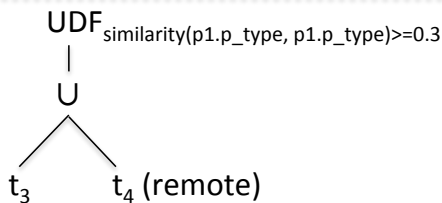


Compute  
Server 1



Compute  
Server 1

materialize  $t_3$

$\sigma_{\text{frequency} \geq 2}$

$\chi_{l1.l\_partkey, l2.l\_partkey, p1.p\_type, p2.p\_type, \text{COUNT}(*)\text{ as frequency}}$

$\bowtie_{l1.l\_partkey=p1.p\_partkey}$

part p2 (part1)

$\bowtie_{l1.l\_partkey=p1.p\_partkey}$

$t_1$  part p1 (part1)

Compute  
Server 2

materialize  $t_4$

$\sigma_{\text{frequency} \geq 2}$

$\chi_{l1.l\_partkey, l2.l\_partkey, p1.p\_type, p2.p\_type, \text{COUNT}(*)\text{ as frequency}}$

$\bowtie_{l1.l\_partkey=p1.p\_partkey}$

part p2 (part2)

$\bowtie_{l1.l\_partkey=p1.p\_partkey}$

$t_2$  part p1 (part2)

Compute  
Server 1

materialize  $t_1$

$\bowtie_{l1.l\_orderkey=l2.l\_orderkey \wedge l1.l\_partkey \neq l2.l\_partkey}$

$\sigma_{l1.l\_shipdate > \text{date '1998-03-15'}}$

$\sigma_{l1.l\_shipdate > \text{date '1998-03-15'}}$

lineitem l1(part1) lineitem l2(part1)

Compute  
Server 2

materialize  $t_2$

$\bowtie_{l1.l\_orderkey=l2.l\_orderkey \wedge l1.l\_partkey \neq l2.l\_partkey}$

$\sigma_{l1.l\_shipdate > \text{date '1998-03-15'}}$

$\sigma_{l1.l\_shipdate > \text{date '1998-03-15'}}$

lineitem l1(part2) lineitem l2(part2)