LabVIEW OPC with NI OPC Servers

Hans-Petter Halvorsen, M.Sc.

Software

You need the following Software:

- LabVIEW (LabVIEW Professional Development System 32-Bit: English)
- NI OPC Servers

You may use them in “Evaluation Mode” if you don't have a valid License key

All LabVIEW Software can be downloaded from: www.ni.com/download

NI OPC Servers

Write Data to OPC Server

Read Data from OPC Server

In this Example LabVIEW Application #1 and LabVIEW Application #2 are on the same computer. Normally they are located on 2 different computers in a Network.

LabVIEW Application #1

LabVIEW Application #2

NI OPC Servers

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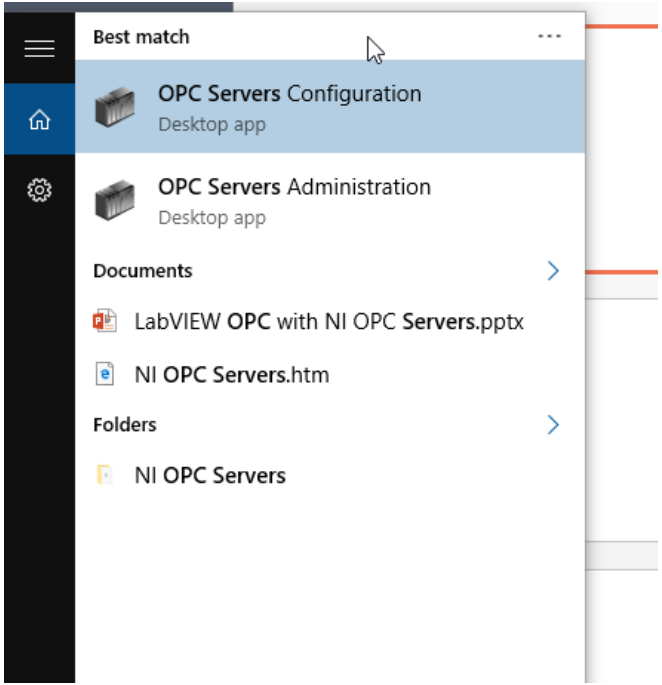
NI OPC Servers

A Demo version should be included with LabVIEW DSC Module or LabVIEW Real-Time Module

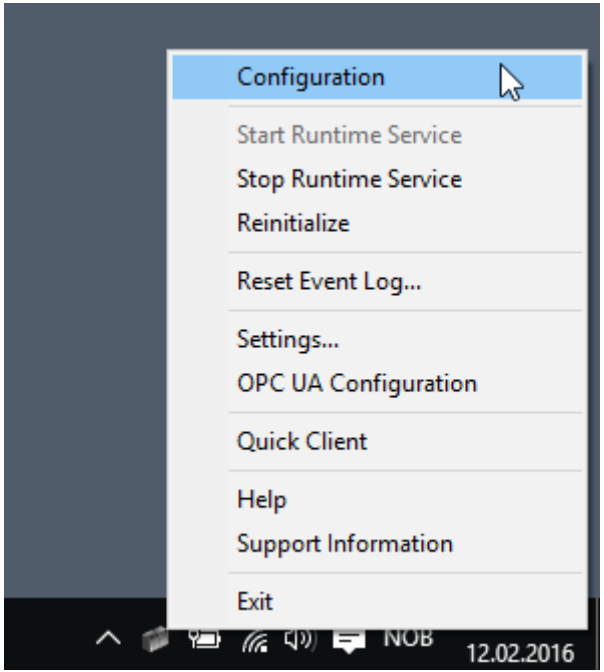
Use Search in Windows. Search for «OPC Servers» And select «OPC Servers Configuration»



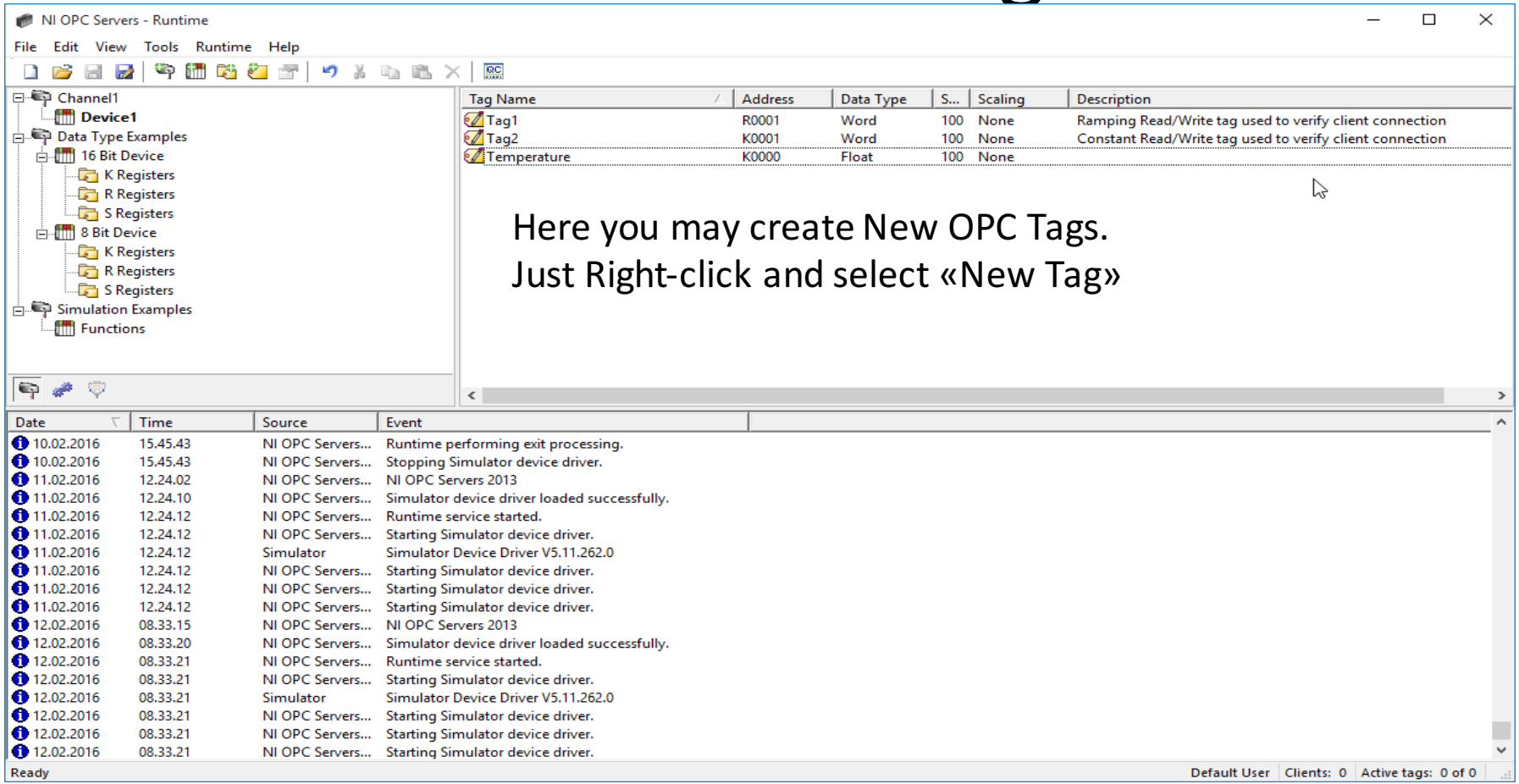
NI OPC Servers

NI OPC Servers will then start and you get access from the Taskbar in Windows.

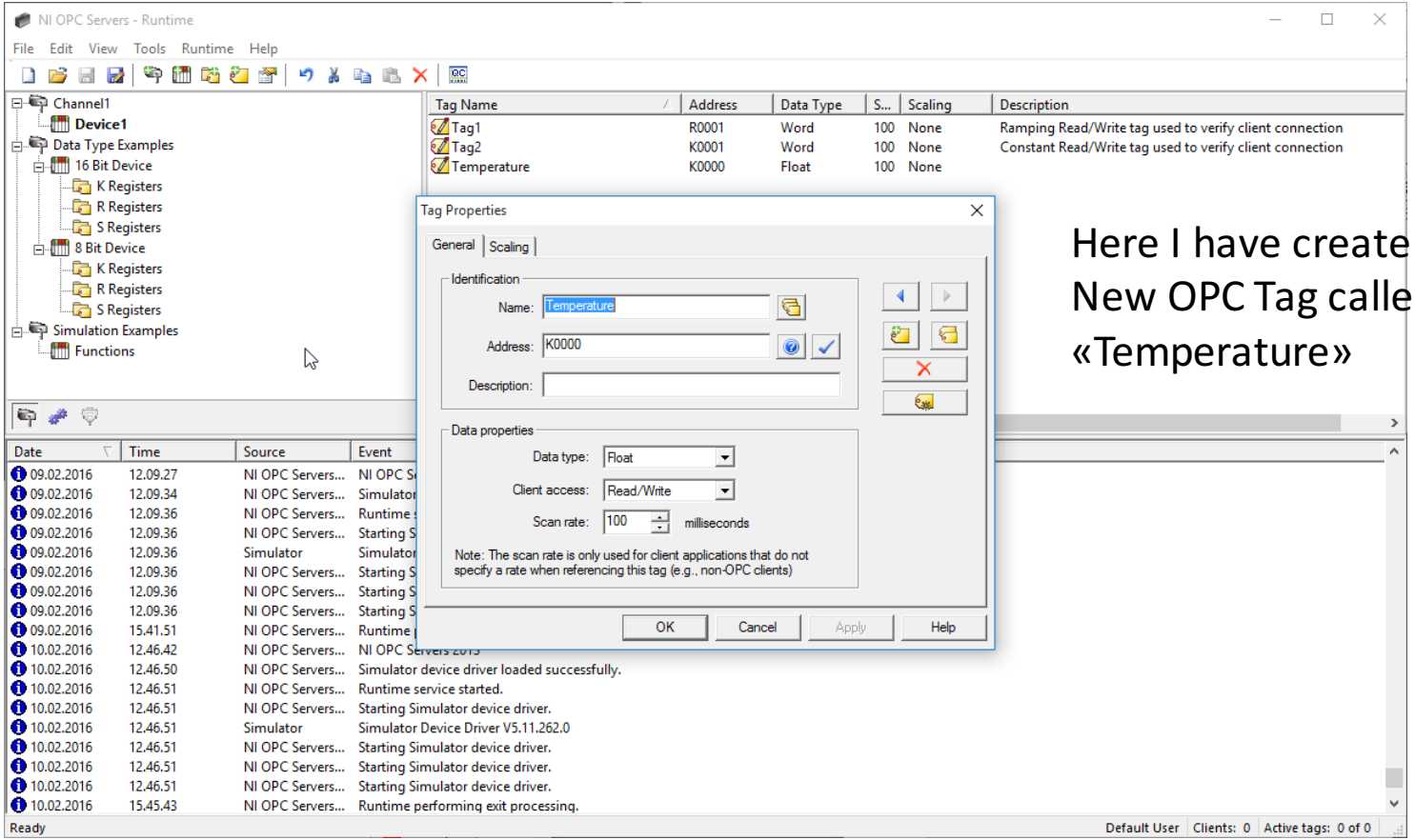
Select “Configuration”



NI OPC Servers Configuration



NI OPC Servers – Create New Tag



Here I have create a New OPC Tag called «Temperature»

OPC in LabVIEW

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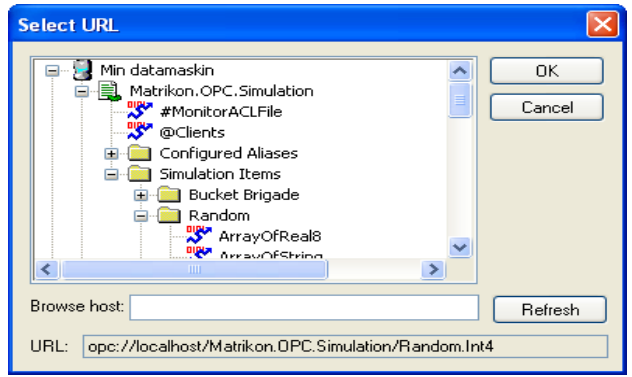
The OPC Functions in LabVIEW

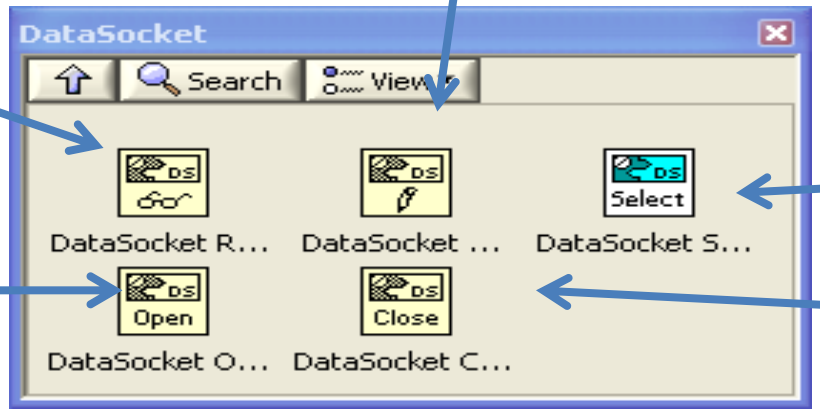
You can use LabVIEW as an OPC client by connecting to an OPC server through a **DataSocket** connection.

The **DataSocket** palette in LabVIEW:



Write Data to OPC

Read Data from OPC



Browse OPC Servers and OPC Items

Open Connection to OPC Server

Close Connection to OPC Server

OPC Write in LabVIEW

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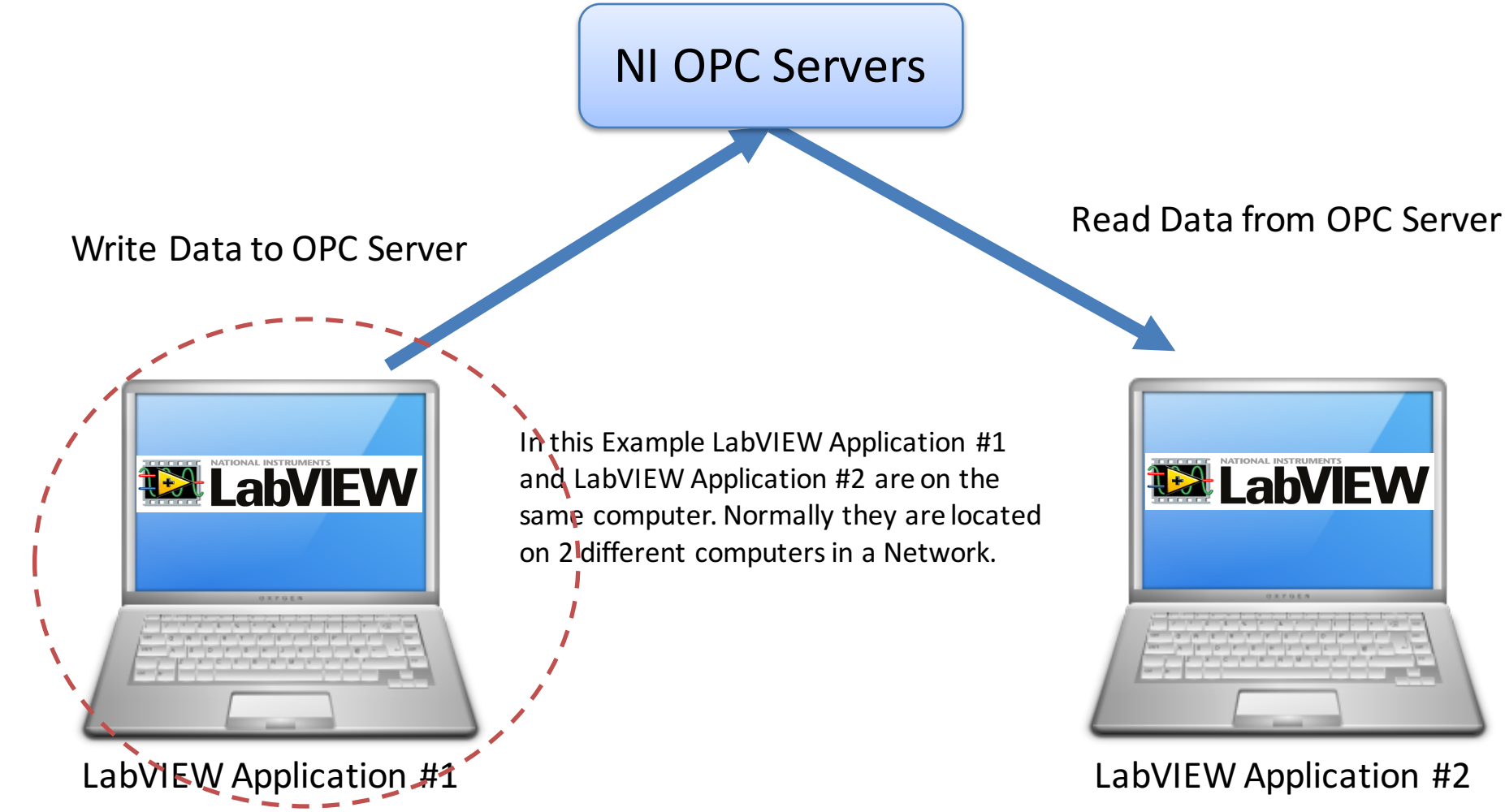
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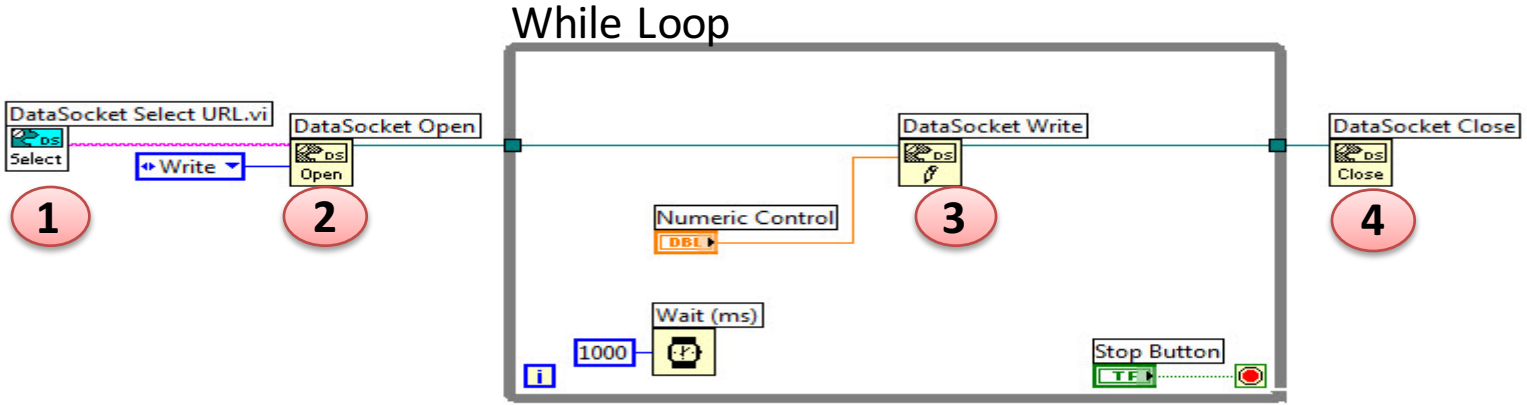
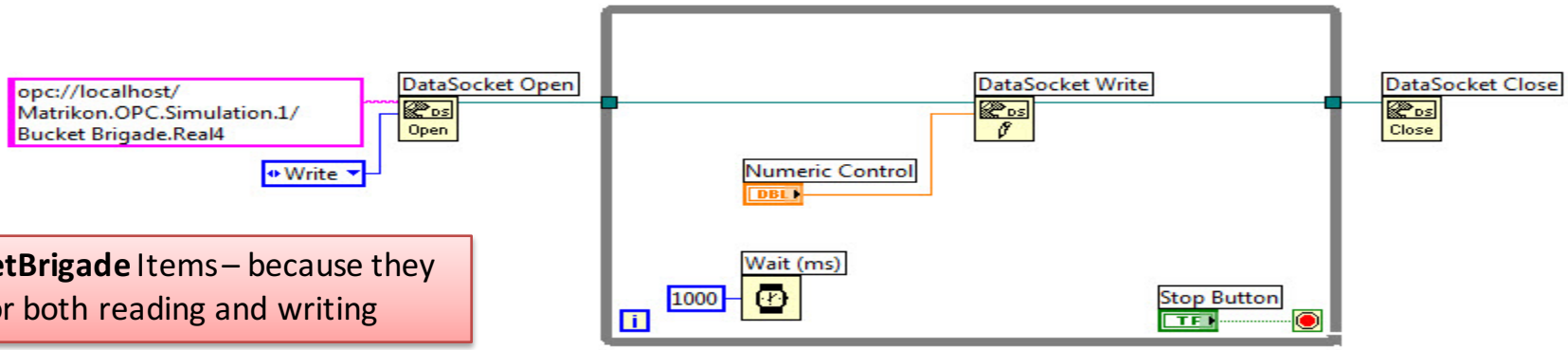
Write to OPC Server using LabVIEW

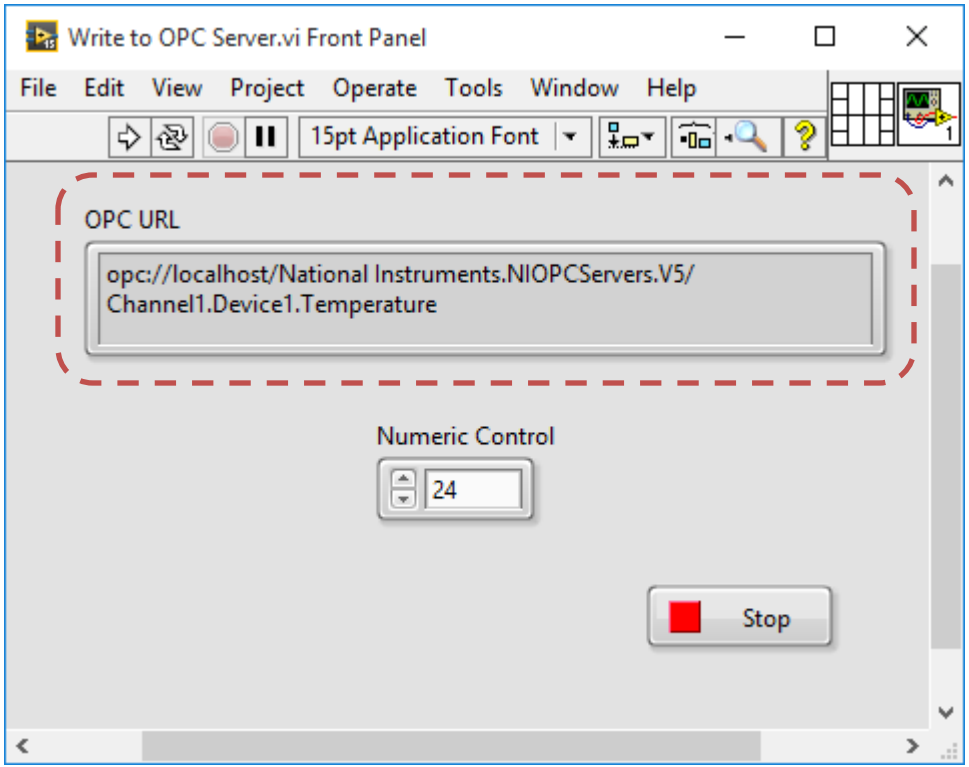


Or specify URL directly:

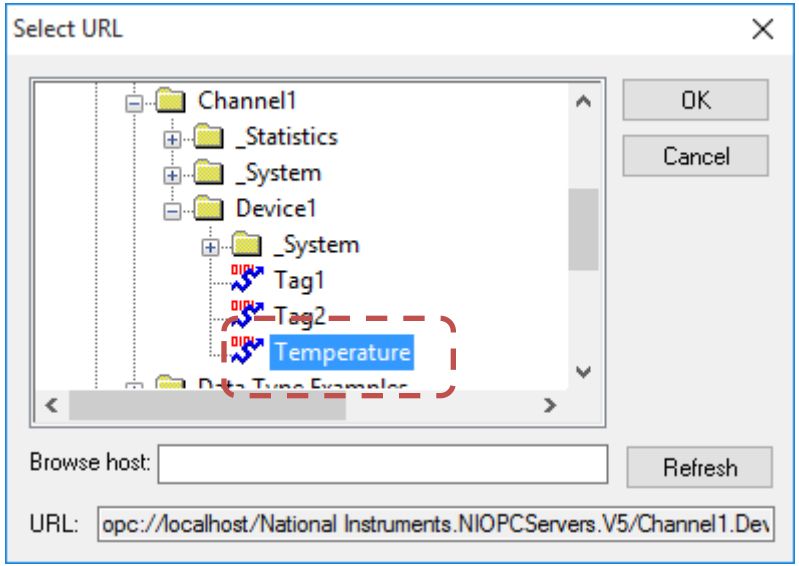


Use the **BucketBrigade** Items – because they can be used for both reading and writing

Connect to NI OPC Servers



Write Tag URL manually or select Tag using the «DataSocket Selct URL»




DEMO

OPC Read in LabVIEW

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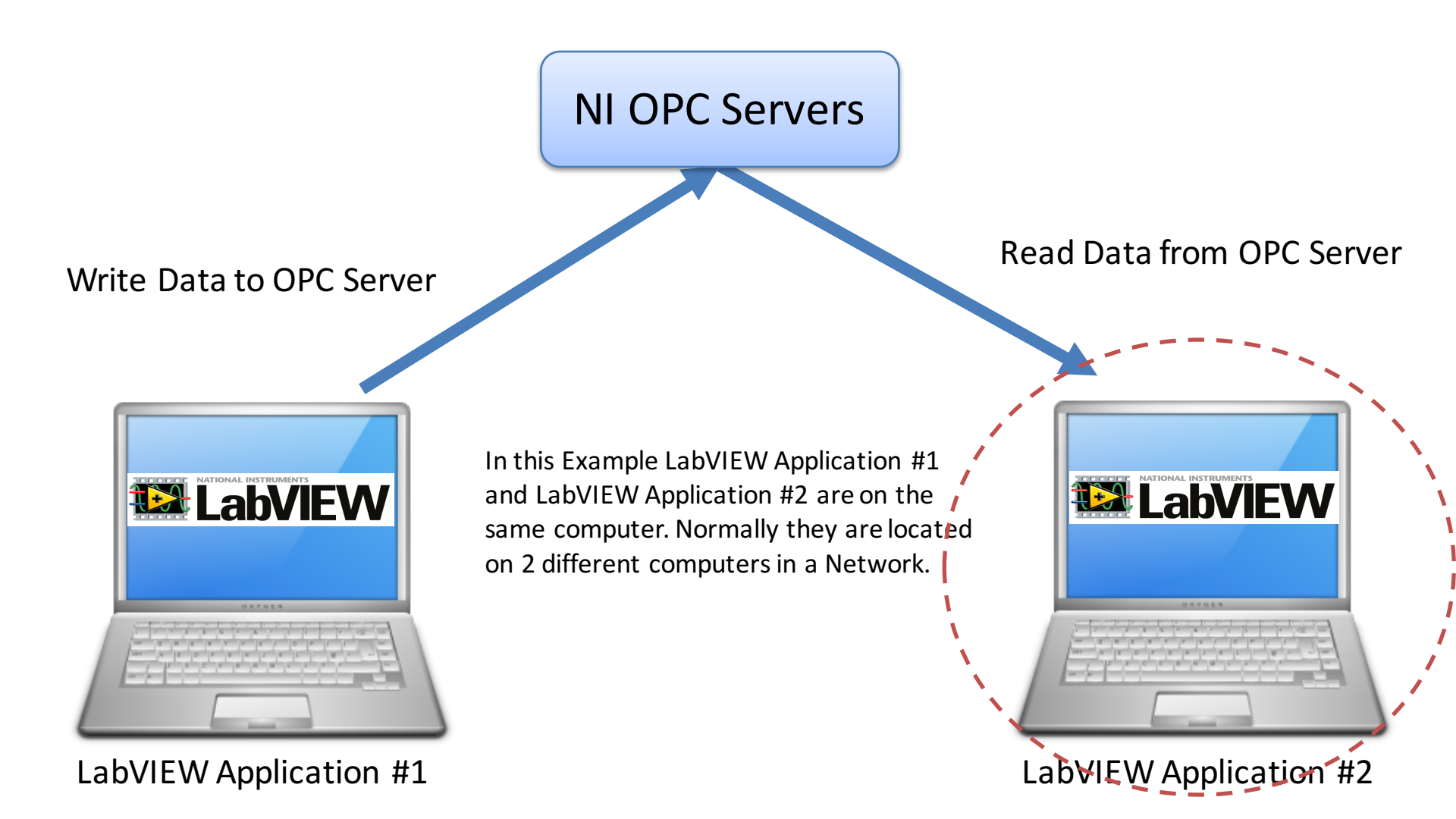
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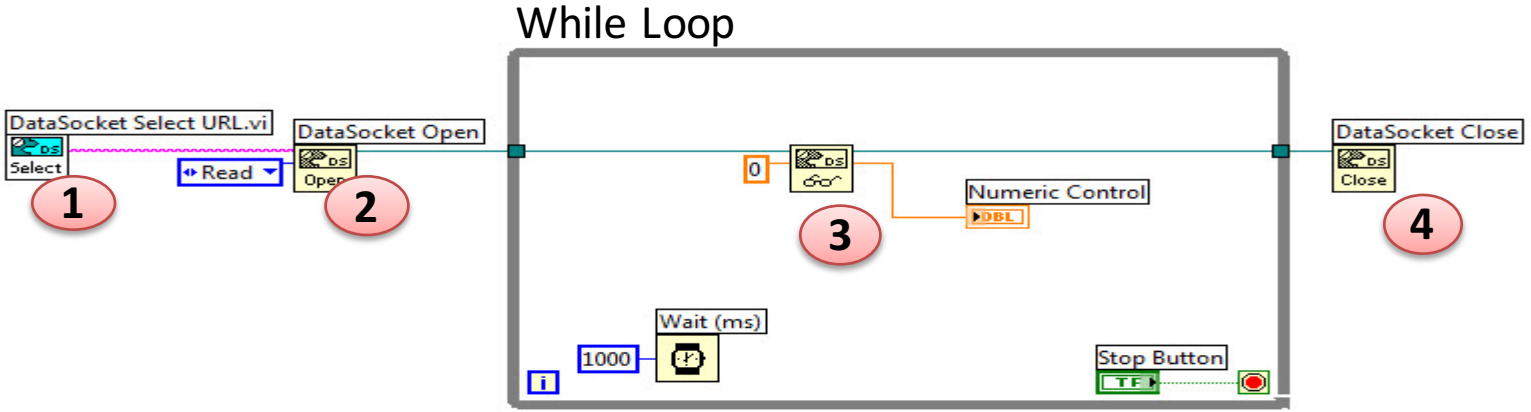
Read from OPC Server using LabVIEW



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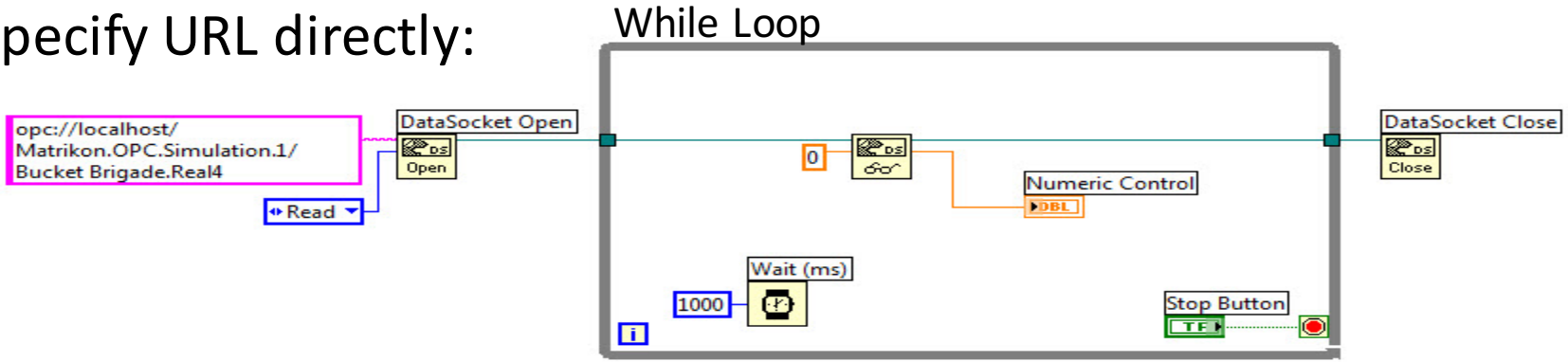
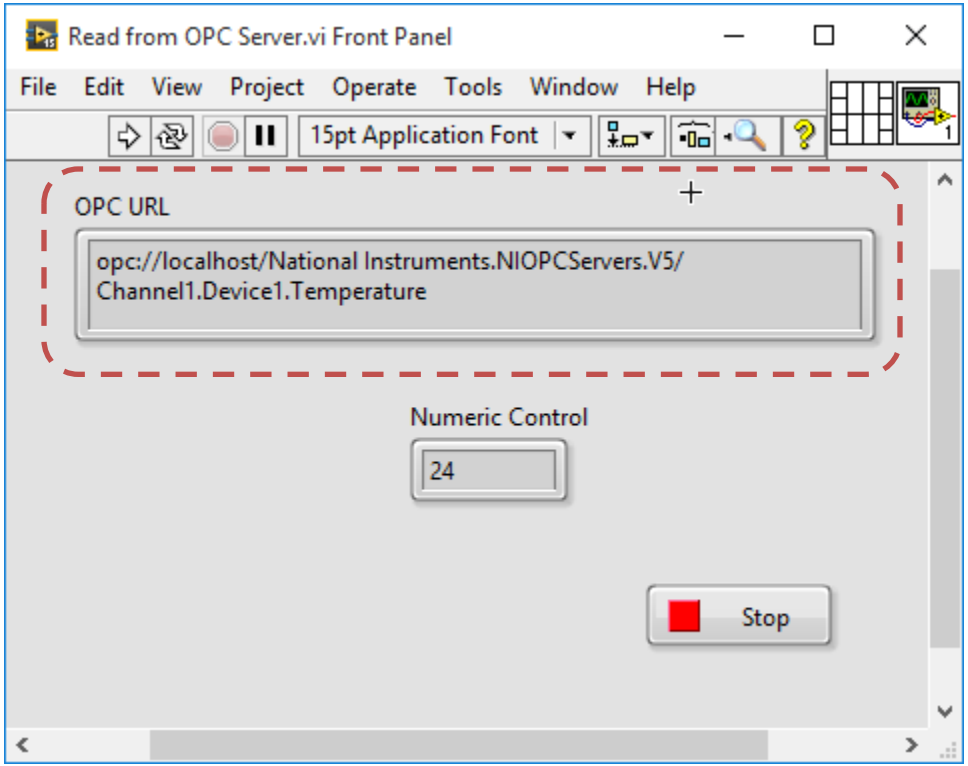


Connect to NI OPC Servers



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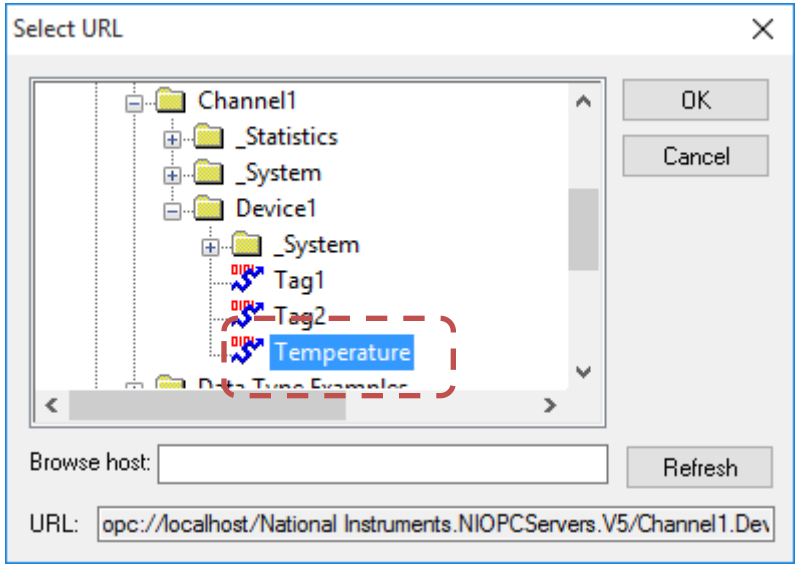


DEMO

Final Solution

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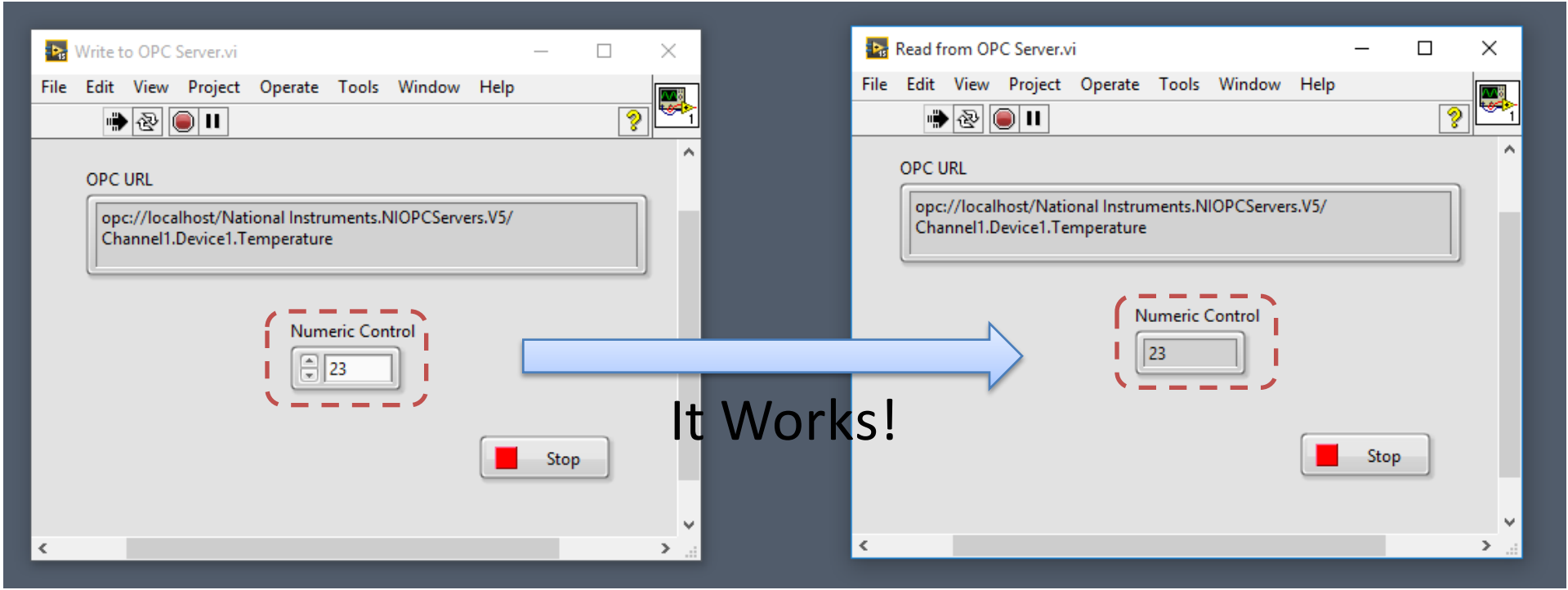
LabVIEW Application #1

LabVIEW Application #2

Running Write Client and Read Client simultaneously



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