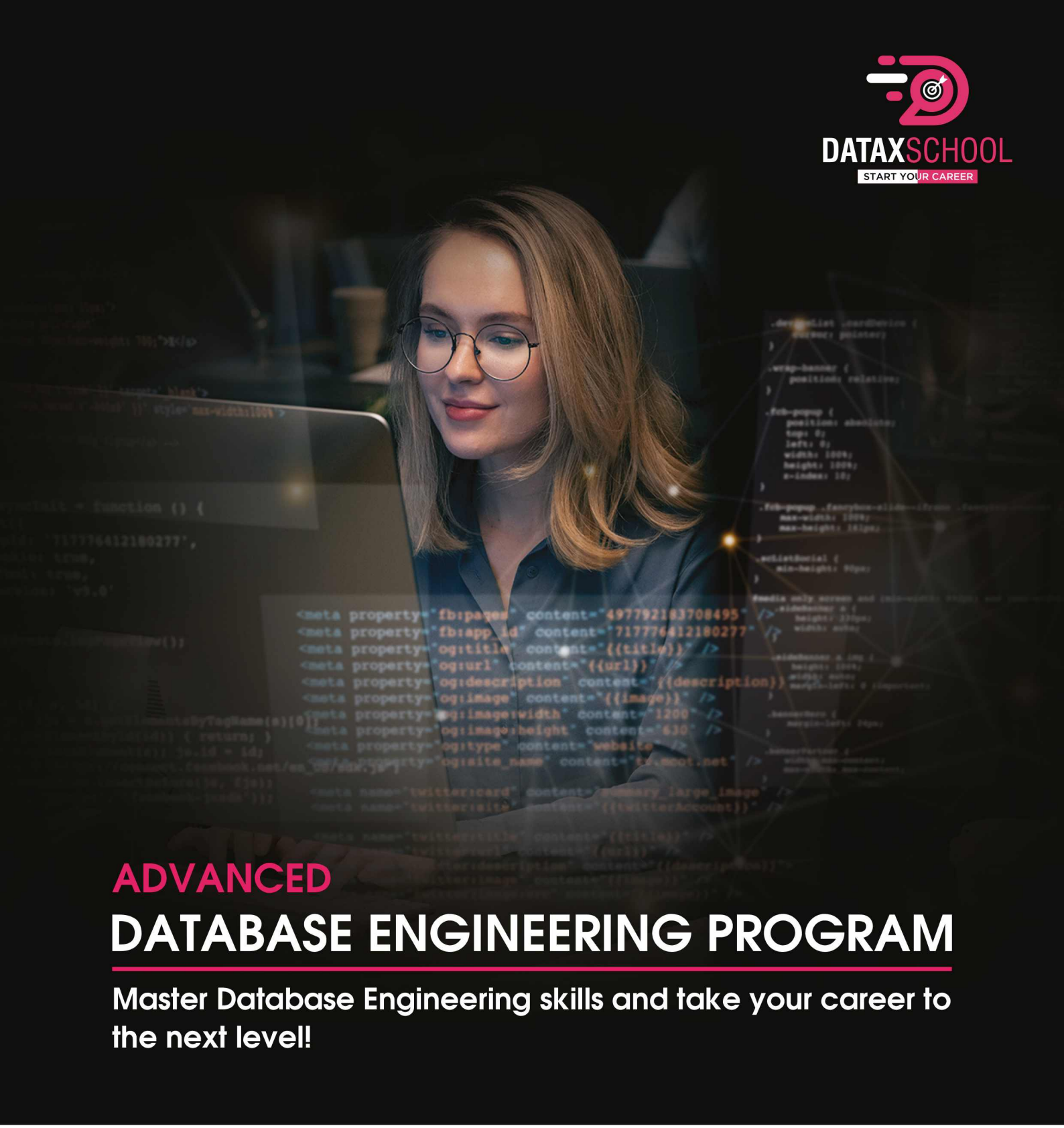
DATAXSCHOOL
START YOUR CAREER



ADVANCED
DATABASE ENGINEERING PROGRAM

Master Database Engineering skills and take your career to the next level!

2000+ Learners	1:1 Personlized Mentorship	55% Average Salary Hike

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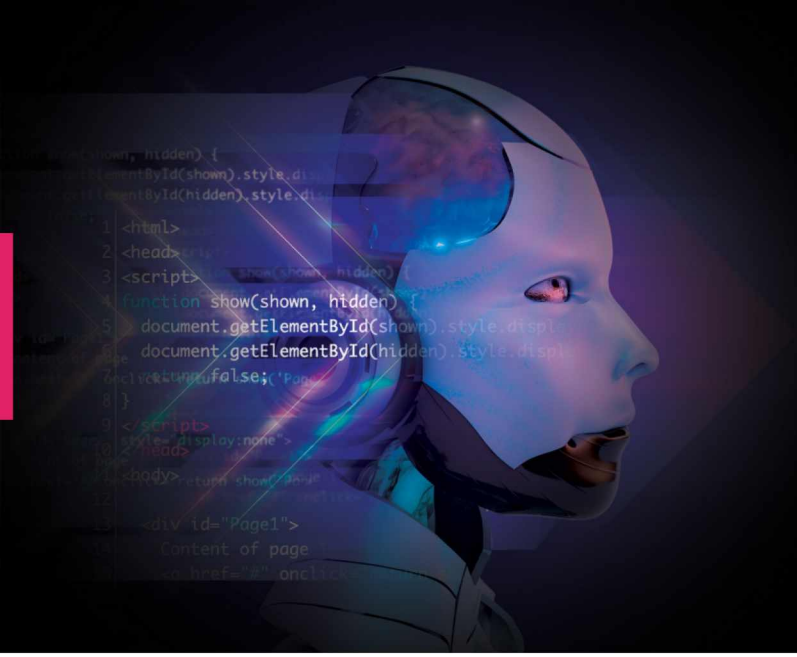

Advanced

Database Engineering Program

The Advanced Database Engineering Program offers in-depth training in both SQL (PostgreSQL) and NoSQL (MongoDB) database management. The course focuses on advanced topics like database architecture, performance tuning, replication, and high-availability solutions. With 60% hands-on experience, students gain practical skills in real-world DBA tasks, including backup, recovery, and security management. The program also covers cloud technologies such as AWS EC2, RDS, and DynamoDB for scalable solutions. This comprehensive training prepares individuals for senior database engineering roles in IT companies.

Hottest **Job of 21st Century**

1.1 Million Job Postings
There is a global estimate of 1.1 Million job postings for Database Engineers in 2030

Skill Development
Database Engineers are equipped with various relevant skills that fetch lucrative job offers

Growing Database Engineering Industry
50% CAGR in the global data industry

Future-oriented Career
Database Engineering is a budding field; a head start will prove to be beneficial

Popular Degree
46% of Database Engineers have a master's degree

High Demand
In 2030, India and the US will face a demand supply gap of 4,00,000 Database Engineers

Our **Credentials**

250+
Aspiring Active Students

10
Industry-expert Instructors

250+
MNC's Hiring Company

24 Lakhs
Highest Salary

55%
Average Salary Hike

7 Lakhs
Lowest Salary

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About Program

DataXSchool PGP Certification in Database Engineering will provide you in-depth knowledge in MongoDB, PostgreSQL, Linux, Database Management System, Data Monitoring, Data Replication, cloud services of AWS. Work on multiple real-world projects to gain knowledge on creating production-ready ETL and pulling data from multiple data sources, including real-time streaming services, and loading them into cloud data warehouses.

Learning Format
Online Boot Camp

6 Months
Live Classes

Career Services
by DataXSchool

Key Highlights

- 6 Months of Live Sessions by Industry Experts
- 70 Hrs of Self-paced Videos
- 24*7 Support
- 140 hours self lab practice
- Soft Skills Essential Training
- Career Guidance
- One-on-One with Industry Mentors
- E-learning Videos
- Dedicated Learning Management Team

Technology Stacks

mongoDB

aws

PostgreSQL

MongoDB Atlas

Jira

Confluence

ChatGPT

Who Can Apply for the Course?

- Freshers and Undergraduates willing to pursue a career in database engineering
- Anyone looking for a career transition to database engineering
- IT Professionals
- Experienced Professionals willing to learn database engineering
- Technical and Nontechnical Professionals with basic-level programming knowledge can also apply
- Project Managers

Application Process

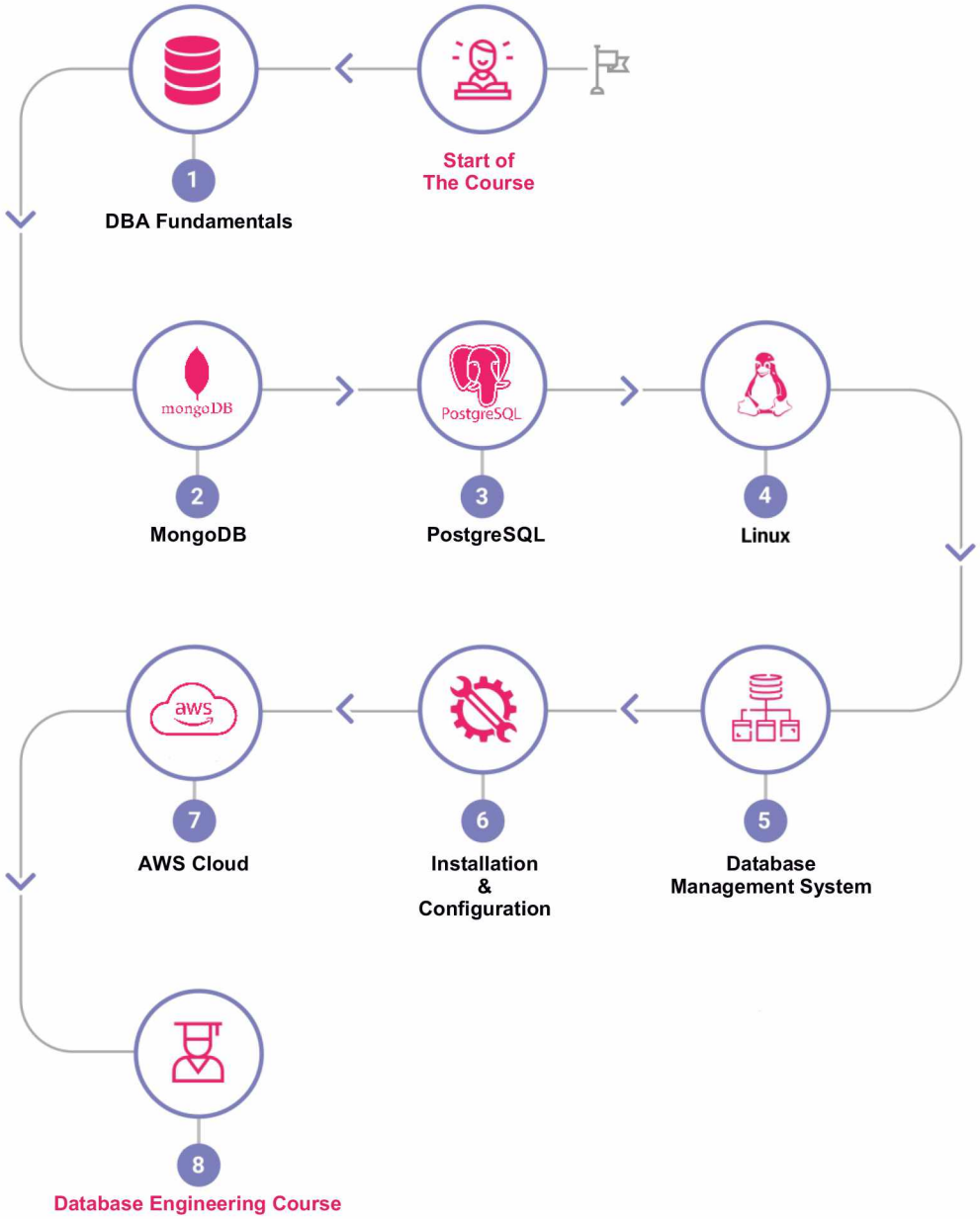
The application process consists of three simple steps. Candidates have to submit their application. An offer of admission will be made to the selected candidates, and their application will be accepted upon the payment of the admission fee.

1. **SUBMIT APPLICATION**
   Tell us a bit about yourself and why you want to join

2. **ADMISSION TEST & APPLICATION REVIEW**
   Clear the admission test and have a personal interview with our interview panel

3. **ADMISSION LETTER**
   Shortlisted candidates would be offered the admission letter

Live Courses



MongoDB DBA Expert Course Modules

Module 1

MongoDB Installation & Setup on AWS and Linux

- Introduction to MongoDB architecture and installation processes.
- Set up MongoDB on AWS EC2 instances and Linux servers.
- Install MongoDB Compass and MongoDB Atlas for cloud-based management.
- Configure MongoDB with appropriate settings on AWS and Linux.
- ·Lab: Install and configure MongoDB on AWS and Linux environments.

Module 2

Daily MongoDB DBA Tasks on AWS & Linux

- Perform daily backups and restores on MongoDB clusters in AWS/Linux.
- Monitor MongoDB performance and resource usage (CPU, Memory, Disk I/O).
- Set up automated tasks using cron jobs on Linux and AWS.
- Configure and monitor MongoDB's logging for issues and performance.
- Lab: Automate daily maintenance tasks on MongoDB using AWS/Linux.

Module 3

MongoDB Data Modeling & Schema Design on AWS/Linux

- Design MongoDB schemas for optimal performance and scalability.
- Implement document-based data models and relationships in MongoDB.
- Schema design best practices and troubleshooting on AWS/Linux environments.
- Plan data partitioning strategies for large datasets on MongoDB.
- Lab: Design and implement a data model on MongoDB in AWS/Linux.

Module 4

MongoDB Query Optimization & Indexing on AWS/Linux

- Indexing strategies for MongoDB performance tuning and query optimization.
- Perform query analysis using MongoDB's explain plan on AWS/Linux.
- Automate index creation and maintenance for optimized query performance.
- Troubleshoot and optimize slow-running queries on AWS/Linux instances.
- Lab: Optimize MongoDB queries with indexing and profiling on AWS/Linux.

Module 5

MongoDB Replication Setup & High Availability on AWS/Linux

- Set up MongoDB replica sets across multiple AWS and Linux nodes.
- Manage replica set elections and automatic failover mechanisms.
- Configure read and write operations across replica sets for balance.
- Monitor replica set health and troubleshoot issues in real-time.
- Lab: Set up, manage, and troubleshoot MongoDB replica sets on AWS/Linux.

Module 6

Sharding & Horizontal Scaling on AWS/Linux

- Implement MongoDB sharding for horizontal scaling on AWS/Linux.
- Understand shard key selection and its impact on data distribution.
- Configure MongoDB sharded clusters and balance data across shards.
- Monitor and maintain sharded clusters for performance and availability.
- Lab: Set up MongoDB sharding on AWS and Linux for scalability.

Module 7

MongoDB Security Setup on AWS/Linux

- Secure MongoDB deployments using authentication and encryption on AWS/Linux.
- Implement Role-Based Access Control (RBAC) for database security.
- Enable SSL/TLS encryption for data in transit on AWS/Linux.
- Set up MongoDB auditing and access controls for compliance.
- Lab: Implement MongoDB security features on AWS/Linux environments.

Module 8

Monitoring, Logging & Performance on AWS/Linux

- Monitor MongoDB instances using AWS CloudWatch and Linux tools.
- Set up alerts and notifications for database performance issues.
- Analyze MongoDB logs for troubleshooting and issue resolution.
- Optimize MongoDB performance with hardware resource management.
- Lab: Monitor MongoDB performance and logs using AWS/Linux tools.

Module 9

MongoDB Automation & Troubleshooting on AWS/Linux

- Automate MongoDB administrative tasks using cron jobs on Linux/AWS.
- Troubleshoot MongoDB performance issues such as slow queries and replication.
- Implement MongoDB health checks and automated alerts for monitoring.
- Optimize MongoDB cluster management for high availability and scaling.
- · Lab: Automate daily DBA tasks and troubleshoot MongoDB issues on AWS/Linux.

Module 10

Interview Preparation & Job Readiness

- Build an optimized MongoDB DBA resume and LinkedIn profile.
- Enhance Naukri and LinkedIn profiles for MongoDB DBA opportunities.
- Mock interviews with common technical and HR questions for MongoDB DBAs.
- Improve communication skills for effective client interaction and presentations.
- · Lab: Participate in mock interviews and receive feedback on performance.

Skills to Master

- MongoDB
- PostgreSQL
- S3
- RDS
- SQL
- MongoAtlas
- AWS
- Ec2
- Linux
- ChatGPT
- Jira
- Confluence

PostgreSQL DBA Expert Course Modules

Module 1

PostgreSQL Installation & Setup on AWS and Linux

- Introduction to PostgreSQL architecture and installation on AWS/Linux.
- Install PostgreSQL on AWS EC2 instances and Linux servers.
- Set up PostgreSQL clusters for high availability and security.
- Install and configure tools like pgAdmin, and configure access rights.
- Lab: Set up and configure PostgreSQL on AWS and Linux environments.

Module 2

Daily PostgreSQL DBA Tasks on AWS & Linux

- Perform daily backups and restores of PostgreSQL databases on AWS/Linux.
- Monitor PostgreSQL performance and resource usage (CPU, Memory, Disk I/O).
- Automate maintenance tasks using cron jobs on Linux and AWS.
- Set up PostgreSQL logging and analyze logs for troubleshooting.
- Lab: Automate daily backup and maintenance tasks for PostgreSQL.

Module 3

PostgreSQL Data Modeling & Schema Design

- Best practices for designing PostgreSQL schemas for performance.
- Table structures, indexes, and foreign keys for data integrity.
- Normalization and denormalization strategies in PostgreSQL.
- Optimizing schemas for read and write-heavy workloads.
- Lab: Design and implement a data model for PostgreSQL applications.

Module 4

PostgreSQL Query Optimization & Indexing on AWS/Linux

- Indexing strategies for PostgreSQL query performance tuning.
- Query optimization with EXPLAIN ANALYZE and pg_stat_statements.
- Partitioning large tables for performance improvement.
- Troubleshoot slow queries and optimize with indexing and vacuum.
- Lab: Optimize PostgreSQL queries using indexing and performance tuning.

Module 5

PostgreSQL Replication & High Availability on AWS/Linux

- Set up PostgreSQL streaming replication across multiple AWS/Linux nodes.
- Manage primary and standby servers, handle failovers and recovery.
- Implement synchronous and asynchronous replication for data consistency.
- Monitor replication lag and troubleshoot replication issues.
- Lab: Set up, manage, and troubleshoot PostgreSQL replication on AWS/Linux.

Module 6

PostgreSQL Sharding & Horizontal Scaling

- Introduction to PostgreSQL sharding for handling large datasets.
- Partitioning strategies for scaling PostgreSQL horizontally.
- Implementing a multi-node setup for PostgreSQL sharding.
- Managing data consistency and balancing data across shards.
- Lab: Implement PostgreSQL sharding and horizontal scaling on AWS/Linux.

Module 7

PostgreSQL Security Setup on AWS/Linux

- Secure PostgreSQL with SSL encryption for data in transit.
- Role-based access control (RBAC) for PostgreSQL security management.
- Set up password authentication and manage access rights securely.
- Implement PostgreSQL auditing for compliance and security monitoring.
- Lab: Configure PostgreSQL security features on AWS/Linux environments.

Module 8

PostgreSQL Monitoring, Logging & Performance on AWS/Linux

- Monitor PostgreSQL performance using AWS CloudWatch and Linux tools.
- Set up monitoring with pg_stat_statements and other performance tools.
- Log analysis for troubleshooting and resolving PostgreSQL issues.
- Optimize PostgreSQL performance using system resource monitoring.
- Lab: Monitor and troubleshoot PostgreSQL performance and logs on

Module 9

PostgreSQL Automation & Troubleshooting on AWS/Linux

- Automate PostgreSQL administration tasks using cron jobs on Linux/AWS.
- Troubleshoot PostgreSQL issues like slow queries, replication, and disk usage.
- Implement health checks, automated alerts, and issue resolution systems.
- Automate backups, indexing, and log rotation on AWS/Linux environments.
- Lab: Automate PostgreSQL DBA tasks and resolve common issues on

Module 10

Interview Preparation & Job Readiness

- Resume Building: Optimize your PostgreSQL DBA resume and LinkedIn profile.
- LinkedIn and Naukri profile enhancement for PostgreSQL DBA roles.
- Mock technical interviews with PostgreSQL DBA questions and answers.
- Improve communication and interpersonal skills for client-facing roles.
- Lab: Participate in mock technical and HR interviews.

Skills to Master

- MongoDB
- PostgreSQL
- S3
- RDS
- SQL
- MongoAtlas
- AWS
- Ec2
- Linux
- ChatGPT
- Jira
- Confluence

Course Projects

Retail

Social Media

Supply Chain

E-Commerce

Banking

Health Care

Insurance

Retail Database Management System with PostgreSQL Build a scalable and secure retail database using PostgreSQL to manage transactions, inventory, orders, and sales analytics. Optimize queries for high performance, ensure data security and backup strategies, and implement high-availability clustering. Leverage AWS (EC2, S3, RDS) for cloud scalability while using Jira & Confluence for project tracking. Gain hands-on experience in real-world PostgreSQL database engineering.

Social Media Reels Management System with MongoDB Develop a scalable and high-performance database using MongoDB to manage social media reels, user interactions, and content analytics. Design an efficient NoSQL schema for storing videos, likes, comments, and shares while ensuring fast data retrieval. Implement replication and sharding for high availability and scalability. Gain hands-on experience in building real-world social media database systems with MongoDB.

Supply Chain Management with PostgreSQL & AWSBuild a high-availability supply chain database using PostgreSQL & AWS RDS for managing inventory, orders, and logistics. Implement replication, failover, and analytics queries with S3 for reporting. Optimize performance for real-time insights and efficient tracking.

E-Commerce Database System with SQL & NoSQLDesign a hybrid database architecture using PostgreSQL for transactions (orders, payments) and MongoDB for product catalogs & user interactions. Ensure scalability, fast queries, and real-time analytics with replication and indexing. Optimize for high availability and seamless shopping experiences.

Banking System with Captcha Validation & Credit Card AnalysisBuild a secure banking database using PostgreSQL for transactions & user data and MongoDB for captcha validation & credit card analysis. Implement fraud detection, real-time analytics, and high-availability replication to ensure security and scalability. Optimize queries for fast processing and secure financial operations.

Healthcare Management System with MongoDBDevelop a scalable healthcare database using MongoDB to manage patient records, medical history, appointments, and diagnostics. Implement fast data retrieval, high availability, and secure access controls. Use replication and sharding for seamless scalability and reliability. Optimize for real-time patient data access and healthcare analytics

Insurance Management System with SQL & NoSQLDesign a hybrid insurance database using PostgreSQL for policy management, claims, and transactions and MongoDB for customer profiles, documents, and analytics. Implement fraud detection, high availability, and real-time query optimization for seamless processing and secure data handling.

DataXSchool

Career Services

50+ Webinars

60+ Job Shares

250+ MNC's Hiring Company

55% Avg. Salary Hike*

Career-oriented Sessions

Attend 10+ career-oriented sessions by industry mentors and prepare your career trajectory

Assured Interviews

Get job Opportunities with Top MNC's & Startups upon movement to Placement Pool**

Profile Building

Craft a Database Engineers resume and LinkedIn and Noukri profile to make an impression on top employers

Job Fairs

Job fairs are conducted regularly to introduce learners to major organizations

Mock Interview Preparation

Prepare with mock interviews including most asked questions by top employers

Hackathons

Work in teams and get exclusive access to hackathons

1:1 Mentoring Sessions

Get 1:1 guidance at every step in your career transition to Database Engineers

Learner Reviews

Payal Kumari
Senior DBA

I am from Bhubaneswar, an MBA graduate with 4 years of experience as a Marketing Manager earning 6 LPA. Despite my efforts, my salary remained stagnant, and I knew it was time for a career transformation. Transitioning from marketing to IT felt like a daunting challenge, especially since I lacked technical skills.

Santosh Patra
Senior DBA

I'm thrilled to announce that I have secured a job at Wipro Techology as a Senior DBA with a monthly salary of 95,000! This incredible achievement wouldn't have been possible without DataXSchool and their top-notch DBA course. The course not only equipped me with the right skills but also gave me the confidence to crack the Tech Mahindra interview with ease. I owe my success to Srikanta Sir, whose guidance and mentorship inspired me to pursue this course. His support has been invaluable in helping me achieve my dream job.

Jogeswar Rao
MangoDB DBA

It's a proud moment for me to share that I've been hired as a Database Engineer at Wipro, Hyderabad, with an impressive package of 13 LPA per annum. As a B.Sc graduate, this achievement feels incredible, and all credit goes to DataXSchool and our mentor, Srikanta Sir. The 4-month Database Engineer course was comprehensive and practical, covering:

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About Us

DataXSchool Learning Centre is a premier educational institution focused on providing cutting-edge training in data science, analytics, artificial intelligence, and other emerging technologies. Our mission is to empower individuals and organizations by equipping them with the practical skills needed to excel in today's data-driven world.

We offer a wide range of courses designed to cater to learners at every level, from beginners to advanced professionals, with expert instructors guiding them through hands-on, real-world applications. Our curriculum is built on the latest industry trends and best practices, ensuring that students gain relevant and actionable knowledge.

At DataXSchool, we also offer corporate training programs tailored to meet the specific needs of businesses, helping them build a skilled workforce capable of tackling complex data challenges. We foster a collaborative and inclusive learning environment that promotes growth, innovation, and continuous learning.

Whether you're looking to enhance your career, train your team, or dive into the world of data science, DataXSchool Learning Centre is your trusted partner for success.

Our Mission

To equip students with practical skills and realworld experience, ensuring they are fully prepared and positioned for successful careers in the software industry.

Our Vision

To be a leading institution that transforms aspiring learners into successful IT professionals, bridging the gap between education and employment through innovative, hands-on training.

Our Values

At DataXSchool Learning Centre, we are driven by excellence, innovation, and integrity, ensuring top-quality education and ethical practices. We foster inclusivity and lifelong learning, creating a supportive environment for all. Through collaboration, we build a thriving community, empowering students with practical skills and confidence. Focused on impact, we prepare learners to solve real-world challenges with innovative, data-driven solutions.

STUDENTS PLACEMENT

Chandan Kumar

Tech Mahindra

Salary : 23 LPA

Jitendra Pradhan

BOEING

Salary : 16 LPA

Jogeswar Rao

wipro

Salary : 13 LPA

Payal Kumari

OpenTable

Salary : 25 LPA

Pratap Patra

Infosys

Salary : 16 LPA

Priyadarshini

cognizant

Salary : 12 LPA

Ramesh Jena

TCS TATA CONSULTANCY SERVICES

Salary : 9 LPA

Sai Kumar

Walmart

Salary : 15 LPA

Sambit Pradhan

IBM

Salary : 8 LPA

Santosh Patra

Tech Mahindra

Salary : 12 LPA

Simanchal Nayak

vagaro

Salary : 7 LPA

Himanshu Rout

IBM

Salary : 13.2 LPA

Siba Patra

MAVENIR

Salary : 10.5 LPA

R. Rama

VI

Salary : 6.5 LPA

Barsha Sethi

Deloitte.

Salary : 13.8 LPA

Jitendra Pradhan

TCS TATA CONSULTANCY SERVICES

Salary : 7.6 LPA

Anupam Panda

LTIMindtree

Salary : 6.7 LPA

Rajesh Patro

Rakuten

Salary : 8.5 LPA

& Many more students...

Our Students, Our Pride!

Top 250+ MNC's

Infosys Deloitte. cognizant TCS TATA CONSULTANCY SERVICES IBM Tech Mahindra Capgemini

HEXAWARE amazon LTIMindtree CRED SAMSUNG HCL Flipkart wipro

Our Trainers

Srikanta Patra
Data Architect, Bengaluru,India,
15 Yrs Exp

Srikanta Patra is a seasoned Data Architect with 15 years of rich experience as a Database Engineer. Currently serving as a Data Architect, he has mastered almost all major database technologies and is a certified database trainer. Srikanta has contributed his expertise across diverse industries, including gaming, travel, telecom, and healthcare, primarily in dynamic startup environments. His deep technical acumen and industry experience make him a trusted leader in designing scalable and efficient data solutions.

Bismaya Hota
Senior Consultant, Costa Rica, USA,
13 Yrs Exp

Bismaya Kota is a highly experienced Senior Consultant with 13 years of expertise in data governance, data architecture, SQL, Python, data analytics, and data engineering. Having worked with top multinational companies like Infosys and IMS Health, Bismaya has provided solutions to global clients, including a major client in Costa Rica,USA. His vast experience in designing scalable, efficient systems and his practical teaching approach make him a valuable instructor, equipping students with the skills needed to excel in the data field and prepare for real-world challenges.

Subrat Nayak
Sr. Technical Consultant, Bengaluru, India,
15 Yrs Exp

Subrat Kumar Nayak is a skilled Solution Architect with 15 years of experience in designing and implementing data-driven solutions. He has worked extensively in supply chain projects, where he focused on data analysis and architecting systems from scratch to optimize operations. Subrat has also contributed to major projects in the banking sector, including with Barclays and Austtila, where he helped design robust, scalable solutions to meet complex business needs. His expertise in data architecture, system design, and problem-solving, combined with his deep understanding of various industries, makes him an exceptional instructor who prepares students to tackle real-world challenges in data and technology.

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