

a:control

Fileparser / XML Functionality



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Note:

All screenshots and pictures of the application which are shown in this document are to be taken as examples and are subjected to the copyright of Diagraph GmbH.

1. System requirements

PC-Hardware	Requirements
Installed a:control	CPU min. 1.0 GHz processor speed
Network	Ethernet
RS232 / COM Ports	COM-Port for scanner (optional)
Scanner	Installed scanner with COM-Port (optional)
USB- Ports	USB A for data exchange with stick drive
Software	Windows 7 SP1 Windows XP embedded (Service Pack 3) Windows 10 Microsoft .NET Framework 4.0

It's absolutely possible that the software is running without problems on differing system constellations. The performance of the application will possibly slow down with older hardware. Most important for a faultless application execution is enough free working memory and hard disk space.

NGT System

Printer-Hardware	Requirements
Printer model	NG2, NG2+, NG4, NG4+, NG6, NG6E, NG8, NG8E
Firmware	Current printer firmware
Connectivity	Ethernet / Serial

53 System

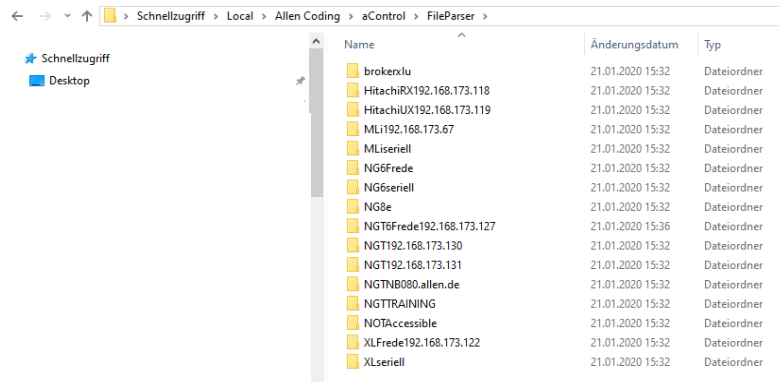
Printer-Hardware	Requirements
Printer model	53XL40, 53XL80u, 53XLC, XL5000, XL5000C
Firmware	Current printer firmware
Connectivity	Ethernet / Serial

MLi System

Printer-Hardware	Requirements
Printer model	MLi
Firmware	Current printer firmware
Connectivity	Ethernet / Serial

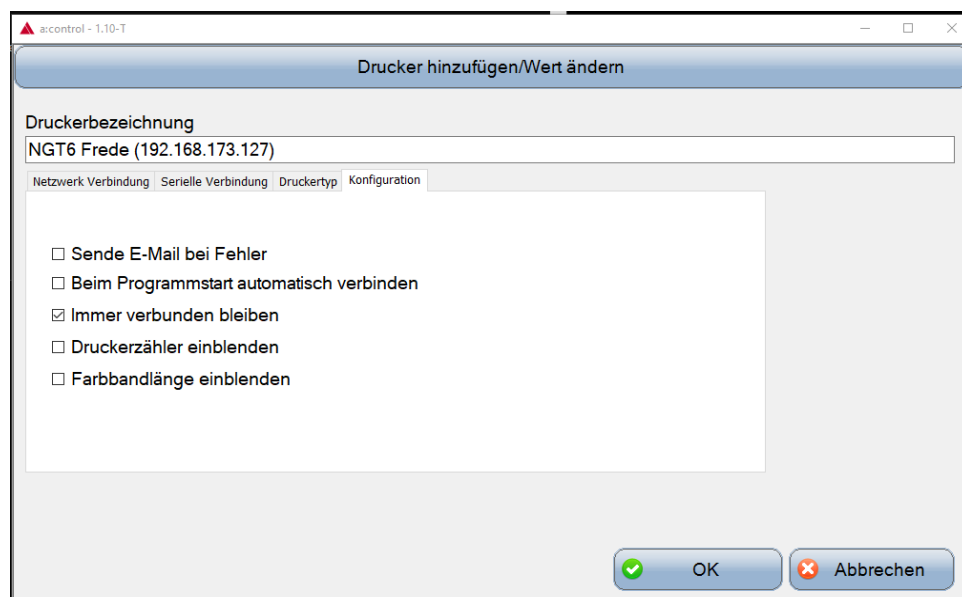
2. FileParser

a:control automatically creates a file parser directory for each printer.



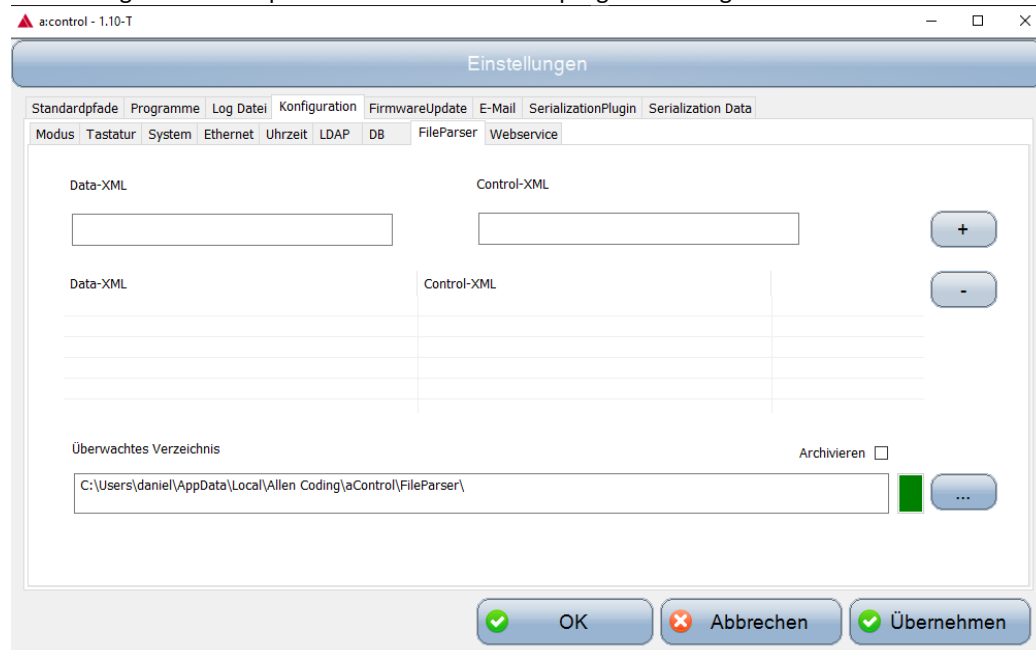
Activation of the file parser

As soon as a printer is connected, the corresponding printer directory is searched for images or file parser XML files. It is therefore often useful to connect the printer automatically when the program starts. This is defined in the printer settings configuration:



Settings in a:control

The settings for the file parser can be found in the program settings:



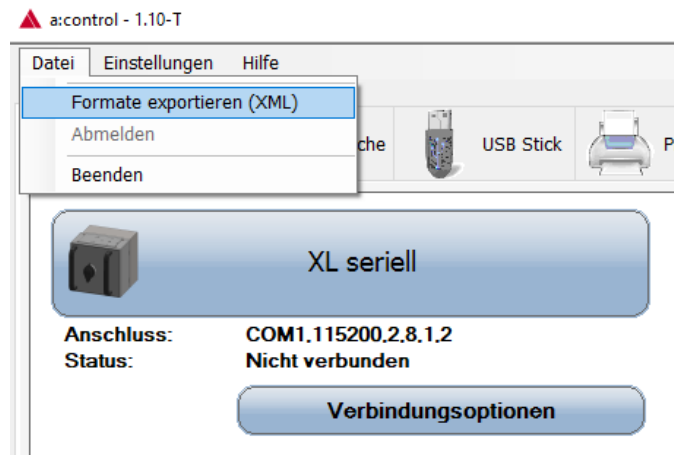
Apply print formats / XML files

if a print format is now copied into such a subdirectory, the formats are loaded onto the corresponding printers. If the file is a valid a:control XML file, it will be used. An XML file can also be drag-dropped onto a printer.

3. XML

Creating an XML template:

Connect to one or more printers and load a format there, e.g. a format with variables. After you have loaded the format, you can create a template with "Export Formats":



This action creates an XML file that can be edited as a template:

Example: FileParser130207_092356.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!--FileParser export: date 130207_092356 (a:control1.5.10-T) -->
<aControl xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="aControl.xsd">
    <Printer id="126AF8F4-1F41-4FB6-83DA-39285405CF04" name="NG8IP">
        <CMD action="LoadConfiguration" id="A6D02A1C6EA04E6C9D942F427542BF74" />
        <CMD action="SetVariable" name="Density" value="020, 3 bar" global="false"
sql="" />
        <CMD action="SetVariable" name="Folientyp" value="000" global="false" sql="" />
        <CMD action="SetVariable" name="Zaehler1" value="0" global="false" sql="" />
        <CMD action="SetCounter" name="Zaehler1" start="0" stop="9999999" step="1"
duration="1" value="0000000" />
        <CMD action="LoadFormat" name="Muster pol">
            <Format>
                <Content sql=""
base64="fjEwMDA0NzgbRk11c3RlciBwb2wbVkREYXR1bVplaXQxCzAxMTcuAzA1MTcuAzEwC0YwMDAwMDAwMDAbVkNaY
WVobGVyMQtTMDAwMDAwMDAwMDA5OTk5OTk5MDAwMDAwMDAxMDAwMDAwMDAwMDAwMDAwMDEyMzQ1Njc4OQswADAwMD
cLCxtWSUZvbGllbnR5cAswMDALRm9saWVudHlwCzAAMDAwMDAwMjULCxtWSURlbnNpdHkLMDIwLCAzIGJhcgtEZW5zaXR
5CzAAMDAwMDAwMjULCxsjQjA0MDAxODcwMDA3NjAwRjEyMzQ1Njc4CzAwNTIwMDkxMDAwGyNUMDQwMDA4NzAwNjcxMDBW
RERhdHVtWmVpdDElMjBMDAwGyNUMDQwMDc2MjAwNjUwMDBGTVVTVVEVSFJVVQ0sLMTRMMDAwGyNUMDQwMDU4NTAwNzIyM
DBWQ1phZW5zaXR5cEwTDAwMBsjVDA1MDAwOTAwMDg2NTAwRkZvbGllbnR5cCA6IASxOEwwMDAbI1QwNTAwNTEzMDA4Nz
UwMFZJRm9saWVudHlwCzE4TDAwMBsjVDA1MDA4NzYwMDg2NTAwVk1EZW5zaXR5CzE4TDAwMBtTMjAwG1gwNzA1MP8bUTA
wMDAw" />
            </Format>
        </CMD>
        <CMD action="SetParameter" name="Speed" value="200" global="false" sql="" />
        <CMD action="SetParameter" name="Density" value="050" global="false" sql="" />
    </Printer>
    <Configuration>
        <CMD action="Configuration" id="A6D02A1C6EA04E6C9D942F427542BF74" database=""
dbtype="SQLite|OleDb|SQLServer" />
    </Configuration>
</aControl>
```

The XML file is checked against a valid a:control DTD.

Action Tags:

A list of the valid action tags for printers is explained below. The action tags are located as subnodes under the printer tag

Download the current configuration.

An XML file with the current printer configuration is generated here. This can possibly be used for verification. The file is stored in the printer directory:

C:\Users\<Benutzername>\AppData\Local\Diagraph\Control\FileParser
 \<printername>\info\B29695F57B8C4E2290E99C4B02ECCF8B.xml

```
<CMD action="GetInfo" />
```

Set a variable

```
<CMD action="SetVariable" name="Variable2" value="123"/>
```

Set a counter

```
<Counter name="GlobalCounter1" value="0" start="0" stop="999999999" step="1" duration="1"/>
```

Set a free variable

```
<CMD action="SetFreeVariable" name="free1" value="hello"
```

Setting a parameter (Speed)

```
<CMD action="SetParameter" name="Speed" value="160" />
```

Setting a parameter (density)

```
<CMD action="SetParameter" name="Density" value="160" />
```

Setting a parameter (quantity)

```
<CMD action="SetParameter" name="Quantity" value="10" />
```

Load a configuration with the specified ID.

The configuration tag is specified at the same level as printer tags. Information such as database connections, global variable information and other information is defined for the printer in the configuration.

```
<CMD action="LoadConfiguration" id="9FCAC9CC8A154D0785DDA94DFDB47098" />
```

Loading a print image.

The print image with the specified name is loaded.

```
<CMD action="LoadFormat" name="AZ_NERI_LA">
```

The print image can also be specified directly in Base64-coded form.

```
<CMD action="LoadFormat" name="AZ NERI LA">
```

<Format>

<Content sql="" base64="fjEwMDAYnzIbRkFaX05FUk1fTEEBvKlURVhUTE1ORTELMtIzNDU2Nzg5C1RFWFRMSU5FMQswADAwMDAwMDI1CwsbVklURVhUTE1ORTILMTIzNDU2Nzg5C1RFWFRMSU5FMgswADAwMDAwMDI1CwsbVklURVhUTE1ORTMLMTIzNDU2Nzg5C1RFWFRMSU5FMwswADAwMDAwMDI1CwsbI1QwMDAwMTU2MDAwNDgwMFZJVEVYVExJTkUxCzA3TDAwMBsjVDAwMDAxNTYwMDA4NDAwVk1URVhUTE1ORTILMDdMMDAwGyNUMDAwMDE1NjAwMTIxMDBwSVRFWFRMSU5FMwswN0wwMDAbUzE2MBtYMDcwNTD/G1EwMDAwMA==" />

</Format>

</CMD>

Examples:

An XML file does not have to contain a format, only variables or counters can be changed, as in the following example:

```
<?xml version="1.0" encoding="UTF-8"?>
<aControl xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="aControl.xsd">
    <Printer name="Printer1" id="C3E20533-6C04-47bb-9B7E-7BD2BA6AFB05">
        <CMD action="SetVariable" name="Variable2" value="123"/>
        <CMD action="SetVariable" name="Variable2" keyfield="123" table="Tabelle1"
dbtype="ArtNr"/>
        <CMD action="SetCounter" name="Counter1" value="123" start="0" stop="999999999"
step="1" duration="1" global="true"/>
    </Printer>
</aControl>
```

Printer-independent a:control settings can be made in a configuration section of the XML, e.g. Global variables or database connection strings

```
<Configuration>
    <!--Setup Configuration-->
    <CMD action="Configuration" id="A6D02A1C6EA04E6C9D942F427542BF74"
name="Beispiel.cfg"
database="Server=technik4\sqlexpress;Database=toennies;Trusted_Connection=True;"
dbtype="SQLServer">
        <Parameters>
            <Parameter name="GlobalSpeed" value="200"/>
            <Parameter name="GlobalGlobalDensity" value="60"/>
            <Parameter name="GlobalQuantity1" value="00001"/>
            <Parameter name="GlobalQuantity2" value="00011"/>
        </Parameters>
        <!--Setup Global Variables-->
        <Variables>
            <Variable name="GTINGlobal" value="AB1345678901234"/>
            <Variable name="GlobalVariable1" value="Text"/>
            <Counter name="GlobalCounter1" value="0" start="0"
stop="999999999" step="1" duration="1"/>
            <Counter name="GlobalCounter2" value="0" keyfield="1234"
sql="select art_nr from Tabelle1" table="Tabelle1" fields="ArtNr" start="0" stop="999999999"
step="1" duration="1"/>
        </Variables>
    </CMD>
</Configuration>
```

Customer example with filling variables from an Excel file:

-The Excel spreadsheet "Knob.xls" is an extract from a SAP database.

- The name of the printer is "192.168.173.70"

-There is a print image on this printer ("Knob").

The free variables defined in it should now be filled using an XML from the Excel spreadsheet "Product specs\$". - the "Knauf.xml" file, which is copied to the file parser directory, has the following content:

```
<?xml version="1.0" encoding="utf-8"?>
<!--FileParser export: date 140311_135223 (a:control1.5.12-R) -->
<aControl xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="aControl.xsd">
  <Printer id="6F4F8FD0-8CDC-433D-8410-55C2F72BFBA0" name="192.168.173.70">
    <CMD action="LoadConfiguration" id="B52827A9830949B69686B88ADA1B72CD" />

    <CMD action="SetFreeVariable" name="AREA" value="" fields="AREA" />
    <CMD action="SetFreeVariable" name="BARCODE- roll" value="" fields="BARCODE- roll" />
    <CMD action="SetFreeVariable" name="Lambda" value="" fields="Lambda" />
    <CMD action="SetFreeVariable" name="Length mm" value="" fields="Length mm" />
    <CMD action="SetFreeVariable" name="PRODUCT" value="" fields="PRODUCT" />
    <CMD action="SetFreeVariable" name="RValue" value="" fields="RValue" />
    <CMD action="SetFreeVariable" name="SAPCODE" value="" fields="SAPCODE"/>
    <CMD action="SetFreeVariable" name="Thick" value="" fields="Thick" />
    <CMD action="SetFreeVariable" name="Width full" value="" fields="Width full" />

    <CMD action="LoadFormat" name="knob"/>
    <CMD action="SetParameter" name="Speed" value="100" sql="" />
    <CMD action="SetParameter" name="Density" value="050" sql="" />
  </Printer>
  <Configuration>
    <CMD action="Configuration" id="B52827A9830949B69686B88ADA1B72CD"

    database="Provider=Microsoft.ACE.OLEDB.12.0;Data source=C:\Users\knob\Desktop\Knob.xls;Extended
Properties='Excel 12.0 Xml;HDR=YES'"
    dbtype="OleDB"
    sql="Select * from [Product specs$] where SAPCODE='426005'" />
  </Configuration>
</aControl>
```

Example with filling variable customer data from an XML file:

The format named "lloreal" is a print format in the printer

- The name of the printer is "NGTSERIAL".

- These are two printer variables mapped to the XML (CHARG->CHARG, MATNR->MATNR).

- In the configuration section, the location of the XML file is defined, the dbtype is set to XML. Each time the XML file is copied to the file parser directory, the SAP export is applied to the format.

(Usually under C:\Users\<username>\AppData\Local\Diagraph\AControl\FileParser)

```
<?xml version="1.0" encoding="utf-8"?>
<!--FileParser export: date 20190218_092836 (a:control1.9-R) -->
<aControl xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="aControl.xsd">
  <Printer id="F5048111-3EB7-D467-CC55-8F6AD1C94BB1" name="NGTSERIELL">
    <CMD action="LoadConfiguration" id="01354130A0BF4653BB03D4FC84370EEC" />
    <CMD action="SetVariable" name="CHARG" value="" global="false" sql="CHARG" />
    <CMD action="SetVariable" name="MATNR" value="" global="false" sql="MATNR" />
    <CMD action="LoadFormat" name="lloreal"/>
  </Printer>
  <Configuration>
    <CMD action="Configuration" id="01354130A0BF4653BB03D4FC84370EEC"
database="C:\Users\AllUsers\SAP_Export\sap.xml" dbtype="XML" />
  </Configuration>
</aControl>
```

Customer file in C:\Users\AllUsers\SAP_Export\sap.xml

```
<?xml version="1.0" encoding="utf-8"?>
<Lot xmlns="http://www.Apriso.com/Lot.xsd">
  <WERKS>280</WERKS>
  <AUFNR>300001962400</AUFNR>
  <RSHID>BD63</RSHID>
  <VERAN>UP2</VERAN>
  <MATNR>D1254003</MATNR>
  <GSTRI>20190110</GSTRI>
  <CHARG>123456</CHARG>
  <VFDAT>20220109</VFDAT>
</Lot>
```

Set up copy triggers to run the fileparser-xml every time the customer file has been modified:

