

Raima Energy & Natural Resources User Applications

Enabling edge applications to move data to the cloud

- Provider of High-Performance In-Memory Database Technology
- Small footprint, cross-platform
- database with both In-Memory and persistent storage device functionality
- Optimized for flash & SSD by minimal writes to the medium for longer lifespan
- Well field-tested.

Types of Industrial Automation Solutions:

- Maintaining parameters, configurations, recipes for manufacturing processes
- Logging events, errors, alarms from systems and processes
- Live data capture
- Display customization
- Condition monitoring predictive maintenance

GE POWER	 Application: "ALSPA ControPlant" OS: Windows X86 Description: GE Power embeds Raima's RDM database solution within their historical data recording application that is part of GE's mission-critical control systems for power plants. The database collects, stores, and manages this critical historical information.
Schneider Electric	 Application: "ezXOS" within OASyS DNA OS: Windows X86 Description: Schneider Electric embeds Raima's RDM database solution within their EasyXOS Operator Station component which is a customized SCADA HMI interface to Schneider's OASyS DNA product. The Raima database provides the management of data for oil & gas companies for how they set up & manage their displays.

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Schlumberger

Schlumberger Limited:

- **Application:** "Application within RX5 Data Acquisition System"
- **OS:** Linux X86
- **Description:** Schlumberger runs Raima's RDM database within an application built into the RX5 Data Acquisition System. The application running RDM is placed on oil rigs and used by Schlumberger engineers to provide offshore drilling services for unconventional oil and gas environments to optimize production and maximize recovery. The RDM database is used to log data gathered from the oil wells.

Schlumberger SRPC:

- **Application:** "Helios" Data Acquisition Reporting & Transmission for Well Monitoring
- OS: Windows X86
- **Description:** Schlumberger integrates Raima's RDM database within their Helios Application. Schlumberger stores measurements of temperature, pressure, gas composition, and oil consistency from sensors. There are as many as 1000 sensors, each generating data once per second. Data is stored 24/7 continuously for 3 months, then is archived and the database emptied. At the same time, the data is being stored the results from the incoming data are computed, in real-time, and stored in the Raima database.

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Aker Solutions ^{**}	 Application: Vectus - "Future Generations of Aker's Offshore Control Technologies" OS: Host Linux - Target QNX PPC Description: Aker Solutions embeds the Raima RDM database to handle high volumes of information gathered from subsea oil production. The database needed to be compatible with embedded and conventional systems and deliver a high degree of robustness to maintain data integrity in the offshore environment where communication links may suffer disruption and interruption.
Echelon by Adesto	 Application: "LNS" OS: Windows X86 Description: Echelon by Adesto embeds Raima's RDM database solution within their LNS-based network tools as network management software for LonWorks Networks. The Raima database manages peak energy efficiency data for customers to operate at the lowest cost. Data managed includes configuration data, monitoring and control data, diagnostics, and more.
EST. 1943	 Application 1: "Radiation Review" OS: Windows X86 Description: Los Alamos embeds Raima's RDM database solution within their Radiation Review nuclear measurement application. This application is installed on laptops and workers take measurements of nuclear data. The Raima database collects data from detectors to verify energy levels and rates. Application 2: "INCC" - International Neutron Coincidence Counting OS: Windows X86 Description: Los Alamos embeds Raima's RDM database solution within their INCC Neutron Coincidence Counting application. This application receives the data feed from the Radiation Review application, stores the data in the database, and uses this information for data analysis.

Hydro Québec	 Application: "CEDA" OS: Windows X86 Description: Hydro-Québec's uses this CEDA parameters & automation edition console utility that embeds Raima's RDM databases solution. Hydro Quebec engineers use this application at Power Plant sites to run during the set-up and configuration of alternators. The utility is run if they need to adjust or change the parameters of these energy-generating alternators.
KONGSBERG	 Application: Maritime Oil & Gas Process Control OS: Windows X86 Description: Kongsberg Maritime embeds the Raima RDM database to handle high volumes of information gathered from subsea oil production.
HYDRIL PRESSURE o GE Oil & Gas business	 Application: "ENSCO 7500 Control System" OS: Windows X86 Description: Hydril embeds Raima's RDM database solution within their ENSCO 7500 offshore drilling control system. The Raima database manages configuration data and stores historical information through a couple of applications including a graphical user interface on QNX and on a secondary application on Windows that communicates to an external device and sends and receives data to the RDM database.
GRAVITY PULL SYSTEMS Conversion to consultance before	 Application: Production Process Measurement & Analysis Systems OS: Windows X86, Linux X86, Mac X86 Description: Gravity Pull Systems embeds Raima's RDM database solution within their production process measurement & analysis system that uses the Raima database to store and analyze production process & measurement information regarding environmental conditions in real-time. The intention of the system is to store the measurement data privately and distribute it to the stakeholders.

Want To Know More?

Please call us to discuss your database needs or email us at info@raima.com. You may also visit our website for the latest news, product downloads, and documentation: <u>www.raima.com</u>.

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