NoSQL + SQL = MySQL 8.0

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Safe Harbor Statement

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MySQL Powers the Web
MySQL Innovation: 5.7 -> 8.0

MySQL 5.7
- 3x Better Performance
- Replication Enhancements
- Optimizer Cost Model
- JSON Support
- Improved Security
- Sys & Performance Schema
- GIS

MySQL InnoDB Cluster
- MySQL Group Replication
- MySQL Router
- MySQL Shell

MySQL 8.0
- NoSQL Document Store
- JSON
- CTEs
- Window Functions
- Data Dictionary
- InnoDB
- Replication
- Roles
- Unicode
- GIS

2 Years in Development
400+ Worklogs
5000+ Bugs Fixed
500 New Tests
MySQL 8.0: Document Store

NoSQL + SQL

- Document oriented data storage for MySQL
  - Full JSON document support through SQL and new X DevAPI NoSQL interface

- Schema-less and schema based data in the same technology stack
  - Use COLLECTIONs of documents & relational TABLEs together

- Rapid Prototyping & Simple CRUD APIs
  - Modern APIs using “method chaining” and asynchronous execution (e.g. promises, callbacks, etc.)

- Connectors for many different languages and frameworks
  - Node.JS, Java, NET, C++/C, PHP, Python
MySQL 8.0: Document Store Architecture

- **Applications**
  - MySQL Connectors (Node.js, Python, Java, .Net)

- **Scripting**
  - MySQL Shell

- **SQL API**
- **CRUD and SQL APIs**
- **Std Protocol**
- **X Protocol**

MySQL 8.0: Document Store Architecture

<table>
<thead>
<tr>
<th>City</th>
<th>Pop</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anytown</td>
<td>2003</td>
<td>33</td>
</tr>
<tr>
<td>Othertown</td>
<td>23000</td>
<td>400</td>
</tr>
</tbody>
</table>

JSON Collections:

`{_id: "232342", "firstname": "John", "lastname": "Doe", "city": "anytown"}`
MySQL 8.0: Document Store
Designed for modern Developers

- Full Node.js integration
  - Support for “Promises”
- Autocompletion support in IDEs
  - Due to method chaining support
- Intuitive Documentation & Tutorials
  - Example:

  ```javascript
  COLLECTION.add Function
  ```
MySQL 8.0: Shell
Get started in minutes

• Rapid prototyping capabilities
  – Using JavaScript and Python
• Full SQL and X DevAPI support
  – With built in auto-completion
• InnoDB Cluster support
  – Setup your HA solution within minutes
• DevOps Tool
  – Designed for DevOps operations
MySQL 8.0 – Innovating and Evolving

- DocStore
  - SQL & NoSQL
- InnoDB Cluster
  - HA made easy
- SQL
- JSON
- GIS

- Replication
- Reliability
- Observability
- Manageability
- Security
- Performance
- Scalability