Use Cases for OpenStack Swift

John Dickinson
Director of Technology, SwiftStack
Project Technical Lead, Swift
@notmynname
The Plan

• What’s the problem with what I’m already using?
• What do app developers get out of Swift?
• Cool API things in Swift
• High-level design of Swift
OpenStack Swift has indeed been great to make adrift.org.au more robust to high load. @Erikvansebille
The Swift API

https://swift.example.com/v1/AUTH_acct/cont/obj

Prefix: API version

Account → Container → Object
Ready? Let’s go fast...
Listings
I’ve got some books...

- The Pit and the Pendulum, Poe, Horror
- The Masque of the Red Death, Poe, Horror
- Pride and Prejudice and Zombies, Grahame-Smith, Horror
- The Far Side Gallery, Larson, Comics
- Something Under the Bed Is Drooling, Watterson, Comics
- It’s A Magical World, Watterson, Comics
...in Swift

- AUTH_john/horror/poe/pit_and_pendulum
- AUTH_john/horror/poe/masque_of_the_red_death
- AUTH_john/horror/grahame-smith/pride_prejudice_zombies
- AUTH_john/comics/larson/far_side_gallery
- AUTH_john/comics/watterson/drool
- AUTH_john/comics/watterson/magical_world
Listing

GET ...AUTH_john/horror

grahame-smith/pride_prejudice_zombies
poe/masque_of_the_red_death
poe/pit_and_pendulum
Listing: limit

GET ...AUTH_john/horror?limit=2

grahame-smith/pride_prejudice_zombies
poe/masque_of_the_red_death
Listing: marker

GET  ...AUTH_john/horror?marker=ohenry

poe/masque_of_the_red_death
poe/pit_and_pendulum
Listing: end_marker

GET ...AUTH_john/horror?end_marker=poe/n

grahame-smith/pride_prejudice_zombies
poe/masque_of_the_red_death
Listing: delimiter

GET ...AUTH_john/horror?delimiter=/

grahame-smith/
poe/
Listing: prefix

...AUTH_john/horror?prefix=g

grahame-smith/true_prejudice_zombies
TempURLs
Signed

x
$ swift tempurl GET 30 /v1/AUTH_test/c/myobj.dat secr3te
Extract Archives
tar czf - * | \
curl -i -H "X-Auth-Token: XYZ" -T - \nhttp://swift/v1/AUTH_test/c?extract-archive=tar.gz
Large Objects
Indirection Objects
Dynamic Large Objects

2014.logs

2014-001.logs
2014-002.logs
2014-003.logs
2014-004.logs
Static Large Objects

big-archive.data

segment33.data

part46.data

piece17.data

part46.data
(really interesting) stuff not covered in this talk
Failure Handling

Drive Failures

Corrupt Data
Production Design
What We Do

SwiftStack enables you to do more with storage. Store more data, enable more applications and serve more users. We do this by delivering a proven object storage solution that’s built on an open-source core and is fully enterprise ready. Our object storage software is an alternative to complex, expensive, on-premises hardware-based storage solutions.

SwiftStack delivers the features and flexibility you need to easily manage and scale object storage behind your firewall. Customers are demanding storage where they can pay as they grow, find it is easier to consume, and can infinitely scale. Today, our customers use SwiftStack for archiving active data, serving web content, building private clouds, sharing documents and storing backups.

SwiftStack Advantages
Questions?

John Dickinson
http://swiftstack.com
@notmyname