学习

azure

#azure

1: azure

AzureMicrosoft。 Microsoft Azure

- IaaSLinuxWindows Azure
- PaaSApp ServiceWeb
- SQLnoSQL
- SaaS

Azure https //azure.microsoft.com/en-us/resources/infographics/azure/ 。 Azure。

Examples

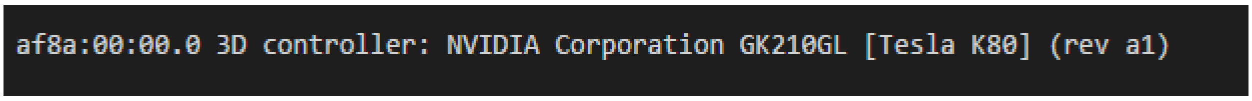
Azure NGPUUBUNTU 16.04 LTSCUDAcudnnTensorflow

5

- CUDAGPU

```
lspci | grep -i NVIDIA
```

NVIDIA Tesla K80 / M60



```
af8a:00:00.0 3D controller: NVIDIA Corporation GK210GL [Tesla K80] (rev a1)
```

- nouveau

```
sudo -i
rmmod nouveau
```

- `sudo reboot` `sudo reboot`

```
lsmod | grep -i nvidia
```

- Nvidia**CUDA**......

```
wget https://developer.nvidia.com/compute/cuda/8.0/prod/local_installers/cuda-repo-ubuntu1604-
8-0-local_8.0.44-1_amd64-deb
```

-...apt-getCUDA Toolkit

```
sudo dpkg -i cuda-repo-ubuntu1604-8-0-local_8.0.44-1_amd64-deb
sudo apt-get update
sudo apt-get install -y cuda
```

- GPU

```
nvidia-smi
```

cuDNN ...

```
wget http://developer.download.nvidia.com/compute/redist/cudnn/v5.1/cudnn-8.0-linux-x64-
v5.1.tgz
```

-...lib64

```
tar -zxf cudnn-8.0-linux-x64-v5.1.tgz
sudo cp cuda/lib64/* /usr/local/cuda/lib64/
sudo cp cuda/include/* /usr/local/cuda/include/
sudo rm -R cuda
```

-

```
rm cuda-repo-ubuntu1604-8-0-local_8.0.44-1_amd64-deb
rm cudnn-8.0-linux-x64-v5.1.tgz
```

CPU / GPUTensorflow

https://www.tensorflow.org/install/install_linux#installing_with_anaconda

1. https://www.lutzroeder.com/blog/2016-12-27-tensorflow-azure 2.
https://www.tensorflow.org/install/install_linux#installing_with_anaconda

azure https://riptutorial.com/zh-CN/azure/topic/1060/azure

2: Azure DocumentDB

Examples

.NET

DocumentDB**URI**`DocumentClient` 。

```
using System;
using Microsoft.Azure.Documents.Client;
```

```
var endpointUri = "<your endpoint URI>";
var primaryKey = "<your key>";
var client = new DocumentClient(new Uri(endpointUri), primaryKey);
```

.NET

`DocumentClient``CreateDatabaseAsync`DocumentDB 。 JSON。

```
using System.Net;
using System.Threading.Tasks;
using Microsoft.Azure.Documents;
using Microsoft.Azure.Documents.Client;
```

```
async Task CreateDatabase(DocumentClient client)
{
    var databaseName = "<your database name>";
    await client.CreateDatabaseAsync(new Database { Id = databaseName });
}
```

```
async Task CreateDatabaseIfNotExists(DocumentClient client)
{
    var databaseName = "<your database name>";
    try
    {
        await client.ReadDatabaseAsync(UriFactory.CreateDatabaseUri(databaseName));
    }
    catch (DocumentClientException e)
    {
        // If the database does not exist, create a new database
        if (e.StatusCode == HttpStatusCode.NotFound)
        {
            await client.CreateDatabaseAsync(new Database { Id = databaseName });

        }
        else
        {
            // Rethrow
            throw;
        }
    }
}
```

.NET

`DocumentClientCreateDocumentCollectionAsync` ◦ JSONJavaScript◦

```
async Task CreateCollection(DocumentClient client)
{
    var databaseName = "<your database name>";
    var collectionName = "<your collection name>";

    DocumentCollection collectionInfo = new DocumentCollection();
    collectionInfo.Id = collectionName;

    // Configure collections for maximum query flexibility including string range queries.
    collectionInfo.IndexingPolicy = new IndexingPolicy(new RangeIndex(DataType.String) {
Precision = -1 });

    // Here we create a collection with 400 RU/s.
    await client.CreateDocumentCollectionAsync(UriFactory.CreateDatabaseUri(databaseName),
        collectionInfo, new RequestOptions { OfferThroughput = 400 });
}
```

```
async Task CreateDocumentCollectionIfNotExists(DocumentClient client)
{
    var databaseName = "<your database name>";
    var collectionName = "<your collection name>";
    try
    {
        await
client.ReadDocumentCollectionAsync(UriFactory.CreateDocumentCollectionUri(databaseName,
collectionName));
    }
    catch (DocumentClientException e)
    {
        // If the document collection does not exist, create a new collection
        if (e.StatusCode == HttpStatusCode.NotFound)
        {
            DocumentCollection collectionInfo = new DocumentCollection();
            collectionInfo.Id = collectionName;

            // Configure collections for maximum query flexibility including string range
queries.
            collectionInfo.IndexingPolicy = new IndexingPolicy(new RangeIndex(DataType.String)
{ Precision = -1 });

            // Here we create a collection with 400 RU/s.
            await
client.CreateDocumentCollectionAsync(UriFactory.CreateDatabaseUri(databaseName),
                collectionInfo, new RequestOptions { OfferThroughput = 400 });
        }
        else
        {
            // Rethrow
            throw;
        }
    }
}
```

JSON.NET

CreateDocumentAsyncDocumentClient。 JSON。

```
async Task CreateFamilyDocumentIfNotExists(DocumentClient client, string databaseName, string
collectionName, Family family)
{
    try
    {
        await client.ReadDocumentAsync(UriFactory.CreateDocumentUri(databaseName,
collectionName, family.Id));
    }
    catch (DocumentClientException e)
    {
        if (e.StatusCode == HttpStatusCode.NotFound)
        {
            await
client.CreateDocumentAsync(UriFactory.CreateDocumentCollectionUri(databaseName,
collectionName), family);
        }
        else
        {
            // Rethrow
            throw;
        }
    }
}
```

```
public class Family
{
    [JsonProperty(PropertyName = "id")]
    public string Id { get; set; }
    public string LastName { get; set; }
    public Parent[] Parents { get; set; }
    public Child[] Children { get; set; }
    public Address Address { get; set; }
    public bool IsRegistered { get; set; }
    public override string ToString()
    {
        return JsonConvert.SerializeObject(this);
    }
}

public class Parent
{
    public string FamilyName { get; set; }
    public string FirstName { get; set; }
}

public class Child
{
    public string FamilyName { get; set; }
    public string FirstName { get; set; }
    public string Gender { get; set; }
    public int Grade { get; set; }
    public Pet[] Pets { get; set; }
}

public class Pet
```

```
{
    public string GivenName { get; set; }
}

public class Address
{
    public string State { get; set; }
    public string County { get; set; }
    public string City { get; set; }
}
```

.NET

DocumentDB**JSON** 。

LINQ

```
IQueryable<Family> familyQuery = this.client.CreateDocumentQuery<Family>(
    UriFactory.CreateDocumentCollectionUri(databaseName, collectionName), queryOptions)
    .Where(f => f.LastName == "Andersen");
```

SQL

```
IQueryable<Family> familyQueryInSql = this.client.CreateDocumentQuery<Family>(
    UriFactory.CreateDocumentCollectionUri(databaseName, collectionName),
    "SELECT * FROM Family WHERE Family.lastName = 'Andersen'",
    queryOptions);
```

LINQ

FeedOptionsRequestContinuation

```
public async Task<IEnumerable<Family>> QueryWithPagination(int Size_of_Page)
{
    var queryOptions = new FeedOptions() { MaxItemCount = Size_of_Page };
    string continuationToken = string.Empty;
    do
    {
        if (!string.IsNullOrEmpty(continuationToken))
        {
            queryOptions.RequestContinuation = continuationToken;
        }

        IDocumentQuery<Family> familyQuery = this.client.CreateDocumentQuery<Family>(
            UriFactory.CreateDocumentCollectionUri(databaseName, collectionName),
queryOptions)
            .Where(f => f.LastName == "Andersen").AsDocumentQuery();

        var queryResult = await familyQuery.ExecuteNextAsync<Family>();
        continuationToken = queryResult.ResponseContinuation;
        yield return queryResult;

    } while (!string.IsNullOrEmpty(continuationToken));
}
```

Continuation Token。

```
public class PagedResults<T>
{
    public PagedResults()
    {
        Results = new List<T>();
    }
    public string ContinuationToken { get; set; }
    public List<T> Results { get; set; }
}

public async Task<PagedResults<Family>> QueryWithPagination(int Size_of_Page, string
continuationToken = "")
{
    var queryOptions = new FeedOptions() { MaxItemCount = Size_of_Page };
    if (!string.IsNullOrEmpty(continuationToken))
    {
        queryOptions.RequestContinuation = continuationToken;
    }

    return await familyQuery = this.client.CreateDocumentQuery<Family>(
        UriFactory.CreateDocumentCollectionUri(databaseName, collectionName), queryOptions)
        .Where(f => f.LastName == "Andersen").ToPagedResults();
}


public static class DocumentDBExtensions
{
    public static async Task<PagedResults<T>> ToPagedResults<T>(this IQueryable<T> source)
        {
            var documentQuery = source.AsDocumentQuery();
            var results = new PagedResults<T>();
            try
            {
                var queryResult = await documentQuery.ExecuteNextAsync<T>();
                if (!queryResult.Any())
                {
                    return results;
                }
                results.ContinuationToken = queryResult.ResponseContinuation;
                results.Results.AddRange(queryResult);
            }
            catch
            {
                //documentQuery.ExecuteNextAsync throws an exception on empty queries
                return results;
            }

            return results;
        }
}
```

.NET

DocumentDB`DocumentClientReplaceDocumentAsync`JSON。

```
await client.ReplaceDocumentAsync(UriFactory.CreateDocumentUri(databaseName, collectionName,
familyName), updatedFamily);
```

.NET

DocumentDB`DocumentClientDeleteDocumentAsync`JSON。

```
await client.DeleteDocumentAsync(UriFactory.CreateDocumentUri(databaseName, collectionName,
documentName));
```

.NET

。

```
await this.client.DeleteDatabaseAsync(UriFactory.CreateDatabaseUri(databaseName));
```

Azure DocumentDB https://riptutorial.com/zh-CN/azure/topic/5176/azure-documentdb

3: Azure Powershell

Examples

ARM

PowerShellAzureMicrosoft

“”

AzureAzure。 AzureARM。

```
Get-Module -ListAvailable Azure.*
```

“ARM”

AzureREST API。 PowershellAzure。 ARMAzure。

ARM

```
Get-Module -ListAvailable AzureRM*
```

Azure

```
Add-AzureAccount
```

Azure Active DirectoryPowerShell12。 12。

cmdlet

```
Get-AzurePublishSettingsFile
```

。 PowerShell。

```
Import-AzurePublishSettingsFile
```

。 。

Azure Active Directory12。

```
Login-AzureRmAccount
Add-AzureRmAccount
```

Azure;;。

```
Set-AzureSubscription
Select-AzureSubscription
```

```
Select-AzureRmSubscription
```

ID。

```
Get-AzureSubscription
```

Azure PowerShell

Azure PowerShell

```
Get-Module -ListAvailable -Name Azure -Refresh
```

PowerShellAzure PowerShell。

Azure

Azure CmdletCAzurePowerShellAzure。

Azure blob

```
New-Item -Path .\myblob -ItemType Directory
$context = New-AzureStorageContext -StorageAccountName MyAccountName -StorageAccountKey {key
from the Azure portal}
$blob = Get-AzureStorageBlob -Container MyContainerName -Context $context
$blob | Get-AzureStorageBlobContent -Destination .\myblob\
```

Azure PowerShellAzure Portal

- Traffic Manager
- Azure `ResourceId`Azure

RM 。

TrafficManager

PowerShell

1. TM
   `$profile = Get-AzureRmTrafficManagerProfile -ResourceGroupName my-resource-group -Name my-traffic-manager`
   。
2. TM
   `$profile``$profile.Endpoints`。
3. `Set-AzureRmTrafficManagerProfile -TrafficManagerProfile $profile`。

```
$profile.Endpoints
```

```
$profile.Endpoints[0].Weight = 100
```

```
$profile.Endpoints | ?{ $_.Name -eq 'my-endpoint' } | %{ $_.Weight = 100 }
```

```
$profile.Endpoints.Clear()
```

```
Remove-AzureRmTrafficManagerEndpointConfig -TrafficManagerProfile $profile -EndpointName 'my-
endpoint'
```

```
Add-AzureRmTrafficManagerEndpointConfig -TrafficManagerProfile $profile -EndpointName "my-
endpoint" -Type AzureEndpoints -TargetResourceId "/subscriptions/00000000-0000-0000-0000-
000000000000/resourceGroups/my-resource-group/providers/Microsoft.ClassicCompute/domainNames/my-
azure-service" -EndpointStatus Enabled -Weight 100
```

ResourceIdAzure。

`Set-AzureRmTrafficManagerProfile -TrafficManagerProfile $profile`TM。 TM。

DNSIPTTL`$profile.Ttl`。 TMTTL。

Azure Powershell https://riptutorial.com/zh-CN/azure/topic/3961/azure-powershell

4: Azure Service Fabric

Azure Service FabricAzurePaaS。 ComputeWeb。

Service FabricMicrosoft “Docker”。

。 “”

-
- “”
    -
    -
- “”

Examples

Service Fabricactor.NET/

```
public interface IMyActor : IActor
{
    Task<string> HelloWorld();
}


internal class MyActor : Actor, IMyActor
{
    public Task<string> HelloWorld()
    {
        return Task.FromResult("Hello world!");
    }
}
```

/outref。

。 actor;actoractor“”。

Service Fabric SDK。 actoractor`await`。

IDActor。 IDDBActoractoruserID。

actorIDActorIdactor ID

```
ActorId actorId = ActorId.NewId();
```

`ActorProxy`actor。 actor。 IMyActor myActor = ActorProxy.CreateactorIdnew Uri“fabric/ MyApp / MyActorService”;

actor。 IDactoractoractorTask

```
await myActor.HelloWorld();
```

Azure Service Fabric https://riptutorial.com/zh-CN/azure/topic/3802/azure-service-fabric

5: Azure

AzureAzure。。。。。。

Examples

```
public static string CreateBLOBContainer(string containerName)
        {
            try
            {
                string result = string.Empty;
                CloudMediaContext mediaContext;
                mediaContext = new CloudMediaContext(mediaServicesAccountName,
mediaServicesAccountKey);
                IAsset asset = mediaContext.Assets.Create(containerName,
AssetCreationOptions.None);
                return asset.Uri.ToString();
            }
            catch (Exception ex)
            {
                return ex.Message;
            }
        }
```

```
private static void GetAllTheAssetsAndFiles(MediaServicesCredentials _medServCredentials)
       {
           try
           {
               string result = string.Empty;
               CloudMediaContext mediaContext;
               mediaContext = new CloudMediaContext(_medServCredentials);
               StringBuilder myBuilder = new StringBuilder();
               foreach (var item in mediaContext.Assets)
               {
                   myBuilder.AppendLine(Environment.NewLine);
                   myBuilder.AppendLine("--My Assets--");
                   myBuilder.AppendLine("Name: " + item.Name);
                   myBuilder.AppendLine("++++++++++++++++++++");

                   foreach (var subItem in item.AssetFiles)
                   {
                       myBuilder.AppendLine("File Name: "+subItem.Name);
                       myBuilder.AppendLine("Size: " + subItem.ContentFileSize);
                       myBuilder.AppendLine("++++++++++++++++++++++");
                   }
               }
               Console.WriteLine(myBuilder);
           }
           catch (Exception)
           {
               throw;
           }
       }
```

Azure https://riptutorial.com/zh-CN/azure/topic/4997/azure

6: Azure

Examples

Azure Blobblob

AzureblobAPI。 Microsoft Azure Blobblob。

```
StorageCredentials cred = new StorageCredentials("[Your storage account name]", "[Your storage
account key]");

CloudBlobContainer container = new CloudBlobContainer(new Uri("http://[Your storage account
name].blob.core.windows.net/[Your container name] /"), cred);

string fileName = "OldFileName";
string newFileName = "NewFileName";

CloudBlockBlob blobCopy = container.GetBlockBlobReference(newFileName);

if (!await blobCopy.ExistsAsync())
{
    CloudBlockBlob blob = container.GetBlockBlobReference(fileName);

    if (await blob.ExistsAsync())
    {
        await blobCopy.StartCopyAsync(blob);
        await blob.DeleteIfExistsAsync();
    }
}
```

Azure Blobblob

ASP.NETAzure Excel/Azure SQL Server

Azure ExcelblobAzure SQL ServerAzure Excel blob。

- Microsoft Visual Studio 2015
- Microsoft OfficeXML SDK 2.5
- Azure
- Azure SQL Server

DocumentFormat.OpenXml。

1. DBAzure Excel blob
   excelAzure。

```
public static string DBExportToExcel()
{
    string result = string.Empty;
    try
    {
        //Get datatable from db
        DataSet ds = new DataSet();
        SqlConnection connection = new SqlConnection(connectionStr);
        SqlCommand cmd = new SqlCommand($"SELECT {string.Join(",", columns)} FROM
{tableName}", connection);
        using (SqlDataAdapter adapter = new SqlDataAdapter(cmd))
        {
            adapter.Fill(ds);
        }
        //Check directory
        if (!Directory.Exists(directoryPath))
        {
            Directory.CreateDirectory(directoryPath);
        }
        // Delete the file if it exists
        string filePath = $"{directoryPath}//{excelName}";
        if (File.Exists(filePath))
        {
            File.Delete(filePath);
        }

        if (ds.Tables.Count > 0 && ds.Tables[0] != null || ds.Tables[0].Columns.Count > 0)
        {
            DataTable table = ds.Tables[0];

            using (var spreadsheetDocument = SpreadsheetDocument.Create(filePath,
SpreadsheetDocumentType.Workbook))
            {
                // Create SpreadsheetDocument
                WorkbookPart workbookPart = spreadsheetDocument.AddWorkbookPart();
                workbookPart.Workbook = new Workbook();
                var sheetPart = spreadsheetDocument.WorkbookPart.AddNewPart<WorksheetPart>();
                var sheetData = new SheetData();
                sheetPart.Worksheet = new Worksheet(sheetData);
                Sheets sheets =
spreadsheetDocument.WorkbookPart.Workbook.AppendChild<Sheets>(new Sheets());
                string relationshipId =
spreadsheetDocument.WorkbookPart.GetIdOfPart(sheetPart);
                Sheet sheet = new Sheet() { Id = relationshipId, SheetId = 1, Name =
table.TableName };
                sheets.Append(sheet);

                //Add header to sheetData
                Row headerRow = new Row();
                List<String> columns = new List<string>();
                foreach (DataColumn column in table.Columns)
                {
                    columns.Add(column.ColumnName);

                    Cell cell = new Cell();
                    cell.DataType = CellValues.String;
                    cell.CellValue = new CellValue(column.ColumnName);
                    headerRow.AppendChild(cell);
                }
                sheetData.AppendChild(headerRow);

                //Add cells to sheetData
                foreach (DataRow row in table.Rows)
                {
                    Row newRow = new Row();
                    columns.ForEach(col =>
                    {
                        Cell cell = new Cell();
                        //If value is DBNull, do not set value to cell
                        if (row[col] != System.DBNull.Value)
                        {
                            cell.DataType = CellValues.String;
                            cell.CellValue = new CellValue(row[col].ToString());
                        }
                        newRow.AppendChild(cell);
                    });
                    sheetData.AppendChild(newRow);
                }
                result = $"Export {table.Rows.Count} rows of data to excel successfully.";
            }
        }

        // Write the excel to Azure storage container
        using (FileStream fileStream = File.Open(filePath, FileMode.Open))
        {
            bool exists = container.CreateIfNotExists();
            var blob = container.GetBlockBlobReference(excelName);
            blob.DeleteIfExists();
            blob.UploadFromStream(fileStream);
        }
    }
    catch (Exception ex)
    {
        result =$"Export action failed. Error Message: {ex.Message}";
    }
    return result;
}
```

2. Azure ExcelDB
   excel blob。
   SqlBulkCopydb。

```
public static string ExcelImportToDB()
{
    string result = string.Empty;
    try
    {
        //Check directory
        if (!Directory.Exists(directoryPath))
        {
            Directory.CreateDirectory(directoryPath);
        }
        // Delete the file if it exists
        string filePath = $"{directoryPath}//{excelName}";
        if (File.Exists(filePath))
        {
            File.Delete(filePath);
        }
        // Download blob to server disk.
        container.CreateIfNotExists();
        CloudBlockBlob blob = container.GetBlockBlobReference(excelName);
        blob.DownloadToFile(filePath, FileMode.Create);

        DataTable dt = new DataTable();
        using (SpreadsheetDocument spreadSheetDocument = SpreadsheetDocument.Open(filePath,
false))
        {
            //Get sheet data
            WorkbookPart workbookPart = spreadSheetDocument.WorkbookPart;
            IEnumerable<Sheet> sheets =
spreadSheetDocument.WorkbookPart.Workbook.GetFirstChild<Sheets>().Elements<Sheet>();
            string relationshipId = sheets.First().Id.Value;
            WorksheetPart worksheetPart =
(WorksheetPart)spreadSheetDocument.WorkbookPart.GetPartById(relationshipId);
            Worksheet workSheet = worksheetPart.Worksheet;
            SheetData sheetData = workSheet.GetFirstChild<SheetData>();
            IEnumerable<Row> rows = sheetData.Descendants<Row>();

            // Set columns
            foreach (Cell cell in rows.ElementAt(0))
            {
                dt.Columns.Add(cell.CellValue.InnerXml);
            }

            //Write data to datatable
            foreach (Row row in rows.Skip(1))
            {
                DataRow newRow = dt.NewRow();
                for (int i = 0; i < row.Descendants<Cell>().Count(); i++)
                {
                    if (row.Descendants<Cell>().ElementAt(i).CellValue != null)
                    {
                        newRow[i] = row.Descendants<Cell>().ElementAt(i).CellValue.InnerXml;
                    }
                    else
                    {
                        newRow[i] = DBNull.Value;
                    }
                }
                dt.Rows.Add(newRow);
            }
        }

        //Bulk copy datatable to DB
        SqlBulkCopy bulkCopy = new SqlBulkCopy(connectionStr);
        try
        {
            columns.ForEach(col => { bulkCopy.ColumnMappings.Add(col, col); });
            bulkCopy.DestinationTableName = tableName;
            bulkCopy.WriteToServer(dt);
        }
        catch (Exception ex)
        {
            throw ex;
        }
        finally
        {
            bulkCopy.Close();
        }
        result = $"Import {dt.Rows.Count} rows of data to DB successfully.";
    }
    catch (Exception ex)
    {
        result = $"Import action failed. Error Message: {ex.Message}";
    }
    return result;
```

```
}
```

https://code.msdn.microsoft.com/How-to-ImportExport-Azure-0c858df9 。

Microsoft Azureblob

APIMicrosoft Azureblob。 Microsoft AzurePowerShellblob。

```
 $key = (Get-AzureRmStorageAccountKey -ResourceGroupName
$selectedStorageAccount.ResourceGroupName -name $selectedStorageAccount.StorageAccountName -
ErrorAction Stop)[0].value
        $storageContext = New-AzureStorageContext -StorageAccountName
$selectedStorageAccount.StorageAccountName -StorageAccountKey $key -ErrorAction Stop
        $storageContainer = Get-AzureStorageContainer -Context $storageContext -Name
$ContainerName -ErrorAction Stop
        $blob = Get-AzureStorageBlob -Context $storageContext -Container  $ContainerName -Blob
$BlobName -ErrorAction Stop
        $leaseStatus = $blob.ICloudBlob.Properties.LeaseStatus;
        If($leaseStatus -eq "Locked")
        {
             $blob.ICloudBlob.BreakLease()
             Write-Host "Successfully broken lease on '$BlobName' blob."
        }
        Else
        {
            #$blob.ICloudBlob.AcquireLease($null, $null, $null, $null, $null)
            Write-Host "The '$BlobName' blob's lease status is unlocked."
        }
```

Microsoft AzureARMblobPowerShell

Azure https://riptutorial.com/zh-CN/azure/topic/5405/azure

7: Azure

Examples

Azure

Azure“REST”APIHTTP API

Azure SDK。 C。

Azure。 Azure CLIPowerShellAzureARM...

`app.config`。

```
// Retrieve storage account from connection string.
CloudStorageAccount storageAccount = CloudStorageAccount.Parse(
    CloudConfigurationManager.GetSetting("StorageConnectionString"));
```

URL `http://<storage account>.queue.core.windows.net/<queue>`

URL;。 。

```
CloudQueueClient queueClient = storageAccount.CreateCloudQueueClient();
```

。

```
CloudQueue queue = queueClient.GetQueueReference("<queue>");
```

`queue`。

```
queue.CreateIfNotExists();
```

。 “”

- “”“” WebWebVM ...
- 。 PaaS。 。

API

```
await queue.CreateIfNotExistsAsync();
```

blob。

。

Azure https://riptutorial.com/zh-CN/azure/topic/6008/azure

8: Azure

resourceGroupName	Azure
connectionName	Azure Run Asservice pricipal
StorageAccountName	Azure
	blob
DaysOld	blob

Azure Active DirectoryAzureRunAs。 。

Examples

BlobBlob

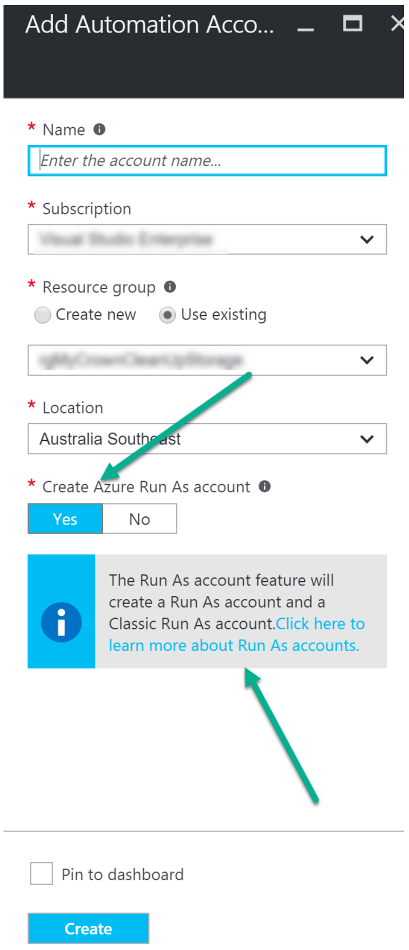
Azure PowershellRunbookRunbookAzureBlob。

SQL。

。

。

Azure。 Azure Active Directory。


Add Automation Acco...

* Name

Enter the account name...

* Subscription

* Resource group

Create new [✓ Use existing]

* Location

Australia Southeast

* Create Azure Run As account

[✓ Yes] No

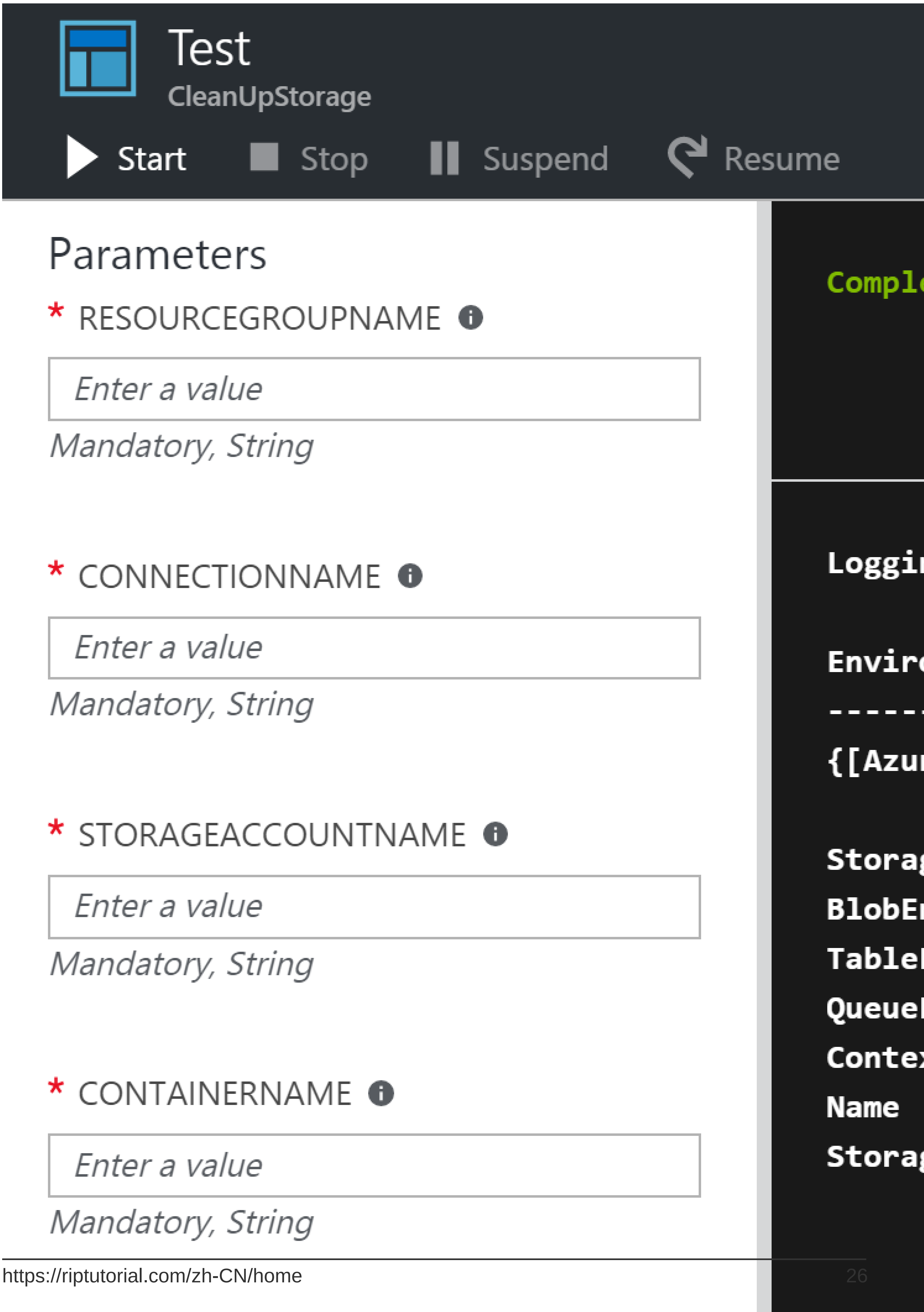
The Run As account feature will create a Run As account and a Classic Run As account.Click here to learn more about Run As accounts.

Pin to dashboard

```
<#
.DESCRIPTION
    Removes all blobs older than a number of days back using the Run As Account (Service
Principal)

.NOTES
    AUTHOR: Russ
    LASTEDIT: Oct 03, 2016   #>

param(
    [parameter(Mandatory=$true)]
    [String]$resourceGroupName,

    [parameter(Mandatory=$true)]
    [String]$connectionName,

    # StorageAccount name for content deletion.
    [Parameter(Mandatory = $true)]
    [String]$StorageAccountName,

    # StorageContainer name for content deletion.
    [Parameter(Mandatory = $true)]
    [String]$ContainerName,

    [Parameter(Mandatory = $true)]
    [Int32]$DaysOld

)
$VerbosePreference = "Continue";
try
{
# Get the connection "AzureRunAsConnection "
```

```
$servicePrincipalConnection=Get-AutomationConnection -Name $connectionName

"Logging in to Azure..."
Add-AzureRmAccount `
    -ServicePrincipal `
    -TenantId $servicePrincipalConnection.TenantId `
    -ApplicationId $servicePrincipalConnection.ApplicationId `
    -CertificateThumbprint $servicePrincipalConnection.CertificateThumbprint
catch {
if (!$servicePrincipalConnection)
{
    $ErrorMessage = "Connection $connectionName not found."
    throw $ErrorMessage
} else{
    Write-Error -Message $_.Exception
    throw $_.Exception
}
$keys = Get-AzureRMStorageAccountKey -ResourceGroupName $resourceGroupName -AccountName
$StorageAccountName
# get the storage account key
Write-Host "The storage key is: "$StorageAccountKey;
# get the context
$StorageAccountContext = New-AzureStorageContext -storageAccountName $StorageAccountName -
StorageAccountKey $keys.Key1 #.Value;
$StorageAccountContext;
$existingContainer = Get-AzureStorageContainer -Context $StorageAccountContext -Name
$ContainerName;
#$existingContainer;
if (!$existingContainer)
{
 "Could not find storage container";
}
else
{
$containerName = $existingContainer.Name;
Write-Verbose ("Found {0} storage container" -f $containerName);
$blobs = Get-AzureStorageBlob -Container $containerName -Context $StorageAccountContext;
$blobsremoved = 0;

if ($blobs -ne $null)
{
    foreach ($blob in $blobs)
    {
        $lastModified = $blob.LastModified
        if ($lastModified -ne $null)
        {
            #Write-Verbose ("Now is: {0} and LastModified is:{1}" -f [DateTime]::Now,
[DateTime]$lastModified);
            #Write-Verbose ("lastModified: {0}" -f $lastModified);
            #Write-Verbose ("Now: {0}" -f [DateTime]::Now);
            $blobDays = ([DateTime]::Now - $lastModified.DateTime)  #[DateTime]

            Write-Verbose ("Blob {0} has been in storage for {1} days" -f $blob.Name,
$blobDays);

            Write-Verbose ("blobDays.Days: {0}" -f $blobDays.Hours);
            Write-Verbose ("DaysOld: {0}" -f $DaysOld);

            if ($blobDays.Days -ge $DaysOld)
            {
                Write-Verbose ("Removing Blob: {0}" -f $blob.Name);
                Remove-AzureStorageBlob -Blob $blob.Name -Container $containerName -Context
$StorageAccountContext;
                $blobsremoved += 1;
            }
            else {
                Write-Verbose ("Not removing blob as it is not old enough.");
            }
        }
    }
}

Write-Verbose ("{0} blobs removed from container {1}." -f $blobsremoved, $containerName);
}
```

。



Parameters

* RESOURCEGROUPNAME

Enter a value

Mandatory, String

* CONNECTIONNAME

Enter a value

Mandatory, String

* STORAGEACCOUNTNAME

Enter a value

Mandatory, String

* CONTAINERNAME

Enter a value

Mandatory, String

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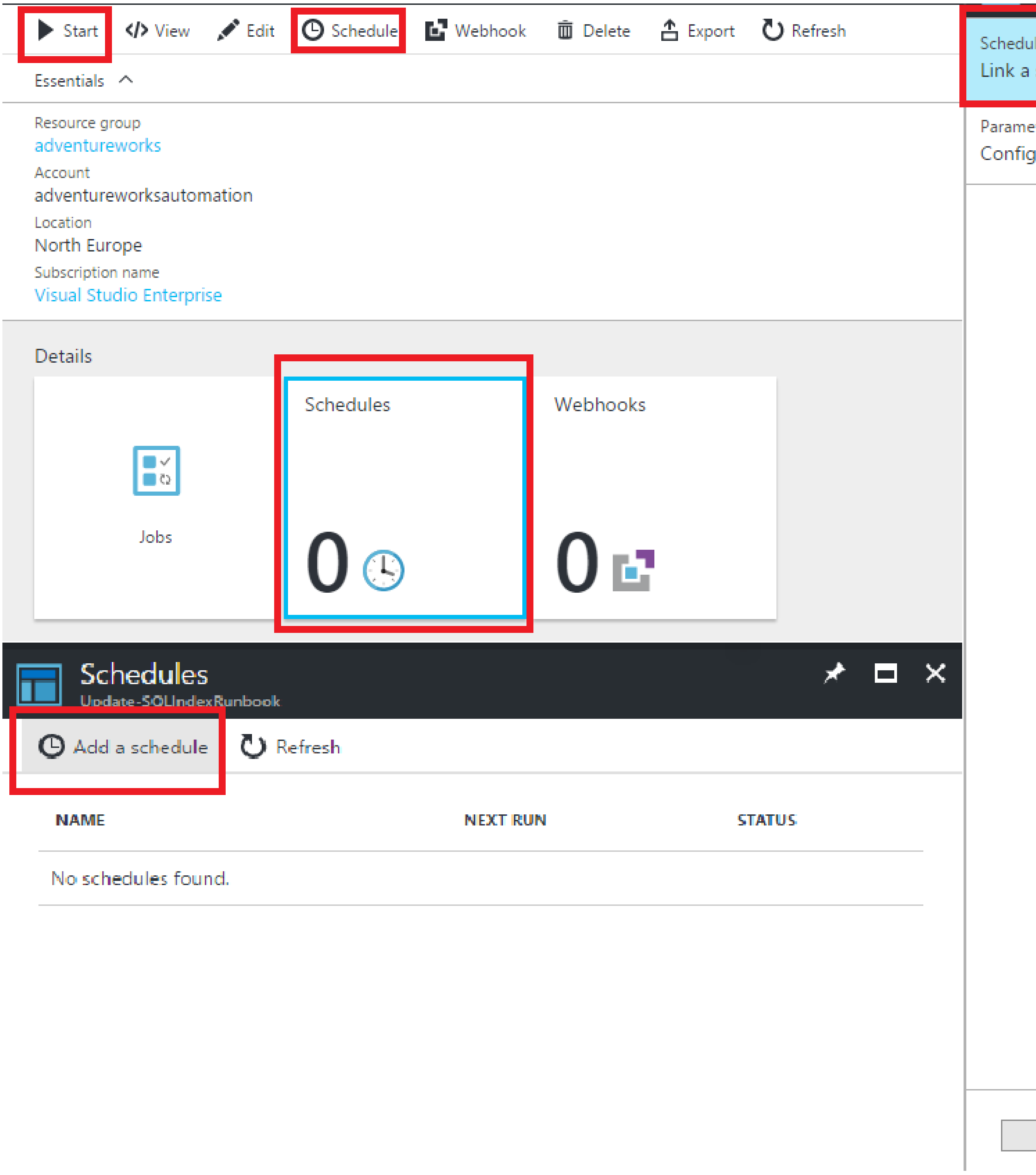
Runbook。 Runbook



Resource group
adventureworks
Account
adventureworksautomation
Location
North Europe
Subscription name
Visual Studio Enterprise

NAME	NEXT RUN	STATUS
No schedules found.		

Runbook。

。

```
SELECT  t.name AS TableName, t.OBJECT_ID FROM sys.tables t
```

```
SELECT  '['+SCHEMA_NAME(t.schema_id)+'].['+t.name+']' AS TableName, t.OBJECT_ID FROM
sys.tables t
```

“”=。 connectionstring。 connectionstring builder

```
$connStringBuilder = New-Object System.Data.SqlClient.SqlConnectionStringBuilder
$connStringBuilder["Server"] = "tcp:$using:SqlServer,$using:SqlServerPort"
$connStringBuilder["Database" ] = "$using:Database"
$connStringBuilder["User ID"] = "$using:SqlUsername"
$connStringBuilder["Password"] = "$using:SqlPass"
$connStringBuilder["Trusted_Connection"] = $False
$connStringBuilder["Encrypt"] = $True
$connStringBuilder["Connection Timeout"] = "30"
$connString = $connStringBuilder.ConnectionString
$Conn = New-Object System.Data.SqlClient.SqlConnection($connString)
```

。

```
SELECT a.object_id, avg_fragmentation_in_percent
    FROM sys.dm_db_index_physical_stats (
           DB_ID(N'$Database')
         , OBJECT_ID(0)
         , NULL
         , NULL
         , NULL) AS a
    JOIN sys.indexes AS b
    ON a.object_id = b.object_id AND a.index_id = b.index_id;
```

sys.dm_db_index_physical_statsNULL“DETAILED”。

Github https //github.com/conwid/IndexRebuildScript

Azure https://riptutorial.com/zh-CN/azure/topic/7258/azure

9: Azure

Examples

ASM APIAzure VM

```
# 1. Login Azure by admin account
Add-AzureAccount
#
# 2. Select subscription name
$subscriptionName = Get-AzureSubscription | Select -ExpandProperty SubscriptionName
#
# 3. Create storage account
$storageAccountName = $VMName
# here we use VMName to play the storage account name and create it, you can choose your name
or use existed one to replace the storage account creation operation
New-AzureStorageAccount -StorageAccountName $storageAccountName -Location $Location | Out-Null
#
# 4. Select subscription name and storage account name for current context
Select-AzureSubscription -SubscriptionName $subscriptionName -Current | Out-Null
Set-AzureSubscription -SubscriptionName $subscriptionName -CurrentStorageAccountName
$storageAccountName | Out-Null
#
# 5. Select a VM image name
$label = $VMLabelPattern
# take care, please ensure the VM image location resides to the same location of your storage
account and service below
$imageName = Get-AzureVMImage | where { $_.Label -like $label } | sort PublishedDate -
Descending | select -ExpandProperty ImageName -First 1
#
# 6. Create cloud service
$svcName = $VMName
# here we use VMName to play the service name and create it, you can choose your name or use
existed one to replace the service creation operation
New-AzureService -ServiceName $svcName -Location $Location | Out-Null
#
# 7. Build command set
$vmConfig = New-AzureVMConfig -Name $VMName -InstanceSize $VMSize -ImageName $imageName
#
# 8. Set local admin of this vm
$cred=Get-Credential -Message "Type the name and password of the local administrator account."
$vmConfig | Add-AzureProvisioningConfig -Windows -AdminUsername $cred.Username -Password
$cred.GetNetworkCredential().Password
#
# 9. Execute the final cmdlet to create the VM
New-AzureVM -ServiceName $svcName -VMs $vmConfig | Out-Null
```

ASM APIPowershellAzureVM

Azure https://riptutorial.com/zh-CN/azure/topic/6350/azure

10: Azure

- ARM https //azure.microsoft.com/en-us/documentation/articles/resource-group-authoring-templates/

Examples

Azure。

Azure Key VaultDiagnosticSettings。

- `resources`
- `dependsOn`ARM

```
{
  "$schema": "https://schema.management.azure.com/schemas/2015-01-
01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "keyVaultName": {
      "type": "string",
      "metadata": {
        "description": "Name of the Vault"
      }
    },
    "tenantId": {
      "type": "string",
      "metadata": {
        "description": "Tenant ID of the directory associated with this key vault"
      }
    },
    "location": {
      "type": "string",
      "metadata": {
        "description": "Key Vault location"
      }
    },
    "storageAccountResourceGroup": {
      "type": "string",
      "metadata": {
        "description": "Resource Group of the storage account where key vault activities will
be logged"
      }
    },
    "storageAccountName": {
      "type": "string",
      "metadata": {
        "description": "Name of the storage account where key vault activities will be logged.
Must be in same region as the key vault."
      }
    }
    },
  "resources": [
    {
      "type": "Microsoft.KeyVault/vaults",
      "name": "[parameters('keyVaultName')]",
      "apiVersion": "2015-06-01",
      "location": "[parameters('location')]",
      "properties": {
        "enabledForDeployment": "false",
        "enabledForDiskEncryption": "false",
        "enabledForTemplateDeployment": "false",
        "tenantId": "[variables('tenantId')]",
        "sku": {
          "name": "Standard",
          "family": "A"
        }
      },
      "resources": [
          {
      "type": "Microsoft.KeyVault/vaults/providers/diagnosticSettings",
      "name": "[concat(parameters('keyVaultName'), '/Microsoft.Insights/service')]",
      "apiVersion": "2015-07-01",
      "dependsOn": [
        "[concat('Microsoft.keyvault/vaults/', parameters('keyVaultName'))]"
      ],
      "properties": {
        "storageAccountId": "[resourceId(parameters('storageAccountResourceGroup'),
'Microsoft.Storage/storageAccounts', parameters('storageAccountName'))]",
        "logs": [{
            "category": "AuditEvent",
            "enabled": true,
            "retentionPolicy": {
                "enabled": true,
                "days": 90
            }
        }]
    }
    }]
    }
  ],
  "outputs": {
      "keyVaultUrl": {
          "type": "string",
          "value": "[reference(resourceId('Microsoft.KeyVault/vaults',
parameters('keyVaultName'))).vaultUri]"
      }
  }
}
```

Azure https://riptutorial.com/zh-CN/azure/topic/3923/azure

S. No		Contributors
1	azure	awh112, Bernard Vander Beken, Community, KARANJ, lorenzo montanari, Sibeesh Venu, user2314737
2	Azure DocumentDB	gbellmann, Matias Quaranta
3	Azure Powershell	Anton Purin, CmdrTchort, frank tan, juunas, RedGreenCode
4	Azure Service Fabric	Lorenzo Dematté, Stephen Leppik
5	Azure	Sibeesh Venu
6	Azure	Dale Chen, Gaurav Mantri
7	Azure	Akos Nagy, RuSs
8	Azure	Dale Chen
9	Azure	BenV