

# Kepware's Oracle Connectivity Suite

**ORACLE**  
Certified Partner

## Kepware's KEPServerEX with new Analysis and Connectivity Plug-ins is designed specifically for Oracle customers.

### KEY FEATURES

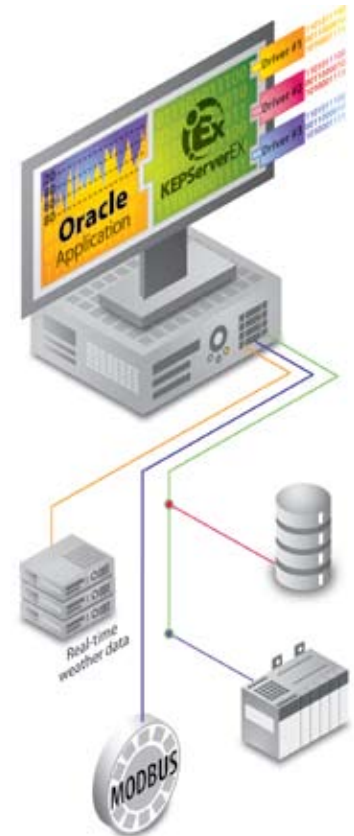
- Connectivity to 1,000s of Devices
- Over 130 Protocols
- Data Aggregation
- Data Analytics
- Basic RDB Connectivity
- Oracle MES Connectivity
- Oracle MOC Connectivity

Today's businesses demand higher throughput, intelligent scheduling, reduced inventories and information automation to reduce errors and enhance productivity. This can only be accomplished by connecting your manufacturing automation systems with enterprise business systems. Oracle has selected Kepware specifically for this purpose. Oracle business and operations management solutions can be connected, in real-time, with equipment and operations on the plant floor, by leveraging Kepware's suite of communication products combined with analytic and connectivity tools tailored for Oracle business solution products. These products include the Oracle MES (Manufacturing Execution System) and the Oracle MOC (Manufacturing Operation Center).

Kepware offers several products and options that can be combined to offer the exact solution you need today, while delivering a scalable architecture to meet future requirements. The foundation for the Oracle Connectivity Suite is KEPServerEX, delivering access to over 130 manufacturing protocols (Drivers). KEPServerEX presents a single, consistent interface that allows you to truly maximize the promise of equipment connectivity. You can add multiple driver "plug-ins" all within a single KEPServerEX without worrying about learning new communication protocols or spending time understanding new applications. The list of drivers includes PLC and device drivers, and U-CON, a User-Configurable driver for serial and Ethernet data acquisition delivering connectivity to a myriad of devices, from barcode scanners to scales and RFID. KEPServerEX works on both Workstation and Server Operating Systems from Microsoft and can operate as a User or Service level application. Operating systems from Windows 2000 through Vista are supported.

Selecting a driver is easy. KEPServerEX delivers all drivers with one straight forward installation. You simply set up the communications Channel and select the Driver (protocol) from the built-in list.

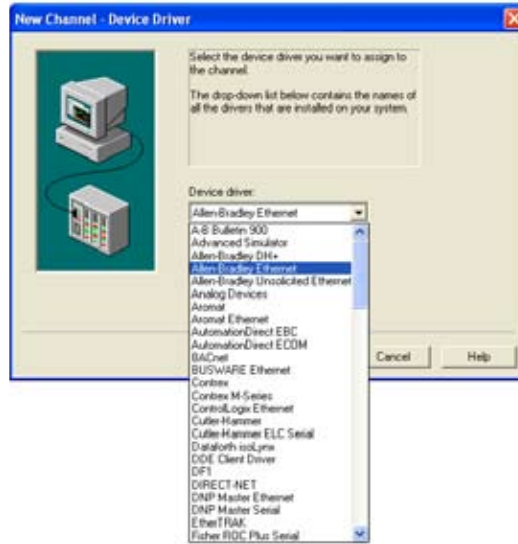
Once a Driver is selected, the user easily references data, events and conditions from plant floor equipment through TAGs that are simple to create. A TAG is a high level reference



# Kepware's Oracle Connectivity Suite

**ORACLE**  
Certified Partner

to plant floor data, that abstracts the user from all the details – protocol, data addresses, scaling, etc. needed to acquire the result. Tags deliver real-time performance data right from the machine to your application.



Driver Selection

## Raw Data is not Information

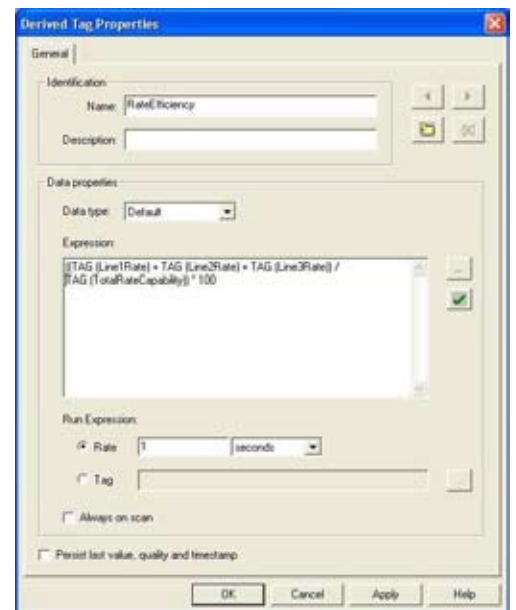
Your machines may not deliver all the data you need for proper operations assessment. Variables such as Cycle Time, Maximum Temperature, Downtime Reason, etc. may not exist, yet are essential for operations analysis. For this reason, the KEPServerEX solution offers an option called Advanced Tags which deliver a variety of Analytics. Advanced Tags deliver an array of mathematical and logical operators enabling the generation of new data, or the aggregation of existing data into information suitable for higher level archival and analysis. Through Advanced Tags users can measure the duration of operations,

totalize events, perform averages over a group of sensors, set trigger conditions for data acquisition and combine machine conditions to generate an overall machine state, valuable for future Analytics.

Advanced Tags are similar to I/O Tags. Advanced Tags enable you to create an expression, browsing from existing data tags, and combining them with math and logic operators to generate a new result.

## Building a Transaction for your higher level Analytics.

Many MES, ERP or OPM solutions require their input data in the form of predefined Transactions of relevant information. For example, the result of a machine cycle might deliver a Machining Center ID, Part ID, Operator

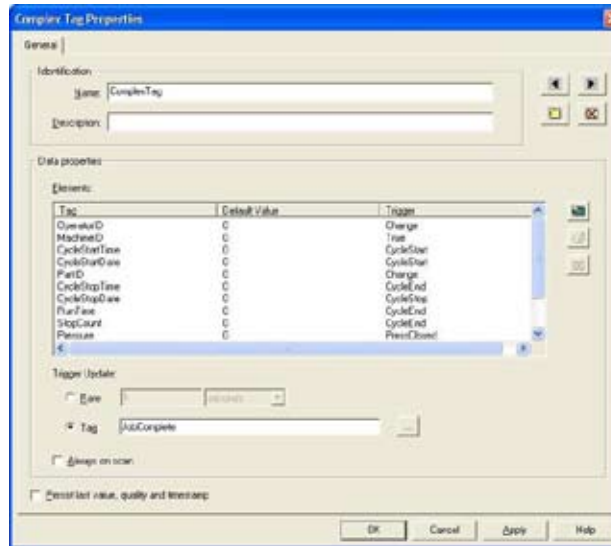


Advanced Tag Configuration



# Kepware's Oracle Connectivity Suite

**ORACLE**  
Certified Partner



Complex Tags

ID, Cycle Time, Number of Downtime Transitions, Total Downtime, Machine Speed, Tool Life, etc. This array of data can be made up of a combination of values and logic states, all bundled into one Transaction. While Advanced Tags deliver the mechanism to create the variables and events to define relevant data, another mechanism must provide the function of transaction assembly. This is the function of the Complex Tag.

Complex Tags assemble the transaction for higher level systems by providing the definition of data to collect and the definition

of collection triggers for each value. Some values are simply a measurement, such as the count of parts generated during a run cycle. Other values might be correct at a moment in time, such as the maximum pressure reached at a point in a press cycle. Complex Tags define the details of the collection and a transaction. Complex Tags support the wide variety of collections that may exist for your plant manufacturing environment and are the mechanism used to interface with the Manufacturing Operations Center.

## Oracle Connection Options

Several mechanisms are available to share information with higher level systems. They include:

- Writing Transactions to a Relational Database Table
- Writing Data to the Oracle MES Transaction Table
- Writing Data to the Oracle MOC Transaction Table.

General Database Logging - Writing data to a Relational Database is accomplished through the KEPServerEX DataLogger option via ODBC. This option enables you to select I/O or Advanced Tags, and write them to a Relational Database on either a time or event basis.

Oracle MES Logging – Writing Data to the Oracle Manufacturing Execution System is accomplished via the Kepware-Oracle MES (OMES) option for KEPServerEX. This option enables selected I/O or Advanced Tags to be written to the appropriate Oracle MES Interface Table on either a time or event basis.

Oracle MOC Logging – Writing data to the Oracle Manufacturing Operations Center is accomplished via the Kepware-Oracle MOC (OMOC) option for KEPServerEX. This option enables Transactions of data, defined by a Complex Tag, to be written to the MOC Interface Table on a time or event basis.



# Kepware's Oracle Connectivity Suite

**ORACLE**  
Certified Partner

## KEPServerEX Product Option Details:

### Device Drivers:

Multiple Protocols for Plant Floor Data Collection

### Advanced Tag Option:

Required for Analytics (Math, Counters and Timers), and for Event Triggering

### DataLogger Option:

Required for Basic Relational Database Connectivity

### + Oracle Connectivity Plug-in:

Option 1 – OMES Option – Required for Oracle MES Connectivity

Option 2 – OMOC Option – Required for Oracle MOC Connectivity

## Product Pricing:

| Options                                       | MOC            | MES            | Basic DB       |
|---|----------------|----------------|----------------|
| KEPServerEX with one Standard Driver - \$795. | ✓              | ✓              | ✓              |
| Additional Standard Driver - \$795.           | optional       | optional       | optional       |
| Advanced Tag Option - \$1795.                 | ✓              | optional       | optional       |
| DataLogger Option - \$995.                    | -              | -              | ✓              |
| OMES Option - \$2495.                         | -              | ✓              | -              |
| OMOC Option - \$2495.                         | ✓              | -              | -              |
| <b>Base Pricing</b>                           | <b>\$5,085</b> | <b>\$3,290</b> | <b>\$1,790</b> |

## ABOUT KEPWARE

Kepware is the world leader in communication software for automation and offers unique experience in both OPC and embedded device communications. Since 1995, Kepware has focused on the development of communication drivers to automation controllers, I/O and field devices. Operating system support includes; Microsoft Windows Desktop, Server and Embedded (Windows CE and Windows NT/XP Embedded). Today, with over 130 communication protocols, and through the efforts of our direct sales, distribution and embedded partners, Kepware is the leading provider of communications with annual shipments exceeding 100,000 units.

Please see the Kepware Website for a complete list of available communication drivers at: [http://www.kepware.com/Products/products\\_OPCServers.html](http://www.kepware.com/Products/products_OPCServers.html)

## Next Steps

Kepware Products are available for download at [www.kepware.com](http://www.kepware.com).

All products operate in a two hour demonstration mode enabling you to install and test the product with-in your environment. Upon satisfaction, you simply contact Kepware to purchase the product, and you will be supplied with a product license key, unlocking permanent operation.

