



**OPC
DAY**
FINLAND 2022

29.11.2022
AS A LIVE EVENT AT
EXPO AND CONVENTION CENTRE
MESSUKESKUS HELSINKI

Digital Transformation: Accelerating Time to Value and Unlocking Double Digit KPI Improvements at Scale

29th November 2022

Thorsten Weiler, inray

How to hold an interesting presentation?

- Raise Emotions & Feelings
- Pose a provocative Thesis
- Tell a good Story

Raise Emotions & Feelings

Only for a few nerds in this room!



Pose a provocative Thesis

Nobody needs OPC by themselves!

- People and businesses have a need to get more efficient, effective, lower costs, increase quality, etc. to stay competitive and successful
- To achieve this they need the right tools (like OPC)

Greiner AG

About the Company



- Manufacturer of innovative plastic packages
- 10.800 Employees in 130 locations worldwide
- Founded in 1868 (before more than 150 years)
- Still family-owned
- Headquartered in Austria
- Total Revenue: 1,631 Billion Euros / ca. 1,8 Billion USD

The Story: Greiner Packaging

About the Company



- More than 30 locations in 19 countries
- Mainly in Europe, but also in USA, Mexico and India
- 670 Million Euro / ca. 740 Million USD annual revenue
- Both Food and Non-Food packages
- Customers like Nestlé, Danone, Automotive Manufacturers



Project Goals

What

1. Increase of Product Quality
 2. Increase Productivity
- To maintain competitive and to sustainably secure jobs in Europe



Project Goals

How



- Get connectivity to as much Plastic Molding Machines as possible
- Connect Molding Machines with each other
 - Collect Data
 - Develop Quality Parameters
 - Increase Quality
 - Increase Productivity

Project Challenges

Obstacles to overcome



- Machines from different vendors
 - Different protocols and formats
- Data not easy to access
 - Machine vendors fear that their machines and technology could be copied or created by in-house production

Course of the Project

Beginning



- Greiner contacted specialists for connectivity:
 - Kepware & inray
- Main contact:
 - Andreas Kurzmann, IT-Manager at Greiner
- Successful testing:
 - KEPServerEX for machine connectivity (Euromap 63 -> OPC)
 - OPC Router as overall communication platform (with ERP and OEE)

Course of the Project

Close collaboration



- Kepware sent their Developer and Project Leader to Austria
- Development of Euromap 63 driver for two different plants
- Extensive Testing of unreleased Beta Version
- No extra cost for Greiner

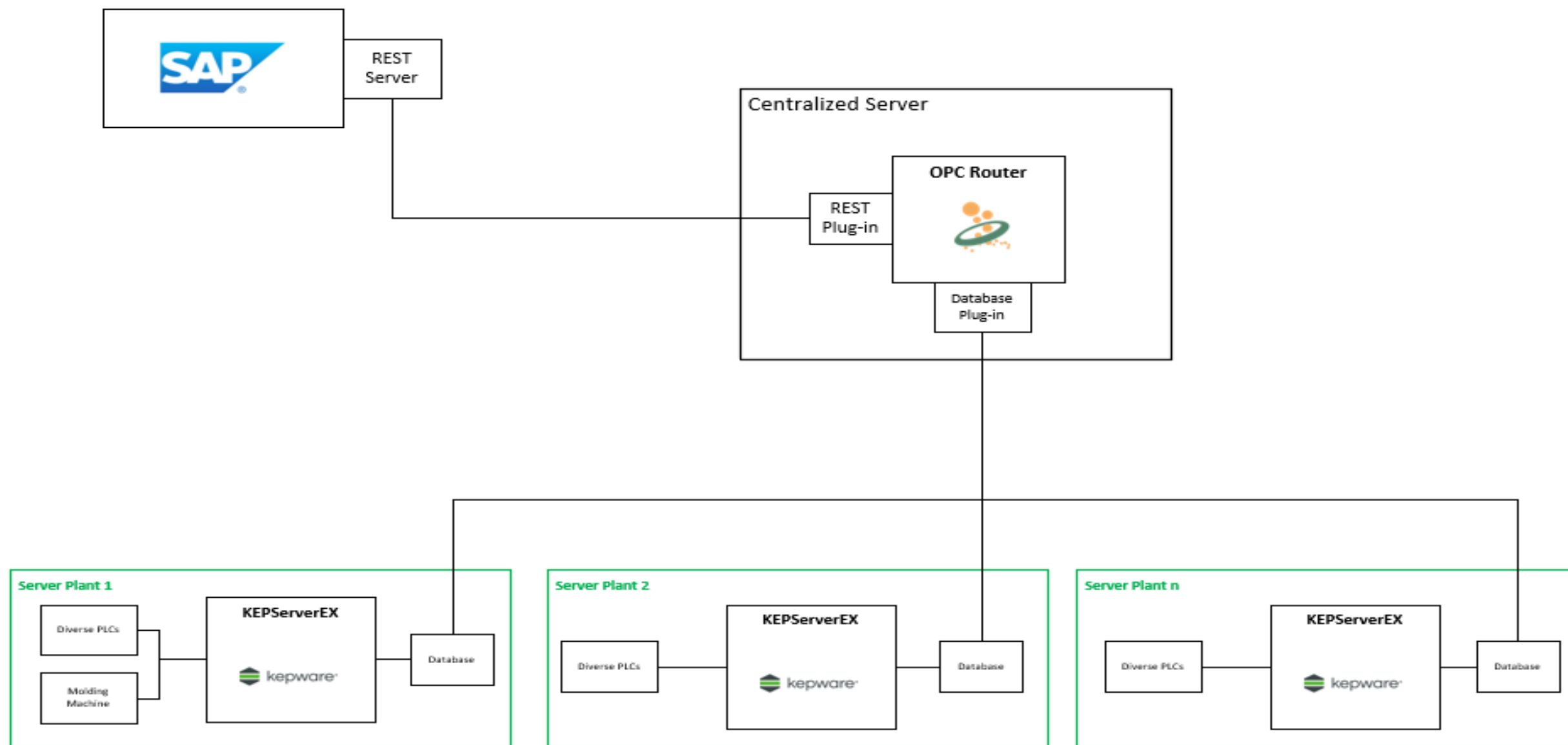
Course of the Project

Roll Out



- Greiner used subscription license of KEPServerEX Manufacturing Suite and Euromap 63 in first year
 - Roll Out into 3 Austrian plants
- After successful first year Greiner rolled out the project into other countries and decided to buy the licenses (perpetual)
 - Roll Out into 11 plants worldwide

Greiner Packaging – Project Structure



Project Details



- Kepware is getting data from all machines every second
- OPC Router is delivering pre-calculated data to SAP every 1-2 seconds
- System handles 1,2 GB data per day

Project Outcome



- Data is available in real-time
 - Before that Greiner needed to wait one day for data
 - Issues are recognized immediately and not after they occurred
 - Issues can be pinpointed at once
- 24/7 Monitoring is enabled
 - Optimization of cycle times possible (as reaction to utilization variances, downtimes and maintenance)
 - Recognition of unplanned downtimes per machine/equipment

Project Outcome



1. Standardization of Data
2. Develop consistent quality measurement parameters
3. Evaluate Data
4. Improve processes (OEE) and quality standards in all plants

Decision Criterias

Why Kepware and OPC Router?

—Decision for Kepware:


- Easy Installation
- Intuitive connectivity to machines
- Stability & Performance

—Decision for OPC Router:

- Overall operational simplicity
- Connectivity to (almost) any OT- or IT-System
- Standard Solution & Platform independent
- Today also with OPC UA CloudLib integration and support of companion specifications



Kepware & OPC Router Case Study



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Greiner Packaging standardizes connectivity to improve quality and OEE


Learn how PTC Kepware and partner inray worked closely with Greiner to standardize connectivity across multiple plants and over 500 machines, improve quality, track KPIs, and ultimately drive productivity.

[DOWNLOAD PDF](#)



First standardization - then optimization

Industry 4.0 and digitization of the industry are often easy to say, but a complicated process. The globally operating company works in its plants with various production technologies, such as injection molding and deep drawing, as well as various decoration technologies, such as printing, labeling, sleeving or in-mold labeling. In cooperation with




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
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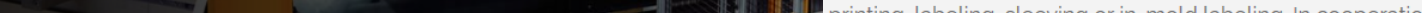


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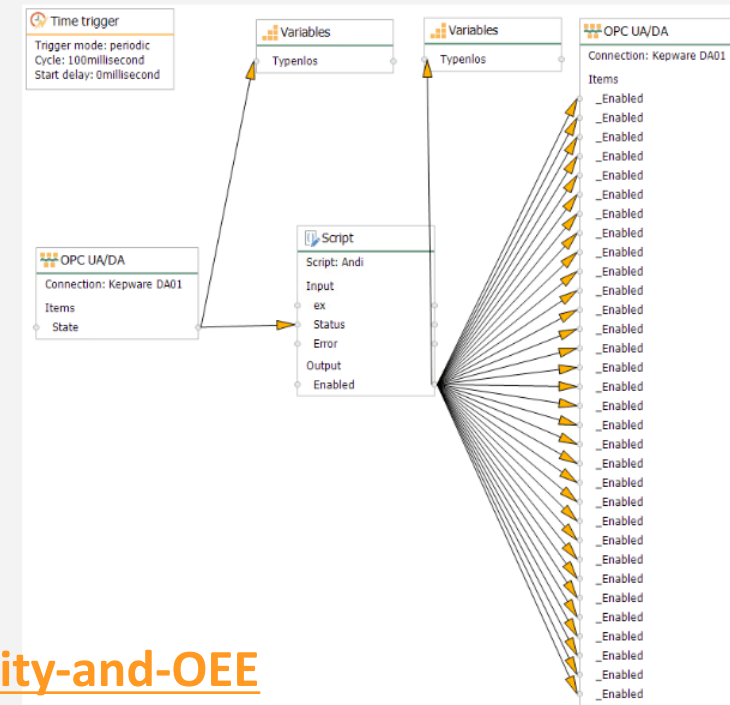


Industrial connectivity for packaging manufacturers

In the age of Industry 4.0, companies have to reposition themselves digitally. New networks provide a secure channel for information from automatic lines and bring numerous advantages, but also challenges. The process must be planned, initiated and implemented. The EUROMAP 63 driver thus brings the machines into the OPC UA architecture and into the Industry 4.0 environment. Investments and new partners. There are countless providers of the new connectivity services. In order to successfully go through the change as a company, good project management is required. Through the other plugins of the KEPServerEX, the data of the injection molding machine can be used in different ways and the OPC server

First standardization - then optimization

Industry 4.0 and digitization of the industry are often easy to say, but a complicated process. The globally operating company works in its plants with various production technologies, such as injection molding and deep drawing, as well as various decoration technologies, such as printing, labeling, sleeving or in-mold labeling. In cooperation with Greiner Packaging, Kepware has developed a communication standard for injection molding machines that is now also available as a EUROMAP 63 driver for other users. The EUROMAP 63 driver connects directly to EUROMAP devices using today's OPC communication technology and provides a secure channel for information from automatic lines and independent devices. The EUROMAP 63 driver thus brings the machines into the OPC UA architecture and into the Industry 4.0 environment. Through the other plugins of the KEPServerEX, the data of the injection molding machine can be used in different ways and the OPC server function allows any number of client applications to query and use the data.





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