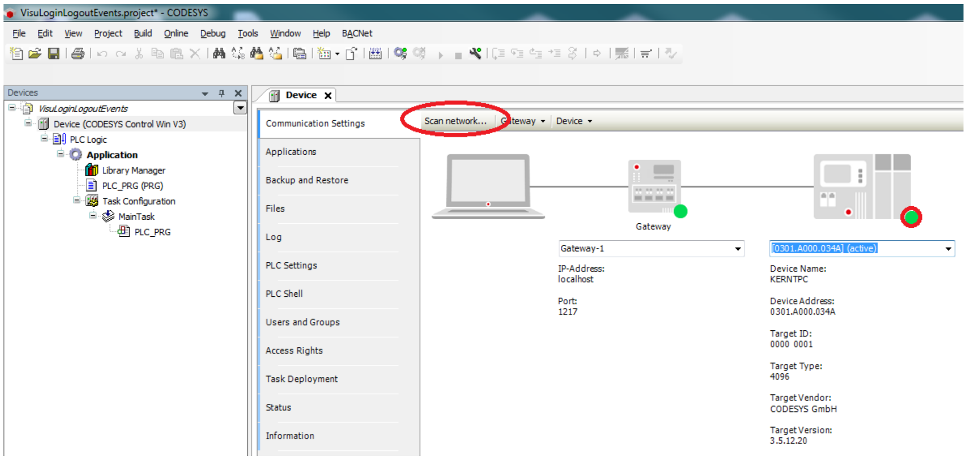
Visu: Using Events of the User Management (Login/Logout)

- Create a "Standard project" and select *CODESYS Control Win V3* as the device.
- Define the target system by means of the *Network scan*.



Gateway-1

IP-Address:
localhost

Port:
1217

[0301.A000.034A] (active)

Device Name:
KERNTPC

Device Address:
0301.A000.034A

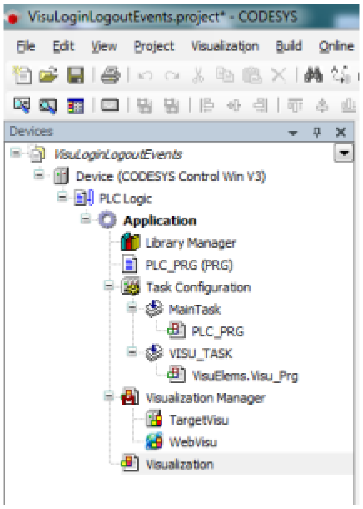
Target ID:
0000 0001

Target Type:
4096

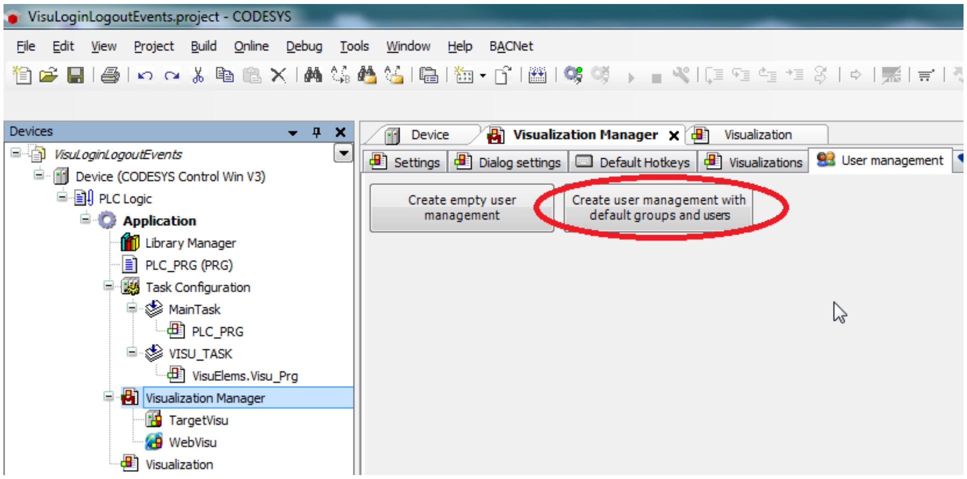
Target Vendor:
CODESYS GmbH

Target Version:
3.5.12.20

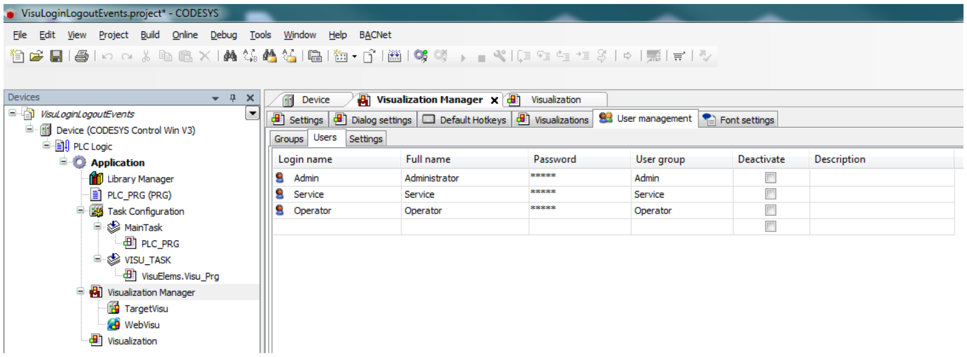
- Insert a visualization in the device tree.
  Then the *Visualization Manager* is inserted automatically with the visu types *TargetVisu* and *WebVisu*.
  In addition, a *VISU_TASK* is also created automatically.



- Create a user management in the *Visualization Manager* with the default groups and users.

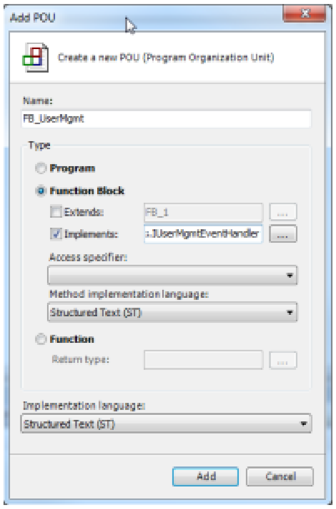


Then adapt the passwords of the users:



Login name	Full name	Password	User group	Deactivate	Description
Admin	Administrator	*****	Admin	□	
Service	Service	*****	Service	□	
Operator	Operator	*****	Operator	□	
				□	

- Create a new FB named *FB_UserMgmtEventHandler* and implement the *VisuElems.IUserMgmtEventHandler* interface.



Name: FB_UserMgmt

Type

○ Program

● Function Block

□ Extends: FB_1

☑ Implements: s.IUserMgmtEventHandler

Access specifier:

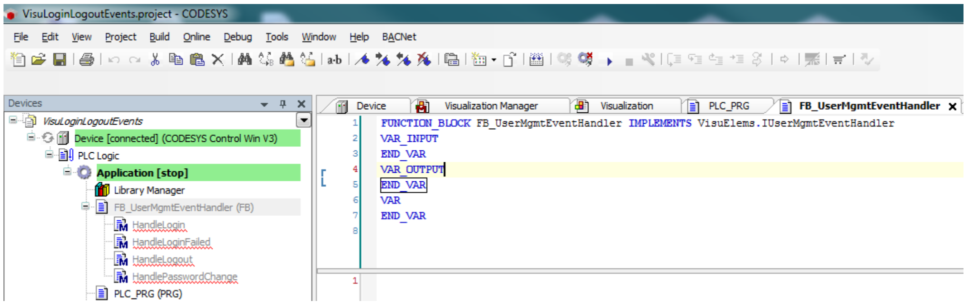
Method implementation language: Structured Text (ST)

○ Function

Return type:

Implementation language: Structured Text (ST)

The following methods are created automatically with the FB:
HandleLogin
HandleLoginFailed
HandleLogout
HandlePasswordChange



```
FUNCTION_BLOCK FB_UserMgmtEventHandler IMPLEMENTS VisuElems.IUserMgmtEventHandler
VAR_INPUT
END_VAR
VAR_OUTPUT
END_VAR
VAR
END_VAR
```

- Adapt the *FB_UserMgmtEventHandler* function block as follows:

Declaration

```
FUNCTION_BLOCK FB_UserMgmtEventHandler IMPLEMENTS VisuElems.IUserMgmtEventHandler
VAR_INPUT
END_VAR
VAR_OUTPUT
END_VAR
VAR
        udiHandleLogin        :    UDINT;
        udiHandleLogout        :    UDINT;
END_VAR
```

- Adapt the *HandleLogin* method as follows:

Declaration

```
(* This method will be called when a login to the visu user management is performed
 :return:
 TRUE  - When the handler has handled this event and it should not be handled by someone else
 FALSE - When the event is not handled by this handler*)
METHOD HandleLogin : BOOL
VAR_INPUT
    (* A pointer to the client structure were the event occurred.
 The name of the user, that logged in, is stored in pClient^.GlobalData.CurrentUserName*)
    pClient    : POINTER TO VisuElems.VisuStructClientData;
END_VAR
```

Implementation

```
udiHandleLogin := udiHandleLogin + 1;
```

- Proceed in the same way with the *HandleLogout* method.
- Make sure that the *VisuElems* prefix is also used in the *HandleLoginFailed* and *HandlePasswordChange* methods; and that the line "{warning 'add method implementation '}" is deleted.
- Adapt the POU *PLC_PRG* as follows:

Declaration

```
VAR
    fbUserMgmtEventHandler    :    FB_UserMgmtEventHandler;
END_VAR
```

- Assign the EventHandler to the visualization as follows.

> **Versions < V3.5.SP10**
>
> In old versions, the following approach is not possible, because the assignment of a program from the visualization manager was not possible.
> For these versions, an initialization must take place in the program code.

Create a new POU of type "Program". Name it *VisuInit*, for example, and adapt the program code as follows:

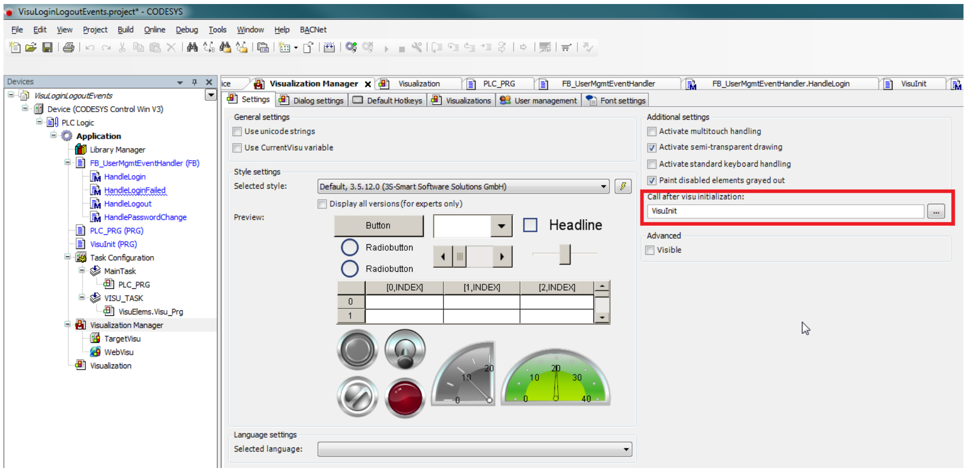
Declaration

```
PROGRAM VisuInit
VAR
END_VAR
```

Implementation

```
VisuElems.Visu_Globals.g_VisuEventManager.SetUserMgmtEventHandler(PLC_PRG.fbUserMgmtEventHandler);
```

Assign the *VisuInit* program to your project as the start procedure within the *Visualization Manager*:



General settings

□ Use unicode strings

□ Use CurrentVisu variable

Style settings

Selected style: Default, 3.5.12.0 (3S-Smart Software Solutions GmbH)

□ Display all versions (for experts only)

Preview:

Language settings

Selected language:

Additional settings

□ Activate multitouch handling

☑ Activate semi-transparent drawing

□ Activate standard keyboard handling

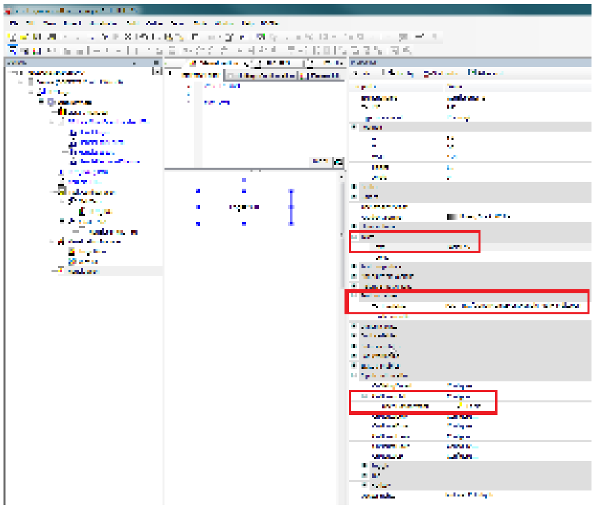
☑ Paint disabled elements grayed out

Call after visu initialization: VisuInit

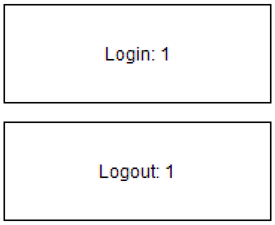
Advanced

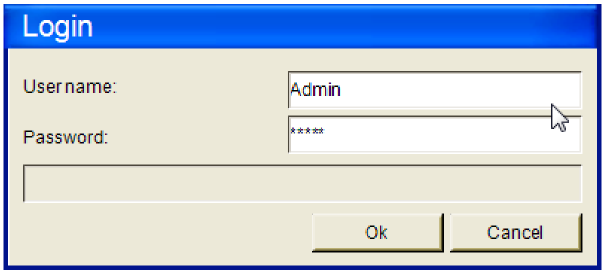
□ Visible

- Open the *Visualization*, add a box, and assign the following properties to it:



- Repeat the steps as for a button for logging out.
- Load the project to the controller and start it.
  The variables are increased at each successful "Login" and "Logout".





User name: Admin

Password: *****