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| **ChemBioOffice Enterprise 19.1** |
| **Hardware and Software Guide** |

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# Introduction

This document is for customers intended to deploy the PerkinElmer ChemBioOffice Enterprise Suite software. Please keep in mind that minimum hardware specifications have a considerable capacity margin and unless the system is serving more than 200 users the infrastructure at minimum specification should suffice.

The versions of dependent software that PKI applications were **Qualified** with are also **Supported**. In the **Supported** column, we will only list supported versions (based on software analysis and vendor information) on which the software was not explicitly qualified.

# Hardware Requirements

The following sections list the hardware requirements for this release.

## Database Server Hardware Requirements

|  |  |  |
| --- | --- | --- |
| **Hardware Component** | **Minimum Specification** | **Recommended Specification** |
| Memory (RAM) | 8 GB | 64 GB |
| Processor | 2 x 2.0 GHz or higher quad core processor | 4 x 3.0 GHz or higher quad core processor |
| Free Space Required on Hard Drive | 400 GB | 500 GB + 1 GB per User per Year |

## Web server (Middle Tier) Hardware Requirements

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| --- | --- | --- |
| **Hardware Component** | **Minimum Specification** | **Recommended Specification** |
| Memory (RAM) | 4 - 8 GB | 16 GB |
| Processor | 2 x 2.0 GHz or higher dual core processor | 4 x 3.0 GHz or higher dual core processor |
| Free Space Required on Hard Drive | 50 GB | 100 GB |

## Client Hardware Requirements

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| --- | --- | --- |
| **Hardware Component** | **Minimum Specification** | **Recommended Specification** |
| Memory (RAM) | 4 GB | 8 GB |
| Processor | 2 GHz or higher single core processor | 3.0 GHz or higher dual core processor |
| Free Space Required on Hard Drive | 10 GB | 20 GB |

# Software Requirements

The following sections list the software requirements for this release.

## Required Software for Database Server

|  |  |  |
| --- | --- | --- |
| **Software** | **Qualified and supported** | **Supported** |
| Operating System | * Windows Server 2012 Standard Edition (64-bit) * Windows Server 2012 R2 Standard Edition (64-bit) * Windows Server 2016 Standard (64-bit) * Red Hat Enterprise Linux 7 (x86\_64) * Red Hat Enterprise Linux 7.3 | * Windows Server 2012 Datacenter Edition (64-bit) * Windows Server 2012 R2 Datacenter Edition (64-bit) |
| Oracle DB | **12.2.0.1.0 Enterprise (64-bit)**  Operating System   * + Windows 2016 Standard (64-bit)   Critical Patches Applied   * + CVE-2019-2444,CVE-2019-2406,CVE-2019-2547   Patch Number   * + Microsoft Windows 32-bit and x86-64 RU 12.2.0.1.190115 Patch 28810696, or later; OJVM Microsoft Windows Bundle Patch 12.2.0.1.190115 Patch 28994068   **12.1.0.2.0 Enterprise (64-bit)**  ***Note****: Oracle patch.19305116 should be applied on Oracle 12c*  Operating System   * + Windows 2016 Standard (64-bit)   Critical Patches Applied   * + CVE-2019-2406,CVE-2019-2547   Patch Number   * + Microsoft Windows Bit x86-64 BP 12.1.0.2.190115 Patch 28810679, or later; Oracle JavaVM Component Microsoft Windows Bundle Patch 12.1.0.2.190115 Patch 28994063   Operating System   * + Linux-x86-64   Critical Patches Applied   * + CVE-2019-2406,CVE-2019-2547   Patch Number   * + Combo OJVM PSU 12.1.0.2.190115 and Database PSU 12.1.0.2.190115 Patch 28980115   <https://www.oracle.com/technetwork/security-advisory/cpujan2019-5072801.html#AppendixDB>   * *The database version for RedHat Linux 7 64-bit and Windows Server 2012 R2 Standard is "Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production".* | * 11.2.0.4 (32-bit and 64-bit)  |  |  | | --- | --- | | ***NoteIcon*** | ***Note:*** *If you use Oracle Database 11.2.0.4, you must download and apply the Oracle patch 17501296.* |   **Oracle Version**   * + 12.2.0.1.0   Operating System   * + Linux x86/64   Critical Patches Applied   * + CVE-2019-2444, CVE-2019-2406, CVE-2019-2547   Patch Number   * + Combo OJVM Update 12.2.0.1.190115 and Database Update 12.2.0.1.190115 Patch 28980102 |
| Oracle Installation | * Oracle Enterprise Edition   ***Note:*** *Registration Row Level Security (RLS) and Inventory RLS are supported only on Enterprise Edition.*  ***Note****:* You must install the "Workspace Manager" feature of Oracle as part of Oracle installation. | * Oracle Standard Edition |
| Oracle Character Set | * WE8MSWIN1252 * AL32UTF8   (If you have an existing database you have to edit the Character Set if it does not match the requirement, or you have to create a new instance of Oracle with the convenient Character Set.) |  |
| Oracle Features | * Oracle Text * Oracle Call Interface (OCI) * Partitioning optional (Oracle Enterprise Only), this is recommended for cartridge performance. * Row Level Security (RLS is only on Oracle Enterprise Edition) |  |
| Oracle Cartridge | * 15.1.0.88   ***Note****: Oracle Cartridge 15.1.0.88 is qualified with Oracle 12.1 and Oracle 11.2.0.4.*   * 15.1.2.113   ***Note****: Oracle Cartridge 15.1.2.113 is qualified with Oracle 12.2 DB.*  ***Note****: Oracle Cartridge installation does not support 32-bit Oracle client, and due to that it is not possible to install it on a DB using a middle tier with a 32-bit Oracle client.*   * *If the database is a Windows Operating System, Cartridge installer can directly be run on the DB.* * *If the database is other than a Windows OS, (for example, RHEL), a 64-bit Oracle client is needed in a middle tier to install through a middle tier. Any client machine (A windows 7 or 10) installed with a 64-bit Oracle client can be used as a make-shift way to install the Cartridge alone.* |  |

## Required Software for Webserver (Middle Tier)

| **Software** | **Qualified** | **Supported** |
| --- | --- | --- |
| Operating System | * Windows Server 2012 Standard Edition (64-bit) * Windows Server 2012 R2 Standard Edition (64-bit) * Windows Server 2016 Standard (64-bit) | * Windows Server 2012 Datacenter Edition (64-bit) * Windows Server 2012 R2 Datacenter Edition (64-bit) |
| Internet Information Services (IIS) | * IIS 8.0 * IIS 8.5 * IIS 10   ***Note:*** *IIS 6.0 compatibility should be installed when the installation VM has IIS 7.5 and above installed to avoid the CBOE installer roll back.* |  |
| .NET Framework\*\* | * .NET Framework 4.7.2 | * .NET Framework 4.7.0 * .NET Framework 4.7.1 |
| Network | Net service connectivity to the Oracle database from the Webserver.  Clients must be able to connect to the Webserver. All clients must be able to resolve the same name to browse to the Webserver. |  |
| Microsoft Office | * 2013 Professional (32-bit) * 2016 Professional Plus (32-bit)   ***Note:*** *Inventory Reporting Feature supports only MS Office 32-bit.* | * 2010 Professional (32-bit) |
| Oracle Client | * 12.1.0.2 (32-bit) * 12.2.0.1 (32-bit)   ***Note:*** *Oracle Client Administration version is required.*  *64-bit Oracle client is NOT supported.* | * 11.2.0.4 (32-bit) |
| Oracle Data Access Components (ODAC) includes OLEDB Provider and Oracle Data Provider for .Net | * 12.1.0.1.2 (32-bit) * 12.2.0.1.0 (32-bit)   ***Note 1****: ODAC needs to be installed with ODT (Oracle Developer Tools) component to avoid errors in search registration and system setting pages in Registration.*  ***Note 2****: It is recommended to install Oracle client and ODAC in two different folders in the same location.* | * 11.2.0.3.20 (32-bit) |
| Oracle Client Components | * SqlPlus. * SqlLoader. * Import Utility (imp.exe) * TNS Names configuration to connect the target Oracle server. |  |
| Other Applications | * Win2PDF print driver (required for PDF report format in Inventory) * Tbarcode 11 for generating barcodes   ***Note:*** *A default printer must be available for the report writer. This can be a virtual printer driver or a regular network or local printer driver. This driver will not be necessarily used but must be available to be assigned as the default printer for the service account used by the ChemBioOffice Enterprise applications.*  ***Note:*** *Only the Win2PDF printer driver is supported for creating reports in PDF format. The “Terminal Server Edition” (TSE) of Win2PDF is required for the installation. Copy of WIN2PDF installer is provided, however, must be licensed by the customer.* |  |
| Internet Explorer | * Internet Explorer (IE) 10.0 (in Windows 2012 Standard) * Internet Explorer (IE) 11.0 |  |

## Required Software for Client

| **Software** | **Qualified** | **Supported** |
| --- | --- | --- |
| Operating System | * Windows 7 Professional (64-bit) * Windows 8.1 Professional (64-bit) * Windows 10 Professional (64-bit) | * Windows 7 (Professional / Enterprise / Ultimate) (32-bit/ 64-bit) * Windows 8.1 (Professional / Enterprise) (32-bit /64-bit) * Windows 10 (Professional / Enterprise) (32-bit /64-bit) |
| OS - Supported Languages | * English (US) | * English (UK) * Spanish * French |
| .Net Framework | * .NET Framework 4.7.2 | .NET Framework 4.7.1 |
| Microsoft Visual C++ | * Microsoft Visual C++ 2017 Redistributable(x86)   ***Note:*** *Microsoft Visual C++ redistributable(x86) should install in client for InvLoader* |  |
| Microsoft Office (Standard, Professional, or Enterprise) | * 2013 Professional (32-bit) * 2016 Professional (32-bit)   ***Note:*** *Inventory Reporting Feature supports only MS Office 32-bit.Should Install the Same version of Office in Clients which is installed in the CBOE server.* |  |
| Web Browser Support | * Internet Explorer (IE) 11.0 * Chrome * Firefox (Only for Web Registration) |  |
| Adobe Acrobat Professional is only required with features requiring in document signing. | * Adobe Acrobat Pro DC Continuous | Version 2019.008.20098) * Adobe Acrobat Pro DC Classic | Version 2015.006.30482 | * Adobe Acrobat Pro 2017 (Classic) | Version 2017.011.30127   All versions assume the latest patch level has been applied. |
| Adobe Reader  This is required to display PDF content where Acrobat is NOT present. | * Adobe Acrobat Reader DC Continuous | Version 2019.008.20098 * Adobe Acrobat Reader DC Classic | Version 2015.006.30482) | * Adobe Acrobat Reader 2017 | Version 2017.011.30127   All versions assume the latest patch level has been applied. |
| ChemDraw | ChemDraw ActiveX Enterprise Constant NA 18.1.1.10c |  |

# Technical Support

To access FAQs, Knowledge Base articles, support forums and more, please visit:

<http://www.perkinelmer.com/informatics/support/>

For Support contact options, please visit:

<http://www.perkinelmer.com/informatics/support/contact>

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