AWS - Introduction

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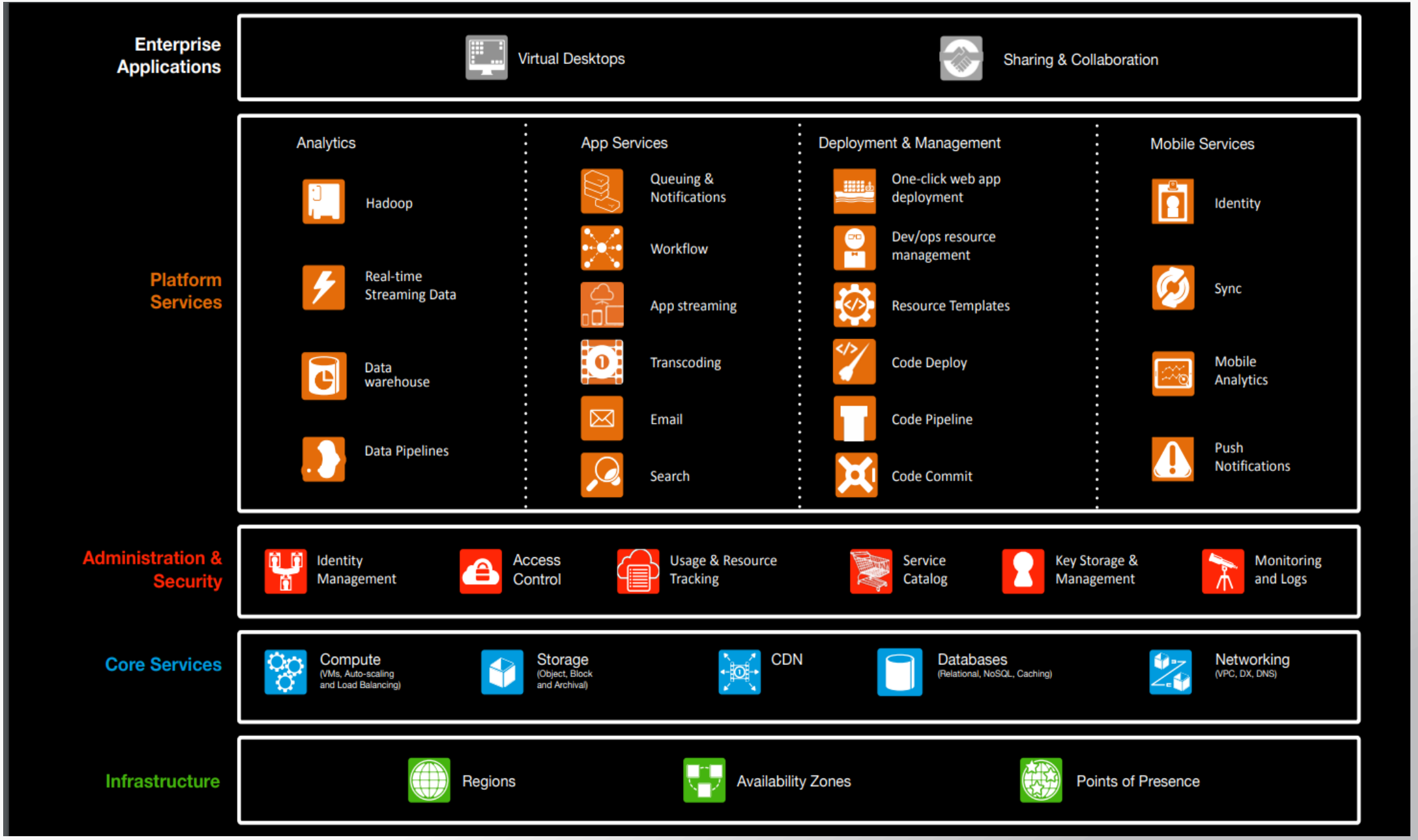
How can I use AWS services to develop, deploy and scale my applications?



The 5 Pillars of the AWS Well-Architected Framework

- **Cost Optimization**
- **Reliability**
- **Operational Excellence**
- **Performance Efficiency**
- **Security**

Note: -- Abbreviation -- (CROPS)

Cost Optimization

Design Principles

There are five design principles for cost optimization in the cloud:

- Adopt a consumption model
- Measure overall efficiency
- Stop spending money on data center operations
- Analyze and attribute expenditure
- Use managed services to reduce cost of ownership

Reliability

Design Principles

There are five design principles for reliability in the cloud:

- Test recovery procedures
- Automatically recover from failure
- Scale horizontally to increase aggregate system availability
- Stop guessing capacity
- Manage change in automation

Operational Excellence

Design Principles

There are six design principles for operational excellence in the cloud:

- Perform operations as code
- Annotate documentation
- Make frequent, small, reversible changes
- Refine operations procedures frequently
- Anticipate failure
- Learn from all operational failures

Performance Efficiency

Design Principles

There are five design principles for performance efficiency in the cloud:

- Democratize advanced technologies
- Go global in minutes
- Use serverless architectures
- Experiment more often
- Mechanical sympathy

Security

Design Principles

There are six design principles for security in the cloud:

- Implement a strong identity foundation
- Enable traceability
- Apply security at all layers
- Automate security best practices
- Protect data in transit and at rest
- Prepare for security events