



Spring Automation

SOFTWARE OFFERINGS

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Spring Automation provides 30 years of industry experience in upper-level software and databases. We tailor-fit the perfect solution to optimize your warehouse operations and maximize productivity. Our process evaluates information important to your business and matches the right software solution for you.

Voyager

Voyager is a Warehouse Control System (WCS) that provides benefits to leading manufacturers, retailers, direct-sale, and e-commerce companies. It also offers custom HMI capability. It is an integrated software solution that extends beyond traditional WCS functionality and provides scalable and configurable four-wall functionality to help manage your business.

Benefits of Voyager include:

- Modular design – Easily configure and modify as your business grows and evolves
- Proactive monitoring – Use real-time data to make better decisions
- Low total cost-of-ownership – Spend more of your resources building your business, not changing expensive software

Offerings of Voyager include:

- Destination Routing
- Sorting
- Order Consolidation
- Print and Apply Services
- Weigh Scale Integration
- Much more

Warehouse Control System

- Statistics tracking
- Waving
- Picking
- Destination Decisions
- Data Collections and Analytics
- Etc.

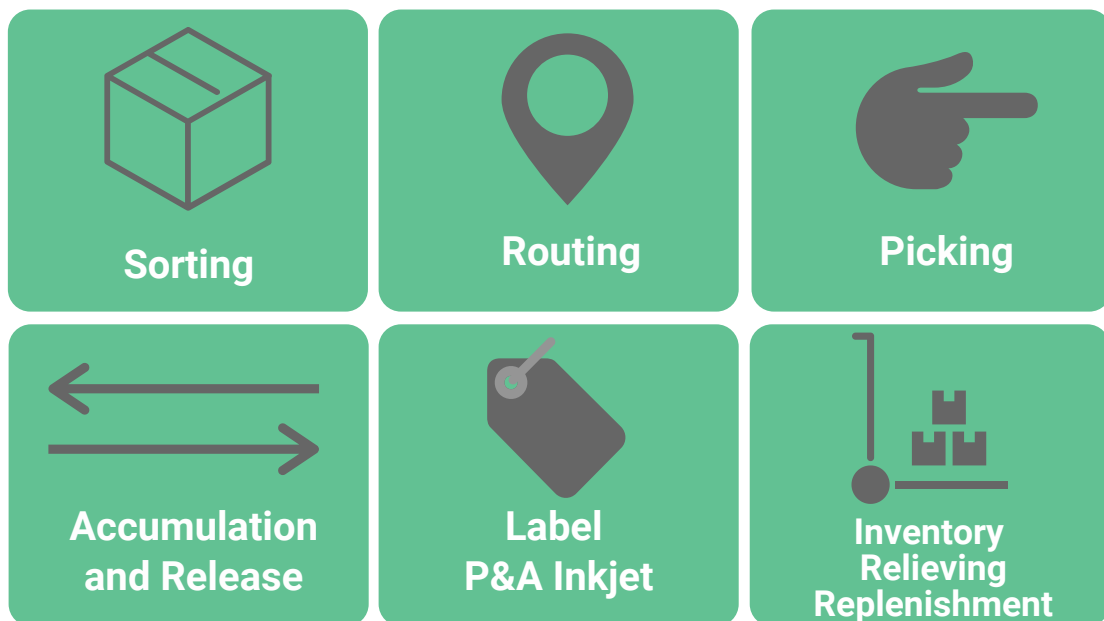
HMI to WCS Integration

- Graphical Representations
- Data Charts and Stats
- Clean User Interfaces

WCS Explained

- Software that sits in the middle that bridges lower-level controls upper-level software (WMS)
- Often referred to as "Middleware"
- Handles solution logic that is data intensive
- Executes "heavier" logic that cannot be handled by a PLC's capabilities
- Facilities logic that cannot be reasonably or cost-effectively done in the WMS
- Much cheaper option that customization in SAP or Manhattan style offerings

Available Services



Communication Protocols - WMS

- Oracle
- FTP
- CIFS
- Web Service Requests

| | | | |
|--|---------------------|---------------|-----------------|
| Integrated Into Framework Event System | Event Handling | Spring IPC | |
| | | Periodic | |
| | | TCP/IP Client | ZPL Client |
| | | TCP/IP Server | |
| | | UDP Server | |
| | PLCs | Serial Ports | Serial Scanners |
| | | Rockwell EIP | |
| | Supported Databases | MySQL | |
| | | Oracle | |
| | | SQLite | |
| | Supported | UDP Client | |
| | | FTP Client | |
| | | SFTP Client | |
| | | SFTP Server | |
| | | Modbus | |
| OPC-UA | | | |

Behind the Scenes

The Framework!

- The common foundation upon which all services and our HMI is built
- The framework provides PLC, OPC UA, database and WMS connectivity
- The framework provides TCP and UDP client and server capability along with data events for connectivity to devices such as label printers, scanners, etc.
- The framework provides timed events
- Services are built on the framework depending on project requirements
- Services are purpose-specific, modular, and limited in functionality. This creates a system that is easier to develop, cheaper to deploy, and quicker to troubleshoot

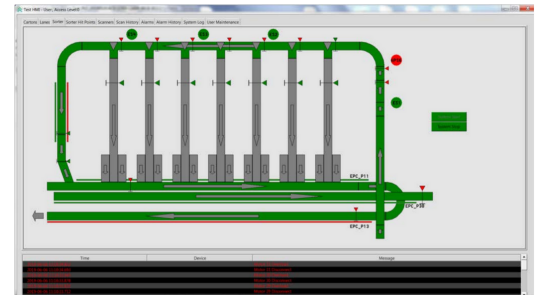
How is it Built?

HMI Based Interface

- Ignition
- Python/tkinter

Service Based Processing

| | |
|------------------------------|-----------|
| Sort | Alarming |
| WMS communication (send/rec) | Database |
| Routing | Scheduler |
| Inventory | Labeling |
| Divert confirmation | IPC |



Spring Software - A Custom Approach



In our experience, no two customers have the same requirements, no two systems are going to sort by the same rules, and no two systems have the same WMS requirements.



Offerings for "canned" sortation logic, picking logic or other WCS functionality can be clunky, expensive and still in need of customization for a user.



Spring Software is adapted to your needs for a cost-competitive and feature-packed experience.

Our Industries



**Contact us today and let's start building legacies together
or visit www.springautomation.com to discover more.**



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