

Detailed Outline of 2 Day Graph Database Workshop (Day 1)

(P) = Presentation

(G) = Guided Exercise

(E) = Self Directed Exercise

Day 1

- Welcome
 - Rules
 - Format
 - Logistics
- What are NoSql databases and how do they compare to relational databases? (P)
 - Scalability
 - High level overview of CAP Theorem
- Where do graph databases fit? (P)
 - What is a graph
 - Index free adjacency
- Overview of known use cases for a graph database (Social, routing, fraud detection, recommendations ... connectedness) (P)
- Why Neo4j over other options? (P)
- Neo4j package options (P)
- Neo4j license options (P)
- Get Neo4j running on everyone's laptops (G)
 - Through a bat file
 - As a windows service
- Introduction to the web UI (G)
 - Browser
 - Web Admin
- SQL to Cypher (P + G)
 - Insert simple data into the graph
 - Query simple data from the graph
 - Query paths from the graph
 - Query dynamic length paths from the graph
- Labels (P + G)
 - Create labels
 - Query using labels
 - Create indexes
 - Profile query with and without indexed labels
- Data Modelling (P + E)
 - Property graphs
 - Relational vs Graph modelling
 - Common modelling pitfalls
 - Model, Create and Query a social graph, exercise
 - Add extra data to social graph and do recommendation queries, exercise
- Rest API (P + G + E)
 - Navigating
 - Executing Cypher & Interpreting results
 - Transactions
 - Add extra data to social graph and query it, all using Cypher, over Rest API using curl exercise
- Backup social network graph
- Retro

Detailed Outline of 2 Day Graph Database Workshop (Day 2)

(P) = Presentation

(G) = Guided Exercise

(E) = Self Directed Exercise

Day 2

- Welcome
 - Rules
 - Format
 - Logistics
- Neo4j C# clients (P + E)
 - Overview up Neo4N, Neo4jClient and Cypher.NET
 - Write a console app that queries the social graph, exercise
- Every day Cypher (P + E)
 - Cypher ref card intro
 - Optional matches, exercise (graph to be decided)
 - Deleting and updating, exercise (graph to be decided)
 - Paging (coping with black holes), exercise (graph to be decided)
- Advanced Cypher(P + E)
 - Chaining using 'with' operator, exercise (graph to be decided)
 - Returning paths in one result row (collecting on patterns), exercise (graph to be decided)
 - Shortest path & weighted shortest path, exercise (graph to be decided)
- Bulk data import (P)
 - Importing CSV files
 - Import Tool
- Retro