

Input: A super-peer n_i and n_i is under-loaded

Operation:

if $UpdSP = \text{RetriveUpdateSPc}(n_i)$ **then**

$\text{UpdateSPCandidates}(n_i, UpdSP)$.

end if

if $\text{ExistBiggerSPCandidate}(n_i) == \text{true}$ **then**

$\text{CanSP}(n_i) = \text{RetriveNewSPCandidates}(n_i)$.

$\text{NotifyNewSPcandidates}(n_i)$.

if $n_i \notin \text{CanSP}(n_i)$ **then**

$\text{TransferClients}(n_i)$.

$\text{ChangeRole}(n_i)$.

end if

else

$\text{AddClientnodes}(n_i)$.

end if