

Infor PM 10.1.2

Sizing Guide

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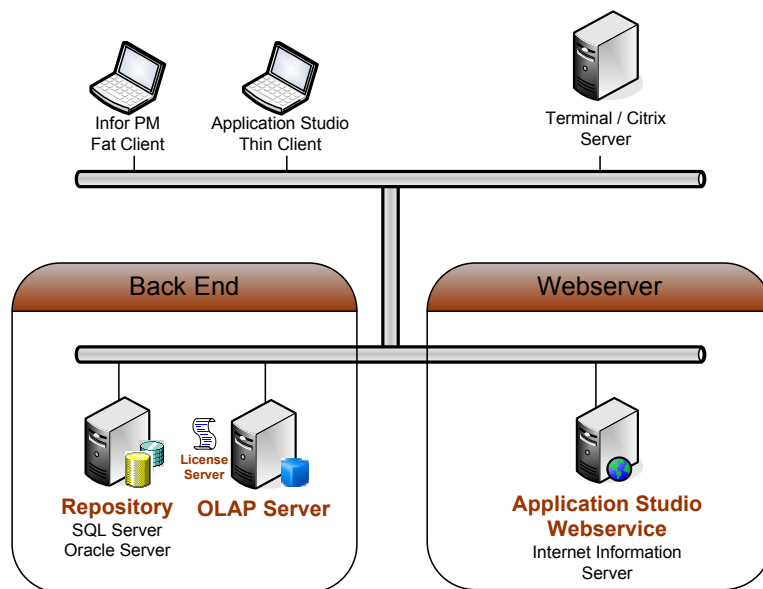
Introduction

This document is a guide to the hardware required to run the various components of Infor PM BSA 10. However, it must be noted that every application is different and it is essential to liaise with your Professional Services and Support contacts to discuss particular situations. The main differences in hardware requirements arise from the server solutions on the one hand and client solutions on the other. Please note that each project has its own conditions and a general statement of hardware requirements is not possible.

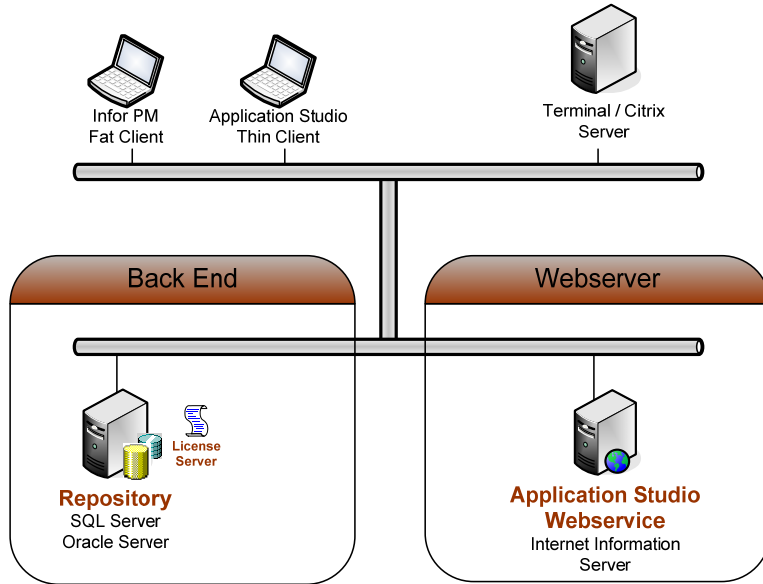
Distribution Scenarios

The diagrams below show the various Infor PM components in typical distribution scenarios.

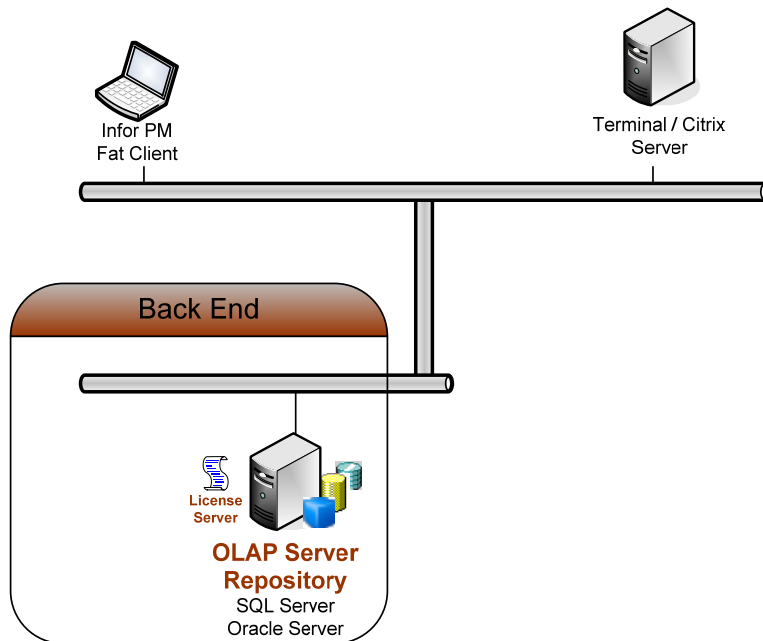
Scenario 1: OLAP Server with Application Studio WebServices



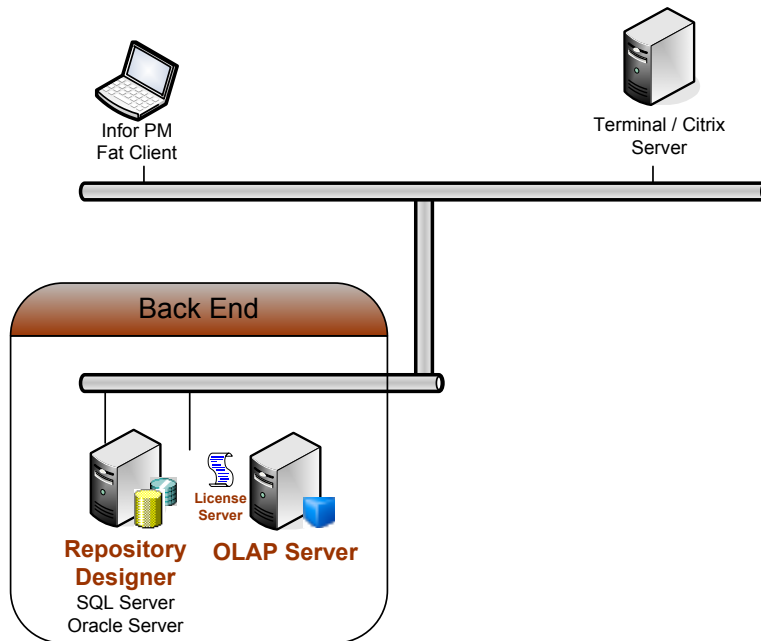
Scenario 2: Application Studio without OLAP Server



Scenario 3: OLAP Server without Application Studio WebServices



Scenario 4: OLAP Server with Designer



OLAP Server

Depending on the distribution scenario, this should be a dedicated server.

Hardware recommendation

- Computer: 2-4 processor 3.0 GHz
- Memory: 2 to 4 GB RAM
- Hard Disks: Fast hard disk system
- Network: The only supported protocol is TCP/IP.

Software requirements

For details about the supported operating systems, RDMS and other software please refer to the appropriate release notes of each Infor PM component.

Sizing factors

The OLAP Server is memory based. This means that the bigger the data models get, the more memory is needed.

Depending on:

- model design
- cubes and dimensions per database
- dimensions per cube (max. 20)
- elements per dimensions (max 1.000.000)
- values per cube
- etc

the used memory could have a range from 10 MB up to 3 GB or more.

Hardware recommendation for 64 Bit Version

Because the 32 bit Windows operating system allows each process only 2 GB or 3 GB of virtual memory, a 64 bit version of the Infor PM OLAP Server can give extra benefit to customers, especially in the ability to use more than 3 GB of RAM on a server process.

- Computer: 2-4 64Bit processor
- OS: E.g. Windows 2003 Server x64 Editions
- Memory: 4 GB RAM or higher, expandable
- Hard Disk: Fast hard disk system
- Network: The only supported protocol is TCP/IP.

Repository Server

Depending on the distribution scenario, this server (database) should be dedicated. It can be on a machine running MS SQL or Oracle.

Hardware recommendation

- Computer: 2-4 processor 3.0 GHz
- Memory: 2-4 GB RAM
- Hard Disks: Fast hard disk system
(the drive should have 10-20 % free space all the time)
- Network: The only supported protocol is TCP/IP.

Software requirements

For details about the supported operation systems, RDMS and other software please refer to the appropriate release notes of each Infor PM component.

Sizing Factors

The main demand on the Repository is Infor PM User management and report catalog management. This means that the larger the number of users and/or reports, the more disk space and memory allocation is needed.

Depending on:

- the model design
- User, groups, roles
- Directory user and groups,
- Reports
- Lists
- Variables (global report catalog and report variables)
- History function in Application Studio enabled
- etc

the used disk space could be in the range of 150 MB to 5 GB or more.

For example:

- A new Oracle 9i instance could allocate 1 GB hard disk space.
- A new table space created for the Repository allocates 150 MB space.
- 10.000 users allocates between 30 and 40 MB space.
- Space allocation for SQL server is similar.

Administration hints

- It is necessary to re-index the existing indexes of the SQL database on a regular basis.
- Pre-allocation of table space up to 1 GB can increase the speed of the database
- MS SQL Server:
 - The number of licenses purchased for the relational product used must at least equal the number of named ports purchased for Infor PM.
 - (Note: The Microsoft SQL Server CPU pricing is acceptable for use with Infor PM if performance is considered to be adequate.)
- Read the hardware recommendations of the used RDBMS (SQL, Oracle) carefully for more detailed information

Application Studio

An Application Studio client computer has an installation of Application Studio only.

Hardware recommendation

- Computer: 1 processor 1-3.0 GHz
- Memory: 512 MB 1 GB RAM
- Hard Disks: Normal disk system
 - 200 MB free RAM before loading Application Studio
 - 200 MB hard disk space before installation
 - (the drive should have 10-20 % free space all the time)
- Network: The only supported protocol is TCP/IP.

Software requirements

For details about the supported operating systems, RDMS and other software please refer to the appropriate release notes of each Infor PM component.

Application Studio Web Client

An Infor PM Application Studio web client only needs internet access. So the hardware requirements are very low.

Hardware recommendation

- Computer: 1 processor 1-2.0 GHz
- Memory: 512 MB 1 GB RAM
- Hard Disks: Normal disk system
- Network: The only supported protocol is TCP/IP.

Software requirements

For details about the supported operating systems, RDMS and other software please refer to the appropriate release notes of each Infor PM component.

Administration hints

- LAN, WAN and Dial Up connections are all supported. As with any web product, the faster and more reliable the connection, the better the performance and reliability of the application.
- No Plug-ins or ActiveX controls are necessary to run the web client.

Application Studio WebService

The Application Studio WebServices machine serves as server machine for your web application. On this machine a full Application Studio is installed, including the web components of Application Studio.

Hardware Minimum Requirements

- A minimum of 70 MB free RAM is required per web instance.
- 200 MB hard disk space is required for the installation + additional disk space for temporary files
- 2 GHz
- 100Mbit connection to repository and application database

Hardware recommendation

- Computer: 2-4 processor Dual or Quad Core 3.0 GHz
- Memory: 2 GB RAM, better: Windows 2003 SP1 Enterprise Server with more GB (depends on number of concurrent user and size of instances)
- Hard Disks: Fast hard disk system
- Network: 1Gbit , The only supported protocol is TCP/IP.
- Display SVGA (800x600, 256 colours) or higher.
-

Software requirements

- Internet Explorer 6.0 SP1 (contains important operating system updates)
- Windows 2000 SP4, Windows XP SP2 Professional, Windows 2003 SP1
- IIS installed on an NTFS partition

Software recommendation

- Operating System
Windows 2003 SP1 Enterprise Server

Sizing Factors

We strongly recommend the use of a dedicated machine for use as the Infor PM Application Studio WebServices server, which runs Windows 2000 Server or Windows Server 2003 and IIS (Microsoft Internet Information Server). IIS must be installed on an NTFS partition.

The “sizing” of the Web Services server machine(s) will determine, to a great extent, the overall performance of the application. Details regarding server sizing are given below.

Please note that the WebServices software can run as a service – therefore the Web Services server machine(s) does not need to be logged on to Windows in order to function.

The WebServices server hardware requirements mainly depend on the load of the server when running the live application, the complexity and size of the models and reports served, and the performance required.

- 70-80 MB RAM per logged on User, depending on the size of models accessed.

- 20 MB of disk space per logged on User, depending on the complexity of the reports served.
- 0.1 to 0.4 processors per logged on User, depending on the complexity of the reports served.

It cannot be accurately predicted how much RAM will be used by one Application Studio web session on the IIS because it depends on many factors: size of model, number and size of dimensions, calculation rules, attributes, number and complexity of lists, etc. Memory consumption will be approximately 70-80 MB per concurrent user, but this number could be even higher in complex applications, and it will also vary during the user's session.

To estimate how much RAM is needed per session, start the Application Studio Windows client; connect to the repository you wish to analyze, run the appropriate reports, and check the resources used in the Windows Task Manager by "Mis.Application.Studio.exe". The amount of RAM needed in total can be calculated roughly by multiplying the number of concurrent users by the RAM needed by one typical user.

Load Balancing

The current version of WebServices has been tested with up to 100 concurrent user sessions on a quad-processor machine. However, it is recommended not to exceed 50 concurrent users per IIS in order to have a safe buffer zone. Several smaller IIS servers can perform better than one large single IIS. Again, every customer's application is unique so these are only guidelines.

A simpler mechanism is available to enable larger numbers of concurrent users to be supported: multiple WebServices servers are used and every additional server runs its own IIS with its own IP address. The user community is explicitly divided into groups with each group using only their own IP address (web page address). All the WebServices servers can still refer to the same Application Studio repository and the same application data sources at the same time, with all functionality being fully supported.

Office Plus

An Office Plus client computer has an installation of Office Plus only. For that a consumer computer is adequate.

An Office Plus client can be used to model OLAP cubes and to import and export data to and from the OLAP model. It is recommended having enough memory for such purposes

Hardware recommendation

- Computer: 1 processor 1-3.0 GHz
- Memory: 512 MB 1 GB RAM
- Hard Disks: Normal disk system
 - 200 MB free RAM before loading Office Plus
 - 200 MB hard disk space before installation
 - (the drive should have 10-20 % free space all the time)
- Network: The only supported protocol is TCP/IP.

Software requirements

For details about the supported operating systems, RDMS and other software please refer to the appropriate release notes of each Infor PM component.

Enterprise Information Designer (EIF Designer)

The Infor PM EIF Designer is the Modeling environment for Infor PM BSA. The Designer is a typical Full Client working environment.

Hardware recommendation

Database Server

- Computer: 2-4 processor 3.0 GHz
- Memory: 1 to 2 GB RAM
- Hard Disks: Fast hard disk system
- Network: The only supported protocol is TCP/IP.

Client

- Computer: 1-2 processor 3.0 GHz
- Memory: 1 to 2 GB RAM
- Hard Disks: Fast hard disk system
- Network: The only supported protocol is TCP/IP.

Software requirements

For details about the supported operating systems, RDMS and other software please refer to the appropriate release notes of each Infor PM component.

Software requirement

Database Server

- OS: Windows 2003 (For details about the Service pack refer to the appropriate Release notes of Infor PM EIF Designer)
- MS SQL Server:
The number of licenses purchased for the relational product used must at least equal the number of named ports purchased for Infor PM.
(Note: The Microsoft SQL Server CPU pricing is acceptable for use with Infor PM if performance is considered to be adequate.)
- Oracle Database Server

Client

- OS: Windows XP . (For details about the Service pack refer to the appropriate Release notes of Infor PM EIF Designer)

Sizing Factors

The main demand on the Designer is the modeling of Infor PM OLAP server and administration of Infor PM Repository user management. Additionally the Connector (with Query & Analysis DataLinks) can be used to load data from a ERP system to the OLAP server.

Depending on:

- the model design
- cubes and dimensions per database

- dimensions per cube (max. 20)
- elements per dimensions (max 1.000.000)
- database security (rights on dimensions)
- multi-database access cube rights
- etc

the used disk space could be in the range of 50 MB to 100 GB or more.

Together with Connector, the

- star schema generation
- data load
- etc.

the used disk space could be in the range of 50 MB to 5 GB or more.

During the Create Database process, the configuration of the model will be processed in memory. Depending on the model configuration and/or the load of data, the used memory on the client could be in the range of 500 MB – 1 GB or more.

Sizing Scenarios

Scenario 1: Infor PM OLAP and Citrix

- Hardware
 - Terminal- / Citrix Server (Infor PM Front End)
 - 2 x 3,2 GHz und 4 GB RAM
 - Possible amount of users depending on the model → 30 – 40 Users / Server
 - Infor PM OLAP Server, LicenseServer
 - 4 x 3,2 CPU, 4 GB RAM
 - Possible amount of users depending on the model → 80 – 150 Users / Server
 - SQL Server
 - 2 x 3,2 GHz und 4 GB RAM
- Operating Systems
 - Windows 2003

Disclaimer

The recommendations and guidelines in this document represent a good faith effort on the part of Infor PM to identify a recommended hardware configuration for Customer's use of the Infor Pm BSA product. These recommendations and guidelines are based on Infor's understanding of common customer needs. Customer acknowledges that a number of factors outside of Infor's control may impact the suitability of these recommendations. Customer remains responsible for monitoring and selecting the hardware configuration that best suits Customer's needs based on Customer's use of the Infor product. Customer acknowledges that this configuration may not be adequate in the future and that Customer may be required to purchase new hardware to accommodate Customer's requirements. Customer further acknowledges that Customer's implementation of Infor's recommendations shall not create or impose any liability on Infor.