Course orientation on Cloud Services Architecting Practices

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http://mail.tku.edu.tw/myday
2019-09-12
課程名稱：雲端服務架構實務
(Cloud Services Architecting Practices)
授課教師：戴敏育 (Min-Yuh Day)
開課系級：資管四P (TLMXB4P) (M2436) (2790)
開課資料：選修 單學期 2 學分
(2 Credits, Elective)
上課時間地點：週四 Thu 9, 10 (16:10-18:00) B113
課程簡介

• 雲端服務架構實務課程主要介紹：AWS 技術基礎和在 AWS 上建立架構。
• AWS技術基礎介紹 AWS 產品、服務和常見解決方案。
• 在 AWS 上建立架構內容涵蓋在 AWS 上建置 IT 基礎架構的基礎。
• 解決方案架構師如何透過了解 AWS 服務來優化對 AWS 雲端的使用，及如何讓這些服務符合雲端解決方案。
• AWS 雲端最佳實務與建議的設計模式，協助學員思考在 AWS 上架構最佳 IT 解決方案的程序。
Course Introduction

• This course, **Cloud Services Architecting Practices**, introduces **AWS Technical Essentials** and **Architecting on AWS**.

• In **AWS Technical Essentials**, students will learn about AWS products, services, and common solutions.

• **Architecting on AWS** covers fundamentals of building IT infrastructure on the AWS platform.

• Students will learn how to optimize the AWS Cloud by understanding how AWS services fit into cloud-based solutions.

• In addition, students explore AWS Cloud best practices and design patterns for architecting optimal IT solutions on AWS.
課程目標

• 與 AWS 平台有關的術語和概念
• 瀏覽 AWS 管理主控台的方法
• AWS 安全措施和 AWS Identity and Access Management (IAM) 的關鍵概念
• 根據 AWS 架構原則和最佳實務做出架構決策
• 利用 AWS 服務，讓您的基礎設施可擴展、可靠且高度可用
Course Objective

• Terminology and concepts related to the AWS platform
• How to navigate the AWS Management Console
• Key concepts of AWS security measures and AWS Identity and Access Management (IAM)
• Make architectural decisions based on AWS architectural principles and best practices
• Leverage AWS services to make your infrastructure scalable, reliable, and highly available
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<tr>
<th>Week</th>
<th>Date</th>
<th>Subject/Topics</th>
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<tbody>
<tr>
<td>1</td>
<td>2019/09/12</td>
<td>Course orientation on Cloud Services Architecting Practices</td>
</tr>
<tr>
<td>2</td>
<td>2019/09/19</td>
<td>Introduction to Cloud Computing</td>
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<tr>
<td>3</td>
<td>2019/09/26</td>
<td>Getting Started with AWS: AWS Compute, Storage, and Networking</td>
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<tr>
<td>4</td>
<td>2019/10/03</td>
<td>Creating Amazon EC2 instances with Microsoft Windows</td>
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<td>6</td>
<td>2019/10/17</td>
<td>Build Your Virtual Private Cloud (VPC) and Launch a Web Server, Working with Amazon Elastic Block Store (EBS)</td>
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<td>7</td>
<td>2019/10/24</td>
<td>AWS Security, Identity, and Access Management: Introduction to AWS Identity and Access Management (IAM)</td>
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<td>8</td>
<td>2019/10/31</td>
<td>AWS Database Options: Build Your Database Server and Interact with Your Database using an Application</td>
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<td>9</td>
<td>2019/11/07</td>
<td>AWS Elasticity and Management Tools: Scale and Load Balance Your Architecture</td>
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<td>10</td>
<td>2019/11/14</td>
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<tr>
<td>11</td>
<td>2019/11/21</td>
<td>Architecting on AWS: Introduction to System Design</td>
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<tr>
<td>12</td>
<td>2019/11/28</td>
<td>Designing Your Environment</td>
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<td>13</td>
<td>2019/12/05</td>
<td>Deploy a Web Application on AWS</td>
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<td>14</td>
<td>2019/12/12</td>
<td>Group discussion: Forklift an Existing Application onto AWS</td>
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<tr>
<td>15</td>
<td>2019/12/19</td>
<td>System Design for High Availability (Part I)</td>
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<td>16</td>
<td>2019/12/26</td>
<td>System Design for High Availability (Part II)</td>
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<tr>
<td>17</td>
<td>2020/01/02</td>
<td>Making Your Environment Highly Available</td>
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<tr>
<td>18</td>
<td>2020/01/09</td>
<td>期末考試週</td>
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教學目標之教學方法與評量方法

• 教學方法
  • 講述、討論、發表、實作、體驗、模擬

• 評量方法
  • 測驗、討論、實作、報告
學期成績計算方式

• 期中評量：30.0%
• 期末評量：30.0%
• 平時評量：40.0% (課堂參與及報告討論表現)
教材課本與參考書籍

• 教材課本 (Textbook)
  • Slides
  • AWS Academy Cloud Foundations (AWS ACF), AWS Academy
  • AWS Academy Cloud Architecting (AWS ACA), AWS Academy
教材課本與參考書籍

• 參考書籍 (References)
  • AWS Technical Essentials
    • [https://aws.amazon.com/training/course-descriptions/essentials/](https://aws.amazon.com/training/course-descriptions/essentials/)
  • Architecting on AWS
    • [https://aws.amazon.com/training/course-descriptions/architect/](https://aws.amazon.com/training/course-descriptions/architect/)
  • AWS Cloud Practitioner Essentials (Second Edition)
    • [https://aws.amazon.com/training/course-descriptions/cloud-practitioner-essentials/](https://aws.amazon.com/training/course-descriptions/cloud-practitioner-essentials/)
  • AWS Certified Cloud Practitioner
  • AWS Certified Solutions Architect – Associate
Available 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

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[https://aws.amazon.com/certification/](https://aws.amazon.com/certification/)
AWS Certified Cloud Practitioner

• This certification provides individuals in a larger variety of cloud and technology roles with a way to validate their AWS Cloud knowledge and enhance their professional credibility.

• This exam covers four domains, including cloud concepts, security, technology, and billing and pricing.

https://aws.amazon.com/certification/certified-cloud-practitioner/
AWS Certified Solutions Architect – Associate

• This certification validates your ability to effectively demonstrate knowledge of how to architect and deploy secure and robust applications on AWS technologies.

• This exam is for anyone with at least one year of hands-on experience designing available, cost-efficient, fault-tolerant, and scalable and distributed systems on AWS.

Summary

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• AWS 技術基礎介紹 AWS 產品、服務和常見解決方案。
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  AWS 上架構最佳 IT 解決方案的程序。
Contact Information

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