

# **APS 400 nAdministrator**

*APS 400 administration software package*

*Installation guide*

**techfass**®

## 1. Content

1. Content .....	2
2. Introduction .....	3
2.1. Solution architecture .....	3
2.2. Hardware and software minimal requirements .....	4
2.3. Installation CD .....	4
3. Software setup .....	4
3.1. Server setup .....	4
3.2. Clients setup .....	6
3.3. User administration .....	6

## 2. Introduction

This manual describes a typical Windows network installation of *APS 400 nAdministrator software* in a *work group*. It is recommended to entrust the installation to network administrators who know used technologies in wide-scaled networks. They ought to know which software is installed on a particular computer and why.

### 2.1. Solution architecture

The solution is *Client/Server* type, the linking up within individual software modules is shown in figure 2.1.

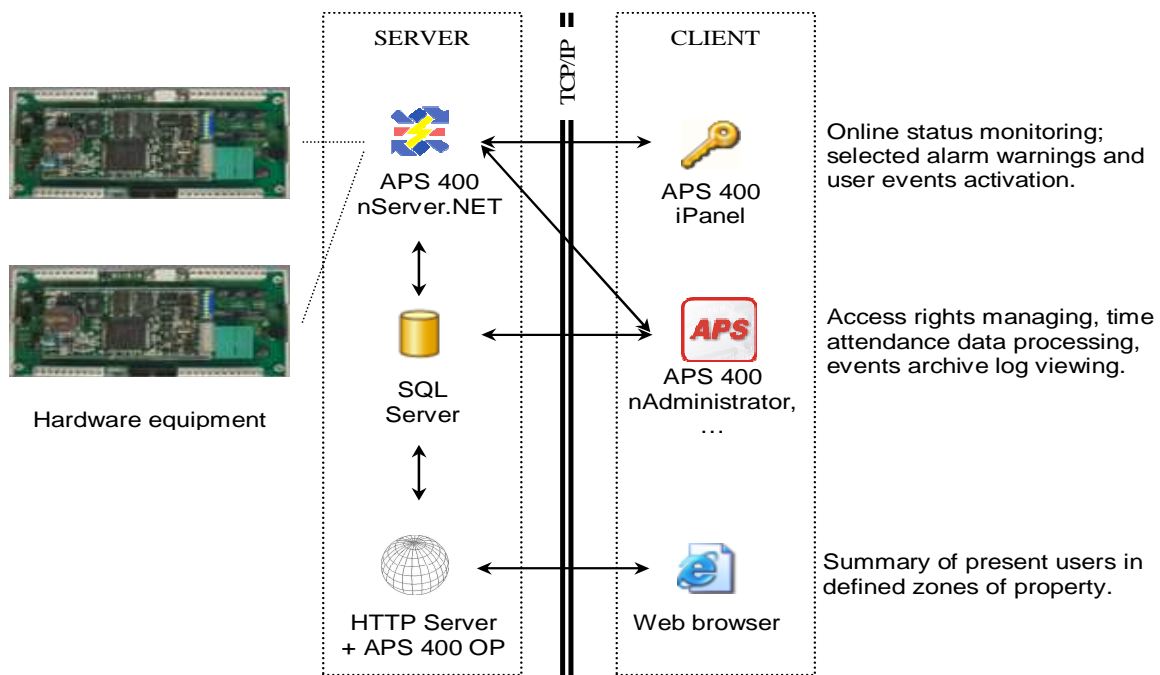


Fig. 1: APS 400 nAdministrator software package architecture

The Server is composed of following components:

- Database server (*Microsoft SQL Server 2005* or *SQL Server 2005 Express Edition*).
- Communication server (*APS 400 nServer.NET*), which ensures the communication with connected hardware, operating data storage and data providing to connected clients.
- HTTP Server (*Microsoft Internet Information Services* – a part of operating system setup), which ensures operating of web software modules (e.g. display of the summary of present cardholders, etc.).

All mentioned server components run as system services, there is no need to log in a user and run the programs manually.

Clients programs are connected to the server via *TCP/IP* interface also when running directly at the server. The way of particular client program connection is suggested to suit its typical use, e.g. APS 400 iPanel software, ensuring the activation of user functions, does not use any database services at all, they are not required for the program to run properly.

## 2.1.1. Used IP Ports

Following values are default when standard setting of particular software components is applied. Values can be changed during the installation or configuration of individual services. Pay attention to the firewall setting, ports are not opened by default.

- For communication among the SQL server and its clients: 1434/UDP a 1433/TCP.
- For communication with nServer.NET software: 10700/TCP.
- For communication with an HTTP server: 80/TCP.
- For communication with a GNOME 485 converter: 10001/TCP.
- For communication with a microreader server: 10777/TCP.

## 2.2. Hardware and software minimal requirements

PC hardware requirements are based on APS 400 system size. Pentium IV 1.4 GHz, 512 MB RAM, 60 GB HDD, and Windows XP operating system are suitable for standard applications (up to 1000 users). Windows 2000 can also be used but some functions of the software can be limited. Computers with Windows Vista can be used as well if the system is able to handle SQL server operation. Consult your regional dealer for the choice of suitable HW and OS!

## 2.3. Installation CD

The software is generally supplied on CD-ROM media containing all necessary components. You can find following folders on the CD:

- *APS 400 Config* ... contains APS 400 system configuration software.
- *APS 400 nAdministrator* ... contains the administration software, an events archive online and offline viewer and a program log viewer.
- *APS 400 nServer.NET* ... a communication server.
- *APS 400 OP* ... web application for users' presence data Intranet/Internet viewing.
- *Support* ... contains installation programs of database server, .NET framework and other necessary components in English.
- *Documentation* ...contains documentation to software and hardware equipment of the system in Czech and English languages

Installation CD can contain other software modules as well (e.g. extensions for visitors' registration, catering services etc.), depending on the individual needs of particular installation which it is created for. The setup of extending modules is similar to the setup of basic software package.

## 3. Software setup

### 3.1. Server setup

It is necessary to be logged as an administrator when performing the installation. Particular software components are mutually dependent. Keep the recommended installation order described below.

### 3.1.1. Windows Installer 3.1 setup

The installation of *SQL Server 2005 Express Edition* requires the *Windows Installer version 3.1* to be installed first. The setup file *WindowsInstaller-KB893803-v2-x86.exe* is located in the *Support/Windows Installer 3.1* folder.

### 3.1.2. .NET Framework 2.0 setup

The *.NET Framework* is a modern Microsoft runtime environment. Its installation is required for proper function of some software components of *APS 400 nAdministrator* application.

The *.NET framework version 2.0* setup file (*dotnetfx.exe*) is located in the *Support/Dot Net Framework 2.0* folder.

### 3.1.3. SQL Server setup and configuration

*SQL Server* processes all access control system operating data. However complex the program is, its standard setup can be made easily. There are setup files for *32-bit* (*SQLEXP32.EXE*) and *64-bit* (*SQLEXP.EXE*) operating system at disposal. In most cases default parameters can be used for the installation, but we *recommend* using following options in order to simplify further installation procedures. Following options are available if the checkbox *Hide advanced configuration options* is not checked when proceeding in the installation at page *Registration Information*.

- At the page *Instance Name* choose Default instance
- At the page *Service Account* check the SQL browser option
- At the page *Authentication Mode* choose Mixed mode and enter a strong password for *sa* user.

We recommend leaving the other parameters intact.

*APS 400 nAdministrator* software is usually used by multiple users within a local network. After installation the *SQL Server* does not allow the network stations usage. Change this setting by using the *SQL Server Configuration Manager* software located in *Programs>Microsoft SQL Server 2005>Configuration Tool*. After enabling the *TCP/IP* protocol the service needs to be restarted.

### 3.1.4. Copying program files, database creation

*APS 400 nAdministrator* application does not require any special setup. Copying appropriate files to designated folder on local HDD and running the program is sufficient. For an easy creation of shortcuts and a folder structure there is an installer at disposal; the installer enables an installation of all basic programs of *APS 400 nAdministrator* software package. Run the program directly at the server first.

After selecting a language at the first tab, select the *SQL server* tab. After opening the list of available servers, the program searches the

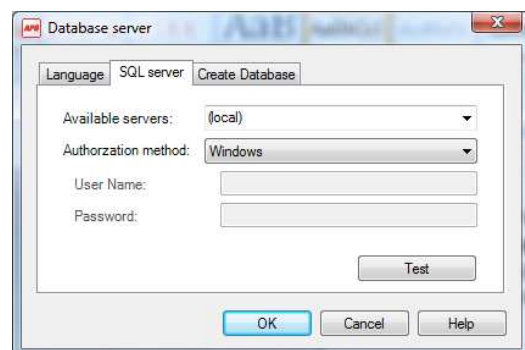


Fig. 2: Database creation

network and offers a list of SQL servers found (finding a server is dependent on the SQL server browser service running).

Select your server name (or enter it – if it is not contained in the list) and proceed to the *Create Database* tab. If the name filled in the previous step is entered correctly, a tab *Create Database* with *Collation* selection is displayed. Choose desired language the database should be created in. For creating the database itself click the *Create* button. During the creation of a database a single user with a login name “*Administrator*” and an “*admin*” password is created. For running the *APS 400 nAdministrator* program click the *OK* button at the *SQL Server* tab.

### 3.1.5. *Communication server setup and configuration*

Follow the instructions described in a user’s guide located in [http://www.techfass.cz/files/m\\_aps\\_400\\_nserver\\_NET\\_en.pdf](http://www.techfass.cz/files/m_aps_400_nserver_NET_en.pdf) when configuring the server. The configuration depends on the way of connection to system modules and controllers and their configuration. The communication converter must be also configured if TCP/IP connection is used.

### 3.1.6. *Database backup*

Periodical data backup is an essential part of every system management. APS400nAdministrator database backup can be run either manually from the administration program or automatically (better). It can be performed by periodical executing the appropriate batch file (Scheduled tasks).

An example of APS400nAdministrator database backup (uses the OSQL console installed with the database server):

```
osql -S SERVER -E -Q "BACKUP DATABASE APS400nAdministrator TO DISK = 'c:\zaloha.bak' WITH INIT, NOUNLOAD, NAME = 'nAdministrator backup', NOSKIP ,STATS = 10, NOFORMAT"
```

## 3.2. *Clients setup*

Setting up the clients is relatively simple. Install .NET framework and copy program files into appropriate folder (or use an appropriate installer). If the user accounts are set correctly (more in the next chapter) you can select the server after the first run and installation is finished.

Pay attention to the firewall setting at the computer running an SQL server - 1434/UDP and 1433/TCP ports must not be blocked!

## 3.3. *User administration*

### 3.3.1. *SQL server authentication*

As mentioned before, the users’ verification for *SQL data access* is performed with a *Windows NT* authentication method. A user must have an account created at the server with the same logon credentials as he uses at his own computer to be able to connect to the SQL server in networks with workgroups using Windows NT authentication. User account administration is performed using standard operation system tools.

If it is not possible or appropriate to use *Windows NT* authentication, an *SQL* authentication can be used.

For creating login credentials for an *SQL* authentication it is appropriate to use a tool MS SQL Management Studio Express. The tool is located on a CD in *Support* folder.

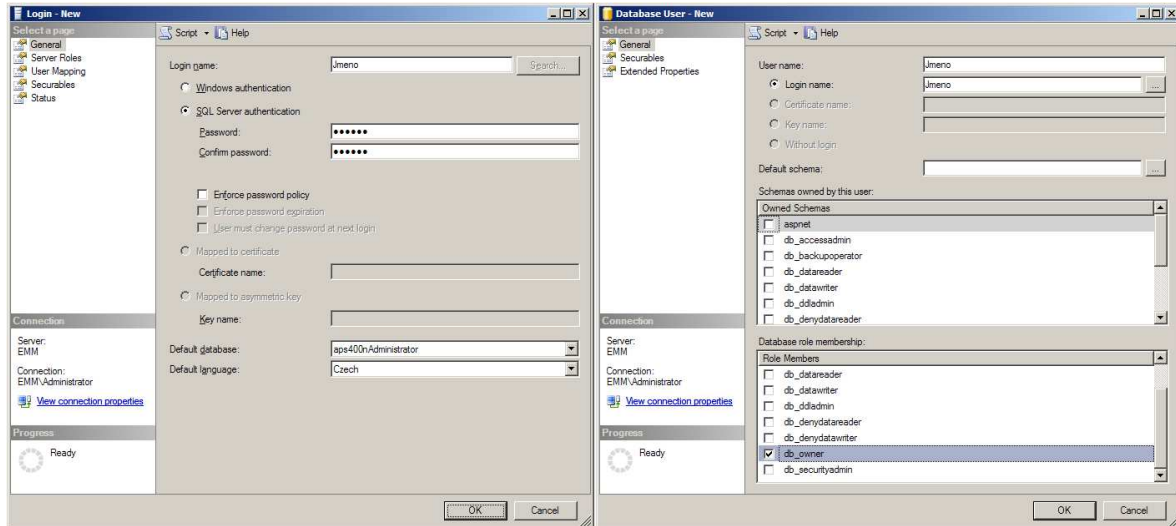


Fig. 3, fig. 4: Login credentials for SQL authentication creation

After connecting the program to the SQL server (Windows NT authentication can be used) create a new *login name* and a *password* in *Security > Logins*. *Default database* parameter should be set to *APS400nAdministrator*. In the next step create a new user of the *APS400nAdministrator* database in *Databases > aps400nAdministrator > Security > Users > New User*. Choose a *formerly created login* as *login name* and add a role *db\_owner* to the user in *Role Members* option. After clicking the button *OK* it will be possible to connect to the SQL server with *APS 400 nAdministrator* program using an *SQL authentication* with the credentials hereby created.

SQL server must be installed in a mixed authentication mode, by default only the Windows NT authentication is enabled!

### 3.3.2. Database access

If the logged user does not have an administration privilege at the server (generally he should not have this right) it is necessary to let the SQL server know which user is allowed to work with the database.

After pressing the *Users* button located in the *Connection* tab in the *System Configuration* dialog in *APS 400 nAdministrator* program, a simple administrator of *APS400nAdministrator database* users is displayed. Working with the database can be enabled to any user whose login identity can be verified with Windows NT authentication method on the server or the domain controller. Enter the name of the server in a Domain field in networks with workgroups.

When using a *web program module* (e.g. presence overview module) a special configuration must be set. Data is processed by an HTTP server, which usually works under the *ASPNET* account. Therefore it is necessary to enable the access to the database for the user *ASPNET* with the same procedure as to any other user.

If the product is installed in a domain network and the web modules are located at a different computer than a domain controller, it is necessary to use the SQL authentication for connecting the web module application to the database server!

### 3.3.3. Access to individual program functions

Individual access of APS 400 program functions is given by the setting of particular functions set in a Personal Card of every user. Identity of a user is verified by a program login name and a password. The application can be used even if multiple users are logged on to the system under any universal user account.