



RTAP FAQs

1) Is RTAP a solution for my industrial operation?

RTAP is a proven supervisory control platform in thousands of installations worldwide. We maintain relationships with a global roster of solution partners who have the training and expertise to create a system that meets your requirements. From a system that helps an aircraft maker cut energy costs in a manufacturing plant, to one that integrates control systems in a chemical plant, to another that gathers real-time data from the world's longest oil pipeline, RTAP is an industrial-strength system for crucial operations and high-speed, high-volume processes.

2) To what extent can RTAP model my operations and processes?

The heart of RTAP is an object-oriented, real-time database that provides reliable storage of high-resolution data—not just sampled or compressed values—from a diverse range of real-time sources: I/O devices, PLCs, plant-level applications and more.

From the abstract to the physical, object-oriented technology and the component software model gives RTAP advanced flexibility. Unlike conventional flat-file or relational databases, RTAP lets you create intuitive data structures that model the natural hierarchy of your operations and processes.

The basic element of RTAP is the database object, which is more than just a database point. Each object can combine multiple I/O points and other relevant data, holding as many as 255 attributes that capture the essence of any object in your system. You can define those attributes as scalars, vectors or tables in a broad array of data types, including:

- floating point, integer or complex format
- database cross-references
- text strings

The ability to include text means each object can contain a description of the data and its source, plus information such as maintenance records, calibration dates and actual run time. Enterprise applications such as the SAP R/3 PM plant maintenance module can use that lifecycle information to help you anticipate changes in the health and performance of your capital assets.

3) Can RTAP help me easily view my specific operations and processes in real-time?

Yes. RTAP has a choice two powerful HMI's (Human Machine Interface) that provide control panels and a visual view of your whole system.

The RTAP HMI's include:

- animation of system operation
- process graphics
- graphical views of data flows
- trend displays
- alarm summaries
- tabular displays of measured data

The traditional HMI, SchematX, is based on X-Windows technology and is available on all major platforms of Unix. . Visualizer, your second HMI choice, runs on the latest version of Windows and can be used with either a Unix or Windows RTAP server. Each HMI will present a live, graphical view of automated operations or processes. Using real-time data from RTAP, they can provide on-screen animation of items such as tanks filling, conveyor belts moving and switches opening or closing. Its drawing tools and library of symbols let you quickly assemble a custom graphical interface without writing any software. Connecting data sources to graphical elements is as simple as point and click.



4) How quickly can RTAP be configured and adapted?

Database objects are reusable, greatly reducing the time your control personnel spend on configuration and maintenance in large systems. Changes or additions to entire classes of objects can ripple through the database, eliminating repetition in system configuration and increasing flexibility for faster reconfiguration.

With the RTAP Configurator for Windows NT, you can configure and manage your RTAP system using a single, intuitive, graphical interface. The Configurator lets you set up and edit the database, the alarm system, the historical data recorder and the scan system— all using an object-oriented system of classes and inheritance, which greatly simplifies the process of creating and changing your RTAP system. The Configurator is also capable of making changes to your RTAP environment while it is running, eliminating the need for costly downtime.

5) Does RTAP have Web Services capability?

Yes. A key feature of RTAP Web Services is availability of RTAP tags. RTAP tags are essentially text commands that you can embed in an HTML document. These commands can search, navigate, read and write information from RTAP databases. With RTAP tags, you can also connect to multiple RTAP environments.

RTAP tags make full use of the power and flexibility of the RTAP database. To query RTAP data structures you have full support of relative addressing and wildcards. You can read scalar, vector and history attributes. You can also simplify reporting with powerful iteration features, and write values to the real-time database. Finally, RTAP Web Services come with a charting library to enable you to display and summarize data in an assortment of chart types.

6) Can RTAP handle networked data?

Yes. RTAP databases are often used in highly distributed SCADA systems with workstations residing in different locations. It is renowned for its ability to handle the massive data that systems like these generate and depend on. The inherent networking strength of RTAP makes databases transparent across standard TCP/IP networks. This capability lets you channel data — literally hundreds of thousands of points—from several independent databases into a human-machine interface (HMI), a Web browser, or a variety of commercial applications such as ERP systems.

7) What devices is RTAP compatible with?

Industrial Defender, Inc. and our solution partners have developed drivers that support a wide variety of popular devices such as RTUs, PLCs and DCSs. The Scan System also features an OPC client, which allows you to connect to any device that can communicate with an OPC server. Whatever the source, data collection is automatic according to parameters you specify. There is also a driver development toolkit to develop custom drivers.

8) Does RTAP have a feature to transform the real-time data it collects to provide high level metrics for my operation?

Yes. The Calculation Engine quickly transforms measured data to intermediate results needed by upstream processes and people. We think of it as an embedded spreadsheet, perfectly synchronized with the rest of the system to match the needs of real-time applications. Many common calculations are built in, and you can add your own specialized calculations with functions written in C or C++.

9) Does RTAP provide alarm capability?

Yes. Questions about the state of the operation can be answered by the RTAP Alarm system, which provides centralized, easily maintained alarm management. Thirty standard alarm classes handle most typical requirements, and you can extend the functionality by adding new classes. At run time, each alarm class operates as a state machine, responding to real-time changes and alerting operators via displays, printers and other output functions. As an example, one developer created a system that pages the on-call operator when a particular set of alarms is detected.



10) Does RTAP have event management capability between applications?

Yes. The RTAP Event Manager watches for triggers from the real-time database and from business applications, and it can initiate follow-on activity in RTAP. The Event Manager excels at the complex problem of responding to real-time events, ensuring the transmission of meaningful information to a transaction-based enterprise system.

11) How does RTAP keep history on my operations data?

Data archiving is a key requirement in automation systems. RTAP's Data Historian collects large volumes of real measured data, which can be sampled based on events or time. The Data Historian also includes trending and reporting tools that highlight noteworthy activity in the measured data. Desktop applications such as Microsoft Excel and Crystal Reports can easily retrieve RTAP's historical data through an ActiveX control. Additionally, RTAP has the ability to tie in to other databases and historians, accessing external data seamlessly.

12) Can RTAP Service a Variety of Clients and Applications?

RTAP Distribution Services use an ActiveX control to enable controlled access for PC clients—and users—in all areas of an organization. The Distribution Services also create transparency across UNIX and Windows databases, preserving the value of installed systems and simplifying future migration. For archival storage of real-time data, an ODBC client interface enables communication with SQL databases. A connection to Industrial Defender, Inc.'s Enterprise Link product provides communication objects for the SAP R/3 system, Oracle databases, Microsoft SQL Server and other business systems.

13) How easily can RTAP be configured with my other applications?

The RTAP Java server supports complete read/write functionality to the RTAP database, including multi-read/write and history. All RTAP query, configuration and control functions are also supported. Database events, alarms & RTAP messages are also supported. Database events and alarms can be automatically dispatched to listeners. Through remote method invocation (RMI) programs can run locally or remotely without changes and can access multiple RTAP environments.

RTAP also has one of the most comprehensive C APIs (Application Programming Interface) available. This fully documented API connects RTAP to custom or off-the-shelf applications that need real-time information. To extend the applications platform further, a fourth-generation scripting language facilitates system proto-typing, iterative problem solving and integration with other applications—quickly and without compiled code.

14) On what platforms is RTAP available?

RTAP is one of the only SCADA systems compatible with multiple operating systems. The RTAP server currently runs on all flavors of Unix, including HP-UX running on Itanium Integrity servers; Red Hat Enterprise Linux V4.0, and Windows 2003. For additional flexibility, you can choose between a Unix and Windows-based HMI.

About Industrial Defender, Inc.

Industrial Defender, Inc., the global leader in Cyber Risk Protection™, is the first company to offer a completely integrated Defense in Depth™ cyber security solution designed to protect the real-time process control and SCADA environment in a flexible and cost effective platform. This comprehensive Cyber Risk Protection™ Lifecycle solution enables the efficient assessment, mitigation and management of cyber security risk within the critical infrastructure network domain.

Formerly known as Verano, Inc., Industrial Defender is a privately held company with over 17 years of real-time process control and SCADA industry experience and more than 6 years of industrial cyber security experience. Industrial Defender has completed more than 80 process control / SCADA cyber security assessments, more than 1,900 global technology deployments in securing critical infrastructure systems, more than 3,000 mission critical SCADA deployments and provides managed security services for 160 process control plants in 21 countries.

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