Getting started

Creating a Web Server application and Smart app

Document revision

Date	Edition	Comments
01/08/2019	1.0	-

1. Introduction

In this guide we propose, as an example, the design of a simple Web Server supervision application with a Smart app Client interface; this example is a little step towards the design of more complex SCADA applications, but it can be useful for anybody who approaches for the first time to a SCADA, and in particular to Winlog Pro software, to quickly understand the potential related to Client/Server structures over intranet and internet networks.

In the next pages you will see the windows regarding the main steps to be taken to build the proposed application. When creating the application, click on the Help buttons to get more specific details about the various options.

Suppose that you want to monitor and control the process from Smartphone or Tablet. Let's start using one of the example applications described in the following guides:

- Getting started - Creating a simple Siemens Modbus protocol application

- Getting started - Creating a simple Siemens Omron SYSMAC protocol application

- Getting started - Creating a simple Siemens PPI protocol application

- Getting started - Creating a simple Siemens MPI protocol application

We will use one of these examples as Web Server
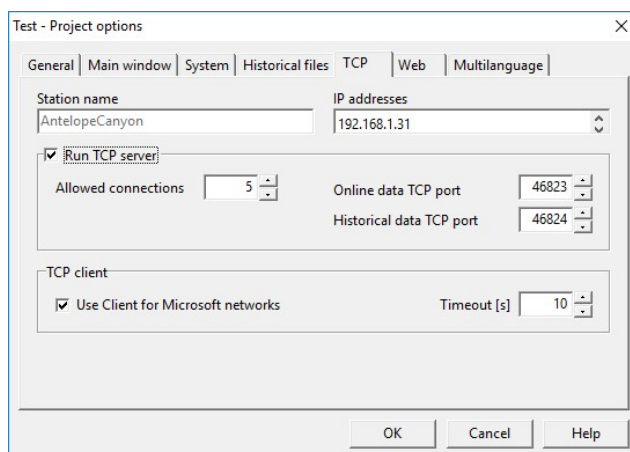
2. Server application configuration

To modify an existing supervision project, it is necessary to use Project Manager, the Winlog Pro integrated development environment that provides different tools (**Gate Builder, Template Builder, Code Builder**).
Run Project Manager selecting the proper icon from Start menu. Create Test project as described in the previous guides .

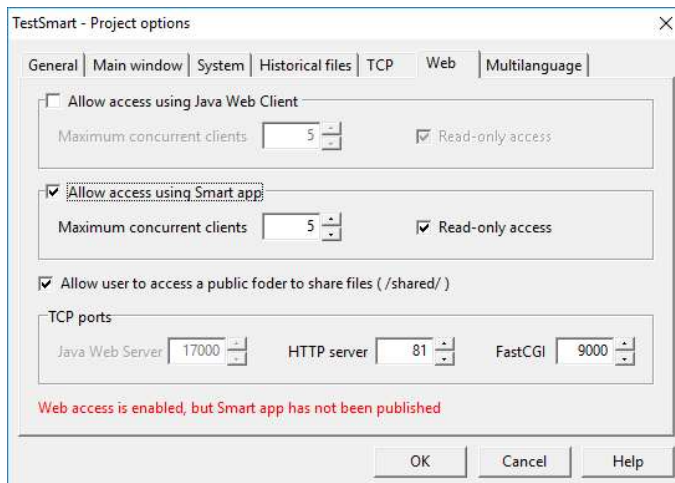In *"Configuration"* folder select *"Options"*.
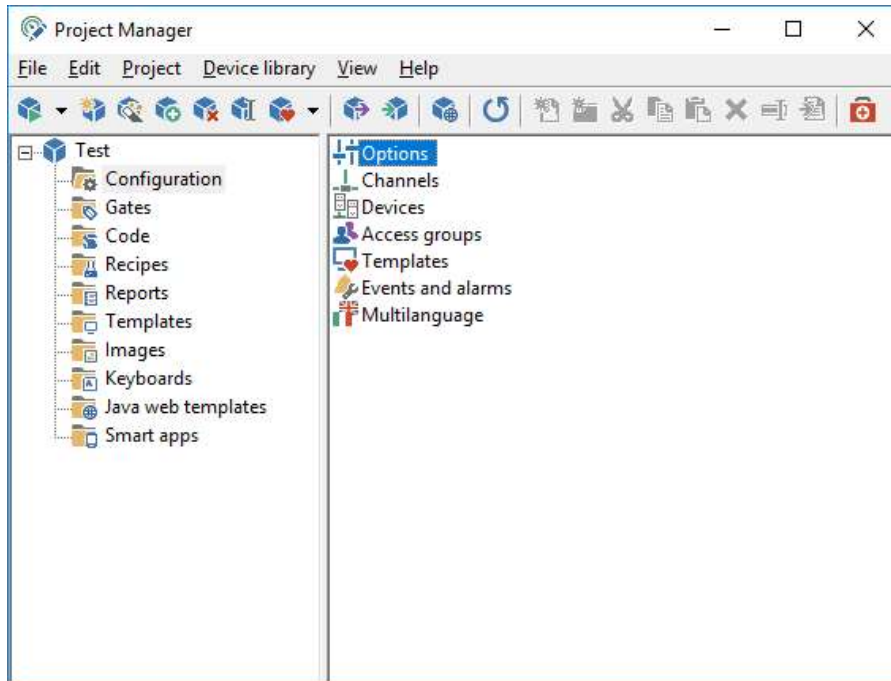
Server Project

In "*TCP*" tab select "*Run TCP server*".

TCP Server configuration

In "`Web`" `Tab` select "*Allow access using Smart app*"

If you want to allow the Smart app to modify the values on the server application, then you have to remove the check from the "*Read-only access*" checkbox.
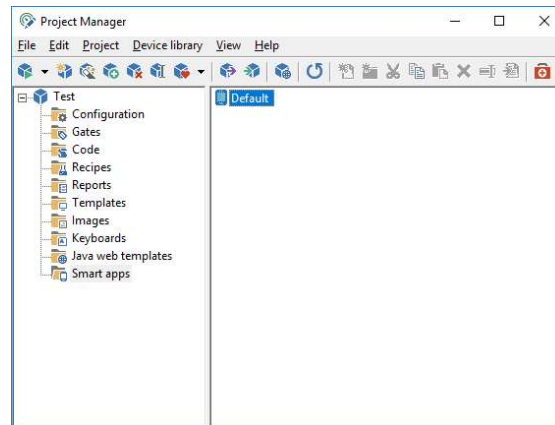

Web Server configuration

In our application we use port 81 for HTTP server and port 9000 for FastCGI
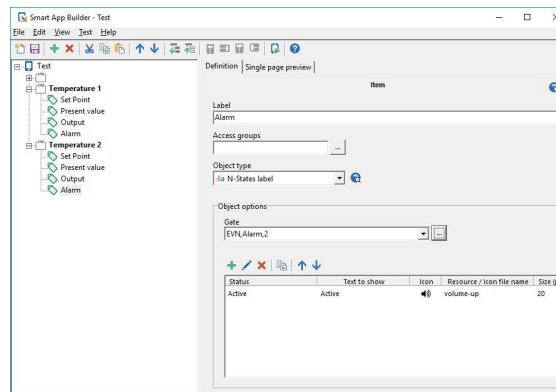
3. Smart app creation

In order to create a Smart app, it is necessary to define the graphic interface that will be consulted by remote users (clients).

Let's create a simple Smart app template for our application by clicking on the "*Default*" file of the "*Smart apps*" folder.
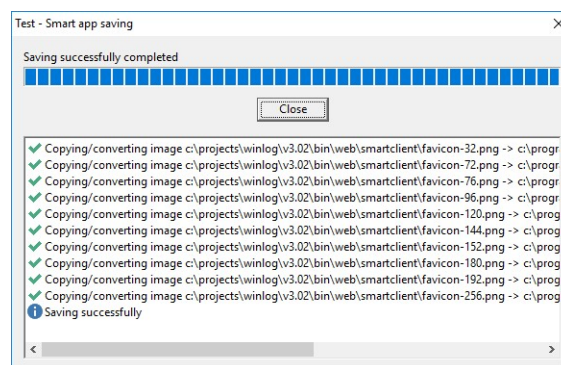

Default file in Smart apps folder

Refer to the **Smart app Builder** guide to get more details about Smart app developing.
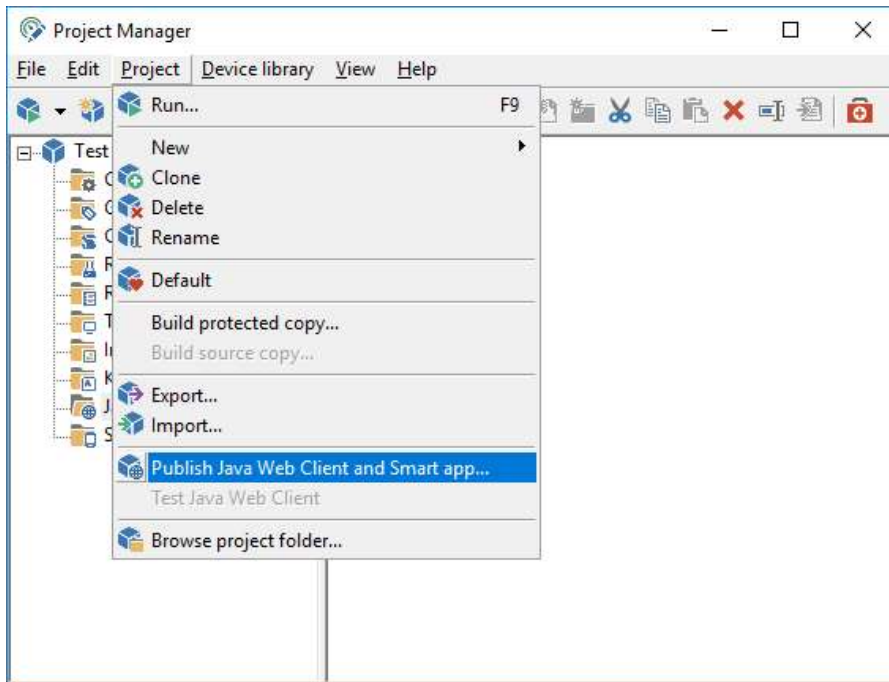

Smart app Builder

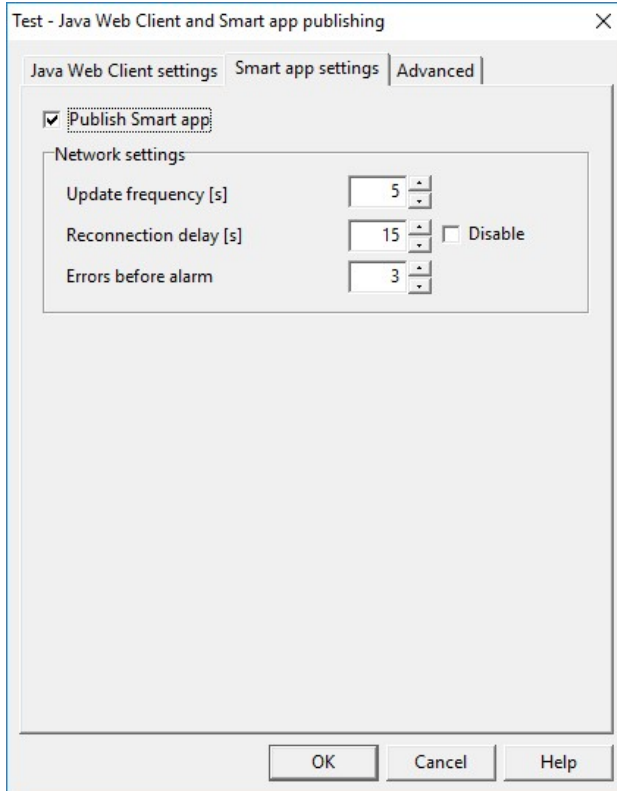On saving, the following Window will appear.

Smart app Builder saving

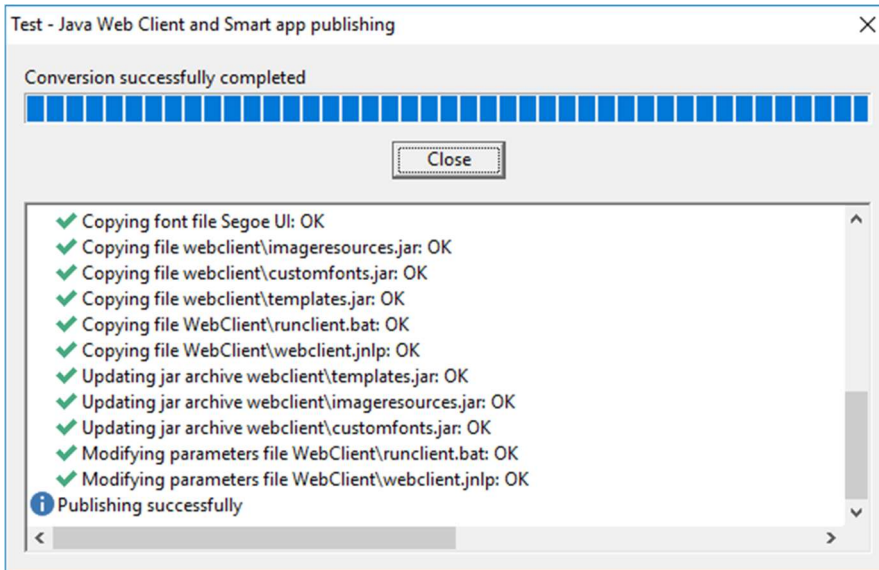## 4. Web Server application - Creation and Configuration

From **Project Manager** select "*Publish Java Web Client and Smart app…*" in "`Project`" menu.

Select "*Publish Smart app*" checkbox and push "*OK*" button.

Web project – Smart app settings

Web project – Creating a project

Our example is complete.

Then you have to configure your router (or your xDSL modem) to redirect requests on port 81 and port 9000 to the PC running HTTP server and Web Server. To perform this procedure you have to define two "virtual servers" (or "port forwarding").

Wire devices to the serial port; to run the project, in **Project Manager** select `Execute...` from `Project menu`.

5 Router Configuration

The broadband router's NAT (Network Address Translation) firewall filters out unrecognized packets to protect your intranet. All hosts behind this firewall are invisible externally. Enabling the Virtual Server Mapping will make some of the host's ports accessible.

A virtual server is defined as a Service Port. All requests to this port will be redirected to the PC that is specified by the Server IP.

Port forwarding sets up public services on your network. When Internet users make requests on your network, the broadband router will forward those requests to the appropriate computer. The broadband router's DHCP function must be disabled to use port forwarding. Port forwarding is generally used to set up a web server, ftp server, or e-mail server on your network.

To add a server using Forwarding, perform the following steps:

1. Enter the port number and the IP Address of the server that you want to allow Internet users to access.

2. Configure as many entries as desired until all the entries are filled in.

3. Click Apply in order to save the settings.

Suppose that this is your configuration:

- HTTP server LAN network address: 192.168.1.10

- HTTP server LAN TCP port: 81

- HTTP server WAN TCP port: 81

- Fast CGI port: 9000

To configure your router to allow Winlog Pro Web Server to be reachable, you need to specify the following virtual server mapping table:

[Virtual Server]

Virtual Servers currently created:

| PVC Name | External Packet | | Internal Host | | | |
	Protocol	Port	IP Address	Port	Modify	Delete
ppp-0	TCP	9000 (User Define)	192.168.1.10	9000	Modify	Delete
ppp-0	TCP	81 (User Define)	192.168.1.10	81	Modify	Delete

Create a new server

Router configuration

6 User

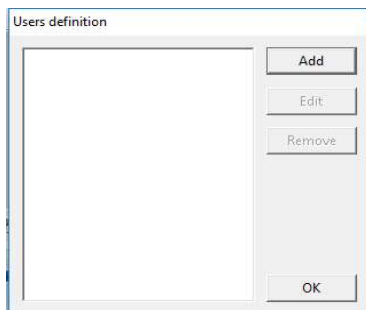Smart app requires always a user name and password at startup.

The users allowed to use the Smart app are the same as those defined in the server application.

User can be defined in **Runtime** on the server application by selecting "*User access->Define->User*" menu item.
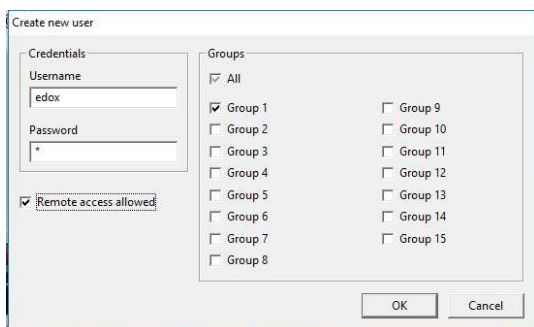

Server application – User definition

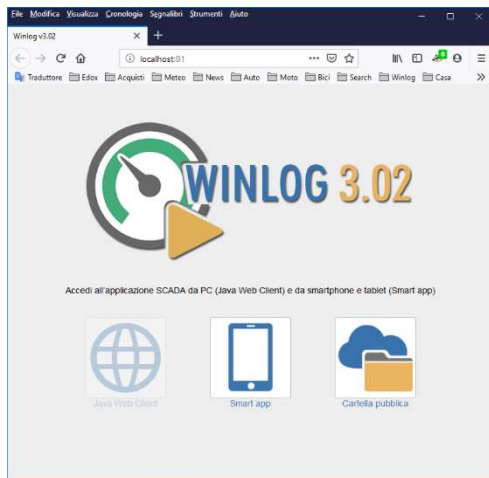Push "*Add*" button

Server application – User definition

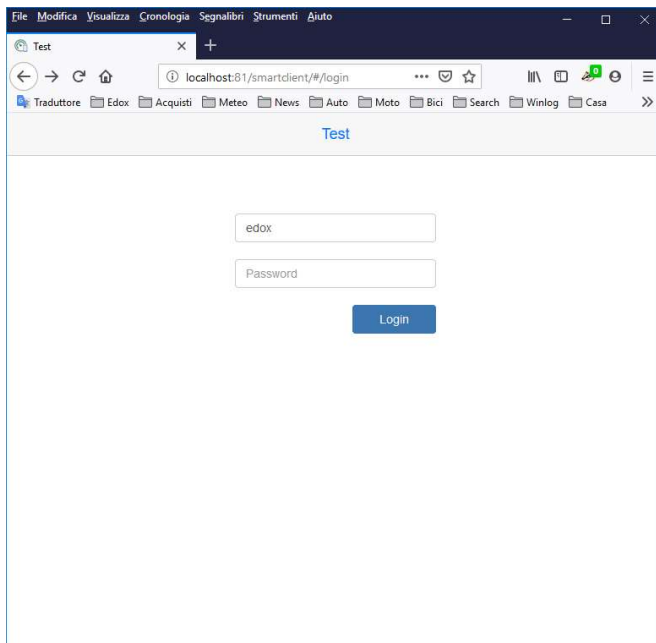and define at least one user

Server application – User definition

7 Client Connection

To run Winlog Smart app go to "http://www.my-domain.com" using your internet browser ("http://www.my-domain.com" is your HTTP server WAN network address) .
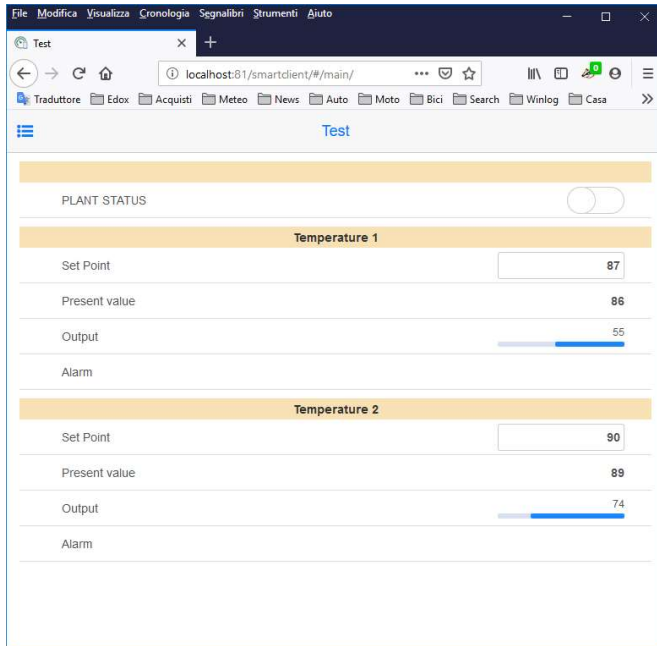

Start page (Web Page)

Insert username and password.

Smart app login

Smart app application