GAMS/AMPL

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1 Introduction

GAMS/AMPL allows users to solve GAMS models using solvers within the AMPL modeling system. The GAMS/AMPL link comes free with any GAMS system. Users must have a licensed AMPL system installed and have the AMPL executable in their path.

To run GAMS/AMPL, just specify the solver as `ampl`. For example, if we wish to solve the *trnsport.gms* model, we would run

```
>> gams trnsport.gms lp=ampl
```

As for other GAMS solvers, options can be passed on via solver option files. GAMS/AMPL specific options are described in the section "GAMS/AMPL Options".

By default, GAMS/AMPL returns a model status of 14 (no solution) and a solver return status of 1 (normal completion), provided the link is executed normally. This includes the case where the AMPL executable is not found.

2 AMPL Path

GAMS searches for an AMPL executable using the following hierarchy:

- Via the options `AmplPath` and `RunAmpl` within a GAMS/AMPL solver option file.
- An `amplpath.txt` file located in the GAMS system directory specifying the path of the AMPL executable.
- The system path.

For example, GAMS will first search for the AMPL executable within the `ampl.opt` file, if specified. If not found, it will search within the GAMS system directory for a file called `amplpath.txt` specifying the AMPL directory. Finally if `amplpath.txt` is not found, the GAMS will try the system path.

If no AMPL exectuable is found, the user will see a message similar to

```
AMPL Link 0. Jan 26, 2005 LNX.00.NA 21.6 002.000.000.LXI P3PC
```

```
--- No AmplPath option or "amplpath.txt" file found
--- System PATH will be used
```

There may also be an output indicating that AMPL was not found, either because it is not installed or because it is not found in the system path.

3 GAMS/AMPL Options

GAMS/AMPL solver options are passed on through solver option files. If you specify "`<modelname>.optfile = 1;`" before the SOLVE statement in your GAMS model, GAMS/AMPL will then look for and read an option file with the name *ampl.opt* (see "Using Solver Specific Options" for general use of solver option files).

Option	Description	Default
`AmplPath`	Path to AMPL system files	
`DotMod`	Ampl input file name	`ampl.mod`
`Help`	Display GAMS/AMPL options	
`Option`	Verbation AMPL options	
`RunAmpl`	Name of AMPL executable	
`TolNone`	Tolerance to interpret status none	`1e-12`

The `Option` specifier is used to specify AMPL options as within the AMPL modeling system. For example, if a user wishes to run AMPL/MINOS with the options "timing=3 outlev=2" then the user creates a file called `ampl.opt` with the entry

```
option minos_options "timing=3 outlev=2";
```