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## Scaling Max-Flow

Initially  $f(e) = 0$  for all  $e$  in  $G$

Initially set  $\Delta$  to be the largest power of 2 that is no larger than the maximum capacity out of  $s$ :  $\Delta \leq \max_{e \text{ out of } s} c_e$

While  $\Delta \geq 1$

$\Delta$ -scaling phase

While there is an  $s$ - $t$  path in the graph  $G_f(\Delta)$

Let  $P$  be a simple  $s$ - $t$  path in  $G_f(\Delta)$

$f' = \text{augment}(f, P)$

Update  $f$  to be  $f'$  and update  $G_f(\Delta)$

$\leq 2m$   
iterations

Endwhile

$\Delta = \Delta/2$

Endwhile

Return  $f$

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