GAMS/XPRESS Licensing

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1   Introduction

This document describes the steps necessary to install a license for the XPRESS-MP component of the GAMS/XPRESS solver. Without such a license, the XPRESS-MP component will not run, or will only run in demonstration mode.

2   Prerequisites

The GAMS/XPRESS solver, also referred to here as simply XPRESS, is included in demonstration or student mode by default (where available). When running under Windows 95/98, there are no XPRESS-specific steps required to use XPRESS in this way. However, under Windows NT, some security drivers must be installed in order to use XPRESS in either demonstration or full mode. Note that this is true whether you intend to use a dongle or not; the XPRESS solver library requires the security drivers. To install the security drivers, you must be running as adminstrator on the machine. As administrator, use the explorer to navigate to the xpress subdirectory of the GAMS system directory. Run the `instdong.bat` file in this subdirectory by double-clicking on it. This will install the security drivers and make the required updates to the registry. A reboot is required after this step is completed for the changes to take effect.

When run in demonstration mode, XPRESS will solve small problems, the current limits being 300 rows, 300 columns, 2000 nonzeros, and 50 discrete variables. If these limits are exceeded, a message indicating this is printed to the listing and log files. To test the installation and ensure that XPRESS runs correctly in demo mode, run a small model (for example: trnsport.gms) and specify XPRESS as the default solver. You should get no licensing errors of any kind, although there may be some warning messages that you are running in demo mode. If you do get a licensing error for the trnsport model (i.e. the solver does not return a solution), contact GAMS Development for technical support (supportgams.com).

There are two licenses necessary to run the XPRESS link in unlimited mode, the GAMS/XPRESS license and the XPRESS "password". The first check is of the GAMS license. This check of the GAMS license file is made from within the

link, and if the check finds no valid license for XPRESS, the solver is downgraded to demonstration mode. You can determine if you have a GAMS license for XPRESS by looking at the GAMS license memorandum or by running a large model and examining the output. For example, if you run the indus89 model from the GAMS model library without a GAMS license for XPRESS, you get log output like:

```
*** Status: Terminated due to a licensing error
***         Problem size limitations have been exceeded
***         Inspect listing file for more information
```

If your GAMS license for XPRESS is correct, and all that is missing is the XPRESS-specific password, you will see output like:

```
--- Executing XPRESS

No purchase authorisation found
XPRESS-MP Student Integer Optimiser Release 12.11
(c) Copyright Dash Associates 1984-2000

XPRESS-MP     Feb 14, 2001 HP7.XP.XP 19.8 011.018.039.HP7 XPRESS lib 12.11

Reading data ...
?120 Problem has too many rows and columns. The maximum is     800

Problem too large for XPRESS student license.
Since you reached this point, you must have a valid GAMS/XPRESS license.
You now need to obtain a proper XPRESS license (i.e. password file).
Hint: have you read the GAMS/XPRESS licensing document?
Please contact support@gams.com and give them this information.
```

The rest of this document details the procedure for installing an XPRESS license.

3   PC: Keyless license

XPRESS users on the PC will typically install a license that does not require a hardware license key. Instead, the XPRESS license uses the Ethernet number of the network card attached to the computer. A network card is required for this type of license.

To install a keyless license, run the program pcether.exe in the GAMS system directory (from the command line, by double-clicking it in the Windows Explorer, etc.) This will display a message box containing the Ethernet (MAC) number of the network card and the number of processors on the machine and will copy this information to the clipboard. Email the MAC number and processor count, along with the gamslice.txt file found in the GAMS system

directory, to `support@gams.com`. We will reply to your email with a password file `xpress.pwd` that can be copied over the existing `xpress.pwd` in the GAMS system directory. This new password file will enable your XPRESS license.

4 PC: Keyed (dongle) license

XPRESS users on the PC have the option of installing a keyed license that relies on the presence of a hardware license key, also known as a dongle. To obtain a dongle for your system, send a request to `support@gams.com`.

5 Unix: Keyless license

XPRESS users on a Unix platform must obtain a password file in order to run GAMS/XPRESS. Depending on the operating system used, either the address of a network card or the machine's hostid is required to generate a suitable password file.

For SGI's Irix and Sun's Solaris, you should run the `hostid` command; include all the output from this command in your correspondence.

For systems running HP-UX or AIX, you should run the `uname -a` command; include all the output from this command in your correspondence.

For systems running Linux, you should run the `ifconfig` command to get the MAC number of your ethernet card; include all the output from this command in your correspondence. We also pass on a little utility from DASH Associates you can use for this purpose. This utility is located in the GAMS system directory and is called `lnxethr6`.

Regardless of how you obtain your machine's unique ID, you should include the following information in your license request addressed to `support@gams.com`:

Unique identifier obtained as described above.

The number of processors in the machine.

The license file `gamslice.txt` found in the GAMS system directory.

In reply, you will receive a password file `xpress.pwd` that you should copy into your GAMS system directory.