

Internet Yellow Pages Cheatsheet

<https://iyp.ijlab.net> - 2025/02

Clauses

LIMIT, ORDER BY: Similar to SQL.

```
MATCH (a:AS)
RETURN a ORDER BY a.asn DESC LIMIT 25
```

EXISTS subqueries: Selects on specific patterns.

```
// IPv4 only IXPs
MATCH (i:IXP)
WHERE NOT EXISTS {
    MATCH (i)<-[r:MEMBER_OF]-(:AS)
    WHERE r.ipv6
}
RETURN i.name
```

UNWIND: Transforms a list back into individual elements.

```
MATCH (a:AS)-[:PEERS_WITH]-(b:AS)
WITH collect(a) AS lista, collect(b) AS listb
UNWIND (list_a + list_b) AS x
RETURN DISTINCT x.asn
```

Reference: [Cypher clauses](#)

String Operations

STARTS WITH / ENDS WITH / CONTAINS:
Filters for string values.

```
MATCH (i:IXP)
WHERE i.name STARTS WITH 'DE-CIX'
RETURN i.name
```

lower() / upper(): Returns lower or upper case strings.

```
MATCH (n:Name)
WHERE lower(n.name) CONTAINS 'hello'
RETURN n
```

Reference: [Cypher string functions](#)

Functions

labels() / type(): Gets the list of labels of a node / types of a relationship.

MATCH (h:HostName)	RETURN DISTINCT labels(h)
MATCH (:AS)-[r]-()	RETURN DISTINCT type(r)

coalesce(): Returns the first non-null value in a list of expressions.

```
MATCH (a:AS)
OPTIONAL MATCH (a)-[:NAME {reference_name: 'emileaben.as_names'}]->(n1:Name)
OPTIONAL MATCH (a)-[:NAME {reference_name: 'ripe.as_names'}]->(n2:Name)
RETURN a.asn, coalesce(n1.name, n2.name) AS name
LIMIT 10
```

Reference: [Cypher functions](#)

List Operations

collect(): Creates a list.

```
MATCH (a:AS
{asn:2497})-[:ORIGINATE]-(pfx:BGPPrefix)
RETURN a.asn, collect(DISTINCT pfx.prefix)
```

IN: Checks if an element belongs to a list.

```
MATCH (a:AS)-[:ORIGINATE]-(pfx:BGPPrefix)
WHERE a.asn IN [2497, 2500]
RETURN DISTINCT a.asn, pfx.prefix
```

count(): Returns the number of values or rows.

```
MATCH (a:AS
{asn:2497})-[:ORIGINATE]-(pfx:BGPPrefix)
RETURN a.asn, count(DISTINCT pfx.prefix)
```

Troubleshooting

EXPLAIN: Shows the execution plan not running the query.

PROFILE: Runs the query and show used resources.

Reference: [Execution plans and query tuning](#)

Links

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| <ul style="list-style-type: none"> • Console • Archive • APNIC blog • IHR website • Cypher documentation | <ul style="list-style-type: none"> • GitHub ◦ Gallery ◦ Documentation ◦ Nodes / Relationships ◦ Crawlers |
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