

## \$bucket stage

At minute 4:45 we show the error message for trying to group a value that falls outside the boundaries.

```
$switch could not find matching branch for an input, and no default was specified
```

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This message might be a bit confusing since we mention *switch* and *branches*. This is related with the internal **\$bucket** stage implementation that uses a **\$group** and **\$switch** stages. We can see that in detail when running the **explain()** command.

```
db.coll.explain().aggregate([{$bucket: {groupBy: "$x", boundaries: [0, 50, 100]}}])
{
  "stages" : [
    {
      "$cursor" : {
        "query" : {

        },
        "fields" : {
          "x" : 1,
          "_id" : 0
        },
        "queryPlanner" : {
          ...
        }
      },
      {
        "$group" : {
          "_id" : {
            "$switch" : {
```

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```
"branches" : [  
  {  
    "case" : {  
      "$and" : [  
        {  
          "$gte" : [  
            "$x",  
            {  
              "$const" : 0  
            }  
          ]  
        },  
        {  
          "$lt" : [  
            "$x",  
            {  
              "$const" : 50  
            }  
          ]  
        }  
      ]  
    },  
    "then" : {  
      "$const" : 0  
    }  
  },  
  {  
    "case" : {  
      "$and" : [  
        {  
          "$gte" : [  
            "$x",  
            {  
              "$const" : 50  
            }  
          ]  
        }  
      ]  
    },  
  ],  
]
```

```
        {
            "$lt" : [
                "$x",
                {
                    "$const" : 100
                }
            ]
        }
    ],
    "then" : {
        "$const" : 50
    }
}
]
},
"count" : {
    "$sum" : {
        "$const" : 1
    }
}
},
{
    "$sort" : {
        "sortKey" : {
            "_id" : 1
        }
    }
}
],
"ok" : 1
}
```