

a:control

Web-Services/REST-Services



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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

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.

Software	Windows 7 or higher Microsoft .NET Framework 4.8
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Printer-Hardware	Requirements
Printer model	NGT2, NGT2+, NGT4, NGT4+, NGT6, NGT6E, NGT8, NGT8E, MLi, XLU, XL5000
Connectivity	Serial or Ethernet Network

53-System

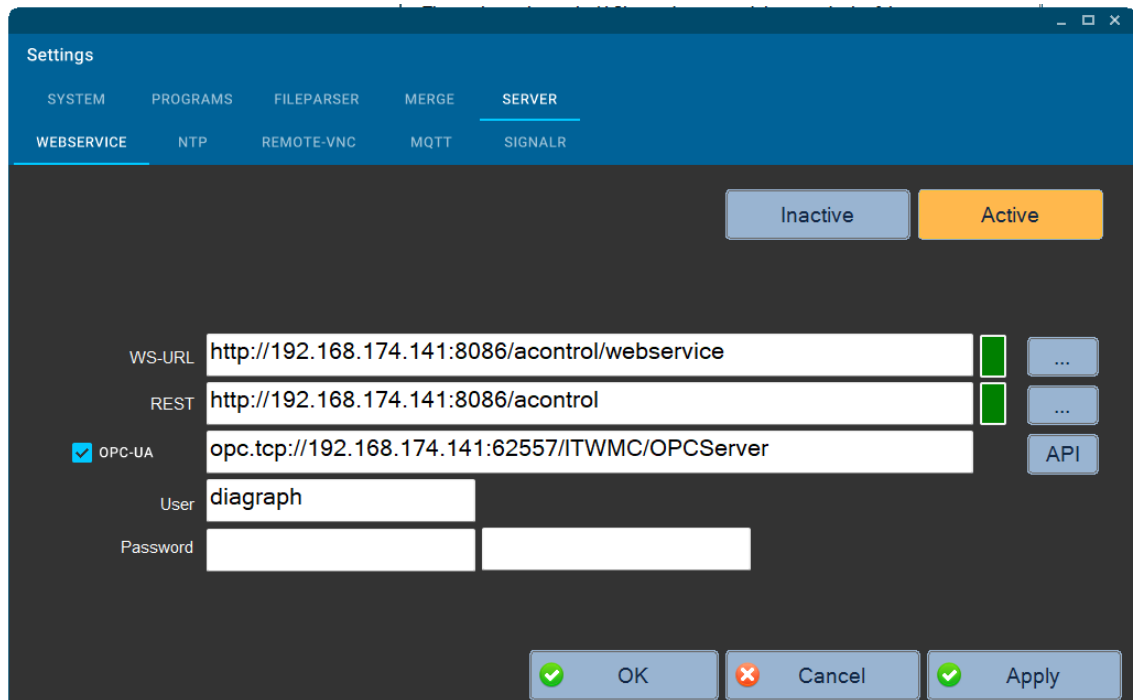
Printer-Hardware	Requirements
Printer model	53XL40, 53XL80u, 53XLC, XL5000,XL5000C
Connectivity	Ethernet

MLi-System

Printer-Hardware	Requirements
Printer model	MLi
Connectivity	Seriell oder Ethernet Netzwerk

3. Web Service

- Settings in a:control
To activate the Web Service functionality, a:control must be set to Active in the Web Service settings.



The screenshot shows the 'Settings' window with the 'SERVER' tab selected. Under the 'WEBSERVICE' sub-tab, there are two buttons: 'Inactive' and 'Active', with 'Active' being the selected state. Below these are three input fields: 'WS-URL' containing 'http://192.168.174.141:8086/acontrol/webservice', 'REST' containing 'http://192.168.174.141:8086/acontrol', and 'OPC-UA' (checked) containing 'opc.tcp://192.168.174.141:62557/ITWMC/OPCServer'. To the right of the OPC-UA field is an 'API' button. Below these are 'User' (diagraph) and 'Password' (empty) fields. At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

- The authentication settings are set by default to

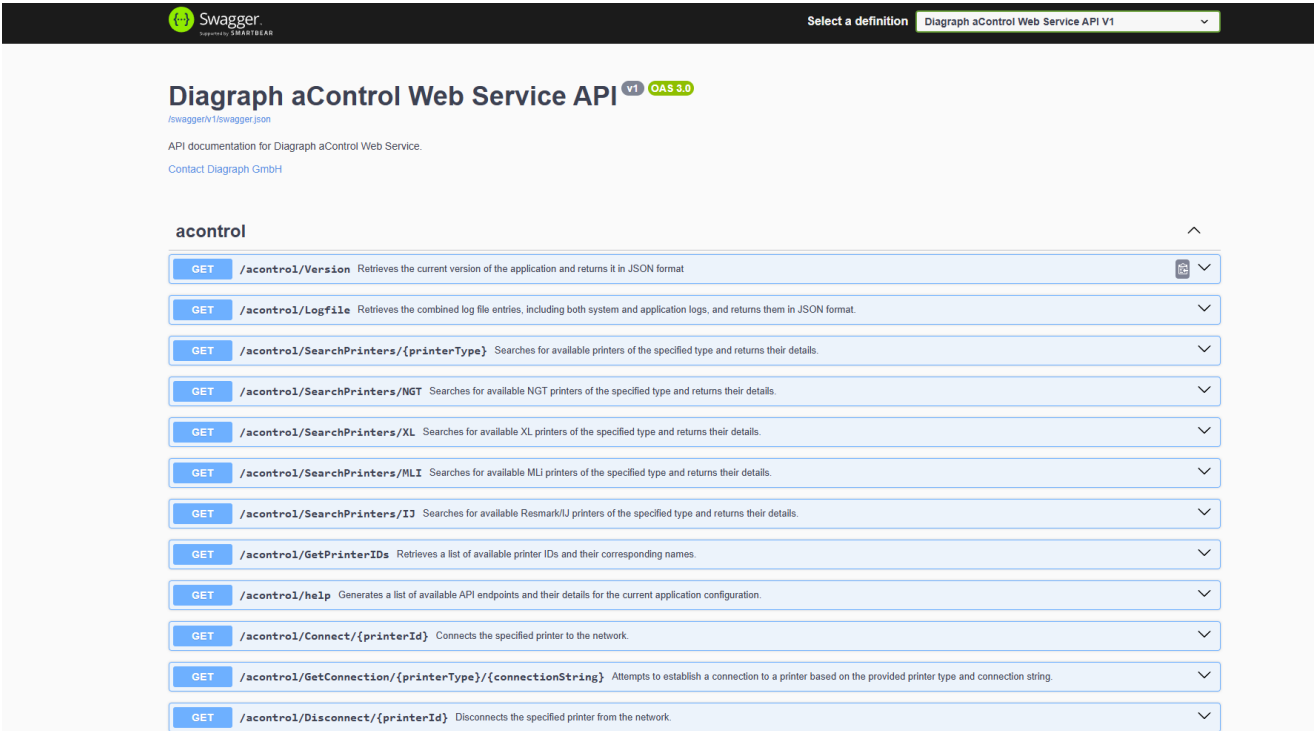
User : diagraph
Password: diagraph

4. Web Service Demoprojekt (Visual Studio / C#)

Below is a web service demo in the C# programming language.
It lists the available printers, connects to them, and reads the error status.

5. A:control REST Services (Swagger)

You can access the Swagger test client by pressing the button Settings->Server->Web Service->API



Swagger

Select a definition: Diagraph aControl Web Service API v1

Diagraph aControl Web Service API v1 OAS 3.0

[/swaggerV1/swagger.json](#)

API documentation for Diagraph aControl Web Service.
[Contact Diagraph GmbH](#)

acontrol

Method	Endpoint	Description
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://192.168.174.144:8086/acontrol/GetPrinterIDs" \
  -H 'accept: */*'
```

Request URL

```
http://192.168.174.144:8086/acontrol/GetPrinterIDs
```

Server response

Code Details

200

Response body

```
{
  "Key": "9FB2089F23819A38C35906F528DE983C",
  "Value": "NGT (COM1)"
},
{
  "Key": "6AE708DEE003578CBAE8BADEB388B01F",
  "Value": "NGT2 (192.168.173.130)"
},
{
  "Key": "20BAC3AFC3F4B908C1073AF3B05A9C31",
  "Value": "NGT2 (192.168.1.245)"
},
{
  "Key": "5C7A52E89A30FDE9936A8B3A2B27AE52",
  "Value": "NGT4 (192.168.173.132)"
},
{
  "Key": "F0E14F4320A9C727A66099A035317C3",
  "Value": "NGT (192.168.173.80)"
},
{
  "Key": "4E4768A3638685C5910B06A8B2C587C",
  "Value": "NGT8 (192.168.173.131)"
},
{
  "Key": "F9328FBC86F858FCDDC97A31A78C56B",
  "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

Use Case:

XLU Printer - Change a variable of a print image and switch to print mode:

```
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
```

Use Case :

XLU printer – with a:touch-Lite (SD card version: atouch_lite_1.11.21.0621.rpi-4-bullseye-wifi-remote.img), connected via WLAN

Retrieve available properties and set and check the 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“

Use Case :

NGT Printer - Retrieve the native Escape sequence 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"

Use Case :

Set variables on an MLi printer using a:control

Prerequisite for this demo:

-a:control must be run as administrator

-Format „Baljet.mli“ with content:

```
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