WHITEPAPER

Versions of NX Nastran Executable

nastran64.exe	Application
nastran64L.exe	Application
nastran64Lw.exe	Application
nastran64w.exe	Application

ATA ENGINEERING, INC.

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Software:
NX Nastran 9

Overview

Every version of Nastran has two different varieties—the LP and ILP—which determine how much memory can be allocated to the Nastran executable. Being able to identify the version you are using and switch between versions can be important because the ILP version may be required to solve some large models. Using the incorrect version of Nastran can result in an error message similar to one below.

```
*** MEMORY REQUEST EXCEEDS LP-64 LIMIT OF 2047 MW  ***
OPEN CORE Allocation Failed
```

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Difference Between the LP and ILP Versions of Nastran

The LP version has 4 bytes per word, and the ILP version has 8 bytes per word. This means that the LP version can only address up to 8 gigabytes of RAM, but the ILP version can address over 20 million terabytes so you are only limited by the amount of memory installed on your machine. Transferring files between versions can also create problems, e.g., external superelements.

More Information: NX Nastran Installation and Operations Guide → Using the Basic Functions of NX Nastran → ILP-32, LP-64 and ILP-64 Executable Information.

Table 1: ►
Nastran executable files.

Version	Executable Name
64-bit LP for command line	nastran64.exe
64-bit ILP for command line	nastran64L.exe
64-bit LP for Windows	nastran64w.exe
64-bit ILP for Windows	nastran64Lw.exe

To set a specific version of NX Nastran, choose the correct executable file for your solve. These executables are in the NX Nastran installation location \bin folder. Some examples of default install locations are at C:\Siemens\NXNastran\9.0\64bit\bin or C:\Program Files\Siemens\NXNastran\9.0\ 64bit\bin. Table 1 shows the different Nastran executable files.

If multiple versions of NX Nastran are installed on your computer in the same hierarchy, the nastran and nastran64L commands will use the most recently installed version. To choose a specific version of NX Nastran, use the nastr and nastrL commands. For example, if versions 8 and 9 are installed together in the same folders, then nast8, nast9, nxn8, nxn9, and a single nastran.exe would be in the same /bin folder. Use the nast8 and nast9 commands to run an LP-version-specific job and the nast8L and nast9L commands for an ILP-version-specific job.

More info on these commands can be found in NX Nastran Installation and Operations Guide → Using the Basic Functions of NX Nastran → ILP-32, LP-64 and ILP-64 Executable Information → Understanding the Commands in /bin.

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Check the NX Nastran Version Using the .log File

To find the version of Nastran used in the solution, check the *.log file. Near the top of the .log file look at the "Executable:" to see the path to the executable file used. This will show which version of NX Nastran is used and if it is LP or ILP. Table 2 shows what to look for in the log file.

Version	From .log File
9.0 LP on Windows	Executable: C:/program files/siemens/nxnastran/nxn9/64bit/nxn9/em64tnt/analysis.exe
9.0 ILP on Windows	Executable: C:/program files/siemens/nxnastran/nxn9/64bit/nxn9/em64tntl/analysis.exe
9.0 LP on Linux	Executable: /usr/local/apps/NASTRAN/NX/9.0/nxn9/x86_64linux/analysis
9.0 ILP on Linux	Executable: /usr/local/apps/NASTRAN/NX/9.0/nxn9/x86_64linuxl/analysis

Table 2: ▲
Nastran executables listed in log file.

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