NAME

mcx clcf – compute the clustering coefficient of a graph

SYNOPSIS

mcx clcf [options] [matrix-file]

mcxclcf is not in actual fact a program. This manual page documents the behaviour and options of the mcx program when invoked in mode *clcf*. The options **-h**, **--apropos**, **--version**, **-set**, **--nop**, **-progress** <*num*> are accessible in all **mcx** modes. They are described in the **mcx** manual page.

mcx clcf [-abc <fname> (*specify label input*)**] [-imx** <fname> (*specify matrix input*)**] [-tab** <fname> (*use tab file*)**] [-o** <fname> (*write to this file*)**] [-t** <int> (*use <int> threads*)**] [-J** <intJ> (*a total of <intJ> jobs are used*)**] [-j** <intj> (*this job has index <intj>*)**] [--summary** (*return mean clustering coefficient*)**] [-h** (*print synopsis, exit*)**] [--apropos** (*print synopsis, exit*)**] [--version** (*print version, exit*)**]**

DESCRIPTION

mcx clcf computes the clustering coefficient of a graph.

The input graph/matrix, if specified with the **-imx** option, has to be in mcl matrix/graph format. You can use label input instead by using the **-abc** option. Refer to **mcxio(5)** for a description of these two input formats. By default **mcx diameter** reads from STDIN *and expects matrix format*. To specify label input from STDIN use **-abc -**.

OPTIONS

-abc <fname> (*label input*)
The file name for input that is in label format.

-imx <fname> (*input matrix*)
The file name for input. STDIN is assumed if not specified.

-o <fname> (*output file*)
The file name for output. STDOUT is the default output stream.

-tab <fname> (*use tab file*)
This option causes the output to be printed with the labels found in the tab file. With **-abc** this option will, additionally, construct a graph only on the labels found in the tab file. If this option is used in conjunction with **-imx** the tab domain and the matrix domain are required to be identical.

--summary (*return mean clustering coefficient*)
By the default a 1-column table (with row names included) is output, one row for each node. This option causes the output of the average clustering coefficient only.

-t <int> (*use <int> threads*)
-J <intJ> (*a total of <intJ> jobs are used*)
-j <intj> (*this job has index <intj>*)
Computing clustering coefficients is time-intensive for large graphs. If you have multiple CPUs available consider using as many threads. Additionally it is possible to spread the computation over multiple jobs/machines. These three options are described in the **clm-protocols** manual page. The following set of options, if given to as many commands, defines three jobs, each running four threads.

```
-t 4 -J 3 -j 0 -o out.0
-t 4 -J 3 -j 1 -o out.1
-t 4 -J 3 -j 2 -o out.2
```

The output can then be collected with

```
mcx collect --add-column -o out.all out.[0-2]
```

SEE ALSO

mcxio(5), and **mclfamily(7)** for an overview of all the documentation and the utilities in the mcl family.