

- *Dramatic Engineering Savings*
- *Lower Cost of Ownership*
- *Agility to Respond and Grow*
- *Uncompromising Openness*



PRODUCT HIGHLIGHTS

- Distributed Peer-to-Peer Architecture
- Plant and Device Application Model
- Intuitive Multi-User Development Environment
- Cost-Effective Redundancy
- Unlimited Scalability
- Data-Level Security
- Component-Based Change Management
- Centralized Deployment and Maintenance
- Integrated History, Scripting, Alarming and Security
- InTouch® HMI for Process Visualization
- Multi-Vendor Device Integration
- FDA 21 CFR Part 11 Ready

INDUSTRIAL APPLICATION SERVER

The Wonderware® Industrial Application Server introduces a new era in engineering productivity and scalability for industrial automation applications. It provides a framework for simplifying the development, deployment, maintenance and administration of distributed automation applications. In addition, the Industrial Application Server provides a new tier of real-time data acquisition, alarm and event management, data manipulation services, and collaborative engineering capabilities, which have been designed from the ground up for use in industrial automation applications.

The Industrial Application Server enables manufacturers, OEMs and systems integrators (SIs) to:

- Develop applications that naturally model the components of a plant or facility
- Significantly lower engineering, ownership and maintenance costs for automation systems
- Architect automation systems without compromising their ability to respond to new demands

The Industrial Application Server is a powerful new applications delivery platform built on the ArcestrA® industrial software architecture. This comprehensive plant



Powering intelligent plant decisions in real time.

automation and information architecture is designed from the outset to extend the life of legacy systems by leveraging the latest software technologies.

As a result, the Industrial Application Server can accommodate applications in:

- Discrete manufacturing
- Process plants
- Remote SCADA operations
- Batch plants
- Any combination of these types of operations

CAPABILITIES THAT DRIVE COST SAVINGS

Engineering Savings through Reuse

The Industrial Application Server significantly lowers engineering development costs through its component-based distributed architecture, which reuses application objects that represent plant devices and contain all the associated application logic. Application objects can be easily built, replicated and assembled, drastically reducing engineering setup and deployment costs, while reducing system startup time and risk.

Lower Cost of Application Ownership

In addition, the Industrial Application Server dramatically decreases the life-cycle costs of owning and maintaining automation applications, while extending the useful lifespan of automation systems. To lower these costs, the Industrial Application Server allows for remote application deployment and maintenance, online upgrades and expansion, remote system diagnostics, and change propagation.

Agility to Respond

The Industrial Application Server also provides companies with the agility and flexibility to cost-effectively respond to changes in automation system requirements, while protecting initial engineering investments. The Industrial Application Server's component-based architecture and scalable, freely distributed automation environment give engineers the flexibility they need to enhance, modify or re-architect an automation application topology without the cost of re-engineering. These capabilities allow users to effectively respond to

demands for increased performance, capacity expansion and retrofits without being constrained by prior application deployment decisions.

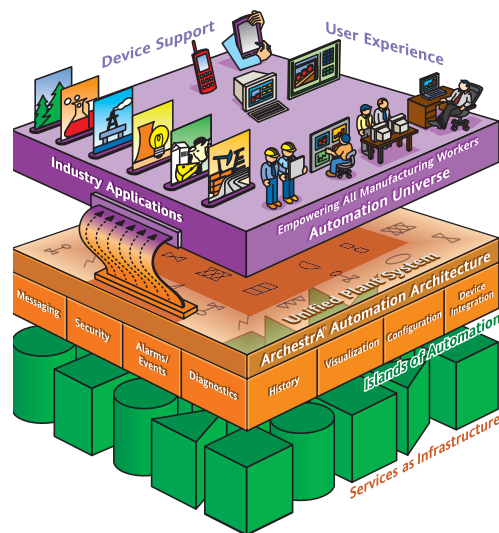
Savings through Extensibility

The Industrial Application Server presents an open and flexible framework that provides engineers with the capability to extend application components as well as communications and device integration with toolkits that broaden functionality, create domain-specific application components and generate field device interfaces. These extensibility capabilities save significant engineering time. This is a great advantage because it allows engineers to concentrate on applying their domain expertise to building applications, thanks to the Industrial Application Server's powerful distributed architecture, development environment and core services.

THE INDUSTRIAL APPLICATION SERVER ARCHITECTURE

A Robust Industrial Framework

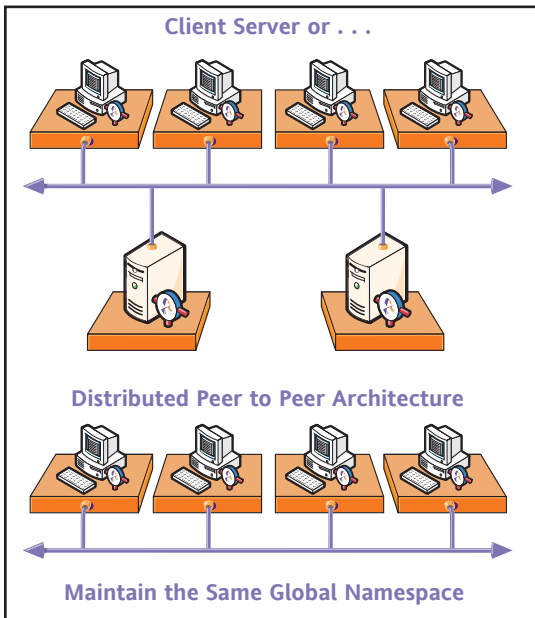
The Industrial Application Server leverages ArchestrA technology and provides users with an extensive set of core automation software services designed to meet the needs of industrial automation applications across all industries.



Plant and Device Application Model

The Industrial Application Server provides a more intuitive and simplified approach to developing supervisory applications. Application Object Templates, which are used for project

development, mirror physical devices such as pumps, conveyers, valves, control loops, PLCs, plant equipment or processes. These templates can also be linked and combined to form more complex structures, such as reactor vessels, packaging machines or conveyers. Furthermore, entire plant areas can be configured, with associated alarming and security. One component builds upon another, with the ability to define, configure and manage all the supervisory aspects of the operation. This provides greater flexibility and power over tag-based supervisory development products.



Distributed Peer-to-Peer Communications

The Industrial Application Server provides users with complete flexibility in architecture choices, both during the initial system design phase and throughout the lifetime of an installed system. Users can develop centralized applications or highly distributed peer-to-peer applications as a result of the ArcestrA architecture's reliable, distributed peer-to-peer communications.

Each workstation or server in the application is part of a global, networked namespace that allows the application to be freely distributed to all the workstations in the system, without limitation or concern for the specific location of the data sources. This vastly simplifies the maintenance process, as changes in data sources or system deployment models do not require changes to other system components.

Cost-Effective Redundancy

Traditionally, supervisory system redundancy has required complicated scripting and programming. But the Industrial Application Server offers a truly flexible and cost-effective

solution for supervisory and networked SCADA redundancy. A supervisory node can be backed up by another dedicated computer, or two supervisory nodes can back each other up. This ability to mix and match redundancy configurations, which is possible because of the distributed nature of the ArcestrA architecture, sets FactorySuite A² products apart from other industrial products on the market.

Redundant Communications Paths

The Industrial Application Server handles redundant PLC communications using redundant Device Integration (DI) Objects. DI Objects are used to define device communications in Industrial Application Server applications. DI Objects also specify the communication paths as part of that definition. In an ArcestrA application, two DI Objects can be configured to read and write to the same PLC address, but through different communications networks. For example, a value in a controller can be accessed through TCP/IP and the vendor's proprietary communications network simultaneously. If one network fails, then the Industrial Application Server can still communicate through the alternate channel.

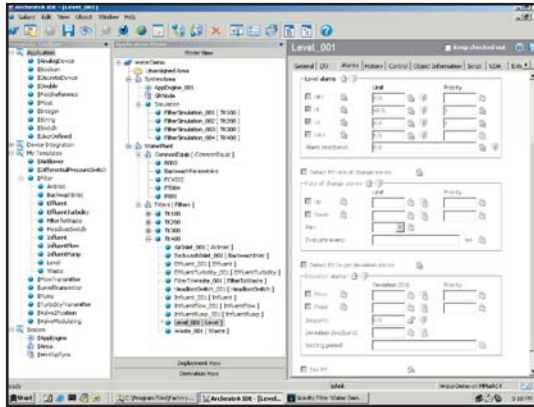
Unlimited Scalability

Applications like food processing and distributed SCADA systems require an infrastructure that can monitor and report on large amounts of real-time data. The Industrial Application Server provides a scalable and integrated architecture to meet the needs of small, simple applications all the way up to highly challenging information management systems, from a few hundred to one-million I/O. The Industrial Application Server provides the capability to quickly and easily deploy new nodes and functions, providing exceptional scalability.

INTUITIVE ENGINEERING ENVIRONMENT

Industrial Application Server systems are developed using the FactorySuite A² Development License. The Industrial Application Server Integrated Development Environment (IDE), delivered as part of the FactorySuite A² Development License, is powerful and easy to use. All application components are configured and deployed from the IDE to target workstations and servers. The Integrated Development Environment is a multi-user

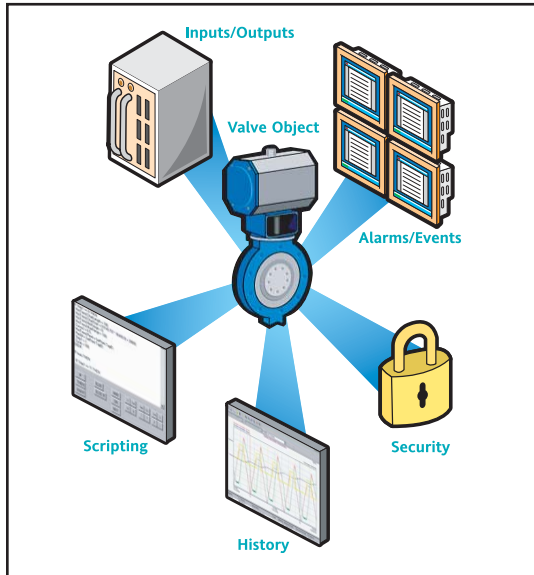
development tool and provides the capabilities to configure, edit and maintain all application-specific components for systems based on the Industrial Application Server.



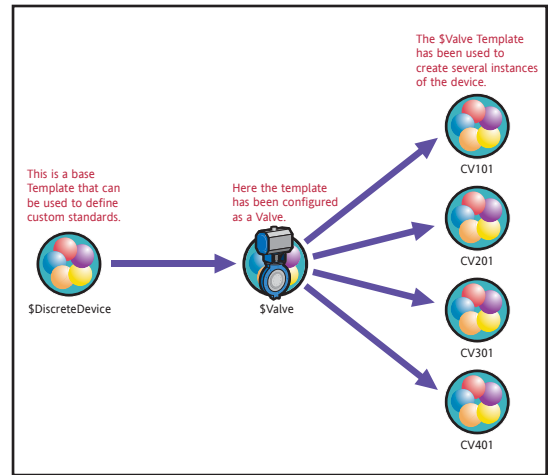
(IDE) Integrated Development Environment

Engineering Re-Use through Application Components

The Industrial Application Server's component-object architecture significantly enhances productivity. The component-object model facilitates the development of reusable application objects that represent plant devices.



Application Objects built within the Industrial Application Server's IDE contain all the necessary elements associated with an automation device, such as historization parameters, tags, alarms and events, documentation, scripts, security and communication parameters. A library of reusable component templates can be built, replicated and deployed, enabling rapid application development. Each component



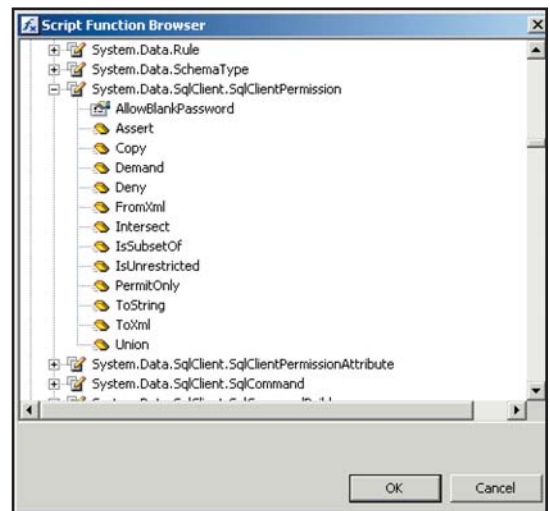
template supports change propagation so that a change in one of the elements can be automatically propagated to all affected components—or select components—saving valuable engineering time and money.

Multi-Developer

The IDE is a multi-developer environment that enables companies to leverage their engineering resources by allowing multiple engineers to work simultaneously on the same project. To achieve this collaborative approach, the IDE uses efficient check-in/check-out procedures and provides an audit trail of revision history for each application component including user ID, time and date stamp, and a detailed summary of the changes made.

Powerful and Easy Scripting with QuickScript.NET

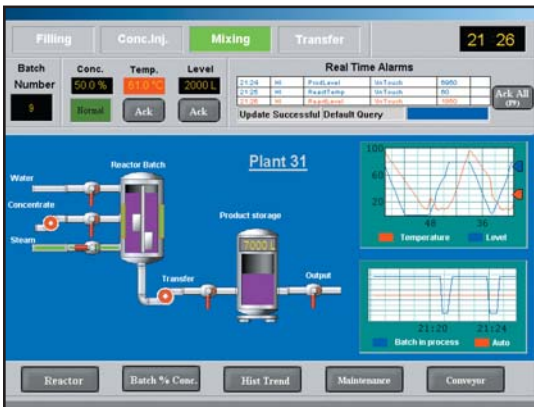
The Industrial Application Server supports and extends Wonderware's QuickScript function with QuickScript.NET, an easy-to-use scripting language that supports almost any data type and provides engineers with unlimited



capabilities to address the most challenging applications. QuickScript.NET offers flexibility and power because its scripting functions can be created in other .NET development environments such as Microsoft's VisualBasic.NET or Visual C.NET. QuickScript.NET also supplies deterministic execution orders and the data traceability required for critical automation environments. Plus, compatibility with standard InTouch QuickScript functions preserves engineering investments by reusing existing applications scripts.

InTouch Integration

For process visualization, the Industrial Application Server leverages Wonderware's award-winning InTouch human-machine



interface software. InTouch or InTouch View HMI workstations can be easily engineered to leverage the common automation services and distributed architecture of the Industrial Application Server. They can also benefit from the Industrial Application Server's security model, component architecture, application logic, scalability, diagnostics and networked namespace. In addition, the Industrial Application Server protects and extends previous InTouch engineering investments with the capability to re-use graphics, scripts, tags and communications from existing InTouch applications, providing for powerful co-existence and easy migration.

SmartSymbols

SmartSymbol technology brings component-based development productivity to InTouch graphics development by simplifying and synchronizing the development of InTouch graphics with Industrial Application Server templates. This reduces overall engineering work by reducing the number of InTouch tags

and scripts. With SmartSymbols, users can also dynamically set graphical references to Instances in runtime. The SmartSymbols Editor can browse the Attributes within the Industrial Application Server, and its Object Instance is automatically generated when a SmartSymbol graphic is replicated.

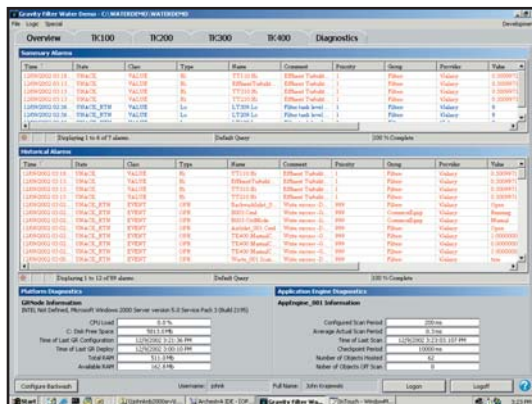
COMMUNICATIONS AND ALARMING

Multi-Vendor Device Integration Communications

Wonderware, together with more than 100 third-party companies, offers a large selection of 32-bit I/O servers for hundreds of the most popular control devices, PLCs, RTUs and DCSs, including Rockwell, Siemens, GE, Schneider, Foxboro®, Fisher-Rosemont, Honeywell and many more. In addition, the Industrial Application Server gives users open access to all the latest device communications protocols using Wonderware's SuiteLink™ protocol or DA Servers; the OPC® protocol; or standard DDE, FastDDE or NetDDE.

High-Performance Distributed Alarm Sub-System

The Industrial Application Server supports a fully distributed alarm subsystem, which greatly improves the quality of alarm information, while reducing system configuration time. This powerful alarm sub-system supports three alarm-acknowledgement models - condition-oriented alarms, event-oriented alarms and expanded-summary alarms - for easy viewing and management of alarm conditions. Step-by-step Wizards and easy-to-use graphical user interfaces (GUIs) make alarm configuration simple to implement.



Powerful Distributed Alarming

Alarm Flexibility

Alarms can be enabled or disabled directly or indirectly under full control of the Industrial Application Server. Alarming can be based at any level of the Application Object hierarchy, allowing the developer to directly map alarms to match a plant structure. Alarm suppression can be applied to single alarm classes, objects or groups to prohibit the display of alarm information on a specific view node. System-wide disablement can also enable users to block all alarm activity during start up.

SYSTEM CHANGE AUDIT & SECURITY CAPABILITIES

Security Down to the Individual Data Element

The Industrial Application Server provides data security at the lowest possible level of granularity and extends the Microsoft® Windows® security model down to the physical equipment layer, providing security attributes that specifically match factory requirements. At this level, data is arranged according to plant area. Users will enjoy the same centralized, easy log-in procedures that the Microsoft model offers, but the Industrial Application Server expands upon them after clients enter the system. Carrying the security model down to the equipment and associated automation levels provides much greater granularity of secured access.

FDA 21 CFR Part 11

The Industrial Application Server's approach to security is ideal for industrial applications that are impacted by FDA 21 CFR Part 11 requirements and other regulations. For it offers outstanding robustness and engineering cost savings. Engineering FDA-regulated applications is now simpler than ever with support for automated configuration audit trails, secure writes and verified reads



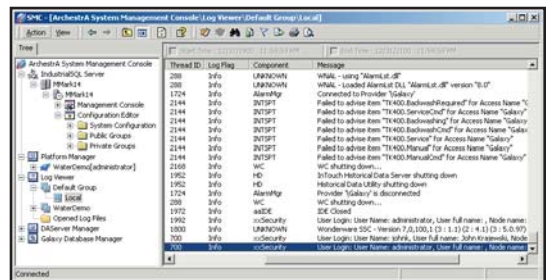
INTEGRATED HISTORY

In addition, the Industrial Application Server leverages Wonderware's world-class IndustrialSQL Server real-time plant historian to acquire, store and retrieve production, process and material history. With the addition of the Industrial Application Server, it's much simpler to configure and maintain the plant historian. Historical logging requirements are defined within each Application Object template and are an integral part of that object. Based on these definitions, the Industrial Application Server automatically configures the IndustrialSQL Server historian to enable immediate logging of data and delivery of plant information.

APPLICATION MAINTENANCE

Centralized Online Maintenance and Expansion

With the Industrial Application Server, application changes and expansions no longer require shutting down the entire system. Changes can be performed on portions of the application without bringing the entire system down, enabling companies to decrease maintenance costs and respond quickly to changes or problems. In addition, new plant equipment and workstations can be easily added without disrupting the rest of the line or plant.



Remote System Maintenance

Remote Deployment

The Industrial Application Server also significantly lowers the deployment costs associated with commissioning, upgrades and expansion. Users can easily deploy and manage their automation applications over large distributed networks from the Industrial Application Server's IDE, making the chore of individually installing and maintaining the same application on every PC in the system a thing of the past.

Remote System-Wide Diagnostics

Saving users a remarkable amount of valuable engineering and troubleshooting time, the Industrial Application Server allows centralized system-wide diagnostics. Any workstation on the network, local or remote, can be equipped and configured to view the entire status of the system. System diagnostics include status related to all workstations and servers that make up the Industrial Application Server, including system communications, historian functions, supervisory application functions and even network health. These diagnostics plug into Microsoft Management Console. Therefore, all personnel can utilize a common, familiar Windows administration toolset.

APPLICATIONS

Distributed HMI

For distributed HMI systems, the Industrial Application Server provides manufacturers, OEMs and SIs with the flexibility and power of a distributed peer-to-peer architecture. The Industrial Application Server gives users the freedom to re-architect and grow their distributed HMI applications, easily accommodating the need for new lines or retrofits at greatly reduced engineering costs. The component architecture also facilitates the

powerful re-use of application engineering from plant to plant. The Industrial Application Server is perfect for distributed HMI applications in which users have to manage expansion, frequent system changes, maintenance and replicated automation lines within or across plants.

SCADA

The Industrial Application Server is ideal for SCADA applications. Its distributed peer-to-peer architecture, re-usable components, and remote deployment and maintenance capabilities make supporting SCADA applications remarkably efficient. The software's network services have been optimized for use over slow and intermittent networks, which significantly enhances application deployment and communications.

In addition, the Industrial Application Server's component-based structure enables easy replication of SCADA object templates, lowering future development costs. Remote deployment and maintenance make the Industrial Application Server ideal for projects that might have been negatively impacted by engineers who must travel or work off-site.

Large oil and gas and water distribution systems are also easy to manage as a result of the Industrial Application Server's impressive scalability. The Industrial Application Server provides system security, right down to the data level, in the development phase as well as in runtime.

Plant Intelligence Solutions

Wonderware is committed to giving its customers plant intelligence. Playing a central role in these solutions, the Industrial Application Server can serve as a powerful event engine to manage large and/or complex manufacturing information management processes. In conjunction with Wonderware's other plant intelligence products, the Industrial Application Server enables plant personnel to visualize plant processes, analyze plant information so as to identify areas for improvements and optimize their plants as a result of this vital plant information.

SYSTEM REQUIREMENTS

To run the Industrial Application Server 2.0, we recommend that IBM-compatible computers running a Microsoft Windows operating system meet the following requirements:

Compatibility Table	FactorySuite A ² Development Seat - <i>IDE Stand-Alone</i>	FactorySuite A ² Development Seat - <i>IDE with Galaxy Repository (Project Database)</i>	Industrial Application Server Platform Runtime - <i>Visualization Only</i>	Industrial Application Server Platform Runtime - <i>Visualization and Automation Objects</i>
Min. Processor Clock Speed	1.2 GHz	2 GHz	1.2 GHz	2 GHz
Min. Physical RAM	512 MB	1 GB	512 MB	1 GB
Free Hard Disk Space	8 GB	18 GB	8 GB	18 GB
Windows Server 2003	X	X	X	X
Windows 2000 Professional SP4	X		X	X
Windows 2000 Server SP4	X	X	X	X
Windows 2000 Advanced Server SP4	X	X	X	X
Windows XP Professional SP2	X		X	X



Powering intelligent plant decisions in real time.

Contact Wonderware or your local Distributor for information about software products for industrial automation.
 Wonderware Corporation • 26561 Rancho Parkway South, Lake Forest, CA 92630 • Tel: (949) 727-3200 • Fax: (949) 727-3270
www.wonderware.com

©2004 Invensys Systems, Inc. All rights reserved. No part of the material protected by this copyright may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, broadcasting, or by any information storage and retrieval system, without permission in writing from Invensys Systems, Inc.

Invensys; Wonderware; ArchestrA; FactorySuite; FactorySuite A2; InTouch; IndustrialSQL Server; Foxboro; SuiteLink; and "Visualize, Analyze, Optimize" are trademarks of Invensys plc, its subsidiaries and affiliated companies. All other brands and product names may be the trademarks or service marks of their respective owners.