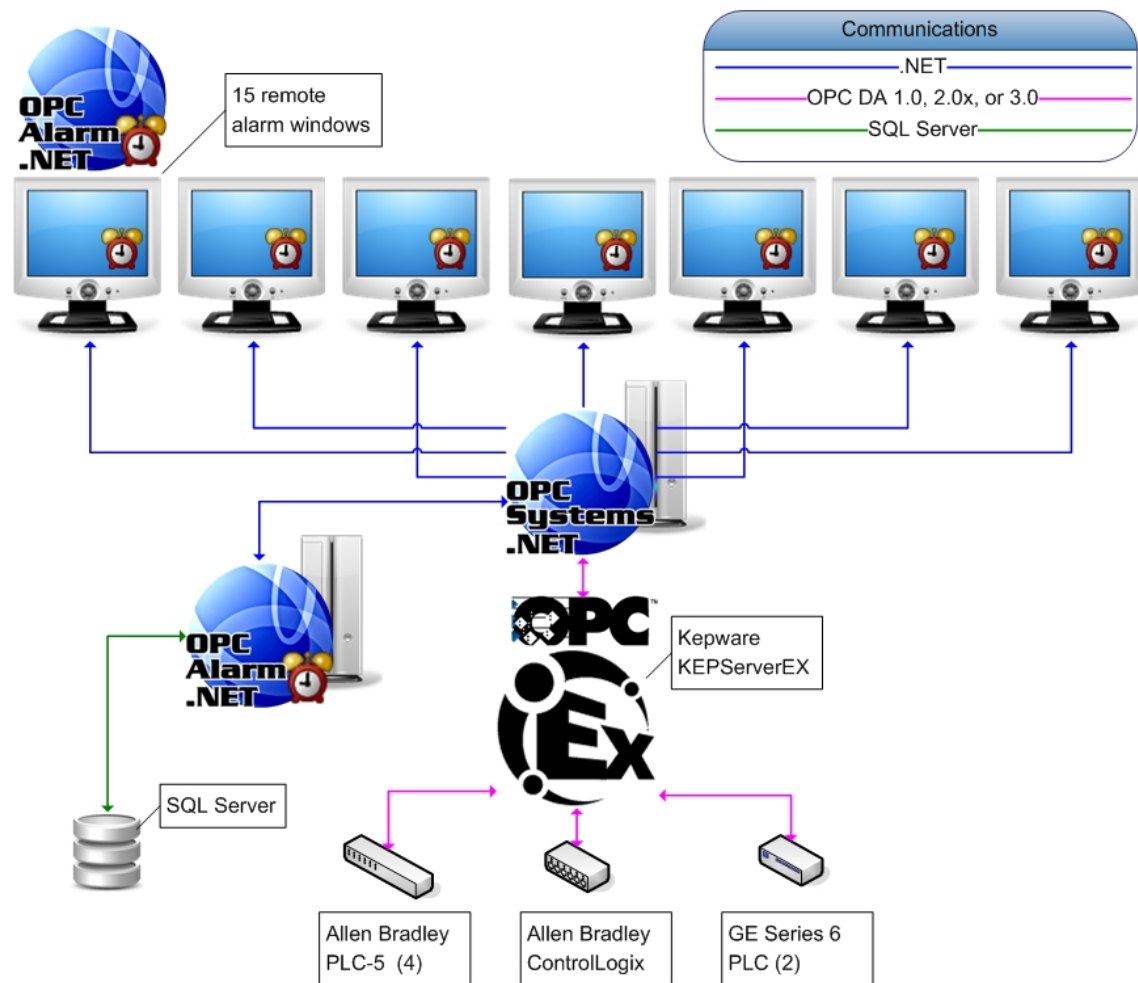


A critical process that OPC Systems.NET is utilized in is Michelin's product bagging system that closely monitors the weight of rubber materials that is used in the production of tires. Michelin Tire's automation technician Travis Jenkins has implemented OPC Alarm.NET to monitor and log alarm conditions for this process from multiple PLCs. Travis describes the process, *"The system weighs each bag for the proper product amount. Weight tolerances are very critical, so operators are notified immediately of any conditions that are outside of the product specification. Real-time and historical alarms can be viewed from 15 different alarm windows located throughout the production facility. Each alarm condition that occurs is logged to a SQL Server database which can then be viewed from any OPC Alarm.NET window and from Michelin's web based production software."*

## Michelin Tire Bagging System



OPC Systems.NET communicates to 4 Allen Bradley PLC 5 controllers, 1 Allen Bradley ControlLogix controller, and 2 GE Series PLCs via OPC Data Access through Kepware's KEPServerEX OPC Server. As the data arrives from the KEPServerEX OPC Server through an asynchronous data subscription the real-time data is then processed by event to determine the alarm state. When alarm conditions occur the information is both logged to SQL Server for historical analysis and sent to all real-time alarm windows currently connected to the OPC Systems.NET Service. Currently there are between 15 to 20 remote alarm windows that are used for monitoring all of the current alarm conditions in the process. From the way that OPC Systems.NET is designed there is no limit to the number of remote alarm windows that can be added for both real-time and historical alarms. The system is also fully scalable as other OPC Systems Services can be added to the system with each remote alarm window subscribing to multiple OPC Systems.NET Services.

Real-time alarm communications implements watchdogs with event driven communications to provide only new alarm information reducing the overall network traffic. If any remote alarm window loses communications due to a network failure the operator is notified within 5 seconds. Alarms are also queued if a failure to SQL Server occurs, so no historical alarms are lost during temporary network failures or if the SQL Server engine is stopped temporarily. DCOM is only used in the OPC Systems Windows Service to communicate with the KEPServerEX OPC Server. All other communications is performed with .NET communications making networking extremely simple, even through network firewalls. Tag and alarm logging configurations can be updated with new signals and alarm conditions while the system is running from local or remote configuration applications through .NET communications.

*"The remote alarm networking is very easy to implement by just specifying which OPC Systems Service you want to view alarms from. We use the OPC Systems HMI container for remote alarm windows throughout our production line. We are now starting to use OPC Web Controls.NET, and OPC Web Alarm.NET for real-time web applications."* Travis Jenkins, automation technician for Michelin Tire.



For more information on OPC Systems.NET and to download a free 30 day evaluation visit [www.opcsystems.com](http://www.opcsystems.com). Visit our Sales page to find a representative near you.

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