OPC UA on Azure

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Platform independent
Protocol independent
Information model
Encryption & Authentication
Open Source
OPC UA on Azure

Industrial Devices (OPC and OPC-UA Servers)

- Field Gateway
- IoT Proxy
- OPC Publisher
- Other devices

Device Connectivity & Management

Analytics & Operationalized Insights

Microsoft Azure

OPC Clients, Servers & Visualizations
OPC Graph Database and API

Hot Path Analytics
Azure Stream Analytics, Azure Storm

Presentation & Business Connectivity

Websites, Mobile Services
Dynamics, BizTalk Services, Notification Hubs

Microsoft Dynamics
Microsoft BizTalk Server

OPC DAY FINLAND 2016
18.10.2016 #OPCUA #OPCDAYFINLAND #AUTOMATION
.NET Standard Library for OPC UA

For everything else: ANSI-C stack!
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
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
Security Considerations

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

RULES APPLY
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!
Thank you!
One more thing...
TPM Certificate Store for OPC UA

Provision
Public/Private key pair
Cert Thumbprints
Found/Not found

OPC UA stack

Thank you!

Microsoft