

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”

Saving the world in 1944



Saving the world in 2020



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** 😊

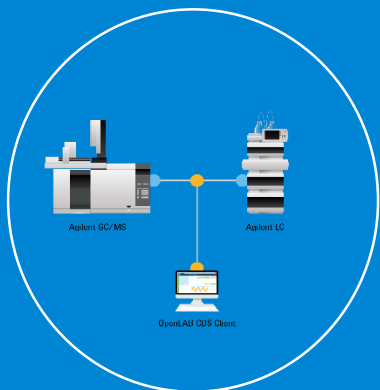
REAL Virus / War / Terrorism

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!! 😊



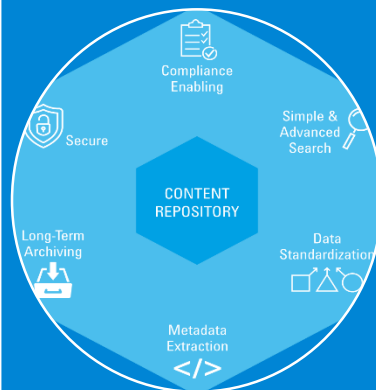
Workstation

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



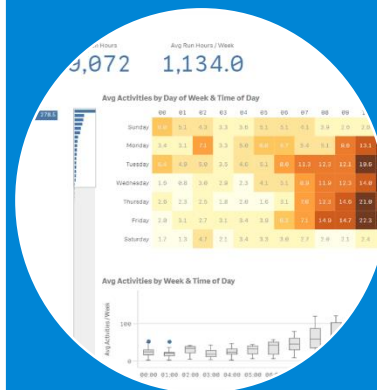
CDS

- 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

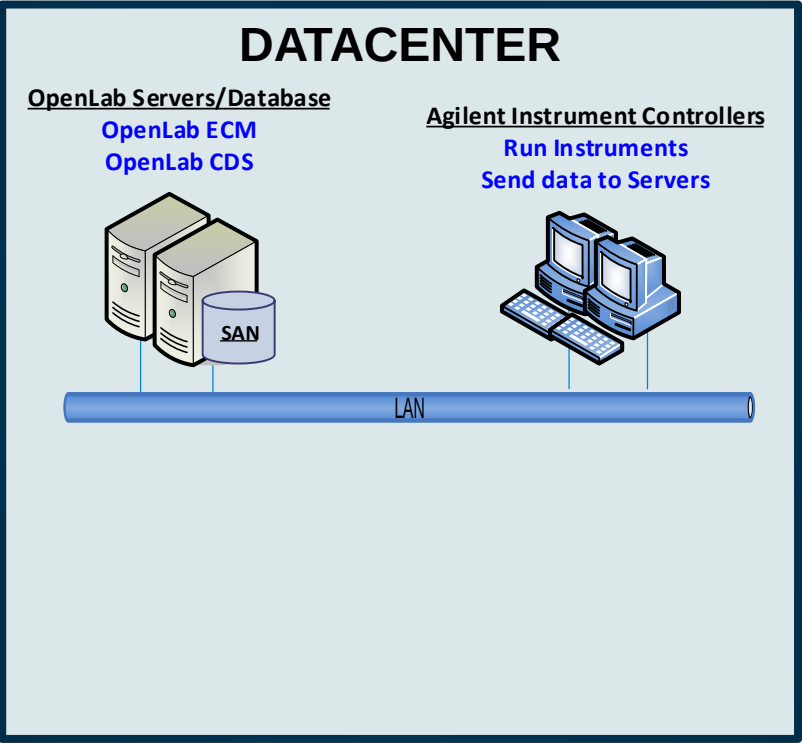
- Sample Tracking
- Barcoding
- R&D and QC
- Worklists
- Worksheet

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

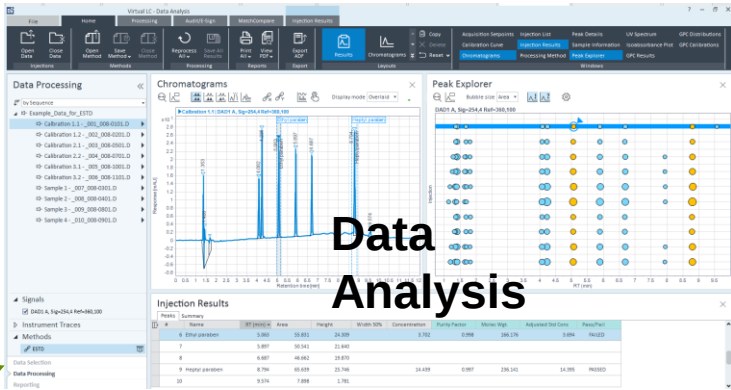
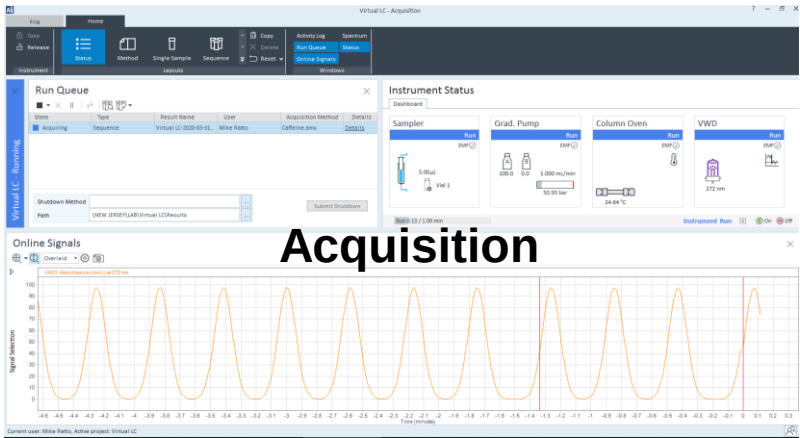
Agilent OpenLab CDS/ECM Remote Access Solutions are ideal for users who need to process their data, generate and approve/reject results, review audit trails and even run their instruments ***all from home***:

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!

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



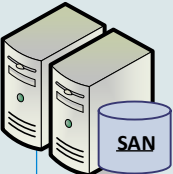
1. Remote Access for OpenLab CDS Data Analysis or Instrument Acquisition



DATACENTER

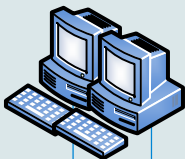
OpenLab Servers/Database

OpenLab ECM
OpenLab CDS



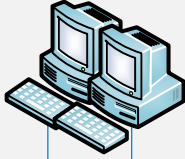
Agilent Instrument Controllers

Run Instruments
Send data to Servers



Lab

Agilent Clients
Users Interface

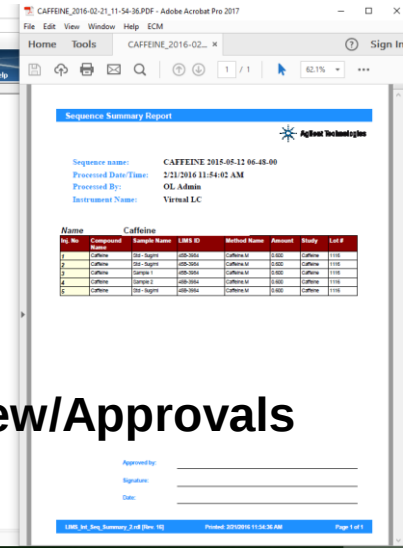
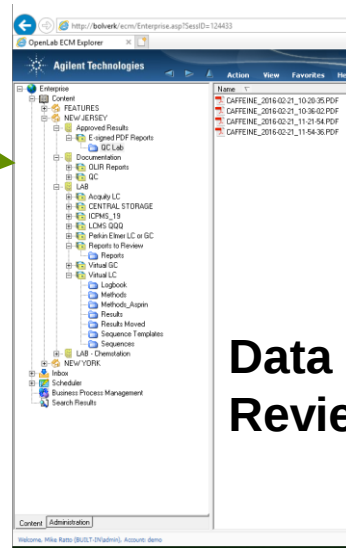


Agilent LC

Agilent GC

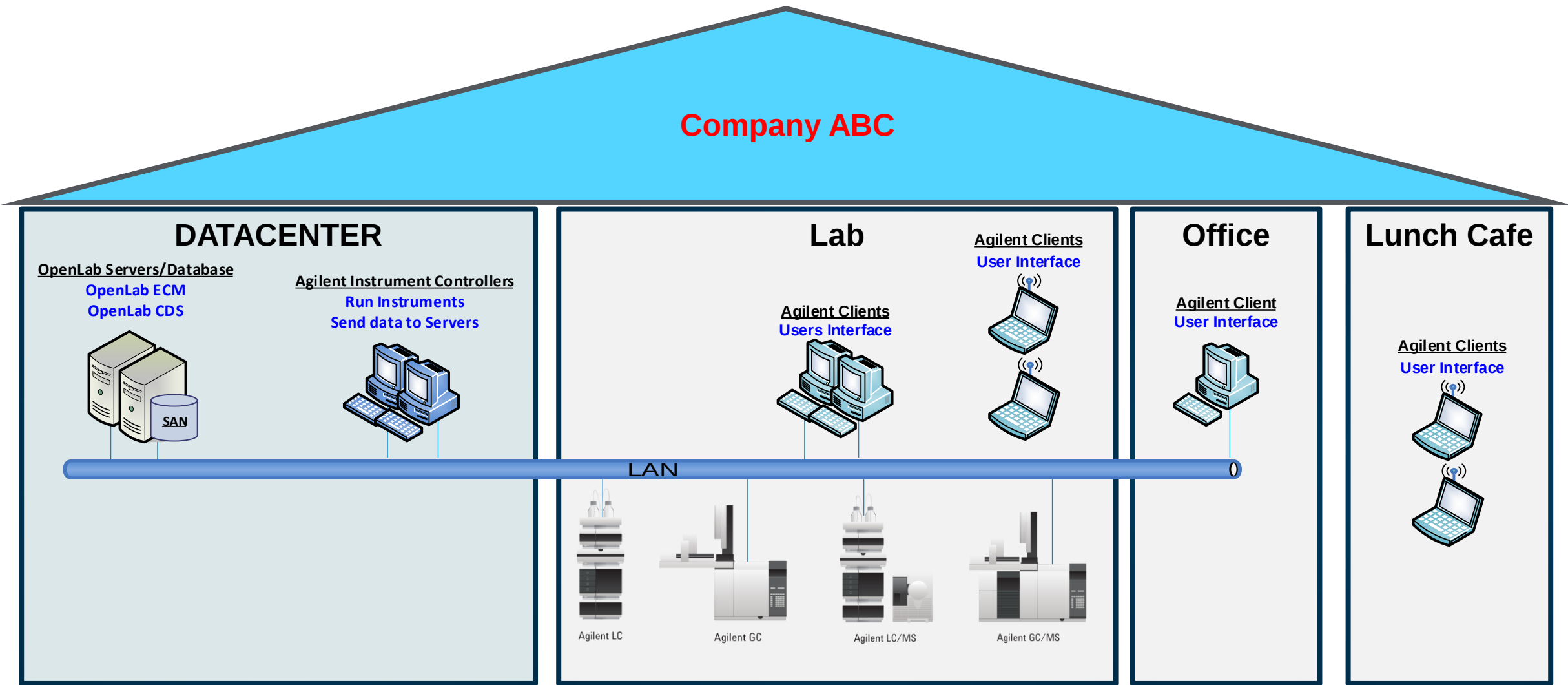
Agilent LC/MS

Agilent GC/MS



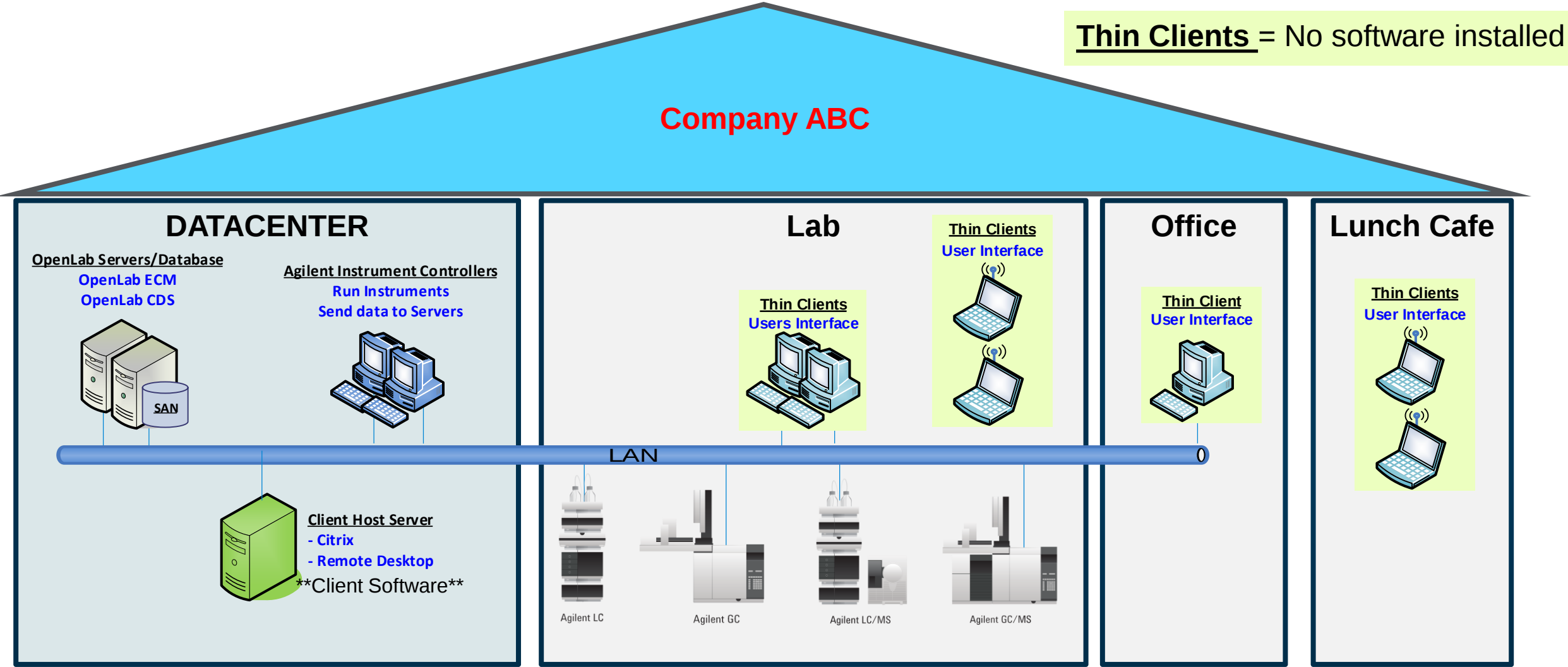
Data Review/Approvals

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

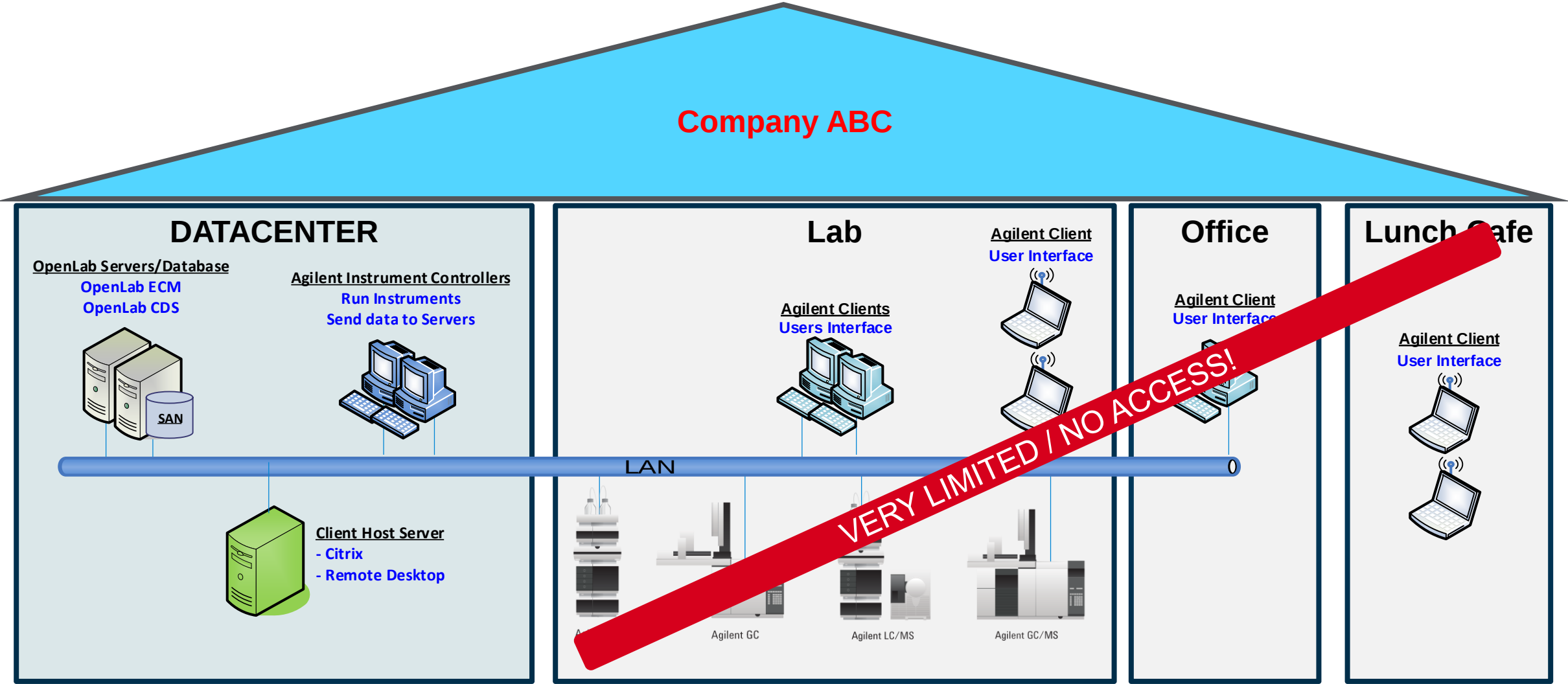


1. Remote Access for OpenLab CDS Data Analysis or Instrument Acquisition

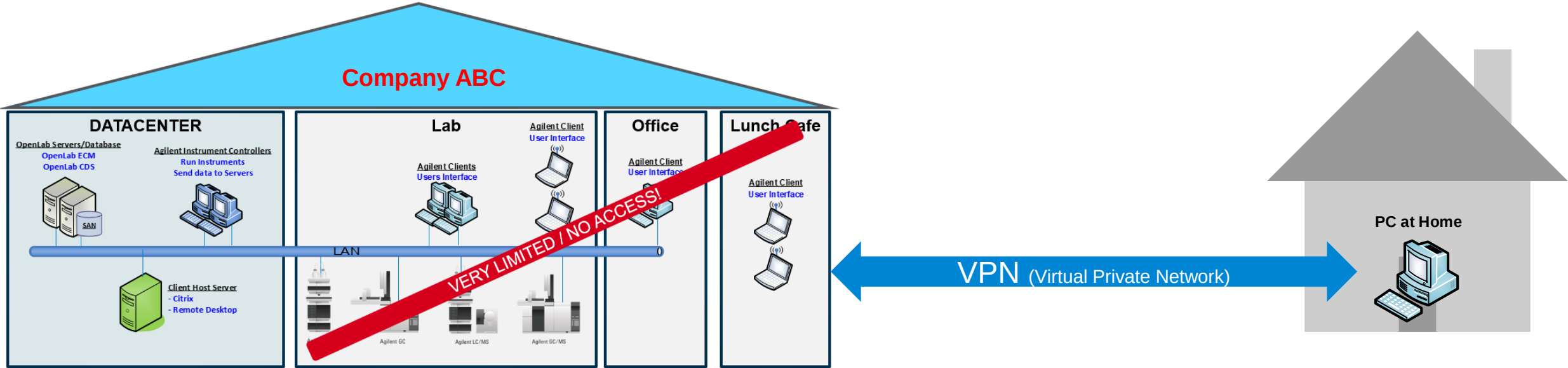
Thin Clients = No software installed



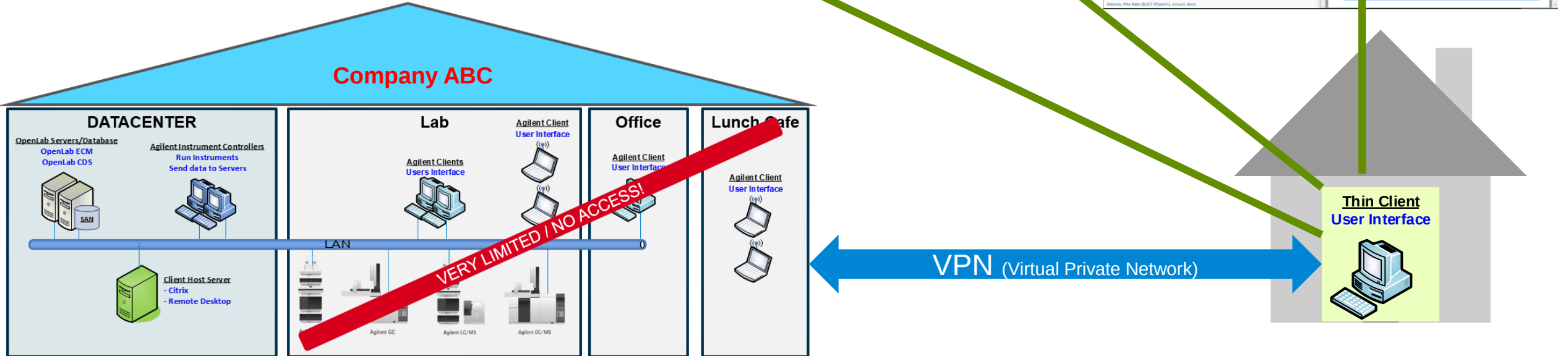
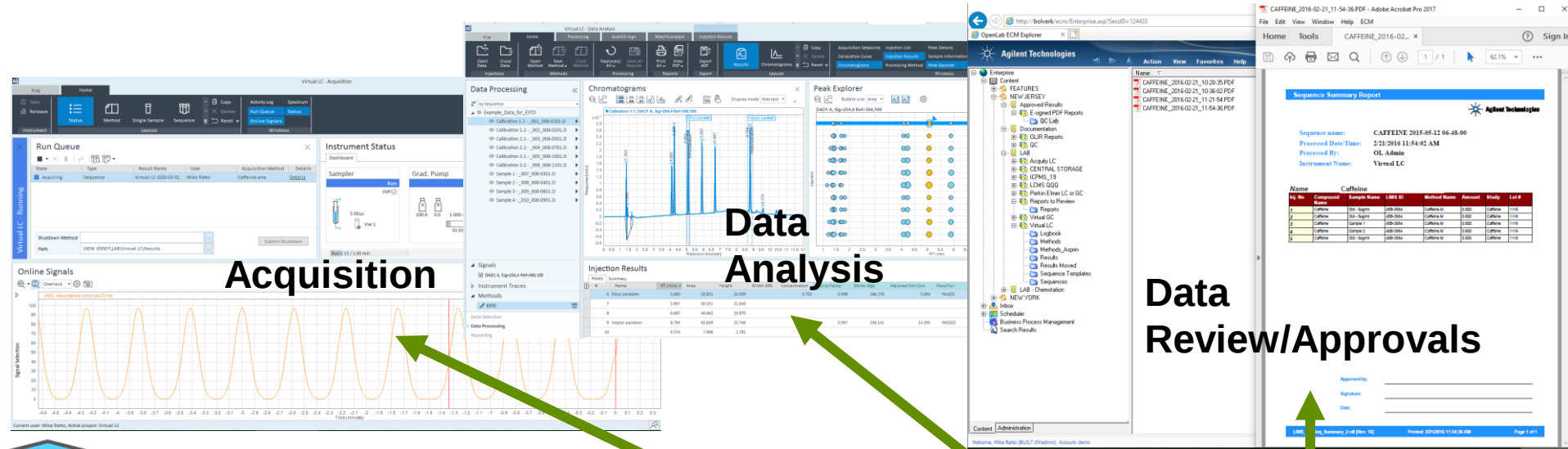
1. Remote Access for OpenLab CDS Data Analysis or Instrument Acquisition



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



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.

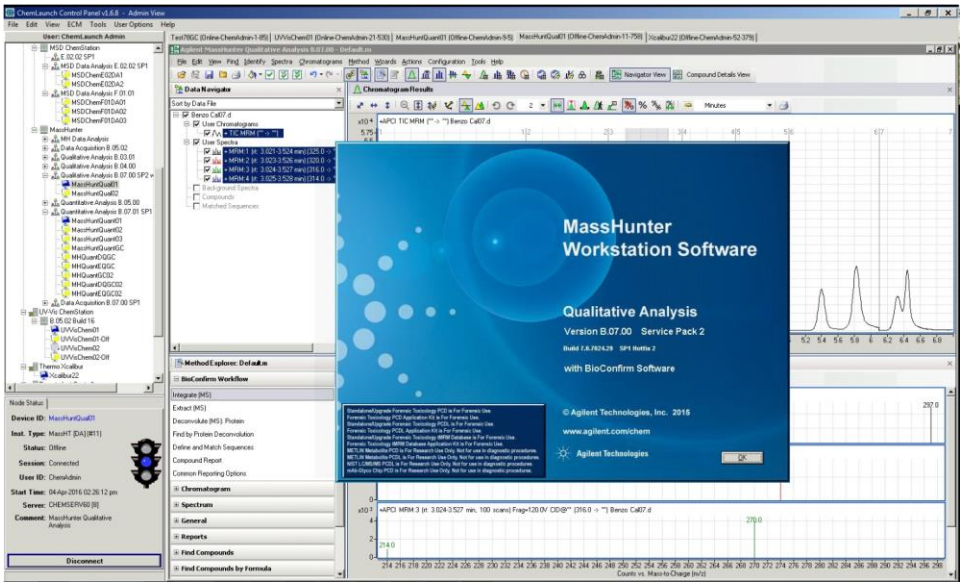
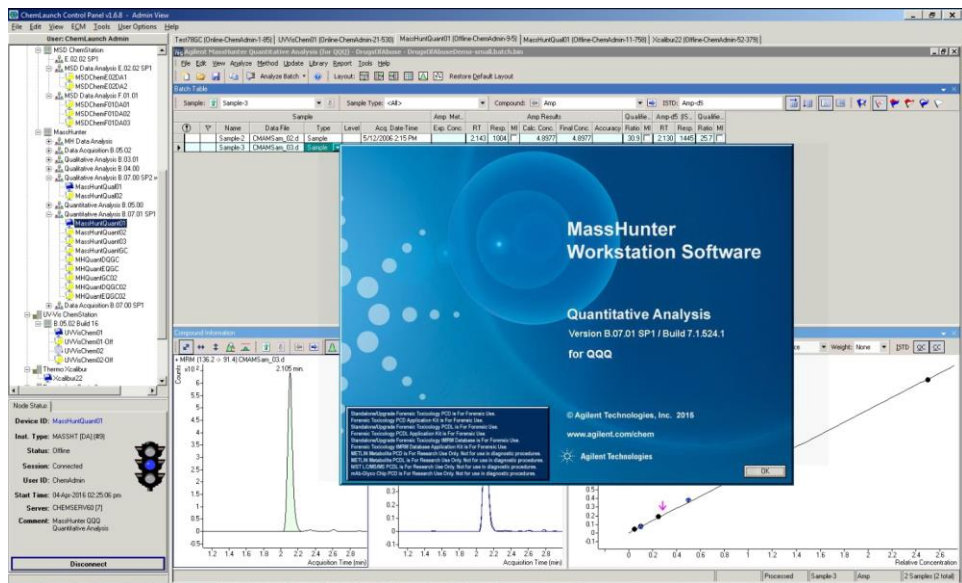
Data Analysis:

- 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

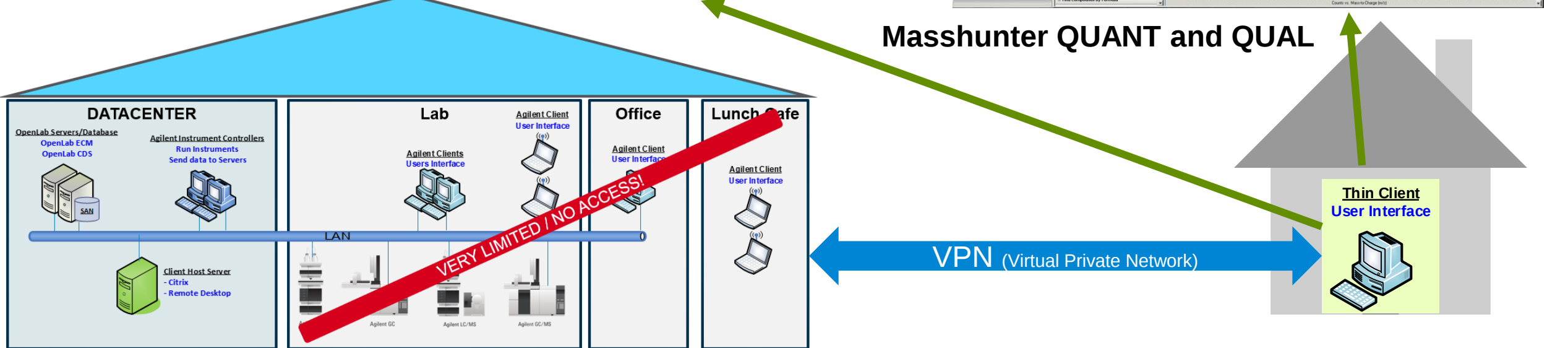
Remember, since you have a networked system with a central database you still have FULL ACCESS to:

- Any Live Instrument
- Results from any instrument including generating reports

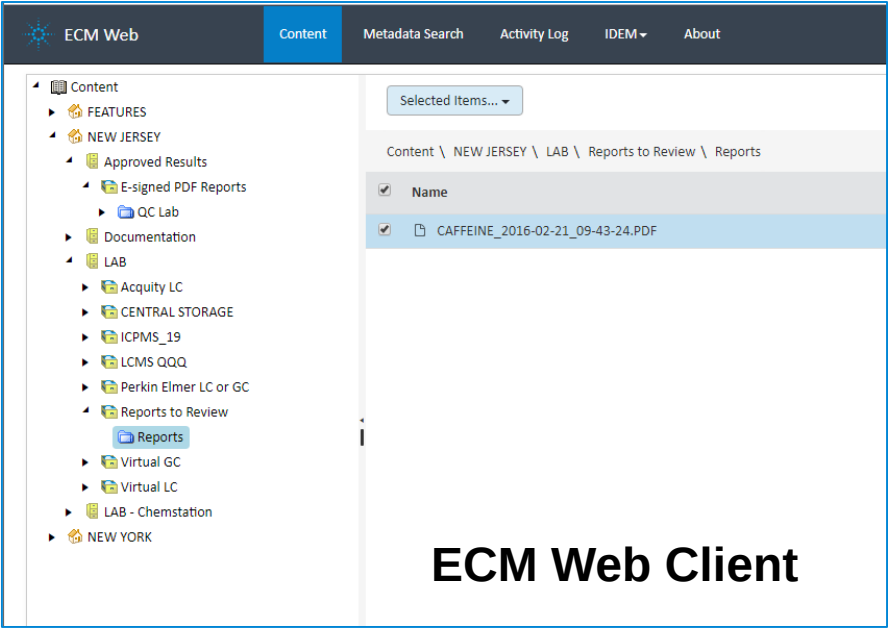
2. Remote Access for Masshunter too!!



Masshunter QUANT and QUAL



3. ECM Web (thin) Client:



ECM Web Client

Electronic Signature

User Information

User Name: * Mike Ratto

Password: *

Domain: * BUILT-IN

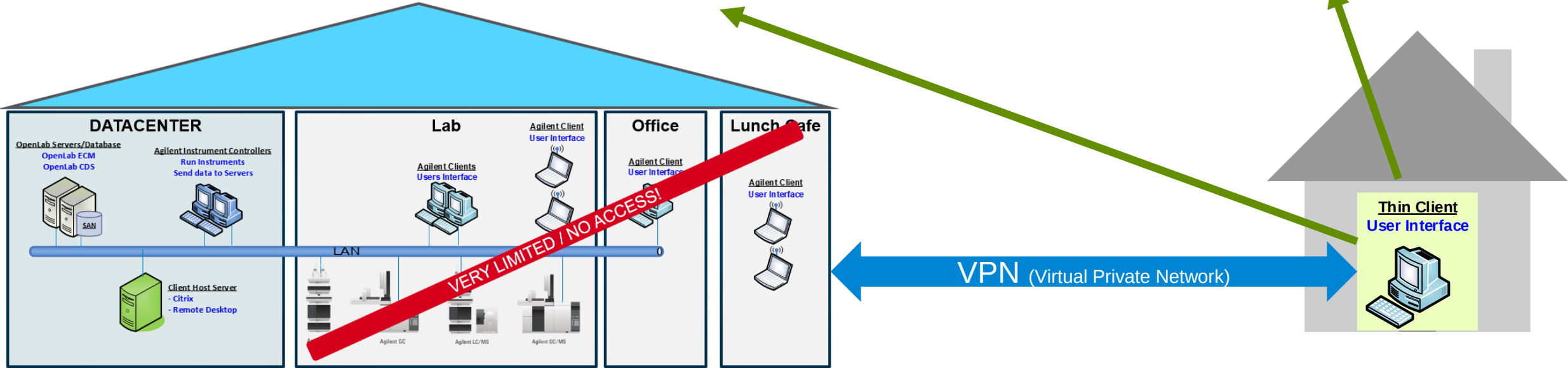
Signed-at Location: Working from HOME

Reason for signing

Default Reason: * Document is ready for approval

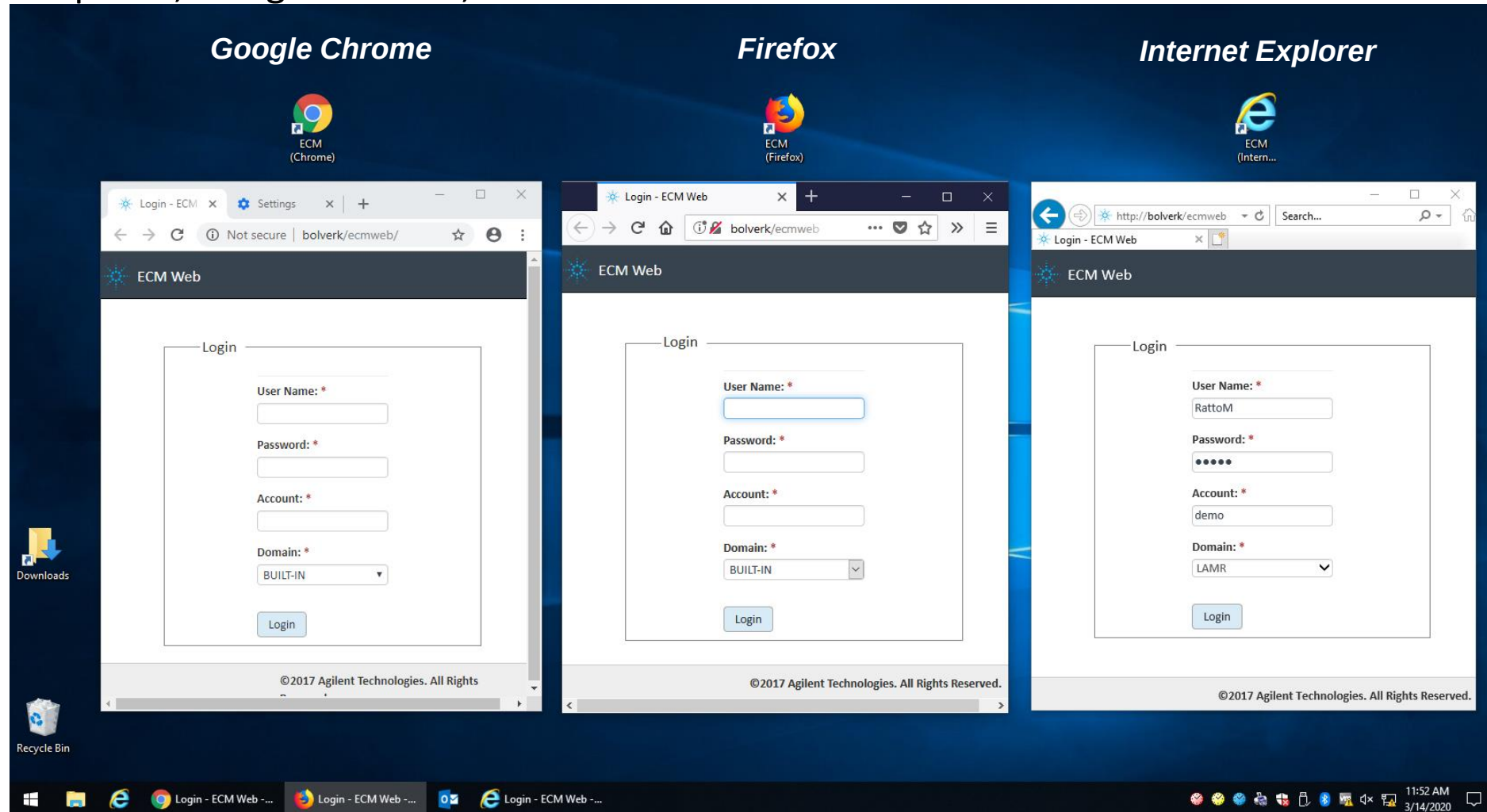
User Specified: *

Sign Cancel



OpenLab CDS/ECM Remote Access Solution

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

Sequence Summary Report							
 Agilent Technologies							
Sequence name: CAFFEINE 2015-05-12 06-48-00							
Processed Date/Time: 2/21/2016 10:35:33 AM							
Processed By: OL Admin							
Instrument Name: Virtual LC							
Name Caffeine							
Inj. No	Compound Name	Sample Name	LIMS ID	Method Name	Amount	Study	Lot #
1	Caffeine	Std - Sug/ml	45B-3444	Caffeine.M	0.800	Caffeine	2021
2	Caffeine	Std - Sug/ml	45B-3444	Caffeine.M	0.800	Caffeine	2021
3	Caffeine	Sample 1	45B-3444	Caffeine.M	0.800	Caffeine	2021
4	Caffeine	Sample 2	45B-3444	Caffeine.M	0.800	Caffeine	2021
5	Caffeine	Std - Sug/ml	45B-3444	Caffeine.M	0.800	Caffeine	2021



- Reduce Compliance costs – IQOQ/Validate 1 server compared to many CDS clients
- Increase Productivity – You can work remotely!!
 - Run samples
 - Process results
 - Review/Approve Results
 - Collaborate – Write SOP's, Training records and videos, etc...
- Key part of a Disaster Recovery Plan

- 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

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

