Simple, Available Cloud Storage
github.com/basho
twitter.com/basho
docs.basho.com
Overview
On March 27, 2012

Basho announced a new product called Riak CS
On March 20, 2013 Riak CS became open source
Riak CS is... enterprise cloud storage built on top of Riak offering S3-compatibility, multi-tenancy, per user reporting, and large object storage.
Enabling you to host your own

PUBLIC & PRIVATE CLOUDS

or....

Reliable Storage Behind Apps
About Riak
Riak

Dynamo-inspired key/value store

Written in Erlang with C/C++

Open source under Apache 2 license

Thousands of production deployments
Riak

High availability
Low-latency
Horizontal scalability
Fault-tolerance
Ops friendliness
Riak

Masterless
- No master/slave or different roles
- All nodes are equal
- Write availability and scalability
- All nodes can accept/route requests
Riak

No Sharding
- Consistent hashing
- Prevents “hot spots”
- Lowers operational burden of scale
- Data rebalanced automatically
Riak

Availability and Fault–Tolerance

• Automatically replicates data
• Read and write data during hardware failure and network partition
• Hinted handoff
How It Works
Riak CS node for every node of Riak
1. User uploads an object

2. Riak CS breaks object into 1 MB chunks

3. Riak CS streams chunks to Riak nodes

4. Riak replicates and stores chunks
multi-tenancy:
Riak CS will track
individual usage/stats

users identified by
access_key

users authenticated by
secret_key
users create buckets. buckets are like folders. store objects in buckets. names are globally unique.
OBJECTS

stored in buckets.
objects are opaque.
store any file type.
Features
Riak CS

Large Object Support
- Started with 5GB / object
- Now have multipart upload
- Content agnostic
Riak CS

S3-Compatible API
- Use existing S3 libraries and tools
- RESTful operations
- Multipart upload
- S3-style ACLs for object/bucket permissions
- S3 authentication scheme
Riak CS

Administration and Users

- Interface for user creation, deletion, and credentials
- Configure so only admins can create users
New Stuff in Riak 1.3

• Multipart upload: parts between 5MB and 5GB
• Support for GET range queries
• Restrict access to buckets based on source IP
Riak CS

Packages
- Debian
- Ubuntu
- FreeBSD
- Mac
- Red Hat Enterprise
- Fedora
- SmartOS
- Solaris
- Source
Operations
built-in stats & DTrace support

- track access & storage per user
- inspect ops with DTrace probes
- monitor total cluster ops
OPERATIONAL STATS

exposed via HTTP resource: /riak-cs/stats

HISTOGRAMS & COUNTERS

<table>
<thead>
<tr>
<th>block</th>
<th>bucket</th>
<th>object</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET, PUT, DELETE</td>
<td>LIST KEYS, CREATE, DELETE, GET/PUT ACL</td>
<td>GET, PUT, DELETE HEAD, GET/PUT ACL</td>
</tr>
</tbody>
</table>
THE

“USAGE”

BUCKET

TRACK INDIVIDUAL USER’S

ACCESS STORAGE
QUERY USAGE STATS

Storage and access statistics tracked on per-user basis, as rollups for slices of time

- Operations, Count, BytesIn, BytesOut, + system and user error
- Objects, Bytes
Partnerships
Citrix CloudStack

- Combined platform for compute and storage
- Summer ‘13: integrated authentication support
- Videos on our blog
Enterprise
Multi-Datacenter Replication

- For active backups, availability zones, disaster recovery, global traffic
- Real-time or full-sync
- 24/7 support
- Per-node or storage-based pricing
SIGN UP FOR AN ENTERPRISE DEVELOPER TRIAL

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