~~Introduction to Cloud~~
Notes on Cloud

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Speaker Bio

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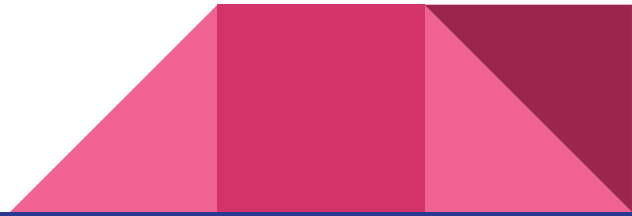
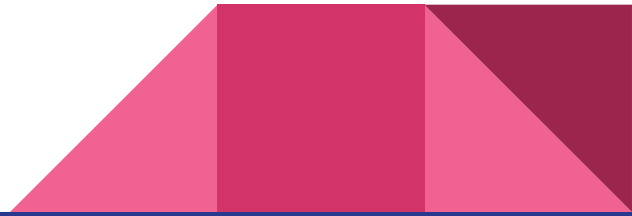


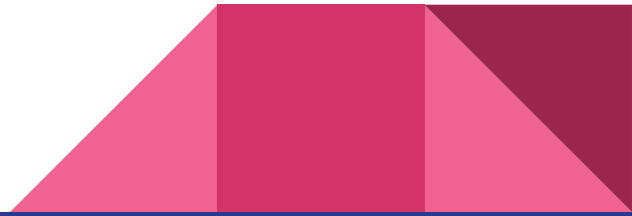
What is cloud?

"Cloud computing is the practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer."



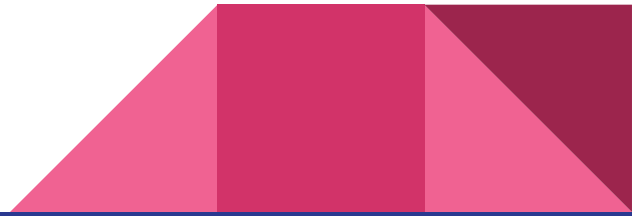
Mainframe to Lambda

- Big Iron
  - Highly redundant systems
  - Vertical Scaling
- Personal Computers
  - Highly unreliable
  - Vertical Scaling (up to the current "640K")
- Virtualization (VMWare, KVM, Xen)
  - "Servers" are reliable even if hosts are not
  - Horizontal Scaling
  - Clustering, VMotion, LPAR Mobility
- Cloud
  - Lets others worry about the infrastructure
  - Assume the servers are unreliable



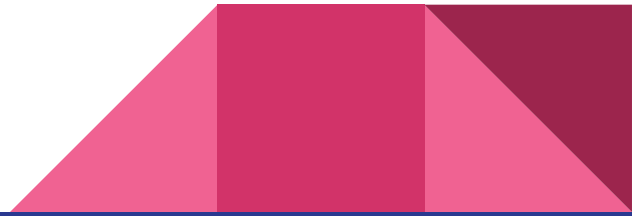
Mainframe to Lambda

- Cloud (2.0)
  - Server is irrelevant, Service is king/queen
  - Applications must be fault tolerant because the servers are unreliable
  - Ability to spin up, spin down *can* save money
    - Are the users prepared for this?
    - Are the apps prepared for this?
  - Scale Horizontally
  - Stateless
- Lambda
  - Service is irrelevant, Code is king/queen
  - Stateless



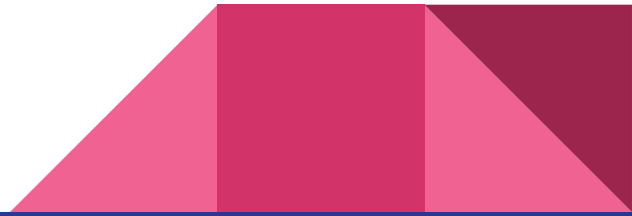
Major Cloud Providers

- Major Players
  - Amazon AWS
  - Google Compute Engine
  - Microsoft Azure
- Compete on price, availability, services
- APIs and Automations are key



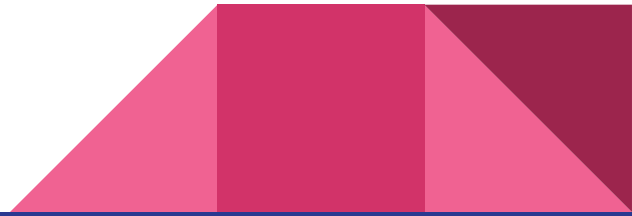
Is it Better/Faster/Stronger?

- It depends (weasel answer)
- What is your use case?
  - Extension of your data center?
  - Availability requirements?
  - Startup costs?
  - Not in the data center business?
- Does your corporate culture adapt/adopt change?
- Pitfalls
  - Legacy processes
  - Legacy requirements
  - Legacy assumptions



Cloud Success

- Corporate Culture changes
  - Say goodbye to the server
  - Say goodbye to uptime metrics
  - Say goodbye to fixing problems :(
  - Adopt cloud friendly workflows (development is production)
  - (Be vigilant in questioning Best Practice)
- Automation
  - Assume the server is unreliable (it is)
  - Save your data
  - Rebuild your OS



Using AWS

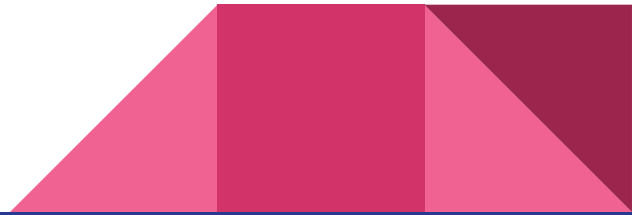
- Installation of the AWS CLI (AUTOMATION!!)
- Python virtualenv (or your favorite language)
  - pip install awscli boto3
  - pip install ansible
- jquery
- aws cli

Using AWS

- Installation
  - yum install python-virtualenv
  - mkdir -p bin/aws_venv
  - virtualenv bin/aws_venv
  - source bin/aws_venv/bin/activa
  - pip install awscli boto3
  - aws configure

Using AWS

- aws ec2 help
- aws ec2 describe-images
- aws ec2 describe-images --output=text
- aws ec2 describe-subnets
- aws ec2 --dry-run
- aws ec2 describe-images (can take 15 minutes to process without filters)
- aws ec2 create-key-pair --keyname foo --output text> key.pem
- aws ec2 run-instances
- ssh -i keyname centos@public_ip



Example Code

https://github.com/kwanlowe/intro-to-cloud