this chapter relate to Oracle Server database systems (e.g. *Oracle8 Server*, *Oracle7 Server*).

To create an ADOxx database, an Oracle database instance (e. g. "ORCL") must be prepared, and an Oracle network connection must be defined for the database instance.

## 3.1 Creating an ADOxx Oracle Database

Before creating an ADOxx database, please note the Hardware recommendations (see chap. 3.1.1, p. 88) and the Software requirements (see chap. 3.1.2, p. 88).

## 3.1.1 Hardware Recommendations

The space requirements for the data files of the ADOxx database depends on the model type definitions as well as on the number and average size of the models stored. Approx. 400 - 700 MB will be required for each 1000 models. Some 30 MB are required for an empty ADOxx database.

## 3.1.2 Software Requirements

### Server

Oracle7/8/9i/10g Server must be installed on the computer.

The ADOxx database installation program will be carried out on Windows based computer with installed Oracle Net Client Software ("SQL Net Client" or "Net8 Client"). The connections to the database instance will be created over the Oracle network connection. A description of the configuration of the Oracle Network is available in the annex "Set-up network connection " (see chap. 3.5.1, p. 168).

Before creating the ADOxx database with the database installation program, an oracle database instance must have been prepared. You can also use an already existing instance. The Oracle database instance has the following configuration requirements:

● The initialisation parameter "OPEN_CURSORS" (standard value: 50) must be set to 100 or higher. A description of how to change this parameter can be found in the appendix 'Change parameter "open_cursors"' (see chap. 3.5.2.1, p. 170).

● A user with the name "ADONIS" and the password "BPMS" must be created.

● The user ADONIS must get a sufficient part of the default table space assigned to him.

● The rights "CONNECT", "CREATE TABLE", "CREATE VIEW", "CREATE TRIGGER" must be assigned to the user ADONIS.

● Rollback segments (RBS) must be available in sufficient number and size. For a productive use, we recommend that at least one RBS is available for each four simultaneous application sessions. In multi user mode, a minimum RBS size (MINEXTENTS * EXTENTSIZE) of 1 MB should be respected.

  **Hint:** Using the program "ACLOG.EXE" (in the directory \TOOLS on the installation CD-ROM), you can change the password of the DB login. You can find conditions as well as

instructions, which are relevant to this point, in the documentation in the file "ACLOG for Oracle.PDF (also in the repertory \TOOLS).

You can only prepare an Oracle database instance with Oracle tools. For this, there are some scripts available on the ADOxx installation CD (sub directory "dbinfo"). A detailed description is to be found in the annex "Prepare database instance" (see chap. 3.5.2, p. 169).

**Client:**

The Oracles software "Oracle Net Client" (SQL Net/Net8/Net9/Net10) must be installed on the Client. ADOxx uses the interface "Oracle Call Interface" with the run-time library "ociw32.dll".

An Oracle network connection must be defined on the Clients for the Oracle database instance. The service name cannot contain more than eight symbols. An appropriate description is available in the annex "Setup Oracle network connection" (see chap. 3.5.1.2, p. 169).

**Stand-alone:**

If using ADOxx on an Oracle stand-alone **Server** database system, the previously described settings for client and server must be set on the stand-alone computer. It is recommended that the "Bequeath" protocol is used when configuring the Oracle network connection.

## 3.1.3 Creating an ADOxx Oracle Database

Create an ADOxx database in Oracle, by starting the program "Create ADOxx database" in the ADOxx program folder.

Once this program has been started, the window "Create ADOxx database" (see fig. 58) appears.



Figure 58: Create ADOxx database (Oracle)

Enter the following information into the corresponding fields in the dialogue window:

**Database name:** Enter the name which was chosen when setting up the network connection.

**Licence number:** Enter your licence number for the ADOxx database creation. You can find the licence number together with the customer number on an information sheet that was delivered with the installation kit. Please note that the licence number MUST be entered exactly as shown - i.e. it is case sensitive.

**Database system:** The pre-selected entry "ORACLE" in the field "Database system" does not need to be changed.

> **Hint:** If you are using more than one database system with ADOxx then a list of all those database systems will be found in this listbox.

**Single-Sign-on installation:** Select whether the ADOxx database should support Single-Sign-on.

> **"Without Single-Sign-on"** creates a new ADOxx database without Single-Sign-on functionality.

> **"With Single-Sign-on"** creates a new ADOxx database supporting Single-Sign-on functionality.

> **"Install now"** extends an existing ADOxx database (created with ADOxx 3.5x or higher) to support Single-Sign-on. In addition functionality in the ADOxx User management in the ADOxx Administration Toolkit (temporarily deletion of ADOxx users, show the date of last login of ADOxx users) will be enabled.

**Single-Sign-on type:** Within this field please select the type of user administration in your system environment.

> **"WINNT"** has to be selected when the domain control and the user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used).

> **"Active-Directory"** has to be selected when the domain control and the user administration in the Windows network are based on an Active Directory system.

**Create table:** determines if tables and other database objects will be created over the program (marked check-box) or if they will be taken for granted and so directly started with the initialisation of the database (check-box not checked).

> **Hint:** Please pay attention to the software prerequisites in order to use **Single-Sign-on functionality** in ADOxx.

> **Hint:** If the check-box "Create tables" is not activated, then the ADOxx database objects must previously have been created per SQL (DDL) script. For this, the file "adonis37.ddl" is provided in the sub directory "dbinfo" of the installation CD. This type of installation installs the database objects initially without the functionality allowing to create operating system users in ADOxx and use them to login to ADOxx. To enable the Single-Sign-on functionality with this type of installation the program "Create ADOxxDB" has to be run with the Single-Sign-on installation set to "Single-Sign-on ONLY".

> **Hint:** If the check-box "Create tables" is not activated, then the ADOxx database objects must previously have been created per SQL (DDL) script. For this, the file "adonis37.ddl" is provided in the sub directory "dbinfo" of the installation CD.

Once all necessary entries have been made, click on the OK button to start installing the ADOxx database.

It is also possible to install the ADOxx database from a command line window. Change to the directory in which **ADOxx** has been installed and enter the following statement:

```
adbinst [-d<database name>] [-l<licence number>]

        [-ct+ | -ct-]

        [-i<Single-Sign-on installation>] [-y<Single-Sign-on type>]

        [-lang<language code>]
```

Replace **<database name>** with the name of the ADOxx database to be created and **<licence number>** with the licence number delivered.

With the parameter **-ct** it is possible to distinguish between the case of creating the table and other database objects by the program (-ct+ or no entry) and only initialising the database as the table and other database objects are already defined ("-ct-").

Replace **<Single-Sign-on installation>** with **"SSO"** to create a new ADOxx database <u>supporting</u> Single-Sign-on, **"NO_SSO"** to create a new ADOxx database <u>without</u> Single-Sign-on functionality or **"ONLY_SSO"** to extend an existing ADOxx database with Single-Sign-on functionality.

Replace **<Single-Sign-on type>** with **"WINNT"**, if the domain control and user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used) or **"AD"** if the domain control and user administration in the Windows network are based on an Active Directory system.

Replace **<language code>** with the Windows language ID or Windows locale of the corresponding language (see chap. 2., p. 151) to show the window "Create ADOxx database" using the selected language.

> **Hint:** If you enter fewer parameters than expected or invalid parameters, the window "Create ADOxx database" (see fig. 58, p. 89) will be shown and you will be able to make the required changes.

> **ATTENTION:** The typed language code had to be selected during the ADOxx installation and the ADOxx licence number had to be configured accordingly to consider this language.

During the database installation, a status window will be displayed which will give some information about its progress.

Once the installation has been successfully completed, a message window will be displayed.

> **Hint:** During the installation of an ADOxx database the ADOxx-Default-Library with the standard user "Admin" and the standard user group "ADOxx" will be automatically installed. A detailed description of the ADOxx-Default-Library can be found in the BPMS modelling method manual.

## 3.2    Backing up and restoring an ADOxx Oracle database

It is recommended that ADOxx databases be backed up and restored according to the Oracle guidelines. A detailed description of how to backup and restore Oracle databases can be found in the Oracle manuals (e.g. "Administrator's Guide"). These tasks will be usually carried out regularly by the database administrator.

# 4. Database System "Microsoft SQL Server"

When using the database system "Microsoft SQL Server" a MS SQL Server database must first be prepared in order to then create an ADOxx database (see chap. 1.1.3, p. 76).

> **Hint:** The MS SQL Server tools must be used in the preparation of a MS SQL Server database (e.g. "Enterprise Manager").

## 4.1 Install ADOxx SQL Server database

Pay attention to the Hardware recommendations (see chap. 4.1.1, p. 92) and software requirements (see chap. 4.1.2, p. 92) before you start with the creation of an ADOxx database (see chap. 4.1.3, p. 93).

### 4.1.1 Hardware Recommendations

The Hardware recommendations for the server result from the requirements of the database system *MS SQL Server* and can be taken from the installation manual of the developer.

At least 50 MB memory space are required for the data files of the *MS SQL Server* database prepared for ADOxx. The memory space for data files grows with the number of models stored. Approx. 400 - 700 MB will be required for each 1000 models, depending on the definition of the modelling method and on the average model size.

### 4.1.2 Software Requirements

**Server:**

*Microsoft SQL Server* (Version 7.0/2000/2005) must be installed on the server.

The font settings of the Master database should contain a case-sensitive sort order.

> **Hint:** The selected font as well as the sort order are valid for all databases administrated by the MS SQL Server-Instance. A change is possible afterwards, however for already existing databases, this will cost considerable effort (see MS SQL Server documentation about "Restore MASTER database").

One of the options "Standard" or "Mixed", or "SQL Server and Windows", must be set for the MS SQL Server configuration parameter "**Security mode of server during the login**". The setting "WindowsNT integrated" or "Only Windows" will not be supported.

The value of the Server configuration parameters "**user connections**" should be increased to a value equalling at least twice the number of simultaneous ADOxx users. Two database connections will be maintained per ADOxx session.

The size of the database for temporary tables "tempdb" must be at least 4 MB.

An empty SQL Server database is needed to run the ADOxx database installation. Its size depends on the quantity of the modelling project. 400-700 MB memory space will be required for 1000 models.

The size of the transaction protocol of the database should be at least 15 MB for the multi user operating mode.

We recommend, to activate the **database option "Truncate log at checkpoint"** or to select the restoring model ""Simple" (MS SQL Server 2000) for the database.

An MS SQL Server user account (Login-ID) with the name "ADONIS" and the password "BPMS" will be required. The authentication option "SQL Server Authentication" must be selected for the user account.

The "ADONIS" user must have the rights "Create table" and "Create view" for the database.

> **Hint:** Using the program "ACLOG.EXE" (in the repertory \TOOLS on the installation-CD-ROM), the password of the DB login can be changed. You will find the conditions and the instructions for this in the documentation in the file "ACLOG for SQL Server.PDF (also in repertory \TOOLS).

A detailed description of the steps to prepare a database (see chap. 3.6.1.1, p. 173), as well as exemplary instructions to prepare a database for MS SQL Server 2000 (see p. 174) are available in the annex.

**Client:**

An SQL Server ODBC driver version 2.65 or higher must be installed for the client

An ODBC data source must be configured on each client for the ADOxx database.

"SQL Server Authentication" (valid for ODBC driver from V.3.50) must be selected as authentication method for the data source.

When using MS SQL Server Version 6.5, the data source option "Create temporary stored procedures for prepared queries" must be deactivated.

A detailed description of the ODBC database source configuration (see chap. 3.6.1.2, p. 178) is available in the annex.

**Stand-alone:**

To run ADOxx in a stand-alone mode with a database system "Microsoft SQL Server", the database must be prepared and the ODBC data source must be configured on the stand-alone computer.

> **Hint:** The software package "ADOxx with MSDE Runtime" is available for the stand-alone operating mode. It contains an MS SQL Server based DBMS Runtime with Microsoft Data Engine (MSDE). The package also contains a tool for easier database administration.

## 4.1.3    Creating an ADOxx SQL Server Database

Once a database has been prepared, the ADOxx database can be created via the program "Create ADOxx DB" (see fig. 59).
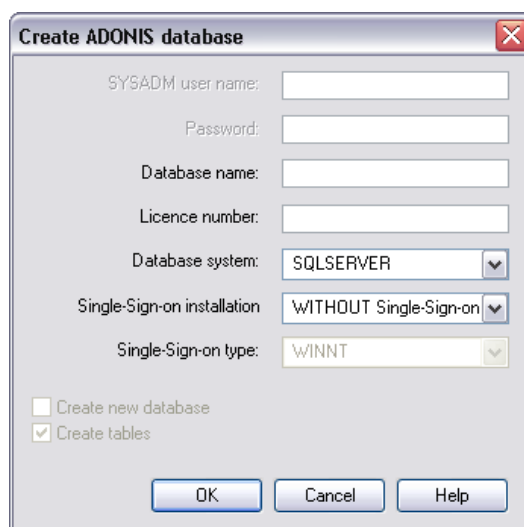
Figure 59: Creating ADOxx SQL Server Database

Enter the following information into the corresponding fields in the dialogue window:

**Database name:**   Enter the name of the ODBC data source of the database.

**Licence number:**   Enter your licence number. You can find the licence number together with the customer number on a label that had been delivered with the installation kit.

**Database system:**   The pre-selected entry "SQLSERVER" in the field "Database system" does not need to be changed.

 **Hint:** If you are using more than one database system with ADOxx then a list of all those database systems will be found in this listbox.

**Single-Sign-on installation:**  Select whether the ADOxx database should support Single-Sign-on.

**"Without Single-Sign-on"** creates a new ADOxx database without Single-Sign-on functionality.

**"With Single-Sign-on"** creates a new ADOxx database supporting Single-Sign-on functionality.

**"Install now"** extends an existing ADOxx database (created with ADOxx 3.5x or higher) to support Single-Sign-on. In addition functionality in the ADOxx User management in the ADOxx Administration Toolkit (temporarily deletion of ADOxx users, show the date of last login of ADOxx users) will be enabled.

**Single-Sign-on type:**   Within this field please select the type of user administration in your system environment.

**"WINNT"** has to be selected when the domain control and the user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used).

**"Active-Directory"** has to be selected when the domain control and the user administration in the Windows network are based on an Active Directory system.

 **Hint:** Please pay attention to the software prerequisites in order to use **Single-Sign-on functionality** in ADOxx.

Once all necessary entries have been updated, click on the OK button to start the ADOxx database installation.

It is also possible to install the ADOxx database from a command line window. Change into the directory in which **ADOxx** has been installed and enter the following statement:

```
adbinst [-d<database name>] [-l<licence number>]

        [-i<Single-Sign-on installation>] [-y<Single-Sign-on type>]

        [-lang<language code>]
```

Replace **<database name>** with the name of the ADOxx database to be created and **<licence number>** with the licence number delivered.

Replace **<Single-Sign-on installation>** with **"SSO"** to create a new ADOxx database supporting Single-Sign-on, **"NO_SSO"** to create a new ADOxx database without Single-Sign-on functionality or **"ONLY_SSO"** to extend an existing ADOxx database with Single-Sign-on functionality.

Replace **<Single-Sign-on type>** with **"WINNT"**, if the domain control and user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used) or **"AD"** if the domain control and user administration in the Windows network are based on an Active Directory system.

Replace **<language code>** with the Windows language ID or Windows locale of the corresponding language (see chap. 2., p. 151) to show the window "Create ADOxx database" using the selected language.

> **Hint:** If you enter fewer parameters than expected or invalid parameters, the window "Create ADOxx database" (see fig. 59, p. 94) will be shown and you will be able to make the required changes.

> **ATTENTION:** The typed language code had to be selected during the ADOxx installation and the ADOxx licence number had to be configured accordingly to consider this language.

While the ADOxx database is being created a status window will inform you about its progress.

Once the installation has been successfully completed an appropriate message will be shown.

> **Hint:** During the installation of an ADOxx database the ADOxx-Default-Library with the standard user "Admin" and the standard user group "ADOxx" will be automatically installed. A detailed description of the ADOxx-Default-Library can be found in the BPMS modelling method manual.

## 4.2 Backing up and restoring an ADOxx SQL Server database

ADOxx databases can be backed up and restored according to the Microsoft guidelines. A description of how to backup and restore *SQL Server* databases can be found in the SQL Server administration manuals (e.g. *SQL Server Online* manual "Data administration"). These tasks will usually be carried out regularly by the database administrator.

# 5. Database System "MSDE Runtime"

● Software requirements (see chap. 5.1, p. 96)

● Program "ADOxx Database maintenance" (see chap. 5.2, p. 96)

● Install Single-Sign-on functionality later (see chap. 5.3, p. 102)

## 5.1 Software Requirements

Depending on the operating system used you must meet specific software requirements for the installation of ADOxx Stand-alone with MSDE:

● **Windows 95**:

Internet Explorer 4.01 SP1 or higher must be installed, before ADOxx Setup is started.

At least one network protocol (e.g. TCP/IP) must be installed in the system.

MSDE can only be installed in the computer in simple form. However, you can use an already existing MSDE installation available to administrate ADOxx database.

No MS SQL Server Software shall be installed in the computer. However you can use an available SQL Server Installation to administrate ADOxx database. (See Database system "Microsoft SQL Server (see chap. 4., p. 92))

> **Hint:** After an abort of the MSDE Runtime installation, the following protocol files contain indications about the error cause:
>
> %WINDIR%\sqlstp.log
>
> \MSDE\INSTALL\cnfgsvr.out
>
> \MSDE\LOG\errorlog

## 5.2 Program "ADOxx Database Maintenance"

Start the program "ADOxx database maintenance" by

● clicking on the appropriate entry in the ADOxx file (Start - Program - ADOxx 1.0) or

● calling the program "asqladm.exe" in the ADOxx installation directory.

All functions for the administration of the ADOxx database will be shown in the **window "ADOxx Database administration "** (see fig. 60).
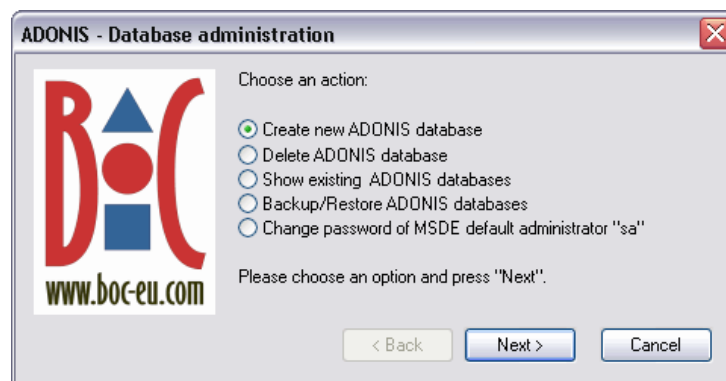
Figure 60: ADOxx Database maintenance - Functions

Select on any function by clicking and then click on the button "Next".

You can select the following functions:

- Create new ADOxx database (see chap. 5.2.1, p. 97),

- Delete ADOxx database (see chap. 5.2.2, p. 98),

- Show existing ADOxx databases (see chap. 5.2.3, p. 98),

- Backup ADOxx databases (see chap. 5.2.4, p. 99),

- Restore ADOxx databases (see chap. 5.2.5, p. 100),

- Change password of MSDE default administrator "sa" (see chap. 5.2.6, p. 101).

## 5.2.1 Create ADOxx MSDE Database

To create an ADOxx MSDE database, start the program "ADOxx Database maintenance", select the option "Create new database"

1. Start the program "ADOxx Database maintenance" (see chap. 5.2, p. 96).

   **ATTENTION:** To be able to create a new ADOxx database, the user currently connected to the system must have system administrator rights.

2. Select the option "Create new ADOxx database" and click on the button "Next".

3. Enter a name for the database to be created in the **window "Create ADOxx database"** (Field "DB name") (see fig. 61) and then click on the button "Next".
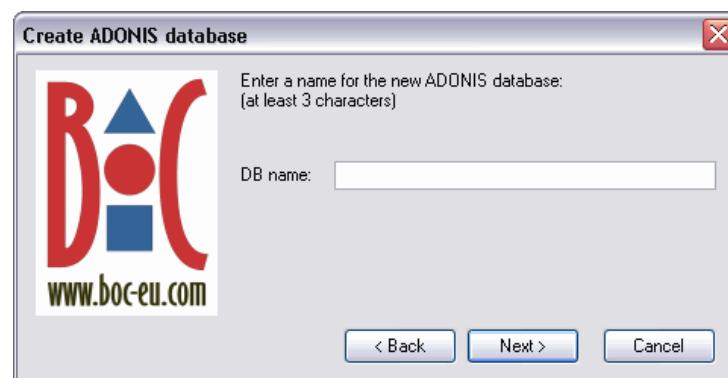


Figure 61: Create ADOxx database - Enter database name

> **ATTENTION:** The database name specified cannot contain more than eight symbols and cannot be existing already. To control the existing database names, you can display the list of existing databases (see chap. 5.2.3, p. 98) by selecting the function "Show existing databases" in the main selection window (see fig. 60).

4. Enter in the **window "Licence number"** (see fig. 62) the licence number and then click on the OK button.
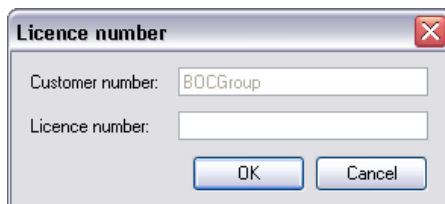


Figure 62: Create an ADOxx database - Enter licence number

Then a new ADOxx database will be created.

## 5.2.2      Delete ADOxx MSDE Database

1. Start the program "ADOxx Database maintenance" (see chap. 5.2, p. 96).

2. Select the option "Delete ADOxx database" and click on the button "Next".

3. Select in the **window "Delete ADOxx database"** (see fig. 63) the database to be deleted and then click on the button "Next".
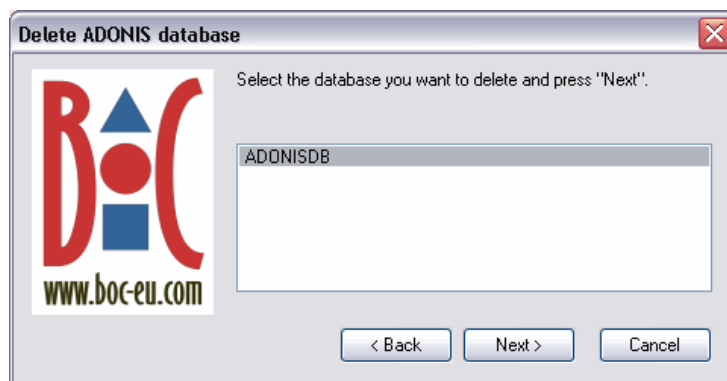


Figure 63: Delete ADOxx database - Database selection

4. Confirm the security query by clicking on the Yes button.

The ADOxx database will be deleted, an appropriate message window will inform you about the successful deletion.

## 5.2.3      Show ADOxx MSDE Databases

1. Start the program "ADOxx Database maintenance" (see chap. 5.2, p. 96).

2. Select the option "Show existing ADOxx databases" and click on the button "Next".

3. All databases existing in the computer will be displayed in the **window "Show existing ADOxx databases"** (see fig. 64).
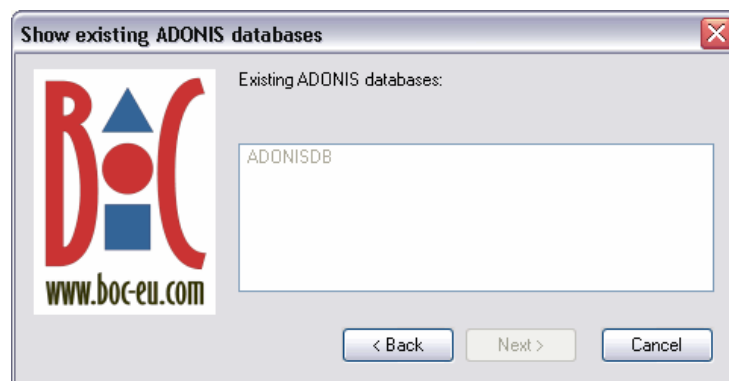
Figure 64: List of existing ADOxx databases

## 5.2.4 Backup ADOxx MSDE Database

1. Start the program "ADOxx Database maintenance" (see chap. 5.2, p. 96).

2. Select the option "Backup/Restore ADOxx databases" and click on the button "Next".

3. Select in the **window "Restore/Backup ADOxx database"** (see fig. 65) the option "Backup database" and then click on the button "Next".
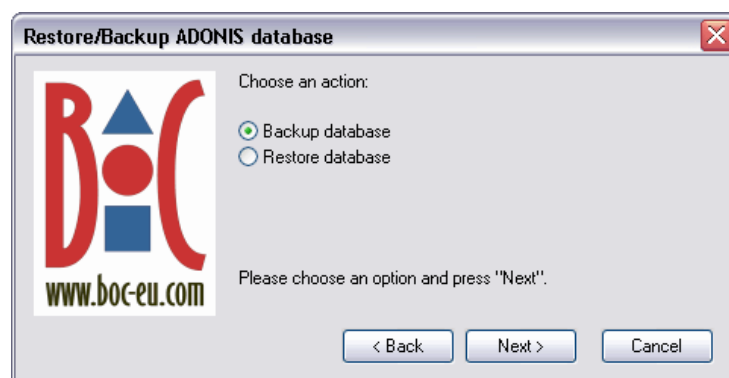


Figure 65: Restore/Backup ADOxx database

4. Select in the **window "Backup ADOxx database"** (see fig. 66) the database you want to backup and then click on the button "Next".
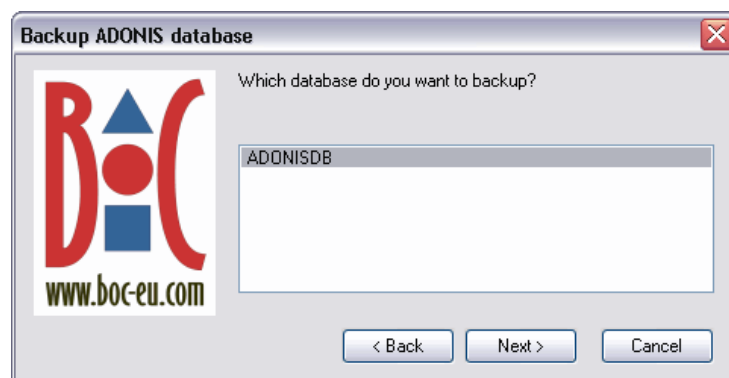


Figure 66: Backup ADOxx database - Database selection

5.  Enter in the **window "Backup ADOxx database"** (see fig. 67) the path and the name for the backup file or take the suggestion and then click on the button "Next".



Figure 67: Backup ADOxx database - Path and file name

The ADOxx database will be stored in the specified file, an appropriate message window will inform you of a successful storage.

**ATTENTION:** The backup file cannot be renamed. The restoration of a renamed backup file is not possible.

**Hint:** Restoring an ADOxx MSDE database (see chap. 5.2.5, p. 100) is only possible on the same (local) system where the database has also been backed up. It is not possible to copy the backup file to a different system and restore it there.

## 5.2.5        Restore ADOxx MSDE Database

**Hint:** Restoring an ADOxx MSDE database is only possible on the same (local) system where the database has also been backed up (see chap. 5.2.4, p. 99). It is not possible to copy the backup file to a different system and restore it there.

1.  Start the program "ADOxx Database maintenance" (see chap. 5.2, p. 96).

2.  Select the option "Backup/Restore a database" and click on the button "Next".

3.  Select in the **window "Restore/Backup database"** (see fig. 68) the option "Restore database" and then click on the button "Next".
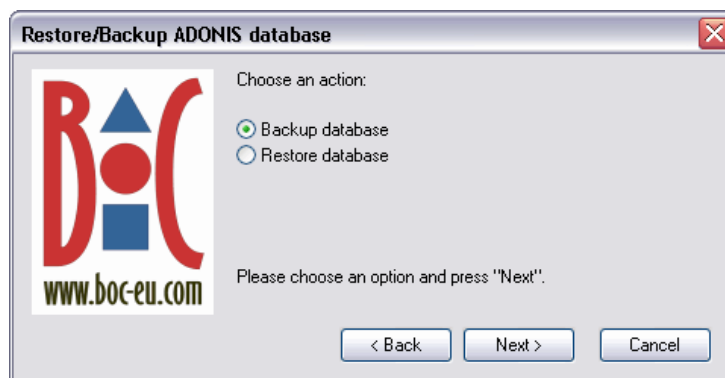


Figure 68: Restore/Backup ADOxx database

4. Select in the **window "Restore ADOxx database"** (see fig. 69) the target databases, in which the backup should be restored and then click on the button "Next".
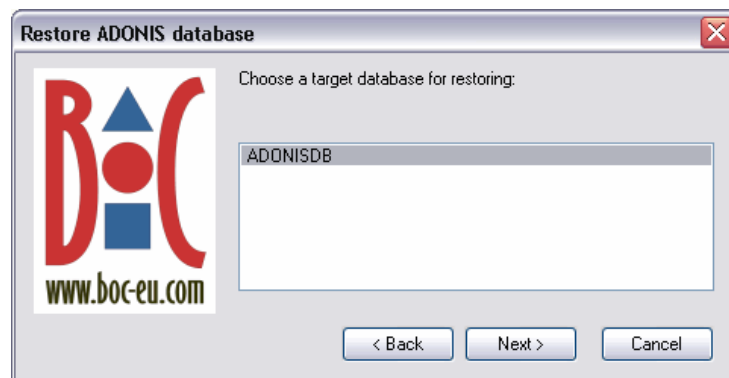


Figure 69: Restore ADOxx database - Select the database

**ATTENTION:** The restoration will overwrite the original contents of the selected database by the contents of the backup file. Should an ADOxx database that is not empty be used, then the saved models it contains will be deleted.

5. Enter in the **window "Restore ADOxx database"** (see fig. 70) the path and the name of the backup file you want to restore or take the suggestion and then click on the button "Next".
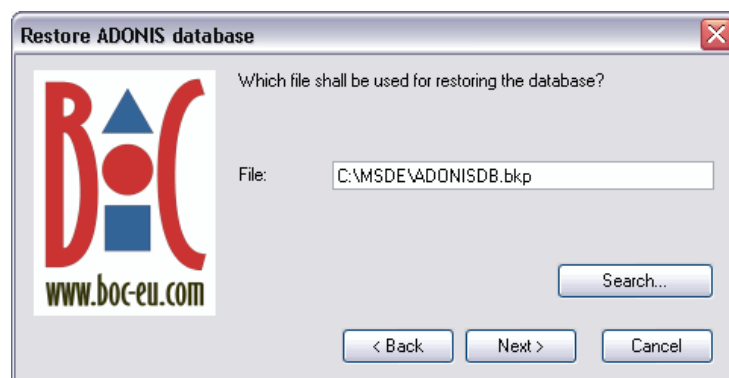


Figure 70: Restore ADOxx database - Path and file name

The data of the backup file will be restored in the selected ADOxx database, an appropriate message window will inform you about the successful restoration.

## 5.2.6 Change password of MSDE default administrator "sa"

1. Start the program "ADOxx Database maintenance" (see chap. 5.2, p. 96).

2. Select the option "Change password of MSDE default administrator "sa"" and click on the button "Next".

3. Enter in the **window "Change password of MSDE default administrator "sa""** (see fig. 71) the old password and then the new password twice and then click on the button "Next".

Figure 71: Change password of MSDE default administrator "sa"

The password of the MSDE default administrator "sa" will be changed, an appropriate message window will inform you about the successful change.

## 5.3  Install Single-Sign-on functionality later

Each existing ADOxx MSDE database (created using ADOxx 3.5x or higher) can be extended for the support of the Single-Sign-on functionality later.

Execute the file **adbinst.exe** from the ADOxx installation directory (Default directory: `C:\Program files\BOC\ADOxx10`). After starting the program the window "Create ADOxx database" appears (see fig. 72).
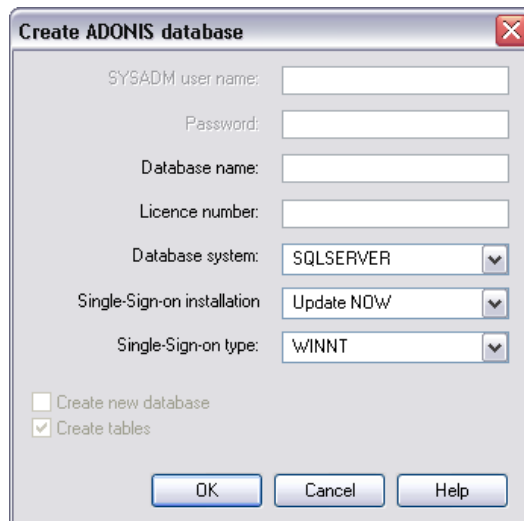


Figure 72: Install Single-Sign-on functionality in ADOxx MSDE database

Enter the following information into the corresponding fields in the dialogue window:

**Database name:**          Enter the name of the ODBC data source of the database.

**Licence number:**         Enter your licence number. You can find the licence number together with the customer number on a label that had been delivered with the installation kit.

**Database system:**        The pre-selected entry "SQLSERVER" in the field "Database system" does not need to be changed.

**Single-Sign-on installation:**  Select the entry **"Install now"**.

**Single-Sign-on type:** Within this field please select the type of user administration in your system environment.

**"WINNT"** has to be selected when the domain control and the user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used).

**"Active-Directory"** has to be selected when the domain control and the user administration in the Windows network are based on an Active Directory system.

**Hint:** Please pay attention to the software prerequisites in order to use **Single-Sign-on functionality** in ADOxx.

Once all necessary entries have been updated, click on the OK button to start the ADOxx database installation.

It is also possible to extend the ADOxx database from a command line window. Change into the directory in which **ADOxx** has been installed and enter the following statement:

```
adbinst [-d<database name>] [-l<licence number>]
        [-iONLY_SSO] [-y<Single-Sign-on type>]
        [-lang<language code>]
```

Replace **<database name>** with the name of the ADOxx database to be created and **<licence number>** with the licence number delivered.

Replace **<Single-Sign-on type>** with **"WINNT"**, if the domain control and user administration in the Windows network are not based on an Active Directory system (i.e. a pre Windows 2000, primary Windows NT domain controller is being used) or **"AD"** if the domain control and user administration in the Windows network are based on an Active Directory system.

Replace **<language code>** with the Windows language ID or Windows locale of the corresponding language (see chap. 2., p. 151) to show the window "Create ADOxx database" using the selected language.

**Hint:** If you enter fewer parameters than expected or invalid parameters, the window "Create ADOxx database" (see fig. 72, p. 102) will be shown and you will be able to make the required changes.

**ATTENTION:** The typed language code had to be selected during the ADOxx installation and the ADOxx licence number had to be configured accordingly to consider this language.

While the ADOxx database is being created a status window will inform you about its progress.

Once the installation has been successfully completed an appropriate message will be shown.

# 6. Error Messages

You will find a detailed description of each error message (including cause and action) in:

● the context menu for each error message by clicking on the help button in the window of the error message,

● in the online documentation (menu item "ADOxx help" in the menu "Help") in the chapter "Error messages",

● in the PDF documentation in the chapter "error messages" (PDF files are to be found on the ADOxx installation CD in the directory \BOOKS).

This chapter lists the error statements that may occur in the ADOxx Database maintenance programs. Each error message belongs to one of the following groups:

| | | | |
|---|---|---|---|
| **acnumchk** | **aconfui** | **acregchk** | **adbacc** |
| **adbadm** | **adbback** | **adbinst** | **adbrest** |
| **aexinst** | **aleo** | **asqladm** | **averdate** |

An error message consists of an error code (in square brackets - []) that is shown at the beginning of the error message and of the message's text (below the error code). The error code is a combination of letters and numbers. The letters represent the error group, the numbers serve to number the messages within an error group. The error messages are listed in alphabetical order according to groups and in ascending order inside each group. Should you have problems finding an error message, please use the online help or check the index.

> **Hint:** The list of errors is ordered alphabetically according to error groups and the groups are numbered in ascending order. The numbering need not necessarily be continuous.

You can close the window containing the error message by clicking on the OK button or by pressing the "Enter" key. Then execute the actions described under "Action".

# [acnumchk-01]

**Message:** The key word "DOMAIN" is missing.

**Cause:** The LEO expression in the facet "AttributeNumericDomain" does not contain the required key word "DOMAIN".

**Action:** Rectify the value of the facet "AttributeNumericDomain", by adding the key word "DOMAIN" or contact your ADOxx administrator.

# [acnumchk-02]

**Message:** The parameter "message" of the key word "DOMAIN" is missing.

**Cause:** The LEO expression in the facet "AttributeNumericDomain" does not contain the required parameter "message" for the key word "DOMAIN".

**Action:** Rectify the value of the facet "AttributeNumericDomain", by adding the parameter "message" to the key word "DOMAIN" or contact your ADOxx administrator.

# [acnumchk-03]

**Message:** After the key word "DOMAIN", only the key word "INTERVAL" is authorised.

**Cause:** The LEO expression in the facet "AttributeNumericDomain" contains an invalid key word. After the key word "DOMAIN", only the key word "INTERVAL" is authorised.

**Action:** Rectify the value of the facet "AttributeNumericDomain", by also using the key word "INTERVAL" after the key word "DOMAIN" or contact your ADOxx administrator.

# [acnumchk-04]

**Message:** The parameter "lowerbound" of the key word "INTERVAL" is missing.

**Cause:** The LEO expression in the facet "AttributeNumericDomain" does not contain the required parameter "lowerbound" for the key word "INTERVAL".

**Action:** Rectify the value of the facet "AttributeNumericDomain", by adding the parameter "lowerbound' to the key word "INTERVAL" or contact your ADOxx administrator.

# [acnumchk-05]

**Message:** The parameter "upperbound" of the key word "INTERVAL" is missing.

**Cause:** The LEO expression in the facet "AttributeNumericDomain" does not contain the required parameter "upperbound" for the key word "INTERVAL".

**Action:** Rectify the value of the facet "AttributeNumericDomain", by adding the parameter "upperbound" to the key word "INTERVAL" or contact your ADOxx administrator.

# [acnumchk-06]

**Message:** The value of the parameter "upperbound" is smaller than the value of the parameter "lowerbound".

**Cause:** The value of the parameter "upperbound" of the key word "INTERVAL" is smaller than the value of the parameter "lowerbound" of the same key word.

**Action:** Change the value of the parameter "lowerbound" and "upperbound" so that the value of the parameter "upperbound" is greater than or equal to the value of the parameter "lowerbound" or contact your ADOxx administrator.

# [acnumchk-07]

**Message:** The value is not in one of the specified intervals.

**Cause:** The specified value is not within the area valid for the attribute.

**Action:** Change the value so that it is in an interval specified in the facet "AttributeNumericDomain".

# [aconfui-01]

**Message:**    An invalid customer number has been entered! You must use a combination of uppercase letters (A-Z), lowercase letters (a-z) or numbers (0-9) with a minimum of 5 and a maximum of 17 characters.

                In the expanded mode, you can use a minimum of 5 and a maximum of 24 characters.

**Cause:**    The customer number does not meet the specified conditions.

**Action:**    Enter a valid customer number.

# [aconfui-03]

**Message:**    An error has occurred when saving the licence number!

**Cause:**    The licence number could not be saved to the file. There may not be enough free memory space available or the file is write-protected.

**Action:**    Create some free memory space or save the licence number to another file.

# [aconfui-04]

**Message:**    No file name has been entered!

**Cause:**    No file name has been entered!

**Action:**    Enter a file name.

# [aconfui-05]

**Message:**    Cannot load current configuration!

**Cause:**    An error occurred while the current configuration was read from the ADOxx database.

**Action:**    Quit ADOxx and re-start it. Should this error re-occur, contact your system administrator.

# [aconfui-10]

**Message:**    Licence number does not correspond with customer number!

**Cause:**    The licence number entered cannot be used for configuring components when combined with the customer number listed.

**Action:**    Check the licence number entered. Should this error still occur, contact your system administrator or your ADOxx consultant.

# [aconfui-12]

**Message:**    No licence number entered!

**Cause:**    You did not enter a licence number.

**Action:** Enter the licence number for the new configuration of components of the ADOxx Modelling Toolkit.

# [aconfui-13]

**Message:** New configuration could not be saved in database.

**Cause:** An error occurred when the new configuration was to be saved in the ADOxx database.

**Action:** Quit ADOxx and re-start it. Should this error re-occur, contact your database or system administrator.

# [aconfui-14]

**Message:** The generation of the new licence number is not possible!

**Cause:** An unexpected error has occurred during the generation of the licence number.

**Action:** Contact your ADOxx administrator.

# [aconfui-15]

**Message:** No test licence number has been entered!

**Cause:** No test licence number has been entered!.

**Action:** Enter a test licence number.

# [aconfui-16]

**Message:** The test licence number could not be decoded!

**Cause:** The licence number is not valid.

**Action:** Enter a valid licence number.

# [aconfui-17]

**Message:** You must configure 1-99 users to specify the maximum number of users!

In the extended mode, you can configure 1-9999 users.

**Cause:** An invalid number of users has been entered.

**Action:** Enter a valid number of users.

# [aconfui-18]

**Message:** The Configuration Toolkit cannot be started, since an ADOxx application is already active. Close the other ADOxx application in order to start the Configuration Toolkit.

**Cause:** An ADOxx application is already active.

**Action:**        First close the other ADOxx application. Then start the Configuration Toolkit again.

# [acregchk-01]

**Message:**     The key word "REGEXP" is missing.

**Cause:**        The LEO expression in the facet "AttributeRegularExpression" doesn't contain the required key word "REGEXP".

**Action:**        Rectify the value of the facet "AttributeRegularExpression", by adding the key word "REGEXP" or contact your ADOxx administrator.

# [acregchk-02]

**Message:**     The parameter "expression" of the key word "REGEXP" is missing.

**Cause:**        The LEO expression in the facet "AttributeRegularExpression" does not contain the required parameter "expression" for the key word "REGEXP". In the parameter "expression", you must have the regular expression, which the attribute values must meet.

**Action:**        Correct the value of the facet "AttributeRegularExpression", by adding the parameter "expression" to the key word "REGEXP", or contact your ADOxx administrator.

# [acregchk-03]

**Message:**     The parameter "message" of the key word "REGEXP" is missing.

**Cause:**        The LEO expression in the facet "AttributeRegularExpression" does not contain the parameter "message" required for the key word "REGEXP". In the parameter "message", you must have the description text for the regular expression, which the attribute values must meet.

**Action:**        Correct the value of the facet "AttributeRegularExpression", by adding the parameter "message" to the key word "REGEXP" or contact your ADOxx administrator.

# [acregchk-04]

**Message:**     The regular expression in the parameter "expression" is invalid.

**Cause:**        The parameter "expression" in the facet "AttributeRegularExpression" contains an invalid regular expression.

**Action:**        Rectify the value of the facet "AttributeRegularExpression", by giving a valid regular expression as value to the parameter "expression" of the key word "REGEXP" or contact your ADOxx administrator.

# [acregchk-05]

**Message:**     The expression does not meet the regular expression in the parameter "expression".

**Cause:**        You have attempted to assign a value, which doesn't correspond to the defined regular expression.

**Action:** Change the value in such a way, that it meets the regular expression. If necessary, have a look at the help text of the corresponding attribute to find out if there is a description of the possible values.

# [adbacc-01]

**Message:** *<Database error message>*Class: ADBACC, Stmt handle: *<Handle>*, Function: *<Function Name>*

**Cause:** A general database error occurred. The error message gives information about the cause of the error and contains the database error-code, which can be used to gain further information from the database error documentation.

**Action:** Exit ADOxx and start it again. If the error re-occurs, please write down the *<Database error message>*, *<Handle>* and *<Function Name>* and contact your system administrator.

# [adbadm-01]

**Message:** *<Database error message>* Class: ADBADM, Stmt handle: *<Handle>*, Function: *<Function Name>*

**Cause:** A general database error occurred. The error message gives information about the cause of the error and contains the database error-code, which can be used to gain further information from the database error documentation.

**Action:** Quit ADOxx and start it again. If the error still occurs, please write down the *<Database error message>*, *<Handle>* and *<Function Name>* and contact your system administrator.

# [adbback-01]

**Message:** Database error occurred:

SQLCODE: *<Database error code> <parameter, which caused the error>*.

**Cause:** A general database error occurred. SQLCODE indicates a database-specific error code, which can be looked up in the database documentation.

**Action:** Find the cause for the error within the database documentation (e.g. look up the DB2 error code "**-1124**" in the DB2 documentation under "SQL**1124**N") and ask your database administrator to carry out the necessary actions described in the documentation to fix the problem.

# [adbback-02]

**Message:** User name, password and database name must be entered.

**Cause:** At least one necessary parameter has not been entered.

**Action:** Enter the user name, password and database name.

# [adbback-03]

**Message:**    Alias name of database not found.

**Cause:**    The ADOxx database name entered does not exist.

**Action:**    Enter the correct name of the ADOxx database to be saved.

# [adbback-04]

**Message:**    User name/password not valid.

**Cause:**    The user name and/or password have not been entered correctly.

**Action:**    Enter the user name and password correctly.

# [adbback-05]

**Message:**    Path not found or invalid.

**Cause:**    The path entered cannot be found or accessed, or is invalid.

**Action:**    Enter an existing path or a path, where you have access rights. If necessary, create a new path using "mkdir" and run "ADBBACK" again.

# [adbback-06]

**Message:**    Database in use. All users must close their connections before database backup can be run.

**Cause:**    The ADOxx database to be saved is being used by one or more ADOxx users. You can only run the backup when all connections to the ADOxx database are terminated.

**Action:**    All ADOxx users must terminate their connections to the ADOxx database so that it can be saved.

# [adbback-07]

**Message:**    Database manager has not been started.

**Cause:**    The database manager or the database instance is not active.

**Action:**    Start the database manager or the database.

# [adbback-08]

**Message:**    User name does not exist or has insufficient privileges.

**Cause:**    The user name entered does not exist or has not got sufficient rights.

**Action:**    Enter the user name correctly. If the message occurs again, create the user and/or allocate the necessary rights. This can only be done by the database administrator.

# [adbinst-01]

**Message:** Database error:

SQLCODE: *<Database error code> <Parameter, which caused the error>*.

**Cause:** A general database error occurred. SQLCODE indicates a database-specific error code, which can be looked up in the database documentation.

**Action:** Find the cause for the error within the database documentation (e.g. look up the DB2 error code "**-1124**" in the DB2 documentation under "SQL**1124**N") and ask your database administrator to carry out the necessary actions described in the documentation to fix the problem.

# [adbinst-02]

**Message:** Syntax error for database name:

[*<node>*:]*<database name>*.

**Cause:** You did not fill in the input field 'database name' correctly. The correct syntax is [*<node>*:]*<database name>*.

**Action:** Enter the database name according to the correct syntax.

# [adbinst-03]

**Message:** User name and password must be entered.

**Cause:** At least one of the values for the fields 'SYSADM/SYSCTRL user' and 'password' is missing.

**Action:** Enter the missing value(s).

# [adbinst-04]

**Message:** Invalid database name.

**Cause:** The name of the ADOxx database is either too short or long, or consists of invalid characters.

**Action:** Enter a name consisting of three to eight alpha-numeric characters.

# [adbinst-05]

**Message:** It is not possible to create a database from this node.

**Cause:** This message occurs, when only the client-enabler is installed on the local machine and the user tries to create a new database on a remote server without entering the name of the node.

**Action:** You cannot install an ADOxx database from the client. This is only possible from the server, so please contact your system administrator.

# [adbinst-06]

**Message:** Database name exists already.

**Cause:** An ADOxx database with this name exists already .

**Action:** Enter a different name for the new ADOxx database.

# [adbinst-07]

**Message:** User name does not exist or has insufficient privileges.

**Cause:** The user name entered either does not exist or has not sufficient rights to create databases.

**Action:** Ensure that the user name was entered correctly. If that is the case, please contact your database administrator.

# [adbinst-08]

**Message:** Unsuccessful login.

**Cause:** You entered an incorrect user name or password.

**Action:** Ensure, that the user name and password were entered correctly. If that is the case, please contact your database administrator.

# [adbinst-09]

**Message:** Command line error.

Calling convention: adbinst [-u*<user>*] [-p*<password>*] [-d[*<node>*:]*<database name>*] [-l*<licence number>*] [-s*<database system>*] [-c[+|-]]

**Cause:** The syntax used in the command line is not correct.

**Action:** Enter the command line parameters in the syntactically correct form.

# [adbinst-10]

**Message:** 'ADONIS' user does not exist or has insufficient privileges.

**Cause:** The standard user 'ADONIS' has not been installed on the computer or has no rights to create databases.

**Action:** Create the user "ADOxx" in the user profile administration and/or allocate the right the create databases to him. This can only be done by your system administrator.

# [adbinst-11]

**Message:** Unsuccessful login of user 'ADONIS'.

**Cause:** The login attempt of the user 'ADONIS' could not be successfully executed. This might be caused by a changed password of the standard user 'ADONIS'.

**Action:**     Please contact your system administrator.

# [adbinst-12]

**Message:**   Error while creating tables.

**Cause:**     A database error occurred when generating the database tables. This is caused either by lack of database rights for the standard user 'ADONIS' or by a database error which cannot be localised (e.g. network error, system break down, connection break down).

**Action:**     Make sure, that the standard user 'ADONIS' has been created correctly and is assigned with the necessary database rights and that the network connection (as described in the DBMS-specific documentation) has been correctly configured.

# [adbinst-13]

**Message:**   Error while creating base classes.

**Cause:**     An error occurred during the creation of the ADOxx base classes. This is most likely to be caused by a system error (network error, connection break down).

**Action:**     Try to install your ADOxx database again. If the error re-occurs, please check the system settings on your computer (e.g. path settings, network).

# [adbinst-14]

**Message:**   Error while creating meta model/standard AL.

**Cause:**     When generating the meta model or the standard application library an error occurred. The error is most likely caused by a system error (network error, connection break down).

**Action:**     Try to install your ADOxx database again. If the error re-occurs, please check the system settings on your computer (e.g. path settings, network).

# [adbinst-15]

**Message:**   Database manager has not been started.

**Cause:**     The database manager or the database instance is not active.

**Action:**     Start the database manager or the database instance.

# [adbinst-16]

**Message:**   Incorrect licence number or licence file not found.

**Cause:**     You entered an invalid licence number.

**Action:**     Make sure that the licence number was entered correctly (capital/small letters!). If the error re-occurs, please contact your ADOxx consultant.

# [adbinst-18]

**Message:** The selected database does not exist or has not yet been catalogued.

**Cause:** The database has not been set-up on the DB server or the network connection has not been configured on the client.

**Action:** Setup the database and the network connection according to the guidelines in your "Installation and database administration manual".

# [adbinst-19]

**Message:** Personal Oracle is not installed.

**Cause:** You tried to create an ADOxx database for "Personal Oracle", without having installed the database system "Personal Oracle" on your computer.

**Action:** Install "Personal Oracle", using your Oracle installation-package.

If you are using an Oracle server version (also as a stand-alone version), please select the entry "ORACLE" (and not "PersonalORACLE") in the list-box "Database system" of the program window.

# [adbinst-20]

**Message:** File <*file name*> could not be found.

**Cause:** The file needed, could not be found. This might be due to an error during the installation of ADOxx or due to the fact, that the file has been deleted.

**Action:** Re-start the ADOxx installation program.

# [adbinst-21]

**Message:** Import of the standard application library failed.

**Cause:** 1. The file "ado30nt.abl" (WindowsNT/95/98 only) or "ado30os2.abl" (OS/2 only) could not be found.

2. The file "ado30nt.abl" (WindowsNT/95/98 only) or "ado30os2.abl" (OS/2 only) does not include the standard application library.

3. The ABL file containing the standard application library is invalid.

**Action:** Please contact your ADOxx consultant.

# [adbrest-01]

**Message:** Database error:

SQLCODE: <*database error code*> <*parameter, causing the error*>.

**Cause:** A database error occurred. SQLCODE indicates a database-specific error code that can be looked up in the database documentation.

**Action:** Find the cause for the error within the database documentation (e.g. look up the DB2 error code "**-1124**" in the DB2 documentation under "SQL**1124**N") and ask your

database administrator to carry out the necessary actions described in the documentation to fix the problem.

# [adbrest-02]

**Message:**    User name, password, database name and timestamp must be entered.

**Cause:**    You did not enter one or more necessary parameters.

**Action:**    Enter all of the following: user name, password, ADOxx database name and timestamp.

# [adbrest-03]

**Message:**    User name does not exist or has insufficient privileges.

**Cause:**    The user name entered does not exist or has not sufficient rights.

**Action:**    Make sure that the user name had been entered correctly. If the message re-occurs, create the user and/or assign the necessary rights to the user. This has to be done by the database administrator.

# [adbrest-04]

**Message:**    User name/password not valid.

**Cause:**    You entered the user name and/or password incorrectly.

**Action:**    Enter a valid user name and the valid password.

# [adbrest-05]

**Message:**    Path not found or invalid.

**Cause:**    The path entered does not exist or cannot be accessed.

**Action:**    Enter the path to which the ADOxx database had been saved with ADBBACK.

# [adbrest-06]

**Message:**    Database in use. All users must close their connections before database can be restored.

**Cause:**    The ADOxx database to be restored is being used by one or more ADOxx users. It can only be restored, when all connections to the ADOxx database have been terminated.

**Action:**    All ADOxx users must terminate their connections with the ADOxx database to be restored.

# [adbrest-07]

**Message:**    Timestamp entered is invalid

**Cause:**    The syntax of the parameter "timestamp" is not correct.

**Action:**    The timestamp is derived from the date and time at which the backup was made and is represented by a number consisting of 14 digits (Example: A back-up from the 3rd of July 1998 at 13 hours 05 minutes and 27 seconds has the timestamp "19980703130527").

# [adbrest-08]

**Message:**    Timestamp or database alias name could not be found.

**Cause:**    The timestamp or the name of the ADOxx database could not be found.

**Action:**    Make sure that the ADOxx database name and the timestamp were entered correctly.

# [adbrest-09]

**Message:**    Database manager has not been started.

**Cause:**    The database manager or the database instance is not active.

**Action:**    Start the database manager or the database instance.

# [aexinst-01]

**Message:**    Parameter not satisfactory.

The syntax: *<file to create>* <new file> <ADOxx Excel file 1> <ADOxx Excel file 2> {<Excel path>}

**Cause:**    An error has occurred during the installation.

**Action:**    Contact your ADOxx administrator.

# [aleo-01]

**Message:**    Character expected after backslash '\'!

*<context>*

**Cause:**    The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-02]

**Message:**    Closing quotation mark " is missing!

*<context>*

**Cause:**    The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-03]

**Message:**    Invalid character: <*character*>.

key word (next element) or Name (next attribute) expected!

<*Context*>

**Cause:**    The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-04]

**Message:**    <*figure*> ':' expected!

<*context*>

**Cause:**    The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-05]

**Message:**    Value expected after ':' !

<*context*>

**Cause:**    The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-06]

**Message:**    <*Text*>: Measure unknown!

<*context*>

**Cause:**    The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-08]

**Message:**    <*Text*>: key word expected!

<*context*>

**Cause:**    The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-09]

**Message:** Unauthorised figure after closing quotation marks '"'!

*<context>*

**Cause:** The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-10]

**Message:** Unauthorised figure after a bracket closing an expression ')'!

*<context>*

**Cause:** The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-13]

**Message:** Operand expected!

*<context>*

**Cause:** The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-14]

**Message:** Closing bracket ')' is missing!

*<context>*

**Cause:** The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-15]

**Message:** Operator expected!

*<context>*

**Cause:** The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-16]

**Message:**    Closing bracket ')' without opening bracket '('!

*<context>*

**Cause:**    The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-17]

**Message:**    Unauthorised figure!

*<context>*

**Cause:**    The attribute listed (context) was changed during customising (or in the ADL file) and contains the syntax error described

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-18]

**Message:**    Division by 0!

*<context>*

**Cause:**    The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-19]

**Message:**    Over flow!

*<context>*

**Cause:**    The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-20]

**Message:**    This expression shall not contain a variable!

*<context>*

**Cause:**    The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute.

**Action:**    Correct the error described or contact your ADOxx administrator.

# [aleo-21]

| | |
|---|---|
| **Message:** | Type incompatibility! |
| | *<function call>* |
| | *<context>* |
| **Cause:** | The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-22]

| | |
|---|---|
| **Message:** | *<Text>*: Unknown function! |
| | *<context>* |
| **Cause:** | The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-23]

| | |
|---|---|
| **Message:** | Wrong parameter number! |
| | *<context>* |
| **Cause:** | The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-24]

| | |
|---|---|
| **Message:** | *<Text>*:  Unknown operator! |
| | *<context>* |
| **Cause:** | The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-25]

| | |
|---|---|
| **Message:** | *<Text>*: Lowercase letters in a key word! |
| | *<context>* |
| **Cause:** | The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-26]

**Message:** Under flow when accessing to string!

*<context>*

**Cause:** The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute.

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-27]

**Message:** Over flow when accessing to string!

*<context>*

**Cause:** The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute.

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-28]

**Message:** *<figure>*: unauthorised figure after a key word!

*<context>*

**Cause:** The attribute listed (context) was changed during customisation (or in the ADL file) and contains the syntax error described.

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-29]

**Message:** Unauthorised figure after an attribute name!

*<context>*

**Cause:** The attribute listed (context) was changed during customisation (or in the ADL file) and contains the syntax error described.

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-30]

**Message:** Unauthorised figure after an attribute value!

*<context>*

**Cause:** The attribute listed (context) was changed during customisation (or in the ADL file) and contains the syntax error described.

**Action:** Correct the error described or contact your ADOxx administrator.

# [aleo-31]

| | |
|---|---|
| **Message:** | The target of a value assignment must be a variable! |
| | *<context>* |
| **Cause:** | The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-32]

| | |
|---|---|
| **Message:** | Call of the function error()! |
| | *<context>* |
| **Cause:** | The described runtime error has occurred during the evaluation of an expression, which is contained in the value of the specified attribute. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-34]

| | |
|---|---|
| **Message:** | Closing bracket '}' is missing! |
| | *<context>* |
| **Cause:** | The attribute listed (context) was changed during customisation (or in the ADL file) and contains the syntax error described. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-35]

| | |
|---|---|
| **Message:** | Closing bracket '}' without opening bracket '{'! |
| | *<context>* |
| **Cause:** | The attribute listed (context) was changed during customisation (or in the ADL file) and contains the syntax error described. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-36]

| | |
|---|---|
| **Message:** | The value for *<attribute name>* is missing or is of the wrong type! |
| | Expected: *<Attribute type1>*, found: *<Attribute type2>*. |
| | *<context>* |
| **Cause:** | The attribute listed (context) was changed during customisation (or in the ADL file) and contains the syntax error described. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [aleo-37]

| | |
|---|---|
| **Message:** | Over flow when concatenating two strings! |
| | The maximum possible length of a string contains 65529 characters. |
| **Cause:** | The string made from the concatenation is too long to be saved to a string variable. |
| **Action:** | Change the concerned command or expression, so that the created string will not be too long. |

# [aleo-38]

| | |
|---|---|
| **Message:** | Overflow while calculating an expression! |
| | The expression is too complex and cannot be calculated. |
| **Cause:** | The expression has a nesting depth and/or a number of operands greater than 250. |
| **Action:** | Simplify the expression or contact your ADOxx administrator. |

# [aleo-39]

| | |
|---|---|
| **Message:** | *<Name of variable>*: is not initialised! |
| | *<Name of function>* |
| **Cause:** | Calling the function *<Name of function>* changes an array (areplace, aappend). However the variable *<Name of variable>* is not defined as an array. |
| **Action:** | Initialize the variable listed as an array before the function call or contact your ADOxx administrator. |

# [aleo-40]

| | |
|---|---|
| **Message:** | Parameter list without function! |
| **Cause:** | A part of the expression is interpreted as a parameter list without a function name in front of it. |
| **Action:** | Correct the error described or contact your ADOxx administrator. |

# [asqladm-01]

| | |
|---|---|
| **Message:** | Serious error: No MSDE or SQL Server default instance found. |
| | Program will terminate. |
| **Cause:** | There is no "MSDE" or "SQL Server" default instance available on your computer. |
| **Action:** | Install "MSDE" from your ADOxx installation CD-ROM or create a SQL Server default instance. |
| | (Further information about creating a SQL Server default instance can be gathered in the SQL Server manual.) |

# [asqladm-02]

| | |
|---|---|
| **Message:** | The database name is to short. |
| | Enter another name (min. 3 characters). |
| **Cause:** | The database name entered is invalid. The database name must contain at least 3 characters and must not be longer than 8 characters. Moreover, the database name cannot start with a number and "adonis" is not authorised as a database name. |
| **Action:** | Specify a valid database name. |

# [asqladm-03]

| | |
|---|---|
| **Message:** | The database name cannot be "adonis". |
| | Enter another name (min. 3 characters). |
| **Cause:** | The database name entered is invalid. The database name must contain at least 3 characters and cannot be longer than 8 characters. The database name cannot start with a number and "adonis" is not authorised as a database name. |
| **Action:** | Specify a valid database name. |

# [asqladm-04]

| | |
|---|---|
| **Message:** | A database with the specified name already exists as ODBC data source. |
| | Enter another database name. |
| **Cause:** | An ODBC data source with the specified name already exists. |
| **Action:** | Enter another database name. |

# [asqladm-05]

| | |
|---|---|
| **Message:** | A database with the specified name already exists as MSDE database. |
| | Enter another database name. |
| **Cause:** | An MSDE database with the specified name already exists. |
| **Action:** | Enter another database name. |

# [asqladm-06]

| | |
|---|---|
| **Message:** | Serious error: The MSDE or SQL server has been stopped and could not be started. Try to start the MSDE or SQL server manually. |
| | Should the problem still not be resolved, contact your system administrator. |
| **Cause:** | The database server has been stopped and could not be started. |
| **Action:** | Start the MSDE or SQL server manually. |
| | Should the problem still not be resolved, contact your system administrator. |

# [asqladm-07]

**Message:** The specified licence number does not entitle you to create a new database. If necessary, contact your ADOxx administrator.

**Cause:** No new databases can be created with the specified licence number.

**Action:** Specify a licence number, which entitles you to create a new database. Contact your ADOxx administrator if necessary.

# [asqladm-08]

**Message:** Serious error: The Template-Script to create the database is not available or could not be opened.

Contact your ADOxx administrator.

**Cause:** The file "createdb.tpl" is not available in the ADOxx program directory.

**Action:** Make sure that the file "createdb.tpl" is available in the ADOxx program directory.If necessary, contact your ADOxx administrator.

# [asqladm-09]

**Message:** Serious error: The Script to create the database is not available or could not be opened.

**Cause:** The file "createdb.sql" is not available in the ADOxx program directory.

**Action:** Make sure that the user currently logged on has write rights on the ADOxx program directory. If necessary, contact your ADOxx administrator.

# [asqladm-10]

**Message:** Serious error: The user 'ADONIS' could not be created.

**Cause:** The user 'ADONIS' could not be created

**Action:** Restart the program and try to create a new database. Should the error occur again, contact your ADOxx administrator.

# [asqladm-11]

**Message:** Serious error: The ADOxx database could not be opened.

**Cause:** The ADOxx database could not be opened.

**Action:** Restart the program and try to create a new database. Should the error occur again, contact your ADOxx administrator.

# [asqladm-12]

**Message:** The ODBC data source could not be installed.

**Cause:** No ODBC data source could be created for the specified database.

**Action:** Restart the program and try again to create a new database. Should the error occur again, contact your ADOxx administrator.


# [asqladm-13]

**Message:** Error when creating the database. The ADOxx database could not be initialised.

**Cause:** An error has occurred during the execution of the program to initialise the database.

**Action:** Restart the program and try again to create a new database. Should the error occur again, contact your ADOxx administrator.


# [asqladm-14]

**Message:** The ADOxx database could not be deleted.

**Cause:** An error occurred when deleting the database.

**Action:** Restart the program and try again to delete the database. Should the error occur again, contact your ADOxx administrator.


# [asqladm-15]

**Message:** The ODBC entry of the ADOxx database could not be deleted. If necessary, remove it manually from the ODBC data source administration.

**Cause:** The entry of the database in the ODBC data source administration could not be deleted.

**Action:** Delete the entry manually from the ODBC data source administration. If necessary, contact your ADOxx administrator.


# [asqladm-16]

**Message:** Invalid path or file name. If necessary, transfer the proposed values.

**Cause:** The specified path and/or file name is invalid.

**Action:** Enter another path and/or file name or accept the proposed values.


# [asqladm-17]

**Message:** Backup could not be executed. The Template Script to backup the database is not available or could not be opened.

**Cause:** The file "backMSDE.tpl" is not available in the ADOxx program directory.

**Action:** Make sure that the file "backMSDE.tpl" is available in the ADOxx program directory. Contact your ADOxx administrator if necessary.

# [asqladm-18]

**Message:** Backup could not be executed. The Script to backup the database is not available or could not be opened.

**Cause:** The file "backMSDE.sql" is not available in the ADOxx program directory.

**Action:** Make sure that the user currently logged in has write rights on the ADOxx program directory. If necessary, contact your ADOxx administrator.

# [asqladm-19]

**Message:** An error has occurred during the backup of the ADOxx database. The backup could not be executed.

**Cause:** An error has occurred during the backup of the ADOxx database.

**Action:** Restart the program and attempt to save the ADOxx database again. Should the error occur again, contact your ADOxx administrator.

# [asqladm-20]

**Message:** The restoration could not be executed.

The Template Script to restore the database is not available or could not be opened.

**Cause:** The file "restMSDE.tpl" is not available in the ADOxx program directory.

**Action:** Make sure that the file "restMSDE.tpl" is available in the ADOxx program directory. If necessary, contact your ADOxx administrator.

# [asqladm-21]

**Message:** The restoration could not be executed.

The Script to restore the database is not available or could not be opened.

**Cause:** The file "restMSDE.sql" is not available in the ADOxx program directory.

**Action:** Make sure that the user currently logged in has write rights on the ADOxx program directory. If necessary, contact your ADOxx administrator.

# [asqladm-22]

**Message:** An error has occurred during the restoration of the ADOxx database. The restoration could not be executed.

**Cause:** An error occurred during the restoration of the ADOxx database.

**Action:** Restart the program and try again to save the ADOxx database. Should the error occur again, contact your ADOxx administrator.

# [asqladm-23]

**Message:**    The entered key words don't correspond.

**Cause:**    Both entered key words don't correspond.

**Action:**    Enter the key word again and make sure that both key words correspond.

# [asqladm-24]

**Message:**    Wrong old password. Could not change password of the MSDE default administrator "sa".

**Cause:**    The specified old password of the MSDE standard administrator "*<system administrator name>*" is wrong.

**Action:**    Specify the correct old password of the MSDE standard administrator "*<system administrator name>*".

# [asqladm-25]

**Message:**    The database name cannot start with a number.

    Enter another name (min. 3 characters).

**Cause:**    The database name entered is invalid. The database name must contain at least 3 characters and cannot be longer than 8 characters, cannot be "adonis" and cannot start with a number.

**Action:**    Specify a valid database name.

# [asqladm-27]

**Message:**    Invalid file name. You can change the path, NOT the file name of the backup file.

**Cause:**    The file name of the backup file has been changed (=database name of the database to be saved). It is only permitted to change the path of the backup file, since otherwise a restoration is not possible.

**Action:**    Restart the storage process. Transfer the recommended values or change the path of the backup file. The file name must be "*<database name>*.bkp".

# [averdate-01]

**Message:**    Internal error: the version handler has not been initialised.

**Cause:**    An internal error has occurred.

**Action:**    Contact your ADOxx administrator.

# [averdate-02]

**Message:**    A syntactical error has occurred when parsing the expression:

*<LEO expression>*

**Cause:** The value of the library attribute "versioning format" contains errors. The specified LEO expression contains syntactical errors. Pay attention to the appropriate [aleo] error message.

**Action:** Correct the value of the library attribute "versioning format" and pay attention to the specified [aleo] error message or contact your ADOxx administrator.

# [averdate-04]

**Message:** The key word "VERSIONING" has not been found.

**Cause:** The first key word of the LEO expressions is not "VERSIONING".

**Action:** Correct the value of the library attribute "versioning format" by inserting the key word "VERSIONING" at the first position or contact your ADOxx administrator.

# [averdate-05]

**Message:** An invalid key word has been used.

**Cause:** The LEO expression contains an invalid key word.

**Action:** Correct the value of the library attribute "versioning format" by deleting all invalid key words or contact your ADOxx administrator. Valid key words are "VERSIONING", "START_DATE", "TEXT_FIELD", "DAY_FIELD", "MONTH_FIELD" and "YEAR_FIELD".

# [averdate-06]

**Message:** The start date can only be defined once.

**Cause:** The LEO expression contains the key word "START_DATE" more than once.

**Action:** Correct the value of the library attribute "versioning format" by deleting all unnecessary "START_DATE" key words or contact your ADOxx administrator.

# [averdate-07]

**Message:** The day field can only be defined once.

**Cause:** The LEO expression contains the key word "DAY_FIELD" more than once.

**Action:** Correct the value of the library attribute "versioning format" by deleting all unnecessary "DAY_FIELD" key words or contact your ADOxx administrator.

# [averdate-08]

**Message:** The month field can only be defined once.

**Cause:** The LEO expression contains the key word "MONTH_FIELD" more than once.

**Action:** Correct the value of the library attribute "versioning format", by removing all unnecessary "MONTH_FIELD" key words or contact your ADOxx administrator.

# [averdate-09]

**Message:**    The year field can only be defined once.

**Cause:**    The LEO expression contains the key word "YEAR_FIELD" more than once.

**Action:**    Correct the value of the library attribute "versioning format", by removing all unnecessary "YEAR_FIELD" key words or contact your ADOxx administrator.

# [averdate-10]

**Message:**    The value of the day attribute in the start date is too small.

It is only allowed within the area *<1>* to *<31>*.

**Cause:**    An error has occurred in the key word "START_DATE": The value of the attribute "day" is too small.

**Action:**    Correct the value of the library attribute "versioning format", by specifying the attribute "day" of the key word "START_DATE" with a valid value between 1 and 31 or contact your ADOxx administrator.

# [averdate-11]

**Message:**    The value of the day attribute in the start date is too high.

It is only allowed within the area *<1>* to *<31>*.

**Cause:**    An error has occurred in the key word "START_DATE": The value of the attribute "day" is too high.

**Action:**    Correct the value of the library attribute "versioning format", by specifying the attribute "day" of the key word "START_DATE" with a valid value between 1 and 31 or contact your ADOxx administrator.

# [averdate-12]

**Message:**    The value of the month attribute in the start date is too small.

It is only allowed within the area *<1>* to *<12>*.

**Cause:**    An error has occurred in the key word "START_DATE": the value of the attribute "month" is too small.

**Action:**    Correct the value of the library attribute "versioning format"  by specifying the attribute "month" of the key word "START_DATE" with a valid value between 1 and 12 or contact your ADOxx administrator.

# [averdate-13]

**Message:**    The value of the month attribute in the start date is too high.

It is only allowed within the area *<1>* to *<12>*.

**Cause:**    An error has occurred in the key word "START_DATE": the value of the attribute "month" is too high

**Action:**  Correct the value of the library attribute "versioning format", by specifying the attribute "month" of the key word "START_DATE" with a valid value between 1 and 12 or contact your ADOxx administrator.

# [averdate-14]

**Message:**  The value of the year attribute in the start date is too small.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:**  An error has occurred in the key word "START_DATE": the value of the attribute "year" is too small.

**Action:**  Correct the value of the library attribute "versioning format", by specifying the attribute "year" of the key word "START_DATE" with a valid value between 0 and 9999 or contact your ADOxx administrator.

# [averdate-15]

**Message:**  The value of the year attribute in the start date is too high.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:**  An error has occurred in the key word "START_DATE": the value of the attribute "year" is too high.

**Action:**  Correct the value of the library attribute "versioning format", by specifying the attribute "year" of the key word "START_DATE" with a valid value between 0 and 9999 or contact your ADOxx administrator.

# [averdate-16]

**Message:**  The minimum value of the day field is greater than the maximum value.

**Cause:**  An error has occurred in the key word "DAY_FIELD": the value of the attribute "minimum" is greater than the value of the attribute "maximum".

**Action:**  Correct the value of the library attribute "versioning format" by specifying in key word "DAY_FIELD" the value of the attribute "minimum" with a value, which is smaller than the value of the attribute "maximum" or contact your ADOxx administrator.

# [averdate-17]

**Message:**  The minimum value of the month field is greater than the maximum value.

**Cause:**  An error has occurred in the key word "MONTH_FIELD": the value of the attribute "minimum" is greater than the value of the attribute "maximum".

**Action:**  Correct the value of the library attribute "versioning format", by specifying in key word "MONTH_FIELD" the value of the attribute "minimum" with a value, which is smaller than the value of the attribute "maximum" or contact your ADOxx administrator.

# [averdate-18]

**Message:**   The minimum value of the year field is greater than the maximum value.

**Cause:**   An error has occurred in the key word "YEAR_FIELD": the value of the attribute "minimum" is greater than the value of the attribute "maximum".

**Action:**   Correct the value of the library attribute "versioning format", by specifying in key word "YEAR_FIELD" the value of the attribute "minimum" with a value, which is smaller than the value of the attribute "maximum" or contact your ADOxx administrator.

# [averdate-19]

**Message:**   The default value of the day field is too small.

It is only allowed within the area  *<1>* to *<31>*.

**Cause:**   An error has occurred in the key word "DAY_FIELD": the value of the attribute "default" is either not in the area 1 to 31 or the value is smaller than the value of the attribute "minimum".

**Action:**   Correct the value of the library attribute "versioning format" by specifying the value of the attribute "default" in the key word "DAY_FIELD" with a value, which is both between the values of the attributes "minimum" and "maximum" and between 1 and 31 or contact your ADOxx administrator.

# [averdate-20]

**Message:**   The default value of the day field is too high.

It is only allowed within the area *<1>* to *<31>*.

**Cause:**   An error has occurred in the key word "DAY_FIELD": the value of the attribute "default" is either not in the area 1 to 31 or the value is higher than the value of the attribute "maximum".

**Action:**   Correct the value of the library attribute "versioning format" by specifying the value of the attribute "default" in the key word "DAY_FIELD" with a value, which is both between the values of the attributes "minimum" and "maximum" and between 1 and 31 or contact your ADOxx administrator.

# [averdate-21]

**Message:**   The minimum value of the day field is too small.

It is only allowed within the area *<1>* to *<31>*.

**Cause:**   An error has occurred in the key word "DAY_FIELD": the value of the attribute "minimum" is too small.

**Action:**   Correct the value of the library attribute "versioning format" by specifying the value of the attribute "minimum" in the key word "DAY_FIELD" with a value between 1 and 31 or contact your ADOxx administrator.

# [averdate-22]

**Message:** The minimum value of the day field is too high.

It is only allowed within the area *<1>* to *<31>*.

**Cause:** An error has occurred in the key word "DAY_FIELD": the value of the attribute "minimum" is too high.

**Action:** Correct the value of the library attribute "versioning format" by specifying the value of the attribute "minimum" in the key word "DAY_FIELD" with a value between 1 and 31 or contact your ADOxx administrator.

# [averdate-23]

**Message:** The maximum value of the day field is too small.

It is only allowed within the area *<1>* to *<31>*.

**Cause:** An error has occurred in the key word "DAY_FIELD": the value of the attribute "maximum" is too small.

**Action:** Correct the value of the library attribute "versioning format" by specifying the value of the attribute "maximum" in the key word "DAY_FIELD" with a value between 1 and 31 or contact your ADOxx administrator.

# [averdate-24]

**Message:** The maximum value of the day field is too high.

It is only allowed within the area *<1>* to *<31>*.

**Cause:** An error has occurred in the key word "DAY_FIELD": the value of the attribute "maximum" is too high.

**Action:** Correct the value of the library attribute "versioning format" by specifying the value of the attribute "maximum" in the key word "DAY_FIELD" with a value between 1 and 31 or contact your ADOxx administrator.

# [averdate-25]

**Message:** The default value of the month field is too small.

It is only allowed within the area *<1>* to *<12>*.

**Cause:** An error has occurred in the key word "MONTH_FIELD": the value of the attribute "default" is either not in the area 1 to 12 or the value is smaller than the value of the attribute "minimum".

**Action:** Correct the value of the library attribute "versioning format" by specifying the value of the attribute "default" in the key word "MONTH_FIELD" with a value, which is both between the values of the attributes "minimum" and "maximum" and between 1 and 12 or contact your ADOxx administrator.

# [averdate-26]

**Message:** The default value of the month field is too high.

It is only allowed within the area <*1*> to <*12*>.

**Cause:** An error has occurred in the key word "MONTH_FIELD": the value of the attribute "default" is either not in the area 1 to 12 or the value is greater than the value of the attribute "maximum".

**Action:** Correct the value of the library attribute "versioning format" by specifying the value of the attribute "default" in the key word "MONTH_FIELD" with a value, which is both between the values of the attributes "minimum" and "maximum" and between 1 and 12 or contact your ADOxx administrator.


# [averdate-27]

**Message:** The minimum value of the month field is too small.

It is only allowed within the area <*1*> to <*12*>.

**Cause:** An error has occurred in the key word "MONTH_FIELD": the value of the attribute "minimum" is too small.

**Action:** Correct the value of the library attribute "versioning format", by specifying in the key word "MONTH_FIELD" the value of the attribute "minimum" with a value between 1 and 12 or contact your ADOxx administrator.


# [averdate-28]

**Message:** The minimum value of the month field is too high.

It is only allowed within the area <*1*> to <*12*>.

**Cause:** An error has occurred in the key word "MONTH_FIELD": the value of the attribute "minimum" is too high.

**Action:** Correct the value of the library attribute "versioning format", by specifying in the key word "MONTH_FIELD" the value of the attribute "minimum" with a value between 1 and 12 or contact your ADOxx administrator.


# [averdate-29]

**Message:** The maximum value of the month field is too small.

It is only allowed within the area <*1*> to <*12*>.

**Cause:** An error has occurred in the key word "MONTH_FIELD": the value of the attribute "maximum" is too small.

**Action:** Correct the value of the library attribute "versioning format", by specifying in the key word "MONTH_FIELD" the value of the attribute "maximum" with a value between 1 and 12 or contact your ADOxx administrator.


# [averdate-30]

**Message:** The maximum value of the month field is too high.

It is only allowed within the area <*1*> to <*12*>.

**Cause:** An error has occurred in the key word "MONTH_FIELD": the value of the attribute "maximum" is too high.

**Action:** Correct the value of the library attribute "versioning format", by specifying in the key word "MONTH_FIELD" the value of the attribute "maximum" with a value between 1 and 12 or contact your ADOxx administrator.

# [averdate-31]

**Message:** The default value of the year field is too small.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:** An error has occurred in the key word "YEAR_FIELD": the value of the attribute "default" is either not within the area 0 to 9999 or the value is smaller than the value of the attribute "minimum".

**Action:** Correct the value of the library attribute "versioning format", by specifying in the key word "YEAR_FIELD" the value of the attribute "default" with a value which is both between the values of the attributes "minimum" and "maximum" and between 0 and 9999 or contact your ADOxx administrator.

# [averdate-32]

**Message:** The default value of the year field is too high.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:** An error has occurred in the key word "YEAR_FIELD": the value of the attribute "default" is either not within the area 0 to 9999 or the value is greater than the value of the attribute "maximum".

**Action:** Correct the value of the library attribute "versioning format", by specifying in the key word "YEAR_FIELD" the value of the attribute "default" with a value which is both between the values of the attributes "minimum" and "maximum" and between 0 and 9999 or contact your ADOxx administrator.

# [averdate-33]

**Message:** The minimum value of the year field is too small.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:** An error has occurred in the key word "YEAR_FIELD": the value of the attribute "minimum" is too small.

**Action:** Correct the value of the library attribute "versioning format", by specifying in the key word "YEAR_FIELD" the value of the attribute "minimum" with a value between 0 and 9999 or contact your ADOxx administrator.

# [averdate-34]

**Message:** The minimum value of the year field is too high.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:** An error has occurred in the key word "YEAR_FIELD": the value of the attribute "minimum" is too high.

**Action:**     Correct the value of the library attribute "versioning format", by specifying in the key word "YEAR_FIELD" the value of the attribute "minimum" with a value between 0 and 9999 or contact your ADOxx administrator.

# [averdate-35]

**Message:**    The maximum value of the year field is too small.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:**      An error has occurred in the key word "YEAR_FIELD": the value of the attribute "maximum" is too small.

**Action:**     Correct the value of the library attribute "versioning format", by specifying in the key word "YEAR_FIELD" the value of the attribute "maximum" with a value between 0 and 9999 or contact your ADOxx administrator.

# [averdate-36]

**Message:**    The maximum value of the year field is too high.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:**      An error has occurred in the key word "YEAR_FIELD": the value of the attribute "maximum" is too high.

**Action:**     Correct the value of the library attribute "versioning format", by specifying in the key word "YEAR_FIELD" the value of the attribute "maximum" with a value between 0 and 9999 or contact your ADOxx administrator.

# [averdate-37]

**Message:**    The value of the day field is too small.

It is only allowed within the area *<1>* to *<31>*.

**Cause:**      The day of the specified date is either smaller than the value of the attribute "minimum" of the key word "DAY_FIELD" or less than 1.

**Action:**     Change the date, so that the day is between Minimum and Maximum or between 1 and 31.

# [averdate-38]

**Message:**    The value of the day field is too high.

It is only allowed within the area *<1>* to *<31>*.

**Cause:**      The day of the specified date is either greater than the value of the attribute "maximum" of the key word "DAY_FIELD" or greater than 1.

**Action:**     Change the date, so that the day is between Minimum and Maximum or between 1 and 31.

# [averdate-39]

**Message:** The value of the month field is too small.

It is only allowed within the area *<1>* to *<12>*.

**Cause:** The day of the specified date is either smaller than the value of the attribute "minimum" of the key word "MONTH_FIELD" or smaller than 1.

**Action:** Change the date, so that the month is between Minimum and Maximum or between 1 and 12.

# [averdate-40]

**Message:** The value of the month field is too high.

It is only allowed within the area *<1>* to *<12>*.

**Cause:** The day of the specified date is either greater than the value of the attribute "maximum" of the key word "MONTH_FIELD" or greater than 1.

**Action:** Change the date, so that the month is between Minimum and Maximum or between 1 and 12.

# [averdate-41]

**Message:** The value of the year field is too small.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:** The day of the specified date is either smaller than the value of the attribute "minimum" of the key word "YEAR_FIELD" or smaller than 0.

**Action:** Change the date, so that the year is between Minimum and Maximum or between 0 and 9999.

# [averdate-42]

**Message:** The value of the year field is too high.

It is only allowed within the area *<0>* to *<9999>*.

**Cause:** The day of the specified date is either greater than the value of the attribute "maximum" of the key word "YEAR_FIELD" or greater than 9999.

**Action:** Change the date, so that the year is between Minimum and Maximum or between 0 and 9999.

# [averdate-43]

**Message:** The internal display of the date is not correct.

**Cause:** An internal error has occurred: the format of the date is invalid.

**Action:** Contact your ADOxx administrator.

# [averdate-44]

**Message:** The internal display of the date contains a day although no day field is defined.

**Cause:** An internal error has occurred: the format of the date is invalid.

**Action:** Contact your ADOxx administrator.

# [averdate-45]

**Message:** The internal display of the date contains a month although no month field is defined.

**Cause:** An internal error has occurred: the format of the date is invalid.

**Action:** Contact your ADOxx administrator.

# [averdate-46]

**Message:** The internal display of the date contains a year although no year field is defined.

**Cause:** An internal error has occurred: the format of the date is invalid.

**Action:** Contact your ADOxx administrator.

# [averdate-47]

**Message:** The specified date cannot be increased.

**Cause:** The specified date is the last possible date.

**Action:** Use an earlier date since this is the last possible date or contact your ADOxx administrator.

# [averdate-48]

**Message:** Error when parsing the string:

The content of the text field does not correspond with the defined content.

**Cause:** A string has been found which does not correspond to the one in the library attribute "versioning format".

**Action:** Adapt the string that it corresponds with the format defined in the library attribute "versioning format". Pay attention to the order! If necessary, contact your ADOxx administrator.

# [averdate-49]

**Message:** Error when parsing the string:

The month name is not valid.

**Cause:** The name of a month is expected but could not be found.

**Action:**     Possible month names are "January", "February", "March", "April", "May", "June", "July", "August", "September", "October", "November" and "December".

# [averdate-50]

**Message:**   Error when parsing the string:

        The sting contains additional characters.

**Cause:**     The string contains excess characters.

**Action:**    Adapt the string so that it corresponds with the format defined in the library attribute "versioning format" or contact your ADOxx administrator.

# [averdate-51]

**Message:**   Error when parsing the string:

        The combination of day and month is invalid.

**Cause:**     You have attempted to use an invalid combination of day and month.

**Action:**    Change the string so that it only contains valid combinations of day and month, invalid combinations include "29" and "2" or "31" and "4".

# [averdate-52]

**Message:**   Error when parsing the string:

        No number has been found at the current place.

**Cause:**     A number is expected in the string but could not be found.

**Action:**    Adapt the string so that it corresponds with the format defined in the library attribute "versioning format" or contact your ADOxx administrator.

# [averdate-53]

**Message:**   Error when parsing the string:

        The number found is too small.

**Cause:**     A number found in the string is too small.

**Action:**    Adapt the string so that it corresponds with the format defined in the library attribute "versioning format" or contact your ADOxx administrator.

# [averdate-54]

**Message:**   Error when parsing the string:

        The number found is too high.

**Cause:**     A number found in the string is too high.

**Action:** Adapt the string so that it corresponds with the format defined in the library attribute "versioning format" or contact your ADOxx administrator.

# [averdate-55]

**Message:** Error while parsing string:

Between two dynamic values at least one TEXT field must exist.

**Cause:** When defining the library attribute "Versioning format" two dynamic fields (for day, month or year) have been entered consecutively.

**Action:** Change the definition by inserting a text field between the two dynamic fields or contact your ADOxx administrator.

# Part V
# Appendix

# 1. ADOxx Installation Appendix

## 1.1 Instructions for ADOxx installation in a Client/Server environment

Within this chapter you will find instructions to install ADOxx in a Client/Server environment including the database installation steps for the following database management systems (DBMS):

- **DB2** (see chap. 1.1.1, p. 142)
- **Informix** (see chap. 1.1.2, p. 142)
- **Oracle** (see chap. 1.1.3, p. 143)
- **Microsoft SQL Server** (see chap. 1.1.4, p. 143)

### 1.1.1 DB2

For the installation of ADOxx using the database management system "DB2" in a Client/Server environment it is recommended to proceed with the following steps:

1. Prepare DBMS environment (see chap. 3.1.1, p. 157)
2. Install ADOxx Server (see chap. 2.2, p. 46)
3. Install ADOxx Client (see chap. 2.3, p. 51)
4. Create ADOxx system user (see chap. 1.1.2, p. 75)
5. Create ADOxx database (see chap. 1.1.4, p. 79)

   **Hint:** Instead of creating the ADOxx DB2 database during the ADOxx installation you may alternatively prepare a DB2 database (see chap. 3.1.2, p. 159) and then create the ADOxx database within that prepared database (see chap. 1.1.3, p. 76).

### 1.1.2 Informix

For the installation of ADOxx using the database management system "Informix" in a Client/Server environment it is recommended to proceed with the following steps:

1. Prepare DBMS environment (see chap. 3.4.1, p. 165)
2. Install ADOxx Server (see chap. 2.2, p. 46)
3. Install ADOxx Client (see chap. 2.3, p. 51)
4. Create ADOxx system user (see chap. 2.1.2, p. 84)
5. Prepare database (see chap. 3.4.2, p. 166)
6. Create ADOxx database (see chap. 2.1.3, p. 85)

### 1.1.3 Oracle

For the installation of ADOxx using the database management system "Oracle" in a Client/Server environment it is recommended to proceed with the following steps:

1. Prepare DBMS environment (see chap. 3.5.1, p. 168)

2. Install ADOxx Server (see chap. 2.2, p. 46)

3. Install ADOxx Client (see chap. 2.3, p. 51)

4. Prepare database instance (see chap. 3.5.2, p. 169)

5. Create ADOxx database (see chap. 3.1.3, p. 89)

> **Hint:** Instead of preparing the Oracle database instance manually you can use the script templates enclosed to prepare the database instance (see chap. 3.5.2.1, p. 170).

### 1.1.4 Microsoft SQL Server

For the installation of ADOxx using the database management system "Microsoft SQL Server" in a Client/Server environment it is recommended to proceed with the following steps:

1. Prepare DBMS environment (see chap. 4.1.2, p. 92)

2. Install ADOxx Server (see chap. 2.2, p. 46)

3. Install ADOxx Client (see chap. 2.3, p. 51)

4. Prepare database (see chap. 3.6.1, p. 173)

5. Create ADOxx database (see chap. 4.1.3, p. 93)

## 1.2 Directory Structure

If not explicitly changed, the standard directories are automatically created during the installation.

The standard directory for the **ADOxx installation** is:

`\Program files\BOC\ADOxx10`

The language independent ADOxx program files can be found in this directory as well as the subdirectories:

- `\examples`
- `\help`
- `\language`
- `\plugins`

The standard directory for the **HOMER installation** is:

`\Program files\BOC\ADOxx10\HOMER`

All HOMER program files can be found in this directory.

## 1.3     File structure

During the **ADOxx installation** the files listed below (see Table 1) are created in the default directory
`\Program files\BOC\ADOxx10`:

| File name | Client | Client/**BPM Toolkit** | Client/**Admin Toolkit** | Server |
|---|---|---|---|---|
| aadma.exe | | | × | |
| aadma.exe.manifest | | | × | |
| aagent39.dll | | × | | |
| aalc39.dll | × | × | × | × |
| aanc39.dll | × | | | |
| abasic39.dll | × | × | × | × |
| abrwse39.dll | × | × | × | × |
| accc39.dll | | × | | |
| aconf39.dll | × | × | × | × |
| aconvert.exe | | × | | |
| acore39.dll | × | × | × | × |
| acorex39.dll | × | × | × | × |
| acorui39.dll | × | × | × | × |
| acqui.dat | | × | | |
| adb39.dll | × | × | × | × |
| adbinfo.exe | × | × | × | × |
| adbinst.exe | | | | × |
| adbinst.exe.manifest | | | | × |
| adblist.ini | × | × | × | × |
| adbui39.dll | × | × | × | × |
| adm.cnt | | | × | |
| adm.hlp | | | × | |
| ado.dtd | × | | | |
| ado_utl.dsl | × | | | |
| adocu39.dll | × | | | |
| adolib.dtd | × | | | |
| adorep.dtd | × | | | |
| adostd.abl | × | × | × | × |
| adostd.cnt | | × | | |
| adostd.hlp | | × | | |
| adows.dll | × | × | × | × |
| adoxml.dtd | × | | | |
| adoxml30.dtd | × | | | |

| | | | | |
|---|---|---|---|---|
| adoxml31.dtd | × | | | |
| adraw39.dll | × | × | × | × |
| adtk39.dll | | | × | |
| afmc39.dll | | × | | |
| agdtc39.dll | × | × | × | × |
| agraph39.dll | × | | | |
| aleo39.dll | × | × | × | × |
| amessg39.dll | × | | | |
| amoded39.dll | | × | | |
| ampadm39.dll | | | × | |
| ampalc39.dll | | × | | |
| ampanc39.dll | | × | | |
| ampapp39.dll | × | | | |
| ampaqc39.dll | | × | | |
| ampaql39.dll | | × | | |
| ampasc39.dll | × | | | |
| ampcor39.dll | × | | | |
| ampcr239.dll | | | × | |
| ampcui39.dll | | × | | |
| ampdoc39.dll | | × | | |
| ampevc39.dll | | × | | |
| ampmoc39.dll | | × | | |
| ampree39.dll | | × | | |
| ampsim39.dll | | × | | |
| ampuie39.dll | | | × | |
| ampum39.dll | × | | | |
| ampusr39.dll | | | × | |
| ampxml39.dll | | × | | |
| amss39.dll | | | | |
| amw39.dll | × | × | × | × |
| aocc39.dll | | | × | |
| apfw39.dll | × | | | |
| apmc39.dll | | × | | |
| applet.js | × | | | |
| arcc39.dll | | × | | |
| areena.exe | | × | | |
| areena.exe.manifest | | × | | |

| | | | | |
|---|---|---|---|---|
| areetk39.dll | | × | | |
| arep2htm.dsl | × | | | |
| arep2rtf.dsl | × | | | |
| ascrpt39.dll | × | × | × | × |
| asetlic.exe | | | | × |
| asetlic.exe.manifest | | | | × |
| asim39.dll | × | | | |
| asimui39.dll | | × | | |
| auix39.dll | × | × | × | × |
| ausman39.dll | × | × | × | × |
| auuc39.dll | | | × | |
| backgrd.gif | × | | | |
| bpm.cnt | | × | | |
| bpm.hlp | | × | | |
| bocirt2.dll | × | × | × | × |
| boclogo.bmp | × | | | |
| boclogo.gif | × | | | |
| bocprt2.dll | × | × | × | × |
| bocrt0.dll | × | × | × | × |
| bocrt2.dll | × | × | × | × |
| c40ref.dll | | × | | |
| catalog | × | | | |
| checksum.dat | × | × | × | × |
| checksum.exe | × | × | × | × |
| checksumw.exe | × | × | × | × |
| compmap.bmp | × | × | × | × |
| dbghelp.dll | × | × | × | × |
| design.gif | × | | | |
| doc_mod.bmp | × | × | × | × |
| dsssl.dtd | × | | | |
| explorer.class | × | | | |
| explorerelement.class | × | | | |
| fot.dtd | × | | | |
| frimg.dll | | × | | |
| frimgp.dll | | × | | |
| getref.exe | × | | | |
| grove.dll | | × | | |

| | | | | |
|---|---|---|---|---|
| guidgen.dll | × | | | |
| help.htm | × | | | |
| help_pnt.gif | × | | | |
| htm_utl.dsl | × | | | |
| ins.cnt | | | | × |
| ins.hlp | | | | × |
| instr.gif | × | | | |
| instr_en.gif | × | | | |
| instruct_pnt.gif | × | | | |
| instruct_pnt_en.gif | × | | | |
| isodia.ent | × | | | |
| isogrk1.ent | × | | | |
| isogrk2.ent | × | | | |
| isolat1.ent | × | | | |
| isonum.ent | × | | | |
| isopub.ent | × | | | |
| jade.exe | | × | | |
| jade.txt | | × | | |
| lang.ini | × | × | × | × |
| launch39.dll | × | × | × | × |
| licence.txt | | × | | |
| objref.dll | | × | | |
| perlglob.exe | × | | | |
| Prozesskennzahlen.xls | × | | | |
| re00004.dll | × | | | |
| readme.txt | × | × | × | × |
| resize.gif | × | | | |
| sp133.dll | | × | | |
| spgrove.dll | | × | | |
| std_rtf2.dsl | × | | | |
| std2htm.bat | × | | | |
| std2htm5.dsl | × | | | |
| std2htm6.dsl | × | | | |
| std2rtf2.dsl | × | | | |
| style.dll | | × | | |
| style_sh.dtd | × | | | |
| sv0102.dll | × | × | × | × |

| tl0102.dll | × | × | × | × |
|---|---|---|---|---|
| tree.jar | × | | | |
| uml_use.bmp | × | × | × | × |
| version.txt | × | × | × | × |
| whatsnew.txt | × | × | × | × |
| xerces_c_2_1_0a.dll | × | | | |
| xerces-c_2_7.dll | × | × | × | × |
| xmlexp3012.asc | × | × | × | × |
| xmlexp3012_procs.asc | × | × | × | × |
| xmlimp3012.asc | × | × | × | × |
| xmlimp3012_preprocs.asc | × | × | × | × |
| xmlimp3012_procs.asc | × | × | × | × |
| xmlimpexp3012_globals_de.asc | × | × | × | × |
| xmlimpexp3012_globals_en.asc | × | × | × | × |
| xmlimpexp3012_globals_meta.asc | × | × | × | × |
| zlib002.dll | × | × | × | × |

Table 1: Installed files in the default directory

> **Hint:** During the **stand-alone installation all files** listed above are created in the default directory.

> **Hint:** During the **installation supporting Single-Sign-on functionality** the file *aads39.dll* is created in the default directory.

Depending on the used database management system (DBMS) during the **ADOxx installation** the files listed below (see Table 2) are created in the default directory \Program files\BOC\ADOxx10:

| File name | DB2 | Oracle | SQL Server | MSDE |
|---|---|---|---|---|
| adb239.dll | × | | | |
| adbback.exe | × | | | |
| adbback.exe.manifest | × | | | |
| adbrest.exe | × | | | |
| adbrest.exe.manifest | × | | | |
| aora39.dll | | × | | |
| amss39.dll | | | × | × |
| asqladm.exe | | | | × |

Table 2: Installed files in the default directory (depending on DBMS)

During the **ADOxx installation (client or stand-alone)** the files listed below (see Table 3) are created in the default directory `\Programme\BOC\ADOxx10\`**`examples`**:

| File name |
|---|
| Beispiel_Allgemein.adl |
| Beispiel-Allgemein_mit_Ressourcen.adl |
| Beispiel_Bank.adl |
| Beispiel_Gesundheitswesen.adl |
| Beispiel-Oeffentliche_Verwaltung.adl |
| Beispiel_Telekommunikation.adl |
| Beispiel_Versicherung.adl |
| PKZ-Readme.txt |
| Prozesskennzahlen.xls |

Table 3: Installed files in the subdirectory \examples

During the **ADOxx installation** the files listed below (see Table 4) are created in the default directory `\Program files\BOC\ADOxx10\`**`help`**:

| Directory and File name | Client/BPM Toolkit | Client/Admin Toolkit | Server |
|---|---|---|---|
| \1031\adm.cnt | | × | |
| \1031\adm.hlp | | × | |
| \1031\adostd.cnt | × | | |
| \1031\adostd.hlp | × | | |
| \1031\bpm.cnt | × | | |
| \1031\bpm.hlp | × | | |
| \1031\ins.cnt | | | × |
| \1031\ins.hlp | | | × |
| \2057\adm.cnt | | × | |
| \2057\adm.hlp | | × | |
| \2057\bpm.cnt | × | | |
| \2057\bpm.hlp | × | | |
| \2057\ins.cnt | | | × |
| \2057\ins.hlp | | | × |

Table 4: Installed files in the subdirectory \help

**Hint:** For each available language an additional subdirectory **\<*Windows Language ID>*** (see chap. 2., p. 151) with the language dependent files is created.

**Hint:** During the stand-alone installation all files listed above are created in the subdirectory **\help**.

During the **ADOxx installation** the files listed below (see Table 5) are created in the subdirectory `\Programme\BOC\ADOxx10\`**language**:

| Directory and File name | Client | Server | Stand-alone |
|---|---|---|---|
| mm39.dll | × | × | × |
| \1031\adm39.dll | × | × | × |
| \1031\adsi39.dll | × | × | × |
| \1031\clog39.dll | × | × | × |
| \1031\gpm39.dll | × | × | × |
| \1031\ins39.dll | × | × | × |
| \1031\lic39.dll | × | × | × |
| \1031\str39.dll | × | × | × |
| \2057\adm39.dll | × | × | × |
| \2057\adsi39.dll | × | × | × |
| \2057\clog39.dll | × | × | × |
| \2057\gpm39.dll | × | × | × |
| \2057\ins39.dll | × | × | × |
| \2057\lic39.dll | × | × | × |
| \2057\str39.dll | × | × | × |

Table 5: Installed files in the subdirectory \language

> **Hint:** For each available language an additional subdirectory **\<*Windows Language ID*>** (see chap. 2., p. 151) with the language dependent files is created.

> **Hint:** Additionally during the **ADOxx installation for MSDE** for each available language the file **\<*Windows Language ID*\sql39.dll** is created in the subdirectory **\language**.

The following files are created during the **HOMER installation for Windows**:

During the **HOMER installation** the files listed below (see Table 6) are created in the subdirectory `\HOMER`:

| File name |
|---|
| Beispiel.xls |
| bpm.cnt |
| bpm.hlp |
| HOMER.exe |
| lng.xls |
| ReadMeFirst.txt |

Table 6: Installed HOMER files

# 2. Language Codes

In the following tables, all Windows languages are listed. Every table contains the languages of one codepage.

**Hint:** In ADOxx, both the ISO 639 codes and the Windows Language IDs can be used.

If more than one Windows Language IDs exists for an ISO 639 code (e.g. "German (Germany)" and "German (Austria)", they are combined into one Windows Language ID. These combinations are displayed in bold letters in the tables (German - for example - with the ISO 639 code "de" is always available in ADOxx with the Windows Language ID "1031").

**ATTENTION:** The ADOxx installation must be available in the specific languages for being able to use the language codes.

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Thai | th | 1054 |

Table 7: Languages within the codepage 874

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Japanese | ja | 1041 |

Table 8: Languages within the codepage 932

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Chinese (Singapore) | zh | 4100 |
| **Chinese** (People's Republic of China) | **zh** | **2052** |

Table 9: Languages within the codepage 936

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Korean | ko | 1042 |

Table 10: Languages within the codepage 949

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Chinese (Hongkong S.A.R.) | zh | 3076 |
| Chinese (Macao S.A.R.) | zh | 5124 |
| Chinese (Taiwan) | zh | 1028 |

Table 11: Languages within the codepage 950

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Albanian | sq | 1052 |
| Bosnian (Bosnia and Herzegovina) | bs | 5146 |
| **Croatian** (Croatia) | **hr** | **1050** |

| Croatian (Bosnia and Herzegovina) | hr | 4122 |
|---|---|---|
| Czech | cs | 1029 |
| Hungarian | hu | 1038 |
| Polish | pl | 1045 |
| Romanian | ro | 1048 |
| **Serbian** (Latin) | **sr** | **2074** |
| Serbian (Latin, Bosnia and Herzegovina) | sr | 6170 |
| Slovak | sk | 1051 |
| Slovenian | sl | 1060 |

Table 12: Languages within the codepage 1250

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Azeri (Cyrillic) | az | 2092 |
| Belarussian | be | 1059 |
| Bulgarian | bg | 1026 |
| Macedonian (FYR) | mk | 1071 |
| Kazakh | kk | 1087 |
| Kyrgyz | ky | 1088 |
| Mongolian | mn | 1104 |
| Russian | ru | 1049 |
| Serbian (Cyrillic) | sr | 3098 |
| Serbian (Cyrillic, Bosnia and Herzegovina) | sr | 7194 |
| Tatar | tt | 1092 |
| Ukrainian | uk | 1058 |
| Uzbek (Cyrillic) | uz | 2115 |

Table 13: Languages within the codepage 1251

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Afrikaans | af | 1078 |
| Basque | eu | 1069 |
| Catalan | ca | 1027 |
| Danish | da | 1030 |
| Dutch (Belgium) | nl | 2067 |
| **Dutch** (Netherlands) | **nl** | **1043** |
| English (Australia) | en | 3081 |
| English (Belize) | en | 10249 |
| English (Canada) | en | 4105 |
| English (Caribbean) | en | 9225 |

| | | |
|---|---|---|
| English (Ireland) | en | 6153 |
| English (Jamaica) | en | 8201 |
| English (New Zealand) | en | 5129 |
| English (Republic of the Philippines) | en | 13321 |
| English (South Africa) | en | 7177 |
| English (Trinidad and Tobago) | en | 11273 |
| **English** (United Kingdom) | **en** | **2057** |
| English (United States) | en | 1033 |
| English (Zimbabwe) | en | 12297 |
| Faroese | fo | 1080 |
| Finnish | fi | 1035 |
| French (Belgium) | fr | 2060 |
| French (Canada) | fr | 3084 |
| **French** (France) | **fr** | **1036** |
| French (Luxembourg) | fr | 5132 |
| French (Principality of Monaco) | fr | 6156 |
| French (Switzerland) | fr | 4108 |
| Galician | gl | 1110 |
| German (Austria) | de | 3079 |
| **German** (Germany) | **de** | **1031** |
| German (Liechtenstein) | de | 5127 |
| German (Luxembourg) | de | 4103 |
| German (Switzerland) | de | 2055 |
| Indonesian | id | 1057 |
| **Italian** (Italy) | **it** | **1040** |
| Italian (Switzerland) | it | 2064 |
| Icelandic | is | 1039 |
| Malay (Brunei Darussalam) | ms | 2110 |
| Malay (Malaysia) | ms | 1086 |
| Northern Sotho | ns | 1132 |
| Norwegian (Bokmal) | nb | 1044 |
| Norwegian (Nynorsk) | nn | 2068 |
| Portuguese (Brazil) | pt | 1046 |
| Portuguese (Portugal) | pt | 2070 |
| Quechua (Bolivia) | qu | 1131 |
| Quechua (Ecuador) | qu | 2155 |
| Quechua (Peru) | qu | 3179 |

| Sami (Inari, Finland) | se | 9275 |
|---|---|---|
| Sami (Lule, Norway) | se | 4155 |
| Sami (Lule, Sweden) | se | 5179 |
| Sami (Northern, Finland) | se | 3131 |
| Sami (Northern, Norway) | se | 1083 |
| Sami (Northern, Sweden) | se | 2107 |
| Sami (Skolt, Finland) | se | 8251 |
| Sami (Southern, Norway) | se | 6203 |
| **Sami** (Southern, Sweden) | **se** | **7227** |
| **Swedish** | **sv** | **1053** |
| Swedish (Finland) | sv | 2077 |
| Spanish (Argentinia) | es | 11274 |
| Spanish (Bolivia) | es | 16394 |
| Spanish (Chile) | es | 13322 |
| Spanish (Costa Rica) | es | 5130 |
| Spanish (Dominican Republic) | es | 7178 |
| Spanish (Ecuador) | es | 12298 |
| Spanish (El Salvador) | es | 17418 |
| Spanish (Guatemala) | es | 4106 |
| Spanish (Honduras) | es | 18442 |
| Spanish (Colombia) | es | 9226 |
| Spanish (Mexico) | es | 2058 |
| Spanish (Nicaragua) | es | 19466 |
| Spanish (Panama) | es | 6154 |
| Spanish (Paraguay) | es | 15370 |
| Spanish (Peru) | es | 10250 |
| Spanish (Puerto Rico) | es | 20490 |
| **Spanish** (Spain) | **es** | **3082** |
| Spanish (Spain) | es | 1034 |
| Spanish (Uruguay) | es | 14346 |
| Spanish (Venezuela) | es | 8202 |
| Swahili | sw | 1089 |
| Tswana | tn | 1074 |
| Welsh | cy | 1106 |
| Xhosa | xh | 1076 |
| Zulu | zu | 1077 |

Table 14: Languages within the codepage 1252

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Greek | el | 1032 |

Table 15: Languages within the codepage 1253

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Azeri (Latin) | az | 1068 |
| Turkish | tr | 1055 |
| **Uzbek** (Latin) | **uz** | **1091** |

Table 16: Languages within the codepage 1254

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Hebrew | he | 1037 |

Table 17: Languages within the codepage 1255

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Arabic (Algeria) | ar | 5121 |
| Arabic (Bahrain) | ar | 15361 |
| Arabic (Egypt) | ar | 3073 |
| Arabic (Iraq) | ar | 2049 |
| Arabic (Jordan) | ar | 11265 |
| Arabic (Kuwait) | ar | 13313 |
| Arabic (Lebanon) | ar | 12289 |
| Arabic (Libya) | ar | 4097 |
| Arabic (Morocco) | ar | 6145 |
| Arabic (Oman) | ar | 8193 |
| Arabic (Qatar) | ar | 16385 |
| **Arabic** (Saudi Arabia) | **ar** | **1025** |
| Arabic (Syria) | ar | 10241 |
| Arabic (Tunisia) | ar | 7169 |
| Arabic (U.A.E.) | ar | 14337 |
| Arabic (Yemen) | ar | 9217 |
| Farsi | fa | 1065 |
| Urdu | ur | 1056 |

Table 18: Languages within the codepage 1256

| Language | ISO 639 Code | Windows Language ID |
|---|---|---|
| Estonian | et | 1061 |
| Latvian | lv | 1062 |

| Lithuanian | lt | 1063 |
|---|---|---|

Table 19: Languages within the codepage 1257

| **Language** | **ISO 639 Code** | **Windows Language ID** |
|---|---|---|
| Vietnamese | vi | 1066 |

Table 20: Languages within the codepage 1258

# 3.   Database Administration Appendix

The Database Administration Appendix provides additional information on the following database systems:

● DB2

  -   general (see chap. 3.1, p. 157)

  -   Windows XP/2000/NT - Stand-alone (see chap. 3.2, p. 164)

  -   Windows ME/98/95 - Stand-alone (see chap. 3.3, p. 165)

● INFORMIX (see chap. 3.4, p. 165)

● ORACLE (see chap. 3.5, p. 168)

● Microsoft SQL Server (see chap. 3.6, p. 173)

> **ATTENTION:**   When creating or preparing a database instance manually, make sure that they are created with a case-sensitive font.

> **Hint:** You can find more information about the preparation of databases for ADOxx in the PDF file, which is included on the ADOxx installation CD in the repertory "dbinfo".

## 3.1   DB2

The Database Administration Appendix for DB2 contains the following information:

● Setting up network connections (see chap. 3.1.1, p. 157)

● Database setup (see chap. 3.1.2, p. 159)

● Recommended parameters for database configuration (see chap. 3.1.3, p. 161)

● Update catalogue statistics (see chap. 3.1.4, p. 161)

● Re-Organization of an ADOxx database (see chap. 3.1.5, p. 162)

● ADOxx database tables (see chap. 3.1.6, p. 163)

● DB2 for Windows XP/2000/NT - Stand-alone (see chap. 3.2, p. 164)

● DB2 for Windows ME/98/95 - Stand-alone (see chap. 3.3, p. 165)

### 3.1.1   Setting up network connections

The network operating system must be configured to support the network protocol used (e.g. TCP/IP) - i.e. a network connection must exist.

The network connection must be established both on the server (see chap. 3.1.1.1, p. 158) and the specific clients (see chap. 3.1.1.2, p. 158).

> **Hint:** DB2 administration rights are needed to set up network connection on both server and client.

### 3.1.1.1 Setting up network connections on the server

> **Hint:** Depending on the DB2 version, the server platform and the environment found at the time of the DB2 installation, the configuration steps described in this section will be automatically carried out by the DB2 installation program during the DB2 installation. That is why usually no or only a few detail adjustments are required regarding the network settings described here.

1. The DB2 environment variable (or the database registry entry) DB2COMM determines which kind of protocol support will be activated while starting the DB2 management software. (The assignment of DB2COMM can be output by the command "db2set".) Therefore DB2COMM must have a corresponding entry for the network protocol used.

   **Example:**

   ```
   DB2COMM = npipe,tcpip,netbios
   ```

   Once the computer has been rebooted, this entry ensures the support of Named Pipes, TCP/IP and NetBIOS connections.

2. Similarly, the corresponding database manager configuration parameter (e.g. SVCENAME for TCP/IP, NNAME for NetBIOS) must be updated.

**Examples of the configuration of a server network connection (Windows):**

**Configuration of a TCP/IP-Server access for DB2 Version 2.1 on Windows XP/2000/NT:**

> **Hint:** The configuration described in this section will usually be carried out by the DB2 installation program.

1. The following two lines must be inserted into the system configuration file "<NT directory>\System32\etc\services":

   ```
   db2cdb2 50000/tcp
   db2idb2 50001/tcp
   ```

2. Carry out the command line "db2set DB2COMM", to check if the entry "TCPIP" is contained in the list.

3. By updating the corresponding database management configuration parameter, DB2 gets to know the TCP/IP service name. Therefore the following statement must be executed in a DB2 shell-window:

   ```
   db2 UPDATE DATABASE MANAGER CONFIGURATION USING SVCENAME db2service
   ```

4. The DB2 service must be re-booted after a change.

Both service names ("db2cdb2", "db2idb2") can be freely chosen, though, locally, they have to be unique. The figures within the names stand for the IP port numbers, to which the service names are mapped. The first one can be freely chosen, with the restriction that it is not used by another network service within the same Server. To get the second port number, increase the former by one. The same pair of port numbers must be defined on the client (see "Setting up network connections on the Client").

### 3.1.1.2 Catalogue DB2 server as a node

The DB2 Server must be catalogued on the Client as a node. This can be done either with the DB2-command shell or the program "Client-configuration" within the DB2 program folder.

**Examples of the configuration of network connections on the Client's computer:**

In the following examples the DB2 command shell is used to catalogue a node for TCP/IP and NetBIOS connections:

**Providing access for a Client to a DB2-Server using TCP/IP:**

1. The following two lines must be added to the file "...\ETC\SERVICES":

```
db2cdb2 50000/tcp
  db2idb2 50001/tcp
```

2. With the subsequent statement in the <u>DB2-command shell</u> the DB2 manager is catalogued as a node:

```
CATALOG TCPIP NODE adosvr REMOTE db2svr SERVER db2cdb2
```

- **ad 1.:** The port number defined for "db2cdb2" must correspond to the port number specified for the DB2 Service on the server.

- **ad 2.:** The DB2 Manager will be defined as a node with the name "adosvr" by the statement. The node name will be used later on when cataloguing databases. The DNS/WINS name of the server computer is "db2svr".

**Providing access for a Client to a DB2-Server using NetBIOS:**

With the <u>DB2 command shell</u>, the DB2 Manager will be catalogued as a node by the following statement:

```
 CATALOG NETBIOS NODE adosvr REMOTE db2svr ADAPTER 0
```

In the example, a node with the name "adosvr" is defined. The name will be used later on when cataloguing databases. The network name of the Server is "db2svr". As a rule the number of the adapter is 0 ("ADAPTER <adapter number>").

## 3.1.2      Database Set-up

Using the ADOxx DB installation program, ADOxx-DB2 databases can be automatically created (Option "Create New Database"). In this case, apart from setting up the network connections (see chap. 3.1.1, p. 157), no additional preparatory work has to be done.

Alternatively it is possible to initialise an ADOxx database in an existing (empty) DB2 database. Below you can find a description of how such an empty database can be created and prepared for the ADOxx database installation:

- Log into the DB-Server using a user account with DB2 system administrator rights. In most cases the local system administrator also serves as a DB2-system administrator.

- Create a new DB2-database with the following statement

  ```
  CREATE DATABASE ...
  ```

   in a DB2 command shell interpreter.

- Set the database configuration parameters according to the expected scale of the application scenario (number of users, amount and size of models, etc.). A list of recommended database configuration parameters (see chap. 3.1.3, p. 161) provides you with support for this task.

- Create and bind CLI-packages (see chap. 3.1.2.2, p. 160). This step is redundant for DB2 Version 5.

- Catalogue the new database (see chap. 3.1.2.1, p. 160) on the client, from which the ADOxx database installation program should be started. Later on, you will have to carry out this step on all Client computers.

## 3.1.2.1 Catalogue DB2 Databases

A remote ADOxx database can be "made known" at the client computer by cataloguing the database at the client. An ADOxx database has to be catalogued in the following cases:

- Before creating an ADOxx database within a prepared DB2 database from a remote computer, the prepared database must be catalogued on this client.

- Before the first connection with an ADOxx application to a remote ADOxx database.

  **Hint:** If the ADOxx database installation program was executed with the option "Create New Database" activated, the new database created will have been <u>automatically</u> catalogued on the executing client's computer.

By following the steps below, a database can be catalogued on the client:

1. Log into the DB-Server as a DB2-system administrator. In most cases the local system administrator (belonging to the "Administrator" user group on Windows XP/2000/NT) also serves as a DB2-system administrator.

2. Catalogue the database by using the following statement in the <u>DB2-command shell interpreter</u>:

   ```
   CATALOG DATABASE <database name> AT NODE <node name>
   ```

<Database name> should be replaced with the name of the existing database on the server. Replace <node name> with the name of the catalogued DB2 node, which identifies the server. (See Catalogue DB2 server as a node (see chap. 3.1.1.2, p. 158).

  **Hint:** Alternatively it is also possible to use the graphic-based program "Client configuration" within the DB2-program folder. For more detailed information see the corresponding DB2-guide.

## 3.1.2.2 Binding of CLI Packages

  **Hint:** If the ADOxx database installation program is carried out with the option "Create new database", **no** explicit binding of packages will be required.

  It is the same when the DB2 version 5 is used by both the client and the server.

ADOxx applications use the interface "DB2 Call Level Interface" (CLI) for database access. The binding of CLI-packages must be executed for each database **once**, before connecting the ADOxx application with the database for the first time.

<u>The following procedure is recommended for the binding of CLI packages</u>:

  Using the DB2 command shell a connection to the database used for the ADOxx database installation will be established. For this connection a user account with "SYSADM" or "DBADM" rights will be used.

  The statement

   ```
    BIND <db2path>\BND\@db2cli.lst GRANT ADONIS
   ```

  must be executed in the DB2 command shell. Please ensure, that the file name used for bundling ("db2cli.lst" in our example) has an "@" sign prefixed.

**Example:**

```
db2 connect to adodb user ADMIN using PASSWORD
db2 bind C:\SQLLIB\BND\@db2cli.lst grant ADONIS
```

In the current example a connection to the database "adodb" is established, using the administration account "ADMIN" with the password "PASSWORD". Through the BIND-statement the CLI-packages are tied to the database and the user "ADOxx" is enabled to execute them.

### 3.1.3 Recommended parameters for database configuration

The following database configuration parameters are set during the automatic creation of an ADOxx database with the ADOxx database installation program (see Table 21). The values of the parameters *before* the database installation can be found in the column "Standard":

| Parameter | Recommended | Standard | Remark |
|-----------|-------------|----------|--------|
| applheapsz | 512 | 128 | intermediate storage for applications |
| avg_appls | 6 | 1 | average number of active applications |
| buffpage | 350 | 250 | size of the buffer (only version 2.1.x) |
| dbheap | 750 | 600 | Intermediate storage for the database |
| dlchktime | 30000 | 10000 | interval for the check of interdependent locks |
| locklist | 70 | 50 | Max. memory for lock-lists |
| locktimeout | -1 | 180 | time-limit for locks |
| logfilsiz | 1024 | 250 | protocol size in pages |
| logprimary | 3 | 3 | number of primary protocol files |
| logsecond | 10 | 2/C> | number of secondary protocol files |
| mincommit | 25 | 1 | number of group-fixes |
| maxappls | 30 | 20 | maximum number of active applications |
| pckcachesz | 128 | -1 | Global Packet Cache |

Table 21: Recommended database configuration parameters

For all other parameters the pre-set values are taken.

### 3.1.4 Update Catalogue Statistics

> **Hint:** The update of database catalogue statistics is also possible through the menu "Extras" within the components "Library Management" and "Model Management" within the ADOxx Administration Toolkit.

After importing application libraries or a considerable number of models, as well as after certain time intervals and after numerous models have been created or deleted, the catalogue statistics of the database should be updated.

Catalogue statistics include statistical data concerning the distribution of table and index values, which are used by the database system for the optimisation of database queries. Updating the catalogue statistics can lead to more efficient execution times and as a consequence to reduced response times within the ADOxx applications.

Essential service improvements can be reached through re-calculating statistics, particularly after the initial import of libraries and/or models into an ADOxx database.

Using DB2, the service "RUNSTATS" (RUN STATISTICS) can be used for this purpose.

The steps below show how to update the catalogue statistics of the database:

Connect to the ADOxx database by entering the following statement in the <u>DB2-command shell interpreter</u>:

```
CONNECT TO <adoxx-db> USER <user> USING <password>
```

With the following sequence of statements, the catalogue statistics for all relevant tables and indices of an ADOxx database are updated:

```
RUNSTATS ON TABLE ADONIS.ADOUSER AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.AMODEL AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.ATTRIBUTE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.CLASS AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.FACET_DOUBLE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.FACET_INTEGER AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.FACET_STRING AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.FILESTORE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.IMODELREFS AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.INSTANCE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.INSTATTR_DOUBLE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.INSTATTR_INTEGER AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.INSTATTR_LONG AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.INSTATTR_STRING AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.INSTATTR_RECORD AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.INSTATTR_REPOREF AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.INTERREF AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.MESSAGE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.MODELGROUP AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.MODELGROUPPERMS AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.MODELTHREAD AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.MODELTOAMODEL AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.MODELTOGROUP AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.MODELVERSION AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.REPODIR AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.REPOINSTANCE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.RDMMATTRIBUTE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.RDMMFACET AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.RELINSTANCE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.RELTYPE AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.PERMISSIONS AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.USERGROUP AND INDEXES ALL
RUNSTATS ON TABLE ADONIS.USERSTOGROUPS AND INDEXES ALL
```

It is recommended to create a script file with the above-mentioned content and to edit this file with the following indication after the connection to the database has been created in the <u>DB2 command shell interpreter</u>:

```
db2 -f <file-name>
```

Replace <file-name> with the name of the script file.

## 3.1.5 Re-organising an ADOxx Database

The DB2 service "REORG" de-fragments and re-organises the physical representation of tables and the data within these tables to reduce the amount of I/O actions needed for queries. This measure is recommended after a substantial amount of insertion, deletion and update statements. Please note, that this measure should be run less frequently than the update of catalogue statistics (see chap. 3.1.4, p. 161) (i.e. at much greater time intervals).

Your DB2 system administration handbook will give further suggestions as to when a re-organisation of table contents is advisable.

The following approach can be used to re-organise the contents of ADOxx database tables:

Ensure that no ADOxx application is connected to the database.

Start the DB2-command shell interpreter and connect to the ADOxx database as a database-administrator.

Create a script-file, with the content as listed below, and execute it with the statement:

```
db2 -f <file-name>
```

replacing <file-name> with the name of the script-file.

Content of the script-file:

```
REORG TABLE ADONIS.ADOUSER
REORG TABLE ADONIS.AMODEL
REORG TABLE ADONIS.ATTRIBUTE
REORG TABLE ADONIS.CLASS
REORG TABLE ADONIS.FACET_DOUBLE
REORG TABLE ADONIS.FACET_INTEGER
REORG TABLE ADONIS.FACET_STRING
REORG TABLE ADONIS.FILESTORE
REORG TABLE ADONIS.IMODELREFS
REORG TABLE ADONIS.INSTANCE
REORG TABLE ADONIS.INSTATTR_DOUBLE
REORG TABLE ADONIS.INSTATTR_INTEGER
REORG TABLE ADONIS.INSTATTR_LONG
REORG TABLE ADONIS.INSTATTR_STRING
REORG TABLE ADONIS.INSTATTR_RECORD
REORG TABLE ADONIS.INSTATTR_REPOREF
REORG TABLE ADONIS.INTERREF
REORG TABLE ADONIS.MESSAGE
REORG TABLE ADONIS.MODELGROUP
REORG TABLE ADONIS.MODELGROUPPERMS
REORG TABLE ADONIS.MODELTHREAD
REORG TABLE ADONIS.MODELTOAMODEL
REORG TABLE ADONIS.MODELTOGROUP
REORG TABLE ADONIS.MODELVERSION
REORG TABLE ADONIS.REPODIR
REORG TABLE ADONIS.REPOINSTANCE
REORG TABLE ADONIS.RDMMATTRIBUTE
REORG TABLE ADONIS.RDMMFACET
REORG TABLE ADONIS.RELINSTANCE
REORG TABLE ADONIS.RELTYPE
REORG TABLE ADONIS.PERMISSIONS
REORG TABLE ADONIS.USERGROUP
REORG TABLE ADONIS.USERSTOGROUPS
```

> **ATTENTION:** Once the table contents have been re-organised the system catalogue statistics must be updated (see chap. 3.1.4, p. 161).

## 3.1.6 ADOxx Database Tables

All tables of an ADOxx database are listed below:

```
ADOIDS
ADOLOCKS
```

```
ADOTRANSACT
ADOUSERS
AMODEL
ATTRIBUTE
CLASS
FACET_DOUBLE
FACET_INTEGER
FACET_STRING
IMODELREFS
INSTANCE
INSTATTR_DOUBLE
INSTATTR_INTEGER
INSTATTR_LONG
INSTATTR_STRING
LONGCHARS
MODEL
MODELGROUPPERMS
MODELGROUPS
MODELTOAMODEL
MODELTOGROUP
PERMISSIONS
RELATION
RELATIONTYPE
USERGROUP
USERSTOGROUPS
```

> **Hint:** All database objects are assigned to the scheme "ADONIS".

## 3.2    DB2 for Windows XP/2000/NT (Stand-alone)

In this chapter the preparation of a DB2 stand-alone database system for Windows NT as the basis for an ADOxx DB installation is described. For stand-alone installations of ADOxx for DB2 the DB2 versions 2.1.1, 2.1.2 and 5 (Personal Edition) may be used.

The following approach is recommended:

1.  Create two new users within the Windows NT user administration:

    -   Assign the name "ADOxx" and the password "BPMS" to one user. This password must not be changed afterwards. Therefore deactivate the option "User has to change password at the next login" and activate the option "Password never expires".

    -   Assign a name with the maximum length of eight characters to the second user (e.g. "admin") and assign this name to the local user group "administrators". If such an administration account already exists, it can be used instead. The log-in account for the DB2-system administrator is needed for the login dialogue of the ADOxx DB installation program.

2.  After disconnecting, re-establish the connection with the second user-name (e.g. "admin", see above). Now enter the name of the local computer in the field "Domain".

3.  Start the DB2 Stand-alone installation.

4.  Re-boot your computer and again log in as an administrator with the second user (e.g. "admin").

5.  Open the NT program "Services" in the folder "Settings", and start the services "DB2 - DB2" and - when using version 2.x - "DB2-security services".

Now you can go ahead with the ADOxx database installation (see chap. 1.1, p. 75) and specify as SYSADM user the administrator user previously defined.

## 3.3      DB2 for Windows 95/98 - Stand-alone

The remarks in this chapter are valid for DB2-Stand-alone installations, including versions 2.1.1, and higher

The following steps should be executed for an ADOxx DB installation:

1.   Get into Windows specifying the user name and password. If necessary, execute the action "Sign out user" in the menu "Start" to obtain an appropriate login window. The specified user account will be automatically created, if it does not already exist. The user name cannot contain more than eight characters.

2.   Install the DB2-software.

3.   Re-boot your computer and log in with the user account, which was used to execute the DB2 installation.

4.   Open a command prompt window and start the DB2 server with the statement "db2start"

Now you continue with the ADOxx database installation program (see chap. 1.1, p. 75) and specify user the user account which was used to execute the DB2 installation as SYSADM.

## 3.4      Informix

The Database Administration Appendix for Informix contains the following information:

●   Setting up network connections (see chap. 3.4.1, p. 165)

●   Database set-up (see chap. 3.4.2, p. 166)

●   Update catalogue statistics (see chap. 3.4.3, p. 167)

●   ADOxx database tables (see chap. 3.4.4, p. 167)

### 3.4.1      Setting up network connections

A necessary pre-requisite is that the network operating system supports the network protocol used (e.g. TCP/IP).

During an Informix-Client installation the environment attributes "INFORMIXDIR" and "INFORMIXSERVER" are only defined for the currently logged in user. Those attributes must be set explicitly for other users on the client PC. The tool "Informix SetNet32" (register "Environment") can be used for this purpose.

### 3.4.1.1      Configure ODBC data source

To configure a data source use the program "ODBC32" or "Data Sources (ODBC)" from the folder "Control panel" or "Control panel / Administrative tools" respectively:

1.   Start the data source configuration program and switch to the register "User DNS" (saved in the user profile) or "System DNS" (stored in the profile of the computer). Click on "Add" to start the configuration of a new data source.

2.   Select the ODBC driver "Informix-CLI 2.5" (Informix version 7.2x) or "INTERSOLV 3.x 32 BIT" (Informix 7.3x) from the list and press the "Finish" button.
     **Note for Informix Clients version 7.3:** The driver "INFORMIX 2.80 32 BIT" must not be used.

3.  Enter the unique alias name (max. 8 characters) in the field "Data Source Name" This name will be used later during the ADOxx login. Enter the name of the prepared Informix database in the field "Database Name".

4.  Fill the values in the fields "Host Name", "Service Name", "Server Name" and "Protocol Type" in the register "Connection" (or after clicking the "Advanced" when using the driver version 2.5) with the values defined already in the program "INFORMIX SetNet32". Leave other fields with default settings.

    **<u>Example:</u>**

    ```
    Host Name: ifxsrv
    Service Name: ifx_port
    Server Name: ol_ifxsrv
    Protocol Type: onsoctcp
    ```

    In the example a computer with the network name "ifxsrv" is addressed. In the file "%WINDIR%\system32\drivers\etc\services" the service name "ifx_port" is mapped on the port number used by Informix. The name of the Informix server instance is "ol_ifxsrv" and "onsoctcp" is used as Informix network protocol.

## 3.4.1.2      Install Loopback Connection (Windows XP/2000/NT)

For a stand-alone installation of ADOxx with Informix, a loop-back connection must be available. It can be checked by typing "ping <Name of computer>" (replace <Name of computer> with the real name) in the command line. In case the connection fails, it can be installed by carrying out the following steps:

●  Click on "Network" in the directory "Control panel".

●  Select "Connect directly with network".

●  Select "MS Loopback Adapter" in the selection box for network cards.

●  Select "802.3".

●  Select "TCP/IP" in the protocol selection field.

●  e.g. enter following values in the fields of IP address:

    ```
    IP address for Loopback: "10.0.0.1"
    Subnet Mask: "255.0.0.0"
    ```

## 3.4.2      Database Preparation

> **Hint:** An Informix database can only be set up on a Server.

Within the administration tool "Command Center" choose the "Space Explorer" and create a new *Dataspace*.

Now use the tool "Database Explorer", to create a new database and assign the previously created *Dataspace* to the database.

Either the option "buffered" or "not buffered" must be selected for "Logging". It is recommended that automatic saving of the transaction protocol is enabled. Therefore start the tool "Backup and Restore" in the "Command Center" within the tools menu and select and execute the option "Start Continuous Logical Log Backup".

If no data security measures are violated the Log-device should be set "NUL" so that protocol backups that are performed continuously cannot cause capacity problems. This can be done with the Informix-tool "ISM Setup": After starting the tool from the Informix start menu select the register "Logical Log Backup" and select the entry "None" from the list box "Backup To". Now, close the tool and re-start the Informix database Server. For more detailed information see your Informix manuals.

Start the Informix tool "SQL Editor" and select the new database from the list box "Server/Database". Grant the necessary rights to the user "ADONIS" by inputting:

```
GRANT CONNECT TO 'ADONIS';
GRANT RESOURCE TO 'ADONIS';
```

> **Hint:** Please ensure, that the string "ADONIS" is enclosed with simple quotation marks ('ADONIS'). Each GRANT statement must contain a trailing semicolon ("**;**").

A database with a standard size of 20 MB is created. The size can be increased on demand using the tool "Space Explorer".

> **Hint:** It is recommended that a database of at least 30 MB should be created.

### 3.4.3        Update Catalogue Statistics

> **Hint:** Catalogue statistics can also be updated within the "Library Management" and "Model Management" components within the ADOxx Administration Toolkit.

After the importing of application libraries or a considerable number of models, as well as after certain time intervals and after numerous models have been created or deleted, the catalogue statistics should be updated.

Catalogue statistics include statistical data concerning the distribution of table and index values, which is used for the globalisation of database queries. Updated catalogue statistics can lead to more efficient execution times and as a consequence to reduced response times within the ADOxx applications.

This is particularly true after the initial import of libraries and/or models into an ADOxx database.

**Procedure to update catalogue statistics with Informix:**

- Start the Informix-tool "SQL Editor" on the Server.

- Select the ADOxx database in the list box "Server/Database". It is possible that a login window is opened. In this case enter the name and password of a (local) system administrator for the Server.

- Execute the application "UPDATE STATISTICS".

### 3.4.4        ADOxx Database Tables

All tables in an ADOxx database are now listed:

```
ADOIDS
ADOLOCKS
ADOTRANSACT
ADOUSERS
AMODEL
ATTRIBUTE
CLASS
FACET_DOUBLE
FACET_INTEGER
FACET_STRING
IMODELREFS
INSTANCE
INSTATTR_DOUBLE
INSTATTR_INTEGER
INSTATTR_LONG
INSTATTR_STRING
```

```
LONGCHARS
MODEL
MODELGROUPPERMS
MODELGROUPS
MODELTOAMODEL
MODELTOGROUP
PERMISSIONS
RELATION
RELATIONTYPE
USERGROUP
USERSTOGROUPS
```

All database objects are assigned to the scheme "ADONIS".

# 3.5     Oracle

The Database administration appendix for the database system Oracle contains the following information:

- Set-up network connections (see chap. 3.5.1, p. 168)

- Database instance preparation (see chap. 3.5.2, p. 169)

- Recommended database configuration parameters (see chap. 3.5.3, p. 171)

- Update catalogue statistics (see chap. 3.5.4, p. 171)

- ADOxx database tables (see chap. 3.5.5, p. 172)

## 3.5.1     Set-up Network Connections

A necessary pre-requisite is the correct configuration of the network operating system with the network protocols supported by Oracle (e.g. TCP/IP, SPX).

> **Hint:** The procedure described within this manual is one of several possibilities for the configuration of "Oracle SQLNet" ("Oracle Net8"). Please see your ORACLE network manual for more detailed information (e.g. possible use of name Servers to resolve service-names).

### 3.5.1.1     Server

> **Hint:** It is assumed, that the Oracle SQLNet  (or Net8) server component has already been configured to support the network protocol (TCP/IP, SPX etc.), which is to be used (e.g. all protocol specific entries are included in the file "TNSNAMES.ORA"). For common protocols (TCP/IP) this pre-condition is fulfilled by the ORACLE-Server installation program.

To configure an ORACLE database instance for access from a remote Client, the process "TNSListener" must recognise this database. Therefore an entry for the ORACLE-instance must be added to the file "<ORACLE_HOME>\NETWORK\ADMIN\LISTENER.ORA" (<ORACLE_HOME> represents the Oracle-directory).

**Example excerpt from the file "LISTENER.ORA"**:

```
SID_LIST_LISTENER =
 (SID_LIST =
   (SID_DESC =
     (SID_NAME = ORCL)
```

```
    )
   (SID_DESC =

     (SID_NAME = ADON)

   )
 )
PASSWORDS_LISTENER = (oracle)
```

In this example a new SID_DESC term has been inserted to add an instance with the SID "ADON" into the SID_LIST.

To make the changes effective, either restart the "TNSListener" or execute the following statements:

```
C:\> LSNRCTL
LSNRCTL> SET PASSWORD <password>
LSNRCTL> RELOAD
```

> **Hint:** Routinely the LSNRCTL-password (*<password>*) is "ORACLE".

## 3.5.1.2 Define Oracle Network Service Name

To catalogue the Oracle database instance used for ADOxx on the client, an Oracle network service must have been defined. The service name will be used in the ADOxx login dialogue, to identify the database.

There are various possibilities to define an Oracle service name. This installation will be described here with the Oracle Net configuration program "SQLNet Easy Configuration" or "Net8 Easy Configuration" or "Net8 Configuration Assistant":

1.  Start the configuration program from the menu "Start", sub-menu "Oracle...". Select the option "Add Database Alias".

2.  Define a max. eight characters long Alias name for the database.

3.  Select the network protocol used (e.g. TCP/IP, SPX). For remote connections, this network protocol is, in most of the cases, TCP/IP. You can use the protocol "Bequeath" for local work on Oracle server ("Stand-alone").

4.  Depending on the protocol selection, the address parameters of the server computer as well as the SID of the ORACLE database instance must be specified.

5.  Confirm all entries and close the configuration program.

Then the configuration program will update a file called "tnsnames.ora" in the Oracle sub directory "network\admin" or "net80\admin". This file can be used for the distribution of the service name definition to several clients.

An alternative possibility for the service name distribution is to set the registry key "TNS_ADMIN" in the subdirectory "HKEY_LOCAL_MACHINE\Software\Oracle" of the registry database, in order to refer to a central Oracle Net Admin directory. A detailed description of the processes are available in the Oracle administrator manual.

## 3.5.2 Database Instance Preparation

An available ORACLE database instance can be used for the ADOxx database. However, note that ADOxx is not a transaction intensive application (OLTP). The application has to be assigned to the category "Decision supporting system" (DSS). An instance configuration optimised for OLTP is therefore less appropriate for the administration of an ADOxx database. In this case, it is recommended to create an ORACLE database instance specific to ADOxx. The recommended database configuration parameters (see chap. 3.5.3, p. 171) for the initialisation file can be found below.

A small amount of settings are described in this chapter. For parameters that are not mentioned, the Oracle preset values can be taken. The values described within this chapter are recommendations and may be adapted to the specific environment.

**Font:**

The character set "WE8ISO8859P15" is recommended for the English version.
**Hint:** The character set must be **specified at the time of creating** the database.

**Initialisation parameter:**

The value of the initialisation parameter "OPEN CURSORS" (standard value 50) must be increased to a minimum value of 100. This should be set in the initialisation file of the database instance, so that the changes remain after the system is rebooted. A detailed description of how the parameter can be changed can be found in the chapter "Change parameter "open cursors"" (see chap. 3.5.2.1, p. 170).

**Table space for user data:**

The following settings in the "Oracle Storage Manager" are recommended for the data-file of the table-space.

```
CREATE TABLESPACE ADOUSR_DATA
DATAFILE '<data file path>'
SIZE 50M AUTOEXTEND ON NEXT 50M MAXSIZE 500M
DEFAULT STORAGE (INITIAL 50K NEXT 200K MINEXTENTS 1 MAXEXTENTS UNLIMITED
PCTINCREASE 10)
```

The maximum size (MAXSIZE) of the data file depends on the size of the modelling project. Approx. 400 - 700 MB are needed per 1000 objects.

The *DEFAULT STORAGE* setting of the table space defines the assignment of physical memory for the tables and indices of the ADOxx database.

**Oracle-user "ADONIS":**

A user with the login "ADONIS" and the password "BPMS" must exist. This password must not be changed. Furthermore the Oracle *Roles* "CONNECT", as well as the rights "CREATE TABLE", "CREATE VIEW", "CREATE TRIGGER" must be assigned to this user.

An appropriate part of the user data table space must be assigned to the user ADONIS.

**Rollback Segment:**

*Rollback segments* with a minimum size of 1 MB and an accessible size of at least 20 MB are required for the import and deletion of larger models in multi user mode. The number of *Rollback segments* should model itself on the maximum number of simultaneous application sessions.

**Example:**

```
CREATE PUBLIC ROLLBACK SEGMENT ADO_RB1
TABLESPACE ADORBS_DATASTORAGE (INITIAL 200K NEXT 200K MINEXTENTS 5 MAXEXTENTS
121)
```

## 3.5.2.1    Database instance preparation with script template

The script templates for different platforms or Oracle versions: aprpsid.sql for Oracle 7.3/8.0 for Windows, aprpsidx.sql for Oracle for Unix derivates, aprporcl8i.sql for Oracle8i and so on are to be found in the directory "dbinfo" of the ADOxx installation CD for the preparation of an Oracle database instance for the ADOxx database installation.

1. **Adapt parameter "open_cursors":**

The initialisation file of the Oracle instance (e.g. c:\oracle\admin\adodb\pfile\init.ora) must contain the line "open_cursors = 100" (or with a higher value). After a change of the initialisation file, the Oracle instance must be started again. (For Windows XP/2000/NT, the Oracle instance must be started again with the program "Services" in the folder "Control panel" (or folder "Control panel / Administration") - Service name "OracleService<SID>" .)

2. **Adapt script file "aprpxxx.sql":**

   Should the table spaces for user, temporary or Rollback Segment files already be available, the appropriate "CREATE TABLESPACE" indications can be removed. In the resting lines, replace "<ORACLE_DATA>" by the appropriate data directory (e.g. "c:\oracle\oradata\adodb").

   Moreover, "<SID>" must be replaced by the SID or another string. As a result, unique file names must be created.

   Should Rollback segments already be available in sufficient number, then the "CREATE ROLLBACK SEGMENT" statement can be removed. Conversely, statements for further rollback segments should be added, if you expect a larger amount of users (recommendation: (maximum number of simultaneous user ÷ number of rollback segments) <= 4).

   If "CREATE TABLESPACE" statements have been removed or changed, then it is possible that the terms "DEFAULT TABLESPACE", "TEMPORARY TABLESPACE" or "QUOTA" of the "ALTER USER" statements have to be accordingly changed for the user definition.

3. **Execute script:**

   Start an Oracle-SQL tool (e.g. "SQL Plus"). Connect to the prepared Oracle instance using a user account with DBA rights (e.g. "system", pre-set password "manager"). Execute the script file using the command "start <Path>\aprpxxx.sql".

## 3.5.3 Recommended Database Configuration Parameters

The settings specified here are optional. The effects on the way of performance caused by configuration changes, depend on the specified Hardware environment and platform of the oracle installation. The Oracle pre-settings are sufficient in most of the cases.

The following configuration parameters of an Oracle initialisation file will be specified for example for an application environment of five clients and Oracle server on Windows XP/2000/NT as orientation help. The pre-settings are recommended for the parameters that are not listed here:

```
db_block_buffers = 550
log_buffer = 32768
transactions_per_rollback_segment = 4
open_cursors = 100
```

As far as possible, Redo Log files and data files should be placed on physically separated drives in order to improve the input/output performance of the system.

If you expect a larger number of simultaneous application users for the utilisation, then a *Multi Threaded Server* (MTS) configuration of the Oracle instance used can be of advantage.

## 3.5.4 Update Catalogue Statistics

> **Hint:** The update of catalogue statistics is also possible using the menu "Extras" within the components "Library Management" and "Model Management" within the ADOxx Administration Toolkit.

After importing application libraries or a considerable number of models, or after certain time intervals and after numerous models have been created or deleted, the catalogue statistics should be updated.

Catalogue statistics include statistical data concerning the distribution of table and index values, which is used for the globalisation of database queries. Updated catalogue statistics can lead to more efficient execution times and as a consequence to reduced response times within the ADOxx application.

Essential performance improvements can be reached by new calculation of statistics, particularly after the initial import of libraries and/or models into an ADOxx database.

While updating the catalogue statistics, no other ADOxx applications should be connected to the database. The following steps are recommended when updating catalogue statistics for an ADOxx database:

1.  Start an ORACLE SQL tool and create a connection to the database instance.

2.  Execute the following list of statements:

```
ANALYZE ADONIS.ADOUSER ESTIMATE STATISTICS;
ANALYZE ADONIS.AMODEL ESTIMATE STATISTICS;
ANALYZE ADONIS.ATTRIBUTE ESTIMATE STATISTICS;
ANALYZE ADONIS.CLASS ESTIMATE STATISTICS;
ANALYZE ADONIS.FACET_DOUBLE ESTIMATE STATISTICS;
ANALYZE ADONIS.FACET_INTEGER ESTIMATE STATISTICS;
ANALYZE ADONIS.FACET_STRING ESTIMATE STATISTICS;
ANALYZE ADONIS.FILESTORE ESTIMATE STATISTICS;
ANALYZE ADONIS.IMODELREFS ESTIMATE STATISTICS;
ANALYZE ADONIS.INSTANCE ESTIMATE STATISTICS;
ANALYZE ADONIS.INSTATTR_DOUBLE ESTIMATE STATISTICS;
ANALYZE ADONIS.INSTATTR_INTEGER ESTIMATE STATISTICS;
ANALYZE ADONIS.INSTATTR_LONG ESTIMATE STATISTICS;
ANALYZE ADONIS.INSTATTR_STRING ESTIMATE STATISTICS;
ANALYZE ADONIS.INSTATTR_RECORD ESTIMATE STATISTICS;
ANALYZE ADONIS.INSTATTR_REPOREF ESTIMATE STATISTICS;
ANALYZE ADONIS.INTERREF ESTIMATE STATISTICS;
ANALYZE ADONIS.MESSAGE ESTIMATE STATISTICS;
ANALYZE ADONIS.MODELGROUP ESTIMATE STATISTICS;
ANALYZE ADONIS.MODELGROUPPERMS ESTIMATE STATISTICS;
ANALYZE ADONIS.MODELTHREAD ESTIMATE STATISTICS;
ANALYZE ADONIS.MODELTOAMODEL ESTIMATE STATISTICS;
ANALYZE ADONIS.MODELTOGROUP ESTIMATE STATISTICS;
ANALYZE ADONIS.MODELVERSION ESTIMATE STATISTICS;
ANALYZE ADONIS.REPODIR ESTIMATE STATISTICS;
ANALYZE ADONIS.REPOINSTANCE ESTIMATE STATISTICS;
ANALYZE ADONIS.RDMMATTRIBUTE ESTIMATE STATISTICS;
ANALYZE ADONIS.RDMMFACET ESTIMATE STATISTICS;
ANALYZE ADONIS.RELINSTANCE ESTIMATE STATISTICS;
ANALYZE ADONIS.RELTYPE ESTIMATE STATISTICS;
ANALYZE ADONIS.PERMISSIONS ESTIMATE STATISTICS;
ANALYZE ADONIS.USERGROUP ESTIMATE STATISTICS;
ANALYZE ADONIS.USERPREF ESTIMATE STATISTICS;
ANALYZE ADONIS.USERSTOGROUPS ESTIMATE STATISTICS;
```

## 3.5.5     ADOxx Database Tables

All tables of an ADOxx database are listed below:

```
ADOIDS
ADOLOCKS
ADOTRANSACT
ADOUSERS
AMODEL
ATTRIBUTE
CLASS
FACET_DOUBLE
FACET_INTEGER
FACET_STRING
```

```
IMODELREFS
INSTANCE
INSTATTR_DOUBLE
INSTATTR_INTEGER
INSTATTR_LONG
INSTATTR_STRING
LONGCHARS
MODEL
MODELGROUPPERMS
MODELGROUPS
MODELTOAMODEL
MODELTOGROUP
PERMISSIONS
RELATION
RELATIONTYPE
USERGROUP
USERPREF
USERSTOGROUPS
```

All database objects are assigned to the scheme "ADONIS".


# 3.6 Microsoft SQL Server

The database administration appendix for SQL Server contains the following information:

- Database set-up (see chap. 3.6.1, p. 173)

- Update catalogue statistics (see chap. 3.6.2, p. 182)

- ADOxx database tables (see chap. 3.6.3, p. 183)


## 3.6.1 Database Set-up

Before creating an ADOxx database, an SQL server database must be prepared (see chap. 3.6.1.1, p. 173) on the server side.

An ODBC data source must be created (see chap. 3.6.1.2, p. 178) on the client.


### 3.6.1.1 Server

The preparation of an SQL-Server database for an ADOxx database installation can be done using the administration tool "SQL Enterprise Manager". The following steps are necessary:

- Create a Microsoft SQL-Server database which has its own database device and log device. The log should be at least 15 MB in size and it is recommended that the initial size of the database should be no less than 40 MB.

  Activate the option "Truncate Log on Checkpoint".

  > **ATTENTION:** The transaction protocol will be required, particularly for later import and deletion of large models. Should the option "Truncate Log on Checkpoint" not be activated, the protocol must be archived at adequate intervals.

- Create a *Login* with the name "ADONIS" and the password "BPMS" and assign the Login to the database.

- The Login "ADONIS" must be given the rights "Create table" and "Create view" for the database.

# Prepare MS SQL Server 2000 Database (example)

To prepare a Microsoft SQL Server 2000 database, the SQL Server program "*SQL Server Enterprise Manager*" will be started.

1. **Create database:**

   Create a new database in the left window of the *SQL Enterprise Manager* in the sub-list of the SQL server used by clicking on the entry "**Databases**" with the right mouse button and selecting the item "**New Database**" from the context menu (see fig. 73).
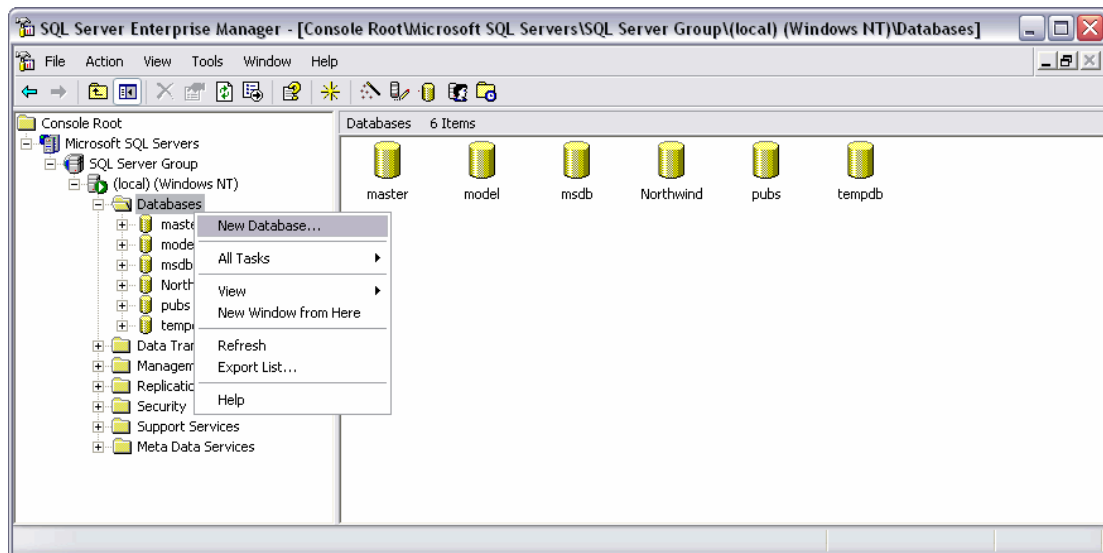


Figure 73: Create new database

The window "Database properties - <*database name*>" (see fig. 74) will be opened.
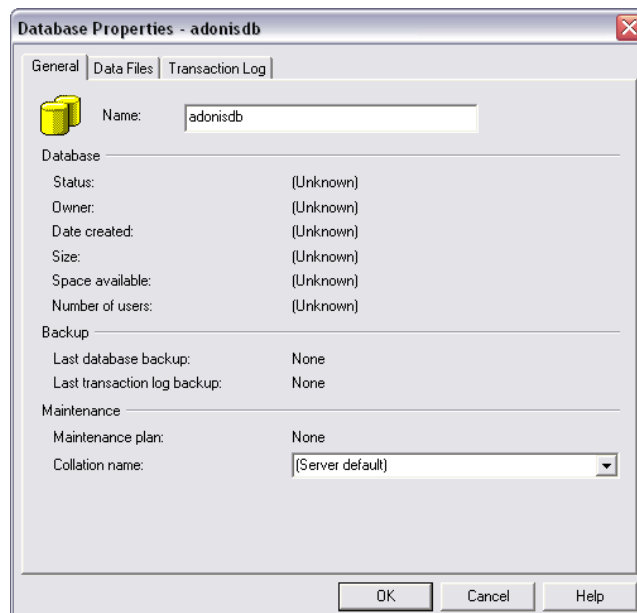


Figure 74: Database properties - General

Enter in the field **Name** a new name for the new database (e.g. "adoxxdb").

**ATTENTION:**   If the database is "adonis", you cannot have local access to the database
from the ADOxx application. It is not recommended to name the database
"adonis".

Switch to the tab "**Data Files**" (see fig. 75).
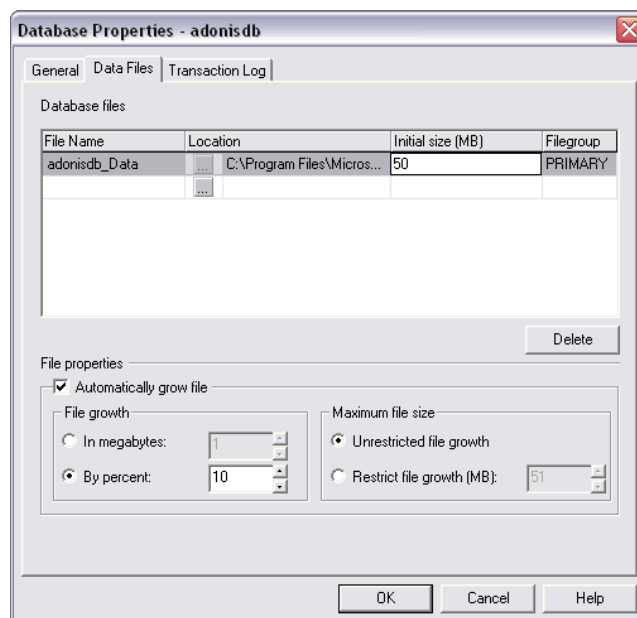


Figure 75: Database properties - Data Files

Within the column **Initial size (MB)** an initial size of the database file can be set. The user files of
the database will be physically stored in the database file. The required space depends on the
number and size of the models stored. A starting size of 50 MB is sufficient.

If the option field **Automatically grow file** is marked, the datafile will be automatically increased if
necessary. It is recommended to accept this setting.

The values "**Field enlargement**" and "**Maximum file size**" are the parameters for the automatic
enlargement and can also be accepted unchanged.

Switch to the tab "**Transaction Log**" (see fig. 76).
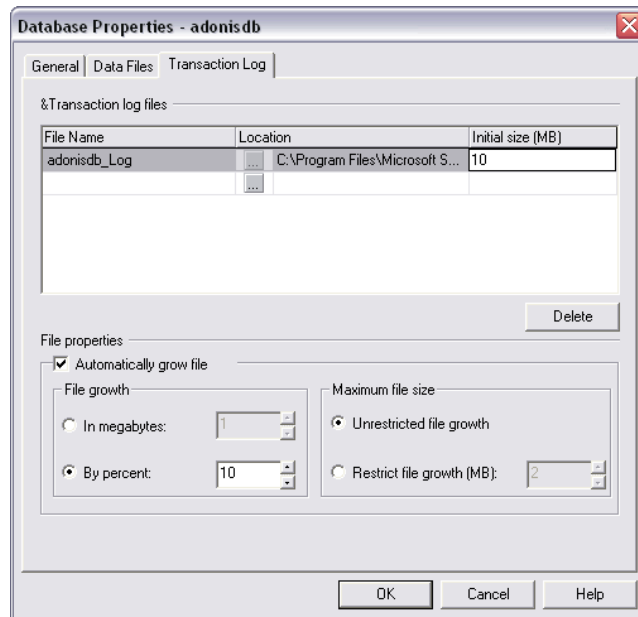


Figure 76: Database properties - Transaction Log

Assign the **Initial size (MB)** with "10" for the initial size of the transaction protocol.

Click on the button "**OK**" to create the new database.

2. **Create user account "ADONIS":**

   Create a new user account in the left window of the *SQL Enterprise Manager* in the sub-list of the SQL server used by clicking on the entry "**Security**" with the right mouse button and selecting the item "**New Login**" from the context menu (see fig. 73).
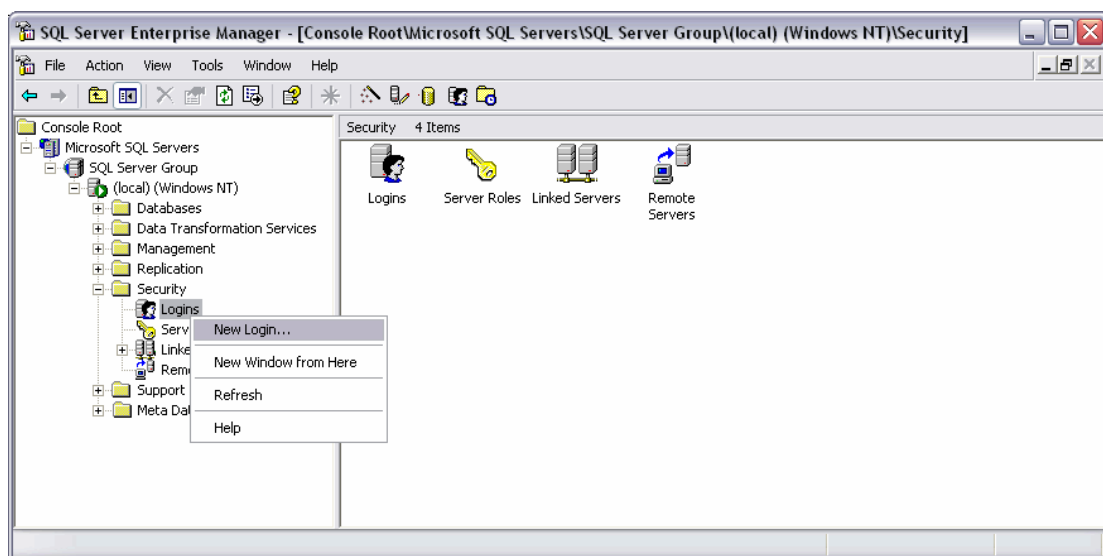


Figure 77: Create new login

The window "**SQL Server Login Properties - New Login**" with the tab "**General**" (see fig. 78) will be opened.

Figure 78: New Login - General

Enter the value "**ADONIS**" in the field "**Name**".

Select the option "**SQL Server Authentication**" and enter the value "**BPMS**" in the field "**Password**".

In the list field "**Database**" select the entry of the previously created database (e.g. "adoxxdb").

Then change to the tab "**Database Access**" (see fig. 79).
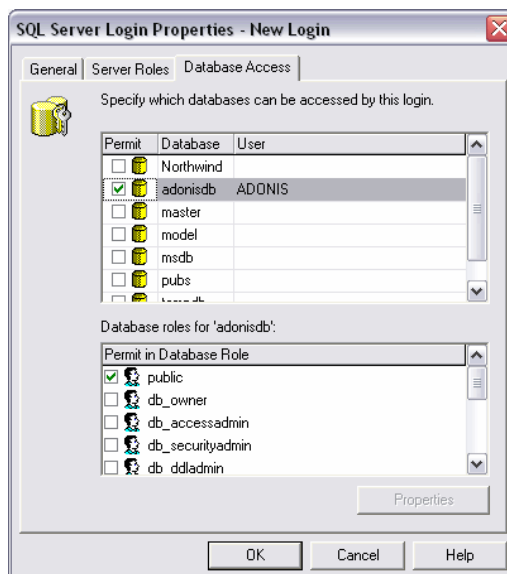


Figure 79: New Login - Database Access

In the row with the name of the new database in the upper table of the window, mark the field "**Permit**" - the new user "ADONIS" will be listed automatically.

The password "BPMS" must be confirmed once the button "**OK**" has been pressed. This closes the creation of the account.

3. **Authorise user "ADONIS":**

Open the window "**<*Database name*> Properties**" (see fig. 80) by right-mouse-clicking on the entry of the newly created database ("adoxxdb") in the part "**Database**" of the *SQL Enterprise Manager* and selecting the item "**Properties**" in the context menu.
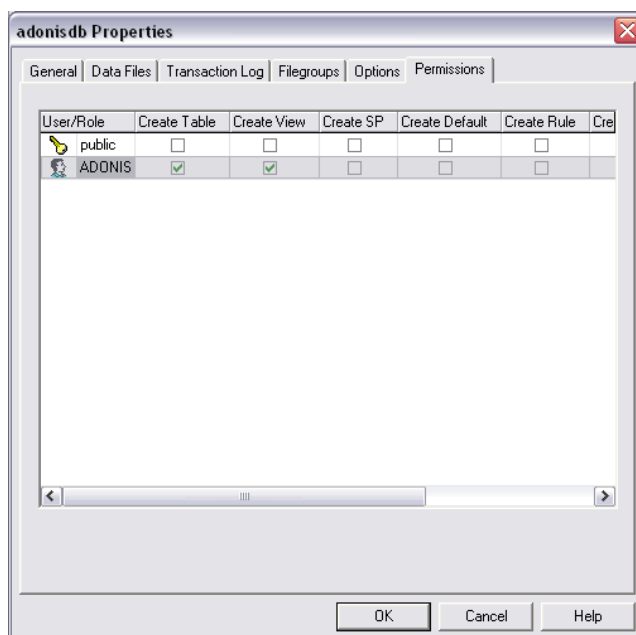


Figure 80: Properties of the new database - Permissions

Switch to the tab "**Permissions**" and mark the access rights "**Create Table**" and "**Create View**" in the line assigned to the user "ADONIS".

Then, confirm the settings by clicking on the **OK** button.

## 3.6.1.2     Client (configure ODBC data source)

ADOxx applications use the ODBC interface to access *Microsoft SQL Server* databases.

For the prepared ADOxx database an ODBC data source has to be defined. Therefore the *Windows* system program "**ODBC32AD32.EXE**" or "**Data Sources (ODBC)**" in the folder "control panel" or "control panel / administration" respectively must be used.

> **ATTENTION:**     The **ODBC driver v2000.80.194.0** (included in Microsoft SQL Server 2000 or MDAC 2.6 RTM) contains errors that can - in combination with Microsoft SQL Server 2000 - lead to truncated attribute values.  If you use Microsoft SQL Server 2000 it is recommended to install an older ODBC driver (e.g. MDAC 2.5 SP1 with ODBC driver v3.70.0820) or MDAC 2.6 SP1. The Microsoft Service Pack "MDAC 2.6 SP1" is included in the ADONIS installation CD in the directory  "dbinfo\mdac26_sp1" and can be installed with the program "mdac_typ_de.exe" (German) or "mdac_typ.exe" (English).

The data source can be created either as a user data source (saved in the user profile) or as a system data source (stored in the profile of the computer).

Within the "ODBC SQL Server setup" dialogue the following information has to be provided:

> **ATTENTION:**     Depending on the version of the installed ODBC driver not all options might be offered in the ODBC configuration assistant.

**Data source name:** Any name that is unique in the system with a maximum of eight characters serving as an alias name for the database. The name defined here will be used during the ADOxx login.

**Server:** Specify the network name (DNS/WINS name) of the server.

**Database name:** The physical name of the prepared MS SQL Server database instance has to be specified.

The authentication mode for the login ID has to be set to "**SQL Server Authentication**".

When using MS SQL Server Version 6.5 the option "**use temporarily stored procedures for prepared queries**" should be deactivated.

When working with a multi-user ADOxx installation it has to be ensured that the option "**Convert OEM into ANSI**" respectively "**Character conversion**" is the same for all clients working with ADOxx as well as on the client where the ADOxx DB installation program is being executed.

For all other fields the default values can be used.

## Configure ODBC data source for ODBC driver (v3.81) (Example)

To configure an ODBC data source use the system program "**ODBC32**" in the folder "**control panel**" (see fig. 81).
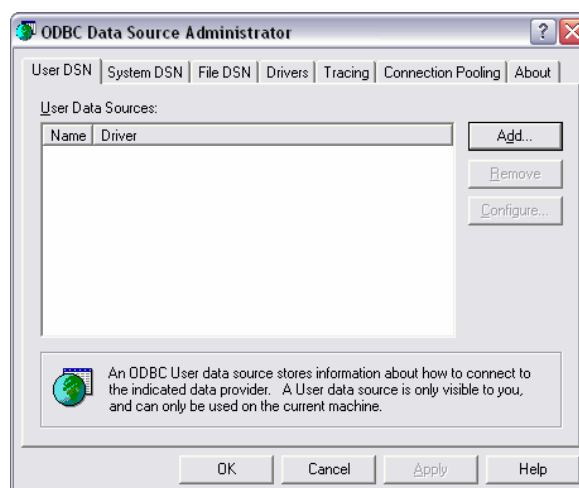


Figure 81: ODBC Data Source Administrator

In the tab "**User DSN**" or "**System DSN**" click on "**Add**" to start the configuration of a new data source.

A user data source (User DSN) is exclusively created for the user account creating the data source. A system data source (System DSN) can be used by all users of the computer. Both types of data sources can be created.

In the window "Create New Data Source" (see fig. 82) the SQL-Server driver should be selected.
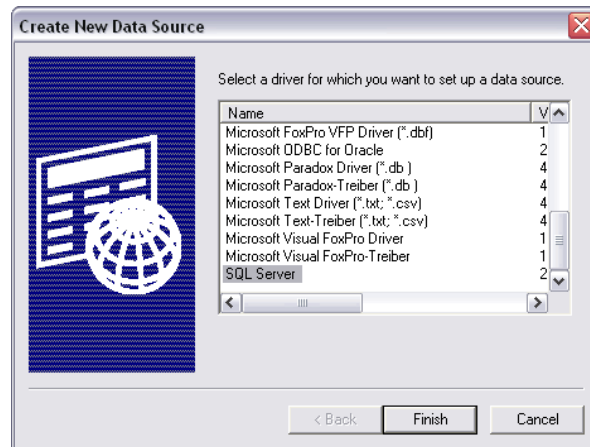


Figure 82: Create New Data Source

By clicking "**Finish**" the configuration assistant is started.

In the first window  (see fig. 83) of the wizard define the name and server of the database.
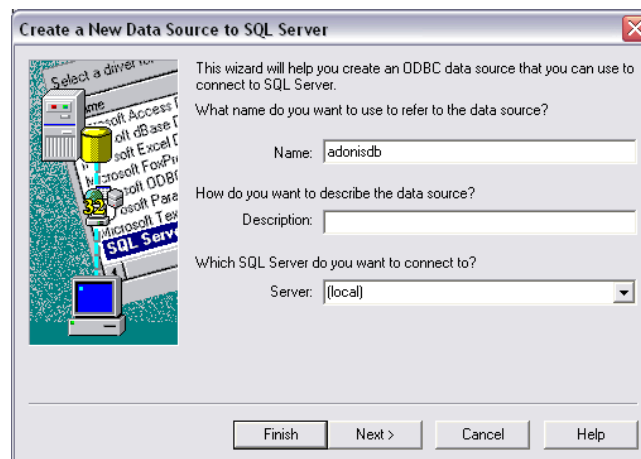


Figure 83: Create a New Data Source to SQL Server - Enter data source name

The "**Name**" must be unique and not more than eight characters and is used as an alias name. This is the name used during the ADOxx login (ADOxx login) to identify the database. For the "**Server**" on all remote clients the **network name of the server computer** should be used. If the configuration of the data source performed on the server computer (locally) the string "**(local)**" can be used.

Click "**Next >**" to move on to the next window (see fig. 84).
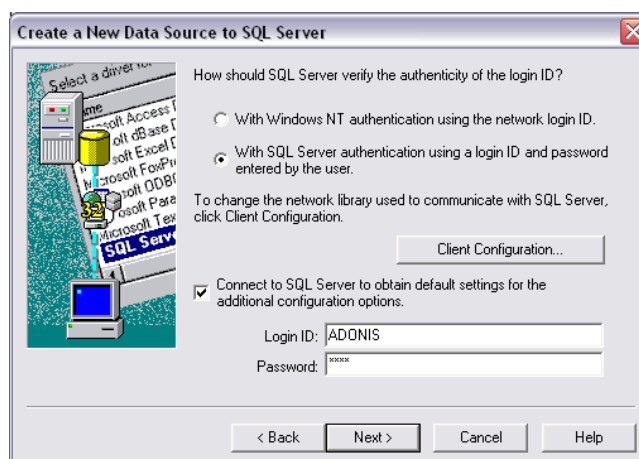
Figure 84: Create a New Data Source to SQL Server -  Enter authentication

The question "**How should SQL Server verify...**" must be answered with "**With SQL Server authentication...**".

The option "**Connect to SQL Server...**" is enabled and the fields "**Login ID**" and "**Password**" should be filled with the values "**ADONIS**" and "**BPMS**".

Click "**Next >**" to move on to the next window (see fig. 85).
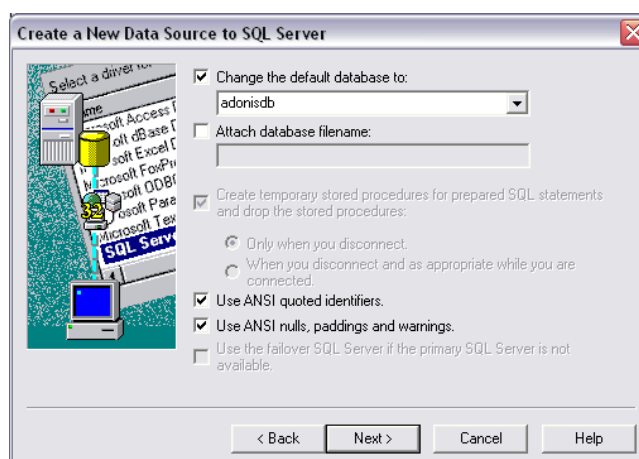


Figure 85: Create a New Data Source to SQL Server - Select database

Enable the selection box "**Change standard database to**" and select the corresponding ADOxx database ("adoxxdb"). The other settings can be accepted unchanged.

Click "**Next >**" to move on to the next window (see fig. 86).
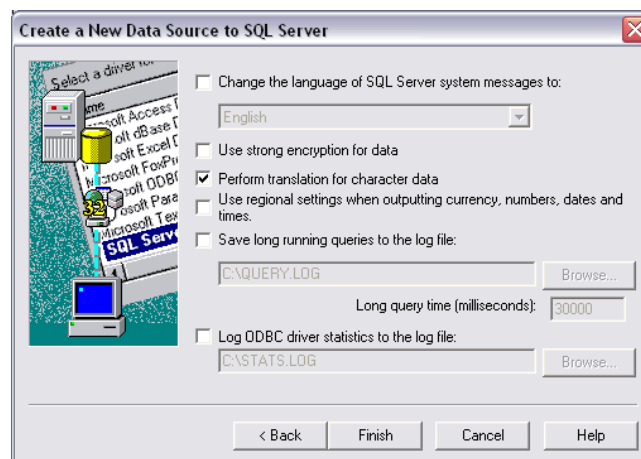
Figure 86: Create a New Data Source to SQL Server - Further settings

Accept all default values.

> **Hint:** The option "Use strong encryption for data" is only available when using SQL Server 2000 and must not be activated.

Click "**Finish**" to close the configuration assistant.

In the window "**ODBC Microsoft SQL Server Setup**" (see fig. 87) a summary of the newly entered settings is listed. For checking the new connection click on "Test Data Source".
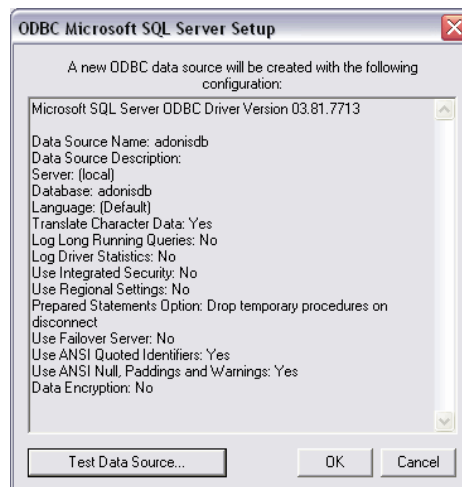


Figure 87: ODBC Microsoft SQL Server Setup

Click "**OK**" to finish the configuration of the data source.

## 3.6.2 Update Catalogue Statistics

> **Hint:** The update of catalogue statistics is also available in the menu "Extras" of the components "Library Management" and "Model Management" within the ADOxx Administration Toolkit.

> **Hint:** From MS SQL Server Version 7.0 onwards an automated update of the catalogue statistics is supported.

After importing application libraries or many models as well as in regular time intervals it is recommended to update the catalogue statistics of the database system.

The catalogue statistics are statistical data about the distribution of tables and indices that are used by the database system to optimise access. Updated catalogue statistics will lead to more efficient access and reduced response times.

After initial importing libraries/models into an ADOxx database it is particularly recommended to update the statistics to obtain performance improvements.

For ADOxx databases using SQL-Server the following approach is recommended:

1. Start the MS SQL Server SQL command line and connect to the database.

2. Execute the following statements:

```
UPDATE STATISTICS ADONIS.ADOUSER
UPDATE STATISTICS ADONIS.AMODEL
UPDATE STATISTICS ADONIS.ATTRIBUTE
UPDATE STATISTICS ADONIS.CLASS
UPDATE STATISTICS ADONIS.FACET_DOUBLE
UPDATE STATISTICS ADONIS.FACET_INTEGER
UPDATE STATISTICS ADONIS.FACET_STRING
UPDATE STATISTICS ADONIS.FILESTORE
UPDATE STATISTICS ADONIS.IMODELREFS
UPDATE STATISTICS ADONIS.INSTANCE
UPDATE STATISTICS ADONIS.INSTATTR_DOUBLE
UPDATE STATISTICS ADONIS.INSTATTR_INTEGER
UPDATE STATISTICS ADONIS.INSTATTR_LONG
UPDATE STATISTICS ADONIS.INSTATTR_STRING
UPDATE STATISTICS ADONIS.INSTATTR_RECORD
UPDATE STATISTICS ADONIS.INSTATTR_REPOREF
UPDATE STATISTICS ADONIS.INTERREF
UPDATE STATISTICS ADONIS.MESSAGE
UPDATE STATISTICS ADONIS.MODELGROUP
UPDATE STATISTICS ADONIS.MODELGROUPPERMS
UPDATE STATISTICS ADONIS.MODELTHREAD
UPDATE STATISTICS ADONIS.MODELTOAMODEL
UPDATE STATISTICS ADONIS.MODELTOGROUP
UPDATE STATISTICS ADONIS.MODELVERSION
UPDATE STATISTICS ADONIS.REPODIR
UPDATE STATISTICS ADONIS.REPOINSTANCE
UPDATE STATISTICS ADONIS.RDMMATTRIBUTE
UPDATE STATISTICS ADONIS.RDMMFACET
UPDATE STATISTICS ADONIS.RELINSTANCE
UPDATE STATISTICS ADONIS.RELTYPE
UPDATE STATISTICS ADONIS.PERMISSIONS
UPDATE STATISTICS ADONIS.USERGROUP
UPDATE STATISTICS ADONIS.USERSTOGROUPS
```

## 3.6.3 ADOxx Database Tables

The following list contains the table names of an ADOxx database:

```
ADOIDS
ADOLOCKS
ADOTRANSACT
ADOUSERS
AMODEL
ATTRIBUTE
CLASS
```

```
FACET_DOUBLE
FACET_INTEGER
FACET_STRING
IMODELREFS
INSTANCE
INSTATTR_DOUBLE
INSTATTR_INTEGER
INSTATTR_LONG
INSTATTR_STRING
LONGCHARS
MODEL
MODELGROUPPERMS
MODELGROUPS
MODELTOAMODEL
MODELTOGROUP
PERMISSIONS
RELATION
RELATIONTYPE
USERGROUP
USERSTOGROUPS
```

All database objects are assigned to the scheme "ADONIS".

# 3.7 Microsoft Database Engine (MSDE)

Within this chapter you will find a description of how to uninstall the Microsoft Database Engine (see chap. 3.7.1, p. 184).

> **Hint:** The installation of the Microsoft Database Engine (see chap. 2.1.1, p. 41) takes place during the ADOxx installation.

## 3.7.1 Uninstall MSDE

> **ATTENTION:** When uninstalling MSDE **all locally saved ADOxx databases** will be **deleted**.

1. **Stop MSDE services:**

   Start the "Service Manager" from the folder "Start->Programs->MSDE". In case the service is running click on the "Stop" button.

2. **Remove the Service-Manager symbol from the task bar:**

   Right mouse click on the Server icon in the task bar (symbol with red dot next to the system time) and select "Exit".

3. **Uninstall MSDE:**

   Run the program "Uninstall" from the folder "Start->Programs->MSDE".

4. **Delete MSDE installation directory** (e.g. "c:\msde").

# 4. Glossary

The glossary explains the expressions used in ADOxx.

The symbol "→" refers to further entries in the glossary.

# - A -

**ABL.** **A**DONIS **B**inary **L**anguage; file format, in which →application libraries can be saved (exported).

**Accelerator.** Letter marked by underlining. Occurs in titles of menus and menu options, in field and list names of input fields and in chapter headings and attribute names of →ADOxx Notebooks. By entering the accelerator (sometimes in connection with the <Alt> key) you can call functions and navigate inside both windows and ADOxx Notebooks via the keyboard.

**Access Rights.** The access rights (read-write/read-only/no access) to an →ADOxx model group are assigned to the →ADOxx user groups by the →ADOxx administrator.

**Acquisition (component).** →Component of the →Modelling Toolkit. Supports the core activity "Acquisition" in organisation projects with the help of →Acquisition Tables.

**Acquisition Tables (HOMER).** Functionality in the →Acquisition Component in the →Modelling Toolkit. The acquisition tables help you to store and manage the data acquired and transfer into ADOxx.

**ACR.** **A**DONIS **C**omparable **R**epresentation; file format, in which simulation and analysis results, which are displayed in the →ADOxx browser can be saved. ACR-files are needed in the →Evaluation Component for the →comparison of results.

**Activity.** Smallest entity of a business process. Activities describe what is done in a →business process.

**Activity, cooperative asynchronous.** An →activity carried out by several →performers who work together but not at the same time.

**Activity, cooperative synchronous.** An →activity carried out by several →performers who work together at the same time.

**ADL.** **A**DONIS **D**efinition **L**anguage; in which →ADOxx models and →ADOxx model groups as well as →ADOxx attribute profile and →ADOxx attribute profile groups can be saved (exported).

**ADL Export.** Functionality in the →Import/Export Component in the →Modelling Toolkit and in the →Model Management in the →Administration Toolkit. Using the ADL export profiles, you can export →ADOxx models and →ADOxx model groups as well as →ADOxx attribute profile and →ADOxx attribute profile groups to →ADL files.

**ADL Import.** Functionality of the →Import/Export Component in the →Modelling Toolkit and in the →Model Management in the →Administration Toolkit. Using the ADL import functionality, you can import →ADL files (→ADOxx models and →ADOxx model groups) as well as →ADOxx attribute profile and →ADOxx attribute profile groups into ADOxx and store them in the →ADOxx database.

**Administration Toolkit.** ADOxx tool, needed by the →ADOxx administrator in order to manage →ADOxx users, →ADOxx libraries, →ADOxx models and →ADOxx attribute profiles. The Administration Toolkit consists of the →User Management, →Library Management, →Model Management, →Attribute Profile Management and →Component Management →components.

**ADO*it*.** IT Service and IT Architecture Management Tool (manufacturer: BOC Asset Management GmbH). Part of the →Management Office.

**ADO*log*.** Supply Chain Management Tool (manufacturer: BOC Asset Management GmbH). Part of the →Management Office.

**ADONIS.** Business Process and Knowledge Management Tool (manufacturer: BOC Asset Management GmbH). Part of the →Management Office.

**ADOxx Administrator.** Person, who is responsible for the configuration of ADOxx ("→Customising"), the →User Management, →Library Management, →Model Management, →Attribute Profile Management and →Component Management.

**ADOxx Attribute Profile.** →Attribute profile

**ADOxx Attribute Profile Group.** →attribute profile group

**ADOxx-Default-Library.** →Application library, automatically generated during the installation of a →ADOxx database for ADOxx version 3.9 and up and assigned to the standard user "Admin". The ADOxx-Default-Library consists of the →ADOxx-Default-BP-Library and the →ADOxx-Default-WE-Library. The ADOxx-Default-Library is the successor and an extension to the →ADOxx-Standard-Anwendungsbibliothek.

**ADOxx-Default-WE-Library** Working Environment library, automatically generated during the installation of a →ADOxx database for ADOxx version 3.9 and up. The ADOxx-Default-WE-Library is part of the →ADOxx-Default-Library. With the →classes and →relations defined in the ADOxx-Default-WE-Library, models of the →model type →"Working Environment model" can be created.

**ADOxx-Default-BP-Library.** , automatically generated during the installation of a →ADOxx database for ADOxx version 3.9 and up. The ADOxx-Default-BP-Library is part of the →ADOxx-Default-Library. With the →classes and →relations defined in the ADOxx-Default-BP-Library, models of the →model types →"Company Map", →"Business Process Model", →"Document Model", →Product Model, →IT System Model and →"Use Case Diagram" can be created.

**ADOxx Browser.** Special result window used in the →Modelling Toolkit(in the components →Modelling, →Analysis, →Simulation and →Evaluation) as well as in the →Administration Toolkit (in the components →Library Management and →Attribute Profile Management). The results are represented in tabular form and can be displayed graphically. They can also be printed out, saved in a file in →TXT format (table and text), →RTF format or →HTML format.

**ADOxx Business Edition.** Compared to the complete ADOxx Professional Edition, this is a restricted configuration (→ADOxx configuration) of the →Modelling Toolkit. The ADOxx Business Edition consists of the components →Modelling, →Analysis, →Documentation and →Import/Export.

**ADOxx Business Edition.** Compared to the complete ADOxx Professional Edition, this is a restricted configuration (→ADOxx configuration) of the →Modelling Toolkit. The ADOxx Business Edition consists of the components →Modelling, →Analysis, →Documentation and →Import/Export.

**ADOxx Component.** Part of ADOxx software. The standard ADOxx components are the →ModellingToolkit and the →Administration Toolkit as well as the →database administration. In addition, the →Process Cost Analysis,^→Dynamic Evaluation Module, →case/4/0 coupling and →objectiF coupling can be purchased as additional components.

**ADOxx Configuration.** A version of the →Modelling Toolkit in which the →components are configured according to the customer's needs. The minimal ADOxx configuration consists of the →modelling component.

**ADOxx Database.** All ADOxx data is stored in the ADOxx database.

**ADOxx Database Administration.** The ADOxx Database administration contains the programs necessary for generating, saving and restoring →ADOxx databases.

**ADOxx Default Language.** The language ADOxx starts by default with. The default language is set during installation.

**ADOxx Directory.** Directory in which ADOxx has been installed. Default: `C:\Program files\BOC\ADOxx10.`

**ADOxx Explorer.** Tool providing an overview of the →models/model groups stored in the ADOxx database and offering various manipulation possibilities.

**ADOxx Inspector.** Tool that supplies the →ADOxx user with various details about the active modelling environment.

**ADOxx Installation Directory.** →ADOxx directory

**ADOxx Mail.** Messaging function in ADOxx, using which →ADOxx users can exchange (→express) messages. The messages will be saved to the→ADOxx database .

**ADOxx Model.** Aggregation of →objects of various →classes that serve to represent the essential aspects of the real world for the →ADOxx user. The models serve as a basis for →components such as →analysis, →simulation and →evaluation.

**ADOxx Model Group.** Group, in which →ADOxx models are referenced. →Access rights for →ADOxx user groups and the →ADOxx users referenced therein are defined for an ADOxx model group.

**ADOxx Navigator.** Tool which shows an overview of the active →model. The part of the model, which is currently visible in the →model window is highlighted and can be used for navigating through the model.

**ADOxx Notebook.** Special dialogue window where the attributes of →objects, →connectors, →attribute profiles, →models or →libraries may be changed.

**ADOxx Professional Edition.** Complete ADOxx version of the →Modelling Toolkit (→ADOxx configuration). The ADOxx Professional Edition in its standard configuration consists of the components →Acquisition, →Modelling, →Analysis, →Simulation, →Evaluation, →Documentation and →Import/Export.

**ADOxx Program Folder.** Contains the program icons for the installed ADOxx toolkits, the →online manuals and (if applicable) the →ADOxx database administration.

**ADOxx Rights.** Rights of an →ADOxx user to access the →Administration Toolkit and/or →Modelling Toolkit.

**ADOxx Standard Application Library.** →Application library that is automatically generated when an →ADOxx database is generated for ADOxx 3.81 or earlier. Since ADOxx 3.9, the →ADOxx-Default-Library is generated automatically. The ADOxx Standard Application Library is assigned to the standard user "Admin". It consists of the →ADOxx Standard BP library and the →ADOxx Standard WE library.

**ADOxx Standard BP Library.** →Business process library that is automatically generated when an →ADOxx database (up to version 3.81) is generated. The ADOxx Standard BP Library is part of the →ADOxx Standard Application Library. You can create models of types →"Business Process Model"→"Document Model", →"Use Case Diagram" and →"Company Map" with the classes and relations defined in the ADOxx Standard BP Library.

**ADOxx Standard WE Library.** Working Environment library that is automatically generated when an →ADOxx database (up to version 3.81) is created. The ADOxx Standard WE Library is part of the →ADOxx Standard Application Library.. You can create models of the model type →"Working Environment Model" with the classes and relations defined in the ADOxx Standard WE Library.

**ADOxx User.** User of →ADOxx components. The ADOxx users stored in the →ADOxx database are displayed in the →user list. ADOxx users may be exported (optionally including →ADOxx user groups) to →UDL files or imported from →UDL files.

**ADOxx User Group.** Group, in which →ADOxx users are referenced. An ADOxx user group has →access rights to →ADOxx model groups and the →ADOxx models referenced within these. The ADOxx user groups stored in the →ADOxx database are displayed in the →user group list. ADOxx user groups may (optionally including →ADOxx users) be exported into →UDL files or imported from UDL files.

**ADOxx User Management (component).**  A →component of the →Administration Toolkit where →ADOxx users can be created, deleted and their settings can be changed →ADOxx user groups can be created, renamed and deleted. An ADOxx user can be assigned to ADOxx user groups and ADOxx users can be imported and exported.

**ADOxx Window.**  Graphical user interface of ADOxx. You can call the individual →components from within the ADOxx window.

**ADO*score*.**  Strategy and Performance Management Tool (manufacturer: BOC Asset Management GmbH). Part of the →Management Office.

**AdoScript.**  Script language, using which you can implement customised functionality extensions in ADOxx. Moreover AdoScript enables the call of any external programs and functions in DLLs.

**Agent.**  Created by a →ADOxx user in the →Simulation Component. Calculates user-defined simulation results during the simulation. An agent's results refer only to the objects specified by the user.

**Agent Calendar.**  Description of the period of time during which an agent evaluates the simulation algorithm →Workload Analysis.

**Alignment Function.**  Functionality in the →Modelling Component, which allows you to align the →objects and →connectors of an →ADOxx model with the help of pre-defined or user-defined parameters. Available in the "Edit menu".

**Analysis (component).**  →Component of the →Modelling Toolkit, in which →queries and reports can be run on your →models. (i.e. you can evaluate your →business process models. The queries are formulated in a language called →AQL (However, you do not need to understand AQL syntax in order to run analysis queries).

**Analytical Evaluation (Calculation).**  Evaluation mechanism for →business process models in the →Analysis Component of the →Business Process Managament Toolkit. The →models are not simulated by this kind of evaluation but calculated mathematically.

**Animation.**  Passive component in the simulation algorithms →"Workload Analysis (fixed time period)" and →"Workload Analysis (steady state)", which is responsible for graphically representing the →task stacks of the different →performers in the →Working Environment model being simulated. (Do not mix up with →offline animation).

**APF.**  **A**DONIS **P**rotocol **F**ile; file format in which the results of a simulation run can be saved. APF files serve as input for the →offline animation function.

**Application Library.**  Combination of a →Business Preocess and a →Working Environment library. The two →libraries contain the →classes and the →relations for the →models of the →model types defined. The application libraries stored in the →ADOxx database are displayed in the →application library list. Exactly one application library is assigned to each →ADOxx user.

**Application Library List.**  List displaying all application libraries that are stored in the →ADOxx database. From here you can import, export and delete application libraries.

**Application Model.**  Combination of at least one →business process model and exactly one →Working Environment model. The definition of an application model is necessary for the →Simulation Component to carry out the simulation algorithms "→Capacity Analysis" and "→Workload Analysis".

**AQL.**  **A**DONIS **Q**uery **L**anguage; query language which enables you to →assign performers and →allocate resources in the →Modelling Component. You can also enter selection criteria for the functions "global change" and "model search". In addition, you can run →queries in the →Analysis Component and generate →pre-defined queries and →pre-defined evaluation queries when you edit the →library attributes in the →Library Management.

**Assessment.**  Functionality in the →Modelling Component in the →Business Process Management Toolkit. This functionality enables you to evaluate →business process models according to time and cost criteria.

**Attribute.** Property of a →library, a →model, a →class, an →object, a →relation or a →connector. Attributes are usually filled with values (=attribute values) in ADOxx Notebooks.

**Attribute-dependent Graphical Representation.** Representation of →objects and →visualised attribute values on the →drawing area depending on concrete attribute values. An attribute-dependent graphical representation can be defined while →customising in the →Administration Toolkit within the →Library Management component. A Resource is an example of an attribute from the ADOxx-Default-Library that has an attribute-dependent graphical representation.

**Attribute Filter.** Filter function for the →Documentation Component. Using the attribute filter, you can select the attributes you want to transfer to the documentation (e.g. HTML, XML, RTF files).

**Attribute Mode.** Presetting in the application library for the →Documentation Component. An attribute mode defines, which attributes of a class should be transferred to the documentation (e.g. HTML, XML, RTF files).

**Attribute Profile.** Concrete instance of an attribute profile class. An attribute profile represents one or more →attributes, which are reused for any →objects and can be maintained in the →Attribute Profile Management).

**Attribute Profile Class.** Template, according to which the →attribute profiles are generated by →instancing. An attribute profile class or its →attribute profiles are described by a quantity of →attributes, which are assigned with concrete values in an →attribute profile.

**Attribute Profile Group.** Grouping, in which →attribute profiles are summed up.

**Attribute Profile Management.** →Component in the →Administration Toolkit, in which you can instance, edit or delete →attribute profiles as well as create, rename and delete →attribute profile groups.

**Attribute Profile Reference.** ATTRPROFREF; attribute type for referencing an attribute profile.

**Attribute Value.** Value of an →attribute, being a concrete instance of a characteristic.

**Automatic Random Generator.** →Random generator, automatic.


# - B -

**Balanced Scorecard (BSC).** Instrument to translate company's mission and strategy to a clear system in order to measure the performance. This system creates the framework for a strategic performance measurement and management system. The Balanced Scorecard focuses above all on the financial targets, but contains also the business drivers of these financial targets.

**Bendpoint.** Point where a →connector changes its direction.

**BMP.** Microsoft Bitmap; graphic file format, in which diagrams/graphics which have been generated from →models can be saved.

**BPMS Paradigm.** (=Business Process Management Systems-Paradigm). Framework for the management of →business processes. This framework consists of five subprocesses: "Strategic Decision Process", "Re-engineering Process", "Resource Allocation Process", "Workflow Process" and "Performance Evaluation Process". It was developed by the BPMS group of the Institute for Applied Computer Science and Information Systems, Department of Knowledge Engineering, University of Vienna.

**Browser.** →ADOxx browser

**Business Process.** Number of logically connected →activities whose execution should meet a business objective.

**Business Process Library.** →Classes for →modelling business processes. The →classes of a business process library are derived from the classes of a →business process meta model. A business process library is part of an →application library. A business process model always refers to

exactly one business process library. Business process libraries are defined while ADOxx is →customised

**Modelling Toolkit.** →ADOxx component in which the →ADOxx user works. In its standard configuration it consists of the following →components: →Acquisition, →Modelling, →Analysis, →Simulation, →Evaluation and →Import/Export.

**Business Process Meta Model.** →Classes pre-defined in ADOxx for →modelling →business processes. The →classes of a →business process library are derived from the →classes contained in the business process meta model.

**Business Process Model. 1.** →ADOxx model of a business process. Comes into existence by →instantiation of →classes of a →business process library.

**2.** Model type of the →ADOxx-Default-BP-Library.

# - C -

**Calculation.** →Analytical Evaluation.

**Calendar. 1.** →Agent Calendar, →Performer Calendar, →Process Calendar.

**2.** CALENDAR; attribute type for defining the period of presence of performers (→Performer Calendar) or the period of occurrence (frequency) of business processes (→Process Calendar).

**Capacity Analysis.** Simulation algorithm in the →Simulation Component of the →Business Process Management Toolkit which "plays through" →business processes and assigns →activities to the →performers. An →application model serves as input for capacity analysis. This analysis enables you to plan your personnel capacity demand. The results of the capacity analysis are displayed in the →ADOxx browser.

**Capacity Management (component).** Special definition of the →Dynamic Evaluation Modules. Used for period-related calculation of the organisational/personnel capacity requirements.

**case/4/0.** Data and function-oriented CASE tool (manufacturer: microTOOL GmbH)

**CASE. C**omputer **A**ided **S**oftware **E**ngineering.

**Class.** Static template according to which →objects are created by →instantiation. A class or its →objects, are described by a set of →attributes, which are filled with concrete values within an →object. The class "Performer", for example, has among others the →attributes "Name", "Availability" and "Hourly wages".

**Class Attribute.** →Attribute of a →class, which refers directly to the class and does therefore not occur in →objects of this class such as the attribute "Info text" in an ADOxx modelling class (See: Information icon in Notebooks).

**Class Filter.** Filter function for the →Documentation Component. Using the class filter, you can select the →classes, in which →objects should be transferred to the documentation (e.g. HTML, XML, RTF files).

**Class Panel.** Button panel, which contains exactly one button for each →class that can be modelled. The class panel represents the second part of the →modelling bar - between the →edit button and the →relation panel.

**Client.** A client is a software module which requests services from a →server, usually via a network.

**Client/Server.** Computer system consisting of a →client and a →server.

**Company Map. 1.** ADOxx model containing an overview of all →business processes occurring in a company. Comes into existence by →instantiating →classes of a →business process library.

**2.** Model type of the →ADOxx-Default-BP-Library.

**Comparison of Results.** Functionality of the →Evaluation Component in the →Modelling Toolkit. Compares results of analysis and simulation in tabular and graphical form. The results are displayed in the →ADOxx browser.

**Component.** Individual module of the →Administration Toolkit or of the →Modelling Toolkit (e.g. Modelling, Analysis, Model Management).

**Component Access.** Configuration of the access to the →components of the →Modelling Toolkit. The component access can be defined individually by the →ADOxx administrator for →ADOxx user groups and for each →ADOxx user, whereby the →ADOxx configuration can be customised

**Component Bar.** Panel, by default below the →menu bar in the →ADOxx window. The smart-icons visible show the available →components. To the right of the component bar, usually the →quick-access bar can be found.

**Component Configuration.** Functionality of the Component Management in the →Administration Toolkit. Additional ADOxx components can be included here by entering a new licence number.

**Component Management.** Component of the →Administration Toolkit, in which the components of the →Modelling Toolkit can be configured.

**Configuration, current.** The current configuration (→ADOxx configuration) specifies which functions of the components of the →Modelling Toolkit are available.

**Connector.** →Instantiation of a →relation. Connection/link between two →objects (e.g. "Subsequent").

**Connector Attribute.** →Attribute of a →connector.

**Connector Mark.** Visualisation of connection joints for connectors that extend over page boundaries. (See →connectors, →page layout). Connector marks are very useful in model documentation.

**Connector Numbering.** Assigning numerical or alphabetical identifiers to →connector marks. The connector numbering is non-ambiguous within a →model.

**Context Menu.** Context-depending menu. Appears when you press the right mouse-button. Provides functionality suitable for the particular situation.

**Cooperative Activity.** An →activity, which is executed by more than one →performer (such as a meeting).

**Cost Cutting Component.** Additional →ADOxx component, which can be integrated into the →Evaluation Component of the →Modelling Toolkit. The Cost Cutting Component is not part of ADOxx standard configurations. The Cost Cutting Component supports cost optimisation, especially in the area of overhead costs.

**Cost Driver.** Establishes the relation between costs, processes and calculation objects. The cost driver is a measure of the costs caused by the business processes and subprocesses.

**Cost Driver Quantity.** The measurable output of a →cost driver. Each →output-induced (OI) process has a cost driver quantity.

**CSV.** **C**omma **S**eparated **V**alue; text file format in which contents from the →ADOxx browser can be stored and transferred without loss to a spreadsheet software.

**Cursor Key.** Arrow keys on the keyboard, using which you can navigate to the left, the right, upward and downward.

**Customer Number.** An unambiguous alphanumerical identifier for each customer. The customer number must be entered when installing ADOxx.

**Customising.** Adapting ADOxx to a customer's demands without programming effort. Via customising, definition of the →page layout, the →model types, →pre-defined analysis queries and →plans as well as →pre-defined evaluation queries and simulation mechanisms is performed.

**Cycle Time.** Time that (on average) passes between the start of a →business process and its end.

# - D -

**Database Administration.** ADOxx component, which the →database administrator uses to administrate the →ADOxx databases. The database administration contains the programs to create, store (only for →DB2 databases) and restore (only for →DB2 databases) →ADOxx databases.

**Database Administrator.** Person responsible for maintaining, configuring and administering the database system.

**Day Profile.** Template, which describes a →performer's time of presence or the stochastic occurrence (frequency) of a →business process per day. Day profiles are used in the →Agent Calendar, the →Performer Calendar and the →Process Calendar.

**DB2.** →DBMS for Windows, Linux, OS/2 and other operating systems (owner: IBM).

**DBMS.** **D**ata**B**ase **M**anagement **S**ystem.

**Default Language.** →ADOxx default language.

**Depth Search.** Process to go through objects, i.e. to automatically process the objects and relations of a model in the RTF generation in the →Documentation Component. Starting from a start object, all objects, which are directly connected to this start object, will be processed. Unlike the →width search the process will not be carried out gradually, but the relations of the objects will be followed until an object, which has no further relation, is reached.

**Distribution.** DISTRIBUTION; Attribute type for statistic distribution used for assigning variables.

**Document Model.** Model type of the →ADOxx-Default-BP-Library to illustrate the documents used in →Business Process Models.

**Documentation (component).** Function in the →Import/Export Component of the →Modelling Toolkit. Using the Documentation Component, you can transport →ADOxx models to specific target formats (e.g. →RTF, →HTML, →XML), whereby you can distribute the model contents including graphic representation integrated into documents or via the →Intranet.

**Domain.** A domain is a group of computers as part of a network using a common directory database. A domain is organised in different levels and is administered as one unit with common rules and procedures. Every domain has a unique name. (Definition from "Windows Help".)

**Drawing Area.** Rectangle in the →model editor of the →Modelling Toolkit. The drawing area is at least big enough so that it encloses all →objects and →connectors of a →model. The drawing area is represented in the →modelling window by a grey outline. It is part of the workspace.

**Drawing Mode.** Mode of the →model editor in which →objects and →connectors can be drawn. You can switch from →editing mode to drawing mode by clicking on a button in the →modelling bar.

**Drawing Space.** Area of a →model window, where objects and connectors can be placed. The →drawing area is a part of the drawing space.

**DSSSL.** **D**ocument **S**tyle **S**emantics and **S**pecification **L**anguage (DSL file); DSL files are used in the →Documentation Component, to convert →SGML files to any format (e.g. →HTML, →RTF, →XML).

**DTD.** **D**ocument **T**ype **D**efinition; DTD are used to define the structure of documents (e.g. in the formats →XML, →SGML) .

**Dynamic Evaluation Modules.** Additional →ADOxx Component, which can be integrated to the →Evaluation Component of the →Modelling Toolkit. The component "Dynamic Evaluation Modules" is not included in ADOxx standard configurations. The Dynamic Evaluation Modules enable period-related evaluations (e.g. Human Resources Management).

# - E -

**E-Business.** E-Business includes all business activities, i.e. the internal and external business processes of an organisation, which are supported by Internet technology.

**Edge Centre.** For each →connector the →ADOxx user can move the "centre". By moving the edge centre, the transition condition of a connector of type "Subsequent" may be arranged along this connector as you like. Alternatively, the edge centre may automatically be placed in the geometrical centre of the connector. This is useful to position the text displayed along a connector at a position at which it can be clearly read.

**Edit Button.** Topmost button within the →modelling bar. With this button the cursor in the →model editor can switch from →drawing mode ("pen") to →editing mode ("arrow").

**Editing Mode.** Mode in the →model editor, in which it is possible to edit (i.e. select, move, copy, cut, paste, delete etc) →objects and →connectors. You can switch from →drawing mode to editing mode either by clicking on the →editing button in the modelling bar or by right-clicking on the →drawing area in the →modelling window.

**EMF.** Windows **E**nhanced **M**eta**F**iles; Graphic file format, in which graphics, which have been generated from →models can be stored. EMF is based on vector graphics. This way EMF graphics can be scaled (resized) freely.

**Empty Space Tool.** Tool in the →Model editor that helps creating empty spaces in crowded models by moving the →objects. Part of the →Modelling bar.

**Enumeration.** ENUMERATION; attribute type with predefined attribute values. The valid value is exactly one of the set of values supplied.

**Enumeration List.** ENUMERATIONLIST; attribute type with predefined attribute values. The value valid may be zero, one or more elements of the value range defined.

**Evaluation Agent.** →Agent

**Evaluation (component).** →Component of the →Modelling Toolkit. Supports both the core "evaluation" activity in re-organisation projects and the "Performance Evaluation Process" within the →BPMS Paradigm.

**Evaluation Queries.** Functionality of the →Evaluation Component in the →Modelling Toolkit. Evaluation queries on →models serve to extract the model content (especially with regard to the simulation results). These can then be displayed in a clearly structured way in the →ADOxx browser. Depending on your particular →library configuration various pre-defined evaluation queries may be available.

**Evaluation Queries, predefined.** Predefined evaluation queries are defined by the →ADOxx administrator for →business process libraries and →working environment libraries. They are made available to the →ADOxx user by special menu options in the Evaluation Component of the →Modelling Toolkit. The results of predefined evaluation queries are displayed in the →ADOxx browser.

**Execution Time.** Time during which an →activity belonging to a →business process is executed.

**Exit Button.** Button in the top left of the →window panel, which closes the window when you double-click on it.

**Export.** →ADL-Export, →XML-Export.

**Export Migration Assistant.** Functionality in the →Administration Toolkit. The export migration assistant supports you in exporting →application libraries, →ADOxx users, →ADOxx user groups, →ADOxx models and →ADOxx model groups.

**Expression.** **1.** EXPRESSION; attribute type which determines the value of an →attribute using a flexible calculation rule, whereas the attribute value is defined by other attributes.

**2.** →AQL expression.

**Express Message.** Specific form of a message (→ADOxx mail) to a logged in →ADOxx user. An express message will be immediately delivered to the receiver and shown in a popup window.

**External Coupling.** Coupling of an external tool to ADOxx.

# - F -

**FDL.** **F**lowmark **D**efinition **L**anguage; language for describing →FlowMark models.

**FDL Generation.** Functionality of the →Import/Export Component in the →Modelling Toolkit. This functionality generates FDL files from →models (in order to then import them into →FlowMark).

**Floating-Point Number.** DOUBLE; attribute type for decimals (up to six decimal places).

**FlowMark.** →MQSeries Workflow.

**Flowmark Audit Trail.** Audit trail of →business processes carried out by →FlowMark.

# - G -

**Global Change.** Simultaneous change of attribute values of several objects in one or more models. The attributes to be changed are selected by entering standardised or user-specific search criteria.

**Global End.** Terminates a →business process including those processes that call it (i.e. may appear within a subprocess). A global end represents the termination of the whole processing.

**Groupware System.** Computer system supporting teamwork by providing services like e-mail, document management, discussion forum and so on.

# - H -

**HOMER.** →Acquisition Tables.

**HTML.** **H**yper**T**ext **M**arkup **L**anguage; file format, in which the contents of the →ADOxx browser or model content generated using the →Documentation Component can be saved. HTML files can be displayed in web browsers.

**Human Resource Management (component).** Specific definition of the →dynamical evaluation modules. Used for the period-related calculation (→time-related versioning) of the organisational/personnel capacity requirements.

# - I -

**Import Migration Assistant.** Functionality in the →Administration Toolkit. The import migration assistant supports you in importing →application libraries, →ADOxx users, →ADOxx user groups, →ADOxx models and →ADOxx model groups.

**Import/Export (component).** →Component of the →Modelling Toolkit in which →ADL Import, →ADL Export and →FDL Transformation can be called.

**Informix.** →DBMS for Windows (owner: IBM).

**Input Parameter Combination.** Parameter for →simulation and analytical evaluation (calculation). When a Simulation or →Analytical Evaluation is started, an input parameter combination must be selected. This specifies on which →attributes the results should be calculated. Depending on the input parameter combination different results will be calculated. Additional input parameter combinations

can be defined in the →Administration Toolkit (→Library Management, →library attribute →"Simmapping").

**Inspector.** →ADOxx Inspector.

**InstallShield.** Software, using which you can install ADOxx via Windows (manufacturer: Macrovision Corp.).

**Instance. 1.** →Object

**2.** →Attribute Profile

**3.** →Process Instance.

**Instantiation. 1.** Creating an →object of a →class or a →connector of a →relation

**2.** Creating an →attribute profile of an →attribute profile class.

**Integer.** INTEGER; attribute type for an integer (whole number).

**Inter-Model Reference.** INTERREF; attribute type used to create a reference to another →ADOxx model or to an →object in a different →ADOxx model.

**Internet.** Worldwide computer network.

**Intranet.** Computer network, which is restricted to one organisation (company, department) - in contrast to the →Internet.

**ISO9000.** This umbrella term is commonly used for the series of norms ISO 9000 ff. These regulations of the International Standards Organisation (ISO) aim at creating a quality assurance system. They include a maximum number of twenty core elements. Depending on the type and size of a company's business operations, the company may acquire a certificate according to the norms ISO 9001, 9002 or 9003. An accredited certifier (= one recognised by the commission) awards this certificate. It certifies that the enterprise quality assurance system conforms with the core elements of the respective norm. The certificate according to ISO 9001-9003 is usually regarded as guarantee for high-quality products and/or services. It is a commonly applied criterion when selecting suppliers especially in the public services and industrial sector.

# - J -

**JPG.** JPEG; graphic file format of the Joint Photographic Experts Group, in which graphics generated from →models can be saved.

# - K -

**Knowledge Management.** Knowledge Management covers all activities of an organisation which deal with supplying and maintaining knowledge.

# - L -

**LEO.** Meta-language for customising and specifying →attributes. Shows the contents of data structures in text form (→AdoScript).

**LEOgram.** Sequence of →LEO elements.

**Library.** Number of user-defined →classes for →modelling. Both →ADOxx-Default-BP-Library and →ADOxx-Default-WE-Library can be defined in ADOxx. Libraries are defined during ADOxx →customising.

**Library Attributes.**  →Attributes of libraries.

**Library Configuration.**  Functionality of the →Library Management in the →Administration Toolkit. Using the library configuration, you can edit and check class and library attributes (→customising).

**Library Export.**  Export of an →application library into an →ABL file to transfer data into a different →ADOxx database or for backup purposes. This functionality of the →Library Management is located in the →Administration Toolkit.

**Library Import.**  Import of an →application library from an →ABL file and then save it in the →ADOxx database. Functionality of the →Library Management in the →Administration Toolkit.

**Library List.**  List that shows all the →business process and →Working Environment libraries stored in the →ADOxx database. From the library list you can import, export and delete libraries.

**Library Management (component).**  →Component of the →Administration Toolkit, which is used to import and export →application libraries and to configure library attributes (= library configuration). The Library Management also contains an import and export migration assistant with the help of which the complete contents of the →ADOxx database (models, model groups, application libraries, users and user groups) can be exported (back-up) and imported into a different ADOxx database (data transfer).

**Licence Number.**  Customer-specific number for configuring ADOxx and creating →ADOxx databases. A licence number consists of the encoded →customer number and the key for the available →components of the →Modelling Toolkit (depending on the customer-specific configuration of ADOxx).

**Longstring.**  LONGSTRING; attribute type for text of up to 32.000 arbitrary symbols.

**Lotus Notes.**  →Groupware and document management system (manufacturer: IBM).

**LOVEM.**  **L**ine **o**f **V**isibility **E**ngineering **M**ethodology; business process modelling method of the IBM Corp.

# - M -

**Main Reference.**  Classification of →references to determine the referenced models (for instance when opening models including referenced models) outgoing from a model. Main referenced models will be processed like the start model, i.e. all references contained in this model will be followed, if the restriction of depth allows it. (see also →side reference).

**Management Office.**  Software tool suite of BOC Asset Management GmbH. The Management Office consists of the Strategy and Performance Toolkit →ADOscore, the Business Process and Knowledge Management Toolkit →ADONIS, the Supply Chain Management Toolkit →ADOlog and the IT Service and Architecture Management Toolkit →ADOit.

**Manual Random Generator.**  →Random generator, automatic.

**Max. Length of Loops.**  Parameter of the →Analytical Evaluation. Determines how many →objects a loop (in a →model) may contain at most, before the evaluation is assumed as a never-ending loop.

**Max. Number of Paths.**  Parameter of the →Analytical Evaluation. Determines how many different paths a model may contain before the evaluation is cancelled.

**Max. Start Time Period.**  →Attribute of →objects of the →class "Activity". The maximum start time period specifies, for how long a →cooperative activity will at most be delayed until sufficient →performers are available for executing the cooperative →activity. This attribute is only evaluated by the simulation algorithm "→Workload Analysis".

**Menu Bar.**  Panel between the →window panel and the →component bar/→quick-access bar in the →ADOxx window which contains the menu options for the activated →ADOxx component.

**Messages.**  →ADOxx mail.

**Meta Model.**  Describes the modelling classes of a model type and their dependences.

**Method Library.**  →Application library.

**Microsoft SQL Server.**  →DBMS for Windows (owner: Microsoft Corp.).

**Migration.**  Transfer of an →application library, →ADOxx database or ADOxx version to a new or changed ADOxx application library, database or version.

**Model.**  →ADOxx model.

**Model Access.**  →Access right.

**Model Attribute.**  →Attribute of a model.

**Model Comparison.**  Comparison of two →models. Differences found will be displayed in the →ADOxx browser.

**Model Editor.**  Graphically oriented editor in the →Modelling Component, used for creating →models.

**Model Group.**  →ADOxx model group.

**Model Group Management.**  Functionality of the →Model Management in the →Administration Toolkit. With the help of the model group management you can create, rename, move or delete →ADOxx model groups, create, copy, move or delete →model references as well as define →access rights of →ADOxx user groups to ADOxx model groups.

**Model History.**  Supports the navigation between →models. For instance, you may switch between a main model and its sub model.

**Model Management (component).**  →Component of the →Administration Toolkit, in which the →model access can be defined.

**Model Pool.**  Quantity of all →ADOxx models saved in the →ADOxx database which are not assigned to any →ADOxx model group. Can be accessed via →model group management.

**Model Reference.  1.** Reference of an →ADOxx model group to an →ADOxx model in the →model group management. ADOxx models may be referenced in any number of ADOxx model groups.

**2.** →Inter-model reference (INTERREF) to an →ADOxx model, created in the  →Modelling Component.

**Model Search.**  Functionality of the →Modelling Component of the →Modelling Toolkit. Using the model search, you can search for models that are stored in the →ADOxx database. You can either search according to →model attributes or within the →process hierarchy.

**Model Type.**  In ADOxx version 1.0 one or several model types can be defined in a →ADOxx-Default-BP-Library and in a →ADOxx-Default-WE-Library. In the →ADOxx-Default-Library we distinguish between →Business Process Models, →company maps (business process library) and →working environment models (working environment model).

**Model Window.**  Window in which a →model is displayed and edited.

**Modelling (component).**  →Component of the →Modelling Toolkit, in which →Business Process Models and →Working Environment models are created, using the →model editor.

**Modelling, bottom-up.**  Approach to creating →models. When modelling bottom-up you start with detailed small models ("micro perspective") and gradually combine them to a bird's-eye view on the process in question by reducing their complexity (→modelling, top-down).

**Modelling, top-down.**  Approach to creating →models. When modelling top-down you start with a bird's-eye view on a given process and gradually go into more detail ("micro perspective") (→Modelling, Bottom-Up).

**Modelling Bar.**  Button panel, by default on the left-hand side of the →ADOxx window. The modelling bar consists of the →edit button, the →empty space tool, the →class panel and the →relation panel.

**Mode.** A mode is a (sub)set of the →objects and →connectors contained within an →ADOxx model. By selecting different modes (menu "View"), some extra objects may be made available and some existing objects may be hidden.

**Mouse Access.** It is possible to block mouse access for each →class and →relation during →modelling separately. This means that none of the →objects of that particular class or none of the →connectors of the particular relation can be selected.

**MQ Series Workflow.** →WebSphere MQ.

**MSDE.** **M**icro**s**oft **D**atabase **E**ngine; →DBMS for Windows (owner: Microsoft Corp.).

**MS SQL Server.** →DBMS for Windows (owner: Microsoft Corp.).

# - N -

**Navigator.** →ADOxx Navigator.

**Notebook.** →ADOxx Notebook.

**Notes.** →Lotus Notes.

# - O -

**Object.** Instantiation of a →class as for example "Specialist" could be an instantiation of the →class "Role".

**Object Attribute.** →Attribute of an →object.

**Object Reference.** Specific form of an →inter-model reference to an →object in the same or in a different →ADOxx model.

**objectiF.** Object-oriented →UML →CASE tool (owner: microTOOL GmbH).

**Offline Animation.** The offline animation enables you to exactly replay an earlier simulation run based on a →simulation protocol. During this, the performers' →task stacks are →animated. →Agents may also be employed during the offline animation. When generating the →simulation protocol the format "short version" must be specified in order to create a file (*.apf) that can be used by the offline animation function.

**Online Manual.** Electronic ADOxx manual, i.e. a manual that can be displayed on the screen by the help system. In ADOxx there are online manuals for the →Modelling-Toolkit, the →Administration Toolkit and the →ADOxx Database Administration.

**Output-induced (OI) Process.** Process causing costs that vary depending on the amount of work that must be executed by the cost centre. A →cost driver exists.

**Output-neutral (ON) Process.** Process causing costs which are independent of the amount of work that must be executed by the cost centre. No →cost driver exists.

**Oracle.** →DBMS for Unix, Windows and other operating systems (owner: Oracle Corp.).

# - P -

**Page Area.** Visualisation of the →page layout in the →model editor of the →Modelling Toolkit. The page area is marked by a broken line. The page area is most important when graphic files are generated.

**Page Layout.**  Description of the size of a printed page. The section available for the graphic model information and the headers and footers per page layout can be defined in the →library configuration of the →Administration Toolkit. The size of a printed page is especially taken into account when graphic files and →connector marks are generated.

**Path.**  Sequence of objects (→activities, decisions etc), which describe one possible way in which a process can be executed.

**Path Analysis.**  Simulation algorithm in the →Simulation Component of the →Modelling Toolkit, which "plays" through →Business Process Models.  Serves to calculate process-specific key figures such as "Expected Cycle time" and "Expected Costs" and to determine which paths are critical with regard to various criteria selected by the →ADOxx user.

**PCX.**  ZSoft Paintbrush graphic file format, in which graphics generated from →models can be saved.

**PDF.**  **P**ortable **D**ocument **F**ormat; file format, using which documents can be shown independently of the hardware, the operating system and the application software used for the creation (owner: Adobe Systems Incorporated). The complete ADOxx user documentation is contained in PDF on the ADOxx installation CD.

**Performer.**  Actor within a →business process. Performers are represented in ADOxx as →objects of the →class "Performer" in →Working Environment models. It is possible to specify the performer (or set of performers) who can execute a certain →activity using the "Performer" →attribute in an activity's notebook.

**Performer Calendar.**  Description when a →performer is present and available for executing →activities. A performer's availability can be described in detail down to seconds and refers to one year. Performer calendars are evaluated in the simulation algorithm "→Workload Analysis".

**Performer Assignment.**  In ADOxx, →business processes and →Working Environments are modelled separately. To assign →activities to performers, →AQL expressions are entered in the attribute "Performer" in objects of the class "Activity". These are interpreted during simulation to assign an actual →performer to an →activity.

**Plans, pre-defined.**  Pre-defined plans are a specific type of result representation for →pre-defined queries. If a →query's result are all →objects of a →class within a →model - such as all →activities of a →business process model - the lines of the result table will only show the model name. The columns of the result table will be empty. Pre-defined plans may e.g. be used for generating task plans. They are defined by the →ADOxx administrator (during →library configuration) for →Working Environment libraries and →business process libraries) and are then available to the →ADOxx user, together with the →pre-defined queries in the →Analysis Component of the →Modelling Toolkit.

**PNG.**  **P**ortable **N**etwork **G**raphics; Graphic file format, in which graphics generated from →models can be stored.

**Pre-defined Evaluation Queries.**  →Queries, pre-defined.

**Pre-defined Plans.**  →Plans, pre-defined.

**Pre-defined Queries.**  →Queries, pre-defined.

**Prioritisation.**  Process, using which the →ADOxx user can select the next →activity to be edited during the →simulation.

**Process Calendar.**  Describes the stochastic occurrence of →business processes in time intervals. An example of stochastic occurrence is seasonal fluctuation. Process calendars are evaluated by the simulation algorithm "→Workload Analysis".

**Process Hierarchy.**  Call hierarchy of →Business Process Models. A hierarchy may be structured according to →business processes calling or to →business processes called. Within a process hierarchy, models can be searched (→model search). The process hierarchy can be displayed graphically or in tabular form.

**Process Instance.**  Specific instance of a →business process during the →simulation.

**Program Call.**  PROGRAM CALL; attribute type for launching an external program (such as Microsoft Excel).

**Program Icon.**  A program icon can be found in the →ADOxx program folder for every →ADOxx component and for every program of the →ADOxx database administration installed. A program is started by clicking on the particular program icon.

# - Q -

**Quality Assurance.**  The basic objective of quality assurance measures (or QA systems) is to guarantee a constant quality level with regard to a company's products and/or services. There is a fundamental difference between two different approaches of quality assurance: active vs. reactive methods. The latter attempts to assure the product quality by introducing control mechanisms. These, however, just fight the consequences of faulty processes, i.e. the poor/defective products. Newer approaches have tried to develop optimised procedures to actively affect the products' quality. These active quality assurance approaches are known as →Quality Management and find their expression in a great number of methods, concepts and canons of rules. These include Total Quality Management (TQM) in particular or the series of norms →ISO 9000 ff.

**Quality Management.**  Quality Management is an umbrella term for a number of active quality assurance methods. Active QM approaches - in contrast to approaches of reactive →Quality Assurance - are those the purpose of which is to avoid "quality gaps" in the products and/or services of a company. An essential part of the quality management is thus the documentation and (re-)structuring of →business processes).

**Quantity.**  →Attribute of →objects of the →class "Process start". Specifies how often the →business process occurs. The quantity refers to the value of the →attribute "Time Period". Both attributes are used in the →Capacity Analysis simulation algorithm.

**Queries.**  Functionality of the →Analysis Component in the →Modelling Toolkit. By running queries on →models, the model contents can be extracted and be displayed in a clearly structured way in the →ADOxx browser. The following types of queries are available: →user-defined, →standardised and (depending on the particular →library configuration) →predefined ones.

**Queries, predefined.**  The →ADOxx administrator defines predefined queries for →business process libraries and →Working Environment libraries in the →Library Management component of the →Administration Toolkit. The predefined queries are made available to the →ADOxx user in the →Analysis Component of the →Modelling Toolkit by specific menu options. The results of the predefined queries are displayed in the →ADOxx browser.

**Queries, standardised.**  Standardised queries are available to the →ADOxx user in the →Analysis Component in the →Modelling Toolkit. Standardised queries may be used to create →user-defined queries. The results of the standardised queries are displayed in the →ADOxx browser.

**Queries, user-defined.**  The →ADOxx user defines user-defined queries in the →Analysis Component of the →Modelling Toolkit by using →AQL expressions. The results of the user-defined queries are displayed in the →ADOxx browser.

**Quick-access Bar.**  Panel, by default below the →menu bar in the →ADOxx window. The buttons (smart-icons) visible depend on the →component selected. They provide quick access to certain functions of the →component. To the left of the quick-access bar, usually the →component bar can be found.

# - R -

**R/3.**  Standard software suite (manufacturer: SAP).

**Random Generator, automatic.**  The assignment of variables during the →simulation run is automatically using the defined →distributions.

**Random Generator, manual.** The ADOxx user can select the variable assignment during the →simulation run.

**Rational Rose.** Object-oriented →CASE tool (owner: IBM).

**RDBMS.** Relational database management system. →DBMS, which is based on the relational data model.

**Read Access.** →Access right to an →ADOxx model group and the →ADOxx models referenced within this group. With this type of access right, you may view models **locally** but do not have access to make any changes.

**Record.** RECORD; attribute type which enables a flexible list/record administration of assembled file types (→attributes).

**Reference Model.** Consists of standardised reference processes (templates) that represent operational activities generally valid or necessary. Reference models focus on branch or software-specific aspects and can be adapted (customised) to company-specific circumstances.

**Reference Process Model.** Process from a →reference model.

**Relation.** General connection between two →classes. →Objects of a →class can be linked by concrete →instantiations) of this →connection), for example, two organisational units may be linked by the relation "Is subordinated".

**Relation Attribute.** →Attribute of a →relation.

**Relation Panel.** Button panel that contains exactly one button for each relation that can be modelled in the active context. It is the lowest part of the →modelling bar, following the →edit button and the →class panel.

**Relation Table.** Functionality available in the →Analysis Component of the →Modelling Toolkit. A relation table represents →connections (of a relation) inside a →model. The →objects (start and target objects), which are linked by the →connectors, are displayed in the row or column headers of the table. Which relation tables are available depends on the respective →library configuration.

**Repository.** Central database for the administration of all →ADOxx users, →ADOxx application libraries, →ADOxx models etc.

**Representation, graphical.** Possibility of visualising an ADOxx model in graphical form.

**Representation, tabular.** Possibility of visualising an ADOxx model in tabular form.

**Resource.** Part of a →Working Environment which is needed for executing →activities, such as PC, printer or fax.

**Resource Assignment.** In ADOxx →business processes and →Working Environments are modelled separately from each other. For the →Simulation to take account of →resources, →AQL expression(s) must be entered in the "Selection" attribute of →objects of the →class "Resource" in business processes (support available for this). These are interpreted during the →Capacity and →Workload Analysis s. In this way, the resources in the →Working Environment which are needed to execute an →activity are determined.

**Resting Time.** Time during which an →activity of a →business process has been executed but has not yet moved on to be transported to the next stage in the process.

**Result Function.** Function which is assigned to an →agent. By this, the agent is instructed to calculate a certain simulation result.

**RTF.** **R**ich **T**ext **F**ormat; file format, in which the contents of the →ADOxx browser or model contents which were generated using the →Documentation Component can be saved. RTF files can be further edited in word-processing programs.

# - S -

**SAP.** **S**ystems, **A**pplications, **P**roducts in data processing. Owner of the standard software →R/3.

**Server.** A server is a software module which puts its services at the disposal of other software modules, the →clients.

**SGML.** **S**tandard **G**eneralized **M**arkup **L**anguage; SGML files are used in the →Documentation Component to transfer the documented model contents. In a second phase, the SGML files will be then converted to any target format (e.g. →HTML, →RTF, →XML) using a →DSL file.

**Side Reference.** Classification of →references to determine the referenced models (for example when opening models including referenced models) starting from a model. Outgoing references from side-referenced models will only be followed, if these references start from the same attribute and if no depth restrictions prevent it.

**Sim Mapping.** Attribute of a →business process library. In the sim mapping the →input parameter combinations are defined. In addition, the sim mapping defines which →classes should be to totalled for aggregated results, for the →assignment of performers and for the reference objects of the →agents.

**Simulation (component).** →Component in the →Modelling Toolkit, which simulates →business processes and →Working Environments. ADOxx contains the simulation algorithms "→Path Analysis", "→Capacity Analysis", "→Workload aAnalysis (steady state)" and "→Workload Analysis (fixed time period)".

**Simulation Cache.** The simulation cache stores the simulated →ADOxx models in the internal representation necessary for →simulation. Thus, the models need not be transferred into the internal representation again, if you start the simulation anew.

**Simulation Log.** Report (protocol) of a simulation run in the Simulation Component.

**Simulation Log, short version.** Compressed form of the →simulation log; used by the →offline animation function.

**Simulation Log, long version.** Detailed form of the →simulation log for replaying each step of the →simulation.

**Simulation Run.** Processing of a →process instance during the →Simulation.

**Single Sign-on (SSO).** Functionality in ADOxx which enables that the Windows system user can be imported into the ADOxx user management and therefore allow →system users working and logged in to the →domain to log into ADOxx without providing user name and password again.

**Smart-Icon.** Graphical buttons in the →component bar, the →quick-access bar etc.

**Snap Grid.** Grid according to which →objects and →bendpoints can be aligned on the →drawing area.

**SQL.** **S**tructured **Q**uery **L**anguage. Query language for relational databases.

**SQL Server.** →Microsoft SQL Server.

**Staffware.** →Workflow Management System (owner: TIBCO, Inc.).

**Stand-alone.** A single computer system.

**Standard Model Group.** →ADOxx model group, which is created automatically with the →ADOxx database. The standard model group has the name "Models".

**Standard User.** →ADOxx user who is created automatically together with the →ADOxx database. The standard user has the user name "Admin" (default password is "password") and cannot be deleted.

**Standard User Group.** →ADOxx user group, which is created automatically with an →ADOxx database. The standard user group has the name "ADOxx" and cannot be deleted.

**Standardised Queries.** →Queries, standardised.

**Swimlane.** A swimlane is a modelling construct to describe roles, organisational units etc. A swimlane is visualised by vertical and horizontal areas on the drawing area. The characteristic of a swim lane is that when changing its size you will also move the →objects and →relations placed on this swimlane.

**System Administrator.** Person responsible for the IT infrastructure (hardware, network, software installations and so on).

**System User.** User of the operating system (Windows) who is authenticated by logging into a →domain. In general the system has to be created by a →system administrator within the system user administration in order to be able to work with and log in to the system. System users can log in to ADOxx via →single sign-on (SSO), if this feature is provided.

**System User Administration.** Part of an operating system used to create, delete or change the settings of →system users, create, rename and delete →system user groups, as well as assign system users to system user groups.

**System User Group.** A group containing →system users. A system user group has specific access and execution rights to components of the operating system which are defined by the →system administrator.


# - T -

**Tabular Representation of a Model.** →Representation, tabular.

**Task Stack.** Stack of →activities a →performer has to execute. The size of the task stack is determined in the simulation algorithm →"Workload Analysis".

**Task stack, central.** The activities in the central task stack will be executed by the first performer who has time for it (→prioritisation).

**Task Stack, personal.** The activities in the personal task stack of a performer are exclusively executed by this performer.

**Text.** STRING; attribute type for text containing up to 3.700 arbitrary symbols (exception: attribute "Name" which is restricted to at most 240 symbols).

**Time.** TIME; attribute type for the ADOxx time format YY:DDD:HH:MM:SS (Years:Days:Hours:Minutes:Seconds).

**Time, company.** Division of time referring to the presence of a →performer in the company. A (performer's) company time may for example consists of 170 days a year and 8 hours a day.

**Time, real.** Conventional division of time, i.e. a year has 365 days and a day has 24 hours.

**Time Period.** →Attribute of →objects of the →class "Process start". The time period specifies for which period of time the value of the →attribute "→Quantity" is valid. (Used in capacity analysis).

**Tolerance Waiting Time.** Maximum waiting time before a →process instance is aborted unedited during the →simulation.

**Transformation.** →FDL-Generation.

**Transport Time.** Time needed for transporting files, documents etc.

**TXT.** ASCII-TEXT; file format in which ordinary text files are saved.

# - U -

**UDL.** **U**ser **D**efinition **L**anguage; file format in which →ADOxx users and →ADOxx user groups are saved (exported) from the →Administration Toolkit.

**UDL Export.** Functionality of the →User Management in the →Administration Toolkit. With UDL export, →ADOxx users and →ADOxx user groups can be exported into →UDL files.

**UDL Import.** Functionality of the →User Management in the →Administration Toolkit. With UDL import →UDL files (→ADOxx users and →ADOxx user groups) can be imported into ADOxx and then stored in the →ADOxx database.

**UML.** **U**nified **M**odeling **L**anguage; method of object-oriented modelling of complex software systems.

**Use Case Diagram.** **1.** →UML diagram type. Interactions between a system and external people involved are described in Use Case Diagrams.

**2.** Model type of the →ADOxx-Default-BP-Library.

**User.** →ADOxx user.

**User Account.** User name and password for logging into the →DBMS or the operating system.

**User Assignment.** Assignment of an →ADOxx user to one or more →ADOxx user group(s) in the →User Management of the →Administration Toolkit. This assignment makes it possible for the user to access →ADOxx model groups and →ADOxx models within the Modelling Toolkit.

**User Export.** Export of →ADOxx users and/or →ADOxx user groups into a →UDL file in order to transfer the data into a different →ADOxx database or make a backup. Functionality of the →User Management in the →Administration Toolkit.

**User Group.** →ADOxx user group.

**User Group List.** List of all →ADOxx user groups stored in the →ADOxx database as well as all →ADOxx users referenced in them. With the help of the user list, ADOxx user groups can be added, renamed and deleted. →user assignment can also be edited.

**User Import.** Import of →ADOxx users and/or →ADOxx user groups from a →UDL file into the →ADOxx database. Functionality of the →User Management in the →Administration Toolkit.

**User List.** List of all →ADOxx users stored in the →ADOxx database. With the help of the user list, you can add and delete →ADOxx users as well as edit their settings.

**User Management (component).** →ADOxx User Mangement.

**User-defined Queries.** →Queries, user-defined.

# - V -

**Validity Date.** Specifies the time from which a model or attribute profile version becomes valid. The validity of a version ends with the validity start of the next version of the same model or attribute profile.

**Versioning.** Enables the administration of different versions of a →model. in ADOxx, either a →model-related or a →time-related versioning is possible.

**Versioning, model-related.** A version number is assigned manually to each version of a →model.

**Versioning, time-related.** A →validity date is assigned to each version of a →model.

**Visio.** Graphical modelling tool (Owner: Microsoft Corp.).

**Visualised Attribute Value.** The →attribute value of an →object or a →connector which is displayed on the →drawing area (g.g. Name of an "Activity", transition condition of a "Subsequent" relation).

# - W -

**Waiting Time.** Time during which an →activity of a →business process cannot yet be executed, as the person due to execute it is still busy working on something else; i.e. the activity is ready to be executed but must first queue for a while.

**WebSphere MQ.** →Workflow Management System, successor of FlowMark and MQ Series Workflow (owner: IBM).

**Width Search.** Process to go through objects, i.e. to automatically process the objects and relations of a model in the RTF generation in the →Documentation Component. Starting from a "Process start" object, all objects which are directly connected to this start object, will be processed gradually. When all objects which are directly connected to this start object have been processed, one of these directly connected objects will be selected as a new start object and the process will recur. This will be carried out for all objects. (see also →depth search)

**Window Panel.** Title bar of an →ADOxx component's window (→ADOxx window).

**Windows System User.** →System user.

**Workflow Management System (WMS).** Computer system that controls the execution of →business processes. The most prominent task of a Workflow management system is to delegate business process activities to the organisation's employees.

**Working Environment.** (= organisational structures); structures (e.g. departments and roles), →performers and →resources of an organisation. The working environment of an organisation is represented in ADOxx in →Working Environment models.

**Working Environment Library.** Contains →classes and →relations for →modelling the →Working Environment as well as description, layout, analysis and simulation definitions. The →classes of a Working Environment library are derived from the classes of the Working Environment meta model. A →Working Environment model always refers to exactly one Working Environment library. Working Environment libraries are defined during ADOxx →customising.

**Working Environment Meta Model.** Pre-defined →classes for →modelling Working Environments in ADOxx. The classes in a Working Environment library are derived from the classes contained in the Working Environment meta model.

**Working Environment Model. 1.** →Model of a Working Environment. Results from instantiating →classes of a →Working Environment library.
**2.** Model type of the →ADOxx-Default-WE-Library.

**Workspace (Working Area).** Main part of the ADOxx window, usually situated below the →component bar/→quick-access bar. The →modelling windows are displayed in the workspace.

**Workload Analysis.** Simulation algorithm in the →Simulation Component of the →Modelling Toolkit, based on queuing theory. The simulation runs "on the time axis". The results are the number of →cycle times and →waiting times depending on the capacity/amount of work of →performers and →resources. The input for the Workload Analysis is an →application model. A Workload Analysis can be run based on a →steady state or a →fixed time period basis. The results of the Workload Analysis are displayed in the →ADOxx browser.

**Workload Analysis, fixed-time period.** →Workload Analysis, in which the length of the initialisation phase and the calculation (result measuring) phase and the types of results calculated (input parameters) are defined by the user.

**Workload Analysis, steady-state view.** →Workload Analysis, in which the length of the oscillation phases and the calculation period depend on the number of simulation runs.

**Write Access.** →Access right granted to an ADOxx user group to an →ADOxx model group and the →ADOxx models referenced within it. With this access right, you can locally change as well as save a model's content.

# - X -

**XML.** E**X**tensible **M**arkup **L**anguage; file format in which →ADOxx models can be stored (exported).

**XML Export.** Functionality in the →Import/Export Component of the →Modelling Toolkit. Using the XML export, →ADOxx models can be exported to →XML files.

**XML Import.** Functionality in the →Import/Export Component of the →Modelling Toolkit. Using the XML import,→XML files (→ADOxx models) can be imported to ADOxx and stored in the →ADOxx database.

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