OpenLab CDS/ECM Remote Access Solution

We at Agilent understand the importance of providing our customers “High Availability” to their Analytical Instruments and Data. For years, our CDS solutions have been designed with built-in “Failover” and standard SQL or Oracle Backup/recovery options.

But, as we are learning in this new environment where most of us are told to work from home, the need for Disaster Recovery is not just the ability to restore servers and their databases, but also access to the live instruments and data themselves.
How times have changed…

We all been told to….

“Work from home”

“Only go to work if you absolutely have to”
What is Disaster Recovery?

Hardware and Software Backup & Restore Strategies

What do I do if my disk crashes? Restore backup!! 😊
What do I do if there is fire in building and my data is in computer room? Restore backup from different state! 😊

Software vulnerability

What if I have a software virus? – Antivirus and other tools can protect, scan and fix 😊. Otherwise, restore the backup!!
What if my Data is Hacked? – Encrypt all files so they could not be opened 😊

REAL Virus / War /Terrorism

What if I cant get to the lab to run samples? ??? Backups cant help here 😊
What if I can only have a few people running samples but no support staff? ??? …cant help here either 😊
What if I need data in real-time and need to approve but I’m not allowed in lab or can get to the printers? ????

This is where a Networked OpenLab system with remote access features can help!! 😊
Workstation
- ChemStation
- EzChrom
- CDS 2.x
- MassHunter
- Spectroscopy

CDS
- Client/Server
- LC/GC/LC-GC MS
- 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
- Utilization
- Workload
- Right Sizing
- Category 1/2/3

ELN
- 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
Agilent OpenLab CDS/ECM Remote Access Solutions are ideal for users who need to process their data, generate and approve/reject results, review audit trails and even run their instruments all from home:

1. **Remote Access for OpenLab CDS Data Analysis or Instrument Acquisition**
   – Central control and reprocessing for OpenLab CDS, Chemstation or EZChrom

2. **Remote Access for Agilent Masshunter**
   – Central Reprocessing

3. **OpenLab ECM Web Interface** – Access to data and Result Reports from any computer on company VPN without installation of software!
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DATACENTER
- OpenLab Servers/Database
  - OpenLab ECM
  - OpenLab CDS
- Agilent Instrument Controllers
  - Run Instruments
  - Send data to Servers
- SAN

Lab
- Agilent Clients
  - User Interface
- LAN
- Agilent Instrument Controllers
  - Run Instruments
  - Send data to Servers

Office
- Agilent Clients
  - User Interface

Lunch Cafe
- Agilent Clients
  - User Interface

Company ABC
1. Remote Access for OpenLab CDS Data Analysis or Instrument Acquisition

**Thin Clients** = No software installed

**Company ABC**

**DATA CENTER**
- OpenLab Servers/Database
  - OpenLab ECM
  - OpenLab CDS
- SAN
- Agilent Instrument Controllers
  - Run Instruments
  - Send data to Servers
- Client Host Server
  - Citrix
  - Remote Desktop

**Lab**
- Thin Clients
- User Interface

**Office**
- Thin Client
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**Lunch Cafe**
- Thin Clients
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**Thin Clients** = No software installed

**LAN**

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*Client Software*
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Quick Demo of CDS Acquisition (from Thin Client)

Acquisition:
- Turn on and equilibrate your instrument.
- Setup/load acquisition methods and sequences (from the server) and start running!
  - You can import sequences (worklists) from a LIMS since you are on your VPN
- After the runs are completed, the data gets stored securely onsite automatically.

Data Analysis:
- Search the Database for your results and load them to prepare for reprocessing
- All Data Analysis features are available from home since you are using a fully featured CDS Client
  - Reprocess Data
  - Review/Approve Results
  - Generate Reports as PDF files and send to anywhere on your network

Remember, since you have a networked system with a central database you still have FULL ACCESS to:
- Any Live Instrument
- Results from any instrument including generating reports
2. Remote Access for Masshunter too!!

Masshunter QUANT and QUAL

VPN (Virtual Private Network)
3. ECM Web (thin) Client:
**ECM Web (thin) Client** – Log into Agilent Enterprise Content Manager using most web browsers such as Internet Explorer, Google Chrome, Safari or Firefox
Quick Demo of ECM Web Client (Thin Client)

- View PDF Reports from within the Internet browser
- Download the PDF or any file if needed - for editing or sharing
- Send secure link to sensitive report to colleague – also working from home!!
- Electronically sign the report after review for approval or rejection
Benefits of OpenLab CDS/ECM Remote access features

• Reduce Compliance costs – IQOQ/Validate 1 server compared to many CDS clients

• Increase Productivity – You can work remotely!!
  o Run samples
  o Process results
  o Review/Approve Results
  o Collaborate – Write SOP’s, Training records and videos, etc…

• Key part of a Disaster Recovery Plan
Customers using OpenLab CDS/ECM Remote access features

• Major Consumer Products Company – Running 38 sites globally with thin clients and data centralized in NJ

• Major Pharma Company - Multi-site system with central servers

• Life Sciences Company – Amazon Cloud system
Future of OpenLab CDS/ECM

- Agilent is investing in Cloud technologies to increase access from anywhere (centralizing operations of the system software)
  - Reduces Cost for IT infrastructure
  - Provides access to your instruments and data