



The Standards Based Integration Company

Systems Integration Specialists Company, Inc.

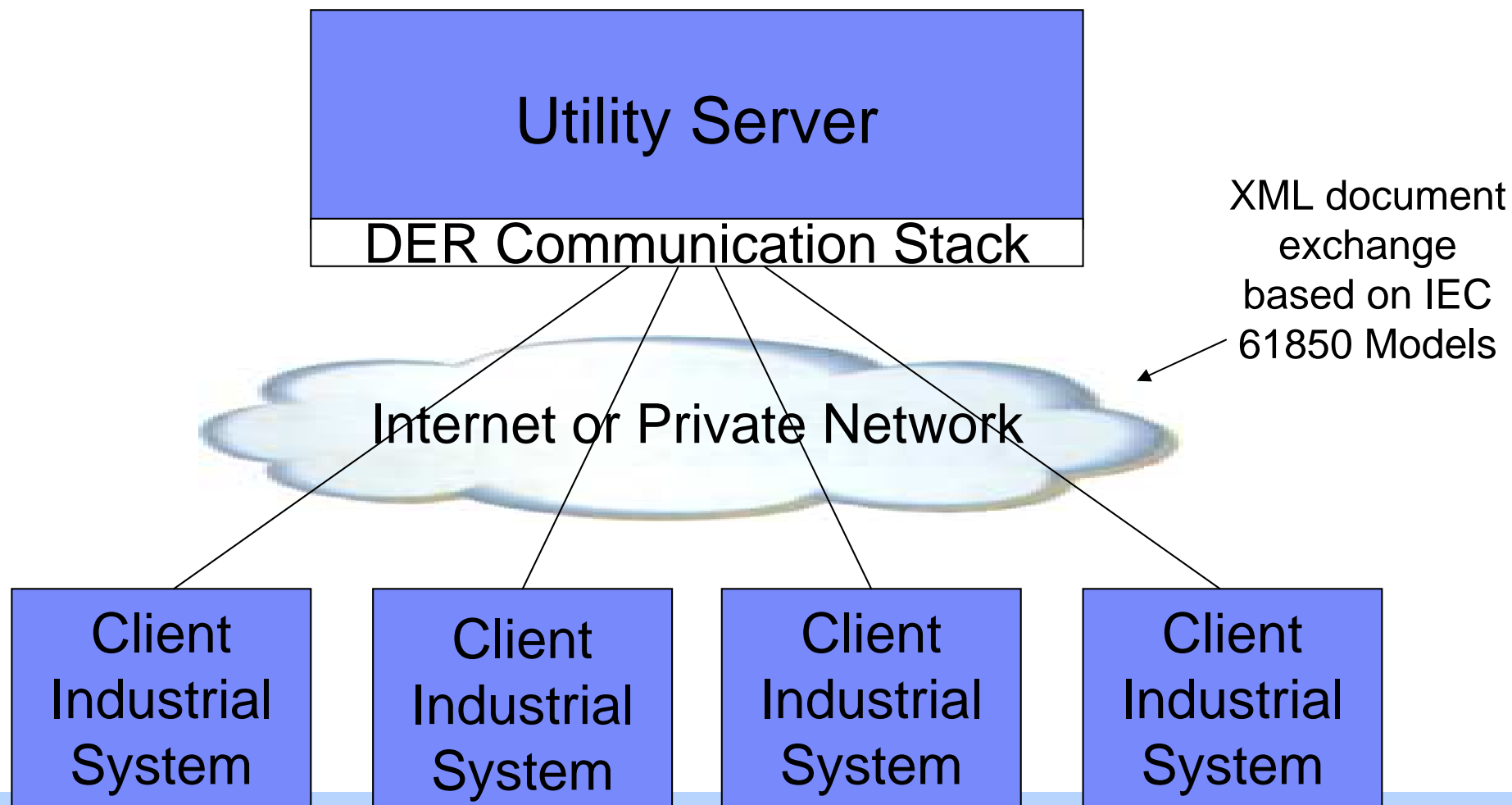
Development of a Java OPC UA Web Service Stack



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Use Case: DER Control System to Utility Control System Communication





Industrial DER Communication Use Case

- This case is related, but not the same as **device** communication
 - IEC 61850 data models conveyed using IEC 61850 binary protocol is preferred for device communication especially when device is owned by the utility
- This case is related, but not the same as **residential** communication
 - A more flexible and robust two way communication mechanism is needed. Not as communication bandwidth limited.
- Client system is more typically a control system such as a Distributed Control System (DCS) supplied by companies such as Foxboro or Fisher Rosemount.
 - These systems already often use OPC technology



What Is OPC UA And Why Use It

- OPC Foundation Unified Architecture
 - An implementation of W3C Web Service standards designed for process control and utility operational communication
- Standardized in IEC SC 65E: **Devices and Integration in Enterprise Systems** and now a Committee Draft in IEC TC 57 WG 13 as a means for exchanging IEC 61970 Common Information Model (CIM) data.
- Extends W3C Web Service standards with added reliability, availability, performance and security features as well as support for data models such as the IEC 61850 data model or CIM
- Will be used to reliably convey IEC 61850 based XML documents but can also be used to exchange others such as those defined by OpenADR, IEC 61970/61968 CIM, etc.

UA is Payload Neutral

