



**»» iTAC.MES.Suite with OPC  
Unified Architecture (OPC/UA)**

**New standard for data integration leads to increased flexibility for continuous traceability**

iTAC Software AG, manufacturer of MES standard software with its core competency in the area of active traceability, is the first MES vendor to use the OPC UA interface standard for integration with its iTAC.MES.Suite. iTAC already offers the new standard in current customer projects. The integration of the updated OPC UA makes the communication via OPC considerably more flexible as it permits platform-independent operation via direct and standardized data exchange between PLC (programmable logic control) and MES systems.

**OPC**

**Standards define software interfaces**

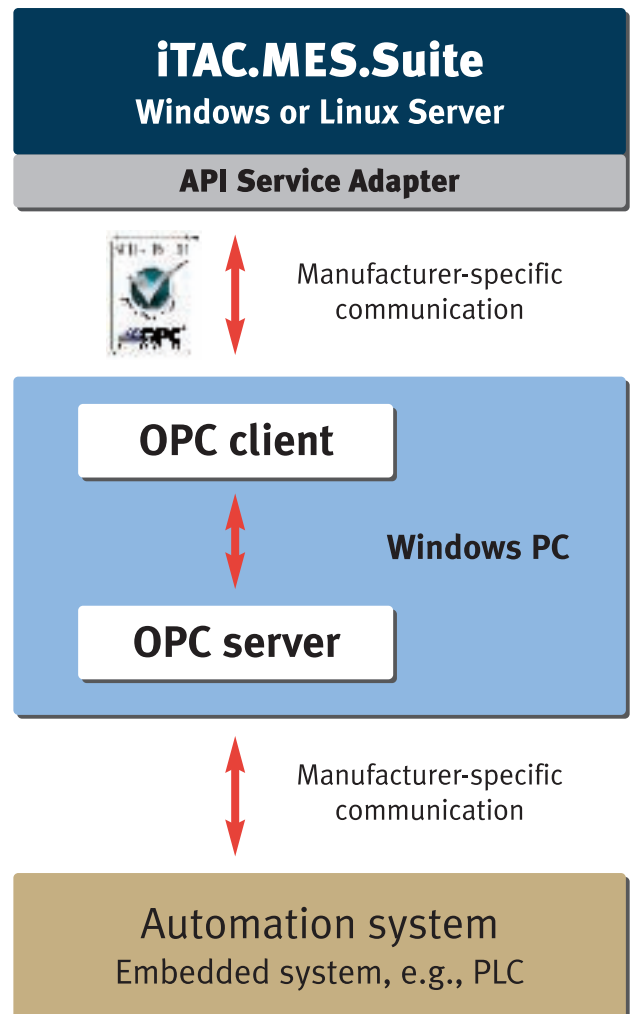
OPC standards define interfaces between software components ensuring the smooth exchange of information from the production process with MES systems.

OPC Data Access, the recognized standard of the OPC Foundation, defines the reading, writing and monitoring of data points based on Microsoft COM technology.

The implementation of this important standard for both client and server allows the integration of the iTAC.MES.Suite with the process level to be considerably simplified. As early as November 2006, the iTAC.MES.Suite became the first MES system worldwide to receive client/server certification for these interfaces (MES interfaces OPC Data Access 2.0 and 3.0).

This standard has, however, one crucial disadvantage: The use of OPC standards is restricted to Microsoft Windows applications. In practice, this means that a Windows PC is required for OPC communication even if both communication partners are not directly operated on a Windows PC.

**OPC COM-based**



## OPC UA

### Platform-independent direct data exchange

In order to avoid the additional overhead for hardware, configuration and engineering, and in order to make the OPC communication even more flexible, iTAC uses the new OPC Unified Architecture standard for the integration with the MES system.

The OPC Unified Architecture is the newest of all OPC specifications of the OPC Foundation and differs substantially from its predecessors.

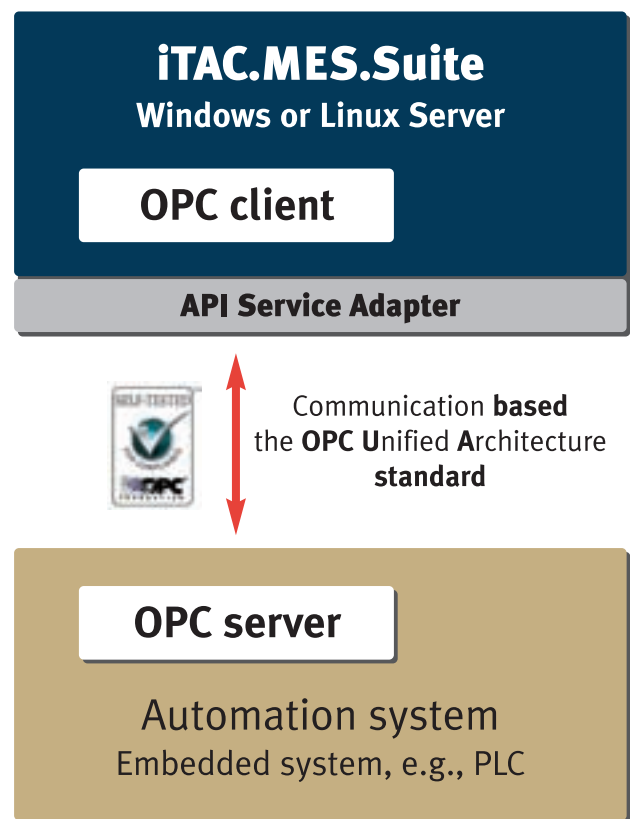
One of the most important new features in the OPC Unified Architecture is the ability to implement OPC UA applications independent of platform. The direct and standardized exchange of data between control and MES systems is now possible.

The OPC UA standard now defines the data encoding and transport protocols for the data exchange in addition to the methods for data access. This permits the direct integration of the OPC interfaces in embedded systems or in software systems on various platforms.

By directly integrating the OPC UA into the iTAC.MES.Suite, the software can now directly access a standardized network protocol, which ensures an efficient data exchange between the systems. For the Ethernet-based UA communication, the software accesses standard elements such as XML-based web services or an efficient TCP-based binary protocol.

A further simplification made possible by the OPC Unified Architecture is the grouping of all types of information familiar from OPC – such as data, events, historical data

## OPC Unified Architecture



*The OPC Unified Architecture defines the methods for data access and specifies the data encoding and transport protocols for data exchange. This enables platform-independent integration of the interfaces directly within the iTAC.MES.Suite.*

and the additional access to historical events and commands – in an object model through the use of uniform access mechanisms.

In addition, the new model is used to describe and exchange complex data, for standardization of security mechanisms for authentication and data encryption, providing options for audit mechanisms and a redundancy concept.

OPC UA now also permits the complex data required by MES systems to be transmitted directly as a block.

At the same time it was possible to significantly reduce the configuration effort, which is very high if the OPC client and server are not operated on the same PC. An additional PC is no longer required, and the configuration between PLC and OPC UA server always remains consistent.

**'While OPC was based on Microsoft COM/DCOM technology so far, we are the only MES vendor to have adopted the newest OPC Unified Architecture standard' comments Dieter Meuser, founder and CTO of iTAC Software AG.**

**'This step renders the additional deployment of a process control system for machine data collection necessary and makes our solution even more flexible. We regard the extension of the iTAC.MES.Suite as state of the art, hence as a real competitive advantage.'**

## iTAC.MES.Suite and OPC UA - at a glance

The use of the OPC Unified Architecture in MES projects simplifies the integration of the MES system and the automation systems and enables the creation of simpler and more flexible systems.

## The advantages of MES projects include:

- Direct integration of the OPC interface in embedded systems and the MES system without restrictions imposed by the platform.
- Use of an efficient, standardized network protocol for exchanging data between the systems
- Configuration of PLC and OPC UA servers is always consistent
- In addition to the data types familiar from OPC Data Access, the OPC UA server also makes available complex data, events, commands and meta-information for the data





**OPC UA:**

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**iTAC Software AG**

Burgweg 19  
56428 Dernbach, Germany  
tel +49 2602 1065 - 0  
fax +49 2602 1065 - 30  
info@itac.de  
www.itacsoftware.com

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