Azure Batch Automation

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Overview

Managing Azure Batch Resources with Windows PowerShell

Demo: Scripting Batch Service Provisioning with Windows PowerShell

Running Azure Batch Jobs with Azure CLI

Demo: Scripting Batch Job Processing with Azure CLI 2.0

Managing Azure Batch Resources with PowerShell

AZ PowerShell

Set of cmdlets to manage Azure resources

Automate deployment from

- PowerShell console
- Azure Cloud Shell
- ALM automation

Az.Batch PowerShell Cmdlets

Batch Account Management

- New-AzBatchAccount
- Get-AzBatchAccountKey
- Remove-AzBatchAccount

Pool Management

- New-AzBatchPool
- Get-AzBatchPool
- Get-AzBatchPoolUsageMetric

```
 # Authenticate the PowerShell session with the Azure API
Login-AzAccount

# Select the appropriate Azure subscription
Select-AzSubscription -SubscriptionID $subscriptionId

# Create an Azure Resource Group in the Appropriate Region
New-AzResourceGroup `
    -Name $ResourceGroupName `
    -Location $Location `
    -Force
```

Creating a Resource Group

Authentication will prompt for password

Ensure that the correct subscription is selected

```
 # Create a new Batch Account
New-AzBatchAccount `
    -AccountName $BatchAccountName `
    -Location $Location `
    -ResourceGroupName $ResourceGroupName
```

Creating a Batch Account

Account name can contain only lowercase characters or numbers, and must be 3-24 characters in length

Account name must be unique

```
 # Retrieve the Batch Account authentication credentials
$context = Get-AzBatchAccountKeys -AccountName $BatchAccountName

# Create a Cloud Service Configuration
$configuration = New-Object `
    -TypeName "Microsoft.Azure.Commands.Batch.Models.PSCloudServiceConfiguration" `
    -ArgumentList @(4,"*")

# Create a New Azure Batch
New-AzBatchPool -Id "AutoScalePool" -VirtualMachineSize "Small" `
    -CloudServiceConfiguration $configuration -AutoScaleFormula '$TargetDedicated=1; ' `
    -BatchContext $context
```

Creating a Batch Pool

$context object contains batch account credentials

$configuration object contains VM specifications

Demo

Scripting Batch Service Provisioning with PowerShell

- Authenticating with PowerShell
- Creating a Resource Group
- Creating a Batch Account
- Creating Batch Pools

Running Azure Batch Jobs with Azure CLI

Azure CLI 2.0

Command-line for managing Azure resources

Can be used to manage Azure Batch accounts, pools, jobs and tasks

Portal-based or used within PowerShell

Available on Windows, macOS and Linux

```
# Get help for specific commands
az -h
az login -h
az account set -h

# Authenticate with Azure management services
az login

# Select the appropriate Azure subscription
az account set -s 12345678-1234-1234-1234-123456789abc
```

Authenticating and Selecting Subscription

Authentication without options will popup a browser window

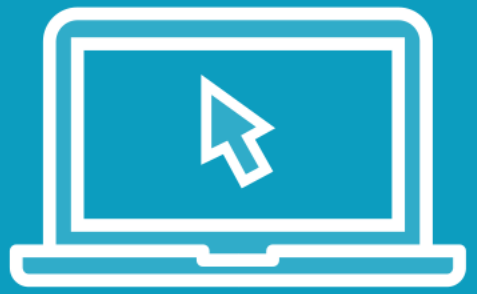
Credentials can also be specified

Client certificates can be used for authentication

```
# Authenticate with an Azure Batch account
az batch account login -g azurebatchdemo -n azurebatch05

# Create a job assigned to a specific pool
az batch job create --id CliJob01 --pool-id RenderPool

# Create a Task
az batch task create --job-id CliJob01 /
        --command-line "cmd /c %AZ_BATCH_APP_PACKAGE_POLYRAY%\polyray.exe F000000.pi -o F000000.tga" /
        --resource-files F000000.pi=https://azurebatch05storage.blob.core.windows.net/demoscenes/F000000.pi --task-id
F000000

# Download an output file
az batch task file download --destination C:\Animate\CliFrames\F000000.tga --file-path wd\\F000000.tga --job-id
CliJob01 --task-id F000000
```

Useful Azure Batch CLI Commands

Demo



Scripting Batch Job Processing with Azure CLI 2.0

- Using Azure CLI
- Authenticating CLI with an Azure Batch Account
- Creating a Job
- Creating Tasks
- Viewing Task Status
- Downloading Output Files

Summary

- Command-line tools can be used for scripting and automation
- Azure Resource Manager CmdLets provide PowerShell integration
- PowerShell scripts can by used in ALM workflows
- Azure CLI 2.0 provides resource management functionality
- Jobs and tasks can also be managed with Azure CLI