DevOpsSchool

Course curriculum · November 2026

BIG DATA TOOLS · CERTIFICATION-FOCUSED PROGRAM

Cassandra Certification

A practical, hands-on Cassandra Certification curriculum: 124 topics. Learn live online in a small batch, as a private corporate batch, or self-paced with one year of LMS access.

LIVE ONLINE **Max 8-10 hours**	CORPORATE **Private team batch, on demand**	SELF-PACED VIDEO **1-year LMS access**
BATCH SIZE **Max 10 learners**	NEXT BATCHES **1st of every month · weekends: first Saturday**	CERTIFICATE **Verifiable certificate of completion**

INSIDE THIS CURRICULUM

Who should attend	Objectives, audience, prerequisites
Agenda	124 topics
Formats and fees	Live, 1:1, self-paced, corporate
Trainer and reviews	Rajesh Kumar
Enrolment	Batches, payment, contacts

WHY DEVOPSSCHOOL

- Rated 4.6 on Google
- 1,500+ verifiable certificates issued in the public registry
- Trainer Rajesh Kumar: 20 years in industry
- Small batches: max 10 learners, every session recorded

Course page: www.devopsschool.com/courses/bigdata/cassandra-certification.html
Talk to us: WhatsApp +91 99057 40781 · +1 (469) 756-6329 · contact@DevOpsSchool.com · reply within 1 hour

COURSE FIT

Who this program is for

Use this page to decide whether Cassandra Certification matches your role and experience.

1

Objectives

Understand the core concepts and usage model, apply practical workflows through examples and guided tasks, and prepare for implementation, certification or team adoption.

2

Who should attend

Developers, DevOps engineers, administrators, SREs, security engineers, platform teams, release teams, technical leads and corporate teams working with this topic.

3

Before you start

Basic computer literacy and awareness of software, operations, cloud, DevOps or security workflows is helpful. Deep programming experience is not needed unless the topic requires it.

AGENDA AT A GLANCE · 124 TOPICS

Core curriculum

124 topics · Introduction to Cassandra

AGENDA · 124 TOPICS

Cassandra Certification agenda

Live online batches run for max 8-10 hours; corporate batches are planned with your team.

CORE CURRICULUM — 124 topics

1. Introduction to Cassandra
2. Getting Started with Cassandra
3. Cassandra Data Model
4. Steps in Configuration
5. Cassandra Architecture
6. Cassandra Query Language (CQL)
7. Configuring a Cluster
8. Performance Tuning
9. Managing a Cluster
10. Monitoring
11. Application Development
12. Integrating Cassandra with Apache Spark
13. Differences between NoSQL and RDBMS
14. Replication in RDBMS
15. Key Challenges with RDBMS
16. Schema
17. Advantage & Limitation
18. Key Characteristics of No SQL Data Base
19. Advantages of Cassandra
20. Where and when to use it?
21. Brewers CAP Theorem
22. Cassandra Key Features
23. Distributed and Decentralised
24. Elastic Scalability
25. High Availability and Fault Tolerance
26. Tuneable Consistency
27. Strict Consistency
28. Casual Consistency
29. Weak (Eventual Consistency)
30. Column Orientation
31. USE Cases for Cassandra
32. Installation
33. Configuration
34. Starting Cassandra
35. Cassandra Cluster Manager
36. Introduction to the data model

37. Shutting down Cassandra
38. Installation and configuration
39. Starting up and shutting down Cassandra
40. Running the Command-Line Client Interface
41. Basic CLI Commands, Help
42. Connecting to a Server, Describing the Environment
43. Creating and Keyspace and Column Family
44. Writing and Reading Data
45. The Relational Data Model
46. Cluster
47. Keyspaces
48. What is Column oriented database
49. Column Families
50. Column Family Options
51. Columns
52. Wide Rows
53. Skinny Rows
54. Column Sorting
55. Super Columns
56. Composite Keys
57. Design Differences between RDBMS and CASSANDRA
58. Query Language
59. Referential Integrity
60. Secondary Indexes
61. Sorting, DeNormalisation
62. Design Patterns
63. Materialized Views
64. Token calculation
65. Configuration overview
66. Node tool
67. Validators
68. Comparators
69. Expiring column
70. Configure a data model using Token calculation, node tool, validators, comparators.
71. Cassandra's ring architecture
72. Cassandra's write path
73. Cassandra's read path
74. On-disk storage
75. Additional components of Cassandra
76. Cassandra's read and write paths
77. The role that horizontal scaling plays

78. How data is stored on-disk
79. How Cassandra handles failure scenarios
80. Overview of Cassandra Data Modeling
81. cqlsh
82. Getting started with CQL
83. Use CQL syntax and solve different types of problems using it
84. Evaluating instance requirement
85. Operating systems optimization
86. Configuring the JVM
87. Configuring Cassandra
88. Operating system optimizations
89. Cassandra Stress
90. Write performance
91. Read performance
92. Other performance considerations
93. Looking into situations to apply different table-compaction strategies
94. Examining Apache Cassandra's cache and compression options
95. Improving upon the efficiency of the JVM
96. Optimizing network settings and configuration to avoid performance bottlenecks.
97. Add/Remove Nodes
98. Scaling Up
99. Scaling Down
100. Backing up and restoring data
101. Maintenance
102. Working with logical data centers
103. Backups
104. Techniques for ensuring data consistency.
105. JMX interface
106. Node tool utility
107. Metric stack
108. Log stack
109. Troubleshooting
110. Understand different monitoring and logging tools, and how they provide more insight for problem solving on your cluster.
111. Make decisions using reliable out-of-the-box applications from the open source community, including installing, configuring, analyzing, and setting up alerting.
112. Common mistakes made at the application and data model levels
113. Driver selection
114. Appropriate connection properties
115. Handling simple and complex result sets in Java
116. Loading data without overwhelming your nodes
117. Select Driver

118. Loading data without overwhelming your nodes.
119. Spark (architecture, installation, and configuration)
120. PySpark
121. SparkR
122. Read, transform, and write
123. The Jupyter web interface
124. Work with Jupyter web interface.

HOW YOU CAN LEARN

Formats and fees

The same agenda in four formats. Fees are in Indian rupees as of November 2026; the course page shows them in your currency.

FORMAT	DURATION	WHAT YOU GET	FEE
Live & interactive (online)	Max 8-10 hours	Instructor-led public batch of max 10 learners with demos, labs, Q&A and assignment review. Weekday batches start on the 1st of every month, weekend batches on the first Saturday of every month.	**INR 34,999**
1:1 live training (online)	Max 8-10 hours, one-to-one	The same agenda, taught one-to-one by the trainer. Starts immediately, without waiting for the next batch; sessions planned around your working hours, at your pace.	**INR 99,999**
Self-paced video	1-year LMS access	This program plus 20+ more courses and 50+ tools, at your own pace.	**INR 833/month** billed yearly at INR 9,996
Corporate	Planned with your team	A private batch for your team, on demand, with examples mapped to your platforms.	**Quote on request**

ASSESSMENT AND CERTIFICATE

Your progress is checked through hands-on tasks and assignments. On completion you receive a DevOpsSchool certificate of completion with a unique credential ID that anyone can verify at devopsschool.com/certificates.

INCLUDED WITH EVERY LIVE BATCH

- Every live session is recorded and stays in your LMS for a year.
- Can't attend your batch? Move to next month's batch.
- Free demo class before you pay.
- Free 10-15 minute call with an advisor or the trainer to check the course fits you.

YOUR TRAINER

Learn from Rajesh Kumar

Principal Architect, trainer and mentor in DevOps, SRE, DevSecOps and platform engineering, with 20 years across 8+ software MNCs, including Staff DevOps/SRE Engineer for a leading Japanese mobile-payment platform and Principal DevOps Architect and Manager in Europe.

Profile: www.rajeshkumar.xyz · Videos: youtube.com/@TheDevOpsSchool

20 years in industry	**200+** corporate trainings
10,000+ engineers mentored	**70+** organisations coached

REVIEWS

What learners say

Rated 4.6 on Google · more reviews at devopsschool.com/testimonials and in our video testimonials.

> “Rajesh is very good trainer. Rajesh was able to resolve our queries and question effectively. We really liked the hands-on examples covered during this training program.”
>
> Indrayani, India

> “The training was very useful and interactive. Rajesh helped develop the confidence of all.”
>
> Abhinav Gupta, Pune

START YOUR TRAINING

Join the next batch

Weekday batches start on the 1st of every month and weekend batches on the first Saturday of every month, with max 10 learners each. 1:1 training can start immediately; corporate batches run on demand. We reply within 1 hour.

Pay by UPI, credit and debit cards, net banking or PayPal. Before you pay, read our refund policy. All courses: www.devopsschool.com/courses/

ENROL OR RESERVE A SEAT
Cassandra Certification

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