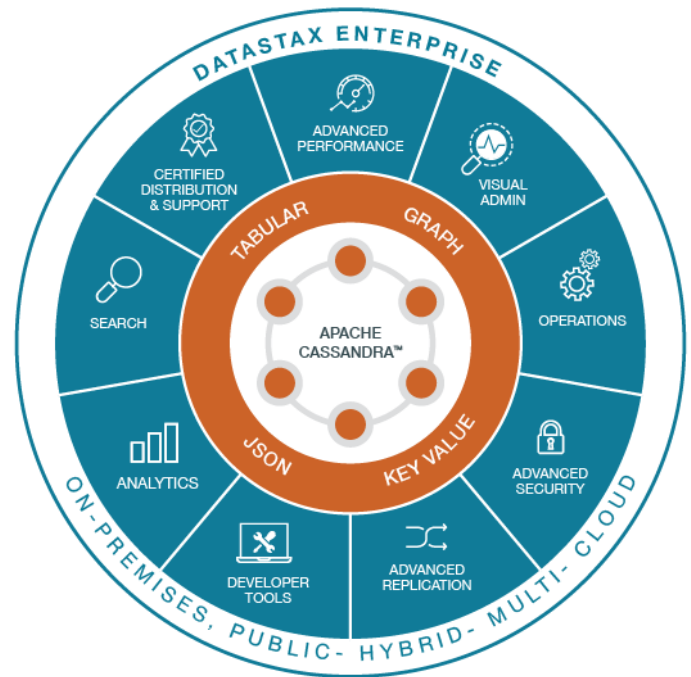


DS410: ADVANCED FOR ADMINISTRATORS

OVERVIEW

The DS410 course covers several advanced topics that include management, maintenance, and optimization of DSE clusters. Management and Configuration incorporates rebalancing, rebuilding, optimizing high availability, migrating datacenters, upgrades for advanced replication, security, and more. The Performance Tuning section covers the key topics of latency vs. throughput, proactive performance tuning, monitoring, stress tools, operating system (OS) settings, schema settings, compaction, and data model impact. The maintaining data section encompasses node and rack, corruption and recovery, rebuilding indexes, backup and restore, et al.

- **Duration:** 4 days
- **Audience:** Software professionals seeking to manage DSE implementations
- **Prerequisites:** DS201: DataStax Enterprise Foundations of Apache Cassandra™ and DS210: DataStax Enterprise Operations with Apache Cassandra™



COURSE DETAILS

- Introduction & Review
- Overview of DataStax Enterprise (DSE)
- Setting up the Cluster
- DSE Features:
 - Advanced Replication
 - Tiered Storage
 - Multi-Instance
 - DSE Analytics
 - DSE Search
 - DSE Graph
- Cluster Management
 - Cluster Sizing
 - Software Provisioning
 - Virtualization and Containers
 - VNodes
 - Stress Testing DSE Core
 - Scaling and Cluster Expansion
- Data Maintenance
 - Data Inconsistency
 - Node Repair
 - Merkle Trees
 - Backup and Restore
 - Down Node Recovery
 - Bad Disks and Data Corruption
- DSE Security
 - Advanced Security Overview
 - At-Rest Encryption
 - In-Flight Encryption
 - Authentication and Authorization
 - Auditing
 - OpsCenter Security
 - Security Summary

- Troubleshooting
 - Logs
 - Tools
 - Java Virtual Machine
- Performance Tuning
 - What is Performance Tuning?
 - Performance Goals
- Performance Tuning - Monitoring
 - Monitoring Tools
 - DSE Performance Service
- OpsCenter Performance Tuning – JVM Heap & Garbage Collection
 - Garbage Collection – Basics
 - Tuning and Monitoring
- Performance Tuning DSE Core
 - Compaction
 - DSE Core Settings
 - Common Performance Challenges
- Performance Tuning DSE Search, Analytics & Graph
 - DSE Search
 - DSE Analytics (Spark)
 - Spark Architecture
 - Analytics Job submission
 - Overview of Spark Modules
 - Configuring DSE Analytics
 - Accessing Spark
 - Spark UI
 - Apache Spark RDD
 - DSE Graph

BENEFITS

Classroom training is delivered by DataStax experts, who will share first-hand experiences and practical use cases. A high level of interactivity with the trainer coupled with hands-on labs deliver an active learning experience.

A private, on-site training environment provides the option to tailor the delivery based on your needs and preferences. We will work with your team to determine areas requiring emphasis during delivery. Additionally, on-site training fosters teamwork and team learning that continue through the project.

TERMS

Please refer to the DataStax Services Terms for specific details regarding terms of Training delivery.

- This is a pre-paid Service offering.
- The Service expires 12 months after receipt of a valid customer order.
- The maximum class size is 20 attendees.
- This training is delivered onsite.
- A virtual classroom option is available, but we do not recommend mixing in-person and remote attendees. The remote attendees have limited learning experience in this environment
- For more information, please contact your account executive or send an email to training@datastax.com

ABOUT DATASTAX

DataStax delivers the always-on, Active Everywhere distributed hybrid cloud database built on Apache Cassandra™. The foundation for personalized, real-time applications at massive scale, DataStax Enterprise makes it easy for enterprises to exploit hybrid and multi-cloud environments via a seamless data layer that eliminates the issues that typically come with deploying applications across multiple on-premises data centers and/or multiple public clouds.

Our product also gives businesses full data visibility, portability, and control, allowing them to retain strategic ownership of their most valuable asset in a hybrid/multi-cloud world. We help more than 400 of the world's leading brands across industries transform their businesses through an enterprise data layer that eliminates data silos and cloud vendor lock-in while powering modern, mission-critical applications. For more information, visit DataStax.com and follow us on [@DataStax](https://twitter.com/DataStax).