



## EnterpriseDB's PostgreSQL Training for Database Administrators (DBA)

### Course Outline

<p><b>Introduction &amp; Architecture</b> History of PostgreSQL Major Features Limitations Architectural Overview PostgreSQL Terminology</p> <p><b>PostgreSQL System Architecture</b> Architectural Summary Database Clusters Physical Database Architecture Data File Architecture Database File Layout Database Page Layout Process Architecture Connect Request Backend Spawning Multi-Version Concurrency Control (MVCC) Write-Ahead Logging</p> <p><b>Installation</b> Installation Creating a database cluster Starting and Stopping the Server (Windows) Starting and Stopping the Server (Other) Lab Exercise - Installation Install PostgreSQL from source Create a database cluster Start the database server Connect to the server using psql Stop the database server Using PSQL Tool</p> <p><b>Introduction to Migration Studio</b> Overview GUI edborascan</p> <p><b>Performance Tuning</b> Explain and Explain Analyze Forcing Query Plan Selection Helping the Optimizer Using Views Creating Rules with Views Indexing Constraints Clustering Rows</p>	<p><b>Routine Database Maintenance Tasks</b> Backup &amp; Recovery Log Management Routine Vacuuming Recovering Disk Space Vacuum Full Updating Planner Statistics Preventing Transaction ID Wraparound Failures Routine Reindexing</p> <p><b>Backup &amp; Recovery</b> Dump &amp; Restore File System Backup - copying DATA folder pg_start_backup and pg_stop_backup PITR - Point in Time Recovery Creating a base backup Archive command Recovery file parameters Lab to test PITR</p> <p><b>High Availability &amp; Replication</b> Why Use Replication Replication Introduction to Slony</p> <p><b>Security</b> Levels of security: pg_conf, schemas and users and table level. USERS; GROUPS; ROLES Object Ownership Access control Application Access pg_hba.conf Schemas and Search Paths Lab to create USERS, SCHEMAS, ROLES, Alter SEARCH_PATH, GRANT and REVOKE privileges</p> <p><b>PostgreSQL Partitioning and Tablespaces</b> Partition Methods Partition Setup Table space Management</p> <p><b>Monitoring &amp; Statistics</b> Database Logs OS Process Monitoring Statistics Collector Statistics Parameters Statistics Views and Functions Timing</p>
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