

# KQL Cheat Sheet

15 Essential Queries for Azure Resource Graph

FREE VERSION

- ✓ **Azure Resource Graph Basics**
- ✓ 15 Production-Ready Queries
- ✓ Tested on 31,000+ Resources

From [azure-noob.com](https://azure-noob.com)

## What is KQL?

Kusto Query Language (KQL) is the query language for Azure Resource Graph, Log Analytics, and Microsoft Sentinel. If you manage Azure resources, you need to know KQL.

## Where to Run These Queries

**Azure Portal** → **Resource Graph Explorer** (search 'resource-graph' in the portal)

### Query 1: List All VMs

```
Resources
| where type == "microsoft.compute/virtualmachines"
| project name, location, resourceGroup
```

*Shows every VM across all your subscriptions.*

### Query 2: List All Storage Accounts

```
Resources
| where type == "microsoft.storage/storageaccounts"
| project name, location, resourceGroup
```

*Lists all storage accounts.*

### Query 3: Find Resources by Tag

```
Resources
| where tags["Environment"] == "Production"
| project name, type, resourceGroup
```

*Filter resources by tag value.*

### Query 4: Count Resources by Type

```
Resources
| summarize count() by type
| order by count_ desc
```

See which resource types you have most of.

## Query 5: List All Network Interfaces

```
Resources
| where type == "microsoft.network/networkinterfaces"
| project name, location, resourceGroup
```

*Inventory all network interfaces.*

## Query 6: Find Untagged Resources

```
Resources
| where type in ("microsoft.compute/virtualmachines",
"microsoft.storage/storageaccounts")
| where isnull(tags) or array_length(bag_keys(tags)) == 0
| project name, type, resourceGroup
```

*Find resources missing tags (governance compliance).*

## Query 7: List All Managed Disks

```
Resources
| where type == "microsoft.compute/disks"
| project name, location, resourceGroup
```

*Inventory all managed disks.*

## Query 8: Count Resources by Location

```
Resources
| summarize count() by location
| order by count_ desc
```

*See which Azure regions you're using.*

## Query 9: Find VMs with Specific OS

```
Resources
| where type == "microsoft.compute/virtualmachines"
```

```
| extend OSType = toString(properties.storageProfile.osDisk.osType)
| where OSType == "Linux"
| project name, OSType, resourceGroup
```

*Filter VMs by operating system.*

## Query 10: List Public IP Addresses

```
Resources
| where type == "microsoft.network/publicipaddresses"
| project name, location, resourceGroup
```

*Find all public IPs (security audit).*

## Query 11: Find Large Disks (>100GB)

```
Resources
| where type == "microsoft.compute/disks"
| extend DiskSizeGB = toint(properties.diskSizeGB)
| where DiskSizeGB > 100
| project name, DiskSizeGB, resourceGroup
```

*Identify large disks for cost analysis.*

## Query 12: List All Resource Groups

```
ResourceContainers
| where type == "microsoft.resources/resourcegroups"
| project name, location
```

*Inventory all resource groups.*

## Query 13: Count VMs by Resource Group

```
Resources
| where type == "microsoft.compute/virtualmachines"
| summarize VMCount = count() by resourceGroup
| order by VMCount desc
```

*See which resource groups have the most VMs.*

## Query 14: Find Resources in Specific Subscription

Resources

```
| where subscriptionId == "your-subscription-id-here"  
| summarize count() by type
```

*Filter to a single subscription.*

## Query 15: Get VM with Network Details

Resources

```
| where type == "microsoft.compute/virtualmachines"  
| extend NetworkInterfaceId =  
tostring(properties.networkProfile.networkInterfaces[0].id)  
| project name, NetworkInterfaceId, resourceGroup
```

*Link VMs to their network interfaces.*

# Want More?

**This FREE guide covers 15 essential queries to get started.**

Ready for production-level Azure administration?

**Get the Complete KQL Query Library (\$19)**

- ✓ 48 production-tested queries (vs 15 basic queries here)
- ✓ Advanced joins - Link VMs to NICs, disks, subnets, subscriptions
- ✓ Performance optimization guide - Query 31,000+ resources efficiently
- ✓ Migration discovery queries - Auto-fill 25 of 55 assessment questions
- ✓ Databricks-specific queries
- ✓ Case-insensitive tag handling
- ✓ SQL to KQL translation guide
- ✓ Future updates included

**Visit: [azure-noob.com/products](https://azure-noob.com/products)**

**Or: [davidnoob.gumroad.com/l/hooih](https://davidnoob.gumroad.com/l/hooih)**