

AWS

Development

- Do not store application state on servers
- Store extra information in your logs
- If you need to interact with AWS, use the official SDK
- Have tools to view application logs

Billing

- Set up granular billing alerts

Security

- Prefer EC2 roles over app level IAM account
- Assign permissions to groups, not users
- Set up automated security auditing
- Use CloudTrail to keep an audit log

ELB

- Terminate SSL on the load balancer
- Pre-warm your ELBs if you're expecting heavy traffic

RDS

- Set up event subscriptions for failover

CloudWatch

- Use CLI tools
- Use the free metrics
- Use the custom metrics
- Use detailed monitoring

IAM

- Use IAM roles
- Use multiple API keys for different purposes
- Use multi-factor auth for IAM users

Miscellaneous

- Scale horizontally
- Your application may require changes to work on AWS
- Always be redundant across availability zones (AZs)
- Be aware of AWS service limits before you deploy
- Decide on a naming convention early, and stick to it
- Decide on a key-management strategy from the start
- Make sure AWS is right for your workload

Operations

- Disable SSH access to all servers (Optional)
- Care about services as a whole instead of servers
- Don't give servers static/elastic IPs
- Automate everything
- Everyone gets an IAM account. Never login to the master
- Get your alerts to become notifications

S3

- Use "-" instead of "." in bucket names for SSL
- Avoid filesystem mounts (FUSE, etc)
- Having CloudFront in front of S3 is optional (but it can help)
- Use random strings at the start of your keys

EC2 / VPC

- Assign tags to everything
- Use termination protection for non-auto-scaling instances
- Use a VPC
- Use reserved instances to save big \$\$\$
- Lock down your security groups
- Don't keep unassociated Elastic IPs

Elasticache

- Use configuration endpoints over individual endpoints

Autoscaling

- Scale down on INSUFFICIENT_DATA as well as ALARM
- Use ELB health check instead of EC2 health checks
- Only use the availability zones (AZs) your ELB is configured for
- Avoid multiple scaling triggers on the same group

Route53

- Use ALIAS records

Elastic MapReduce

- Specify a directory on S3 for Hive results

Continue Learning with following relevant tracks

Backend Roadmap

DevOps Roadmap