# Microsoft 365 Automation Project

Appendix A — PowerShell Script List

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## Overview

This appendix provides an overview of all PowerShell scripts used in the Microsoft 365 automation project. Each script automates a specific stage of user, group, and mailbox management.

## Script Descriptions

|  |  |  |
| --- | --- | --- |
| Script File | Purpose | Key Functions / Cmdlets Used |
| 1\_Create-M365-Users.ps1 | Creates new Microsoft 365 users from a CSV list. | Import-Csv, New-MgUser, Write-Host |
| 2\_assign\_license.ps1 | Assigns Microsoft 365 E5 licenses to users. | Set-MgUserLicense, Get-MgSubscribedSku |
| 3\_sync\_departments.ps1 | Syncs department-based groups and adds members via Graph API. | Get-MgGroup, Invoke-MgGraphRequest, ConvertTo-Json |
| Assign-SharedMailboxPermissions.ps1 | Assigns access permissions for shared mailboxes based on departments. | Add-MailboxPermission, Add-RecipientPermission |
| export\_report.ps1 | Generates a full user/group/license report in CSV format. | Get-MgUser, Get-MgUserMemberOf, Export-Csv |
| run\_all.ps1 | Master runner script — executes all automation steps sequentially and logs outputs. | Start-Transcript, Stop-Transcript, Join-Path, Write-Host |

## Example Code Snippet

Example from 3\_sync\_departments.ps1:  
  
Import-Csv "$basePath\data\neurogroupmembers.csv" | ForEach-Object {  
 $group = Get-MgGroup -Filter "displayName eq '$($\_.Identity)'"  
 $user = Get-MgUser -Filter "userPrincipalName eq '$($\_.Members)'"  
 if ($group -and $user) {  
 Invoke-MgGraphRequest -Method POST `  
 -Uri "https://graph.microsoft.com/v1.0/groups/$($group.Id)/members/`$ref" `  
 -Body (@{"@odata.id" = "https://graph.microsoft.com/v1.0/directoryObjects/$($user.Id)"} | ConvertTo-Json)  
 }  
}

## Notes

- All scripts were executed in PowerShell 5.1 (Windows 10 build 26100).  
- Microsoft.Graph module v2.19.0 and ExchangeOnlineManagement v3.5.0 were used.  
- Logging outputs are stored under /logs/ folder with timestamped filenames.