

# Vector Timestamps

- Used in key-value stores like Riak
- Each process uses a vector of integer clocks
- Suppose there are  $N$  processes in the group  $1 \dots N$
- Each vector has  $N$  elements
- Process  $i$  maintains vector  $V_i[1 \dots N]$
- $j$ th element of vector clock at process  $i$ ,  $V_i[j]$ , is  $i$ 's knowledge of latest events at process  $j$