



# Agilent OpenLAB CDS

OpenLAB Laboratory Software Suite

## Manage your chromatography better than ever before

Agilent OpenLAB CDS – the next generation of ChemStation and EZChrom Elite, now on the modern OpenLAB architecture. An integrated solution with full compliance for GLP, GMP, and 21 CFR part 11 guidelines offering full scalability for Agilent and non-Agilent instruments, delivering greater efficiency with fewer analytical errors.

The Measure of Confidence



Agilent Technologies

# A more efficient solution for today's software-based laboratory

In today's analytical research and quality control laboratory, software is a key tool. As a result, analysts spend more time reviewing, re-analyzing and manipulating their laboratory data than they spend in the laboratory running samples, all of which leads to a decrease in lab productivity.

OpenLAB CDS will give your analysts more time to work on samples and reduce the time spent on data review and re-analysis. OpenLAB CDS is built on the modern OpenLAB Shared Services architecture. The new OpenLAB Shared Services Control Panel is designed for intuitive and user-friendly administration of the complete OpenLAB CDS software, giving you a system that is designed for user-friendly operation. It also provides you with superior instrument control for Agilent and non-Agilent instruments.

Here are the productivity and cost benefits you gain with OpenLAB CDS:

- **Lower operating costs** with the new OpenLAB Shared Services Control Panel for central and intuitive system administration.
- **Fewer analytical errors** due to level 4 (= ongoing bi-directional) instrument control and remote instrument monitoring for the whole lab.
- **Less time** from raw sample data acquisition to final results with new OpenLAB Intelligent Reporter.
- **Easily find and share data** throughout the laboratory and entire enterprise.
- **Get status information** on-the-go for your laboratory through any WLAN connection or on your smart phone.

OpenLAB CDS gives your analysts more time to work on samples and gives your system administrator an efficient and intuitive way to administer their CDS.

## The next generation of Agilent chromatography data systems: a simple upgrade for ChemStation and EZChrom users

Agilent ChemStation and EZChrom Elite are the industry leaders in chromatography data system technology.

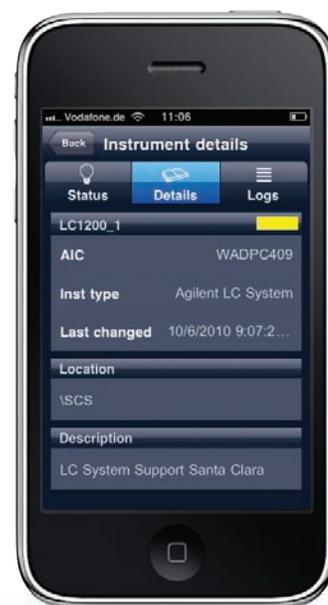
The new OpenLAB CDS is the next step, providing powerful new functionality:

- Full scalability from a single workstation to a multi-site enterprise-wide connected data system.
- Intuitive system administration with the new OpenLAB shared services control panel application.
- Intelligent Reporter speeds up result review and approval with automated limit checks – now report creation is a snap with new graphical drag and drop capability.

OpenLAB CDS is the next generation of ChemStation and EZChrom. It will be available in two versions – OpenLAB CDS ChemStation Edition and as OpenLAB CDS EZChrom Edition. Each retains its familiar look and feel but with significant improvements and new shared features.

If you operate ChemStation or EZChrom Elite today, OpenLAB CDS is a straightforward upgrade for you that is non-disruptive, intuitive, and adaptable.

With the new OpenLAB Shared Services architecture – controlling your laboratory remotely is a snap when accessing instrument status, detailed log and error information from your smart phone.



# Maximizing lab efficiency with OpenLAB CDS

## A single data system: for a broad range of analytical techniques

As the diversity of chromatographic instrumentation and the number of samples grow, so does the need for an increase in throughput and a decrease in cost per sample. OpenLAB CDS gives you a **single data system** with one set of methods and reports for GC, LC, CE, SFC, LC-MS and CE-MS instrumentation.

## OpenLAB shared services control panel: designed with usability in mind

The OpenLAB shared services control panel is the administrative and management center of OpenLAB CDS, offering:

- Optimized instrument utilization, with full instrument status information of your entire laboratory in the Lab-at-a-glance.
- Central system configuration and administration of users, instruments, and security.
- Full system documentation and built-in administrative reports.

## New Intelligent Reporter: for complex reporting made easy and faster data processing cycle times

With OpenLAB Intelligent Reporter, generating complex reports such as refinery gas analysis, BTU reports or dissolution testing from the CDS is easy. It gives you:

- Custom calculation functionality from simple statistics to complex multi-level calculations.
- Effortless report generation making template creation as simple as “drag and drop”.
- Simplified custom reports with pre-configured tables, graphics and matrices for easy reuse.
- Faster access to your final result.
- Real dashboard monitoring of your assets when managing your data centrally in OpenLAB ECM.

Toggle between template edits and report preview for intuitive template development.

Easily include graphics such as your company logo.

Drag and drop preconfigured report elements to your report template and edit them easily.

Custom calculations and pass/fail results are included with the report template.

Sample Name	Teamwork Wt	Tablet Wt	% Target	Pass/Fail
Sample 1	\$007.885	1119	100.7	Pass
Sample 1	\$007.929	1119	100.8	Pass
Sample 2	\$008.274	1129	100.8	Pass
Sample 2	\$009.424	1129	100.9	Pass
Sample 3	\$011.853	1009	101.2	Fail
Sample 3	\$014.772	1009	101.5	Fail
Sample 4	\$010.703	1205	101.1	Fail

Lab-at-a-glance: A control panel that gives you more control.

## Optimize analytical performance

Every analytical laboratory is powered by instrumentation – and it is software that enables you to get the most out of your instruments. OpenLAB CDS gives you a level of control over both your Agilent and non-Agilent instruments that simply cannot be matched by any other vendor.

### With OpenLAB CDS, you get:

- **Intuitive operation.** Modern, standards-based dot.net instrument drivers include graphical user interface – as shown in Figure 1.
- **More control for new instrumentation.** Modular instrument control architecture eliminates the need to update the software by just adding a new instrument driver.
- **Secure and uninterrupted instrument control.** Level 4 instrument control facilitates ongoing bi-directional real time communication.
- **Error-free documentation.** Key analytical separation parameters are accurately documented with ID tags for LC columns or flow cells.
- **Data recovery protection.** The Infinity Series LC detector buffers instrument data even in case of a complete network or connection breakdown.
- **Greater universal control.** OpenLAB CDS EZChrom Edition gives you control for more than 300 non-Agilent chromatographic instruments from all major manufacturers – as shown in Figure 2.
- **Leading-edge technology.** You will have ongoing immediate access to the latest innovative technology in Agilent's instrumentation at release (e.g. Sample Prep automation on new GC Autosampler, new LTM technology for 7890A GCs, and full 80 or 160 Hz dynamic range on 1200 Infinity Series LC detectors).

**Figure 1:** Dot.net based dashboard visualization of the Agilent Infinity LC with secure ongoing bi-directional instrument control and real-time display of instrument parameters.



## A flexible and modern architecture

OpenLAB CDS is built on the flexible and fully scalable OpenLAB Shared Services architecture. This offers you a number of benefits that will reduce your cost of administration and operation.

- Seamless integration with (OpenLAB) ELN and ECM.
- Up to eight instruments per AIC (in OpenLAB CDS ChemStation Edition).
- Based on Microsoft® industry standards for instrument control, administration and reporting.
- Support for file-based storage (with OpenLAB CDS EZChrom Edition) and database storage (in OpenLAB ECM).
- Remote lab monitoring anywhere from your 3G phone.
- Unmatched scalability: Configure administration, storage, and remote instrument access independently.
- Support for virtualization of acquisition controllers and storage.

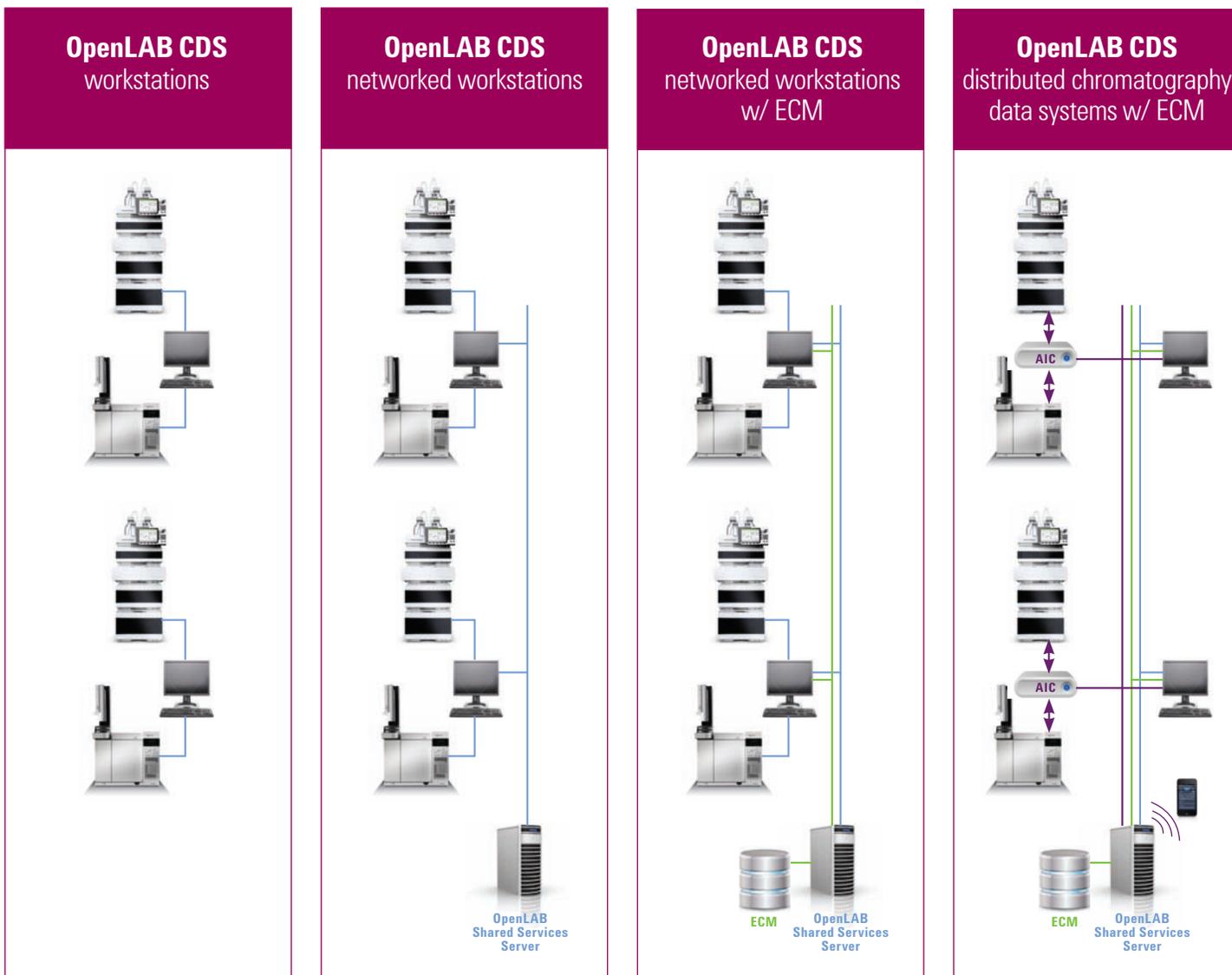
**Figure 2:** Controlling Agilent and non-Agilent instruments easily from the OpenLAB control panel.

# OpenLAB CDS: scalable in storage, lab management and administration

## Discover unmatched scalability

OpenLAB CDS is scalable in storage, lab management, and administration. OpenLAB CDS scalability is more than simply putting instruments on the network for remote access and central data storage. The OpenLAB CDS architecture provides you with the option to have all key functional elements of a CDS – administration, data storage, and instrument access –

either locally or centrally over the network. And the OpenLAB architectural flexibility allows you to combine these options in any permutation – giving you more choices to map OpenLAB CDS with the specific needs of *your* lab. The most common OpenLAB CDS configuration choices are displayed here.

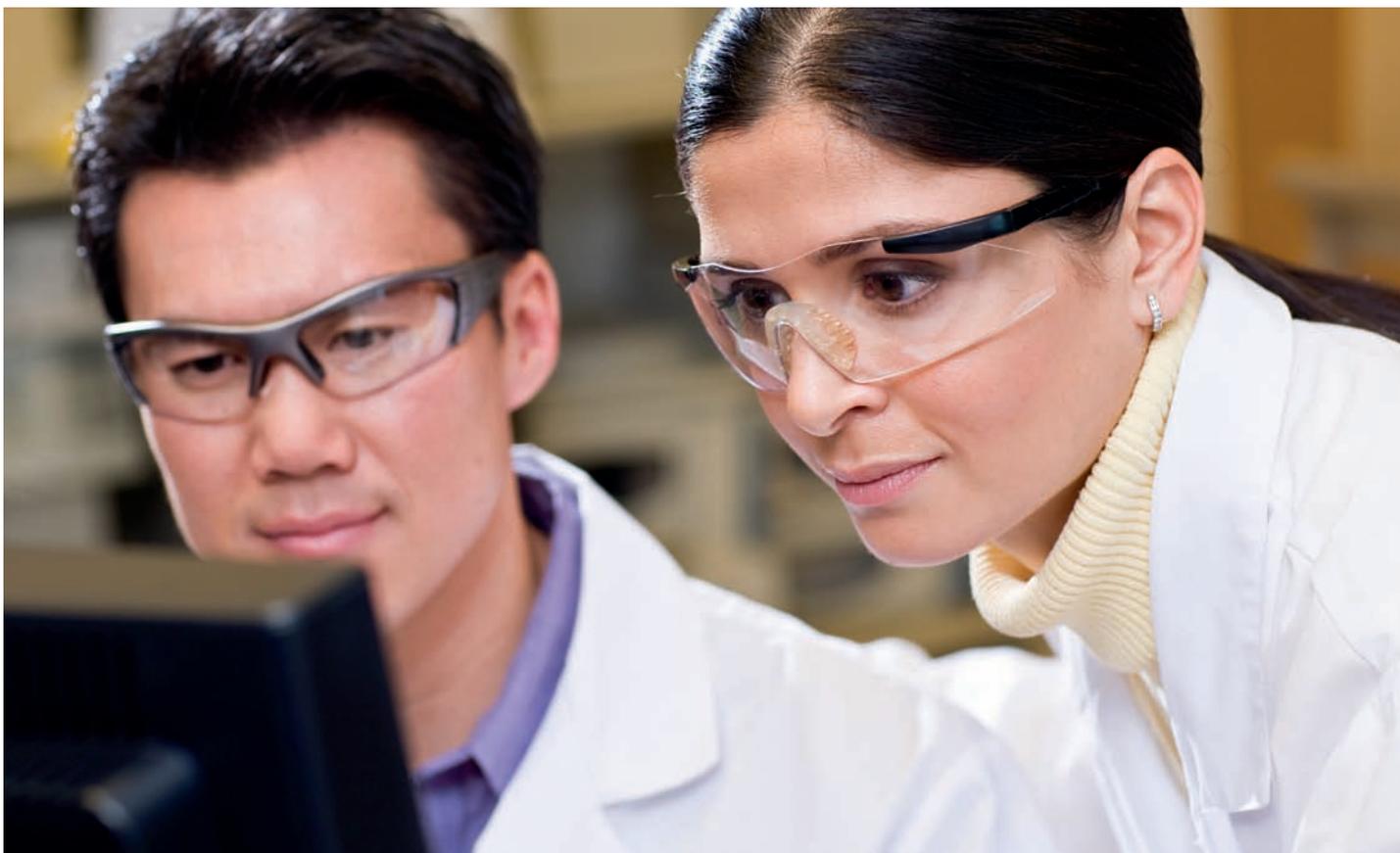


**Stand-alone workstation configuration:** This configuration lets you operate fully independent of your company network. Instrument connection, data storage, and administration are all local on your computer.

**Networked workstation configuration:** Central administration of your local workstations and full Lab-at-a-glance view for all instruments connected while data storage and instrument control still remain on each local computer.

**Networked workstations with central storage in OpenLAB ECM:** Build on local instrument control powered with centralized administration and Lab-at-a-glance view for all instruments connected plus central storage in OpenLAB ECM – with the added benefit of retrieving results data from anywhere.

**Fully distributed OpenLAB CDS configuration:** Administration, data storage and instrument connection are all done centrally over the network. With Agilent Instrument Controller (AIC), remote instrument access is available from anywhere – including your 3G phone.



## OpenLAB CDS delivers user benefits throughout your enterprise

### Chromatography users get:

- **More meaningful reports.** Intuitive Intelligent Reporting provides comprehensive custom calculating capabilities.
- **Easier report generation.** Creating report templates is as simple as “drag and drop.”
- **Better workflow support.** Fewer manual steps in data analysis and result review for faster access to results.
- **Lab-at-a-glance.** Highly intuitive use and administration simplifies system operation.

### IT managers get:

- **Lower cost of maintenance.** Central update, central patch deployment, and unattended installation combine for a more cost-effective solution.
- **Intuitive system administration.** Easy-to-use OpenLAB control panel means simplified administration.
- **More future readiness.** Modern architecture is integrated into the OpenLAB suite, offering support for thin client operation and virtualization.

### Lab managers get:

- **More efficiency:**
  - OpenLAB CDS Lab-at-a-glance view optimizes instrument utilization and gives you full control of your lab from anywhere.
  - OpenLAB Intelligent Reporting reduces time from acquisition to results.
  - The depth of Agilent Instrument Control let’s you run your lab with higher uptime and fewer analytical errors.
- **Lower costs.** Central deployment and supportability reduce the cost of operation.
- **Less training and administration.** A single system handles LC, GC, LC/MS, SFC & CE data.

## OpenLAB CDS – taking the next step forward

### If you currently use ChemStation:

You can now scale your system to add central storage, central administration, and remote instrument access. You can benefit from the new OpenLAB Intelligent Reporter, new user administration, and user rights in the OpenLAB Shared Services Control Panel. Benefits include:

- **More flexibility.** New result navigation concept to reprocess arbitrary sets of samples from multiple sequences with one batch.
- **Better traceability.** Recreate original results or track modifications for each run individually in the sequence.
- **Faster report generation.** 10 times faster access to your reports by eliminating the need for reprocessing to generate your report.
- **Better instrument utilization.** Remote access to any ChemStation controlled instrument in your laboratory.

### If you currently use EZChrom Elite or OpenLAB ECM:

OpenLAB CDS EZChrom Edition provides more rugged and scalable architecture with a new communication protocol as well as new OpenLAB Intelligent Reporter and integration with OpenLAB Shared Services. Benefits include:

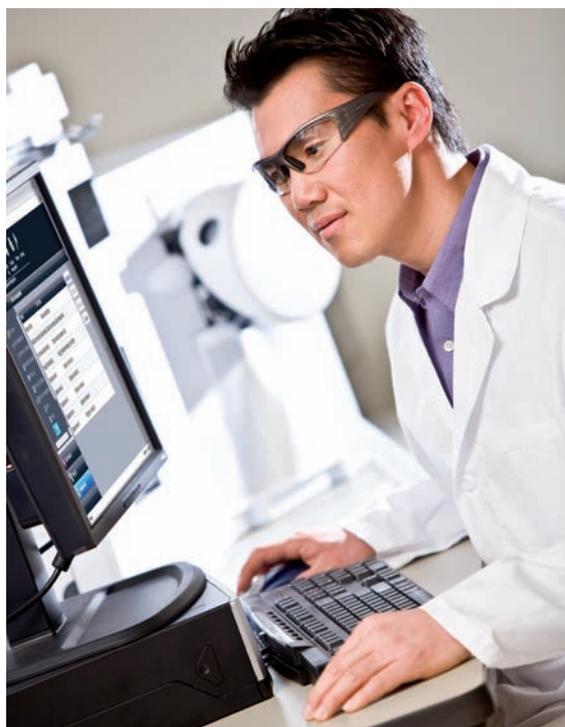
- **Lab-at-a-glance overview.** Easy central deployment, software diagnostics, and troubleshooting.
- **Improved administration.** User management with groups, roles, more permissions, and central administrative reports.
- **Better workflow.** Faster result review and more flexible reporting.



**If you use other Agilent data systems – such as Agilent Cerity NDS for Pharma or Varian Galaxie – Agilent will assist you in migrating to OpenLAB CDS.**

OpenLAB CDS is an effective solution for most industry standard technologies. Through software integration and greater instrument control, you'll have the means to report analysis results in a fast, convenient, and more intuitive way. OpenLAB CDS maximizes laboratory efficiency, quality, and compliance with a compelling end result – enhanced research, development, and quality control that helps you get products to market faster.





## The Agilent OpenLAB laboratory software suite

The Agilent OpenLAB suite of software products provides you with a strategy for integrating instrumentation, local data systems, and laboratory electronic information into a fully protected, searchable, and archivable system. OpenLAB CDS is the newest addition to the growing Agilent OpenLAB suite, which also includes OpenLAB Electronic Lab Notebook (ELN) for capturing and managing the details of each day's experiments, and OpenLAB Enterprise Content Manager (ECM) for archiving and retrieving any type of data file.

## OpenLAB

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