

OPC DAY
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Connecting securely to Cloud without braking the Air Gap

Sami Hyytiäinen, Magnus Kullström
Advenica Oy



FINNISH SOCIETY OF AUTOMATION
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About Advenica

- Founded in 1993
- Expert in high level cybersecurity solutions for critical data in motion and in rest
- EU approved to the highest level of security
- Product design, development and manufacturing
- Offices in Helsinki, Malmö, Stockholm and Vienna



Cloud - Benefits and Concerns

Cloud benefits

- Flexible virtualization
- Cost effective storage and services
- Reliable data back-up and recovery
- Unbeaten analytics services
- Savings in outsourced IT-infrastructure and administration
- Automated maintenance process



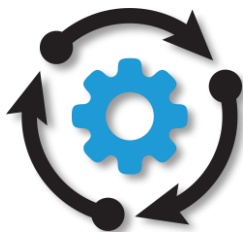
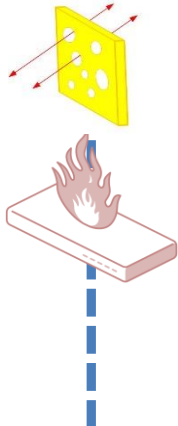
Cloud concerns

- Unlimited attack vector space
- Exposure of operational environment
- Legacy on-premise systems
- Business continuity
- Loss of control over data and apps

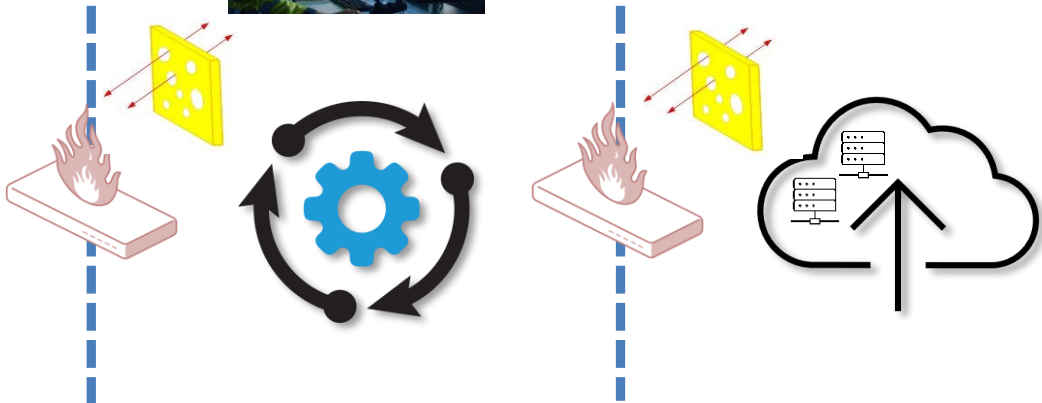
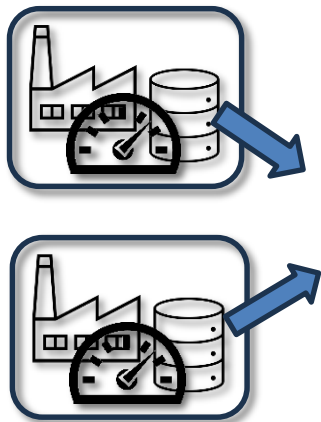
Use case: Electricity Production - Cloud Analytics

- Enable central monitoring of dispersed electricity production sites in the Cloud
- Utilize the advanced analytics capabilities of the Cloud.
- Some of the key concerns were:
 - How to manage the risk of opening up the Air Gap?
 - The cost of securing the systems and networks by patching and hardening
 - How to uniformly export the data?
 - How to safely transfer the selected data to cloud?
 - How to ensure business continuity?

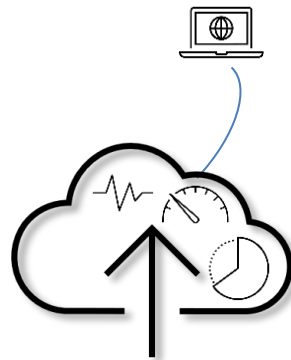
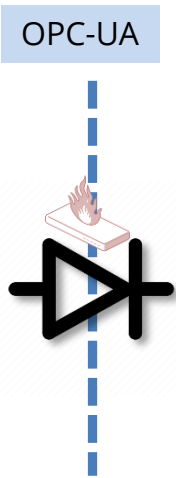
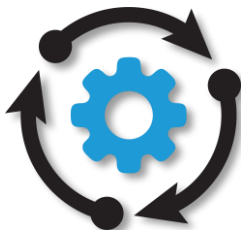
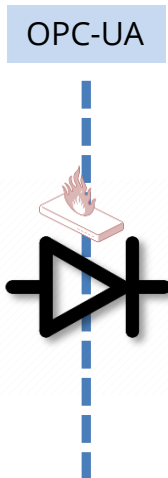
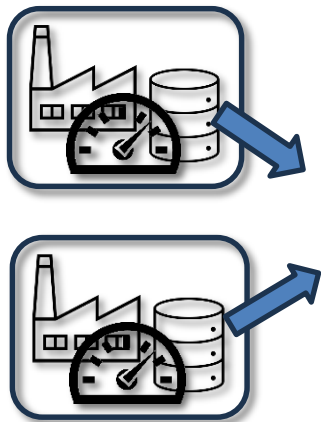
The Start



Phase 1.



Phase 2.

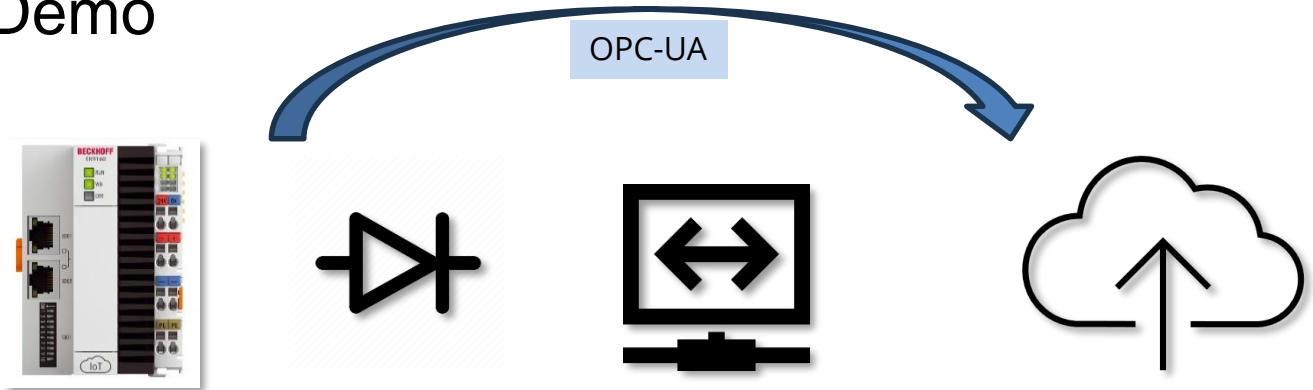


Conclusions

- Cloud services can be utilized securely, without increasing the OT-environment exposure
- In many cases, the physical one-way connection provides a cost effective means to interconnect domains, networks and systems in different security and maturity levels
 - In some cases, like interconnecting legacy systems, it is the only viable solution
- OPC-UA provides a uniform transport-protocol, with basic security features to harmonize the data being transferred
 - Advanced security features also available

Demo

Powered by ProSys



OPC UA data through data diode over VPN to Azure cloud

Thank You.

Please, come and see our demo