Preparing for the Professional Data Engineer Examination

Overview

This course will help prospective candidates plan their preparation for the Professional Data Engineer exam. The session will cover the structure and format of the examination, as well as its relationship to other Google Cloud certifications. Through lectures, quizzes, and discussions, candidates will familiarize themselves with the domain covered by the examination, to help them devise a preparation strategy. Rehearse useful skills including exam question reasoning and case comprehension. Tips and review of topics from the Data Engineering curriculum.

Prerequisite Comments

To get the most out of this course, participants should have:
Familiarity with Google Cloud Platform to the level of the Data Engineering on Google Cloud Platform course (suggested, not required)

Target Audience

This course is intended for the following participants:
Cloud professionals interested in taking the Data Engineer certification exam.
Data engineering professionals interested in taking the Data Engineer certification exam.

Course Objectives

This course teaches participants the following skills:
Position the Professional Data Engineer Certification
Provide information, tips, and advice on taking the exam
Review the sample case studies
Review each section of the exam covering highest-level concepts sufficient to build confidence in what is known by the candidate and indicate skill gaps/areas of study if not known by the candidate
Connect candidates to appropriate target learning

Course Outline

1 - Understanding the Professional Data Engineer Certification

Position the Professional Data Engineer certification among the offerings
Distinguish between Associate and Professional
Provide guidance between Professional Data Engineer and Associate Cloud Engineer
Describe how the exam is administered and the exam rules
Provide general advice about taking the exam

2 - Sample Case Studies for the Professional Data Engineer Exam

Flowlogistic
MJTelco

3 - Designing and Building (Review and preparation tips)

Designing data processing systems
Designing flexible data representations
Designing data pipelines
Designing data processing infrastructure
Build and maintain data structures and databases
Building and maintaining flexible data representations
Building and maintaining pipelines
Building and maintaining processing infrastructure

4 - Analyzing and Modeling (Review and preparation tips)

Analyze data and enable machine learning
Analyzing data
Machine learning
Machine learning model deployment
Model business processes for analysis and optimization
Mapping business requirements to data representations
Optimizing data representations, data infrastructure performance and cost

5 - Reliability, Policy, and Security (Review and preparation tips)

Design for reliability
Performing quality control
Assessing, troubleshooting, and improving data representation and data processing infrastructure
Recovering data
Visualize data and advocate policy
Building (or selecting) data visualization and reporting tools
Advocating policies and publishing data and reports
Design for security and compliance
Designing secure data infrastructure and processes
Designing for legal compliance

6 - Resources and next steps

Resources for learning more about designing data processing systems, data structures, and databases
Resources for learning more about data analysis, machine learning, business process analysis, and optimization
Resources for learning more about data visualization and policy Resources for learning more about reliability design
Resources for learning more about business process analysis and optimization
Resources for learning more about reliability, policies, security, and compliance