COBA's product suite

Technological requirements

Summary
This guide presents the technological requirements

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WARNING and NOTES

In this document, the masculine gender is used in the neutral sense and designates women as much as men.

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Database server (and Windows software)

Operating system allowed:

Microsoft Windows « Server » 2008 SP2	(x86 et x64)	End of support : january 2020
Microsoft Windows « Server » 2008 R2 SP1	(x64)	End of support : january 2020
Microsoft Windows « Server » 2012	(x64)	End of support : October 2023
Microsoft Windows « Server » 2012 R2	(x64)	End of support : October 2023
Microsoft Windows « Server » 2016	(x64)	
Microsoft Windows « Server » 2019	(x64)	

Recommended databases :

Microsoft SQL Server 2008 (Express, Standard, Enterprise,..)	End of support: July 2019
Microsoft SQL Server 2012 (Express, Standard, Enterprise,…)	End of support : October 2023
Microsoft SQL Server 2016 (Express, Standard, Enterprise,…)	
Microsoft SQL Server 2017 (Express, Standard, Enterprise,…)	
Microsoft SQL Server 2019 (Express, Standard, Enterprise,…)	

Hardware recommendations (Processor, Memory**):

Minimum	Recommended
2.5 Ghz (4 cores) with 16 gb RAM	2.5 Ghz (8 cores) with 32 gb RAM

** Memory **dedicated** exclusively to the database manager.

For better protection we recommend a RAID configuration for hard drives.

Note:

A small institution with a small amount of data **can use a single server** for the database service and the V6 application server. However, no matter the size of the institution, the server for portals **can not** be the same server as the database server and V6 applications. The portal server is a server that will be exposed to the WEB and it is not recommended to expose an administrative server on the WEB.

Note:

Microsoft SQL Server can not be installer on a server that is a Domain Controller (DC).

V6 application server

Operating system allowed:

Microsoft Windows « Server » 2008 SP2	(x86 et x64)	End of support : january 2020
Microsoft Windows « Server » 2008 R2 SP1	(x64)	End of support : january 2020
Microsoft Windows « Server » 2012	(x64)	End of support : October 2023
Microsoft Windows « Server » 2012 R2	(x64)	End of support : October 2023
Microsoft Windows « Server » 2016	(x64)	
Microsoft Windows « Server » 2019	(x64)	

Hardware recommendations (Processor, Memory**):

Minimum	Recommended
2.5 Ghz (4 cores) with 16 gb RAM	2.5 Ghz (8 cores) with 32 gb RAM

** Memory **dedicated** exclusively for the IIS Internet Information Services platform
For better protection we recommend a RAID configuration for hard drives.

Server for portals (internet or intranet)

COBA's Internet/Intranet portals are designed to allow users to consult, with a browser, the data entered via the administrative software of the COBA's product suite via the Internet / Intranet. To do this you will need a "Microsoft Internet Information Services Web Server" web server.

Requests received from the Internet / Intranet portals will be forwarded to the database manager thus allowing access to the data of the administrative software of the COBA's product suite. For Internet access to the Web server, the server must have a fixed public IP address and have a connection to the LAN database server. One of the recommended secure methods is to place the Web server in a DMZ * with these specific rules:

Ports TCP #80 & #443 (HTTP, HTTPS): Public access
Ports TCP #1435 (MS SQL Server): Access to the local network's Data base server

For more security, Berger-Levrault requires the installation of a trusted SSL / TLS certificate on the WEB server. In addition, the security of your web server should comply with the highest recommendations suggested by Microsoft. For more information, see the Microsoft Web site under "Microsoft recommended hardening practices for Windows and IIS."

*A demilitarized zone (DMZ) is a subnet isolated by a firewall with limited access to other servers in the network.

Operating system allowed:

Microsoft Windows « Server» 2008 SP2	(x86 et x64)	End of support : january2020
Microsoft Windows « Server » 2008 R2 SP1	(x64)	End of support : january 2020
Microsoft Windows « Server» 2012	(x64)	End of support : October 2023
Microsoft Windows « Server »2012 R2	(x64)	End of support : October 2023
Microsoft Windows « Server »2016	(x64)	
Microsoft Windows « Server »2019	(x64)	

Hardware recommendations (Processor, Memory**):

Minimum	Recommended
2.5 Ghz (4 cores) with 16 gb RAM	2.5 Ghz (8 cores) with 32 gb RAM

** Memory **dedicated** exclusively for the IIS Internet Information Services platform
For better protection we recommend a RAID configuration for hard drives.

Server for Qlik management Tables

The management tables developed with the Qlik application are designed to allow users to view, through our intranets, tables based on the data entered via the administrative software of the COBA range. To do this you will need a web server with Qlik application.

For access to the Qlik web server, the server must have a fixed public IP address and have a connection to the local network database server to refresh the data in the warehouse. One of the recommended secure methods is to place the Web server in a DMZ * with these specific rules:

Ports TCP #80 & #443 (HTTP, HTTPS) : Public access
Ports TCP #1435 (MS SQL Server): Access to the local network's Data base server

For added security, Berger-Levrault requires the installation of a trusted SSL / TLS certificate on the Qlik web server. In addition, the security of your Qlik web server should comply with the highest recommendations suggested by Microsoft. For more information, see the Microsoft Web site under "Microsoft recommended hardening practices for Windows and IIS."

*A demilitarized zone (DMZ) is a subnet isolated by a firewall with limited access to other servers in the network.

Systèmes d'exploitation autorisés :

Microsoft Windows « Server» 2012	(x64)	End of support : October 2023
Microsoft Windows « Server »2012 R2	(x64)	End of support : October 2023
Microsoft Windows « Server »2016	(x64)	
Microsoft Windows « Server »2019	(x64)	

Recommandation du matériel (processeur, mémoire **) :

Minimum	Recommandé
2.5 Ghz (4 cores) with 16 gb RAM	2.5 Ghz (8 cores) with 32 gb RAM

** Memory **dedicated** exclusively for Qlik application.
For better protection we recommend a RAID configuration for hard drives.

Workstation for Windows software

Operating system allowed:

Microsoft Windows 7 SP1	(x86 et x64)	End of support : january 2020
Microsoft Windows 8	(x86 et x64)	
Microsoft Windows 10	(x86 et x64)	

Hardware recommendations (Processor, Memory**):

Usage type	Minimum	Recommended
Occasional*	2.5 GHz with 2 gb RAM	3.0 GHz with 2 gb RAM
Normal**	2.5 GHz (2 cores) with 3 gb RAM	3.0 GHz (2 cores) with 4 gb RAM
Intensive***	3.0 GHz (2 cores) with 4 gb RAM	3.0 GHz (8 cores) with 4 gb RAM

* Occasional data entry or consultation

** Normal data entry

*** Volume processing ex.: payroll calculation, student assignment

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Notes:

Win2PDF software must be purchased and installed on workstations that **use** Windows software when they need to **generate PDF documents** for **e-mailing** or **uploading to the portal.**

The cost of this software is around $ 45 per workstation.

https://www.win2pdf.com/

Notes:

- These technological requirements represent the minimum you need to ensure the satisfactory performance of COBA's product suite. In order to obtain the best possible results from COBA's product suite, we strongly suggest that you purchase the most advanced models of computers and peripherals available at the time you make your choice. Computer technology evolves very rapidly, and the amount of memory required to run software on the Windows platform increases regularly.

- We recommend that you use laser printers which have had the drivers recently upgraded by the supplier to your Windows version preferred by Berger-Levrault.

- Considering the rapid evolution of these technologies, recommendations related to equipment are updated every year by Berger-Levrault.

- Material recommendations are suggested for guidance only. Any other layout could be functional. For more information, consult your Berger-Levrault representative.

- This document does not address the issue of networks. For recommendations on this subject, we suggest that you communicate directly with an expert in your area.

- Installation disks and database manager update versions installed on your servers must have been validated by Berger-Levrault.

- Make sure that the last upgrades for your network operating system updates are installed on the server **before** installing the database manager.

Proposed architecture

The architecture we propose allocates the load of operations on 2 to 4 servers, so it don't create funnel effects on one of the servers.
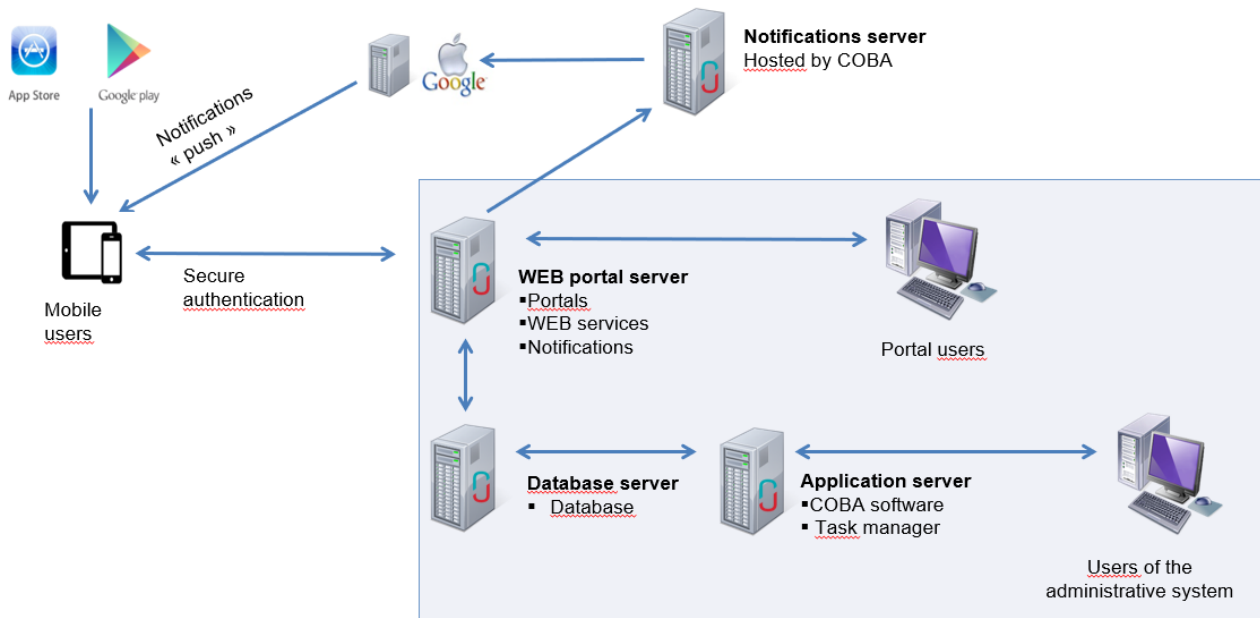
Minimal architecture
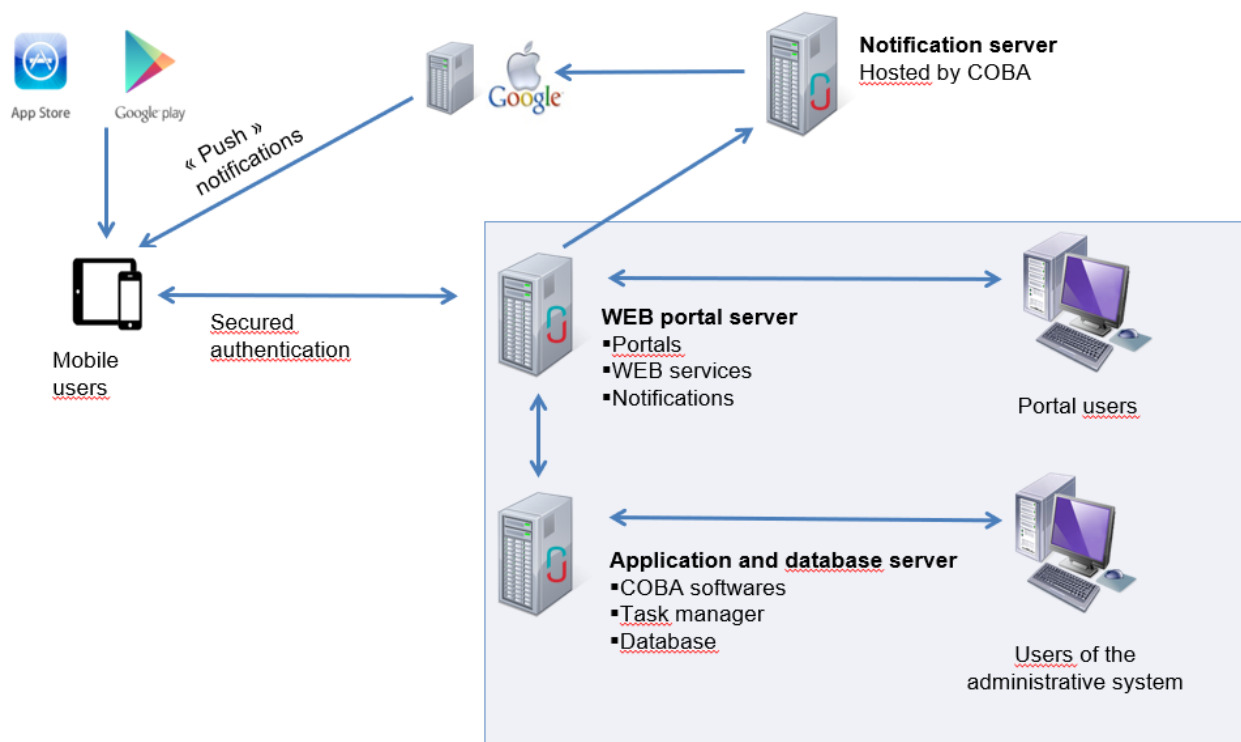
The **application and database server** handle all transactions with Microsoft's SQL Server database for both the administrative software and the portal. In addition, this server manages the administrative software for the users of the institution and also assumes the role of task manager.

The **portal server** manages the portals and manages the WEB services to feed the mobile application and other systems.

Architecture for large institutions

The **database server** handles all transactions with Microsoft's SQL Server database for both the administrative software and the portal.

The **application server** manages the administrative software for the users of the institution. By default, the application server also assumes the role of the task manager server.

The **task manager server** (optional) is required only in the situation where we want to free resources on the application server to improve its performance.

The **portal server** manages the portals and manages the WEB services to feed the mobile application and other systems.

Compatibility with other products

Office 365

Using Office 3365 as a relay for sending emails from COBA's product suite.

Please refer to the following link:

https://technet.microsoft.com/en-ca/library/dn554323(v=exchg.150).aspx

You must use option 3:

Option 3: Configure a connector to send mail using Office 365 SMTP relay