11 Indexación: Índices parciales

Partial indexes only index the documents in a collection that meet a specified filter expression. By indexing a subset of the documents in a collection, partial indexes have lower storage requirements and reduced performance costs for index creation and maintenance.

Create a Partial Index

To create a partial index, use the db.collection.createIndex() method with the partialFilterExpression option. The partialFilterExpression option accepts a document that specifies the filter condition using:

- equality expressions (i.e. field: value or using the $eq operator),
- $exists: true expression,
- $gt, $gte, $lt, $lte expressions,
- $type expressions,
- $and operator at the top-level only

Behavior
Query Coverage. MongoDB will not use the partial index for a query or sort operation if using the index results in an incomplete result set.

To use the partial index, a query must contain the filter expression (or a modified filter expression that specifies a subset of the filter expression) as part of its query condition.

Práctica

```
> db.clientes.createIndex({apellidos: 1}, { partialFilterExpression: { createdAt: { $gte:
new Date(2005, 0, 1) } } })
{
        "createdCollectionAutomatically" : true,
        "numIndexesBefore" : 1,
        "numIndexesAfter" : 2,
        "ok" : 1
}
> db.clientes.insert({apellidos: "Fernández Pérez", createdAt: new Date()})
WriteResult({ "nInserted" : 1 })
> db.clientes.insert({apellidos: "Fernández Pérez", createdAt: new Date(2003, 2, 6)})
WriteResult({ "nInserted" : 1 })
```

```
> db.clientes.find({apellidos: "Fernández Pérez"}).explain() // No usa el índice
> db.clientes.find({apellidos: "Fernández Pérez", createdAt: { $gte: new Date(2005,
0, 1) } }).explain() // si usa el índice
```