

DS 5110 Dynamo Consistent Hashing

Token map:

$\text{token}(n1) = \{-2, 4\}$ $\text{token}(n2) = \{-7, 0\}$ $\text{token}(n3) = \{-5, 2, 6\}$

Q1. How many nodes are there? How many *vnodes*?

Q2. Which node likely has greater resources (memory, storage, etc.)?

Q3. One of the vnode positions of $n3$ is drawn in the ring below. Draw the rest.

$n3$

-8 | -7 | -6 | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8

Q4. What node is responsible for each of the following tokens?

-4: _____ 1: _____ 7: _____

Q5. A row's key is ("A"). Assume $\text{token}("A") = -1$, which node owns this row?