**Day 1**

* **Overview**
  + Oracle vs PostgreSQL
  + History
  + Major Features
  + PostgreSQL Limits
  + PostgreSQL Process Architecture
  + MVCC
  + Write Ahead Logging
  + The Background Writer
  + PostgreSQL Version Highlights
  + AWS Aurora
    - Pros/Cons
* **PostgreSQL Data Types**
  + Numeric Types
  + The Monetary Type
  + Character Types
  + Binary Types
  + Date / Time Types
  + The Boolean Type
  + Enumerated Types
  + Geometric Types
  + Network Address Types
  + The Bit String Type
  + Text Search Types
  + UUID
  + XML
  + JSON Types
  + Array Types
  + Composite Types
  + Range Types
  + The OID Type
* **PostgreSQL Installation**
  + Platforms
  + RPM Based Installation
  + Initializing a Cluster
  + Starting & Stopping a PostgreSQL Cluster
  + Dropping / Removing a PostgreSQL Cluster
  + AWS Aroura
    - Initializing and Auroura Instance
    - Starting & Stopping an Aurora Instance
  + Lab
* **PostgreSQL Configuration**
  + Access Control
  + The postgresql.conf File
  + ALTER DATABASE / ALTER ROLE
  + The show command and the SET command
  + PostgreSQL Settings Walkthrough
  + AWS Aurora
    - Parameter Settings
    - Parameter Groups
    - Deploying Setting Changes
    - Parameters available in AWS Aurora
  + Lab
* **Intro to psql**
  + Command line parameters
  + Meta commands
  + SET Commands
  + psql Security
  + Lab

**Day 2**

* **Moving Data with PostgreSQL**
  + Moving Data with DML
  + COPY
  + COPY vs \copy
  + Lab
* **Functions and Operators**
  + Comparison Functions and Operators
  + Mathematical Functions and Operators
  + String Functions and Operators
  + Binary String Functions and Operators
  + Bit String Functions and Operators
  + Pattern Matching
  + Data Type Formatting Functions
  + Date/Time Functions and Operators
  + Enum Support Functions
  + Geometric Functions and Operators
  + Network Address Functions and Operators
  + Text Search Functions and Operators
  + XML Functions
  + JSON Functions and Operators
  + Sequence Manipulation Functions
  + Conditional Expressions
  + Array Functions and Operators
  + Range Functions and Operators
  + Aggregate Functions
  + Window Functions
  + Subquery Expressions
  + Row and Array Comparisons
  + Set Returning Functions
  + System Information Functions
  + System Administration Functions
* **Managing PostgreSQL Databases**
  + Creating Databases
  + Creating Schemas
  + ALTER SYSTEM
  + Creating Tables
  + ALTERING Tables
  + JOINS
  + INDEXES
  + Lab
* **Roles and Security**
  + VIEWs
  + Creating ROLES / USERS
  + Sequences
  + Permissions
  + Lab

**Day 3**

* **Tablespaces, Partitioning and Advanced Features**
  + VACUUM
  + Tablespaces
  + Inheritance
  + Inheritance Based Partitioning
  + Declarative Partitioning
  + Lab
* **Routine DBA Tasks and Best Practices**
  + Log Management
  + Query Analysis
  + VACUUM & Monitoring
  + REINDEX
  + Lab
* **Monitoring & Statistics**
  + Database Logs & OS Moniotoring
  + The PostgreSQL Statistics Collector
  + The PostgreSQL Statistics VIEWs
  + PG Badger & PGCLUU
  + AWS Aurora
    - Logs
    - PG Badger / PGCLUU
    - AWS Aurora Cloudwatch Metrics
  + Lab
* **PostgreSQL Performance Tuning**
  + OS & Hardware Tuning
  + Checkpoint Tuning
  + Query Tuning
  + Lab
* **Backup & Recovery**
  + Logical Backups
  + Logical Restore
  + Restore via a List File
  + Physical Backup
  + Physical (PITR) Restore
  + AWS Aurora
    - Logical Backups
    - Physical Backups
    - Recovery
  + Lab

**Day 4**

* **Foreign Data Wrappers**
  + Installation
  + Deploy FDW Tables
  + FDW Joins & Other Constructs
  + Lab
* **Replication and High Availability**
  + Streaming Replication
  + Logical Replication
  + High Availability (and HA Tools)
  + AWS Aurora
    - Read Replicas
    - HA
  + Lab
* **Logical Replication**
  + Logical Replicatopn Concepts
  + Logical Replication vs pglogical
  + Setup
  + Monitoring & Debugging
  + Lab
* **PostgreSQL Upgrades**
  + Minor Version Upgrades
  + Major Version Upgrades
  + pg\_upgrade
  + Logical Replication Based Upgrades
  + AWS Aurora Upgrades
  + Lab
* **PostgreSQL Contribs and Extensions**
  + PostgreSQL Contribs
  + PostgreSQL Extensions
  + Extensions available / Not available in AWS Aurora
  + Lab

**Day 5**

* **The PL/pgSQL Procedural Languages**
  + Overview
  + Structure
  + Declarations
  + Expressions
  + Basic Statements
  + Control Structures
  + Cursors
  + Errors and Messages
  + Examples
  + Lab
* **PostgreSQL Triggers**
  + Overview of Trigger Behavior
  + Visibility of Data Changes
  + Trigger Variables
  + Trigger Examples
  + Lab
* **EVENT Triggers**
  + EVENT Triggers Overview
  + EVENT Trigger Events
  + Examples
  + Lab
* Questions