

Hardware and Software Requirements for Installing California.pro

The following document lists the minimum hardware and software requirements to install and run **California.pro**.

Workstation with SQL Server

Processor	<p>Processor type:</p> <ul style="list-style-type: none"> x64-Processor: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T-support, Intel Pentium IV with EM64T-support x86-Processor: Pentium IV-compatible processor or faster <p>Processor speed: Minimum: 1,4 GHz Recommended: x64-Processor 2 GHz or faster</p>
Operating system	<p>Windows 8.1, Windows 7, Windows Server 2012, Windows Server 2008 / R2, Windows Small Business Server 2011. Windows 10 and Windows Server 2012 R2 are supported by California.pro V7. Recommended: 64-Bit.</p>
.NET Framework	.NET 3.5 SP1 and .NET 4 are requirements for California.pro and are activated by Setup.
Network Software	Supported operating systems for California.pro have built-in networking software. The following SQL Server network protocols are supported: TCP/IP, Named Pipes and Shared memory.
Office	For MS Outlook connectivity to California.pro (module BPO) a version of Outlook 2007, Outlook 2010 or Outlook 2013 is necessary.
SQL Server	MS SQL Server 2014 SP1 Express Edition
Memory	Minimum: 2 GB, Recommended: 4 GB or more (Windows Small Business Server at least 16 GB)
Hard Disk	<p>California.pro requires a minimum of 6 GB of available hard disk space. Required free hard disk space depends on the number and size of projects or documents. For optimal speed, a SSD is recommended. During installation of California.pro Windows Installer creates temporary files on system drive. Verify that you have at least 6 GB of free space on system drive for these files before you run Setup to install or update California.pro.</p>
Drive	A DVD drive, as appropriate, is required for installation from disc.
Monitor	California.pro requires a resolution of 1.280 x 1024 pixels or higher.
User Rights	Installing California.pro requires administrative privileges on the PC.
Virtualization	<p>California.pro is supported in virtual machine environments running on the Hyper-V role in:</p> <ul style="list-style-type: none"> Windows Server 2008 SP2 Standard, Enterprise and Datacenter editions. Windows Server 2008 R2 SP1 Standard, Enterprise and Datacenter editions. Windows Server 2012 Datacenter and Standard editions. Windows Server 2012 R2 / Windows 10 Enterprise x64 by California.pro V7
Internet	Internet functionality (e.g. access to tendering platform, mobile measurment, mobile offer, and online help) requires Internet access.

Workstation without local SQL Server (Rich Client)

Processor	<p>Processor type:</p> <ul style="list-style-type: none"> x64-Processor: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T-support, Intel Pentium IV with EM64T-support x86-Processor: Pentium IV-compatible processor or faster <p>Processor speed: Minimum: 1,4 GHz Recommended: x64-Processor 2 GHz or faster</p>
Operating system	<p>Windows 8.1, Windows 7, Windows Vista SP1, Windows XP SP 3, Windows Server 2012, Windows Server 2008 / R2, Windows Server 2003 / R2 SP 2, Windows Small Business Server 2011. Windows 10 and Windows Server 2012 R2 are supported by California.pro V7. Recommended: 64-Bit Windows 7 or higher.</p>
Network Software	<p>Supported operating systems for California.pro have built-in networking software. The following SQL Server network protocols are supported: TCP/IP and Named Pipes.</p>
System Software	<p>The following system software is included with California.pro and installed if needed: .NET 4 and MS Windows Installer 4.5. For MS Outlook connectivity to California.pro (module BPO) a version of Outlook 2007, Outlook 2010 or Outlook 2013 is necessary. The LDAP connection (module LDP) supports versions Active Directory, eDirectory, and OpenLDAP optionally with SSL encryption.</p>
Memory	<p>Minimum: 1 GB, Recommended: 4 GB or more.</p>
Monitor	<p>California.pro requires a resolution of 1.280 x 1024 pixels or higher.</p>
Data Backup	<p>Not required. You back up the California.pro database on the server regularly.</p>
User Rights	<p>Installing California.pro requires administrative privileges on the PC.</p>
Internet	<p>Internet functionality (e.g. access to tendering platform, mobile measurement, mobile offer, and online help) requires Internet access.</p>

Remote Workstation (Terminal Services Client)

Operating system	<p>Each operating system which supports Remote Desktop Connection, e.g. Windows 10, Windows 8 / 8.1, Windows 7, Windows Vista, Windows XP, Linux, Mac OS X</p>
Monitor	<p>California.pro requires a resolution of 1.280 x 1024 pixels or higher.</p>
Restriction	<p>BIM2AVA (module BIM) is not supported in a Terminal Service Client.</p>

Database Server (SQL Server)

SQL Server 2014 Express Edition is a free, easy to install, reduced version of SQL Server 2014. It is ideal for up to five **California.pro** users. The size of the databases can't exceed **10 GB space** on hard disk. It supports only one processor or one processor core and **1 GB** of addressable RAM.

For more than five **California.pro** users a standard edition of SQL Server 2014 is recommended. This standard edition is not included in the licensing of **California.pro**, but can be purchased from **G&W Software AG** as a low-cost runtime version.

Processor	<p>Processor type: x64-Processor: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T-support, Intel Pentium IV with EM64T-support</p> <p>Processor speed: Minimum: 1,4 GHz Recommended: 2 GHz or faster</p>
Operating system	<p>Windows Server 2012 R2, Windows Server 2008 / R2, Windows Server 2003 / R2 SP 2, Windows Small Business Server 2011, do not install on a domain controller, Windows 8.1, Windows 7 SP1. Windows 10 is supported by California.pro V7.</p>
.NET Framework	.NET 3.5 SP1 and .NET 4 are requirements for California.pro and are activated by Setup.
Network Software	Supported operating systems for California.pro have built-in networking software. The following SQL Server network protocols are supported: TCP/IP and Named Pipes.
SQL Server	<p>Included: MS SQL Server 2014 SP1 Express Edition Minimum: MS SQL Server 2005 SP2 Recommended: MS SQL Server 2014 SP1</p>
Memory	<p>Minimum: 2 GB, Recommended: At least 4 GB (Windows Small Business Server 16 GB) and should be increased as database size increases to ensure optimal performance.</p>
Hard Disk	<p>SQL Server requires a minimum of 6 GB of available hard disk space. The required free hard disk space depends on the number and size of projects or documents. For SQL Server Standard Edition RAID 10 is recommended. During installation of SQL Server Windows Installer creates temporary files on the system drive. Verify that you have at least 6 GB of free space on the system drive for these files before you run Setup to install SQL Server.</p>
Drive	A DVD drive, as appropriate, is required for installation from disc.
Data Backup	Streamer, backup software, which is able to backup running SQL Server databases.
User Rights	Installing California.pro requires administrative privileges on the PC.
Virtualization	<p>SQL Server is supported in virtual machine environments running on the Hyper-V role in:</p> <ul style="list-style-type: none"> • Windows Server 2008 SP2 Standard, Enterprise and Datacenter editions. • Windows Server 2008 R2 SP1 Standard, Enterprise and Datacenter editions. • Windows Server 2012 Datacenter and Standard editions. • Windows Server 2012 R2 Datacenter and Standard editions.

Oracle Installations:

Workstation connected to an external Oracle database server

Processor	<p>Processor type:</p> <ul style="list-style-type: none"> x64-Processor: AMD Opteron, AMD Athlon 64, Intel Xeon with Intel EM64T-support, Intel Pentium IV with EM64T-support x86-Prozessor: Pentium IV-compatible processor or faster (not recommended) <p>Processor speed: Minimum: 1,4 GHz Recommended: x64-Processor 2 GHz or faster</p>
Operating system	<p>Windows 8.1, Windows 7, Windows Vista SP1, Windows XP SP3, Windows Server 2012, Windows Server 2008 / R2, Windows Server 2003 / R2 SP2, Windows Small Business Server 2011. Windows 10 and Windows Server 2012 R2 are supported by California.pro V7. Recommended: 64-Bit Windows 7 or higher.</p>
Network Software	<p>Supported operating systems for California.pro have built-in networking software. The following Oracle network protocol is supported: TCP/IP</p>
System Software	<p>The following system software is included with California.pro and installed if needed: .NET 4 and MS Windows Installer 4.5. A separate Oracle client is no longer needed. For MS Outlook connectivity to California.pro (module BPO) a version of Outlook 2007, Outlook 2010 or Outlook 2013 is necessary. The LDAP connection (module LDP) supports versions Active Directory, eDirectory, and OpenLDAP optionally with SSL encryption.</p>
Memory	<p>Minimum: 1 GB, Recommended: 4 GB or more</p>
Monitor	<p>California.pro requires a resolution of 1.280 x 1024 pixels or higher.</p>
Data Backup	<p>Not required. You back up the California.pro database on the Oracle database server regularly.</p>
User Rights	<p>Installing California.pro requires administrative privileges on the PC.</p>
Internet	<p>Internet functionality (e.g. access to tendering platform, mobile measurment, mobile offer, and online help) requires Internet access.</p>

Database Server (Oracle)

California.pro Enterprise supports Oracle databases version 10.2.03 and higher (**Version 12.1.02 is recommended**). The database installation should already exist before installation of **California.pro** and supporting a Western European single byte character set (e.g. **WE8MSWIN1252**). For multi-user environments, the Oracle Continuous Query Notification feature is required. Using an Oracle database, for installations with less than five simultaneous users is not recommended.

Operating system	Each 64-bit operating system, which supports at least the Oracle database version 10.2.03, e.g. Windows Server 2012 / R2 , Windows Server 2008 / R2, Windows Server 2003 / R2 SP2, Windows Small Business Server 2011, Linux, Solaris
Network Software	Supported operating systems for California.pro have built-in networking software. The following Oracle network protocol is supported: TCP/IP
Memory	Minimum: 2 GB, Recommended: At least 4 GB (Windows Small Business Server 16 GB) and should be increased as database size increases to ensure optimal performance.
Hard Disk	Oracle requires at least 8 GB available hard disk space. Disk space requirements will vary with count and size of projects. RAID 10 is recommended.
Drive	A DVD drive, as appropriate, is required for installation from disc.
Data Backup	Streamer or equivalent; backup software, which is able to backup running Oracle databases.
User Rights	Installing California.pro requires administrative privileges on the Computer. On first Setup the password of the Oracle user SYSTEM must be known by the administrator.

Other Recommendations:

- Naming of Tablespace: California_TS (Size ~ 16 GB)
- TNSPING < 20 ms