### Release Notes: PowerShell Script for Resizing Azure VMs Based on CSV Input

**Version:** 1.0.0

**Date:** October 27, 2024

### Summary:

This release includes a PowerShell script designed to resize Azure Virtual Machines (VMs) based on input from a CSV file. The script efficiently handles multiple Azure subscriptions, stops the VMs before resizing, updates the size, and restarts them, ensuring a smooth transition with minimal downtime.

### Features:

* **CSV Input Support**: Reads details from a CSV file that specifies SubscriptionName, ResourceGroupName, VMName, and NewVMSize, allowing for easy bulk management of VM resizing.
* **Multi-Subscription Handling**: Automatically switches to the correct Azure subscription based on the input from the CSV, optimizing resource management across multiple environments.
* **VM Stop, Resize, and Start Process**:
  + Stops the VM to ensure it is in a safe state for resizing.
  + Waits for the VM to reach a "deallocated" state before applying size changes.
  + Resizes the VM using the specified size from the CSV input.
  + Starts the VM after resizing to minimize service disruption.
* **Context Management**: Checks the current Azure subscription context before switching, reducing unnecessary subscription changes.
* **Error Handling**: Catches and logs errors for each VM operation, providing detailed error messages for troubleshooting.

### Improvements:

* **Efficiency**: Avoids unnecessary context switching, making the script faster when handling multiple VMs in the same subscription.
* **User-Friendly Logging**: Provides clear and color-coded messages to the user, indicating the progress and success of each step in the resizing process.
* **Polling Mechanism**: Uses a polling loop to ensure the VM is fully stopped before resizing, reducing the likelihood of resizing errors due to improper VM states.

### Prerequisites:

* PowerShell with the Az module installed:

Install-Module -Name Az -AllowClobber -Scope CurrentUser powershell

* Logged into Azure using:

Connect-AzAccount

* A properly formatted CSV file containing SubscriptionName, ResourceGroupName, VMName, and NewVMSize.

### Known Issues:

* The script waits in a loop for each VM to be deallocated before proceeding, which may extend the runtime when processing many VMs. Consider parallelization for larger batches.
* Network interruptions during the resizing process may cause partial updates. Users should verify VM states if an error occurs.

### Usage Instructions:

1. Prepare the CSV file with the required columns (SubscriptionName, ResourceGroupName, VMName, NewVMSize).
2. Update the csvFilePath variable in the script with the path to the CSV file.
3. Run the script in PowerShell after logging into Azure.
4. Monitor the console output for status updates and any potential errors.

### Next Steps:

* **Future Enhancements**:
  + Add support for parallel processing to reduce runtime for large batches.
  + Implement logging to a file for detailed records of each operation.
  + Add a retry mechanism for VM start operations in case of transient Azure errors.