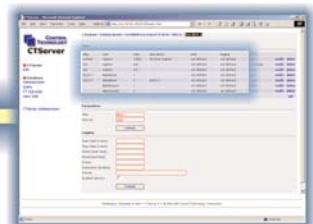


# CTServer™

*Web enabled enterprise intelligence software*

- Integrates device data with enterprise systems
- Captures and logs data from hundreds of devices in real time
- Automates alarm and decision management
- Securely accesses real-time information anywhere, anytime from any browser-based device



  
**Control  
Technology  
Corporation**

# Enterprise Intelligence

## The Challenge

Many facilities have implemented higher level enterprise systems (MES, ERP, CRM, etc) only to find that they are not achieving their expected optimization and cost reduction goals. The problem in many cases is a missing link: lack of accurate and consistent real-time data from their plant and process level devices. Typically this data is still collected via manual or semi-automatic methods that are subject to errors, delays and bias.

## The Solution

CTC and its browser-based CT Server™ software provide this missing link. As the inventor of web based automation control in the early 1990's, CTC is intimately familiar with optimizing real-time information flow between industrial devices and enterprise systems. CT Server is a



configurable Java-based standard product that completes the link between plant and process devices and

the rest of the enterprise. Built on open standards, it can run on virtually any hardware or operating system. All user and administrative functions are accessed through a standard browser window making it easy to deploy and maintain.

CT Server also helps to bridge another information gap as well: the gap between controls engineering and IT. CT Server gives IT professionals access to device level data through IT-friendly interfaces like XML, SQL, and SOAP. This means the IT department doesn't have to learn new proprietary languages or invest in custom drivers to get the desired data. And control engineers do not have to spend resources developing schemes for collecting device level data from control devices that were never designed for this purpose.

If you're looking for a way to capture accurate real-time information from your plant and process devices and seamlessly move that information to those who need it inside and outside of your company, bridge the gap and get CT Server.

## CT Server Features

*CT Server offers a wealth of innovative features designed to significantly improve your ability to capture and deploy information from process and production assets, and to make that information instantly available to local and remote users, resulting in reduced operating costs, reduced IT expenditures, reduced downtime, and increased productivity.*

### 100% Web Deployed

Unlike competitive offerings, CT Server is not a browser-enabled "bolt-on" to a proprietary software package. It was designed from the core as a Web based application, so you get all the benefits of today's open web and Java based Thin Client Architectures. The only user-side software required is a standard browser!

All interaction, including administration functions, are supported through the browser.

### Open Architecture

Java-based software provides hardware and operating system independence. CT Server runs on any Java compatible platform, supporting the traditional Windows/Intel platform as well as popular alternatives such as Linux and Sun/Solaris.

CT Server also supports several IT enterprise connectivity standards, including Web Services (SOAP), XML, SQL, ODBC, JDBC, and J2EE server.

### Off-the-Shelf Solution

CT Server and its add-on modules are provided as standard off-the-shelf solutions. Simply download the software to your server, and then use your browser to configure it. There's no need to write custom code or scripts to get up and running. Support for multiple standards at every level of system design makes CT Server a system that can be configured without expensive and time-consuming customization.



## Secure

Because CT Server is designed for use on the Internet, it has several built-in features that ensure secure, multi-level, multi-user access. A sophisticated multi-level password grid enables you to control whether users have read-only, read-write, or no access to system variables. Support for Secure Sockets Layer (SSL) technology with 128-bit encryption protects against unauthorized access. CT Server integrates with existing IT security schemes via LDAP support and MD5 digest authentication.

CT Server's security and detailed audit trail capabilities support companies in meeting FDA 21CFR Part 11 compliance requirements.

## Reliable

CT Server is designed for mission-critical, 24/7 applications. It supports data buffering at the controller level, ensuring uninterrupted data collection even if CT Server or your enterprise systems go off-line.

## Affordable

CT Server includes a built-in SQL database, eliminating the need for expensive 3rd party licenses for programs such as Microsoft SQL Server. A simple licensing strategy, with no tag limits or view limits, makes it easy to purchase a license up front that will have sufficient capacity for your application, before system setup begins. CT Server typically deploys in 3-6 weeks and achieves payback in under a year.

## Maintainable

Because CT Server has an intuitive browser-based interface, custom software support is unnecessary. The Thin Client Architecture – where the server engine transfers data to the browser on the client – eliminates the need to maintain user-side software.



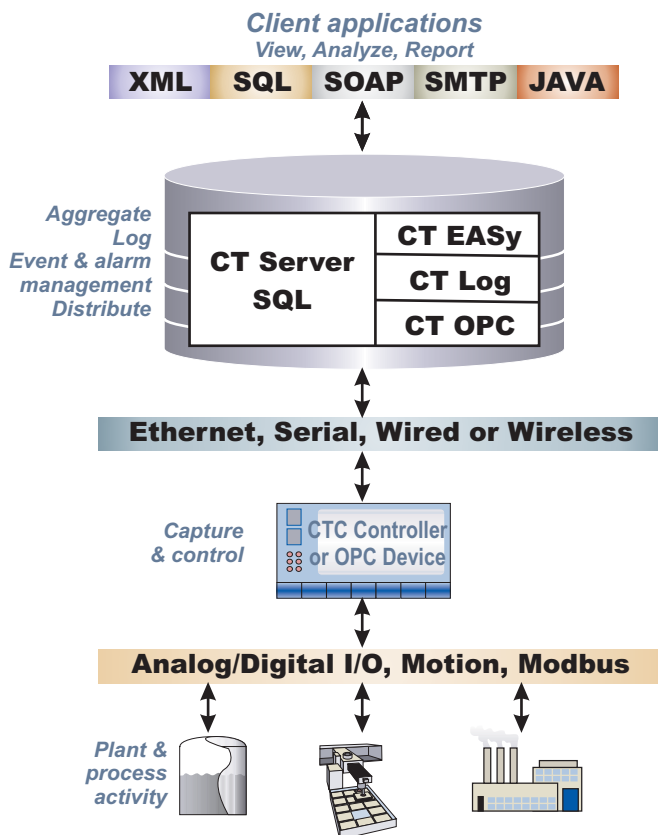
## Scalable

Licenses for CT Server are distributed on a per-device basis, and are available for 1 to more than 1,000 devices per server. CT Server also supports multiple server load sharing, ensuring that performance will be maintained as the application or network demands increase.

CT Server has several online configuration features that allow you to expand your system without interrupting service. CTC's Parallel Configuration Engine lets you modify one part of CT Server without interrupting execution of non-affected areas, e.g. adding or changing monitored devices. Additional licenses can be added to CT Server without restarting the system.

## Extensible

For advanced users, CT Server provides useful access to customization capabilities and a Java 2 Platform Enterprise Edition (J2EE)-compatible Interface. CT Server enables you to write your own Java-based functions to share data with other applications. You can also use JavaServer (.jsp) pages to craft customized interfaces.



*CT Server provides shop floor to top floor integration with a lean but powerful communications strategy that uses existing networks and systems.*

# CT Server and Its Modules

CT Server consists of a Java-based server engine and SQL database, to which you can add other optional modules:

- CT EASy™, for event-based data transactions,
- CT Log™, for data archival,
- CT OPC™, to connect to OPC-compliant devices.

CT Server and its modules are described below.

## CT Server

CT Server is a modular system consisting of tightly-coupled modules that handle specific tasks and provide users with a number of flexible enterprise connectivity solutions. CT Server handles all administrative and communication functions. It includes a powerful, secure web-application server engine which is capable of delivering static and dynamic server-generated content. It also contains a native SQL engine, a SOAP web service interface and bi-directional XML exchange services.

## CT Log

CT Log is CT Server's high performance data historian, capable of logging over 100,000 data points per second. All logging is time- and device-stamped, providing a rigorous operating history audit trail. When combined with CT EASy, logging can also be event-driven. CT Log is integrated with CT Server's SQL interface, which allows data to be stored locally or in an external database. Use captured data to analyze data trends, provide visibility through the supply chain, identify constraints or comply with regulatory requirements.

## CT EASy

CT EASy is CT Server's Event and Action System that goes well beyond traditional alarm management systems. It monitors user-programmable conditions in the form of conditional expressions that occur within connected devices such as register state or input changes. It can also be interfaced with existing enterprise systems to monitor and act upon changes in external databases

(such as a new customer order). CT EASy automatically reacts to events with a series of one or more user-definable actions. Some of the most common actions are event logging, sending a message (text, email, wireless-page), and 'pushing' XML or SQL data to an external database. In systems that include CTC controllers, CT EASy actions can modify control functions such as turning on an output, loading a new recipe, or changing a value setting.

## CT OPC

CT OPC allows CT Server to connect to hundreds of OPC devices. CT OPC is not required to connect to CTC controllers.

### CT Server Applications

- Automated meter reading
- Water and waste water station control
- Building automation
- Oil and water well monitoring and control
- Plant-wide data historian
- Pipeline leak and flow monitoring
- Environmental monitoring
- Tank monitoring and control
- FDA 21 CFR Part 11 Compliance
- Factory alarm management

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