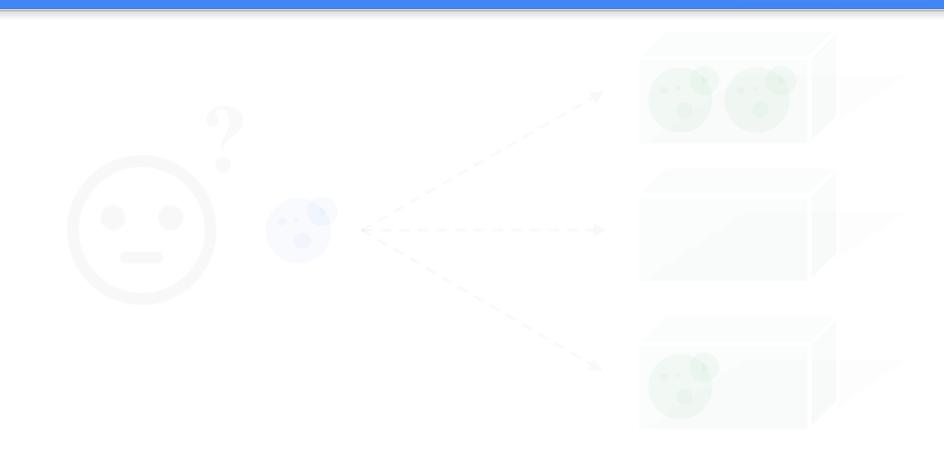


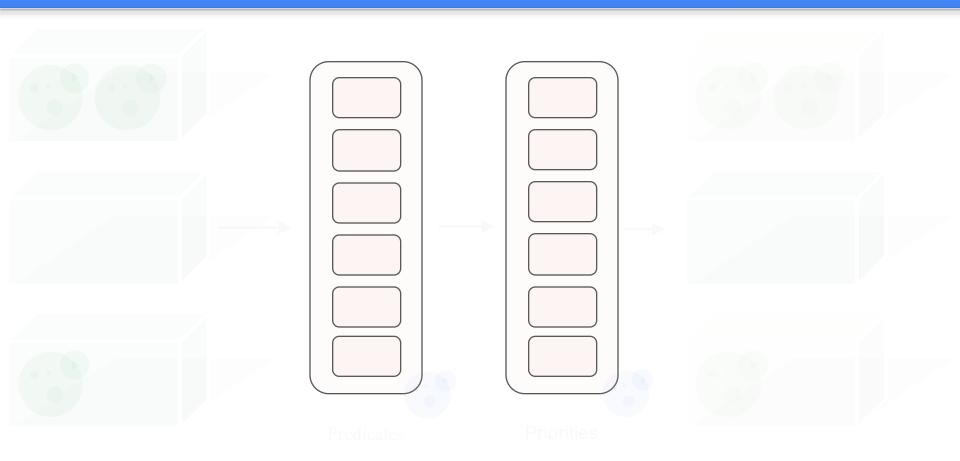
Kuberentes 中的资源调度 与 资源 管理

Da Ma (@k82cn)

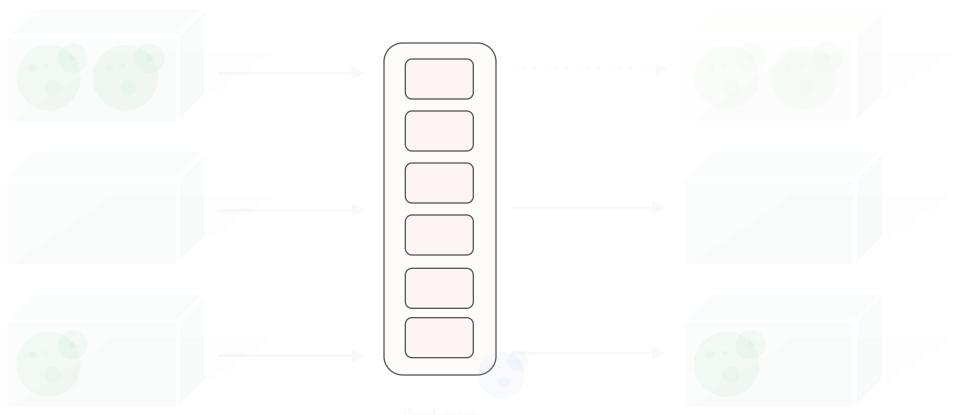






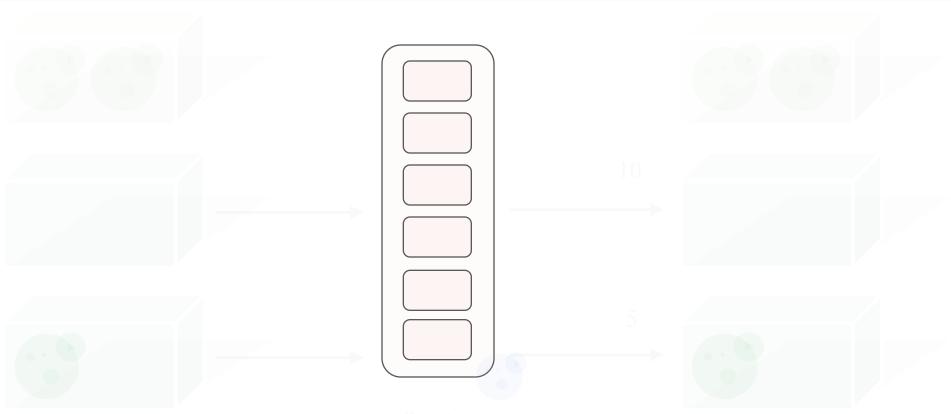






Predicates





Priorities

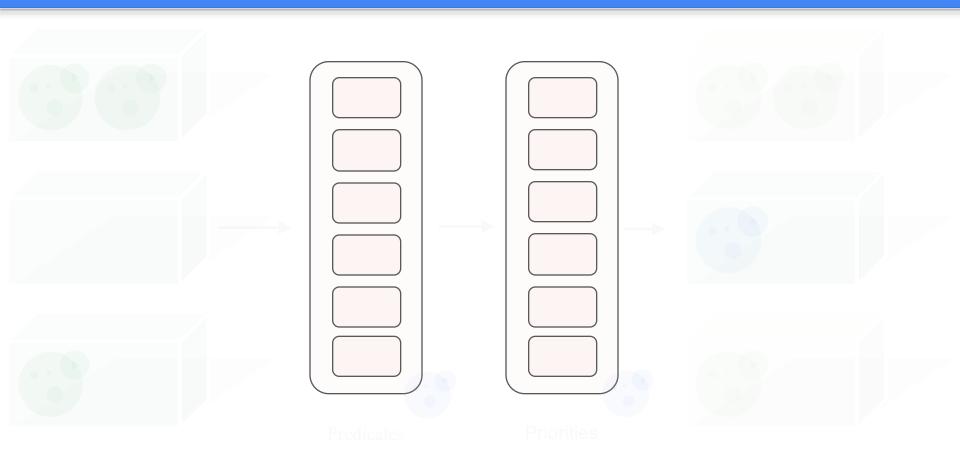






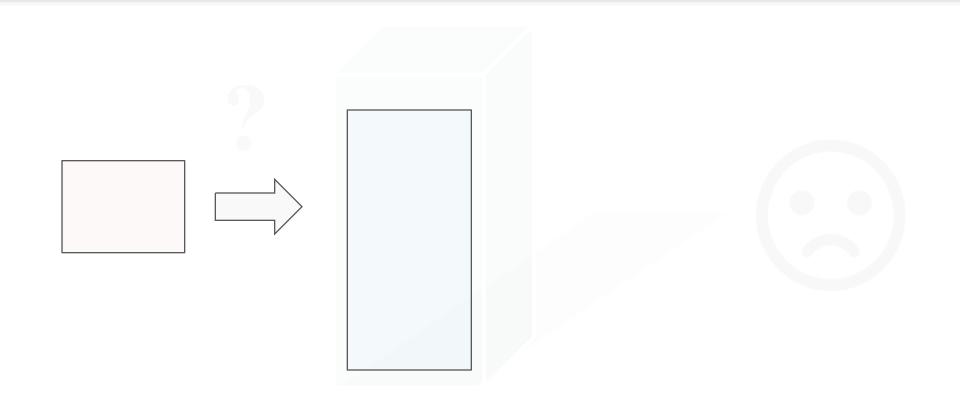






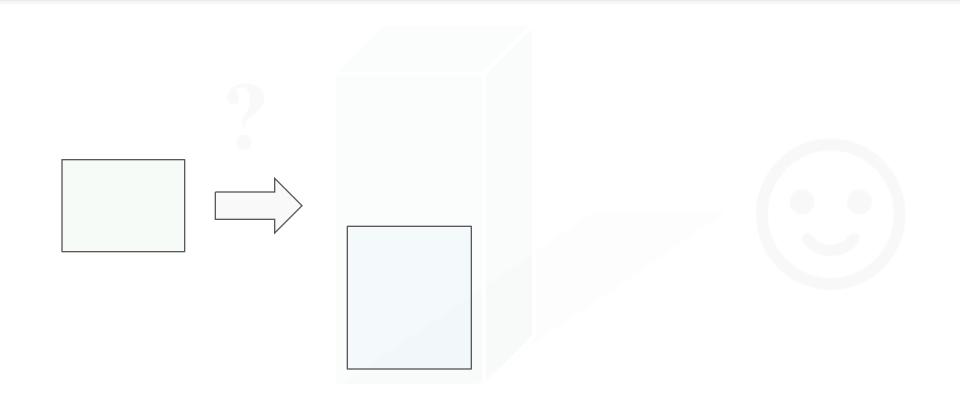
Prevent overcommit





Prevent overcommit













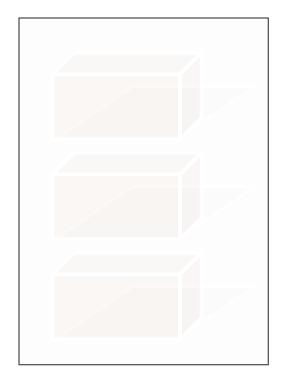
 \times

PodAntiAffinity: {
 TopologyKey: "hostname",
 LabelSelector: "type:cat













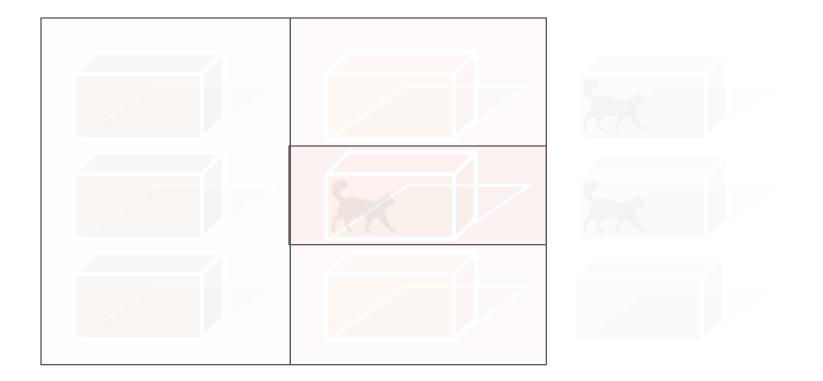




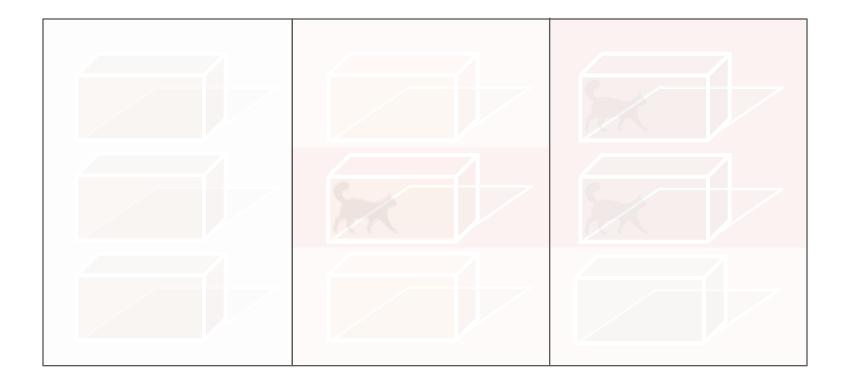






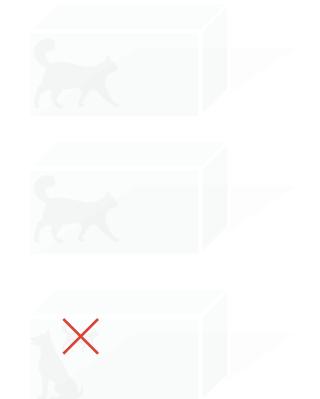








PodAntiAffinity: {
 TopologyKey: "hostname",
 LabelSelector: "type:cat



Force co-scheduling (pod affinity)



Force co-scheduling (pod affinity)

caicloud z IT z III i

PodAffinity: {
 TopologyKey: "hostname",
 LabelSelector: "type:sapling





Dedicated machines (Taints)

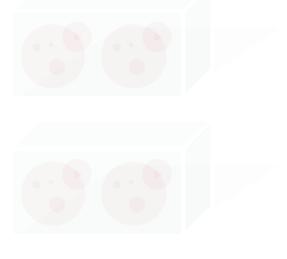




Dedicated machines (Taints)









```
Taint: {
TaintEffect: "NoSchedule",
Key: "color",
Value: "blue"
}
```

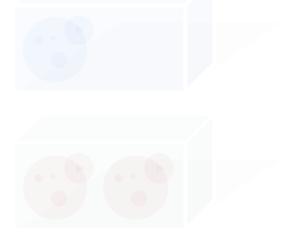
```
Toleration: {
Key: "color",
Value: "blue",
Operator: "Equal",
TaintEffect: "NoSchedule"
```





Dedicated machines (Taints)

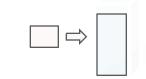






Predicate summary





- Prevent overcommit
- Prevent co-scheduling
- Force co-scheduling
- Dedicated Nodes



Best fit vs worst fit

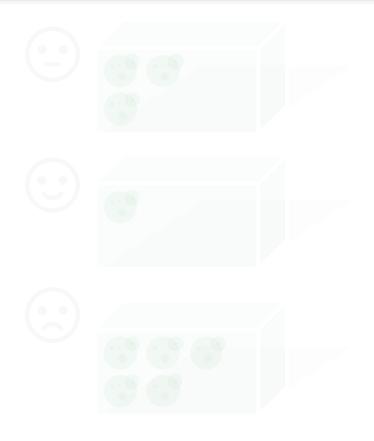




Best fit vs worst fit







Best fit vs worst fit

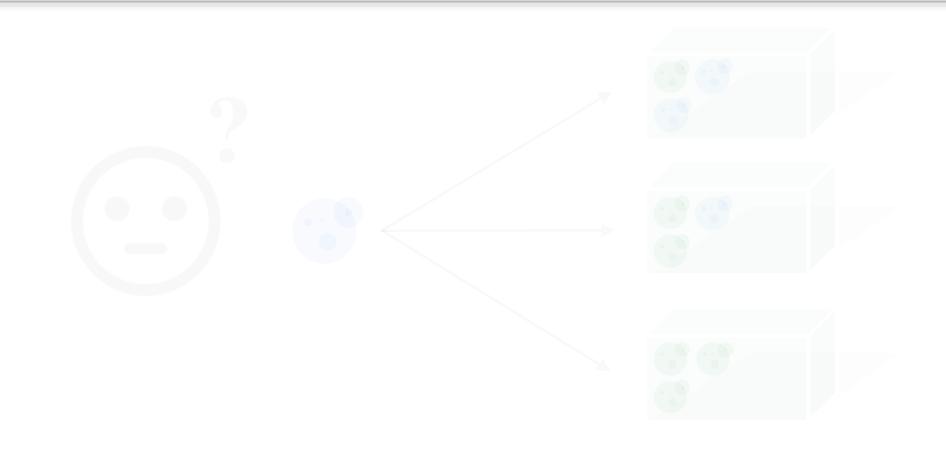






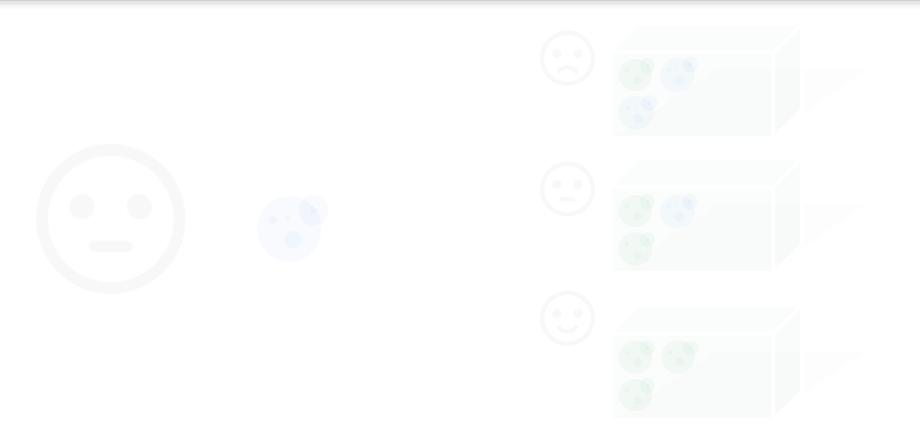
Selector Spreading





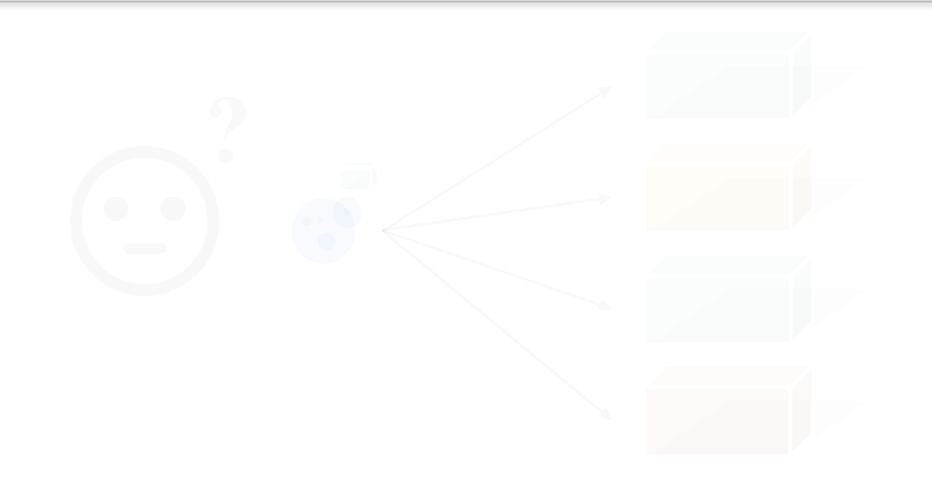
Selector Spreading





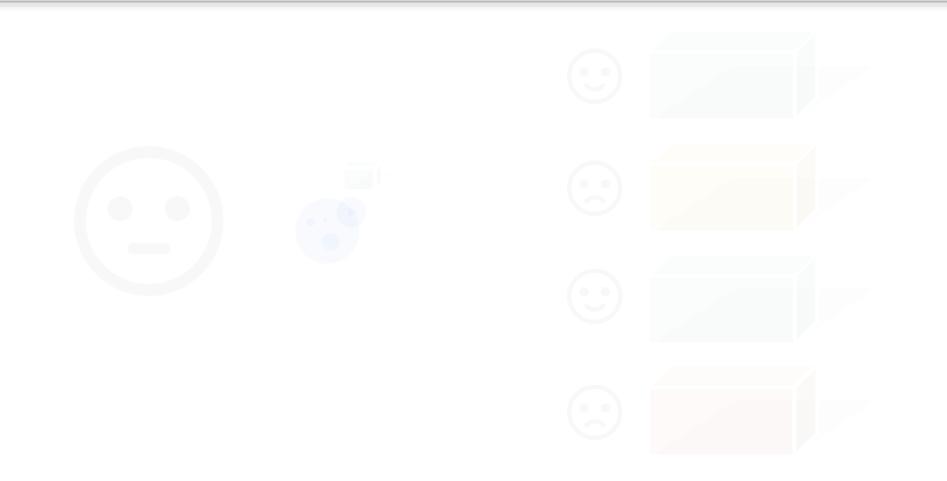
Node Affinity





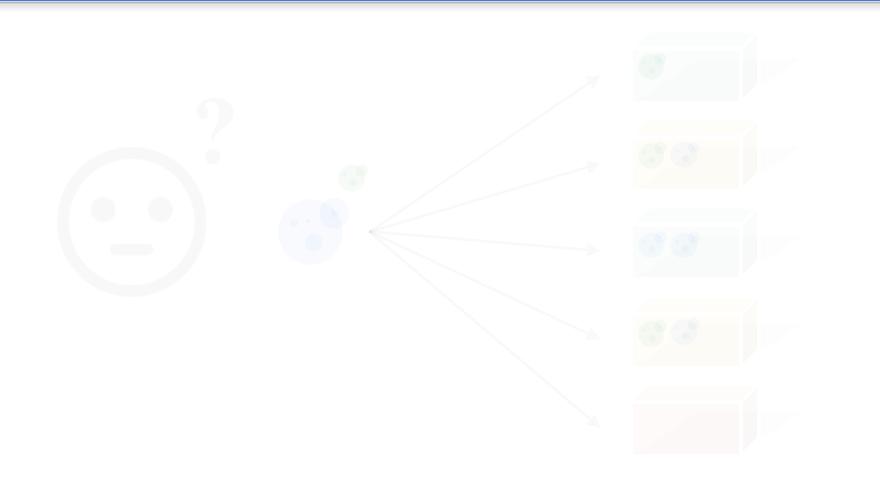
Node Affinity





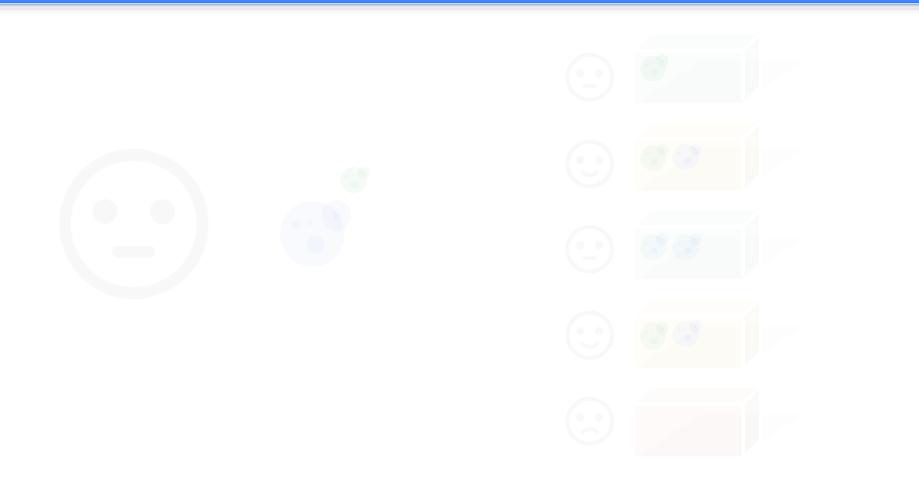




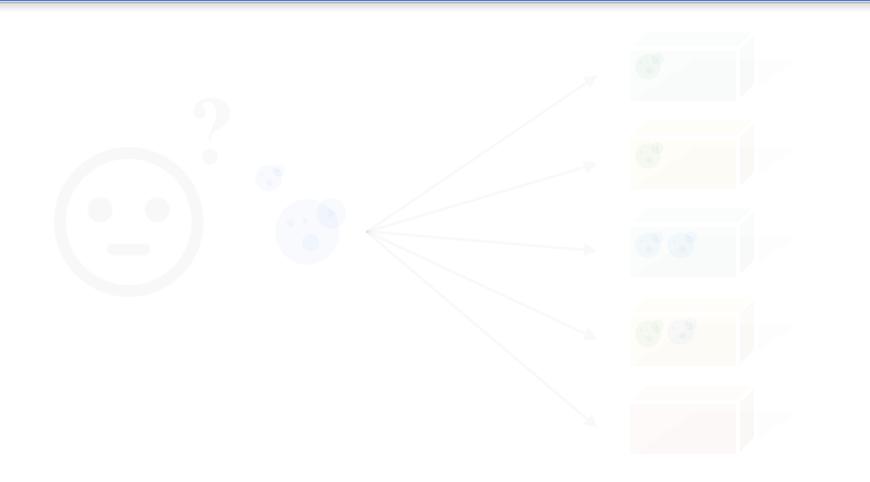


Pod Affinity

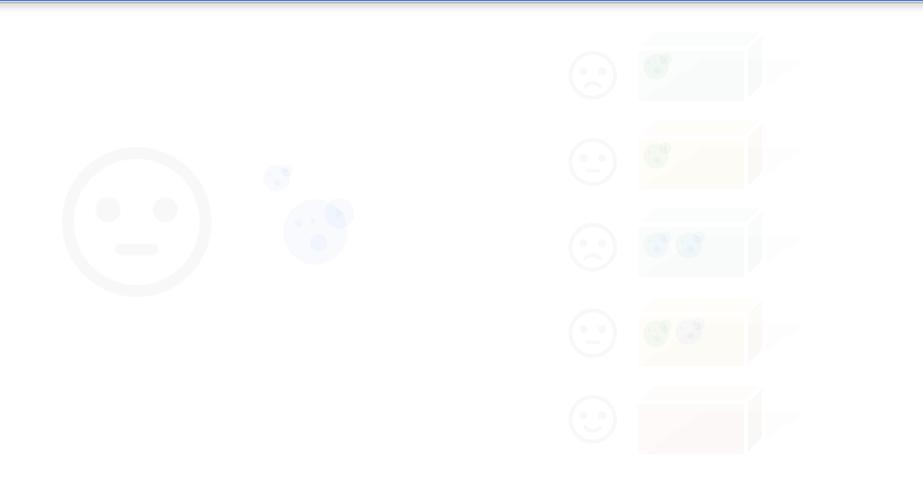






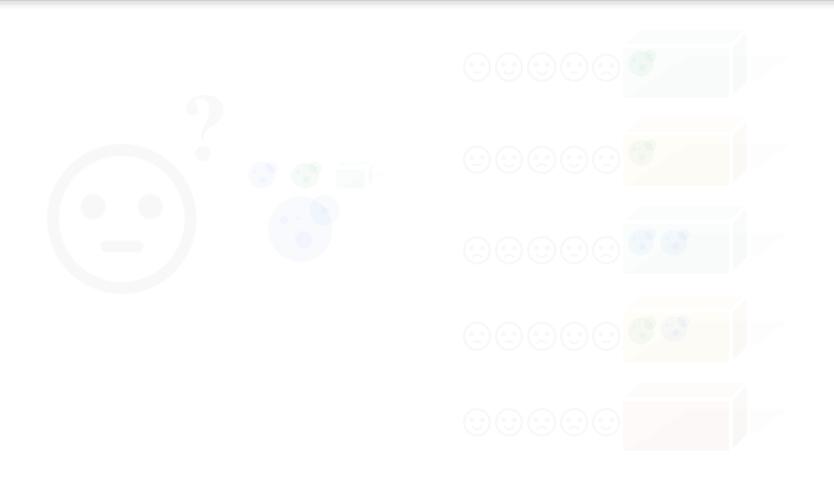






How to combine scores?





_inear combination









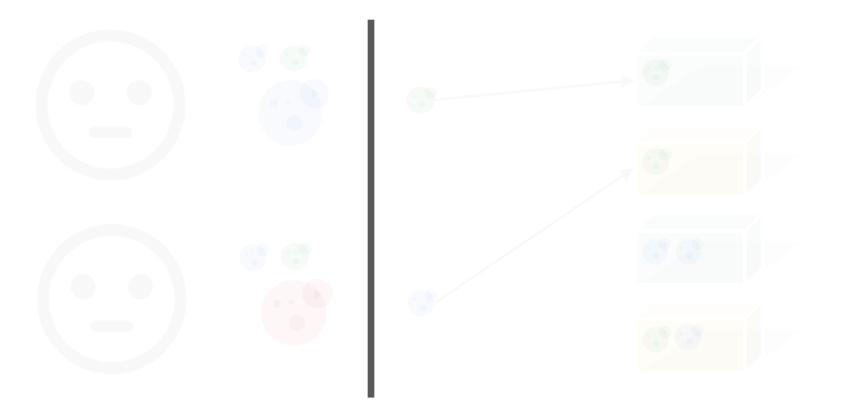
Resource Management





ResourceQuota





ResourceQuotaAdmission

Rescheduler





Rescheduler





Priority/Preemption

Security Calcing Calculated and Calc



Priority/Preemption





Flexible resource allocation

Seaicloud Zeaicloud Zeaicloud

Resource Requirement Resource Estimation Quota by percentage Dynamic Quota

SIG Scheduling

• Meeting every other Monday 2pm PST

• #sig-scheduling Slack channel

• kubernetes-sig-scheduling@mailing group





() Thanks