



# LabVantage 8: Technical Specifications

## Run your lab more efficiently. Secure your data in a central system and ensure compliance.

LabVantage provides users the ability to access laboratory data from any device using web browsers. LabVantage is a browser-based system so there are no client programs, applets or plugins that need to be managed. LabVantage uses standard Java EE application servers and modern databases. LabVantage can be centrally hosted for global deployment and can support hundreds of concurrent users. LabVantage comes ready for integration with instruments and systems. LabVantage is easier to maintain than any other enterprise grade LIMS in the market.

### Key Technical Features

#### Multi-tier Architecture

LabVantage has a multi-tier architecture with the following tiers:

- Presentation tier consisting of the web browser (Microsoft Internet Explorer, Google Chrome or Apple Safari)
- Application tier consisting of a Java EE server (Oracle WebLogic Server, Red Hat JBoss Enterprise Application Platform, or IBM WebSphere Application Server)
- Data Tier consisting of a database server (Oracle or Microsoft SQL Server). Reports may be executed from LabVantage on the application server tier using JasperSoft JasperReports, or from a dedicated report server tier using SAP Business Objects or similar.

#### Web Browser

LabVantage runs in a web browser on the client tier. The application does not require any browser plug-ins or applets, which significantly simplifies deployment and system validation.

### Key Benefits

- 100% browser based so there are no client programs that need to be managed
- Can be centrally hosted for global deployment and can support hundreds of concurrent users
- Comes ready for integration with instruments and systems



## Key Technical Features Continued

### Application Server

The application server is LabVantage's main processing component and is CPU and network intensive. Therefore, when configuring the application server, organizations should consider the number of concurrent users and the complexity of the operations the solution will have to perform. Performance and reliability can be improved by adding servers to a clustered installation, which uses third party load balancers to route client requests to multiple application servers within the cluster. If one or more servers fail, client requests are automatically routed to other servers within the cluster so there is no interruption in service.

### Database Server

LabVantage supports Oracle and Microsoft SQL Server, two industry-leading database management systems. The database server is the repository for all LabVantage data, including metadata generated from LabVantage Web Page Designer, the screen configuration tool within LabVantage. This metadata is used to drive the runtime architecture and determine business logic execution. LabVantage has been designed to do most of its processing on the application server. As a result, the database server is not CPU intensive; rather it tends to be I/O intensive. Therefore, a high throughput disk sub-system is recommended. When configuring the database server, organizations should consider the number of concurrent users, amount of historical data, and which database engine will be used. Database connections are pooled by the application server, so database-level connection pooling is typically not required or recommended.

### Barcoding

LabVantage provides an interface to Seagull Scientific Bartender label and barcode printing software to generate barcode labels.

### Instrument and System Integration

LabVantage has a framework to enable integration of instruments and systems across the enterprise. This includes a data integration platform for instruments and system interfacing as well as web services for system interoperability.



## About LabVantage

LabVantage Solutions, Inc., the leading global laboratory informatics provider, is headquartered in Somerset, NJ and has offices around the world. LabVantage's industry-leading solutions and world-class services are the result of 35+ years of experience in laboratory informatics.

LabVantage offers a comprehensive portfolio of products and services that enable companies to innovate faster in the R&D cycle, run labs more efficiently, improve manufactured product quality, achieve accurate recordkeeping and comply with regulatory requirements. LabVantage serves thousands of labs across the globe from industries such as pharmaceutical, biotech, food & beverage, chemicals, CPG and more.

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