

System Requirements  
LucaNet.**Software Manager**,  
LucaNet.**Financial OLAP Server**  
and Desktop Applications



## Introduction

The system requirements at hand depend on a variety of factors. Due to the many different potential uses for the software, each customer's organizational characteristics and intended area of application will determine how their system should be designed. In this sense, system requirements are always project requirements as well. The information provided herein should thus be viewed as approximations that need to be adapted to each customer and project. Since customers' needs vary, no universal guidelines can be provided.

## 1 Software performance and hardware used

### Overview

Software performance can be improved, depending on which of the hardware components are upgraded. The demands on the LucaNet software components **LucaNet.Software Manager**, **LucaNet.Financial Client**, and **LucaNet.Server Administrator** are relatively small in comparison to **LucaNet.Financial OLAP Server**. As a result, **LucaNet.Financial OLAP Server**'s performance is improved when certain hardware components are upgraded. The performance and size of the RAM and the CPU as well as the operating system are the deciding factors for the performance of **LucaNet.Financial OLAP Server**.

### LucaNet.Software Manager

From the very outset, **LucaNet.Software Manager** must be installed onto every computer that LucaNet software is to operate on. **LucaNet.Software Manager** administrates all LucaNet programs on a computer and all Java versions required by LucaNet programs.

### Operating system

It is possible to select an operating system (Windows, Unix/Linux, MacOS) as required. Please note that from LucaNet 11 LTS, the entire LucaNet software range (i.e. all LucaNet programs, including **LucaNet.Software Manager**) are only available as 64-bit versions and can, therefore, only be installed on 64-bit operating systems.

### RAM

The RAM is actively managed by **LucaNet.Financial OLAP Server**. **LucaNet.Server Administrator** can be used to analyze the storage requirements of databases.

To optimize operations, it is important to keep an eye on the memory usage of **LucaNet.Financial OLAP Server**. This is possible by configuring the system so that it issues a warning e-mail as soon as memory requirements reach a critical level. This is usually the case when more than 75% of the available RAM is being utilized. Required RAM per database grows proportionally with the complexity of the data model so it may be necessary to assign more memory to the process on an incremental basis.

The server reserves 50% of the RAM for the databases that are loaded and 50% for working with the data. That means the available RAM must be at least twice the size of the databases that are being worked with at the same time. If this ratio can be adhered to, there should be no problems during operation.



When **LucaNet.Financial OLAP Server** is operating at critical memory levels, performance can be seriously undermined or the system can become unusable.

**LucaNet.Financial OLAP Server** benefits from additional RAM. Operations, such as mass queries of account values, merging of dimensions, or importing of a backup, for example, can be accelerated with additional RAM.

## Hard drives

Because hard drive accesses are kept to a minimum for LucaNet.**Financial OLAP Server**, the performance of the hard drive is only relevant during database imports, database exports or when loading a database to the RAM. Modern SSD hard drives or RAID systems are very fast. Because read and write-intensive operations are more of an exception, there are no particular hard drive requirements.

## CPU

The CPU has influence on system performance. LucaNet.**Financial OLAP Server** benefits from multi-core systems for different operations. If data are queried in parallel from the server, the system uses several cores depending on the workload. In most cases, a four-core system is sufficient. Bigger processor caches and a fast connection of the RAM to the CPU improve system performance.

## Network connection

In our experience, a 1 Gbit connection provides sufficient speed for LucaNet.**Financial OLAP Server**. A 10 Gbit connection is recommended for good performance speed. The network load per client depends heavily on the type of operations performed and the type of network connection used by the client:

- Within a corporate network, a 1 Gbit network provides sufficient bandwidth for LucaNet.**Financial Client**.
- For remote connections (for example, VPNs), we recommend a bandwidth with at least 1 Mbit.
- The connection capacity is additionally impacted by the following factors:
  - Whether or not clients upload a lot of images or large binary files to the database, because this increases network load.
  - The quality of the network provider for remote connections.

If a remote connection is to be used, the physical distance between LucaNet.**Financial Client** and LucaNet.**Financial OLAP Server** is a deciding factor with regard to performance. If very large distances must be spanned (e.g. LucaNet.**Financial OLAP Server** is on a server in Germany, whereas LucaNet.**Financial Client** is started over in Australia), a lot more time is required for the transfer of information. The more information that needs to be transferred (e.g. large data imports), the longer the transfer process will ultimately take.

## 2 LucaNet.**Software Manager**

### Overview

From the very outset, LucaNet.**Software Manager** must be installed onto every computer that LucaNet software is to operate on. LucaNet.**Software Manager** administrates all LucaNet programs that run on a computer and all Java versions required by these LucaNet programs.

### Hardware requirements

The minimum hardware requirements of every computer that is to run LucaNet.**Software Manager** are as follows:

Component	Minimum requirement
CPU	At least two CPU cores (four CPU cores recommended)
RAM	At least 512 MB
Internal network connection	At least a 1 Gbit connection (10 Gbit recommended)
Internet connection	At least a 16 Mbit connection
Storage/hard drive	500 MB or more

## Operating system

LucaNet.**Software Manager** runs on the following operating systems:

- Microsoft Windows: Windows 7 64-bit or later
- Unix/Linux: all common maintained distributions, especially CentOS, Debian (version 7 and later), and SUSE (OH)
- Mac OS X

## 3 LucaNet.Financial OLAP Server

### Overview

LucaNet.**Financial OLAP Server** is the server component of the LucaNet software.

The hardware requirements of LucaNet.**Financial OLAP Server** depend on the project and customer in question. The following section includes recommendations on the minimum server hardware configuration necessary to run LucaNet.**Financial OLAP Server**.

In addition to hardware requirements, the type of customer-specific adjustments and maintenance of data stocks are also decisive for system performance. LucaNet.**Financial OLAP Server** uses **in-memory databases**. The technology used for these databases allows LucaNet.**Financial OLAP Server** to reduce hard drive accesses to a minimum and retains all required data in the RAM. Because the RAM is considerably faster than the hard drive, this significantly improves the system performance.

### General recommendation

As a rule, LucaNet.**Financial OLAP Server** should run in a virtualized environment whenever possible. This makes (temporary) adjustments in system hardware relatively easy when performance issues occur, which is the standard method prescribed for such situations.

### Hardware requirements

The minimum hardware requirements of a computer that is to run LucaNet.**Financial OLAP Server** are as follows:

Component	Minimum requirement
CPU	Four CPU cores or more <b>Note:</b> The greater the number of users that will be accessing the LucaNet software simultaneously, the more processors the computer in question should have to run LucaNet. <b>Financial OLAP Server</b> .
RAM	At least 16 GB <b>Note:</b> The database will grow over time and require additional RAM.
Internal network connection	At least a 1 Gbit connection (10 Gbit recommended)
Internet connection	At least a 16 Mbit connection
Storage/hard drive	<ul style="list-style-type: none"><li>• Basic installation: 1 GB</li><li>• At least 50 GB; 100 GB recommended for standard operations, plus temporary storage (for imports, for example)</li><li>• Following configuration, four times the database backup size will be required for ongoing operations!</li></ul>

## Operating system

LucaNet.**Financial OLAP Server** runs on the following operating systems:

- Microsoft Windows: MS Windows 2012 R2 server operating system (64-bit or later)  
**Note:** LucaNet.**Financial OLAP Server** can be installed as a service or desktop application
- UNIX/Linux: all common maintained distributions, especially CentOS, Debian (version 7 and later), and SUSE (OH)
- Mac OS X  
**Note:** LucaNet.**Financial OLAP Server** can only be installed as a desktop application under Mac OS X.

**Note:** LucaNet cannot guarantee that its software will offer 100% functionality in older operating system versions. The company will test future versions of operating systems in a timely manner in order to approve their use with LucaNet software.

## Installation prerequisite

From the very outset, LucaNet.**Software Manager** must be installed onto every computer that LucaNet.**Financial OLAP Server** is to operate on.

## 4 LucaNet.Server Administrator

### Overview

LucaNet.**Server Administrator** is the LucaNet user interface for the administration of LucaNet.**Financial OLAP Server**.

LucaNet.**Server Administrator** can be run without difficulty on a typical, modern desktop PC or laptop.

### Hardware requirements

The minimum hardware requirements of every computer that is to run LucaNet.**Server Administrator** are as follows:

Component	Minimum requirement
<b>CPU</b>	At least two CPU cores (four CPU cores recommended)
<b>RAM</b>	At least 512 MB
<b>Internal network connection</b>	At least a 1 Gbit connection (10 Gbit recommended)
<b>Internet connection</b>	At least a 16 Mbit connection
<b>Storage/hard drive</b>	500 MB or more

## Operating system

LucaNet.**Server Administrator** runs on the following operating systems:

- Microsoft Windows: Windows 7 64-bit or later
- Unix/Linux: all common maintained distributions, especially CentOS, Debian (version 7 and later), and SUSE (OH)
- Mac OS X

## Installation prerequisite

From the very outset, LucaNet.**Software Manager** must be installed onto every computer that LucaNet.**Server Administrator** is to operate on.

## 5 LucaNet.Financial Client

### Overview

LucaNet.**Financial Client** is the user interface for end users of the LucaNet software.

LucaNet.**Financial Client** can be run without difficulty on a typical, modern desktop PC or laptop.

### Hardware requirements

The minimum hardware requirements of every computer that is to run LucaNet.**Financial Client** are as follows:

Component	Minimum requirement
CPU	At least two CPU cores (four CPU cores recommended)
RAM	At least 512 MB (with a total of 4.5 GB with RAM for the operating system) <b>Note:</b> If you have a complex installation (i.e. you use LucaNet. <b>Group Report</b> and/or other LucaNet scripts and apps), we recommend a 4 GB RAM capacity (with a total of 8 GB RAM for the operating system).
Internal network connection	At least a 1 Gbit connection (10 Gbit recommended)
Internet connection	At least a 16 Mbit connection
Storage/hard drive	500 MB or more

### Operating system

LucaNet.**Financial Client** runs on the following operating systems:

- Microsoft Windows: Windows 7 64-bit or later
- Unix/Linux: all common maintained distributions, especially CentOS, Debian (version 7 and later), and SUSE (OH)  
**Note:** When running Linux, system behaviour depends on distribution and the desktop environment used. Therefore, LucaNet cannot guarantee correct operation of LucaNet.**Financial Client** under Linux.
- Mac OS X

## Installation prerequisite

From the very outset, LucaNet.**Software Manager** must be installed onto every computer that LucaNet.**Financial Client** is to operate on.

## 6 LucaNet.Excel-Add-In

### Overview

LucaNet.**Excel-Add-In** is used for the excel integration of the LucaNet software.

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## Using LucaNet.Excel-Add-In under MS Windows

LucaNet.**Excel-Add-In** is compatible under MS Windows with the following versions of MS Excel:

- MS Excel 2010
- MS Excel 2013
- MS Excel 2016

## Using LucaNet.Excel-Add-In under Mac OS

LucaNet.**Excel-Add-In** for Mac OS can be used with MS Excel for Mac 2016.