







OPC UA scalability:

From small ARM device to SAP

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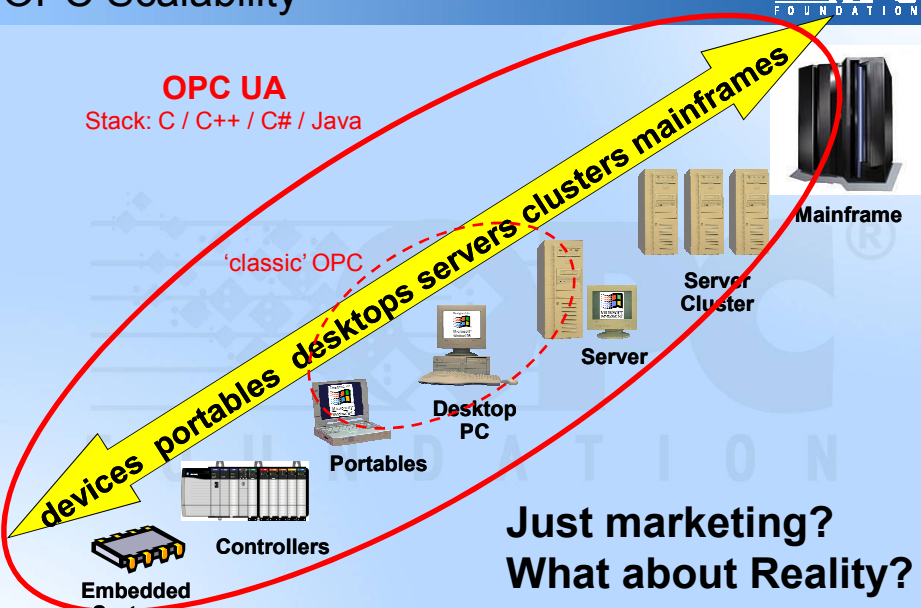
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OPC Scalability

OPC UA
Stack: C / C++ / C# / Java

'classic' OPC



**Just marketing?
What about Reality?**

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OPC UA Products

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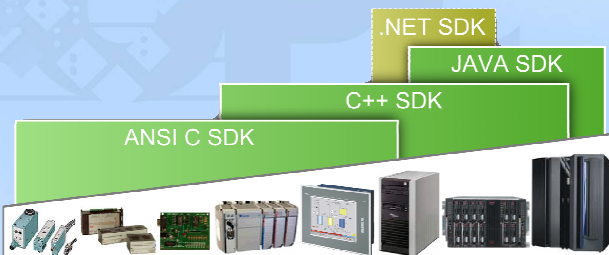
UA solutions: Device to Mainframe




- Toolkits and SDKs (C / C++ / Java)
- used by all large automation vendors
- all platforms, all architectures (x86, ARM, PPC, x64, Mips, ... <> WinCE, vxWorks, Linux, QNX,...)
- UaModeler - Code Generator
- OEM solutions for legacy OPC

Solutions:

- PC, IPC, Panel
- Embedded Device
- Smart-Phone



Euros, QNX, embedded Linux, VxWorks, WinCE, Win32, Win64, Linux, Solaris

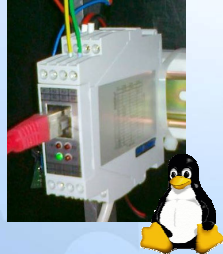
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UA solutions: UA Server Device

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- ARM 9 rack mount UA Server Gateway
- Embedded Linux
- S7, Modbus, CAN, ...
- Ring Buffer Data Storage
- Configured through UA



OPC UA goes Mobile: Android and Apple (iPhone and iPad)



- ARM Cortex A8
- Android 2.2
- UA Client
- UA Security



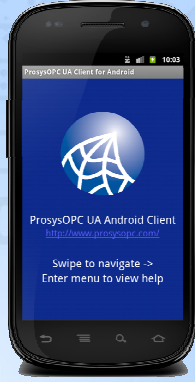
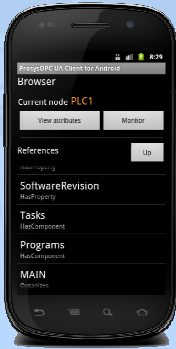

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UA solutions: @ ProsysOPC

OPC FOUNDATION

- Prosys OPC UA Java SDK
- Brings OPC UA on any Java capable platform:
 - Windows, Unix, Linux, OSX...
- Google Android is also “natively” a Java platform
- → Enables full OPC UA development capabilities together with Android SDK



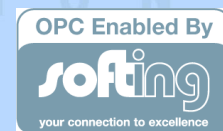
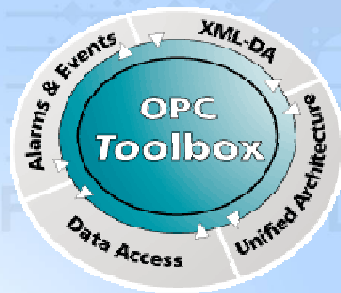
- ProsysOPC UA Android Client
- Android 2.3 and up

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UA solutions: @ Softing



- Company: Softing
- Product: Development Toolkit for Windows, VxWorks, Linux, QNX
- OPC UA: UA Data Access, Alarms&Conditions, Client, Server



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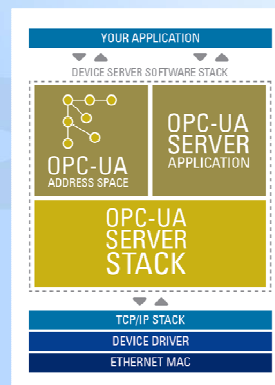
UA solutions: @ EmbeddedLabs



- Company: Embedded Labs
- Product: *fasaLINK* – OPC-UA Server Module
- OPC UA: OPC-UA Server



OPC-UA Server Stack



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UA solutions: @ Siemens

Penetration at all automation levels

Openness of OPC + Consistency of Totally Integrated Automation → Your benefit

SIEMENS

OPC FOUNDATION

Enterprise Resource Planning

Management Level
MES
SIMATIC IT, SIPLUS CMS

Operations Level
DCS SCADA
SIMATIC Net OPC, S7 OPC Redundancy, SINEMA Server, SIPLUS CMS, SIMATIC WinCC, SIMATIC PCS 7, ...

Control Level
SIMATIC Net OPC, SIMATIC WinAC RTX, SIMATIC HMI Panels, SINUMERIK, SIMATIC S7, SIMOTION, ...

Field Level
Sirius, SIMOCODE pro V PN Motormanagement System

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UA solutions: @ Siemens

OPC-UA in field-devices
Product: Sirius, SIMOCODE pro V PN Motormanagement System

Produktdatenblatt 3UF7011-1AU00-0



GRUNDGERAET 3 SIMOCODE PRO V PN ETHERNET / PROFINET IO;
OPC UA SERVER / WEBSERVER;
UEBERTRAGUNGSRATE 100MBIT/S;
2 X BUSANSCHLUSS UEBER RJ45 4E/3A FREI
PARAMETRIERBAR;
US: AC/DC 110-240V;
EINGANG F. THERMISTORANSCHLUSS;
MONOSTABILE RELAISAUSSGAENGE;
ERWEITERBAR DURCH ERWEITERUNGSMODULE

SIEMENS

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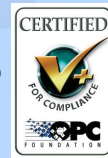
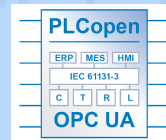
UA solutions: @ BECKHOFF



Automation Controller series with PLC, Motion and GUI



- OPC-UA Server integrated:
 - DA: Data Access
 - HA: Historical Access
 - AC: Alarm & Condition
- OPC-UA client integrated
 - UA client functionality as FUNCTIONSBLOCKS out of the IEC61131-3 PLC
- Certified in OPC-Europe Lab



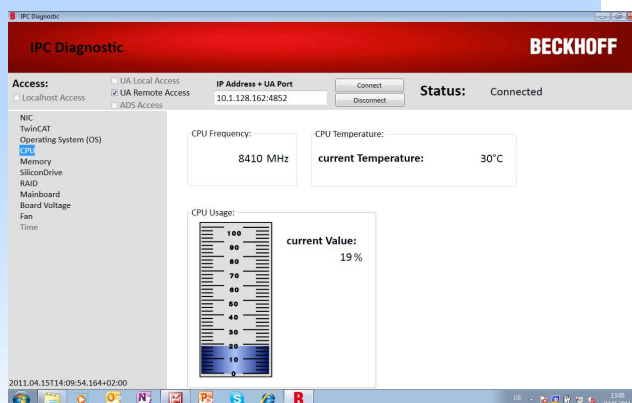
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UA solutions: @ BECKHOFF



- Company: Beckhoff
- Product: IPC-Diagnostic (royalty free)
- OPC UA: OPC-UA Server



Access to all parameters:

- Hardware
 - CPU usage
 - CPU temperature
 - Fan speed
 - ...
- Software
 - IP address
 - Free space on HDD
 - ...

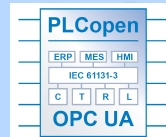
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UA solutions: @ Bosch-Rexroth



- Company: Bosch-Rexroth
- Product: IndraLogic
- OPC UA: OPC-UA Server



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UA solutions: @ Prediktor



- Company: Prediktor AS
- Product: UA Box – hookup IO directly to business systems
- OPC UA: OPC-UA Server



Prediktor

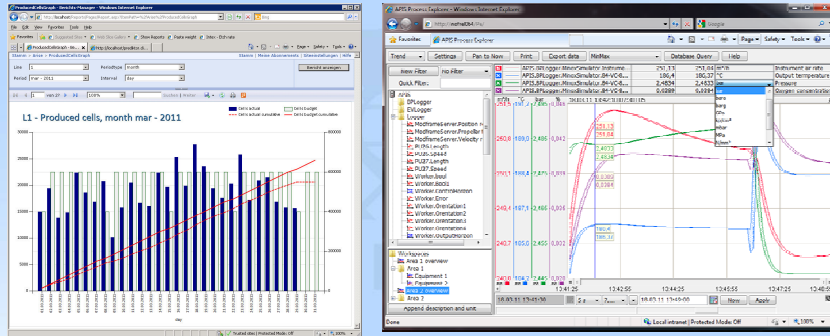
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UA solutions: @ Prediktor



- Company: Prediktor AS
- Product: APIS OPC Historian – efficient BI on huge production volumes
- OPC UA: OPC-UA Client and Server



Prediktor

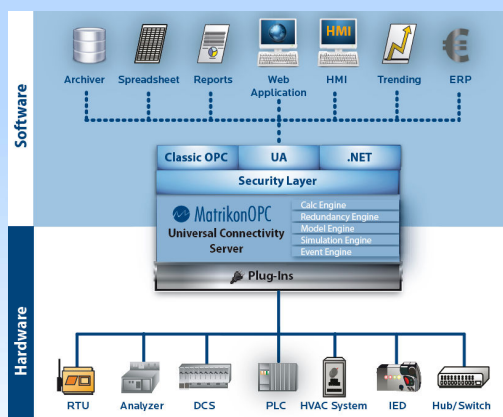
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UA solutions: @ Matrikon



- Company: MatrikonOPC
- Product: Universal Connectivity Server
- OPC UA: OPC-UA Server



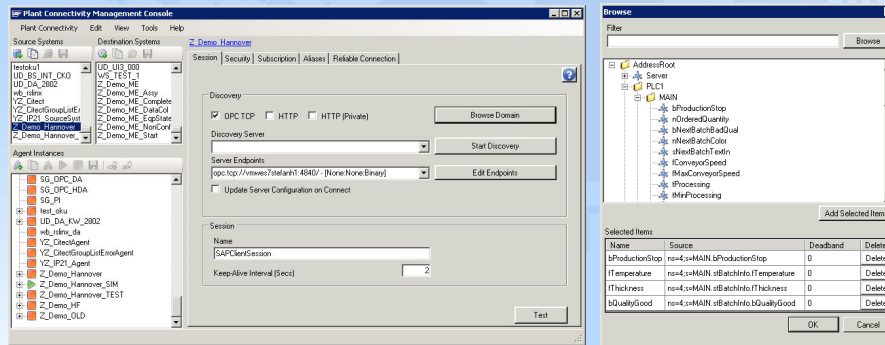
MatrikonOPC

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UA solutions: @ SAP

- Company: SAP AG
- Product: SAP Plant Connectivity (PCo)
- OPC UA: OPC-UA Client (PCo Agent)



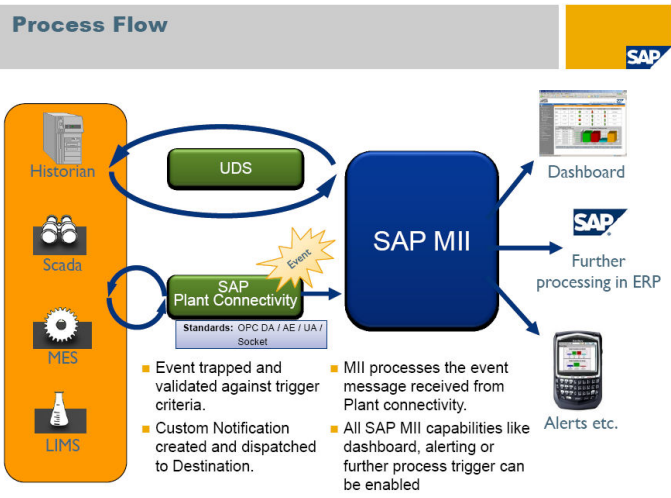
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SAP support UA: The Perfect Plant



Harmonizes Complex Manufacturing Network Interdependencies
SAP product „SAP Plant Connectivity“ provides OPC-UA



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