Cloudera Data Platform

Introduction:

- Brief overview of the evolution of big data.
- Introduction to Cloudera Data Platform (CDP).

Industry Trends for Big Data

- Growth of big data in various industries.
- Rise of AI and machine learning.
- Importance of real-time analytics.
- The shift towards cloud-based data platforms.

The Challenge to Become Data-Driven

- Discuss the challenges organizations face in becoming data-driven.
- The complexity of managing diverse data sources.
- Data security and governance challenges.
- The skills gap in big data analytics.

The Enterprise Data Cloud

- Definition and benefits of an enterprise data cloud.
- How CDP enables a holistic data management approach.
- Discuss key features like multi-function analytics, security, and governance.

CDP Overview

- Detailed overview of Cloudera Data Platform.
- Key components: Cloudera Manager, Hue, Nifi, CFM, Atlas, and Ranger.
- Discuss how these components integrate and function together.

CDP Form Factors

- Explanation of different CDP form factors: Public Cloud, Private Cloud, and Data Center.
- Best practices for choosing the right form factor for different business needs.

Hands-On Exercise: Configure the Exercise Network

- **Exercise Setup:**
  - Requirements: Access to a Cloudera environment.
  - Objective: Configure a basic network setup on CDP.
- **Step-by-Step Guide:**

1. **Accessing Cloudera Manager:**
   - Log into Cloudera Manager.
   - Code snippet to access via CLI:
     ```
     ssh user@clouderamanager.host
     ```
2. **Setting Up Hue:**
   - Navigate to Hue service.
   - Configuration of Hue for user access.
   - Example query in Hue:
     ```
     SELECT * FROM sample_table LIMIT 10;
     ```
3. **Configuring NiFi:**
   - How to access and set up basic data flows in NiFi.
   - Example of a simple data ingestion flow.
4. **Integrating CFM, Atlas, and Ranger:**
   - Setting up CFM for data flow management.
   - Using Atlas for metadata management and data lineage.
   - Configuring Ranger for data security and policy management.

- **Validation:**
  - Tips on how to validate the setup.
  - Example validation checks.