

a:control

Webservices / REST-Services



Diagraph GmbH

Friedrich-Bergius-Ring 30
97076 Würzburg
Germany

Phone: +49 (0) 931-25076-0

FAX: +49 (0) 931 25076-50

E-Mail: support@diagraph.de

Web: www.diagraph.de

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Hinweis:

Sämtliche Screenshots und Abbildungen (Bildschirmfotos) der Anwendung in diesem Dokument sind als beispielhafte Oberflächen anzusehen, und unterliegen dem Copyright der Diagraph GmbH.

1. Systemvoraussetzungen

PC-Hardware	Anforderungen
Installiertes a:control ab Version 2026.1	CPU mit mindestens 1.0 GHz Prozessorgeschwindigkeit
Physikalischer Hauptspeicher	Mindestens erforderlich, um die Installation abzuschließen: 2 GB Empfehlung: 8 GB
Freier Festplattenspeicher	200 MB für Programminstallation + Speicherplatz für Druckformate
Maus, Tastatur, Monitor oder Touch-Screen	Auflösung Monitor mindestens 800x600, 16 bit Farbtiefe
Netzwerkkarte	Ethernet
RS232 / COM Ports	Je ein COM-Port für jeden seriell angeschlossenen Drucker
USB- Ports	USB A für Datenaustausch mit USB-Stick
Software	Windows 7 oder höher Microsoft .NET Framework 4.8

Es ist durchaus möglich, dass die Software auf abweichenden Systemen einwandfrei läuft, jedoch könnte die Programmperformance unter schwächerer Hardware leiden. Vor allem ausreichend freier Arbeitsspeicher + Festplattenspeicher sind ein wichtiger Faktor für eine einwandfreie Programmausführung.

Drucker-Hardware	Anforderungen
Druckertyp	NGT2, NGT2+, NGT4, NGT4+, NGT6, NGT6E, NGT8, NGT8E
Firmware	Aktuellste Druckerfirmware ab Version N.5.x (NGT)
Konnektivität	Seriell oder Ethernet Netzwerk

53-System

Drucker -Hardware	Anforderungen
Druckertyp	53LTi, 53XL80, 53LTc 53XL40, 53XL80u, 53XLC, XL5000, XL5000C
Konnektivität	Seriell

MLi-System

Drucker -Hardware	Anforderungen
Druckertyp	MLi
Konnektivität	Seriell oder Ethernet Netzwerk

3. Webservice

- Einstellungen im a:control**

Um die Webservice -Funktionalität aktivieren zu können, muss a:control in den Einstellungen der Webservice auf Aktiv gesetzt sein.

The screenshot shows the 'Settings' window with the 'SERVER' tab selected. Under the 'WEBSERVICE' sub-tab, the 'Active' button is highlighted in orange. The 'WS-URL' field is set to 'http://192.168.174.141:8086/acontrol/webservice'. The 'REST' field is set to 'http://192.168.174.141:8086/acontrol'. The 'OPC-UA' checkbox is checked, and its field is set to 'opc.tcp://192.168.174.141:62557/ITWMC/OPCServer'. The 'User' field is set to 'diagraph'. The 'Password' field is empty. The 'API' button is visible next to the OPC-UA field. At the bottom, there are 'OK', 'Cancel', and 'Apply' buttons.

- Die Authentifizierungseinstellungen sind standardmäßig eingestellt auf**

User : diagraph
 Passwort: diagraph

4. Webservice Demoprojekt (Visual Studio / C#)

Unter <https://github.com/diagraph-de/aControl.Client> gibt es ein Webservice Demo in der Programmiersprache C#. Es listet die verfügbaren Drucker, verbindet sich mit ihnen und liest den Fehlerstatus aus

```
Client opened successfully.
Retrieving version...
Version: 2025.1.28528-R CAL:100
Retrieving available printer IDs...
Available Printers:
0: Name = 9FB2D89F23B19A30E259D6F52BDE982C, PrinterID = NGT (COM1)
1: Name = 6AE7DBDEE0D357BCB4E8BADEB388BD1F, PrinterID = NGT2 (192.168.173.130)
2: Name = 5C7A52E89A3DFDE9936A8B3A2B27AE52, PrinterID = NGT4 (192.168.173.132)
3: Name = 0EC20BBBF99C77FDD59D953FA6858C84, PrinterID = NGT2 (192.168.173.80)
4: Name = 4E476BA3638685EC591DB06A8B2C587C, PrinterID = NGT8 (192.168.173.131)
5: Name = F932BFBC86FB58FCCDDC97A31A78C56B, PrinterID = XL5000 (192.168.173.57)
Please select the index of the printer you want to connect to: 1
Connecting to printer with PrinterID 'NGT2 (192.168.173.130)'...
Connection status: Connected
Connection established successfully.
Printer error status: 00
No error details found.
Press any key to exit...
```

5. A:control REST-Services (Swagger)

Sie gelangen in die Swagger-Testclient durch drücken des Buttons Einstellungen->Server->Webservice->API



Select a definition

Diagraph aControl Web Service API V1

Diagraph aControl Web Service API v1 OAS 3.0

/swagger/v1/swagger.json

API documentation for Diagraph aControl Web Service.
Contact Diagraph GmbH

acontrol

- GET** `/acontrol/Version` Retrieves the current version of the application and returns it in JSON format.
- GET** `/acontrol/LogFile` Retrieves the combined log file entries, including both system and application logs, and returns them in JSON format.
- GET** `/acontrol/SearchPrinters/{printerType}` Searches for available printers of the specified type and returns their details.
- GET** `/acontrol/SearchPrinters/NGT` Searches for available NGT printers of the specified type and returns their details.
- GET** `/acontrol/SearchPrinters/XL` Searches for available XL printers of the specified type and returns their details.
- GET** `/acontrol/SearchPrinters/MLI` Searches for available MLI printers of the specified type and returns their details.
- GET** `/acontrol/SearchPrinters/IJ` Searches for available Resmark/IJ printers of the specified type and returns their details.
- GET** `/acontrol/GetPrinterIDs` Retrieves a list of available printer IDs and their corresponding names.
- GET** `/acontrol/help` Generates a list of available API endpoints and their details for the current application configuration.
- GET** `/acontrol/Connect/{printerId}` Connects the specified printer to the network.
- GET** `/acontrol/GetConnection/{printerType}/{connectionString}` Attempts to establish a connection to a printer based on the provided printer type and connection string.
- GET** `/acontrol/Disconnect/{printerId}` Disconnects the specified printer from the network.
- GET** `/acontrol/Lock/{printerId}/{disconnect}` Locks the specified printer, optionally disconnecting it from the network.
- GET** `/acontrol/Unlock/{printerId}` Unlocks the specified printer, allowing access to its GUI.
- GET** `/acontrol/GetPrinterInfo/{printerId}` Retrieves detailed information about a printer based on its unique identifier.
- GET** `/acontrol/GetConnectionStatus/{printerId}` Retrieves the connection status of a printer based on its unique identifier.
- GET** `/acontrol/TriggerPrint/{printerId}` Triggers the print process for the specified printer, based on the provided printer ID.
- GET** `/acontrol/ResetError/{printerId}` Resets the error state of the specified printer by invoking the reset error functionality on its associated driver.
- GET** `/acontrol/Reboot/{printerId}` Reboots the specified printer by invoking the reboot functionality on its associated driver.
- GET** `/acontrol/GetPrinterLogFile/{printerId}` Retrieves the log file entries for a specified printer.
- GET** `/acontrol/Stop/{printerId}` Stops the printer specified by the provided printer ID.
- GET** `/acontrol/GetErrorStatus/{printerId}` Retrieves the error status of the specified printer.
- GET** `/acontrol/GetErrorDetails/{printerId}` Retrieves the error details for the specified printer.
- GET** `/acontrol/GetPrintCounter/{printerId}` Retrieves the print counter for the specified printer.
- GET** `/acontrol/GetFormatNames/{printerId}` Retrieves a list of format names associated with the given printer.
- GET** `/acontrol/GetFontNames/{printerId}` Retrieves a list of font names associated with the given printer.
- GET** `/acontrol/GetVariableNames/{printerId}` Retrieves a list of variable names associated with a specific printer identified by the given printer ID.
- GET** `/acontrol/GetFormat/{printerId}/{formatName}` Retrieves the specified print format for the given printer.
- GET** `/acontrol/SetFormat/{printerId}/{formatName}` Sets the specified format as the active format for the printer and updates its settings.
- GET** `/acontrol/GetVariable/{printerId}/{variableName}` Retrieves the value of a specific variable for the given printer.

GET	/acontrol/SetVariable/{printerId}/{variableName}/{variableValue}	Sets a specific variable's value for the given printer.	▼
GET	/acontrol/RenameFormat/{printerId}/{oldFormatName}/{newFormatName}	Renames an existing format on the specified printer.	▼
GET	/acontrol/PrintFormat/{printerId}/{formatName}	Prints the specified format on the specified printer.	▼
GET	/acontrol/GetPropertyNames/{printerId}	Retrieves a list of property names associated with the given printer.	▼
GET	/acontrol/GetPropertyAttribute/{propertyName}	Retrieves the attribute type (read-write or read-only) for a specified property.	▼
GET	/acontrol/GetProperty/{printerId}/{propertyName}	Retrieves the value of a specified property for a given printer.	▼
GET	/acontrol/GetAllProperties/{printerId}	Retrieves all properties for a specified printer.	▼
GET	/acontrol/SetProperty/{printerId}/{propertyName}/{propertyValue}	Sets a property value for a given printer based on the specified property name and value.	▼
GET	/acontrol/GetNativePropertyNames/{printerId}	Retrieves a list of nativeProperty names associated with the given printer.	▼
GET	/acontrol/GetNativePropertyAttributes/{printerId}/{propertyName}	Retrieves the attributes of a native property for the specified printer.	▼
GET	/acontrol/GetNativeProperty/{printerId}/{propertyName}	Retrieves the value of a specified nativeNativeProperty for a given printer.	▼
GET	/acontrol/GetAllNativeProperties/{printerId}	Retrieves all native properties for the specified printer.	▼
GET	/acontrol/SetNativeProperty/{printerId}/{propertyName}/{propertyValue}	Sets a native property value for the specified printer.	▼
POST	/acontrol/SetPropertyValue/{printerId}/{propertyName}	Sets a property value for a given printer by reading the content from the provided stream and updating the property.	▼
POST	/acontrol/SetNativePropertyValue/{printerId}/{propertyName}	Sets a native property value for the specified printer using a stream as input.	▼
POST	/acontrol/SetVariables/{printerId}	Sets multiple variables for the given printer using a stream containing key-value pairs.	▼
POST	/acontrol/SetVariableValue/{printerId}/{variableName}	Sets a specific variable's value for the given printer using a stream of data.	▼
POST	/acontrol/SendFormat/{printerId}/{formatName}	Sends a print format to a specified printer using data from a stream.	▼

Beispiel:

GET

/acontrol/GetPrinterIDs

Retrieves a list of available printer IDs and their corresponding names.

This method retrieves a list of available printers along with their unique printer IDs. The response is a JSON object containing key-value pairs, where the key is the printer ID (in uppercase, without special characters) and the value is the printer's name. Example usage:

```
string url = "http://192.168.174.144:8086/acontrol/GetPrinterIDs";
using (var client = new HttpClient())
{
    client.DefaultRequestHeaders.Authorization = new AuthenticationHeaderValue("Basic", Convert.ToBase64String(Encoding.ASCII.GetBytes("diagraph:diagraph")));
    var response = await client.GetAsync(url);
    if (response.IsSuccessStatusCode)
    {
        var content = await response.Content.ReadAsStringAsync();
        Console.WriteLine(content);
    } else {
        Console.WriteLine("Failed to retrieve printer IDs");
    }
}
```

Example `curl` command:

```
curl -u diagraph:diagraph "http://192.168.174.144:8086/acontrol/GetPrinterIDs"
```

Parameters

No parameters

Execute

Clear

Responses

Curl

```
curl -X GET: \
"http://192.168.174.141:8086/acontrol/GetPrinterIDs" \
-H 'accept: */*'
```

Request URL

```
http://192.168.174.141:8086/acontrol/GetPrinterIDs
```

Server response

Code

Details

200

Response body

```
{
  "Key": "9FB2089F23819A38E35906F528DE983C",
  "Value": "NGT (COM1)"
},
{
  "Key": "6AE708DEE003578CB4E8BADEB388B01F",
  "Value": "NGT2 (192.168.173.130)"
},
{
  "Key": "20B4C3AFC3F4B908C1073AF3B05A9C31",
  "Value": "NGT2 (192.168.1.245)"
},
{
  "Key": "5C7A52E89A30FDE9936A8B3A2B27AE52",
  "Value": "NGT4 (192.168.173.132)"
},
{
  "Key": "F0E14F432049C7273A66999A035317C3",
  "Value": "NGT (192.168.173.80)"
},
{
  "Key": "4E4768A3638685C591D006A8B2C587C",
  "Value": "NGT8 (192.168.173.131)"
},
{
  "Key": "F9328FBC86FB58FCDDC97A31A78C56B",
  "Value": "XL5000 (192.168.173.57)"
}
}
```

Response headers

```
content-type: application/json
date: Thu, 20 Mar 2025 08:40:45 GMT
server: Kestrel
transfer-encoding: chunked
```

Responses

Code	Description	Links
200	OK	No links

Anwendungsfall:

XLU Drucker - Ändern einer Variable eines Druckbildes und Wechsel in den Druckmodus:

http://localhost:8086/acontrol/help
http://192.168.36.1:8086/acontrol/Connect/2AD4864AD07BEE2592B7447AD85F5ADE
http://192.168.36.1:8086/acontrol/Stop/2AD4864AD07BEE2592B7447AD85F5ADE
http://192.168.36.1:8086/acontrol/SetFormat/2AD4864AD07BEE2592B7447AD85F5ADE/Doc001
http://192.168.36.1:8086/acontrol/GetVariableNames/2AD4864AD07BEE2592B7447AD85F5ADE
0 "VIVariable13334"
1 "VIVariable2"
http://192.168.36.1:8086/acontrol/SetVariable/2AD4864AD07BEE2592B7447AD85F5ADE/VIVariable13334/frede
http://192.168.36.1:8086/acontrol/SetVariable/2AD4864AD07BEE2592B7447AD85F5ADE/VIVariable2/daniel
http://192.168.36.1:8086/acontrol/PrintFormat/2AD4864AD07BEE2592B7447AD85F5ADE/Doc001

Anwendungsfall :

XLU Drucker – mit a:touch-Lite (SD-Kartenversion :

atouch_lite_1.11.21.0621.rpi-4-bullseye-wifi-remote.img) , verbunden über WLAN

Abrufen der verfügbaren Properties und setzen und überprüfen der Speed

<http://192.168.4.1:8086/acontrol/GetPropertyNames/F7300CC6E5C58079093018C5B618361C>
<http://192.168.4.1:8086/acontrol/SetProperty/F7300CC6E5C58079093018C5B618361C/Density/60>
<http://192.168.4.1:8086/acontrol/GetProperty/F7300CC6E5C58079093018C5B618361C/Density>

→ „50“

Anwendungsfall :

NGT Drucker – Abrufen der nativen Escape-Sequenz R46

<http://192.168.174.157:8086/acontrol/Auth/FQGIZ4RHKCAR8DES4K5H6CML/admin>
<http://192.168.174.157:8086/acontrol/SetNativeProperty/C7F1923B95FC6B866108F01D4E463815/esc/R46>
<http://192.168.174.157:8086/acontrol/GetNativeProperty/C7F1923B95FC6B866108F01D4E463815/ESC>

→ "N8.1.03V-R"

Anwendungsfall :

Variablen bei einem MLi-Drucker über a:control setzen

Voraussetzung für dieses Demo:

-a:control muss als Administrator ausgeführt werden

-Format „Baljet.mli“ mit folgendem Inhalt:

```
MLi01
#
# Label name: Baljet.mli
# Renderer: a:design2 Version 4.8.8234 Build 28706
# generated 7/27/2022 4:16 PM
#
SET RIBBON_USE=1
#
#
VAR_DATE "DATE1_1" 3 0 0 0 0 0
VAR_DATE "DATE1_2" 9 0 0 0 0 0
VAR_TEXT "Serial" "6900001"
VAR_TEXT "LOT" "L7DDD"
#
TXT * 197 84 10 100 0 "{DATE1_1}/{DATE1_2}"
TXT * 13 88 10 100 0 "{Serial}"
TXT * 372 88 10 100 0 "LOT"
TXT * 479 88 10 100 0 "{LOT}"
```

See all services

<http://localhost:8086/acontrol/help> (login with diagraph:diagraph)

Get Connectioninfo

<http://127.0.0.1:8086/acontrol/GetConnection/MLI/COM1>

"B080AC9298423F08A5C9873681A76D3F,B8700MNHIDJF1BRZ7QTAV2P"

Verify that Baljet.mli is available

<http://127.0.0.1:8086/acontrol/GetFormatNames/B080AC9298423F08A5C9873681A76D3F>

"Baljet.mli"

Stop

<http://127.0.0.1:8086/acontrol/Stop/B080AC9298423F08A5C9873681A76D3F>

true

Load Format Baljet.mli

<http://127.0.0.1:8086/acontrol/SetFormat/B080AC9298423F08A5C9873681A76D3F/Baljet.mli>

true

Get Error Status

<http://127.0.0.1:8086/acontrol/GetErrorStatus/B080AC9298423F08A5C9873681A76D3F>

"00"

Get Variable Names

<http://127.0.0.1:8086/acontrol/GetVariableNames/B080AC9298423F08A5C9873681A76D3F>

0"VISerial"

1"VILOT"

Set Variable VISerial

127.0.0.1:8086/acontrol/SetVariable/B080AC9298423F08A5C9873681A76D3F/VISerial/abc123

True