



Java SE

Stream API

3 Performance Tips





**Decrease source
elements as early as
possible**





```
source.stream()  
    .map(person -> new Citizen(person.getName(), person.getAge()))  
    .filter(citizen -> citizen.getName().contains("A"))  
    .toList();
```



```
source.stream()  
    .filter(person -> person.getName().contains("A"))  
    .map(person -> new Citizen(person.getName(), person.getAge()))  
    .toList();
```





```
source.stream()  
    .map(Person::getAge)  
    .limit(10)  
    .toList();
```



```
source.stream()  
    .limit(10)  
    .map(Person::getAge)  
    .toList();
```





Use Parallelism (Carefully)





```
source.stream()  
    .filter(person -> person.getAge() > 18)  
    .map(Person::getName)  
    .toList();
```



```
source.stream()  
    .parallel()  
    .filter(person -> person.getAge() > 18)  
    .map(Person::getName)  
    .toList();
```





Relax Order Constraint





```
source.stream()  
    .parallel()  
    .map(Person::getName)  
    .distinct()  
    .toList();
```



```
source.stream()  
    .parallel()  
    .unordered()  
    .map(Person::getName)  
    .distinct()  
    .toList();
```

