Industry Cloud Adoption and Demand for Cloud-based Skills

SPE MiT Seminar – May 2020

Outline

- Industry Adoption and Transition to Cloud Computing
- Job Market and Demand for Cloud Computing Skills
- Upcoming Industry Needs and Demands
- What Can You Do Now
- Other Skills in Demand
- Q&A

Industry Adoption and Transition to Cloud Computing

"We are in the midst of a talent drought within the IT market that is plaguing enterprise organizations…"

- Source: "The Cloud Talent Drought Continues (And Is Even Larger Than You Thought)", Forbes, March 2020

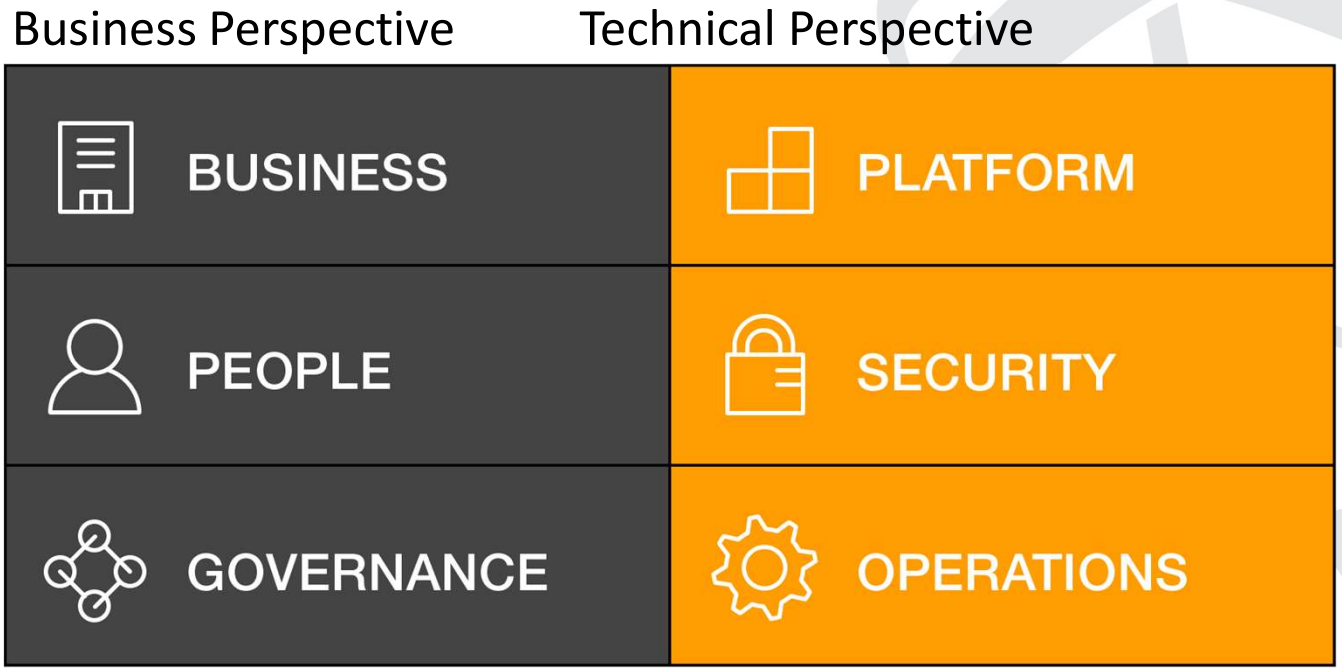
"When it comes to cloud adoption, the biggest challenge isn't technology -- it's the people and processes that must change and adapt."

- Source: "13 Biggest Challenges When Moving Your Business to The Cloud", Forbes, June 2017

- Impacts effectiveness
- Smaller, newer companies at advantage over established, larger corporations
- Timing and readiness of the resources

AWS Cloud Adoption

1. Evaluation Period, POCs, Cloud Provider Demonstrations
2. Migration of Services

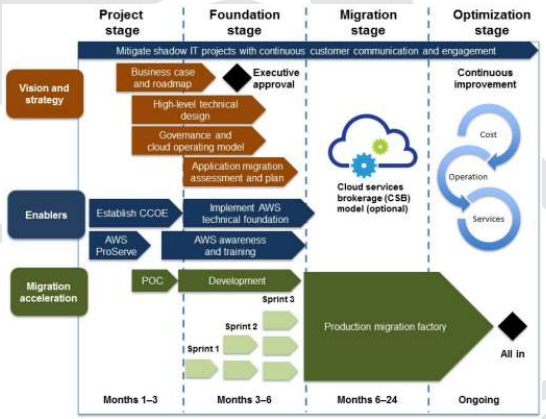


AWS Cloud Adoption Plan and Stakeholders

Cloud Adoption Position and Strategy

Cloud Maturity Model

- Organization does not have the skills
  - RFP for Professional/Managed Services
    - Deloitte, Accenture, AWS Professional Services, etc.
      - Complete project – all business domains, all disciplines, all services (development, security, operations, governance)
- Strategy
  - Which systems to migrate
  - Prioritization of systems to migrate
  - Timing and complexity to migrate
- Migration of selected services



Ready To Build Own Teams

Technical Training and Hiring

1. Cloud Operations Teams
   - DevOps
   - Infrastructure and Support
2. Development Teams
3. Architecture Teams

Other Disciplines

- Finance, Audit, Sales, HR, Governance, Compliance

Job Market and Demand for Cloud Computing Skills

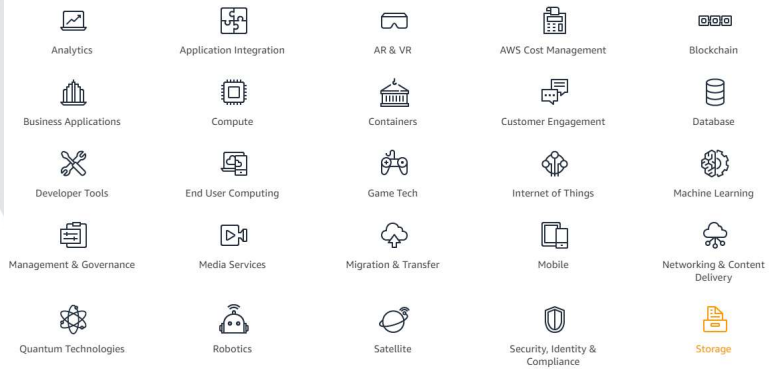
It's Not One Discipline

- Technology
  - DevOps
  - CI/CD
  - Agile, CI/CI and DevOps
  - Automation
  - Development
  - Operations
  - Support
  - Business Analysts
  - Testers
  - Among many more
- Domain Experts

- Managerial
  - Project Manager
  - Project Coordinator
  - Program Managers, Portfolio Managers
  - Governance, Processes and Procedures, Methodologies
  - Compliance
  - Auditors
  - Cloud Finance and Billing
- Administrative
- Executive
  - Strategy

Next In Industry Needs and Skill Demands

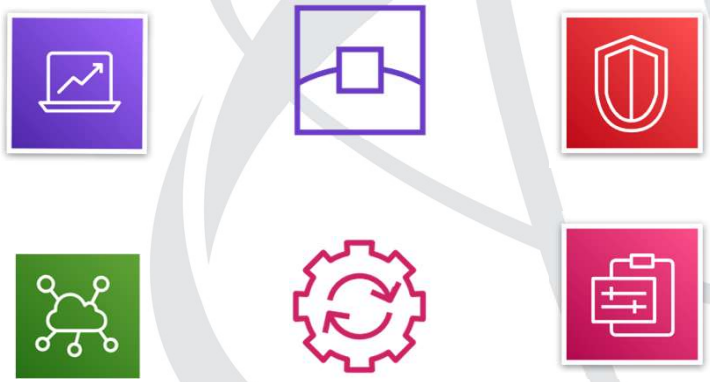
- Experts at specific services
  - Cloud Migration and Deployment within Multi-Cloud Environments
    - Infrastructure Architect
  - Machine Learning and Artificial Intelligence (AI)
  - Serverless Architecture and Computing
  - DevOps
  - Cloud Security
  - Database Skills
  - Programming Languages



Upcoming Industry Needs and Demands

Next In Industry Needs and Skill Demands

- Upcoming Industry Needs and Skill Demands
  - Edge Computing
  - DevOps
  - Security
  - Data Analytics
  - IoT
  - Automation



What Can You Do Now

Knowing the Needs

Readiness

Knowing the Needs

Organizations:

- Cloud-based Knowledge
- Show and Demonstrate Practical, Hands-on Experience
- Cross-referencing the Cloud-based skills with your domain skills

Recruiters/Staffing Companies:

- LinkedIn Profile
- The right recruiters/staffing – focus in resources in transition
- Paradigm shift – be prepare for virtual networking and virtual interviews

Enhancing your Skill Set

"Skills gaps are harming organizations and the best antidote is upskilled employees. Preparing for a certification is one of the best ways to add the critical skills that IT departments need right now."

"The value of certification extends beyond individual benefits. Specifically, certified professionals are better at closing skills gaps,…"

"The big money is in cloud computing certifications, with AWS and Google Cloud delivering high salaries across all regions."

– Source: Global Knowledge, 2019 IT SKILLS AND SALARY REPORT

AWS Certifications

Professional

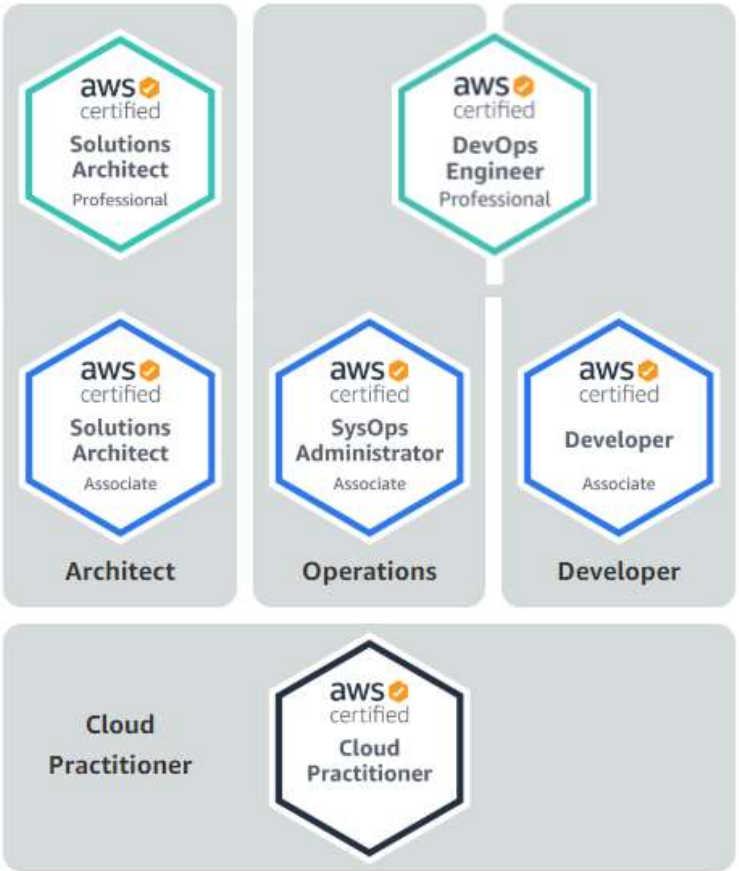
Two years of comprehensive experience designing, operating, and troubleshooting solutions using the AWS Cloud

Associate

One year of experience solving problems and implementing solutions using the AWS Cloud

Foundational

Six months of fundamental AWS Cloud and industry knowledge



Specialty

Technical AWS Cloud experience in the Specialty domain as specified in the **exam guide**

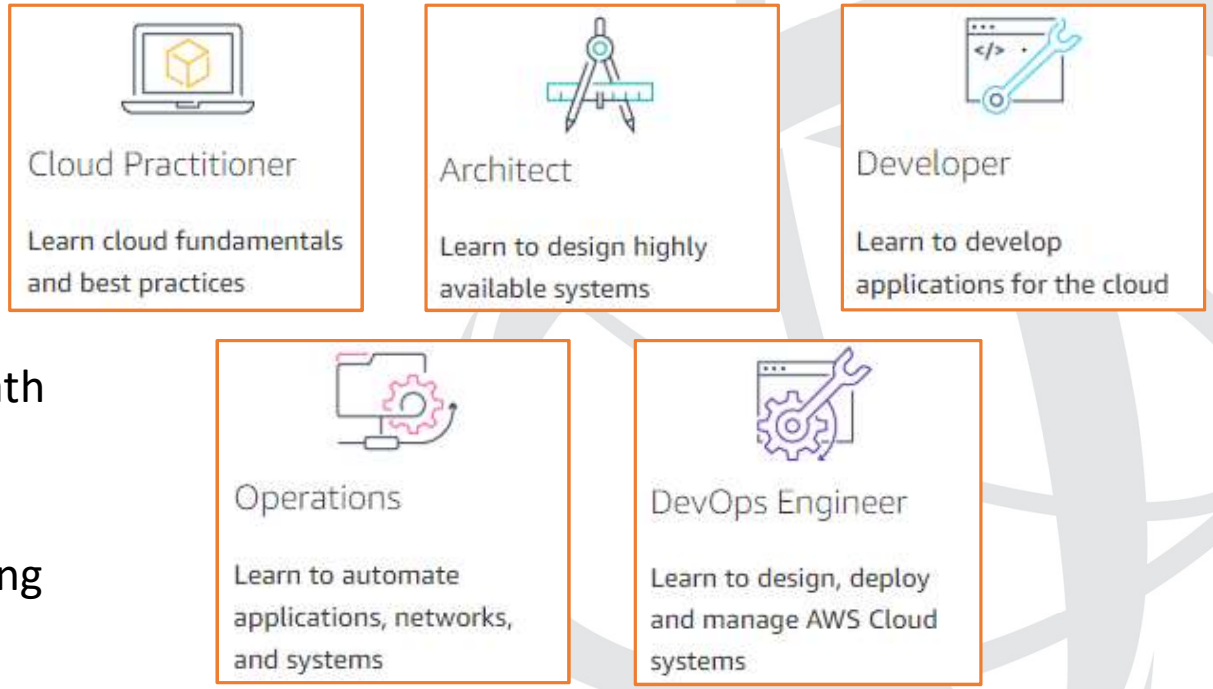
Learning Paths

Role-Based Paths

- Cloud Practitioner
- Architect
- Developer
- Operations
- DevOps Engineer

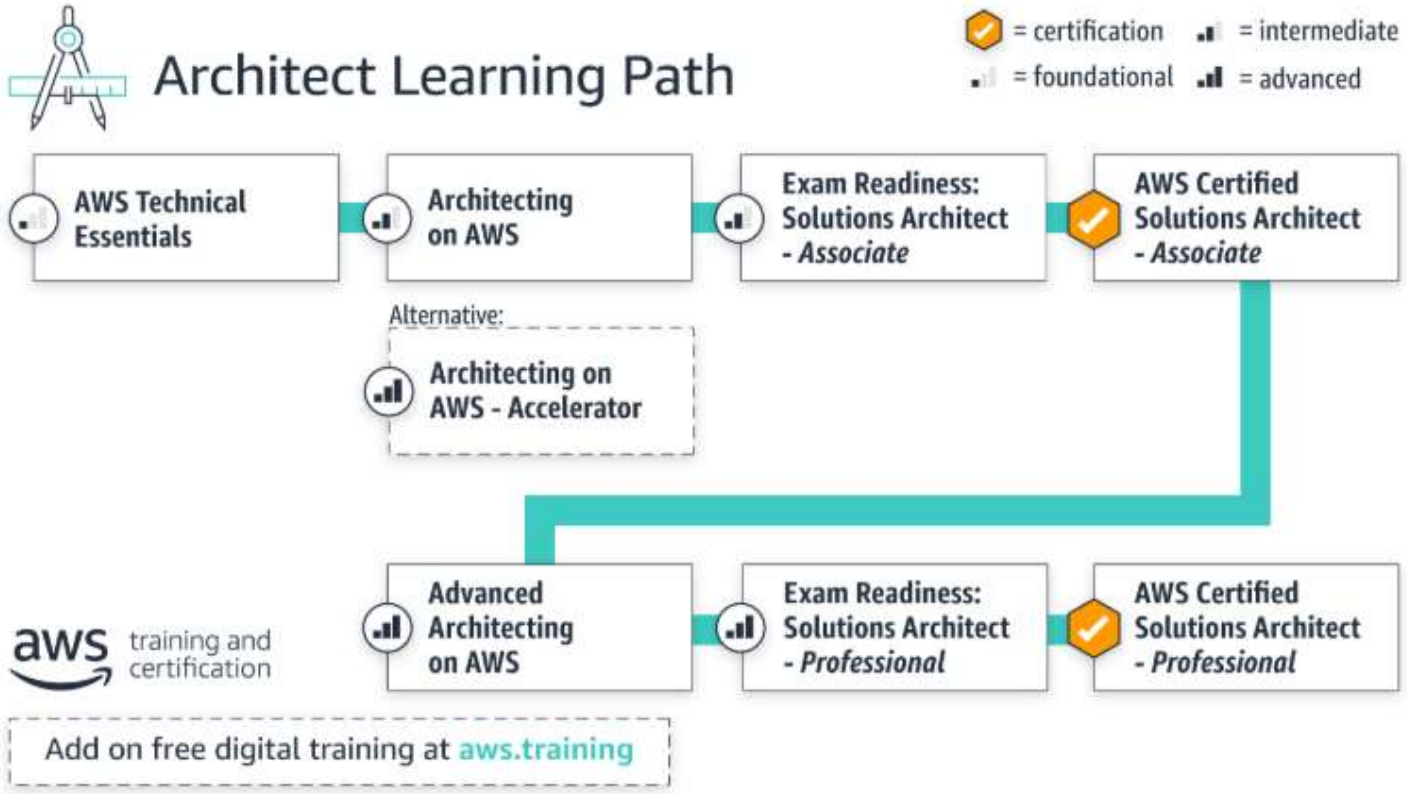
Solutions/Specialty Path

- Data Analytics
- Security
- Advanced Networking
- Database
- Storage
- Machine Learning



Cloud Practitioner

AWS Solutions Architect



Developer

Developer Learning Path
aws training and certification
= certification
= intermediate
= foundational
= advanced
AWS Certified Developer - Associate
AWS Technical Essentials
Developing on AWS
Exam Readiness: Developer - Associate
AWS Certified Developer - Associate
Optional:
AWS Certified Cloud Practitioner
Add on free digital training at aws.training
Advanced Developing on AWS

Operations

Operations Learning Path
AWS Certified SysOps Administrator - Associate
= certification
= intermediate
= foundational
= advanced
AWS Technical Essentials
Systems Operations on AWS
Exam Readiness: SysOps Administrator - Associate
AWS Certified SysOps Administrator - Associate
Optional:
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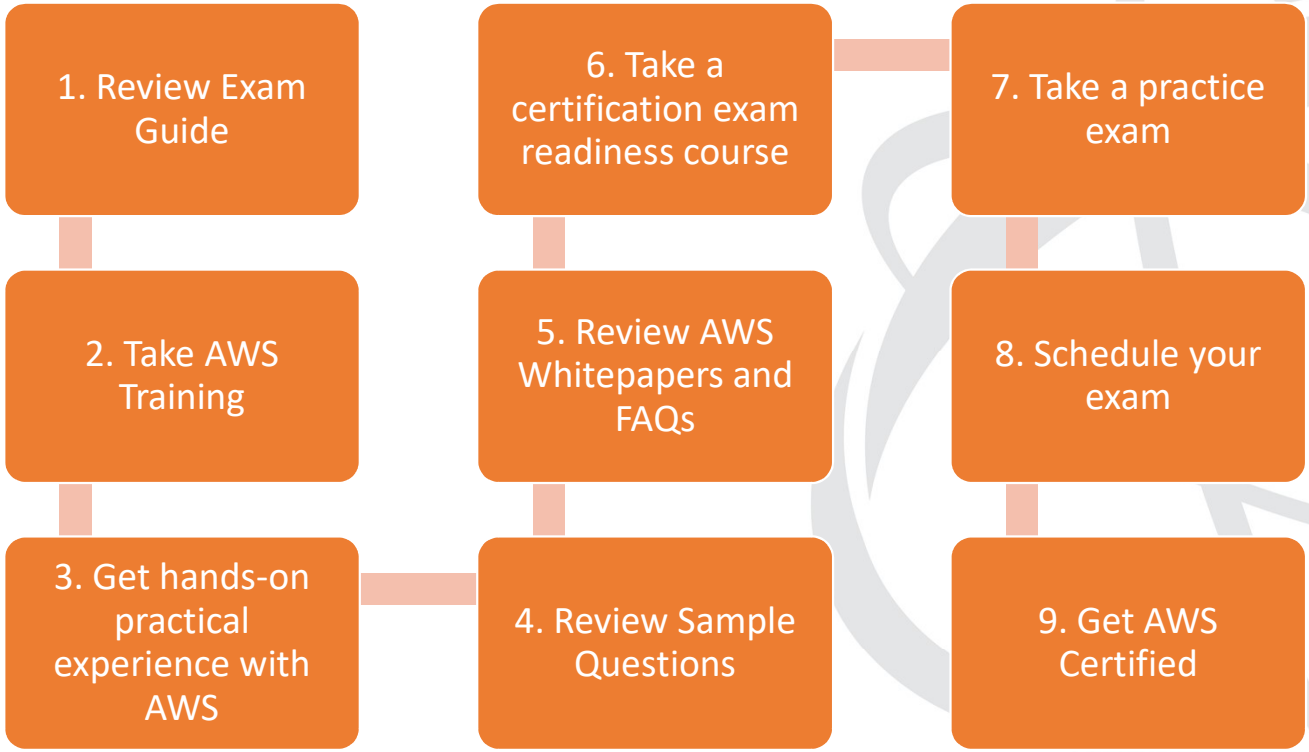
aws training and certification

DevOps Engineer

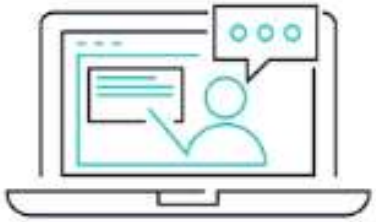
AWS Certifications Readiness



*Source: AWS Houston Office MeetUp Meeting

2. Take AWS Training

Free Digital Training



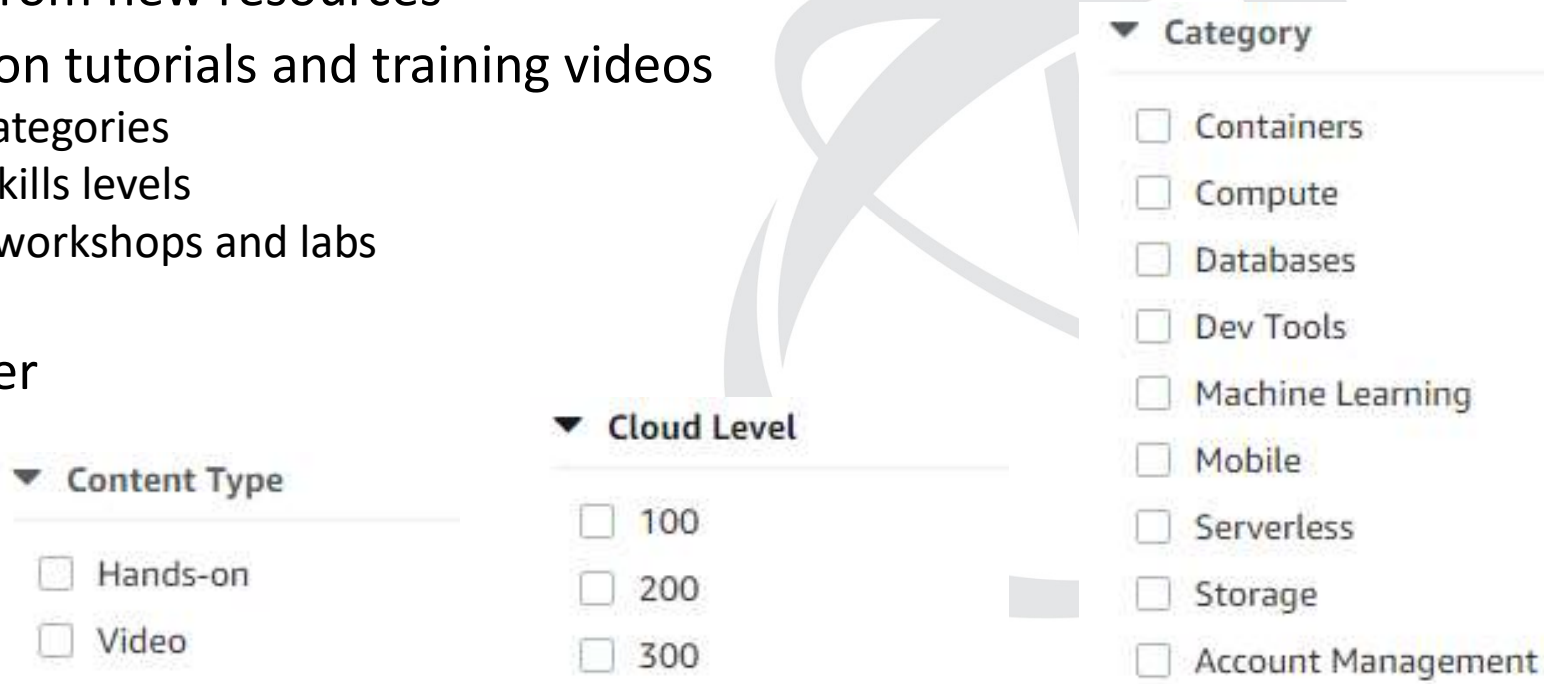
Classroom Training

AWS Certification

- Benefits of AWS Training and Certification
- Learning Paths by Role
- Learning Paths by Solutions
- Recommended Courses

3. Get Hands-on Practical Experience with AWS

- Organizations expecting practical, hands-on experience from new resources
- AWS hands-on tutorials and training videos
  - Multiple categories
  - Different skills levels
  - Hands-on workshops and labs
  - Tutorials
- AWS Free Tier



4. Review Sample Questions

Download the exam guide

Download the sample questions

- AWS sample questions per certification
- Textbook-based sample questions
- Third-party-based sample questions

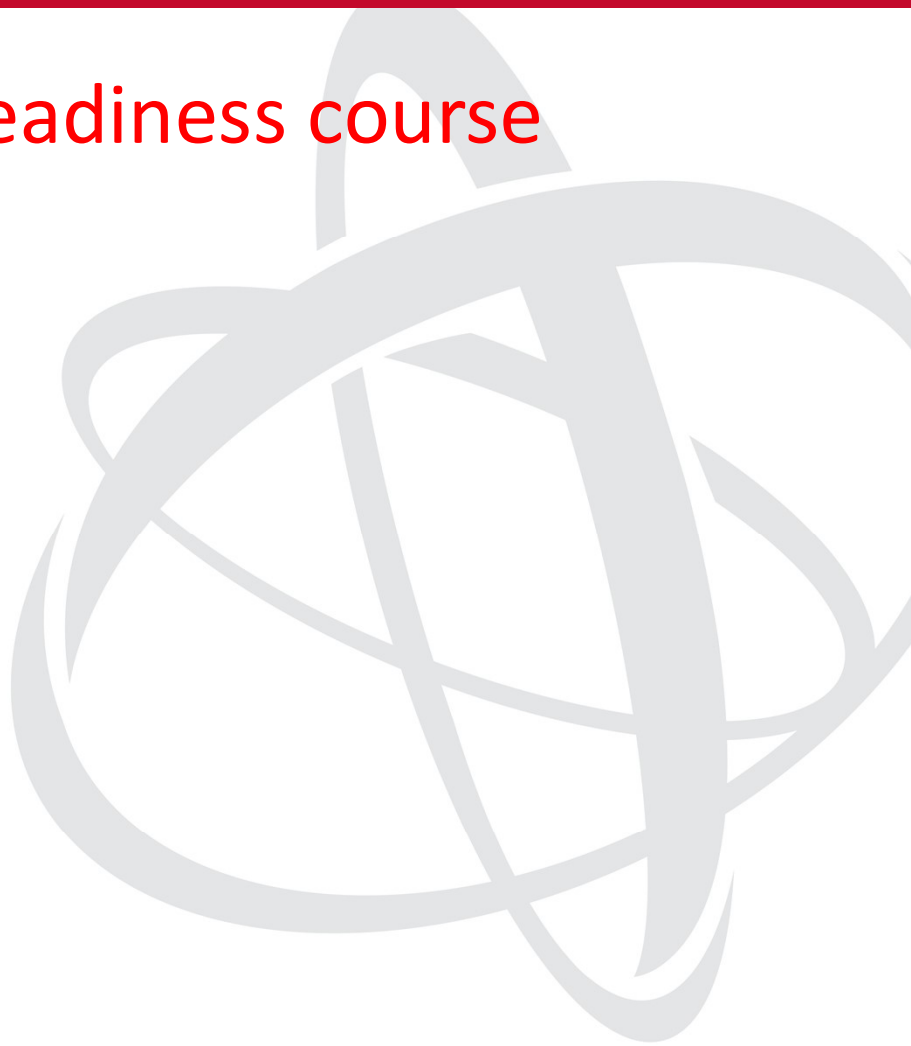
1) Why is AWS more economical than traditional data centers for applications with varying compute workloads?

A) Amazon EC2 costs are billed on a monthly basis.
B) Users retain full administrative access to their Amazon EC2 instances.
C) Amazon EC2 instances can be launched on demand when needed.
D) Users can permanently run enough instances to handle peak workloads.

5. Review AWS Whitepapers and FAQs

- AWS Content
  - Whitepapers
  - Step by Step Guides
  - Discussion Forums
  - Customer Case Studies
  - AWS News Blog
  - User Groups
  - Community and Collaboration
  - FAQ References
  - AWS Events & Webinars
  - Customer News
  - AWS in the News
  - What's New
  - AWS Executive Insights
  - Many other references

6. Take a certification exam readiness course



7. Take a Practice Exam

Other Skills in Demand

Data Science and Analytics (DSA), Cybersecurity

"The demand is for business people with analytics skills, not just data scientists"

– Source: PWC, Investing in America's data science and analytics talent

"The most popular certification category is Cybersecurity, Governance, Compliance and Policy."

"Cross-certifying with an AWS certification is universally a great way to boost salary."

– Source: Global Knowledge, 2019 IT SKILLS AND SALARY REPORT

Readiness – What Now?

Time To Prepare

- AWS Certifications
  - Cloud Practitioner or AWS Solutions Architect - Associate
- AWS Practical and Hands-on Experience
  - AWS-based Projects, Tutorials
- Online Presence
- Digital Brand
- Digital Engagement
- Volunteering
- Staffing Companies

- Join relevant groups/ contribute
- Utilize co-workers, alumni
- Virtual “Meet –Up” Events
- Other alternative ways to network (i.e. virtual coffee chats)
- Fully utilize LinkedIn
- Cross-reference your skills
- Update constantly
- It only takes one

Contact Details

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Experience the Power of the Cloud:
Amazon Web Services (AWS) Certified Solutions Architect - Certification Training

AWS@UH Certification Program

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- Comprehensive, in-classroom, instructor-led and hands-on AWS Certification Training
- Covers all the content material, scenarios, labs required for two of the AWS certification exams (Solutions Architect and Cloud Practitioner)
- After the training, participants will be prepared to take and pass both certification exams.
- Program in collaboration with the AWS Academy – Content, Labs, Projects, Practice Exams, Demos and all material designed and developed by the AWS Academy
- AWS@UH: https://uh.edu/technology/programs/professional/aws/

Appendix

Links to Resources

AWS-based Content

- AWS Training and Certification
  - https://aws.amazon.com/training/?nc2=sb_tc
- Prepare for Your AWS Certification Exam
  - https://aws.amazon.com/certification/certification-prep/
- AWS Certified Cloud Practitioner
  - https://aws.amazon.com/certification/certified-cloud-practitioner/
- AWS Cloud Practitioner Essentials (Second Edition)
  - https://www.aws.training/learningobject/curriculum?id=27076
- Getting Started with AWS – Hands-on and Tutorials
  - https://aws.amazon.com/getting-started/
- AWS Whitepapers and Guides
  - https://aws.amazon.com/whitepapers/
- AWS@UH Certification Program
  - https://uh.edu/technology/programs/professional/aws/

- Exam Prep/Readiness
  - AWS Cloud Practitioner Essentials (Second Edition)
    - https://www.aws.training/learningobject/curriculum?id=27076
  - AWS Well Architected Framework
    - https://www.aws.training/Details/Curriculum?id=12049
  - AWS Solutions Architect - Associate
    - https://www.aws.training/Details/Curriculum?id=20685

Articles and References

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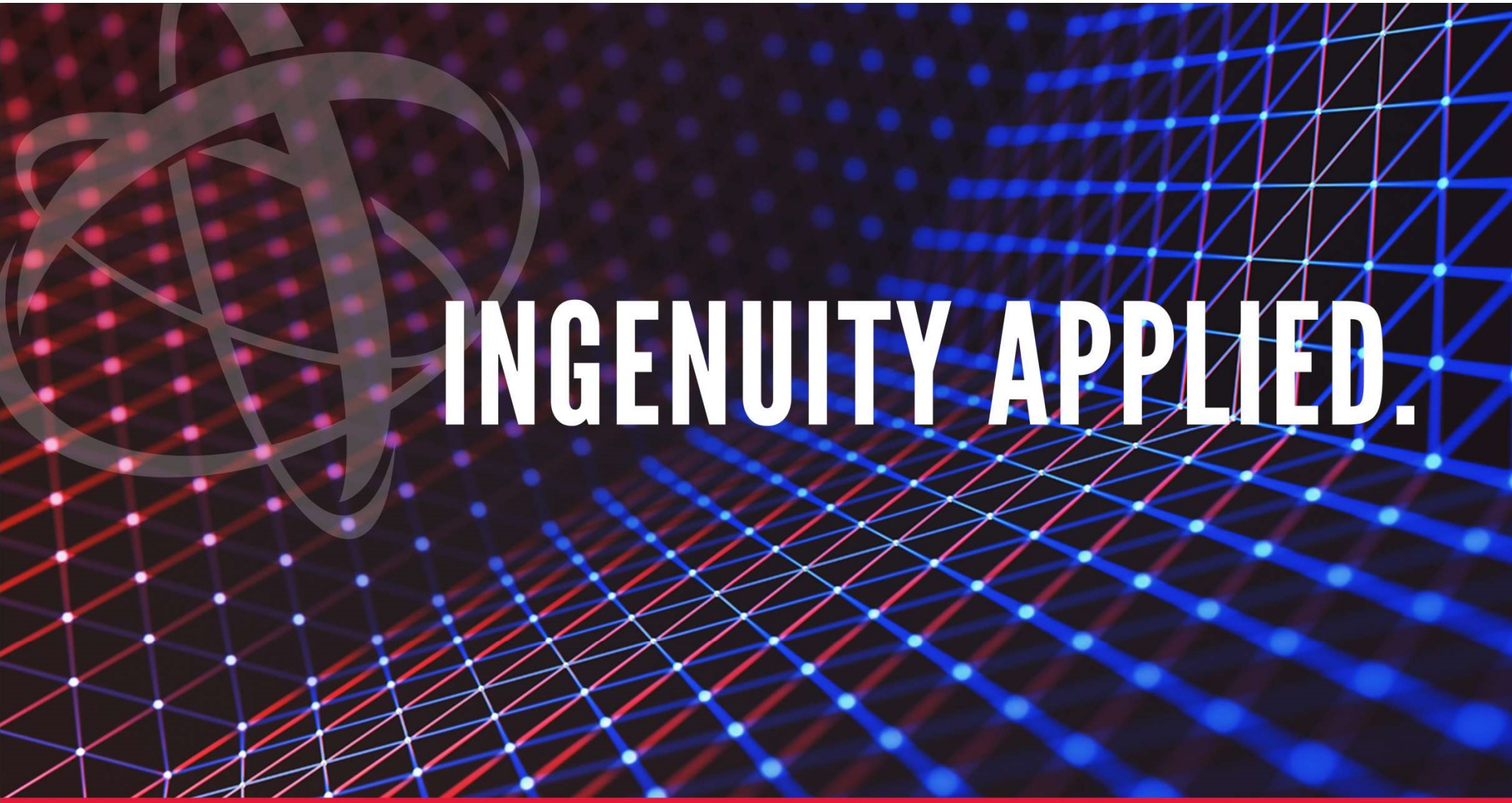
Acknowledgements

- Some content and visual figures in this presentation were directly taken from AWS Training web content.
- Other sources were listed for other content shown in the presentation



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