



## System Requirements

For On-Premise deployments of:

aPriori Professional 2021 R1 SP2

aPriori Cost Insight Report 2021 R1 SP2

aPriori Cost Insight Admin 2021 R1 SP2

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## Document Information

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**The latest version of this document can be found at the aPriori Support HelpCenter (requires registration): <https://support.apriori.com/hc>**

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# aPriori On-Premise Product Compatibility

This document covers the requirements for these aPriori On-Premise software releases:

- aPriori Professional 2021 R1 SP2
- aPriori Enterprise Platform 2021 R1 SP2
  - aPriori Cost Insight Report 2021 R1 SP2
  - aPriori Cost Insight Admin 2021 R1 SP2

**Note:** For On-Premise deployments, Cost Insight Report and Cost Insight Admin are distributed and installed under the aPriori Enterprise Platform framework. Therefore, in this document, “Enterprise Platform” refers to On-Premise installations of Cost Insight Report or Cost Insight Admin.

This document covers only the system requirements for aPriori On-Premise installations. For system requirements for aPriori Cloud Deployments, refer to the aPriori Cloud documentation.

aPriori Professional 2021 R1 and any aPriori 2021 R1 maintenance releases (service packs and hot fixes, including release 2021 R1 SP2) are compatible with aPriori Enterprise Platform 2021 R1 and any Enterprise Platform 2021 R1 maintenance releases. Likewise, aPriori Enterprise Platform 2021 R1 and any Enterprise Platform 2021 R1 maintenance releases, including release 2021 R1 SP2, are compatible only with aPriori Professional 2021 R1 and any aPriori 2021 R1 maintenance releases.

Depending on the Enterprise Platform maintenance release, it may be necessary to upgrade at least one aPriori Professional client to a maintenance release compatible with Enterprise Platform. For more information, see the aPriori On-Premise installation guide

**Note:** Hot fixes for one product may require a later compatible version of the other.

The compatibility chart shows compatibility between current releases.

| aPriori Enterprise Platform Version | aPriori Database Level <sup>1</sup> |             |             |
|-------------------------------------|-------------------------------------|-------------|-------------|
|                                     | 2021 R1                             | 2020 R1 SP1 | 2020 R1 SP2 |
| 2021 R1                             | –                                   | Yes         | No          |
| 2021 R1 SP1                         | Yes                                 | –           | No          |
| 2021 R1 SP2                         | No                                  | No          | —           |

<sup>1</sup> Updating the database (DB) to a new maintenance release typically requires running a compatibility script. It does NOT require a DB upgrade. You can update only a single aPriori client to the required version to run the compatibility script.

# aPriori On-Premise Enterprise Platform Modules

The following Enterprise Platform modules are available as local web services for aPriori On-Premise installations.

- Cost Insight Report
- Cost Insight Admin: Scenario Export (Required for Cost Insight Report)
- Cost Insight Admin: System Data Export (Required for Cost Insight Report)
- Cost Insight Admin: Scenario Synchronization
- Cost Insight Admin: LDAP Synchronization
- Cost Insight Admin: VPE Synchronization (for Digital Factory Synchronization)

## RAM versus Heap Memory

When evaluating memory requirements for aPriori applications, there are two primary factors to consider:

- RAM – Random Access Memory, total hardware memory installed in the host computer
- Heap – Portion RAM that is reserved exclusively for aPriori.

There are different heap size requirements and different procedures for adjusting heap size for:

- aPriori Professional in Creo direct integration mode
- aPriori Professional in standalone mode
- aPriori Professional bulk costing
- Enterprise Platform (Cost Insight Admin and Cost Insight Report)

For more information about heap memory requirements and how to adjust heap settings, refer to the tables and footnotes on the following pages, and to the aPriori Professional **System Administration Guide**.

## What constitutes a "large" or "complex" environment

The disk and memory requirements for your installation varies with factors such as the size and complexity of the CAD parts you work with, and the number of Digital Factories (VPEs) you use. Here are some guidelines to help you estimate your local requirements. If your organization uses Bulk Costing, also see [Bulk Costing Considerations](#).

| Factor                                       | Description                                    | Recommendation                                                                                  |
|----------------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------|
| "Large" CAD parts                            | file size >= 10 MB                             | Solid State Drive (SSD) <sup>1</sup><br>RAM: 12 - 32 GB<br>aPriori heap size = 8GB <sup>2</sup> |
| "Large" or "complex" assembly and/or roll up | Has up to 5000 components                      | Solid State Drive (SSD) <sup>1</sup><br>RAM: 12 - 32 GB<br>aPriori heap size = 8GB <sup>2</sup> |
| "Many" Digital Factories (VPEs)              | Greater than about 30 Digital Factories (VPEs) | Solid State Drive (SSD) <sup>1</sup>                                                            |

1 SSDs provide significantly improved I/O performance when costing components and when reading/writing Digital Factories (VPEs).

2 The heap setting should not exceed 60% of available RAM. For information about adjusting aPriori Professional heap settings, see the *aPriori Professional System Administration Guide* or contact aPriori Customer Support.

# Bulk Costing Considerations

To optimize the performance of Bulk Costing jobs, ensure that your system is configured to reflect the following.

## Bulk Costing Child Clients versus CPU Cores

Before increasing the number of Bulk Costing child clients, you must increase the number of CPU cores:

$$(\text{Number of Bulk Costing child clients}) = (\text{Number of CPU Cores})$$

Costing is a single threaded process, so increasing the number of child clients without increasing the number of CPU Cores does NOT improve Bulk Costing performance.

## Setting Heap Size for Bulk Costing

The default heap size for aPriori Bulk Costing can be set in two files:

- By setting `launcher.max.memory` in `<pistol>\exit\analysis-purchasing-module\plugin.properties`. The default is 2048m.
- For running the Bulk Loader from the command line, you can also set `MAX_HEAP_SIZE` in `<ap_install>\bin\bulkLoad.cmd`. By default, this setting is commented out, so unless you uncomment and edit this line, command line Bulk Costing jobs use the value set in `plugin.properties`.

Very complex parts can require 8GB. For more information see [RAM versus Heap Memory](#).

If you need to set your child clients to this high of a value, you must ensure that you have enough RAM on the computer. If you have moderately complex parts, you can try setting the heap size to 4GB.

You can also try other settings between these values. For example, if you are going to generate Spreadsheet Reports and use Bulk Costing for greater than 1000 parts, you might try setting the main client heap size to 6GB. Note that these are rough estimates to start with, and you may need to tweak these values to find the best performance for your situation.

## Database location

The aPriori Bulk Costing process occupies most of the CPU processing of the machine that aPriori Professional is installed on. Therefore, to optimize performance, do not store your database on a machine that contains aPriori Professional. Instead, store your database on a separate machine within your LAN.

## Calculating total RAM requirements

To evaluate the impact of the above considerations, use the following formula to calculate the total RAM needed for your configuration:

$$\text{Total RAM} \Rightarrow (\text{Tc} * \text{Hc}) + \text{Hm} + \text{Md} + \text{Mos}$$

Where:

- `Tc` = Total Number of Child Clients = Total Number of CPU Cores

- Hc = Heap Size setting for individual Bulk Costing Clients
- Hm = Heap Size setting for the main client
- Md = Memory required for the database (2GB if database is on the same machine)
- Mos = Memory required for OS and other processing (2GB)

If your requirements far exceed the existing RAM of the computer, consider making these changes:

- Reduce number of client processes.
- Reduce heap size.
- Add RAM.

**Note:** If the database resides on another machine, you can eliminate Md.



# aPriori License Manager Service Requirements

The aPriori License Manager Service is a Java-built Spring Boot application that manages aPriori application keys. The License Manager Service, which is required for aPriori On Premise deployments, must be installed on a server that:

- Is accessible to all:
  - aPriori Professional client machines
  - Enterprise Platform servers
- Can access the:
  - aPriori operational database that contains your license schema
  - aPriori Cloud via the internet

The requirements for the aPriori License Manager Service are included in this table.

|                  | Requirement                                                                                                                             |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Operating System | <ul style="list-style-type: none"> <li>▪ Windows Server 12</li> <li>▪ Windows Server 16</li> <li>▪ Windows 8.1 or 10, 64-bit</li> </ul> |
| RAM              | 250 MB per installation                                                                                                                 |
| Disk Space       | 335 MB, depending on usage                                                                                                              |
| Communication    | TCP/IP internet connection                                                                                                              |

# aPriori Professional General Requirements

This table includes the general requirements for On-Premise deployments of aPriori Professional. The *Required* column shows the minimum requirements for running aPriori Professional on a user workstation or laptop in a test environment, or in a very simple deployment. The *Recommended* column shows more stringent requirements for running aPriori Professional in a large or complex production environment, that is, an environment that contains many scenarios, large CAD parts, or many Digital Factories. For more information, see [RAM versus Heap Memory](#).

If your organization uses Bulk Costing, also see [Bulk Costing Considerations](#).

|                        | Required                                                                                                                                                                                                                     | Recommended                                                                                                                              |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Operating System       | <b>Tested Client Configurations:</b><br>Windows 8.1 or 10, 64-bit<br><br><b>Tested Server Configurations:</b><br>Microsoft Windows Server 2012 R2, 64-bit <sup>2</sup><br>Microsoft Windows Server 2016, 64-bit <sup>2</sup> | --                                                                                                                                       |
| RAM                    | 4 GB                                                                                                                                                                                                                         | 4 GB                                                                                                                                     |
| Heap Size              | 4 GB                                                                                                                                                                                                                         | 4 GB – 8 GB <sup>1</sup>                                                                                                                 |
| Disk Space             | 3 GB                                                                                                                                                                                                                         | Depends on details of your installation. For more information, see <a href="#">What constitutes a "large" or "complex" environment</a> . |
| Disk drives            | HDD (Hard Disk Drive)                                                                                                                                                                                                        | SSD (Solid State Drive)                                                                                                                  |
| Communication Protocol | TCP/IP                                                                                                                                                                                                                       | --                                                                                                                                       |

- 1 The heap setting should not exceed 60% of available RAM. For information about adjusting heap settings, see the *aPriori Professional System Administration Guide* or contact aPriori Customer Support.
- 2 Windows Server tests are performed with Standard Edition, which also validates Datacenter Edition. The following Server Editions are NOT validated: Standard-Core and Nano.

# aPriori On-Premise Database Server Requirements

aPriori Professional and Enterprise Platform (Cost Insight Admin and Cost Insight Report) have different database server requirements. The tables that include the database server requirements have both a *Required* column and a *Recommended* column.

The *Required* column shows the minimum requirements for running aPriori Professional on a user workstation or laptop in a test environment, or in a very simple deployment.

The *Recommended* column shows more stringent requirements for running aPriori Professional in a large or complex production environment, that is, an environment that contains many scenarios, large CAD parts, or many Digital Factories. For more information, see [RAM versus Heap Memory](#).

If your organization uses Bulk Costing, also see [Bulk Costing Considerations](#).

## aPriori Professional Database Server Requirements

This table includes the database server requirements for On-Premise deployments of aPriori Professional.

|                               | Required                                                                                                                                                                                                                                                                                                                                                         | Recommended                                                                                                                                                                              |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating System <sup>1</sup> | Oracle®: Any server-class OS Supported by the database vendor.<br>Microsoft SQL Server®: Any server-class OS Supported by the database vendor.<br>MySQL™: Server-class Windows® or Linux® <sup>3</sup><br>See “ <i>Software Requirements</i> ” below for supported Oracle and MySQL versions.                                                                    |                                                                                                                                                                                          |
| RAM <sup>2</sup>              | 2 GB                                                                                                                                                                                                                                                                                                                                                             | 4 GB                                                                                                                                                                                     |
| Disk Space <sup>2</sup>       | The required disk space depends primarily on the number of scenarios.<br>The number of users, number and size of export sets <sup>2</sup> , and amount of retained data also affect the disk space requirements.<br>For conservative aPriori operational database disk requirements, as based on the number of scenarios, see the <b>Recommended</b> column. ==> | <ul style="list-style-type: none"> <li>• 20 GB for 100K scenarios</li> <li>• 60 GB for 300k scenarios</li> <li>• 100 GB for 500K scenarios</li> <li>• 200 GB for 1M scenarios</li> </ul> |
| Communication Protocol        | TCP/IP                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                          |

- 1 aPriori is tested against databases on Windows Server 2012 R2 x64 and 2016 x64, and ships with MySQL 5.7. Server-class OS is **required** for production environments, and any environment where production-like performance is needed (for example, performance/load testing environments, which should mimic production environments as much as is practicable). Server-class OS is recommended but not required for small deployments and other environments such as development, training, and demo systems.  
Windows Server tests are performed with Standard Edition, which also validates Datacenter Edition. The following Server Editions are NOT validated: Standard-Core and Nano.
- 2 Required RAM and disk space are dependent on the number of users and overall usage.
- 3 When using MySQL on Linux, the MySQL installation must be case insensitive.

## Enterprise Platform Database Server Requirements

This table shows which components and schemas are required for On-Premise deployments that use Enterprise Platform (Cost Insight Admin and Cost Insight Report). For more information, see the ***Enterprise Platform Installation Guide***.

| Component                                                | Database (Schema)         | Required for Cost Insight Admin | Required for Cost Insight Report |
|----------------------------------------------------------|---------------------------|---------------------------------|----------------------------------|
| JasperServer                                             | <code>jasperserver</code> | No                              | Yes                              |
| Cost Insight Report                                      | <code>reporting</code>    | No                              | Yes                              |
| Quartz scheduler                                         | <code>quartz</code>       | Yes                             | Yes                              |
| Cost Insight Admin Scenario Synchronization              | <code>sync</code>         | Yes                             | No                               |
| Cost Insight Admin Digital Factory (VPE) Synchronization | <code>sync</code>         | Yes                             | No                               |
| Cost Insight Admin LDAP Synchronization                  | <code>ldap_sync</code>    | Yes                             | No                               |

Cost Insight Admin is required for Cost Insight Report, but Cost Insight Report is not required for Cost Insight Admin. Therefore, On-Premise deployments that require the data synchronization capabilities of Cost Insight Admin, but do not require the reporting capabilities of Cost Insight Report do not have disk space requirements for the `jasperserver` and `reporting` databases (schemas).

For Cost Insight Admin Scenario Synchronization, the initial disk space needed to handle a realm, the shared space that scenarios are exported to and then analyzed and synced with their databases in, for the first synchronization is equal to the size of the aPriori operational database. However, the disk space required for subsequent synchronization operations is much less.

For Cost Insight Admin Digital Factory (VPE) Synchronization, which does not use of realms, the disk space requirements are even less.

This table includes the database server requirements for On-Premise deployments of Enterprise Platform.

|                               | Required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Recommended                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating System <sup>1</sup> | <p>Oracle®: Any server-class OS supported by the database vendor.</p> <p>Microsoft SQL Server®: Any server-class OS supported by the database vendor.</p> <p>MySQL: Server-class Windows® or Linux®<sup>3</sup></p> <p>See “<i>Software Requirements</i>” below for supported Oracle, MySQL, and SQL Server versions.</p> <p>Note that a Cost Insight installation can include remote databases. You can have multiple database installations (for the operational and reporting databases, for example), and they do not need to be on a single machine. <b>However, all servers must be on the same LAN.</b></p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| RAM                           | 6 GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 8 - 16 GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Disk Space <sup>4, 5, 6</sup> | For demo installations: 5 GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                               | <p>For production installations, the required disk space depends primarily on the number of scenarios.</p> <p>The number of users, number and size of export sets<sup>2</sup>, and amount of retained data also affect the disk space requirements.</p> <p>For conservative estimates, as based on the number of scenarios, see the <b>Recommended</b> column. ==&gt;</p>                                                                                                                                                                                                                                          | <p>Cost Insight Report:</p> <ul style="list-style-type: none"> <li>• 40 GB for 100K scenarios</li> <li>• 120 GB for 300k scenarios</li> <li>• 200 GB for 500K scenarios</li> <li>• 400 GB for 1M scenarios</li> </ul> <p>Cost Insight Admin:</p> <p>Initial synchronization:</p> <ul style="list-style-type: none"> <li>• 20 GB for 100K scenarios</li> <li>• 60 GB for 300k scenarios</li> <li>• 100 GB for 500K scenarios</li> <li>• 200 GB for 1M scenarios</li> </ul> <p>Subsequent synchronizations:</p> <ul style="list-style-type: none"> <li>• 5 GB for 100K scenarios</li> <li>• 15 GB for 300k scenarios</li> <li>• 25 GB for 500K scenarios</li> <li>• 50 GB for 1M scenarios</li> </ul> |

- Enterprise Platform is tested against databases on Windows Server 2012 R2 x64 and 2016 x64. For demos and evaluations, it can run on Windows 8.1, and 10. Server-class OS is **required** for **production** environments, and any environment where production-like performance is needed (for example, performance/load testing environments, which should mimic production environments as much as is practicable). Server-class OS is recommended but not required for small deployments and other environments such as development, training, and demo systems. Windows Server tests are performed with Standard Edition, which also validates Datacenter Edition. The following Server Editions are NOT validated: Standard-Core and Nano.
- Number of scenarios, processes, operations, frequency of exports, and so forth.
- When using MySQL on Linux, the MySQL installation must be case insensitive.
- When the database is serving multiple applications, use the higher RAM and Disk Space recommendations. Note that disk recommendations include only aPriori usage, and do not consider any DBA overhead or external factors such as back-up files.
- Larger reporting databases may require more memory for the reporting database should be raised for larger databases. For example, for a database that contains more than 200,000 scenarios, 16-32 GB of RAM is recommended.
- The recommended reporting database sizes assumes that **All** exports are purged on a monthly basis..

# Enterprise Platform Web Server Requirements

This table include the required and recommended web server requirements for Enterprise Platform (Cost Insight Admin and Cost Insight Report).

|                  | Required               | Recommended                      |
|------------------|------------------------|----------------------------------|
| Operating System | Windows <sup>1</sup>   |                                  |
| Processor        | Two CPUs or equivalent | Four to eight CPUs or equivalent |
| RAM              | 12 GB                  | 16 - 32 GB <sup>2</sup>          |
| Heap             | 4 GB                   | 6 GB <sup>3</sup>                |
| Disk Space       | 20 GB                  | 20 - 40 GB                       |

- 1 Cost Insight Report and Cost Insight Admin are tested on Windows Server 2012 R2 x64 and 2016 x64. For demos and evaluations, Cost Insight Admin and Cost Insight Report can run on Windows 8.1 and 10.
- 2 The RAM requirements vary depending on the number and size of aServer instances in use. For more information about aServers, see *Enterprise Platform Installation Guide*.
- 3 The heap requirements for aServers vary if you use Cost Insight Report and Cost Insight Admin to export more than about 75,000 scenarios from the operational database, depending on the number and size of aServer instances in use. See "Heap size and large scenario counts" in the *Cost Insight Admin User Guide* for more details.

# Enterprise Platform Windows Powershell Requirements

Some aPriori procedures require the use of Microsoft Windows PowerShell scripts. As of the current release, aPriori tests with Windows PowerShell 5.1.

# Enterprise Platform Browser Requirements

In Cost Insight Report, to work with Ad Hoc reports that contain charts, you must use a Google Chrome or Open-Source Chromium web browser. As a best practice, download and install your preferred browser before installing Enterprise Platform because you can configure the browser settings during the installation process by specifying the path to the installed browser application.

# aPriori On-Premise Software Requirements

This table includes software and internet browser requirements for On-Premise deployments of aPriori Professional and aPriori Enterprise Platform (Cost Insight Report and Cost Insight Admin).

|                                                                                           | Server                                                                                                                                                                                                                                                                               | Client                                                                                                                    |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Database<br>(For aPriori Professional) <sup>1</sup>                                       | <ul style="list-style-type: none"> <li>▪ MySQL Server Community or Commercial Edition 5.6 through 5.6.34<sup>2, 3</sup>, or 5.7</li> <li>▪ Oracle Standard Edition 11g or 12c relational databases<sup>4</sup></li> <li>▪ SQL Server 2014, 2016, or 2017 Standard Edition</li> </ul> | –                                                                                                                         |
| Database<br>(For aPriori Enterprise Platform) <sup>5</sup>                                | <ul style="list-style-type: none"> <li>▪ MySQL Server Community or Commercial Edition 5.6 through 5.6.34<sup>2, 3</sup>, or 5.7</li> <li>▪ Oracle Standard Edition 11g or 12c relational databases<sup>4</sup></li> <li>▪ SQL Server 2014, 2016, or 2017 Standard Edition</li> </ul> | –                                                                                                                         |
| Microsoft Visual C++ 2010, 2012, 2013 Runtimes<br>(For aPriori Professional) <sup>6</sup> | –                                                                                                                                                                                                                                                                                    | Included as part of the aPriori installation.                                                                             |
| Dassault Systèmes® VC10 and VC11 Prerequisites<br>(For aPriori Professional) <sup>6</sup> | –                                                                                                                                                                                                                                                                                    | Included as part of the aPriori installation.<br>Not required when running aPriori as a Pro/ENGINEER® Toolkit application |
| Apache Tomcat Web Server<br>(For aPriori Enterprise Platform)                             | Apache Tomcat/8.5.30<br>Included as part of aPriori Enterprise Platform installation                                                                                                                                                                                                 | –                                                                                                                         |
| Jaspersoft<br>(For aPriori Enterprise Platform)                                           | JasperReports Server V7.2<br>Included as part of Cost Insight installation                                                                                                                                                                                                           | Jasper Studio<br>Included as part of Cost Insight distribution, for optional local installation                           |
| Java Virtual Machine <sup>7</sup>                                                         | OpenJDK 8                                                                                                                                                                                                                                                                            | –                                                                                                                         |
| aPriori<br>(For aPriori Enterprise Platform)                                              | See <a href="#">aPriori On-Premise</a> Product Compatibility                                                                                                                                                                                                                         | –                                                                                                                         |

|                                                          | Server | Client                                                                                                                                                                                        |
|----------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Internet Browsers<br>(For Cost Insight and Sync modules) | –      | Latest version of: <ul style="list-style-type: none"> <li>▪ Microsoft Edge Chromium</li> <li>▪ Mozilla Firefox Extended Support Release (ESR)<sup>9</sup></li> <li>▪ Google Chrome</li> </ul> |

- 1 As a MySQL reseller, aPriori can license and provide MySQL Server and Tools. Oracle and SQL Server database software is not provided and needs to be acquired independently by the customer.
- 2 Ensure that `innodb_buffer_pool_size` is set to at least “1G”. Versions higher than 5.6.19 require that `innodb_log_file_size` be set to at least six times the value of `max_allowed_packet`. See the aPriori *Installation Guide* for more information.
- 3 Oracle has announced that the MySQL 5.6 relational database has reached End of Life (EOL) and is encouraging customers to upgrade to newer versions. After aPriori 2021 R1 and any 2021 R1 maintenance releases, aPriori will discontinue testing its application with MySQL 5.6 and will not address any issues found to occur only with that database version.
- 4 aPriori certifies against Oracle Standard Edition. Since this includes a subset of Oracle Professional Edition functionality, aPriori expects Professional Edition to also work.
- 5 To run reports against the operational database, all Enterprise Platform databases must be the same vendor type and must match the type of aPriori operational database that they interact with. For example, if your operational database is MySQL, your Cost Insight Report reporting database must also be MySQL.
- 6 Provided by aPriori and can be installed directly from the aPriori installer executable. Not required by Cost Insight.
- 7 As of 2019 R1, aPriori products are bundled with OpenJDK 8. Customer configuration is no longer needed.
- 8 For more information about Firefox ESR, see <http://www.mozilla.org/en-US/firefox/organizations/faq/>

## Supported aPriori Client Deployments

The On-Premise aPriori Professional client runs directly on the client hardware and must be installed on a local drive. Some configuration on the local machine is necessary.

## Network Requirements between the aPriori client and server

aPriori tests [network latency](#) as [Round Trip Time \(RTT\)](#) with the **ping** command between the aPriori client and the aPriori Professional database server.

|                       | Required | Recommended |
|-----------------------|----------|-------------|
| Latency (round trip)* | 240 ms   | 150 ms      |
| Bandwidth*            | 200 kb/s | 1500 kb/s   |



\* Latency generally has a greater impact on performance than bandwidth. The impact of high latency is increased when costing large assemblies.

**Note:** When latency is greater than 240 ms, aPriori recommends a deployment with local databases for groups of users, with aPriori Scenario Sync to share data between the databases. This deployment approach allows a global user population to have a consistent and shared view of component costs.

If latency is 150 – 240 ms for remote users that are frequently accessing aPriori and costing assemblies, aPriori recommends a multi-database deployment.

## The Effect of Latency on Performance

The performance of aPriori software depends on the latency of your network connection, that is, how fast your network can transfer data between the client and the server. The client queries the server for costing data, and the results are saved to the server. The longer it takes for data to transfer between the client and server, the longer the costing operation takes.

Network latency depends on several variables including:

- Network infrastructure
- Distance to the server
- Amount of simultaneous network traffic
- Communication cost of the software operation

During an aPriori installation, due to the number and unpredictability of the variables, it can be difficult to predict the architecture that is required to ensure reliable performance. However, as the table shows, there are some general expectations for performance based on geography.

| Server        | Client        |            |                                   |
|---------------|---------------|------------|-----------------------------------|
|               | North America | Europe     | Asia                              |
| North America | Good          | Acceptable | Poor                              |
| Europe        | Acceptable    | Good       | Poor                              |
| Asia          | Poor          | Poor       | See <a href="#">Users in Asia</a> |

Good performance is adequate for most operations.

Acceptable performance includes some performance issues, but the software works as expected. Consider solutions for better performance based on the operations that your company performs. For more information, see [Operations That Require Better Networks](#) and [Solutions for High-Latency Network Connections](#).

Poor performance falls below User expectations and network errors may occur. Alternative solutions are recommended. For more information, [Solutions for High-Latency Network Connections](#)

## Users in Asia

Network quality in Asia varies greatly by country and region, and often the distances can be quite large. For this region, the following is proposed.

- Good performance – Servers as close as possible, in the same country.
- Acceptable performance – Servers in the same country
- Poor performance – Servers in a different country

## Operations That Require Better Networks

The required latency also depends on the amount of work that the end user is doing. Certain operations require more communication with the database, especially when using large numbers of parts. If the latency is poor, performance suffers more when:

- The bill of materials is large, perhaps loaded through PCBA or Wire Harness.
- The deployment includes large numbers of configured Digital Factories (VPEs).
- A search includes many parts.

## Solutions for High-Latency Network Connections

These are solutions available for users that experience poor performance due to latency:

- Place an additional server closer to the users. This data may need to be synchronized with other data in the global environment.
- Set up a shared cache for all users in an environment. This approach allows caching operations to take place in off-hours on one PC, rather than for all users during working hours.
- Create a remote desktop environment close to the server for remote users. If the number of remote users is small, this approach may be the most cost-effective solution.
- Use the aPriori cloud solution.

For a better understanding of the causes and solutions for any performance issues that you are experiencing, contact the aPriori Support team.

# Licensing

On-Premise aPriori Professional users and licenses are configured using the aPriori System Administrator tool. Licensing is based on named users. The aPriori user store and authentication are managed as part of the aPriori system.

On-Premise Cost Insight Report installations that include Jaspersoft components have users and licenses that are configured using JasperServer. aPriori provides a Jaspersoft production license as described in the On-Premise *Enterprise Installation Guide*.

# Supported CAD Application Formats

aPriori provides the capability to cost parts and assemblies from several CAD formats. Customers across a broad range of industries can use aPriori Professional regardless of their CAD or PLM systems. Subject to noted limitations, aPriori certifies the CAD applications and versions in the table<sup>1, 2, 3, 4</sup>.

| CAD Vendor            | Application                               | Version                                                                                                             | Optional MCAD Integration                                                                                           |
|-----------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| PTC                   | Creo™ <sup>5</sup><br>Elements/Parametric | 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0                                                                                   | 4.0, 5.0, 6.0, 7.0, 8.0                                                                                             |
| Dassault Systèmes     | CATIA®                                    | V5-6R2016 (R26),<br>V5-6R2017 (R27),<br>V5-6R2018 (R28),<br>V5-6R2019 (R29),<br>V5-6R2020 (R30),<br>V5-6R2021 (R31) | V5-6R2016 (R26),<br>V5-6R2017 (R27),<br>V5-6R2018 (R28),<br>V5-6R2019 (R29),<br>V5-6R2020 (R30),<br>V5-6R2021 (R31) |
| Dassault Systèmes     | SolidWorks® <sup>6</sup>                  | 2016, 2017, 2018, 2019, 2020, 2021                                                                                  | 2016, 2017, 2018, 2019, 2020, 2021                                                                                  |
| Siemens PLM           | NX™ <sup>7</sup>                          | 11, 12,<br>1847 series,<br>1872 series,<br>1899 series,<br>1926 series<br>1953 series                               | 11, 12,<br>1847series,<br>1872 series,<br>1899 series<br>1926 series<br>1953 series                                 |
| Siemens PLM           | SolidEdge®                                | V20, ST, ST2, ST3, ST4, ST5,<br>ST6, ST7, ST8, ST9, ST10, ST11                                                      | –                                                                                                                   |
| Autodesk              | Autodesk® Inventor®                       | 2016, 2017, 2018, 2019, 2020                                                                                        | 2020                                                                                                                |
| File Exchange Formats | JT                                        | 8.5, 9.0 - 9.5, 10 <sup>8</sup>                                                                                     | –                                                                                                                   |
|                       | STEP                                      | AP203, AP214, AP242                                                                                                 | –                                                                                                                   |
|                       | Parasolid                                 | 10.0 - 29.0                                                                                                         | –                                                                                                                   |
|                       | ACIS                                      | R19-R27                                                                                                             | –                                                                                                                   |
|                       | Gerber <sup>9</sup>                       | RS-274X                                                                                                             | –                                                                                                                   |

- 1 aPriori can also read CAD files saved in older versions of these CAD applications but does not regularly test older versions. aPriori reserves the right to not address issues which are apparent only in older unsupported CAD versions.
- 2 aPriori also can be used in environments where the MCAD application is integrated with a PLM system
- 3 aPriori tests and certifies only the most recent three versions of each CAD application.
- 4 aPriori does not provide official support for CAD EOL (end-of-life) versions.
- 5 For all versions, for MCAD integration, Creo Elements/Direct Modelling is not currently supported.
- 6 aPriori does not generally support Bulk Costing or Deep Costing for SolidWorks. For more information, contact aPriori Support.
- 7 For all versions of NX, MCAD integration requires an aPriori Professional Services Engagement to implement. Service delivery. Integration requires that customers have one NX Open C++ Author License, Microsoft Visual Studio 2015, and a Windows 10 machine with admin privileges.
- 8 aPriori supports costing only for JT files that use XT-BREP boundary representation, not the older JT-BREP. aPriori supports only the JT little-endian file format, which is exported from most CAD systems, not the big-endian format.

- 9 aPriori supports costing only for Gerber files that are exported from Siemens PADs, Cadence Allegro, and Altium Designer. aPriori supports only the Exellon and indefinite NC format drill files, which can be exported from most ECAD systems.

For information on support for additional CAD formats and version, contact aPriori directly.

**Licensing Note:** The capability to open different format CAD files is sold and licensed as separate options. Contact aPriori if you are interested in this capability.

## Graphics Drivers

aPriori uses a third-party component from Tech Soft 3D called HOOPS for displaying graphics. aPriori can be configured to use OpenGL or OpenGL2. As of 2020 R1, DirectX 11 is the default Graphics Driver for aPriori.

A list of tested drivers is posted here: <http://developer.techsoft3d.com/hoops/hoops-visualize/graphics-cards/>

**IMPORTANT:** aPriori recommends upgrading to the latest graphics drivers when installing or upgrading aPriori products.

## Localization and Translation

aPriori Professional UI elements (user interface labels and error messages) available in:

- English
- German
- French
- Chinese
- Japanese

All aPriori help documentation is available as on-line and as downloadable PDFs in English.

A subset of the aPriori help documentation is translated and available on-line and as downloadable PDFs in:

- German
- Japanese

Translations of the aPriori UI elements and help documentation are typically available with the first Service Pack release of each major release. For example, for aPriori 2020 R1, the UI elements and help documentation are available in German as of the 2010 R1 SP1 release.

**Note:** Translated versions of aPriori UI elements and help documentation for functionality, messages, and documentation that are introduced between major releases are not typically available until the first service pack for the following major release. For example, the translated version of UI elements and help documentation for a process group that was introduced in 2020 R1 SP1 were not available until 2021 R1 SP1.

Other products and languages may be added in the future. If you have a pressing need for additional language support, contact aPriori.

## Excel Support for Spreadsheet Reports

The aPriori Spreadsheet Report feature has been tested against Microsoft 365 Apps for Enterprise, version 2105 and 2106. In general, template-based reports work properly when the OS running the report supports the same version of Excel on which the spreadsheet

report template is based. Problems may occur when the two versions are mismatched. For example, if you build a spreadsheet report and create a template for it with Excel 2021, then you should use Excel 2021 to view it.

## Limitations

- The MCAD integration with PTC products may not work when other Java based toolkit applications are running concurrently.
- aPriori does not work on computers on which Comodo Time Machine® is installed.
- Cost Insight Report and Cost Insight Admin support single aPriori On-Premise deployments. If you have multiple On-Premise deployments, use a separate Cost Insight instance for each deployment.



[www.apriori.com](http://www.apriori.com)

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