

Pseudo code - Tabu search

Notations :

\rightarrow server alloc.

min time

Q \rightarrow offloading policy of task obtained by greedy algorithm
 L \rightarrow solution obtained by the greedy algorithm

Q^{bst} \rightarrow current optimal policy

Q^{tmp} \rightarrow to save a better policy in iteration

Ω \rightarrow candidate policy not in tabu table

temp \rightarrow to save a better solution in iteration

γ \rightarrow tabu table

K \rightarrow threshold for algorithm termination

H \rightarrow threshold for termination during sub-iteration

Algorithm :

\Rightarrow Initialize everything

temp = L [greedy time]
 Q^{tmp} = Q [greedy alloc]
 Q^{bst} = Q

while $K < K$:

while $h < H$:

randomly swap allocated server to get Q'

if Q' not in γ :

compute solution of current policy l ;

if $l < temp$: [better solⁿ than greedy]

temp = l

Add Q' to γ

Q^{tmp} = Q [server allocation change]

else :

select a_y not in Y
 $a_{tmp} = a_y$
 $temp = a_y$

end if

end if

$k = k + 1$

end while

if $temp < L$ [Better solⁿ than greedy L]

$L = temp$

$a_{bst} = a_{tmp}$

end if

$n = n + 1$

end while