

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

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

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