

Airport Queries

These are example N1QL queries that may can performed to retrieve airport related data.

Airport By ID

The following query will get an Airline by its Document ID.

Query

[airport_by_document_id.n1ql](#)

1	SELECT airports.*
2	FROM `flight-data` AS airports
3	USE KEYS 'airport_3605'

Result

```

1  [
2    {
3      "_id": "airport_3605",
4      "airport_gps_code": "KICT",
5      "airport_iata": "ICT",
6      "airport_icao": "KICT",
7      "airport_id": 3605,
8      "airport_ident": "KICT",
9      "airport_local_code": "ICT",
10     "airport_name": "Wichita Dwight D. Eisenhower National Airport",
11     "airport_type": "large_airport",
12     "doc_type": "airport",
13     "dst": "A",
14     "elevation": 1333,
15     "geo": {
16       "latitude": 37.64989853,
17       "longitude": -97.43309784
18     },
19     "iso_continent": "NA",
20     "iso_country": "US",
21     "iso_region": "US-KS",
22     "municipality": "Wichita",
23     "timezone": "America/Chicago",
24     "timezone_offset": -6
25   }
26 ]

```

The following query will retrieve many Airlines by their ID.

Query

[airports_by_document_id.n1ql](#)

```

1  SELECT airports.*
2  FROM `flight-data` AS airports
3  USE KEYS ['airport_3605', 'airport_3568']

```

Result

```

1  [
2    {
3      "_id": "airport_3605",
4      "airport_gps_code": "KICT",
5      "airport_iata": "ICT",
6      "airport_icao": "KICT",
7      "airport_id": 3605.

```

```
8     "airport_ident": "KICT",
9     "airport_local_code": "ICT",
10    "airport_name": "Wichita Dwight D. Eisenhower National Airport",
11    "airport_type": "large_airport",
12    "doc_type": "airport",
13    "dst": "A",
14    "elevation": 1333,
15    "geo": {
16        "latitude": 37.64989853,
17        "longitude": -97.43309784
18    },
19    "iso_continent": "NA",
20    "iso_country": "US",
21    "iso_region": "US-KS",
22    "municipality": "Wichita",
23    "timezone": "America/Chicago",
24    "timezone_offset": -6
25 },
26 {
27     "_id": "airport_3568",
28     "airport_gps_code": "KGSO",
29     "airport_iata": "GSO",
30     "airport_icao": "KGSO",
31     "airport_id": 3568,
32     "airport_ident": "KGSO",
33     "airport_local_code": "GSO",
34     "airport_name": "Piedmont Triad",
35     "airport_type": "large_airport",
36     "doc_type": "airport",
37     "dst": "A",
38     "elevation": 925,
39     "geo": {
40         "latitude": 36.09780121,
41         "longitude": -79.93730164
42     },
43     "iso_continent": "NA",
44     "iso_country": "US",
45     "iso_region": "US-NC",
46     "municipality": "Greensboro",
47     "timezone": "America/New_York",
48     "timezone_offset": -5
49 }
50 ]
```

Airports in a Country

The following index and queries allows for finding airports based in a given country by creating an index on the `iso_country` where the `doc_type` is `airport`

Index

[idx_airports_iso_country.n1ql](#)

```
1 CREATE INDEX idx_airports_iso_country ON `flight-data` ( iso_country )
2 WHERE doc_type = 'airport'
3     AND iso_country IS NOT NULL
4 USING GSI
```

Query

[airport_by_country.n1ql](#)

```
1 SELECT airports.*
2 FROM `flight-data` AS airports
3 WHERE airports.iso_country = 'FI'
4     AND airports.doc_type = 'airport'
5 LIMIT 1
```

Result

```

1  [
2    {
3      "_id": "airport_2330",
4      "airport_gps_code": "EFMA",
5      "airport_iata": "MHQ",
6      "airport_icao": "EFMA",
7      "airport_id": 2330,
8      "airport_ident": "EFMA",
9      "airport_local_code": null,
10     "airport_name": "Mariehamn",
11     "airport_type": "medium_airport",
12     "doc_type": "airport",
13     "dst": "E",
14     "elevation": 17,
15     "geo": {
16       "latitude": 60.12220001,
17       "longitude": 19.89819908
18     },
19     "iso_continent": "EU",
20     "iso_country": "FI",
21     "iso_region": "FI-AL",
22     "municipality": "Mariehamn",
23     "timezone": "Europe/Mariehamn",
24     "timezone_offset": 2
25   }
26 ]

```

Now that we know we can retrieve an airport in a country, lets retrieve all airports in a given country by querying on the `iso_country` , sorted by the `airport_name`

Query

[airportsbycountry.n1ql](#)

```

1  SELECT airports.airport_id, airports.airport_name, airports.airport_type,
2     airports.iso_region, airports.municipality,
3     IFNULL( airports.airport_iata, airports.airport_icao, airports.airport_ident ) AS ai
4  FROM `flight-data` AS airports
5  WHERE airports.iso_country = 'AE'
6     AND airports.doc_type = 'airport'
7  ORDER BY airports.airport_name ASC

```

Results

```

1  [
2    {
3      "airport_code": "AUH",
4      "airport_id": 5226,
5      "airport_name": "Abu Dhabi Intl",
6      "airport_type": "large_airport",
7      "iso_region": "AE-AZ",
8      "municipality": "Abu Dhabi"
9    },
10   {
11     "airport_code": "AAN",
12     "airport_id": 5230,
13     "airport_name": "Al Ain International Airport",
14     "airport_type": "medium_airport",
15     "iso_region": "AE-AZ",
16     "municipality": "Al Ain"
17   },
18   {
19     "airport_code": "DHF",
20     "airport_id": 5231,
21     "airport_name": "Al Dhafra",
22     "airport_type": "medium_airport",
23     "iso_region": "AE-AZ",
24     "municipality": "Abu Dhabi"
25   },
26   ...
27  ]

```

Additionally we can retrieve an aggregate count of the number of airports in a given country.

Query

[totalairportsin_country.n1ql](#)

```

1  SELECT COUNT(1) AS total_airports
2  FROM `flight-data` AS airports
3  WHERE airports.iso_country = 'FI'
4         AND airports.doc_type = 'airport'

```

Result

```
1 [
2   {
3     "total_airports": 50
4   }
5 ]
```

Airports by Country and Region

Now that we know we can retrieve all airports in a given country by querying on the `iso_country` we can add the `iso_region` to further narrow the results.

Index

First we need to delete our previously created index and then create a new one. The new index will index both `iso_country` and `iso_region`

[idx_airports_iso_country_drop.n1ql](#)

```
1 DROP INDEX `flight-data`.idx_airports_iso_country
```

[idx_airports_iso_country_region.n1ql](#)

```
1 CREATE INDEX idx_airports_iso_country_region ON `flight-data` ( iso_country, iso_region )
2 WHERE doc_type = 'airport'
3     AND iso_country IS NOT NULL
4     AND iso_region IS NOT NULL
5 USING GSI
```

Query

[airports_by_country_region.n1ql](#)

```
1 SELECT airports.airport_id, airports.airport_name, airports.airport_type,
2     airports.iso_region, airports.municipality,
3     IFNULL( airports.airport_iata, airports.airport_icao, airports.airport_ident ) AS ai
4 FROM `flight-data` AS airports
5 WHERE airports.iso_country = 'US'
6     AND airports.iso_region = 'US-VT'
7     AND airports.doc_type = 'airport'
8 ORDER BY airports.airport_name ASC
```

Results

```

1  [
2    {
3      "airport_code": "BTV",
4      "airport_id": 3430,
5      "airport_name": "Burlington Intl",
6      "airport_type": "medium_airport",
7      "iso_region": "US-VT",
8      "municipality": "Burlington"
9    },
10   {
11     "airport_code": "MPV",
12     "airport_id": 20551,
13     "airport_name": "Edward F Knapp State",
14     "airport_type": "medium_airport",
15     "iso_region": "US-VT",
16     "municipality": "Montpelier"
17   },
18   {
19     "airport_code": "VSF",
20     "airport_id": 21336,
21     "airport_name": "Hartness State",
22     "airport_type": "small_airport",
23     "iso_region": "US-VT",
24     "municipality": "Springfield VT"
25   },
26   {
27     "airport_code": "MVL",
28     "airport_id": 20575,
29     "airport_name": "Morrisville Stowe State Airport",
30     "airport_type": "small_airport",
31     "iso_region": "US-VT",
32     "municipality": "Morrisville"
33   },
34   {
35     "airport_code": "RUT",
36     "airport_id": 3859,
37     "airport_name": "Rutland State Airport",
38     "airport_type": "medium_airport",
39     "iso_region": "US-VT",
40     "municipality": "Rutland"
41   }
42 ]

```

Additionally we can retrieve an aggregate count of the number of airports in a given country and region.

Query

[total_airports_in_country_region.n1ql](#)

```
1 SELECT COUNT(1) AS total_airports
2 FROM `flight-data` AS airports
3 WHERE airports.iso_country = 'US'
4       AND airports.iso_region = 'US-VT'
5       AND airports.doc_type = 'airport'
```

Result

```
1 [
2   {
3     "total_airports": 5
4   }
5 ]
```

Airport Codes

The following queries allows for finding airports by their IATA, ICAO or Ident Codes.

Just like Airlines, our [Codes](#) model is keyed by `{{designation}}_code_{{code}}` i.e.

`airport_code_ICT`. Because of how these documents are keyed, we do not even need an index. Using this predictive key pattern we use the code as part of the key name on the codes document.

Query

Query by the IATA code

[airport_by_iata_code.n1ql](#)

```
1 SELECT airports.airport_id, airports.airport_name, airports.airport_type,
2       airports.iso_region, airports.municipality,
3       IFNULL( airports.airport_iata, airports.airport_icao, airports.airport_ident ) AS ai
4 FROM `flight-data` AS codes
5 USE KEYS 'airport_code_ICT'
6 INNER JOIN `flight-data` AS airports ON KEYS 'airport_' || TOSTRING( codes.id )
7 LIMIT 1
```

Query by the ICAO code

[airport_by_icao_code.n1ql](#)

```

1 SELECT airports.airport_id, airports.airport_name, airports.airport_type,
2     airports.iso_region, airports.municipality,
3     IFNULL( airports.airport_iata, airports.airport_icao, airports.airport_ident ) AS ai
4 FROM `flight-data` AS codes
5 USE KEYS 'airport_code_KICT'
6 INNER JOIN `flight-data` AS airports ON KEYS 'airport_' || TOSTRING( codes.id )
7 LIMIT 1

```

Both queries will yield the same exact result.

Result

```

1 [
2   {
3     "airport_code": "ICT",
4     "airport_id": 3605,
5     "airport_name": "Wichita Dwight D. Eisenhower National Airport",
6     "airport_type": "large_airport",
7     "iso_region": "US-KS",
8     "municipality": "Wichita"
9   }
10 ]

```

Airports by City

Lets say we wanted to search on cities in an ISO country to find associated airport codes for use within an auto-complete function on our site.

Index

[idx_airports_cities.n1ql](#)

```

1 CREATE INDEX idx_airports_cities ON `flight-data`( iso_country, municipality )
2 WHERE doc_type = 'airport'
3     AND iso_country IS NOT NULL
4     AND municipality IS NOT NULL
5 USING GSI

```

Query

This query will find cites and their airport_code based on a partial match of the city name.

[airports_by_city.n1ql](#)

```

1 SELECT a.municipality AS city,
2        IFNULL( a.airport_iata, a.airport_icao, a.airport_ident ) AS airport_code
3 FROM `flight-data` AS a
4 WHERE a.iso_country = 'US'
5        AND a.municipality LIKE 'San%'
6        AND a.doc_type = 'airport'
7 ORDER BY a.municipality ASC, a.airport_name ASC
8 LIMIT 5

```

Results

```

1 [
2   {
3     "airport_code": "SJT",
4     "city": "San Angelo"
5   },
6   {
7     "airport_code": "SKF",
8     "city": "San Antonio"
9   },
10  {
11    "airport_code": "RND",
12    "city": "San Antonio"
13  },
14  {
15    "airport_code": "SAT",
16    "city": "San Antonio"
17  },
18  {
19    "airport_code": "SBD",
20    "city": "San Bernardino"
21  }
22 ]

```

We can get the total number of matches as well:

Query

[totalairportsby_city.n1ql](#)

```

1 SELECT COUNT(1) AS matches
2 FROM `flight-data` AS a
3 WHERE a.iso_country = 'US'
4        AND a.municipality LIKE 'San%'
5        AND a.doc_type = 'airport'

```

Results

```
1  [
2    {
3      "matches": 26
4    }
5  ]
```

We can leverage the `OFFSET` clause to paginate through the results.

Query

[airportsbycity_offset.n1ql](#)

```
1  SELECT a.municipality AS city,
2         IFNULL( a.airport_iata, a.airport_icao, a.airport_ident ) AS airport_code
3  FROM `flight-data` AS a
4  WHERE a.iso_country = 'US'
5         AND a.municipality LIKE 'San%'
6         AND a.doc_type = 'airport'
7  ORDER BY a.municipality ASC, a.airport_name ASC
8  LIMIT 5 OFFSET 5
```

Results

```

1  [
2    {
3      "airport_code": "SQL",
4      "city": "San Carlos"
5    },
6    {
7      "airport_code": "KNUC",
8      "city": "San Clemente Island"
9    },
10   {
11     "airport_code": "SDM",
12     "city": "San Diego"
13   },
14   {
15     "airport_code": "MYF",
16     "city": "San Diego"
17   },
18   {
19     "airport_code": "NZY",
20     "city": "San Diego"
21   }
22 ]

```

Airports Near a Given Airport

For this query we want to find all airports within a given radius of a given airport code.

Since we are going to be querying on the ISO Country, Latitude and Longitude of a given airport we need to create an index.

Index

[idxairportsdistance.sql](#)

```

1  CREATE INDEX idx_airports_distance ON `flight-data` ( iso_country, geo.latitude, geo.long
2  WHERE doc_type = 'airport'
3      AND iso_country IS NOT NULL
4      AND geo.latitude IS NOT NULL
5      AND geo.longitude IS NOT NULL
6  USING GSI

```

This query is based on a MySQL example provided by [Ollie Jones](#).

To perform this query we need to provide 5 pieces of information to the query, these are represented in the query below as `{{tokens}}`

Input

- The Source Airports
 - `iso_country` i.e. US
 - `latitude` i.e. `36.09780121`
 - `longitude` i.e. `-79.93730164`
- A `distance_unit`
 - Kilometers: 111.045
 - Miles: 69
- A `radius` in which to contain results in, i.e. `100`

Radius Query

```

1 SELECT results.airport_name, results.airport_code, ROUND( results.distance, 2 ) AS distance
2 FROM (
3     SELECT airports.airport_name,
4         /* assign an airport_code */
5         IFNULL( airports.airport_iata, airports.airport_icao, airports.airport_ident ) AS airport_code,
6         /* calculate the distance */
7         {{distance_unit}} * DEGREES(ACOS(COS(RADIANS( {{source_latitude}} ))
8         * COS(RADIANS( airports.geo.latitude ))
9         * COS(RADIANS( {{source_longitude}} ) - RADIANS( airports.geo.longitude ))
10        + SIN(RADIANS( {{source_latitude}} ))
11        * SIN(RADIANS( airports.geo.latitude )))) AS distance
12 FROM `flight-data` AS airports
13 WHERE airports.iso_country = '{{iso_country}}'
14     /* limit results to latitudes within {{distance}} north or south of the source latitude */
15     AND airports.geo.latitude BETWEEN
16         {{source_latitude}} - ( {{radius}} / {{distance_unit}} )
17     AND
18         {{source_latitude}} + ( {{radius}} / {{distance_unit}} )
19     /* limit results to longitudes within {{distance}} east or west of the source longitude */
20     AND airports.geo.longitude BETWEEN
21         {{source_longitude}} - ( {{radius}} / ( {{distance_unit}} * COS(RADIANS( {{source_latitude}} )) )
22     AND
23         {{source_longitude}} + ( {{radius}} / ( {{distance_unit}} * COS(RADIANS( {{source_latitude}} )) )
24     AND airports.doc_type = 'airport'
25 ) AS results
26 WHERE results.distance > 0 /* remove the source from the results as its distance 0 */
27     AND results.distance <= {{radius}} /* remove any of the results that are not within the radius */
28 ORDER BY results.distance ASC /* sort the results by closest distance */

```

To provide the source airports `iso_country` , `latitude` , and `longitude` we can use the previous Airport Codes query.

Source Airport Query

[sourceairportICT.n1ql](#)

```

1 SELECT airports.iso_country, airports.geo.latitude AS latitude, airports.geo.longitude AS longitude
2 FROM `flight-data` AS codes
3 USE KEYS 'airport_code_ICT'
4 INNER JOIN `flight-data` AS airports ON KEYS 'airport_' || TOSTRING( codes.id )
5 LIMIT 1

```

Result

```

1 [
2   {
3     "iso_country": "US",
4     "latitude": 37.64989853,
5     "longitude": -97.43309784
6   }
7 ]

```

Next we replace the tokens from our base radius query with the returned values.

Airports Near a Given Airport in Miles Query

For our example we want to find any airports within 100 miles of "ICT". Our `{{distance_unit}}` is miles, this value needs to be `69` and our `{{radius}}` is `100`. Replace the `{{source_latitude}}`, `{{source_longitude}}` and `{{iso_country}}` with the values from the previous query.

[airportsnearairportbymiles.n1ql](#)

```

1  SELECT results.airport_name, results.airport_code, ROUND( results.distance, 2 ) AS dista
2  FROM (
3      SELECT airports.airport_name,
4          IFNULL( airports.airport_iata, airports.airport_icao, airports.airport_ident ) A
5          69 * DEGREES(ACOS(COS(RADIANS( 37.64989853 ))
6          * COS(RADIANS( airports.geo.latitude ))
7          * COS(RADIANS( -97.43309784 ) - RADIANS( airports.geo.longitude ))
8          + SIN(RADIANS( 37.64989853 ))
9          * SIN(RADIANS( airports.geo.latitude )))) AS distance
10     FROM `flight-data` AS airports
11     WHERE airports.iso_country = 'US'
12         AND airports.geo.latitude BETWEEN
13             37.64989853 - (100 / 69)
14             AND
15             37.64989853 + (100 / 69)
16         AND airports.geo.longitude BETWEEN
17             -97.43309784 - (100 / (69 * COS(RADIANS( 37.64989853 ))))
18             AND
19             -97.43309784 + ( 100 / ( 69 * COS(RADIANS( 37.64989853 ))))
20         AND airports.doc_type = 'airport'
21     ) AS results
22     WHERE results.distance > 0
23         AND results.distance <= 100
24     ORDER BY results.distance ASC

```

Airports Near a Given Airport in Miles Results


```
1  L
2  {
3    "airport_code": "IAB",
4    "airport_name": "Mc Connell Afb",
5    "distance": 9.21
6  },
7  {
8    "airport_code": "BEC",
9    "airport_name": "Beech Factory Airport",
10   "distance": 12.3
11 },
12 {
13   "airport_code": "EGT",
14   "airport_name": "Wellington Municipal",
15   "distance": 22.65
16 },
17 {
18   "airport_code": "EWK",
19   "airport_name": "Newton City-County Airport",
20   "distance": 29.47
21 },
22 {
23   "airport_code": "HUT",
24   "airport_name": "Hutchinson Municipal Airport",
25   "distance": 36.94
26 },
27 {
28   "airport_code": "PNC",
29   "airport_name": "Ponca City Rgnl",
30   "distance": 65.93
31 },
32 {
33   "airport_code": "SLN",
34   "airport_name": "Salina Municipal Airport",
35   "distance": 79.63
36 },
37 {
38   "airport_code": "EMP",
39   "airport_name": "Emporia Municipal Airport",
40   "distance": 82.32
41 },
42 {
43   "airport_code": "GBD",
44   "airport_name": "Great Bend Municipal",
45   "distance": 91.15
46 },
```

```

47 {
48   "airport_code": "END",
49   "airport_name": "Vance Afb",
50   "distance": 94.28
51 }
52 ]

```

Airports Near a Given Airport in Kilometers Query

For our example we want to find any airports within 75 kilometers of "Berlin" (TXL). Our

`{{distance_unit}}` is kilometers, this value needs to be `111.045` and our `{{radius}}` is `75`. Replace the `{{source_latitude}}`, `{{source_longitude}}` and `{{iso_country}}` with the values from the previous query.

Source Airport Query

[sourceairportTXL.n1ql](#)

```

1 SELECT airports.iso_country, airports.geo.latitude AS latitude, airports.geo.longitude AS longitude
2 FROM `flight-data` AS codes
3 USE KEYS 'airport_code_TXL'
4 INNER JOIN `flight-data` AS airports ON KEYS 'airport_' || TOSTRING( codes.id )
5 LIMIT 1

```

Result

```

1 [
2   {
3     "iso_country": "DE",
4     "latitude": 52.55970001,
5     "longitude": 13.2876997
6   }
7 ]

```

Airports Near a Given Airport in Kilometers Query

[airportsnearairportbykilometers.n1ql](#)

```

1 SELECT results.airport_name, results.airport_code, ROUND( results.distance, 2 ) AS dista
2 FROM (
3     SELECT airports.airport_name,
4         IFNULL( airports.airport_iata, airports.airport_icao, airports.airport_ident ) A
5         111.045 * DEGREES(ACOS(COS(RADIANS( 52.55970001 ))
6         * COS(RADIANS( airports.geo.latitude ))
7         * COS(RADIANS( 13.2876997 ) - RADIANS( airports.geo.longitude ))
8         + SIN(RADIANS( 52.55970001 ))
9         * SIN(RADIANS( airports.geo.latitude )))) AS distance
10    FROM `flight-data` AS airports
11   WHERE airports.iso_country = 'DE'
12         AND airports.geo.latitude BETWEEN
13             52.55970001 - ( 75 / 111.045 )
14         AND
15             52.55970001 + ( 75 / 111.045 )
16         AND airports.geo.longitude BETWEEN
17             13.2876997 - ( 75 / ( 111.045 * COS(RADIANS( 52.55970001 ))))
18         AND
19             13.2876997 + ( 75 / ( 111.045 * COS(RADIANS( 52.55970001 ))))
20         AND airports.doc_type = 'airport'
21    ) AS results
22   WHERE results.distance > 0
23         AND results.distance <= 75
24   ORDER BY results.distance ASC

```

Airport Radius in Kilometers Results

```

1 [
2   {
3     "airport_code": "SXF",
4     "airport_name": "Berlin Brandenburg Willy Brandt",
5     "distance": 25.5
6   },
7   {
8     "airport_code": "EDCS",
9     "airport_name": "Saarmund Airport",
10    "distance": 30.65
11  },
12  {
13    "airport_code": "EDOI",
14    "airport_name": "Bienenfarm Airport",
15    "distance": 38.25
16  },
17  {
18    "airport_code": "EDAV",
19    "airport name": "Flugplatz Finow".

```

```

20     "distance": 40.36
21   },
22   {
23     "airport_code": "QXH",
24     "airport_name": "Schonhagen",
25     "distance": 40.53
26   },
27   {
28     "airport_code": "EDAY",
29     "airport_name": "Strausberg",
30     "distance": 42.51
31   },
32   {
33     "airport_code": "EDAI",
34     "airport_name": "Segeletz Airport",
35     "distance": 58.29
36   },
37   {
38     "airport_code": "EDOJ",
39     "airport_name": "Luesse Airport",
40     "distance": 62.82
41   },
42   {
43     "airport_code": "EDBK",
44     "airport_name": "Kyritz",
45     "distance": 70.38
46   }
47 ]

```

Airports Near a Given Airport in Miles with Source Airport Query

Our previous examples have required us to perform a separate query to determine the source airport information. We add the source airports information to the query by utilizing the `NEST` statement. For our example we want to find any airports within 100 miles of "ICT". Our `{{distance_unit}}` is miles, this value needs to be `69` and our `{{radius}}` is `100`.

[airportsnearairportbymileswithlookup.n1ql](#)

```

1  SELECT results.airport_name, results.airport_code, ROUND( results.distance, 2 ) AS dista
2  FROM (
3      SELECT airports.airport_name,
4          IFNULL( airports.airport_iata, airports.airport_icao, airports.airport_ident ) A
5          69 * DEGREES(ACOS(COS(RADIANS( source_airport[0].geo.latitude ))
6          * COS(RADIANS( airports.geo.latitude ))
7          * COS(RADIANS( source_airport[0].geo.longitude ) - RADIANS( airports.geo.longitu
8          + SIN(RADIANS( source_airport[0].geo.latitude ))
9          * SIN(RADIANS( airports.geo.latitude )))) AS distance
10     FROM `flight-data` AS airports
11     INNER NEST `flight-data` AS source_airport ON KEYS (
12         ARRAY 'airport_' || TOSTRING(a.id) FOR a IN (
13             SELECT lookup_code.id
14             FROM `flight-data` AS lookup_code
15             USE KEYS 'airport_code_ICT'
16             LIMIT 1
17         ) END
18     )
19     WHERE airports.iso_country = source_airport[0].iso_country
20         AND airports.geo.latitude BETWEEN
21             source_airport[0].geo.latitude - ( 100 / 69 )
22             AND
23             source_airport[0].geo.latitude + ( 100 / 69 )
24         AND airports.geo.longitude BETWEEN
25             source_airport[0].geo.longitude - ( 100 / ( 69 * COS(RADIANS( source_airport
26             AND
27             source_airport[0].geo.longitude + ( 100 / ( 69 * COS(RADIANS( source_airport
28         AND airports.doc_type = 'airport'
29     ) AS results
30 WHERE results.distance > 0
31     AND results.distance <= 100
32 ORDER BY results.distance ASC

```

Airports Near a Given Airport in Miles Results

```

1  [
2      {
3          "airport_code": "IAB",
4          "airport_name": "Mc Connell Afb",
5          "distance": 9.21
6      },
7      {
8          "airport_code": "BEC",
9          "airport_name": "Beech Factory Airport",
10         "distance": 12.3
11     }

```

```
12 {
13     "airport_code": "EGT",
14     "airport_name": "Wellington Municipal",
15     "distance": 22.65
16 },
17 {
18     "airport_code": "EWK",
19     "airport_name": "Newton City-County Airport",
20     "distance": 29.47
21 },
22 {
23     "airport_code": "HUT",
24     "airport_name": "Hutchinson Municipal Airport",
25     "distance": 36.94
26 },
27 {
28     "airport_code": "PNC",
29     "airport_name": "Ponca City Rgnl",
30     "distance": 65.93
31 },
32 {
33     "airport_code": "SLN",
34     "airport_name": "Salina Municipal Airport",
35     "distance": 79.63
36 },
37 {
38     "airport_code": "EMP",
39     "airport_name": "Emporia Municipal Airport",
40     "distance": 82.32
41 },
42 {
43     "airport_code": "GBD",
44     "airport_name": "Great Bend Municipal",
45     "distance": 91.15
46 },
47 {
48     "airport_code": "END",
49     "airport_name": "Vance Afb",
50     "distance": 94.28
51 }
52 ]
```

While this executes and we get the same results as before, it is exponentially slower because the `NEST` is happening on every record.

