



OpenLAB ECM: Site Preparation Checklist

- **ECM 3.5**
 - **Including ECM Scheduler and Client plug-ins**



Purpose of Procedure

To assure the installation of **OpenLAB ECM** can be completed successfully by careful preparation and evaluation of the installation site and by meeting or exceeding minimum requirements as outlined in this **Site Prep Checklist**.

Correct site preparation is the key first step in ensuring that your instruments and software systems operate reliably over an extended lifetime. This document is an **information guide AND checklist** prepared for you that outlines the computing requirements for your site. It may also recommend tools where needed, that will help you get started.

For additional information, please visit our web site at <http://www.chem.agilent.com/en-US/Pages/HomePage.aspx>

Customer Responsibilities:

- Meets or exceeds the Agilent Software/Hardware Requirements as outlined in this Site Preparation Checklist. Any questions or issues regarding these requirements should be discussed with an Agilent Solutions Architect and an agreement must be made before onsite installation begins.**
- Computing environment and the necessary space is made available to the onsite Engineer.
- The number & location of electrical outlets for your computer systems and peripherals are planned.
- Locate your sales order information, software authorization codes and/or software licenses/certificates.
- The necessary Software media, disks etc.. are available including any upgrade/update disks.
- If Agilent is delivering installation and familiarization services, users of the system should be present throughout these services. Otherwise, they will miss important operational, maintenance and safety information.

Important Customer Information

1. If you have questions or problems in providing anything described as “**Customer Responsibilities**” above, please contact your local Agilent Technologies office for additional assistance prior to delivery.
2. Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-arrange any services that have been purchased.
3. Assistance with user-specific applications may be provided, but should be contracted separately with Agilent.



SQL Database Server:

General:

- Should be dedicated to OpenLAB application and should not be used in any other capacity. (i.e. – Mail Server, Print Server, etc...)
- The **Server Name** must be alphanumeric characters (A-Z or 0-9) or dashes (-). No underscores (_), ampersands (&) or other non-alphanumeric characters. Do not name the Server ECM.
- It is the (customer) DBA's responsibility to configure the Database server for optimal performance according to the manufacturer's recommended hardware requirements for SQL Server 2014 (Standard or Enterprise R2).
- It is recommended that the SQL 2014 DB Server be a separate physical server. However, using database server technology running on virtual machines as recommended by the database vendors is also supported.**

Hardware Requirements:

Specification	Description	Recommended
Processor type & speed		3 GHz Dual core
Memory		4 GB (4096 MB)
Hard Disk Drive:		100 GB Hard Drive Multiple Hard Drives in a RAID configuration for added performance
Optical Device Drive:		DVD-ROM
Network Adapter:		1000 LAN Adapter

Refer as well to the Microsoft documentation for additional hardware requirements

Software Requirements:

- MS SQL Version:
 - o SQL Server 2014 (Standard or Enterprise)
- Operating System (OS):
 - o Windows 2012 - See requirements from Microsoft.
- SQL Server Collation (Default): **SQL_Latin1_General_CP1_CI_AS**
 - o Use SQL statement to verify: "SELECT SERVERPROPERTY('Collation') AS 'Collation'"
- Language/Regional Settings:
 - o English US;
 - o If needed verify the registry
 - Verify key settings
 - Locale 409
 - SCountry United States
 - sDecimal .
 - sLanguage ENU
 - sDate /
 - sShortDate M/d/yyyy



- Verify this for the following keys
 - HKEY_USERS\S-1-5-18\Control Panel\International\
 - HKEY_USERS\S-1-5-19\Control Panel\International\
 - HKEY_USERS\S-1-5-20\Control Panel\International\
 - HKEY_USERS\
- Drives: NTFS Files system – Basic Disks (Dynamic Disks not supported)
- Network: TCP/IP Protocol, Client for Microsoft Networks, File and Printer Sharing for Microsoft Networks
- Virtualization:
 - It is recommended that the SQL 2014 DB Server be a separate physical server.
 - However, using database server technology running on virtual machines as recommended by the database vendors is also supported.

Oracle Database Server:

General:

- Should be dedicated to OpenLAB application and should not be used in any other capacity. (i.e. – Mail Server, Print Server, etc...)
- The **Server Name** must be alphanumeric characters (A-Z or 0-9) or dashes (-). No underscores (_), ampersands (&) or other non-alphanumeric characters. Do not name the Server ECM.
- It is the (customer) DBA's responsibility to configure the Database server for optimal performance according to the manufacturer's recommended hardware requirements for Oracle 12c.
- Running the OpenLAB ECM Server Installer on the same machine that is hosting a 64 bit version of the Oracle Database is **NOT** supported. If a 64 bit version of the Oracle database is to be used, it **MUST** be installed on a separate machine. As stated above, and below, the OpenLAB ECM Server Installer requires a local installation of the 32 bit Oracle client. The 32 bit Oracle client can be used to communicate with a remote 64 bit Oracle database.
- If the 32 bit version of the Oracle database is to be used, the OpenLAB ECM Server can be installed on the same machine. If the 32 bit version of the Oracle database is installed on the same machine that is hosting the OpenLAB ECM Server, the 32 bit Oracle Client does not have to be installed. This configuration is not recommended. **The recommendation is to always use a second machine to host the database, and always install the 32 bit Oracle Client**
- The Oracle Database scripts are run by the DBA**
- It is recommended that the Oracle DB Server be a separate physical server. However, using database server technology running on virtual machines as recommended by the database vendors is also supported.**

Hardware Requirements:

- Refer to Oracle 12c documentation for minimum Hardware and Software Requirements.



Software Requirements:

- Oracle Version:
 - Oracle 12c (Standard or Enterprise Edition). Will need 11g for client on ECM server.
- Operating System (OS):
 - See requirements from Oracle.
- Database Character set must be: **UTF8** or **AL32UTF8**
 - To verify run the following SQL statement "Select parameter, value From nls_database_parameters WHERE parameter like '%CHARACTERSET%'";
- Virtualization:
 - It is recommended that the Oracle DB Server be a separate physical server.
 - However, using database server technology running on virtual machines as recommended by the database vendors is also supported.

ECM Servers:

General:

- ECM consists of 3 components (Web, File Transfer and Application) that are installed either on the same server (Smaller systems) or more than one Server (Larger systems). Servers that will host more than 1 ECM component should be sized accordingly. ***A Solutions Architect can work with you on the best system Architecture for your implementation.***
- Running Oracle on the ECM Application Server is not supported.
- ECM Client components should not be installed on the ECM Server(s).
- The **Server Name** must be alphanumeric characters (A-Z or 0-9) or dashes (-). No underscores (_), ampersands (&) or other non-alphanumeric characters. **Do not name the Server ECM.**
- The Server must be part of a Domain and assigned a static IP Address.
- The Server must be on the same segment as the Database Server with the following results:
 - PING -n 100 <<database>> shows 0% packet loss and average latency of <3ms.
 - Tracert <<database>> shows <2 hops to the Database Server

Firewall:

- The following Port(s) must not be blocked by a firewall:
 - i. Port 25 Application service sending emails via port 25. You can exclusively allow the CyberLabAppServer.exe to send e-mail messages
- Default service ports are 80(HTTP) and 443(HTTPS). Alternative ports can be used like servername:3000" for port 3000
- Database
 - i. Oracle
 - Verify Oracle port settings allowing traffic through the port configured for Oracle database configuration. Default port is **1521**.
 - ii. SQL Server
 - Port **1433**



Hardware Requirements:

ECM Web Server:

Specification Description	Recommended
Processor type & speed	3.5 GHz Dual core
Memory	4 GB (4096 MB)
Hard Disk Drive:	100 GB Hard Drive
Optical Device Drive:	DVD-ROM
Network Adapter:	1000 LAN Adapter

ECM File Transfer Server:

Specification Description	Recommended
Processor type & speed	3.5 GHz Dual core
Memory	4 GB (4096 MB)
Hard Disk Drive:	200 GB Hard Drive (A dedicated 100 GB partition is needed for the FT cache)
Optical Device Drive:	DVD-ROM
Network Adapter:	1000 LAN Adapter
Other Storage Options:	EMC Centera ver. 3.3/4.0

ECM Application Server:

Specification Description	Recommended
Processor type & speed	3.5 GHz Dual core
Memory	4 GB (4096 MB)
Hard Disk Drive:	200 GB At least 100 GB of free disk space needed for temporary file processing activities
Optical Device Drive:	DVD-ROM
Network Adapter:	1000 LAN Adapter

OpenLAB ECM 35 Site Preparation Checklist



Software Requirements:

- Operating System (OS):
 - Windows 2012 R2 (64 bit)
- SQL Server Collation (Default): **SQL_Latin1_General_CP1_CI_AS**
 - SQL Server 2014 (Standard or Enterprise)
 - Use SQL statement to verify: "SELECT SERVERPROPERTY('Collation') AS 'Collation'"
- When SQL Server database installed on a different server. Install SQL Server 2014:
 - Client Tools Connectivity
 - "Management Tools – Complete"
- OS .NET & other Add-ins:
 - .NET 3.5 SP1
 - It is required to have .NET 3.5 SP1 installed prior to the installation of Oracle client.
- Compatible with:
 - ECM Options CD 3.5 (ENT) or higher
 - Waters Empower 3
 - Desktop 3.5
 - Chromviewer 3.5
 - TNF Viewer 3.5
 - SDK 2.0.0.0 (API)
- Oracle Database Systems only - Oracle 12c R2 Client 11g (**only 32 bit version**)
 - It is required to have .NET 3.5 SP1 installed prior to the installation of Oracle client.
- Language/Regional Settings:
 - English US
 - If needed verify the registry
 - Verify key settings
 - Locale 409
 - SCountry United States
 - sDecimal .
 - sLanguage ENU
 - sDate /
 - sShortDate M/d/yyyy
 - Verify this for the following keys
 - HKEY_USERS\S-1-5-18\Control Panel\International\
 - HKEY_USERS\S-1-5-19\Control Panel\International\
 - HKEY_USERS\S-1-5-20\Control Panel\International\
 - HKEY_USERS\<SID Network Service User>\Control Panel\International\
- Drives: NTFS Files system – Basic Disks (Dynamic Disks not supported)
- Network: TCP/IP Protocol, Client for Microsoft Networks, File and Printer Sharing for Microsoft Networks
- Virtualization:
 - VMWARE ESX 5.x is supported for OpenLAB Web, File Transfer and Application Servers
 - For appropriate disk access performance, use a SATA-II drive.

ECM Clients:

Hardware Requirements:

Specification Description	Minimum	Recommended (if applicable)
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OpenLAB ECM 35 Site Preparation Checklist



Processor type & speed	2 GHz	3 GHz Dual core
Memory	2GB (2048 MB) for Windows 7	Additional 512 MB if running scheduler or ECM Print Services
Hard Disk Drive:	40 GB Hard Drive	NA
Optical Device Drive:	DVD-ROM	NA
Network Adapter:	100/1000 LAN Adapter	NA
Monitor/Graphics Adapter:	SVGA or better – 1024 x 768 min. res.	SVGA or better – 1280 x 1024 min. res.

Software Requirements:

- Operating System (OS):
 - Windows 8.1 (32 or 64 bit)
 - Windows 7 SP1 (32 or 64 bit)
 - Windows 2012 R2 (64 bit)
- OS .NET & other Add-ins:
 - .NET 3.5 or higher
- Language/Regional Settings must be set correctly for each region:
 - English or Western Europe
- Browser: Internet Explorer 10.x, 11.x
- Client Plug-in Requirements:**
 - ECM Desktop
 - MS Office 2010 (English only 32 bit)
 - MS Office 2013 (English only 32 bit)
 - ECM Print Services
 - Adobe Acrobat 10 (32 bit) – Pro or Standard versions (English only)
 - Adobe Acrobat 11 (32 bit) – Pro or Standard versions (English only)
 - Adobe Acrobat Integration
 - Adobe Acrobat 10 (32 bit) – Pro or Standard versions (English only)
 - Adobe Acrobat 11 (32 bit) – Pro or Standard versions (English only)
 - Template Plug-in for Adobe Acrobat
 - Adobe Acrobat 10 (32 bit) – Pro or Standard versions (English only)
 - Adobe Acrobat 11 (32 bit) – Pro or Standard versions (English only)
 - Electronic Signature Plug-in for Adobe Acrobat
 - Adobe Acrobat 10 (32 bit) – Pro or Standard versions (English only)
 - Adobe Acrobat 11 (32 bit) – Pro or Standard versions (English only)
 - Scalable Vector Graphics Plug-in for Adobe Acrobat (ECM Client with 32 bit OS)
 - Adobe Acrobat 10 (32 bit) – Pro or Standard versions (English only)
 - Adobe Acrobat 101 (32 bit) – Pro or Standard versions (English only)



ECM Scheduler:

Hardware Requirements:

Specification Description	Recommended
Processor type & speed	3.5 GHz Dual core
Memory	2 GB (2048 MB)
Hard Disk Drive:	200 GB Hard Drive**
Optical Device Drive:	DVD-ROM
Network Adapter:	1000 LAN Adapter
Monitor/Graphics Adapter:	SVGA or better – 1280 x 1024 min. res.

****The 200 GB Drive used for the scheduler inbox should be larger than the amount of files being uploaded. The Scheduler needs disk space available on the drive designated by the Temp Variable. To process SSIZip files, at least 3x the maximum size of an SSIZip archive is needed.**

Software Requirements:

- Same as ECM Client Software Requirements (above)

Network Service User:

A Windows Domain Service Account is necessary for file transfer and proper system configuration. All OpenLAB software will be installed using this Account. The User should have the abilities to create directories, read files, write files, and delete files on any network share used as a storage or archive location

- This Domain User (Service Account) must be added to the Local Administrators Group of all OpenLAB ECM servers.
- This Service Account must remain active after installation and the password set not to expire.
- With the Active Directory Service, this account must be a member of the built-in Pre-Windows 2000 Compatible Access Group.

Important web links

- a) Microsoft Hardware Compatibility Lists
<http://www.microsoft.com/whdc/hcl/default.mspx>
- b) Links to specific O/S fixes, updates needed
<http://support.microsoft.com/>