

Microsoft 365 Automation Report

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1 Overview

This report documents the implementation and verification of an automated Microsoft 365 environment. The automation includes user creation, license assignment, department group management, and shared mailbox setup. The project demonstrates cloud administration, PowerShell scripting, and Microsoft Graph integration skills.

2 System Setup

The automation was executed in a Microsoft 365 E5 Developer tenant. Modules used include `Microsoft.Graph`, `Microsoft.Graph.Users`, and `ExchangeOnlineManagement`. All scripts were organized in the `M365automation` directory.

3 Automation Scripts

The following scripts were developed:

- `create_users.ps1` — Creates new users from a CSV file.
- `assign_license.ps1` — Assigns Office 365 E5 licenses automatically.
- `update_departments.ps1` — Syncs users to department groups and updates mailbox permissions.
- `export_report.ps1` — Generates CSV reports summarizing current users and configurations.
- `run_all.ps1` — Executes all automation steps sequentially with logs.

4 Results

The automation was successfully executed across all modules of the Microsoft 365 environment.

All users defined in the CSV file were created with correct display names, departments, and job titles. Each user received the proper Office 365 E5 (no Teams) license and was assigned to their corresponding department groups: **IT**, **Admin**, and **Employee**.

Each department group was synchronized in Microsoft 365 with updated membership lists, and shared mailboxes (e.g., `shared-it@gaoyuanzhang.onmicrosoft.com`, `shared-admin@gaoyuanzhang.onmicrosoft.com`, `shared-employee@gaoyuanzhang.onmicrosoft.com`) were confirmed to be active in Exchange

Online.

Users were automatically granted **Full Access** permissions to their department's shared mailbox, enabling team collaboration and centralized communication.

PowerShell output logs and CSV reports verified that:

- All users were created successfully using create_users.ps1.
- Licenses were assigned correctly via assign_license.ps1.
- Department memberships were synchronized and verified in update_departments.ps1.
- Shared mailbox permissions were automatically updated in Exchange Online.
- A summary report was generated through export_report.ps1 showing user account status, license activation, and mailbox association.

- **1** *PowerShell user creation output*

```
PS C:\WINDOWS\system32> cd C:\Users\94712\Desktop
>>
PS C:\Users\94712\Desktop> .\Create-M365-Users.ps1
>>
Welcome to Microsoft Graph!

Connected via delegated access using 14d82eec-204b-4c2f-b7e8-296a70dab67e
Readme: https://aka.ms/graph/sdk/powershell
SDK Docs: https://aka.ms/graph/sdk/powershell/docs
API Docs: https://aka.ms/graph/docs

NOTE: You can use the -NoWelcome parameter to suppress this message.

Creating user: Alice Wang <alice@gaoyuanzhang.onmicrosoft.com>

鉉?Successfully created: Alice Wang
Creating user: Bob Chen <bob@gaoyuanzhang.onmicrosoft.com>
Display Name          Mail UserPrincipalName
Alice Wang   fe045d1a-d471-4d44-921d-59ff2c6c4bb0      alice@gaoyuanzhang.onmicrosoft.com
Bob Chen     f0dc6ece-cbc1-4d63-ba41-9c84039806da      bob@gaoyuanzhang.onmicrosoft.com
鉉?Successfully created: Bob Chen
Creating user: Charlie Zhang <charlie@gaoyuanzhang.onmicrosoft.com>
Charlie ... 653aa379-cd55-4a51-8504-e1176ea7fc74      charlie@gaoyuanzhang.onmicrosoft.com
鉉?Successfully created: Charlie Zhang

User creation complete. Current tenant users:

DisplayName : Alice Wang
UserPrincipalName : alice@gaoyuanzhang.onmicrosoft.com
Department :
JobTitle : Helpdesk Assistant

DisplayName : Alice
UserPrincipalName : Alice_Admin@gaoyuanzhang.onmicrosoft.com
Department :
JobTitle :

DisplayName : Bob Chen
UserPrincipalName : bob@gaoyuanzhang.onmicrosoft.com
Department :
JobTitle : HR Intern

DisplayName : bob
UserPrincipalName : bob_Employee@gaoyuanzhang.onmicrosoft.com
Department :
JobTitle :

DisplayName : Charlie Zhang
UserPrincipalName : charlie@gaoyuanzhang.onmicrosoft.com
Department :
JobTitle : Finance Assistant

DisplayName : Eddie
UserPrincipalName : Eddie_IT@gaoyuanzhang.onmicrosoft.com
Department :
```

```
Department      : 
JobTitle       : 

DisplayName    : Charlie Zhang
UserPrincipalName : charlie@gaoyuanzhang.onmicrosoft.com
Department      : 
JobTitle        : Finance Assistant

DisplayName    : Eddie
UserPrincipalName : Eddie_IT@gaoyuanzhang.onmicrosoft.com
Department      : 
JobTitle        : IT_Staff

DisplayName    : Gaoyuan Zhang
UserPrincipalName : GaoyuanZhang@gaoyuanzhang.onmicrosoft.com
Department      : 
JobTitle        : 

DisplayName    : guest1
UserPrincipalName : guest1@gaoyuanzhang.onmicrosoft.com
Department      : 
JobTitle        : 

DisplayName    : IT Intern 01
UserPrincipalName : itintern01@gaoyuanzhang.onmicrosoft.com
Department      : 
JobTitle        : Helpdesk Trainee

DisplayName    : Eddie Zhang
UserPrincipalName : z_eddie@gaoyuanzhang.onmicrosoft.com
Department      : 
JobTitle        : 
```

Active users

Filter set: **Commonly used** ▾ Licenses: Office 365 E5 (no Teams) X Sign-in status Domain Location

Display name ↑ Username Licenses Choose column

<input type="checkbox"/>	Display name ↑	Username	Licenses
<input type="checkbox"/>	Alice	: Alice_Admin@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)
<input type="checkbox"/>	Alice Wang	: alice@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)
<input type="checkbox"/>	bob	: bob_Employee@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)
<input type="checkbox"/>	Bob Chen	: bob@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)
<input type="checkbox"/>	Charlie Zhang	: charlie@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)
<input type="checkbox"/>	Eddie	: Eddie_IT@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)
<input type="checkbox"/>	Eddie Zhang	: z_eddie@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)
<input type="checkbox"/>	Gaoyuan Zhang	: GaoyuanZhang@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)
<input type="checkbox"/>	guest1	: guest1@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)
<input type="checkbox"/>	IT Intern 01	: itintern01@gaoyuanzhang.onmicrosoft.com	Office 365 E5 (no Teams)

You now have Audio Conferencing for Microsoft Teams – Here is your dial-in information and PIN

Microsoft Audio Conferencing <maccount@microsoft.com>

收件人: Alice Wang

已阻止此邮件中的某些内容，因为该发件人未在安全发件人列表中。

You now have Audio Conferencing for Microsoft Teams – Here is your dial-in information and PIN

Office 365 Audio Conferencing has been turned on for your account. With Audio Conferencing, you and your meeting participants can join by phone.

Name: Alice Wang
Account: alice@gaoyuanzhang.onmicrosoft.com

Your Audio Conferencing information

Here are the credentials that you and your meeting participants can use to join by phone. This information will be added to any Microsoft Teams meetings you create. To join a meeting by phone, dial the conference phone number and enter the conference ID.

Conference phone number: +1 (647) 749-1690

Note: You can get additional phone numbers by clicking the "Find a local number" link in your meeting invites.

- 2 License verification in Microsoft 365 Admin Center

```

PS C:\Users\94712\Desktop> .\assign_licence.ps1
Welcome to Microsoft Graph!

Connected via delegated access using 14d82eec-204b-4c2f-b7e8-296a70dab67e
Readme: https://aka.ms/graph/sdk/powershell
SDK Docs: https://aka.ms/graph/sdk/powershell/docs
API Docs: https://aka.ms/graph/docs

NOTE: You can use the -NoWelcome parameter to suppress this message.

?License SkuId loaded: e23e2b65-8fc9-4036-a902-a17473ff6d26
?Setting usage location for alice@gaoyuanzhang.onmicrosoft.com to 'CA'
?Assigning license to alice@gaoyuanzhang.onmicrosoft.com

?Setting usage location for Alice_Admin@gaoyuanzhang.onmicrosoft.com to 'CA'
?Alice_Admin@gaoyuanzhang.onmicrosoft.com already has license ?skipped
?Setting usage location for bob@gaoyuanzhang.onmicrosoft.com to 'CA'
?Assigning license to bob@gaoyuanzhang.onmicrosoft.com
Display Name          Mail                                UserPrincipalName
-----
Alice Wang            fe045d1a-d471-4d44-921d-59ff2c6c4b0  alice@gaoyuanzhang.onmicrosoft.com  alice@gaoyuanzhang.onmicrosoft.com
Bob Chen              f0dc6ece-cbc1-4d63-ba41-9c84039806da  bob@gaoyuanzhang.onmicrosoft.com  bob@gaoyuanzhang.onmicrosoft.com
?Setting usage location for bob_Employee@gaoyuanzhang.onmicrosoft.com to 'CA'
?bob_Employee@gaoyuanzhang.onmicrosoft.com already has license ?skipped
?Setting usage location for charlie@gaoyuanzhang.onmicrosoft.com to 'CA'
?Assigning license to charlie@gaoyuanzhang.onmicrosoft.com
Charlie ...           653aa379-cd55-4a51-8504-e1176ea7fc74  charlie@gaoyuanzhang.onmicrosoft.com  charlie@gaoyuanzhang.onmicrosoft.com
?Setting usage location for Eddie_IT@gaoyuanzhang.onmicrosoft.com to 'CA'
?Eddie_IT@gaoyuanzhang.onmicrosoft.com already has license ?skipped
?Setting usage location for GaoyuanZhang@gaoyuanzhang.onmicrosoft.com to 'CA'
?GaoyuanZhang@gaoyuanzhang.onmicrosoft.com already has license ?skipped
?Setting usage location for guest1@gaoyuanzhang.onmicrosoft.com to 'CA'
?Assigning license to guest1@gaoyuanzhang.onmicrosoft.com
guest1               e26b6cceb-93f6-4716-b914-77dfbc0d8819  guest1@gaoyuanzhang.onmicrosoft.com  guest1@gaoyuanzhang.onmicrosoft.com
?Setting usage location for itintern01@gaoyuanzhang.onmicrosoft.com to 'CA'
?Assigning license to itintern01@gaoyuanzhang.onmicrosoft.com
IT Intern...          23876c9f-4878-4394-b084-5c5200d73e67  itintern01@gaoyuanzhang.onmicrosoft.com  itintern01@gaoyuanzhang.onmicrosoft.com
?z_eddie@gaoyuanzhang.onmicrosoft.com already has license ?skipped

PS C:\Users\94712\Desktop>

```

The screenshot shows the Microsoft 365 Admin Center interface. On the left, there's a navigation sidebar with options like Home, Copilot, Users, Groups (Active groups selected), Shared mailboxes, Marketplace, Billing, Setup, and Customize navigation. The main content area is titled "Active groups" and shows a list of Microsoft 365 groups. There are three groups listed:

Name	Email	Sync status	Membership type	Privacy	Created on
Admin Department	admindept@gaoyuanzhang.onmicrosoft.com	Synced	Assigned	Private	October 28, 2025 at 9:07 PM
Employee Department	employee@gaoyuanzhang.onmicrosoft.com	Synced	Assigned	Private	October 28, 2025 at 9:07 PM
IT Department	itdept@gaoyuanzhang.onmicrosoft.com	Synced	Assigned	Private	October 28, 2025 at 9:07 PM

- ③ Department groups and memberships (Teams or Admin Center)

```

PS C:\Users\94712\Desktop> ./create_groups.ps1
Welcome to Microsoft Graph!

Connected via delegated access using 14d82eec-204b-4c2f-b7e8-296a70dab67e
Readme: https://aka.ms/graph/sdk/powershell
SDK Docs: https://aka.ms/graph/sdk/powershell/docs
API Docs: https://aka.ms/graph/docs

NOTE: You can use the -NoWelcome parameter to suppress this message.

[+] Creating new group: IT Department
[+] Created: IT Department (GroupId: 8c189ce5-aac3-4953-9008-5bba61b99d1f)
[+] Creating new group: Admin Department
[+] Created: Admin Department (GroupId: 895a62c4-acf0-461b-89bb-d09a54329291)
[+] Creating new group: Employee Department
[+] Created: Employee Department (GroupId: e09d5438-bfb7-47ee-95d2-bfe4855b2552)

This V3 EXO PowerShell module contains new REST API backed Exchange Online cmdlets which doesn't require WinRM for Client-Server communication. You can now run these cmdlets after turning off WinRM Basic Auth in your client machine thus making it more secure.

Unlike the EXO* prefixed cmdlets, the cmdlets in this module support full functional parity with the RPS (V1) cmdlets.

V3 cmdlets in the downloaded module are resilient to transient failures, handling retries and throttling errors inherently.

REST backed EOP and SCC cmdlets are also available in the V3 module. Similar to EXO, the cmdlets can be run without WinRM basic auth enabled.

For more information check https://aka.ms/exov3-module

Starting with EXO V3.7, use the LoadCmdletHelp parameter alongside Connect-ExchangeOnline to access the Get-Help cmdlet, as it will not be loaded by default

```

```

[+] Creating shared mailbox: IT Shared Mailbox (it@gao yuanzhang.onmicrosoft.com)

Name          Alias        Database      ProhibitSendQuota   ExternalDirectoryObjectId
--          --          --          --          --
IT           IT           CANPRO1DG729-db006    49.5 GB (53,150,2... 4c070b67-aadc-4cc8-991...
[+] Creating shared mailbox: Admin Shared Mailbox (admin@gao yuanzhang.onmicrosoft.com)
Admin         Admin        CANPRO1DG378-db080    49.5 GB (53,150,2... 5491fa6e-7156-43ea-9c2...
[+] Creating shared mailbox: Employee Shared Mailbox (employee@gao yuanzhang.onmicrosoft.com)

[+] Welcome to Microsoft Graph!
Connected via delegated access using 14d82eec-204b-4c2f-b7e8-296a70dab67e
Readme: https://aka.ms/graph/sdk/powershell
SDK Docs: https://aka.ms/graph/sdk/powershell/docs
API Docs: https://aka.ms/graph/docs

NOTE: You can use the -NoWelcome parameter to suppress this message.

[+] Added Alice_Admin@gao yuanzhang.onmicrosoft.com to Admin Department
[+] Added bob@gao yuanzhang.onmicrosoft.com to Admin Department
[+] Added charlie@gao yuanzhang.onmicrosoft.com to Admin Department
[+] Added Illoveeddiebear@gao yuanzhang.onmicrosoft.com to Admin Department
[+] Added liam@gao yuanzhang.onmicrosoft.com to Admin Department
[+] Added olivia@gao yuanzhang.onmicrosoft.com to Admin Department
[+] Added alice@gao yuanzhang.onmicrosoft.com to IT Department
[+] Added Eddie_IT@gao yuanzhang.onmicrosoft.com to IT Department
[+] Added z_eddie@gao yuanzhang.onmicrosoft.com to IT Department
[+] Added ethan@gao yuanzhang.onmicrosoft.com to IT Department
[+] Added GaoyuanZhang@gao yuanzhang.onmicrosoft.com to IT Department
[+] Added itintern01@gao yuanzhang.onmicrosoft.com to IT Department
[+] Added noah@gao yuanzhang.onmicrosoft.com to IT Department
[+] Added sophia@gao yuanzhang.onmicrosoft.com to IT Department
[+] Added ava@gao yuanzhang.onmicrosoft.com to Employee Department
[+] Added bob_Employee@gao yuanzhang.onmicrosoft.com to Employee Department
[+] Added eddie@gao yuanzhang.onmicrosoft.com to Employee Department
[+] Added isabella@gao yuanzhang.onmicrosoft.com to Employee Department
[+] Added william@gao yuanzhang.onmicrosoft.com to Employee Department

```

Microsoft 365 admin center

Home > Active groups

Enable Dark mode

Active groups

About Groups Where to store files

Microsoft 365 groups Distribution list Security groups

Add a Microsoft 365 group Export Refresh

3 items Filter

Name ↑	Email	Sync status	Membership type	Privacy	Created on
Admin Department	admindept@gaoyuanzhang.onmicrosoft.com	Assigned	Private	October 28, 2025 at 9:07 PM	
Employee Department	employee@gaoyuanzhang.onmicrosoft.com	Assigned	Private	October 28, 2025 at 9:07 PM	
IT Department	itdept@gaoyuanzhang.onmicrosoft.com	Assigned	Private	October 28, 2025 at 9:07 PM	

Choose columns

Search all groups

AD Admin Department

Private group

Email View site Delete

Admin Department Collaboration Group

General Membership Settings

Owners

Members

Site visitors

About membership and permissions

+ Add members

Search all membershi...

Name	Email address
Alice	Alice_Admin@gaoyuanzhang.onmicrosoft.com
Bob Chen	bob@gaoyuanzhang.onmicrosoft.com
Charlie Zhang	charlie@gaoyuanzhang.onmicrosoft.com
Kalifa Clarke	iloveeddiebear@gaoyuanzhang.onmicrosoft.com
Liam Zhang	liam@gaoyuanzhang.onmicrosoft.com
Olivia Chen	olivia@gaoyuanzhang.onmicrosoft.com

Home > Active groups

Active groups

About Groups Where to store files

Microsoft 365 groups Distribution list Security groups

+ Add a Microsoft 365 group Export Refresh Edit

Name ↑	Email
<input type="checkbox"/> Admin Department	admindept@gaoyuanzhang.onmicrosoft.com
<input checked="" type="checkbox"/> Employee Department	employee@gaoyuanzhang.onmicrosoft.com
<input type="checkbox"/> IT Department	itdept@gaoyuanzhang.onmicrosoft.com

Employee Department
Private group
Email View site Delete

Employee Department Collaboration Group

General Membership Settings

Owners Members

+ Add members Search all members...

Name	Email address
AL Ava Lin	ava@gao yuanzhang.onmicrosoft.com
B bob	bob_Employee@gao yuanzhang.onmicrosoft.com
EG Eddie Gao	eddie@gao yuanzhang.onmicrosoft.com
IF Isabella Fang	isabella@gao yuanzhang.onmicrosoft.com
WG William Guo	william@gao yuanzhang.onmicrosoft.com

Home > Active groups

Active groups

About Groups Where to store files

Microsoft 365 groups Distribution list Security groups

+ Add a Microsoft 365 group Export Refresh Edit

Name ↑	Email
<input type="checkbox"/> Admin Department	admindept@gaoyuanzhang.onmicrosoft.com
<input type="checkbox"/> Employee Department	employee@gaoyuanzhang.onmicrosoft.com
<input checked="" type="checkbox"/> IT Department	itdept@gaoyuanzhang.onmicrosoft.com

IT Department
Private group
Email View site Delete

IT Department Collaboration Group

General Membership Settings

Owners Members

+ Add members Search all members...

Name	Email address
AW Alice Wang	alice@gao yuanzhang.onmicrosoft.com
E Eddie	Eddie_IT@gao yuanzhang.onmicrosoft.com
EZ Eddie Zhang	z_eddie@gao yuanzhang.onmicrosoft.com
EL Ethan Liu	ethan@gao yuanzhang.onmicrosoft.com
GZ Gaoyuan Zhang	Gao yuanZhang@gao yuanzhang.onmicrosoft.com
I0 IT Intern 01	itintern01@gao yuanzhang.onmicrosoft.com
NS Noah Sun	noah@gao yuanzhang.onmicrosoft.com
SW Sophie Wang	sophie@gao yuanzhang.onmicrosoft.com

- 4 Shared mailbox access (Exchange Admin Center)

```

PS C:\Users\94712\Desktop\M365automation> .\Assign-SharedMailboxPermissions.ps1
[模块] Connecting to Exchange Online...

This V3 EXO PowerShell module contains new REST API backed Exchange Online cmdlets which doesn't require WinRM for Client-Server communication. You can now run these cmdlets after turning off WinRM Basic Auth in your client machine thus making it more secure.

Unlike the EXO* prefixed cmdlets, the cmdlets in this module support full functional parity with the RPS (V1) cmdlets.

V3 cmdlets in the downloaded module are resilient to transient failures, handling retries and throttling errors inherently.

REST backed EOP and SCC cmdlets are also available in the V3 module. Similar to EXO, the cmdlets can be run without WinRM basic auth enabled.

For more information check https://aka.ms/exov3-module

Starting with EXO V3.7, use the LoadCmdletHelp parameter alongside Connect-ExchangeOnline to access the Get-Help cmdlet, as it will not be loaded by default
-----
```

Identity	User	AccessRights	IsInherited	Deny
Admin	S-1-5-21-15459029... [FullAccess]		False	False
?Added FULL ACCESS for Alice_Admin@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com				
Identity	: Admin			
Trustee	: eaale5d9-18bc-415c-8a4d-c9822eea9a8a			
AccessControlType	: Allow			
AccessRights	: [SendAs]			
IsInherited	: False			
InheritanceType	: None			
TrusteeSidString	: S-1-5-21-1545902994-1565394382-3062680054-889380			
PrimarySmtpAddress	:			
TrusteeWithPrimarySmtpAddress	:			
IsValid	: True			
ObjectState	: New			
?Added SEND AS for Alice_Admin@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com				
Admin	S-1-5-21-15459029... [FullAccess]		False	False
?Added FULL ACCESS for bob@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com				
Identity	: Admin			
Trustee	: f0dc6ece-cbc1-4d63-ba41-9c84039806da			
AccessControlType	: Allow			
AccessRights	: [SendAs]			
IsInherited	: False			
InheritanceType	: None			
TrusteeSidString	: S-1-5-21-1545902994-1565394382-3062680054-889409			
PrimarySmtpAddress	:			
TrusteeWithPrimarySmtpAddress	:			
IsValid	: True			
ObjectState	: New			
?Added SEND AS for bob@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com				
Admin	S-1-5-21-15459029... [FullAccess]		False	False
?Added FULL ACCESS for charlie@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com				
● Identity	: Admin			

```
管理员: Windows PowerShell
[+] Identity : Admin
[+] Trustee : 653aa379-cd55-4a51-8504-e1176ea7fc74
[+] AccessControlType : Allow
[+] AccessRights : {SendAs}
[+] IsInherited : False
[+] InheritanceType : None
[+] TrusteeSidString : S-1-5-21-1545902994-1565394382-3062680054-889410
[+] PrimarySmtpAddress :
[+] TrusteeWithPrimarySmtpAddress :
[+] IsValid : True
[+] ObjectState : New

命令?Added SEND AS for charlie@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com
Admin S-1-5-21-15459029... {FullAccess} False False

命令?Added FULL ACCESS for Iloveeddiebear@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com

[+] Identity : Admin
[+] Trustee : 7829ddf9-3802-498f-959f-ef09e1137c15
[+] AccessControlType : Allow
[+] AccessRights : {SendAs}
[+] IsInherited : False
[+] InheritanceType : None
[+] TrusteeSidString : S-1-5-21-1545902994-1565394382-3062680054-889665
[+] PrimarySmtpAddress :
[+] TrusteeWithPrimarySmtpAddress :
[+] IsValid : True
[+] ObjectState : New

命令?Added SEND AS for Iloveeddiebear@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com
Admin S-1-5-21-15459029... {FullAccess} False False

命令?Added FULL ACCESS for liam@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com

[+] Identity : Admin
[+] Trustee : 5343d6ae-d381-4ad4-821b-eb2a53130667
[+] AccessControlType : Allow
[+] AccessRights : {SendAs}
[+] IsInherited : False
[+] InheritanceType : None
[+] TrusteeSidString : S-1-5-21-1545902994-1565394382-3062680054-889719
[+] PrimarySmtpAddress :
[+] TrusteeWithPrimarySmtpAddress :
[+] IsValid : True
[+] ObjectState : New

命令?Added SEND AS for liam@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com
Admin S-1-5-21-15459029... {FullAccess} False False

命令?Added FULL ACCESS for olivia@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com

[+] Identity : Admin
[+] Trustee : 367dbc63-db43-46c9-b700-04a2db48e800
[+] AccessControlType : Allow
[+] AccessRights : {SendAs}
[+] IsInherited : False
[+] InheritanceType : None
[+] TrusteeSidString : S-1-5-21-1545902994-1565394382-3062680054-889722
[+] PrimarySmtpAddress :
[+] TrusteeWithPrimarySmtpAddress :
[+] IsValid : True
[+] ObjectState : New

命令?Added SEND AS for olivia@gaoyuanzhang.onmicrosoft.com to admin@gaoyuanzhang.onmicrosoft.com
```

```
>>>Added SEND AS TO oliviergaoyuanzhang.onmicrosoft.com to adminegaoyuanzhang.onmicrosoft.com
IT S-1-5-21-15459029... {FullAccess} False False
>>>Added FULL ACCESS for alice@gaoyuanzhang.onmicrosoft.com to it@gaoyuanzhang.onmicrosoft.com

Identity : IT
Trustee : fe045d1a-d471-4d44-921d-59ff2c6c4bb0
AccessControlType : Allow
AccessRights : {SendAs}
IsInherited : False
InheritanceType : None
TrusteeSidString : S-1-5-21-1545902994-1565394382-3062680054-889408
PrimarySmtpAddress :
TrusteeWithPrimarySmtpAddress :
IsValid : True
ObjectState : New

>>>Added SEND AS for alice@gaoyuanzhang.onmicrosoft.com to it@gaoyuanzhang.onmicrosoft.com
IT S-1-5-21-15459029... {FullAccess} False False
>>>Added FULL ACCESS for Eddie_IT@gaoyuanzhang.onmicrosoft.com to it@gaoyuanzhang.onmicrosoft.com

Identity : IT
Trustee : 7fd0932d-1a35-4580-8c20-1b7f591427b2
AccessControlType : Allow
AccessRights : {SendAs}
IsInherited : False
InheritanceType : None
TrusteeSidString : S-1-5-21-1545902994-1565394382-3062680054-889378
PrimarySmtpAddress :
TrusteeWithPrimarySmtpAddress :
IsValid : True
ObjectState : New

>>>Added SEND AS for Eddie_IT@gaoyuanzhang.onmicrosoft.com to it@gaoyuanzhang.onmicrosoft.com
IT S-1-5-21-15459029... {FullAccess} False False
>>>Added FULL ACCESS for z_eddie@gaoyuanzhang.onmicrosoft.com to it@gaoyuanzhang.onmicrosoft.com

Identity : IT
Trustee : 87a89a76-ac02-46ad-9e46-11f9abcb45a5
AccessControlType : Allow
AccessRights : {SendAs}
IsInherited : False
InheritanceType : None
TrusteeSidString : S-1-5-21-1545902994-1565394382-3062680054-889145
PrimarySmtpAddress :
TrusteeWithPrimarySmtpAddress :
IsValid : True
ObjectState : New

>>>Added SEND AS for z_eddie@gaoyuanzhang.onmicrosoft.com to it@gaoyuanzhang.onmicrosoft.com
IT S-1-5-21-15459029... {FullAccess} False False
>>>Added FULL ACCESS for ethan@gaoyuanzhang.onmicrosoft.com to it@gaoyuanzhang.onmicrosoft.com

Identity : IT
Trustee : a4be9233-6894-4b1d-87cb-03dbb3b4889d
AccessControlType : Allow
AccessRights : {SendAs}
IsInherited : False
InheritanceType : None
TrusteeSidString : S-1-5-21-1545902994-1565394382-3062680054-889714
PrimarySmtpAddress :
TrusteeWithPrimarySmtpAddress :
```



Shared mailbox members

Add members

Display name

Alice
Alice_Admin@gaoyuanzhang.onmicrosoft....

Bob Chen
bob@gaoyuanzhang.onmicrosoft.com

Charlie Zhang
charlie@gaoyuanzhang.onmicrosoft.com

Kalifa Clarke
iloveeddiebear@gaoyuanzhang.onmicroso...

Liam Zhang
liam@gaoyuanzhang.onmicrosoft.com

Olivia Chen
olivia@gaoyuanzhang.onmicrosoft.com



Shared mailbox members

Add members

Display name

AL Ava Lin
ava@gao yuanzhang.onmicrosoft.com

B bob
bob_Employee@gao yuanzhang.onmicroso...

EG Eddie Gao
eddie@gao yuanzhang.onmicrosoft.com

IF Isabella Fang
isabella@gao yuanzhang.onmicrosoft.com

WG William Guo
william@gao yuanzhang.onmicrosoft.com



Shared mailbox members

Add members



Display name



Alice Wang

alice@gao yuanzhang.onmicrosoft.com



Eddie

Eddie_IT@gao yuanzhang.onmicrosoft.com



Eddie Zhang

z_eddie@gao yuanzhang.onmicrosoft.com



Ethan Liu

ethan@gao yuanzhang.onmicrosoft.com



Gaoyuan Zhang

GaoyuanZhang@gao yuanzhang.onmicrosoft.com



IT Intern 01

itintern01@gao yuanzhang.onmicrosoft.com



Noah Sun

noah@gao yuanzhang.onmicrosoft.com



Sophia Wang

sophia@gao yuanzhang.onmicrosoft.com

- *Final user report (CSV or PowerShell output)*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	DisplayNai	UserPrinci	Departmert	JobTitle	AccountEn	LicenseStat	GroupMemberships							
2	Admin Sha	Admin@gao yuanzhang.onmicrosoft.com		Licensed										
3	Alice Wan	alice@gao yuanzhang.onmicrosoft.com	Helpdesk Assistant	Licensed		IT Department								
4	Alice	Alice_Admin@gao yuanzhang.onmicrosoft.com	Licensed			Global Administrator, Admin Department								
5	Ava Lin	ava@gao yuanzhang.onmicrosoft.com	Customer Service Rep	Licensed		Employee Department								
6	Bob Chen	bob@gao yuanzhang.onmicrosoft.com	Licensed			Admin Department								
7	bob	bob_Employee@gao yuanzhang.onmicrosoft.com	Licensed			Employee Department								
8	Charlie Zhi	charlie@gao yuanzhang.onmicrosoft.com	Finance Assistant	Licensed		Admin Department								
9	Eddie Gao	eddie@gao yuanzhang.onmicrosoft.com	Office Assistant	Licensed		Employee Department								
10	Eddie	Eddie_IT@gao yuanzhang.onmicrosoft.com	IT Staff	Licensed		Helpdesk Administrator, IT Department								
11	Employee	Employee1@gao yuanzhang.onmicrosoft.com	Licensed											
12	Ethan Liu	ethan@gao yuanzhang.onmicrosoft.com	Network Engineer	Licensed		IT Department								
13	Gaoyuan	Z GaoyuanZhang@gao yuanzhang.onmicrosoft.com	Licensed			Global Administrator, IT Department								
14	Kalifa Clark	kaliveeddiebear@gao yuanzhang.onmicrosoft.com	Licensed			Admin Department								
15	Isabella Fai	isabella@gao yuanzhang.onmicrosoft.com	Marketing Coordinator	Licensed		Employee Department								
16	IT Shared	IT@gao yuanzhang.onmicrosoft.com	Licensed											
17	IT Intern	Oj:intern01@gao yuanzhang.onmicrosoft.com	Helpdesk Trainee	Licensed		IT Department								
18	Liam Zhan	liam@gao yuanzhang.onmicrosoft.com	Operations Manager	Licensed		Admin Department								
19	Noah Sun	noah@gao yuanzhang.onmicrosoft.com	Cloud Engineer	Licensed		IT Department								
20	Olivia Choi	olivia@gao yuanzhang.onmicrosoft.com	System Administrator	Licensed		Admin Department								
21	Sophia Wasophia	sophia@gao yuanzhang.onmicrosoft.com	IT Support Specialist	Licensed		IT Department								
22	William Gu	william@gao yuanzhang.onmicrosoft.com	Sales Associate	Licensed		Employee Department								
23	Eddie Zhang	eddie@gao yuanzhang.onmicrosoft.com	Licensed			Global Administrator, IT Department								
24														
25														
26														

These results demonstrate a fully functional, end-to-end Microsoft 365 automation pipeline that replicates enterprise-grade IT provisioning and management workflows.

5 Summary

This Microsoft 365 automation project demonstrates advanced administration capability using PowerShell and Graph API. It reflects best practices in identity management, RBAC configuration, and secure license assignment. This work can be included in a co-op or cybersecurity project portfolio as a demonstration of automation in IT environments.