

# Dynamic Overcommit

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# Reason

- Not enough hosts to add static configuration
- Simple to maintain
- Some hosts too small for overcommit
- Varying types, no single ratio

# What

- VM sees normal number of CPUs
- Physical host allows as many instances to run as there is disk and RAM.
  
- Idle: Instance gets all CPU.
- Loaded: Instance gets a share.

# Filters

## – Normal

- Empty Host or
- Host with only 'Normal' instances(checks only first instance)
  
- Enough Cores
- Enough RAM
- Enough Disk

# Filters

## – Overcommit

- Used instance\_type vcpu\_weight of -1
- Meets minimum requirements(Cores, CPUs, set as CONF flags)
- Empty or
- Only overcommit instances(only checks first one)
- Enough RAM
- Enough Disk

# Weighting

## – Normal

- Fewest Free Cores
- If Equal, Smallest Free RAM
- A Random number for good measure

# Weighting

## – Overcommit

- Prefer not-empty hosts
- Smallest Free RAM
- A Random number for good measure

# Problems/Next Steps

- Slow, has to check every compute node with instances to validate if its 'normal' or 'oversubscribe'
- Implement changes for Kilo.