ORACLE

[Roadmap Session] Introducing Oracle Graph Cloud: Automating Graph Analysis

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Safe Harbor

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.

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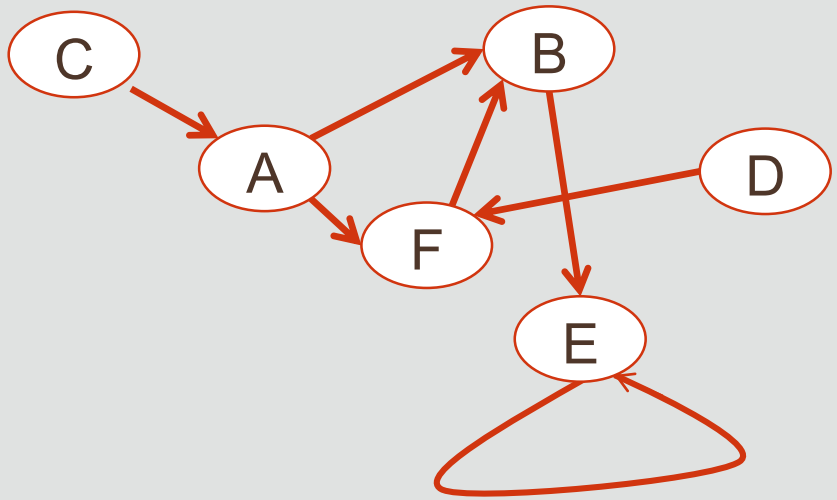
Abstract

- Oracle Graph Cloud is a planned, future service that offers low-code, highly automated services for data scientists and developers to simplify the creation and management of graphs and allow for powerful graph analysis of database, data warehouse, and data lake content. This session previews these features.

Graph Data Model



- What is a graph?
  - A set of nodes and links in between them
  - A graph is simply *linked data*
- Why do we care?
  - Graphs are everywhere
    - Social networks (Facebook, Twitter, Baidu, …)
    - Cyber networks, power grids, protein interaction graphs
    - Knowledge graphs (IBM Watson, Apple Siri, Google knowledge graph)
  - Graphs are intuitive and flexible
    - Easy to navigate, easy to form a path, natural to visualize
    - Do not require predefined schema

Graph Analysis for Business Insight

Fraud Detection

Find parties in insurance data who are on both sides of multiple claims, who live near each other

Influencer Identification

Identify most influential persons in a social network

Cluster Detection

Define groups of entities that share similar attributes, document classification

Impact Analysis

Determine the effect of an outage across an electrical grid

Recommendations

Suggest relevant products based on customer purchase history

Graph Cloud Service | Planned

Fully managed

- “One-click” deployment: no installation, zero configuration
  - Automated failure detection and recovery
- Automated graph modeler
  - Easily convert your relational data into property graphs
- Pre-built algorithms, flows and interactive queries
  - Java
  - PGQL
  - Rest APIs
- Rich User Interface
  - Low code / zero code features
  - Notebook support and powerful data visualization features

Graph analytics services (storage platform agnostic)

50+ pre-built parallel graph analysis functions for ranking, centrality, path-finding, community detection, and more

Interactive graph visualization

REST APIs, support for Java and *Python*

Templates and workflows for common use cases such as influencer identification, circular payments, and churn analysis

Graph database services (with Autonomous Database)

Automated graph modeling, creation, and loading

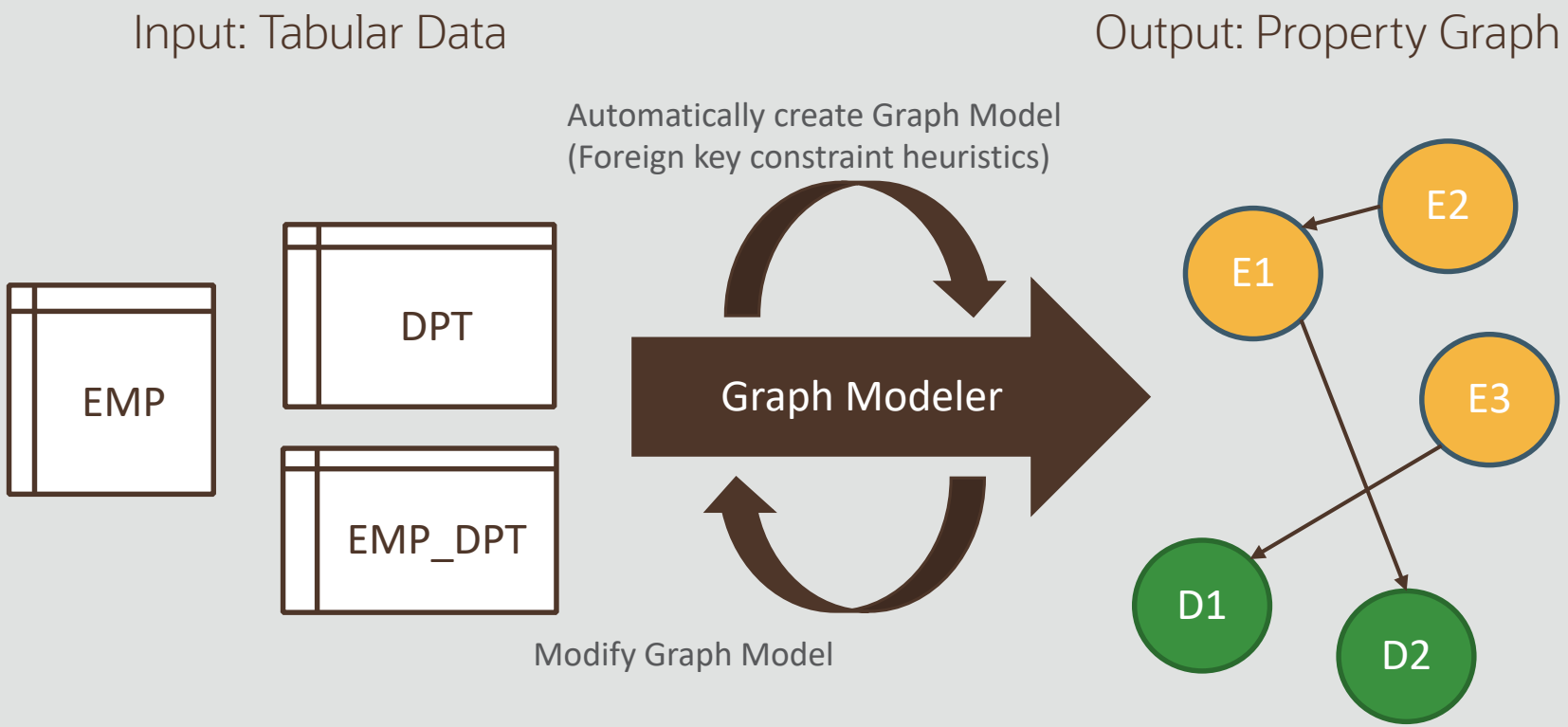
PGQL (SQL-like declarative graph query language)

Node and edge level security policies

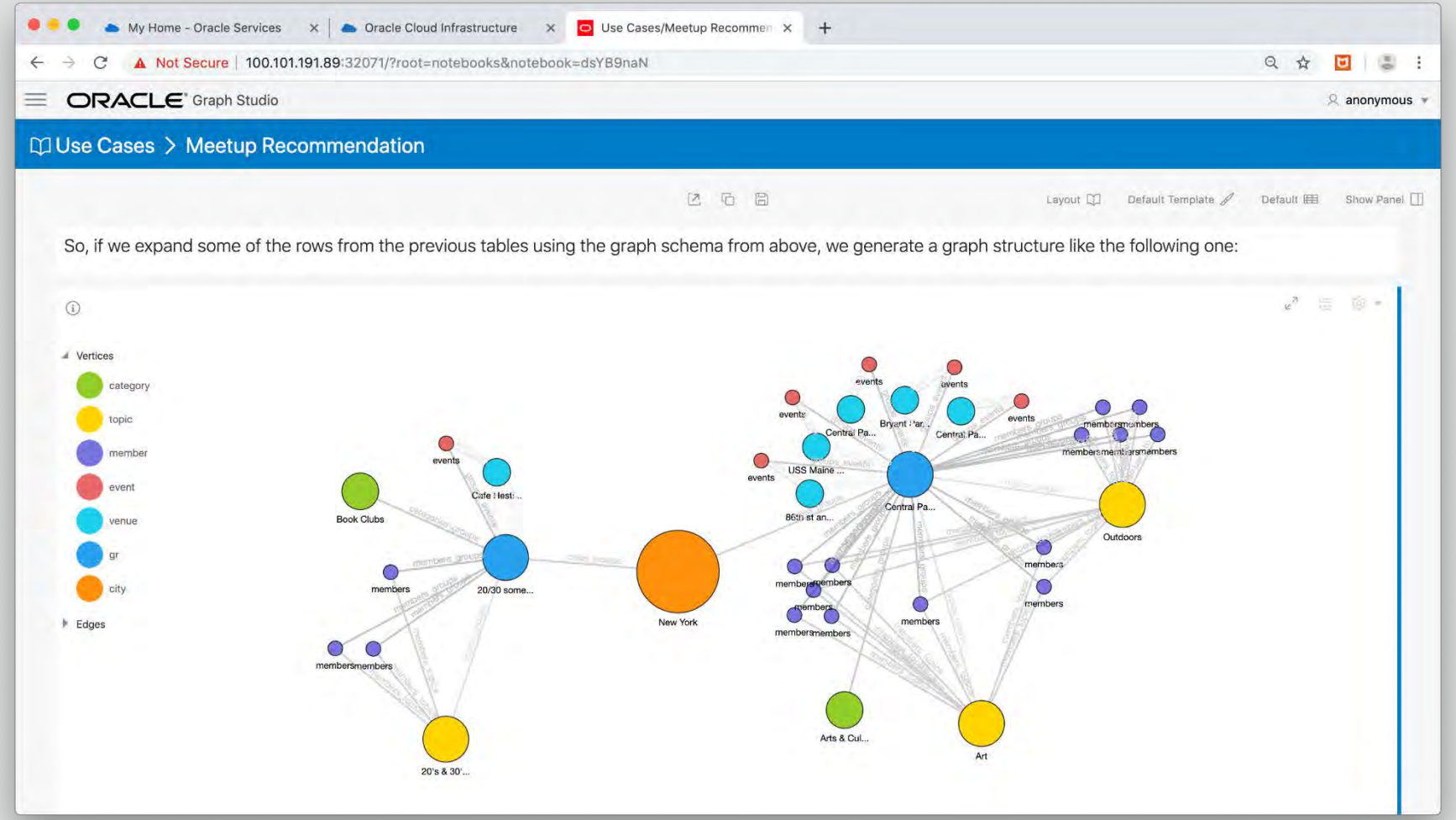
Graph filtering *and traversals (e.g. breadth first search)* on very large graphs

CRUD operations on graphs

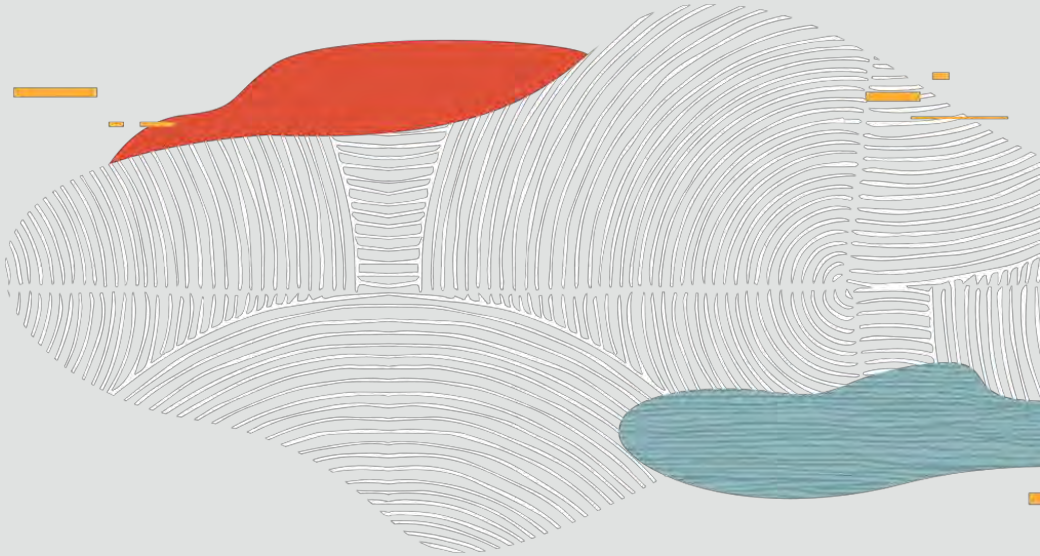
Automated graph modeling



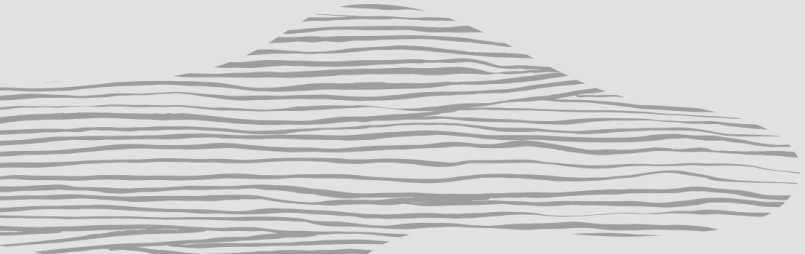
Interactive graph viz and analysis



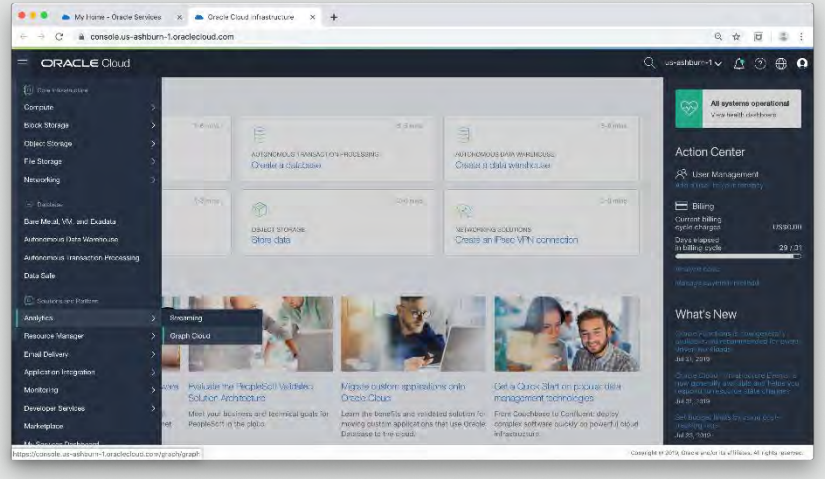
Sample graph cloud workflow

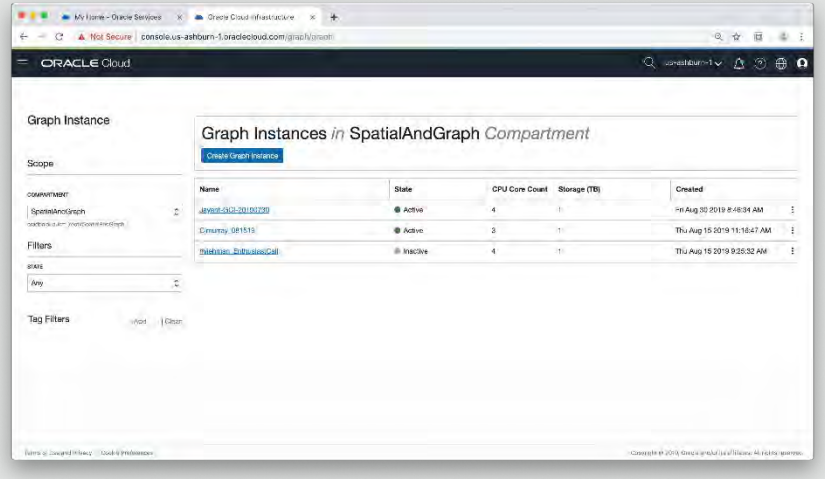


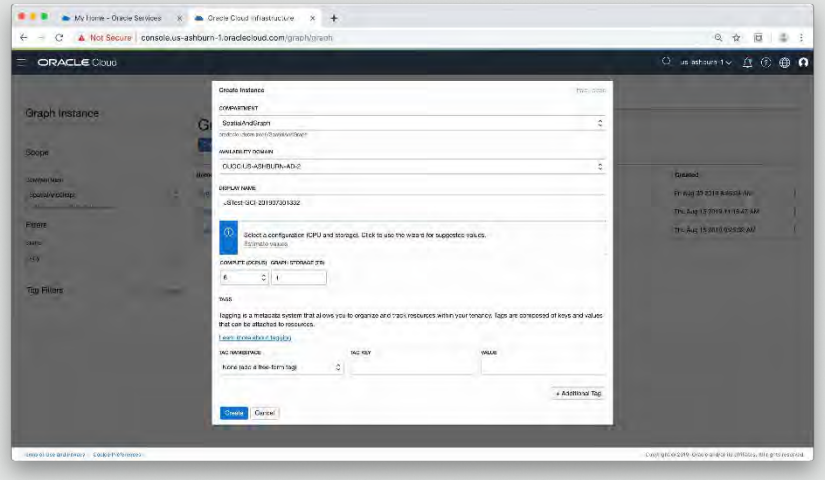
Provision instance
Model and load graph
Analyze, visualize, share results

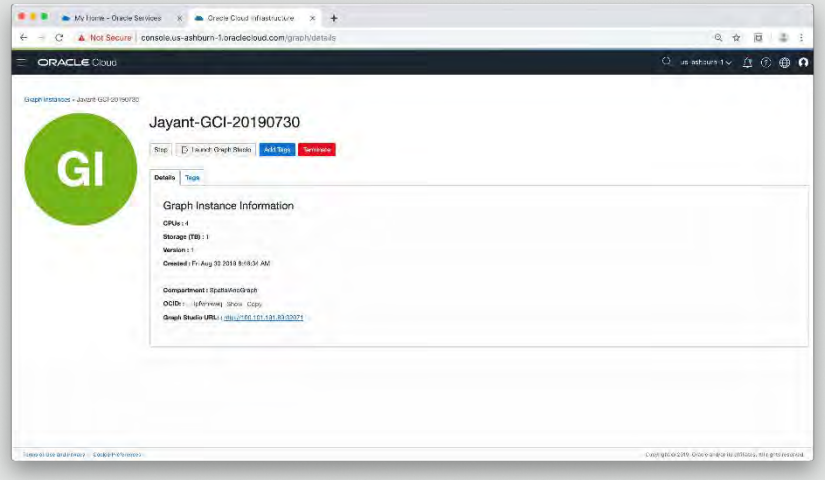


Provision an instance

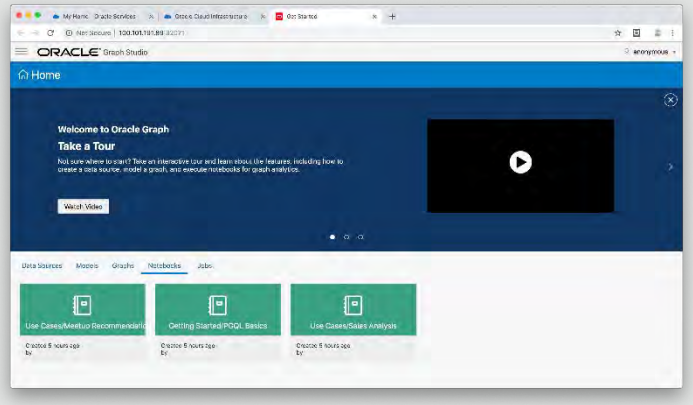


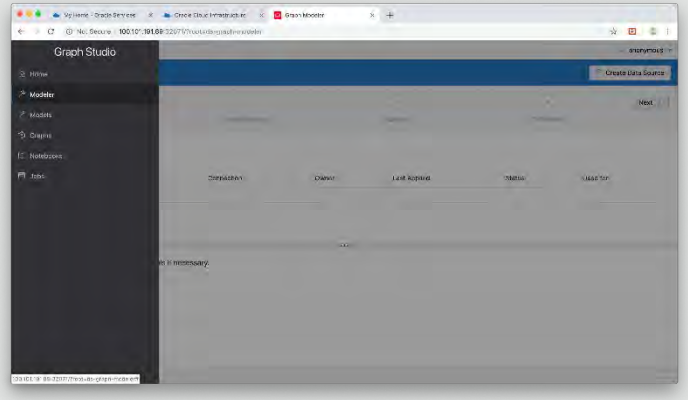


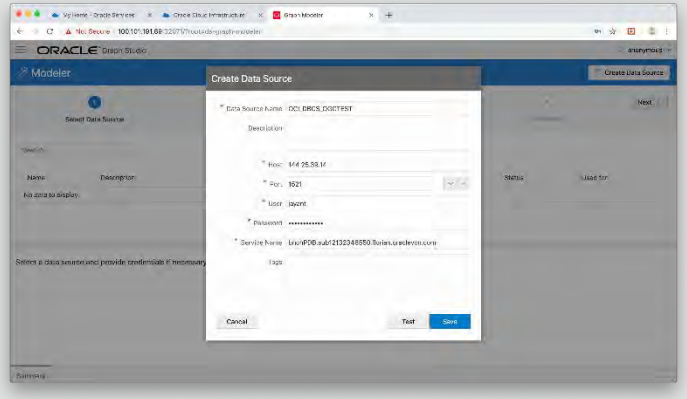


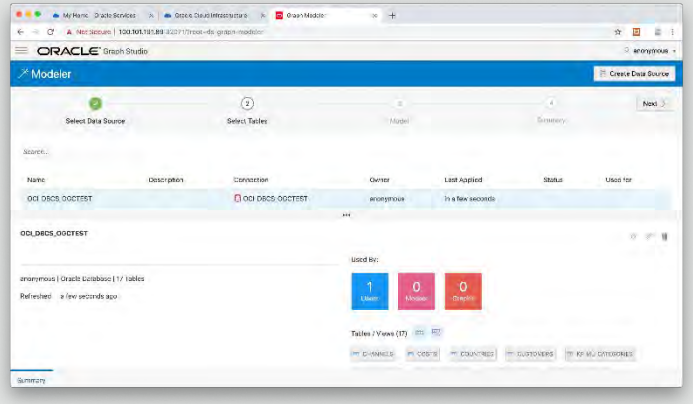


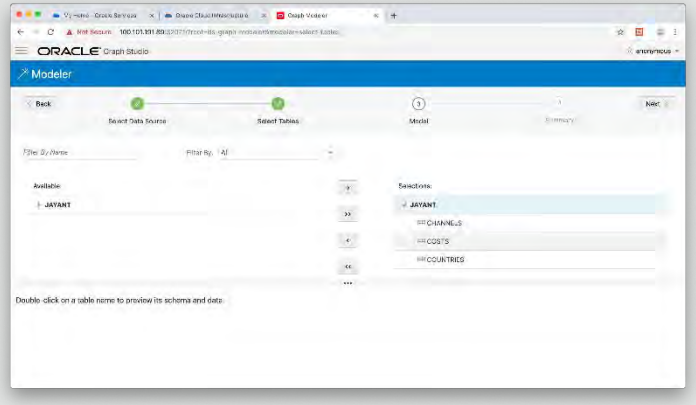
Connect to data source, create graph

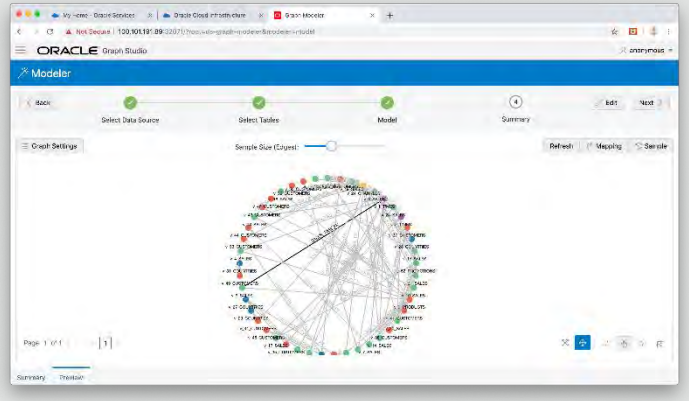




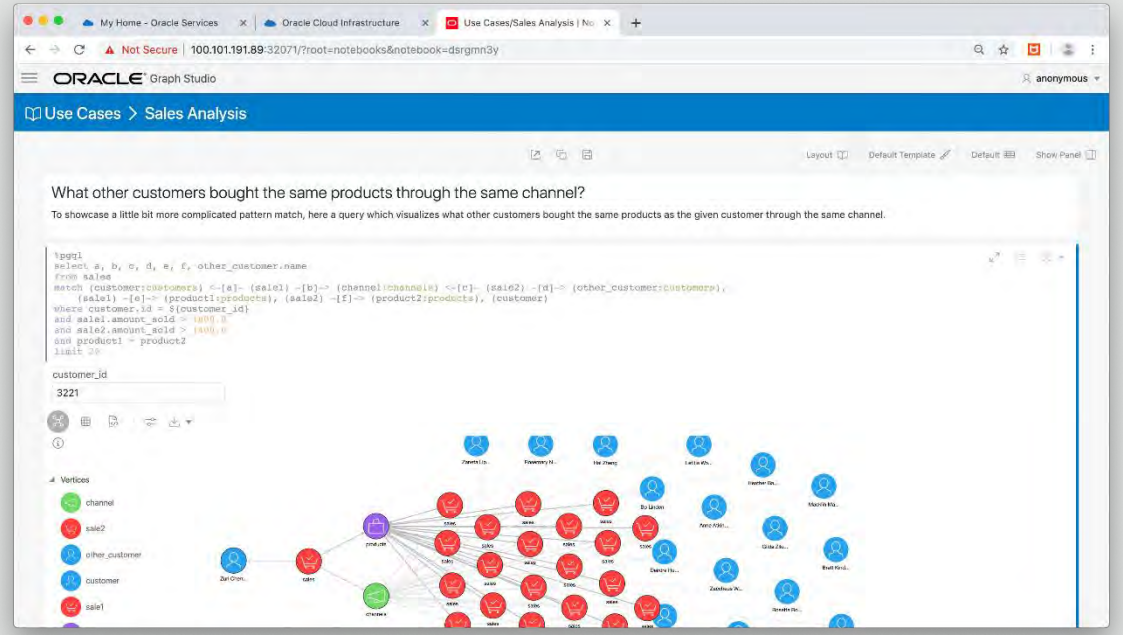


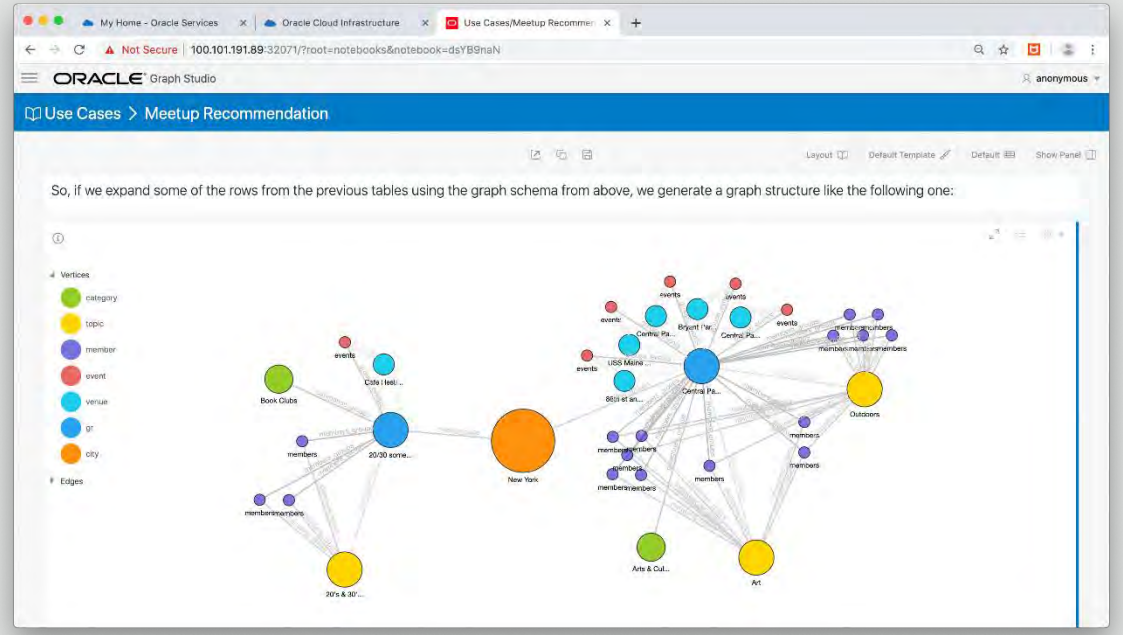






Analyze and visualize





Demo

Our mission is to help people see data in new ways, discover insights, unlock endless possibilities

Oracle's Mission Statement

Abstract

- Oracle Graph Cloud is a planned, future service that offers low-code, highly automated services for data scientists and developers to simplify the creation and management of graphs and allow for powerful graph analysis of database, data warehouse, and data lake content. This session previews these features.

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The Spatial & Graph SIG User Community

Now part of BIWA User Group

We are a vibrant community of customers and partners that connects and exchanges knowledge online, and at conferences and events.

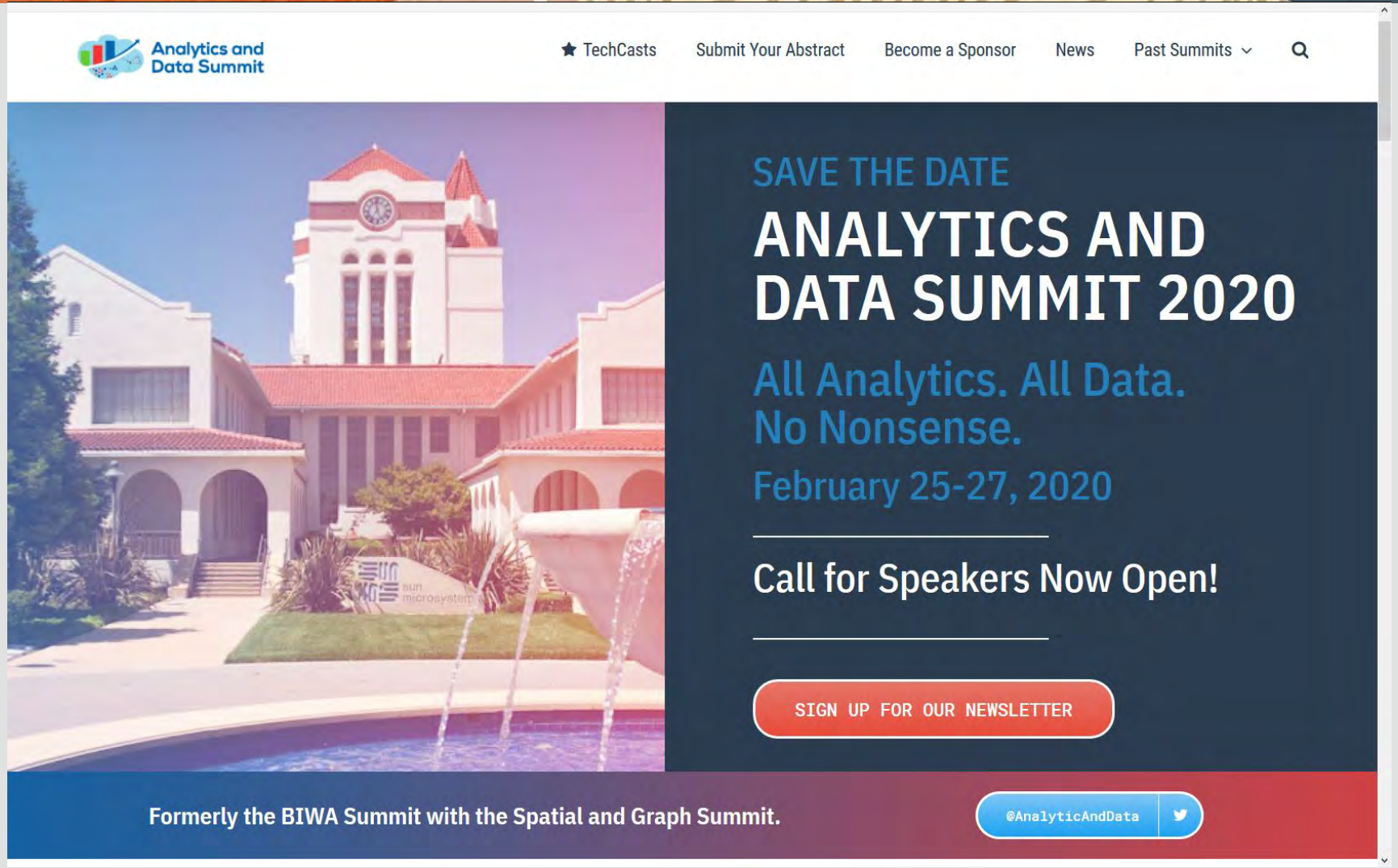
Meet us at OpenWorld! Monday-Wednesday
Moscone West, Level 3, User Group area
at the *BIWA/Analytics Community* table

Join us online
tinyurl.com/oraclespatialcommunity

LinkedIn

@oraspatialsig

oraclespatialsig@gmail.com



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Seeking customer use cases and technology sessions

Dedicated Spatial & Graph track with 20+ sessions

Graph at OOW and Code One 2019

View this list at bit.ly/SpatialGraphOOW19

Sessions

Date/Time	Title	Location
Wednesday, Sept. 18		
10:00 a.m. – 10:45 a.m.	**Graph Databases and Analytics: How To Use Them [TRN4755]**	Moscone South - Room 152C
10:00 a.m. – 10:45 a.m.	**Setting Up Modern Anti-Money-Laundering Solutions to Service Wholesale [CON6223]**	Moscone West - Room 3004
11:15 a.m. - 12:00 p.m.	**Demystifying Graph Analytics for the Nonexpert [CON5503]**	Moscone South - Room 156B
1:30 p.m. - 2:15 p.m.	**Traversing and Querying Graphs with PGQL and Gremlin with Oracle Spatial and Graph [DEV4084]**	Moscone South - Room 202

Meet the Experts

At the Code One Groundbreakers Hub, Moscone South Level 1

Wednesday, Sept. 18		
1:30 pm - 2:20 pm	**Graph Database and Analysis**	Lounge C, Code One Groundbreakers Hub, Moscone South level 1
2:30 pm - 3:20 pm	**Graph Cloud Service: Automating Graph Analysis**	

Spatial and Graph at OOW and Code One 2019

View list at bit.ly/SpatialGraphOOW19

Demos

Date/Time	Title	Location
Monday 10:00 am – 4:00 pm Tuesday 10:30 am – 5:30 pm Wednesday 10:00 am– 4:30 pm	Spatial and Graph: Database, Analytics and Cloud	Moscone South Exhibit Hall ('The Exchange') • Oracle Demogrounds > Data Management area > Kiosk # ODB-017

Spatial & Graph Demos

Resources - Get Started

- Oracle Spatial and Graph product pages
  oracle.com/technetwork/database/options/spatialandgraph
- YouTube channel youtube.com/c/OracleSpatialandGraph
- Blog – examples, tips & tricks
  blogs.oracle.com/oraclespatial | blogs.oracle.com/bigdataspatialgraph
- @SpatialHannes
- Oracle Spatial and Graph Group