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Riak KV

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# Riak KV

## Introduction

Riak is a distributed NoSQL database. It is designed to allow for maximum data availability. It does this by distributing data across multiple servers.

## Use Cases

# The Data Model

- Riak stores data in buckets, and each bucket can store multiple key-value pairs. An example of this follows bellow.

usernames = {

'mohan': {

{'name': 'Sriram Mohan'},

{'password': 'password'},

{'salt': 'mohanSalt'}

},

'mellor': {

{'name': 'JP Mellor'},

{'password': 'password'},

{'salt': 'mellorSalt'}

}

}

- In the above example, 'usernames' is the name of the bucket while 'mohan' and 'mellor' are keys within the bucket that map to the data about the particular user.

# Installation Instructions

## For Ubuntu

Installing Riak:

- First run the following command to install the prerequisite packages:

sudo apt-get install libc6 libc6-dev libc6-dbg

- Next, we need to get the signing key and add it to apt-get:

curl https://packagecloud.io/gpg.key | sudo apt-key add -

- Then, install apt-transport-https to enable the ability to fetch packages of https

sudo apt-get install -y apt-transport-https

- Finally, download and install Riak KV:

curl -s https://packagecloud.io/install/repositories/basho/riak/script.deb.sh |

sudo bash

sudo apt-get install riak=2.1.4-1

# Configuration Instructions

## Initial Configuration

To make sure that Riak has been installed correctly:

(riak ping -> pong)

## Configuring Python

- First, we need to install the necessary ubuntu packages:

sudo apt-get install python-dev libffi-dev libssl-dev

- Next, we need to install the riak python libraries (Can use either of the following):

easy\_install riak

sudo pip install riak

- Riak is now ready to use with python. Here are some useful commands:

- import riak

- This imports the riak library

- myClient = riak.RiakClient(pb\_port=8087, protocol='pbc', host='hostname')

- This establishes the connection with the database

- myBucket = myClient.bucket('bucketName')

- This retrieves a reference to the bucket, bucketName, from the database

- key = myBucket.new('one', data='1')

- key.store()

- These commands store the key-value pair {"one", "1"} in bucket bucketName

- fetchedData = myBucket.get('one')

- This gets the data object containing 1 from the database

- fetchedData.delete()

- This deletes the key-value pair {"one", "1"} from the bucket

# Riak Basic Commands

Basic commands

# Mini Project: (Not sure)

Outline a mini project

# Golf Course Reviews

Outline the requirements for the golf course reviews project

# Scalability

Scalability/sharding/replication instructions

# Keep an eye out for

FAQs, any issues, unique stuff

# References

References to sources, documentation

-Riak Documentation

http://docs.basho.com/riak/kv/2.1.4/