## NAME

gc - count graph components

## SYNOPSIS

gc [ -necCaDUrsv? ] [ files ]

## DESCRIPTION

$\mathbf{g c}$ is a graph analogue to $\mathbf{w c}$ in that it prints to standard output the number of nodes, edges, connected components or clusters contained in the input files. It also prints a total count for all graphs if more than one graph is given.

## OPTIONS

The following options are supported:
-n Count nodes.
-e Count edges.
-c Count connected components.
-C Count clusters. By definition, a cluster is a graph or subgraph whose name begins with "cluster".
-a Count all. Equivalent to -encC
-r Recursively analyze subgraphs.
-s Print no output. Only exit value is important.
-D Only analyze directed graphs.
-U Only analyze undirected graphs.
-v Verbose output.
-? Print usage information.
By default, $g c$ returns the number of nodes and edges.

## OPERANDS

The following operand is supported:
files Names of files containing 1 or more graphs in dot format. If no files operand is specified, the standard input will be used.

## EXIT STATUS

The following exit values are returned:
0 Successful completion.
1 The $\mathbf{-} \mathbf{U}$ or $\mathbf{- E}$ option was used, and a graph of the wrong type was encountered.
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## SEE ALSO

$\mathrm{wc}(1), \operatorname{acyclic}(1), \operatorname{gvpr}(1), \operatorname{gvcolor}(1), \operatorname{ccomps}(1), \operatorname{sccmap}(1)$, tred(1), libgraph(3)

