NAME

policyFormat − QNET Policy file format

DESCRIPTION

QNET policy files contain information about the action taken by each server (sometimes called a station) at each point 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 decisions (or actions) recorded at each state, and the state space truncations (the bounds on the state space).

Policy files begin with a "magic number" that is used by routines that read them to help avoid inadvertently reading an invalid policy file. This number occupies the first four bytes of the file. The remaining data in the file is appears as space-delimited ASCII strings representing integer values followed by a newline and a comment string.

Starting with the first value after the magic number, the following table shows the position, common name, and description of the entries in a policy file:

Position	Name	Description
1	ndim	Dimension of state space
2	decn	Number of decisions (i.e. actions stored for each state
3..3+ndim−1	trunc[]	State space truncations (each is one less than the corresponding state space array dimension)
3+ndim..K−1	action	Policy data stored in row−major order with all decisions for a given state appearing consecutively
K..EOF	comment	comment string

where K = 3 + ndim + (trunc[1]+1) * (trunc[2]+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 < decn; i++)
            output action[x1][x2][x3][i];
```

SEE ALSO

getPolicyFileInfo(3), **readPolicyFile**(3), **writePolicyFile**(3)

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