

CDS Strategy and Overview



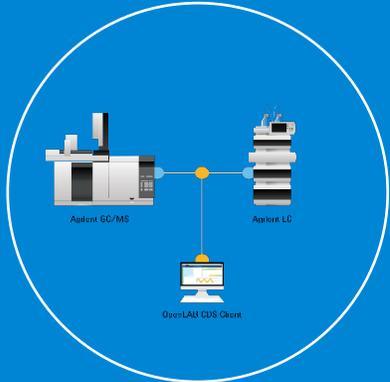
Rich Mutkoski

Informatics Applications Specialist

Agilent
OpenLab

Agilent OpenLab

Agilent
OpenLab



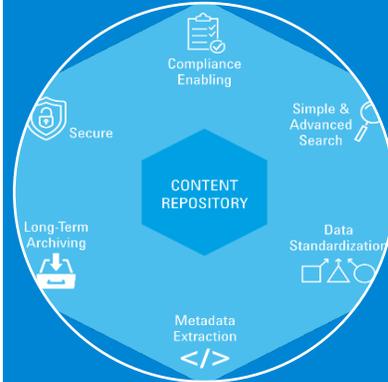
Workstation

- ChemStation
- EzChrom
- CDS 2.x
- MassHunter
- Spectroscopy



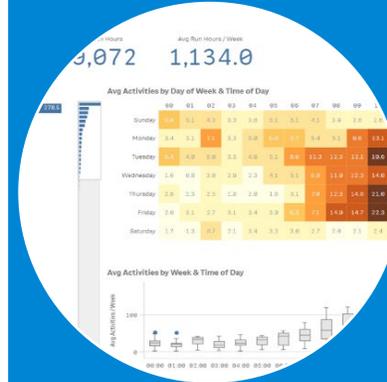
CDS

- Client/Server
- LC/GC/LC-GCMS
- Built-in Review
- LIMS/ELN interface
- Multi Vendor
- Superior Reporting



ECM

- Data Archiving
- Data Management
- Vendor Neutral
- BPM (workflow)
- Report Generation
- Record Retention



Analytics

- CrossLab Connect
- Utilization
- Workload
- Right Sizing
- Category 1/2/3



SLIMS

- SOP
- Free Form Entry
- Drag and Drop
- Text Editing
- Data Visualization
- R&D and QC



LIMS

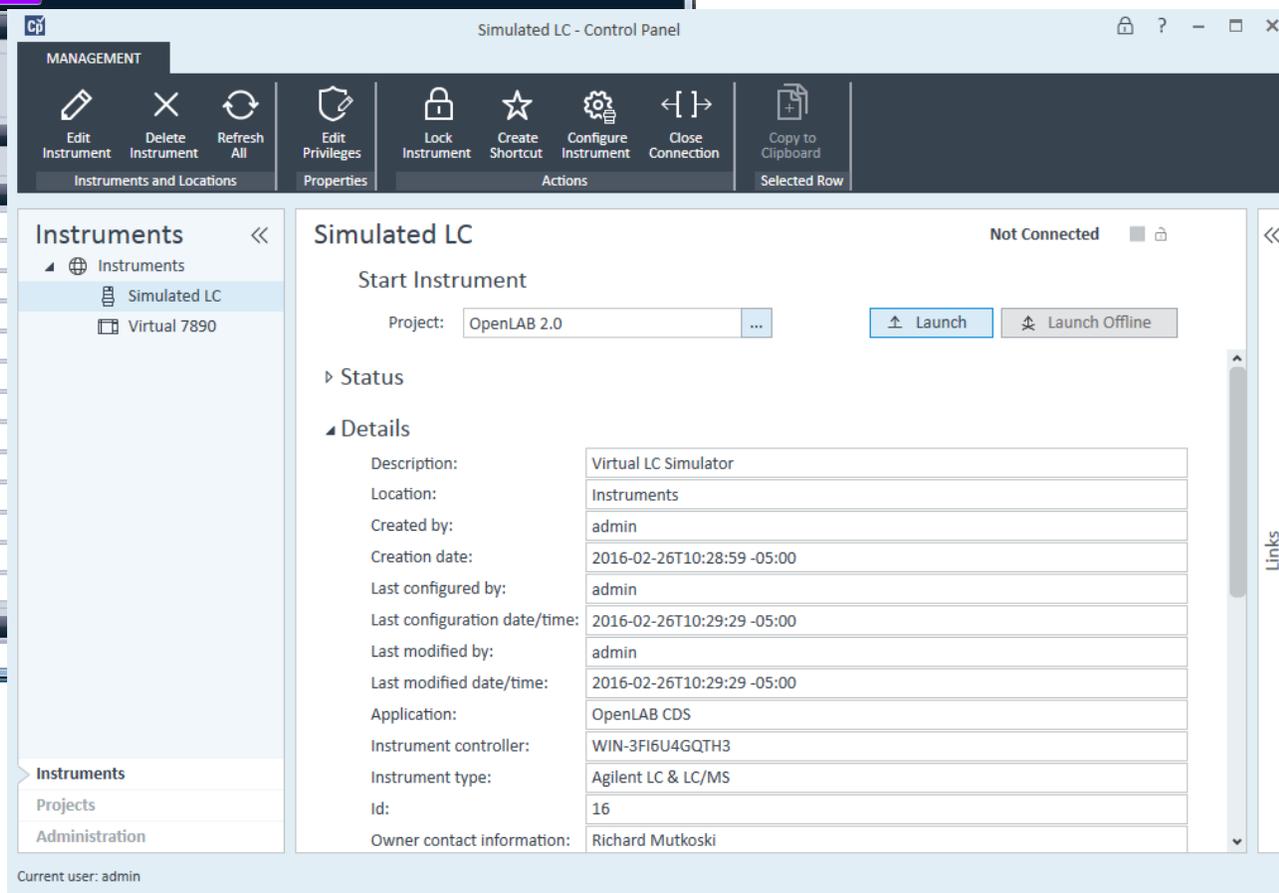
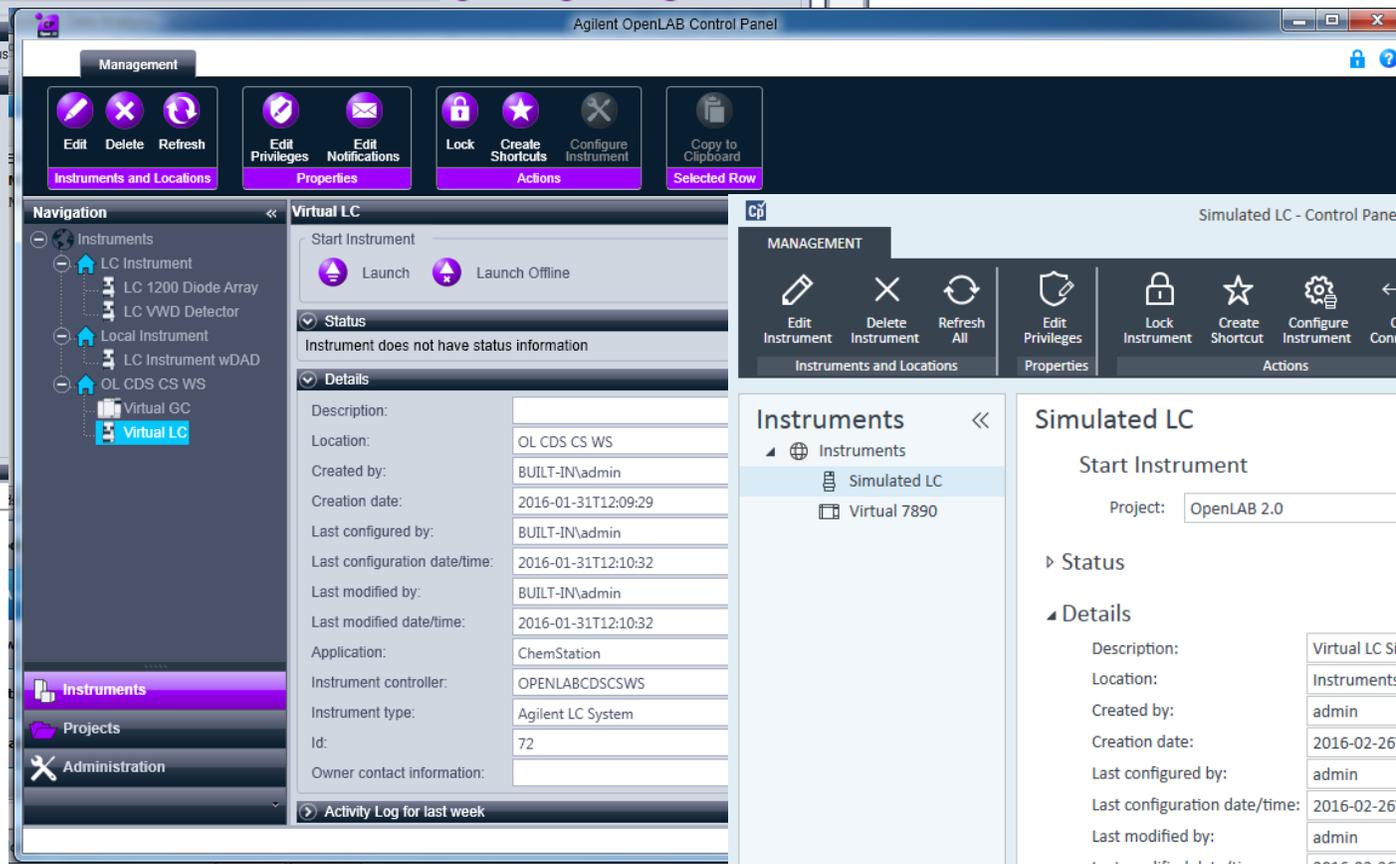
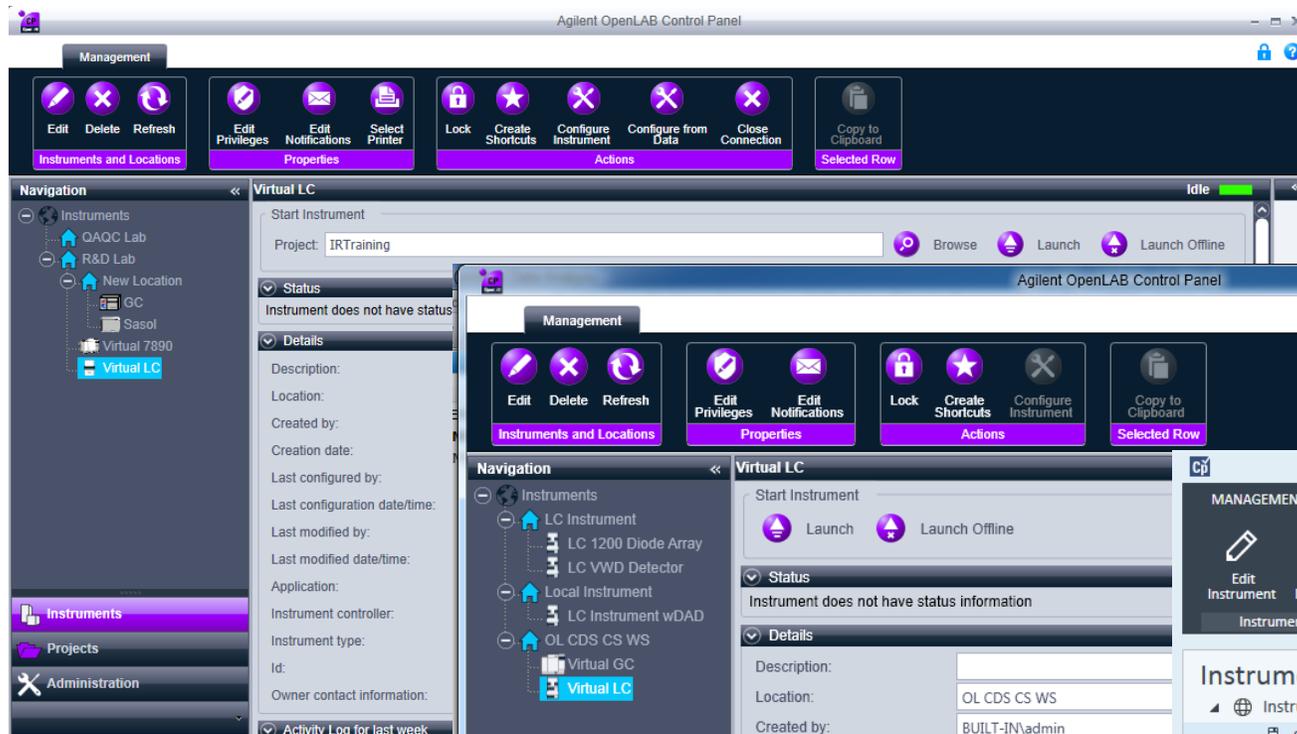
- Sample Tracking
- Barcoding
- R&D and QC
- Worklists
- Worksheet

Single/Multisite - Cloud Options - Compliance Features (21CFRpart11) - Scalable – On Demand Solutions – Web Interface

OpenLab CDS is the Next Evolution of our Chromatography Data systems.

One CDS for Agilent LC/LCMS and GC/GCMS - along with third-party instruments!





Common Control Panel

OpenLAB CDS 2.x

Time [min]	A [%]	B [%]	Flow [mL/min]	Max. Pressure Limit [bar]
0.00	100.0	0.0	1.000	400.00
1.00	0.0	100.0	1.000	---

Common Instrument Drivers

OpenLAB CDS 2.x

Method: New Method.met Data: istd calib level 1 rep 1.dat Sequence: Internal Standard.rst [Intelligent Report - Short_Quant_ESTD.r]

File Edit View Method Data Result Set Analysis Sample Prep Control Reports Window Help

1: VWD: Signal A, 250 nm

Navigation

Reports

- Standard Report
- Advanced Report
- Intelligent Report
- Area %
- ConfigContentsReport
- Current Baseline Check
- External Standard
- Internal Standard
- Normalization
- Properties

Method

- Result Sequence
- Reports
- Control
- Views

Method and Run Control

- Data Analysis
- Review
- Report Layout
- Verification (OQ/PV)

User: admin (admin) Project: IRTraining

Virtual LC (online): Report Layout, SHORT_QUANT_ESTD.RDL

File Edit View User ECM Abort Help

SHORT_QUANT_ESTD.RDL Preview data: _001_001_001-0101.D

Report Layout

- Performance.rdl
- Performance+Noise.rdl
- Sample_Summary.rdl
- SequenceSummary_Extended...
- SequenceSummary_Short.rdl
- SequenceSummary_Short2.rdl
- SequenceSummary_Standard.rdl
- Short_Area.rdl
- Short_ESTD.rdl
- Short_ISTD.rdl
- Short_Quant_ESTD.rdl
- Short_Quant_ISTD.rdl
- Summary RPT.rdl
- Test.rdl

Report Templates

- Method and Run Control
- Data Analysis
- Review
- Report Layout
- Verification (OQ/PV)

Integration done.

OpenLAB 2.0 - Data Analysis

File Home

Save as DOCX Save as XLSX Save as PDF Save as TXT Refresh Preview New Template Save Template Accept Template Preview Editor Copy Delete Reset Report Editor Report Preview

Reporting

- Injection
 - LC_Demo1
 - isocratic sample CS - CS-1_001.D
 - isocratic sample CS - CS-2_002.D
- Report Items

Search: Enter search text here Go

 - Tables
 - Matrices
 - Fields
 - Special Objects
 - Instrument Information
 - Sequences
 - Samples
 - Method Information
- Report Templates
 - /OpenLAB 2.0/Report Templates
 - Short_Istd_Letter.rdl
 - Short_Quant_ESTD.rdl
 - Short_Quant_Estd_Letter.rdl

Data Selection

Data Processing

Reporting

Current user: admin

Report Editor

Short_Quant_Report (ESTD)

Agilent Technologies

Header

Body

Data file: /OpenLAB 2.0/Results/LC_Demo1.rst\CS-1_001.D

Sample name: isocratic sample CS

Description:

Instrument: Location: P1-F-05

Injection date: 7/9/2008 10:49:24 AM Injection: 1 of 1

Acq. method: LC_DEMO.M Injection volume:

Analysis method: Def_LC Acq. operator: A.G.H.

Last changed: 6/20/2016 4:47:08 PM

Sample amount: Sample type: Control

Multiplier: Dilution:

Calib. data modified: Lims ID:

Column name:

Serial #:

DAD A, Sig=254,4 Ref=360,100

18

16

1.0M Peak-1

1.0M Peak-2

1.0M Peak-3

1.0M Peak-4

Connected

Common Reporting

OpenLAB CDS 2.x

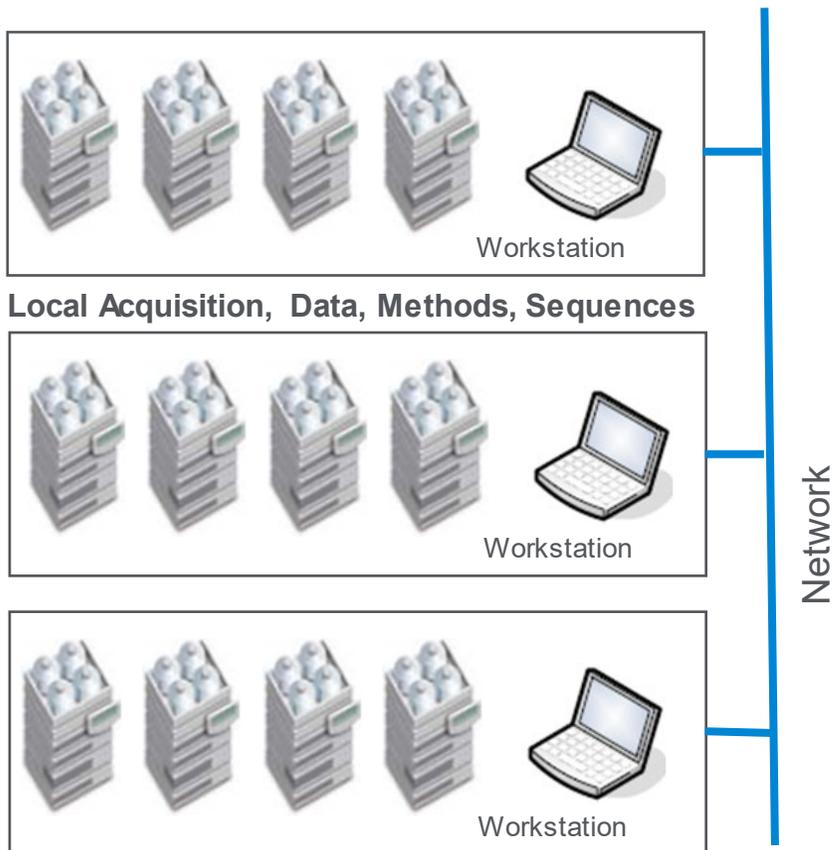
A photograph of three scientists in white lab coats working in a laboratory. A woman in the foreground is looking at a notebook, while a man behind her is also looking at the notebook. They appear to be in a collaborative work environment.

Adding value to your
lab... and your business

OpenLab CDS:

- Redesigned User interface
- Multi-Technique LC, GC, LCMS, and for the first time GCMS
- Multi vendor instrument support
- Redesigned Data Processing Engine
 - **Lightning fast reprocessing!**
- (NEW) Peak Explorer
- (NEW) Compliance features
 - **Audit Trail Review!**
- Powerful (NEW) Custom Calculator
- Lab-at-a-Glance view
- Intelligent Reporter
- Help and Learning module (separate)
- More....

Workstations

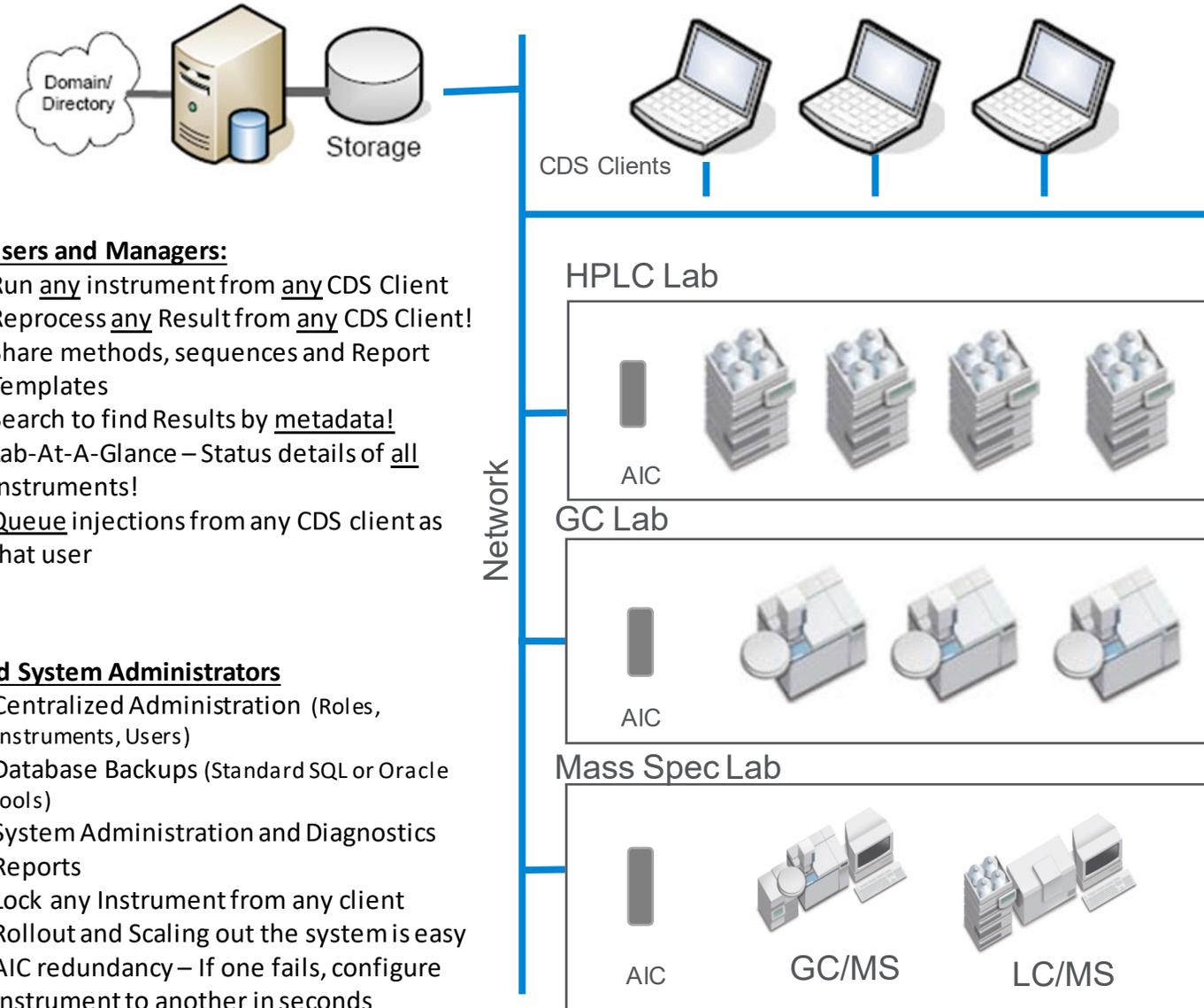


Key Limitations:

- System Config/Admin on each Workstation
- Files must be backed up for each Workstation
- Have to walk up to each Workstation to control instrument
- Not easy to share methods/sequences or access to data

Distributed System

Agilent
OpenLab



Lab Users and Managers:

- Run any instrument from any CDS Client
- Reprocess any Result from any CDS Client!
- Share methods, sequences and Report Templates
- Search to find Results by metadata!
- Lab-At-A-Glance – Status details of all instruments!
- Queue injections from any CDS client as that user

IT and System Administrators

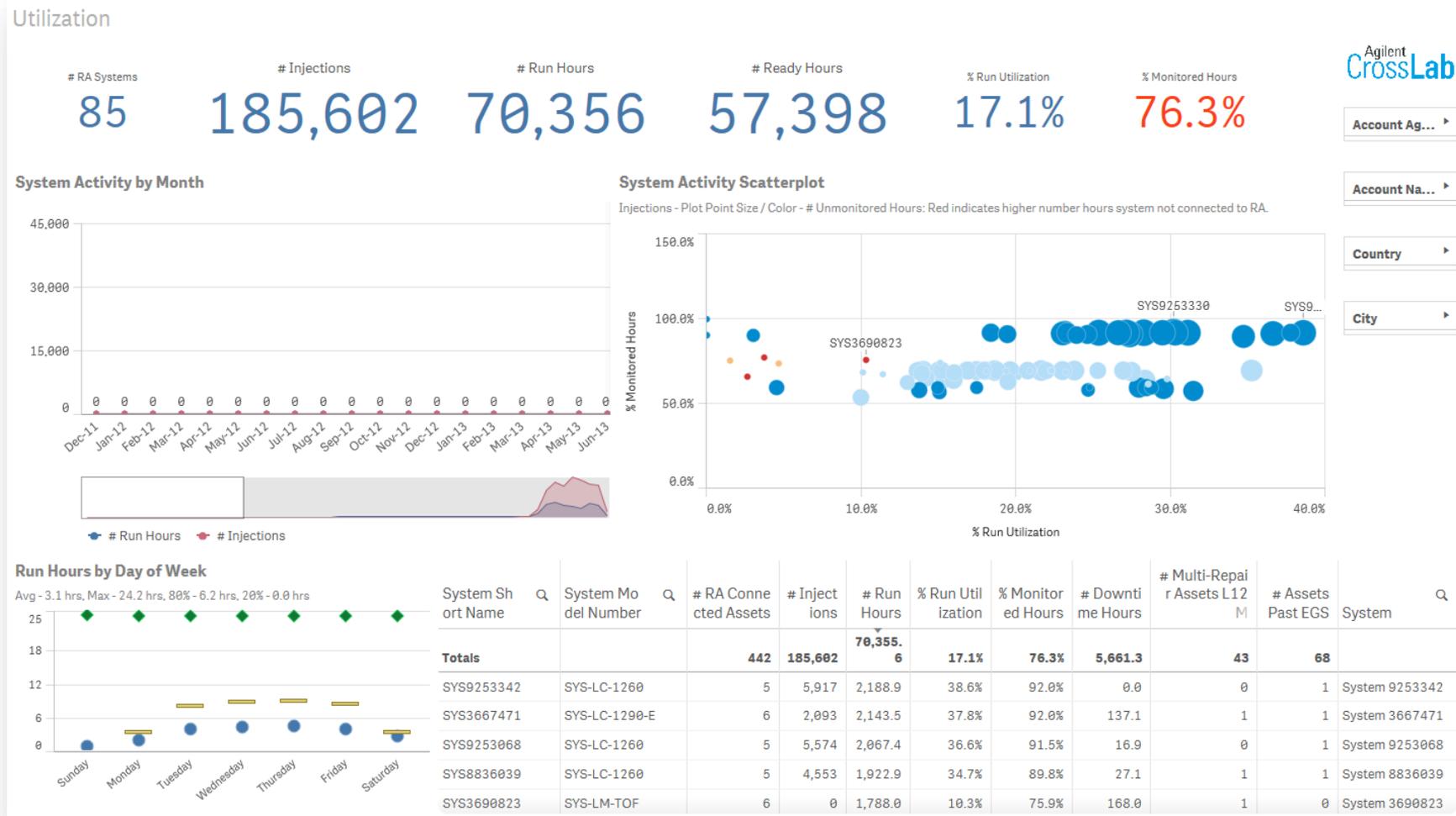
- Centralized Administration (Roles, Instruments, Users)
- Database Backups (Standard SQL or Oracle tools)
- System Administration and Diagnostics Reports
- Lock any Instrument from any client
- Rollout and Scaling out the system is easy
- AIC redundancy – If one fails, configure instrument to another in seconds

CrossLab Connect

Reporting Examples

Instrument Utilization

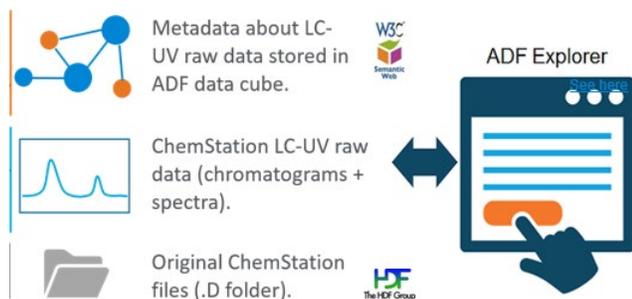
- # injections
- Run hours
- Ready hours (not running!)
- % utilized



OpenLab Additional Features:

- **Allotrope Enabled**

- First commercial CDS to support the Allotrope format
- Pharmaceutical industry driven initiative
- Technology Neutral Format for Long Term data archival



- **Sample Scheduler**

- Automated Sample submission
- OpenLab CDS – LIMS integration
- Run all instruments across the lab/site

Analysis Table

Identifier	Sample name	State	LIMS ID1	Ended date	Priority	Run time	Project	Instrument	Acq. method	User	Last modification by	Last modification date			
Maria_2017-0...	sample	Ended		2017-02-14 13-0...				QC Lab 2	Instrument 2	Mary	Mary	2017-02-14 12:53:13 (GMT...			
Maria_2017-0...	sample	Ended		2017-02-14 13-0...				QC Lab 2	Instrument 2	Mary	Silvia	2017-02-14 12:57:20 (GMT...			
Maria_2017-0...	sample 5	Submitted						QC Lab 2	Instrument 2	Mary	Silvia	2017-02-14 12:57:00 (GMT...			
id000100	sample <V>	Holding	LI_00100					QC Lab 2		Mary	LIMS	2017-02-20 10-21-02 (GMT...			
id000101	sample <V>	Holding	LI_00101					QC Lab 2		Mary	LIMS	2017-02-20 10-21-02 (GMT...			
F id00000_1	Sample abc1	In Progress	LI_00001			12 (min)		QC Lab 1	7890 GC	Mary	LIMS	2017-02-21 10-16-01 (GMT...			
B	Sample abc2	In Progress	LI_00002												
F id00000_2	Sample abc1	Scheduled	LI_00003		2			QC Lab 1	7890 GC	Mary	LIMS	2017-02-21 10-16-01 (GMT...			
B	Sample abc2	Scheduled	LI_00004												
User: Tina															
Silvia_2017-0...	sample 21	Stopped		2017-02-14 13-0...				QC Lab 2	Instrument 1	Tina	Silvia	2017-02-14 13-05-30 (GMT...			
Silvia_2017-0...	sample <V>	Waiting						QC Lab 2	Instrument 1	Tina	Silvia	2017-02-14 13-05-30 (GMT...			
Silvia_2017-0...	sample <V>	Waiting						QC Lab 2	Instrument 1	Tina	Silvia	2017-02-14 13-05-30 (GMT...			
Tina_2017-0...	sample 55	Error		2017-02-14 13-5...				QC Lab 1	7890 GC	Tina	Tina	2017-02-14 13-58-12 (GMT...			
		In Progress						QC Lab 2	Instrument 1	Tina	Tina	2017-02-21 10-33-37 (GMT...			
Sequence															
Identifier	Sample name	State	LIMS ID1	Acq. method	Proc. method	Injection source	Vial	Sample type	Level	Calibration	Run type	Method	Inj. volume	Inj. volume	Injector
id000400	Cal 1	Ended	LI_00400	ESTD1.amx	DPQuant.pmx	Standard	1	Cal. Std.	1	Clear all calibration			5	5	1
id000401	Cal 2	Ended	LI_00401	ESTD2.amx	DPQuant.pmx	Standard	2	Cal. Std.	2				5	5	1
id000402	Cal 3	Ended	LI_00402	ESTD3.amx	DPQuant.pmx	Standard	3	Cal. Std.	3				5	5	1
id000403	Sample01	In Progress	LI_00403	ESTD4.amx	DPQuant.pmx	Standard	4	Sample					5	5	1



Project Management

- Manage project
- Single POC
- Certified PM's
- Manage Resources



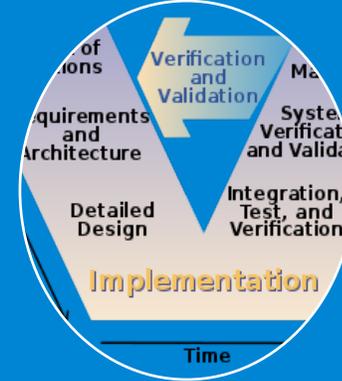
Install Services

- Client/Server
- Workstations
- Instrumentation



Qualification Services

- Installation Qual.
- Operational Qual.
- Vendor Neutral



CSV Services

- GAMP V Model
- Start-up Packages
- Custom Solutions
- Vendor Neutral



Consulting

- General Purpose
- Project Based
- T&M
- Custom Solutions
- Custom Reports
- System Integrations



Call Center Support

- Annual SMA
- Call Centers
- Global Focus

Services Portfolio

Additional Openlab CDS Training Opportunities

Online and Remote Training

Agilent University

Agilent University helps you unlock the full potential of your Agilent instruments, with affordable, effective training, delivered in the format that fits your needs.

<https://www.agilent.com/en/training-events/events/agilent-university>

OpenLab CDS REMOTE Seminars

Limited to 50 attendees

2-Hour Hands On Interactive Remote Seminars using Agilent cloud images of OpenLab CDS. Separate sessions on

- Control Panel and Data Acquisition
- Data Analysis
- Custom Calculator and Reporting

[Register Now!](#)

Virtual Hands-On Series
Discover what OpenLab CDS
software suite can do in your lab



OpenLab CDS Online Webinar

Overview and introduction

- August 10th
- September 14th
- October 5th
- November 9th
- December 14th

OpenLab CDS Webinar Series

<https://www.agilent.com/en/training-events/eseminars/openlab2>

OpenLab CDS 2.x Live Demo