



**BIZANGA STORE**

How to beat S3 at their own game  
and make money with cloud storage



# Advantages of Cloud Storage

- Billing is incremental “pay as you store”
- Eliminates reliability, availability and capacity planning issues
- No intrinsic limits to the maximum storage capacity
- Capex is reduced or eliminated
- Multiple storage entities become a single global name space – administration is greatly simplified
- Allows focus on core business, which is generally not storing data!



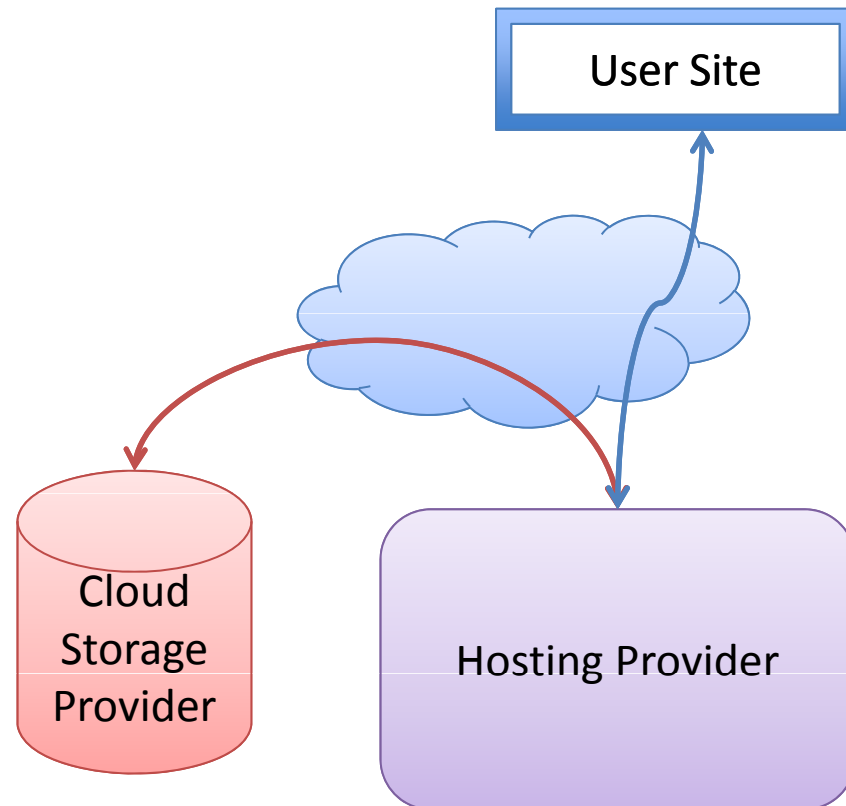
# Constraints of Cloud Storage

- Offsite Bandwidth Requirements can be high
- Loss of control over where data is stored
- Security Risks must be managed
- New Application interfaces must be developed
- Can become costly (billing based on volume and usage)



# The Public Cloud Equation for Hosting Companies

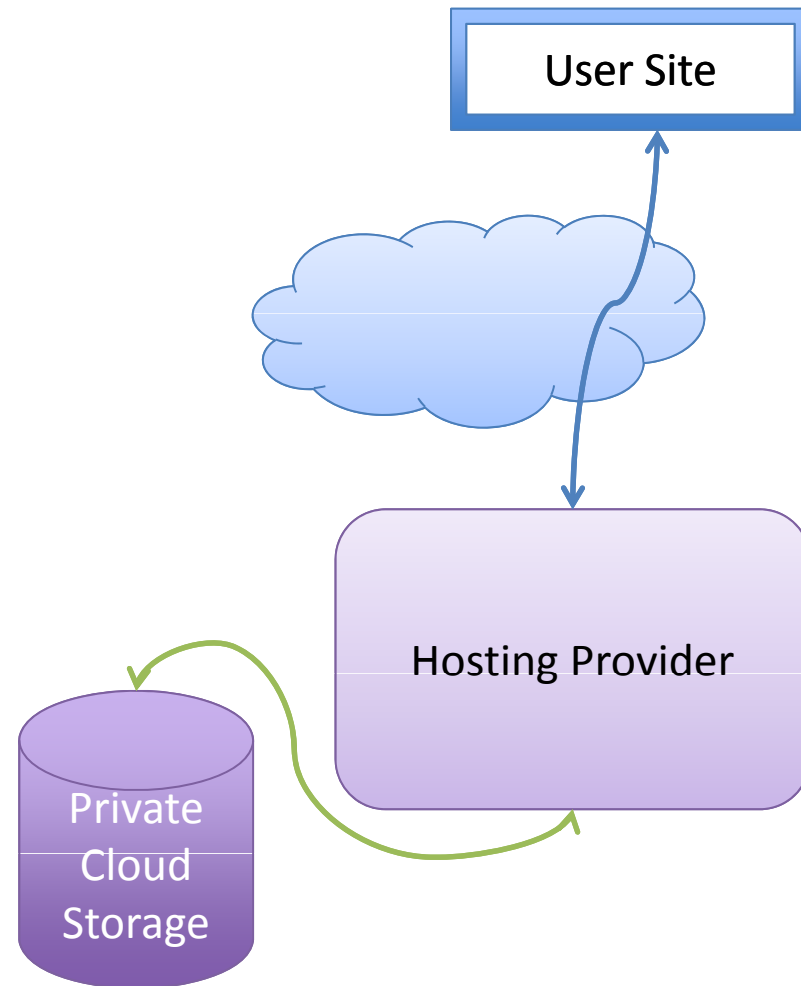
- Loss of Storage Revenue + Bandwidth Cost = decrease in profitability
- Storage is “stickier” than applications, DNS and other hosting services -> The more data in somebody’s cloud, the less attachment to hoster
- Amazon S3 is currently giving away inbound bandwidth, why?





# The Private Cloud Equation for Hosting Companies

- Increase of Storage Revenue - Bandwidth Cost = increase in profitability
- Storage is “stickier” than applications, DNS and other hosting services -> The more data in YOUR cloud, the more likely stay with you
- You control bandwidth pricing, more traffic will be LAN based



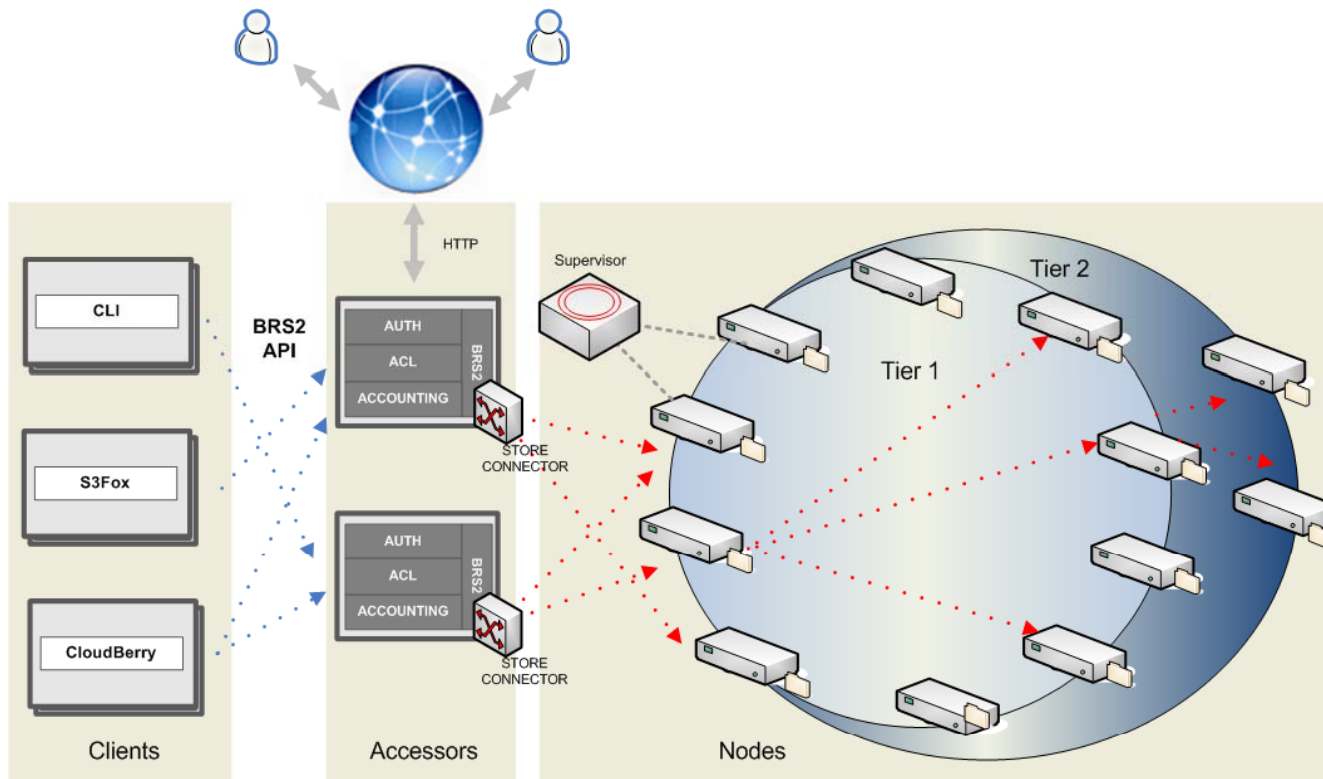


# The Question of Data Security

- Directive 95/46/EC defines constraints for data protection in the EU – Data moved outside the EU must be secured
- Decision 2000/520/EC referred to as the « Safe Harbor Arrangement » streamlines the acceptance of USA based providers of data storage
- The application of Safe Harbor is not considered to be uniform, -Amazon are very careful about its application.<sup>[1]</sup>
- Individual users will likely be satisfied with these arrangements
- Corporations may be uncomfortable with the anonymous nature of such arrangements for their data

[1] Chris Connolly (Galexia), US Safe Harbor - Fact or Fiction?, Privacy Laws and Business International, issue 96, December 2008

# Bizanga Store Private Cloud Solution



Bizanga Store Rest Storage Service (S3 compatible protocol) with access control and billing mechanisms

A 2<sup>nd</sup> Tier can add options and can use any cost effective technology (private or public)



# Bizanga Store Private Cloud Storage Attributes

- Start small yet expand without limits – to Petabyte levels
- Hardware agnostic – no vendor lock in
- Mix applications and storage quality and characteristics
- Single global namespace – no volume, no i-node limits
- Fault tolerant and self healing – no service interruptions
- Easy administration – Central Web GUI & command line

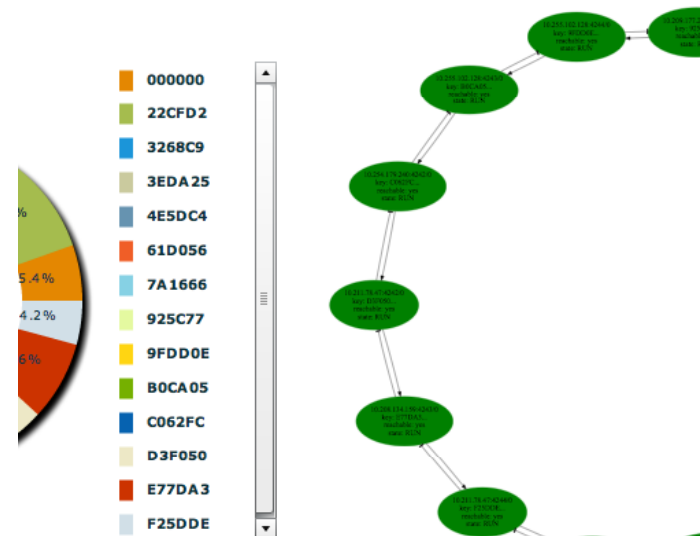
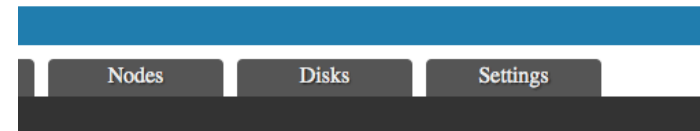
# Easy Administration For Hosting Provider, Standard Access for Users

## Supervisor

- Central management platform
- Monitor application connectors, storage nodes down to individual disk drives
- Passive component

## RingSH

- Command line interface
- Easy to script with
- Manage platform, store/retrieve/delete objects
- List all keys





# Conclusions

- Cloud Computing, Cloud Storage are compelling – Threat or Opportunity?
- The Edison Power Utility Arguments are taking hold for XaaS (See Nicholas Carr's "The Big Switch")
- # Providers Increasing: AWS, Azure, Iron Mountain, Rackspace...
- Hosting Companies need to find their place
- Economic Arguments favor providing Cloud Storage
- Differentiation via: quality, performance, applications, security, geographical/geopolitical proximity and of course economics



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Thank  
You

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