

# Network Dimensioning Practice





# Setting

- You can hire some bandwidth
  - 1 bandwidth costs 60 money units
- You can resell bandwidth for different kind of subscribers (claims): bronze, silver, gold
- Each kind of claim has the following parameters:
  - bw: bandwidth needed to host the claim
  - duration: time units a claim spends in the system until it is served
  - value: money units earned by hosting the claim
  - damage: money units lost if kicking out the claim before it ends
  - pr: probability that in the next time unit this kind of claim will arrive
- claim\_types=
  - {'bronze':{'bw': 1, 'value': 2, 'damage':4, 'duration': 100, 'pr': 0.4},
  - 'silver': {'bw': 3, 'value': 5, 'damage':6, 'duration': 50, 'pr': 0.3},
  - 'gold':{'bw': 10, 'value': 30, 'damage':80, 'duration': 70, 'pr': 0.1}}
- One simulation lasts 2000 time units
- Your score will be your average profit of 100 simulations
- The team with maximal score will be the winner



## Additional info

- Some additional info:
  - You get the value if it is fully served
  - You get the damage if you kick it out before it is fully served