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WARNING
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.

Software Revision
This guide is valid for revision A.02.05 of Agilent OpenLAB ECM Intelligent Reporter.
In This Guide...

This guide contains all installation procedures and configuration guidelines that are required to install Agilent OpenLAB ECM Intelligent Reporter.

1 Introduction
This chapter explains the general purpose and features of OpenLAB ECM Intelligent Reporter.

2 System Architecture
This chapter provides an overview of the server, client, and software components that are involved in the installation.

3 System Requirements with ECM 3.4.1 SP2 Infrastructure
This chapter lists the requirements which servers and clients must meet before OpenLAB ECM Intelligent Reporter is installed on an ECM 3.4.1 system.

4 System Requirements with ECM 3.5 Infrastructure
This chapter lists the requirements which servers and clients must meet before OpenLAB ECM Intelligent Reporter is installed on an ECM 3.5 system.

5 Pre-Installation Checklists
During the installation, several pieces of information are required. This chapter provides lists that help you to gather all the required data.

6 New Installation with ECM 3.4.1 SP2 Infrastructure
This chapter describes the new installation of OpenLAB ECM Intelligent Reporter with OpenLAB ECM 3.4.1.

7 Updating Previous Versions Using ECM 3.4.1 SP2 Infrastructure
This chapter describes the update of previous revisions to OpenLAB ECM Intelligent Reporter A.02.05 with OpenLAB ECM 3.4.1 SP2.
8 **New Installation with ECM 3.5 Infrastructure**  
This chapter describes the new installation of OpenLAB ECM Intelligent Reporter with OpenLAB ECM 3.5.

9 **Updating Previous Versions Using ECM 3.5 Infrastructure**  
This chapter describes the update of previous revisions to OpenLAB ECM Intelligent Reporter A.02.05 with OpenLAB ECM 3.5.

10 **Configuration**  
This chapter contains information on the configuration steps that are necessary before starting work with OpenLAB ECM Intelligent Reporter.

11 **Database Maintenance**  
This chapter contains information on the signal data, database size, and database maintenance.
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1 Introduction

This chapter explains the general purpose and features of Agilent OpenLAB ECM Intelligent Reporter (ECM IR).
In modern laboratories, a large number of measurements are performed each day, consequently producing a large amount of data. This data is generated with different analytical instruments and instrument settings, at different times, or, of course, for different projects. With Agilent OpenLAB ECM, all your measurement results and method information are stored in a safe place, where you can easily search for data and retrieve data.

Using Agilent OpenLAB ECM Intelligent Reporter, you now have the possibility to easily query analytical result data – across different samples, sequences, instruments or even projects. To query results, the Reporter Client offers a convenient filter function, where filter definitions can be saved and reused. You can choose one of the report templates that are provided along with OpenLAB ECM Intelligent Reporter for the resulting report.

The set of basic report templates that comes with OpenLAB ECM Intelligent Reporter covers the most common requirements in laboratories. These report templates were designed for use in a wide range of applications, and can be used as is in many cases. They contain all necessary functions and advanced calculations to summarize your data.

If you have specific needs for your reports, these report templates can also serve as a starting point for developing your own templates. All report items and functions for developing your own report templates are described in detail in the OpenLAB ECM Intelligent Reporter Online Help and in the Report Template Editor Concepts Guide.
Context of Laboratory Software

Many different software systems are used in laboratories. These different systems can be categorized according to their functional range and intended use. To better understand OpenLAB ECM Intelligent Reporter as compared to other lab software, a description of the essential categories is included in the following sections.

Chromatographic Workstation

This type of software is usually handled by a single user on one PC. It controls a small number of instruments. The software offers functions for instrument control, maintenance, and diagnostics. It also supports data analysis and basic reporting for the data collected on this PC.

Example: *Agilent OpenLAB CDS Workstation*
Chromatographic Data System

This type of software is used for managing many PCs and instruments, possibly even hundreds, in a network. It offers central data storage, often based on a relational database. All data collected in this network is accessible, but it is still difficult to analyze large amounts of data across different projects. And since chromatographic data systems can only store and report data generated within the system, reports across different chromatographic data systems are not possible.

Example: *Agilent OpenLAB CDS Distributed System*
Enterprise Application

These applications are superordinate to the two above-mentioned systems. They offer integration of data throughout the lab and beyond (for example, across different chromatographic data systems), with features such as long-term archiving, adjustable workflows, and content management not only for chromatographic data but also for any data generated in a laboratory.

Example: Agilent OpenLAB ECM
OpenLAB ECM Intelligent Reporter

*OpenLAB ECM Intelligent Reporter* is technically a component of *OpenLAB ECM*. It is integrated in OpenLAB ECM, and uses the existing archiving, versioning and authorization functions of OpenLAB ECM. The Reporter Client offers the possibility to quickly search for result data, generate customized reports, and preview them. It considers all measurement results available in the central database – independent of the origin of the data.

This central database can process any measurement data that is saved in Agilent Common Analytical Markup Language (ACAML) format. At the time of writing this manual, ACAML data can be generated by the following software:

- Agilent OpenLAB CDS ChemStation Edition
- Agilent OpenLAB CDS EZChrom Edition
- Waters Empower 2 or 3

It is thus possible to create reports with essential key information across various samples, sequences, instruments, or even projects. An outstanding feature of the reports available with OpenLAB ECM Intelligent Reporter is that the key information is not limited to chromatographic data. It is, in fact, possible to generate statistics on instrument utilization, or statistics on mean values and standard deviations for data acquired over a longer period of time.
Features

OpenLAB ECM Intelligent Reporter comes with the following features:

- OpenLAB ECM Intelligent Reporter is compatible with Agilent OpenLAB CDS and Waters Empower. Reporting is possible across data generated by Agilent OpenLAB CDS ChemStation or EZChrom Edition or Waters Empower.
- Reporting based on database queries - thus very fast and flexible
- Easy-to-use filter interface
- Easy-to-use report template editor
- Simple and advanced calculations
- Trend charts, Chromatograms, Calibration Curves, Spectra
- Decision-based result presentation (flag outliers, automatically sort results by pass/fail criteria, and so forth)
- Configuration of interactive report elements (show/hide information in the report)
- Management of report templates and filter definitions in Agilent OpenLAB ECM
- Scalable, ECM-based reporting infrastructure
- Works with ECM systems based on Oracle (11g or 12) or Microsoft SQL Server (2008 R2, 2012, or 2014)
- Integration of standard technology for generating reports (Microsoft SQL Server 2008 R2, 2012, or 2014 Reporting Services)
- Web-based reports designed with SQL Server Report Builder
- A Data Retention tool helps to execute data retention policies on the Intelligent Reporter data cache
- Report definitions in Microsoft-supported, XML-based RDL (Report Definition Language) format
1 Introduction
Features
2 System Architecture

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Security Considerations 28

This chapter provides an overview of the server, client, and software components that are used to install OpenLAB ECM Intelligent Reporter.
Hardware and Software Components

OpenLAB ECM Intelligent Reporter is not a single program with a single setup file. It is a collection of components, services, and databases that work together. The figure below illustrates all of the involved components. The servers can be installed on the same machine or on separate machines.
Reporting Server

Microsoft SQL Server 2008 R2, 2012, or 2014 with Reporting Services

ECM servers

Database Server
- ECM Database
- Reporting Database
File Transfer Server
Web Server

OpenLAB Shared Services

OpenLAB Shared Services

OpenLAB Reporting Server

Microsoft SQL Server 2008 R2, 2012, or 2014 with Reporting Services

Figure 1 System architecture

Reporting Server

The Reporting Server is responsible for generating the reports, based on the data and report templates stored in OpenLAB ECM. The Reporting Server can be installed on a separate machine or on the same machine as the ECM Database Server.
However, for performance reasons, we recommend to install the Reporting Server on a separate machine.

The Reporting Server contains an installation of Microsoft SQL Server, including the *Reporting Services* feature. If you already have an existing Microsoft SQL Server installation, you need to activate and configure *Reporting Services*.

**ECM Server**

The different ECM server modules that are involved in an OpenLAB ECM Intelligent Reporter installation can either be installed on a single machine or on different machines:

- **ECM Database Server**
  This server hosts the ECM database. It can be installed with Oracle or with Microsoft SQL Server.

  When installing OpenLAB ECM Intelligent Reporter, you will add new tables to the ECM database. These new tables contain all the values that can be queried in a report (for example, component name, peak height, peak area, instrument name, or method name).

  In this guide, the additional tables are referred to as the *Reporting Database*. The Reporting Database is optimized for report generation.

- **ECM File Transfer Server**
  The File Transfer Server is a web server that runs the ECM File Transfer Service. When a file is added to the ECM system, it is first added to a file-cache folder before being moved to a permanent storage location.

  When installing OpenLAB ECM Intelligent Reporter, you will equip the File Transfer Servers with a new *Synchronization Service*. When new measurement data is generated and saved in OpenLAB ECM as an *.ssizip* file, the Synchronization Service extracts the relevant data and creates the appropriate records in the Reporting Database.

  All data that has been saved in the *Agilent Common Analytical Markup Language* (ACAML) format is taken into account.
Hardware and Software Components

• ECM Web Server

The ECM Web Server is responsible for forwarding the requests from the client and providing the data. You will install the Data Services to enable this functionality.

OpenLAB Shared Services Server

If you use OpenLAB CDS, there is already an OpenLAB Shared Services Server available in your system landscape. If you use older versions of Agilent ChemStation, you must install a new OpenLAB Shared Services Server. An OpenLAB Shared Services Server must already be available in your system landscape.

You can access OpenLAB Shared Services via the OpenLAB Control Panel. The OpenLAB Control Panel provides – among other things – the configuration of users, groups, roles, and privileges. After installing the Reporter Client, OpenLAB Control Panel also provides the configuration of reporting projects and their assigned location/cabinet/drawer/folder (LCDF) paths in ECM.

NOTE

If you use multiple ECM accounts, you must install one OpenLAB Server for each ECM account.

Reporter Client

The CDS Client or Networked Workstation contains an OpenLAB CDS A.02.x installation. Here the acquisition and processing methods are specified, and samples or sequences are run. In case of a Networked Workstation, the processing of the actual measurement takes place, too. The generated measurement data is saved to OpenLAB ECM as an .ssizip file that contains the results in ACAML format.

The OpenLAB ECM Intelligent Reporter Client enables users to develop and apply standard cross-sequence report templates, including custom calculation and statistics.
Overview of Installation and Configuration Steps

The following table contains an overview of the basic installation steps involved in the different installation or migration scenarios.

The revisions A.02.04 and earlier of OpenLAB ECM Intelligent Reporter were only available for ECM 3.4.1 or earlier, which were based on older Windows versions as operating system. ECM 3.5 is based on Windows 2012 Server R2 (64 bit). Therefore, migrating from one of these revisions to OpenLAB ECM Intelligent Reporter A.02.05 in combination with ECM 3.5 includes upgrading all ECM servers with the new ECM versions and operating systems. For more information on upgrading ECM, refer to the *ECM Version 3.5 Upgrade Guide*.

The revisions A.02.02. to A.02.04 exist with an ECM 3.4.1 infrastructure. An update to A.02.05 is possible on the existing server hardware.

### Table 1  Installation steps with ECM 3.5 infrastructure

<table>
<thead>
<tr>
<th>Upgrade from revision ...</th>
<th>None/New Installation</th>
<th>A.02.04 and older and older</th>
</tr>
</thead>
</table>
| **OpenLAB Server**        | • Install A.02.05 Reporter Client  
                           | • Set ECM as authentication provider | • Same as new installation |
| **DB Server**             | • Install A.02.05 Reporting Database | • Set up new DB server  
                           |                                     | • Install ECM 3.5  
                           |                                     | • Migrate ECM database  
                           |                                     | • Re-synchronize the ECM IR data |
| **Reporting Server**      | • Install A.02.05 Extensions for Reporting Services  
                           | • Create Report Generation user and role | • Same as new installation |
| **FT Server**             | • Install A.02.05 Sync Service  
                           | • Install EZChrom Reader | • Same as new installation |
### Table 1  
Installation steps with ECM 3.5 infrastructure (continued)

<table>
<thead>
<tr>
<th>Upgrade from revision ...</th>
<th>None/ New Installation</th>
<th>A.02.04 and older and older</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Server</td>
<td>• Install A.02.05 Data Services</td>
<td>• Same as new installation</td>
</tr>
</tbody>
</table>
| Reporter Client           | • Install OpenLAB CDS Client or Networked Workstation  
                            | • Install A.02.05 Reporter client | • Same as new installation |
| Configuration             | • Configure privileges and reporting projects | • Configure privileges and reporting projects |
Security Considerations

The chromatographic data in OpenLAB ECM is not only stored in specific LCDF paths, it is also logically grouped into projects. Projects are administered via the OpenLAB Control Panel. In OpenLAB Control Panel there are different project types; for working with OpenLAB ECM Intelligent Reporter, you must create at least one reporting project. With reporting projects you define the LCDF paths for report templates and filter definitions in ECM (see “Configuration” on page 169).

When working with projects, be aware of the different security settings.

**LCDF security**

The configuration of projects includes assigning the required LCDF paths that contain the project data. LCDF paths normally have specific LCDF security settings for reading or writing data. As opposed to project security, the LCDF security settings do not apply to OpenLAB ECM Intelligent Reporter.

**Project security**

In OpenLAB Control Panel, you can assign privileges to users for specific projects or project groups. In the Reporter Client, users are able to choose from all projects for which they have access according to their privileges.

**Database settings**

The data in the Reporting Database is also organized in projects. The database takes into account the project information that the Reporter Client includes in the queries. As reports are typically limited to one specific project, this ensures optimum performance: the data in the Reporting Database is pre-filtered, and the query does not need to scan the entire database.
This chapter lists the requirements which servers and clients must meet before OpenLAB ECM Intelligent Reporter is installed on an ECM 3.4.1 SP2 system.
A ready installed OpenLAB Shared Services server is required before you start installing OpenLAB ECM Intelligent Reporter.

For information on the requirements for OpenLAB Shared Services server, refer to the *Agilent OpenLAB Chromatography Data System (CDS) Hardware and Software Requirements*.

For more information on installing OpenLAB Server, refer to the respective OpenLAB CDS installation guide.

As OpenLAB ECM is a multi-tenant application, there may be multiple ECM instances (so-called “accounts”) that are relevant for OpenLAB ECM Intelligent Reporter. Relevant ECM accounts are the ones where measurement data is generated and stored in the ACAML format. A separate instance of OpenLAB Server is required for each ECM account.
ECM Web Server

In distributed ECM installations, you can install the ECM Web Server on a separate machine. In all-in-one installations, the ECM Web Server is installed on the same machine as the other ECM servers.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows 2008 Server R2 (64 bit) with SP1</td>
</tr>
<tr>
<td>.NET Framework</td>
<td>3.5 and 4.5.1</td>
</tr>
<tr>
<td>Regional settings</td>
<td>English (US)</td>
</tr>
<tr>
<td>OpenLAB ECM</td>
<td>3.4.1 SP2 with several hotfixes</td>
</tr>
<tr>
<td></td>
<td>• Follow the instructions on the OpenLAB ECM Intelligent Reporter installation medium in the ECM/Required Hotfixes directory.</td>
</tr>
</tbody>
</table>
ECM File Transfer Server

In distributed ECM installations, you can install the ECM File Transfer Server on a separate machine. In all-in-one installations, the ECM File Transfer Server is installed on the same machine as the other ECM servers.

**Table 2  ECM File Transfer Server**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows 2008 Server R2 (64 bit) with SP1</td>
</tr>
<tr>
<td>.NET Framework</td>
<td>3.5 and 4.5.1</td>
</tr>
<tr>
<td>Regional settings</td>
<td>English (US)</td>
</tr>
<tr>
<td>OpenLAB ECM</td>
<td>3.4.1 SP2 with several hotfixes</td>
</tr>
<tr>
<td></td>
<td>- Follow the instructions on the OpenLAB ECM Intelligent Reporter installation medium in the ECM/Required Hotfixes directory.</td>
</tr>
<tr>
<td>OpenLAB ECM client</td>
<td>The OpenLAB ECM client installation includes a suitable ECM API version.</td>
</tr>
</tbody>
</table>
ECM Database Server

**Table 3** ECM Database Server (if Oracle is used)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>Oracle Database 11g (11.2.0.1)</td>
</tr>
</tbody>
</table>

**Table 4** ECM Database Server (if Microsoft SQL Server is used)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| Database| • Microsoft SQL Server 2008 R2 Standard or Enterprise SP1  
|         | • Microsoft SQL Server 2012                      |
For performance reasons, we recommend installing the Reporting Server on a separate machine.

Table 5 Reporting Server – hardware requirements

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• CPU</td>
<td>64 bit</td>
</tr>
<tr>
<td>• RAM</td>
<td>1 GB minimum</td>
</tr>
<tr>
<td>• Disk Space</td>
<td>2 GB minimum</td>
</tr>
<tr>
<td>• Optical drive</td>
<td>DVD</td>
</tr>
</tbody>
</table>

Table 6 Reporting Server – software requirements

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Operating system</td>
<td>• Windows 2008 Server R2 (64 bit) with SP1&lt;br&gt;or&lt;br&gt;• Windows 2012 Server R2 (64 bit)</td>
</tr>
<tr>
<td>• Microsoft SQL Server</td>
<td>Microsoft SQL Server 2008 R2 SP1, 2012 or 2014 Standard or Enterprise, including&lt;br&gt;• Reporting Services (see Appendix: “Reporting Services on Microsoft SQL Server” on page 198)</td>
</tr>
</tbody>
</table>

The following versions must not be used:<br>• All SQL Server Express Editions
Network Interfaces

Table 7  Network interface requirements

<table>
<thead>
<tr>
<th>Interface</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Between ECM File Transfer Server and ECM</td>
<td>100 Mbps minimum</td>
</tr>
<tr>
<td>Database Server</td>
<td>1000 Mbps recommended</td>
</tr>
<tr>
<td>• Between Reporting Server and ECM</td>
<td>100 Mbps minimum</td>
</tr>
<tr>
<td>Database Server</td>
<td>1000 Mbps recommended</td>
</tr>
</tbody>
</table>
3 System Requirements with ECM 3.4.1 SP2 Infrastructure

Reporter Client

Table 8 Reporter client

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• CPU</td>
<td>32 bit or 64 bit</td>
</tr>
<tr>
<td>• Operating system</td>
<td>• Windows 7 (32 bit or 64 bit) with SP1</td>
</tr>
<tr>
<td></td>
<td>- or -</td>
</tr>
<tr>
<td></td>
<td>• Windows 8.1 (64 bit)</td>
</tr>
<tr>
<td>• .NET Framework</td>
<td>• 3.5 SP1 or higher</td>
</tr>
<tr>
<td>• Regional settings</td>
<td>English (US)</td>
</tr>
<tr>
<td>• Adobe Reader</td>
<td>Recommended 10 or 11</td>
</tr>
<tr>
<td>• OpenLAB ECM client</td>
<td>3.4.1 SP2</td>
</tr>
<tr>
<td>• Instrument client software (optional)</td>
<td>• OpenLAB CDS A.02.0x</td>
</tr>
<tr>
<td></td>
<td>- or -</td>
</tr>
<tr>
<td></td>
<td>• Waters Empower 2 or 3 client</td>
</tr>
</tbody>
</table>
This chapter lists the requirements which servers and clients must meet before OpenLAB ECM Intelligent Reporter is installed on an ECM 3.5 system.
OpenLAB Shared Services Server

A ready installed OpenLAB Shared Services A.02.x server is required before you start installing OpenLAB ECM Intelligent Reporter.

For information on the requirements for OpenLAB Shared Services server, refer to the *Agilent OpenLAB Chromatography Data System (CDS) Hardware and Software Requirements*.

For more information on installing OpenLAB Server, refer to the respective OpenLAB CDS installation guide.

As OpenLAB ECM is a multi-tenant application, there may be multiple ECM instances (referred to as “accounts”) that are relevant for OpenLAB ECM Intelligent Reporter. Relevant ECM accounts are the ones where measurement data is generated and stored in the ACAML format. A separate instance of OpenLAB Server is required for each ECM account.
ECM Web Server

In distributed ECM installations, you can install the ECM Web Server on a separate machine. In all-in-one installations, the ECM Web Server is installed on the same machine as the other ECM servers.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows 2012 Server R2 (64 bit)</td>
</tr>
<tr>
<td>.NET Framework</td>
<td>3.5 and 4.5.1</td>
</tr>
<tr>
<td>Regional settings</td>
<td>English (US)</td>
</tr>
<tr>
<td>OpenLAB ECM</td>
<td>3.5</td>
</tr>
</tbody>
</table>
ECM File Transfer Server

In distributed ECM installations, you can install the ECM File Transfer Server on a separate machine. In all-in-one installations, the ECM File Transfer Server is installed on the same machine as the other ECM servers.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows 2012 Server R2 (64 bit)</td>
</tr>
<tr>
<td>.NET Framework</td>
<td>3.5 and 4.5.1</td>
</tr>
<tr>
<td>Regional settings</td>
<td>English (US)</td>
</tr>
<tr>
<td>OpenLAB ECM</td>
<td>3.5</td>
</tr>
<tr>
<td>OpenLAB ECM client</td>
<td>The OpenLAB ECM client installation includes a suitable ECM API version.</td>
</tr>
</tbody>
</table>
ECM Database Server

**Table 3** ECM Database Server (if Oracle is used)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>Oracle 12 Server</td>
</tr>
</tbody>
</table>

**Table 4** ECM Database Server (if Microsoft SQL Server is used)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>Microsoft SQL Server 2012 or Microsoft SQL Server 2014</td>
</tr>
</tbody>
</table>
Reporting Server

For performance reasons, we recommend installing the Reporting Server on a separate machine.

Table 5  Reporting Server – hardware requirements

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• CPU</td>
<td>64 bit</td>
</tr>
<tr>
<td>• RAM</td>
<td>1 GB minimum</td>
</tr>
<tr>
<td>• Disk Space</td>
<td>2 GB minimum</td>
</tr>
<tr>
<td>• Optical drive</td>
<td>DVD</td>
</tr>
</tbody>
</table>

Table 6  Reporting Server – software requirements

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Operating system</td>
<td>Windows 2012 Server</td>
</tr>
<tr>
<td>• Microsoft SQL Server</td>
<td>Microsoft SQL Server 2012 or 2014 Standard or Enterprise, including</td>
</tr>
<tr>
<td></td>
<td>• Reporting Services (see Appendix: “Reporting Services on Microsoft SQL Server” on page 198)</td>
</tr>
</tbody>
</table>

*The following versions must not be used:*  
• All Server Express Editions
Network Interfaces

### Table 7  Network interface requirements

<table>
<thead>
<tr>
<th>Interface</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| • Between ECM File Transfer Server and ECM Database Server | 100 Mbps minimum  
1000 Mbps recommended |
| • Between Reporting Server and ECM Database Server     | 100 Mbps minimum  
1000 Mbps recommended |
### Reporter Client

**Table 8** Instrument client

<table>
<thead>
<tr>
<th>Feature</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• CPU</td>
<td>32 bit or 64 bit</td>
</tr>
<tr>
<td>• Operating system</td>
<td>• Windows 7 (32 bit or 64 bit) with SP1</td>
</tr>
<tr>
<td></td>
<td>- or -</td>
</tr>
<tr>
<td></td>
<td>• Windows 8.1 (64 bit)</td>
</tr>
<tr>
<td>• .NET Framework</td>
<td>3.5 and 4.5.1</td>
</tr>
<tr>
<td>• Regional settings</td>
<td>English (US)</td>
</tr>
<tr>
<td>• Adobe Reader</td>
<td>Recommended 10 or 11</td>
</tr>
<tr>
<td>• OpenLAB ECM client</td>
<td>3.5</td>
</tr>
<tr>
<td>• Instrument client software</td>
<td>• OpenLAB CDS A.02.x</td>
</tr>
<tr>
<td></td>
<td>- or -</td>
</tr>
<tr>
<td></td>
<td>• Waters Empower 2 or 3 client</td>
</tr>
</tbody>
</table>
Several pieces of information are required during the installation of OpenLAB ECM Intelligent Reporter. This chapter provides lists that help you to gather all of the required data. If it is not possible to fill in the lists in advance, make sure that the information will be available when you start the installation.
General Information

Table 1  Customer information

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of user who purchased the OpenLAB ECM Intelligent Reporter license:</td>
<td></td>
</tr>
<tr>
<td>Organization that purchased the OpenLAB ECM Intelligent Reporter license:</td>
<td></td>
</tr>
</tbody>
</table>

Table 2  LCDF path for new or updated sample templates in OpenLAB ECM

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location, cabinet, drawer, and folder for the Agilent sample templates</td>
<td></td>
</tr>
</tbody>
</table>

Table 3  Usage of signal data

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you intend to report chromatograms or spectra data? If the answer is no, you do not need to save the signal data in the database. This increases database performance and reduces database space consumption.</td>
<td></td>
</tr>
</tbody>
</table>
User Access Control (UAC)

With Windows 2008 Server and Windows 7, Microsoft introduced the User Access Control (UAC) mechanism. We recommend switching off UAC during installation of OpenLAB ECM Intelligent Reporter.

If you activate UAC, you can specify the notification settings for the computer. As a result, you may be asked for permission each time you start an installation or configuration. You must always confirm these notifications with Yes.
An OpenLAB Server must already be running when you start installing OpenLAB ECM Intelligent Reporter.

For more information on the OpenLAB Server installation, refer to the respective OpenLAB CDS installation guide. You only need to fill out the checklists regarding OpenLAB Server if you have to install a new OpenLAB server.

An installation of OpenLAB Server includes server components and database components. We recommend installing the server components on the same machine as the ECM Web Server, the ECM Application Server, or on a separate machine. We recommend installing the database components as a separate schema (Oracle) or database (Microsoft SQL Server) on the ECM Database Server or on a separate database server.

Table 4  Information on the OpenLAB Shared Services server

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the OpenLAB Shared Services server:</td>
<td>The server name must be known in the network. If in doubt, try ping &lt;server name&gt; in a separate command window.</td>
</tr>
<tr>
<td>Windows login as local administrator:</td>
<td></td>
</tr>
<tr>
<td>User name:</td>
<td></td>
</tr>
<tr>
<td>Password:</td>
<td></td>
</tr>
</tbody>
</table>
Table 5  Information on the OpenLAB Shared Services Database, if Oracle is used (only required for a new installation of OpenLAB Server)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the database server:</td>
<td>The server name must be known in the network. If in doubt, try <code>ping &lt;server name&gt;</code> in a separate command window.</td>
</tr>
<tr>
<td>Service name of the OpenLAB Shared Services Database. The service name is also known as SID.</td>
<td></td>
</tr>
<tr>
<td>Password for the database user SYS:</td>
<td></td>
</tr>
<tr>
<td>Schema/user name of the new OpenLAB Shared Services schema:</td>
<td>Recommended: OLSS</td>
</tr>
<tr>
<td>Password for the OLSS schema:</td>
<td></td>
</tr>
<tr>
<td>Directory for the index files:</td>
<td></td>
</tr>
<tr>
<td>Directory for the core data:</td>
<td></td>
</tr>
<tr>
<td>Directory for the activity log:</td>
<td></td>
</tr>
</tbody>
</table>
Table 6  
Information on the OpenLAB Shared Services Database, if Microsoft SQL Server is used (only required for a new installation of OpenLAB Server)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the database server:</td>
<td>The server name must be known in the network. If in doubt, try <code>ping &lt;server name&gt;</code> in a separate command window.</td>
</tr>
<tr>
<td>Server instance name:</td>
<td>By default, the name is empty</td>
</tr>
<tr>
<td>Database administrator name:</td>
<td>For example, SA</td>
</tr>
<tr>
<td>Password for the database administrator:</td>
<td></td>
</tr>
<tr>
<td>Name of the OpenLAB Shared Services database user:</td>
<td>Recommended: OLSSADMIN</td>
</tr>
<tr>
<td>Password for the OpenLAB Shared Services database user:</td>
<td></td>
</tr>
<tr>
<td>Database name of the OpenLAB Shared Services database</td>
<td>Recommended: OLSS</td>
</tr>
</tbody>
</table>
Information on the ECM Database

During the installation, you will be asked for the directories where the data files, index files, signal files, and map files of the Reporting Database should be stored. We recommend using directories on different hard disks; distributed file access usually improves database performance. You may check the path settings of the ECM Database as a reference.

Table 7 Information on the ECM Database Server, if Oracle is used

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the database server:</td>
<td>The server name must be known in the network. If in doubt, try <code>ping &lt;server name&gt;</code> in a separate command window.</td>
</tr>
<tr>
<td>Net service name of the ECM Database.</td>
<td>The net service name is also known as TNS alias. You find this parameter in the <code>tnsnames.ora</code> file on the ECM File Transfer Server. You can test the net service name with <code>tnsping</code>.</td>
</tr>
<tr>
<td>Service name of the ECM Database.</td>
<td>The service name is also known as SID. You find this parameter in the <code>tnsnames.ora</code> file on the ECM File Transfer Server. See Appendix (“Connecting to Oracle With or Without Easy Connect Syntax” on page 202).</td>
</tr>
<tr>
<td>Password for the database user SYS:</td>
<td></td>
</tr>
<tr>
<td>Directory for the new data files:</td>
<td></td>
</tr>
<tr>
<td>Directory for the new index files:</td>
<td></td>
</tr>
<tr>
<td>Directory for the new map files:</td>
<td></td>
</tr>
<tr>
<td>Directory for the new signal files:</td>
<td></td>
</tr>
</tbody>
</table>
Pre-Installation Checklists
Information on the ECM Database

Table 7  Information on the ECM Database Server, if Oracle is used

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Path and file name for the installation log file(^b):</td>
<td></td>
</tr>
<tr>
<td>• Schema/user name of the ECM Database:</td>
<td>for example, ECMSchema</td>
</tr>
<tr>
<td>• Password for the schema/user name:</td>
<td></td>
</tr>
<tr>
<td>a Only required for new installations. The directory must exist prior to the installation and must be different from &quot;C:&quot;</td>
<td></td>
</tr>
<tr>
<td>b The directory must exist prior to the installation.</td>
<td></td>
</tr>
</tbody>
</table>

Table 8  Information on the ECM Database Server if Microsoft SQL Server is used

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Name of the database server:</td>
<td></td>
</tr>
<tr>
<td>• The server name must be known in the network. If in doubt, try ping &lt;server name&gt; in a separate command window.</td>
<td></td>
</tr>
<tr>
<td>• Password for the database user SA:</td>
<td></td>
</tr>
<tr>
<td>• Name of the ECM Database:</td>
<td></td>
</tr>
<tr>
<td>• Directory for the new data files(^a):</td>
<td></td>
</tr>
<tr>
<td>• Directory for the new index files(^a):</td>
<td></td>
</tr>
<tr>
<td>• Directory for the new map files:(^a)</td>
<td></td>
</tr>
<tr>
<td>• Directory for the new signal files(^a):</td>
<td></td>
</tr>
<tr>
<td>• Directory and name for the installation log file(^b):</td>
<td></td>
</tr>
<tr>
<td>• Name of the ECM Database user:</td>
<td>Normally CYBERLABLOGIN.</td>
</tr>
<tr>
<td>• Password for the ECM Database user:</td>
<td></td>
</tr>
<tr>
<td>a Only required for new installations. The directory must exist prior to the installation.</td>
<td></td>
</tr>
<tr>
<td>b The directory must exist prior to the installation/migration.</td>
<td></td>
</tr>
</tbody>
</table>
Table 9  Passwords for specific database users

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Password for the user ACAMLVIEW:</td>
<td></td>
</tr>
</tbody>
</table>
  - The user will be created during installation.  
  - The user will be used by the Reporter Client to read the contents of the Reporting Database.  
  - Read access is limited by Project Security. |
| Password for the user ACAMLDESIGN: | 
  - The user will be created during installation.  
  - The user will be able to read the entire content of the Reporting Database without limitation.  
  - Typically used by template designers. |
Information on the Reporting Server

Table 10  Information on the Reporting Server

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Server name:</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>• User name for the new Report Generation User:</td>
<td>• Windows user</td>
</tr>
<tr>
<td></td>
<td>• This account is used on the Reporting Server to generate the reports.</td>
</tr>
<tr>
<td>• Password for the Report Generation User:</td>
<td></td>
</tr>
<tr>
<td>• Local user or domain user?</td>
<td>• Depending on the IT policy in your environment, the user may be created as a local user on the Reporting Server or as domain user.</td>
</tr>
<tr>
<td></td>
<td>• If possible, create a local user.</td>
</tr>
<tr>
<td>• Domain of the Report Generation User:</td>
<td>• If created as a local user, use the name of the Reporting Server as the domain.</td>
</tr>
<tr>
<td>• Role name for report generation:</td>
<td>• Used in the Reporting Database (for example, “Report Generator”).</td>
</tr>
<tr>
<td>• Use the local Users group for the Report Generation User?</td>
<td>• If the Report Generation User is a member of the local Users group, and you did not change this group, all necessary rights are automatically provided.</td>
</tr>
<tr>
<td></td>
<td>• If your company’s IT policy requires you to remove the Report Generation User from the local Users group, or if the built-in security principal NT AUTHORITY\Authenticated Users has been removed from the local Users group, you must manually configure the file permissions and user rights.</td>
</tr>
</tbody>
</table>
Information on the ECM File Transfer Server

The information in Table 12 is needed for all File Transfer Servers that will be updated:

Table 12  Information on the ECM File Transfer Server

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server name:</td>
<td></td>
</tr>
<tr>
<td>User name for the <em>Network Service User:</em></td>
<td></td>
</tr>
<tr>
<td>· The Network Service User account is the account under which, among other things, the File Transfer Service is started. This user is typically a domain user.</td>
<td></td>
</tr>
<tr>
<td>Password for the Network Service User:</td>
<td></td>
</tr>
<tr>
<td>Domain of the Network Service User:</td>
<td></td>
</tr>
<tr>
<td>Number of processors used in the File Transfer Server:</td>
<td></td>
</tr>
</tbody>
</table>
As OpenLAB ECM is a multi-tenant application, there may be multiple ECM instances (so-called “ECM accounts”) that are relevant for OpenLAB ECM Intelligent Reporter. Relevant ECM accounts are the ones where measurement data is generated and stored in the ACAML format. For the installation of OpenLAB ECM Intelligent Reporter, you need the login data of one ECM administrator for each relevant ECM account.

The information in Table 13 is needed for each relevant ECM account.

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECM server URL</td>
<td></td>
</tr>
<tr>
<td>User name</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td></td>
</tr>
<tr>
<td>Account</td>
<td></td>
</tr>
<tr>
<td>Domain</td>
<td></td>
</tr>
</tbody>
</table>
Information on the ECM Web Server

The information in Table 14 is needed for all web servers that will be updated.

Table 14  Information on the ECM Web Server

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Server name:</td>
<td></td>
</tr>
<tr>
<td>• Components directory of ECM Web Server&lt;sup&gt;a&lt;/sup&gt;:</td>
<td></td>
</tr>
<tr>
<td>• In a standard installation, it is</td>
<td></td>
</tr>
<tr>
<td>C:\inetpub\wwwroot\ECM\Components.</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Only required for migration, not for new installations.
Information on Clients

The login information in Table 15 is needed for all clients that will be updated.

Table 15  Administrator login on client

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Machine name of the client:</td>
<td></td>
</tr>
<tr>
<td>• Windows login as local administrator:</td>
<td></td>
</tr>
<tr>
<td>• User name:</td>
<td></td>
</tr>
<tr>
<td>• Password:</td>
<td></td>
</tr>
</tbody>
</table>
5 Pre-Installation Checklists

Information on Clients
6
New Installation with ECM 3.4.1 SP2 Infrastructure

- Updating the OpenLAB Shared Services Server 62
- Updating the ECM Database 65
- Installing the Reporting Server 70
- Updating ECM File Transfer Servers 78
- Updating ECM Web Servers 87
- Adding Agilent Sample Templates to OpenLAB ECM 90
- Preparing Reporter Clients 91

This chapter describes the installation of OpenLAB ECM Intelligent Reporter (ECM IR) using OpenLAB ECM Enterprise 3.4.1 SP2.

After completing the procedures described in this chapter, refer to Chapter 10, “Configuration” for the required configuration steps.
Updating the OpenLAB Shared Services Server

To update the OpenLAB Shared Services Server, carry out the following procedures:

An OpenLAB Shared Services Server must already be running.

For more information on the OpenLAB Shared Services Server installation, refer to the respective OpenLAB CDS installation guide.

1. “To Install or Update the OpenLAB Shared Services Server Software” on page 62
2. “To Install the Reporter Client on the OpenLAB Server” on page 63
3. “To Select ECM as the Authentication Provider for OpenLAB Shared Services” on page 64

You must update the OpenLAB Shared Services Server before you start updating the ECM servers. Several of the subsequent procedures rely on the correct settings in OpenLAB Shared Services.

To Install or Update the OpenLAB Shared Services Server Software

With OpenLAB ECM Intelligent Reporter A.02.05, you must use the OpenLAB Shared Services Server software from OpenLAB CDS A.02.0x. You find all required installation files on the OpenLAB CDS installation DVD. For details on the installation or update procedures, refer to the respective OpenLAB CDS installation guide.

If you do not have an Agilent OpenLAB CDS installation DVD, please contact Agilent Support.
To Install the Reporter Client on the OpenLAB Server

Although it is not a requirement, we recommend installing the complete Reporter Client as well on the OpenLAB Shared Services Server. The installation includes a plug-in for the OpenLAB Control Panel to enable the configuration of reporting projects.

1. In the CD Installer window, click **Install Reporter Client**.
   An installation wizard opens.

2. Click **Next**.

3. Select the check box to confirm the license agreement.

4. Click **Next** to continue.

5. Provide the customer information (see Table 1 on page 46).

6. Click **Next** to continue.

7. Click **Next** to confirm the setup features.

   The **OpenLAB Control Panel Plug-In** feature is the only feature required on the server. However, we recommend installing all features to enable full functionality of the Reporter Client.

8. Click **Install**.

   A progress bar is shown during the installation.

9. Click **Finish**.

10. Validate the installation.

    a. Select **Start > All Programs > Agilent Technologies > OpenLAB > OpenLAB ECM Intelligent Reporter Validation**.

    b. Start **Data Selection & Report Preview**. Run the program as administrator.

       If the validation was successful, it shows a green traffic light.

    c. Start **OpenLAB Control Panel Plug-in**. Run the program as administrator.

       If the validation was successful, it shows a green traffic light.
To Select ECM as the Authentication Provider for OpenLAB Shared Services

You only need to carry out this procedure if ECM is not yet selected as the authentication provider.

1. Start the OpenLAB Control Panel.
2. From the navigation pane, select Administration > System Configuration.
3. Click Edit System Settings.
4. In the Edit System Settings window, select ECM as your authentication provider from the options on the drop down menu. The storage provider is automatically set to ECM as well.
5. Click Next.
6. Enter the URL of the ECM Web Server and the login credentials of the ECM administrator (see Table 13 on page 57).
7. Click Select Account to select the ECM user who will initially log in to the OpenLAB Control Panel and administer the system. You can select the same ECM administrator as in the previous step.
8. Click Next.
9. Leave the folder for storing projects empty.

This path will be set as the default for all types of projects. If you enter a path here, the selection of default paths in reporting projects will be limited. You cannot undo this setting.

10. Click Next.
11. Review your settings and select Apply.
12. Click OK to confirm the changed settings.
13. If OpenLAB Control Panel does not automatically restart, close the application and select Start > Agilent Technologies > OpenLAB > OpenLAB Control Panel to restart it.
14. Log in to the OpenLAB Control Panel as the ECM administrator you selected above.
Updating the ECM Database

To update the ECM Database, you must log on to a machine from which you can reliably connect to the database. As the ECM File Transfer Server already contains all required tools, we recommend carrying out the following procedure on the ECM File Transfer Server.

To update the new ECM Database Server, carry out the following procedures:

With Oracle:
1. “To Install the Reporting Database with Oracle” on page 65
2. “To Disable Password Expiration in Oracle 11g” on page 67

With Microsoft SQL Server
1. “To Install the Reporting Database with Microsoft Server” on page 68

To Install the Reporting Database with Oracle

Make sure that the required directories (see Table 7 on page 51) already exist on the disc. Installing the database without these directories will lead to an error that cannot be corrected. In this case, you will have to restore the original ECM database and start the installation again.

1. Log on as the Network Service User to the ECM File Transfer Server (see Table 12 on page 56).
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
   On Windows Systems:
   a. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.
   b. In the CD Installer window, click Install/Migrate Database Objects.
      An explorer window opens. It shows the contents of the DDBuild directory on the CD.
6 New Installation with ECM 3.4.1 SP2 Infrastructure

Updating the ECM Database

- Open the folder Oracle/install.
  Alternatively, you can access the folder DBBuild/Oracle/install on the installation medium via the network. To access the folder via the network, you must map a drive letter to the network drive.

3 Execute InstallOracle.cmd.

A command window opens.

4 You are prompted to enter several parameters. Type in the required data (see Table 7 on page 51) and press Enter to confirm each entry:
  - **Net service name (TNSNAMES alias)**
    This is the net service name for your ECM Database.
  - **Directory and filename of the log file**
    An installation log file is created in the given location
  - **Password for database user SYS**
    The password is not shown while typing.
    After confirming the password with Enter, a confirmation is shown that you are currently logged on as the user SYS.
  - **Schema/user name for ECM** (for example ECMSchema)
  - **Directories** where the data files, index files, map files, and signal files of the new database schema should be stored.

5 Review the data.
  - If something is wrong, press Ctrl+C to abort the installation.

6 If everything is OK, press Enter.

The installation begins. When the installation is finished, the text **Installation finished** is shown in the command window.

7 Press any key to close the command window.

**NOTE**
If you use signal files (see “To Change Import Settings in the Synchronization Service” on page 182), we recommend using a separate drive for the signal files. Signal files consume much more space and will grow much faster than the other files.

- **Set Password for user ACAMLVIEW** (see Table 9 on page 53)
- **Set Password for user ACAMLDDESIGN** (see Table 9 on page 53)

5 Review the data.
  - If something is wrong, press **Ctrl+C** to abort the installation.

6 If everything is OK, press **Enter**.

The installation begins. When the installation is finished, the text **Installation finished** is shown in the command window.

7 Press any key to close the command window.
8 Check the “ORA-”, “Msg”, and “Err” entries in the installation log file. The log file should only include messages about changing the database, no warnings or errors. If there are errors, contact your Agilent support representative.

9 Validate the database installation.
   a In the **CD Installer** window, click **Run Database Installation Qualification**.
   
The **OpenLAB ECM Intelligent Reporter Database IQ** window opens.
   b Under **Database System**, select **Oracle**.
   c Provide the required **Database Settings** and the credentials of the ECM schema database user (for example, **ECMSchema**; see Table 7 on page 51).
   d Provide the passwords for the ACAMLDESIGN and ACAMLVIEW users (see Table 9 on page 53).
   e Click **Start**.
   
   If the validation was successful, it responds with **DB IQ Succeeded**. If the validation failed, and there are only warning messages, you may proceed with the installation. There must be no error messages.
   f Save or print the IQ results.

**To Disable Password Expiration in Oracle 11g**

Unlike older releases, with Oracle 11g a password expiration mechanism is enabled by default. However, if the password expires for any account used by the application servers, the entire system can be locked out. We therefore recommend to disable the password expiration.

To disable the password expiration, carry out the following procedure for each Oracle database instance in your OpenLAB system (ECM Database and OpenLAB Shared Services Database):

1 Log on to the database instance as user SYS or SYSTEM.

2 Run the following commands:

```
ALTER PROFILE DEFAULT LIMIT FAILED_LOGIN_ATTEMPTS UNLIMITED PASSWORD_LIFE_TIME UNLIMITED;
```
To Install the Reporting Database with Microsoft Server

Make sure that the required directories (see Table 8 on page 52) already exist on the disc. Installing the database without these directories will lead to an error that cannot be corrected. In this case, you will have to restore the original ECM database and start the installation again.

1 Log on as the Network Service User to the ECM File Transfer Server (see Table 12 on page 56).

2 Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
   a If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.
   b In the CD Installer window, click Install/Migrate Database Objects.
      An explorer window opens. It shows the contents of the directory DBBuild on the CD.
   c Open the folder Server/install.
      Alternatively, you can access the folder DBBuild/Server/install on the installation medium via the network. To access the folder via the network, you must map a drive letter to the network drive.

3 Execute InstallServer.cmd.
   A command window opens.

4 You are prompted to enter several parameters (see Table 8 on page 52 and Table 9 on page 53). Type in the required data and press Enter to confirm each entry:
   - ECM-Database Server: the server name of the ECM Database Server
   - ECM-Database Name
   - ECM Database user name: the database user who uses ECM.
   - Directories where the data files, index files, map files, and signal files of the new database schema should be stored.
   - Set Password for user ACAMLVIEW
   - Set Password for user ACAMLDESIGN
   - Directory and Name for log file: An installation log file is created in the given location.
5 Review the data.
   If something is wrong, press **Ctrl+C** to abort the installation.

6 If everything is OK:
   a Enter the password for the database user SA.
      The password is not shown while typing.
   b Press **Enter** to continue.
      The installation begins. When the installation is finished, the text **Installation finished** is shown in the command window.

7 Press any key to close the command window.

8 Check the “Msg” and “Err” entries the installation log file. The log file should only include messages about changing the database, no warnings or errors. If there are errors, contact your Agilent support representative.

   The message **Msg 5701, Changed database context to...** does not indicate an error. It merely shows that the database has been changed.

9 Validate the database installation.
   a In the **CD Installer** window, click **Run Database Installation Qualification**.
      The **OpenLAB ECM Intelligent Reporter Database IQ** window opens.
   b Under **Database System**, select **SQL Server**.
   c Provide the required **Database Settings** and the credentials of the ECM Database user (for example, CYBERLABLOGIN; see Table 8 on page 52).
   d Provide the passwords for the ACAMLDESIGN and ACAMLVIEW users (see Table 9 on page 53).
   e Click **Start**.
      If the validation was successful, it responds with **DB IQ Succeeded**. If the validation failed, and there are only warning messages, you may proceed with the installation. There must be no error messages.
   f Save or print the IQ results.
Installing the Reporting Server

For performance reasons, we recommend to install the Reporting Server on a separate machine.

To install the Reporting Server, proceed as follows:
1. “To Log on to the Server and Start the CD Installer” on page 70
2. “To Install the Oracle Instant Client” on page 71
3. “To install Extensions for Reporting Services” on page 72
4. “To Create the Report Generation User” on page 73
5. “To Create a Role for Report Generation” on page 74
6. “To Assign the Role to the Report Generation User” on page 75
7. “To Verify the Report Server Virtual Directory” on page 76

To Log on to the Server and Start the CD Installer

1. Log on as the Network Service User to the Reporting Server (see Table 12 on page 56).
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
3. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.
   The CD Installer window opens.
   Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Install the Oracle Instant Client

You only need to carry out this procedure if:

- your ECM Database is based on Oracle, and
- an Oracle client is not yet installed on the Reporting Server.

1. In the **CD Installer** window, click **Install Extensions for SQL Server Reporting Services**.
   
   An explorer window opens. It shows the contents of the *Report Server* directory on the CD.

2. Execute **OracleInstantClient64.msi**.
   
   The *Oracle Database 10g Instant Client Setup Wizard* opens.

3. Click **Next**.

4. Select the check box to accept the license agreement.

5. Click **Next**.

6. Click **Next** to confirm the default setup configuration.

7. Click **Install**.
   
   A progress bar is shown to indicate the status of the installation.

8. Click **Finish**.

9. After successful installation of the Oracle Instant Client, open the Service Console and restart the *IIS Admin* service.
To install Extensions for Reporting Services

These extensions include *Agilent Intelligence Reporter Scratch Pad*.

1. In the **CD Installer** window, click **Install Extensions for SQL Server Reporting Services**.

   An explorer window opens. It shows the contents of the **Report Server** directory on the CD.

2. Execute **ReportServerExtensions64.msi**.

3. Click **Next**.

4. Select the check box to accept the license agreement.

5. Click **Next**.

6. Provide the customer information (see Table 1 on page 46).

7. Click **Next**.

8. Do not change the features selection. Click **Install**.

   The status of the installation is indicated by a progress bar.

9. Click **Finish**.

10. Validate the installation.

   a. Navigate to the installation folder.

      For example: *C:\Program Files\Microsoft SQL Server\MSRS10_50.MSSERVER\Reporting Services\OpenLAB ECM Intelligent Reporter*

   b. Execute the file **ModuleValidation.exe**. With Windows 2008 as the operating system, run the file as administrator.

      If the validation was successful, it shows a green traffic light.
To Create the Report Generation User

This procedure explains how to create the Report Generation User as a local user on the Reporting Server. If your IT policy prohibits such a local user, ask your network administrator to create an equivalent domain user. See Table 11 on page 55.

1. Click **Start** on the Windows desktop.
2. Right-click **Computer** and select **Manage** from the context menu. The **Computer Manager** window opens.
3. Select the node **System Tools > Local users and groups**.
4. Right-click **Users** and select **New User...** from the context menu. The **New User** dialog opens.
5. Enter the user credentials (see Table 11 on page 55):
   - **User Name**: name of the Report Generation User.
   - **Full User Name**: the same entry as for user name.
   - **Description**: you do not need to fill out this field.
   - **Password/Password Confirmation**
6. Set the account options:
   - **Clear the check box** User must change password at next login.
   - **Select the check box** User cannot change password.
   - **Select the check box** Password never expires.
   - **Make sure the check box** Account is disabled is cleared.
7. Click **Create**.
8. Click **Close**.
9. Close the **Server Management** window.
To Create a Role for Report Generation

1. Start *SQL Server Management Studio*.
2. In the **Connect to Server** dialog, provide the connection parameters for the Reporting Database:
   - **Server type**: Select *Reporting Services*
   - **Server name**: Select the name of your Reporting Server
   - **Authentication**: Select *Windows Authentication*
3. Click **Connect**
   
   Because the Reporting Services are started in the background, it may take several minutes to establish the connection.
4. Expand the node *(Your Reporting Server)* > **Security**.
5. Right-click **System Roles** and select **New System Role...** from the context menu.
   
   The **System Roles** dialog appears.
6. Enter the **Name** of the role (see Table 11 on page 55).
7. Select the check box for the task **Execute Report Definitions**. No other tasks are required.
8. Click **OK**.
   
   An error message “Object instance not set” may be shown. You can ignore this message.
9. Right-click **System Roles** and select **Refresh** from the context menu.
   The new role is shown in the list.
   Leave the *Server Management Studio* open for the next task.
To Assign the Role to the Report Generation User

Perform the following steps on a client PC or any other web client that is remotely connected to the Reporting server.

1. Start Internet Explorer as administrator.
2. In the address bar, enter the Server Reporting Services URL.
   By default, the URL is http://<Server name>/reports.
3. In the top right corner of the page, click Site Settings.
4. In the navigation bar to the left, select the Security page.
5. Click New Role Assignment.
6. Enter the user name of the Report Generation User (see Table 11 on page 55).
7. Select the check box for the previously generated role (for example, “Report Generator”).
8. Click OK.
To Verify the Report Server Virtual Directory

You will need this parameter later to configure the Synchronization Service.

1. On the report server, open the Report Server Configuration Manager. When the utility starts up, it requests the name of the server to connect to.

2. Check whether the correct name of your Reporting Server is shown in the Machine Name field.
   - If a different name is shown:
     a. Enter the name of the Reporting Server (see Table 10 on page 54)
     b. Click Find.
        - All instances of Reporting Services on that machine are listed in the Instance Name drop-down list.
     c. Select the instance you want to use with OpenLAB ECM Intelligent Reporter.

3. Click Connect.

4. In the pages list on the left side of the screen, select Web Service URL.

5. Note down the name of the virtual directory. The name is not case-sensitive.
   - If it is empty, set the name to ReportServer. Refer to Microsoft documentation for details on the configuration of the virtual directory.

Report Server Virtual Directory:
Updating ECM File Transfer Servers

NOTE
Your ECM system may contain multiple File Transfer Servers. You must carry out the following procedures on at least one of the File Transfer Servers. We recommend to update all File Transfer Servers in your environment.

To update an ECM File Transfer Server, proceed as follows:
1 “To Log on to the Server and Start the CD Installer” on page 70
2 “To Install the Synchronization Service” on page 79
3 “To Configure the Synchronization Service” on page 80
4 “To Configure the Reporting Server’s Database Access and User Parameters” on page 82
5 “To Assign Missing OpenLAB Privileges” on page 85
6 “To Install EZChrom Reader” on page 86

To Log on to the Server and Start the CD Installer

1 Log on to the ECM File Transfer Server as the Network Service User (see Table 12 on page 56).
2 Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
3 If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.

The CD Installer window opens.

Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Install the Synchronization Service

1. In the CD Installer window, click Install Synchronization Service. The ECM Synchronization Service Setup Wizard opens.
2. Click Next.
3. Select the check box to confirm the license agreement.
4. Click Next.
5. Provide the customer information (see Table 1 on page 46).
6. Click Next.
7. Click Next to confirm the setup features. Do not change the feature selection.
8. Click Install. A progress indicator is shown during the installation.
9. Click OK.
10. Click Finish to exit the ECM Synchronization Service Setup Wizard.
11. Validate the installation.
   a. On the ECM File Transfer Server, navigate to the installation folder:
      \Program Files (x86)\Agilent Technologies\ECM Synchronization Service
   b. Right-click the file ModuleValidation.exe and run it as administrator. If the validation was successful, it shows a green traffic light.
### To Configure the Synchronization Service

#### Step 1
Open the **Synchronization Service Configuration and Maintenance** window.

- **Action**: Select `Start > All Programs > Agilent Technologies > ECM > Synchronization Service Configuration`.

#### Step 2
Unlock the fields.

- **Action**: Click the padlock icon in the top left corner.

#### Step 3
Configure the **Service Configuration** tab/ **Common** subtab.

- **Action**: Select the correct **Worker Thread Count** number:
  - **Oracle**: According to processors (see Table 12 on page 56), max. 4.
  - **SQL Server**: Always enter 1.

- **Notes**: Number of threads used by the Synchronization Service.
  - With **Oracle**, the best performance is normally achieved if the number of threads equals the number of processors in the machine. The maximum number of threads is four.
  - With **SQL Server**, always use only one thread.

#### Step 4
Configure the **Service Configuration** tab/ **Database** subtab.

- **Action**: Check the settings:
  - **ECM Database credentials**: The ECM Database credentials are automatically filled. If all credentials are valid, the fields are disabled.
  - **Job Poll Interval/Retry Connect Interval**: Do not change these settings.
  - **Import Chromatograms Import Spectra**: If you do not intend to report chromatograms or spectra data, clear these check boxes. The data will then not be extracted and saved into the database. This increases database performance and reduces database space consumption.

- **Action**: Click **Test Connection**. A confirmation is shown if all the parameters are correct.

- **Action**: Click **.**
To configure the Synchronization Service

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Configure the <strong>Service Configuration</strong> tab/ECM subtab.</td>
<td>a Click the padlock icon 🏗️ in the top left corner to unlock the fields again.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b Enter the URL to your ECM Web Server in the field <strong>Server URL</strong>. <strong>http://&lt;server name&gt;</strong> For example: <strong><a href="http://ecmserver">http://ecmserver</a></strong> (see <strong>Table 14</strong> on page 58)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c Click <strong>Test Connection</strong> to test whether the ECM API is functional and the Synchronization Service can connect using the built-in admin logins. • Admin logins have been created during ECM setup in the domain BUILT-IN and possibly also in other domains. These admin logins are automatically detected. • After executing the test, all detected logins are listed in the text box under <strong>ECM Login Check</strong> with a <strong>login succeeded</strong> status.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d Select the check box <strong>Process All</strong>.</td>
</tr>
<tr>
<td>6</td>
<td>Save the service configuration.</td>
<td>• Click 🖐️ in the top toolbar in the <strong>Service Configuration</strong> tab.</td>
</tr>
<tr>
<td>7</td>
<td>Start the Synchronization Service.</td>
<td>• Click 🖐️ in the bottom toolbar in the <strong>Service Configuration</strong> tab. • The status <strong>StartPending</strong> is shown in the status bar while the service is starting. • After the service has been started, the status <strong>Running</strong> is shown.</td>
</tr>
<tr>
<td>8</td>
<td>Check the events.</td>
<td>a Select the <strong>Event Viewer</strong> tab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b Click 🖐️ in the top toolbar to refresh the entries.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c Check the entries. <strong>There should only be Information</strong> type entries, no warnings or errors.</td>
</tr>
<tr>
<td>9</td>
<td>If you did not yet configure the <strong>Reporting Server Configuration</strong> tab, continue with the next procedure. Otherwise, close the <strong>Synchronization Service Configuration and Maintenance</strong> window.</td>
<td></td>
</tr>
</tbody>
</table>
To Configure the Reporting Server’s Database Access and User Parameters

The Reporting Server configuration is saved in the ECM Database. Therefore, it only needs to be configured once in the entire ECM system (even if there are several File Transfer Servers).

To configure the Reporting Server’s database access and user parameters

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open the Synchronization Service Configuration and Maintenance window.</td>
<td>• Select Start &gt; All Programs &gt; Agilent Technologies &gt; ECM &gt; Synchronization Service Configuration. The service configuration window might still be open from the previous procedure.</td>
</tr>
<tr>
<td></td>
<td>Configure the Reporting Server Configuration tab/Database Account subtab</td>
<td>a Click the Refresh icon in the top toolbar to read the current values from the ECM Database.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b Click the Copy button to get the database parameters provided on the Service Configuration tab.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>• If your ECM Database is based on Oracle:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Database System: Oracle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• EZCONNECT String: Here, the connection string is required using the Easy Connect syntax &lt;host&gt;:&lt;port&gt;/&lt;service name&gt;. See Table 7 on page 51. Note: If you use an Oracle Full Client on the File Transfer Server and an Oracle Instant Client on the Reporting Server, you must manually replace the copied connection string by the Easy Connect syntax. See step 4b on page 84.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If your ECM Database is based on Microsoft SQL Server:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Database System: SQL Server.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Server Name: Name of the ECM Database Server. See Table 8 on page 52.</td>
</tr>
</tbody>
</table>
To configure the Reporting Server’s database access and user parameters

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>c</td>
<td>Provide the database account used by the Reporter Client:</td>
<td>This account is used to read the contents of the Reporting Database.</td>
</tr>
<tr>
<td></td>
<td>· <strong>User Name</strong>: ACAMLVIEW</td>
<td></td>
</tr>
<tr>
<td></td>
<td>· <strong>Password/Confirm Password</strong></td>
<td>Password for the user ACAMLVIEW (see Table 9 on page 53).</td>
</tr>
<tr>
<td></td>
<td>· <strong>Additional Settings</strong>: Do not enter anything here.</td>
<td>This field is intended for future purposes.</td>
</tr>
<tr>
<td>d</td>
<td>Click <strong>Test Connection</strong> to make sure all parameters are correct.</td>
<td>A confirmation is shown.</td>
</tr>
<tr>
<td>3</td>
<td>Configure the <strong>Reporting Server Configuration</strong> tab/ <strong>User Account</strong> subtab.</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Enter the Windows account of the Reporting Generation User:</td>
<td>This account is used on the Reporting Server to generate the reports.</td>
</tr>
<tr>
<td></td>
<td>· <strong>Domain</strong></td>
<td>See Table 11 on page 55.</td>
</tr>
<tr>
<td></td>
<td>· <strong>User Name</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>· <strong>Password/Confirm Password</strong></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Configure the <strong>Reporting Server Configuration</strong> tab/ <strong>Virtual Directory URL and Test</strong> subtab.</td>
<td></td>
</tr>
</tbody>
</table>
| a  | Enter the **Report Server Virtual Directory URL**. | The URL syntax is:  
  http://<server>/
  <directory>[/<instance>]  
  · `<server>` is the name of the Reporting Server  
  · `<directory>` is the name of the report server virtual directory.  
  · `<instance>` is the name of the SQL Server instance of the Reporting Server. If Reporting Services are installed under the default instance of SQL Server, this value can be omitted.  
  · The name of the virtual directory was verified during the installation of the Reporting Server (see page 70).  |
To configure the Reporting Server’s database access and user parameters

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **b** | Click **Test Reporting Server** to make sure all parameters are correct. | • When you run the test for the first time, it can take up to two minutes until the confirmation is shown, because the Reporting Services are started in the background.  
• The test includes several sub-tests. After finishing the test, an additional text field with a detailed result is shown.  
• If the message **Extensions not installed** is shown, follow the procedure “To install Extensions for Reporting Services” on page 72.  
• If the connection to an Oracle database cannot be established, you can use the following exceptional configuration:  
  • Create a new **tnsnames.ora** file on the Reporting Server as described in “Connecting to Oracle With or Without Easy Connect Syntax” on page 202  
  • Note down the net service name from the new **tnsnames.ora**.  
  • Select the **Reporting Server Configuration** tab/ **Database Account** subtab and enter the net service name (TNS Alias) as the **EZCONNECT String**. |
| 5   | Save the client configuration. | • Click [ ] in the top left corner. |
| 6   | If you did not yet assign the missing OpenLAB privileges, continue with the next procedure. Otherwise, close the **Synchronization Service Configuration and Maintenance** window. |
**To Assign Missing OpenLAB Privileges**

ECM system administrators may need to be granted additional OpenLAB privileges. These privileges are required to access locations, drawers, cabinets, and folders in ECM from the OpenLAB Control Panel. You must be able to access these LCDF paths in order to create reporting projects.

1. Select the **ECM Privileges Setup** tab.

2. Click the Refresh icon in the top toolbar to check the currently assigned privileges for all ECM administrators.

   The system checks all users with the ECM system administrator role. The results are shown in the text box. If privileges are missing, a red warning message is displayed under the text box.

3. If privileges are missing:
   a. Select **ECM Privileges > Assign OpenLAB privileges**.
   b. Enter the credentials of the ECM database user (see Table 7 on page 51 for Oracle or Table 8 on page 52 for Microsoft SQL Server, respectively).
   c. Click **Yes** to assign the missing OpenLAB privileges.

   The results of the privilege check are automatically refreshed. All required privileges are now assigned.

   d. Close the **Synchronization Service Configuration and Maintenance** window.
To Install EZChrom Reader

1. In the **CD Installer** window, click **Install EZChrom Reader**.

   The *Agilent OpenLAB ECM Intelligent Reporter EZChrom Reader Setup Wizard* opens.

2. Click **Next**.

3. Select the check box to confirm the license agreement.

4. Click **Next**.

5. Provide the customer information (see Table 1 on page 46).

6. Click **Next**.

7. Click **Next** to confirm the setup features. Do not change the feature selection.

   A progress indicator is shown during the installation.

8. Click **Finish** to exit the wizard.
Updating ECM Web Servers

Your ECM system may contain multiple web servers. You must carry out the following procedures on each of the web servers.

To update an ECM Web Server, proceed as follows:

1. “To Log on to the Server and Start the CD Installer” on page 87
2. “To Install the Data Services” on page 88
3. “To Configure the Data Services” on page 88

To Log on to the Server and Start the CD Installer

1. Log on as the Network Service User to the ECM Web Server (see Table 12 on page 56)
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
3. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.

The CD Installer window opens.

Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Install the Data Services

1. In the CD Installer window, click Install Data Services.
   The OpenLAB ECM Data Services Setup Wizard opens.

2. Click Next.

3. Confirm the license agreement, and click Next.

4. In the Select Installation Folder page:
   a. Provide a valid installation.
   b. Make sure that Everyone is selected.
   c. Click Next.

5. Click Next to start the installation.
   A progress indicator is shown during the installation.

6. Click Close to exit the wizard.

To Configure the Data Services

1. Select Start > All Programs > Agilent Technologies > ECM > Data Services Configuration.
   The Agilent OpenLAB Data Services Configuration window opens.

2. Click Local Host Name to enter the name of the local host (ECM Web Server) into the Host Name field.
   Alternatively, you can manually enter the name of a different ECM Web Server.

3. Click Read to obtain the current configuration for the given host name (at this time, it is still empty).
   The fields required to establish a database connection are automatically filled.

4. Click Test Connection.
   A success message is shown.

5. Select the Service Test and Installation Qualification subtab.
6 Click **Run Test and Installation Qualification**.

Each of the different services responds with a success message. There should be no errors or warnings.

7 Click **Save Log** to save the results, for example, under `c:\Program Files (x86)\Agilent Technologies\ECM Data Services`. 
Adding Agilent Sample Templates to OpenLAB ECM

The Agilent sample templates may be accessed by any instrument client or ECM client for template designers. Therefore, you should provide them before installing the ECM clients.

1. Log on to any Windows client with access to OpenLAB ECM.

2. Insert the *OpenLAB ECM Intelligent Reporter* installation medium in your DVD drive.

   Alternatively, you can access the installation medium via the network (UNC syntax is possible).

3. Open a browser window and connect to the ECM Web Server. Log in as a user with the right to add content (for example, as ECM administrator, see Table 13 on page 57).

4. Select a suitable LCDF path in your ECM environment for the Agilent sample report templates (see Table 2 on page 46).

5. If your ECM Database is based on Oracle: Add all the files from the *UCL Report Templates/Oracle* directory on the installation medium to this ECM folder.

   – or –

   If your ECM Database is based on Microsoft SQL Server: Add all the files from the *UCL Report Templates/Server* directory on the installation medium to this ECM folder.
Preparing Reporter Clients

To prepare a reporter client, carry out the following procedures:

1. **To Install or Update the OpenLAB Client** on page 91
2. **To Log on to the Client and Start the CD Installer** on page 91
3. **To Check the ECM Client** on page 92
4. **To Install the Reporter Client** on page 92

**To Install or Update the OpenLAB Client**

With OpenLAB ECM Intelligent Reporter A.02.05, you must use the OpenLAB Client software from OpenLAB CDS A.02.0x. You find all required installation files on the OpenLAB CDS installation DVD. For details on the installation or update procedures, refer to the respective OpenLAB CDS installation guide.

If you do not have an Agilent OpenLAB CDS installation DVD, please contact Agilent Support.

**To Log on to the Client and Start the CD Installer**

1. Log on as an administrator to the client (see Table 15 on page 59).
2. Insert the *OpenLAB ECM Intelligent Reporter* installation medium in your DVD drive.
3. If the installer does not run automatically, double-click `CDInstaller.exe` in the *Autorun* directory of the installation medium.

The **CD Installer** window opens.

Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Check the ECM Client

An ECM client is required on each instrument client. Open the ECM URL in a browser window to check if the client has been installed properly.

To Install the Reporter Client

1. In the CD Installer window, click Install Reporter Client. An installation wizard opens.
2. Click Next.
3. Select the check box to confirm the license agreement.
4. Click Next to continue.
5. Provide the customer information (see Table 1 on page 46).
6. Click Next to continue.
7. Click Next to confirm the setup features.
8. Click Install. A progress bar is shown during the installation.
9. Click Finish.
10. Validate the installation.
   a. Select Start > All Programs > Agilent Technologies > OpenLAB > OpenLAB ECM Intelligent Reporter Validation.
   b. Start Data Selection & Report Preview. Run the program as administrator. If the validation was successful, it shows a green traffic light.
   c. Start OpenLAB Control Panel Plug-in. Run the program as administrator. If the validation was successful, it shows a green traffic light.
This chapter describes the update of previous OpenLAB ECM Intelligent Reporter versions to version A.02.05 using ECM 3.4.1 SP2 infrastructure. As previous versions did not run under ECM 3.4.1, many of the update procedures include an update of the ECM infrastructure and are actually new installation procedures.

After completing the procedures described in this chapter, refer to Chapter 10, “Configuration” for the required configuration steps.
Updating the OpenLAB Shared Services Server

To update the OpenLAB Shared Services Server, carry out the following procedures:

An OpenLAB Shared Services Server must already be running.

For more information on the OpenLAB Shared Services Server installation, refer to the respective OpenLAB CDS installation guide.

1. “To Install or Update the OpenLAB Shared Services Server Software” on page 94
2. “To Install or Update the Reporter Client on the OpenLAB Server” on page 95
3. “To Select ECM as the Authentication Provider for OpenLAB Shared Services” on page 96

You must update the OpenLAB Shared Services Server before you start updating the ECM servers. Several of the subsequent procedures rely on the correct settings in OpenLAB Shared Services.

To Install or Update the OpenLAB Shared Services Server Software

With OpenLAB ECM Intelligent Reporter A.02.05, you must use the OpenLAB Shared Services Server software from OpenLAB CDS A.02.0x. You find all required installation files on the OpenLAB CDS installation DVD. For details on the installation or update procedures, refer to the respective OpenLAB CDS installation guide.

If you do not have an Agilent OpenLAB CDS installation DVD, please contact Agilent Support.
To Install or Update the Reporter Client on the OpenLAB Server

Although it is not a requirement, we recommend installing the complete Reporter Client as well on the OpenLAB Shared Services Server. The installation includes a plug-in for the OpenLAB Control Panel to enable the configuration of reporting projects.

1. Go to Add/remove programs and uninstall any present version of the Reporter Client.
2. In the CD Installer window, click Install Reporter Client.
   An installation wizard opens.
3. Click Next.
4. Select the check box to confirm the license agreement.
5. Click Next to continue.
6. Provide the customer information (see Table 1 on page 46).
7. Click Next to continue.
8. Click Next to confirm the setup features.
   The OpenLAB Control Panel Plug-In feature is the only feature required on the server. However, we recommend installing all features to enable full functionality of the Reporter Client.
9. Click Install.
   A progress bar is shown during the installation.
10. Click Finish.
11. Validate the installation.
   a. Select Start > All Programs > Agilent Technologies > OpenLAB > OpenLAB ECM Intelligent Reporter Validation.
   b. Start Data Selection & Report Preview. Run the program as administrator.
   If the validation was successful, it shows a green traffic light.
   c. Start OpenLAB Control Panel Plug-in. Run the program as administrator.
   If the validation was successful, it shows a green traffic light.
7 Updating Previous Versions Using ECM 3.4.1 SP2 Infrastructure
Updating the OpenLAB Shared Services Server

To Select ECM as the Authentication Provider for OpenLAB Shared Services

You only need to carry out this procedure if ECM is not yet selected as the authentication provider.

1 Start the OpenLAB Control Panel.
2 From the navigation pane, select Administration > System Configuration.
3 Click Edit System Settings.
4 In the Edit System Settings window, select ECM as your authentication provider from the options on the drop down menu.
   The storage provider is automatically set to ECM as well.
5 Click Next.
6 Enter the URL of the ECM Web Server and the login credentials of the ECM administrator (see Table 13 on page 57).
7 Click Select Account to select the ECM user who will initially log in to the OpenLAB Control Panel and administer the system. You can select the same ECM administrator as in the previous step.
8 Click Next.
9 Leave the folder for storing projects empty.

This path will be set as the default for all types of projects. If you enter a path here, the selection of default paths in reporting projects will be limited. You cannot undo this setting.

10 Click Next.
11 Review your settings and select Apply.
12 Click OK to confirm the changed settings.
13 If OpenLAB Control Panel does not automatically restart, close the application and select Start > Agilent Technologies > OpenLAB > OpenLAB Control Panel to restart it.
14 Log in to the OpenLAB Control Panel as the ECM administrator you selected above.
Preparing the ECM System

Before updating OpenLAB ECM Intelligent Reporter to the new version, complete the following procedures:

- Make a backup copy of the ECM Database
- Stop the ECM System

**Make a backup copy of the ECM Database**

Before upgrading the ECM Database, use the tools included with your database application to make a backup copy of your ECM database.

**Stop the ECM System**

1. Ensure that all users have logged off the ECM system.
2. Stop the following services:
   - Agilent OpenLAB ECM Sync Service
   - ECM File Transfer Service
   - ECMApplicationService
   - IIS Admin Service
     Stopping the IIS Admin Service implies stopping several sub-services (in particular, the WWW Publishing Service). Note down these sub-services; you will need to restart them later.
3. Stop all ECM processes in the Component Services:
   - SSI Component Service
   - SSI FTS Component Service
Migrating the Database

The revisions A.02.01 and earlier of OpenLAB ECM Intelligent Reporter were only available for the ECM 3.3.1 or ECM 3.3.2 infrastructure, which was based on Windows 2003 Server as the operating system. ECM 3.4.1 is based on Windows 2008 Server. When you migrate from A.02.01 or earlier, you must therefore first set up a new ECM 3.4.1 SP2 Database Server:

1. Set up a new server using Windows 2008 Server as the operating system.
2. Install the required database software (Microsoft SQL Server or Oracle).
3. Migrate the ECM Database to ECM 3.4.1 SP2.

For more information, refer to the OpenLAB ECM Installation Guide.

To migrate the ECM IR Database from revisions earlier than A.02.04, you must carry out the migration procedure separately for each intermediate revision:

1. “To Migrate from A.01.01 to A.02.01” on page 99
2. “To Migrate from A.02.01 or A.02.01 SP1 to A.02.02” on page 99
3. “To Migrate from A.02.02 to A.02.03” on page 100
4. With Oracle:
   a. “To Migrate from A.02.03 to A.02.04 with Oracle” on page 100
   b. “To Disable Password Expiration in Oracle 11g” on page 103

With Microsoft SQL Server:

a. “To Migrate from A.02.03 to A.02.04 with Microsoft SQL Server” on page 104
To Migrate from A.01.01 to A.02.01

The required installation files and a description of this migration are available on the installation medium in the following directories:

- `\Support\tools\Database Migration\A.02.01\Oracle\migration\A.01.01_A.02.01`
- `\Support\tools\Database Migration\A.02.01\Server\migration\A.01.01_A.02.01`

Run the migration script directly from the DVD, or copy the entire `Support` and `DBBuild` directories to your local disk, and execute the scripts from there. After the successful migration to revision A.02.01, continue with the migration to revision A.02.02.

To Migrate from A.02.01 or A.02.01 SP1 to A.02.02

The required installation files and a description of this migration are available on the installation medium in the following directories:

- `\Support\tools\Database Migration\A.02.02\Oracle\migration\A.02.01+A.02.01SP1_A.02.02`
- `\Support\tools\Database Migration\A.02.02\Server\migration\A.02.01+A.02.01SP1_A.02.02`

Run the migration script directly from the DVD, or copy the entire `Support` and `DBBuild` directories to your local disk, and execute the scripts from there. After the successful migration to revision A.02.02, continue with the migration to revision A.02.03.
To Migrate from A.02.02 to A.02.03

The required installation files and a description of this migration are available on the installation medium in the following directories:

- `\Support\tools\Database Migration\A.02.03\Oracle\migration\A.02.02_A.02.03`
- `\Support\tools\Database Migration\A.02.03\Server\migration\A.02.02_A.02.03`

Run the migration script directly from the DVD, or copy the entire `Support` and `DBBuild` directories to your local disk, and execute the scripts from there. After the successful migration to revision A.02.03, continue with the migration to revision A.02.04.

To Migrate from A.02.03 to A.02.04 with Oracle

Revision A.02.05 does not require any changes to the database schema. Revision A.02.04 of the database schema remains unchanged.

1. Log on to the database server as an administrator.
2. Check the current database status:
   a. Select `Start > All Programs > Agilent Technologies > ECM > Synchronization Service Configuration` to open the `Synchronization Service Configuration and Maintenance` window.
   b. Select the `Database Maintenance` tab/`Database Info` subtab.
   c. Click to get the current data.
   d. Check the `Schema Version`. It must begin with 2.0.39.x. For other versions, the following update procedures are not applicable.
   e. Check the status of the Synchronization Service in the status bar. If it is not stopped already, click to stop it.
   f. Close the `Synchronization Service Configuration and Maintenance` window.
3 Insert the *OpenLAB ECM Intelligent Reporter* installation medium in your DVD drive.

On Windows systems:

a If the installer does not run automatically, double-click **CDInstaller.exe** in the *Autorun* directory of the installation medium.

b In the *CD Installer* window, click **Install/Migrate Database Objects**.

An explorer window opens. It shows the contents of the *DBBuild* directory on the CD.

c Open the folder *Oracle/migration/A.02.03_A.02.04*.

Alternatively, you can access the folder *DBBuild/Oracle/migration/A.02.03_A.02.04* on the installation medium via the network. To access the folder via the network, you must map a drive letter to the network drive.

4 Execute **MigrateOracle.cmd**.

A command window opens.

5 You are prompted to enter several parameters. Type in the required data (see Table 7 on page 51) and press **Enter** to confirm each entry:

- **Net Service name (TNSNAMES alias)**
  This is the net service name, also known as TNS alias, for your ECM Database.

- **Schema/user name for ECM**

- **Directory and filename of the log file**
  An installation log file is created in the given location.

- **Password for database user SYS** (see Table 7 on page 51).
  The password is not shown while typing.

6 Review the data.

- If something is wrong, press **Ctrl+C** to abort the installation.

7 If everything is OK, press **Enter**.

The migration begins. When the migration is finished, the text **Migration finished** is shown in the command window.

8 Press any key to close the command window.
9 Check the “ORA-”, “Msg”, and “Err” entries in the installation log file. The log file should only include messages about changing the database, no warnings or errors. If there are errors, contact your Agilent support representative.

10 Validate the database migration.
   a In the CD Installer window, click Run Database Installation Qualification.
      The OpenLAB ECM Intelligent Reporter Database IQ window opens.
   b Under Database System, select Oracle.
   c Provide the required Database Settings and the credentials of the ECM Database user (for example, CYBERLABLOGIN; see Table 7 on page 51).
   d Provide the passwords for the ACAMLDESIGN and ACAMLVIEW users (see Table 9 on page 53).
   e Click Start.
      If the validation was successful, it responds with DB IQ Succeeded. If the validation failed, and there are only warning messages, you may proceed with the installation. There must be no error messages.
   f Save or print the IQ results.

11 Restart the following previously stopped services:
   - ECM File Transfer Service
   - ECMApplicationService
   - IIS Admin Service
   - All sub-services of the IIS Admin Service that you noted down during the preparation (in particular, the WWW Publishing Service)

The ECM processes in the Component Services are automatically restarted.

The Synchronization Service must remain stopped for the subsequent installation steps.
To Disable Password Expiration in Oracle 11g

Unlike older releases, with Oracle 11g a password expiration mechanism is enabled by default. However, if the password expires for any account used by the application servers, the entire system can be locked out. We therefore recommend to disable the password expiration.

To disable the password expiration, carry out the following procedure for each Oracle database instance in your OpenLAB system (ECM Database and OpenLAB Shared Services Database):

1. Log on to the database instance as user SYS or SYSTEM.
2. Run the following SQL commands:
   
   ```sql
   ALTER PROFILE DEFAULT LIMIT FAILED_LOGIN_ATTEMPTS UNLIMITED
   PASSWORD_LIFE_TIME UNLIMITED;
   ```
To Migrate from A.02.03 to A.02.04 with Microsoft SQL Server

Revision A.02.05 does not require any changes to the database schema. Revision A.02.04 of the database schema remains unchanged.

1. Log on to the ECM File Transfer Server.

2. Check the current database status:
   a. Select Start > All Programs > Agilent Technologies > ECM > Synchronization Service Configuration to open the Synchronization Service Configuration and Maintenance window.
   b. Select the Database Maintenance tab/Database Info subtab.
   c. Click to get the current data.
   d. Check the Schema Version. It must begin with 2.0.39.x. For other versions, the following update procedures are not applicable.
   e. Check the status of the Synchronization Service in the status bar. If it is not stopped already, click to stop it.
   f. Close the Synchronization Service Configuration and Maintenance window.

3. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
   a. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.
   b. In the CD Installer window, click Install/Migrate Database Objects.
      An explorer window opens. It shows the contents of the directory DBBuild on the CD.
   c. Open the folder Server/migration/A.02.03_A.02.04.
      Alternatively, you can access the folder DBBuild/Server/migration/A.02.03_A.02.04 on the installation medium via the network, if you map a drive letter to the network drive.

4. Execute MigrateServer.cmd.
   A command window opens.
5 You are prompted to enter several parameters (see Table 8 on page 52). Type in the required data and press **Enter** to confirm each entry:

- **ECM-Database Server**: the server name of the ECM Database Server.
- **ECM-Database Name**.
- **ECM Database user name**: the database user who uses ECM.
- **Directory and Name for log file**: An installation log file is created in the given location.

6 Review the data.

If something is wrong, press **Ctrl+C** to abort the installation.

7 If everything is OK:

a Enter the password for the database user SA, see Table 8 on page 52.

The password is not shown while typing.

b Press **Enter** to continue.

The migration begins. When the migration is finished, the text **Migration finished** is shown in the command window.

8 Press any key to close the command window.

9 Check the “Msg” and “Err” entries the migration log file. The log file should only include messages about changing the database, no warnings or errors. If there are errors, contact your Agilent support representative.

**NOTE**

The message **Msg 5701, Changed database context to...** does not indicate an error. It merely shows that the database has been changed.
10 Validate the database installation.
   a  In the CD Installer window, click Run Database Installation Qualification. The OpenLAB ECM Intelligent Reporter Database IQ window opens.
   b  Under Database System, select SQL Server.
   c  Provide the required Database Settings and the credentials of the ECM Database user (for example, CYBERLABLOGIN; see Table 8 on page 52).
   d  Provide the passwords for the ACAMLDESIGN and ACAMLVIEW users (see Table 9 on page 53).
   e  Click Start.
      If the validation was successful, it responds with DB IQ Succeeded. If the validation failed, and there are only warning messages, you may proceed with the installation. There must be no error messages.
   f  Save or print the IQ results.
11 Restart the following previously stopped services:
   •  ECM File Transfer Service
   •  ECMApplicationService
   •  IIS Admin Service
   •  All sub-services of the IIS Admin Service that you noted down during the preparation (in particular, the WWW Publishing Service)

The ECM processes in the Component Services are automatically restarted.

The Synchronization Service must remain stopped for the subsequent installation steps.
Updating the Reporting Server

For performance reasons, we recommend to install the Reporting Server on a separate machine.

This chapter is only valid if you update an existing Reporting Server. For more information on installing a new Reporting Server, refer to the chapter “New Installation with ECM 3.4.1 SP2 Infrastructure” on page 61.

To update an existing Reporting Server, carry out the following procedures:

1. “To Log on to the Server and Start the CD Installer” on page 107
2. “To Remove Old Extensions for Reporting Services” on page 108
3. “To Install Extensions for Reporting Services” on page 108

To Log on to the Server and Start the CD Installer

1. Log on as the Network Service User to the Reporting Server (see Table 12 on page 56).
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
3. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.

The CD Installer window opens.

Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Remove Old Extensions for Reporting Services

1. Select **Start > Control Panel > Programs and Features**.
2. Select **Agilent OpenLAB Extensions for Reporting Services**.
3. Click **Uninstall**.

To Install Extensions for Reporting Services

These extensions include *Agilent Intelligence Reporter Scratch Pad*.

1. In the **CD Installer** window, click **Install Extensions for SQL Server Reporting Services**.
   
   An explorer window opens. It shows the contents of the *Report Server* directory on the CD.

2. Execute **ReportServerExtensions64.msi**.
3. Click **Next**.
4. Select the check box to accept the license agreement.
5. Click **Next**.
6. Provide the customer information (see Table 1 on page 46).
7. Click **Next**.
8. Do not change the features selection. Click **Install**.
   
   The status of the installation is indicated by a progress bar.

9. Click **Finish**.
10. Validate the installation.

   a. Navigate to the installation folder.
      
      For example: \Program Files\Microsoft SQL Server\MS.2\Reporting Services\OpenLAB ECM Intelligent Reporter

   b. Execute the file **ModuleValidation.exe**. Run the file as administrator.
      
      If the validation was successful, it shows a green traffic light.
To Verify the Report Server Virtual Directory

You will need this parameter later to configure the Synchronization Service.

1. On the report server, open the Report Server Configuration Manager.
   When the utility starts up, it requests the name of the server to connect to.

2. Check whether the correct name of your Reporting Server is shown in the Machine Name field.
   If a different name is shown:
   a. Enter the name of the Reporting Server (see Table 10 on page 54)
   b. Click Find.
      All instances of Reporting Services on that machine are listed in the Instance Name drop-down list.
   c. Select the instance you want to use with OpenLAB ECM Intelligent Reporter.

3. Click Connect.

4. In the pages list on the left side of the screen, select the Report Server Virtual Directory page.

5. Note down the name of the virtual directory. The name is not case-sensitive.
   If it is empty, use the New... button to set the name to ReportServer. Refer to Microsoft documentation for details on the configuration of the virtual directory.
Updating ECM File Transfer Servers

The revisions A.02.01 and earlier of OpenLAB ECM Intelligent Reporter were only available for the ECM 3.3.1 or ECM 3.3.2 infrastructure, which was based on Windows 2003 Server as the operating system. ECM 3.4.1 is based on Windows 2008 Server. Therefore, when you upgrade to OpenLAB ECM Intelligent Reporter A.02.05 from one these revisions, you must first set up one or more new ECM 3.4.1 File Transfer Servers.

For more information, refer to the OpenLAB ECM Installation Guide.

To install the required components for OpenLAB ECM Intelligent Reporter, carry out the following procedures for each File Transfer Server:

**Upgrading from A.01.01 or A.02.01 (SP1) — new ECM 3.4.1 File Transfer Server**

- “To Log on to the Server and Start the CD Installer” on page 111
- “To Install the Synchronization Service” on page 114
- “To Configure the Synchronization Service” on page 115
- “To Configure the Reporting Server’s Database Access and User Parameters” on page 118
- “To Assign Missing OpenLAB Privileges” on page 121
- “To Install EZChrom Reader” on page 122
- “To Restart the Synchronization Service” on page 122
Upgrading from A.02.02 or higher– existing ECM 3.4.1 File Transfer Server

- “To Log on to the Server and Start the CD Installer” on page 111
- “To Backup the Synchronization Service Configuration” on page 112
- “To Remove the Old Synchronization Service” on page 112
- “To Remove the Old EZChrom Reader” on page 113
- “To Install the Synchronization Service” on page 114
- “To Configure the Synchronization Service” on page 115
- “To Configure the Reporting Server’s Database Access and User Parameters” on page 118
- “To Install EZChrom Reader” on page 122
- “To Restart the Synchronization Service” on page 122

To Log on to the Server and Start the CD Installer

1. Log on to the ECM File Transfer Server as the Network Service User (see Table 12 on page 56).
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
3. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.

The CD Installer window opens.

Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Backup the Synchronization Service Configuration

You only need to carry out this procedure if you are upgrading OpenLAB ECM Intelligent Reporter revision A.02.02 or higher on an already existing File Transfer Server.

1. Make sure that the Synchronization Service is stopped:
   a. Select Start > All Programs > Agilent Technologies > ECM > Synchronization Service Configuration to open the Synchronization Service Configuration and Maintenance window.
   b. Check the status of the Synchronization Service in the status bar. If it is not stopped already, click to stop it.
   c. Close the Synchronization Service Configuration and Maintenance window.

2. Navigate to the installation folder of the Synchronization Service (typically C:\Program Files\Agilent Technologies\ECM Synchronization Service).

3. Create a backup copy of the file AcamlSyncService.exe.config. Save the backup copy to a temporary local folder.

To Remove the Old Synchronization Service

You only need to carry out this procedure if you are upgrading OpenLAB ECM Intelligent Reporter revision A.02.02 or higher on an already existing File Transfer Server.

1. Select Start > Control Panel > Programs and Features.
2. Select Agilent OpenLAB ECM Synchronization Service.
3. Click Uninstall.
To Remove the Old EZChrom Reader

1. Select **Start > Control Panel > Programs and Features**.
2. Select **Agilent OpenLAB Intelligent Reporter EZChrom Reader**.
3. Click **Uninstall**.
To Install the Synchronization Service

1. In the CD Installer window, click Install Synchronization Service.
   The ECM Synchronization Service Setup Wizard opens.

2. Click Next.

3. Select the check box to confirm the license agreement.

4. Click Next.

5. Provide the customer information (see Table 1 on page 46).

6. Click Next.

7. Click Next to confirm the setup features. Do not change the feature selection.

8. Click Install.
   A progress indicator is shown during the installation.

9. Click OK.

10. Click Finish to exit the ECM Synchronization Service Setup Wizard.

11. Validate the installation.
   a. On the ECM File Transfer Server, navigate to the installation folder:
      \Program Files (x86)\Agilent Technologies\ECM Synchronization Service
   b. Right-click the file ModuleValidation.exe and run it as administrator.
      If the validation was successful, it shows a green traffic light.
To Configure the Synchronization Service

**NOTE**
You only need to carry out this procedure if you are upgrading OpenLAB ECM Intelligent Reporter revision **A.02.01 SP1 or earlier** and have set up a new File Transfer Server.

To configure the Synchronization Service

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open the <strong>Synchronization Service Configuration and Maintenance</strong> window.</td>
<td>- Select <strong>Start &gt; All Programs &gt; Agilent Technologies &gt; ECM &gt; Synchronization Service Configuration</strong>.</td>
</tr>
<tr>
<td>2</td>
<td>Unlock the fields.</td>
<td>- Click the padlock icon in the top left corner</td>
</tr>
</tbody>
</table>
| 3    | Configure the **Service Configuration** tab/ **Common** subtab. | - Select the correct **Worker Thread Count** number:  
  - **Oracle**: According to processors (see **Table 12 on page 56**), max. 4  
  - **Server**: Always enter 1  
  - Number of threads used by the Synchronization Service.  
  - With **Oracle**, the best performance is normally achieved if the number of threads equals the number of processors in the machine. The maximum number of threads is four.  
  - With **SQL Server**, always use only one thread. |
To configure the Synchronization Service

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>a. Check the settings:</td>
<td>The ECM Database credentials are automatically filled. If all credentials are valid, the fields are disabled.</td>
</tr>
<tr>
<td></td>
<td>- ECM Database credentials</td>
<td>Do not change these settings.</td>
</tr>
<tr>
<td></td>
<td>- Job Poll Interval/Retry Connect Interval</td>
<td>If you do not intend to report chromatograms or spectra data, clear these check boxes. The data will then not be extracted and saved into the database. This increases database performance and reduces database space consumption.</td>
</tr>
<tr>
<td></td>
<td>b. Click Test Connection.</td>
<td>A confirmation is shown if all the parameters are correct.</td>
</tr>
<tr>
<td></td>
<td>c. Click 🗝.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>a. Click the padlock icon 🗝 in the top left corner to unlock the fields again.</td>
<td></td>
</tr>
</tbody>
</table>
|      | b. Enter the URL to your ECM Web Server in the field Server URL. | · http://<server name>
For example: http://ecmserver
(see Table 14 on page 58) |
|      | c. Click Test Connection to test whether the ECM API is functional and the Synchronization Service can connect using the built-in admin logins. | · Admin logins have been created during ECM setup in the domain BUILT-IN and possibly also in other domains. These admin logins are automatically detected.
· After executing the test, all detected logins are listed in the text box under ECM Login Check with a login succeeded status. |
|      | d. Select the check box Process All. | |
| 6    | Save the service configuration. | · Click 🗝 in the top toolbar in the Service Configuration tab. |
To configure the Synchronization Service

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 7    | Start the Synchronization Service.  
   • Click ![image](image) in the bottom toolbar in the **Service Configuration** tab.  
   • The status **StartPending** is shown in the status bar while the service is starting.  
   • After the service has been started, the status **Running** is shown. |
| 8    | Check the events.  
   a  Select the **Event Viewer** tab  
   b  Click ![image](image) in the top toolbar to refresh the entries.  
   c  Check the entries.  
   There should only be **Information** type entries, no warnings or errors. |
| 9    | If you did not yet configure the **Reporting Server Configuration** tab, continue with the next procedure. Otherwise, close the **Synchronization Service Configuration and Maintenance** window. |
To Configure the Reporting Server’s Database Access and User Parameters

**NOTE**

The Reporting Server configuration is saved in the ECM Database. Therefore, it only needs to be configured once in the entire ECM system (even if there are several File Transfer Servers).

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open the Synchronization Service Configuration and Maintenance window.</td>
<td>The service configuration window might still be open from the previous procedure.</td>
</tr>
<tr>
<td>2</td>
<td>Configure the Reporting Server Configuration tab/Database Account subtab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a Click the Refresh icon in the top toolbar to read the current values from the ECM Database.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b Click the Copy button to get the database parameters provided on the Service Configuration tab.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If your ECM Database is based on Oracle:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Database System:</strong> Oracle.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>EZCONNECT String:</strong> Here, the connection string is required using the Easy Connect syntax <code>&lt;host&gt;:&lt;port&gt;/&lt;service name&gt;</code>. See Table 7 on page 51.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Note:</strong> If you use an Oracle Full Client on the File Transfer Server and an Oracle Instant Client on the Reporting Server, you must manually replace the copied connection string by the Easy Connect syntax. See step 4b on page 120.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If your ECM Database is based on Microsoft SQL Server:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Database System:</strong> SQL Server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Server Name:</strong> Name of the ECM Database Server. See Table 8 on page 52.</td>
<td></td>
</tr>
</tbody>
</table>
To configure the Reporting Server’s database access and user parameters

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
</table>
| c    | Provide the database account used by the Reporter Client:  
- **User Name**: ACAMLVIEW  
- **Password/Confirm Password**: Password for the user ACAMLVIEW (see Table 9 on page 53).  
- **Additional Settings**: Do not enter anything here. | This account is used to read the contents of the Reporting Database. |
| d    | Click **Test Connection** to make sure all parameters are correct. | A confirmation is shown. |

3 Configure the *Reporting Server Configuration* tab/ **User Account** subtab.

- a Enter the Windows account of the Reporting Generation User:  
  - **Domain**  
  - **User Name**  
  - **Password/Confirm Password**  
  - This account is used on the Reporting Server to generate the reports.  
  - See Table 11 on page 55. |

4 Configure the *Reporting Server Configuration* tab/ **Virtual Directory URL and Test** subtab.

- a Enter the **Report Server Virtual Directory URL**.  
  - The URL syntax is: `http://<server>/<directory>[$<instance>]`  
  - `<server>` is the name of the Reporting Server  
  - `<directory>` is the name of the report server virtual directory.  
  - `<instance>` is the name of the SQL Server instance of the Reporting Server. If Reporting Services are installed under the default instance of SQL Server, this value can be omitted.  
  - The name of the virtual directory was verified during the installation of the Reporting Server (see page 109). |
To configure the Reporting Server’s database access and user parameters

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
</table>
| b | Click **Test Reporting Server** to make sure all parameters are correct. | • When you run the test for the first time, it can take up to two minutes until the confirmation is shown, because the Reporting Services are started in the background.  
• The test includes several sub-tests. After finishing the test, an additional text field with a detailed result is shown.  
• If the message **Extensions not installed** is shown, follow the procedure “To Install Extensions for Reporting Services” on page 108.  
• If the connection to an Oracle database cannot be established, you can use the following exceptional configuration:  
  - Create a new *tnsnames.ora* file on the Reporting Server as described in “Connecting to Oracle With or Without Easy Connect Syntax” on page 202  
  - Note down the net service name from the new *tnsnames.ora*.  
  - Select the **Reporting Server Configuration** tab/ **Database Account** subtab and enter the net service name (TNS Alias) as the **EZCONNECT String**. |
| 5 | Save the client configuration. | • Click in the top left corner. |
| 6 | If you did not yet assign the missing OpenLAB privileges, continue with the next procedure. Otherwise, close the **Synchronization Service Configuration and Maintenance** window. |
To Assign Missing OpenLAB Privileges

You only need to carry out this procedure if you are upgrading OpenLAB ECM Intelligent Reporter revision A.02.01 SP1 or earlier and have set up a new File Transfer Server.

ECM system administrators may need to be granted additional OpenLAB privileges. These privileges are required to access locations, drawers, cabinets, and folders in ECM from the OpenLAB Control Panel. You must be able to access these LCDF paths in order to create reporting projects.

1. Select the **ECM Privileges Setup** tab.

2. Click the Refresh icon in the top toolbar to check the currently assigned privileges for all ECM administrators.

   The system checks all users with the ECM system administrator role. The results are shown in the text box. If privileges are missing, a red warning message is displayed under the text box.

3. If privileges are missing:
   a. Select **ECM Privileges > Assign OpenLAB privileges**.
   b. Enter the credentials of the ECM database user (see Table 7 on page 51 for Oracle or Table 8 on page 52 for Microsoft SQL Server, respectively).
   c. Click **Yes** to assign the missing OpenLAB privileges.

   The results of the privilege check are automatically refreshed. All required privileges are now assigned.

   d. Close the **Synchronization Service Configuration and Maintenance** window.
To Install EZChrom Reader

1 In the **CD Installer** window, click **Install EZChrom Reader**.
   The *Agilent OpenLAB ECM Intelligent Reporter EZChrom Reader Setup Wizard* opens.

2 Click **Next**.

3 Select the check box to confirm the license agreement.

4 Click **Next**.

5 Provide the customer information (see Table 1 on page 46).

6 Click **Next**.

7 Click **Next** to confirm the setup features. Do not change the feature selection.
   A progress indicator is shown during the installation.

8 Click **Finish** to exit the wizard.

To Restart the Synchronization Service

1 In the **Synchronization Service Configuration and Maintenance** window, select the **Database Maintenance** tab/Database Info subtab.

2 Click **to start the Synchronization Service**.

3 Select the **Event Viewer** tab.

4 Click **to refresh the Event list**.
   There is a **Service is started** message.
Updating ECM Web Servers

The revisions A.02.01 and earlier of OpenLAB ECM Intelligent Reporter were only available for the ECM 3.3.1 or ECM 3.3.2 infrastructure, which was based on Windows 2003 Server as the operating system. ECM 3.4.1 is based on Windows 2008 Server. Therefore, when you upgrade to OpenLAB ECM Intelligent Reporter A.02.05 from one these revisions, you must first set up one or more new ECM 3.4.1 Web Servers.

For more information, refer to the *OpenLAB ECM Installation Guide*.

To install the required components for OpenLAB ECM Intelligent Reporter, carry out the following procedures for each web server:

1. “To Log on to the Server and Start the CD Installer” on page 123
2. “To Remove Old Data Services” on page 124
3. “To Install the Data Services” on page 124
4. “To Configure the Data Services” on page 125

To Log on to the Server and Start the CD Installer

1. Log on as the *Network Service User* to the Reporting Server (see Table 12 on page 56)
2. Insert the *OpenLAB ECM Intelligent Reporter* installation medium in your DVD drive.
3. If the installer does not run automatically, double-click **CDInstaller.exe** in the *Autorun* directory of the installation medium.

   The **CD Installer** window opens.

   Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Remove Old Data Services

You only need to carry out this procedure if you are upgrading OpenLAB ECM Intelligent Reporter revision A.02.02 or higher on an already existing Web Server.

1. Select Start > Control Panel > Programs and Features.
2. Select Agilent OpenLAB ECM Data Services.
3. Click Uninstall.

To Install the Data Services

1. In the CD Installer window, click Install Data Services.
   The OpenLAB ECM Data Services Setup Wizard opens.
2. Click Next.
3. Confirm the license agreement, and click Next.
4. In the Select Installation Folder page:
   a. Provide a valid installation.
   b. Make sure that Everyone is selected.
   c. Click Next.
5. Click Next to start the installation.
   A progress indicator is shown during the installation.
6. Click Close to exit the wizard.
To Configure the Data Services

1. Select **Start > All Programs > Agilent Technologies > ECM > Data Services Configuration**.

   The *Agilent OpenLAB Data Services Configuration* window opens.

2. Click **Local Host Name** to enter the name of the local host (ECM Web Server) into the **Host Name** field.

   Alternatively, you can manually enter the name of a different ECM Web Server.

3. Click **Read** to obtain the current configuration for the given host name (at this time, it is still empty).

   The fields required to establish a database connection are automatically filled.

4. Click **Test Connection**.

   A success message is shown.

5. Select the **Service Test and Installation Qualification** subtab.

6. Click **Run Test and Installation Qualification**.

   Each of the different services responds with a success message. There should be no errors or warnings.

7. Click **Save Log** to save the results, for example, under \c:\Program Files (x86)\Agilent Technologies\ECM Data Services.
Adding Agilent Sample Templates in OpenLAB ECM

The Agilent sample templates have been updated with OpenLAB ECM Intelligent Reporter A.02.05. As they may be accessed by any client, you should provide the new templates in ECM.

1 Log on to any Windows client with access to OpenLAB ECM.
2 Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.

   Alternatively, you can access the installation medium via the network (UNC syntax is possible).
3 Open a browser window and connect to the ECM Web Server. Log in as a user with the right to add content (for example, as ECM administrator, see Table 13 on page 57).
4 Select the LCDF path in your ECM environment where the Agilent sample report templates are stored (see Table 2 on page 46).
5 If your ECM Database is based on Oracle: Add all templates from the UCL Report Templates/Oracle directory on the installation medium.
   – or –
6 If your ECM Database is based on Microsoft SQL Server: Add all templates from the UCL Report Templates/Server directory on the installation medium.
Updating Reporter clients

To update a reporter client, carry out the following procedures:

1. “To Install or Update the OpenLAB Client” on page 127
2. “To Log on to the Client and Start the CD Installer” on page 128
3. “To Remove the Old ECM Client Extension” on page 128
4. “To Remove the Old ECM API” on page 128
5. “To Check the ECM Client” on page 129
6. “To Update the New Reporter Client” on page 129

To Install or Update the OpenLAB Client

With OpenLAB ECM Intelligent Reporter A.02.05, you must use the OpenLAB Client software from OpenLAB CDS A.02.x. You find all required installation files on the OpenLAB CDS installation DVD. For details on the installation or update procedures, refer to the respective OpenLAB CDS installation guide.

If you do not have an Agilent OpenLAB CDS installation DVD, please contact Agilent Support.
To Log on to the Client and Start the CD Installer

1. Log on as an administrator to the client (see Table 15 on page 59).
2. Insert the *OpenLAB ECM Intelligent Reporter* installation medium in your DVD drive.
3. If the installer does not run automatically, double-click `CDInstaller.exe` in the *Autorun* directory of the installation medium.

   The *CD Installer* window opens.

   Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).

To Remove the Old ECM Client Extension

```
NOTE

You only need to carry out this procedure if you are upgrading OpenLAB ECM Intelligent
Reporter revision A.02.01 SP1 or earlier. From A.02.02 on, *ECM Client Extension* was not
required as a separate installation on the instrument client any more.
```

1. Select *Start > Control Panel > Programs and Features*.
2. Select *Agilent OpenLAB Intelligence Reporter ECM Client Extension*.
3. Click *Uninstall*.

To Remove the Old ECM API

```
NOTE

You only need to carry out this procedure if you are upgrading OpenLAB ECM Intelligent
Reporter revision A.02.01 SP1 or earlier. From A.02.02 on, the ECM API was not required as
a separate installation on the instrument client any more.
```

1. Select *Start > Control Panel > Programs and Features*.
2. Select *Agilent OpenLAB ECM API Deployment Installation*
3. Click *Uninstall*.  

To Check the ECM Client

An ECM client is required on each instrument client. Open the ECM URL in a browser window to check if the client has been installed properly.

To Update the New Reporter Client

1. In the CD Installer window, click **Install Reporter Client**.
   An installation wizard opens.

2. Click **Next**.

3. Select the check box to confirm the license agreement.

4. Click **Next** to continue.

5. Provide the customer information (see Table 1 on page 46).

6. Click **Next** to continue.

7. Click **Next** to confirm the setup features.

8. Click **Install**.
   A progress bar is shown during the installation.

9. Click **Finish**.

10. Validate the installation.

    a. Select **Start > All Programs > Agilent Technologies > OpenLAB > OpenLAB ECM Intelligent Reporter Validation**.

    b. Start **Data Selection & Report Preview**. Run the program as administrator.

    If the validation was successful, it shows a green traffic light.

    c. Start **OpenLAB Control Panel Plug-in**. Run the program as administrator.

    If the validation was successful, it shows a green traffic light.
7 Updating Previous Versions Using ECM 3.4.1 SP2 Infrastructure
Updating Reporter clients
This chapter describes the installation of OpenLAB ECM Intelligent Reporter (ECM IR) using OpenLAB ECM 3.5.

After completing the procedures described in this chapter, refer to Chapter 10, “Configuration” for the required configuration steps.
Updating the OpenLAB Shared Services Server

To update the OpenLAB Shared Services Server, carry out the following procedures:

An OpenLAB Shared Services Server must already be running.

For more information on the OpenLAB Shared Services Server installation, refer to the respective OpenLAB CDS installation guide.

1. “To Install or Update the OpenLAB Shared Services Server Software” on page 132
2. “To Install the Reporter Client on the OpenLAB Server” on page 133
3. “To Select ECM as the Authentication Provider for OpenLAB Shared Services” on page 134

You must update the OpenLAB Shared Services Server before you start updating the ECM servers. Several of the subsequent procedures rely on the correct settings in OpenLAB Shared Services.

To Install or Update the OpenLAB Shared Services Server Software

With OpenLAB ECM Intelligent Reporter A.02.05, you must use the OpenLAB Shared Services Server software from OpenLAB CDS A.02.0x. You find all required installation files on the OpenLAB CDS installation DVD. For details on the installation or update procedures, refer to the respective OpenLAB CDS installation guide.

If you do not have an Agilent OpenLAB CDS installation DVD, please contact Agilent Support.
To Install the Reporter Client on the OpenLAB Server

Although it is not a requirement, we recommend installing the complete Reporter Client as well on the OpenLAB Shared Services Server. The installation includes a plug-in for the OpenLAB Control Panel to enable the configuration of reporting projects.

1. In the CD Installer window, click Install Reporter Client.

   An installation wizard opens.

2. Click Next.

3. Select the check box to confirm the license agreement.

4. Click Next to continue.

5. Provide the customer information (see Table 1 on page 46).

6. Click Next to continue.

7. Click Next to confirm the setup features.

   The OpenLAB Control Panel Plug-In feature is the only feature required on the server. However, we recommend installing all features to enable full functionality of the Reporter Client.

8. Click Install.

   A progress bar is shown during the installation.

9. Click Finish.

10. Validate the installation.

    As a general rule, you must not run a module validation test while the installed application or service is running. In order to pass the test, the module validation requires exclusive access to the files to be tested.

    a. On Windows 2008 Server, select Start > All Programs > Agilent Technologies > OpenLAB > OpenLAB ECM Intelligent Reporter Validation. Run the following programs as administrator.

       On Windows 2012 Server, Press the Start button, switch to the Apps overview panel, and find the Agilent Technologies section.
To Select ECM as the Authentication Provider for OpenLAB Shared Services

You only need to carry out this procedure if ECM is not yet selected as the authentication provider.

1 Start the OpenLAB Control Panel.
2 From the navigation pane, select Administration > System Configuration.
3 Click Edit System Settings.
4 In the Edit System Settings window, select ECM as your authentication provider from the options on the drop down menu.
   The storage provider is automatically set to ECM as well.
5 Click Next.
6 Enter the URL of the ECM Web Server and the login credentials of the ECM administrator (see Table 13 on page 57).
7 Click Select Account to select the ECM user who will initially log in to the OpenLAB Control Panel and administer the system. You can select the same ECM administrator as in the previous step.
8 Click Next.
9 Leave the folder for storing projects empty.

NOTE
This path will be set as the default for all types of projects. If you enter a path here, the selection of default paths in reporting projects will be limited. You cannot undo this setting.
10 Click **Next**.

11 Review your settings and select **Apply**.

12 Click **OK** to confirm the changed settings.

13 If OpenLAB Control Panel does not automatically restart, close the application and select **Start > Agilent Technologies > OpenLAB > OpenLAB Control Panel** to restart it.

14 Log in to the OpenLAB Control Panel as the ECM administrator you selected above.
Updating the ECM Database

To update the ECM Database, you must log on to a machine from which you can reliably connect to the database. As the ECM File Transfer Server already contains all required tools, we recommend carrying out the following procedure on the ECM File Transfer Server.

To update the new ECM Database Server, carry out the following procedures:

With Oracle:
1. “To Install the Reporting Database with Oracle” on page 136
2. “To Disable Password Expiration in Oracle 12” on page 138

With Microsoft SQL Server
1. “To Install the Reporting Database with Microsoft SQL Server” on page 139

To Install the Reporting Database with Oracle

Make sure that the required directories (see Table 7 on page 51) already exist on the disc. Installing the database without these directories will lead to an error that cannot be corrected. In this case, you will have to restore the original ECM database and start the installation again.

1. Log on as the Network Service User to the ECM File Transfer Server (see Table 12 on page 56).
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
   On Windows Systems:
   a. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.
   b. In the CD Installer window, click Install/Migrate Database Objects.
      An explorer window opens. It shows the contents of the DBBuild directory on the CD.
c Open the folder Oracle/install.
Alternatively, you can access the folder DBBuild/Oracle/install on the installation medium via the network. To access the folder via the network, you must map a drive letter to the network drive.

3 Execute InstallOracle.cmd.
A command window opens.

4 You are prompted to enter several parameters. Type in the required data (see Table 7 on page 51) and press Enter to confirm each entry:
   - **Net service name (TNSNAMES alias)**
     This is the net service name for your ECM Database.
   - **Directory and filename of the log file**
     An installation log file is created in the given location
   - **Password for database user SYS**
     The password is not shown while typing.
     After confirming the password with Enter, a confirmation is shown that you are currently logged on as the user SYS.
   - **Schema/user name for ECM** (for example ECMSchema)
   - **Directories** where the data files, index files, map files, and signal files of the new database schema should be stored.

If you use signal files (see “To Change Import Settings in the Synchronization Service” on page 182), we recommend using a separate drive for the signal files. Signal files consume much more space and will grow much faster than the other files.

5 Review the data.
   - If something is wrong, press Ctrl+C to abort the installation.

6 If everything is OK, press Enter.
   The installation begins. When the installation is finished, the text **Installation finished** is shown in the command window.

7 Press any key to close the command window.
8 Check the “ORA-”, “Msg”, and “Err” entries in the installation log file. The log file should only include messages about changing the database, no warnings or errors. If there are errors, contact your Agilent support representative.

9 Validate the database installation.
   a In the CD Installer window, click Run Database Installation Qualification. The OpenLAB ECM Intelligent Reporter Database IQ window opens.
   b Under Database System, select Oracle.
   c Provide the required Database Settings and the credentials of the ECM schema database user (for example, ECMSchema; see Table 7 on page 51).
   d Provide the passwords for the ACAMLDESIGN and ACAMLVIEW users (see Table 9 on page 53).
   e Click Start. If the validation was successful, it responds with DB IQ Succeeded. If the validation failed, and there are only warning messages, you may proceed with the installation. There must be no error messages.
   f Save or print the IQ results.

To Disable Password Expiration in Oracle 12

Unlike older releases, with Oracle 12 a password expiration mechanism is enabled by default. However, if the password expires for any account used by the application servers, the entire system can be locked out. We therefore recommend to disable the password expiration.

To disable the password expiration, carry out the following procedure for each Oracle database instance in your OpenLAB system (ECM Database and OpenLAB Shared Services Database):

1 Log on to the database instance as user SYS or SYSTEM.
2 Run the following SQL commands:
   ALTER PROFILE DEFAULT LIMIT FAILED_LOGIN_ATTEMPTS UNLIMITED PASSWORD_LIFE_TIME UNLIMITED;
To Install the Reporting Database with Microsoft SQL Server

Make sure that the required directories (see Table 8 on page 52) already exist on the disc. Installing the database without these directories will lead to an error that cannot be corrected. In this case, you will have to restore the original ECM database and start the installation again.

1 Log on as the Network Service User to the ECM File Transfer Server (see Table 12 on page 56).

2 Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
   a If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.
   b In the CD Installer window, click Install/Migrate Database Objects.
      An explorer window opens. It shows the contents of the directory DBBuild on the CD.
   c Open the folder SQLServer/install.
      Alternatively, you can access the folder DBBuild/SQLServer/install on the installation medium via the network. To access the folder via the network, you must map a drive letter to the network drive.

3 Execute InstallSqlServer.cmd.
   A command window opens.

4 You are prompted to enter several parameters (see Table 8 on page 52 and Table 9 on page 53). Type in the required data and press Enter to confirm each entry:
   • ECM-Database Server: the server name of the ECM Database Server
   • ECM-Database Name
   • ECM Database user name: the database user who uses ECM.
   • Directories where the data files, index files, map files, and signal files of the new database schema should be stored.
   • Set Password for user ACAMLVIEW
   • Set Password for user ACAMLDDESIGN
   • Directory and Name for log file: An installation log file is created in the given location.
5 Review the data.
   If something is wrong, press Ctrl+C to abort the installation.

6 If everything is OK:
   a Enter the password for the database user SA.
      The password is not shown while typing.
   b Press Enter to continue.
      The installation begins. When the installation is finished, the text
      Installation finished is shown in the command window.

7 Press any key to close the command window.

8 Check the “Msg” and “Err” entries the installation log file. The log file
   should only include messages about changing the database, no warnings
   or errors. If there are errors, contact your Agilent support
   representative.

9 Validate the database installation.
   a In the CD Installer window, click Run Database Installation Qualification.
      The OpenLAB ECM Intelligent Reporter Database IQ window opens.
   b Under Database System, select SQL Server.
   c Provide the required Database Settings and the credentials of the ECM
      Database user (for example, CYBERLABLOGIN; see Table 8 on
      page 52).
   d Provide the passwords for the ACAMLDESIGN and ACAMLVIEW
      users (see Table 9 on page 53).
   e Click Start.
      If the validation was successful, it responds with DB IQ Succeeded. If
      the validation failed, and there are only warning messages, you may
      proceed with the installation. There must be no error messages.
   f Save or print the IQ results.

NOTE
The message Msg 5701, Changed database context to... does not indicate an error. It
merely shows that the database has been changed.
Installing the Reporting Server

For performance reasons, we recommend to install the Reporting Server on a separate machine.

To install the Reporting Server, proceed as follows:

1. “To Log on to the Server and Start the CD Installer” on page 141
2. “To Install the Oracle Instant Client” on page 142
3. “To install Extensions for Reporting Services” on page 143
4. “To Create the Report Generation User” on page 144
5. “To Create a Role for Report Generation” on page 146
6. “To Assign the Role to the Report Generation User” on page 147

To Log on to the Server and Start the CD Installer

1. Log on as the Network Service User to the Reporting Server (see Table 12 on page 56).
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
3. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.

The CD Installer window opens.

Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
New Installation with ECM 3.5 Infrastructure
Installing the Reporting Server

To Install the Oracle Instant Client

You only need to carry out this procedure if:
- your ECM Database is based on Oracle, and
- an Oracle client newer than 10g is not yet installed on the Reporting Server.

1. In the **CD Installer** window, click **Install Extensions for SQL Server Reporting Services**.
   An explorer window opens. It shows the contents of the **Report Server** directory on the CD.
2. Execute **OracleInstantClient64.msi**.
   The **Oracle Database 10g Instant Client Setup Wizard** opens.
3. Click **Next**.
4. Select the check box to accept the license agreement.
5. Click **Next**.
6. Click **Next** to confirm the default setup configuration.
7. Click **Install**.
   A progress bar is shown to indicate the status of the installation.
8. Click **Finish**.
9. After successful installation of the Oracle Instant Client, open the Service Console and restart the **IIS Admin** service.
To install Extensions for Reporting Services

These extensions include *Agilent Intelligence Reporter Scratch Pad*.

1. In the **CD Installer** window, click **Install Extensions for SQL Server Reporting Services**.

   An explorer window opens. It shows the contents of the *Report Server* directory on the CD.

2. Execute **ReportServerExtensions64.msi**.

3. Click **Next**.

4. Select the check box to accept the license agreement.

5. Click **Next**.

6. Provide the customer information (see Table 1 on page 46).

7. Click **Next**.

8. Do not change the features selection. Click **Install**.

   The status of the installation is indicated by a progress bar.

9. Click **Finish**.

10. Validate the installation.

    a. Navigate to the installation folder.

       For example: `C:\Program Files\Microsoft SQL Server\MSRS10_50.MSSQLSERVER Reporting Services\OpenLAB ECM Intelligent Reporter`

    b. Execute the file **ModuleValidation.exe**. Run the file as administrator. In case of a failure re-run the test in Windows 8 compatibility mode (see “Run a Program in Compatibility Mode” on page 204).

       If the validation was successful, it shows a green traffic light.
To Create the Report Generation User

This procedure explains how to create the Report Generation User as a local user on the Reporting Server. If your IT policy prohibits such a local user, ask your network administrator to create an equivalent domain user. See Table 11 on page 55.

1. Click Start on the Windows desktop.
2. Right-click Computer and select Manage from the context menu.
   The Computer Manager window opens.
3. Select the node System Tools > Local users and groups.
4. Right-click Users and select New User... from the context menu.
   The New User dialog opens.
5. Enter the user credentials (see Table 11 on page 55):
   b. Full User Name: the same entry as for user name.
   c. Description: you do not need to fill out this field.
   d. Password/Password Confirmation
5. Set the account options:
   a. Clear the check box User must change password at next login.
   b. Select the check box User cannot change password.
   c. Select the check box Password never expires.
   d. Make sure the check box Account is disabled is cleared.
7. Click Create.
8. Click Close.
You may need to manually configure the file permissions and user rights:

If your company’s IT Policy requires you to remove the Report Generation User from the local Users group, or if the built-in security principal NT AUTHORITY\Authenticated Users has been removed from the local Users group, you must manually configure the file permissions and user rights for the Report Generation User.

The necessary file permissions and user rights are listed in the Microsoft Knowledge Base article 812614 (http://support.microsoft.com/kb/812614). In addition, the user needs Read & Execute permissions on the Reporting Services directory tree.

If you keep receiving error 401 Unauthorized, review the Microsoft Knowledge Base article 907273 (http://support.microsoft.com/kb/907273).
To Create a Role for Report Generation

1. Start *SQL Server Management Studio*.
2. In the **Connect to Server** dialog, provide the connection parameters for the Reporting Database:
   - **Server type**: Select *Reporting Services*
   - **Server name**: Select the name of your Reporting Server
   - **Authentication**: Select *Windows Authentication*
3. Click **Connect**
   Because the Reporting Services are started in the background, it may take several minutes to establish the connection.
4. Expand the node *(Your Reporting Server)* > **Security**.
5. Right-click **System Roles** and select **New System Role...** from the context menu.
   The **System Roles** dialog appears.
6. Enter the **Name** of the role (see Table 11 on page 55).
7. Select the check box for the task **Execute Report Definitions**. No other tasks are required.
8. Click **OK**.
   An error message “Object instance not set” may be shown. You can ignore this message.
9. Right-click **System Roles** and select **Refresh** from the context menu.
   The new role is shown in the list.
   Leave the *SQL Server Management Studio* open for the next task.
To Assign the Role to the Report Generation User

Perform the following steps on a client PC or any other remotely connected web client.

1. Start Internet Explorer as administrator.
2. In the address bar, enter the SQL Server Reporting Services URL. By default, the URL is http://<Server name>/reports.
3. In the top right corner of the page, click Site Settings.
4. In the navigation bar to the left, select the Security page.
5. Click New Role Assignment.
6. Enter the user name of the Report Generation User (see Table 11 on page 55).
7. Select the check box for the previously generated role (for example, “Report Generator”).
8. Click OK.
To Verify the Report Server Virtual Directory

You will need this parameter later to configure the Synchronization Service.

1. On the report server, open the *Report Server Configuration Manager*. When the utility starts up, it requests the name of the server to connect to.

2. Check whether the correct name of your Reporting Server is shown in the *Machine Name* field.
   - If a different name is shown:
     a. Enter the name of the Reporting Server (see Table 10 on page 54)
     b. Click *Find*.
        All instances of Reporting Services on that machine are listed in the *Instance Name* drop-down list.
     c. Select the instance you want to use with OpenLAB ECM Intelligent Reporter.

3. Click *Connect*.

4. In the pages list on the left side of the screen, select the *Web Service URL* page.

5. Note down the name of the virtual directory. The name is not case-sensitive.
   - If it is empty, set the name to *ReportServer*. Refer to Microsoft documentation for details on the configuration of the virtual directory.

| Report Server Virtual Directory: | | |
Updating ECM File Transfer Servers

Your ECM system may contain multiple File Transfer Servers. You must carry out the following procedures on at least one of the File Transfer Servers. We recommend to update all File Transfer Servers in your environment.

To update an ECM File Transfer Server, proceed as follows:

1. “To Log on to the Server and Start the CD Installer” on page 141
2. “To Install the Synchronization Service” on page 150
3. “To Configure the Synchronization Service” on page 151
4. “To Configure the Reporting Server’s Database Access and User Parameters” on page 153
5. “To Assign Missing OpenLAB Privileges” on page 156
6. “To Install EZChrom Reader” on page 157

To Log on to the Server and Start the CD Installer

1. Log on to the ECM File Transfer Server as the Network Service User (see Table 12 on page 56).
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
3. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.

   The CD Installer window opens.

   Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Install the Synchronization Service

1 In the **CD Installer** window, click **Install Synchronization Service**. The **ECM Synchronization Service Setup Wizard** opens.

2 Click **Next**.

3 Select the check box to confirm the license agreement.

4 Click **Next**.

5 Provide the customer information (see Table 1 on page 46).

6 Click **Next**.

7 Click **Next** to confirm the setup features. Do not change the feature selection.

8 Click **Install**.

   A progress indicator is shown during the installation.

9 Click **OK**.

10 Click **Finish** to exit the **ECM Synchronization Service Setup Wizard**.

11 Validate the installation.
   
   a On the ECM File Transfer Server, navigate to the installation folder:
      
      `C:\Program Files (x86)\Agilent Technologies\ECM Synchronization Service`
   
   b Right-click the file **ModuleValidation.exe** and run it as administrator.

   If the validation was successful, it shows a green traffic light.
To Configure the Synchronization Service

To configure the Synchronization Service

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open the Synchronization Service Configuration and Maintenance window.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Select Start &gt; All Programs &gt; Agilent Technologies &gt; ECM &gt; Synchronization Service Configuration.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Unlock the fields.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Click the padlock icon 🗝️ in the top left corner</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Configure the Service Configuration tab/ Common subtab.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Select the correct Worker Thread Count number:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Oracle: According to processors (see Table 12 on page 56), max. 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sql Server: Always enter 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Number of threads used by the Synchronization Service.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• With Oracle, the best performance is normally achieved if the number of threads equals the number of processors in the machine. The maximum number of threads is four.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• With SQL Server, always use only one thread.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Configure the Service Configuration tab/ Database subtab.</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Check the settings:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ECM Database credentials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Job Poll Interval/ Retry Connect Interval</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Import Chromatograms Import Spectra</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The ECM Database credentials are automatically filled. If all credentials are valid, the fields are disabled.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Do not change these settings.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If you do not intend to report chromatograms or spectra data, clear these check boxes. The data will then not be extracted and saved into the database. This increases database performance and reduces database space consumption.</td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Click Test Connection.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A confirmation is shown if all the parameters are correct.</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Click 🎂.</td>
<td></td>
</tr>
</tbody>
</table>
To configure the Synchronization Service

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 5    | Configure the Service Configuration tab/ECM subtab. | a) Click the padlock icon in the top left corner to unlock the fields again.  
   b) Enter the URL to your ECM Web Server in the field Server URL.  
   c) Click Test Connection to test whether the ECM API is functional and the Synchronization Service can connect using the built-in admin logins.  
   d) Select the check box Process All. | http://<server name>  
For example: http://ecmserver  
(see Table 14 on page 58)  
Admin logins have been created during ECM setup in the domain BUILT-IN and possibly also in other domains. These admin logins are automatically detected.  
After executing the test, all detected logins are listed in the text box under ECM Login Check with a login succeeded status. |
| 6    | Save the service configuration. | • Click in the top toolbar in the Service Configuration tab. |
| 7    | Start the Synchronization Service. | • Click in the bottom toolbar in the Service Configuration tab.  
• The status StartPending is shown in the status bar while the service is starting.  
• After the service has been started, the status Running is shown. |
| 8    | Check the events. | a) Select the Event Viewer tab  
   b) Click in the top toolbar to refresh the entries.  
   c) Check the entries. There should only be Information type entries, no warnings or errors. |
| 9    | If you did not yet configure the Reporting Server Configuration tab, continue with the next procedure. Otherwise, close the Synchronization Service Configuration and Maintenance window. |
To Configure the Reporting Server’s Database Access and User Parameters

The Reporting Server configuration is saved in the ECM Database. Therefore, it only needs to be configured once in the entire ECM system (even if there are several File Transfer Servers).

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open the Synchronization Service Configuration and Maintenance window.</td>
<td>• Select Start &gt; All Programs &gt; Agilent Technologies &gt; ECM &gt; Synchronization Service Configuration. The service configuration window might still be open from the previous procedure.</td>
</tr>
<tr>
<td>2</td>
<td>Configure the Reporting Server Configuration tab/Database Account subtab</td>
<td>a Click the Refresh icon in the top toolbar to read the current values from the ECM Database. b Click the Copy button to get the database parameters provided on the Service Configuration tab. • If your ECM Database is based on Oracle: • Database System: Oracle. • EZCONNECT String: Here, the connection string is required using the Easy Connect syntax <code>&lt;host&gt;:&lt;port&gt;/&lt;service name&gt;</code>. See Table 7 on page 51. Notice: If you use an Oracle Full Client on the File Transfer Server and an Oracle Instant Client on the Reporting Server, you must manually replace the copied connection string by the Easy Connect syntax. See step 4b on page 155. • If your ECM Database is based on Microsoft SQL Server: • Database System: SQL Server. • Server Name: Name of the ECM Database Server. See Table 8 on page 52.</td>
</tr>
</tbody>
</table>
To configure the Reporting Server’s database access and user parameters

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
</table>
| c    | **Provide the database account used by the Reporter Client:**  
      |       | This account is used to read the contents of the Reporting Database. |
|      | • **User Name**: ACAMLVIEW  
      |      | Password for the user ACAMLVIEW (see Table 9 on page 53). |
|      | • **Password/Confirm Password**  
      |      | This field is intended for future purposes. |
|      | • **Additional Settings**: Do not enter anything here.  
      |      | A confirmation is shown. |
| d    | **Click Test Connection** to make sure all parameters are correct.  
      |      | |

3 Configure the **Reporting Server Configuration** tab/ **User Account** subtab.

| a    | Enter the Windows account of the Reporting Generation User:  
      |       | This account is used on the Reporting Server to generate the reports. |
|      | • **Domain**  
      |      | See Table 11 on page 55. |
|      | • **User Name**  
      |      |  
|      | • **Password/Confirm Password**  
|      |       |  

4 Configure the **Reporting Server Configuration** tab/ **Virtual Directory URL and Test** subtab.

| a    | Enter the **Report Server Virtual Directory URL**.  
      |       | The URL syntax is: http://<server>/<directory>[/<instance>].  
      |      | • <server> is the name of the Reporting Server  
      |      | • <directory> is the name of the report server virtual directory.  
      |      | • <instance> is the name of the SQL Server instance of the Reporting Server. If Reporting Services are installed under the default instance of SQL Server, this value can be omitted.  
      |      | • The name of the virtual directory was verified during the installation of the Reporting Server (see page 141). |
To configure the Reporting Server’s database access and user parameters

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td><img src="image.png" alt="Image" /></td>
<td>• When you run the test for the first time, it can take up to two minutes until the confirmation is shown, because the Reporting Services are started in the background.</td>
</tr>
<tr>
<td></td>
<td><img src="image.png" alt="Image" /></td>
<td>• The test includes several sub-tests. After finishing the test, an additional text field with a detailed result is shown.</td>
</tr>
<tr>
<td></td>
<td><img src="image.png" alt="Image" /></td>
<td>• If the message <strong>Extensions not installed</strong> is shown, follow the procedure “To install Extensions for Reporting Services” on page 143.</td>
</tr>
<tr>
<td></td>
<td><img src="image.png" alt="Image" /></td>
<td>• If the connection to an Oracle database cannot be established, you can use the following exceptional configuration:</td>
</tr>
<tr>
<td></td>
<td><img src="image.png" alt="Image" /></td>
<td>• Create a new tnsnames.ora file on the Reporting Server as described in “Connecting to Oracle With or Without Easy Connect Syntax” on page 202.</td>
</tr>
<tr>
<td></td>
<td><img src="image.png" alt="Image" /></td>
<td>• Note down the net service name from the new tnsnames.ora.</td>
</tr>
<tr>
<td></td>
<td><img src="image.png" alt="Image" /></td>
<td>• Select the <strong>Reporting Server Configuration</strong> tab/Database Account subtab and enter the net service name (TNS Alias) as the <strong>EZCONNECT String</strong>.</td>
</tr>
<tr>
<td>6</td>
<td><img src="image.png" alt="Image" /></td>
<td>• <img src="image.png" alt="Image" /> in the top left corner.</td>
</tr>
<tr>
<td></td>
<td><img src="image.png" alt="Image" /></td>
<td>• <img src="image.png" alt="Image" /> in the top left corner.</td>
</tr>
</tbody>
</table>

6 If you did not yet assign the missing OpenLAB privileges, continue with the next procedure. Otherwise, close the **Synchronization Service Configuration and Maintenance** window.
To Assign Missing OpenLAB Privileges

ECM system administrators may need to be granted additional OpenLAB privileges. These privileges are required to access locations, drawers, cabinets, and folders in ECM from the OpenLAB Control Panel. You must be able to access these LCDF paths in order to create reporting projects.

1. Select the **ECM Privileges Setup** tab.

2. Click the Refresh icon in the top toolbar to check the currently assigned privileges for all ECM administrators.

   The system checks all users with the ECM system administrator role. The results are shown in the text box. If privileges are missing, a red warning message is displayed under the text box.

3. If privileges are missing:
   a. Select **ECM Privileges > Assign OpenLAB privileges**.
   b. Enter the credentials of the ECM database user (see Table 7 on page 51 for Oracle or Table 8 on page 52 for Microsoft SQL Server, respectively).
   c. Click **Yes** to assign the missing OpenLAB privileges.

   The results of the privilege check are automatically refreshed. All required privileges are now assigned.

   d. Close the **Synchronization Service Configuration and Maintenance** window.
To Install EZChrom Reader

1. In the CD Installer window, click Install EZChrom Reader.
   The Agilent OpenLAB ECM Intelligent Reporter EZChrom Reader Setup Wizard opens.

2. Click Next.

3. Select the check box to confirm the license agreement.

4. Click Next.

5. Provide the customer information (see Table 1 on page 46).

6. Click Next.

7. Click Next to confirm the setup features. Do not change the feature selection.
   A progress indicator is shown during the installation.

8. Click Finish to exit the wizard.
Updating ECM Web Servers

To update an ECM Web Server, proceed as follows:
1 “To Log on to the Server and Start the CD Installer” on page 158
2 “To Install the Data Services” on page 159
3 “To Configure the Data Services” on page 159

To Log on to the Server and Start the CD Installer

1 Log on as the *Network Service User* to the ECM Web Server (see *Table 12* on page 56)
2 Insert the *OpenLAB ECM Intelligent Reporter* installation medium in your DVD drive.
3 If the installer does not run automatically, double-click *CDInstaller.exe* in the *Autorun* directory of the installation medium.

The *CD Installer* window opens.

Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Install the Data Services

1. In the CD Installer window, click Install Data Services.
   The OpenLAB ECM Data Services Setup Wizard opens.
2. Click Next.
3. Confirm the license agreement, and click Next.
4. In the Select Installation Folder page:
   a. Provide a valid installation.
   b. Make sure that Everyone is selected.
   c. Click Next.
5. Click Next to start the installation.
   A progress indicator is shown during the installation.
6. Click Close to exit the wizard.

To Configure the Data Services

1. Select Start > All Programs > Agilent Technologies > ECM > Data Services Configuration.
   The Agilent OpenLAB Data Services Configuration window opens.
2. Click Local Host Name to enter the name of the local host (ECM Web Server) into the Host Name field.
   Alternatively, you can manually enter the name of a different ECM Web Server.
3. Click Read to obtain the current configuration for the given host name (at this time, it is still empty).
   The fields required to establish a database connection are automatically filled.
4. Click Test Connection.
   A success message is shown.
5. Select the Service Test and Installation Qualification subtab.
6 Click Run Test and Installation Qualification. Each of the different services responds with a success message. There should be no errors or warnings.

7 Click Save Log to save the results, for example, under c:\Program Files (x86)\Agilent Technologies\ECM Data Services.
Adding Agilent Sample Templates to OpenLAB ECM

The Agilent sample templates may be accessed by any client. Therefore, you should provide them before installing the ECM clients.

1. Log on to any Windows client with access to OpenLAB ECM.
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
   Alternatively, you can access the installation medium via the network (UNC syntax is possible).
3. Open a browser window and connect to the ECM Web Server. Log in as a user with the right to add content (for example, as ECM administrator, see Table 13 on page 57).
4. Select a suitable LCDF path in your ECM environment for the Agilent sample report templates (see Table 2 on page 46).
5. If your ECM Database is based on Oracle: Add all the files from the UCL Report Templates/Oracle directory on the installation medium to this ECM folder.
   – or –
   If your ECM Database is based on Microsoft SQL Server: Add all the files from the UCL Report Templates/SQLServer directory on the installation medium to this ECM folder.
Preparing Reporter Clients

To prepare a reporter client, carry out the following procedures:

1. “To Install or Update the OpenLAB Client” on page 162
2. “To Log on to the Client and Start the CD Installer” on page 162
3. “To Check the ECM Client” on page 163
4. “To Install the Reporter Client” on page 163

To Install or Update the OpenLAB Client

With OpenLAB ECM Intelligent Reporter A.02.05, you must use the OpenLAB Client software from OpenLAB CDS A.02.0x. You find all required installation files on the OpenLAB CDS installation DVD. For details on the installation or update procedures, refer to the respective OpenLAB CDS installation guide.

If you do not have an Agilent OpenLAB CDS installation DVD, please contact Agilent Support.

To Log on to the Client and Start the CD Installer

1. Log on as an administrator to the client (see Table 15 on page 59).
2. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive.
3. If the installer does not run automatically, double-click CDInstaller.exe in the Autorun directory of the installation medium.

The CD Installer window opens.

Alternatively, you can access the installer files on the installation medium via the network (UNC syntax is possible).
To Check the ECM Client

An ECM client is required on each instrument client. Open the ECM URL in a browser window to check if the client has been installed properly.

To Install the Reporter Client

1. In the CD Installer window, click **Install Reporter Client**.
   An installation wizard opens.
2. Click **Next**.
3. Select the check box to confirm the license agreement.
4. Click **Next** to continue.
5. Provide the customer information (see Table 1 on page 46).
6. Click **Next** to continue.
7. Click **Next** to confirm the setup features.
8. Click **Install**.
   A progress bar is shown during the installation.
9. Click **Finish**.
10. Validate the installation.

   a. Select **Start > All Programs > Agilent Technologies > OpenLAB > OpenLAB ECM Intelligent Reporter Validation**.
   b. Start **Data Selection & Report Preview**. Run the program as administrator.
      If the validation was successful, it shows a green traffic light.
   c. Start **OpenLAB Control Panel Plug-in**. Run the program as administrator.
      If the validation was successful, it shows a green traffic light.
8 New Installation with ECM 3.5 Infrastructure
Preparing Reporter Clients
This chapter describes the update of previous OpenLAB ECM Intelligent Reporter versions to version A.02.5 using ECM 3.5 infrastructure. As previous versions did not run under ECM 3.5, the update procedures include an update of the ECM infrastructure and are actually new installation procedures.
Updating Previous Versions

The upgrade of an existing ECM system to the current version 3.5 is described in the *Enterprise Content Manager Version 3.5 Upgrade Guide* located on your OpenLAB ECM installation media.

By moving the OpenLAB Shared Services and ECM databases to new servers, all data is transferred to the new servers as well. The data includes all report templates, raw result data, users and privileges, and reporting project settings.

As raw result data can be synchronized with ECM Intelligent Reporter database tables at any time, the time consuming migration of cached ECM IR can be omitted by dropping and re-synchronized the cached content. This procedure also takes care of shrinking and compacting the database.

Page 4 of the *Enterprise Content Manager Version 3.5 Upgrade Guide* shows a brief overview of the procedure. It needs to be extended by the steps marked in *italic letters* in the following list:

- Stop Clients: Stop all client applications connected to ECM server(s)
- Finish processing: Wait until all server processing to complete
- Backup systems: Backup DB, other server systems and local file storages
- *Drop the ECM IR database tables schema according to chapter 11 (Uninstalling the Reporting database)*
- *Backup DB again*
- Prep New Systems: Prepare new system with new OS
- Restore/Upgrade DB
- Restore Permanent Storage Locations
- Restore Archive Storage locations
- Install ECM server software: Install and configure new ECM servers. Decommission old servers
- Upgrade ECM client software
- *Install ECM IR server and client components according to Chapter 8*
- Partial or full re-synchronization of ECM IR data
Full re-synchronization of ECM IR data

Use the synchronization service configuration tool installed on the ECM file transfer server to start a full synchronization of the reporting database with ECM.

The Re-synchronization may take several hours and can be monitored in the Synchronization queue tab.

1. Start synchronization service configuration tool.
2. Switch to the Database Maintenance tab.
3. Press the Synchronize Relational Database with ECM button.
4. Enter the password of the ECM schema user when prompted.

If you are using a SQL server hosted database you could re-synchronize dedicated subsets of your CDS data stored in ECM. Read the chapter “Using the ACAML Data Retention Tool” on page 185 for more information.
9 Updating Previous Versions Using ECM 3.5 Infrastructure

Full re-synchronization of ECM IR data
Before anyone can start working with OpenLAB ECM Intelligent Reporter, you must configure the required access privileges and reporting projects. There are multiple ways to accomplish this; this chapter describes the recommended approach.
Creating a User Group in ECM

You must prepare a specific user group in ECM for template editors. All ECM users who will edit report templates in OpenLAB ECM Intelligent Reporter must be members of this group.
Groups, Roles and Privileges in OpenLAB Control Panel

To configure the groups, roles, and privileges in an appropriate way in OpenLAB Control Panel, carry out the following procedures:

1. “To Import the ECM Group to OpenLAB Control Panel” on page 171
2. Optional: “To Import ECM Users to OpenLAB Control Panel” on page 171
3. “To Assign the Template Editor Role to the Group” on page 172

If you use ECM Enterprise with more than one account, you must carry out these procedures for each account!

To Import the ECM Group to OpenLAB Control Panel

1. Start OpenLAB Control Panel as administrator.
2. From the navigation pane, select Administration > Groups.
3. In the Groups toolbar, select Import.
4. In the Search Groups dialog box, search for the name of the previously prepared ECM group for report template editors.
5. Select the ECM group under Search Results, and click Add.
   The ECM group is then listed under Selected Groups.
6. Click OK.

To Import ECM Users to OpenLAB Control Panel

You can import users from ECM, if you want to assign them to specific groups or grant them specific privileges in OpenLAB Control Panel. However, if you follow the approach described in this manual, it is not required that you import any individual users. It is sufficient to configure
the group membership of the required users in ECM; when the users log in to OpenLAB Control Panel, the information on group membership is automatically requested from ECM.

**To Assign the Template Editor Role to the Group**

1. In OpenLAB Control Panel, select *Administration > Groups* from the navigation pane.
2. Select the previously imported group for report template editors.
3. In the *Groups* toolbar, select *Edit*.
4. Select the *Role Membership* tab.
5. Select the *Intelligent Reporter Template Editors* role.
   The following privileges are assigned to this role:
   - **Project Management / View project or project group**
     This privilege is required to view the projects in the Reporter Client.
   - **Project Management / View Edit Report Templates Tab**
     This privilege is required to view the *Edit Report Templates* tab in the Reporter Client.
6. Click *OK*. 
Reporting Projects in OpenLAB Control Panel

In order to work with OpenLAB ECM Intelligent Reporter, you must first create reporting projects in OpenLAB Control Panel. The following sections describe how to create, configure, and administrate these projects.

To Create a Reporting Project

Carry out the following procedure for each new reporting project.

1. From the navigation pane, select Projects.
2. Select the Projects root node or another project group where you want to add a project.
3. In the Projects and Groups toolbar, select Create Project.
4. Under Project folder path, provide the ECM path that contains the data you want to report.
   Alternatively, you can click Browse and select a path. You can select a location, a cabinet, or a drawer in ECM.

5. Under Description, provide a description of the project.
6. Select IntelligentReporter as the Application. This check box is only available if OpenLAB Intelligent Reporter is installed on your system.
7. Select the Intelligent Reporter tab.
8. Enter a valid ECM path under Default Filter Path.
   By default, the project folder path is used. This setting affects the Reporter Client: If a user has selected the given project and clicks Open Filter, this path is opened by default.

NOTE
Make sure that you do not need to change the project path in ECM at a later point in time. Changing the project path in ECM after creating the reporting project in OpenLAB Control Panel will make the reporting project unavailable in the Reporter Client.
9 Enter a valid ECM path under Default Template Path.
   By default, the project folder path is used. This setting affects the
   Reporter Client: If a user has selected the given project and clicks Open
   Report Template, this path is opened by default.

10 Consider selecting the check box Users can select other folders.
   If this check box is selected, users can select folders other than the
   ones defined above in the default paths. If the check box is cleared,
   users can only access the templates and filter definitions contained in
   the default paths.

11 Select OK.

Working with Project Groups

You can create a tree of different projects in OpenLAB Control Panel. A
node containing multiple sub-projects is then called a project group. You
can change the default path settings for all projects in a project group in
a single step.

This allows you to create a central ECM path where you provide report
templates and filter definitions that can be shared by all projects.

To apply path settings to a project group

1 From the navigation pane, select Projects.
2 Select the project group for which you want to change the path settings.
3 Modify the path settings in the Intelligent Reporter tab.
   You can only change the settings for the default filter path and default
   template path for a project group. The path settings for the project
   itself (project folder path) always remain specific for each project.
4 In the Intelligent Reporter toolbar, select Apply settings to group.
   The new settings are applied recursively to all subnodes.
Migration of Intelligent Reporter Reporting Projects to OpenLAB Shared Services

With the introduction of OpenLAB Shared Services in OpenLAB ECM Intelligent Reporter A.02.02, the reporting project management moved from OpenLAB ECM to the OpenLAB Shared Services database. A migration of existing projects is technically not feasible. Therefore you must set up these reporting projects from scratch.

In order to get an overview of decommissioned ECM projects, the OpenLAB ECM Intelligent Reporter installation medium provides a report template that generates a report listing all former ECM projects. The legacy_projects.rdl report template is available in the sample template set uploaded to ECM at the time of installation.
10 Configuration
Reporting Projects in OpenLAB Control Panel
11 Database Maintenance

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This chapter contains information on the signal data, database size, and database maintenance.
Data Retention Management Tools

Database maintenance procedures and tools are essential for efficient usage of OpenLAB ECM Intelligent Reporter installations.

Despite the various monitoring and maintenance tools offered for Microsoft SQL server and Oracle databases, the usage of application specific procedures allow further performance optimization.

Agilent OpenLAB ECM Intelligent Reporter Data Retention Management Tools consists of two parts:

- The Signal Data Retention tool to execute data retention policies on the signal data stored in the Intelligent Reporter data cache. This tool is automatically installed with OpenLAB ECM Intelligent Reporter. See “Using the Signal Data Retention Tool” on page 183.

- The ACAML Data Retention Tool that offers result deletion and restore options independent of the OpenLAB ECM archiving mechanism. This tool is available for SQL server only and gets automatically installed with OpenLAB ECM Intelligent Reporter. See “Using the ACAML Data Retention Tool” on page 185.

Database Filling over Time

With increasing amount of results stored in the database, all tables grow and the search and sort performance drops with increased filling level.

As long as the database files are large enough, the tables are automatically extended in physical size. However, multiple table extensions cannot be queried and sorted as quickly as one homogeneous table. At a certain point one of the database files is filled up and no further data can be spooled into the database. It is therefore essential to establish a data expiration and deletion process. The following figure shows the database filling over time with such a process established.
In order to keep the size and performance of a database in a stead state, it is essential to remove as much unused data as new data was added within a certain time frame.

For more information on ECM Archiving, refer to the *OpenLAB Enterprise Content Manager Administrator’s Guide*.

### Contribution of Signal Data to Database Growth

In order to generate chromatographic (2D) and spectral (3D) data in OpenLAB ECM Intelligent Reporter outputs, copies of the raw information need to be available in a moderately compressed format. The ACAML tables of the ECM database act as a cache to keep this information as long as the data does not get archived by the ECM data retention mechanism.
Depending on the data retention period in ECM, the amount of data stored in the ACAML tables can lead to substantial database growth and performance drop. The growth rate and database size are influenced by the following factors:

- The number of instruments connected to OpenLAB
- The workload
- The data retention period/archiving intervals
- The analytical technique or detector types: LC or CE – diode array detectors or fluorescence detectors may produce spectral information that outgrows a plain chromatogram by an order of magnitude

Data retention periods are typically chosen far too high to keep the ACAML signal data file at a decent size. In many cases the OpenLAB ECM archiving mechanism is not used at all to maintain the size of the ACAML database tables.

The following example illustrates the contribution of chromatographic data and spectral data to the overall OpenLAB ECM database size. These numbers may vary over a broad range depending on the relative amount of LC spectral data stored in OpenLAB ECM.

![Figure 2 Example: Spectral data and chromatographic data](image)

The installation medium (`\support\tools\database scripts`) provides scripts to measure and monitor these important numbers.

The ACAML Data Retention Tool provides means to delete cached, but unused results based on age, storage location, ECM account, or combinations of these parameters. It also provides means to add deleted
data back to cache. DB administrators can set up data retention plans and define individual retention times for analysis results and the related chromatograms and spectra.

**Planning Data Retention Policies**

A good data retention policy is a reasonable trade-off between the effort it takes to restore deleted data, in the rare case the data needs to be reported again, and the effort to keep a million of peak results and chromatograms vital in a large database.

The required period for data availability also depends on the report types generated by OpenLAB ECM Intelligent Reporter. Single sequence summary reports may or may not show chromatograms, whereas peak spectra are typically not shown. Instrument usage reports typically span over larger time ranges but do not show chromatograms.

Hence, the data retention periods may differ significantly for spectra, chromatograms, and results. This could be reflected in the data retention times and individual deletion schedules. The following table shows a possible schedule and the tools to be used.

<table>
<thead>
<tr>
<th>Data type</th>
<th>Deleted from cache after</th>
<th>Tool</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spectra</td>
<td>1 month</td>
<td>Signal Data Retention Tool</td>
<td>Spectral purity reports on data older than 1 month requires re-synchronization of the data set</td>
</tr>
<tr>
<td>Chromatograms</td>
<td>3 months</td>
<td>Reports including chromatograms on data older than 3 months requires re-synchronization of the data set</td>
<td></td>
</tr>
<tr>
<td>Results</td>
<td>3 years</td>
<td>ACAML Data Retention Tool or ECM archiving</td>
<td>System suitability reports based on 3 year’s data are possible, but chromatograms and spectra are missing</td>
</tr>
</tbody>
</table>
If the synchronization of spectra is already de-activated in the synchronization service configuration, the data deletion schedule may look like this:

Table 2  Example maintenance plan with deactivated spectra synchronization

<table>
<thead>
<tr>
<th>Data type</th>
<th>Deleted from cache after</th>
<th>Tool</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromatograms and results</td>
<td>2 years</td>
<td>ACAML Data Retention Tool or ECM archiving</td>
<td>Spectral purity reports are not possible. System suitability reports based on 2 year’s data are possible, including chromatograms.</td>
</tr>
</tbody>
</table>

Depending on the database server hardware, configuration, and database maintenance plans, the data retention period can be increased without significant loss of performance.

**NOTE**
Increasing the data retention period increases the required storage size, backup effort and maintenance effort and vice versa.

**NOTE**
The Delete operations performed by the Data Retention Management Tools do not affect the master copy of the raw data and result files stored in the primary storage location of OpenLAB ECM.

If the database is operated with recovery model full (SQL Server), every large delete operation causes the transaction log file to grow rapidly.

You should perform a full back-up and shrink from time to time to reduce the size of the transaction log.

To Change Import Settings in the Synchronization Service

If you do not intend to report spectral data or chromatograms with OpenLAB ECM Intelligent Reporter from now on, carry out the following procedure to stop extracting the raw data into the database. This will result in an increased performance of the result synchronization process and in reduced database space consumption.
Data recovery may consume a lot of time, disk space and server performance

If you ever decide to report chromatograms and spectra at a later point in time, you may activate both options again. However, this will not trigger the re-synchronization of data that was acquired while one or both options had been cleared. You will need to re-synchronize the entire database. Alternatively, you can re-synchronize individual SSIZIP containers by uploading the file to OpenLAB ECM again.

1 Click 🔄 to refresh the configuration shown in the user interface.
2 Click 🕵️‍♂️ to unlock the fields.
3 Click 🚪 to stop the service.
4 Clear the **Import Spectra** and/or **Import Chromatograms** check box.

### Using the Signal Data Retention Tool

The Signal Data Retention Tool is available for both SQL Server and Oracle databases.

You should monitor the following items on a regular basis due to their major contribution to the overall disk-filling level:

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Items to be monitored</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>SQL Server</strong></td>
</tr>
<tr>
<td></td>
<td>Hot backup files</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signal data files</td>
</tr>
</tbody>
</table>

1 Make sure that the Synchronization Service is stopped.

a Select **Start > All Programs > Agilent Technologies > ECM > Synchronization Service Configuration** to open the **Synchronization Service Configuration and Maintenance** window.
11 Database Maintenance
Data Retention Management Tools

b Check the status of the Synchronization Service in the status bar. If it is not stopped already, click to stop it.

2 Create a full back-up of the ECM database.

3 If you intend to delete larger amounts of data and shrink the database significantly: Turn off the archive log mode (Oracle) or run an SQL Server maintenance plan to shrink the transaction log file (SQL Server).

4 Select Start > All programs > Agilent Technologies > ECM > SignalDataRetention.

5 Authenticate as an ECM database user against the database.

6 Select the required ECM Account.

7 Select the type of signal to be removed.

8 Select and define filter conditions to search result sets where chromatograms and/or spectra should be purged.

A filter condition must be enabled by checking it. If more than one condition is enabled, the conditions are combined with AND logic. There are the following filter conditions for file search:

- **Date Range** can be used to define a time interval, to search for files which are older than the given point of time.

- **File Location** defines an LCDF path with optional wild cards, in which files should be searched. You can use the “%” wildcard.

9 Click Get files to get the files by filter condition.

The query result acts as a work list for the purge operation.

10 Review and modify the purge worklist.

The columns **Chroms** and **Spectra** show which kind of signal data is stored in the database. To remove files for which signal data should not be cleared up:

a Click the row to select it (multiple selection by [CTRL] + click).

b Press [Delete].

11 When you have defined the final list, click Cleanup Files.

12 Click OK to confirm the purging of the signal data.

The work list will be moved to the cleanup queue, which is processed from top to the bottom. This queue runs in the background and can be monitored in the Cleanup Queue tab.

The deletion of the spectral information is traced in the audit trail of the result set.
13 If required, you can add files during cleanup.

You can go back to the Filter Conditions tab and select a new set of files to be cleaned up. This selection workflow is completely independent of the cleanup. You can simply add the new file set to the cleanup queue by clicking the Cleanup Files button.

14 For Oracle databases: After the entire work list is processed, turn on the archive-log mode again.

15 For SQL Server databases: We recommend to perform a full back-up of the transaction log file, followed by a shrink procedure.

16 Restart the Synchronization Service.

**Using the ACAML Data Retention Tool**

The ACAML Data Retention Tool is available only with SQL Server hosted databases.

The ACAML Data Retention Tool makes use of the *SQL Server Agent Job* feature included with every SQL Server installation. A default configuration of the job is provided with the product installation. By default, the job is deactivated but configured to be executed on a daily basis after activation. Hence the ECM File Transfer Server and the database server need to have sufficient performance buffer to delete old data as fast as new data gets added. If the average workload of the lab remains the same over time, the database will not grow significantly.

The planned deletion of data makes use of the SQL Server Agent Job feature included with every SQL server installation. A default configuration of the job is provided with the installation. Per default this job is disabled and not functional.

The following section describes how to configure and enable the job according to the data retention policy described in the previous section.

**To Configure the SQL Server Agent Job**

1. Start the SQL Server Agent service in the Windows service panel.
2. Set the start-up mode to Automatic, if not already done.
3 Open SQL Server Management Studio, and connect to the ECM database server as user SA.

4 In the Object Explorer:
   a Navigate to **SQL Server Agent > Jobs**.
   b Select the job **ACAML_DatabaseCleanUp**.
   c Right-click this job, and select **Properties** from the context menu.
      The **Job Properties** dialog opens.

5 Select the **Steps** page.

6 Select the step **DeleteFiles**, and click **Edit**.
   The **Job Step Properties** dialog opens.

7 Select the ECM database from the **Database** drop-down list.
8 Customize the command.

The syntax of the job command is:

```
ACAML.FILES_DELETEBYIMPORTDATE <Account Name>, <LCDF Location>, <Days until Retire>
```

The parameters can be customized as follows:

**Table 4 Parameters for SQL Server Agent job command**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Default value</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;Account Name&gt;</code></td>
<td>Name of ECM account</td>
<td>All ECM accounts</td>
<td>’PROD’</td>
</tr>
<tr>
<td><code>&lt;LCDF Location&gt;</code></td>
<td>ECM location\cabinet\drawer\folder path</td>
<td>All ECM locations</td>
<td>’\QA\LAB1%’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>In this example, all results</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>are stored in location QA and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>drawer Lab1. Note: You can use SQL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>wildcards ’%’ and ‘_’.</td>
</tr>
<tr>
<td><code>&lt;Days until Retire&gt;</code></td>
<td>Data retention period in days (number of days</td>
<td>180 days</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>since last time imported). Older data or revisions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>will be deleted\a.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\a In cases where a SSIZIP file is stored in several ECM folders, the parameter returns the latest synchronization time stamp across all folders (Select filelocation, importdate from acaml.files where filelocation=’filename’)

**NOTE**

Always enclose strings with single quotes.

LCDF locations must always start with ‘\’ as root.

String comparison is case insensitive.

Wrong or misspelled strings will not trigger any deletion.

Example commands:

- This command will erase all results from all ECM accounts older than 6 months:

  ```
  ACAML.FILES_DELETEBYIMPORTDATE DEFAULT, DEFAULT, 180
  ```
11 Database Maintenance
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- This command will delete all the results stored in the ECM account 'PROD' in the ECM drawer '\RD\LAB1', if the data was uploaded at least 1 year ago:
  
  `ACAML.FILES_DELETEBYIMPORTDATE 'PROD', '\RD\Lab1\%', 365`

- You can also add multiple commands to a single job. This allows defining individual data retention periods by storage locations, and implicitly by reporting projects. For example:

  `ACAML.FILES_DELETEBYIMPORTDATE 'PROD', '\RD\Lab1\%', 360`
  `ACAML.FILES_DELETEBYIMPORTDATE 'PROD', '\RD\Lab7\%', 200`
  `ACAML.FILES_DELETEBYIMPORTDATE 'PROD', '\RD\Lab9\SectionA\%', 30`

The Deletion process may consume a lot of performance

If the data retention period is set too short, the first test run of the `ACAML_DatabaseCleanUp` job may produce a high workload on the database. Depending on the configured retirement rules, a significant amount of file deletion requests may be placed in the synchronization queue. The processing of these file deletion requests will affect the database performance and slow down the whole system!

The purpose of the data retention policy is to keep the ACAML tables of the ECM database at a constant size. However, if you use the tool to shrink the database content, you should perform the deletion in smaller chunks to avoid a longer lasting blockage of the synchronization service.

- We recommend to start with a large cut-off period such as 500 days, and reduce the value after performing initial performance tests for the deletion process.

9 Click OK to confirm the settings and close the Job Step Properties dialog.
10 Select the Schedules page.
11 Select the schedule EachDay, and click Edit.

   The Job Schedule Properties dialog opens.

12 Review the schedule.

   If required, you can modify the schedule, for example, that the job is only executed every week on Saturday at 11 p.m.

   We recommend to leave these schedule settings unchanged.
Impact on performance

The detected results will not be deleted directly by the job. They will be placed in the synchronization queue. From there the synchronization service will process each file deletion in a sequential order. If a nameable count of files must be deleted, the server will be busy, and all other operations will have a noticeable decrease of performance.

- We recommend to run the job during periods where as few as possible users are connected to the system.

---

13 Click OK to confirm the settings and close the Job Schedule Properties dialog.

14 Click OK to confirm the settings and close the Job Properties dialog.

15 Enable the ACAML_DatabaseCleanup job as described in the following procedure.

The job will only be executed if you enable it.

To Enable or Disable an SQL Server Agent Job

1 Open SQL Server Management Studio and connect to ECM database server as user SA.

2 In the Object Explorer:
   a Navigate to SQL Server Agent > Jobs.
   b Select the Job ACAML_DatabaseCleanup.
   c Right-click the job, and select the required state:
      Select Enable when a job is disabled and you want to enable it.
      Select Disable when a job is enabled and you want to disable it.

To Test a Database Clear-Up Job

Use the following procedure to test the execution of a job independently of the configured schedule.

---

CAUTION

Data Impact on performance

The detected results will not be deleted directly by the job. They will be placed in the synchronization queue. From there the synchronization service will process each file deletion in a sequential order. If a nameable count of files must be deleted, the server will be busy, and all other operations will have a noticeable decrease of performance.

- We recommend to run the job during periods where as few as possible users are connected to the system.

NOTE

We recommend to run large test jobs during periods where as few as possible users are connected to the system.
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1. On the FT Server: Open the **Synchronization Service Configuration** panel.
2. Select the **Synchronization Queue** tab.
3. Stop the synchronization service.
4. Refresh the display, or set automatic refresh: **Synchronization Queue > Start/Stop Update**
5. On the database server (or any SQL server management client): Open SQL Server Management Studio and connect to ECM database server as user SA.
6. In the Object Explorer:
   a. Navigate to **SQL Server Agent > Jobs**
   b. Select the job **ACAML_DatabaseCleanUp**
   c. Right click the job, and select **Start Job at Step...** from the context menu.
      The **Start Jobs** dialog opens and shows the status of job execution.
7. On the FT Server: Inspect the **Synchronization Queue**, and start the service to proceed with the result deletion.

**To Review the Job Execution Log**

1. Open SQL Server Management Studio and connect to ECM database server as user SA.
2. In the Object Explorer:
   a. Navigate to **SQL Server Agent > Job Activity Monitor**.
   b. Right-click **Job Activity Monitor**, and select **View Job Activity** from the context menu.
3. In the **Job Activity Monitor** dialog, right-click **ACAML_DatabaseCleanUp**, and select **View history** from the context menu.
4. In the Log File Viewer dialog, select a specific line of history, and review the log in the details window.

**To Re-Synchronize Deleted Results**

To revert clean up actions, you can reimport the deleted results to the ACAML database. For that a manual call of a stored procedure is required.
To Edit the Database Job

1. Open **SQL Server Management Studio** and connect to ECM database server as user SA or ECM database user.

2. In the Object Explorer, right-click ECM database node, and select **New Query** from the context menu.

3. To check the database selection of the query: Check the content of drop-down list in the toolbar, or check the text in the status bar. Ensure that the ECM database is selected.

4. Enter the following SQL code:
   
   ```sql
   EXEC ACAML.FILES_RESYNC <Acc. Name>, <LCDF Location>, <File Name>
   ```

   For example:
   
   ```sql
   EXEC ACAML.FILES_RESYNC 'XSR1', '\L1\%', null
   ```

   - 'XSR1': Only ECM account ‘XSR1’ will be searched.
   - '\L1\%': All files under the location ‘\L1’ are investigated.
   - null: All files will match.

5. To run the clear command, press **F5** or choose **Query > Execute**. A message window will list all found files.

---

**CAUTION**

**Re-synchronization may slow down the whole system**

Please be aware, that the run of the ACAML.FILES_RESYNC procedure may produce a high workload on the database and the file transfer server. Depending of the configured search parameters, a significant amount of file import requests may be placed in the synchronization queue. The processing of these file import requests will affect the database performance and slow down the whole system!

---

**Table 5** Parameters of the Resync SQL query

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Acc. Name&gt;</td>
<td>Name of ECM account (e.g. 'PROD')</td>
</tr>
<tr>
<td>&lt;LCDF Location&gt;</td>
<td>ECM LCDF path, SQL wildcards '%' and '_' can be used</td>
</tr>
<tr>
<td>&lt;File Name&gt;</td>
<td>ECM file name, SQL wildcards '%' and '_' can be used</td>
</tr>
</tbody>
</table>

---
6 On the File Transfer Server, check the queue of Synchronization Services.

All available SSIZIP files that are not yet synchronized with the ACAML result tables are added to the job queue of the Synchronization Service. The service processes the list and will import the files into the ACAML database.

You can repeat the manual re-synchronization with different parameters as many times as required.

If the same re-synchronization job is executed twice, no new jobs will show up in the synchronization queue.

**Job Collision Resolution**

If clean up and re-synchronization requests on the same set of files are issued in between a very short time interval, a collision of the delete and import may happen.

1 To observe this, open the Synchronization Service Configuration tool and select the **Synchronization Queue** tab.

The error message typically looks like this:

*Execution of stored procedure 'ACAML.FILES_DELETEBYECMID' failed: 'The current transaction cannot be committed and cannot be rolled back to a savepoint. Roll back the entire transaction.‘*

This is not an error but a warning only. The database just detects a conflict, that a transaction cannot be completed successfully. The transaction is rolled back to restore a consistent database content.

2 To re-submit the job to the synchronization service, call the menu **Synchronization Queue > Retry All Jobs**.

**Manual File Retirement**

It's also possible to do a manual clean-up of the ACAML database tables. This can be done on top or instead of the job-based mechanism.

The procedure is identical to the on described in “To Re-Synchronize Deleted Results” on page 190. However, the syntax of the SQL command is the following:
EXEC ACAML.FILES_DELETEBYIMPORTDATE <Acc. Name>, <LCDF Location>, <Days until Retire>

The parameters can be customized as follows:

Table 6 Parameters for SQL Server Agent job command

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Default value</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Account Name&gt;</td>
<td>Name of ECM account</td>
<td>All ECM accounts</td>
<td>'PROD'</td>
</tr>
<tr>
<td>&lt;LCDF Location&gt;</td>
<td>ECM location\cabinet\drawer\folder path</td>
<td>All ECM locations</td>
<td>'\QA\LAB1%'</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>In this example, all results are stored in location QA and drawer Lab1. Note: You can use SQL wildcards '%' and '_'</td>
</tr>
<tr>
<td>&lt;Days until Retire&gt;</td>
<td>Data retention period in days (number of days since last time imported). Older data or revisions will be deleteda.</td>
<td>180 days</td>
<td>180</td>
</tr>
</tbody>
</table>

a In cases where a SSIZIP file is stored in several ECM folders, the parameter returns the latest synchronization time stamp across all folders (Select filelocation, importdate from acaml.files where filelocation='filename')

For example:

EXEC ACAML.FILES_DELETEBYIMPORTDATE 'XSR1', '\L1\C1\D1\%', 90
- 'XSR1': Only ECM account ‘XSR1’ is cleaned up.
- '\L1\C1\D1\%': All results stored in files under the location ‘\L1\C1\D1’ are deleted.
- 90: All results older than 90 days will be deleted.

The manual retirement can be repeated with different parameters as many times as required.
Cleaning up may slow down the whole system

Please be aware, that the run of the ACAML.FILES_DELETEBYIMPORTDATE procedure may produce a high workload on the database. Depending of the configured retirement parameters, a significant amount of file deletion requests can be placed in the synchronization queue. The processing of these file deletion requests will affect the database performance and slow down the whole system.

Tracing the delete operation in the ECM Audit Trail

Each delete or re-sync action of a specific file is stored in the ECM Audit. To check the audit trail, open the ECM Explorer and navigate to the desired file.

For each delete and import action a new entry is generated in the audit trail.

The entry is written when the delete or import was successfully processed by the Synchronization Service. Thus, there may be a time gap between issuing the delete or re-sync request and the final execution.
Uninstalling the Reporting Database

If you uninstall the Reporting Database, the entire Reporting Database, including its content, is deleted. Recovering the data can be very time-consuming.

To uninstall the Reporting Database with Oracle

1. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive and navigate to the folder DBBuild\Oracle.
2. Execute UninstallOracle.cmd.
   You need the password for the user SYS.
3. Follow the instructions.
   When finished, the message Uninstallation finished is shown in the command window.
4. Press any key to close the command window.

To uninstall the Reporting Database with Microsoft SQL Server

1. Start the SQL Server Activity Monitor. If there are any open or hanging transactions, you must first commit them or roll them back before starting the uninstallation.
   Alternatively, you can try to detach the database. If you can detach it, there are no open or hanging transactions.
2. Disable all SQL Server Agent jobs of the Signal Data Retention Tool.
   Only if all of these jobs are disabled, the foreign keys of some ACAML tables can be deleted during uninstallation.
3. Insert the OpenLAB ECM Intelligent Reporter installation medium in your DVD drive and navigate to the folder DBBuild\SQLServer.
   You need the password for the user SA.
5 Follow the instructions.
   When finished, the message Uninstallation finished is shown in the command window.

6 Press any key to close the command window.
12 Appendix

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Reporting Services on Microsoft SQL Server

With a new installation of Microsoft SQL Server, you can optionally install Reporting Services as part of the new installation. Perform the installation according to the Microsoft documentation, and choose a default configuration for the reporting services. After a new installation, carry out the following procedures:

1. “To Configure the Windows Firewall” on page 198
2. “To Update Microsoft SQL Server 2008 R2 with SP1” on page 200
3. Verify the default configuration as described in “To Configure Microsoft SQL Server Reporting Services” on page 200

To add the Reporting Services to an existing Microsoft SQL Server, carry out the following procedures:

1. “To Configure the Windows Firewall” on page 198
2. “To Add Reporting Services to Microsoft SQL Server” on page 199
3. “To Update Microsoft SQL Server 2008 R2 with SP1” on page 200
4. “To Configure Microsoft SQL Server Reporting Services” on page 200

To Configure the Windows Firewall

Report server applications and published reports are accessed through URLs that specify an IP address, port, and virtual directory. If Windows Firewall is turned on, the relevant port is probably closed.

To open a port, use the Windows Firewall utility on the Report Server. Reporting Services will not open ports for you; you must open the ports manually.

By default, the report server listens for HTTP requests on port 80. If you configure the report server URLs to use a different port, you must open the corresponding port.
If you are accessing SQL Server relational databases on external computers, or if the report server database is on an external SQL Server instance, you must open the ports 1433 and 1434 on the external computer.

**NOTE**

For more information, see the MSDN article *Configuring the Windows Firewall to Allow SQL Server Access* under [http://msdn.microsoft.com/en-us/library/cc646023.aspx](http://msdn.microsoft.com/en-us/library/cc646023.aspx)

**To Add Reporting Services to Microsoft SQL Server**

1. Insert the Microsoft SQL Server installation medium.
2. On the *Installation* page, select **New installation or add features to an existing installation**.
3. Confirm the following pages, until the *Installation Type* page is shown.
4. On the *Installation Type* page:
   a. Select **Add features to an existing instance of SQL Server**.
   b. Select the SQL Server instance of the Reporting Database.
5. On the *Feature Selection* page, select only the **Reporting Services** check box.
6. On the *Installation Rules* page, check the messages. There should be no entries under **Failed** or **Warning**.
7. On the *Server Configuration* page, select **Network Service** in the **Account Name** drop-down list.
8. On the *Reporting Services Configuration* page, select **Install, but do not configure the report server**.
   
   You will configure the Reporting Services after completing the installation.
9. On the *Ready to Install* page, click **Install**.
10. Click **Close** to exit the installation wizard.
11. For Microsoft SQL Server 2008 R2: Update with SP1.
To Update Microsoft SQL Server 2008 R2 with SP1

The Reporting Services are installed without any service pack. Therefore, you must always update Microsoft SQL Server 2008 R2 with SP1 after installing the Reporting Services.

To update Microsoft SQL Server 2008 R2 with SP1, follow the instructions given in the installation wizard. The installation is rather straightforward.

To Configure Microsoft SQL Server Reporting Services

If you have installed the Reporting Services together with Microsoft SQL Server, the system may have created a default configuration for you.

If you installed Reporting Services afterwards, or if you want to check the default configuration, go through the following steps.

1. Select Start > All Programs > Microsoft SQL Server > Configuration Tools > Reporting Services Configuration to start the Reporting Services Configuration Manager.

2. In the instance selection dialog, provide the name of the Reporting Server and the name Microsoft SQL Server instance (by default, it is MSSQLSERVER). Click Connect.

3. On the Report Server Status page: Check that the Report Service Status is Started.

4. On the Service Account page: make sure the service uses the Network Service User.

5. On the Web Service URL page:
   a. Click Apply to configure the Report Server Web Service with the default values.
      The URL under Report Server Web Service URLs becomes active.
   b. Click the URL to launch the Report Server web page in Internet Explorer.
If the ReportServer web page is not shown:
Try again after finishing the entire configuration.
Check the Windows Firewall settings (see “To Configure the Windows Firewall” on page 198).
Restart IIS.

6 On the Database page:
   a Click Change Database.
      The Report Server Database Configuration Wizard opens.
   b On the Action page, select Create a new report server database. Click Next.
   c On the Database Server page, verify the server name and set the Authentication Type to Current User. Click Next.
   d On the Database page, ReportServer is suggested as the Database Name. Keep this name and click Next.
   e On the Credentials page, keep Service Credentials as the Authentication Type. Click Next.
   f On the Summary page, review the summary. Click Next to start the database generation.
   g On the Progress and Finish page, click Finish to exit the wizard.

7 On the Report Manager URL page:
   a Keep the suggested name Reports under Virtual Directory.
   b Click Apply to create a new virtual directory.
      The corresponding URL becomes active.
   c Click the URL to launch the Report Manager web page in Internet Explorer.

8 On the remaining pages:
You can leave these sections unchanged. OpenLAB ECM Intelligent Reporter does not use e-Mail notifications, special execution accounts, or encryption.

9 Click Exit to close the Reporting Services Configuration Manager.
Connecting to Oracle With or Without Easy Connect Syntax

If a *tnsnames.ora* file is available on the local machine, you can establish the connection to an Oracle database using the net service name (also known as TNS alias).

A *tnsnames.ora* file contains the following information:

- **Net service name** =
  - (DESCRIPTION =
    - (ADDRESS_LIST =
      - (ADDRESS =
        - (PROTOCOL = TCP)(HOST = host)(PORT = port)
      )
    )
  )
  (CONNECT_DATA =
    - (SERVICE_NAME = service_name)
  )

Figure 1   Information in a tnsnames.ora file

The *tnsnames.ora* file already exists by default on machines that have the Oracle Full Client installed (for example, the ECM File Transfer Server), but does not exist on machines that only have the Oracle Instant Client installed (such as the Reporting Server and the ECM client for template designers).

On machines without *tnsnames.ora* file, you can either use the Easy Connect syntax to establish the connection, or create a new *tnsnames.ora* file.

The Easy Connect syntax is `<host>:<port>/<service name>`. 
To create a new tnsnames.ora file on a machine without Oracle Full Client:

1. Navigate to the installation folder of Oracle Instant Client and to the subdirectory `\NETWORK\ADMIN`.

2. Create a `tnsnames.ora` file by copying it from a machine with the Oracle Full Client installed (for example, the ECM File Transfer Server). - or -
   Create a new `tnsnames.ora` file with the information shown in Figure 1 on page 202.

3. Replace the values for `net service name`, `host`, `port`, and `service_name` with the values used in your system.

4. Check if the file `sqlnet.ora` exists. If it does not exist, create an empty file `sqlnet.ora`.

5. Open the file `sqlnet.ora` with a text editor. Check the following entries, and add them if they are missing:
   - `SQLNET.AUTHENTICATION_SERVICES= (NTS)`
   - `NAMES.DIRECTORY_PATH= (TNSNAMES, EZCONNECT)`

   These entries ensure that (1) all users are allowed to be authenticated using Windows NT native security, and (2) TNS aliases can be used as well as EZCONNECT syntax to access the database.

6. Create a system environment variable `ORACLE_HOME`.
   - Select `Start > System control > System` to open the `System properties` dialog.
   - Select the `Advanced` tab.
   - Click `Environment variables`.
   - Click `New` to add a new environment variable.
   - Set the name to `ORACLE_HOME` and the value to the installation folder of Oracle Instant Client.

7. Test the net service name with `tnsping`.
   The connection to the Oracle ECM Database should now be successful.
Run a Program in Compatibility Mode

To run a program on Windows 2012 Server in compatibility mode for Windows 8 or earlier:

1. Right-click the App icon and select **Open file location**.
2. Right-click the App icon and select **Properties**.
3. Select the **Compatibility** tab, and select the **Run this program in compatibility mode for** check box.
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In This Book

This book contains all the installation procedures and configuration guidelines required for installing OpenLAB ECM Intelligent Reporter.

Supported installation scenarios include new installation and update of previous revisions with an ECM 3.4.1 SP2 or ECM 3.5 infrastructure.