

APS 400.ST

Augmentative Software Module for APS 400 Identification System

Installation and User's Guide

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2. Product Description

The programming module *APS 400.ST* expands the program package of *APS 400 nAdministrator* in an option of observing the actual user presence in chosen areas via a web browser.

By the conception of data presenting it is suitable for smaller systems with approximately dozens users.

3. Installation

3.1. Installation Conditions

It is suitable to make the installation on the computer, which is used as a server for APS 400 system (meaning the computer with database and communication server running). Other models can be chosen as well, but a deeper knowledge of database systems and web applications is required then. From now on we assume the installation is done on a single computer.

The database *APS400nAdministrator* version *12 or higher* (version 2.0.2798.27121) is required for the application *APS 400.ST*.

3.2. HTTP Server Installation

APS 400 ST uses ASP.NET technology, version 2.0. Recommended HTTP server is therefore Internet Information Services (*IIS*) from Microsoft Corp., version 5.1 (or higher) with *ASP.NET 2.0* support. IIS is a part of Microsoft Windows 2000 or XP installation (except for the Home edition) and a part of Windows Vista installation except Home Basic and Starter Editions.

3.3. Product installation in Windows 2000 and Windows XP environment

3.3.1. IIS Support

The IIS service is not installed in the standard installation of Professional editions, it is necessary to install it additionally. To install the service navigate through *Control Panel > Add or remove programs > Add or remove Windows components*.

3.3.2. ASP.NET 2.0 support installation

It is necessary to register ASP.NET support by the IIS. The registration is done by running the registration program *aspnet_regiis.exe*, which is placed in the folder with the parts of the .NET framework.

In the system Windows 2000 it is placed here:

C:\WINNT\Microsoft.NET\Framework\v2.0.50727

In the system Windows XP it is placed here:

C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727

For the ASP.NET support installation it is necessary to run the program with *-i* parameter, then it is:
aspnet_regiis -i

3.3.3. Installation of Web application APS 400.ST

Copy the entire folder containing the program APS 400.ST (*aps400st*) in the folder with IIS, which is designated for publishing information on the web.

By the initial configuration the IIS folder is placed here:

c:\Vntepub\wwwroot

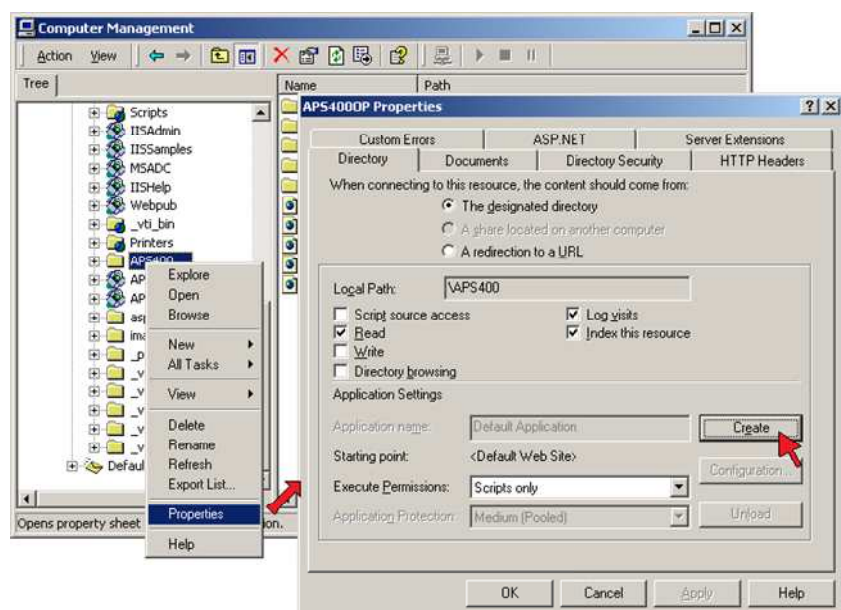
Thus the application will be placed here:

c:\Vntepub\wwwroot\aps400st

From now on it is supposed the initial names and paths are preserved.

Then it is necessary to inform IIS that the folder contains a web application. This can be done by selecting *Computer Management* > *Services and Applications* > *Internet Information Services*.

In the list of objects published by the server select *APS 400.ST* application and open the window *Properties*. Click the button *Create* in the section *Application Settings* on the folder *Directory* (picture 1).



Pic. 1: Web Application Properties

With regard to the option that more versions of *ASP.NET* can be run on the server, it is appropriate to check whether the right version of *ASP.NET (2.0.x)* is chosen for the application *APS 400.ST*.

3.3.4. Database Connection Configuration

The configuration parameters of the web application are set in a file *Web.Config*, which is located in the application folder. It is a common XML file and can be edited in notepad. The only parameter you need to change is the name of the server (the string *SERVER_NAME* should be replaced with a real name of the database server).

```
<connectionStrings>
  <add
    name = "SystemDatabase"
    connectionString = "Data Source=SERVER_NAME;
      Initial Catalog = aps400nAdministrator;
      Integrated Security = True"
  />
</connectionStrings>
```

Don't forget the initial installation of SQL Server 2005 Express Edition is done as a named instance. It is necessary to enter *COMPUTER_NAME\INSTANCE_NAME* as *SERVER_NAME*, where *COMPUTER_NAME* is the name of the SQL server and *INSTANCE_NAME* is the name of the service running SQL server (usually *SQLEXPRESS*).

3.4. Product installation in Windows Vista environment

3.4.1. IIS support

The IIS service is not installed in the standard installation of the system, it is necessary to install it additionally. To install the service navigate through *Programs and functions > Turn Windows features on or off*.

3.4.2. ASP.NET 2.0 support installation

It is necessary to register ASP.NET support by the IIS. The registration is done by running the registration program *aspnet_regiis.exe*, which is placed in the folder with the parts of the .NET framework.

In the system Windows Vista it is placed here:

C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727

For the ASP.NET support installation it is necessary to run the program with *-i* parameter, then it is:

aspnet_regiis -i

3.4.3. Installation of Web application APS 400 ST

Copy the entire folder containing the program *APS 400 ST* (aps400op) in the folder with IIS, which is designated for publishing information on the web.

By the initial configuration the IIS folder is placed here:

c:\inetpub\wwwroot

Thus the application will be placed here:

c:\inetpub\wwwroot\aps400st

From now on it is supposed the initial names and paths are preserved.

Then it is necessary to inform IIS that the folder contains a web application. This can be done by *IIS Manager*, which is available in the *Computer Management* menu.

Select APS 400 ST folder in the list of objects published by the server. Choose the option *Assign to application* (fig.2).

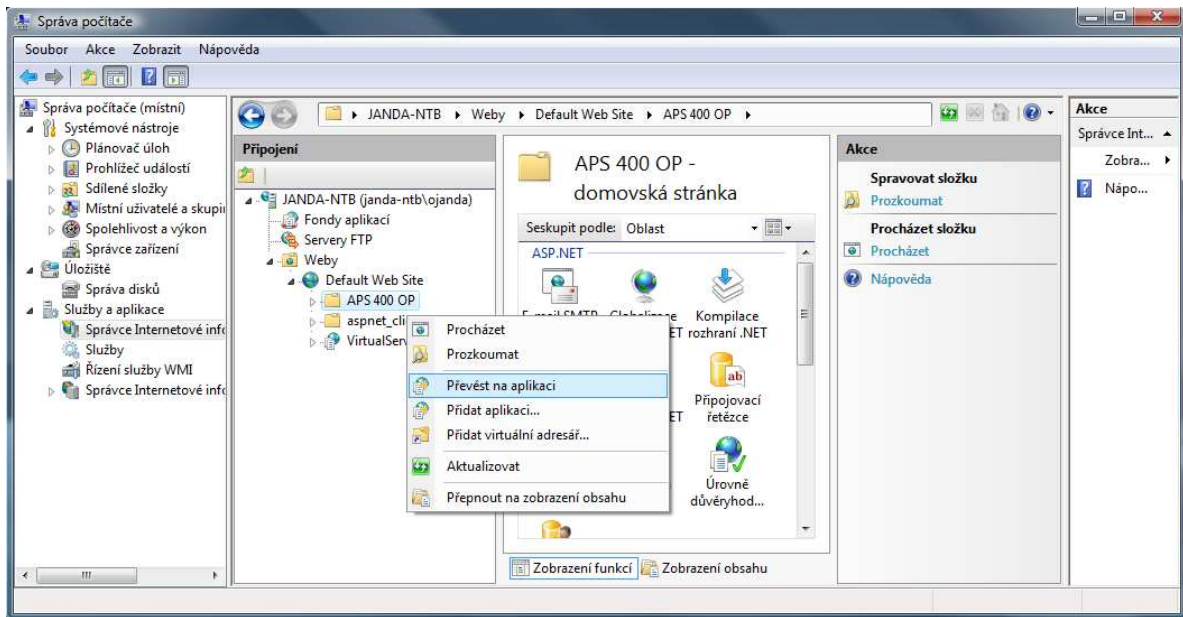


Fig. 2: Creating a web application

Insert the name of the application in the *Alias* field (usually APS400ST). It is necessary to select an option supporting .NET Framework 2.0 from the *Application pool* (this option can be standardly set to *DefaultAppPool* (default value), fig. 3).

Choose the option *Connection strings* and edit the string called *aps400nAdministratorConnectionString (SystemDatabase)*. After choosing the option *SQL Server* enter the server name to the *Server* attribute, and insert *aps400nAdministrator* to the *Database* attribute. *Authorization* can be left intact by default (fig.4).



Fig. 3: Adding web application

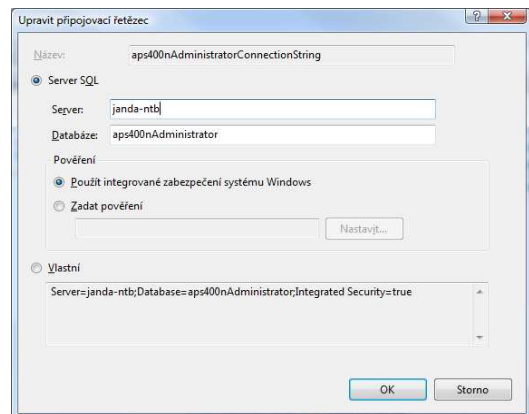


Fig. 4: Connection String

Don't forget the initial installation of SQL Server 2005 Express Edition is done as a named instance. It is necessary to enter *COMPUTER_NAME\INSTANCE_NAME* as a *SERVER_NAME* then, where *COMPUTER_NAME* is the name of the computer running SQL server and *INSTANCE_NAME* is the specific instance name, usually *SQLEXPRESS*.

3.5. Database Access

It is necessary to grant the access to the database APS400nAdministrator for the standardly used account *ASPNET* for the application to be able to use the database. This can be done the same way as granting the access to any other user (either with the program APS 400 nAdministrator or with another tool for database server administration).

If the access rights were granted to the account *ASPNET* before extending the database (it is possible for example due to the service of other web augmentations), the access would not be allowed for the newly created objects. It is necessary to extend the rights then.

3.6. Testing the Application

The web application is run at the moment, when the HTTP server acquires an appropriately formulated request from the client (in this case it is its web browser). Directly on the server run the web browser and fill in the line with address:

`http://COMPUTER_NAME/aps400st/default.aspx`

If everything is configured correctly, a welcome screen is shown, similar as in the picture 3 (without the list of users yet), in the opposite case a page with an error statement is shown and it is necessary to edit the configuration.

The most common errors when configuring the web application are:

- Incorrectly filled the SQL Server name,
- ASPNET account doesn't have the rights to the database.
- Network communication interface of the SQL Server disabled (see APS 400 nAdministrator Installation Guide for more info).

4. Configuring the System for APS 400.ST

4.1. User Types, Access Rights Settings

We distinguish 2 kinds of users from the view of APS 400.ST module:

- **Parent** ... can observe actual status and the history of attendance of his child.
- **Teacher** ... can observe actual status and the history of attendance of each student in every class he has the right to observe.

It is necessary to set up the access rights and the primary login data of the users in APS 400 nAdministrator application. The login data of the parents are taken over from the students' personal lists, the teachers must have their own personal lists.




It is possible to generate login data in APS 400 nAdministrator program and print them afterwards. The users can change their login names and passwords individually then (via the application APS 400.ST). The commands for multiple granting or denying the login rights are available in the context menu after right clicking the selected users.

To enable the login process for the parents you only have to create login data (user name and password) and grant the right to login to the program.

To grant the rights for the teachers it is necessary to set the authorization **Time and attendance operator** (or other authorization if needed) to appropriate personal cards. After that you can add the user to the list of privileged in the folder (class) properties window.

4.2. Attendance Module Relation

The display of actual presence of the users is derived from the changes of the attendance status in the attendance module APS 400 nDochazka. APS 400.ST distinguishes 3 stats represented by following symbols:

-  ... user is present,
-  ... user is not present,
-  ... another status (following to the configuration of attendance processing) or unknown status (meaning user did not arrived at the school on actual date at all).

4.3. Placing the Link on Intranet of the School

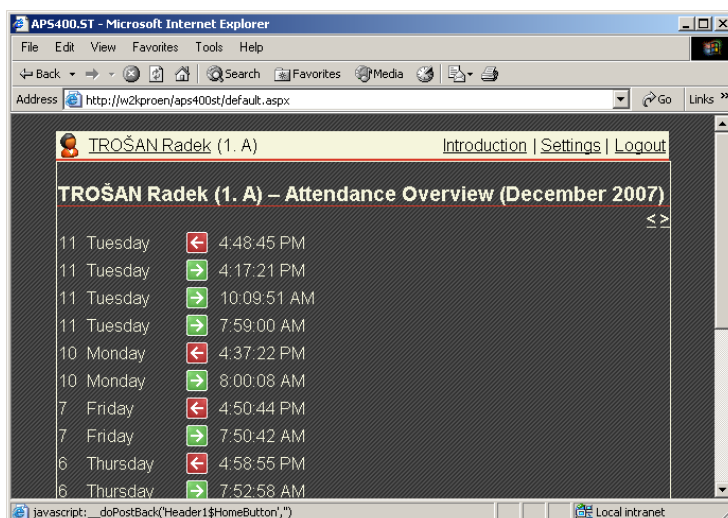
Entering the address manually in the address row is not very comfort. Therefore it is common for the firms to have a site with favorite links. A link to APS 400.ST application can look for example like this:

```
<a href="http://SERVER_NAME/aps400st/default.aspx">APS400.ST</a>
```

5. Working with the program

5.1. Parent

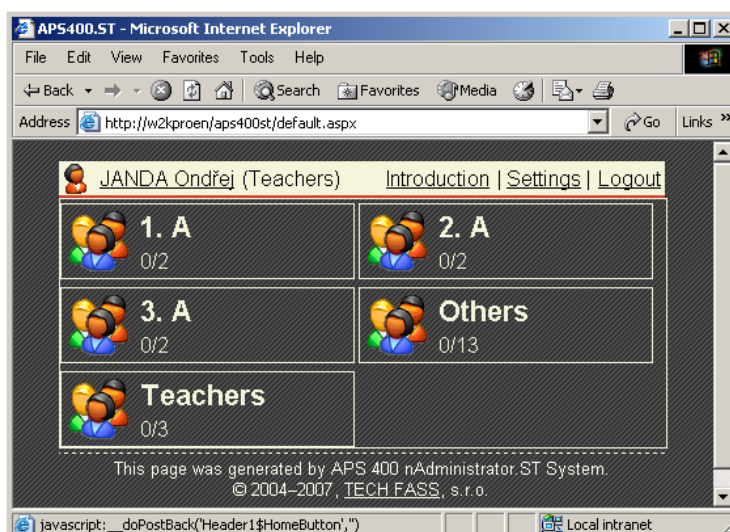
The users with the right to observe the attendance of a whole class will have the symbol of actual presence displayed in the upper row followed by the history of attendance status changes in actual month. In the right part of the list you can find the links < and > which you can use to see previous and next month.



Picture 2: Starting page after parent login

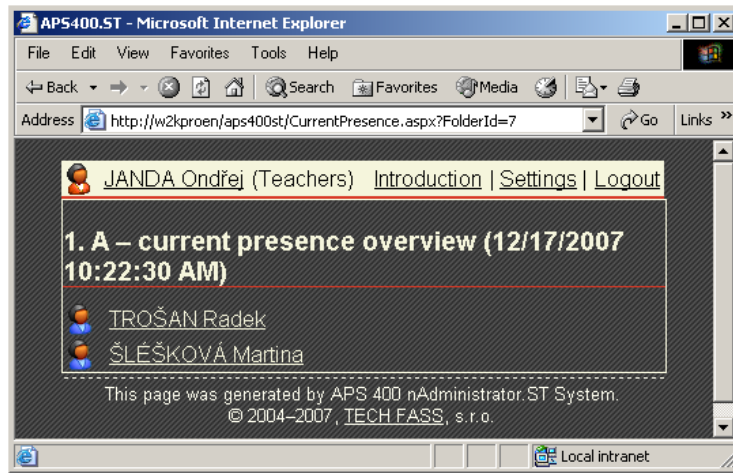
5.2. Teacher

The users with a privilege to see class attendance will see the list of classes at the starting page (picture 3). Each class has the name, number of students present and total number of students in class displayed.



Picture 3: Starting Page after Teacher's Login

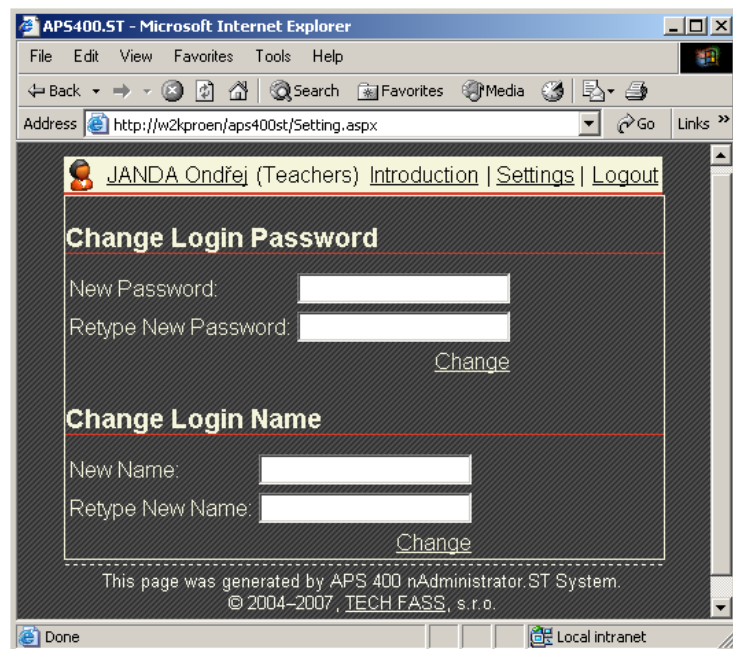
After choosing the class the list of all students and their current status is shown (picture 4). Individual student can be chosen and his attendance history viewed (similar as in picture 1).



Picture 4: List of Students in Class

5.3. Changing Login Data

After a valid login every user can change his login data by selecting the link *Settings* (Picture 7). It is appropriate to change the login data at least after their automatic multiple creation during the installation of the application. After changing the login parameters a new login is requested.



Picture 5: Changing Login Data