NAME

valueFormat – QNET Value file format

DESCRIPTION

QNET value files contain differential cost information for each state in the state space, i.e. for every possible configuration of jobs waiting in queues (classes) to be served. The file header contains information such as the dimension of the state space, the number of value data recorded per state, and the state space truncations (the bounds on the state space).

Value files begin with a "magic number" that is used by routines that read them to help avoid inadvertently reading an invalid file. This number occupies the first four bytes of the file. The layout of the file is given in the following table:

Start Position	End Position	Type	Common Name	Description
0	3	int		Magic Number; should be −7
4	7	int	ndim	Dimension of state space
8	11	int	nval	Number of values at state space location
12	12 + 4 * ndim − 1	int*	trunc[]	State space truncations (each one less than individual state space array dimensions)
12 + 4 * ndim	K − 1	double	h	value/cost data in row−major order
K	EOF	char*	comment	comment string

where $K = 12 + 4 * ndim + 4 * (trunc[1]+1) * ... * (trunc[ndim]+1)$.

The comment is separated from the data by a newline character and is also terminated with a newline character.

The following pseudocode shows the order the data is stored in the file for a three−dimensional state space.

```
for (int x1 = 0; x1 <= N[1]; x1++)
   for (int x2 = 0; x2 <= N[2]; x2++)
      for (int x3 = 0; x3 <= N[3]; x3++)
         for (int i = 0; i < nval; i++)
            output h[x1][x2][x3][i];
```

SEE ALSO

getValueFileInfo(3), **readValueFile**(3), **writeValueFile**(3)

AUTHOR

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