Benefits:

- Complete and accurate plant data record enables plant personnel to find plant performance improvement opportunities.
- Blend plant data with business metrics to more effectively communicate plant performance and reach your business objectives.
- Reports from a host of Wonderware software solutions can be viewed via Information Server Web Clients.

A Better Approach to Plant Information Management

The Wonderware Historian is the first, large volume plant data historian to unite a high-speed data acquisition and storage system with a traditional relational database management system, facilitating easy access to plant data using open database standards such as SQL, ODBC and others. Traditional relational database management systems do not meet the performance and functional needs of industrial information storage and management. The Wonderware Historian is designed to collect a wide variety of operations data at full resolution and very high data rates, store this data for an extended period of time, and deliver it for reporting, analysis and visualization. These features exceed industrial requirements and help deliver to decision-makers at all levels of an organization data needed to drive vital initiatives that improve plant and operational productivity.

Improve Productivity with Highly Targeted Plant Information

The latest version of Wonderware Historian software offers several advanced data retrieval modes that help target key plant information needed to identify and solve costly plant inefficiencies. Plant personnel can quickly retrieve key information and immediately apply corrective actions to improve plant productivity. These new advanced data retrieval modes also help reduce the time needed to create database queries — saving valuable plant IT resources.
Maximize Data Access with Wonderware’s Industry Leading Connectivity

Wonderware’s unparalleled data source connectivity allows the Wonderware Historian to connect to hundreds of field devices and plant systems using a wide range of communication options. Examples include:

- NetDDE
- OPC® technology
- Wonderware’s SuiteLink protocol
- Industry-standard SQL and ODBC database connectivity

Data from virtually any field device, plant system or database can be acquired and stored in the Wonderware Historian, furnishing real-time and historical plant data to users throughout the manufacturing enterprise.

Simplify Production Reporting and Delivery using Integrated Microsoft SQL Server 2005 Reporting Services

Microsoft SQL Server 2005 Reporting Services is a comprehensive server-based solution that enables the creation, management and delivery of both traditional, paper-oriented reports and interactive, Web-based reports. Now integrated with the Wonderware Information Server, which is included with the Wonderware Historian, Reporting Services combines the data management capabilities of the Wonderware Historian with the powerful and familiar reporting and analysis functionality of Microsoft Office to deliver real-time information which supports better operational decisions.
THE WONDERWARE HISTORIAN BENEFITS THE ENTIRE INDUSTRIAL ORGANIZATION

Wonderware’s Historian provides vital real-time and historical information that plant personnel need to streamline operations and reduce unnecessary production costs. Data from the Wonderware Historian serves the needs of operations, engineering, quality, maintenance and other groups. A few examples of how data from the Wonderware Historian can assist plant personnel in their process improvement efforts include:

Production

Production managers using the Wonderware Historian can answer questions such as:
- What are the daily production totals?
- What were the major outages this month?
- Are the plant’s emissions within regulatory limits?

Operations

Plant operators can reply to queries to answer:
- Why won’t this pump start?
- Is the furnace temperature slowly increasing?
- How was this start-up different from last year?

Engineering

Engineers can use the Wonderware Historian to answer questions such as:
- Are the set points optimal for this control loop?
- Did the protection interlock cause a spurious plant trip?
- Did the alarm provide sufficient warning to the operator?

Process engineers can make the following determinations:
- Has this vessel been subjected to metal stress?
- Is this machine a production bottleneck?
- What caused this pump to fail?
- Is my raw material supply being starved?

Quality

Quality assurance personnel can reply to a variety of inquiries including:
- Did the recipe change affect the product’s quality and yield?
- Have the bearing temperatures and vibration increased since the last overhaul?
- How many hours has the heat exchanger been in service this year?

HIGH-PERFORMANCE FEATURES

Field Proven in Dozens of Industries

Used in industries in every corner of the globe, the Wonderware Historian is field-proven in thousands of diverse applications. With more than 20,000 installations worldwide since its introduction in 1997, the Wonderware Historian is one of the world’s most popular plant data historians.

Wonderware Historian System Architecture
Store Plant Data with Unconventional Speed & Remarkable Efficiency

Wonderware Historian software captures plant data hundreds of times faster than a standard database system and saves data in a fraction of the space. Conventional relational database technology is not suited to the demanding plant-floor environment. The innovative Wonderware Historian combines front-end, high-speed data collection with time series extensions to an embedded Microsoft SQL Server relational database. The “swinging door” data storage algorithm greatly reduces data storage requirements while preserving important data features. It also fully integrates event, summary and production data along with database configuration information.

Expand Your Applications with Astonishing Scalability

The Wonderware Historian is fully scalable to meet the data demands of even the largest plants. Its broad scalability allows plants to start small and grow applications over time in a controlled and systematic manner.

Collect Plant Data Immediately Out of the Box

Designed as a shrink-wrapped solution, Wonderware Historian software installs quickly and immediately begins to collect valuable plant data. Wonderware is known throughout the industry as a leader in providing industrial automation software that is easy to set up and use. The Wonderware Historian is no exception.

Build Queries Faster & More Efficiently with New Advanced Data Retrieval Modes

Now offering more efficient and flexible queries than ever before, the open, high-speed Wonderware Historian offers the following advanced data retrieval modes:
- Time-in-state
- Best fit
- Time-weighted average
- Integral
- Slope
- Counter

Quickly and Easily Build a Plant Intelligence Web Solution

An integral part of the Wonderware Historian, the Wonderware Information Server enables plant personnel to quickly and easily build a plant intelligence Web content server because it provides the entire content management framework, home page and configuration tools out of the box. The Wonderware Information Server builds the entire content management infrastructure upon installation. Straight from the home page, content management administrators can easily point and click to configure the content and instantly obtain real-time and historical plant information. In fact, the Wonderware Information Server was designed to be configured by users with no programming knowledge. In addition, Wonderware Information Server Web analysis software offers the following advanced capabilities:
- Content management personalization and customization
- Intelligent content linking
- Dynamic formatting
- Integrated security
- Support for Web Services
- Centralized software administration and management
- Multi-view windows
- Extensive search capabilities
- Multilingual support
- Extensibility

Customized Content to Acquire Specific Information

The Wonderware Information Server can be customized so that different people can easily access the information they need. For instance, maintenance staff could use it to create detailed equipment drawings and downtime reports. A Vice President of Operations could use it to review plant efficiency information from various manufacturing lines and plants. To provide this personalized information, the content management administrator need only access the server once, then drag and drop the links to custom panels that provide views for the users. This capability eliminates the need to duplicate information in multiple places. Content management personalization enables Wonderware Information Server users to quickly access only the information they need and decide precisely how they want to view it. It features extensive drill-down capabilities and the ability to change the display format.

Gain More Plant Intelligence with Powerful Data Mining Functionality

Data without context is useless to most people. That’s why Wonderware’s Information Server provides intelligent content linking and drill-down capabilities, which allow plant personnel to display information in the ideal format for the analysis they plan to conduct. For example, a person who wants to analyze a batch to determine how many units of a particular ingredient are left in the unfinished goods inventory could simply click
on the ingredient in question to view a chart illustrating how much of that ingredient is in production and how much remains in the unfinished goods inventory.

POWERFUL ANALYSIS & REPORTING

The Wonderware Historian integrates seamlessly with a comprehensive set of data analysis and reporting clients including:

**Wonderware Information Server Web Client Software**

The Wonderware Information Server software’s TableWeaver feature facilitates data flow between the Wonderware Historian and other data sources. This data can be organized into highly useful plant information. Wonderware Information Server Web analysis software offers several visualization and analysis tools in easy-to-understand formats. Examples of this kind of real-time and historical information include:

- Key performance indicators (KPIs), trends and dynamic reports
- Statistical reports and charts
- Manufacturing execution system (MES) reports
- Information on product and batch genealogy
- Spreadsheets, charts and tables

**Trending and Reporting with ActiveFactory Software**

Plant data trending and reporting software, tightly integrated with the Wonderware Historian, facilitates the creation of Web friendly trend plots and reports in minutes.

**A clearer picture of operations through InTouch Graphics**

Wonderware’s world-famous, award-winning InTouch HMI software for visualization and industrial process control offers outstanding ease of use and simple-to-configure graphics. Powerful wizards and the new Wonderware SmartSymbols enable users to quickly create and deploy customized applications that connect and deliver real-time information. Wonderware Historian leverages InTouch to integrate real-time HMI capabilities with historical information for use anywhere in the plant. In addition, Wonderware Information Server can re-use graphics created in InTouch HMI and leverage them to deliver a rich set of graphics to the Web and reporting environment offering an extra level of information and notification for workers outside of the control room.

**EASY CONFIGURATION & MAINTENANCE**

**Configure Your System Simply & Efficiently Using One Plant Model**

Wonderware Historian software has been designed to integrate seamlessly with the Wonderware Application Server as part of the Wonderware System Platform. The Application Server provides significant engineering cost savings through the use of an object-based plant model and common namespace. Reusable and extensible objects representing typical plant assets can be created, customized and organized following the physical or logical structure of your plant. Once deployed, these objects can furnish data to the Wonderware Historian.

Furthermore, Wonderware Application Server objects also can greatly simplify configuration of the Wonderware Historian. For example, history extensions for object parameters are predefined, allowing for one-click parameter configuration without additional setup or configuration.

The Application Server’s plant model incorporates data tags and logically organizes data elements — representing the plant as a whole (or multiple plant systems), one area within a plant or specific equipment. These tags and elements can then be downloaded into the Wonderware Historian to provide a unified view of the entire plant’s history for easier troubleshooting and process improvement efforts.

**Capture Complete Data Records, Even from Slow or Intermittent Networks**

The Wonderware Historian captures complete data records with its fault-tolerant data acquisition system, which is appropriate for SCADA and other applications that use slow or intermittent data networks. The Wonderware Historian can acquire and store data collected by remote terminal units (RTUs), providing more complete data records for SCADA operations.

**Adeptly Retrieve Information with Flexible Data Source Configuration & Dynamic Reconfiguration**

The Wonderware Historian flexibly defines how data is acquired, stored and retrieved. All data — regardless of its source or time of entry — is fully integrated into a unified plant information database for easy retrieval of comprehensive historical data as well as configuration, event and summary information.

The Wonderware Historian software’s Dynamic Reconfiguration feature accommodates fast, simple alterations to the historian’s data collection configuration without interrupting data collection or breaking the stream of process data. Entire
Wonderware Historian configuration databases can be imported or exported to other Wonderware Historians. In addition, users can edit configuration files using Microsoft Excel software. What’s more, the Configuration Import/Export function makes it easy to pull in existing configuration information from other data sources, such as human-machine interface (HMI) applications. This enables diverse manufacturing enterprises to standardize on the Wonderware Historian without replacing existing systems. Real-time production data can be acquired automatically, at full resolution, directly from an extensive range of data sources including:

- Industry-standard OPC servers
- Greater than 600 device-specific I/O Servers
- Wonderware’s Data Access Servers (DA Servers)

Non-real-time, manual or off-network data also can be fully incorporated into the real-time production database via a powerful and versatile set of data import tools.

Moreover, the embedded Microsoft SQL Server technology provides industry-standard SQL and ODBC connectivity to other plant data systems, such as lab and maintenance management systems so that all of your plant data can be found in one place.

**Conveniently & Securely Manage Multiple Historians via a Single Management Console**

Multiple Wonderware Historians and associated Microsoft SQL Servers can be conveniently and securely managed through a single system management console. Based on the Microsoft Management Console, this single console can be accessed anywhere on the network, including the system administrator’s desktop. Centralized system administration saves valuable IT time and lowers overall system costs.

**HIGH AVAILABILITY**

The Wonderware Historian acquires distributed plant data from I/O Servers via either the Industrial Data Acquisition Service (iDAS) or the Wonderware Application Server. Both iDAS and the Application Server can run remotely and in redundant configurations. Thus, plant network failures do not typically have an adverse affect on data collection — virtually eliminating the need for expensive redundant processing hardware. iDAS and the Application Server automatically provide Store and Forward functionality if there is a loss of the primary Wonderware Historian node. Moreover, the Wonderware Historian software’s failover capabilities can significantly reduce data loss associated with interrupted connection to the I/O Server.

**Save Your Data with the Store & Forward Feature**

If the network connection to the Wonderware Historian node — or the node itself — is lost, then the Store & Forward function is automatically activated. Data is stored locally on the iDAS or APPLICATION SERVER node until connection to the Wonderware Historian node is re-established. No data is lost. The Store & Forward function makes servicing and administrating the Wonderware Historian node convenient and secure.
Buffer Your Data Sources with the IDAS or APPLICATION SERVER Failover Feature

The iDAS or APPLICATION SERVER acquires data from an I/O Server and forwards it to the Wonderware Historian node for data storage. A redundant, secondary node can be configured so that, if the primary node is lost, then the secondary automatically acquires the data. Remote configuration is easy and can be quickly configured via a few mouse clicks. In addition, these services can be located anywhere on the plant network.

Protect Your Data with I/O Failover & Redundant Systems

Multiple I/O Servers can be configured to enable automatic failover to the secondary I/O Server in case the primary I/O Server is lost. Data flow is maintained. Dual communication paths from the I/O Server to each PLC also can be specified. So, if one network goes down, then data can still be collected via the secondary network path. For particularly critical applications, special redundant hardware systems also have been tested and are capable of providing up to 99.999% uptime.

Microsoft Failover Clusters Support for Platform Redundancy

The Enterprise Edition of Wonderware Historian supports failover of active-passive clustering configurations on two PC clusters – significantly improving historian availability. In this type of clustering, one PC runs Wonderware Historian software while the other PC within the cluster is idle (Wonderware Historian is installed, but not running). If the PC running Wonderware Historian fails, the clustering software automatically starts Wonderware Historian Enterprise Edition on the second PC and shifts the work to that PC.

EXTENSIBILITY

Customize Applications & Databases to Suit Your Needs

The integrated Microsoft SQL database is easily extended with additional tables, stored procedures and views to accommodate specific information requirements. Customized event detectors and actions can be created using standardized tools to extend the power of the event system. The new Wonderware Historian Toolkit, which is included with the Wonderware Toolkits Package, enables programmatic access to the Wonderware Historian from within standalone Microsoft .NET applications, as well as from within Application Server scripts. The DA Server Toolkit also can facilitate the device integration capabilities necessary to collect more plant data.

POWERFUL EVENT MONITOR

Respond Rapidly to Critical Events with Automatic Event Detection & Notification

The Wonderware Historian’s highly configurable system detects and reacts to a wide range of process events such as when batches come to an end, ingredients are added manually or machines go down. Events can trigger a data snapshot, an e-mail alert or the modification of a specific data acquisition process or parameter, such as data collection intervals or value deadbands. The event system ensures that meaningful data is available when it is needed and that proper notifications are given to plant decision-makers regarding significant process events.

The Wonderware System Platform expands the Wonderware Historian’s event monitoring capabilities by configuring objects that capture and distribute information to and from multiple data sources. For example, when real-time events occur, the system will capture the requisite information to describe the event. These objects also can be configured to handle the upload and download of information required by ERP systems, business applications and databases.
Furthermore, the Application Server in the System Platform also can write directly to PLC setpoints and other control-related hardware, enabling plant personnel to take immediate action.

**FDA 21 CFR PART 11 READY**

Security & Audit Trails for Regulated Applications

For many regulated industries, FDA 21 CFR Part 11 compliance is a business requirement. Wonderware’s Historian delivers stringent data security and user access functions that assist with FDA compliance. Wonderware’s popular historian has been an important part of many FDA-validated applications. Microsoft Windows authentication also is available to better control system access to regulated processes.

**CUSTOMER SUPPORT & SERVICES**

Wonderware’s Customer Support Services Program makes it easy to receive up-to-date Wonderware software and associated applications. To learn more about this valuable program, which maintains and often increases the value of industrial software applications, please contact your local sales representative.

**PRODUCT HIGHLIGHTS**

- Advanced data storage compression minimizes data storage requirements
- Distributed architecture for more reliable data acquisition and lower administration costs
- Integrated with Wonderware Information Server for seamless Web content management and delivery
- Powerful performance management tools for KPIs, process graphics, trending, reporting, downtime analysis, production and SPC
- Built-in Microsoft SQL Server 2005 Reporting Services for easy report creation and management
- Open SQL Data Access with embedded Microsoft SQL Server Database for production database extensions and greater information context
- Generate highly focused data queries using powerful data retrieval modes
- Designed to support slow and/or intermittent data networks
- Ready to use out of the box
- High availability features protect critical applications
- FDA 21 CFR Part 11 Ready for regulated industries