

Normalized Avg of Orderquantity and Values.

Customer values

The screenshot shows the MongoDB Compass interface for the 'Lab1' database, specifically the 'Customer' collection. The 'Documents' tab is active, displaying 3 documents. The left sidebar shows the database structure with 'Lab1' expanded and 'Customer' selected. The top navigation bar includes 'Documents', 'Aggregations', 'Schema', 'Explain Plan', 'Indexes', and 'Validation'. The filter bar is empty, and the 'ADD DATA' and 'EXPORT COLLECTION' buttons are visible. The documents are as follows:

Document	Fields
1	<code>_id: ObjectId('63dc766f6baaffbbf0dd332e')</code> <code>CustomerID: "30010"</code> <code>LastName: "Woo"</code> <code>FirstName: "Stephen"</code> <code>EmailAddress: "stephen@adventure-works.com"</code> <code>OrderID: Array</code>
2	<code>_id: ObjectId('63dc766f6baaffbbf0dd332f')</code> <code>CustomerID: "30020"</code> <code>LastName: "Miller"</code> <code>FirstName: "Emilio"</code> <code>EmailAddress: "emilio@adventure-works.com"</code> <code>OrderID: Array</code>
3	<code>_id: ObjectId('63dc766f6baaffbbf0dd3330')</code> <code>CustomerID: "30030"</code> <code>LastName: "Track"</code> <code>FirstName: "Glenn"</code> <code>EmailAddress: "glenn@adventure-works.com"</code> <code>OrderID: Array</code>

Sales/Orders

The screenshot shows the MongoDB Compass interface for the 'Lab1' database, specifically the 'Sales' collection. The 'Documents' tab is active, displaying 4 documents. The left sidebar shows the database structure with 'Lab1' expanded and 'Sales' selected. The top navigation bar includes 'Documents', 'Aggregations', 'Schema', 'Explain Plan', 'Indexes', and 'Validation'. The filter bar is empty, and the 'ADD DATA' and 'EXPORT COLLECTION' buttons are visible. The documents are as follows:

Document	Fields
1	<code>_id: ObjectId('63dc754a6baaffbbf0dd331f')</code> <code>SalesOrder: 44529</code> <code>TotalOrderQuantity: 1</code> <code>OrderValue: 472</code>
2	<code>_id: ObjectId('63dc754a6baaffbbf0dd3320')</code> <code>SalesOrder: 44663</code> <code>TotalOrderQuantity: 1</code> <code>OrderValue: 985</code>
3	<code>_id: ObjectId('63dc754a6baaffbbf0dd3321')</code> <code>SalesOrder: 53525</code> <code>TotalOrderQuantity: 80</code> <code>OrderValue: 592223</code>
4	<code>_id: ObjectId('63dc754a6baaffbbf0dd3322')</code> <code>SalesOrder: 58968</code> <code>TotalOrderQuantity: 16</code> <code>OrderValue: 141340</code>

PipeLine \$Lookup

The screenshot shows the MongoDB Compass interface for the 'Lab1' database, specifically the 'Customer' collection. The 'Aggregations' tab is active, and a pipeline is being built. The left sidebar shows the database structure with 'Lab1' expanded and 'Customer' selected. The top navigation bar includes 'Documents', 'Aggregations', 'Schema', 'Explain Plan', 'Indexes', and 'Validation'. The filter bar is empty, and the 'ADD DATA' and 'EXPORT COLLECTION' buttons are visible. The pipeline is as follows:

```
1 * {
2   from: "Sales",
3   localField: "OrderID",
4   foreignField: "_id",
5   as: "OrderID"
6 }
```

The output after the '\$lookup' stage (Sample of 3 documents) is shown on the right:

Document	Fields
1	<code>_id: ObjectId('63dc766f6baaffbbf0dd332e')</code> <code>CustomerID: "30010"</code> <code>LastName: "Woo"</code> <code>FirstName: "Stephen"</code> <code>EmailAddress: "stephen@adventure-works.com"</code> <code>OrderID: Array</code>
2	<code>_id: ObjectId('63dc766f6baaffbbf0dd332f')</code> <code>CustomerID: "30020"</code> <code>LastName: "Miller"</code> <code>FirstName: "Emilio"</code> <code>EmailAddress: "emilio@adventure-works.com"</code> <code>OrderID: Array</code>
3	<code>_id: ObjectId('63dc766f6baaffbbf0dd3330')</code> <code>CustomerID: "30030"</code> <code>LastName: "Track"</code> <code>FirstName: "Glenn"</code> <code>EmailAddress: "glenn@adventure-works.com"</code> <code>OrderID: Array</code>

Pipeline unwind

The screenshot shows the MongoDB Atlas pipeline editor for the 'Lab1.Customer' collection. The pipeline is titled 'Untitled - modified' and is in the 'Aggregations' tab. The pipeline consists of three stages: '\$lookup', '\$unwind', and '\$group'. The '\$unwind' stage is selected, and its output is displayed as a sample of 10 documents. The output shows a document with a '_id' field, a 'CustomerID' field, and an 'OrderID' field. The '\$group' stage is also shown, with its output displayed as a sample of 1 document. The output shows a document with a '_id' field, an 'AvgTotalOrderQuantity' field, and an 'AvgOrderValue' field.

Lab1.Customer 3 DOCUMENTS

Documents Aggregations Schema Explain Plan Indexes Validation

Pipeline \$lookup \$unwind \$group Explain Export Run More Opti

Untitled - modified SAVE + CREATE NEW EXPORT TO LANGUAGE PREVIEW STAGES TEXT

Output after \$unwind stage (Sample of 10 documents)

```
1 {
2   path: "$OrderId",
3 }
```

```
{
  "_id": ObjectId("63dc766f6baaffbbf9dd332e"),
  "CustomerID": "30010",
  "LastName": "New",
  "FirstName": "Stephen",
  "EmailAddress": "stephen4@adventure-works.com",
  "OrderID": ObjectId("63dc766f6baaffbbf9dd332e")
}
```

Output after \$group stage (Sample of 1 document)

```
1 {
2   _id: null,
3   AvgTotalOrderQuantity: {
4     Avg: "AvgOrderId.TotalOrderQuantity"
5   },
6   AvgOrderValue: {
7     Avg: "AvgOrderId.OrderValue"
8   },
9 }
```

```
{
  "_id": null,
  "AvgTotalOrderQuantity": 69.4,
  "AvgOrderValue": 1091831.6
}
```

Final Avg

The screenshot shows the MongoDB Atlas pipeline editor for the 'Lab1.Customer' collection. The pipeline is titled 'Untitled - modified' and is in the 'Aggregations' tab. The pipeline consists of three stages: '\$lookup', '\$unwind', and '\$group'. The '\$group' stage is selected, and its output is displayed as a sample of 1 document. The output shows a document with a '_id' field, an 'AvgTotalOrderQuantity' field, and an 'AvgOrderValue' field.

Lab1.Customer 3 DOCUMENTS

Documents Aggregations Schema Explain Plan Indexes Validation

Pipeline \$lookup \$unwind \$group Explain Export Run More Opti

Untitled - modified SAVE + CREATE NEW EXPORT TO LANGUAGE PREVIEW STAGES TEXT

Output after \$group stage (Sample of 1 document)

```
1 {
2   _id: null,
3   AvgTotalOrderQuantity: {
4     Avg: "$OrderId.TotalOrderQuantity"
5   },
6   AvgOrderValue: {
7     Avg: "$OrderId.OrderValue"
8   },
9 }
```

```
{
  "_id": null,
  "AvgTotalOrderQuantity": 69.4,
  "AvgOrderValue": 1091831.6
}
```

+ Add Stage

[Learn more about aggregation pipeline stages](#)