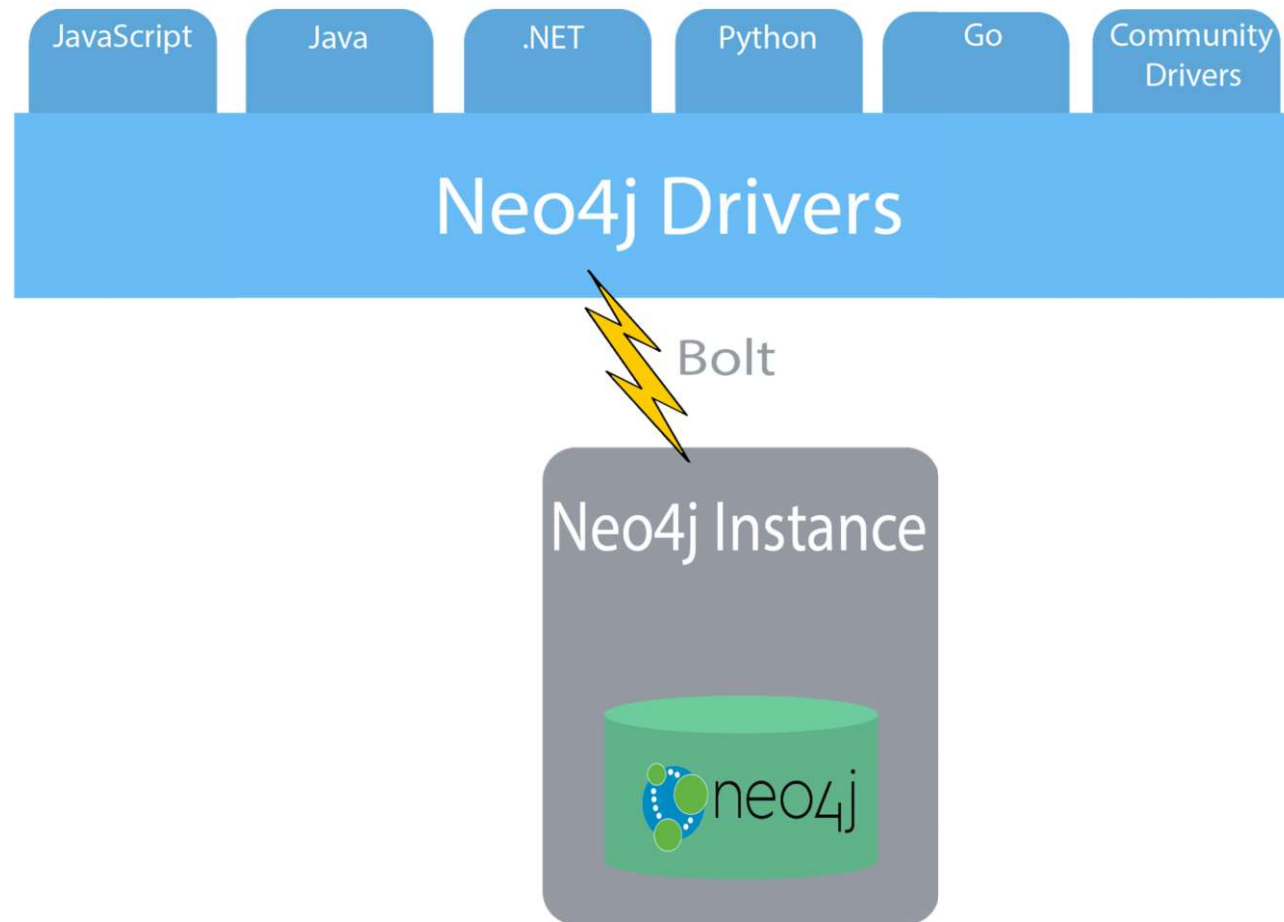# Neo4j Administration

Common application architectures

- Used in different application architectures
- Transactional and real-time database
- For highly connected data
- Applications connect using **Bolt protocol**
- Officially supported drivers:
  - .NET,
  - Java,
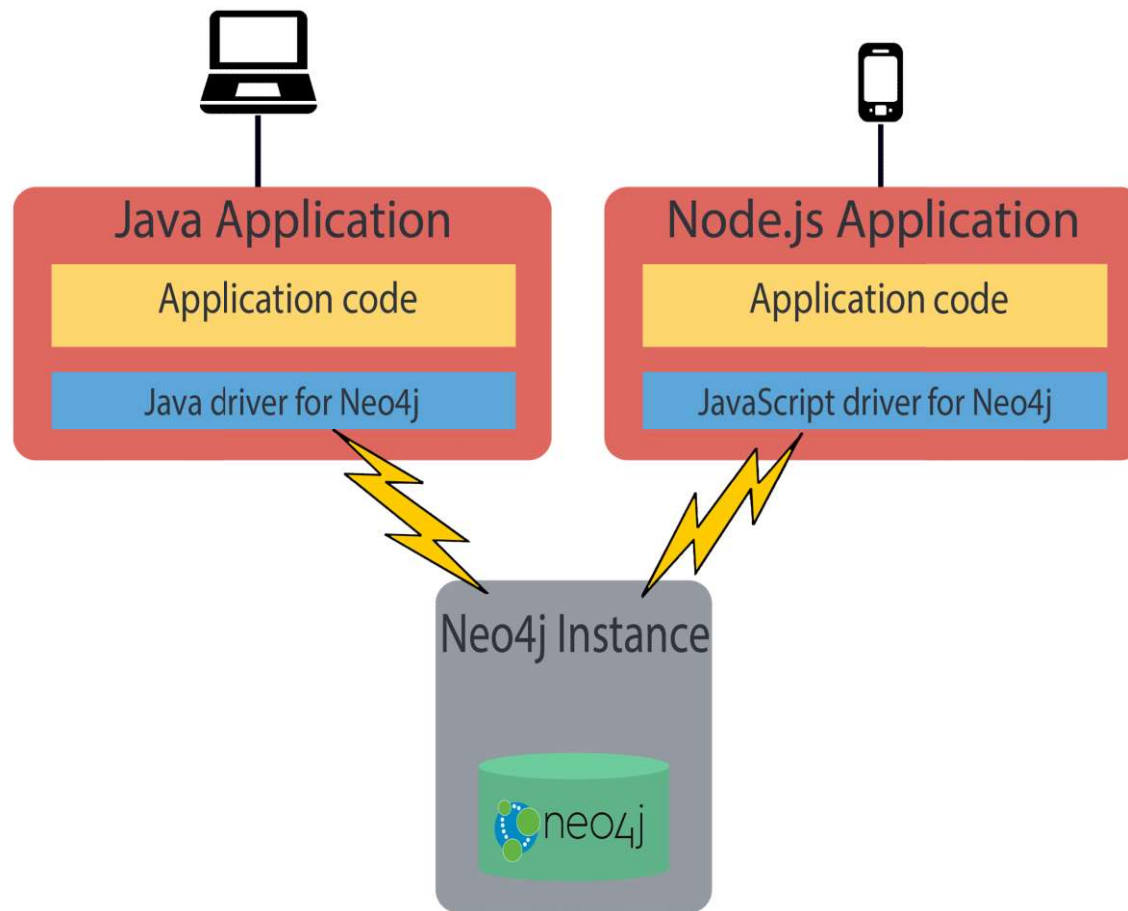 - JavaScript,
  - Python, and
  - GO

Common application architectures

| JavaScript | Java | .NET | Python | Go | Community Drivers |

Neo4j Drivers
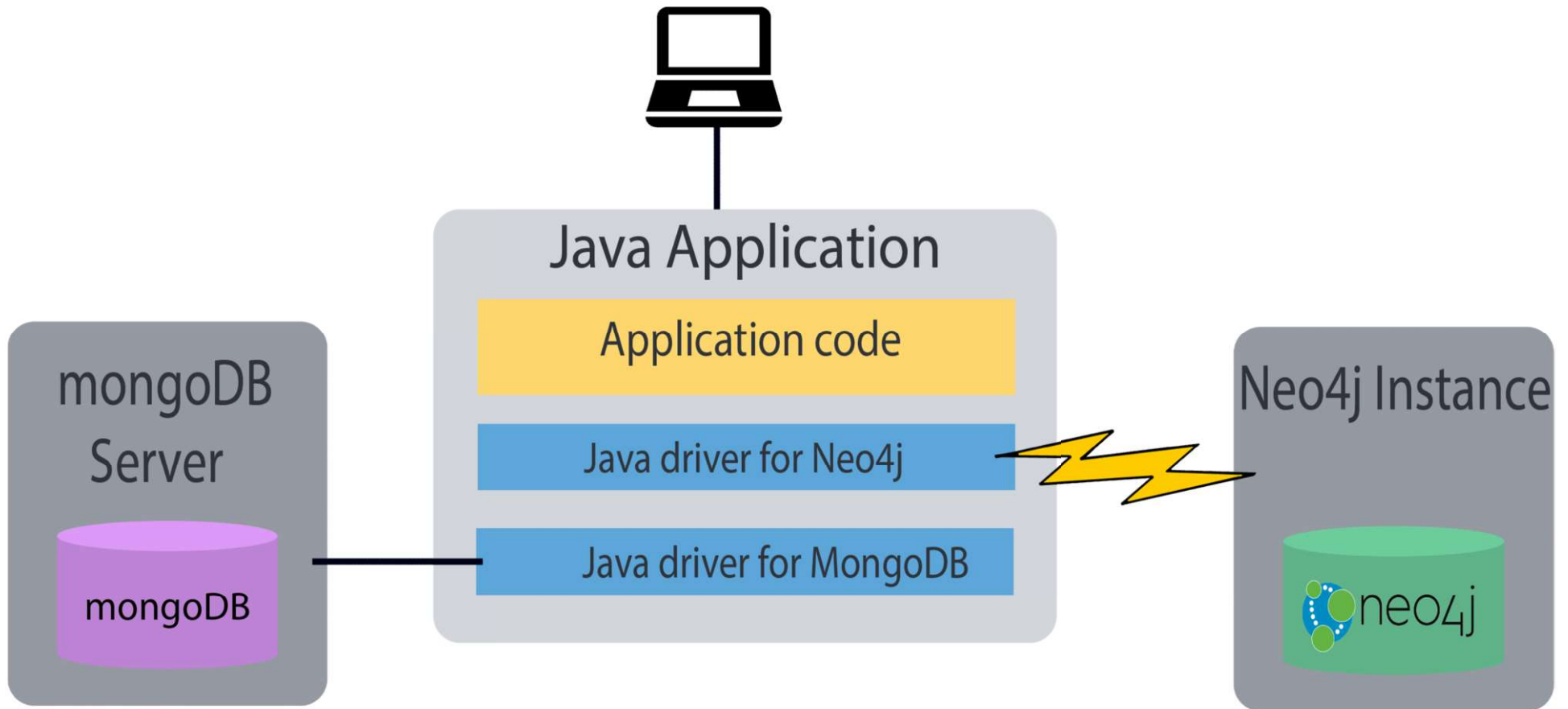
Bolt

Neo4j Instance

neo4j

Extending Neo4j

- Some applications use Neo4j out-of-the-box

- Others extend with additional functionality

- Examples:
  - Neo4j-supported procedures:
    - Graph Algorithms
    - GraphQL
  - Community-supported procedures
    - Awesome Procedures of Cypher (APOC)

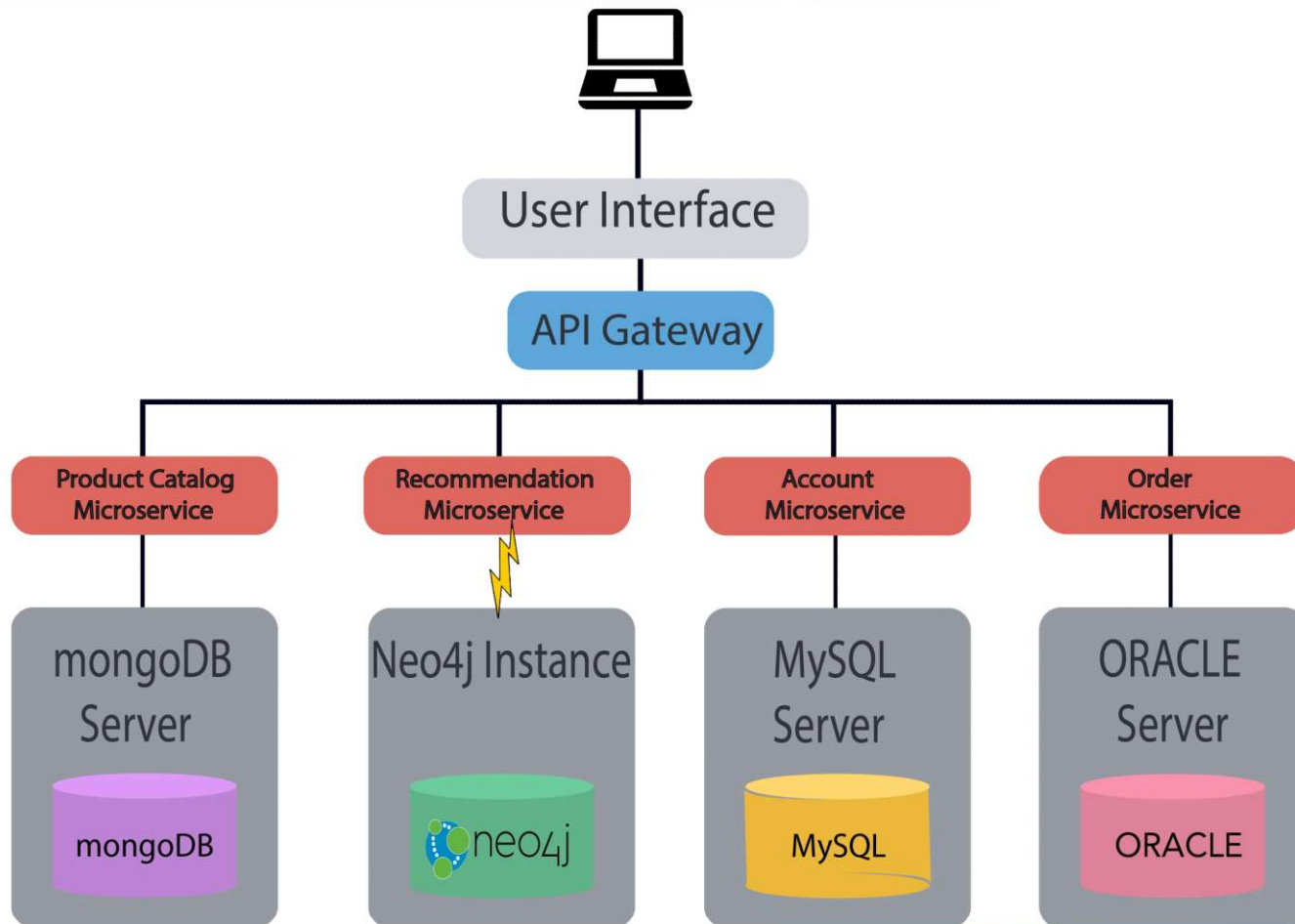- Can also custom-developed procedures for your application
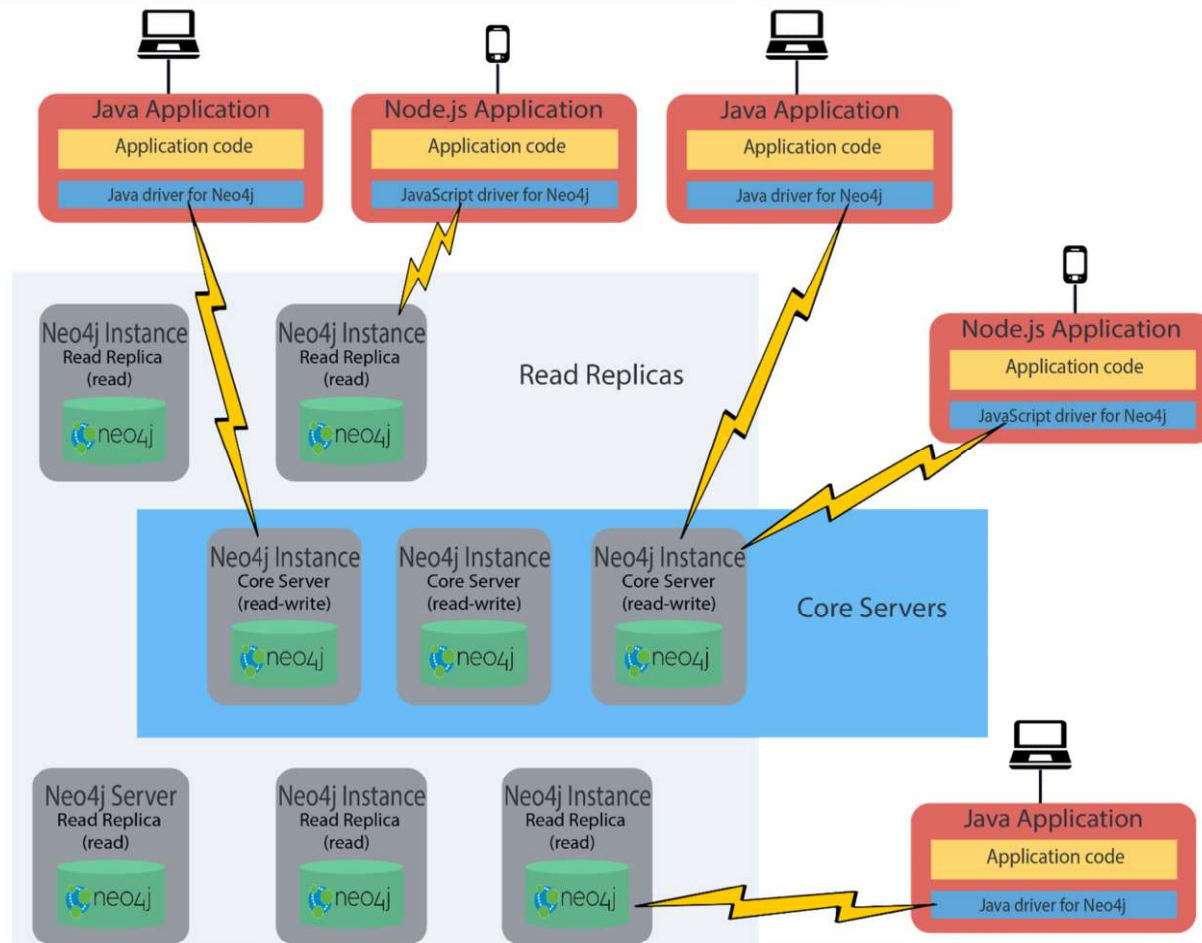
Using Neo4j as primary database

Java Application

Application code

Java driver for Neo4j

Node.js Application

Application code

JavaScript driver for Neo4j

Neo4j Instance

neo4j

Integrating Neo4j with other databases

Java Application

Application code

Java driver for Neo4j

Java driver for MongoDB

mongoDB Server

mongoDB

Neo4j Instance

neo4j

Microservices

www.cognixia.com

Using Neo4j Causal Clustering

www.cognixia.com

Using Neo4j standalone for graph analytics

JavaScript Application

Neo4j **Bloom**

JavaScript driver for Neo4j

Neo4j Instance

neo4j

- Neo4j Bloom is
  - An easy-to-use graph exploration application
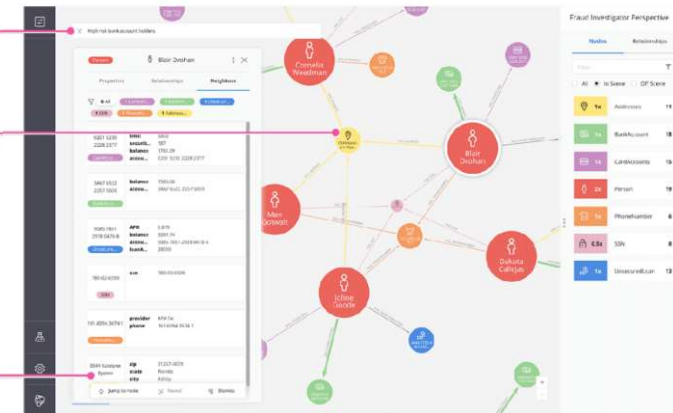 - For visually interacting with Neo4j graphs

Search with type-ahead suggestions

Flexible Color, Size and Icon schemes

Visualize, Explore and Discover

Pan, Zoom and Select

Property Browser and editor

Which edition of Neo4j to use

Community Edition

- Suitable for single instance deployments

Enterprise Edition

- For production systems
- Requires a license
  - 30 day evaluation license
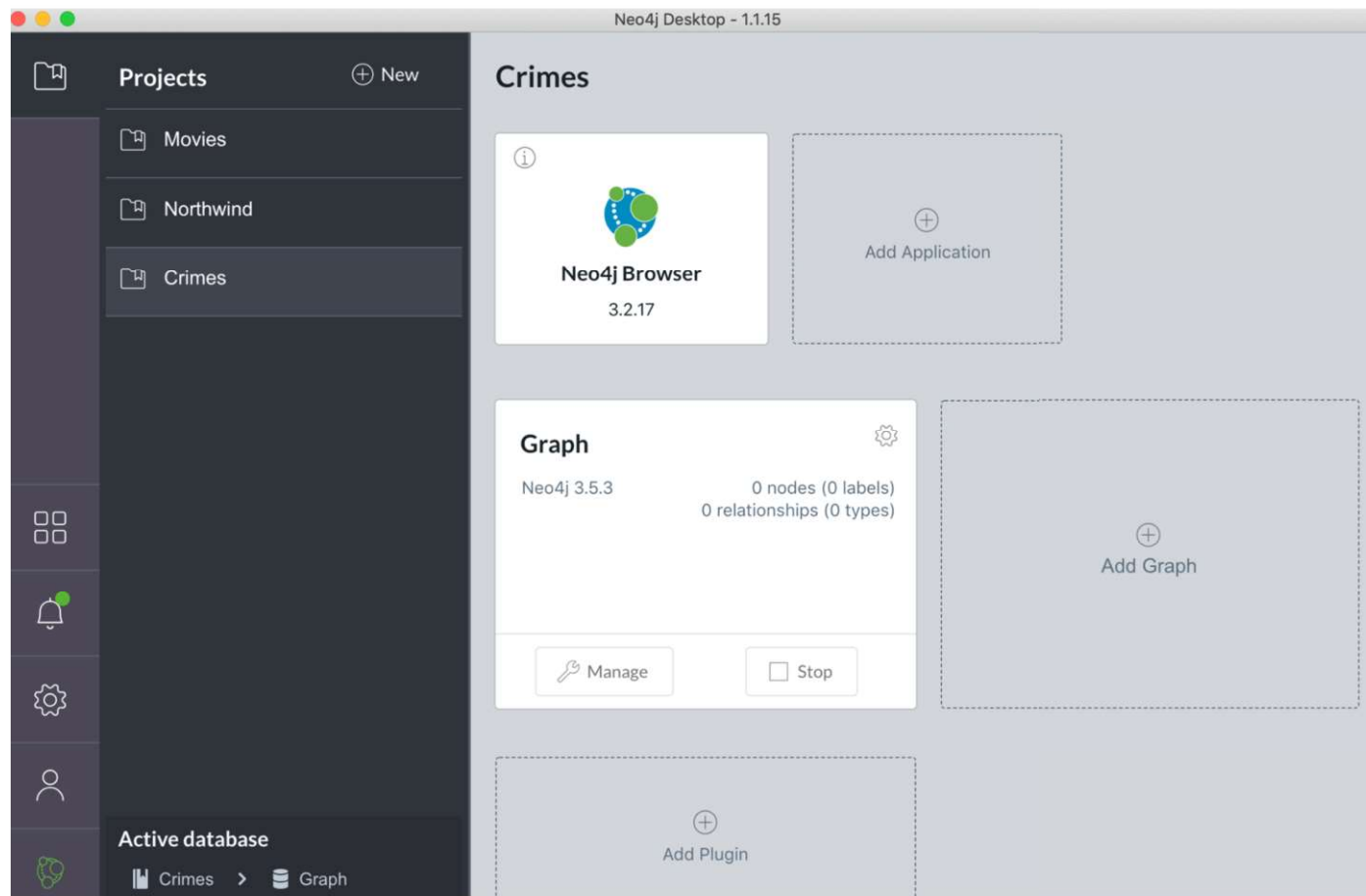
Neo4j Desktop

Used by developers

Purpose is to make development easier

The Neo4j instance that runs in Neo4j Desktop is Enterprise Edition

Linux, OS X, and Windows

Free for developers

Neo4j Desktop

Download Specific Version

- https://neo4j.com/download-center/#releases

Supported S/W & H/W

Have specific requirements for:

- JVM
- Operating system
- Hardware architecture
- Memory
- Disk
- Filesystem

Consult the System Requirements to learn more

- https://neo4j.com/docs/operations-manual/current/installation/requirements/#deployment-requirements

Neo4j deployment options

Server mode deployments

- Most common
- Recommended for all onsite deployments

Embedded deployments

- Common in OEM setups
- Runs integrated as part of a third party product
- Very easy to directly work with the database
- Fast performance

Neo4j in the Cloud

- Amazon EC2
- Google Cloud (GCP)
- Microsoft Azure
- Kubernetes

Administrative tasks

Downloading and installing Neo4j

Managing a Neo4j database

Managing plugins used with the Neo4j database

Managing logging

Monitoring queries

Backing up and restoring databases

Managing Causal Clusters

Managing database security

THANK YOU