**问题描述：**

最近，在China Azure环境下运行Batch Python示例，遇到较多问题。为此，我们花费了较多的时间进行测试以解决这个问题。

1. <https://docs.microsoft.com/zh-cn/azure/batch/batch-python-tutorial>

2. <https://www.azure.cn/documentation/articles/batch-python-tutorial>

以上资料由微软官方提供，但是无法直接在China Azure环境下直接使用，主要问题如下：

1. 镜像问题：

官方示例中是基于SKU方式来创建Batch计算节点，但因网络原因，目前中国无法访问Azure虚拟机应用商店映像(已经向产品组提交Bug,后续会修复这个问题)：

    new\_pool = batch.models.PoolAddParameter(

            id=pool\_id,

        virtual\_machine\_configuration=batchmodels.VirtualMachineConfiguration(

            image\_reference=image\_ref\_to\_use,

            node\_agent\_sku\_id=sku\_to\_use),

        vm\_size=\_POOL\_VM\_SIZE,

        target\_dedicated=\_POOL\_NODE\_COUNT,

        start\_task=batch.models.StartTask(

            command\_line=common.helpers.wrap\_commands\_in\_shell('linux',

                                                               task\_commands),

            run\_elevated=True,

            wait\_for\_success=True,

            resource\_files=resource\_files),

    )

2. 环境问题：

以下是本地运行实例、Batch节点依赖的运行时环境：

1. python 2.7 或 3.3+

2. pip 9.0.1

3. cryptography

4. azure-batch

5. azure-storage

我们在尝试安装以上依赖环境时遇到了诸多问题，首要的问题就是如何在Batch节点中安装Python环境（示例中是基于Linux Batch节点，并未给出Windows安装Python的示例），因为Windows Batch Pool也是基于云服务建立的计算节点，因此我们参考了云服务中通过powershell安装Python的资料，参考：[云服务配置Python环境](https://docs.microsoft.com/zh-cn/azure/cloud-services/cloud-services-python-ptvs)

在测试过程中，我们发现China Azure网络环境访问[Python官网](https://www.python.org/)较慢，因此在访问国外资源、国外镜像的时候会遇到各种问题，导致运行示例依赖的运行时环境无法配置成功。

**解决方法：**

我们纠正了较多的代码、脚本，从[这里](https://github.com/hello-azure/azure-batch-windows-sample/)下载完整示例。以下是调整的内容：

1. 镜像问题解决方案

基于CloudServiceConfiguration从云服务创建Windows Batch Pool代码实现：

new\_pool = batch.models.PoolAddParameter(

        id=pool\_id,

        cloud\_service\_configuration=batchmodels.CloudServiceConfiguration(

            os\_family="4",

            target\_os\_version="\*"),

        vm\_size=\_POOL\_VM\_SIZE,

        target\_dedicated=\_POOL\_NODE\_COUNT,

        start\_task=batch.models.StartTask(

            command\_line=common.helpers.wrap\_commands\_in\_shell('windows', task\_commands),

            run\_elevated=True,

            wait\_for\_success=True,

            resource\_files=resource\_files),

    )

1. 环境问题解决方案

提供国内访问资源及镜像：

$nl = [Environment]::NewLine

Write-Output "Download python to install...$nl"

$url = "<https://devstorage.blob.core.chinacloudapi.cn/files/python-3.5.2-amd64.exe>"

$outFile = "${env:TEMP}\python-3.5.2-amd64.exe"

Write-Output "Downloading $url to $outFile$nl"

Invoke-WebRequest $url -OutFile $outFile

Write-Output "Installing$nl"

Start-Process "$outFile" -ArgumentList "/quiet", "InstallAllUsers=1" -Wait

Write-Output "Update pip and add dependency"

py -m pip install -U pip -i <http://mirrors.aliyun.com/pypi/simple/> --trusted-host mirrors.aliyun.com

py -m pip install cryptography -i <http://mirrors.aliyun.com/pypi/simple/> --trusted-host mirrors.aliyun.com

py -m pip install azure-batch -i <http://mirrors.aliyun.com/pypi/simple/> --trusted-host mirrors.aliyun.com

py -m pip install azure-storage -i <http://mirrors.aliyun.com/pypi/simple/> --trusted-host mirrors.aliyun.com

Write-Output "Done$nl"

**运行测试：**

Sample start: 2016-12-14 05:34:52

Uploading file C:\Users\kevin\Desktop\george-python-test\azure-batch-samples-mas ter\Python\Batch\article\_samples\python\_tutorial\_task.py to container [applicati on]... Uploading file C:\Users\kevin\Desktop\george-python-test\azure-batch-samples-mas ter\Python\Batch\article\_samples\PrepPython35.ps1 to container [application]... Uploading file C:\Users\kevin\Desktop\george-python-test\azure-batch-samples-mas ter\Python\Batch\article\_samples\data\taskdata1.txt to container [input]... Uploading file C:\Users\kevin\Desktop\george-python-test\azure-batch-samples-mas ter\Python\Batch\article\_samples\data\taskdata2.txt to container [input]... Uploading file C:\Users\kevin\Desktop\george-python-test\azure-batch-samples-mas ter\Python\Batch\article\_samples\data\taskdata3.txt to container [input]... Creating pool [PythonTutorialPool01]... Creating job [PythonTutorialJob01]... Adding 3 tasks to job [PythonTutorialJob01]... Monitoring all tasks for 'Completed' state, timeout in 0:30:00.................. ................................................................................ ................................................................................ ................................................................................ ................................................................................ .................................................................... Success! All tasks reached the 'Completed' state within the specified timeout period. C:\Users\kevin Downloading all files from container [output]... Downloaded blob [taskdata1\_OUTPUT.txt] from container [output] to C:\Users\kev in\taskdata1\_OUTPUT.txt Downloaded blob [taskdata2\_OUTPUT.txt] from container [output] to C:\Users\kev in\taskdata2\_OUTPUT.txt Downloaded blob [taskdata3\_OUTPUT.txt] from container [output] to C:\Users\kev in\taskdata3\_OUTPUT.txt Download complete! Deleting containers...

Sample end: 2016-12-14 05:42:20 Elapsed time: 0:07:28

Delete job? [Y/n]

## Word Count

to: 18 and: 17 you: 14

Node: tvm-884213370\_1-20161214t053541z Task: topNtask0 Job: PythonTutorialJob01 Pool: PythonTutorialPool01