

# ADO++

## Installing the Enterprise Version with an SQL-Server

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Date: 26.3.2014

## Introduction

The Enterprise version of ADO++ stores its configuration data in an SQL Server database.

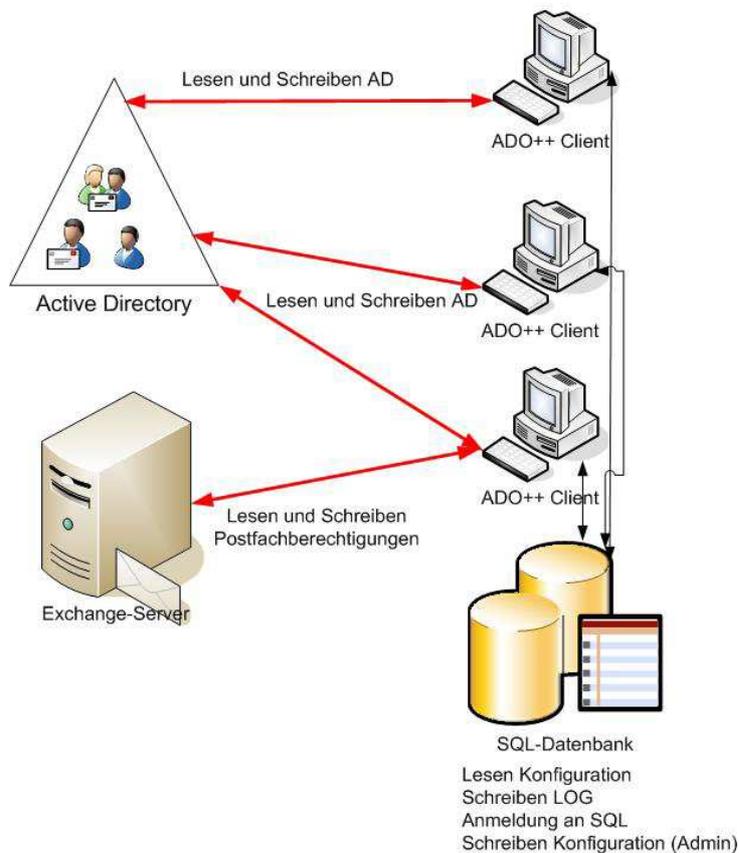
This database contains the entry points into the Active Directory as well as the permissions the ADO++ user has to manage objects in the Active Directory. The ADO++ - client installation then only needs a SQL-Server selected to get the configuration. Another task for the SQL-Server is to log all the changes on the objects and their attributes, so that the administrator can review the object history.

ADO++ uses only a few standard SQL statements. So the selected server may be any existing MS SQL-Server, or even a MS-SQL-Server based on the free Express Editions. Only Windows Authentication must be supported. So if your company does not have an available SQL Server, use the latest free Microsoft Express SQL Editions. It is sufficient to install the software on a workstation. The load, produced by ADO++, is very small.

The following description refers to the Microsoft SQL Server 2005 Express Edition, although a Microsoft SQL Server 2008 Express Edition is already available. These free versions of Microsoft are subject to some restrictions in functionality, but this is only relevant for really big ADO++-installations (support of only one CPU, 1 GB of RAM and max. 4 GB database size, and a limitation of simultaneous connections). ADO++ users login to the SQL Server only when starting the software or when transmitting log information to the server. The following diagram describes the communication between the ADO++ client and the SQL server.

ADOpWeb uses the same database, that is installed with ADO++.

## ADO++ mit SQL-Server



If you already have a SQL-Server, you want to use, you can skip reading chapter 1.

### 1. Installation SQL Server (Example: MS - SQL Express 2005)

Download the software from the Microsoft download website and install the software on a server or client computer as described by Microsoft.

With the installation of MS SQL Express server, administration tools are also ready to install. Since the MS SQL Express versions of Desktop Engine that has network access disabled, this feature must be enabled to allow other clients to connect the SQL Server.

To do this, start the program menu of your computer:

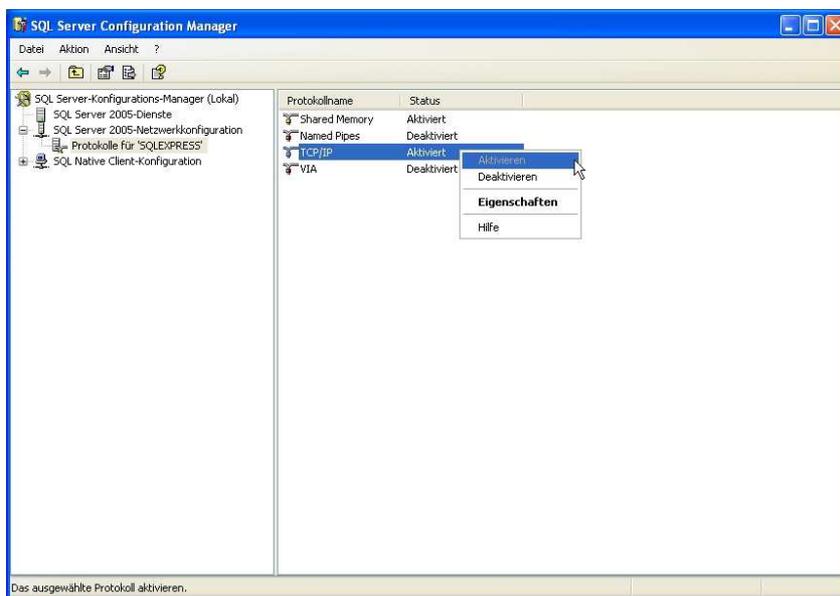
## Microsoft SQL Server 2005->

### Configurationstools->

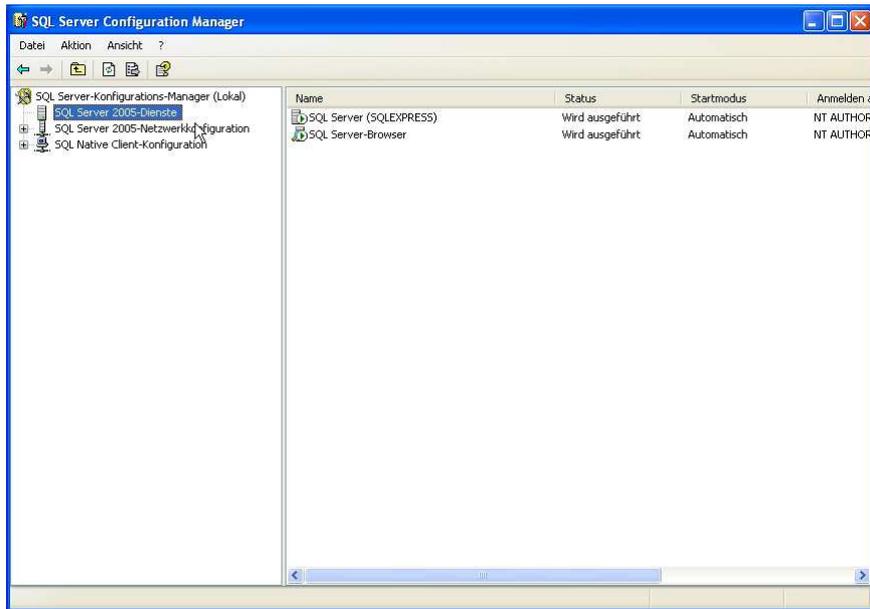
#### SQL Server Configurationsmanager

The Configuration Manager provides configuration options for network services and configurations. By default, access to the server via the network is not activated. The ADO++-installations of other PCs have to use the SQL Server via network, so you must active access over the network .

The following picture shows, how to activate the TCP protocol.



Next activate the service SQL Server Browser. This service is also disabled by default. This service must be activated in order for other PCs on the network to find the SQL Server. The following picture shows the correct configuration.



## 2. Installing the first ADO++ Client, Creating the ADO++-database

Now you are ready to install the first instance of ADO++.

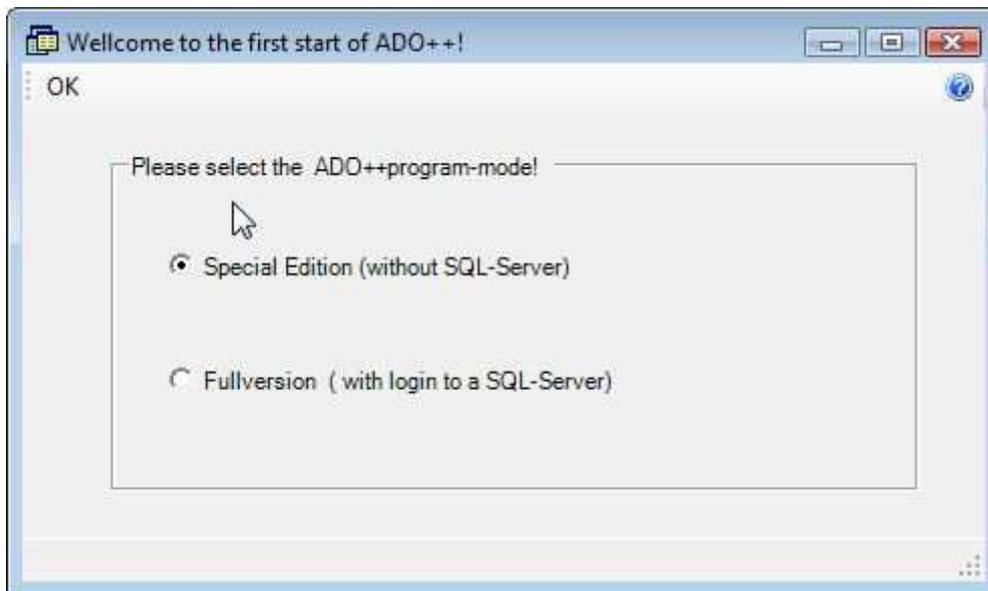
**It is also possible to install ADO++ first as a Special Edition and then later change to the use of the full version. The Special Edition Mode is a good and quick way to see most of the amazing features of ADO++. You can then switch the Standard Version into a Enterprise Version.**

**Use the Menuepoint: Configuration->SQL-Server to change the version.**

### Otherwise:

Install ADO++ by running ADO++. Msi.

Then start ADO++ and select full version in the Welcome window.



Confirm your selection with OK.

Then a window for selecting the SQL-server will be opened:



Enter the name of your selected SQL server.

Use the following naming rules:

**SQL-server:**                      **Servername\SQLExpress**

**SQLExpress** is the standard-servername of an SQL- Express 2005 Installation.

Servername:	Netbiosname	(e.g. Servername)
	FQDN	(e.g. Servername.contoso.com)
	IP-Address	(e.g. 192.168.0.22)

**Continue reading here, when you changed the version from Standard to Enterprise:**

When first connecting the selected SQL server, ADO++ installs its database and the corresponding tablestables automatically. When doing this you will receive an acknowledgment message before and after the creation of the database.

The SQL database name is **ADAD**.

After the creation of the database ADO++ goes on starting, offering the login screen:

Enter the following default login information:

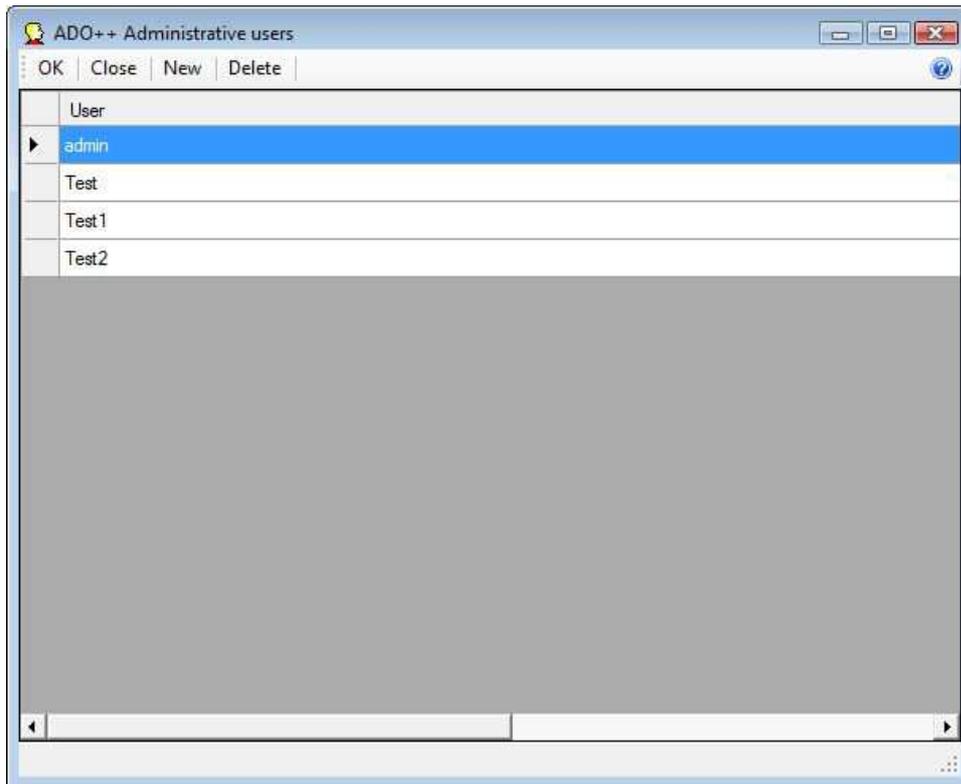
User:           **admin**

Password:       **password**

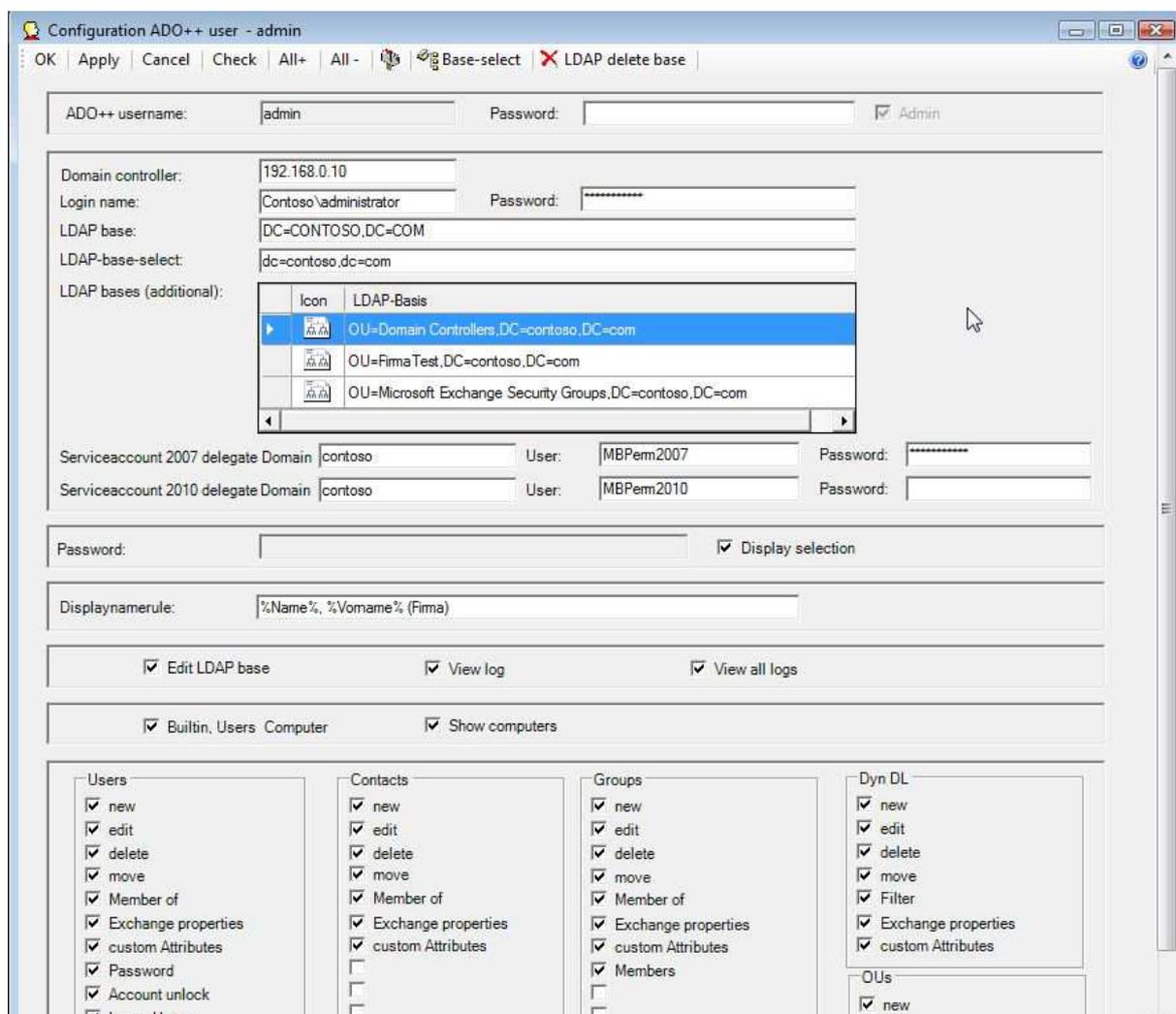
Now you have to make the additional user configuration.

To do so go to following the menu in ADO++ main window:

Configuration> User Management



In this form, select the user, you to edit. After the first start, there is only the admin user. Do not forget to assign a new password for the admin user. The above mentioned password is only valid for the initial application start of ADO++, afterwards the admin user password is used. It is left blank after the first start.



The above screenshot shows a possible configuration for the user admin. Mandatory information is up to the line including LDAP- base selection.

For more information about the configuration, see the On-Line Help for ADO++.

After saving the configuration data you can start to work with ADO++. As an admin you can create more ADO++ users, or administrate your Active Directory, if the AD-login account ( Login name ) has the appropriate permissions in your Active Directory /Exchange organization.

To use the Exchange features of ADO++ you have :

Exchange 2010 and Exchange 2013:

Nothing needs to be installed, ADO++ works with remote Powershell

Exchange 2007:

The Exchange 2007 management tools need to be installed, if all features shall be used.

### **Exchange 2003:**

The Exchange 2003 System Manager needs to be installed on the server or workstation, ADO++ is installed on.

Alternatively and better, for the administration of Exchange 2003, it is sufficient to copy the following DLLs from your Exchange 2003 server into the ADO++ program directory and register CDOEXM.DLL with th following command (e.g. in a DOS Box):

### **Regsvr32 CDOEXM.DLL**

<b>Dateiname</b>	<b>Quelle</b>	<b>Kommentar</b>
CLUSAPI.DLL	Windows\System32	
ESCPRIINT.DLL	Exchsrvr\bin	
EXCHMEM.DLL	Exchsrvr\bin	
ESE.DLL	Exchsrvr\bin	
GBLNAME.DLL	Exchsrvr\bin	
PTTRACE.DLL	Exchsrvr\bin	
CDOEXM.dll	Exchsrvr\bin	Registrieren mit Regsvr32.exe

### **The registration of CDOEXM is very important.**

If your ADO++ computer runs Windows 7, Vista, Server 2008 or Server 2008R2, take these files from the Exchange Systemmanager for Vista msi package, you can download from Microsoft, and ignore the CLUSAPI.DLL.

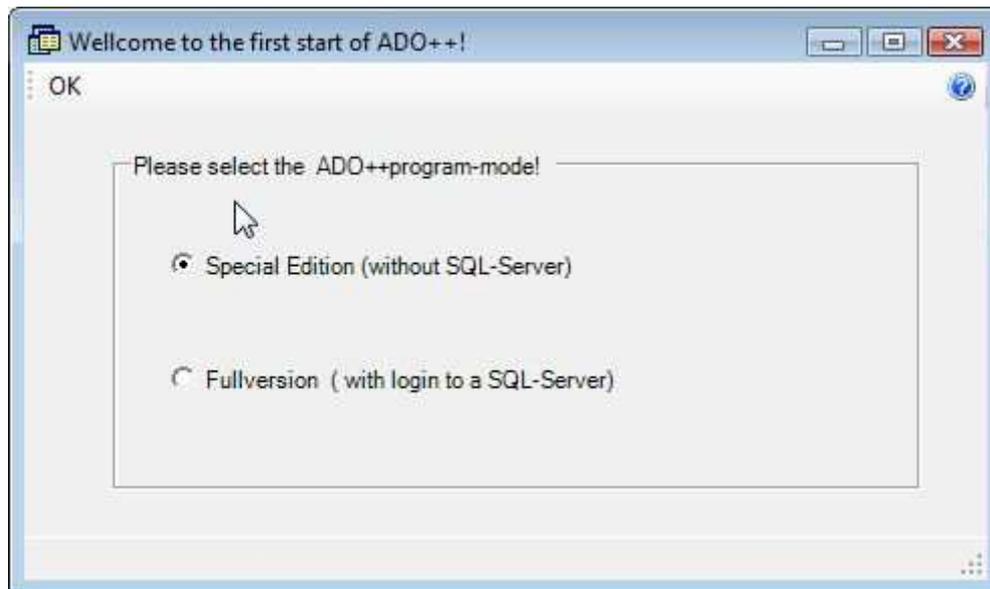
And don't forget the registration of CDOEXM.

### **Tip:**

Registering CDOEXM.dll needs administrative permissions. To do this, run a CMD-Shell (DOS-box) as administrator and the run the regsvr32 command.

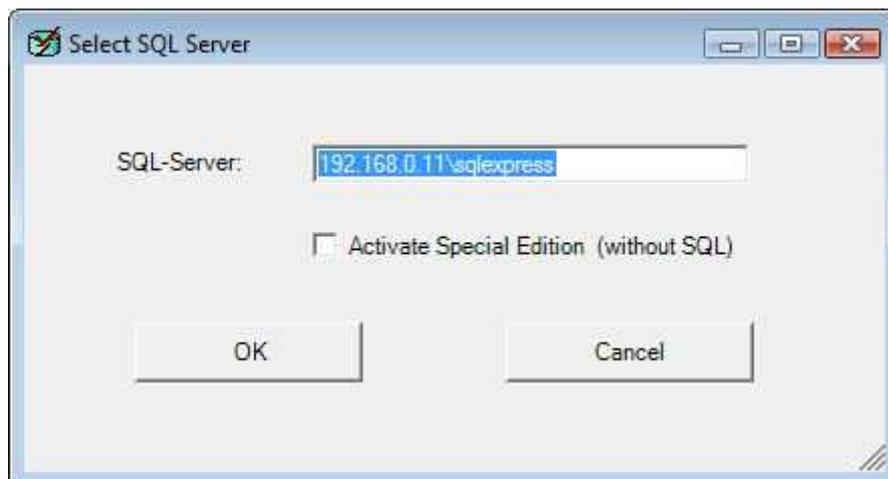
## Installing further ADO++ Clients

Install ADO++ on the PC and start the application. Select the Enterpisel version (logon to a SQL server).



Confirm your selection with OK.

Then window for selecting the SQL-server will open:



Enter the name of the selected SQL server.

Again use the following naming rules:

**SQL-server:**                      **Servername\SQLExpress**

**SQLExpress** is the standard-servername of an SQL- Express 2005 Installation.

Servername:	Netbiosname	(e.g. Servername)
	FQDN	(e.g. Servername.contoso.com)
	IP-Address	(e.g. 192.168.0.22)

After selecting a valid SQL server, the logon screen of ADO++ opens. Sign in here as an admin, or use the ADO++ user information that have been created for you.

If any further Exchange tools are needed, install them now.

**For proper function, add the ADO++ service account to the local Administrators group of every computer ADO++ is installed on. This membership may also be added by using group policies.**

**The AD-user account the ADO++ user logs in with to his computer must have the permission to read the ADO++ SQL database. This can also be achieved by a group membership in an AD group. That group should then have the the database read permission.**

### **3. Assigning the appropriate rights on the SQL-Server for the ADO++ -database**

The the ADO SQL database must be readable and writable by the ADO++ client. So the involved Windows user accounts must have are added to the database permission management. This has to be done by the database administrator. It is quite simple:

The name of the database on the SQL Server installed by ADO++ is: ADAD

Accounts with the following roles need permissions for proper working:

- Windows accounts, with which ADO + + users log on to their workstation in order do their normal work and start ADO++.

These accounts need read Access to the ADO++ database.

- Windows accounts that are selected as Service accounts in the ADO++ users account management.

These accounts need read and write Access to the ADO++ database, because they write the log information.

The appropriate administrative rights to the SQL database can be easaly set by using the membership in a group. The assignment of permissions to users in the the ADO++ SQL database can be done with an administration tool for SQL databases, such as the

- Microsoft SQL Server Management Studio Express
- SQL Manager 2005 Lite by EMS ([www.sqlmanager.net](http://www.sqlmanager.net)).

The Microsoft Management Studio is automatically installed with the SQL Server.

### **4. Using ADOplusWeb - Enterprise Edition with SQL-Server with the ADO++ -database**

To use ADOplusWeb with the SQL database you must first install ADO++ in the Enterprise Mode. Then you only need to copy the SQL.Dat file from ADO++ program directory into the ADOplusWeb root-directory. Afterwards delete or rename SE.Dat file. The ADOplusWeb Application-Pool-User needs to read and write to the SQL-Database.

This has to be done by the database administrator.

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## 5. Permission Settings for ADO++ - Service Accounts

ADO++ uses its own permission management for allowing and denying which Active Directory, Exchange or Lync objects or attributes a user may change.

ADO++ Enterprise Edition itself logs in to the Active Directory with the specified Service Account from the configuration. Only this account must have enough permissions in Active Directory, Exchange or Lync to be able to do all the tasks, the ADO++ user is allowed to do. ADO++ allows the use a different service accounts for each ADO++ - user, but often creating one service Account for the Active Directory access is sufficient.

In the Standard Edition logon account and service account are the same.

Enterprise Version Service Account Example:

ADO++ users shall potentially manage all objects contained in an OU. The ADO++-service account should in this case have full access to all objects below the OU level, in the form:

### Active Directory Rights:

- Full Control

Full controll is needed, because otherwise, new object can not be created.

The ADO++ user now can get less permissions, for example only the permission to manage contacts.

Additionally the ADO++ service accounts need permissions in the Exchange Organization. These are:

### Exchange 2003 Rights:

Delegate the following role to the ADO++-service account in the Exchange organization:

- Exchange View-Only Administrators (in Exchange System Manager).

Add the ADO++-service account ADO to the security descriptor of Exchange information stores, with which the user shall work. Add the following permissions:

- Read permissions (Read permissions)
- Modify permissions (write permissions)
- Administer Information Store (Administer information store)

### Exchange 2007 Rights:

Add the ADO++-service account in the Active Directory as a member to the following group:

- Exchange Recipient Administrators

**Exchange 2010/13 permissions:**

Add the ADO++-service account in the Active Directory as a member to the following group:

- Organizational Management

If you have any further question to any theme around ADO++ and ADOplusWeb, don't hesitate to contact us.