

# OPC DAY FINLAND 2016

TUESDAY, OCTOBER 18TH 2016 @BECKHOFF, HAKAKALLIONTIE 2, HYVINKÄÄ

## OPC UA on Azure

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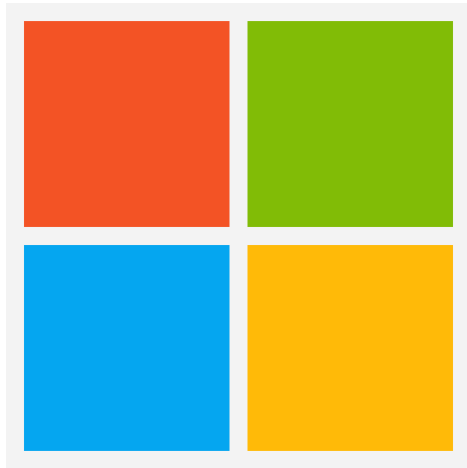
[erichb@microsoft.com](mailto:erichb@microsoft.com)

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NESTEJACOBS





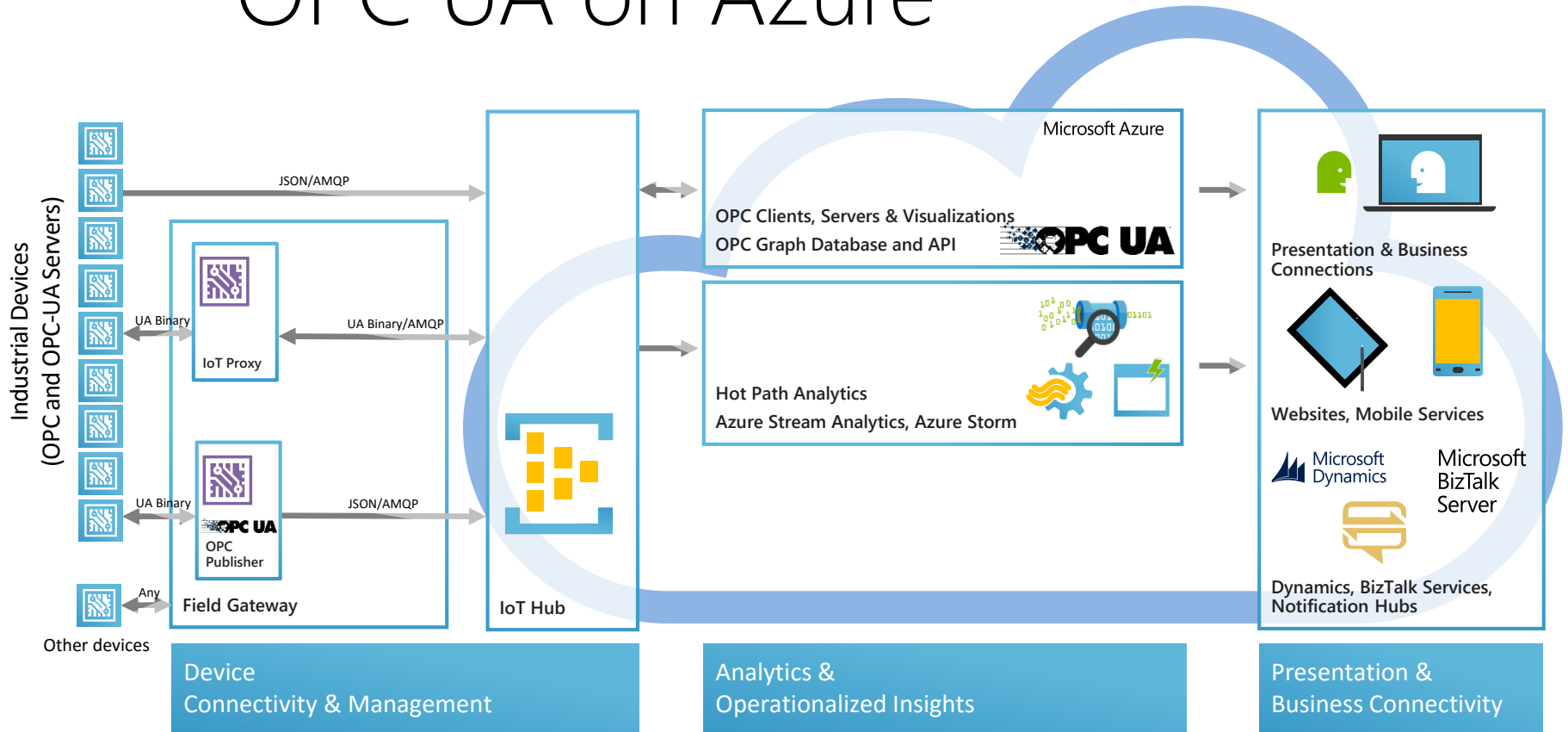
Platform independent  
Protocol independent  
Information model  
Encryption & Authentication  
Open Source



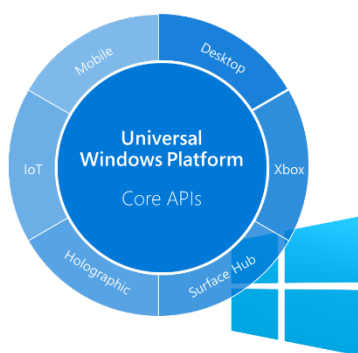
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# OPC UA on Azure



# .NET Standard Library for OPC UA



= **.Net Standard Library**

For everything else: ANSI-C stack!



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# Roadmap

## Available now:

- .NET Standard OPC UA reference stack on OPC Foundation GitHub
- OPC Publishers for all OPC UA reference stacks (.NET/.NET Standard/Java/ANSI-C)
- Sample OPC UA telemetry web application on OPC Foundation GitHub
- OPC UA applications on HoloLens
- OPC UA applications running on Azure (ASP/Service Fabric/etc.)
- IoT Hub available in German (sovereign) cloud

## Coming soon (fall 2016):

- OPC UA module for Azure IoT Gateway SDK
- OPC UA certification for .NET Standard OPC UA reference stack

## Further out (CY2017):

- OPC UA SaaS offerings hosted on Azure



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# Resources



OPC UA-.Net Standard Library Stack and Samples:

<https://github.com/OPCFoundation/UA-.NETStandardLibrary>

OPC UA-ANSI-C Stack and Samples:

<https://github.com/OPCFoundation/UA-AnsiC>

Microsoft Azure IoT SDKs:

<https://github.com/Azure/azure-iot-sdks>

Microsoft Azure IoT Gateway SDK:

<https://github.com/Azure/azure-iot-gateway-sdk>



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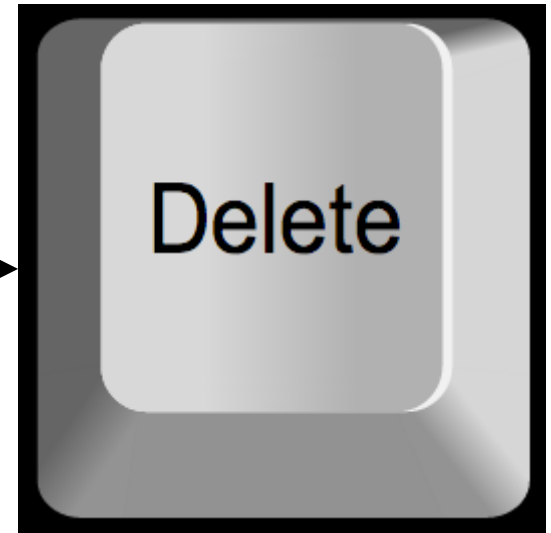
# Security Considerations

OPC UA is secure, but you gotta use it!  
Here are some rules to follow...



# Rule #1 – “Don’t talk to strangers”!

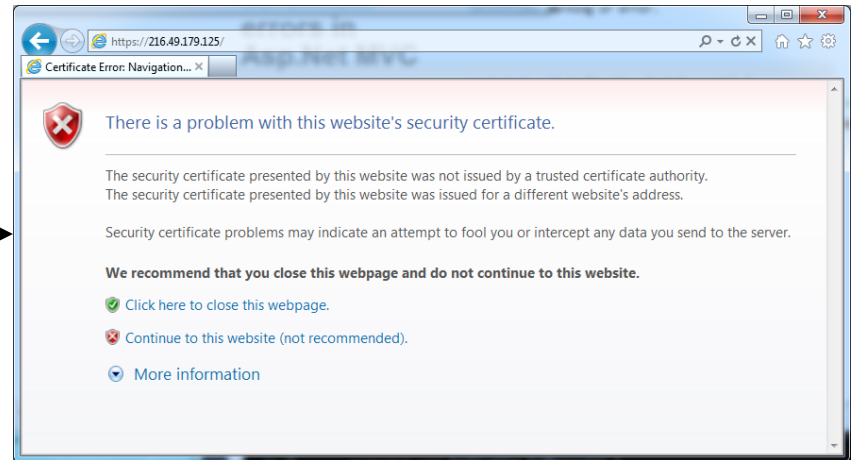
Enabling `<SecurityMode>None_1</SecurityMode>` is the **same thing!**





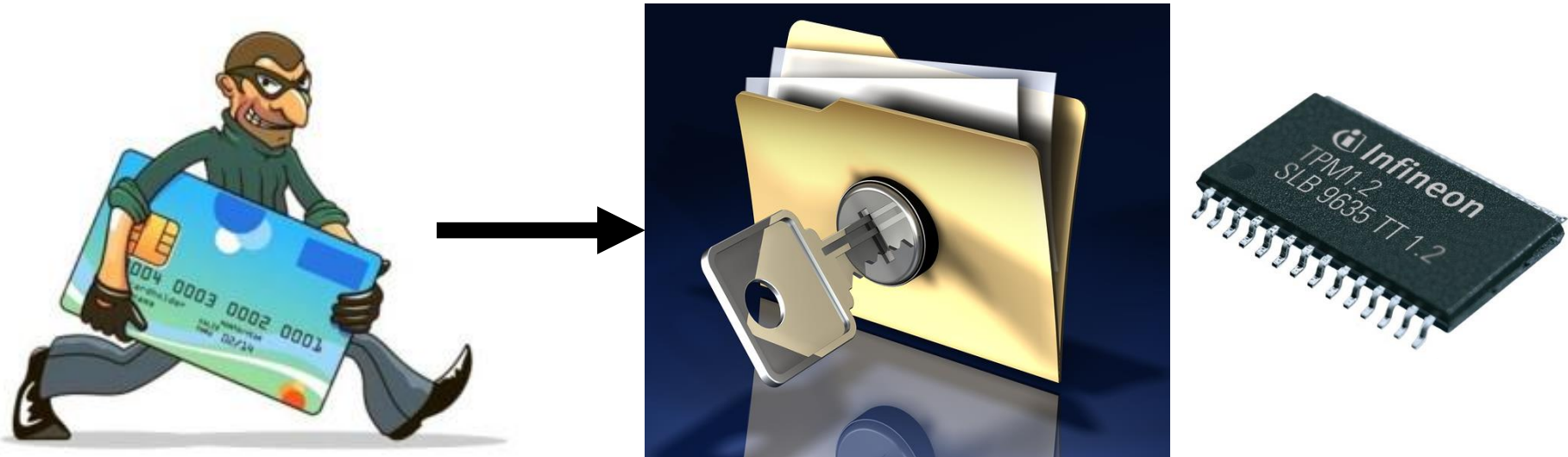
# Rule #2 – “Don’t accept gifts from strangers!”

Accepting self-signed certificates is the **same thing!**



# Rule #3 – “Don’t leave your secrets lying around!”

Storing your private keys on the (unencrypted) file system (in .pfx files) is the **same thing!**



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## Thank you!

**BECKHOFF**



NOVOTEK 

**KLINKMANN**

 Matrikon OPC

NESTEJACOBS

**PROSYS**  OPC

 Unified  
Automation

**Valmet**   
FORWARD

 **VTT**

One more thing...

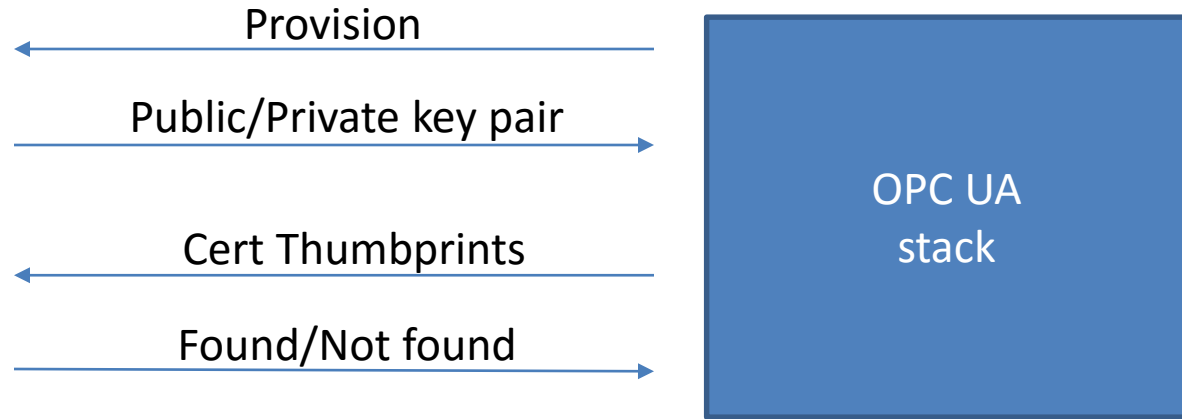


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# TPM Certificate Store for OPC UA



<https://github.com/barnstee/UA-.NETStandardLibrary/blob/master/Stack/Opc.Ua.Core/Security/Certificates/TPMCertificateStore.cs>



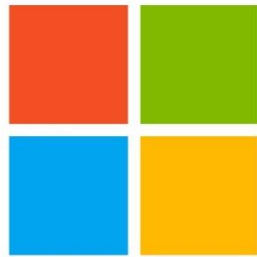
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## Thank you!



# Microsoft