FEMAP v11.3 -
Operating Systems and Minimum Hardware Requirements

Important Notes Regarding 32 bit Windows Operation Systems and Windows XP and Windows Vista

Femap v11.1 was the last release of Femap that runs on 32 bit Windows Operating Systems. Femap versions 11.1.1, v11.1.2 and 11.2.x and v11.3 require a 64 bit Windows OS.

FEMAP v11.1 was the last supported release of FEMAP that runs on the Windows XP and Windows Vista operating systems.

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FEMAP v11.x Supported Operating Systems

Operating Systems – FEMAP v11.3		
	FEMAP	**NX Nastran 10.2**
Windows 7 – 32 bit	NO	NO
Windows 7 – 64 bit	Yes	Yes
Windows 8.x[1]	Yes	Yes
Windows 10	Yes	Yes

Operating Systems – FEMAP v11.2.x		
	FEMAP	**NX Nastran 10**
Windows 7 – 32 bit	NO	NO
Windows 7 – 64 bit	Yes	Yes
Windows 8.x[1]	Yes	Yes
Windows 10	Yes	Yes

Operating Systems – FEMAP v11.1.2		
	FEMAP	**NX Nastran 9.1**
Windows 7 – 32 bit	NO	NO
Windows 7 – 64 bit	Yes	Yes
Windows 8.x[1]	Yes	Yes
Windows 10	No	No

1:   Windows RT is not supported.

FEMAP v11.x Supported Operating Systems (continued)

Operating Systems – FEMAP v11.1		
	FEMAP	**NX Nastran 9**
Windows XP – 32 bit	Yes[2,3]	**No**
Windows XP – 64 bit	Yes[2]	**No**
Windows Vista – 32 bit	Yes[2,3]	**No**
Windows Vista – 64 bit	Yes[2]	Yes
Windows 7 – 32 bit	Yes[3]	**No**
Windows 7 – 64 bit	Yes	Yes
Windows 8.x[1]	Yes	Yes
Windows 10	No	No

1:    Windows RT is not supported.

2:    Limited support. The OS is no longer being used in development and no support is available from the vendor. An OS upgrade will be required for full support. **FEMAP releases after v11.1 may not run on Windows XP or Windows Vista and in any case, are unsupported by GTAC.**

3:    Available by download only. Includes NX Nastran 8.5

FEMAP v11.x Licensing Requirements

Nodelocked - Rainbow Super USB Dongle (included with every nodelocked license of Femap)

You will need an open USB port to use this device.

The driver for this device is included in the *SentinelDriver* folder under the main Femap installation location and also in the *SentinalDriver* folder on the Femap DVD and installation fileset.

Network Floating Licenses

One computer on your Network will need to be configured as a FlexLM license server.

The overhead of running the license via FlexLM is very low, and can either be one of the computers running Femap or any other computer on the same network with the computers running Femap. The license server machine does not have to be a server class computer, it simply has to be "seen" (pinged) by all of the computers running Femap using the network floating license protocal.

Setting up the floating license is detailed in the network.pdf file installed with FEMAP, and also located on the FEMAP DVD and installation fileset.

The following page lists the supported Windows and Linux operating systems for the Femap FlexLM floating license server.

Modifying the Femap License Type

At the time of installation, the type of Femap license is specified for each computer. This can be modified, when Femap is not running, by running one of the following .bat scripts located in the main Femap installation folder.

Femap License Server Type Scripts	
License Type	**Script**
Nodelocked USB Dongle	go_dongle.bat
Nodelocked, with a license file or Floating FlexLM	go_network.bat
300-node Demonstration version – no license file, server or dongle required.	go_demo.bat
API only – access Femap only via the API. Requires a valid Femap license via USB Dongle, nodelocked license file, or Floating FlexLM license.	go_demo.bat

Femap Floating License Server –
Supported Operating Systems

The Femap FlexLM license server has been tested and is supported on the following operating systems:

Microsoft Windows
Windows 7, 32-bit and 64-bit
Windows 8, 32-bit and 64-bit (Windows RT not supported)
Windows 10
Windows Server

Linux - Tested Compatibility with FlexLM v11.10.1 (09/2013) [1]
Suse Linux Enterprise Desktop x64 10
Redhat 4.8 x64
Redhat 4.9 i686-x64
Redhat 6.1 Enterprise Linux Desktop
Ubuntu 11.4 x64
CentOS 7.2.1511 x64

1:     Requires the LSB runtime libraries.

FEMAP v11.x Minimum Hardware Requirements

There are no special hardware requirements for FEMAP beyond those imposed by Windows. The **minimum** requirements are as follows.

Computer, CPU: Minimum as required for the Windows OS and Graphics Adapter.

Memory, RAM: 64 Bit Windows: 4 GB minimum. At least 8 GB recommended for larger models. More RAM is better for even larger models.

Graphics Card: See pages 7 through 9.

Minimum Free Hard Drive Space Requirements for a FEMAP v11.3 Installation	
Description	**Free Disk Space Required**
Femap Standalone,includes documentation, Sentinel USB Dongle Driver, FlexLM server software and VisQ,	1,372 MB
NX Nastran (including NX Nastran and NX Nastran Documentation)	1,497 MB
NX Nastran Support folder - unzipped	472 MB
Femap Flow/Thermal UI, Solver and Documentation	369 MB
Femap Structural Analysis Toolkit	714 MB
Total – All Options	4,424 MB (4.424 GB)

Free Hard Drive space: In addition to the disk space required for the installation of FEMAP and its options as shown in the table above, additional **local** free disk space is required for FEMAP scratch and NX Nastran scratch files.

A minimum of 10 GB is recommended for small models and can increase rapidly as model size increases. FEMAP model files can range in size from 50 Kb for a file with no entities to greater than 1 GB depending on the number of entities and the results sets.

NX Nastran scratch and results files for large models can be hundreds of gigabytes.

FEMAP v11.x Graphics Card Requirements

General statement regarding Graphics Cards

Femap has been developed with the intent to support all cards that implement the required versions of OpenGL. However, AMD® considers Radeon® cards and NVIDIA® considers GeForce® cards to be consumer cards. Therefore, it is highly recommended that Femap be used on PCs with AMD FirePro or NVIDIA Quadro cards (Quadro NVS cards are for business use and are not intended for 3D graphics). The Femap development group receives significant support from AMD for FirePro cards and from NVIDIA for Quadro cards, while receiving minimal support from AMD for Radeon cards and NVIDIA GeForce cards.

In addition, the latest graphics card drivers should be used and in cases where the PC vendor has a graphics driver specific to their computer model number and graphics chip, the driver certified by the PC manufacturer should be used.

Base Graphics requires an OpenGL graphics card with a minimum of 512 Mb dedicated graphics memory.

FEMAP Graphics – Vertex Buffer Objects Settings

If your graphics card has good support of vertex buffer objects (VBOs), you can get significant performance improvement by selecting VBOs. The VBO Option requires an OpenGL 2.1 graphics card or higher.

- To enable VBOs, select the **File, Preferences** command. In the Preferences dialog box, select the **Graphics** tab, then, select option **3..Vertex Buffer Objects** from the Vertex Arrays pull-down menu. See Section 2.6.2.3 of the Femap Commands manual for details for this option.

- **MAX VBO** should be set in a range from 50 to 75 percent (%) of the total graphics card memory of the installed graphics card.
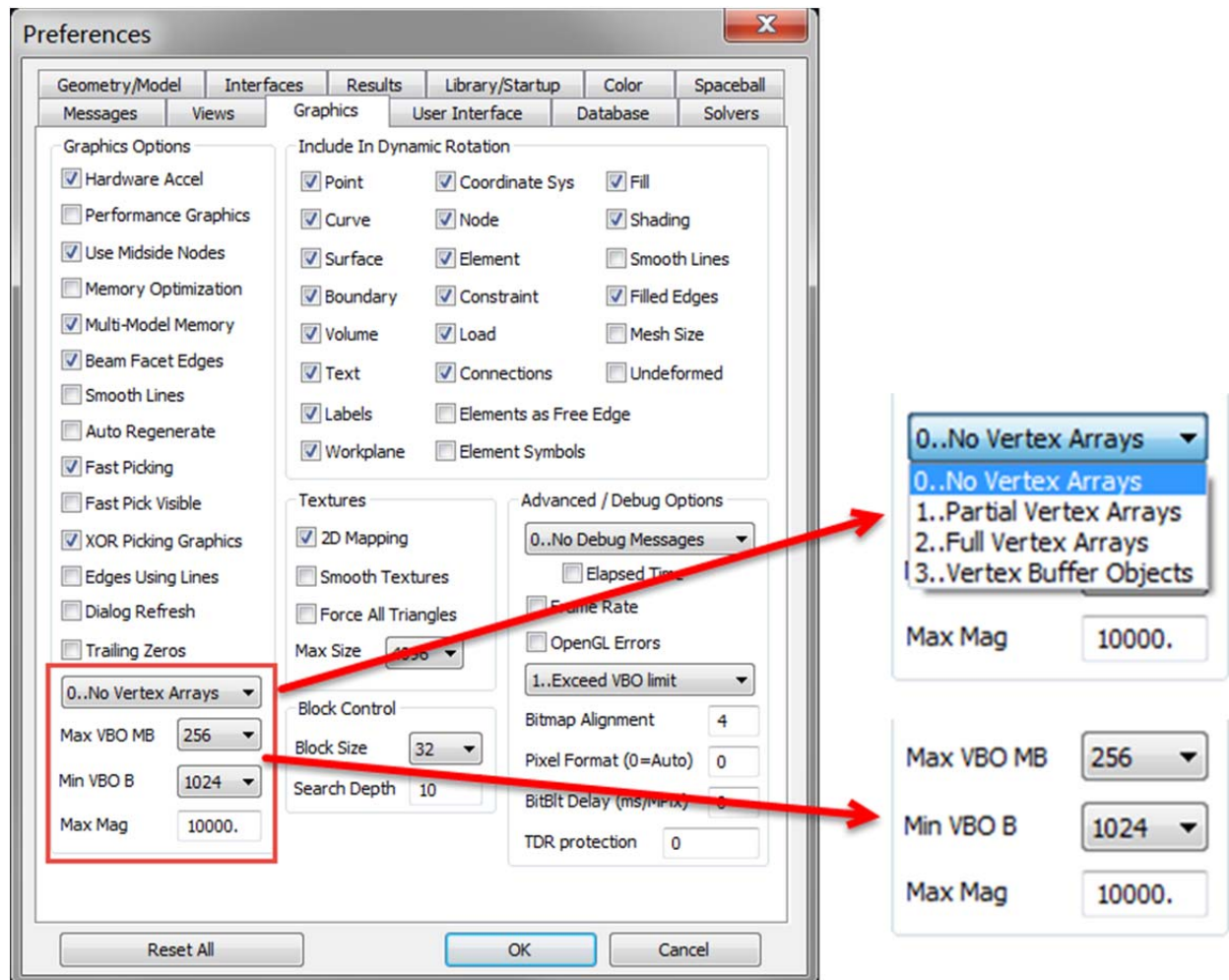
FEMAP Versions 11.3 11.2.x and 11.1.x -
Performance Graphics Option Graphics Card Requirements

The **Performance Graphics** option requires an OpenGL 4.2 or higher graphics card. This option dramatically improves graphics performance for model with a large number of entities. Please refer to the *What's New in Femap* document (*newfeat.pdf*) for details on entities and post-processing view styles supported by Performance Graphics.

- Performance Graphics can be combined with the use of Vertex Arrays and VBOs.

- Performance Graphics is not supported on Intel graphics hardware.

- Enable Performance Graphics with the **File, Preferences** command. In the *Preferences* dialog box, select the **Graphics** tab, then, enable the option for **Performance Graphics**.