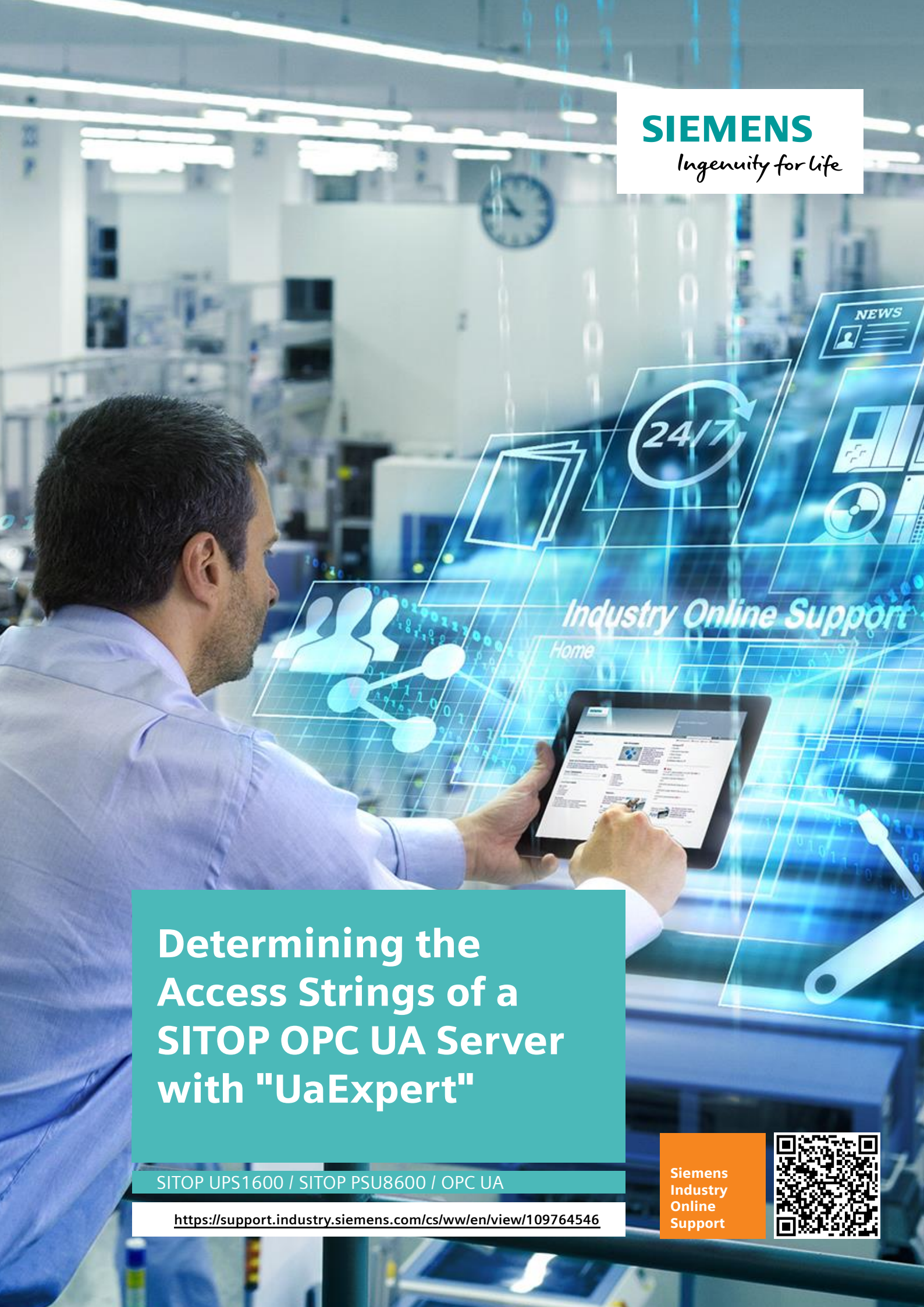


Determining the Access Strings of a SITOP OPC UA Server with "UaExpert"

SITOP UPS1600 / SITOP PSU8600 / OPC UA

https://support.industry.siemens.com/cs/ww/en/view/109764546

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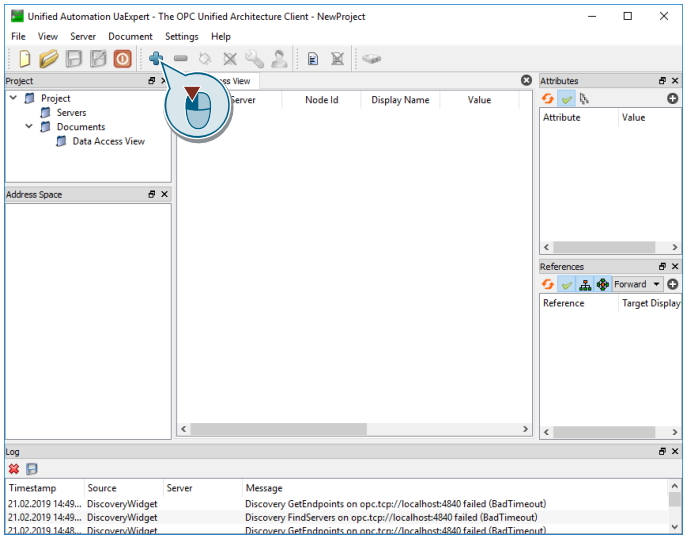
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1 Using "UA Expert" to Create a Connection to the OPC UA Server Integrated in SITOP Devices

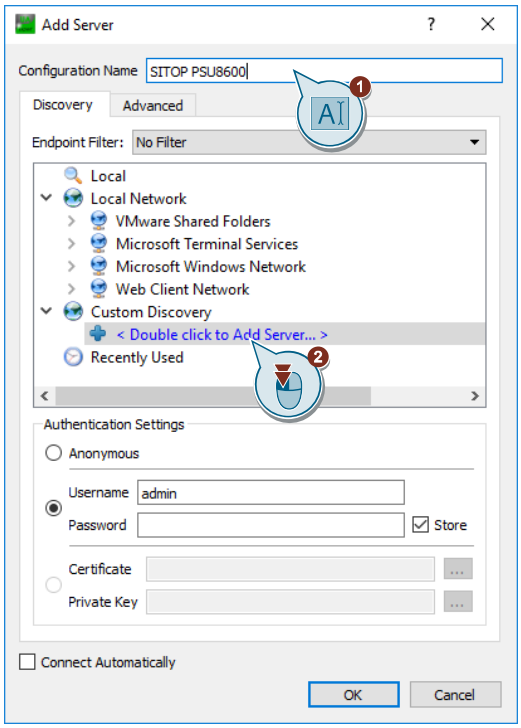
In this chapter we show you how to use "UaExpert" to establish a connection to the OPC UA server of the power supply system SITOP PSU8600. The procedure is similar for the uninterruptable power supply SITOP UPS1600.

1. Make sure that the SITOP power supply can be reached from your computer (through a ping via the cmd console, for example).
2. Install and open "UaExpert". The download is available at the following link: https://www.unified-automation.com/products/development-tools/uaexpert.html
3. Click the "Blue Plus" icon in the top menu bar of "UaExpert".



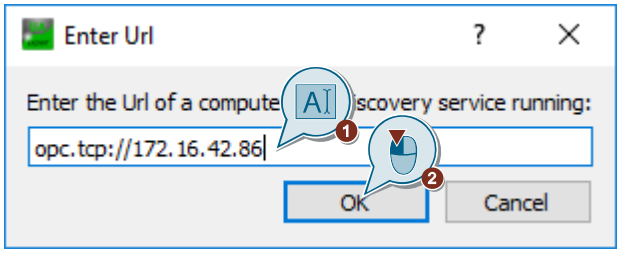
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4. The "Add Server" dialog window opens to add OPC UA servers.
   - In the "Configuration Name" field you enter an appropriate designation for your connection (1).
   - Double-click the item "<Double click to Add Server…>" (2).



5. The "Enter Url" dialog window opens.
   - Enter the IP address of your OPC UA server behind the already entered beginning of the URL. (1)
   - Confirm the entry with the "OK" button. (2)

   Composition of the URL:
   <opc.tcp://> + <172.16.42.86> + <:4840>
   <protocol used//> + <IP of the server> + <:port used>

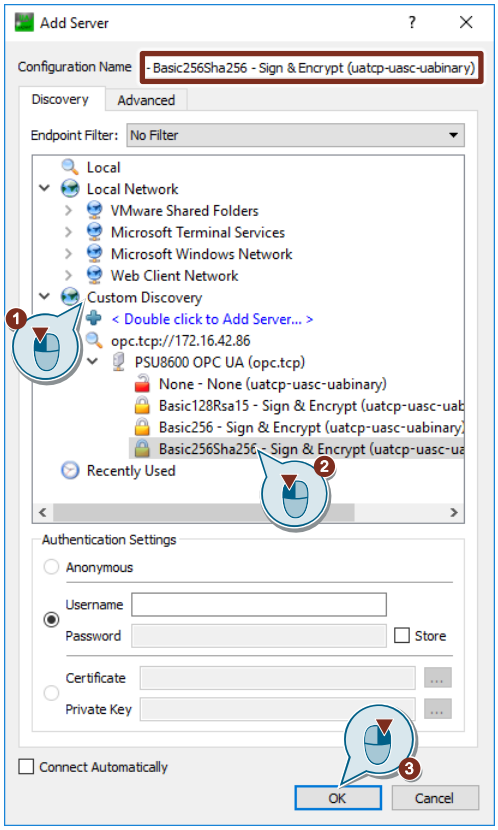


Note When created, the URL is attached automatically to the standard port for OPC UA servers (:4840). If you use a different port, you can edit this in the properties after establishing the connection or enter it directly in the input field. Example for a server with a different port: "opc.tcp://172.16.42.86:3830"

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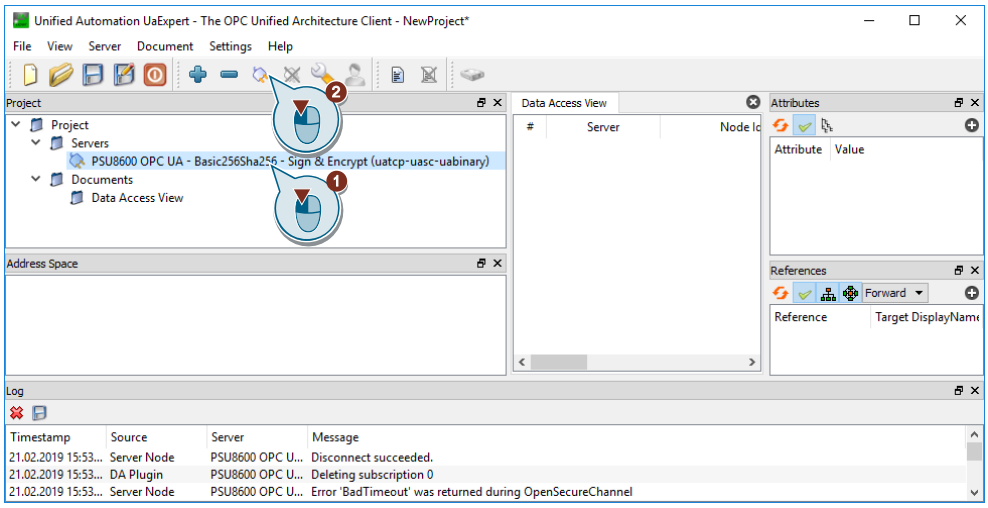
6. After entering the URL the server is displayed in the "Custom Discovery" area.
   - Open the OPC UA server item (1).
   - Select one of the end points presented (2).
     It is recommended to select the end point with the highest encryption. The selected end point is attached to the name that you previously specified for the connection (framed in red).
   - Confirm the configuration with the "OK" button (3).

   More information on encryption versions is available at the following link:
   https://docs.microsoft.com/de-de/dotnet/api/system.servicemodel.security.securityalgorithmsuite?view=netframework-4.7.2



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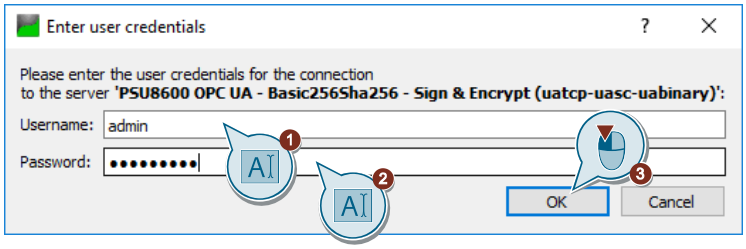
7. The server is displayed in the server list.
   - Select the server (1).
   - Click the "Connector" icon in the top menu bar to start establishing the connection (2).



8. Via the "Enter user credentials" dialog window you are requested to enter the login data of an authenticated user. Enter the login name in the corresponding field (1).

   Enter the associated password in the corresponding field (2).

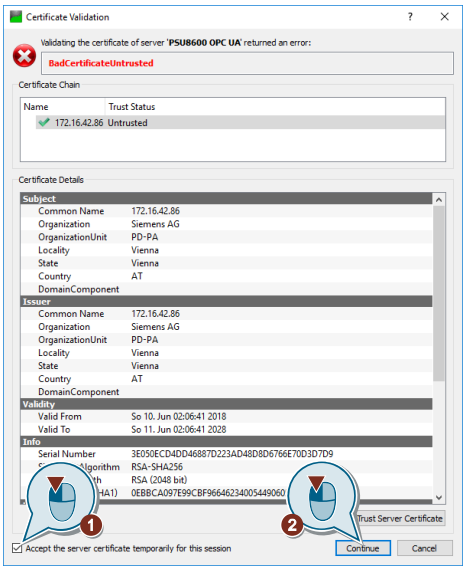
   Click the "OK" button to confirm the inputs (3).



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9. In the following window "Certificate Validation" you are informed that the certificate of the server is not trustworthy. This is because the certificate is not yet known to the client system.
   - Check the option "Accept the server temporarily for this session" at the bottom of the window (1).
   - Click on the "Continue" button (2).

   This makes the server certificate trustworthy for one session. With the "Trust Server Certificate" button you can also enter the certificate permanently in the list of trustworthy certificates.



10. Wait until the connection to the server has been established.

Result

You have successfully established the connection to the OPC UA server of your SITOP power supply system. The "Connector" icon in the server list is now displayed as closed. You can see the data structure in the "Address Space" area. (Figure 2-1)

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2 Determining the Data Points and Associated Access Strings

Browsing for the required data points and reading out the attributes

After the connection to the OPC UA server has been established successfully the closed structure tree of the server is displayed in the "Address Space" field of the window (1).

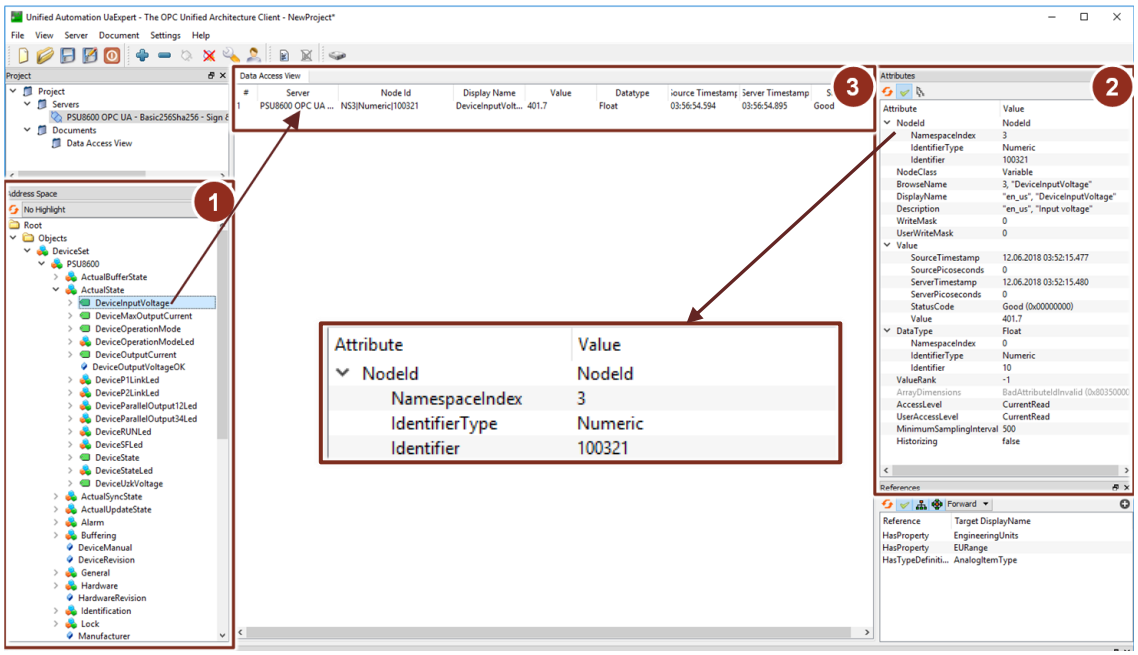
Browse the data structure for the required data point. You do this using the "arrow" buttons next to the objects to open and close them.

Select the data point. The different attributes of the data point are displayed in the "Attributes" area (2).

The "NodeID" attribute addresses a data point on the OPC UA server.
The attributes with the associated parameters ("NamespaceIndex", "IdentifierType" and "Identifier") are to be found in the item "NodeID".

You have read and write access to the data points during runtime in the "Data Access View" area (3). Drag-and-drop the data point into the "Data Access View" area. In the "Value" column you see the current status value.

Figure 2-1



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Note on the verification of data points (to Figure 2-1 "Data Access View")

In this example we have chosen the data point "DeviceInputVoltage". To make sure that the data point is the input voltage of the PSU8600 you can check the value in the "Value" area against the value that the web server outputs (framed in red).

To find out how to have the values output via the web server refer to the manual at the "Web Server" link on the entry page of the device you are using.

Figure 2-2



#	Server	Node Id	Display Name	Value	Datatype	ource Timestamp	Server Timestamp	Statuscode
1	PSU8600 OPC UA ...	NS3|Numeric|100321	DeviceInputVolt...	401.7	Float	03:56:54.594	03:56:54.895	Good

Composition of the access string for a data point from the NodeID

The string for the NodeID in the server is composed of the following three values.

"ns=<namespaceIndex>;<identifiertype>=<identifier>"

Example: "ns=3;i=100321"

Information about the abbreviations of the different identifier types and further information on the topic of "NodeID" is available at the following link:

http://documentation.unified-automation.com/uasdkhp/1.0.0/html/_l2_ua_node_ids.html

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