Esko ArtiosCAD Minimum System Requirements

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These are the minimum requirements for reasonable performance of the described products, with recommendations for optimal performance. They will help you decide whether the equipment you are currently using remains viable. If you are considering new equipment, bear in mind that these requirements are minimum, not optimal. Exceeding these specifications will in general lead to enhanced performance.

Esko ArtiosCAD 10 CAD-X 10

Site Deployment options:

- **Centralized configuration serving multiple plants and clients herein known as *multiSite***
  - **In this configuration, the enterprise framework is deployed at a single site, allowing ArtiosCAD 10 clients from anywhere in the company to access the centralized database via the corporate WAN network.**
- **Centralized configuration serving single plant and multiple clients herein known as *singleSite*.**
  - **In this configuration, the enterprise framework is deployed at a single site, allowing ArtiosCAD 10 clients from the same site to access the centralized database via the LAN network.**
- **Enterprise framework installed on an individual system, herein known as *singleClient*... *not yet supported***
  - **In this configuration, the enterprise framework and the ArtiosCAD 10 client are installed on the same machine.**

Client Operating System for ArtiosCAD client application:

- **Windows 7 Professional 32 & 64-bit with limitations. See Release Notes. Please note the Home and Ultimate editions should work as well, but it was the Home edition that was fully certified.**
- **Windows Server 2008, 2008 r2 (64-bit) with limitations. See Release Notes.**
- **Windows Vista Business Edition with limitations 32/64 See Release Notes.**
- **Microsoft® Windows® XP Pro SP2 or higher, 32 & 64-bit**
- **Mac OS® X 10.4 /Parallels® Desktop 3.0 running on an Intel® Mac with Limitations. See Release Notes.**
- **Mac OS® X 10.4/VMWare Fusionv1.1.1 running on an Intel® Mac with limitations. See Release notes. VMWare Fusion is preferred over Parallels.**
- **The following platforms may be used in an *experimental* mode. They have been tested to a certain point but have not been certified for this release:**
  - **Mac Bootcamp**

Operating system patches

Windows XP sp2 and Windows server 2003... http://support.microsoft.com/kb/319740 This patch will resource leaks when using Esko ArtiosCAD

Vista Business Edition... http://go.microsoft.com/fwlink/?LinkID=82148 This patch will install the help environment for running Esko ArtiosCAD help

CPU:

- **Architecture**

    - **To fully take advantage of the *3D Importer* or *Solidworks* module, x86 64-bit processors are recommended, especially for multi-hundred M files.**
    - **ArtiosCAD is still a 32-bit application. All other uses other than *3D Importer* or *Solidworks* (32-bit) modules will require a x86 32-bit processor.**
- **Performance**
    - **multisite/singleSite:**
        - **Intel® Core 2 Duo, 2.4 GHz, 2.4 GHz, required**
        - **Intel® Mac Intel® Core 2 Duo: 2.4 GHz, 2.4 GHz with VMWare Fusion® Desktop**
    - **singleClient:**
        - **Intel® Core 2 Duo: 2.4 GHz, 2.4 GHz, required**
        - **Intel® Core 2 Quad, 2.4 GHz x 4, recommended**

Memory

- **multisite/singleSite:**
    - **2D design: 2G required, 4G recommended**
    - **3D design(3D Designer, 3D Connection and Animation): 4G required**
    - **3D import: 4G required, 4+G recommended**
- **singleClient: 4G required**

Disk Space

- **20G for the ArtiosCAD application, including the local cache, and 500M available on the system partition. If files are large and/or the cache contents are not purged regularly, you should consider more than 20G for the local disk.**

Network

- **TCP/IP v4 required, TCP/IP v6 not supported**
- **ArtiosCAD 10 utilizes http as its core communication protocol. For optimal performance, do not drop http to a lower quality of service (QOS), or at least ensure http traffic directed to the enterprise web server received higher network priority.**
- **For singleSite:**
    - **100 Base-T Ethernet required, 1G Base-T recommended**
    - **Wireless networks may be utilized, be keep in mind that 802.11b is 11Mbit/s which is really no better than 10 Base-T. This may be used for casual use. Recommended is 802.11g (raw 54 Mbits/s), or better 802.11n (expected 100Mbit/s)**
- **For multiSite where a site will communicate with the enterprise frameworks at WAN speeds:**
    - **T1 (1.544 Mbits/s) is required, T3 (44Mbits/s) is optimal**
    - **Due to costs, it should be expected that fractional T1s may be deployed, but expect lower performance.**

Display

- **1024X768, High Color (16 bit) minimum display**

Display Adapter

- **Esko ArtiosCAD 3D modules requires a display adapter that is OpenGL 2.1 and Direct-X 9 compliant**
- **Video memory: 512M require, 1G recommended**
- **Nvidia cards are recommended; on board adapters are not supported.**

  The better the card, the better the 3D experience.

Mouse

- **3 button (2 button can be used with feature limitations) with scroll wheel**

Drives

- **DVD ROM drive**

I/O Ports

- **Parallel or USB port for ArtiosCAD license locked to a security key for existing Esko ArtiosCAD users. For new ArtiosCAD10 users, no security key is required.**

- **Additional USB port for optional Esko ArtiosCAD Rubber Nesting feature if purchased**

ArtiosCAD enterprise framework deployment:

There are three server processes that comprise the enterprise framework deployment: *web server,* an *application server (Jboss)* and the *database*. The Web server has two components: IIS and a servlet runner (Tomcat).

multiSite and singleSite deployments:

- **Minimum deployment is over two machines.**
  - **In a secure DMZ environment for a web deployment, the web server must be deployed within the DMZ, leaving the application server and database to be deployed on a machine in the company network.**
  - **In a standard internal deployment with no DMZ and therefore no web deployment, the processes requiring the most resources will be the application server and the database server. It is recommended that these two servers be split, leaving the web and application servers to run on one machine and the database server running on the other. The application server and database server may run on the same machine provided it is a server class machine.**
- **For optimal performance, it is recommended that the three server processes be deployed on three individual machines. This is due to the fact that server processes such as these attempt to utilize as much memory as possible. Separation will reduce the contention for memory and CPU access when the system is busy with concurrent users.**

For singleClient deployments, all three server processes are installed on the same machine. This is normally fine as there will be only one user accessing the framework at any one time.

Server Operating Systems for ArtiosCAD enterprise framework:

- **Microsoft® Windows® Server 2008 R2 (64-bit), SP2 32 & 64 bit**
- **Microsoft®-Windows® Server 2003 SP2 32 bit**
- **The windows Server 200x SBS, Web Server and HPC (for 2008) editions have not been certified.**

Database

- **Microsoft® SQL Server 2008, 32 & 64-bit**
- **Microsoft® SQL Server 2005, 32 & 64-bit**
- **Microsoft® SQL Express 2005, SQL Express 2008 for DBs no larger than 4G**
  - **Storing files in the database can not be used with the SQL express versions**
- **Oracle® versions 9i or greater**

CPU

- **Architecture: Tomcat and Jboss are java-based servers are inherently 64-bit. They should run fine in 64-bit environments. x86-32 bit processors are required, x86-64 bit processors are recommended to allow for memory beyond 4G.**
- **10 concurrent users:**
  - **Web server, application server, database on separate machines: required Intel® Core 2 duo core, per server**
  - **Web server/application server, database on two machines: required Intel® Core 2 duo core, per server**
  - **Web server, application server/database on two machines for DMZ:**
    - **required Intel® Core 2 duo core, per server**
    - **optimal Intel® Core 2 quad core for application server/database**
  - **Web server, application server, database on same machine: required Intel® Core 2 quad core**
- **20 concurrent users:**
  - **Web server, application server, database on separate machines: required Intel® Core 2 duo core, per server**
  - **Web server/application server, database on two machines:**
    - **required Intel® Core 2 duo core, per server**

        - optimal Intel® Core 2 quad core for database server
    - Web server, application server/database on two machines for DMZ:
        - required Intel® Core 2 duo core for Web server
        - required Intel® Core 2 quad core for application server/database
    - Web server, application server, database on same machine: required Intel® Core 2 quad core
- 50 concurrent users:
    - Web server, application server, database on separate machines:
        - required Intel® Core 2 duo core for Web server
        - required Intel® Core 2 quad core for application server and database
    - Web server/application server, database on two machines: required Intel® Core 2 quad core, per server
    - Web server, application server/database on two machines for DMZ:
        - required Intel® Core 2 quad core for Web server
        - required Intel® Core 2 quad core for application server/database
    - Web server, application server, database on same machine: not recommended

Memory

- 10 concurrent users:
    - Web server, application server, database on separate machines: 4G per server
    - Web server/application server, database on two machines: 4G per server
    - Web server, application server/database on two machines for DMZ: 4G per Server
    - Web server, application server, database on same machine: 8G
- 20 concurrent users:
    - Web server, application server, database on separate machines: required 4G per server
    - Web server/application server, database on two machines:
        - Required 4G per server
        - Optimal 8G for database
    - Web server, application server/database on two machines for DMZ:
        - Required 4G for Web server
        - Required 8G for application server/database
    - Web server, application server, database on same machine: 16G
- 50 concurrent users:
    - Web server, application server, database on separate machines:
        - required 4G per Web server
        - required 8G for application server and database server
    - Web server/application server, database on two machines: 16G per server
    - Web server, application server/database on two machines for DMZ:
        - required 16G per Web server
        - required 24G+ for application server/database server
    - Web server, application server, database on same machine: not recommended

Disk Space

- Web Server
- Application Server (filestore, Index)
    - Files stored in database as BLOBs- 50G
    - Files stored in disk filestore- required: 100-200G, more depending on number and size of files
- Database Server
    - Files stored in database as BLOBs-- required: 100-200G, more depending on number and size of files
    - Files stored in disk filestore - 50G

Network

- 100 Base-T required between server machines, 1G Base-T optimal.

I/O Ports

- For new Esko ArtiosCAD10 users, no key is required, else USB key on applicaton server.

VMWare ESX

Has not been certified by Esko, however, there are no known limitations. To use ESX, the ESX server should be specified as to be able to guarantee the processing power and memory allocation for each of the individual servers the ESX server may host.

Notes

Normal installation of Esko ArtiosCAD products requires access to a DVD drive.