

Azure Synapse

Data Masking

Ahora, en este capítulo, vamos a ver el enmascaramiento de datos (data masking), así que si quieres ocultar información de los datos, digamos en una columna en particular de tus usuarios, digamos que la columna está almacenando información sensible como información de tarjetas de crédito, etc, y quieres asegurarte de que cuando se realicen consultas a una tabla en Azure Synapse, esa información no se mostrará a los usuarios. Puede utilizar la función de "data masking" (enmascaramiento de datos).

- Aquí se puede limitar la exposición de los datos de la tabla a usuarios no privilegiados.
- Puede crear una regla que enmascare los datos
- Sobre la base de la regla se puede decidir sobre la cantidad de datos a exponer al usuario
- Existen diferentes reglas de enmascaramiento:

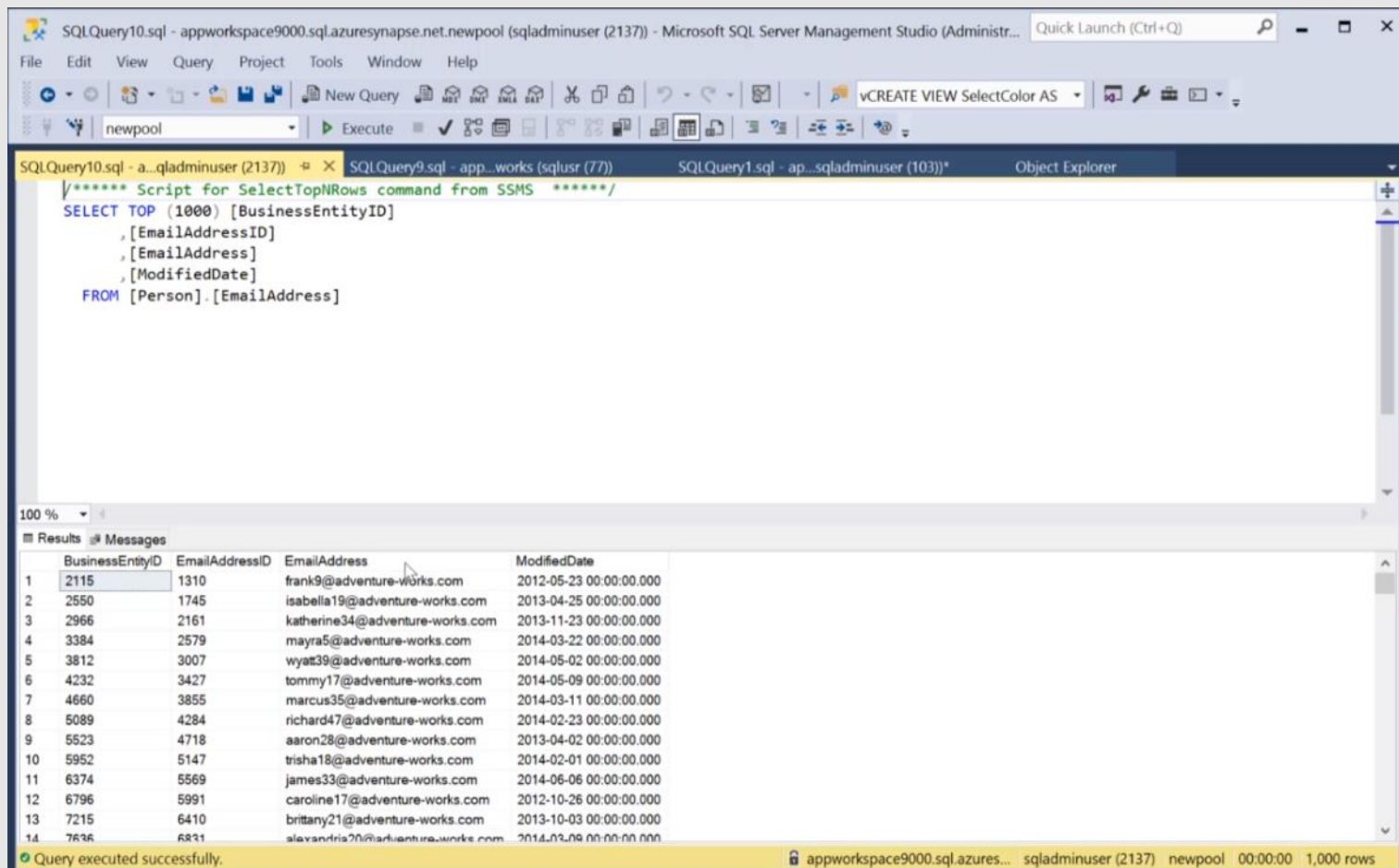
Credit Card masking rule: Se utiliza para enmascarar las columnas que contienen datos de tarjetas de crédito. En este caso, sólo se muestran los cuatro últimos dígitos del campo.

Email: Aquí se muestra la primera letra de la dirección de correo electrónico. Y el nombre de dominio de la dirección de correo electrónico se sustituye por XXX.com.

Custom text: Aquí usted decide qué caracteres exponer para un campo

Random number: Aquí puede generar un número aleatorio para el campo

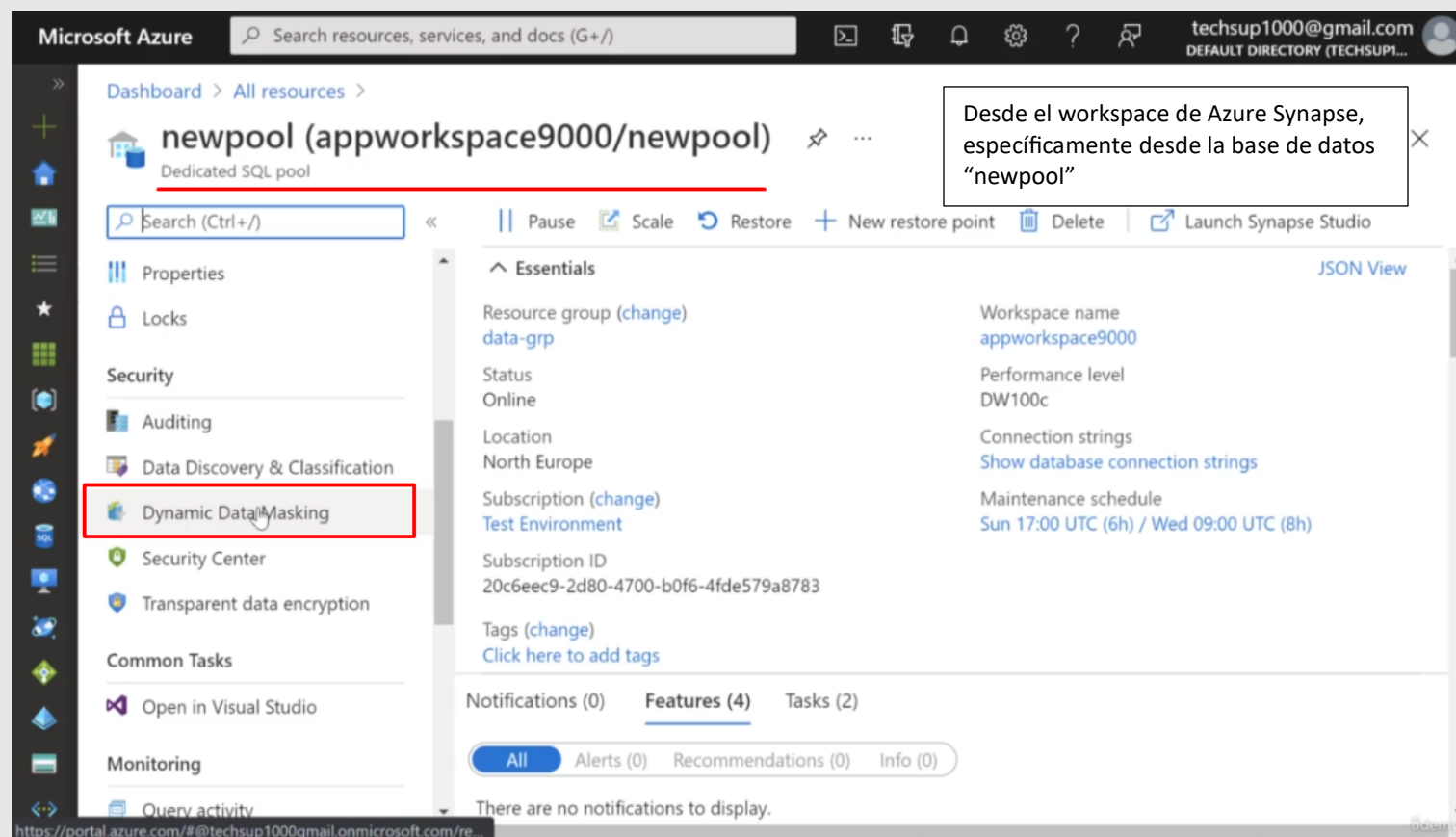
Para la siguiente tabla que copiamos desde la base de datos AdventureWorks que se encontraba en Azure SQL, hacia Azure Synapse Dedicated Pool



The screenshot shows the Microsoft SQL Server Management Studio interface. The query window displays a T-SQL script for a SELECT TOP (1000) query on the AdventureWorks database. The query selects columns BusinessEntityID, EmailAddressID, EmailAddress, and ModifiedDate from the Person.EmailAddress table. The Results pane shows the first 14 rows of the query output, which includes columns BusinessEntityID, EmailAddressID, EmailAddress, and ModifiedDate. The status bar at the bottom indicates that the query executed successfully, returning 1,000 rows in 00:00:00 seconds.

```
/****** Script for SelectTopNRows command from SSMS ******/
SELECT TOP (1000) [BusinessEntityID]
, [EmailAddressID]
, [EmailAddress]
, [ModifiedDate]
FROM [Person].[EmailAddress]
```

	BusinessEntityID	EmailAddressID	EmailAddress	ModifiedDate
1	2115	1310	frank9@adventure-works.com	2012-05-23 00:00:00.000
2	2550	1745	isabella19@adventure-works.com	2013-04-25 00:00:00.000
3	2966	2161	katherine34@adventure-works.com	2013-11-23 00:00:00.000
4	3384	2579	mayra5@adventure-works.com	2014-03-22 00:00:00.000
5	3812	3007	wyat39@adventure-works.com	2014-05-02 00:00:00.000
6	4232	3427	tommy17@adventure-works.com	2014-05-09 00:00:00.000
7	4660	3855	marcus35@adventure-works.com	2014-03-11 00:00:00.000
8	5089	4284	richard47@adventure-works.com	2014-02-23 00:00:00.000
9	5523	4718	aaron28@adventure-works.com	2013-04-02 00:00:00.000
10	5952	5147	trisha18@adventure-works.com	2014-02-01 00:00:00.000
11	6374	5569	james33@adventure-works.com	2014-06-06 00:00:00.000
12	6796	5991	caroline17@adventure-works.com	2012-10-26 00:00:00.000
13	7215	6410	brittany21@adventure-works.com	2013-10-03 00:00:00.000
14	7636	6821	alexandria20@adventure-works.com	2014-03-09 00:00:00.000



The screenshot shows the Microsoft Azure portal interface. The main content area displays the configuration for a new SQL pool named 'newpool' within the workspace 'appworkspace9000'. The pool is a Dedicated SQL pool. The configuration details include the resource group 'data-grp', status 'Online', location 'North Europe', subscription 'Test Environment', and subscription ID '20c6eec9-2d80-4700-b0f6-4fde579a8783'. The workspace name is 'appworkspace9000', the performance level is 'DW100c', and the maintenance schedule is 'Sun 17:00 UTC (6h) / Wed 09:00 UTC (8h)'. The 'Dynamic Data Masking' feature is highlighted in the left-hand navigation pane. A text box on the right side of the screen states: 'Desde el workspace de Azure Synapse, específicamente desde la base de datos "newpool"'. The status bar at the bottom indicates that there are no notifications to display.

newpool (appworkspace9000/newpool)
Dedicated SQL pool

Search (Ctrl+/) | Pause | Scale | Restore | New restore point | Delete | Launch Synapse Studio

Properties | Locks | Security | Auditing | Data Discovery & Classification | **Dynamic Data Masking** | Security Center | Transparent data encryption | Common Tasks | Open in Visual Studio | Monitoring | Query activity

Essentials

- Resource group (change) data-grp
- Status Online
- Location North Europe
- Subscription (change) Test Environment
- Subscription ID 20c6eec9-2d80-4700-b0f6-4fde579a8783
- Tags (change) Click here to add tags

Workspace name appworkspace9000

Performance level DW100c

Connection strings Show database connection strings

Maintenance schedule Sun 17:00 UTC (6h) / Wed 09:00 UTC (8h)

Notifications (0) Features (4) Tasks (2)

All Alerts (0) Recommendations (0) Info (0)

There are no notifications to display.

Microsoft Azure Search resources, services, and docs (G+/)

techsup1000@gmail.com DEFAULT DIRECTORY (TECHSUP1...

Dashboard > All resources > newpool (appworkspace9000/newpool)

newpool (appworkspace9000/newpool) | Dynamic Data Masking

Dedicated SQL pool

Search (Ctrl+/) Save Discard **Add mask** Feedback

[Learn more - Getting Started Guide](#)

Masking rules

Mask name	Mask Function
You haven't created any masking rules.	

SQL users excluded from masking (administrators are always excluded) ⓘ

SQL users excluded from masking (administrators are always excluded) ✓

Recommended fields to mask

Schema	Table	Column	
Person	EmailAddress	EmailAddress	Add mask
dbo	serverlogs	remote_addr	Add mask
dbo	customercourse	mobile	Add mask
dbo	customercourse	city	Add mask

Properties
Locks
Security
Auditing
Data Discovery & Classification
Dynamic Data Masking
Security Center
Transparent data encryption
Common Tasks
Open in Visual Studio
Monitoring
Query activity

Microsoft Azure Search resources, services, and docs (G+/)

techsup1000@gmail.com DEFAULT DIRECTORY (TECHSUP1...

Dashboard > All resources > newpool (appworkspace9000/newpool) >

Add masking rule

Add Delete

Mask name
Person_EmailAddress_EmailAddress

Select what to mask

Schema *
Person

Table *
EmailAddress

Column *
EmailAddress (nvarchar)

Select how to mask

Masking field format
Email (aXXX@XXXX.com)

Microsoft Azure Search resources, services, and docs (G+/)

Dashboard > All resources > newpool (appworkspace9000/newpool)

newpool (appworkspace9000/newpool) | Dynamic Data Masking

Dedicated SQL pool

Save Discard + Add mask Feedback

Saving
Saving Dynamic Data Masking settings...

SQL users excluded from masking (administrators are always excluded) ✓

Recommended fields to mask

Schema	Table	Column	
Person	EmailAddress	EmailAddress	Add mask
dbo	serverlogs	remote_addr	Add mask
dbo	customercourse	mobile	Add mask
dbo	customercourse	city	Add mask
dbo	SalesFact	TaxAmt	Add mask

techsup1000@gmail.com
DEFAULT DIRECTORY (TECHSUP1...)

11:27 AM
Saving Dynamic Data Masking settings for SQL pool: newpool.

SQL users excluded from masking (administrators are always excluded): Usuarios SQL excluidos del enmascaramiento (los administradores siempre están excluidos)

Microsoft Azure Search resources, services, and docs (G+/)

Dashboard > All resources > newpool (appworkspace9000/newpool)

newpool (appworkspace9000/newpool) | Dynamic Data Masking

Dedicated SQL pool

Search (Ctrl+/) Save Discard + Add mask Feedback

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Masking rules

Mask name	Mask Function
Person_EmailAddress_EmailAddress	Email (aXXX@XXXX.com)

SQL users excluded from masking (administrators are always excluded) ⓘ
SQL users excluded from masking (administrators are always excluded) ✓

Recommended fields to mask

Schema	Table	Column	
Person	EmailAddress	EmailAddress	Add mask
dbo	serverlogs	remote_addr	Add mask
dbo	customercourse	mobile	Add mask
dbo	customercourse	city	Add mask

techsup1000@gmail.com
DEFAULT DIRECTORY (TECHSUP1...)

En la siguiente Query se creó un nuevo usuario y se utilizó para generar una consulta

The screenshot displays the Microsoft SQL Server Management Studio interface. The top menu bar includes File, Edit, View, Query, Project, Tools, Window, and Help. The toolbar contains various icons for file operations, query execution, and development tools. The main query editor window shows the following SQL script:

```
CREATE USER UserA WITHOUT LOGIN;  
  
GRANT SELECT ON [Person].[EmailAddress] TO UserA;  
  
EXECUTE AS USER = 'UserA';  
SELECT * FROM [Person].[EmailAddress];  
REVERT;
```

Below the query editor, the 'Results' tab is active, displaying a table with the following data:

	BusinessEntityID	EmailAddressID	EmailAddress	ModifiedDate
1	2115	1310	fXXX@XXXX.com	2012-05-23 00:00:00.000
2	2550	1745	iXXX@XXXX.com	2013-04-25 00:00:00.000
3	2966	2161	kXXX@XXXX.com	2013-11-23 00:00:00.000
4	3384	2579	mXXX@XXXX.com	2014-03-22 00:00:00.000
5	3812	3007	wXXX@XXXX.com	2014-05-02 00:00:00.000
6	4232	3427	tXXX@XXXX.com	2014-05-09 00:00:00.000
7	4660	3855	mXXX@XXXX.com	2014-03-11 00:00:00.000
8	5089	4284	rXXX@XXXX.com	2014-02-23 00:00:00.000
9	5523	4718	aXXX@XXXX.com	2013-04-02 00:00:00.000
10	5952	5147	bXXX@XXXX.com	2014-02-01 00:00:00.000
11	6374	5569	jXXX@XXXX.com	2014-06-06 00:00:00.000
12	6796	5991	cXXX@XXXX.com	2012-10-26 00:00:00.000
13	7215	6410	bXXX@XXXX.com	2013-10-03 00:00:00.000
14	7626	6821	aXXX@XXXX.com	2014-03-06 00:00:00.000

The status bar at the bottom indicates: 'Query executed successfully. appworkspace9000.sql.azure... sqladminuser (2137) newpool 00:00:01 19,972 rows'.