

A Cost-Saving Scheme for Content Providers by Utilizing Clouds

Yu Wu

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Outline

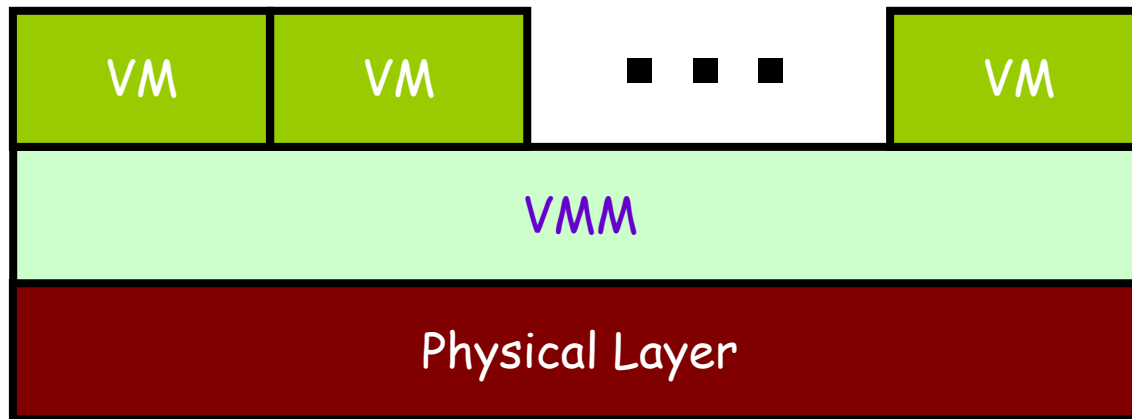
- A Hybrid p2p architecture utilizing clouds.
- Service On Demand strategy based on statistical results.

What Clouds Look Like?

- Pay-per-use
- Scalability
- Open Grid?
- Virtualization
-



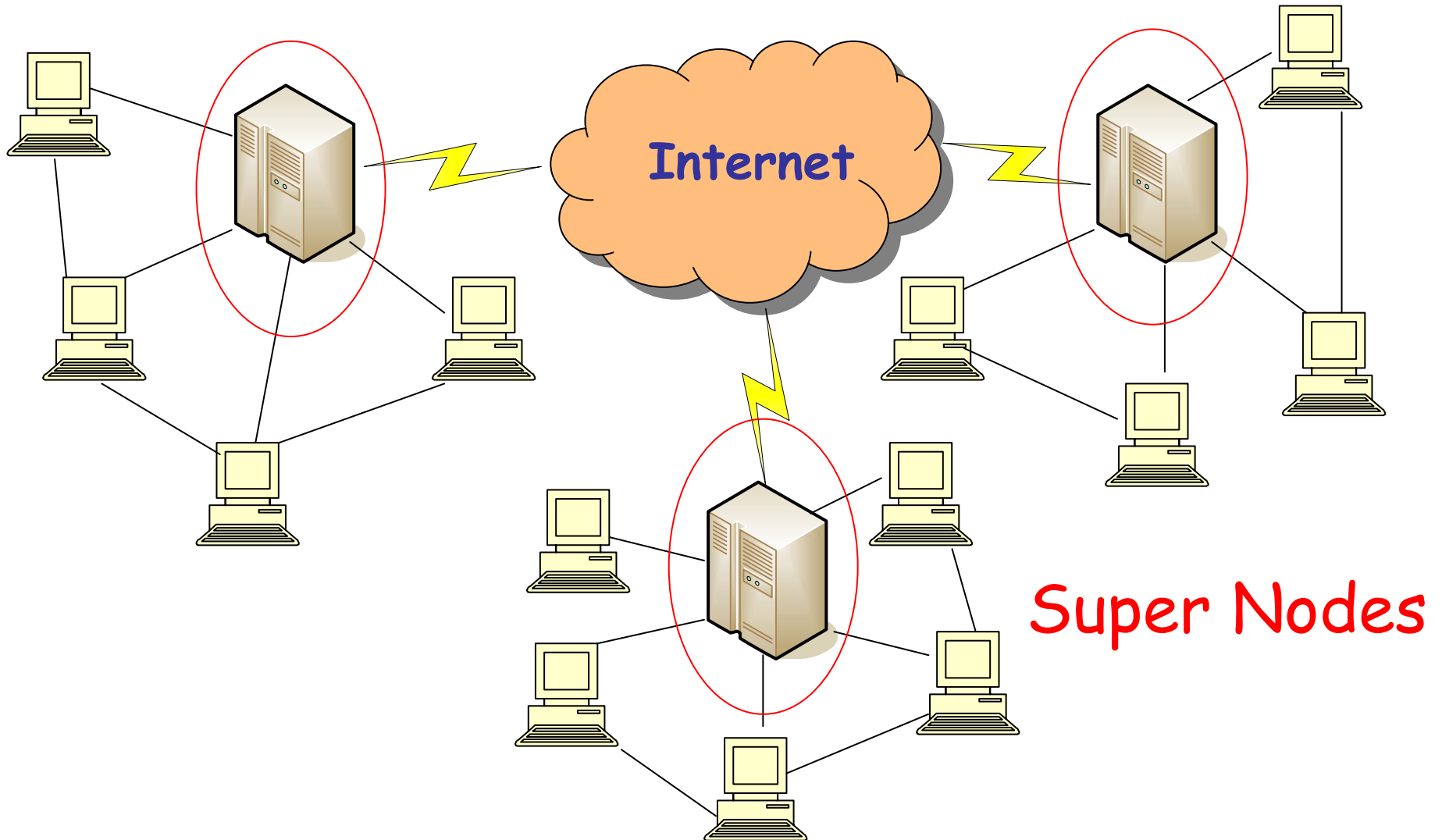
Virtualization



Benefits

- Efficient for resource-partitioning
- Easy for user legacy code
- Easy to clone & migration for VMs
- User customization
-

And A P2P Network?



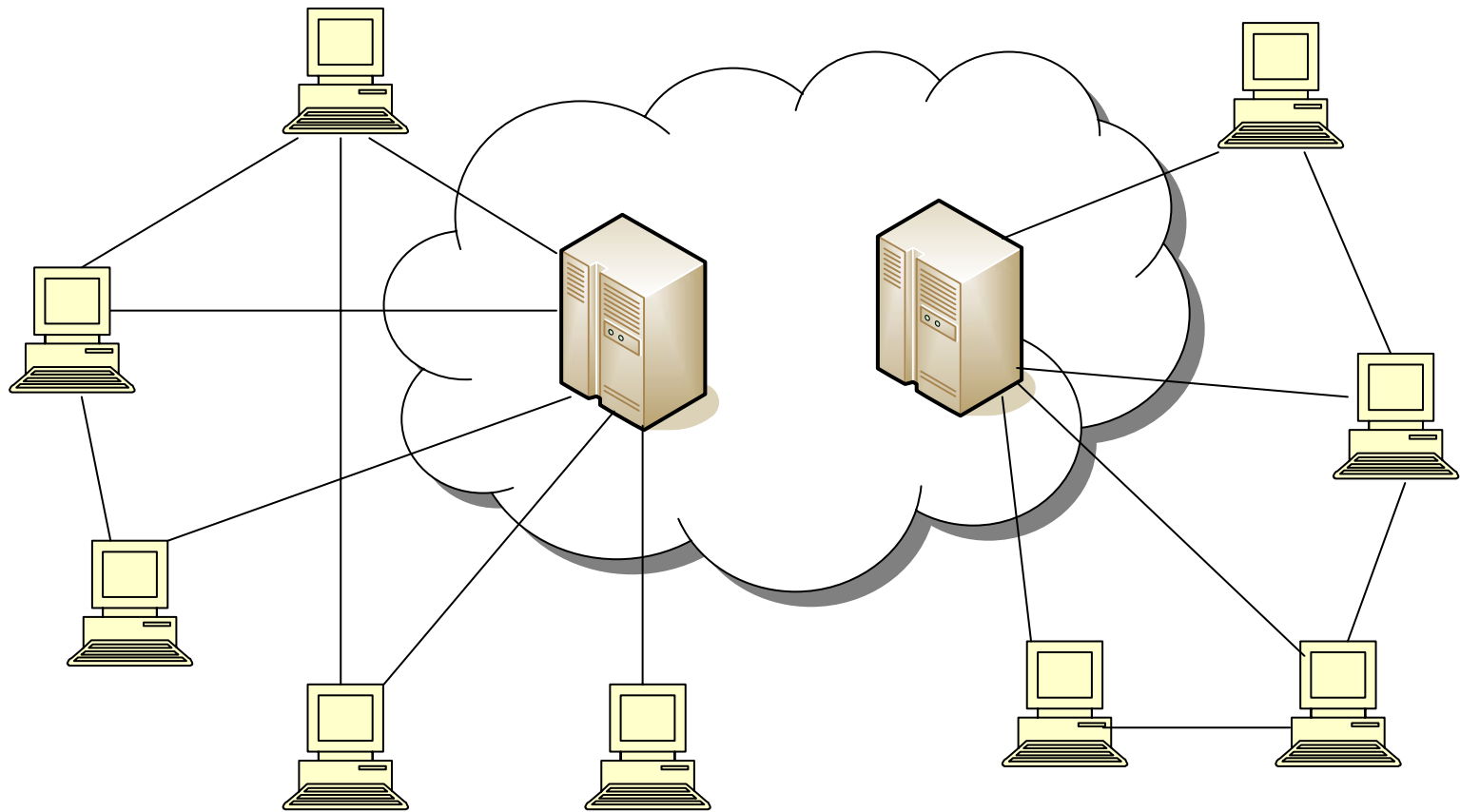
What Content Providers care?

- How to deploy the super nodes?
- Load-balancing among them?
- Efficient & Cost-Saving!

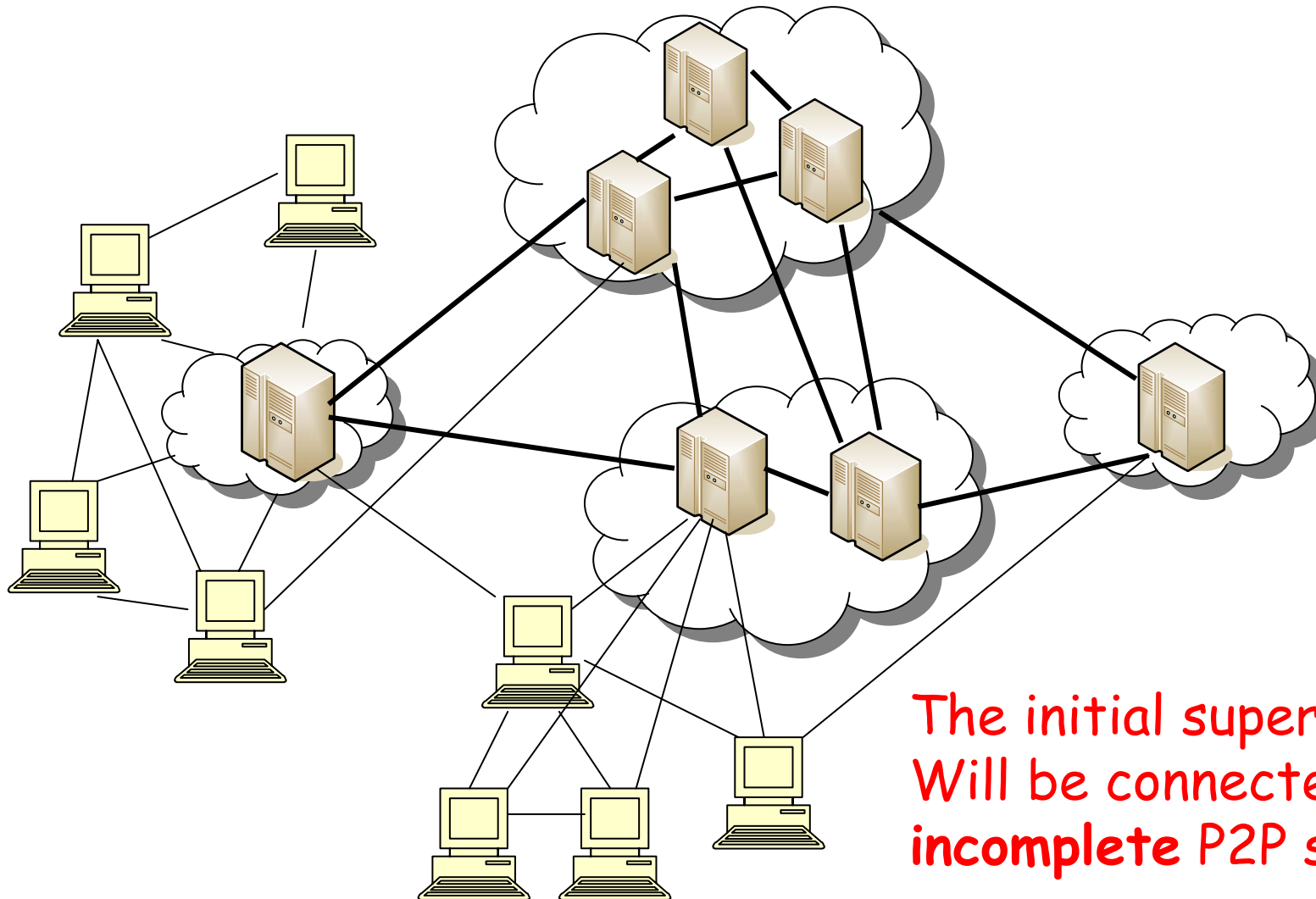
In a dynamic on-demand way?



Utilizing the Clouds



Initial Phase

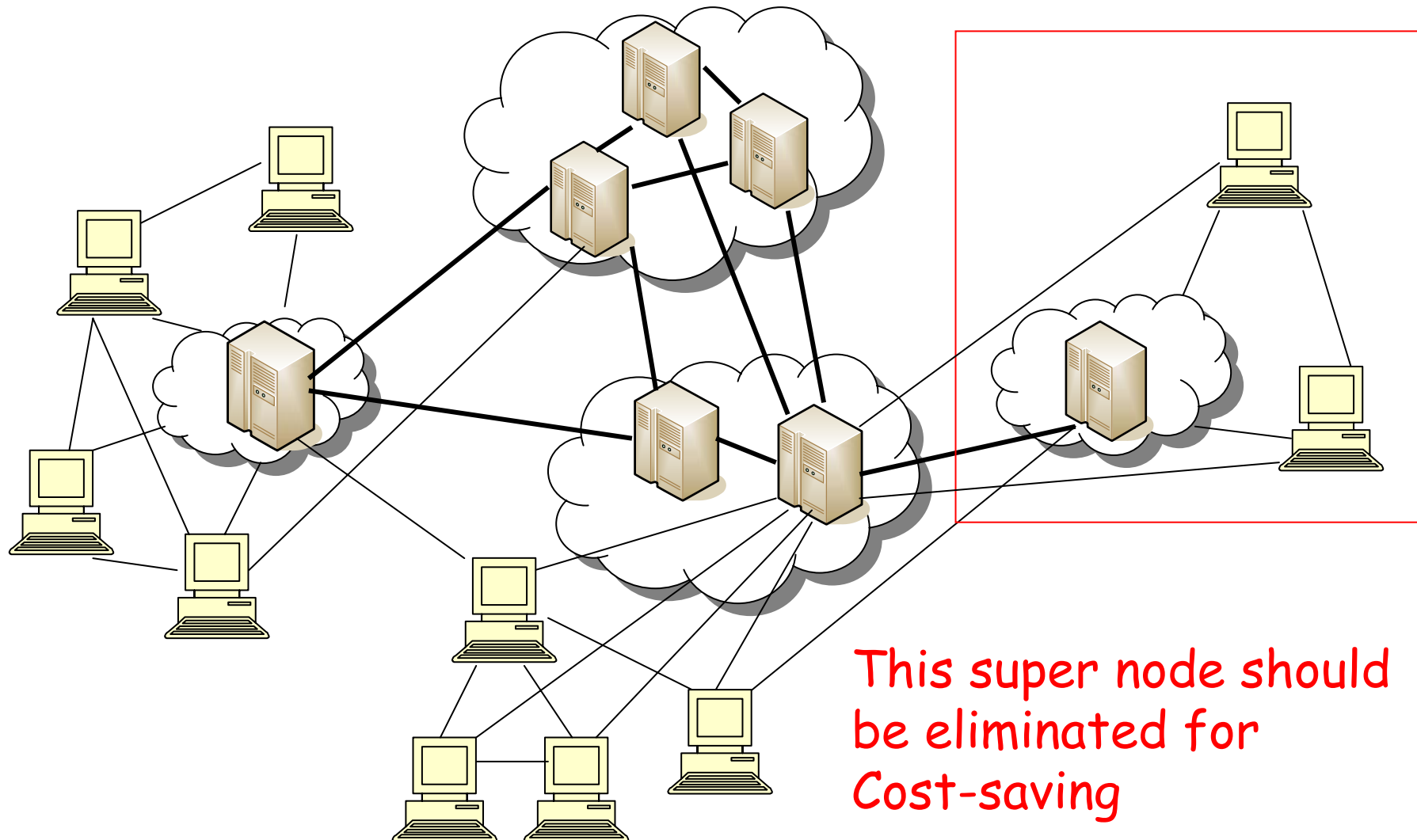


The initial super nodes
Will be connected in an
incomplete P2P style

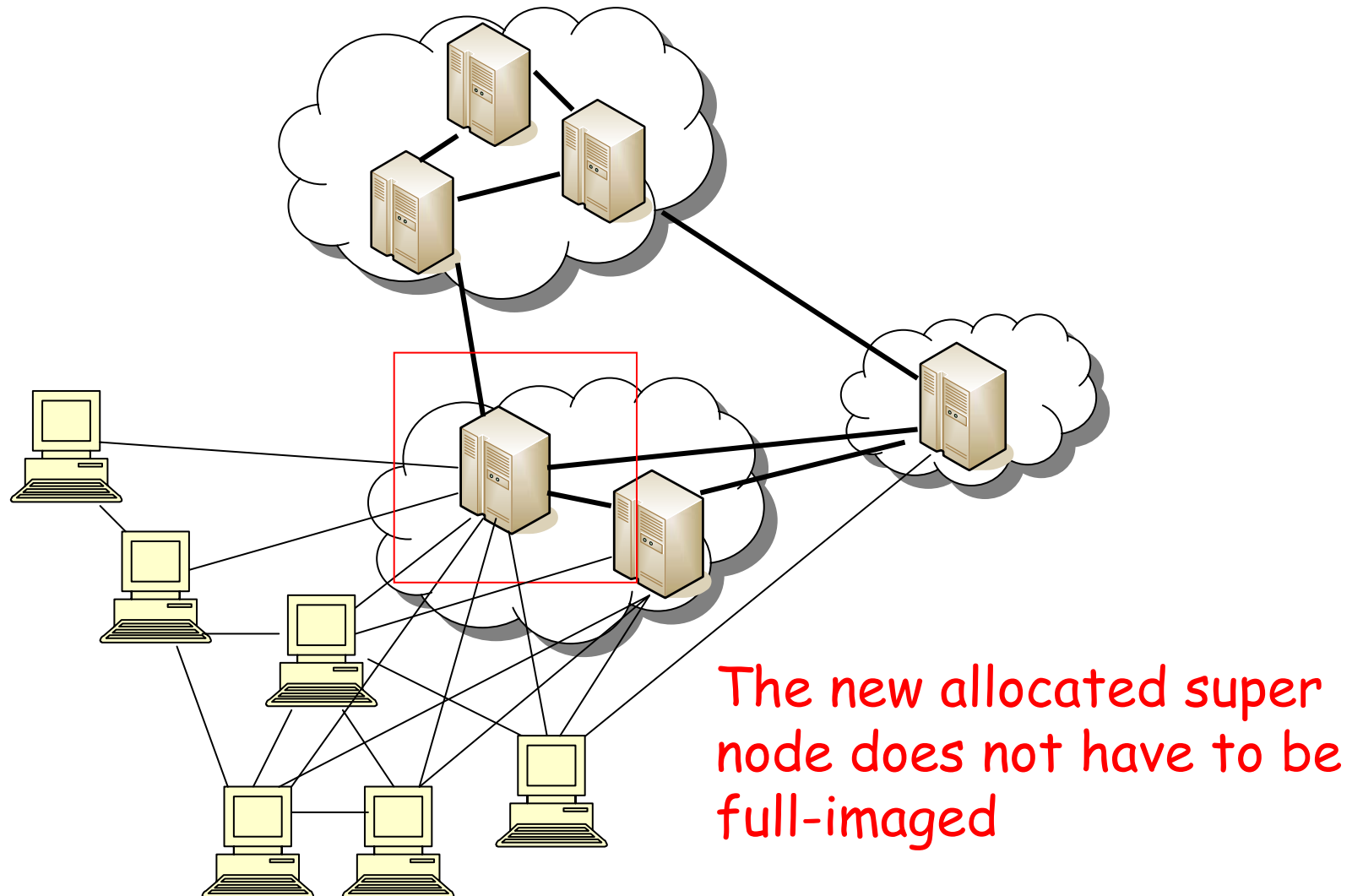
Initial Phase

- N Initial super nodes will be complete-image server. (10000)
- M initial super nodes will be grouped as neighbors, ($M \ll N, 100$), with an organizer.
- Each new node will be assigned a number of super nodes, (5) with a primary one.
- Super node will offer indexing and downloading services to its neighbors and child nodes.

Evolution Phase



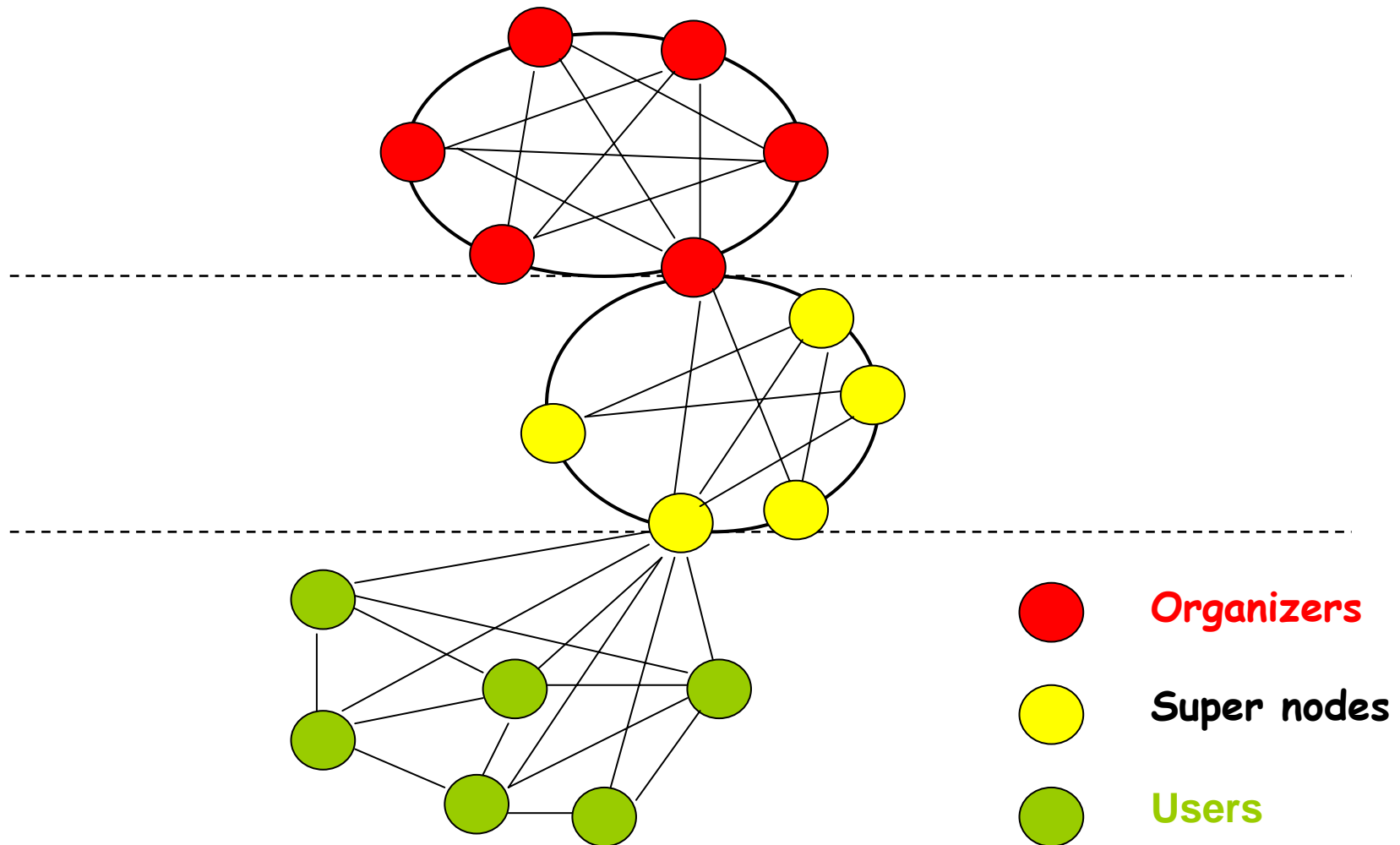
Evolution Phase



More Explanation...

- Why super nodes are organized in a p2p style?
- What job does an organizer do?
- Why is a node assigned a number of super nodes.
- A node can be transferred from a super node to another. When?

The Layered Topology



Thank You