

# Rails in the Clouds

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# Amazon Web Services



- Scalable
- Pay as you go
- Redundant
- Platform Agnostic

# S3 - Storage

- ~\$0.15 per GB Storage / month
  - 1TB = \$150/month (redundant, BTW)
- ~\$0.10 - \$0.17 per GB Transferred

# EC2 - Servers

- **Small Instance** (1 core, 1.7gb memory)
  - \$0.10 / hour (~\$72/month)
- **Large** ( 2 cores, 7.5gb memory)
  - \$0.40 / hour (~\$280/month)
- **Extra Large** (4 cores, 15gb memory)
  - \$0.80 / hour (~\$560/month)

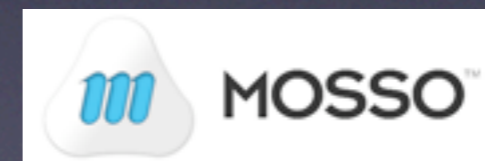
# Other stuff

- SimpleDB
- Simple Queue Service
- CloudFront
- and more!

# Not the only players



Azure™ Services Platform



# Real world examples

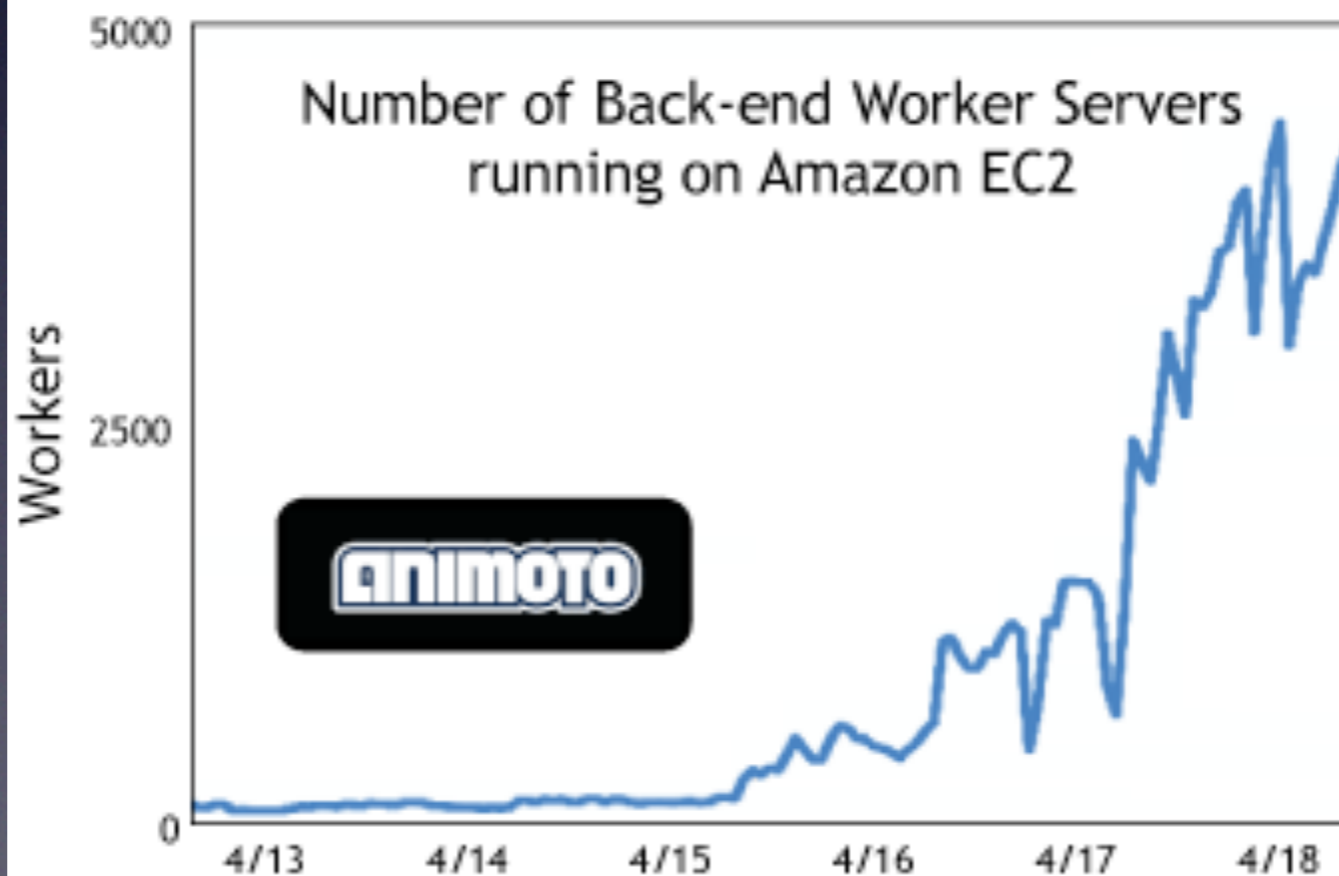
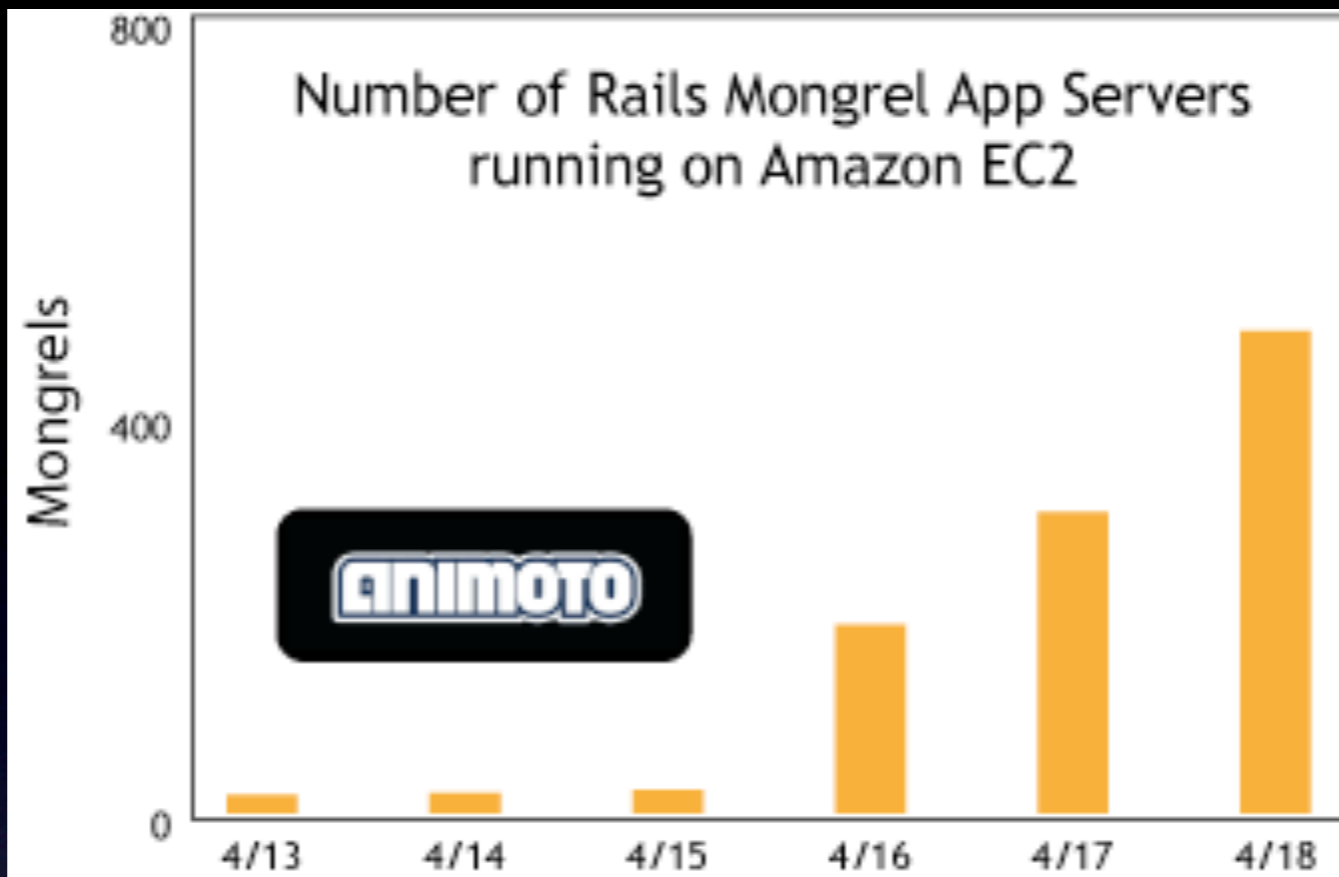
- NYTimes.com
  - Archives from 1851-1922 (11M articles)
  - 4TB of data on S3
  - Using Hadoop across 100 machines, processed in under 24 hours

# Real world examples



- 25k to 250k users in 3 days
- Launching 40 instances / minute
- Between 50 and 4000 instances





# Tools - Elastic Fox

The screenshot displays the Elastic Fox web interface. At the top, there are navigation tabs for 'Credentials', 'Account IDs', 'Tools', and 'About'. Below this is a main navigation bar with tabs for 'AMIs and Instances', 'Kernels and Ramdisks', 'KeyPairs', 'Security Groups', 'Elastic IPs', and 'Availability Zones'. The 'AMIs and Instances' tab is active.

The interface is divided into three main sections:

- Machine Images (AMIs):** A table listing various AMIs. The table has columns for AMI ID, Manifest, Owner, and Visibility. The visible rows are:

| AMI ID      | Manifest                         | Owner  | Visibility |
|-------------|----------------------------------|--------|------------|
| ami-26b6... | ec2-public-images/developer-i... | amazon | public     |
| ami-f21a... | ec2-public-images/fedora-8-x8... | amazon | public     |
| ami-bd9...  | ec2-public-images/demo-paid...   | amazon | public     |
| ami-25b6... | ec2-public-images/fedora-core... | amazon | public     |
| ami-22b6... | ec2-public-images/fedora-core... | amazon | public     |
| ami-20b6... | ec2-public-images/fedora-core... | amazon | public     |
| ami-23b6... | ec2-public-images/fedora-core... | amazon | public     |
| ami-f51a... | ec2-public-images/fedora-8-i3... | amazon | public     |

- Launch Permissions:** A section with a toolbar containing icons for refresh, add, remove, warning, and undo. The main area is currently empty.
- Your Instances:** A table listing instances. The table has columns for Reservation ID, Instance ID, State, Private IP, Group, Region, Type, Local Launch Time, and Availability Zone. The visible row is:

| Reservatio... | In...       | State   | P... | Priv... | Gr...  | R... | Ty... | Local Launch Ti...  | Availability Zo... |
|---------------|-------------|---------|------|---------|--------|------|-------|---------------------|--------------------|
| r-6df20804    | 6... i-a... | running | e... | domU... | def... | 0    | m1... | 2008-05-04 01:04... | us-east-1a         |

# Tools - RightScale

The screenshot displays the RightScale web interface for a component named "Server HTTPerf". The browser address bar shows the URL "https://my.rightscale.com/components/623647". The interface includes a navigation menu on the left with sections for "Home", "Manage" (Servers, Deployments, Active Servers, Arrays, Alerts, Terminated Servers, Storage, S3 Browser, EC2 Image locator, Queues), "Design", "Report", and "Settings". A "Recent Events" section shows a list of events such as "Rails AppServer (Q) v4 #1521" terminated. The main content area features a "Server HTTPerf" header with action buttons: Clone, SSH Console, Bundle, Terminate, Reboot, and Help. Below this is a monitoring dashboard with tabs for Info, Monitoring, Actions, Action Inputs, Audit Entries, Alerts, Log Files, Console Output, Inputs, Changes, and History. The dashboard displays various performance metrics for "cpu-0" and "cpu-1", including disk usage (sda1, sdb, sdc), interface, load, memory, ping, processes, and users. A large "cpu-0 cpu\_overview" chart shows CPU usage over a 24-hour period, with a legend for user, nice, system, interrupt, softirq, wait, idle, and steal. The footer contains links for About Us, Privacy Policy, Terms of Service, Contact Us, and Support Wiki, along with the date "August 20, 2008 11:07 PDT" and copyright information "© 2006-2008 RightScale, Inc. All rights reserved."

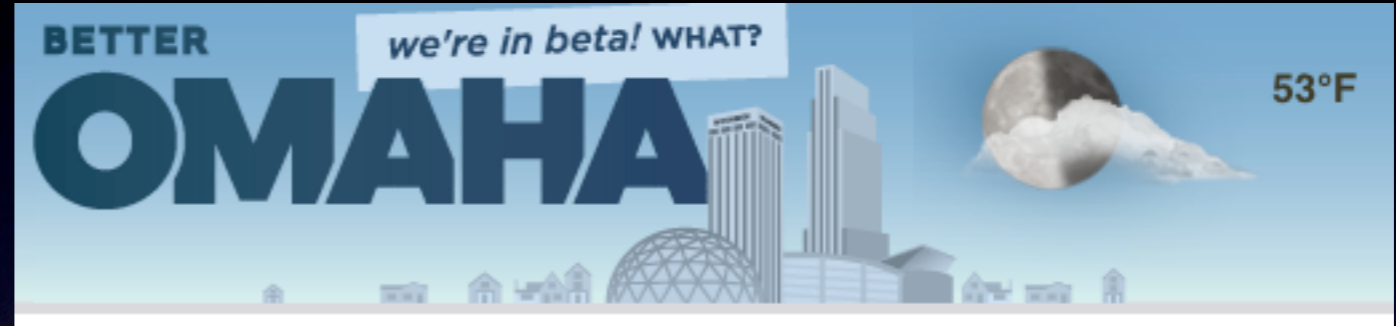
# Tools - Scalr!

The screenshot displays the Scalr web interface for a farm named "gpanel.net". The top navigation bar includes a search box and links for Home, Applications, Farms, Roles, Log, Settings, Tools, FAQ, Support, and Logout. Below the navigation, the page title is "Farm > Map". A yellow warning banner states: "This page contains new features that should be considered 'experimental'. Drop us a line if you notice any issues." The main content area shows three application groups, each with a primary instance and a "Spare Instance".

- www (ami-72f2161b)**: Primary instance `i-54ce6f3d`, Spare Instance.
- app (ami-bac420c3)**: Primary instance `i-52ce6f3b`, Spare Instance.
- mysql-ivm64 (ami-dcc226b5)**: Primary instance `i-ee15b387`, Spare Instance.

Each instance card includes a server icon, a status indicator (e.g., a blue bar for the 'app' instance), and an "Options" dropdown menu.

# How do we use?



# EC2 on Rails

<http://ec2onrails.rubyforge.org/>

- Rails enabled EC2 Instance (Ubuntu)
- Automatic backup of MySQL to S3
- Capistrano tasks to manage / deploy
- So much more!

Demo!

Thanks! Questions?!