

PiSA sales, Version 7.5

Technical Specification

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System architecture

PiSA sales is a modern component-based software. It is based on the middleware PiSA cubes and uses a multistage architecture in which different services can be installed at any location within your company network or even globally. PiSA sales users work with Windows clients or have access to CRM data via a web portal using a standard internet browser. The clients or the browser communicate with the PiSA sales application server (Java). It contains the complete logic of the application and establishes the connection to the database when accessing data. The communication between the single components takes place via standardized network protocols.

Installation scenarios

For the operation of PiSA sales you will generally set up the following working environments resp. applications in your company:

1. An enterprise environment for the use of PiSA sales on the company network, consisting of the following software components, in most cases distributed on several computers:

- + Database
- + PiSA sales application server
- + PiSA sales print server
- + Several PiSA sales CRM Web- or Windows clients on the workstations in the company network (to use Web-client a web browser and a Web transaction server is required).

2. Several mobile environments on the notebook computers of your sales representatives, consisting of the following software components on the notebook computer:

- + Database
- + PiSA sales CRM application server
- + PiSA sales CRM print server
- + CRM Web- or Windows clients on the workstations in the company network (to use Web-client a web browser and a Web transaction server is required).

Enterprise environment and mobile environment use the same PiSA sales application server. Merely configuration files and properties files differ.

System requirements

The system requirements apply to the autonomous installation of a component on a computer. If, e.g., database and PiSA sales application server are installed together on one computer, the requirements are to be added accordingly.

The system requirements apply to the enterprise environment on the company network as well as to mobile environments on notebook computers. Nevertheless, notice the following statements for the operating system:

- + For operation of the enterprise server a 64bit operating system is required. It provides the applications with more main storage. Multi Core CPUs are not compulsory but, however, make sense for the enterprise server operation.
- + A 64bit operating system is not necessary for notebook computers.

Database

Hardware

The hardware has to ensure the operation of the database. The user data volume is depending on the saved CRM data. That is why no concrete statements can be made here. Notice the following recommendations for the disk storage of data:

- + System and software in RAID 1 (mirror)
- + RAID 10 is recommended by Oracle/Microsoft. The nest is useful for partition(s) with the data files and provides for high stability and performance.
- + Basically the load sharing improves, if more disks become mirrored and striped.
- + Oracle/Microsoft and PiSA sales do not recommend the application of RAID 5 storage (not imperative for a Storage-Area-Network)

Software (operating system and database)

Requirement for the operation of PiSA sales is a fit for use database by the following manufacturers:

- + Oracle 11g (Standard, Enterprise, Express, Personal).
- + Oracle 18c (12.2.0.2) (Standard, Enterprise, Personal)
- + Oracle 19c (12.2.0.3) (Standard, Enterprise, Personal, Express)

Current patches must be installed.

PiSA sales supports the following Microsoft SQL servers:

- + Server 2012, (Standard, Enterprise, Workgroup and Express edition)
- + Server 2014 (Standard, Enterprise, Web and Express edition)
- + Server 2016 (Standard, Enterprise, Web and Express edition)
- + Server 2017 (Standard, Enterprise, Web and Express edition) – recommended!

Always ensure the latest service pack!

We basically recommend only the use of software for which the manufacturer offers current support.

Please note the limits of the single editions, in particular when applying the Express editions (number of used CPUs, max. usable RAM size and max. database size). You'll find information about in the Microsoft knowledge base and at Oracle.

For mobile environments on notebook computers Oracle Personal edition is recommended. Oracle XE (Express Edition) is not recommended for productive environments (limits: 1 GB main memory, 1 CPU, approx. 9 GB data). This edition is provided by Oracle only as development database without support.

PiSA sales application server

Hardware

- + Usage of modern processors
- + At least 2 GB of free main storage if no further services run except PiSA sales, otherwise 4 GB
- + Main storage, utilized capacity in operation: Base load with cache 1.2 GB (with intermediate storage of all masks), base load without cache 300 MB, additional load 50 MB per session

Please orient yourselves by the experience ascertained by PiSA sales:

- RAM = 2024MB**
- + 100MB - PowerUser**
- + 50MB - NormalUser**
- + RAM of the OS**

Web server

- RAM Webserver = 1024 MB**
- + 100 MB / User**
- + RAM des OS**

- + The necessary CPU cores should be based considering current users on following information:

CPUcores = number of current logged in users/10

- + Disk capacity (data volumes) without user data:
 - at least 5 GB for the PiSA sales software
 - additionally approx. 5 GB for the database incl. PiSA sales repository (in case of installation of application server and database on one computer)
- + Graphic resolution from 800x600 pixels for setup program

The disk capacity for the application server is also dependent on the size and the volume of security files, upgrade files (jar-files), log files and temporarily files, which are stored automatically in the course of the work with PiSA sales.

We recommend an additional drive with 30 GB for the PiSA sales system

Please store the corresponding directories regularly in order to release hard disk space on the application server.

Please take into consideration additional storage space for possible options like:

- + ZIP database
- + GEO database
- + Text indexes
- + Log files

Notice, in addition, the following notes:

- + Using of a 64bit operating system provides the application with more main memory. The PiSA sales server can then use more than 1.5 GB of main memory.

Cluster operation

If you want to use Cluster software features, you have to install and to license several application servers. PiSA sales provides Load balancing during registration. Using several application servers the system stability is enhanced.

Software (operating system)

- + MS Windows 7 (or higher), 64-Bit-Version
- + MS Windows Server 2008 R2; MS Windows Server 2012, R2; MS Windows Server 2016; MS Windows Server 2019
- + UNIX (LINUX, IBM, HP, SUN, Silicon Graphics), TCP/IP network protocol
- + All systems must support JAVA SE8, either you use the origin Oracle Java or a completely compatible product.

We generally recommend only the use of software for which the manufacturer offers up-to-date support.

Support and maintenance – Software

In order to provide safe and reliable support for installation and maintenance as a contract processor as well as for technical support, we strongly recommend provision of VPN access by the customer and installation of supporting software.

- + .Net Framework 4.7.2 or higher
- + Current patches
- + depending on database system
 - Oracle: SQL Developer
 - Microsoft: SQL Management Studio
- + Notepad ++ (incl. Compare PlugIn)
- + PDF reader
- + Chrome / Firefox
- + ERP client (only when using the interface)
 - SAP GUI
 - PSIpenta client
- + Inxmail client (only when using the coupling)

Software (server's site groupware connection)*

Following groupware servers are provided:

- + MS Exchange Server from 2019
- + MS Exchange online (as a part of MS Office 365)*
- + Lotus Domino Server 7.0, 8.0, 8.5 (with current fix pack FP and UP) or higher

*See also information in the feature document "PiSA sales Feature Groupware Connector 7", D-12-119710

PiSA sales CRM clients

Hardware (required)

- + Usage of modern processors
- + At least 512MB MB of main storage (exclusive Office applications), from 1GB is recommended
- + Disk capacity (data volumes): approx. 50 MB. According to extent of use and size of documents, pictures, etc. the demand can rise to more than 250 MB, because the data are buffered on the client when edited.
- + Graphic resolution 1920x1080 px, min. 1024x786 px
- + Color depth from 16 bits (24 or 32 bits are recommended)

Hardware (optional)

- + CardScan (business card scanner incl. required software, licensed for existing customers only)

Software (operating system)

- + MS Windows 7 (or newer), 32- or 64-bit-version
- + .NET-Framework 4.7.2 or higher

Software (visualization)

PiSA sales creates reports in the formats RTF, PDF and HTML server-driven via the integrated report generator. For the visualization of documents and multimedia files in the client:

- + A software to represent PDF documents
- + MS Excel from Version 2010 up to 2019
- + where applicable Visual Studio Runtime for Office (if not installed)

Software (map representation)

The PiSA sales standard uses Google Maps to represent locations. For expanded representation of addresses, CRM data and route planner following services are supported.

- + Google Maps
- + Bing Maps
- + Here
- + MapQuest Open
- + Microsoft MapPoint Version 2009**

(**please note note that MapPoint is no longer developed by Microsoft, if MapPoint is used furthermore, for versions higher than 2009 PiSA sales customizing is required).

CTI (Computer Telephony Integration)

Representation of incoming phone calls in the contact management and outgoing phone calls with one mouse click directly from the contact.

- + Support of TAPI driver from TAPI 3.x or higher on an existing TAPI-capable PBX.
- + Support for third-party telephony (host CTI) and first-party telephony (desktop CTI).

Interfaces of existing commercial solutions (e.g., Xphone of C4B) are to be checked on performance for the CRM coupling.

Skype for Business 2015

From PiSA sales Web-Client Version 7.1 support of Skype 4 Business 2015.

- + Installation scenario of the interface plugin as web application on IIS or Skype4B server is required.
- + Cloud usage only if server can be administrated directly.
- + Communication between application server and Skype4B server via RESTful web service
- + Server to server communication must be fully guaranteed without any restrictions (no firewall, VPN or some other).

Citrix terminal server

The PiSA sales Windows client and the Web client can be run under Citrix terminal server.***

PiSA sales CRM Web client

Employees, customers or partners can use an Internet browser on the PiSA sales Web client both to access to CRM data as well as on the road and locally. For this, in addition to the application server, a transaction server and a web browser are required.

Desktop integration (DIM)

The web client can also be used without a client-side system integration. The so-called desktop integration with couplings (for example Office integration, Geo integration etc.) requires increased resource requirements for the transaction server or the web client.

*** When using thin clients with the Web client, in a terminal environment the DIM can only be used under certain conditions. Please contact your project manager at PiSA sales.

Web client (internet browser)

- + Mozilla Firefox; Chrome-Browser, Opera, Microsoft Edge, *The usage of Internet Explorer is no longer supported by the web client because the browser is incompatible with modern web standards and causes interface problems too.*
- + Graphic resolution from 1280x1024 px

Resource requirements for desktop integration:

- + Assure the use of min. 256 MB RAM
- + Disk capacity (data volumes): approx. 50 MB (depending on the extent of the use and size of documents, images etc., the demand can increase to more than 250 MB because the data are cached on the client).

Software Integration -Plugins-

Office integration is necessary to use the standard functional range of PiSA sales.

PiSA sales supports the 32-bit and the 64-bit version of Microsoft Office from version 2010 to incl. 2019 (VSTO Runtime required).

Attention:

With 64bit Office please use the web client. The interface to the Windows client is NOT supported by a 64bit Office.

For the generation/edition of documents,
for viewing templates and reports:

- + MS Word from Version 2010, to incl. 2019

For the generation of report templates and reports:

- + MS Word from version 2010 to 2019
- + MS Excel from Version 2010 to 2019

For the external management of contacts and tasks:

- + MS Outlook version 2010 up to 2019 as a mail client or contact management (optional)
- + MS Project version 2010 up to 2019 for the generation of project plans (optional)

For e-mail application:

- + MS Outlook from Version 2010 up to 2019
- + MS Exchange Server from 2010 (optional)
- + MS Office 365 is supported
- + Generation and editing of documents in Office 365 applications installed locally on the client (local installation is recommended by Microsoft)

Software (alternative groupware integration)

- + Lotus Notes from Version 6.5. The integration requires a Lotus Domino Server in the network.

Solutions for Tablet and Smartphone

PiSA sales tablet

PiSA sales tablet offers the user via tablet/smartphone mobile online access to PiSA sales. Access happens via a native app that is installed directly on the device or via a web app in the browser. The browser application is restricted in opposite to the app (for example, no access to a file system, no push message, no SMS, no triggering of e-mail).

PiSA sales Pocket

Simplified access via smartphone (touchscreen) on selected data of the CRM system (e.g. customer data, sales cases, appointments and tasks) with read / write access. A special pocket solution that works with web services and has a customized (customizable) data and functional range compared to PiSA sales tablet.

Technical prerequisites

PiSA sales tablet

- + Java 7+ (cur. 8)
- + Servlet Container (e.g. Apache Tomcat)
- + Web Socket Server (from Apache Tomcat ver. 7.0.56)
- + Connection – Web Socket Server to Servlet Container
- + Connection – Servlet Container to Sales Server
- + Valid SSL certificate for secure connection encryption
- + OS: Windows, Linux, Mac OS
- + RAM – depending on number of users, ca. 20 MB per user

PiSA sales pocket

- + Pocket-Server, Apache-Tomcat version 6.0, Webkit-enabled browser

Transaction server

PiSA sales Web client, PiSA sales tablet and PiSA sales pocket require an installed and configured Web Transaction server, which serves all three solutions.

- + HTTP Web-Server Windows or Linux), e.g. Tomcat, JBoss, Virgo, Jetty, WebSphere with Java 8 (or higher)
- + Memory demand 100 MB for the application plus approx. 50 MB per logged-in user****
- + Secure connections (https) are supported
valid SSL certificate is required.

Resource requirements for desktop integration Web client:

- + Recommended: 3GB hard disk space for files / BLOBs of all currently logged in users and the client configurations of all users ****.

****With using multiple solutions (web client, tablet), the requirements for memory and performance are added.

Requirements and platforms for end devices

iOS from version 9, better iOS10 (in any case PiSA sales from version 6.4 is always required); Android from Version 5, optimally from version 6; Windows from version 8, Smartphone, iPhone, iPad, Tablet with Webkit capable browser.

End devices must be capable for connections to the Web Socket Server.

Virtualization

PiSA sales can also run in a VMware and MS Hyper.

Docker Container

PiSA sales CRM can be executed as Docker Container.

VSTO Runtime (Office 2010)

When installing / using Office 2010, the VSTO runtime (Visual Studio Tools for Office) of Microsoft is not installed automatically in any case. From PiSA sales 7.0 "VSTO runtime" from version 4.0 is required and has to be installed additionally if necessary.

With the VSTO Runtime, the AddIns for MS Office 32-bit and 64-bit are supported.

Attention:

With 64bit Office please use the web client. The interface to the Windows client is NOT supported by a 64bit Office.

PiSA sales CRM in a cloud

The CRM system PiSA sales is deployed in a private cloud (Enterprise Cloud), hosted in a high-security data center in Germany. Certified "Trusted Cloud Service".

All data are stored in a database (MS SQL Server).

The PiSA sales application server includes the application logic for your PiSA sales CRM application and the PiSA sales Web Transaction server ensures access via web servers (HTTPS, VPN, and Citrix).

The access is via PiSA sales WEB Client, PiSA sales Windows Client and PiSA sales tablet for mobile devices.

The server-based integration of other applications (Office 365, ERP, etc.) inside or outside of the private cloud is guaranteed.

Form of organization

With SaaS (Software as a Service) we offer you a complete software package for the standardized mapping of your business processes.

Bandwidth

100 Mbit in the download / upload

Data security in the cloud

- + Secure data transmission via sockets, TCP / IP, HTTPS,
- + AES-256-bit encrypted transmission and storage of your data
- + Protection by firewalls
- + SSL / TSL integration
- + All data are stored in the relational database.

Access via Internet browser or PiSA sales tablet on the web server

- + IP Network access via HTTPS
- + SSL encrypted data transmission
- + Certificate-based authentication to protect against man-in-the-middle attacks
- + Optional VPN access in protected company network possible
- + Connection via proxy / firewall possible
- + No permanent local storage of data on mobile clients. This means that no data is transferred to other hands even if the device is lost or stolen.
- + The PiSA sales web server does not host any application logic.
- + Static elements on the web server are limited to the login functionality.

Access of the web server to the application server

- + Connection via proxy / firewall possible
- + HTTP tunneling
- + SSL encryption possible

Access of the application server to the database server

- + Access to the database only allowed for application servers
- + No way to directly enter SQL queries in the client.
All queries to the DB are processed according to the search conditions in the server.
- + Run of queries / search results in a processed form with a defined range of data
- + Thus immune against SQL injections

Backup in the cloud

Backup in the cloud by daily back-up with 7-day hold back. Optionally extended backup agreements possible.

For more information to technical prerequisites, please contact us to make arrangements for an individual consulting appointment. To get more information of our products and services, please visit our web site www.pisasales.de