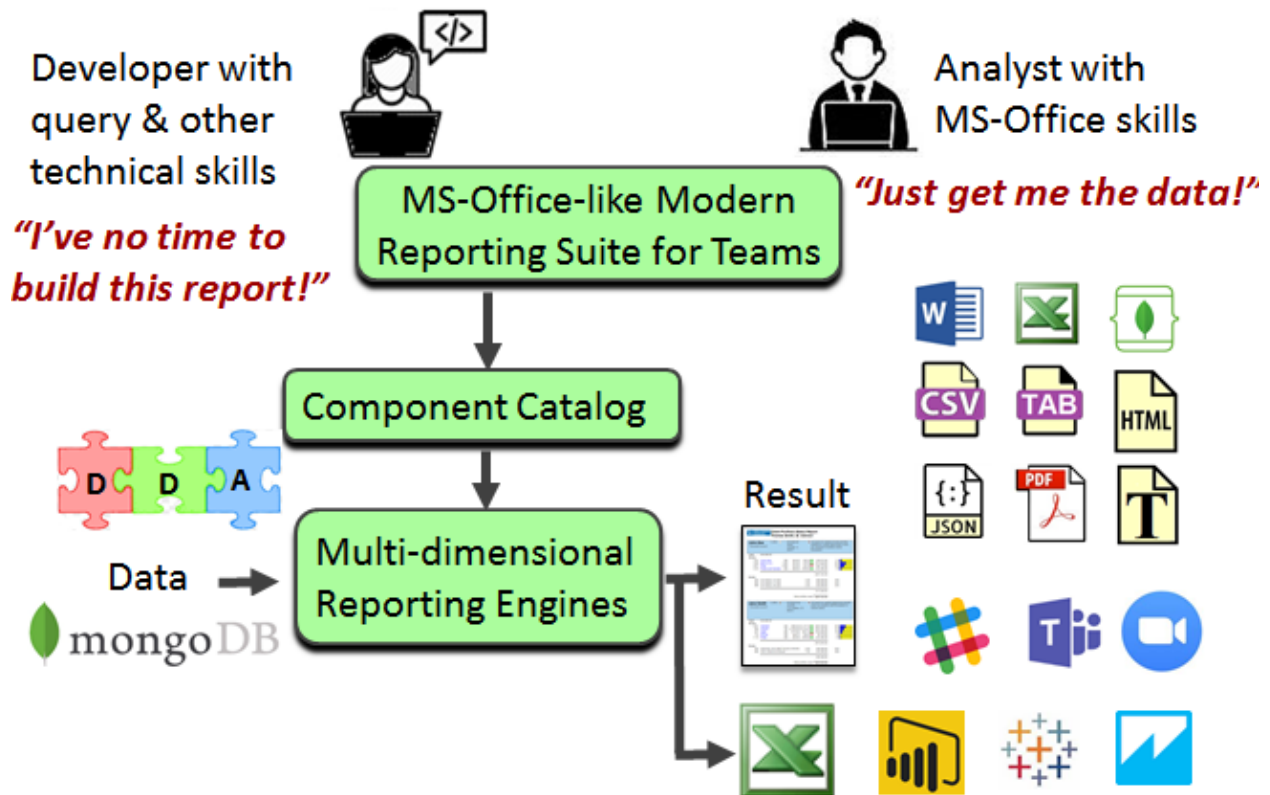


Overview of Qarbine and MongoDB Integration

Qarbine is a comprehensive reporting suite for enterprise teams. Visualization tools like Tableau and MongoDB Charts are great for summary information. In contrast, Qarbine is focused on the details behind the dashboards. It is based on 5 previous data and reporting products with 50%+ of the Fortune 500 and most of Wall Street as customers. There were also 2 buyouts of the technology by leading vendors. Unlike popular legacy tools like Tableau, Qarbine supports direct, native queries and JSON documents. For modern databases, any SQL gateway usage or ETL task becomes more and more painful as the richness of data shapes increases. Both approaches lose the distinct value of your MongoDB modern data investment!

Qarbine integrates well with MongoDB Atlas, Charts, and Data Lake. The reporting suite has over 10 different integrated tools for interacting with data and building analysis components. Qarbine purposely segregates data retrieval from data analysis components. Why? To leverage component reuse and cross team skills. Dev Teams can define optimized and reusable MQL retrieval components which can then be easily discovered and referenced by analysts & other teams. Each group does what they are best at and enterprises gain productivity and higher quality insights. Qarbine even includes a no-code dialog builder to increase analysis flexibility.



The Catalog facilitates teamwork and leveraging cross team member skills 24x7x365. The analysis result can be printed, exported, displayed, or make its way into a variety of popular products. Qarbine is not a silo and, like MongoDB Charts, it can be embedded into applications. Qarbine even has Slack, Teams, and Zoom support for interactive analysis and exporting. Integrating Atlas data now becomes seamless & transparent within everyday workflows!

MongoDB Query and Data Integration

Qarbine supports direct, native MongoDB queries. This is the only way to access the full power of the MongoDB data platform, especially the aggregation pipeline. Here is a query for a portfolio collection that takes advantage of the MongoDB document model features.

```
db.portfolio.find( {cash: {$gt: 2000}, isIRA: false } )
```

A sample portfolio document with embedded documents and arrays may look like

```

_id: 1,
_class: "biz_model_Portfolio",
who: "John Doe",
isIRA: false,
addressItems: [
  "910 Marcall Street",
  "Chicago, IL",
  "80512"
],
opened: Tue Mar 15 2016 10:00:00 GMT-0400 (Eastern Daylight Time),
cash: 45000,
goal: "An asset mix seeking income and the potential for capital appreciation which can withstand moderate market fluctuations.",
profile: {
  phone: "801-677-8823",
  email: "johnnydoe@aol.com",
  email_alerts: false,
  go_green: false
},
stocks: [ 4 fields ],
bonds: [ 3 fields ]

```

```

stocks: [
  {
    sector: "CPG",
    name: "Coca-Cola",
    ticker: "KO",
    shares: 500,
    basis: 45,
    price: 47.25,
    purchased: Mar 14 2016
  },
  { 8 fields },
  { 8 fields },
  { 8 fields }
],
bonds: [
  {
    issuer: "US Treasury 10 year",
    value: 40000,
    yield: 0.0325,
    purchased: Aug 14 2017
  },
  { 5 fields },
  { 5 fields }
]

```

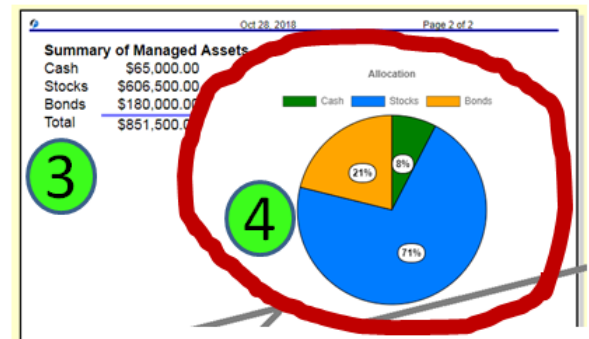
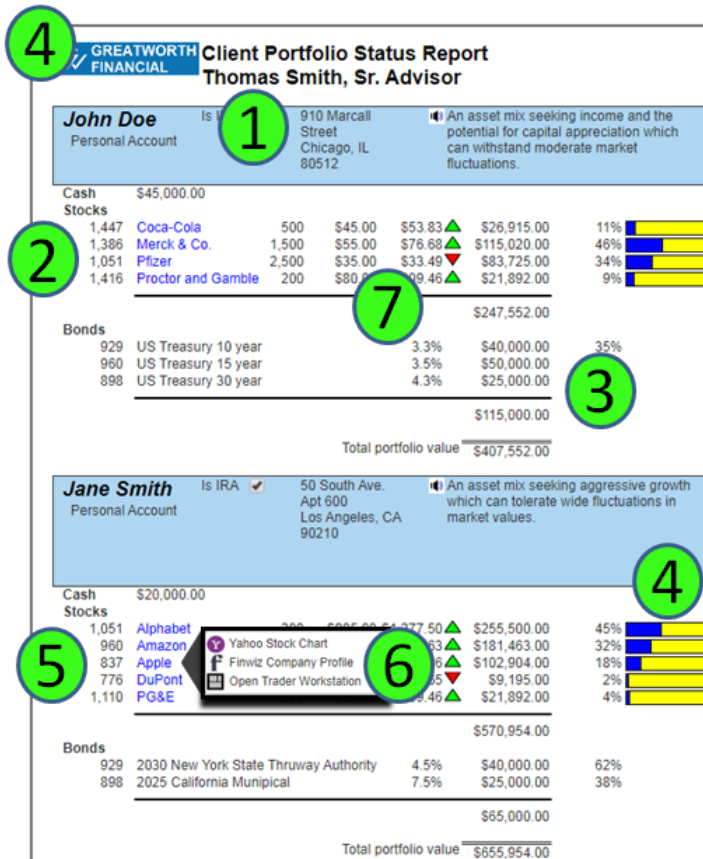
The query results can directly feed a Qarbine analysis template which indicates how to iterate through the documents, interact with them using formulas, and format the results. The report “just works” like you’d expect because it uses the same data model as your application! Qarbine can handle any data shape and has lots of conditional configuration as well. The query is a one liner using MongoDB Query Language. It can be super painful to even attempt to use legacy SQL tools with the document model and dynamic data structures enabled by MongoDB.

The Template Designer combines the formula power of Excel, with Word formatting features, and PowerPoint layout interactions. Qarbine has almost 400 Excel-like macro functions and offers a comprehensive set of processing and presentation options. Numerous “custom” cells are available for analyzing and presenting data elements. You can even include a MongoDB Chart within a Qarbine report. That custom cell also supports MongoDB Chart callbacks to interactively run an analysis for the details behind a pie slice! End users never lose context as they instinctively navigate across their custom application, Charts, and Qarbine worlds.

Qarbine Reporting Suite Feature Set

Qarbine includes over 10 different integrated tools. Much more complex queries and analyses can be accomplished with Qarbine than with legacy, silo'd SQL centric tools. Shown below is an analysis with a deeply nested portfolio object containing stock and bond holdings. The slide below enumerates some of Qarbine's distinctive features.

BI plus Reporting with Modern Data



Most BI tools are just this

- 1) Embedded documents
- 2) Embedded arrays
- 3) Excel-like formulas
- 4) Custom graphics and charts
- 5) Call your application code
- 6) Interactive elements
- 7) Real-time REST calls

Also note that Qarbine's two pass analysis engine enables percent of total calculations (#4 blue and yellow bars above). This is a core requirement in many analyses, especially revenue ones.

The Way Ahead

MongoDB project success is gated by what dev teams can deliver to end users. Qarbine, like Charts, dramatically changes that constraint to increase access and usage of MongoDB's data. It does this all natively, just like your applications! Charts satisfies the summary visualization need and Qarbine fills the detailed reporting void. Dev teams focus on delivering application value and everyone avoids going crazy attempting BI and reporting tasks with legacy tools never built to handle modern data. You gain productivity and ROI on your modern data investment.

Contact the Qarbine team for more information.