OPC DAY FINLAND 2019

6.-7.11.2019 @ EXPO AND CONVENTION CENTRE MESSUKESKUS HELSINKI #OPCUA #OPCDAY #OPCDAYFINLAND #AUTOMAATIO

Getting Started with

OPC UA

Pyry Grönholm, Prosys OPC Ltd





BECKHOFF

kepware
NOVOTEK

NAPCON

PROSYS 🛞 OPC

SIEMENS Ingenuity for life Automation

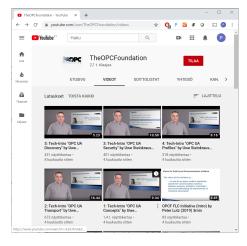
FINNISH SOCIETY



Getting started - Learn

VIDEOS

- OPC Foundation youtube channel
 - <u>https://www.youtube.com/user/TheOPCFoundation/videos</u>
 - Especially "Getting started", "Tech Intro" and "Certification and Complience" videos
 - Also videos about SAP, Azure connectivity, FLC etc.
- Finnish Society of Automation youtube channel
 - <u>https://www.youtube.com/channel/UCzkP4miVM9-</u> <u>vmDotXb7IfxQ/videos</u>
 - You can find videos of the presentations held at the previous OPC Day Finland events



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Getting started - Learn

LITERATURE

- There are a couple of books available in eg. Amazon. Especially ones to recommend are:
 - OPC Unified Architecture by Mahnke, Leitner and Damm
 - OPC: From Data Access to Unified Architecture by Lange, Iwanitz and Burke
 - OPC UA: The Basics by Rinaldi
- A lot of further information including white papers, case studies and OPC UA SPECIFICATIONS are available at OPC Foundation website RESOURCES section. www.opcfoundation.org





Getting started - Learn

WORKSHOPS & TRAINING

- The real quick start for OPC UA is participating to OPC UA Workshops.
- There are multiple companies arranging regularly open workshop. For example:
 - Prosys OPC
 - Unified Automation
- Companies that arrange public workshops typically also offer customized customer specific workshops as well
- OPC Foundation has listed credited experts on the Expert section of their web site. Training providers (TR) are marked separately
 - https://opcfoundation.org/about/opc-foundation/experts/

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What is OPC? OPC Technolo	-						
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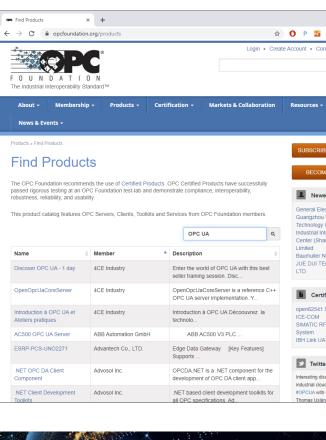
Getting started - Use

SOFTWARE & HARDWARE WITH OPC UA SUPPORT

OPC Foundation product catalog

- The first place to check for OPC UA products both certified and noncertified is the OPC Foundation website products catalog.
- Use search tool to find relevant products
- Check the supported profiles and facets from vendor before buying.
 - <u>https://apps.opcfoundation.org/ProfileReporting/</u>







Getting started - Use

Help

Status

Running

FREE TEST TOOLS

OPC Foundation

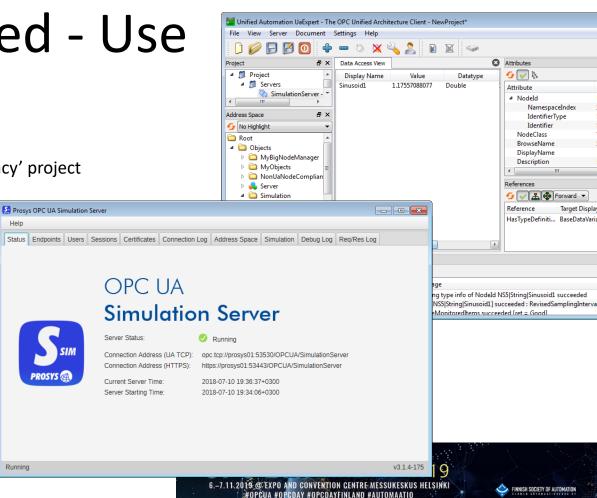
- Samples included in the '.NET Legacy' project
- Github.com/opcfoundation ٠

Unified Automation

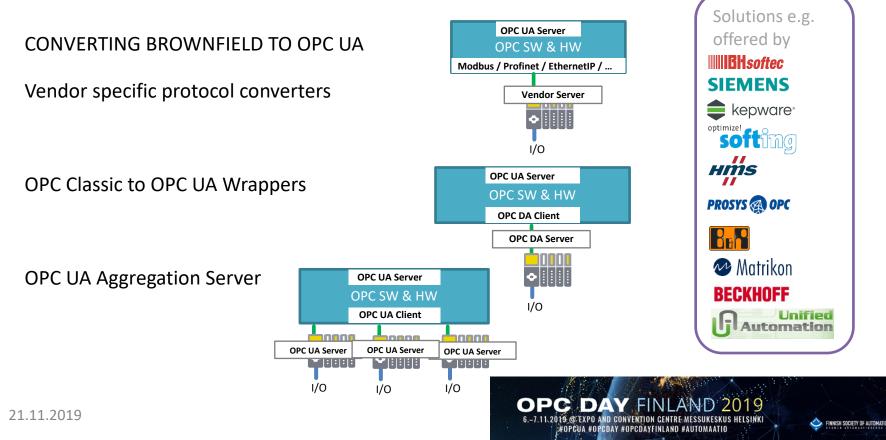
- UaExpert
- Demo Servers .
- unified-automation.com .

Prosys OPC

- **UA Browser**
- **UA Simulation Server** ٠
- ٠ prosysopc.com



Getting started - Use



Getting started - Develop

OPC UA Programming Model

- Stacks provide interoperable OPC UA communication
- Software Development Kits (SDKs) provide standard implementation of OPC UA functionality
- Your application code comes on top

UA Client UA SDK (High Level API)			UA Serve	r
			UA SDK (High Level API)
Current Values Events Alarms History Methods	Information Models Node Management Subscription Management Session Management Identity Management		Current Values Events Alarms History Methods	Information Models Node Management Subscription Management Session Management Identity Management
UA Stack (Low Level API) Message Encoding Message Security Message Transport		UA Secure Channel TCP/IP (UA Binary, HTTPS)	UA Stack Message Encodi Message Securit Message Transp	

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Getting started - Develop

OPC UA Stacks

- github.com/opcfoundation
 - .NET Standard
 - .NET Legacy
 - Java Legacy
 - AnsiC Legacy
- Dual License:
 - GPL (GNU Public License) v2: non-commercial use
 - RCL (Reciprocal Community License): commercial use
 - OPC Foundation members
 - SDK customers
- SDK vendors provide their own stacks for Java and AnsiC



Getting started - Develop

Commercial OPC UA SDK

- Java
 - Prosys OPC
- .NET
 - Unified Automation
 - Softing
 - OPC Labs (Client)
- C/C++
 - Unified Automation
 - Softing
 - Matrikon OPC (Server)

	About - Membership		- Products - Certificat		ation - Markets & Collaboration		Resour	Resources - News & Events -		
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	Embedded OPC UA Stack		EUROS Embedded Systems GmbH		Communication standards, implemented in the form of high level interfa			Cyberlogic OPC Server Omron NX1 Machine Automation Controller		
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	MatrikonOPC UA Device Server HDK Modigm OPC UA Client Toolkit NET And COM Client Toolkit QuickOPC Streaminsight Option for QuickOPC Development Kit				The OPC UA Device Server Hardware Development Kit is the easiest way t Modigm OPC UA Client ToolKit is the easy and stable SDK for OPC U			Twitter Feed		
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						OPC is a set of COM and .NET OPC nents that simplify the tas				
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NOVEMBER / 6 -7. 11.2019 #OPCUA #OPCDAY #OPCDAYFINLAND #AUTOMAATIO



Thank you!



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