

# LAB14: Get insights on your Arc-enabled SQL Servers and Databases using the Azure Resource Graph

---

## Student Lab Manual

### Table of Contents

Exercise 1 - Collect insights on your SQL Server instances

**Task 1 - Use the Azure Portal to examine your SQL servers and databases**

**Task 2 - Query SQL Servers and Databases using the Resource Graph Explorer**

====

## Exercise 1 - Collect insights on your SQL Server instances

---

### Objective

In this exercise you will examine the Arc-enabled SQL Servers and the databases deployed on them.

### Estimated Time to Complete This Exercise

30 minutes

====

## Task 1: Use the Azure Portal to examine your SQL servers and databases

---

1. [] From the Azure portal home page, look for Resource Groups and select the one where you have been using in this workshop. Review the of *SQL Server – Azure Arc* and *SQL Server database – Azure Arc* resources that have now been onboarded. To make it easier you can filter by type or order by Type

Azure Resource Group 'ArcBox' - Overview

Subscription (move) : Deployment ID : Deployments : 19 Succeeded  
Subscription ID : Location : East US  
Tags (edit) : Add tags

**Resources** Recommendations (8)

Filter for any field... Type equals all × location equals all × Add filter

Type Operator Value

Operator Equals Value sql

All

SQL Server - Azure Arc (1)  
SQL Server database - Azure Arc (5)

Apply Cancel

Type ↑	Location ↑
Azure Workbook	East US
Azure Workbook	East US
Shared dashboard	East US
SQL Server database - Azure Arc	East US
Action group	Global
Data collection rule	East US
Data collection rule	East US
Virtual machine	East US
Network Interface	East US
Disk	East US
Public IP address	East US
Network security group	East US
Machine - Azure Arc	East US
Virtual network	East US

< Previous Page 1 of 1 Next >

2. [] Your SQL Servers are displayed in the format *Server Instance* and your databases are in the format *Database (Server Instance/Database)* where *Instance* only applies for named instances

Azure Resource Group 'ArcBox' - Overview

Subscription (move) : Deployment ID : Deployments : 19 Succeeded  
Subscription ID : Location : East US  
Tags (edit) : Add tags

**Resources** Recommendations

Filter for any field... Type equals 2 selected × Location equals all × Add filter

Type ↑↓

Type ↑↓	Location ↑↓
SQL Server database - Azure Arc	East US
SQL Server - Azure Arc	East US
SQL Server database - Azure Arc	East US
SQL Server database - Azure Arc	East US
SQL Server database - Azure Arc	East US
SQL Server database - Azure Arc	East US

< Previous Page 1 of 1 Next >

[!Important] On occasions, the databases might not show on the resource group view as described above for some time. In this case you can navigate to the Arc-enable SQL Server itself, expand the *Data management* menu and select *Databases*. This view should populate earlier than the resource group view

The screenshot shows the Azure portal interface for a SQL Server named 'ArcBox-SQL'. The top navigation bar includes 'Home > ArcBox-SQL' and the title 'ArcBox-SQL | Databases'. Below the title, it says 'SQL Server - Azure Arc'. On the left, a sidebar lists various management options: Overview, Activity log, Access control (IAM), Diagnose and solve problems, Resource visualizer, Settings, Security (with Extended Security Updates and Microsoft Defender for Cloud), Data management (with Databases and Availability Groups), and General. The 'Databases' item under 'Data management' is highlighted with a red box. The main content area displays the 'Last collected time' as 5/8/2025, 6:58:57 AM and 'Upload status' as Success. A search bar allows filtering databases. A table lists five databases: tempdb, msdb, AdventureWorksLT2022, model, and master, along with their status, creation time, and earliest restore point.

Database	Status	Creation time (UTC)	Earliest restore point (UTC)
tempdb	Online	5/8/2025, 5:55:59 AM	5/8/2025, 6:58:57 AM
msdb	Online	10/8/2022, 6:31:57 AM	5/8/2025, 6:58:57 AM
AdventureWorksLT2022	Online	9/26/2024, 1:29:08 PM	5/8/2025, 6:58:57 AM
model	Online	4/8/2003, 9:13:36 AM	5/8/2025, 6:58:57 AM
master	Online	4/8/2003, 9:13:36 AM	5/8/2025, 6:58:57 AM

- Click on any SQL server or database to examine further details and properties about them

### Task 1 has been completed

Click **Next** for the next exercise or **Go back to the main table of content**

====

## Task 2: Query SQL Servers and Databases using the Resource Graph Explorer

- From the Home page of the Azure portal, click on the search bar and type Resource graph and then select *Resource Graph Explorer*

The screenshot shows the Azure portal search results for 'Resource graph'. The 'Resource Graph Explorer' item is highlighted with a red box. Other items listed include 'Resource bridges', 'Resource Explorer', 'Resource management private links', and 'All resources'. The 'Resource Graph Explorer' item has a tooltip 'Overview of Azure Resource Graph - Azure Resource Graph'.

2. [] Copy and paste the following into the Query window and then click *Run query*. It will list all of your Arc-Enabled SQL Servers by Resource group.

The screenshot shows the Azure Resource Graph Explorer interface. The query entered is:

```
| where type == "microsoft.azurearcdata/sqlserverinstances"
| project name, resourceGroup, properties
```

The results table shows one row:

name ↑	resourceGroup ↑↓	properties
ARCBOT-SQL	arcbox	{"provisioningState": "Succeeded", "status": "Connected", ...}

The screenshot shows the Azure Resource Graph Explorer interface with three numbered callouts:

- Callout 1: A red box highlights the query editor area containing the following T-SQL-like query:

```
Resources
| where type == "microsoft.azurearcdata/sqlserverinstances"
| project name, resourceGroup, properties
```
- Callout 2: A red box highlights the 'Run query' button in the top navigation bar.
- Callout 3: A red box highlights the 'See details' link in the results table for the single listed resource.

3. [] Examine the information displayed by the *See details* link

## Details

name  
ARCBOX-SQL

resourceGroup  
arcbox

properties

```
1  {
2    "provisioningState": "Succeeded",
3    "status": "Connected",
4    "version": "SQL Server 2019",
5    "licenseType": "Free",
6    "collation": "SQL_Latin1_General_CI_AS",
7    "azureDefenderStatusLastUpdated": null,
8    "azureDefenderStatus": "Unknown",
9    "containerResourceId": "/subscriptions/ /resourcegroups/Arc
10   "tcpDynamicPorts": "",
```

4. [] Run the following query to return details about your databases. Examine the results from clicking the *See details* link for each database

### Resources

```
| where type == "microsoft.azurearcdata/sqlserverinstances/databases"
| project id, name, resourceGroup, properties
```

The screenshot shows the Azure Resource Graph Explorer interface. On the left, there's a sidebar with categories like General, AI + machine learning, Analytics, Compute, Containers, Databases, DevOps, Hybrid + multicloud, Identity, Integration, Internet of Things, Management and governance, Migration, Mixed reality, Monitor, Networking, Security, Storage, Web, and Other. The main area has a toolbar with New query, Open a query, Set authorization scope, Run query (button 2), Save, Save as, and Feedback. Below that is a 'Query 1' section with a code editor containing:

```

Resources
| where type == "microsoft.azurearcdata/sqlserverinstances/databases"
| project id, name, resourceGroup, properties

```

Below the code editor is a results table with columns: id ↑, name ↑, resourceGroup ↑, and properties. The results show five rows:

id ↑	name ↑	resourceGroup ↑	properties
/subscriptions... AdventureWorksLT2019	master	arcbox	{"provisioningState": "Succeeded", "databaseCreatio... See details
/subscriptions... master	model	arcbox	{"provisioningState": "Succeeded", "databaseCreatio... See details
/subscriptions... model	msdb	arcbox	{"provisioningState": "Succeeded", "databaseCreatio... See details
/subscriptions... msdb	tempdb	arcbox	{"provisioningState": "Succeeded", "databaseCreatio... See details

On the right, there's a 'Formatted results' toggle switch set to 'Off'. A red box highlights the 'See details' link in the last row of the results table.

5. [] Click on the See details links to provide a better view of the properties for each database in the result set
6. [] Run the following query to show the compatibility levels of the databases on all your Arc-enabled servers

```

resources
| where type == "microsoft.azurearcdata/sqlserverinstances"
| project InstanceId = id, InstanceName = name, Version =
    tostring(properties.version)
| join kind = inner (
    resources
    | where type == "microsoft.azurearcdata/sqlserverinstances/databases"
    | where name !in ("master", "model", "msdb", "tempdb")
    | project InstanceId = substring(id, 0, indexof(id, "Databases", 0) - 1),
        DatabaseName = name, CompatibilityLevel = tostring(properties.compatibilityLevel)
) on InstanceId
| project InstanceName, DatabaseName, CompatibilityLevel = strcat(Version, " -
    Level ", CompatibilityLevel)

```

## Task 2 has been completed

---

Click **Next** for the next lab or **Go back to the main table of content**