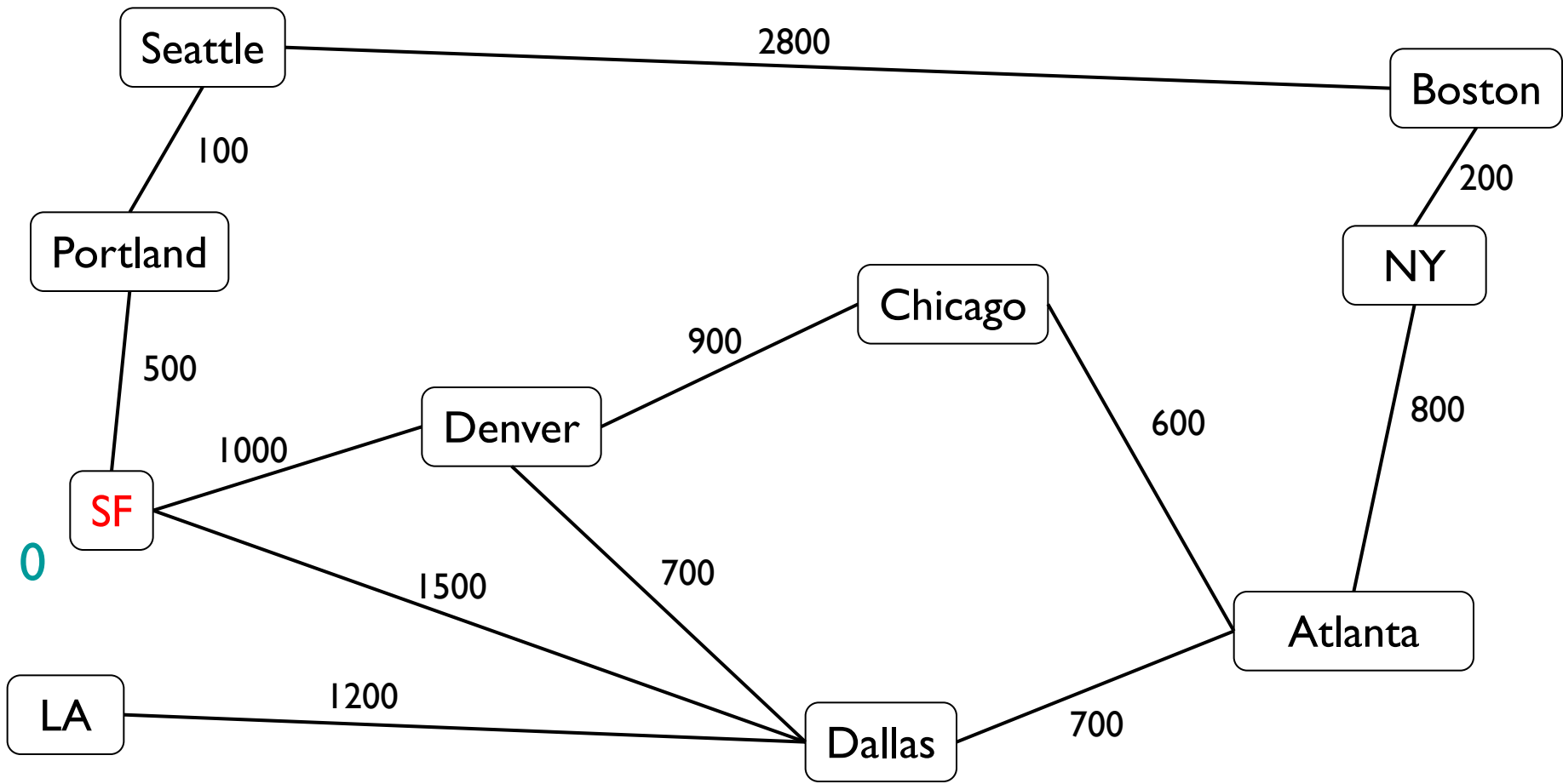
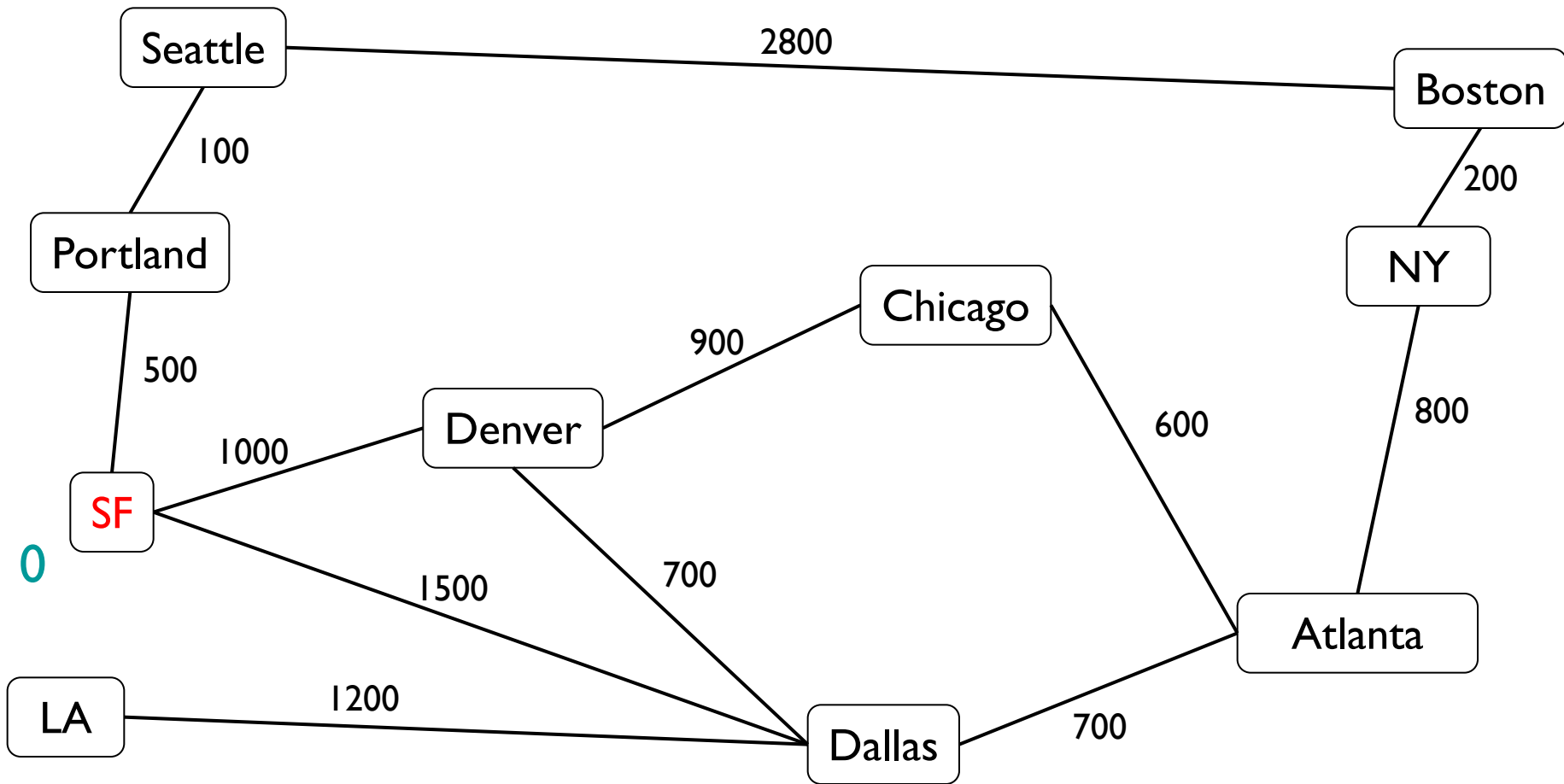


# Dijkstra's Algorithm



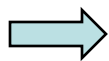
Priority Queue





0

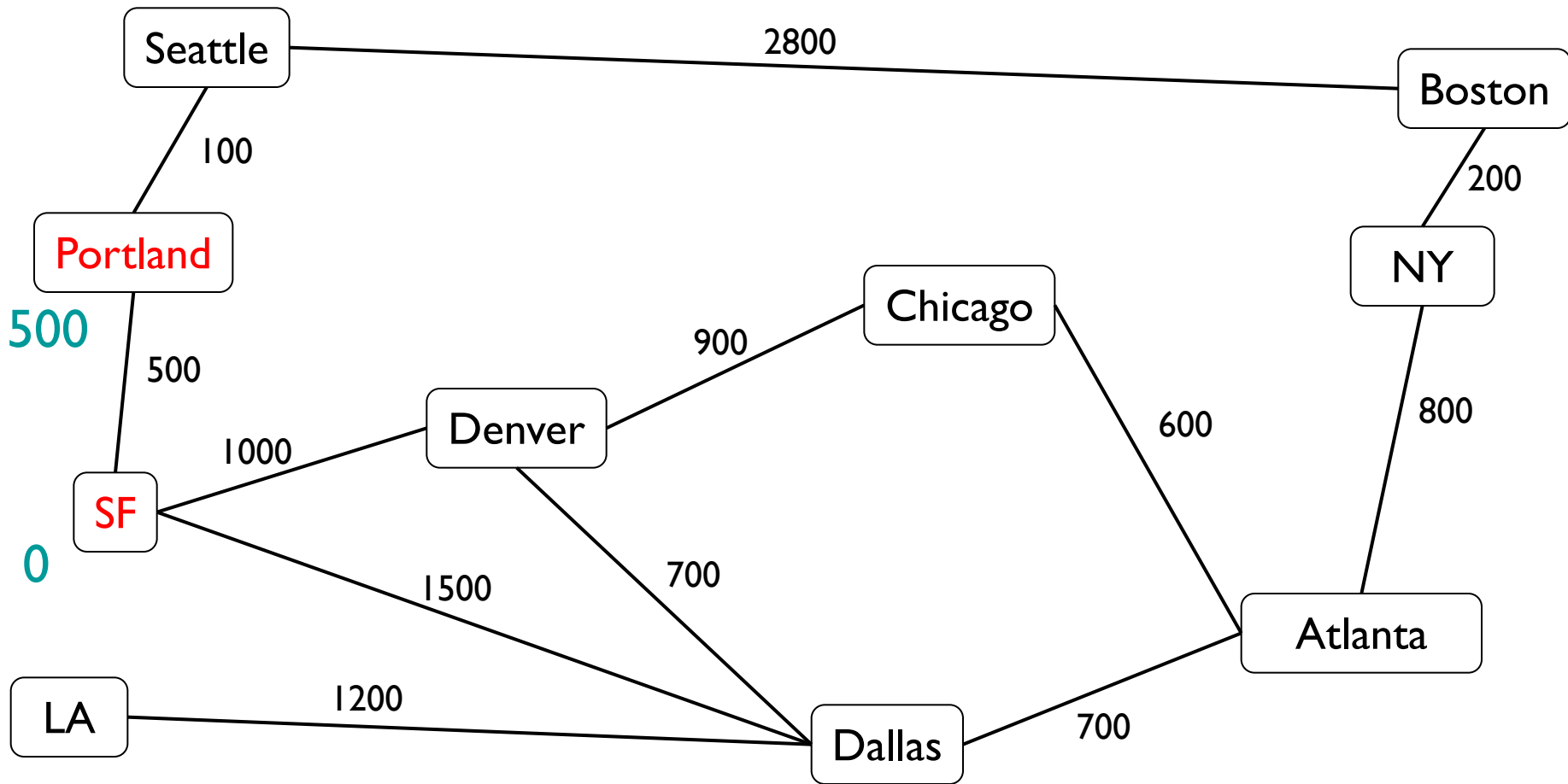
### Priority Queue



SF->Port;  
500

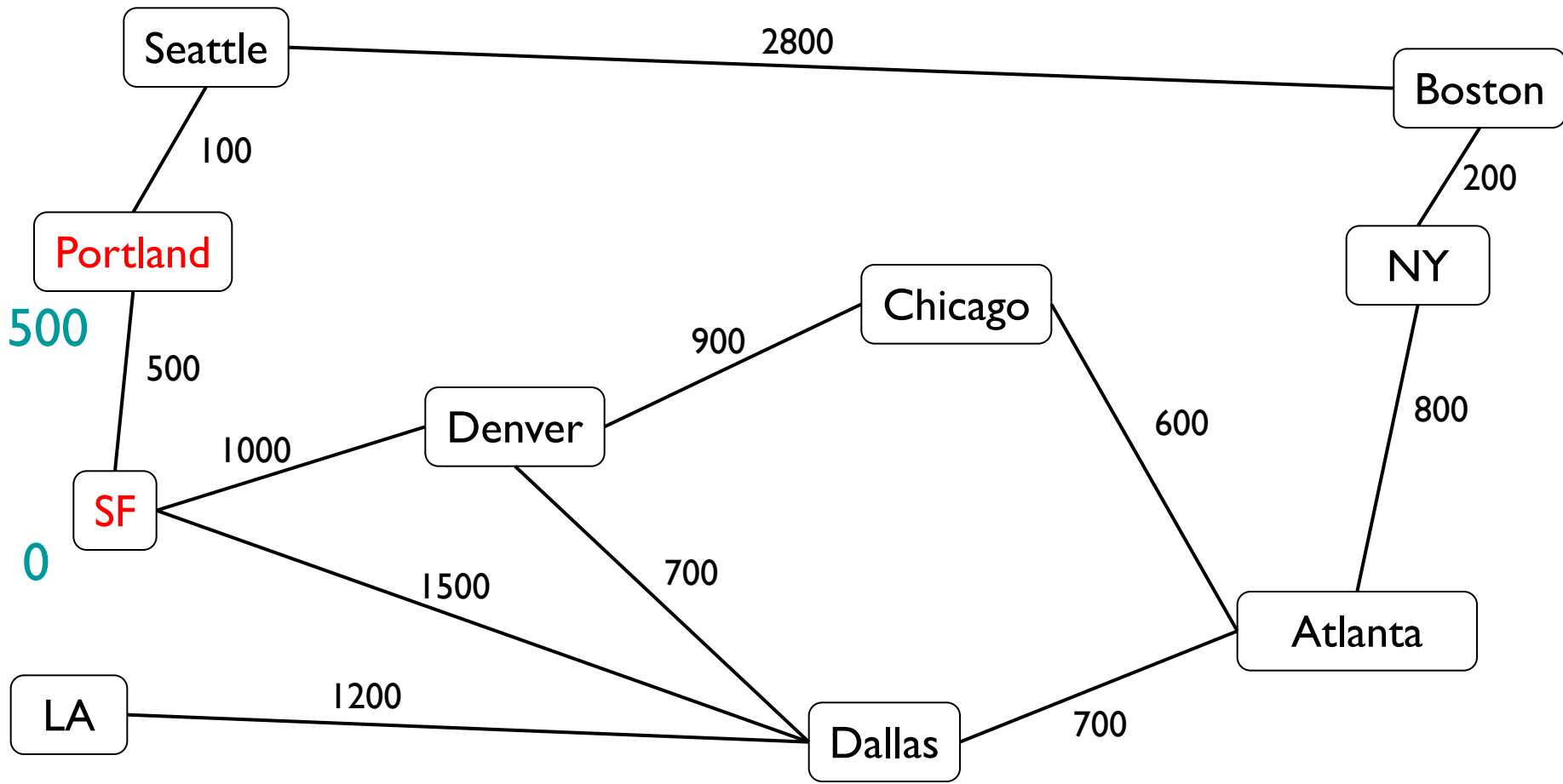
SF->Den;  
1000

SF->Dal  
1500



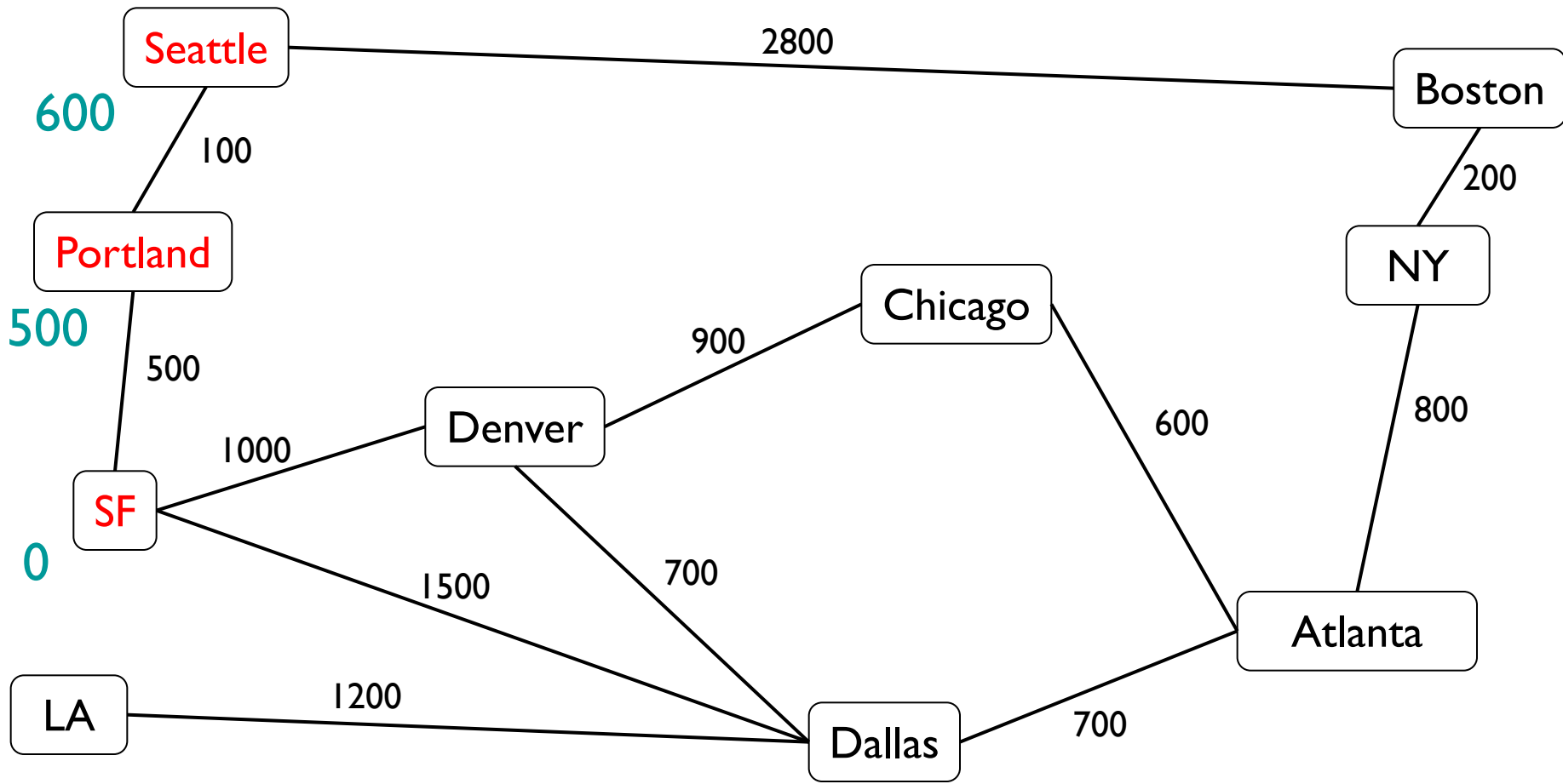
Current: 500 SF->Port (need to add Port's neighbors to PQ)

→ SF->Den; 1000      SF->Dal; 1500



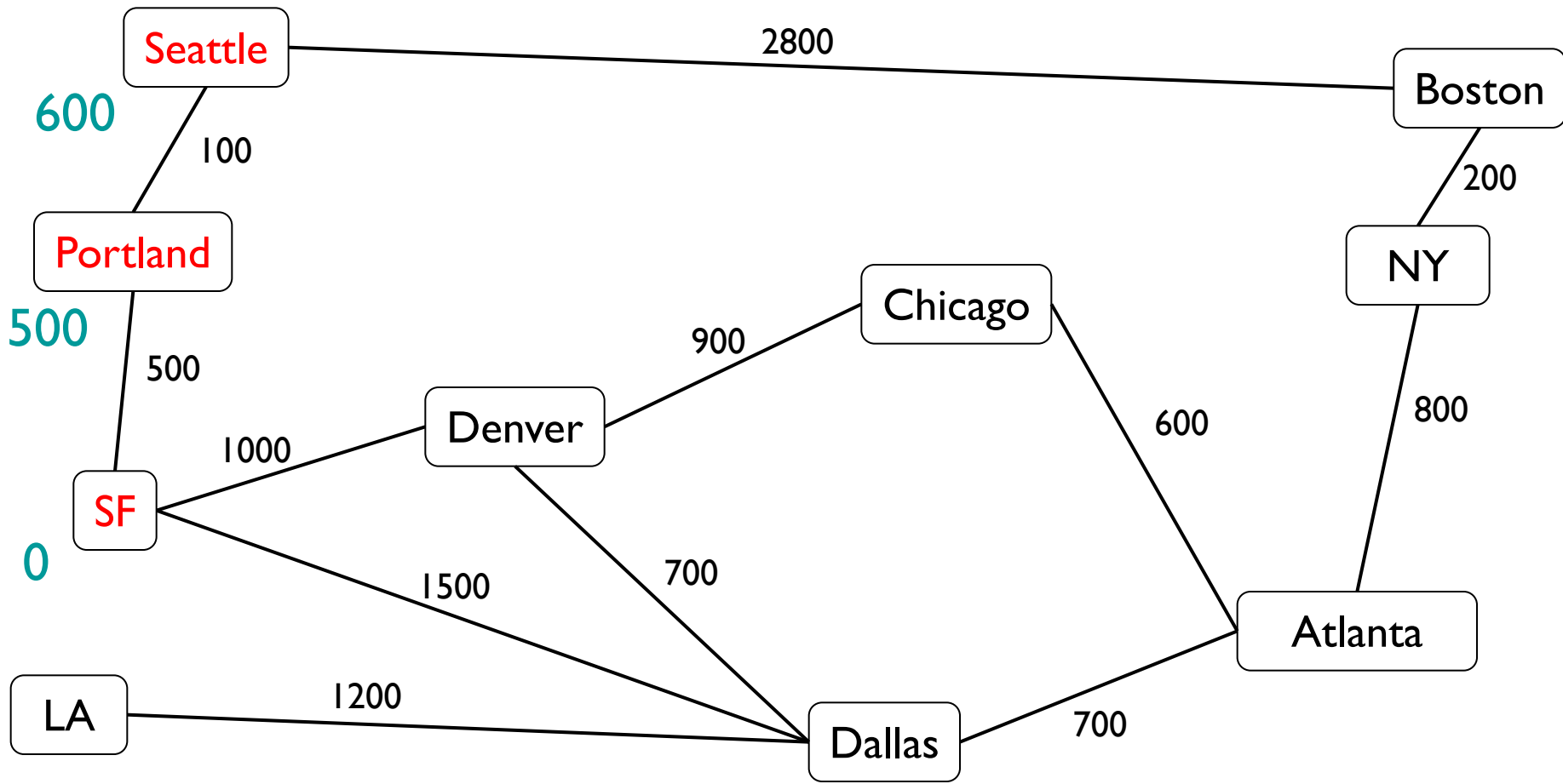
Current: 500 SF->Port

 SF->Port->Sea;      SF->Den;      SF->Dal  
 600                      1000                      1500

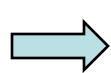


Current: 600 SF->Port->Sea

➡ SF->Den; SF->Dal  
1000 1500



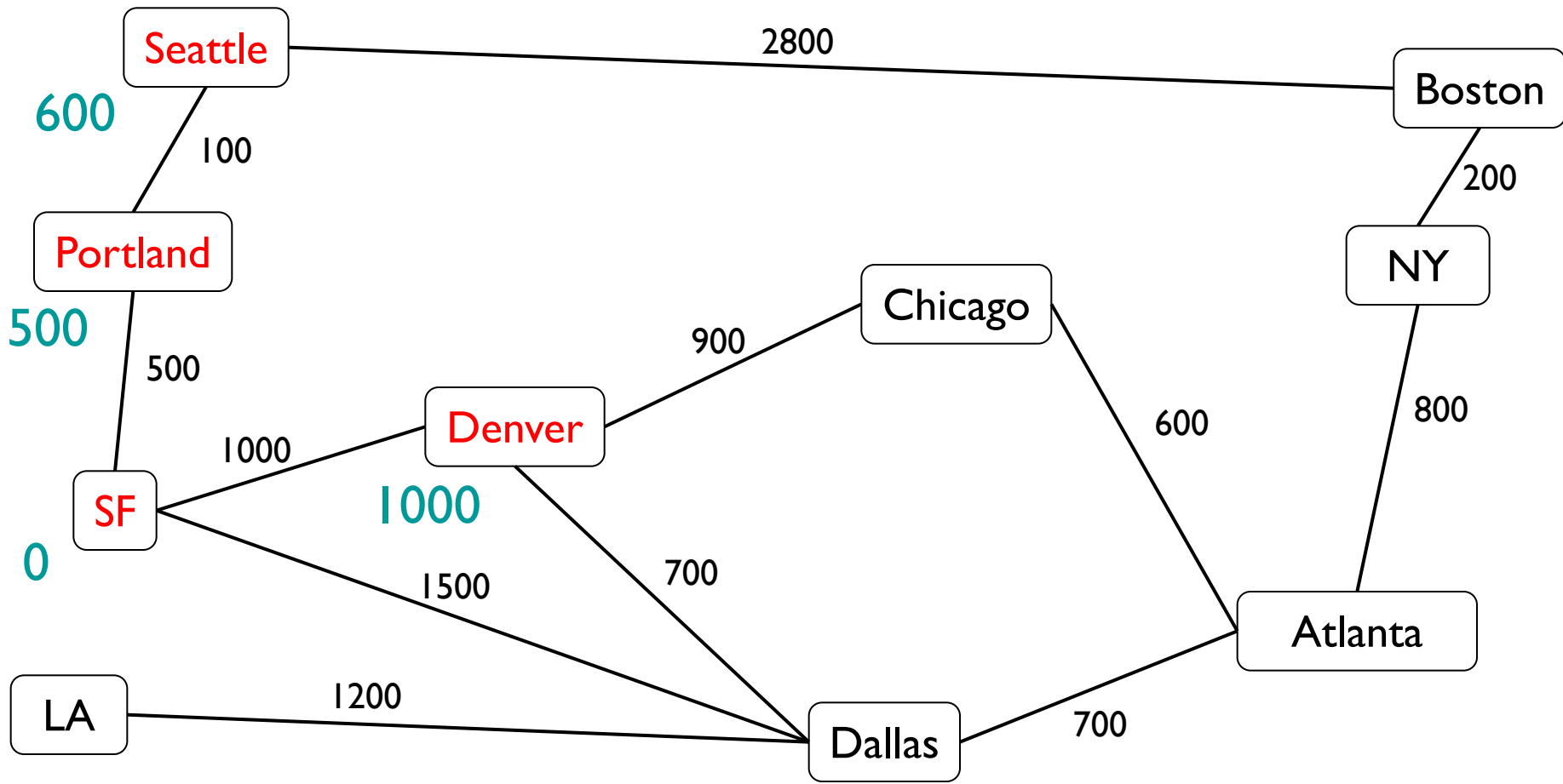
Current: 600 SF->Port->Sea



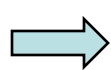
SF->Den;  
1000

SF->Dal;  
1500

SF->Port->Sea->Bos  
3400



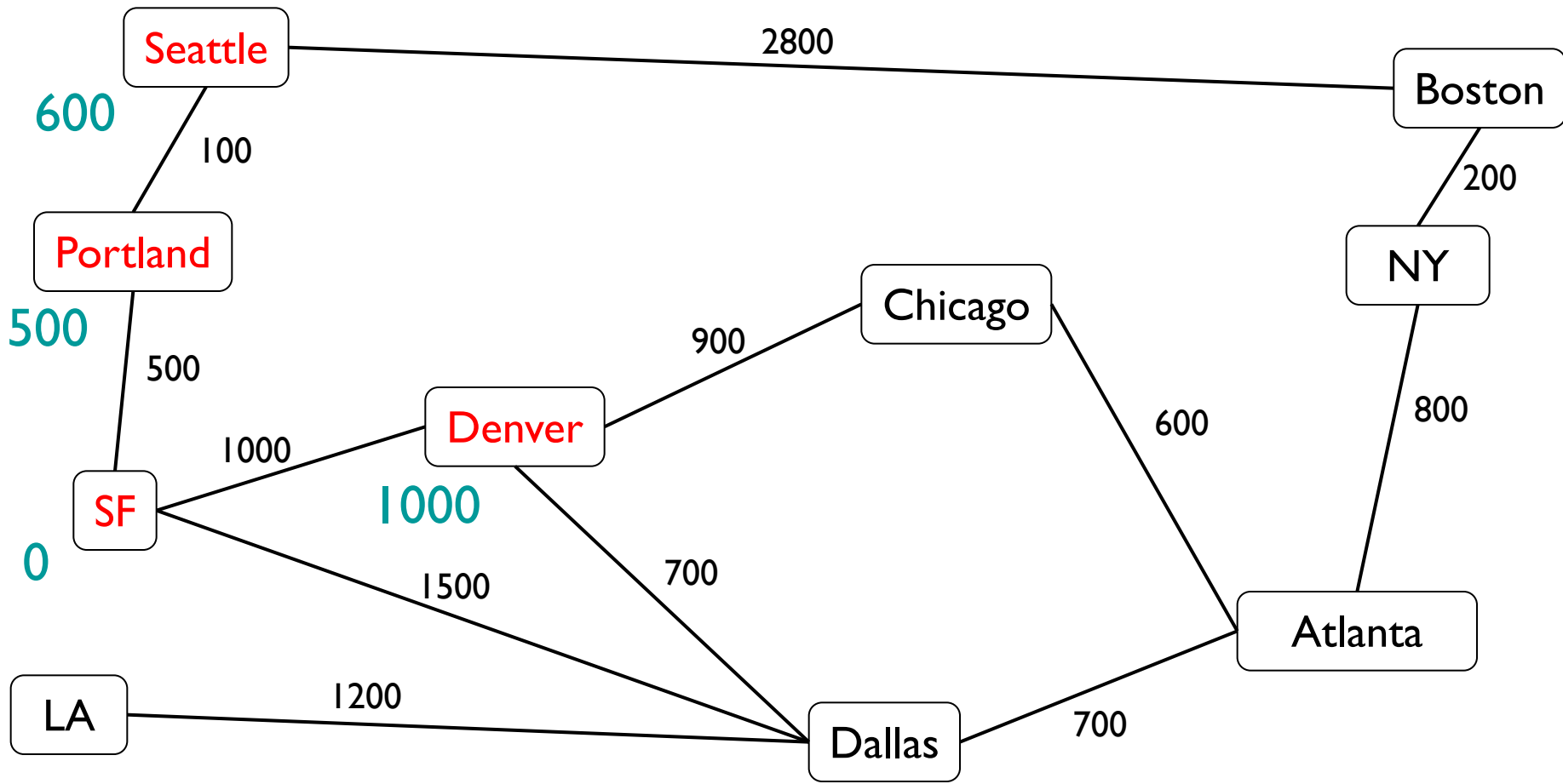
Current: 1000 SF->Den



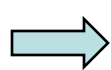
SF->Dal;  
1500

SF->Port->Sea->Bos  
3400





Current: 1000 SF->Den

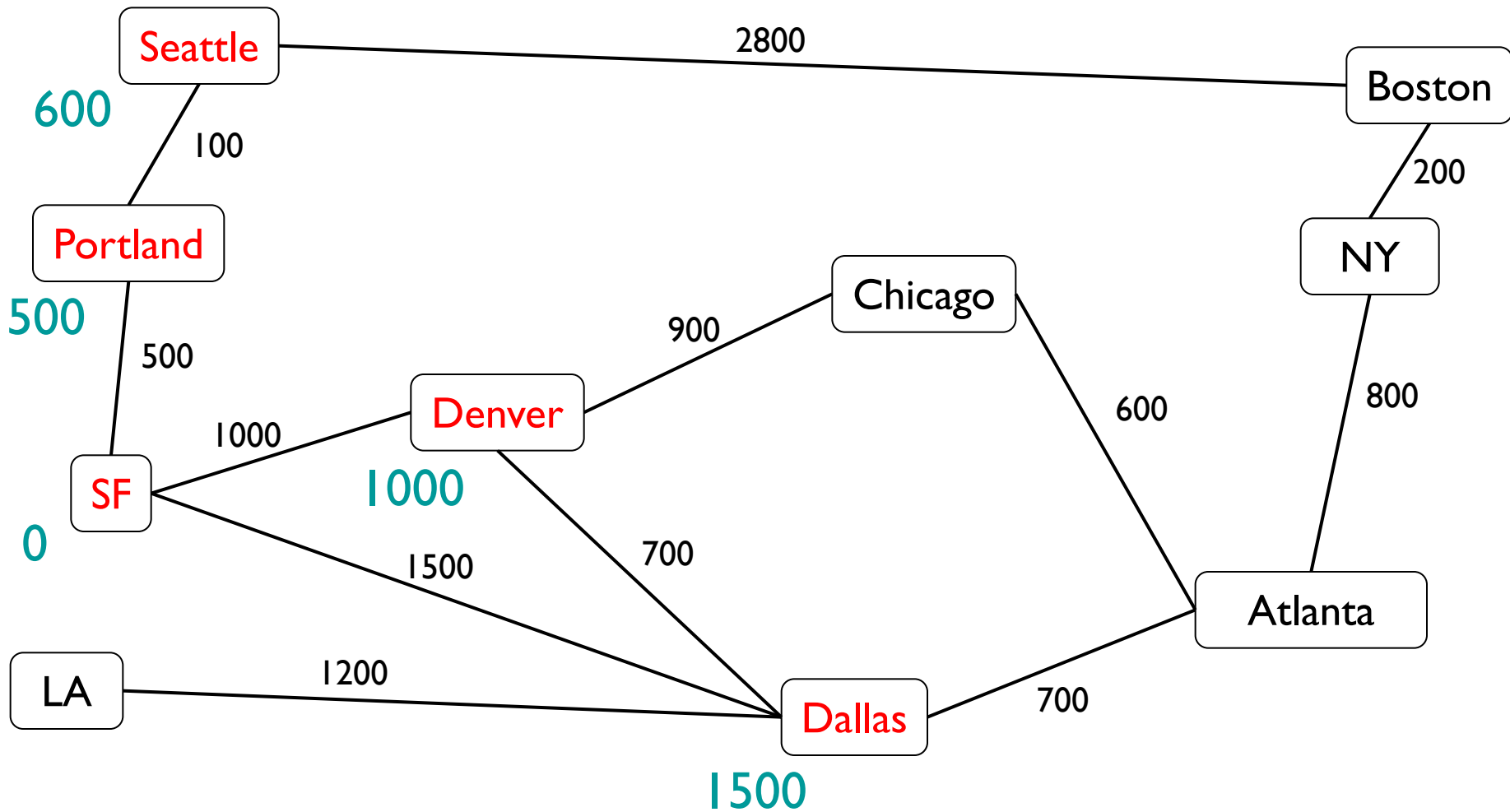


SF->Dal;  
1500


SF->Den->Dal;  
1700

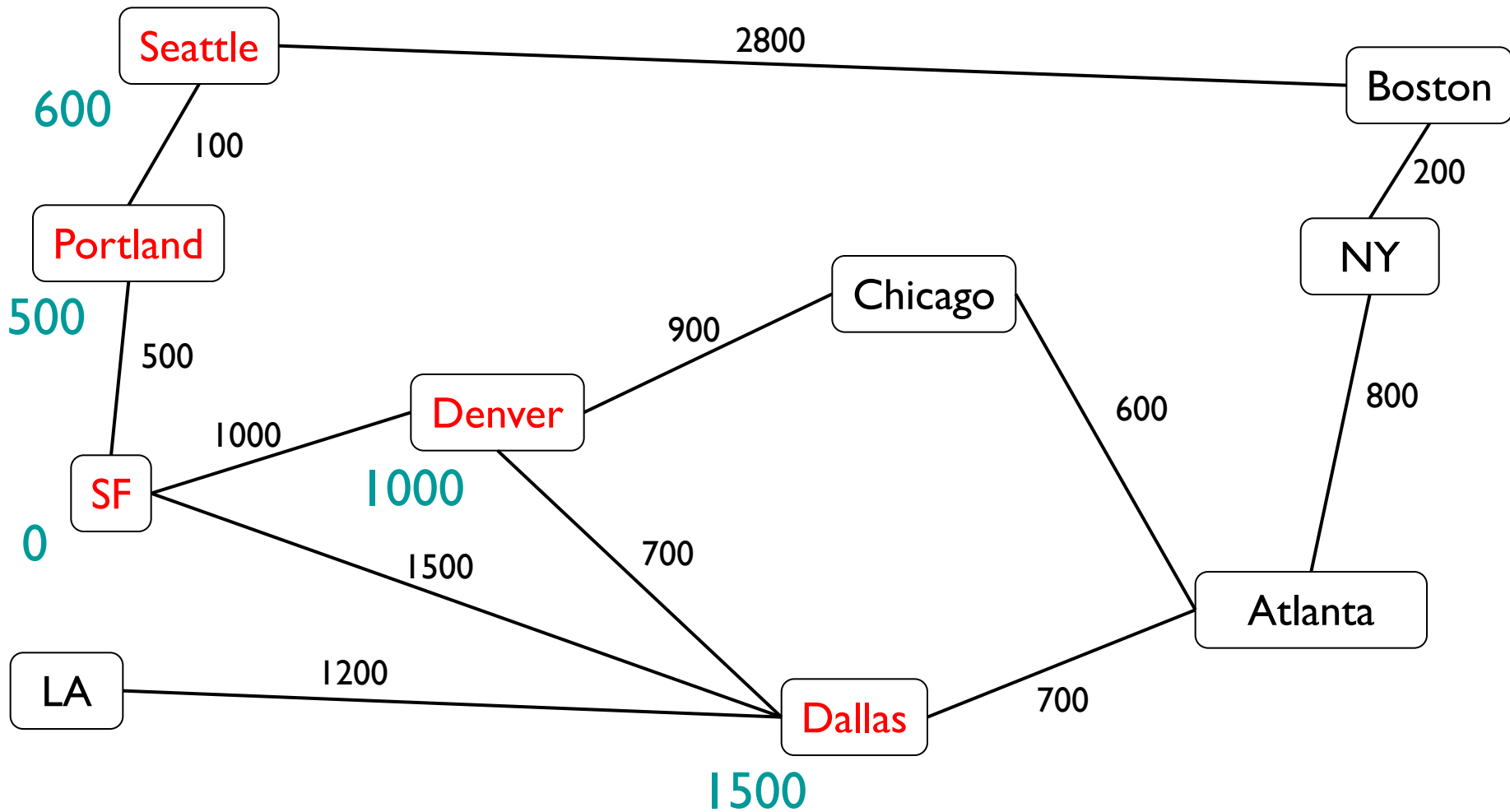
SF->Den->Chi;  
1900

SF->Port->Sea->Bos  
3400



Current: 1500 SF->Dal

 SF->Den->Dal;      SF->Den->Chi;      SF->Port->Sea->Bos  
 1700                      1900                      3400



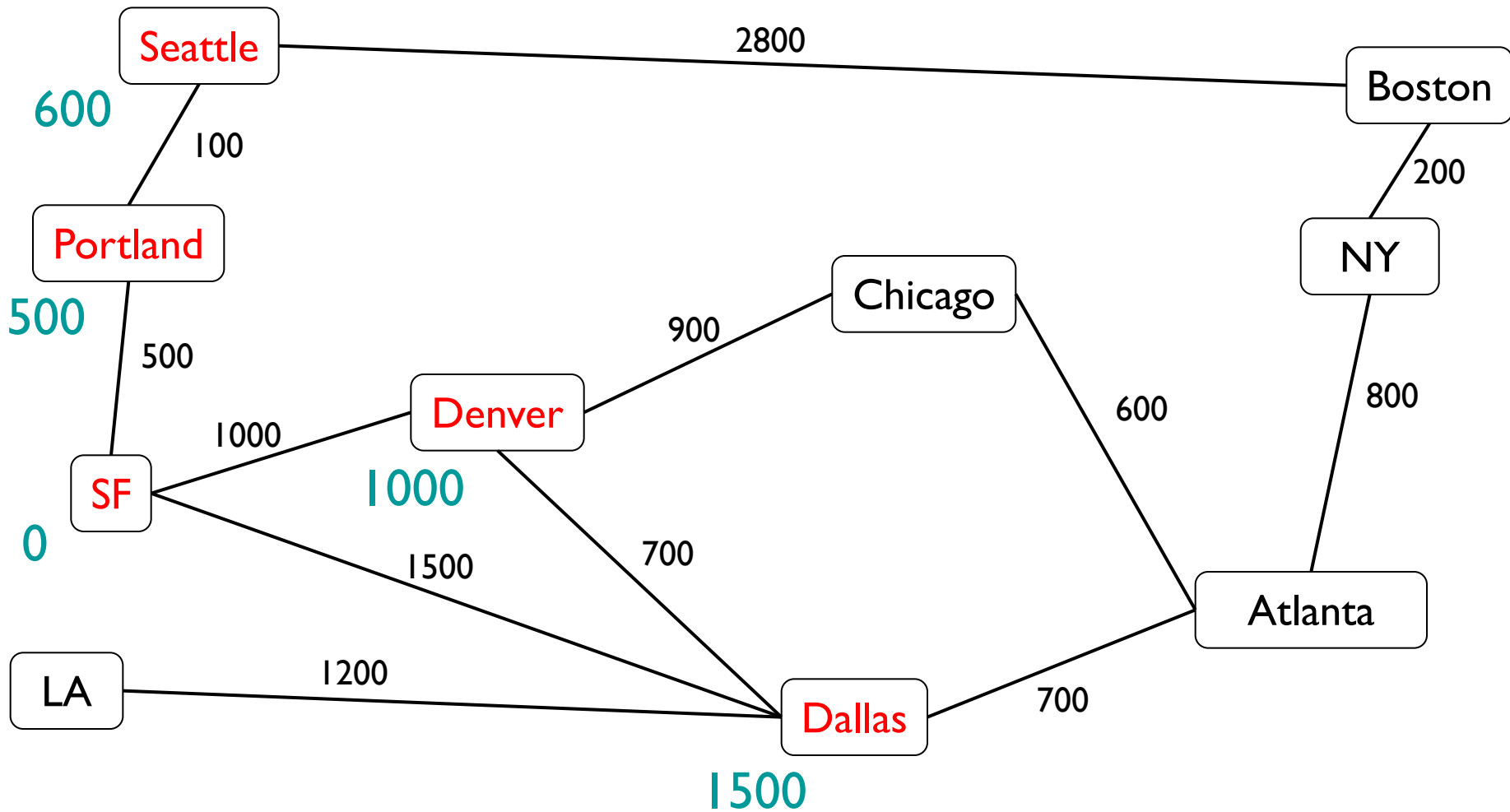
SF->Den->Dal;  
1700

SF->Den->Chi;  
1900

SF->Dal->Atl;  
2200

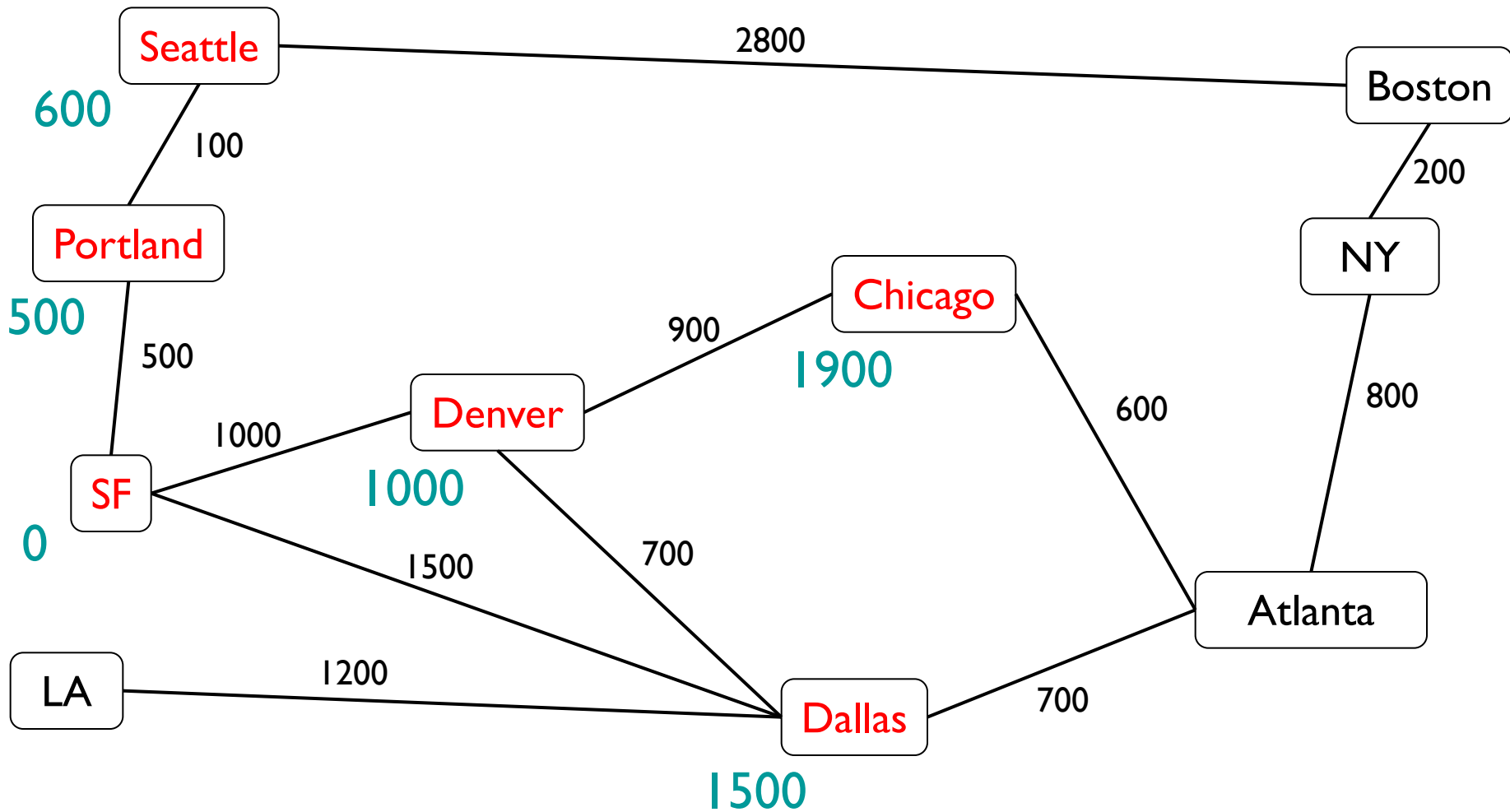
SF->Dal->LA;  
2700

SF->Port->Sea->Bos  
3400

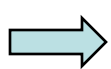


Current: 1700 SF->Den->Dal (we already have Dallas!)

- SF->Den->Chi; 1900      SF->Dal->Atl; 2200      SF->Dal->LA; 2700      SF->Port->Sea->Bos 3400



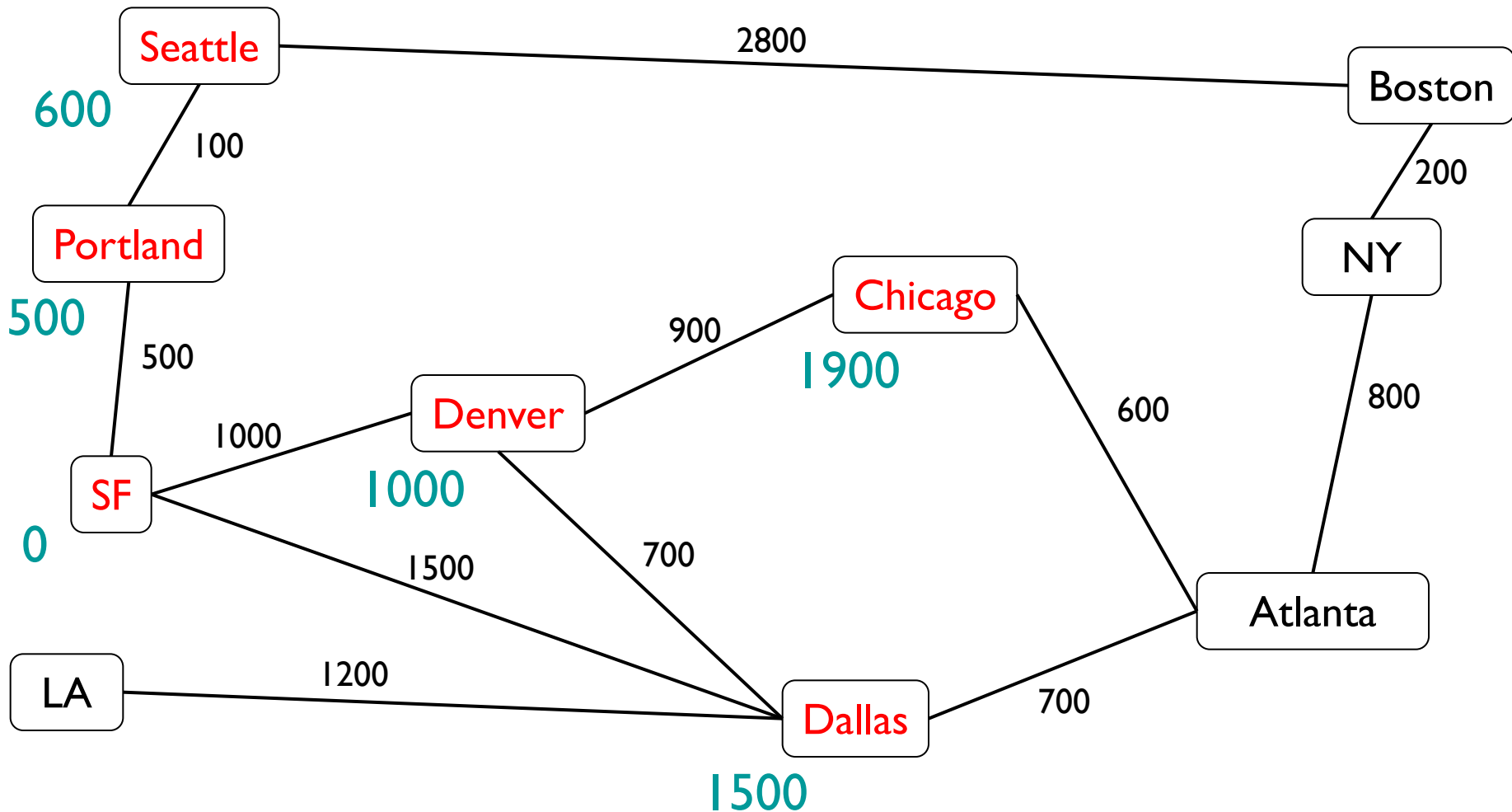
Current: 1900 SF->Den->Chi



SF->Dal->Atl;  
2200

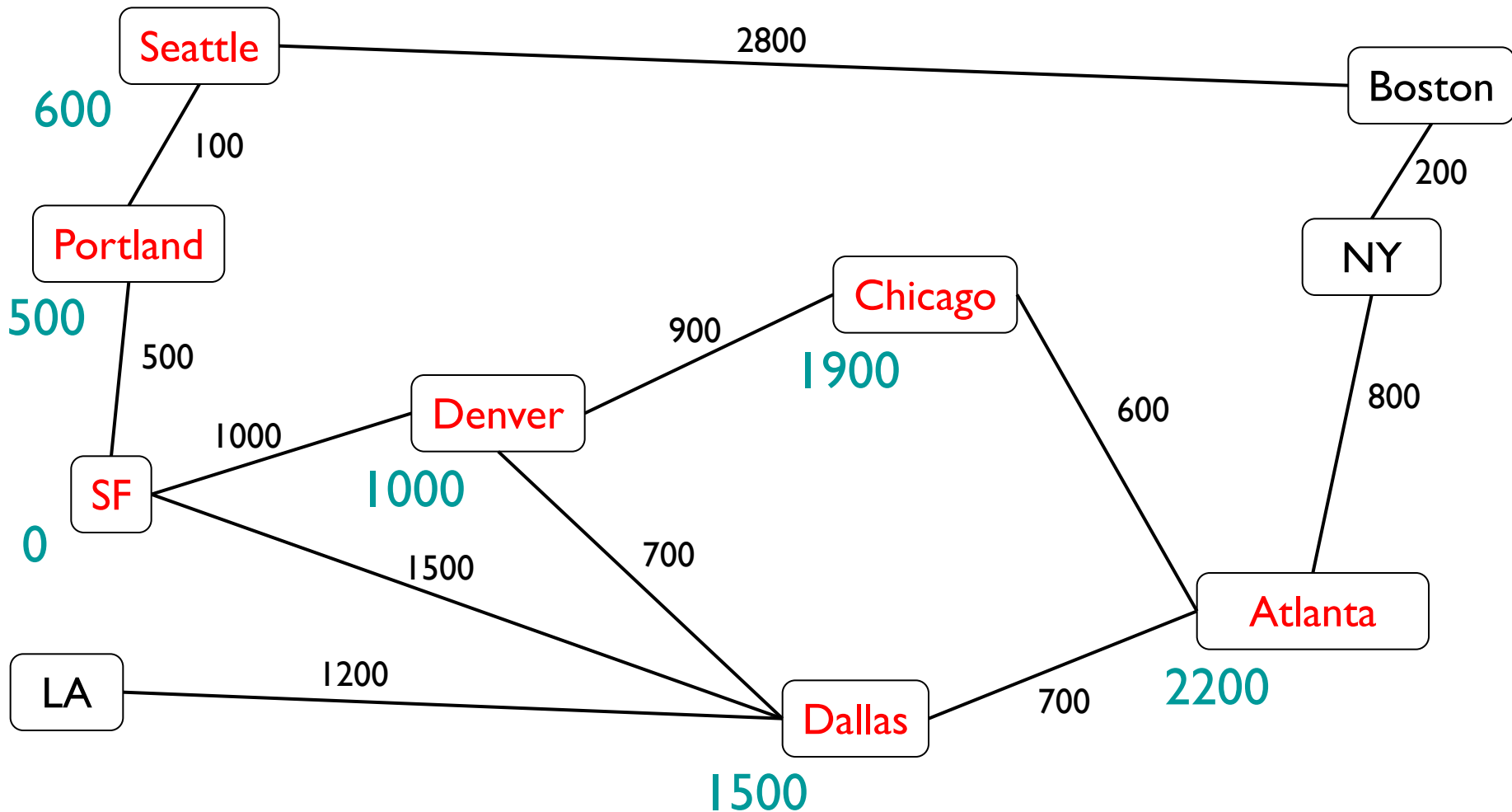
SF->Dal->LA;  
2700      3400

SF->Port->Sea->Bos




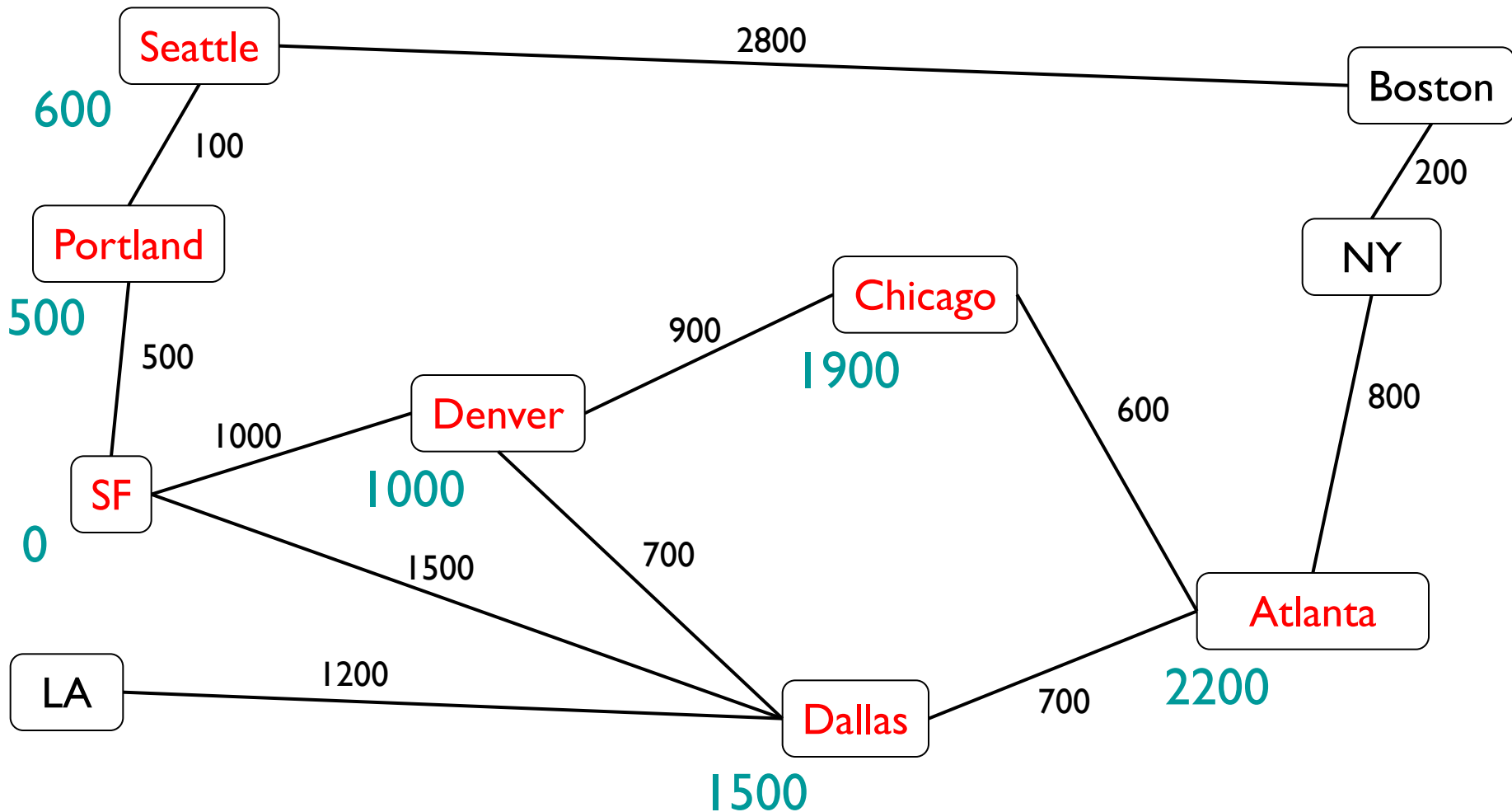
Current: 1900 SF->Den->Chi

- SF->Dal->Atl; 2200      SF->Den->Chi->Atl; 2500      SF->Dal->LA; 2700      SF->Port->Sea->Bos 3400



Current: 2200 SF->Dal->Atl

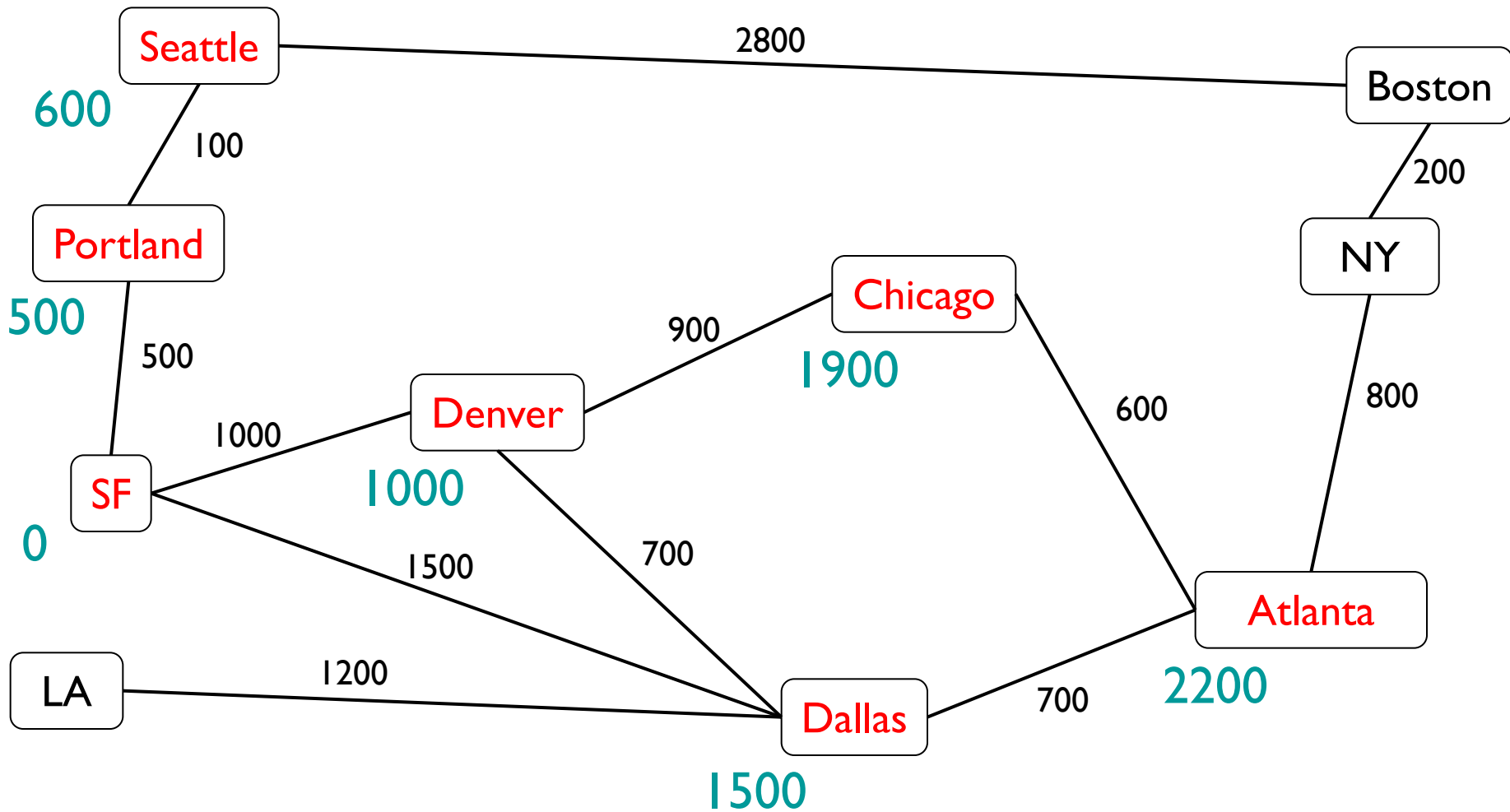
 SF->Den->Chi->Atl;      SF->Dal->LA;      SF->Port->Sea->Bos  
 2500                                      2700                                      3400



Current: 2200 SF->Dal->Atl

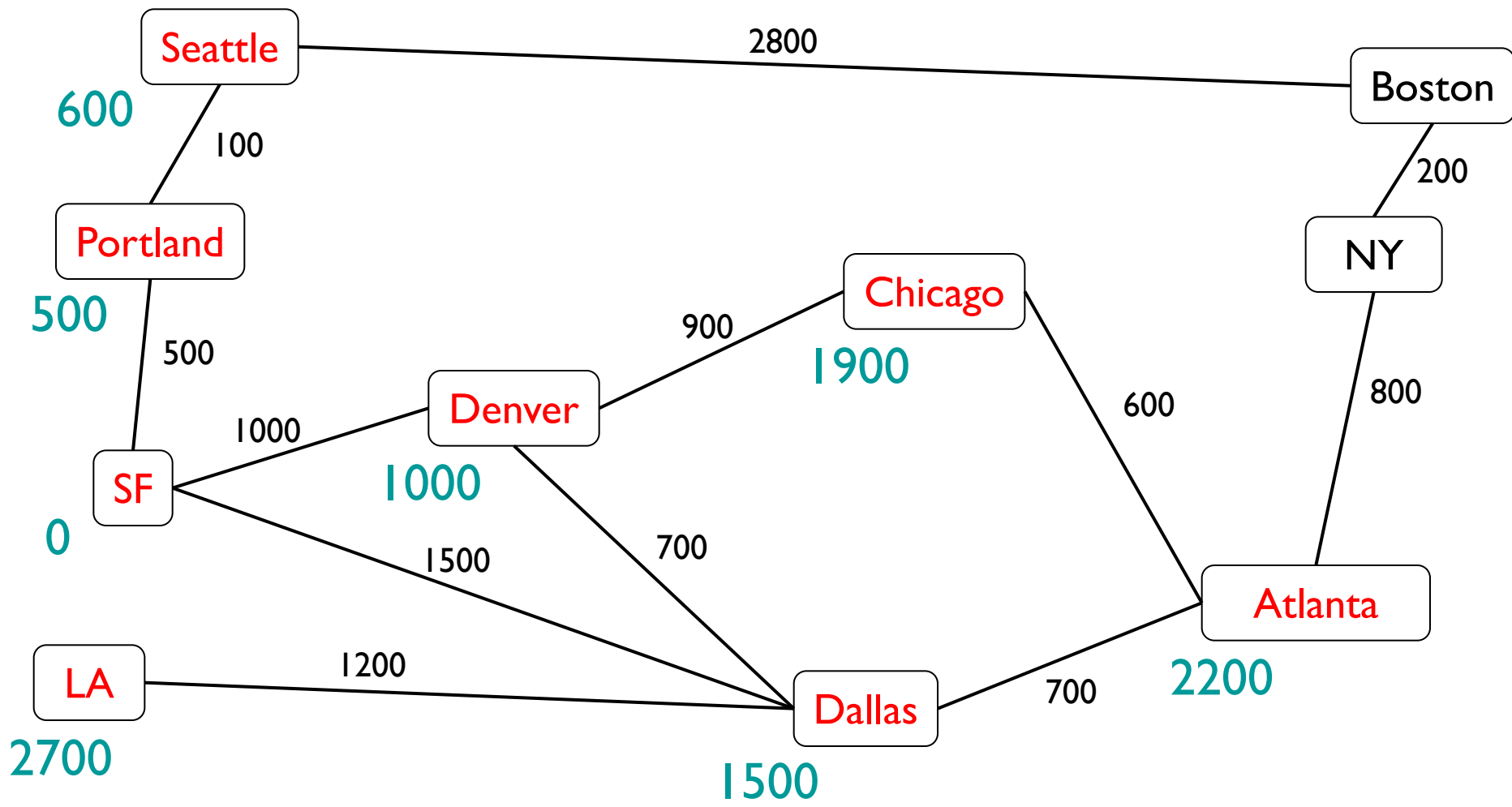
- SF->Den->Chi->Atl;  
2500
- SF->Dal->LA;  
2700
- SF->Dal->Atl->NY;  
3000
- SF->Port->Sea->Bos  
3400



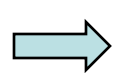


Current: 2500 SF->Den->Chi->Atl

→ SF->Dal->LA; 2700      SF->Dal->Atl->NY; 3000      SF->Port->Sea->Bos 3400

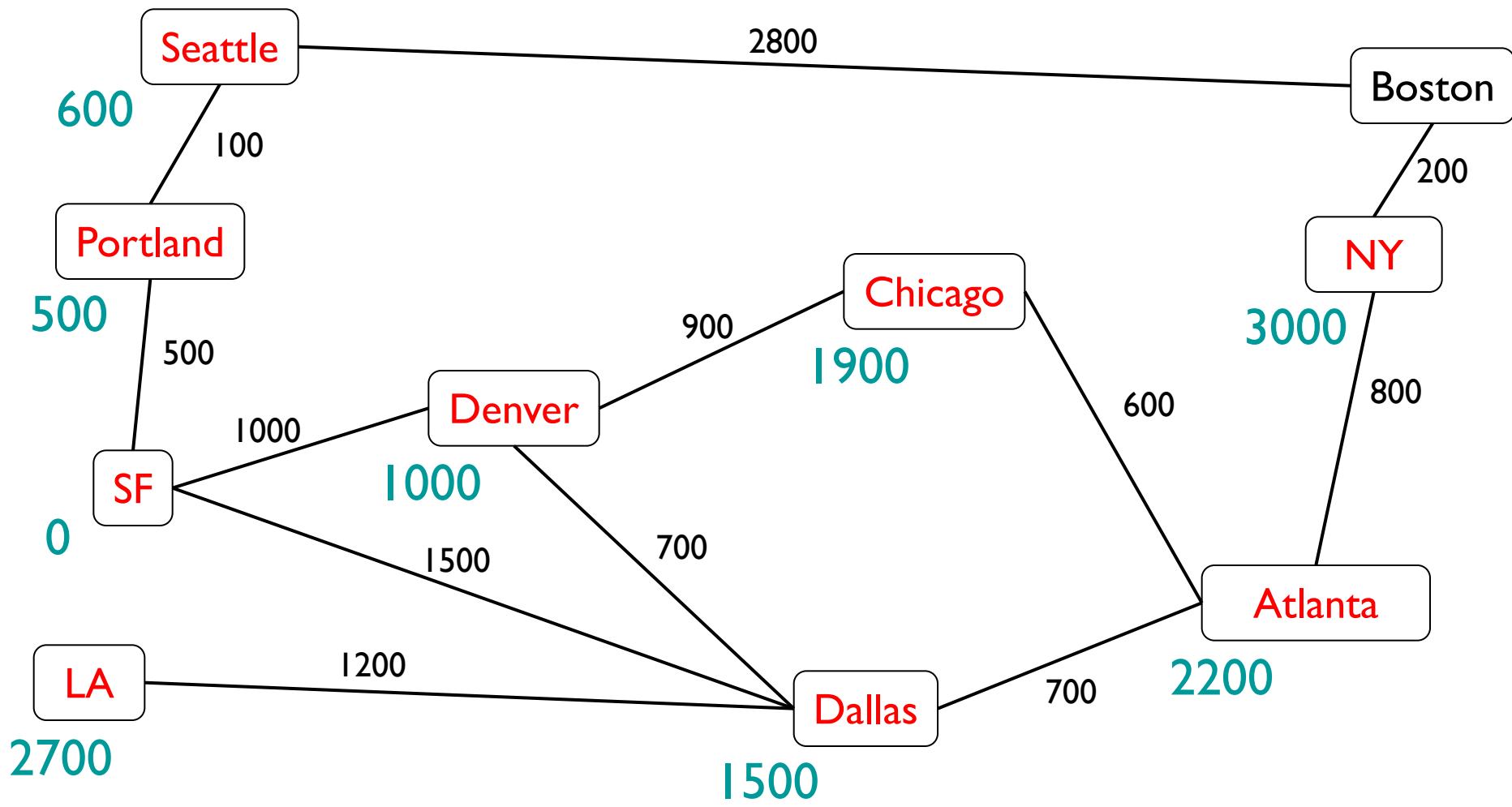


Current: 2700 SF->Dal->LA



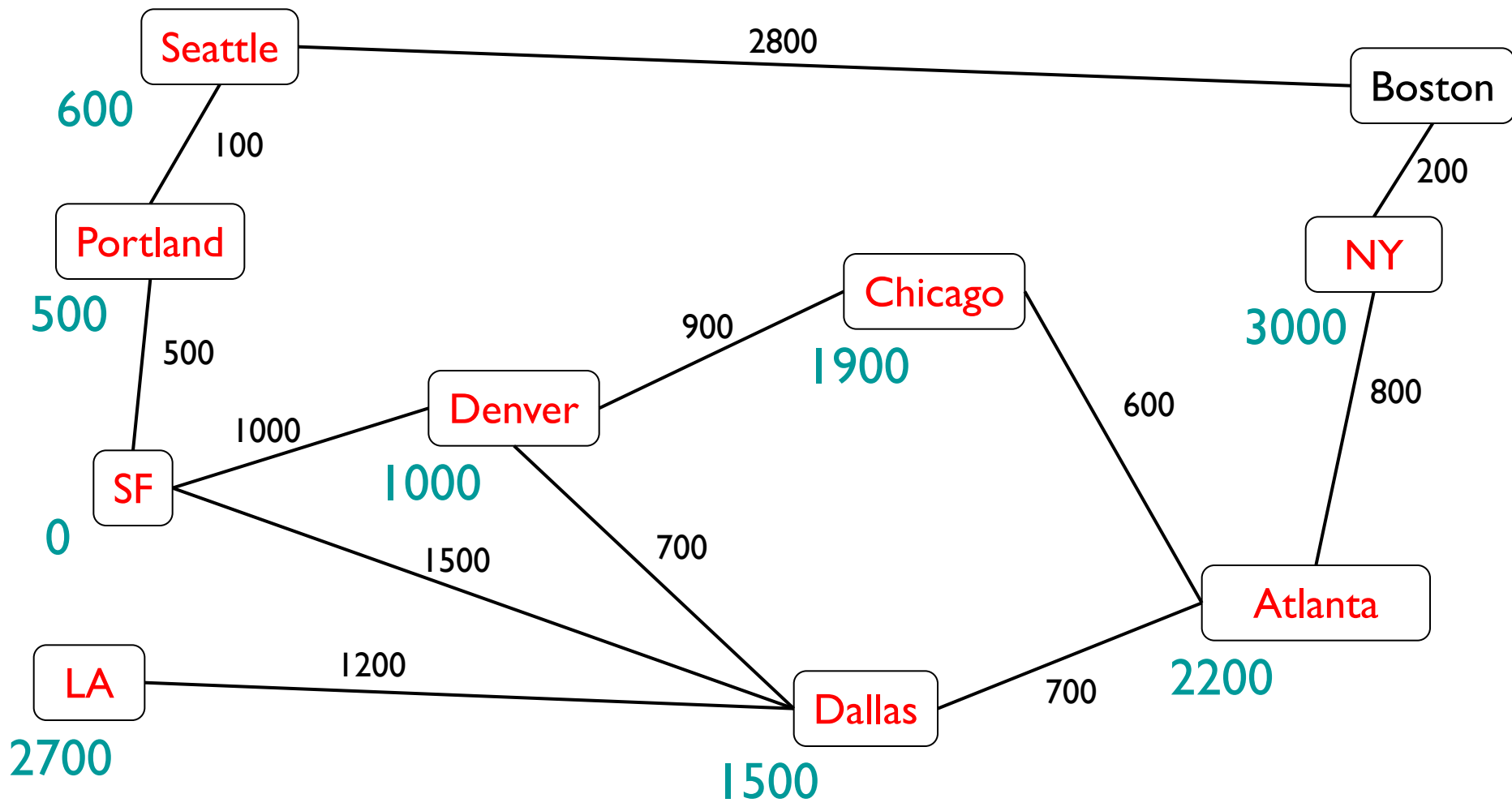
SF->Dal->Atl->NY;  
3000

SF->Port->Sea->Bos  
3400

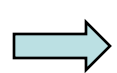


Current: 3000 SF->Dal->Atl->NY

➔ SF->Port->Sea->Bos  
3400

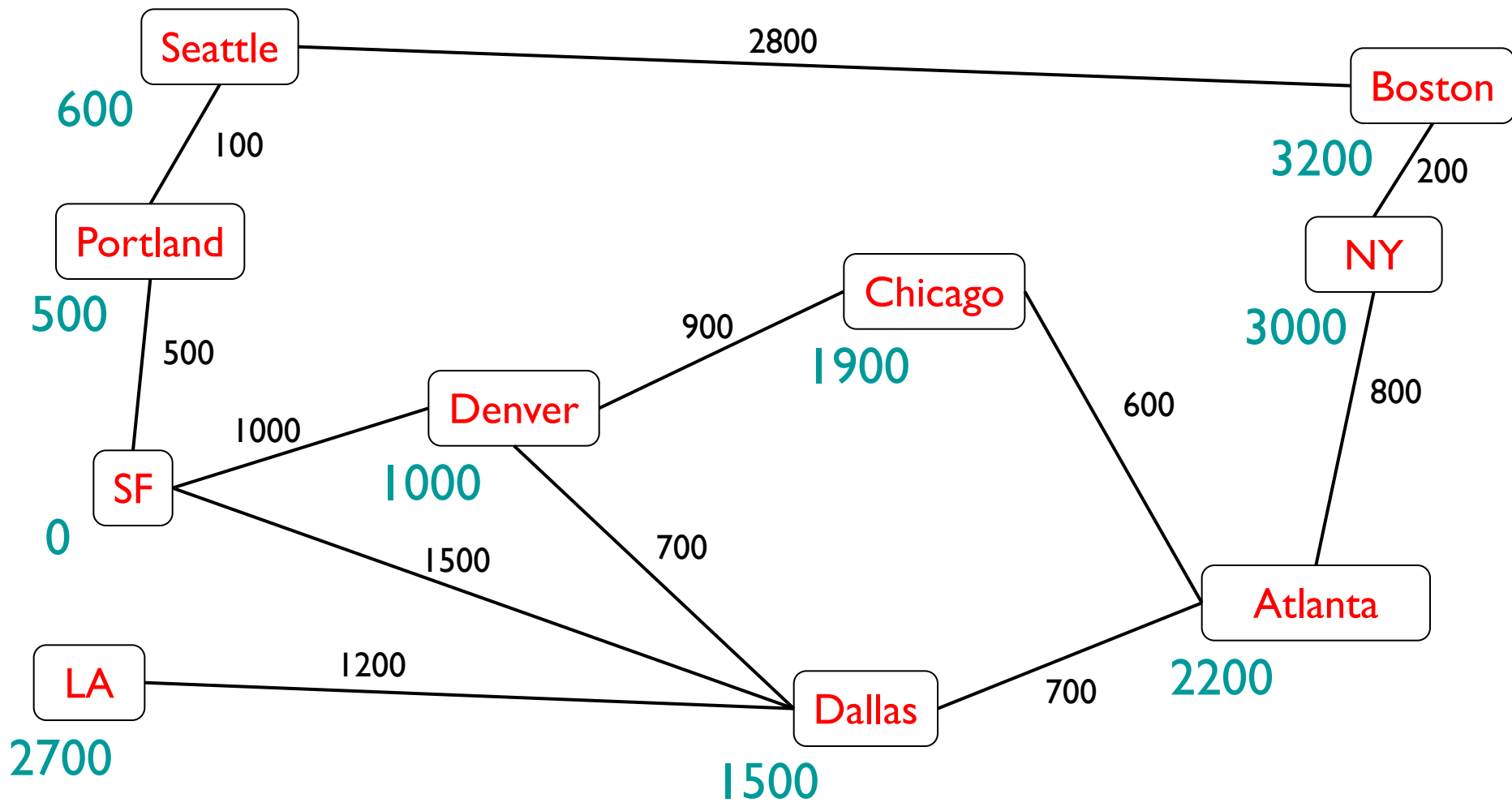


Current: 3000 SF->Dal->Atl->NY



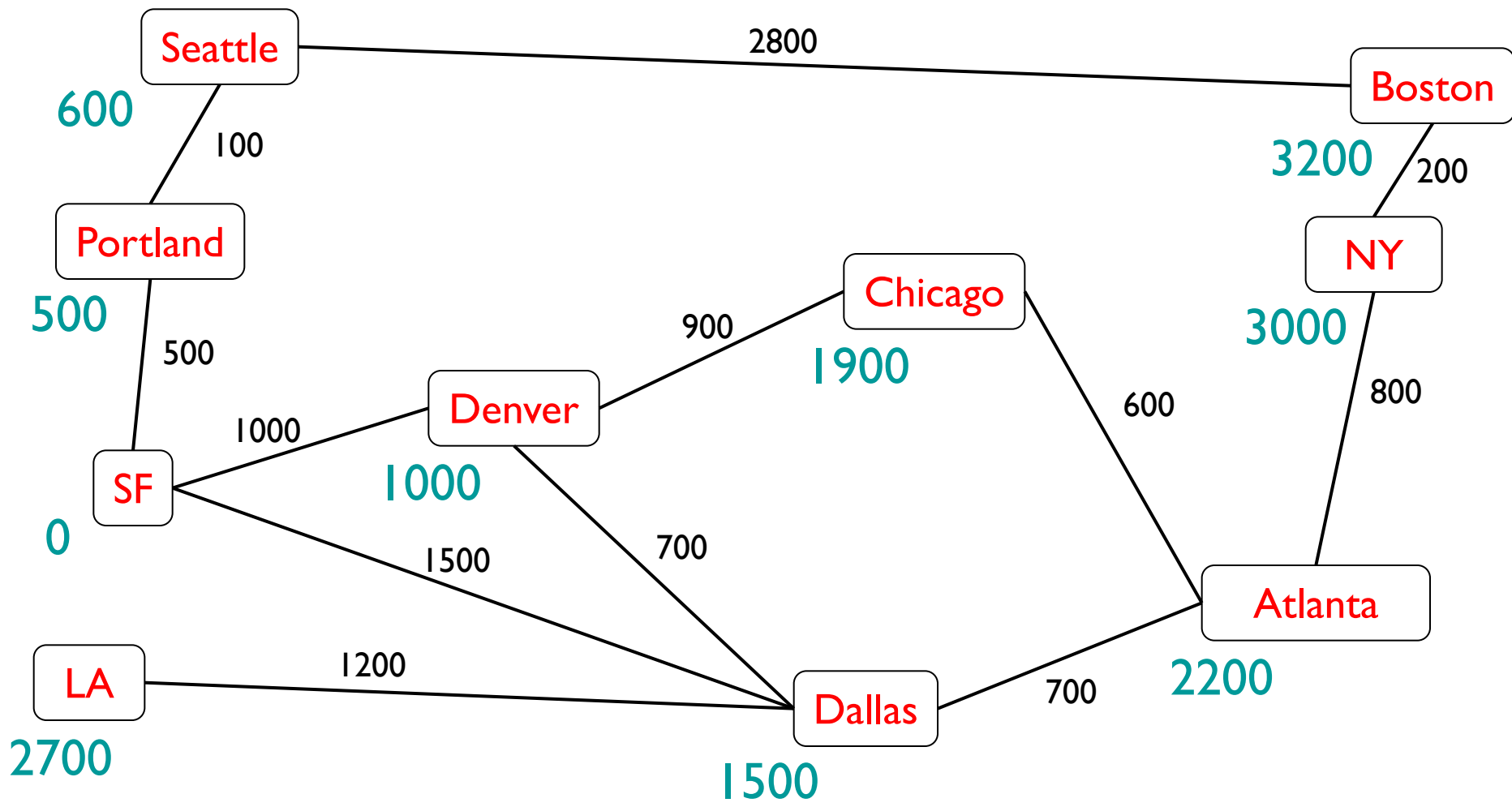
SF->Dal->Atl->NY->Bos;  
3200

SF->Port->Sea->Bos  
3400



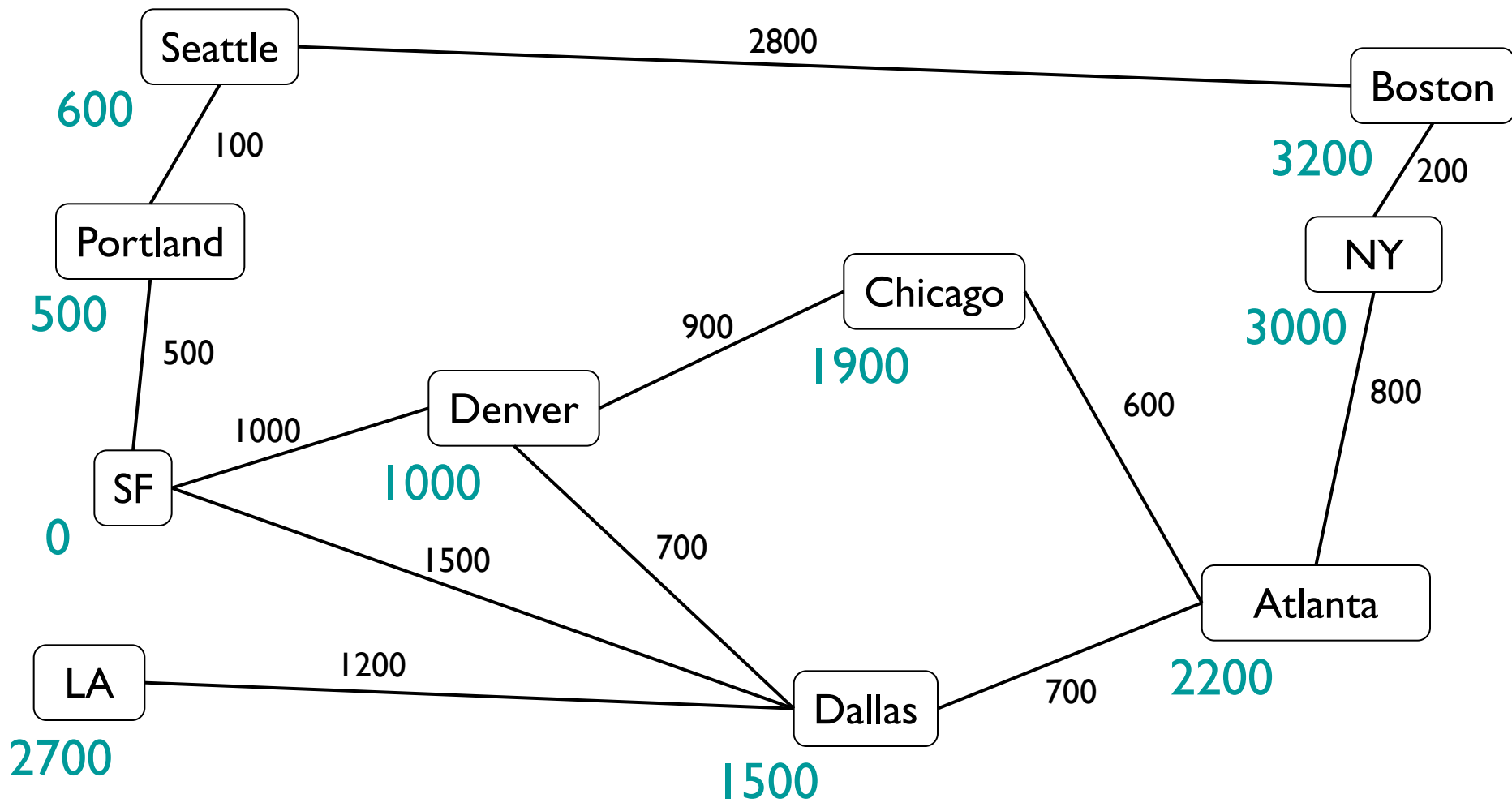
Current: 3200 SF->Dal->Atl->NY->Bos

→ SF->Port->Sea->Bos  
3400



Current: 3400 SF->Port->Sea->Bos





Current:

