



Agilent OpenLab Server and ECM XT
Revision 2.7

Release Notes

Notices

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Software Revision

This guide is valid for the 2.7 revision or higher of Agilent OpenLab Server and OpenLab ECM XT until superseded.

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CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

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A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a **WARNING** notice until the indicated conditions are fully understood and met.

Contents

1	Introduction	4
	For our Regulated Customers	4
2	OpenLab Server	5
	Version 2.7	5
	Version 2.6	7
	Version 2.5	9
	Version 2.4	10
	Version 2.3	12
	Version 2.2	13
	Version 2.1	13
	Version 2.0	14
	Version A.02.02	15
	Version A.02.01	15
3	OpenLab ECM XT	16
	Version 2.7	17
	Version 2.6	19
	Version 2.5	21
	Version 2.4	23
	Version 2.3	23
4	Important Support Information	25



1

Introduction

This document provides a listing of the major feature modifications made in each release of OpenLab Server and OpenLab ECM XT Software.

References to product documentation regarding known issues and workarounds are also provided.

For our Regulated Customers

When any change is made to Agilent software, the validation status of the software needs to be re-established by the user/customer.

Whenever software is changed, a validation analysis should be conducted not just for the validation of an individual change, but also to determine the extent and impact of that change on the entire software system.



2 OpenLab Server

OpenLab Server software is comprised of Shared Services and Content Management components. Shared Services provides system administration functions and content management provides the ability to manage data and files of any type.

Information on modifications provided in this section apply to both OpenLab Server and ECM XT.

Version 2.7

Operating System Support

Added operating system support

- Windows 11 Pro (clients only)
- Windows 11 Enterprise (clients only)

Database Support

Added Database support

- PostgreSQL 14.1

Removed Database support

- PostgreSQL 11.5
- SQL Server 2014
- Oracle 18c

Browser Support

Removed browser support

- Internet Explorer

New Features/functionality

- New Activity Log Access role with View activity log privilege

In previous versions, all entries in the Content Management Activity Log were visible to any logged-in user, regardless of role/permissions. In v2.7, a new privilege (View activity log) and a new role (Activity Log Access) containing only this privilege was added. Content Management users will be required to have the View activity log privilege to view the activity log and all its entries. Users who are allowed to view the activity log must be assigned (or be in a group that has) the Activity Log Access role or another role that contains the View activity log privilege.

During an upgrade, all users will be assigned the Activity Log Access role, so users do not lose functionality. However, it is possible to remove the Activity Log Access role or View activity log privilege from a user.

- Standardized display of usernames with user-ID

Usernames are displayed in the full format Full Name (userid) in audit trails and activity logs

- Backup and Restore utilities use the database backup location for temporary storage of backup-related files.
- New backup and restore scripts for 4-server topologies
- New Incremental Configuration Tool allows you to configure all PostgreSQL instances used by OpenLab Server/ECM XT at once.
- Updates to the OpenLab Installer
 - New, updated look and feel
 - Access to manuals and documentation is now provided from links on an html page, opened from the Planning page.
 - Setup of passwords for the Data Repository has been moved to Step 1 Server Prerequisites.
- Further reduced number of firewall ports required to be opened to run an OpenLab CDS + OpenLab Server/ECM XT system. See the OpenLab Server/ECM XT Hardware and Software Requirements Guide for a full list of required ports.

Version 2.6

Database Support

New database support

- Oracle 19c (not supported for all-in-one system)
- PostgreSQL is now supported on a separate database server.

Removed database support

- Oracle 12c R2

Virtualization Support

- OpenLab Server/ECM XT is now supported on a virtual machine hosted by VMWare vSphere 64-bit 6.x or Hyper-V for Windows Server. The virtual machine must meet the OpenLab Server/ECM XT hardware and software requirements.

Office Applications Support

- Added Microsoft Office 365 64-bit

Updated communications ports

- The number and type of communication ports used by OpenLab Server have been changed in v2.6 as described in the following table.

Change	Port information		Communication Protocol	
	Port Type	Port number	New	Old
Added port	Internal	9083	HTTP	N/A
Added port	Internal	12876	HTTP	N/A
Added port	External - RabbitMQ Server	5671, 5672, 15671, 15672, 4369	TCP	N/A
Protocol change	External	52088	HTTPS	HTTP
Protocol change	External	9092	HTTPS	TCP

OpenLab Server

Protocol change	External	9093	HTTPS	TCP
Protocol change	External	21	FTP	TCP
Removed port	External	52080	HTTP	N/A

New Features

- New Content Management roles and privileges
 - New Delete Content of Project permission provides ability to delete and move content associated with projects
 - New Project Content Deletion role with Delete Content of Project privilege (Shared Services)
 - New Content Management Administrator role: View, Read, Add, Modify, Move, and Delete content of projects
- New Backup and Restore utilities
 - Two new utilities replace the manual backup and restore procedures. User can choose hot/cold, full/incremental, immediate/scheduled, and local or cloud-based (Amazon S3) backup storage. Restore to clean or existing systems.
 - Supported for all-in-one and 2-server topologies
 - Backup and Restore utilities do not support Oracle databases
- OpenLab CDS with OpenLab Server now utilizes secure https communication protocols between CDS components (for example, OpenLab CDS Clients, AIC, and web browsers) and the server application. In order to ensure appropriate authentication of the applications, Agilent OpenLab can utilize any existing commercially signed digital certificate OR the supplied OpenLab self-signed certificate as part of system configuration.
 - Not all systems connected to OpenLab Server will use the https communication protocols. See details from the associated system for applicability. If any system that uses the HTTPS protocol is connected, an appropriate digital certificate must be used.
- New Basic Server license
 - Entry level all-in-one server for up to 4 configured instruments
 - e-signatures not supported.
 - Edit offline not supported.

OpenLab Server

- Oracle database not supported.

Version 2.5

Operating System Support

New server OS support:

- Windows Server 2019 (64-bit) Standard or Datacenter

New client OS support:

- Windows Server 2019 (64-bit) Standard or Datacenter

Removed operating system support:

- Windows 7 SP1 (64-bit) Professional or Enterprise Edition¹
- Windows Server 2012 R2 Standard or Enterprise Edition

Database Support

New database support:

- SQL Server 2019 (64-bit)
- PostgreSQL (64-bit) 11.5
- Oracle (64-bit) 18c

Removed database support:

- Microsoft SQL Server 2012 Standard or Enterprise (64-bit) SP4

New Features

- Hot backup and restore

New hot backup and restore for the OpenLab Server and ECM XT system, including hot backup of Solr indexes, database, content store, and configuration information. Hot backup can be performed while the system continues to acquire and analyze data.

- Automatic archiving

¹ ECM XT interface for Empower 3 works on Windows 7

OpenLab Server

New automatic archiving feature enables a user to create automatic archiving tasks that run at specific times. When automatic archive tasks run, user-specified archive rules assigned to the content folders are enforced, and the content is moved to the destination archive location. The archiving functionality itself remains as in previous software revisions.

- Increased security

Support for security functions include: Support for HTTPS, CSRF (Cross-Site Request Forgery) filter, and configuration of CORS (Cross Origin Resource Sharing) to prevent cross-domain requests.

- New System Preparation Tool

New System Preparation Tool replaces the Site Preparation Tool. The System Preparation Tool ensures that the system configuration adheres to requirements prior to OpenLab installation. The tool can be run from the installer and can be run pre-installation.

Version 2.4

Operating System Support

New server OS support:

- Microsoft Windows Server 2016 Standard or Datacenter

New client OS support:

- Microsoft Windows Server 2016 Standard or Datacenter

No operating system support has been removed since v2.3.

Database Support

New database support:

- Microsoft SQL Server 2017 Standard or Enterprise (64-bit)
- Microsoft SQL Server 2016 SP2 Standard or Enterprise (64-bit)
- PostgreSQL Server 10.3
- Oracle 12c R2

OpenLab Server

Removed database support:

- PostgreSQL Server 9.3
- Oracle 12c R1

New Features

- Separation of Active Content storage location and Archive storage location

Files locked for archiving are stored in a different location from non-archived files. When a file is archived, the physical file is moved from the active storage location to the archive location. Step 4 in OpenLab Installer was updated to enable the definition of active and archive storage locations. Administrator can add storage post installation by executing Step 4 of the OpenLab Installer.

- Support for multiple Active and Archive storage locations

More than one active storage location can be defined and used. Newly added storage locations are designated as “Primary”. The primary storage location is used for all file uploads; it is a read/write location. Previous primary locations are automatically designated as “Secondary” when the new storage location is configured. Secondary file storage locations are read-only. Storage locations are added using Step 4 of the OpenLab Installer.

This same Primary/Secondary location scheme applies to Archive locations.

- Support for File Storage in the Amazon Cloud

The Amazon S3 cloud can be used for file storage – for active files, archived files, or both. Adding an Amazon S3 storage location is done using Step 4 of the OpenLab Installer.

- Support for Automated Configuration of the Scalable topology

The OpenLab Server scalable topology can now be configured in an automated fashion using Step 4 of the OpenLab installer. The installer supports new server configurations for all three server types: Content Management with Index and Search Services, Content Management only, or Index and Search only. Existing servers can be re-configured to be Content Management only servers.

- File Set

Grouping of analytical files (e.g., sequence, project, study). The File Set grouping preserves analytical context, enabling access, download and version

OpenLab Server

management of an entire group of files. Files grouped in File Sets are stored in special folders, indicated with dark blue color.

File Sets are versioned as new files are added or updated in the File Set. A new File Set Version History property on File Set folders enables access to view and download previous versions of a File Set. File Sets can be downloaded as a zip file using a new folder action. The File Set functions described above are available only via the Content Management user interface.

- Metadata-based filtering and folder search

Search is enhanced with the introduction of metadata-based filtering and folder search. Metadata-based filtering makes it easier to filter search results for specific files or folders based on attributes such as data type, upload date or File Set. Folder search returns search results that contain only folders.

- Preview files inside a SSIZIP

Viewing a SSIZIP file by default shows all contents of the file. Clicking one of the following types of files shows a preview of that file: .ch, .doc, .docx, .xls, .xlsx, .pdf, or .txt. Note that this enhancement allows for viewing of ChemStation chromatography data directly from the ChemStation SSIZIP; no download and file extraction is required.

Version 2.3

Information on modifications provided in this section apply to both OpenLab Server and ECM XT.

Database Support

- Microsoft SQL Server 2012 Standard or Enterprise (64-bit) SP4
- Microsoft SQL Server 2014 Standard or Enterprise (64-bit) SP2
- PostgreSQL Server 9.3
- Oracle 12c R1

Miscellaneous

- Upgraded underlying Search engine from Solr 4 to Solr 6.3
- Added new dedicated Search Service for search optimization and content indexing

Version 2.2

Information on modifications provided in this section apply to both OpenLab Server and ECM XT.

New Database Support

Microsoft SQL Server 2014

New Features

- Updated Installer
- Link to the Admin Console module added to the Content
- Management web user interface
- Updated Storage API to support OpenLab CDS version 2.2

Version 2.1

New Database Support

- Updated PostgreSQL version to 9.3.6

New Features

- Metadata Extraction and Search enhancements to support OpenLab CDS version 2.1 file formats
- Support for OpenLab CDS version 2.1 search feature
- Updated Web User Interface extensions and customizations
- New Access Content using Web Client permission added
- Improved overall system performance

Miscellaneous

- OpenLab Data Store renamed to OpenLab Server
- Data Store web interface renamed to Content Management
- Removed capability to archive and purge files outside of the repository
- Removed capability to support Microsoft Windows Server 2008 R2 SP1
- Removed capability to support Microsoft SQL Server 2008
- Removed capability to support Oracle 11g

Version 2.0

New Database Support

- Oracle 11g R2
- Oracle 12c R1

New Features

- New installer
- Web User Interface extension and customization updated
- New User Interface based on the new Agilent design guidelines
- Added capability to archive and purge files outside of the repository
- New Storage API to support OpenLab CDS version 2.0
- Metadata Extraction and Search enhancements to support OpenLab CDS version 2.0 file formats
- High Availability and Performance support for a clustered configuration
- Added Brazilian-Portuguese support

Version A.02.02

New Operating System Support

- Microsoft Windows Server 2012 R2
- New Databases Support
- PostgreSQL 9.2
- Microsoft SQL Server 2012 Service Pack 2

New Features

- FTP Support

Generic FTP client tools like FileZilla can be used to upload files to the OpenLab Data Store repository or to download files. The user's permissions and privileges configured on the system are also applicable for the FTP activities.

The FTP protocol is enabled by default, the procedure to enable or disable FTP is documented in the OpenLab Data Store Administrator Guide.

- Support of HTTPS and FTPS

Version A.02.01

- The OpenLab Data Store A.02.01 server can be installed independent of other OpenLab software through a dedicated installer program.
- The software can be installed on a PostgreSQL database engine rev. 9.0 in addition to Microsoft SQL Server 2008 R2 SP2.
- The server is automatically activated upon installation with internal authentication. A default user called 'admin' with the password 'openlab' is created.
- The software supports up to 30 instruments of mixed OpenLab CDS Workstations (ChemStation or EZChrom) and ICP-MS MassHunter Workstations on the same server.
- Lab Applications introduced with OpenLab Data Store A.01.02 is not supported with this release.



3 OpenLab ECM XT

OpenLab ECM XT contains OpenLab Server software with advanced content management functionality (e.g. Microsoft Office) and additional functionality, including:

- Import Service: Sends files from your local folders to OpenLab Content Management.
- Import Scheduler: Automatically import files stored on network computers to ECM XT.
- PDF Data Extraction: Allows you to extract selected values from PDF reports into OpenLab ECM XT.

Changes in ECM XT software releases are provided in the section below.

Version 2.7

Operating System Support

Added operating system support

- Windows 11 Pro (clients only)
- Windows 11 Enterprise (clients only)

Removed operating system support

- Windows 7 support (used for Empower 3 FR4)

Database Support

Added Database support

- PostgreSQL 14.1

Removed Database support

- PostgreSQL 11.5
- SQL Server 2014
- Oracle 18c

Browser Support

Removed browser support

- Internet Explorer

Import Scheduler with Empower support

- Import Scheduler with Empower supports Empower 3 FR5.
- Removed support for Empower 3 FR4.

PDF Metadata Extraction

Supported version Acrobat DC 32-bit (has not changed.) However, Adobe installs 64-bit by default. Also, automatic updates install 64-bit. To avoid problems, install Acrobat DC 32-bit using the instructions provided in the OpenLab Server/ECM XT

Requirements Guide and the OpenLab Server/ECM XT Installation Guide. Turn off automatic updates for Adobe.

New Features/functionality

- New Activity Log Access role with View activity log privilege

In previous versions, all entries in the Content Management Activity Log were visible to any logged-in user, regardless of role/permissions. In v2.7, a new privilege (View activity log) and a new role (Activity Log Access) containing only this privilege was added. Content Management users will be required to have the View activity log privilege to view the activity log and all its entries. Users who are allowed to view the activity log must be assigned (or be in a group that has) the Activity Log Access role or another role that contains the View activity log privilege.

During an upgrade, all users will be assigned the Activity Log Access role, so users do not lose functionality. However, it is possible to remove the Activity Log Access role or View activity log privilege from a user.

- Standardized display of usernames with user-ID
Usernames are displayed in the full format Full Name (userid) in audit trails and activity logs
- Backup and Restore utilities use the database backup location for temporary storage of backup-related files.
- New backup and restore scripts for 4-server topologies
- New Incremental Configuration Tool allows you to configure all PostgreSQL instances used by OpenLab Server/ECM XT at once.
- Updates to the OpenLab Installer
 - New, updated look and feel
 - Access to manuals and documentation is now provided from links on an html page, opened from the Planning page.
 - Setup of passwords for the Data Repository has been moved to Step 1 Server Prerequisites.
- Further reduced number of firewall ports required to be opened to run an OpenLab CDS + OpenLab Server/ECM XT system. See the OpenLab Server/ECM XT Hardware and Software Requirements Guide for a full list of required ports.

Version 2.6

Database Support

New database support

- Oracle 19c (not supported for all-in-one system)
- PostgreSQL is now supported on a separate database server

Removed database support

- Oracle 12c R2

Virtualization Support

OpenLab Server/ECM XT is now supported on a virtual machine hosted by VMWare vSphere 64-bit 6.x or Hyper-V for Windows Server. The virtual machine must meet the OpenLab Server/ECM XT hardware and software requirements.

Office Applications Support

- Added Microsoft Office 365 64-bit

Support for cloud deployments

- Cloud deployments are tested and supported on Amazon Web Services (AWS) and Microsoft Azure, where ECM XT is configured as the secured repository for OpenLab CDS. A Software Maintenance Agreement (SMA) is required. For details on supported cloud configurations, see the OpenLab CDS Requirements Guide or contact your Agilent representative.

Updates to communications ports

- The number and type of communication ports used by OpenLab ECM XT have been changed in v2.6 as described in the following table.

Change	Port information		Communication Protocol	
	Port Type	Port number	New	Old
Added port	Internal	9083	HTTP	N/A

OpenLab ECM XT

Added port	Internal	12876	HTTP	N/A
Added port	External - RabbitMQ Server	5671, 5672, 15671, 15672, 4369	TCP	N/A
Protocol change	External	52088	HTTPS	HTTP
Protocol change	External	9092	HTTPS	TCP
Protocol change	External	9093	HTTPS	TCP
Protocol change	External	21	FTP	TCP
Removed port	External	52080	HTTP	N/A

New Features

- New Content Management roles and privileges
 - New Delete Content of Project permission provides ability to delete and move content within projects
 - New Project Content Deletion role with Delete Content of Project privilege (Shared Services)
 - New Content Management Administrator role: View, Read, Add, Modify, Move, and Delete content of projects
- New Backup and Restore utilities
 - Two new utilities replace the manual backup and restore procedures. User can choose hot/cold, full/incremental, immediate/scheduled, and local or cloud-based (Amazon S3) backup storage. Restore to clean or existing systems.
 - Supported for all-in-one and 2-server topologies
 - Backup and Restore utilities do not support Oracle databases
- OpenLab CDS with ECM XT now utilizes secure https communication protocols between CDS components (for example, OpenLab CDS Clients, AIC, and web browsers) and the server application. In order to ensure appropriate authentication of the applications, Agilent OpenLab can utilize any existing commercially signed digital certificate OR the supplied OpenLab self-signed certificate as part of system configuration.
 - Not all systems connected to ECM XT will use the https communication protocols. See details from the associated system for applicability. If any system that uses the HTTPS protocol is connected, an appropriate digital certificate must be used.

Version 2.5

Operating System Support

New server OS support:

- Windows Server 2019 (64-bit) Standard or Datacenter

New client OS support:

- Windows Server 2019 (64-bit) Standard or Datacenter

Removed operating system support:

- Windows 7 SP1 (64-bit) Professional or Enterprise Edition²
- Windows Server 2012 R2 Standard or Enterprise Edition

Database Support

New database support:

- SQL Server 2019 (64-bit)
- PostgreSQL (64-bit) 11.5
- Oracle (64-bit) 18c

Removed database support:

- Microsoft SQL Server 2012 Standard or Enterprise (64-bit) SP4

New Features

- Hot backup and restore

New hot backup and restore for the OpenLab ECM XT system, including hot backup of Solr indexes, database, content store, and configuration information. Hot backup can be performed while the system continues to acquire and analyze data.

- Automatic archiving

New automatic archiving feature enables a user to create automatic archiving tasks that run at specific times. When automatic archive tasks run, user-specified archive rules assigned to the content folders are enforced, and the content is moved to the destination archive location. The archiving functionality itself remains as in previous software revisions.

² ECM XT interface for Empower 3 works on Windows 7

OpenLab ECM XT

- Increased security

Support for security functions include: Support for HTTPS, CSRF (Cross-Site Request Forgery) filter, and configuration of CORS (Cross Origin Resource Sharing) to prevent cross-domain requests.

- New System Preparation Tool

New System Preparation Tool replaces the Site Preparation Tool. The System Preparation Tool ensures that the system configuration adheres to requirements prior to OpenLab installation. The tool can be run from the installer and can be run pre-installation.

Version 2.4

Includes changes to OpenLab Server listed in OpenLab Server above, plus the following:

- Localization of Add-ons

The ECM XT add-ons (Import Scheduler, Import Services, and PDF Templates) now support localization in Chinese, Japanese, and Brazilian Portuguese.

- File Set support in Import Scheduler

The Import Scheduler General Task now has an option to upload files as a File Set. Empower tasks automatically upload files as a File Set

Version 2.3

Operating System Support

OpenLab ECM XT version 2.3 server system supports:

- Microsoft Windows Server 2012 R2 Standard or Enterprise Edition

OpenLab ECM XT version 2.3 client system supports the following:

- Microsoft Windows Server 7 SP1 (64-bit) Professional or Enterprise Edition
- Microsoft Windows 10 (64-bit) Professional or Enterprise Edition
- Microsoft Windows Server 2012 R2 Standard or Enterprise Edition

Database Support

- Microsoft SQL Server 2012 Standard or Enterprise (64-bit) SP4
- Microsoft SQL Server 2014 Standard or Enterprise (64-bit) SP2
- PostgreSQL Server 9.3
- Oracle 12c R1

OpenLab ECM XT

New Features

- Empower add on for Import Scheduler

Allows you to upload data from your Waters Empower 3 system directly to OpenLab ECM XT.

Miscellaneous

- Upgraded underlying Search engine from Solr 4 to Solr 6.3
- Added new dedicated Search Service for search optimization and content indexing



4 Important Support Information

Check the Agilent Software Support Lifecycle Policy at <https://www.agilent.com/en/support/agilent-openlab-software-support-lifecycle-policy> so you can schedule the updates to keep your version up to date.

You can also visit www.agilent.com for up to date issue information for all Agilent software products.

In This Book

This document provides a listing of the major feature modifications made in each release of OpenLab ECM XT and OpenLab Server Software.

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