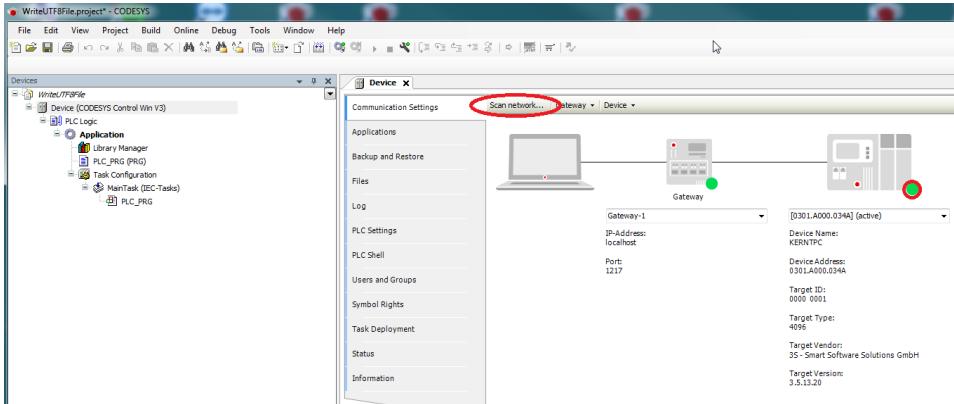


# SysFile: Saving Files in UTF-8 Format

Data can be stored in UTF-8 format when working with the `WSTRING` type in the IEC code.

By using the `ConvertUTF16toUTF8` function from the `StringUtil` library, the text is converted to UTF-8 format and can be saved to a file.

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



- Open the `Library Manager` and add the following libraries:  
`StringUtil`  
`SysFile`  
`SysTypes2 Interfaces`

Name	Namespace	Effective version
_3SLicense = 3SLicense, 3.5.12.0 (3S - Smart Software Solutions GmbH)	_3S_LICENSE	3.5.12.0
BPLog = Breakpoint Logging Functions, 3.5.5.0 (3S - Smart Software Solutions GmbH)	BPLog	3.5.5.0
IoStandard = IoStandard, 3.5.13.0 (System)	IoStandard	3.5.13.0
Standard = Standard, 3.5.13.0 (System)	Standard	3.5.13.0
StringUtil = StringUtil, 3.5.13.20 (System)	Stu	3.5.13.20
SysFile = SysFile, 3.5.9.0 (System)	SysFile	3.5.9.0
SysTypes2 Interfaces, * (System)	SysTypes	3.5.4.0

- Edit the `PLC_PRG` POU as follows:

## Declaration

```
VAR
    xWrite          : BOOL;
    szFileName     : STRING(128) := 'c:/tmp/TestUTF8.txt';
    hFile           : SysTypes.RTS_IEC_HANDLE := SysTypes.RTS_INVALID_HANDLE;
    iecResult       : SysTypes.RTS_IEC_RESULT;
    wsTextLine     : WSTRING(10) := "Übersetzer";
    sUTF8TextLine  : STRING;
    udiPos          : __XWORD;
    udiWrite        : __XWORD;
END_VAR
```

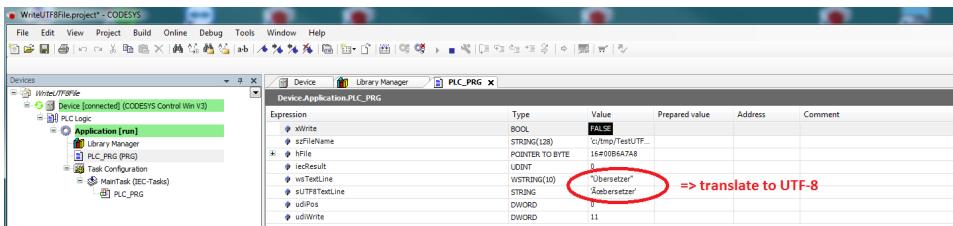
## Implementation

```

IF xWrite THEN
    xWrite := FALSE;
    hFile := SysFileOpen(szFileName:=szFileName, am:=SysFile.AM_Write , pResult:=ADR(iecResult));
    IF hFile <> RTS_INVALID_HANDLE THEN
        Stu.ConvertUTF16toUTF8(sourceStart := ADR(wsTextLine), targetStart := ADR(sUTF8TextLine),
        dwTargetBufferSize := SIZEOF(wsTextLine), bStrictConversion := TRUE);
        udiWrite := SysFileWrite(hFile:=hFile, pbyBuffer:=ADR(sUTF8TextLine), ulSize:=INT_TO_UINT(LEN
        (sUTF8TextLine)), pResult:=ADR(iecResult));
        iecResult := SysFileClose(hFile:=hFile);
    END_IF
END_IF

```

- Start the project and set the *xWrite* variable to *TRUE*.



If the file is viewed in an editor, then the text is displayed correctly:

