



Universal-Adapter documentation

INSTALLING AND USING ANYVIZ UNIVERSAL-ADAPTER

VERSION 0.5.1.0

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TARGET SPECIFICATIONS

The universal cloud adapter is designed to connect miscellaneous devices to AnyViz. The cloud adapter can be installed on Linux machines or on Windows.

	WIN32	LINUX (POSIX)
X86	X	X
X64	X	X
ARM		X

INSTALL CLOUD ADAPTER ON LINUX

The cloud adapter is served as a Debian package or an Itsy package. Download the package for your target platform and install the package using following command.

ON ARM PLATFORM WITH DPKG:

```
wget -N https://download.anyviz.de/anyviz\_ARM.deb  
sudo dpkg -i anyviz_ARM.deb
```

ON X86 PLATFORM WITH DPKG:

```
wget -N https://download.anyviz.de/anyviz\_x86.deb  
sudo dpkg -i anyviz_x86.deb
```

ON X64 PLATFORM WITH DPKG:

```
wget -N https://download.anyviz.de/anyviz\_x64.deb  
sudo dpkg -i anyviz_x64.deb
```

ON ARM PLATFORM WITH IPKG:

```
sudo ipkg install http://download.anyviz.de/anyviz\_ARM.ipk
```

ON X86 PLATFORM WITH IPKG:

```
sudo ipkg install http://download.anyviz.de/anyviz\_x86.ipk
```

ON X64 PLATFORM WITH IPKG:

```
sudo ipkg install http://download.anyviz.de/anyviz\_x64.ipk
```

The download link is available with http and https. After successful installation, the AnyViz cloud adapter starts automatically.

UNINSTALL CLOUD ADAPTER ON LINUX

For uninstalling AnyViz cloud adapter enter the following command:

WITH DPKG PACKET MANAGER

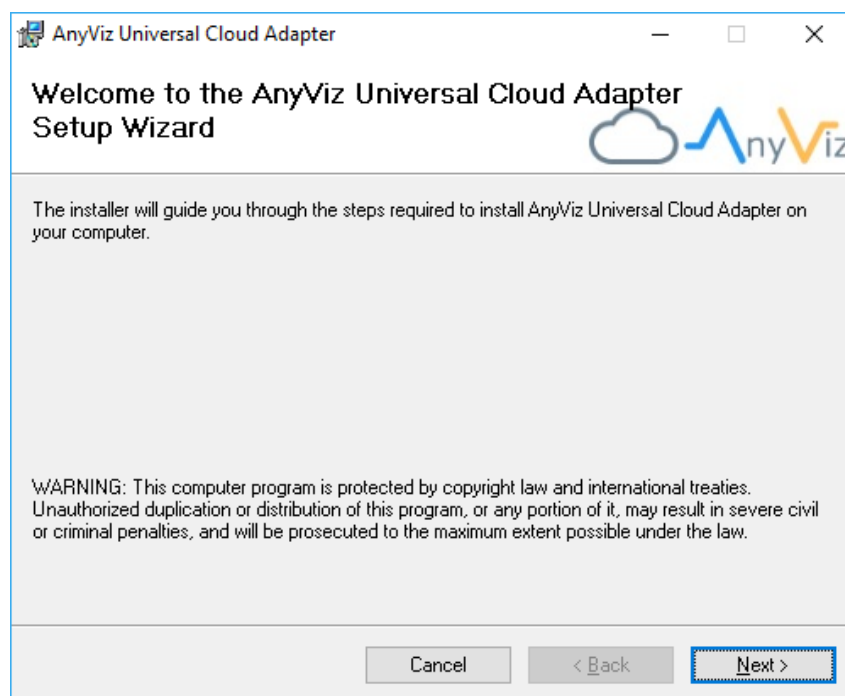
```
sudo dpkg -r anyvizcloudadapter
```

WITH IPKG PACKET MANAGER

```
sudo ipkg remove anyvizcloudadapter
```

INSTALL CLOUD ADAPTER ON WINDOWS

Download Setup file from <https://download.anyviz.de/AnyVizUniversalCloudAdapter.msi> and follow the instructions of the setup wizard.

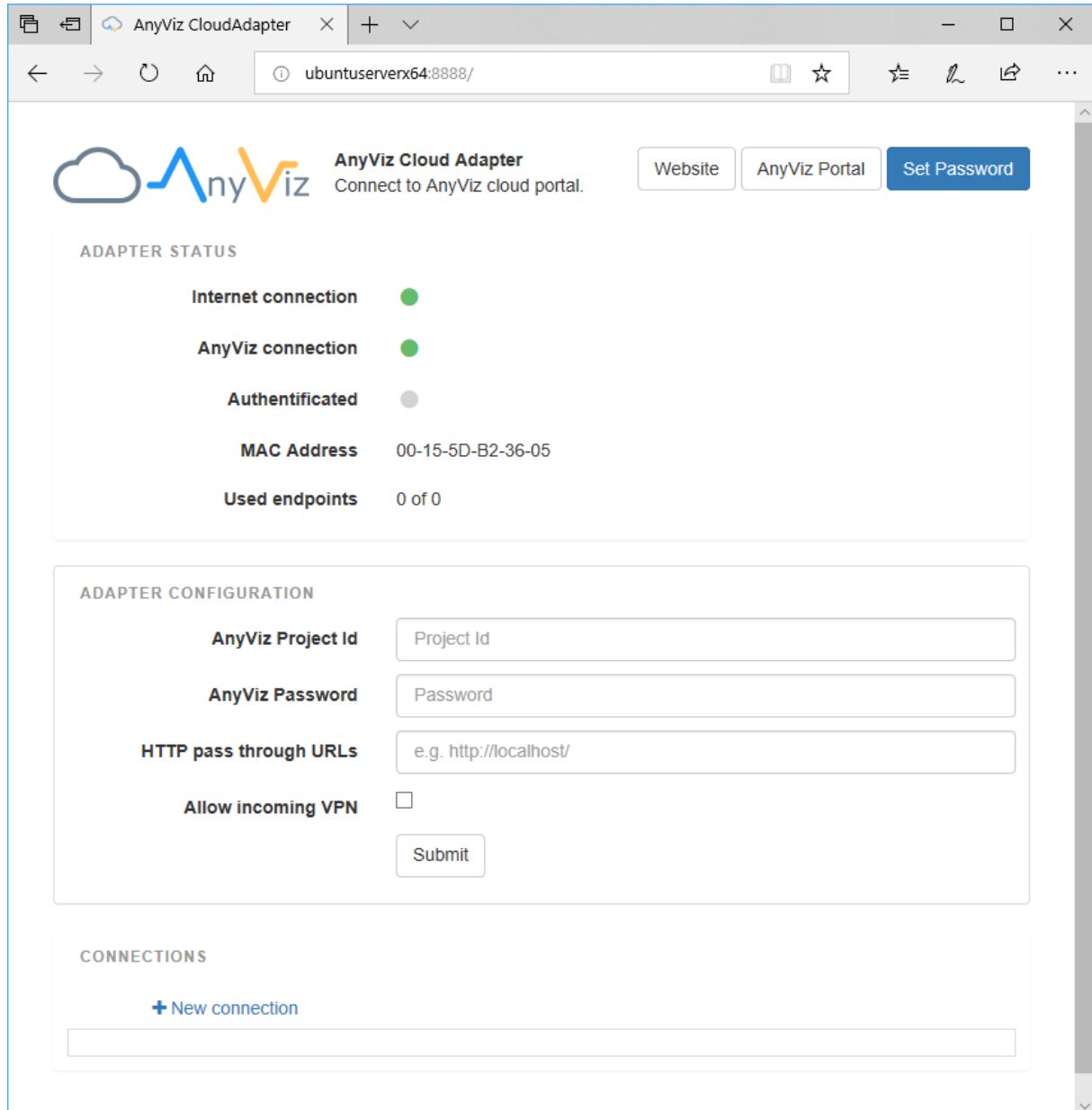


CONFIG CLOUD ADAPTER

The cloud adapter comes with a web server. Enter the following URL to get to the configuration interface:

[http://\[host\]:8888](http://[host]:8888)

Then the following web page will be displayed:



The screenshot shows a web browser window with the address bar displaying "ubuntuserverx64:8888/". The page title is "AnyViz Cloud Adapter" and the subtitle is "Connect to AnyViz cloud portal." There are three buttons: "Website", "AnyViz Portal", and "Set Password".

ADAPTER STATUS

Internet connection	●
AnyViz connection	●
Authenticated	●
MAC Address	00-15-5D-B2-36-05
Used endpoints	0 of 0

ADAPTER CONFIGURATION

AnyViz Project Id	<input type="text" value="Project Id"/>
AnyViz Password	<input type="text" value="Password"/>
HTTP pass through URLs	<input type="text" value="e.g. http://localhost/"/>
Allow incoming VPN	<input type="checkbox"/>
<input type="button" value="Submit"/>	

CONNECTIONS

[+ New connection](#)

CONFIGURATION PARAMETER

AnyViz Project Id	Project ID generated by AnyViz portal: Open the project settings at the top right of the AnyViz Portal
AnyViz Password	Password for secure Adapter communication: The password must be entered in AnyViz Portal once the connection has been established
HTTP pass through URLs	Specify URL(s) for pass-through to the server, to display local websites in AnyViz Portal (e.g. http://localhost/visu). Multiple URLs can be separated with a semicolon. Limitations: No https support
Allow incoming VPN	Allow AnyViz Administrators to establish a secure VPN connection to this device

Please click submit after changing configuration parameter.

STATUS DISPLAY

Internet connection	Green if the address of the AnyViz portal can be resolved by the DNS server.
AnyViz connection	Green if the connection to AnyViz portal can be established.
Authenticated	Green if the adapter password matches the password entered in Portal
MAC Address	Address of the network adapter which is used by the cloud adapter
Used endpoints	Gives the number of tags used in AnyViz and the number of symbols which are sent to the AnyViz portal

MANAGING CONNECTIONS

Since version 0.5.0, the universal cloud Adapter can handle several different connections. Click on "New Connection" for a selection. You can then set up the connection as described below.

CREATE OPC-UA CONNECTION

Name	Enter a name to appear later in the AnyViz portal
Server url	Enter the URL of your OPC-UA server (e.g. opc.tcp://server:48010)
User name	If your OPC-UA-Server requires authentication, enter the user name. Otherwise leave blank.
Password	If your OPC-UA-Server requires authentication, enter the password. Otherwise leave blank.

OPC-UA FEATURES

Transport	
UA-TCP UA-SC UA Binary	✓
SOAP-HTTP WS-SC UA Binary	
SOAP-HTTP WS-SC UA XML	
SOAP-HTTP WS-SC UA XML-UA Binary	
Encryption	
None	✓
Basic128Rsa15	*
Basic256	*
Authentication	
Anonymous	✓
User Name Password	✓
X509 Certificate	*

* Currently in work

CREATE MODBUS TCP CONNECTION:

Name	Enter a name to appear later in the AnyViz portal
Hostname	Enter the hostname or IP address of the device
Port	Enter the TCP port number. Default for Modbus is 502
Swap	Typically, the values of the Modbus registers are placed in Big Endian format. If the values do not appear as expected, press "Swap" to retrieve the values in Little Endian format.

Now click on "New row" to create one or more new symbols. The following parameters can be entered

Name	Enter a name to appear later in the AnyViz portal
Unit ID	Enter the unit ID (also known as slave ID) of your device
Function Code	The Modbus function code
Data type	Choose a data type from the list
Address	Enter the Modbus register address (zero based). If the registers in your device documentation start at 1, they may be register numbers. In this case, subtract the register number by 1.
Length	Only needed in the case of data type String and specifies the length in bytes.

Note: Some device descriptions are using the *Modicon convention*. If you see the first register on the list having a number 40001, that really tells you register #1, and it is a holding register (function code 3)

CREATE MODBUS RTU CONNECTION:

Name	Enter a name to appear later in the AnyViz portal
Port	The Cloud Adapter lists all serial ports of your system. Select the port to which your Modbus device is connected.
Stop bits	Number of the stop bits (see description of the Modbus device)
Parity	Parity bit (see description of the Modbus device)
Baudrate	Baud rate (see description of the Modbus device)
Swap	Typically, the values of the Modbus registers are placed in Big Endian format. If the values do not appear as expected, press "Swap" to retrieve the values in Little Endian format.

Now click on "New row" to create one or more new symbols. The following parameters can be entered

Name	Enter a name to appear later in the AnyViz portal
Unit ID	Enter the unit ID (also known as slave ID) of your device
Function Code	The Modbus function code
Data type	Choose a data type from the list
Address	Enter the Modbus register address (zero based). If the registers in your device documentation start at 1, they may be register numbers. In this case, subtract the register number by 1.
Length	Only needed in the case of data type String and specifies the length in bytes.

Note: Some device descriptions are using the *Modicon convention*. If you see the first register on the list having a number 40001, that really tells you register #1, and it is a holding register (function code 3)

CREATE SIEMENS TCP CONNECTION

You can read and write values from Siemens PLCs like (S7-300, S7-400, S7-1200 or S7-1500) via the RFC1006 protocol.

Name	Enter a name to appear later in the AnyViz portal
Hostname	Enter the hostname or IP address of the device
Rack	Rack number of communication processor (Default is 0)
Slot	Slot number of communication process (Mostly 0 or 2)

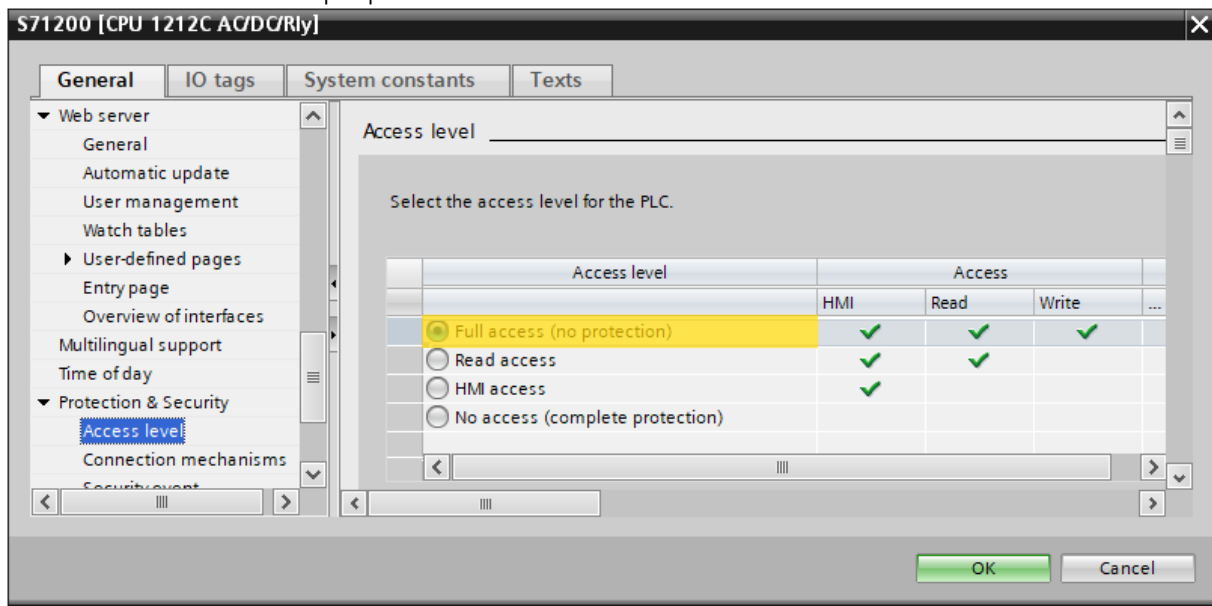
Now click on "New row" to create one or more new symbols. The following parameters can be entered

Name	Enter a name to appear later in the AnyViz portal
Area	Choose a supported area from the list
DB	DB-Number (only required if area is DB)
Data type	Choose a data type from the list
Address	Enter the byte address (or bit address if datatype is BIT)

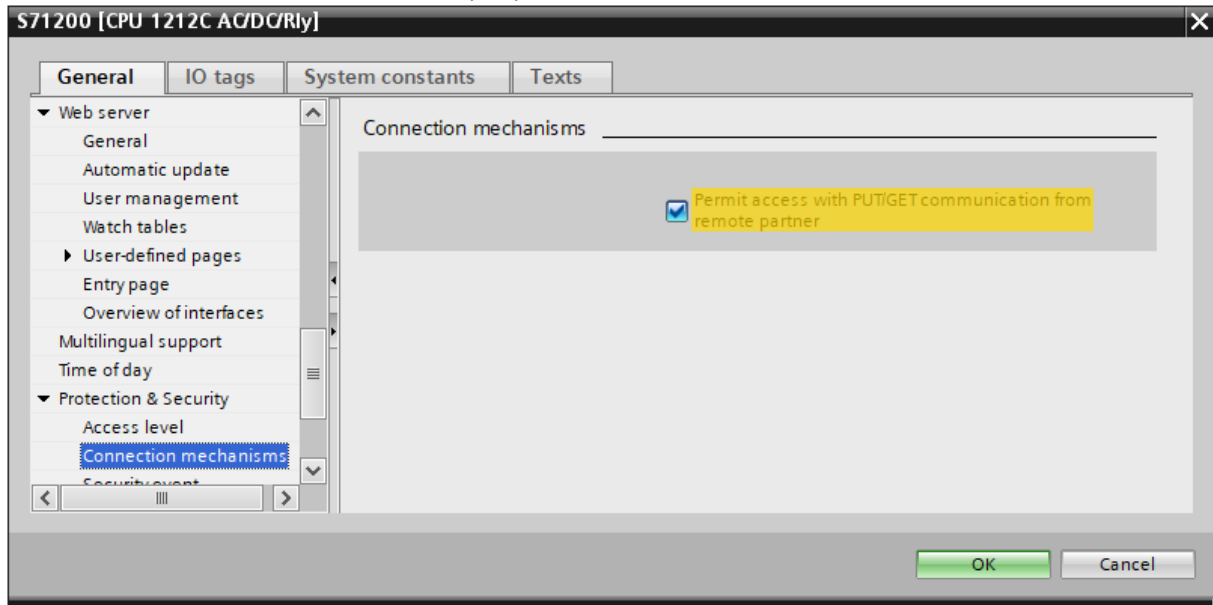
SYSTEM REQUIREMENTS

In order to be able to communicate with a Siemens PLC via the RFC1006 protocol, the following settings must be made in the TIA Portal.

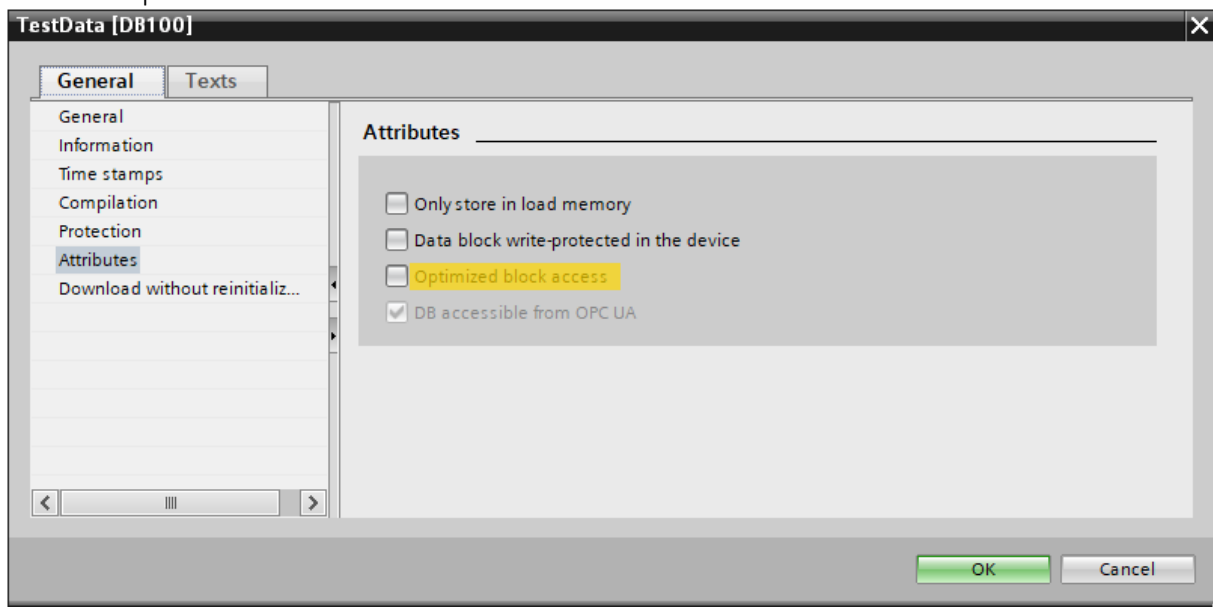
Allow Full Access in CPU properties



Permit access with PUT/GET in CPU properties

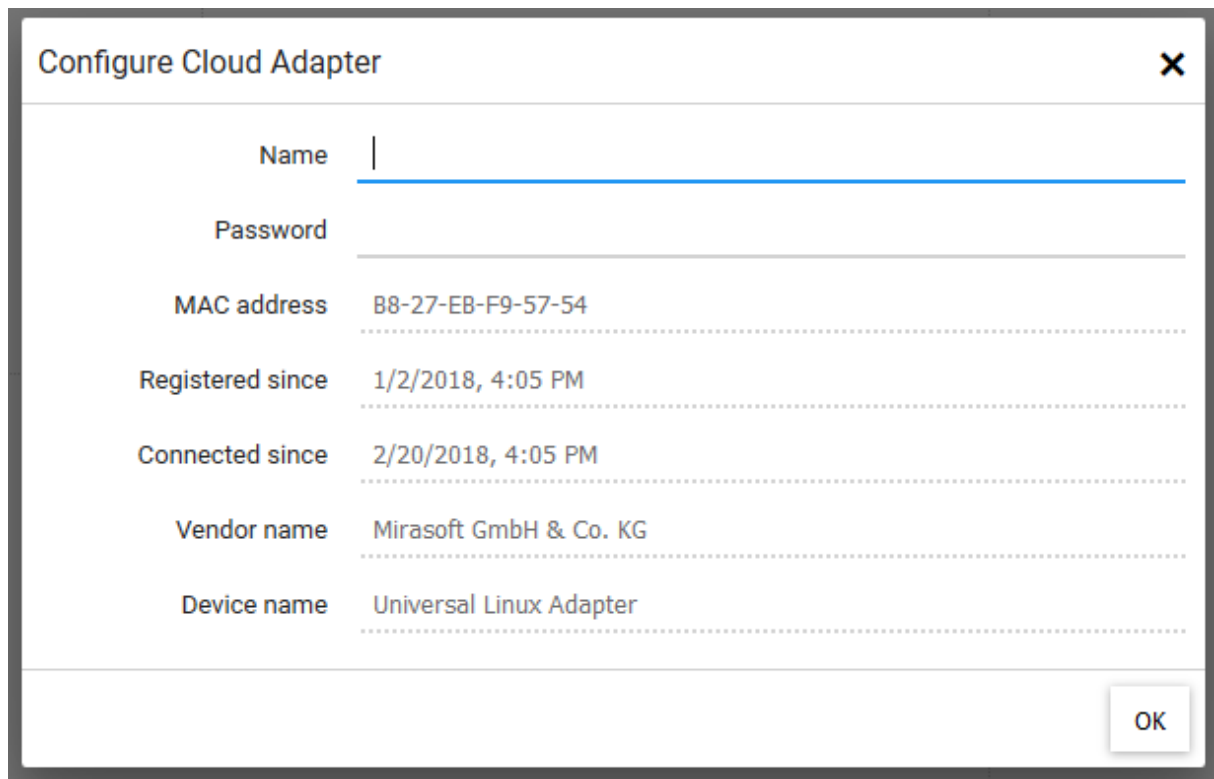


Disable "Optimized block access" in attributes of DBs



CONNECTION CONFIRMATION

Once the connection to the AnyViz portal has been established, a new entry will appear in the AnyViz user interface. Move your mouse over the entry and click on the gear symbol. The cloud adapter dialog opens.



Name	
Password	
MAC address	B8-27-EB-F9-57-54
Registered since	1/2/2018, 4:05 PM
Connected since	2/20/2018, 4:05 PM
Vendor name	Mirasoft GmbH & Co. KG
Device name	Universal Linux Adapter

OK

For verification, the same password must be entered, which was previously set in the cloud adapter configuration interface. Optionally, a name can be assigned, which will then be used for display.

ANYVIZ VPN

By enabling the “Allow incoming VPN” feature, you can use the universal cloud adapter to remotely access your device. Users who are logged in to the AnyViz Portal as an administrator can connect via the context menu in the cloud adapter Tree.

A virtual network adapter is created on the cloud adapter system that connects to AnyViz Cloud. Administrators can connect to your device through a separate AnyViz VPN client.

DIAGNOSTICS

In the case of an error, a log file is created. The log file is available at [http://\[host\]:8888/Log.txt](http://[host]:8888/Log.txt).