Toward Private Cloud Storage in Public Clouds

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What Problem We Try to Address

- **User privacy**
  - To what extent, and for what services, can we keep users anonymous from clouds?

- **Existing solutions focused on**
  - (Client side) data encryption
  - Require trusted party

- **Properly address three problems**
  - User authentication
  - Payment
  - Communication

What We Propose

- **Decentralized anonymous payment, authentication, and communication system (D-PAC)**

- **Capitalizing on recent (or not so recent) advances**
  - Anonymous authentication
  - Anonymous electronic cash
  - Anonymous communications
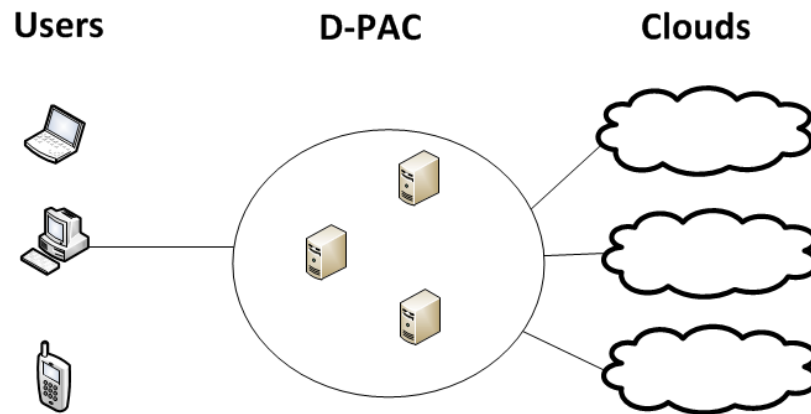
What We Need for Experiments

- **Public clouds**
  - Extended to support interaction with D-PAC
- **D-PAC**
  - With relatively large number of supernodes
- **Cloud users**
  - Large number
  - Diverse capabilities in resources