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Welcome to Couchbase Professional Administrator Certification!

What to Expect:
⇒ Use this Study Guide to prepare for the Couchbase Professional Administrator Certification Exam.

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Certification Program and Exam Overview

This Study Guide is designed to help you prepare for the Couchbase Professional Administrator Certification exam. The 50-question certification exam is based on fundamental aspects of Couchbase 6.6+ and the CS300 Couchbase Administrator course. As with any certification, the most valuable parts are the learning process which leads to successful concept recognition.

We encourage you to take time to go through the CS300 Couchbase Administrator course which is offered regularly onsite and remotely. These materials are designed to walk you through essential topics, Couchbase features and benefits, as well as how Couchbase 6.5+ knowledge can be applied from the perspective of a System Administrator. However, taking the course is not a required prerequisite to taking the Certification Exam.

Items to understand:
  ⇒ Topics in this Study Guide and aligned to the exam and are organized by subject area, where each topic contains a description of what you should make sure you know.
  ⇒ The list of topics can be used as a check-list.
  ⇒ The instructor-led CS300 course can be used for points of reference and explanation of key concepts covered in the exam.
  ⇒ Everything in the exam is covered somewhere in the course materials.

Possible Preparation Path:
  ⇒ Attend the four-day CS300 course, onsite or remotely.
  ⇒ Make notes of key topics and call outs that align with the Study Guide topics listed.
  ⇒ Work through the lab exercises for practice with key concepts.
  ⇒ Please keep in mind that you are expected to have good working knowledge of all the topics listed.
Certification Exam Logistics

When you are ready to test and validate your product knowledge, please visit learn.couchbase.com/store to purchase an industry-recognized Couchbase Professional Administrator Certification Exam.

- Certification exams may be taken from a location of your choosing, anywhere in the world, provided you meet the basic system and test environment requirements. **Please read these instructions thoroughly. See here for requirements.** Mac users should pay specific attention here as setting changes may be required. All users will need to bring a photo ID to the exam.

- For help with your exam purchase, exam registration process, credentials verification, or other questions related to our certification program, process, and procedures, please visit couchbase.com/academy/certification.

- The exam itself is computer-based and must be purchased from Couchbase and scheduled with the vendor ProctorU in order to take it.

- The proctor will require 5-10 minutes of setup before you begin the exam. You will receive general instructions from the proctor.

- It is **IMPORTANT** that you do not start the exam until you are told to do so by the proctor. **Who must type in a password before you begin.** Starting the exam without the proctor can invalidate your exam.

- You have up to 90 minutes to answer the 50 multiple choice questions. You must answer at least 40 questions correctly (80%) in order to pass the exam.

- Read each question carefully, and provide the best answer. Questions can be skipped and returned to as you have the ability to review all selected answers before submitting the exam.

Certification Exam Pass/Fail Scenarios

If you earn a passing score, you will be granted the Couchbase Certified Professional Administrator badge which is granted by Acclaim, our badging vendor.

- This badge can be socialized on LinkedIn, Twitter, Facebook, WhatsApp, or within your email signature.

- The skills you show with this certification have been validated as appropriate for the Professional-level Administrator, and have been attested to by many Subject Matter Experts within Couchbase, Inc.

If you do not earn a passing score, you will need to:

- Review the study guide materials.

- Purchase a new exam on the Couchbase Academy Store.

- Schedule a time to take the exam with ProctorU.
Certification Exam Frequently Asked Questions (FAQs)

1. Is there anything in the exam, which was not covered in the course?
   No, everything in the exam is derived from the course materials and Professional lab exercises.

2. Do I have to know specific command argument details?
   No, however we expect you to be familiar with the tools that interface with Couchbase and their basic functionality.

3. Who is eligible to take a certification exam?
   Our certification exam is available to Administrators seeking to attain the Professional Administrator Certification. We offer a corresponding course to help you prepare for our certification exam. However, you may purchase and sit for a certification exam any time you like.

4. Can I get certified without taking the training course?
   Our training course is the best way to gain the knowledge tested in our certification exam. However, course attendance is not a required step in the certification process.

5. How do I purchase a certification exam?
   Exams are available for purchase on our Couchbase Academy Store. Locate the exam and add to cart (Couchbase Professional Administrator Certification Exam) where you will be directed to log in if you have not already done so. Once logged in, you will complete the checkout. Once the purchase has completed, you will receive several emails from ProctorU inviting you to set up your account and schedule your exam.

6. How long is my exam purchase good for?
   Once you have purchased the exam from the Couchbase Academy store, you must schedule and take your exam through ProctorU within 90 calendar days or the exam expires. Once this exam has expired, you must purchase another if you wish to continue with the exam. Therefore we encourage you not to wait to schedule your exam date.

7. What happens if I pass the exam?
   Within 72 hours of passing the exam, you will receive a notice to claim your digital badge through Acclaim by Credly. Once you accept your badge, you can share via LinkedIn, Twitter, and/or place in your email signature.

8. What happens if I do not pass the exam?
   If you need another opportunity to take the exam, you may purchase again from our store. We encourage you to refresh your knowledge with the study guide material before re-attempting the exam.

9. Do I have to create an account to take the exam or get the badge?
   In order to take the exam, you ARE required to create a ProctorU account. In order to accept your badge, you ARE required to create an account with Acclaim by Credly.
NoSQL Overview

1. What do industry trends indicate about the type of the majority of new data is generated?
2. How does Couchbase utilize sharding and caching?
3. What are the benefits of denormalizing data in Couchbase?
4. What kind of data storage models does Couchbase offer and what are their benefits to data management?

Couchbase Installation

5. What mechanism in Couchbase Server enables access to the console?
6. Which platforms support Couchbase Server for production?
7. What are the code requirements for running the Couchbase Analytics Service?
8. How does Couchbase enable encrypted or non-encrypted data communication?
9. Which protocols are used to avoid conflict when communicating via XDCR?
10. What are the best practices for service configurations of RAM, CPU, and disk?

Couchbase Data Platform

11. What are the different vBucket statuses within Couchbase?
12. What steps must be taken in order to enable sub-millisecond response time?
13. Which types of storage use the most or the least disk resources?
14. Explain the concerns associated with co-locating different services on a single node.
15. Describe the processes of Eventing.
16. What information can be found in a document's metadata?
17. For what type of data is Couchbase optimized?
18. How is high speed of operations achieved in Couchbase?
19. Compare Analytics querying with NIQL querying. What are the benefits of each?
**Bucket Management in Couchbase**

20. Explain the different components of vBuckets.

21. What can and cannot be altered about a Bucket after initial creation?

22. Define each of the different Bucket options within Couchbase as well as their benefits and limitations.

23. How do adding replicas and setting durability levels impact Protection Guarantees?

24. What are the minimum and maximum limits of Buckets and replicas within Couchbase?

25. What must be manually completed after new Buckets are added? What does Couchbase automatically do after new Buckets are added?

26. How does cbimport work with Couchbase?

27. What do each of the ejection policies achieve?

**Node Management in Couchbase**

28. What is required for auto-failover to function for each of the different Couchbase Services?

29. For which Services can Couchbase automatically failover? For which Services can Couchbase never automatically failover?

30. Define the steps of auto-failover.

31. How does Couchbase Compaction benefit the database?

32. Define the steps of Graceful failover.

33. Define the steps of Hard failover.

34. What does Full Recovery achieve in Couchbase?

35. Under which circumstances can auto-failover occur?

36. How does Rebalance impact the existing Services when new nodes are added?

37. Under which circumstances can Server Group failure be guaranteed or not guaranteed?

38. How does setting auto-failover time to the smallest or the largest value impact Service resources?
Cross Data Center Replication (XDCR)
39. What are the XDCR capabilities within Couchbase?
40. How does Advanced Filtering impact XDCR?
41. What does Conflict Resolution achieve in Couchbase? What are its limitations?
42. How is XDCR set up in Couchbase?
43. For what operations are replicated documents sent for the first time? For what operations are replicated documents resent?
44. What are four common reasons for XDCR to stop replicating in Couchbase?
45. How does XDCR impact a desire for High Availability of data?
46. When there is a node disconnect between XDCR nodes, what events can an Administrator expect?

Back-up and Restore
47. How does Couchbase Backup function?
48. What steps would be required of an Administrator who needs to perform a Cluster backup, but the last backup has failed?
49. What is important to remember about merging data from incremental backups in Couchbase?
50. How does cbbackupmgr function within Couchbase?
51. For what purpose is metadata stored by cbbackupmgr?
52. What are the important capabilities of Couchbase Backup and Restore functionality?

Security in Couchbase
53. What is an External LDAP group affiliation?
54. Name the different Administrator roles and their capabilities within Couchbase.
55. Which items are recorded in an auditing file entry?
56. How does the Control setting interact with Node-to-Node encryption?
57. How does Couchbase encrypt data at rest?
58. How does Couchbase use Field Level Encryption?
59. What are the major pillars of Couchbase Security?
Monitoring and Logging in Couchbase

60. Which statistics are available in Couchbase Monitoring?

61. Describe what “Active Docs Resident %” and “Disk Queue Size” refer to and where they can be found in Couchbase.

62. What email alerts are available to an Administrator, and how often can they be sent?

63. For what reason would an Administrator use the cblogredaction tool?

64. What information is redacted from collected Couchbase Server log files?

65. How do Nagios and Prometheus work with Couchbase logging?

66. What troubleshooting steps might you take if the client SDK cannot connect with Couchbase after initial installation?

67. Name some monitoring and logging best practices for Developers and Administrators.

68. Name the different ways Couchbase Server logs can be collected and the recommendation for collecting those logs.
Next Steps
Now that you have completed this Study Guide, we hope you feel prepared to take the Couchbase Professional Administrator Certification exam.

Exam
The exam must be purchased at the Couchbase Academy Store and scheduled with ProctorU, our testing vendor, in order to be taken. Once you have scheduled your exam time, your exam will contain 50 questions. You will be given 90 minutes to complete the exam, and no feedback will be provided at the question level. Once you have completed the exam, you will be given your score.

Questions? Concerns?
Please send all inquiries to training@couchbase.com.