

DISTRIBUTED RESOURCE ALLOCATION

ABSTRACT

Disclosed herein are methods, systems, and apparatus, including computer
5 programs encoded on computer storage media, for performing allocating M resources
subject to L constraints. The method includes: receiving data representing L constraints,
wherein each of the L constraints corresponds to a subset of M resources and restricts a
respective maximum number C of resources to be selected among the subset of the M
resources, wherein the L constraints has a hierarchal structure; determining a topological
10 ordering of the L constraints; selecting all the M resources as an initial selection;
removing resources from the initial selection by traversing each constraint in the
topological ordering of the L constraints; and allocating the selected resources after
traversing all the L constraints in the topological ordering of the L constraints.

15 FIG. 1