Export BACPAC using Azure service

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How To: Export BACPAC to Storage Account using Azure Import/Export service (Powershell)

When you need to export a database for archiving or for moving to another platform, you can export the database schema and data to a BACPAC file. A BACPAC file is a ZIP file with an extension of BACPAC containing the metadata and data from a SQL Server database. A BACPAC file can be stored in Azure Blob storage or in local storage in an on-premises location and later imported back into Azure SQL Database or into a SQL Server on-premises installation.

```
# Subscription parameters
$tenant = "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"
$subscription = "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"
$resource_group_sql = "xxxxxxxxxxxx"
$resource_group_storage = "xxxxxxxxxxxx"

# Server/Database
$server_name = "xxxxxxxxxxxx"
$database_name = "xxxxxxxxxxxx"

# Credentials
$user_name = "xxxxxxxxxxxx"
$secure_password = ConvertTo-SecureString -String "xxxxxxxxxxxx" -AsPlainText -Force

# Storage details
$date = Get-Date -Format "yyyyMMdd_HHmmss"
$storage_account = "xxxxxxxxxxxx"
$storage_container = "xxxxxxxxxxxx"
$file_name = $($database_name + "_" + $date + ".bacpac")
$storage_uri = $("https://" + $storage_account + ".blob.core.windows.net/" + $storage_container + "/" + $file_
$storage_key = $(Get-AzStorageAccountKey -ResourceGroupName $resource_group_storage -StorageAccountName $stora



# Connect to Azure, and set the subscription to use. Can be commented if there's only one subscription
Connect-AzAccount -Tenant $tenant
Set-AzContext -Subscription $subscription

# Make the request for the Export
$export_request = New-AzSqlDatabaseExport `
    -ResourceGroupName $resource_group_sql `
    -ServerName $server_name `
    -DatabaseName $database_name `
    -AdministratorLogin $user_name `
    -AdministratorLoginPassword $secure_password `
    -StorageKeyType "StorageAccessKey" `
    -StorageKey $storage_key `
    -StorageUri $storage_uri

# The cmdlet below can then be used to get current status about the operation.
Get-AzSqlDatabaseImportExportStatus -OperationStatusLink $export_request.OperationStatusLink
```

Notes/Considerations

- The machines processing import/export requests submitted through portal or PowerShell need to store the bacpac file as well as temporary files generated by Data-Tier Application Framework (DacFX). The disk space required varies significantly among DBs with same size and can take up to three times of the database size. Machines running the import/export request only have 450GB local disk space. As result, some requests may fail with "There is not enough space on the disk" error. In this case, the workaround is to run SqlPackage on a machine with enough local disk space. When importing/exporting databases larger than 150GB, use SqlPackage to avoid this issue.
- For an archive to be transactionally consistent, you must ensure that no write activity is occurring during the export, or that you are exporting from a transactionally consistent copy of your Azure SQL database.
- The maximum size of a BACPAC file archived to Azure Blob storage is 200 GB. To archive a larger BACPAC file to local storage, use the SqlPackage command-prompt utility. This utility ships with both Visual Studio and SQL Server. You can also download the latest version of SQL Server Data Tools to get this utility.
- Archiving to Azure premium storage by using a BACPAC file is not supported.

- If the export operation exceeds 20 hours, it may be canceled. To increase performance during export, you can:
  - Temporarily increase your service level.
  - Cease all read and write activity during the export.
  - Use a clustered index with non-null values on all large tables. Without clustered indexes, an export may fail if it takes longer than 6-12 hours. This is because the export service needs to complete a table scan to try to export entire table. A good way to determine if your tables are optimized for export is to run DBCC SHOW_STATISTICS and make sure that the RANGE_HI_KEY is not null and its value has good distribution. For details, see DBCC SHOW_STATISTICS.

External Links

Import a .bacpac file to a database in Azure SQL Database

Learn about SQL Database backups

Storing Azure SQL Database Backups for up to 10 years

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