

HOSPITALITY
WITH
A SYSTEM



protel Property Management Systems

HARDWARE REQUIREMENTS

protel SPE and smart (single- and network use)

Hardware requirements for protel PMS

What is this document about?

An appropriate hardware configuration makes sure in advance that the upcoming installation process and operation of your protel hotelsoftware will run smoothly.

The following recommendations are based on the specifications suggested by our software developer as well as on the experience we and our partners made during thousands of installation processes.

Please, consider the following information especially if you are planning on the acquisition of new hardware components. If you wish individual advice, do not hesitate to contact us! We are glad to support you and your hardware dealer.

Please make sure you work with the latest version of this document!

Related documents:

- protel pre-installation checklist:
Prepare the setup of the master data for MPE installations
- Checklists for protel SPE, smart, banquet and sales are under revision currently.

➤ All our documents are constantly revised parallel to the further development of the software. If you have any doubts regarding the version of this document, please send an e-mail to: documentation@protel-net.com. We welcome any questions and suggestions.

➤ Also do not hesitate to contact us at support@protel-net.com if you have any questions or doubts regarding the following recommendations. We will be happy to assist you!

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Networks

Peer-to-Peer Network

Under windows, a network with up to two PCs can be installed as a peer-to-peer-network. To meet the requirements of your professional operations use one of the following operating systems: Windows 2000, Windows XP Professional (our recommendation), Windows Vista Business or Windows 7 Rechner Professional oder Ultimate.

Within a peer-to-peer-network, the database server can be used as an ordinary workstation. If a system failure occurs on this computer (be it by any application or by Windows itself), it is possible that one or more databases will be damaged. The damage can, in the worst-case scenario, be irreparable.

Data backup

➡ The regular backing up of databases is imperative!

Windows 2000/ 2003/ 2008 Network

Central data management with
Windows Server

A dedicated Windows 2000, 2003 or 2008 Server centralises the data storage and the correspondent data management. The benefit: This reduces the workload for each workstation.

The server operating systems Windows 2003 and Windows 2008 can be applied as 32-bit as well as 64-bit versions.

Interfaces

➡ Since a dedicated server offers permanent availability, protel interfaces (e.g. PABX) should be located on this server as well. This ensures the uninterrupted connection to the external systems.

Maintenance

Another benefit: maintenance will become much easier since it can be directly carried out on the server. There's no interference with the operation of a hotel. Using a dedicated server increases the safety of the stored data because an unexpected shutdown of a workstation will usually not affect the databases.

Data backup

➡ Please note that, nevertheless, a regular backup of the database files is imperative!

Specifications Workstations / PCs (stand-alone)

- Pentium IV – CPU 2 GHz or faster, AMD Athlon 2000+ or higher / faster or more recent processors
- Min. of 1024 MB RAM*
- Enhanced IDE-Controller and hard drive with a min. capacity of 40 GB min.
- Operating system: Windows 2000 Professional, Windows XP Professional or Windows Vista (Business or higher), Windows 7

* For Windows Vista and Windows 7 we recommend min. 2048 MB RAM

Specifications Server

We recommend the following specifications for a server:

- Pentium IV Processor > 2GHz or faster, AMD Athlon 2000+ or higher/faster*
- Min. of 4 GB RAM
- Hard drive with a min. capacity of 100 GB or more
- A mirrored hard drive (RAID 1 or RAID 5) enables operations even if the database drive is damaged.
- Operating system: Windows 2000/2003 or 2008 Server (our recommendation)
- Database: MS SQL Server 2000 / MS SQL Server 2005 or MS SQL Server 2008** (our recommendation)

* Alternative: multicore processor like Intel Core Duo or AMD Athlon 64 X2 – If several parallel sessions are to be expected, an appropriate processor or even multi-processor system / cluster should be used.

** For the use of an SQL 2008 Server there are possibly other (higher) hardware requirements

Memory Requirements

To be on the safe side, we recommend a minimum of 4 GB RAM for both 32 und 64 bit systems.

► Please find information regarding your specific installation at <http://msdn.microsoft.com/de-de/library/ms143506.aspx>.

Microsoft Windows Server and SQL Server: feasible combinations

Windows Server	Bit	Microsoft SQL Server							
		SQL 7.0	SQL 2000	SQL 2005 32 Bit	SQL 2005 64 Bit	SQL 2008 32 Bit	SQL 2008 64 Bit	SQL 2008 R2 32 Bit	SQL 2008 R2 64 Bit
Server 2000	32	yes	yes	no	no	no	no	no	no
Server 2003 SBS	32	no	no	yes	no	yes	no	yes	no
Server 2003 Standard/Enterprise	32	no	yes	yes	no	yes	no	yes	no
Server 2003 Standard/Enterprise	64	no	no	no	yes	no	yes	no	yes
Server 2008 Foundation	64	no	no	no	no	no	yes	no	yes
Server 2008 SBS	64	no	no	no	no	no	yes	no	yes
Server 2008 Standard/Enterprise	32	no	no	yes	no	yes	no	yes	no
Server 2008 Standard/Enterprise	64	no	no	no	yes	no	yes	no	yes
Server 2008 R2: Foundation	64	no	no	no	no	no	yes	no	yes
Server 2011 SBS	64	no	no	no	no	no	no	no	yes

➤ **Important:** protel supports SQL Server only in the full versions (Standard/Enterprise). Express versions or MSDE (as in SQL Server 2000) are not allowed!

Licences

➤ Please make sure that all required software licences are available when the installation takes place.

Please ask you hardware dealer or visit the Microsoft licence pages, for instance at <http://www.microsoft.com/calcsuites/en/us/products/default.aspx>.

Hard disk capacity

Make sure that the available hard disk provides enough space for a GROWING system.

➤ The following statements denote the minimum requirements at the **starting point**:

Database programs: 2 GB

Database size: 1 GB

+ 1 GB for training version

+ (up to) 3 GB for backup snapshots (30 to 60 % of the size of the protel DB)

Plan for a growing system!

Redundant Systems

The Enterprise versions of Windows Server 2003 and 2008 can be used to run an active/passive server cluster. Two servers that are constructed and configured in the same way can then be used as mutual safeguards: Should the active system fail, the second server activates automatically.

► Please note: If you consider to deploy redundant systems, an external data storage system (SAN) should also be used, and all protel interfaces should run on a separate computer.

Serial connections

Most interfaces require at least one serial connection (RS-232) to connect to the external devices (PBX, Pay TV System, POS, etc.).

► Please keep in mind that other devices like UPS, serial mouse or a modem may also need further serial connections.

Interfaces e.g. for PBX

Interfaces can be installed on several PCs. These can either be workstations or servers.

In any case *each* PC has to be equipped with enough serial ports for all interfaces (see above). Most interfaces require one serial connection; there are but a few that require two or more serial connections.

► Please contact your protel support team to get further information on the interfaces you wish to apply and to make sure that your hardware provides all the connections you need to run those interfaces!

► The best possible data security can be achieved by running the interfaces on a server. However, it is possible to use a separate IFC machine if you do not have a server (see specifications workstations).

Graphic Cards

The PCI graphic card should provide a minimum of 8 MB RAM.

Windows Vista requires a graphic controller supporting the Windows Driver Display Model (WDDM).

Monitors

We recommend to use a default resolution of 1280 x 1024 or more pixels for a monitor with 17" - or possibly 19" screen.

Printer

The printer should be an inkjet or laser printer with a minimum performance of six pages per minute.

Please do not use dot matrix printers!!

Network Wiring

Fast Ethernet or Gigabit Ethernet: Twisted-Pair-wiring (UTP or STP Cat 5 or higher).
Fast Ethernet using 100mbit/sec is sufficient.

We recommend star-shaped, hub-based wiring (transfer: 100 or 1000 Mbit/sec).

Network Protocol

Especially in larger network environments you should take into consideration that protel uses a transport protocol that is used by all workstations in order to communicate with each other.

This is generally supplied by

- an identical name for workgroup and domain for **all** machines that run protel or its interfaces.
- at least one network card driver. This is also mandatory for or a stand-alone system.
- The used protocol is TCP/IP. - All PCs must be contained in one IP range.
- All machines within the network must be able to communicate with each other. You may experience issues if one workstation or server splits the network into different segments by using several network cards and thus no protocol routing is provided.

Power Supply

The server should be connected to at least one uninterrupted power supply (UPS).

We advise the usage of an UPS even if you only have a standalone solution, especially if power outages are not unusual in the region.

Data Backup

The backup files should be stored on a tape using a streamer or on a removable disk drive (e.g. SyQuest). The tape size should be selected according to the size of the data (plus additional space for a growing database).

Generally speaking, the size of a tape should be at least 100 GB.

Messaging Service

The following is required to ensure a smooth service:

- One workgroup within the network (a domain under WinNT). All machines require the same NetBIOS supporting protocol.
- TCP/IP as the only protocol is possible as well; in this case you need to assign a fixed IP number.

Remote Maintenance

For some issues, it is necessary for your supporter to dial into your network. As far as possible, remote maintenance sessions should be conducted via the Internet using a fast DSL connection as well as a secure VPN connection.

➤ Please ask your local protel dealer for recommendations.

DSL / ISDN

Internet Connection via DSL (or ISDN)

We highly recommend the exclusive use of pcAnywhere by Symantec or the freeware UltraVNC

To connect to your network in order to conduct a remote maintenance session, the protel support team needs to know your IP address.

There are three options:

- Alternating IP: Each time you access the Internet you will be assigned a new IP address by your Internet provider. The current IP address you can find out for example at www.meineip.de.
- Static IP: In order to avoid this effort please ask your Internet provider for a fixed IP address. (Provider independent IPs are available as well for example at www.fix-ip.de)
- Dynamic IP: You may also use a provider like www.dyndns.com who will assign a sub domain to you, for example: protel.dyndns.org. The exchange of the IP address will then take place in the background.

➤ Please note that static or dynamic IPs are not procured by the protel support.

VPN connection (Virtual Private Network)

For security reasons we additionally advise the use of a VPN connection. The benefit: The codification of the transferred data including the log in information.

We highly recommend the exclusive use of MS VPN, Cisco, FortiClient, Nortel.

Software recommendation

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Ports

During the configuration of the remote software the port by which the application is able to communicate with its counterpart is to be entered. If one of the ports mentioned below is not available at your hotel, please ask us for an alternative port.

- Standard port at RDP: 3389, 15556
- Standard ports at pca32: 5631 und 5632
- Standard ports at (Ultra-)vnc: 5900

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protel Fact sheet

	protel SPE/smart	protel MPE
Programming language (all products)	C++	C++
Size source code	> 1.000.000 lines	> 1.000.000 lines
Generated code	MS Windows/32 Bit	MS Windows/32 Bit
Database server	Microsoft SQL Server 2000/2005/2008	Microsoft SQL Server 2000/2005/2008
Database language	SQL	SQL
Database interface	ODBC	ODBC
Triggering database	C++	C++
Monthly licence fee for database	none	none
Monthly maintenance fee for database	none	none
Report Generator	Seagate Crystal Reports	Seagate Crystal Reports
MS Office Integration	yes	yes
MS Backoffice Integration	yes	yes
Internet Integration	yes	yes
Automatic update via update	yes	yes
Web Interface via implemented HTTP Server	yes	yes
Internet reservations	yes	yes

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	protel SPE/smart	protel MPE
Workstation operating systems		
Windows 2000	yes	yes
Windows 2003	yes	yes
Windows XP Professional	yes	yes
Windows Vista Business or higher	yes	yes
"Dumb Terminal" support	yes	yes
Linux*	As terminal client	As terminal client
(recommended o/s for workstations)	XP Prof.	XP Prof.
Server operating systems		
Windows 2000 Server	yes	yes
Windows 2003 Server	yes	yes
Windows 2008 Server	yes	yes
Windows 2011 Server	yes	yes
Citrix WinFrame/MetaFrame	yes	yes
Novell Netware*	no	no
Linux*	no	no
(recommends o/s for server)	Windows 2008	Windows 2008

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If you have questions or wish further information please do not hesitate to contact us!

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