

Course Number

CS300

Delivery MethodsPublic remote
Private onsite**Duration**Four days,
instructor-led training**Prerequisites**

Students should have experience with standard Linux/Unix skills used by administrators.

Target Audience

System Administrators

This is a fast-paced technical practicum on Couchbase Server 6.0+, from an Operations perspective. Through instructor-led discussion, demonstrations, and intensive hands-on labs, participants will build and administer a production capable Couchbase server cluster and Proof of Concept (POC), modeled on typical use-cases for high performance mission-critical Enterprise NoSQL databases.

Hands on lab time will be 40% to 60% or more, each day. Each student will be provisioned multiple virtual machines running in the cloud for hands-on practice installing, configuring, monitoring, and troubleshooting multi-node clusters in realistic scenarios, including filtered cross data center replication.

Objectives

Upon completing this course, students will be able to perform the following:

- Install, Configure and Manage Couchbase Server
- Configure, Create and Secure XCDR
- Configure and Manage Security in Couchbase Server
- Manage Backup and Restore in a Couchbase Clusters
- Monitor Couchbase Clusters
- Identify and Troubleshoot Issues in a Couchbase Cluster



Couchbase Server



XCDR



Security



Manage



Monitor



Troubleshoot

More Information

On-site training is also available for customers who prefer to bring a Couchbase Instructor to their own facilities.

For more information about on-site classes, contact us at training@couchbase.com.

Overview, architecture and installation of Couchbase server software

- Overview of Couchbase Server architecture and capabilities
- State the core use cases for Couchbase
- State the number of vBuckets used in the construction of a Couchbase database (Bucket)
- Name the method/object Couchbase server uses to determine which Couchbase node to contact for I/O
- Recognize and implement current hardware sizing guidelines for different workloads on a Couchbase cluster
- Recognize the installation and best practices guidelines for configuring Couchbase in production

Installation and configuration of Couchbase server software

- Recognize and implement current hardware sizing guidelines for different workloads on a Couchbase cluster
- Operate the Web Console to administer and monitor Couchbase for production operation
- Demonstrate use of the command-line toolkit to administer Couchbase
- Create, delete and modify a Bucket in a Couchbase cluster
- Examine the Couchbase file system structure to determine common file locations for data, indexes, analytics and logs

Security within a Couchbase cluster

- Name the access control mechanism used in Couchbase to control access to a given cluster
- Add users to a Couchbase cluster at a given access level (RBAC) and test access
- Configure and test auditing features in a given Couchbase cluster
- Name the types of security used for transport of data between application servers and Couchbase clusters
- State the security protocol used between Couchbase clusters

Software Development Kit

- Install a Couchbase Software Development Kit (SDK) on a node outside the cluster and execute simulated workloads into a Couchbase cluster
- Create/delete a key-value pair in a Couchbase cluster
- Determine where a given key-value pair is located within a Couchbase cluster

High Availability, Add/Remove nodes from a cluster

- Determine from a given set of conditions the best definition of a failure domain
- Configure Failure Domain Awareness (Rack Awareness) for two racks in a Couchbase cluster

High Availability, Add/Remove nodes from a cluster (continued)

- Rebalance a cluster after adding, removing or failing over a node(s)
- Name the three methods of performing a software upgrade to a Couchbase cluster

Indexes, Views, Full Text Search (FTS), Eventing & Analytics

- Create indexes on a couchbase cluster for use in a production environment, including Primary, Secondary, Composite, and Covering
- Construct an FTS index service(s) and perform a text search of an FTS service index
- Construct an Eventing service(s) example and demonstrate eventing operation
- Construct an Analytics service(s) example and demonstrate analytics queries

Cross Data Center Replication (XDCR)

- Setup and configure Cross Datacenter Replication (XDCR) between two dissimilar sized Couchbase clusters
- Modify replication threshold values and measure cluster behavior during XDCR replication between clusters
- Configure in-transit encryption between Couchbase clusters
- Setup, configure and measure Network Time Protocol (NTP) for use in conflict resolution strategies between clusters

Backup and Restore

- Name the three different types of backup levels
- Perform an online backup and restore of a cluster using command-line tools

Benchmarking, Monitoring, Troubleshooting and Performance

- Troubleshoot a Couchbase cluster for common configuration issues
- Name the tools used to benchmark and monitor a production cluster
- State the method Couchbase server uses to delete and recover disk space in operation
- Name the two methods of configuring Compaction within a Couchbase cluster
- Perform a manual compaction of a given Couchbase bucket
- Examine ejection and working set management within a cluster under varying workloads
- Use command line tools to collect Cluster State information for use in troubleshooting a Couchbase cluster
- Examine Log Redaction controls in a Couchbase cluster



About Couchbase

Unlike other NoSQL databases, Couchbase provides an enterprise-class, multicloud to edge database that offers the robust capabilities required for business-critical applications on a highly scalable and available platform. As a distributed cloud-native database, Couchbase runs in modern dynamic environments and on any cloud, either customer-managed or fully managed as-a-service. Couchbase is built on open standards, combining the best of NoSQL with the power and familiarity of SQL, to simplify the transition from mainframe and relational databases.

Couchbase has become pervasive in our everyday lives; our customers include industry leaders Amadeus, American Express, Carrefour, Cisco, Comcast/Sky, Disney, eBay, LinkedIn, Marriott, Tesco, Tommy Hilfiger, United, Verizon, as well as hundreds of other household names. For more information, visit www.couchbase.com.

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